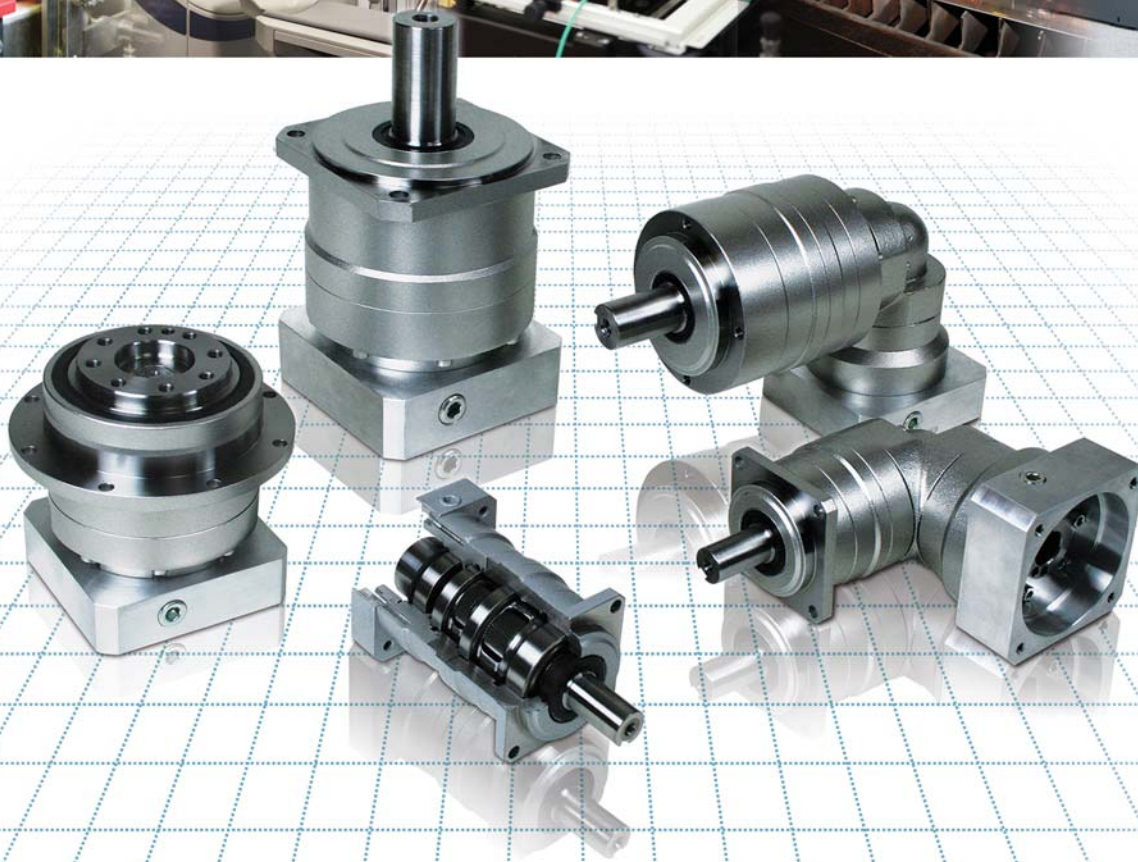


SHIMPO

High Precision Gear Technology



Improving the Speed of Industry

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

A *Nidec* Group Company

SHIMPO

Letter from the President

The NIDEC-SHIMPO Corporation was originally founded in Kyoto Japan in 1952. Since our inception, we have made every possible effort to improve our manufacturing skill and capabilities, including the advancement of power transmission products to support new technologies and markets. NIDEC-SHIMPO initially established an industry-wide leadership position in the area of mechanical variable speed drives. We are very proud of our storied past with mechanical drive technology, through which NIDEC-SHIMPO helped contribute to the growth of the emerging industries that are now the cornerstone of our world economy today.


Over time, within the field of power transmission engineering, NIDEC-SHIMPO has maintained the highest level of skill and production quality throughout the industry. We have earned a reputation as a long term dependable partner to our customers, and this solid reputation is firmly supported by the many industrial awards we hold, such as the Japanese Machinery Society Award, and Deming Award, among others.

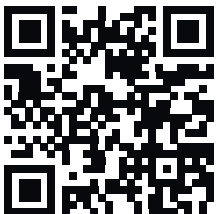
Today, the growing global market for motion control has focused a significant share of our time and energy towards providing higher precision solutions for our customers. This effort has led to the development of our ABLE product line, a complete offering of high-precision planetary speed reducers specific to servo-motor applications. This catalog provides in-depth technical details and specifications for the full ABLE product line.

NIDEC-SHIMPO promises to continue to provide high precision power transmission products at unmatched value, which solve the new requirements of our customer base and allow them to be competitive in an increasingly tough global market. Within our company, we have coined this promise as "Enduring Process of SHIMPO" - a pledge by our employees to approach all of their day-to-day work activities with full effort, full dedication, and full energy to support the evolving needs of our customers.

Your continued support and loyal patronage to our company is highly appreciated. Thank you for your time.

Best Regards,
President
T. Nishimoto


西本達也



*Please take 30 seconds
to register your catalog.
Every 500th Registrant
will receive an award
from SHIMPO.*



Table of contents

| | | |
|---|---|----------------|
| | Company Overview | 2-13 |
|  | VRSF-Series | 14-31 |
| | Planetary Inline Configuration Economy class (NEMA output dimensions, refer to page 30-31) | |
|  | VRL-Series | 32-79 |
| | Planetary Inline Configuration General purpose (Food/washdown options, refer to page 36-37) | |
|  | VRB-Series | 80-125 |
| | Planetary Inline Configuration General purpose, simple mount | |
|  | VRS-Series | 126-171 |
| | Planetary Inline Configuration Highest radial, axial load capacity | |
|  | VRT-Series | 172-223 |
| | Planetary Inline Configuration Compact, ISO flange mount | |
|  | NEV-Series | 224-243 |
| | Right-angle Configuration Economy class | |
|  | EVL-Series | 244-283 |
| | Planetary Right-angle Configuration General purpose | |
|  | EVB-Series | 284-323 |
| | Planetary Right-angle Configuration General purpose, simple mount | |
|  | EVS-Series | 324-369 |
| | Planetary Right-angle Configuration Highest radial, axial load capacity | |
|  | STH-Series | 370-377 |
| | Hollow Output Rotary Actuator Great moment load, general duty | |
|  | STR-Series | 378-407 |
| | Hollow Output Rotary Actuator Highest moment load, "zero" backlash | |
|  | ER-Series | 408-417 |
| | Inline Configuration Extreme shock load situations | |
| | Technical Information | 418-429 |
| | Commercial Information | 430-440 |

VRSF

VRL

VRB

VRS

VRT

NEV

EVL

EVB

EVS

STH

STR

ER

NIDEC Corporation

With annual sales exceeding \$8 Billion for the fiscal year 2011, the NIDEC Corporation has become the world's dominant provider of small precision, mid-size motors and related drive technologies. Founded in 1973 by current Chairman of the Board and CEO, Shigenobu Nagamori, the NIDEC Corporation has built a portfolio of motor variety that is far reaching and impacts all of us during our daily routine. Regardless if its hard disk drive motors, fan motors for appliances, or automotive related, NIDEC Corporation provides the motor and drive technology that help keep our world moving forward.

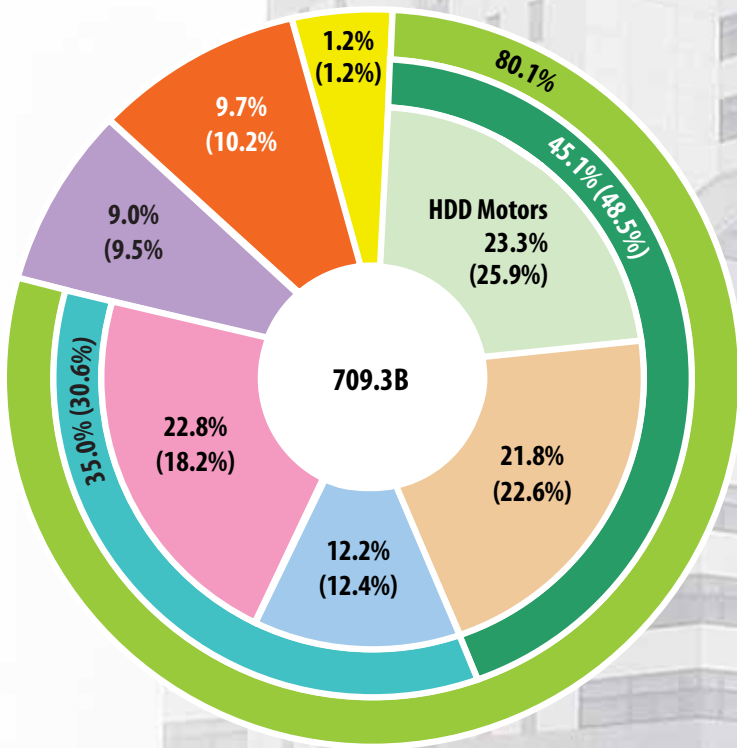
Corporate Headquarters
Kyoto, Japan

Share Listing
New York Stock Exchange
Tokyo Nikkei Stock Exchange

Bond Rating
JCR: A+
R&I: A+

Under the NIDEC Group umbrella there are more than 150 corporate subsidiaries spanning the globe. A consolidated group would total more than 100,000 employees that are supplying products and services to customers in more than 150 countries. The NIDEC Group companies can be categorized into the following complementary business segments;

Sales by Product Group (FY2012)



Motors:

Automotive, Appliance, Commercial & Industrial Products

Motors for automobiles, home electronic appliances and industrial equipment

Small Precision Motors

HDD Motors

Other Small Motors

Optical disk drive motors, OA equipment motors, polygon scanners, MPU cooling fans, game machine fans, PC/communications fans, home appliance fans, automobile fans, vibration motors, brush motors, stepping motors, actuator units

Auto

Vibration motors, brush motors, stepping motors

Appliance Commercial Industrial

Game machine consoles, MPU cooling fans, PC/communications devices, home appliances, automobiles

Machinery:

Industrial robots, card readers, circuit board testers, high-speed pressing machines, chip mounters, measuring equipment, power transmission equipment, factory automation system

Electronic & Optical Components:

Camera shutters, switches, trimmer potentiometers, processing, precision plastic mold products

Others:

Logistics and services, musical products

The NIDEC Group has numerous manufacturing plants across the globe including their own industrial park near Shanghai, China where many of the group companies have located their primary production operations. NIDEC Corporation maintains motor research laboratories in Kyoto, Shiga, and Nagano Japan in order to remain in the forefront of precision and mid-size motor technology.

The NIDEC Corporation continues to expand its portfolio in "all types of motors" and maintain its leadership position through aggressive product development and global acquisitions. The corporate slogan – **All for Dreams** - coined by founder Shigenobu Nagamori himself, epitomizes the NIDEC Group spirit and the promise to continue to deliver on the high value products and technologies that make our dreams possible.

We begin with dreams.
Dreams drive our motivation.
Dreams are our future.
The world's dreams, people's dreams, our dreams.
Our passion creates ideas that make dreams come alive.
Technology and products that were only dreams become reality.

All for dreams
Dreams challenge and the Nidec-Group will continue to meet the challenge.
For the world's tomorrow,
we will develop the world's first technologies and provide the world's best products. We will continue our part in creating a better society.



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

NIDEC-SHIMPO

NIDEC-SHIMPO has established itself over time as a leading supplier of drive technology and precision power transmission solutions to the industrial marketplace. Created in 1952, SHIMPO located its corporate headquarters and main production facility in Kyoto, Japan. With traditional roots that began imbedded in the development of mechanical variable speed powertrains, SHIMPO grew into a more diverse manufacturer of high precision and heavy duty power transmission products.

In 1994 the company was acquired by the NIDEC Corporation, and became formally known as NIDEC-SHIMPO. NIDEC-SHIMPO began to focus on the higher volume production needs that industry demanded as the global motion control and servo motor market grew at an accelerated rate. Soon after that ground was broken for NIDEC-SHIMPO's state-of-the-art manufacturing facility in Ping Hu China, approximately two hours outside of Shanghai.

Today NIDEC-SHIMPO is producing more than 30,000 servo motor speed reducers per month out of its Ping Hu facility. More impressive than the volume put forth is the consistent level of high quality attained. With the marketplace continuing to demand higher levels of precision, NIDEC-SHIMPO continues to push forward in the development of high quality, dependable products to meet those specifications, and at a price point that allows customers to be competitive in the global arena.

Sales and Distribution Network

NIDEC-SHIMPO has distribution channels that span the globe with stocking and service locations throughout Asia-Pacific, Europe, and the Americas – in total more than 30 locations. Within the Americas, NIDEC-SHIMPO has established its main headquarters in the Chicago, Illinois area. This location has been supporting the North America market for more than 30 years.

Recently, NIDEC-SHIMPO America implemented a kit build assembly program within its Chicago, Illinois location. The kit build program allows NIDEC-SHIMPO to provide a large variety of frame sizes and ratios within 48 hours for customers. The kit build program provides product variety, availability, and flexibility (minor customization of product) that are unmatched within the industry.

New offices and stocking points have been added in Mexico (Monterrey, Queretaro), and a subsidiary established in Brazil (Sao Paulo) to serve the expanding motion control needs of emerging markets in Latin and South America.

NIDEC-SHIMPO America has built a solid engineering and customer support infrastructure, sales and distribution network, and inventory program that have it poised to grow aggressively in the next few years. The goal, to obtain a level of brand awareness and a dominant marketshare position similar to that established by the SHIMPO brand name in the Asia Pacific region, looks very well within reach.



NIDEC-SHIMPO'S ultimate goal is to provide the highest quality of products and level of service to our customers throughout the world. To support the needs of a constantly expanding and evolving global economy, we continue to invest heavily in extending the footprint of our support network and distribution channels.

Today, NIDEC-SHIMPO has more than 2,000 employees with a presence across five continents. We continue to expand and improve our global capabilities in order to better serve the needs of our OEM customer in an increasingly competitive environment.



Global Connections

Americas

- * Chicago
- Monterrey
- Querétaro
- São Paulo

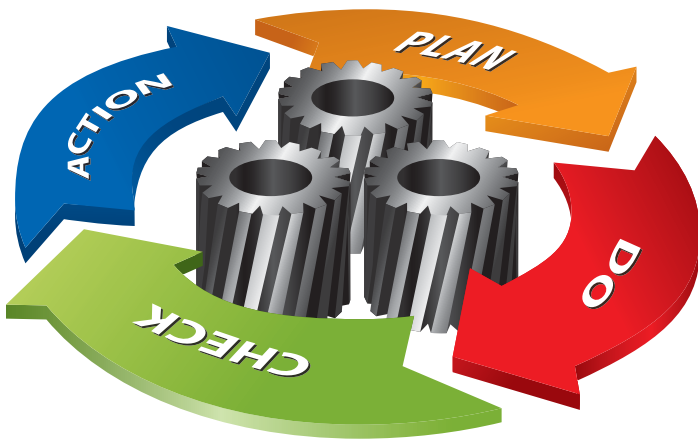
Asia-Pacific

- * Kyoto (Headquarters)
- Taiwan
- Seoul
- Beijing
- Shanghai
- Pinghu
- Xianggang
- Singapore
- India-Bangalore

Unmatched Quality

The spirit of challenge is basic to the NIDEC-SHIMPO culture, influencing all aspects of product development, manufacturing, and servicing our customers. All of us at NIDEC-SHIMPO, as a team, swiftly start taking action toward our goals. The practice of challenging each individual employee has helped drive and cultivate the creative ideas behind the state-of-the-art technology within our power transmission products. NIDEC-SHIMPO and its employees place quality control on a pedestal and consider it to be the ultimate goal – an ongoing challenge, where we seek continuous improvement at levels previously thought unattainable.

In 1969 NIDEC-SHIMPO received “The Deming Award” for our outstanding quality control based on the Total Quality Control (TQC) Method. Since that time, NIDEC-SHIMPO’s desire to avoid causing any inconvenience to our customers, due to inferior product or service, has steered us towards internalizing a unique statistical Quality Control procedure across all departments and functional teams. Our rigid Quality Control program influences all aspects of production such as the sales and order processing activities, the design and resource allocation stages, manufacturing, and logistics. By instilling the Deming Cycles – *Plan, Do, Check, Action* – deep within our company culture, NIDEC-SHIMPO is manufacturing products that exceed our customer’s needs and specifications at a lower cost, faster delivery, and better service when benchmarked against any of our major competitors.



Regardless if the reducer is manufactured at our main facility in Asia or assembled at our Kit Build Center in the United States, all products will be tested with the same stringent quality control procedures and tests. Lot testing a few samples, like some of our competitors do, was never an option for NIDEC-SHIMPO.

NIDEC-SHIMPO holds certification for ISO 9001 and 14001. We took the certification process very seriously, realizing that NIDEC-SHIMPO must achieve global ISO standards in order to build our brand awareness and establish credibility abroad where



STATE-OF-THE-ART TECHNOLOGY

our presence in the local market is still fairly undeveloped. Our ISO Registration is the following;

ISO 9001 Compliance in the following activities

Design, development, manufacturing, and service (repair) of the following products,

- Planetary Speed Reducers
- Mechanical Variable Speed Drives
- Handheld Instrumentation (Digital Tachometers, Stroboscopes)
- Digital Controllers



ISO 14001 Compliance in the following activities

All design, development, manufacturing, and repair services at our main manufacturing facility, and at our Corporate headquarters.

In conclusion, NIDEC-SHIMPO will continue to challenge itself and our individual employees while striving for greater levels of product quality and services. It is a daunting challenge, as the incremental gains in quality become smaller and smaller and much harder to achieve. However, the challenge is ingrained within the spirit of each NIDEC-SHIMPO employee. This *Do It Now!* and *Follow Through!* attitude exhibited by our employees helps create superior products for the global marketplace.

Sold & Serviced By:

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

Manufacturing Strength and Capabilities

As mentioned previously, NIDEC-SHIMPO has a state-of-the-art manufacturing plant located about 40 miles south of Shanghai in an industrial park in the Zhejiang province. The industrial park is the home to more than 20 NIDEC Group Company manufacturing plants, making NIDEC a very important employer for the local community. NIDEC is one of the first Japanese corporations to focus on establishing local manufacturing capabilities and a strong supply chain networks in China, as an important part of their strategy.

The primary NIDEC-SHIMPO manufacturing facility is now producing more than 30,000 reducers a month. The plant has achieved large scale production and economies of scale that is a major advantage over our competi-

tors. This manufacturing strength allows NIDEC-SHIMPO to provide unmatched value to our OEM customers, helping them to compete in a very price competitive global market.

NIDEC-SHIMPO has been very successful over the past decade at bringing new high performance and high quality products to the market. We have developed a core competency at quickly developing products and applying our know-how to efficiently scale-up a manufacturing process from bench testing to large volume production. We promise to leverage this intrinsic skill set in order to continue to push the product development envelope and provide even higher performance, cost-effective products to our customers.



Quality Control Program

Our high-volume and cost effective manufacturing capabilities would be meaningless if we did not have the appropriate quality control program in place. NIDEC-SHIMPO takes great pride in our product quality, and we have implemented numerous tests and metrics in order to insure our products exceed our customers' expectations.

Every reducer that leaves our manufacturing plant undergoes a series of performance tests before it's cleared for shipment. It is not satisfactory for NIDEC-SHIMPO to simply conduct lot testing. Each reducer is tested under ex-

treme duty cycle and duration simulated environments. The program includes the following tests – Noise Measurement, Continuous Load Testing, Shock Load Testing, and a Backlash Measurement Check. Besides final assembly performance testing, a quality control program is in place for any raw materials entering our manufacturing plant. This testing at the front end of our production process is crucial, and our quality inspections at the point-of-entry are as stringent as any testing done throughout our manufacturing process.



Americas Kit Assembly Center

In 2011, NIDEC-SHIMPO AMERICA launched a kit build program at their Itasca, IL facility to serve the North American market. The new Kit Build Center allows NIDEC-SHIMPO to quickly assemble a larger variety of high-precision planetary reducers, which surpasses all competition. The Kit Build Center can assemble any inline series (VRL, VRB, VRS) of reducers in most major ratios within a 2 to 4 day period. The larger frame sizes, especially the right-angle products are shipped from Japan within a 4 week period.

The Kit Build Center tests every assembled planetary reducer to make sure all performance specifications are

met. The battery of tests includes load testing, noise measurement, and backlash measurement, the same tests run by our manufacturing facility. The new Kit Build Center provides an excellent, quick, turn-around solution for Distributors working on single projects, OEMs requiring prototype units for test, and basic aftermarket support where required.

For more information about the Kit Build Center in North America, please contact your local NIDEC-SHIMPO sales office. Take advantage of the quick turn-around time in order to stay out in front of your competition. Contact NIDEC-SHIMPO today!



Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com







sales@electromate.com







The Kit Assembly Cycle



The kit assembly cycle requires clear communication and coordination between all parties involved at every stage of the cycle. If quality control is slighted at any stage, the kit assembly program will not maintain the high-level of performance our customers expect from our products. At every stage, NIDEC-SHIMPO makes efficient communication and stringent control procedures priority number one.

Gear Reducer Selection Overview

| | |  |  |  |  |  |  |
|------------------------------------|--------------|---|---|--|---|---|---|
| Product Series | | VRSF | VRL | VRB | VRS | VRT | ER |
| Catalog Page | | 14 | 32 | 80 | 126 | 172 | 408 |
| Axis of Orientation | | Coaxial | Coaxial | Coaxial | Coaxial | Coaxial | Coaxial |
| Gear Description | | Planetary helical | Planetary helical | Planetary helical | Planetary helical | Planetary helical | Cycloidal |
| Frame | Smallest | B (60mm) | 070 | 060 | 060 | 064 | B03 |
| | Largest | E (170mm) | 235 | 220 | 240 | 285 | F07 |
| | Variety | 4 | 6 | 6 | 7 | 7 | 10 |
| Ratio | Minimum | 3 | 3 | 3 | 3 | 4 | 11 |
| | Maximum | 81 | 100 | 100 | 100 | 100 | 71 |
| | Variety | 9 | 22 | 22 | 22 | 19 | 7 |
| Installation | | | | | | | |
| Rounded, Tapping Holes on Casing | | | ■ | | | | |
| Square, Through Holes on Casing | | ■ | | ■ | ■ | | |
| Rounded, Through Holes on Casing | | | | | | ■ | ■** |
| Lubrication | | | | | | | |
| Grease | | ■ | ■ | ■ | ■ | ■ | ■ |
| Oil | | | | | | | ■ |
| Input | | | | | | | |
| Direct Clamp | | ■ | ■ | ■ | ■ | ■ | ■ |
| Keyed Shaft | | | | | | | ■ |
| Output | | | | | | | |
| Smooth Shaft with Tapping Hole | | ■ | ■ | ■ | ■ | | |
| Shaft with Tapping Hole and Keyway | | ■ | ■ | ■ | ■ | | |
| Flanged Connection | | | | | | ■ | ■** |
| Flange with Hollow Bore | | | | | | | |
| Bearing Type on Output | | | | | | | |
| Ball Bearing | | ■ | ■ | ■ | | ■ | ■ |
| Tapered Roller Bearing | | | | | ■ | ■ | ■ |
| Cross Roller Bearing | | | | | | | |
| Performance Specification | | | | | | | |
| Radial Load | | | Ordinary | Ordinary | Excellent | Excellent | Ordinary |
| Thrust Load | | | Ordinary | Ordinary | Excellent | Excellent | Ordinary |
| Backlash Rating | < 1 arc-min | | | | | | |
| | ≤ 2 arc-min | | | | | | |
| | ≤ 3 arc-min | ■ | | ■ | ■ | ■ | |
| | ≤ 5 arc-min | ■ | ■ | | | | |
| | ≤ 6 arc-min | | | | | | ■ |
| | ≤ 8 arc-min | | | | | | |
| | ≤ 9 arc-min | | | | | | |
| | ≤ 10 arc-min | | | | | | |
| ≤ 11 arc-min | | | | | | | |
| ≤ 15 arc-min | ■ | | | | | | |
| ≤ 30 arc-min | | | | | | | |
| Torsional Rigidity | | Ordinary | Ordinary | Ordinary | Excellent | Excellent | Excellent |
| Efficiency | | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |

| | |  |  |  |  |  |  |
|------------------------------------|--------------|---|---|--|---|---|---|
| Product Series | | NEV | EVL | EVB | EVS | STH | STR |
| Catalog Page | | 224 | 244 | 284 | 324 | 370 | 378 |
| Axis of Orientation | | Right-angle | Right-angle | Right-angle | Right-angle | Off-set rotary stage | Right-angle |
| Gear Description | | Planetary helical | Spiral bevel/Planetary | Spiral bevel/Planetary | Spiral bevel/Planetary | Planetary w/ Rotary stage | Roller gear/cam mechanism |
| Frame | Smallest | B (60mm) | 070 | 060 | 060 | 052 (B frame) | 040 |
| | Largest | E (170mm) | 235 | 220 | 240 | 078 (C frame) | 240 |
| | Variety | 4 | 6 | 6 | 7 | 2 | 7 |
| Ratio | Minimum | 3 | 3 | 3 | 3 | 12 | 15 |
| | Maximum | 81 | 100 | 100 | 100 | 324 | Various* |
| | Variety | 9 | 22 | 22 | 22 | 9 | Various* |
| Installation | | | | | | | |
| Rounded, Tapping Holes on Casing | | | ■ | | | | |
| Square, Through Holes on Casing | | | | ■ | ■ | ■ | ■* |
| Rounded, Through Holes on Casing | | ■ | | | | | |
| Lubrication | | | | | | | |
| Grease | | | ■ | ■ | ■ | ■ | ■ |
| Oil | | | | | | | |
| Input | | | | | | | |
| Direct Clamp | | ■ | ■ | ■ | ■ | ■ | ■* |
| Keyed Shaft | | | | | | | |
| Output | | | | | | | |
| Smooth Shaft with Tapping Hole | | ■ | ■ | ■ | ■ | | |
| Shaft with Tapping Hole and Keyway | | ■ | ■ | ■ | ■ | | |
| Flanged Connection | | | | | | | |
| Flange with Hollow Bore | | ■ | | | | ■ | ■ |
| Bearing Type on Output | | | | | | | |
| Ball Bearing | | ■ | ■ | ■ | | | |
| Tapered Roller Bearing | | | | | ■ | | |
| Cross Roller Bearing | | | | | | ■ | ■ |
| Performance Specification | | | | | | | |
| Radial Load | | Ordinary | Ordinary | Ordinary | Excellent | Ordinary | Excellent |
| Thrust Load | | Ordinary | Ordinary | Ordinary | Excellent | Excellent | Excellent |
| Backlash Rating | < 1 arc-min | | | | | | |
| | ≤ 2 arc-min | | | | | ■ | |
| | ≤ 3 arc-min | | | | | | |
| | ≤ 5 arc-min | | | | | ■ | |
| | ≤ 6 arc-min | | ■ | ■ | ■ | | |
| | ≤ 8 arc-min | | | | | | |
| | ≤ 9 arc-min | | ■ | ■ | ■ | | |
| | ≤ 10 arc-min | | | | | ■ | |
| | ≤ 11 arc-min | | | | | | |
| | ≤ 15 arc-min | | | | | | |
| | ≤ 30 arc-min | ■ | | | | | |
| Torsional Rigidity | | Ordinary | Ordinary | Ordinary | Excellent | Ordinary | Excellent |
| Efficiency | | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |

NOTE: *(STR) motor connection to VRB/EVB reducer

***(ER) several mounting styles available

SHIMPO ABLE Gear Reducers



Industrial Areas of Expertise



Machine Tool and Metal Forming

A selection of robust and durable speed reducers, both planetary and cycloidal, for heavier duty or high shock load applications. Many choices for the different levels of precision, torque ratings, and mounting options required on the different axes of movement.



Custom Assembly and Test Automation

A wide variety of frame sizes and ratios are available for immediate delivery to solve any inertia matching application within turn-key projects. The hollow-bore rotary products and planetary reducers with high torsional rigidity characteristics are ideal for many indexing applications.



Packaging and Filling Machinery

An assortment of inline and right angle speed reducers at different price points, depending on the specifications needed. For the OEM, this provides ideal, cost-effective, gear reduction solutions for exported packaging equipment or applications where you are transitioning from induction motor or hydraulics to servo motor technology.

Sold & Serviced By: **ELECTROMATE**

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com



Printing and Converting Equipment

Our reducers are designed to minimize the heat generated, and they are therefore capable of operating at higher speeds and within continuous duty environments. An assortment of size and ratio combinations are available that allow proper selection to maximize operating efficiency for varying cycle speeds.



Medical and Health Care Related Systems

We offer extremely accurate positioning characteristics and high quality gear reducers that maintain a level of performance consistency required in medical applications. Our inline speed reducers are ideal for commercial equipment applications involving pumping, mobile equipment, and smooth positioning.



Semiconductor and Circuit Manufacturing

A broad offering of high precision, clean room friendly planetary and hollow-bore rotary reducers that are preferable over belt drives and other reduction methods that can introduce contamination. Custom coatings and materials are available for OEM applications when necessary for corrosive chamber environments and different clean room class

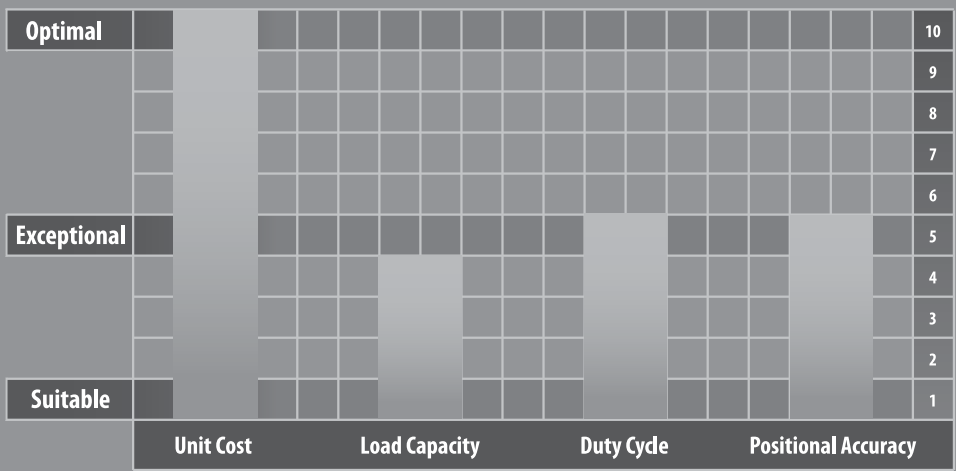
Sold & Serviced By:
ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRSF-SERIES

The intelligent selection for a higher performance planetary gearbox at an ultimate value for standard duty motion control applications. The VRSF utilizes a lightweight aluminum frame, helical cut gear, and bearing span that provides the best level of precision and torque carrying capacity in its competitive class. The noise level generated by the VRSF is greatly reduced in comparison to any other competitor's economy class series that relies on spur gearing. The VRSF can be selected with one of three backlash levels – Standard backlash at 15 arc/min, Reduced backlash at 5 arc/min, and Precision backlash at 3 arc/min.

The series is available in four frame sizes (B, C, D, E) which has a peak output torque of 91 Nm across a variety of ratios. The VRSF is the ideal choice for OEMs manufacturing in larger volume and where accuracy is important and duty cycle is not overly extreme. The VRSF has been very popular in applications such as mobile robotics, standard packaging machinery, medical equipment, and other types of enclosed food processing applications.





VRSF-SERIES

- Quiet operation: Helical cut gears contribute to reduced vibration and noise
- Different precision levels available in order to choose the best fit and value
- High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- Adapter bushing connection: Enables a simple, effective attachment to most servo motors
- Extremely light weight aluminum body to reduce excess weight from your equipment
- Additional features include NEMA output flange options

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

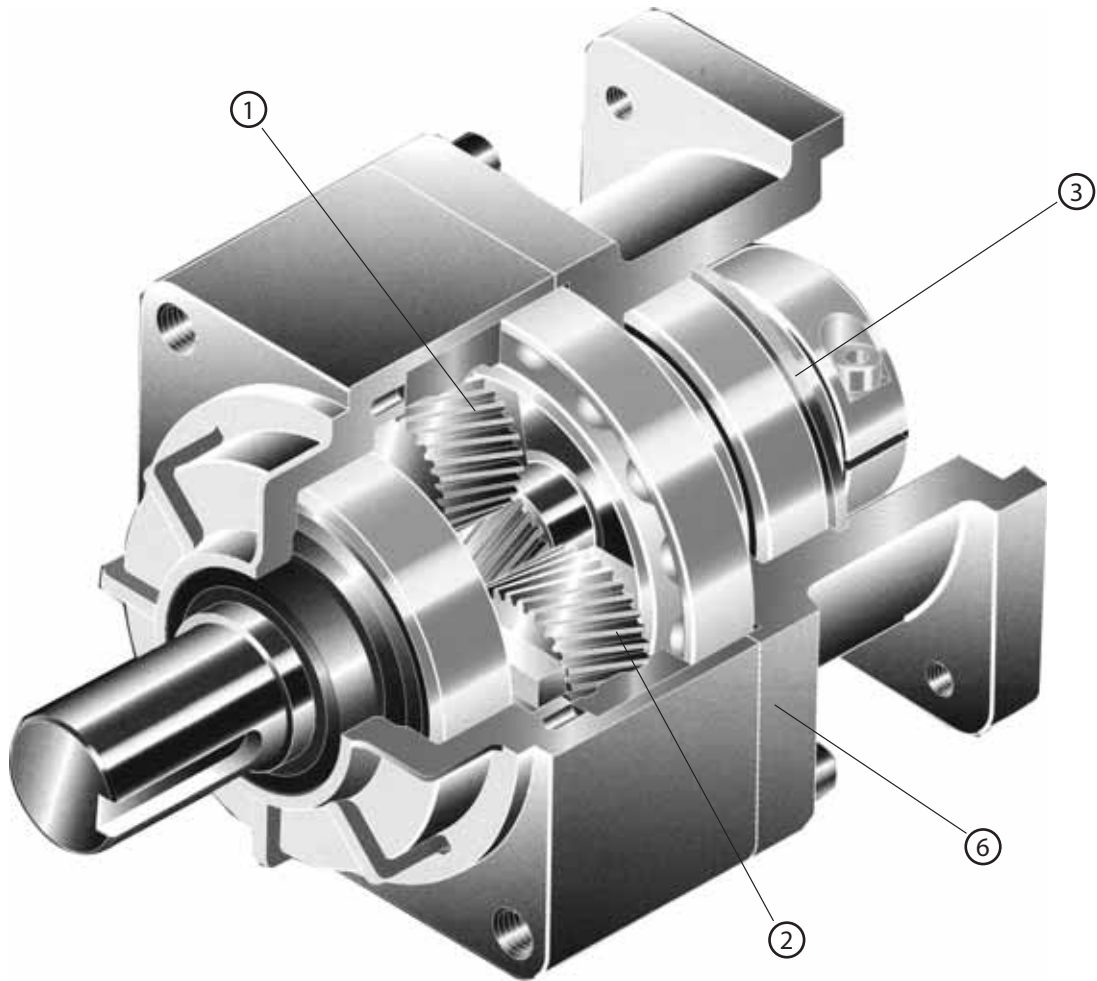
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRSF-SERIES Inline shaft

VRSF-Series- Features



- ① High-precision with backlash 0.05° (three arc-minutes), Low-backlash 0.08° (five arc-minutes) or less certified
- ② Smooth rotation and less pulsation due to utilizing helical gearing
- ③ Maintenance free with long-life grease, the sealed structure allows for mounting in any orientation
- ④ Every possible countermeasure against oil leakage taken: Including impregnation of the case and air leak test
- ⑤ IP65 rating extremely popular in washdown and food grade environments
- ⑥ Various optional features allowed, such as different coatings, plating, and grease varieties

VRSF-Series – Model Code

VR S F - 15 C - 19HB16

Mount code (*1)

Reducer frame size: B, C, D, E

Ratio
1stage: 3, 5, S9
2stage: 15, 20, 25, 35, 45, 81

Backlash specification
Symbol: Standard
PB: High-precision
LB: Low-backlash

Backlash*

| Frame Size | VR-□ (Standard) | VR-LB (Low-Backlash) | VR-PB (High-Precision) |
|----------------|------------------------|-------------------------|------------------------|
| B frame | 0.25° (15 arc-minutes) | 0.166° (10 arc-minutes) | 0.05° (3 arc-minutes) |
| C frame | 0.25° (15 arc-minutes) | 0.08° (5 arc-minutes) | 0.05° (3 arc-minutes) |
| D frame | 0.25° (15 arc-minutes) | 0.08° (5 arc-minutes) | 0.05° (3 arc-minutes) |
| E frame | 0.25° (15 arc-minutes) | 0.08° (5 arc-minutes) | 0.05° (3 arc-minutes) |

*Values obtained by multiplying the output shaft speed by a load of ±5% of allowable output torque.

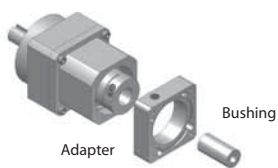
Output specification F: F-flange - Installation style is not limited

Input selection Clamp collar (The motor shaft is provided without key-way, but can be used with a keyed motor shaft.)

Model name for ABLE reducer

* 1) Mount code varies depending on the motor.
Please refer to reducer selection tool or contact us for more information.

SHIMPO's adapter flange motor mounting methodology allows for nearly limitless motor mounting options

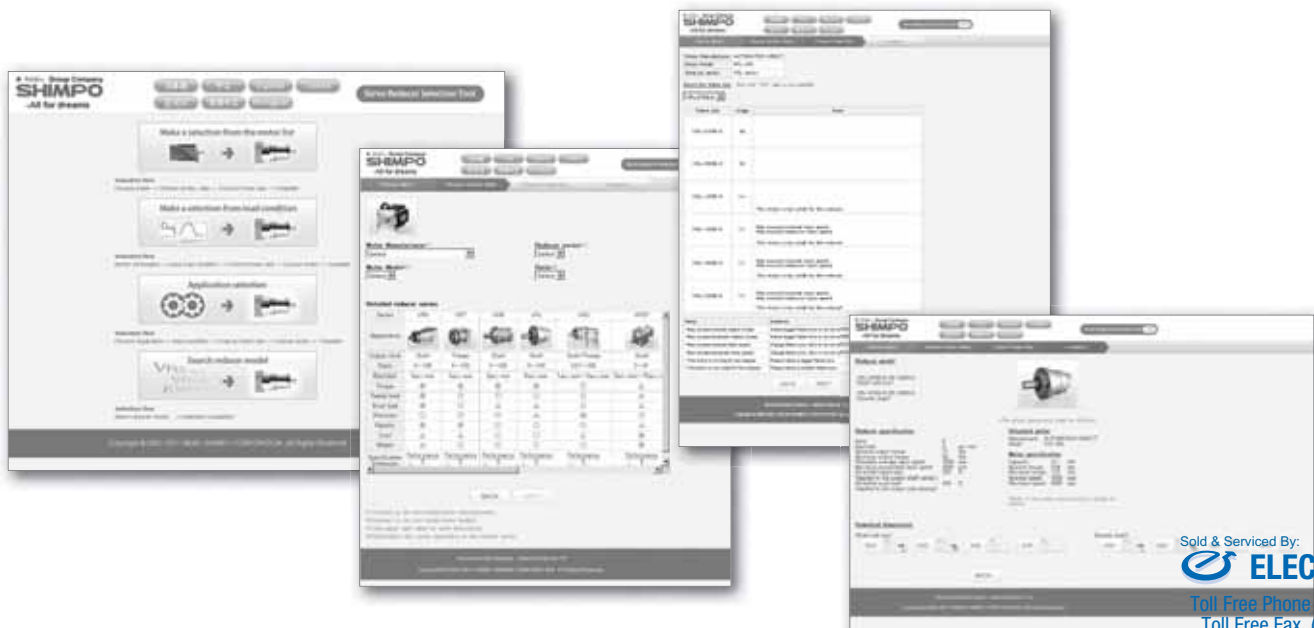


Adapter Bushing

■ Output shaft tapping
B frame: M5 × 10 C frame: M6 × 12 D frame: M8 × 16 E frame: M10 × 20

Metric and NEMA Output Flange

Refer to page 30-31 for Metric and NEMA Output Flange



VRSF B-Frame – 1-Stage and 2-Stage Specifications

| Frame Size | B | | | | | | | | |
|---|----------------------|------|-----------|-------|-------|-----------|-------|-------|-------|
| Stage | 1-Stage | | | | | 2-Stage | | | |
| Ratio | Units | Note | 3 | 5 | 9 | 15 | 20 | 25 | 35 |
| Nominal Output Torque | [Nm] | -- | 3.43 | 2.84 | 2.35 | 4.02 | 5.00 | 6.27 | 3.84 |
| Maximum Acceleration Torque | [Nm] | -- | 10.3 | 8.53 | 7.25 | 12.2 | 15.0 | 19.0 | 11.5 |
| Emergency Stop Torque | [Nm] | -- | -- | -- | -- | -- | -- | -- | -- |
| Nominal Input Speed | [rpm] | -- | 3000 | | | 3000 | | | |
| Maximum Input Speed | [rpm] | *1 | 5000 | | | 5000 | | | |
| No Load Running Torque | [Nm] | -- | 0.119 | | | 0.048 | | | |
| Permitted Radial Load | [N] | *2 | 392 | 490 | 588 | 784 | 804 | 882 | 882 |
| Permitted Axial Load | [N] | *3 | 196 | 245 | 294 | 392 | 402 | 441 | 441 |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | *4 | 0.081 | 0.059 | 0.052 | 0.057 | 0.056 | 0.056 | 0.052 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | *4 | 0.150 | 0.130 | 0.120 | 0.130 | 0.130 | 0.130 | 0.120 |
| Efficiency | [%] | -- | 90 | | | 85 | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 0.8 | | | 0.8 | | | |
| Backlash (Standard) | [Arc-min] | -- | ≤ 15 | | | ≤ 15 | | | |
| Backlash (Low) | [Arc-min] | -- | ≤ 10 | | | ≤ 10 | | | |
| Backlash (Precision) | [Arc-min] | -- | ≤ 3 | | | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 72 | | | ≤ 65 | | | |
| Protection Class | -- | -- | IP65 | | | IP65 | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | 0-40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | 90 | | | |
| Weight ($\leq \emptyset 8$) | [kg] | *5 | 0.58 | | | 0.75 | | | |
| Weight ($\leq \emptyset 14$) | [kg] | *5 | 0.7 | | | 0.86 | | | |

- *1) Nominal input speed is 3,000 rpm or less
- *2) Permitted radial load is measured at the middle of the output shaft
- *3) Permitted thrust load is measured at the center of the output shaft
- *4) The moment of inertia is reflected to the input shaft of the reducer
- *5) The weight varies slightly depending on the input bore size and reduction ratio

Refer to page 30-31 for Metric and NEMA Output Flange

VRSF C-Frame – 1-Stage and 2-Stage Specifications

| Frame Size | C | | | | | | | | | | |
|---|----------------------|------|-----------|-------|-------|-----------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | 2-Stage | | | | | |
| Ratio | Units | Note | 3 | 5 | 9 | 15 | 20 | 25 | 35 | 45 | 81 |
| Nominal Output Torque | [Nm] | -- | 6.86 | 11.5 | 9.7 | 16.2 | 21.1 | 26.4 | 15.5 | 9.5 | 9.7 |
| Maximum Acceleration Torque | [Nm] | -- | 20.6 | 34.3 | 29.2 | 48.6 | 63.3 | 79.2 | 46.6 | 28.6 | 29.2 |
| Emergency Stop Torque | [Nm] | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nominal Input Speed | [rpm] | -- | 3000 | | | 3000 | | | | | |
| Maximum Input Speed | [rpm] | *1 | 5000 | | | 5000 | | | | | |
| No Load Running Torque | [Nm] | -- | 0.29 | | | 0.19 | | | | | |
| Permitted Radial Load | [N] | *2 | 784 | 980 | 1180 | 1470 | 1570 | 1670 | 1670 | 1670 | 1670 |
| Permitted Axial Load | [N] | *3 | 392 | 490 | 588 | 735 | 785 | 833 | 833 | 833 | 833 |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | *4 | -- | -- | -- | 0.077 | 0.070 | 0.062 | 0.055 | 0.053 | 0.052 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | *4 | 0.630 | 0.380 | 0.300 | 0.150 | 0.140 | 0.130 | 0.130 | 0.120 | 0.120 |
| -- | -- | *4 | 1.100 | 0.880 | 0.800 | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | 85 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 3 | | | 3 | | | | | |
| Backlash (Standard) | [Arc-min] | -- | ≤ 15 | | | ≤ 15 | | | | | |
| Backlash (Low) | [Arc-min] | -- | ≤ 5 | | | ≤ 5 | | | | | |
| Backlash (Precision) | [Arc-min] | -- | ≤ 3 | | | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 72 | | | ≤ 65 | | | | | |
| Protection Class | -- | -- | IP 65 | | | IP65 | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | 0-40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | 90 | | | | | |
| Weight ($\leq \varnothing 8$) | [kg] | *5 | -- | | | 1.8 | | | | | |
| Weight ($\leq \varnothing 14$) | [kg] | *5 | 1.8 | | | 1.9 | | | | | |
| Weight ($\leq \varnothing 19$) | -- | -- | 2.2 | | | -- | | | | | |

*1) Nominal input speed is 3,000 rpm or less

*2) Permitted radial load is measured at the middle of the output shaft

*3) Permitted thrust load is measured at the center of the output shaft

*4) The moment of inertia is reflected to the input shaft of the reducer

*5) The weight varies slightly depending on the input bore size and reduction ratio

Refer to page 30-31 for Metric and NEMA Output Flange

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRSF D-Frame – 1-Stage and 2-Stage Specifications

| Frame Size | D | | | | | | | | | | |
|---|----------------------|------|-----------|------|------|-----------|------|------|------|------|------|
| Stage | 1-Stage | | | | | 2-Stage | | | | | |
| Ratio | Units | Note | 3 | 5 | 9 | 15 | 20 | 25 | 35 | 45 | 81 |
| Nominal Output Torque | [Nm] | -- | 18.3 | 23.5 | 18.2 | 30.4 | 40.6 | 50.7 | 37 | 28.3 | 17.8 |
| Maximum Acceleration Torque | [Nm] | -- | 54.9 | 70.6 | 54.7 | 91.2 | 122 | 152 | 111 | 85.2 | 53.5 |
| Emergency Stop Torque | [Nm] | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nominal Input Speed | [rpm] | -- | 3000 | | | 3000 | | | | | |
| Maximum Input Speed | [rpm] | *1 | 5000 | | | 5000 | | | | | |
| No Load Running Torque | [Nm] | -- | 0.51 | | | 0.26 | | | | | |
| Permitted Radial Load | [N] | *2 | 882 | 1080 | 1470 | 1760 | 1910 | 2060 | 2060 | 2060 | 2060 |
| Permitted Axial Load | [N] | *3 | 441 | 539 | 735 | 882 | 955 | 1030 | 1030 | 1030 | 1030 |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | *4 | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | *4 | 1.30 | 0.59 | 0.38 | 0.37 | 0.35 | 0.34 | 0.30 | 0.29 | 0.29 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | *4 | 1.80 | 1.10 | 0.90 | 0.86 | 0.84 | 0.83 | 0.79 | 0.78 | 0.77 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | *4 | 3.60 | 2.90 | 2.70 | 2.70 | 2.70 | 2.70 | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | 85 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 6 | | | 6 | | | | | |
| Backlash (Standard) | [Arc-min] | -- | ≤ 15 | | | ≤ 15 | | | | | |
| Backlash (Low) | [Arc-min] | -- | ≤ 5 | | | ≤ 5 | | | | | |
| Backlash (Precision) | [Arc-min] | -- | ≤ 3 | | | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 72 | | | ≤ 65 | | | | | |
| Protection Class | -- | -- | IP65 | | | IP65 | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | 0-40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | 90 | | | | | |
| Weight ($\leq \emptyset 8$) | [kg] | *5 | -- | | | 2.8 | | | | | |
| Weight ($\leq \emptyset 14$) | [kg] | *5 | 2.8 | | | 3.3 | | | | | |
| Weight ($\leq \emptyset 19$) | [kg] | *5 | 3.2 | | | 3.7 | | | | | |
| Weight ($\leq \emptyset 28$) | [kg] | *5 | 4.0 | | | 4.8 | | | | | |

- *1) Nominal input speed is 3,000 rpm or less
- *2) Permitted radial load is measured at the middle of the output shaft
- *3) Permitted thrust load is measured at the center of the output shaft
- *4) The moment of inertia is reflected to the input shaft of the reducer
- *5) The weight varies slightly depending on the input bore size and reduction ratio

Refer to page 30-31 for Metric and NEMA Output Flange

VRSF E-Frame – 1-Stage and 2-Stage Specifications

| Frame Size | E | | | | | | | | | | |
|---|----------------------|------|-----------|-------|-------|-----------|-------|-------|------|------|------|
| Stage | 1-Stage | | | | | 2-Stage | | | | | |
| Ratio | Units | Note | 3 | 5 | 9 | 15 | 20 | 25 | 35 | 45 | 81 |
| Nominal Output Torque | [Nm] | -- | 44.1 | 56.8 | 73.5 | 91.4 | 78.4 | 65.4 | 71 | 91.3 | 43.3 |
| Maximum Acceleration Torque | [Nm] | -- | 132 | 171 | 221 | 274 | 235 | 196 | 213 | 274 | 130 |
| Emergency Stop Torque | [Nm] | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nominal Input Speed | [rpm] | -- | 3000 | | | 3000 | | | | | |
| Maximum Input Speed | [rpm] | *1 | 5000 | | | 5000 | | | | | |
| No Load Running Torque | [Nm] | -- | 1.12 | | | 0.62 | | | | | |
| Permitted Radial Load | [N] | *2 | 1370 | 1670 | 1960 | 2350 | 2500 | 2650 | 3430 | 3520 | 3530 |
| Permitted Axial Load | [N] | *3 | 686 | 833 | 980 | 1180 | 1250 | 1320 | 1715 | 1760 | 1765 |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | *4 | -- | -- | 0.61 | 0.63 | 0.56 | 0.53 | 0.40 | 0.35 | 0.34 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | *4 | 4.40 | 1.90 | 1.20 | 1.10 | 1.10 | 1.00 | 0.90 | 0.85 | 0.84 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | *4 | 6.20 | 3.70 | 2.90 | 3.30 | 3.20 | 3.20 | 2.80 | 2.70 | 2.70 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | *4 | 14.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | 85 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 20 | | | 20 | | | | | |
| Backlash (Standard) | [Arc-min] | -- | ≤ 15 | | | ≤ 15 | | | | | |
| Backlash (Low) | [Arc-min] | -- | ≤ 5 | | | ≤ 5 | | | | | |
| Backlash (Precision) | [Arc-min] | -- | ≤ 3 | | | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 75 | | | ≤ 75 | | | | | |
| Protection Class | -- | -- | IP65 | | | IP65 | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | 0-40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | 90 | | | | | |
| Weight ($\leq \emptyset 8$) | [kg] | *5 | 6.1 | | | 7.1 | | | | | |
| Weight ($\leq \emptyset 14$) | [kg] | *5 | 6.5 | | | 7.5 | | | | | |
| Weight ($\leq \emptyset 19$) | [kg] | *5 | 7.4 | | | 9.3 | | | | | |
| Weight ($\leq \emptyset 28$) | [kg] | *5 | 9.8 | | | 11.7 | | | | | |

*1) Nominal input speed is 3,000 rpm or less

*2) Permitted radial load is measured at the middle of the output shaft

*3) Permitted thrust load is measured at the center of the output shaft

*4) The moment of inertia is reflected to the input shaft of the reducer

*5) The weight varies slightly depending on the input bore size and reduction ratio

Refer to page 30-31 for Metric and NEMA Output Flange

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

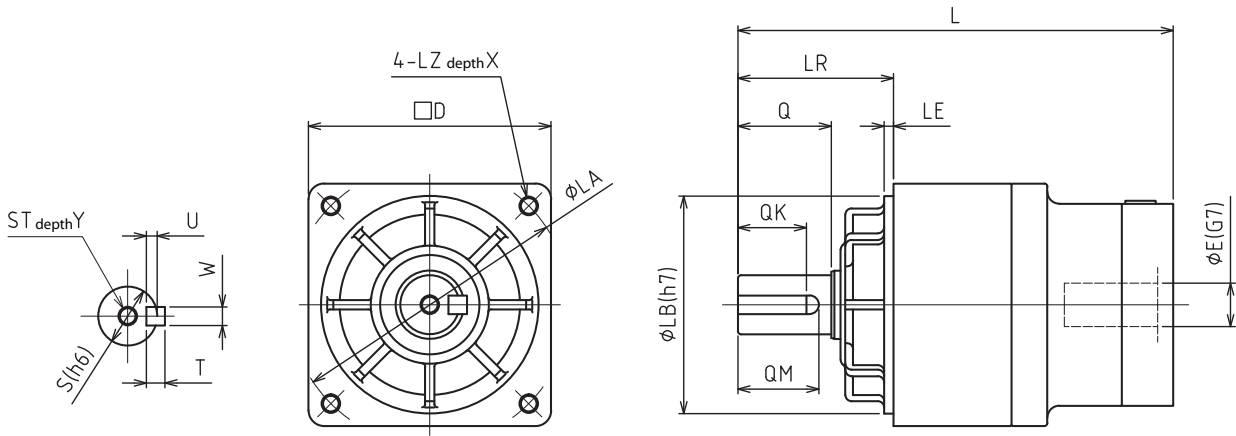
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRSF-SERIES Inline shaft

VRSF B-Frame – 1-Stage and 2-Stage Dimensions



| Frame Size | Ratio* | Input Bore Dia. E** | Dimensions | | | | | | | | | | | | | | | |
|------------|---------|------------------------|------------|----|----|----|----|----|----|----|-------|---|----|----|----|----|----|----|
| | | | L*** | LR | S | ST | Y | Q | QM | QK | W×U | T | D | LB | LE | LA | LZ | X |
| B | 1-Stage | ≅ φ8 | 104.5 | 32 | 12 | M5 | 10 | 20 | 18 | 16 | 4×2.5 | 4 | 52 | 50 | 3 | 60 | M5 | 12 |
| | | ≅ φ14 | 107.5 | | | | | | | | | | | | | | | |
| | 2-Stage | ≅ φ8 | 115.5 | | | | | | | | | | | | | | | |
| | | ≅ φ14 | 118.5 | | | | | | | | | | | | | | | |

*1) Single reduction : 1/3 - 1/S9, Double reduction : 1/15 - 1/81 (1/15 - 1/35 for B frame)

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

 **ELECTROMATE**

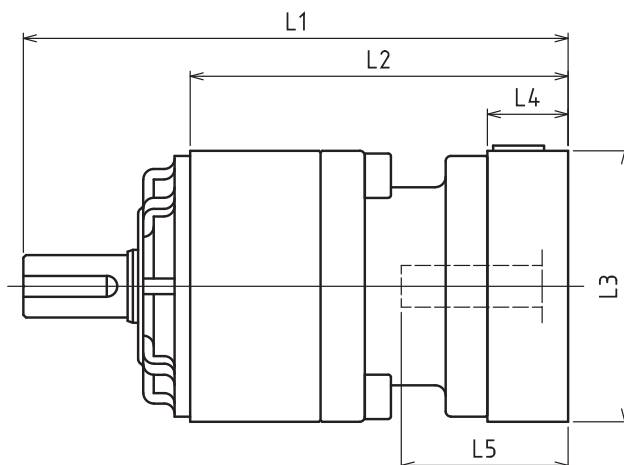
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRSF B-Frame – 1-Stage and 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | 2-Stage | | | | |
|--|-------------------------------|---------|------|------|------|----|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 | L1 | L2 | L3 | L4 | L5 |
| VRSF-□-□B-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 104.5 | 72.5 | □52 | 15.5 | 32 | 115.5 | 83.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 109.5 | 77.5 | □52 | 20.5 | 37 | 120.5 | 88.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 104.5 | 72.5 | □60 | 15.5 | 32 | 115.5 | 83.5 | □60 | 15.5 | 32 |
| | BC·BF | 109.5 | 77.5 | □60 | 20.5 | 37 | 120.5 | 88.5 | □60 | 20.5 | 37 |
| | CA | 109.5 | 77.5 | □70 | 20.5 | 37 | 120.5 | 88.5 | □70 | 20.5 | 37 |
| VRSF-□-□B-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 107.5 | 75.5 | □65 | 16.5 | 35 | 118.5 | 86.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 112.5 | 80.5 | □65 | 21.5 | 40 | 123.5 | 91.5 | □65 | 21.5 | 40 |
| | BL | 117.5 | 85.5 | □65 | 26.5 | 45 | 128.5 | 96.5 | □65 | 26.5 | 45 |
| | CA·CC | 107.5 | 75.5 | □70 | 16.5 | 35 | 118.5 | 86.5 | □70 | 16.5 | 35 |
| | CB | 112.5 | 80.5 | □70 | 21.5 | 40 | 123.5 | 91.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 107.5 | 75.5 | □80 | 16.5 | 35 | 118.5 | 86.5 | □80 | 16.5 | 35 |
| | DE·DL | 112.5 | 80.5 | □80 | 21.5 | 40 | 123.5 | 91.5 | □80 | 21.5 | 40 |
| | DG·DK | 117.5 | 85.5 | □80 | 26.5 | 45 | 128.5 | 96.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 107.5 | 75.5 | □90 | 16.5 | 35 | 118.5 | 86.5 | □90 | 16.5 | 35 |
| | EJ·EM | 112.5 | 80.5 | □90 | 21.5 | 40 | 123.5 | 91.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 117.5 | 85.5 | □90 | 26.5 | 45 | 128.5 | 96.5 | □90 | 26.5 | 45 |
| | FA | 107.5 | 75.5 | □100 | 16.5 | 35 | 118.5 | 86.5 | □100 | 16.5 | 35 |
| | FB | 107.5 | 75.5 | □115 | 16.5 | 35 | 118.5 | 86.5 | □115 | 16.5 | 35 |

*1) Single reduction : 1/3 - 1/5, Double reduction : 1/15 - 1/35

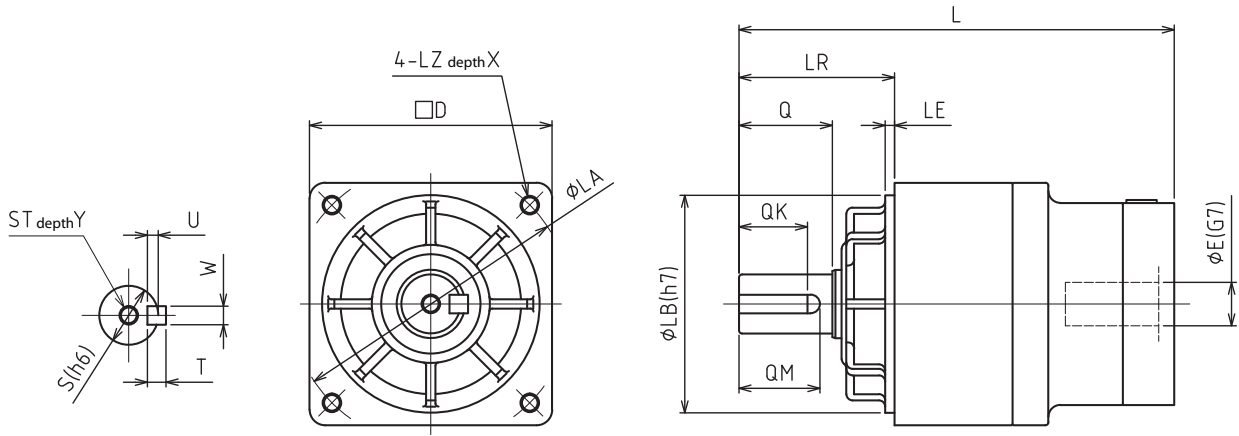
*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRSF-SERIES Inline shaft

VRSF C-Frame – 1-Stage and 2-Stage Dimensions

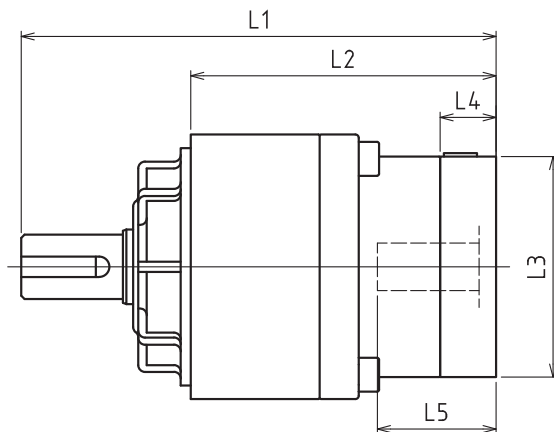


| Frame Size | Ratio* | Input Bore Dia. E** | Dimensions | | | | | | | | | | | | | | | |
|------------|---------|------------------------|------------|----|----|----|----|----|----|----|-------|---|----|----|----|----|----|----|
| | | | L*** | LR | S | ST | Y | Q | QM | QK | W×U | T | D | LB | LE | LA | LZ | X |
| C | 1-Stage | ≅ φ14 | 140 | 50 | 19 | M6 | 12 | 30 | 26 | 22 | 6×3.5 | 6 | 78 | 70 | 3 | 90 | M6 | 20 |
| | | ≅ φ19 | 156 | | | | | | | | | | | | | | | |
| | 2-Stage | ≅ φ8 | 147.5 | | | | | | | | | | | | | | | |
| | | ≅ φ14 | 150.5 | | | | | | | | | | | | | | | |

*1) Single reduction : 1/3 - 1/59, Double reduction : 1/15 - 1/81 (1/15 - 1/35 for B frame)

*2) Bushing will be inserted to adapt to motor shaft

VRSF C-Frame – 1-Stage and 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | 2-Stage | | | | |
|--|-------------------------------|---------|------|------|------|----|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 | L1 | L2 | L3 | L4 | L5 |
| VRSF-□-□C-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | 147.5 | 97.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | 152.5 | 102.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- | 147.5 | 97.5 | □60 | 15.5 | 32 |
| | BC·BF | -- | -- | -- | -- | -- | 152.5 | 102.5 | □60 | 20.5 | 37 |
| | CA | -- | -- | -- | -- | -- | 152.5 | 102.5 | □70 | 20.5 | 37 |
| VRSF-□-□C-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 140 | 90 | □65 | 16.5 | 35 | 150.5 | 100.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 145 | 95 | □65 | 21.5 | 40 | 155.5 | 105.5 | □65 | 21.5 | 40 |
| | BL | 150 | 100 | □65 | 26.5 | 45 | 160.5 | 110.5 | □65 | 26.5 | 45 |
| | CA·CC | 140 | 90 | □70 | 16.5 | 35 | 150.5 | 100.5 | □70 | 16.5 | 35 |
| | CB | 145 | 95 | □70 | 21.5 | 40 | 155.5 | 105.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 140 | 90 | □80 | 16.5 | 35 | 150.5 | 100.5 | □80 | 16.5 | 35 |
| | DE·DL | 145 | 95 | □80 | 21.5 | 40 | 155.5 | 105.5 | □80 | 21.5 | 40 |
| | DG·DK | 150 | 100 | □80 | 26.5 | 45 | 160.5 | 110.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 140 | 90 | □90 | 16.5 | 35 | 150.5 | 100.5 | □90 | 16.5 | 35 |
| | EJ·EM | 145 | 95 | □90 | 21.5 | 40 | 155.5 | 105.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 150 | 100 | □90 | 26.5 | 45 | 160.5 | 110.5 | □90 | 26.5 | 45 |
| | FA | 140 | 90 | □100 | 16.5 | 35 | 150.5 | 100.5 | □100 | 16.5 | 35 |
| | FB | 140 | 90 | □115 | 16.5 | 35 | 150.5 | 100.5 | □115 | 16.5 | 35 |
| VRSF-□-□C-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 156 | 106 | □80 | 25 | 50 | -- | -- | -- | -- | -- |
| | DD | 166 | 116 | □80 | 35 | 60 | -- | -- | -- | -- | -- |
| | DE | 161 | 111 | □80 | 30 | 55 | -- | -- | -- | -- | -- |
| | EA | 161 | 111 | □90 | 30 | 55 | -- | -- | -- | -- | -- |
| | EB·ED | 156 | 106 | □90 | 25 | 50 | -- | -- | -- | -- | -- |
| | EC | 166 | 116 | □90 | 35 | 60 | -- | -- | -- | -- | -- |
| | FA | 156 | 106 | □100 | 25 | 50 | -- | -- | -- | -- | -- |
| | FB | 166 | 116 | □100 | 35 | 60 | -- | -- | -- | -- | -- |
| | GA·GC·GH | 161 | 111 | □115 | 30 | 55 | -- | -- | -- | -- | -- |
| | GB·GD·GJ | 156 | 106 | □115 | 25 | 50 | -- | -- | -- | -- | -- |
| | GE·GF | 166 | 116 | □115 | 35 | 60 | -- | -- | -- | -- | -- |
| | HA | 156 | 106 | □130 | 25 | 50 | -- | -- | -- | -- | -- |
| | HB | 171 | 121 | □130 | 40 | 65 | -- | -- | -- | -- | -- |
| | HC·HD·HE | 161 | 111 | □130 | 30 | 55 | -- | -- | -- | -- | -- |
| | JA | 166 | 116 | □150 | 35 | 60 | -- | -- | -- | -- | -- |
| JB | 171 | 121 | □150 | 40 | 65 | -- | -- | -- | -- | -- | |

*1) Single reduction : 1/3 - 1/59, Double reduction : 1/15 - 1/81

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and is updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

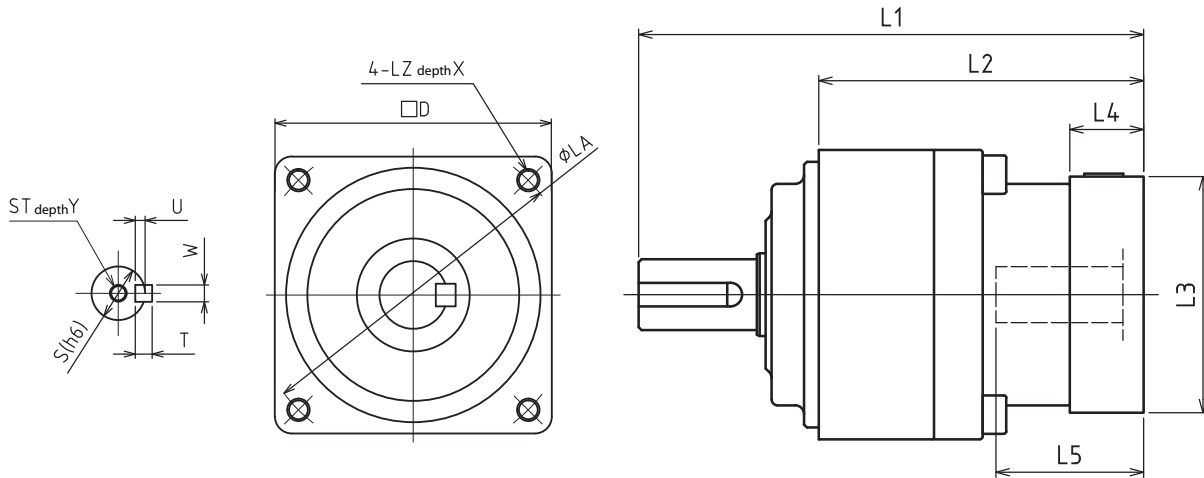
ELECTROMATE

Toll Free Phone (877) SERV098
and (877) SERV099

www.electromate.com
sales@electromate.com

VRSF-SERIES Inline shaft

VRSF D-Frame – 1-Stage and 2-Stage Dimensions



| Frame Size | Ratio* | Input Bore Dia. E** | Dimensions | | | | | | | | | | | | | | | |
|------------|---------|------------------------|------------|----|----|----|----|----|----|----|-----|---|----|----|----|-----|----|----|
| | | | L*** | LR | S | ST | Y | Q | QM | QK | W×U | T | D | LB | LE | LA | LZ | X |
| D | 1-Stage | ≅ φ14 | 155 | 61 | 24 | M8 | 16 | 40 | 35 | 30 | 8×4 | 7 | 98 | 90 | 5 | 115 | M8 | 20 |
| | | ≅ φ19 | 171 | | | | | | | | | | | | | | | |
| | | ≅ φ28 | 186 | | | | | | | | | | | | | | | |
| | 2-Stage | ≅ φ8 | 163 | | | | | | | | | | | | | | | |
| | | ≅ φ14 | 169 | | | | | | | | | | | | | | | |
| | | ≅ φ19 | 184 | | | | | | | | | | | | | | | |
| | | ≅ φ28 | 200.5 | | | | | | | | | | | | | | | |

*1) Single reduction : 1/3 - 1/59, Double reduction : 1/15 - 1/81 (1/15 - 1/35 for B frame)

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

 **ELECTROMATE**

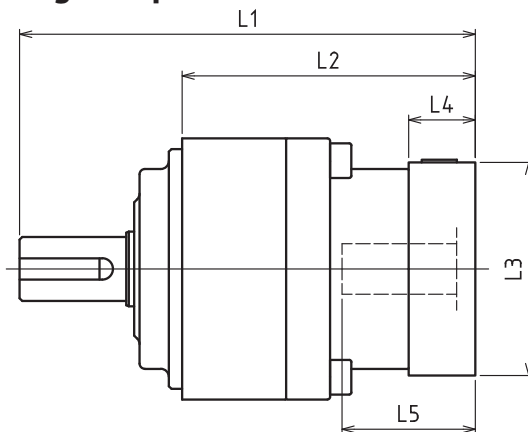
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRSF D-Frame – 1-Stage and 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | 2-Stage | | | | |
|--|-------------------------------|---------|-------|------|------|-------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 | L1 | L2 | L3 | L4 | L5 |
| VRSF-□-□D-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | 163 | 102 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | 168 | 107 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- | 163 | 102 | □60 | 15.5 | 32 |
| | CA | -- | -- | -- | -- | -- | 168 | 107 | □70 | 20.5 | 37 |
| VRSF-□-□D-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 155 | 94 | □65 | 16.5 | 35 | 169 | 108 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 160 | 99 | □65 | 21.5 | 40 | 174 | 113 | □65 | 21.5 | 40 |
| | CA·CC | 155 | 94 | □70 | 16.5 | 35 | 169 | 108 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 155 | 94 | □80 | 16.5 | 35 | 169 | 108 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 155 | 94 | □90 | 16.5 | 35 | 169 | 108 | □90 | 16.5 | 35 |
| | FA | 155 | 94 | □100 | 16.5 | 35 | 169 | 108 | □100 | 16.5 | 35 |
| | FB | 165 | 104 | □100 | 26.5 | 45 | 179 | 118 | □100 | 26.5 | 45 |
| VRSF-□-□D-19** (Input shaft bore ≤ φ19) | JA | 170 | 109 | □150 | 31.5 | 50 | 184 | 123 | □115 | 31.5 | 50 |
| | DA·DB·DC | 171 | 110 | □80 | 25 | 50 | 184 | 123 | □80 | 25 | 50 |
| | EB·ED | 171 | 110 | □90 | 25 | 50 | 184 | 123 | □90 | 25 | 50 |
| | FA | 171 | 110 | □100 | 25 | 50 | 184 | 123 | □100 | 25 | 50 |
| | FB | 181 | 120 | □100 | 35 | 60 | 194 | 133 | □100 | 35 | 60 |
| | GB·GD·GJ | 171 | 110 | □115 | 25 | 50 | 184 | 123 | □115 | 25 | 50 |
| | HA | 171 | 110 | □130 | 25 | 50 | 184 | 123 | □130 | 25 | 50 |
| | HB | 186 | 125 | □130 | 40 | 65 | 199 | 138 | □130 | 40 | 65 |
| | HC·HD·HE | 176 | 115 | □130 | 30 | 55 | 189 | 128 | □130 | 30 | 55 |
| VRSF-□-□D-28** (Input shaft bore ≤ φ28) | JA | 181 | 120 | □150 | 35 | 60 | 194 | 133 | □150 | 35 | 60 |
| | JB | 186 | 125 | □150 | 40 | 65 | 199 | 138 | □150 | 40 | 65 |
| | FA·FB·FC | 186 | 125 | □100 | 35 | 67 | 200.5 | 139.5 | □100 | 35 | 67 |
| | FD·FE | 181 | 120 | □100 | 30 | 62 | 195.5 | 134.5 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 186 | 125 | □115 | 35 | 67 | 200.5 | 139.5 | □115 | 35 | 67 |
| | HA·HC·HD | 186 | 125 | □130 | 35 | 67 | 200.5 | 139.5 | □130 | 35 | 67 |
| | HB | 196 | 135 | □130 | 45 | 77 | 210.5 | 149.5 | □130 | 45 | 77 |
| | HE | 201 | 140 | □130 | 50 | 82 | 215.5 | 154.5 | □130 | 50 | 82 |
| | HF | 181 | 120 | □130 | 30 | 62 | 195.5 | 134.5 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 186 | 125 | □150 | 35 | 67 | 200.5 | 139.5 | □150 | 35 | 67 |
| | JD | 206 | 145 | □150 | 55 | 87 | 220.5 | 159.5 | □150 | 55 | 87 |
| | JE | 210.5 | 149.5 | □150 | 45 | 77 | 210.5 | 149.5 | □150 | 45 | 77 |
| KA·KB | 186 | 125 | □180 | 35 | 67 | 200.5 | 139.5 | □180 | 35 | 67 | |
| | KD | 196 | 135 | □180 | 45 | 77 | 210.5 | 149.5 | □180 | 45 | 77 |

*1) Single reduction : 1/3 - 1/59, Double reduction : 1/15 - 1/81

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and is updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

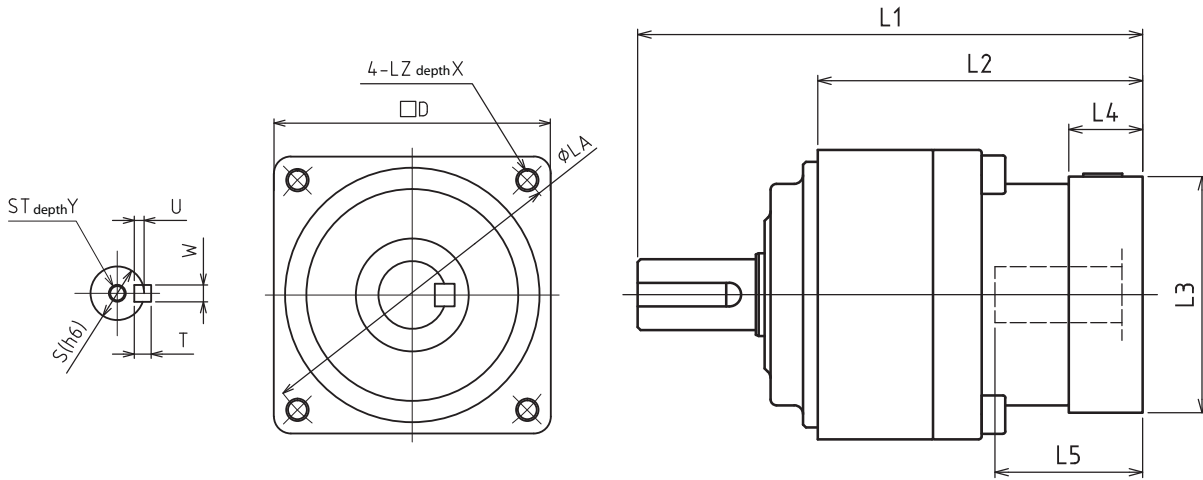
and (877) SERV099

www.electromate.com

sales@electromate.com

VRSF-SERIES Inline shaft

VRSF E-Frame – 1-Stage and 2-Stage Dimensions

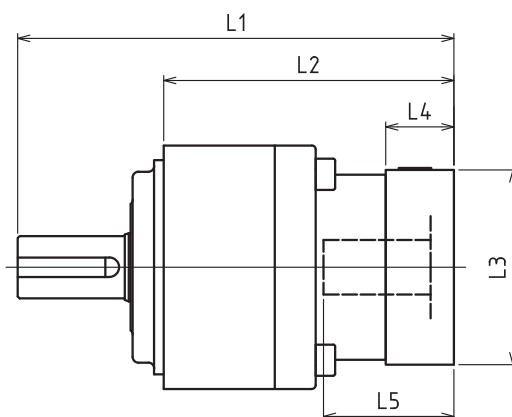


| Frame Size | Ratio* | Input Bore Dia. E** | Dimensions | | | | | | | | | | | | | | | |
|------------|---------|------------------------|------------|----|----|-----|----|----|----|----|------|---|-----|-----|----|-----|-----|----|
| | | | L*** | LR | S | ST | Y | Q | QM | QK | W×U | T | D | LB | LE | LA | LZ | X |
| E | 1-Stage | ≅ φ14 | 189 | 75 | 32 | M10 | 20 | 55 | 52 | 45 | 10×5 | 8 | 125 | 110 | 5 | 135 | M10 | 20 |
| | | ≅ φ19 | 198.5 | | | | | | | | | | | | | | | |
| | | ≅ φ28 | 224 | | | | | | | | | | | | | | | |
| | | ≅ φ38 | 240 | | | | | | | | | | | | | | | |
| | 2-Stage | ≅ φ14 | 210 | | | | | | | | | | | | | | | |
| | | ≅ φ19 | 225 | | | | | | | | | | | | | | | |
| | | ≅ φ28 | 246.5 | | | | | | | | | | | | | | | |
| | | ≅ φ38 | 261.5 | | | | | | | | | | | | | | | |

*1) Single reduction : 1/3 - 1/5₉, Double reduction : 1/15 - 1/81 (1/15 - 1/35 for B frame)

*2) Bushing will be inserted to adapt to motor shaft

VRSF E-Frame – 1-Stage and 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | 2-Stage | | | | |
|---|-------------------------------|---------|-------|------|------|-------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 | L1 | L2 | L3 | L4 | L5 |
| VRSF-□□E-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 189 | 114 | □65 | 16.5 | 35 | 210 | 135 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 194 | 119 | □65 | 21.5 | 40 | 215 | 140 | □65 | 21.5 | 40 |
| | CA•CC | 189 | 114 | □70 | 16.5 | 35 | 210 | 135 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 189 | 114 | □80 | 16.5 | 35 | 210 | 135 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 189 | 114 | □90 | 16.5 | 35 | 210 | 135 | □90 | 16.5 | 35 |
| | FA | 189 | 114 | □100 | 16.5 | 35 | 210 | 135 | □100 | 16.5 | 35 |
| | FB | 199 | 124 | □100 | 26.5 | 45 | 220 | 145 | □100 | 26.5 | 45 |
| VRSF-□□E-19** (Input shaft bore ≤ φ19) | JA | 204 | 129 | □150 | 31.5 | 50 | 225 | 150 | □150 | 31.5 | 50 |
| | DA•DB•DC | 198.5 | 123.5 | □80 | 25 | 50 | 225 | 150 | □80 | 25 | 50 |
| | EB•ED | 198.5 | 123.5 | □90 | 25 | 50 | 225 | 150 | □90 | 25 | 50 |
| | FA | 198.5 | 123.5 | □100 | 25 | 50 | 225 | 150 | □100 | 25 | 50 |
| | FB | 208.5 | 133.5 | □100 | 35 | 60 | 235 | 160 | □100 | 35 | 60 |
| | GB•GD•GJ | 198.5 | 123.5 | □115 | 25 | 50 | 225 | 150 | □115 | 25 | 50 |
| | HA | 198.5 | 123.5 | □130 | 25 | 50 | 225 | 150 | □130 | 25 | 50 |
| VRSF-□□E-28** (Input shaft bore ≤ φ28) | HB | 213.5 | 138.5 | □130 | 40 | 65 | 240 | 165 | □130 | 40 | 65 |
| | JA | 208.5 | 133.5 | □150 | 35 | 60 | 235 | 160 | □150 | 35 | 60 |
| | FA•FB•FC | 224 | 149 | □100 | 35 | 67 | 246.5 | 171.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 224 | 149 | □115 | 35 | 67 | 246.5 | 171.5 | □115 | 35 | 67 |
| | HA•HC•HD | 224 | 149 | □130 | 35 | 67 | 246.5 | 171.5 | □130 | 35 | 67 |
| | HB | 234 | 159 | □130 | 45 | 77 | 256.5 | 181.5 | □130 | 45 | 77 |
| | HF | 119 | 144 | □130 | 30 | 62 | 241.5 | 166.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 224 | 149 | □150 | 35 | 67 | 246.5 | 171.5 | □150 | 35 | 67 |
| | KA•KB•KE | 224 | 149 | □180 | 35 | 67 | 246.5 | 171.5 | □180 | 35 | 67 |
| | LA | 224 | 149 | □200 | 35 | 67 | 246.5 | 171.5 | □200 | 35 | 67 |
| VRSF-□□E-38** (Input shaft bore ≤ φ38) | LB | 234 | 159 | □200 | 45 | 77 | 256.5 | 181.5 | □200 | 45 | 77 |
| | MA | 224 | 149 | □220 | 35 | 67 | 246.5 | 171.5 | □220 | 35 | 67 |
| | MB | 234 | 159 | □220 | 45 | 77 | 256.5 | 181.5 | □220 | 45 | 77 |
| | HA | 240 | 165 | □130 | 45 | 82 | 261.5 | 186.5 | □130 | 45 | 82 |
| | HB•HE | 235 | 160 | □130 | 40 | 77 | 256.5 | 181.5 | □130 | 40 | 77 |
| | JA | 240 | 165 | □150 | 45 | 82 | 261.5 | 186.5 | □150 | 45 | 82 |
| | KA•KB•KC | 240 | 165 | □180 | 45 | 82 | 261.5 | 186.5 | □180 | 45 | 82 |
| KD | 275 | 200 | □180 | 80 | 117 | 296.5 | 221.5 | □180 | 80 | 117 | |
| KE | 255 | 180 | □180 | 60 | 97 | 276.5 | 201.5 | □180 | 60 | 97 | |
| MA•MB | 240 | 165 | □220 | 45 | 82 | 261.5 | 186.5 | □220 | 45 | 82 | |

*1) Single reduction : 1/3 - 1/59, Double reduction : 1/15 - 1/81

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and is updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

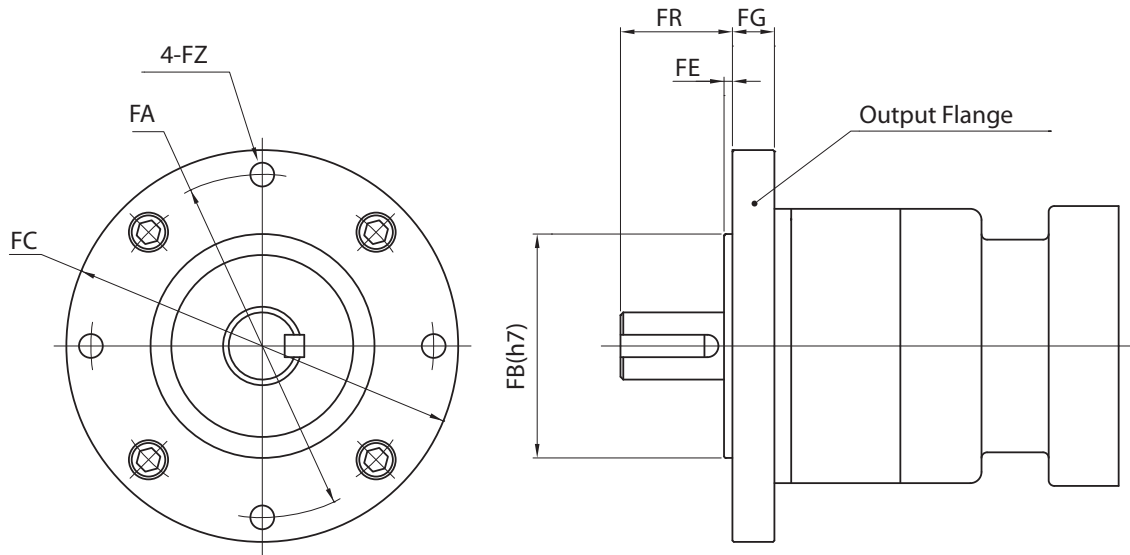
Toll Free Phone (877) SERV098

and (877) SERV099

www.electromate.com

sales@electromate.com

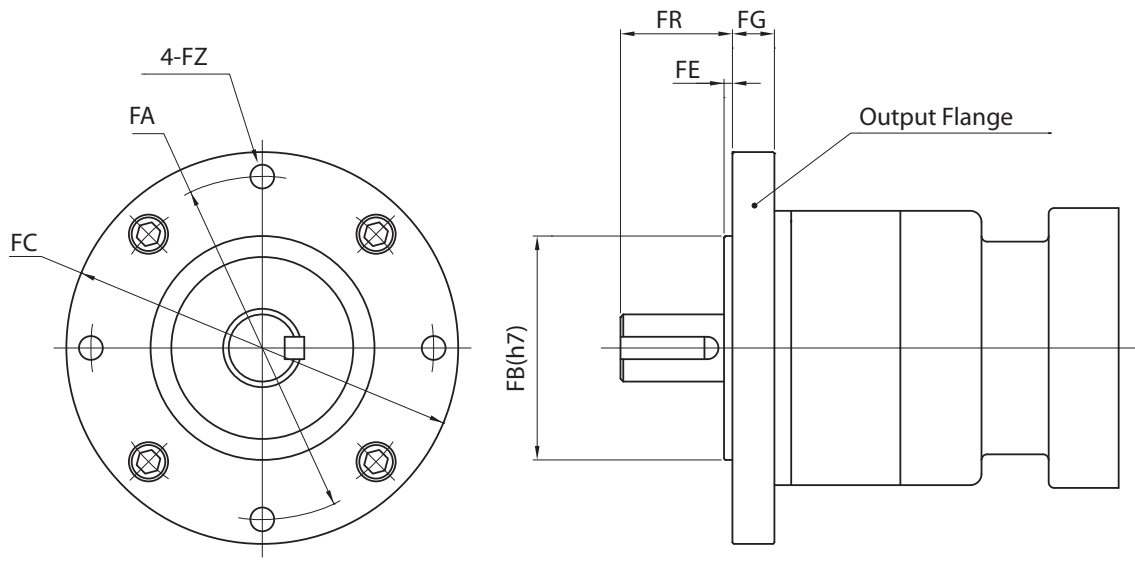
VRSF Optional Metric Output Flange



| Frame Size | | FG | FR | FE | FB | FC | FA | FZ |
|------------|------|-------|-------|-------|-------|-------|-------|-------|
| B | mm | 8 | 24 | 3 | 50 | 75 | 65 | 6 |
| | inch | 0.315 | 0.945 | 0.118 | 1.969 | 2.953 | 2.559 | 0.236 |
| C | mm | 12 | 33 | 3 | 72 | 110 | 95 | 7 |
| | inch | 0.472 | 1.299 | 0.118 | 2.835 | 4.331 | 3.74 | 0.276 |
| D | mm | 13 | 48 | 5 | 90 | 134 | 115 | 8.8 |
| | inch | 0.512 | 1.89 | 0.197 | 3.543 | 5.276 | 4.528 | 0.346 |

VRSF Optional NEMA Output Flange

VRSF



| Frame Size | | FG | FR | FE | FB | FC | FA | FZ |
|------------|------|-------|-------|-------|-------|-------|--------|-------|
| B | mm | 12 | 20 | 2 | 38.1 | 78 | 66.68 | 5.2 |
| | inch | 0.472 | 0.787 | 0.079 | 1.5 | 3.071 | 2.625 | 0.205 |
| C | mm | 12 | 30 | 2 | 73.02 | 110 | 98.43 | 5.6 |
| | inch | 0.472 | 1.181 | 0.079 | 2.876 | 4.331 | 3.875 | 0.22 |
| D | mm | 15 | 40 | 3 | 55.56 | 140 | 125.73 | 7.1 |
| | inch | 0.591 | 1.575 | 0.118 | 2.187 | 5.512 | 4.95 | 0.28 |
| E | mm | 20 | 55 | 3 | 114.3 | 168 | 149.23 | 10.2 |
| | inch | 0.787 | 2.165 | 0.118 | 4.5 | 6.614 | 5.875 | 0.402 |



VRL-SERIES

- Industry standard mounting dimensions
- Large variety of frame sizes and ratios
- Thread-in mounting style
- Best-In-class backlash (≤ 5 arc-min)
- Ships in 48 hours in standard frame sizes
- Assembled in the USA

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

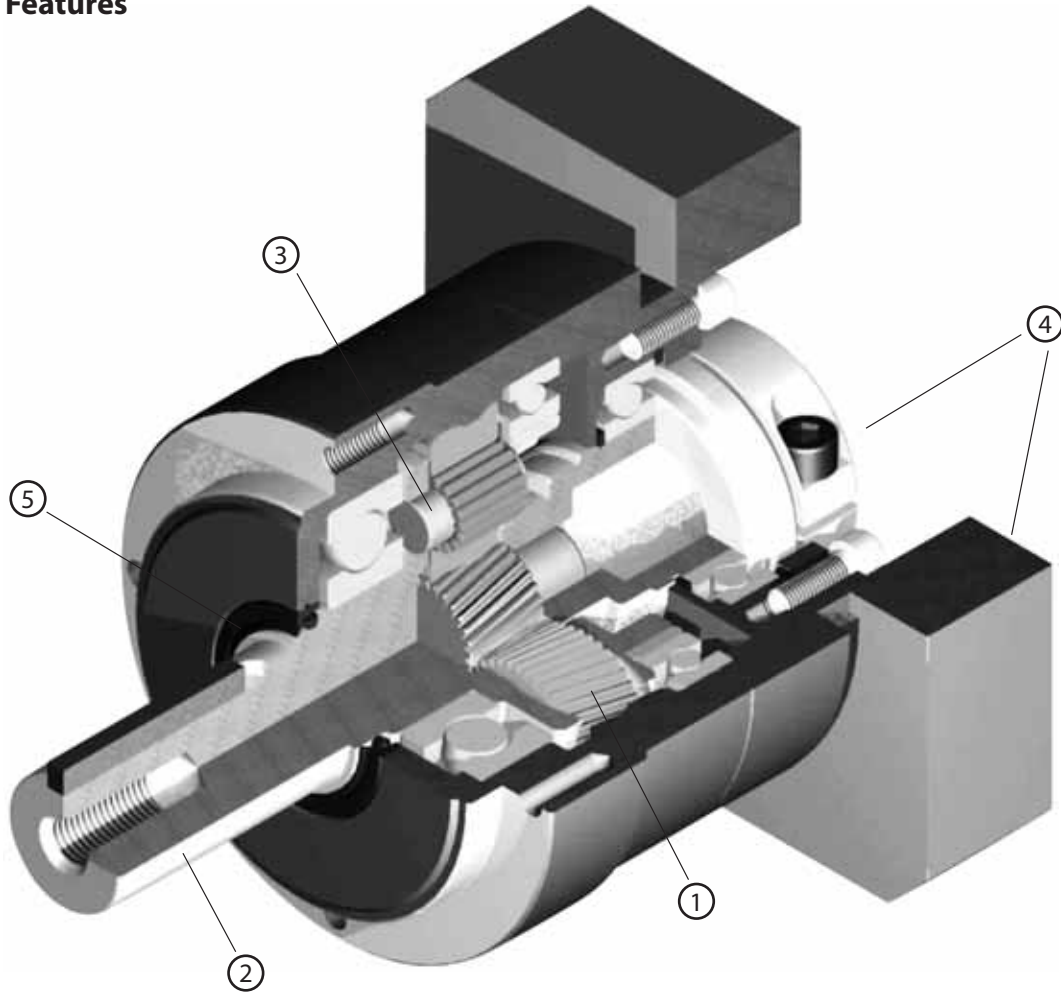
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

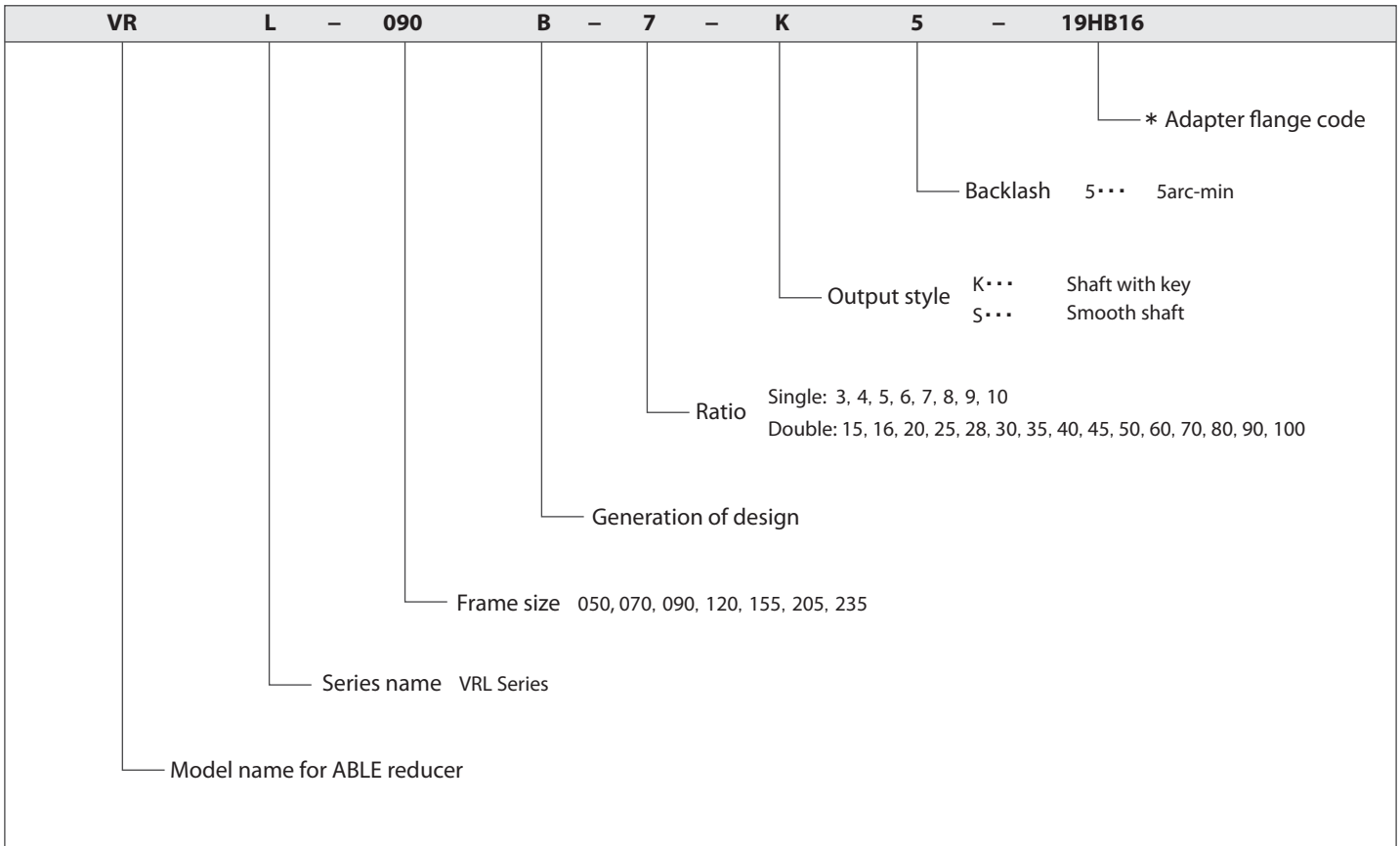
VRL-SERIES Inline shaft

VRL-Series- Features



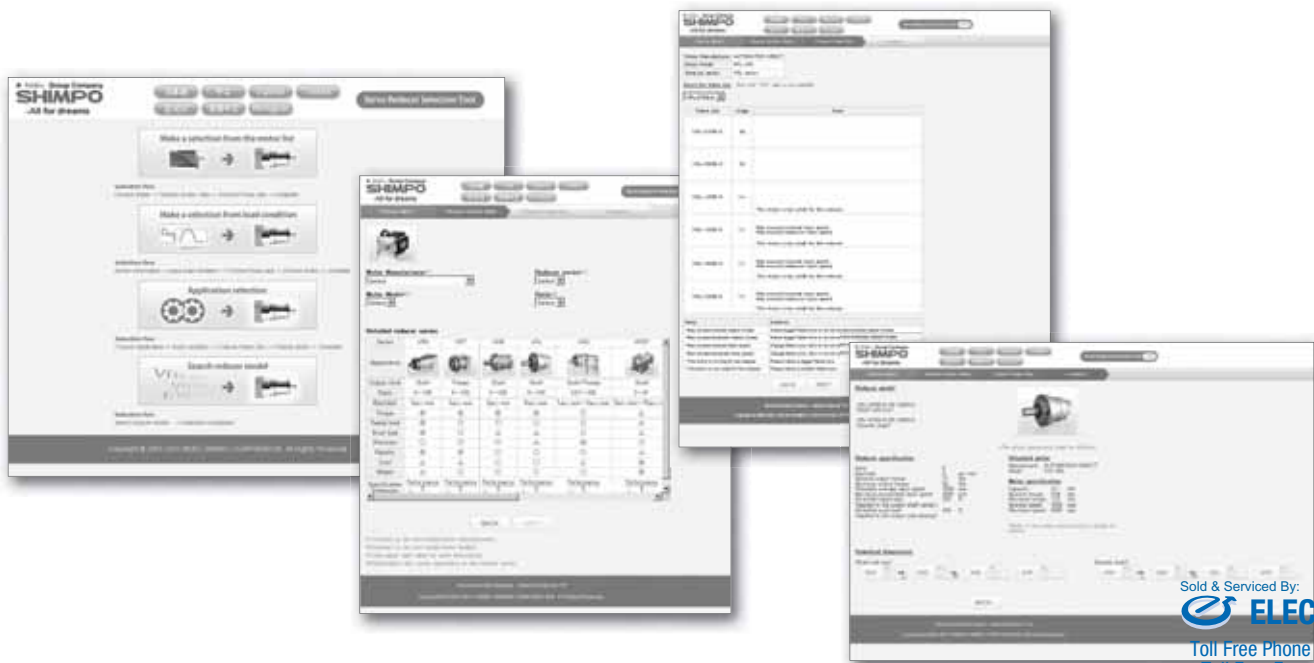
- ① Quiet operation: Helical cut gears contribute to reduced vibration and noise
- ② High precision: Standard backlash is 5 arc-min, ideal for the most accurate applications
- ③ High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ④ Adapter bushing connection: Enables a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal: High viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ Maintenance-free: No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

VRL-Series – Model Code



VRL

- *1) Adapter flange code
Adapter flange code varies depending on the motor
- *2) For all washdown intensive and food grade options, refer to pages 36 and 37



ABLE Washdown and Food Duty Reducers

Motion control applications for production environments within the Food and Beverage, Personal Care, and Pharmaceutical industries often require materials of construction and sealants that provide higher levels of protection. To improve our product offering to these customers, NIDEC-SHIMPO is now offering Washdown and Food Grade à la carte options for our inline and right-angle planetary reducers. These options provide ultimate flexibility without sacrificing on precision and performance.

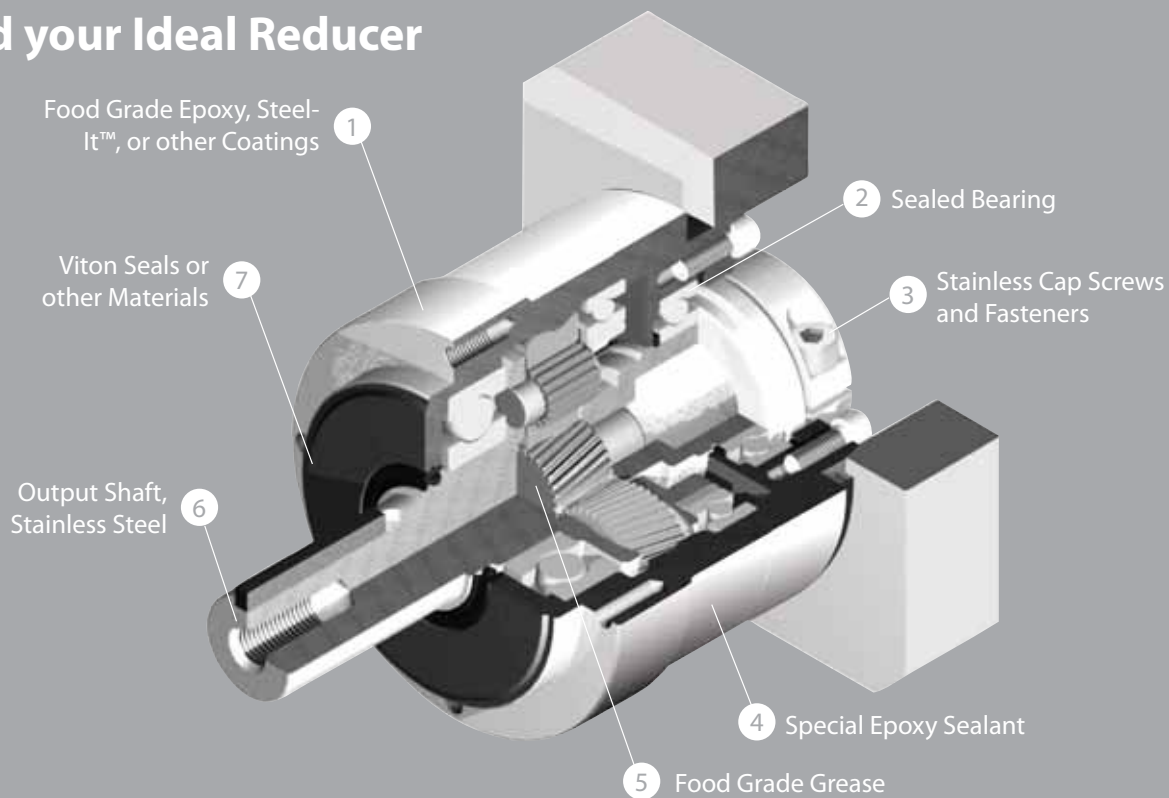
Upgradeable Features include the following;

- Special coatings, including Food Grade white epoxy, Steel-It, among others
- Sealed bearing, and Viton seal at output
- Stainless steel screws, fasteners, etc.
- Special sealant for better resistance to solvents
- Stainless steel output shaft
- Food Grade grease for exposure sensitive environments

Note:

- 1) For Food Grade grease, special consideration is required when sizing the reducer. Contact NIDEC-SHIMPO for support on these applications.
- 2) IP65 rating is based on standard protection criteria and commonly accepted test conditions. Any exposure at extreme conditions (continuous exposure, excessive pressure, etc.) is not considered accepted environment for given IP rating.

Build your Ideal Reducer



Immediate Availability for these Models:

| Series | VRL | | |
|------------|-----------------------------------|-----|-----|
| Frame Size | 070 | 090 | 120 |
| 1-Stage | 3, 5, 7, 10:1 | | |
| 2-Stage | 15, 25, 28, 30, 35, 50, 70, 100:1 | | |

| Series | VRB | | |
|------------|-----------------------------------|-----|-----|
| Frame Size | 060 | 090 | 115 |
| 1-Stage | 3, 5, 7, 10:1 | | |
| 2-Stage | 15, 25, 28, 30, 35, 50, 70, 100:1 | | |

VRL and VRB inline frame sizes and ratios can be quickly assembled with the Washdown and Food Grade options. Small quantity orders will be tested, assembled, and shipped within 2 – 4 days. For all other VRL, VRB, VRS inline series and EVL, EVB, EVS right-angle series frame size and ratio combinations, please contact SHIMPO for price and availability from our main manufacturing facility.

Sold & Serviced By:



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

Featured Series Product Extension

There are many Washdown and Food Grade features that can be added to your reducer. Below is an explanation on the model code, when specifying a reducer with the ideal performance and protection for your application.

Washdown – Model Code

| | | | | | | |
|------------|------------|------------|--------------------|----------|---------------|------------------------------|
| VRB | 090 | 007 | K | 3 | 19HB16 | XV |
| Series | Frame Size | Ratio | Output shaft style | Backlash | Adapter code | Washdown, Food Grade Options |

| Order Code | Description of Features | |
|------------|-------------------------|---|
| X | V | Food Grade Grease; Food Grade White Epoxy; IP 65; SS shaft |
| - | | Standard Grease; Standard Paint |
| W | | Standard Grease; Food Grade White Epoxy |
| S | | Standard Grease; Steel - It™ |
| F | | Food Grade Grease; Standard Paint |
| X | | Food Grade Grease; Food Grade White Epoxy |
| G | | Food Grade Grease; Steel – It™ |
| - | | Standard Protection; Standard Shaft, Fasteners |
| I | | Standard Protection; Stainless Steel Shaft, Fasteners |
| V | | IP65 Protection; Stainless Steel Shaft, Fasteners |



As the global marketplace becomes increasingly competitive, NIDEC-SHIMPO continues to raise the bar in terms of product quality, flexibility, and availability – providing a real value to our customers. Our new Washdown and Food duty reducers serve as another good example where NIDEC-SHIMPO is delivering improved value to our customers.

Contact NIDEC-SHIMPO for more details:

Toll-free: (800) 842-1470

Email: info@nidec-shimpo.com

Featured Series Product Extension

VRL-050 – 1-Stage Specifications

| Frame Size | 050 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 9 | 6 | 6 |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 18 | 12 | 12 |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 35 | 30 | 30 |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.03 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 240 | 270 | 290 | 310 | 320 | 340 | 350 | 360 |
| Permitted Axial Load | [N] | *8 | 270 | 300 | 330 | 360 | 380 | 410 | 430 | 450 |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.053 | 0.041 | 0.036 | 0.034 | 0.032 | 0.031 | 0.031 | 0.030 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.091 | 0.079 | 0.074 | 0.072 | 0.071 | 0.070 | 0.069 | 0.069 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 0.7 | | | | | | | |

VRL-050 – 2-Stage Specifications

| Frame Size | 050 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 12 | 18 | 18 |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 30 | 35 | 35 |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 410 | 420 | 460 | 490 | 510 | 520 | 550 | 570 |
| Permitted Axial Load | [N] | *8 | 540 | 550 | 610 | 640 | 640 | 640 | 640 | 640 |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.035 | 0.038 | 0.034 | 0.034 | 0.038 | 0.030 | 0.034 | 0.030 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 0.8 | | | | | | | |

Sold & Serviced By:



Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRL-050 – 2-Stage Specifications

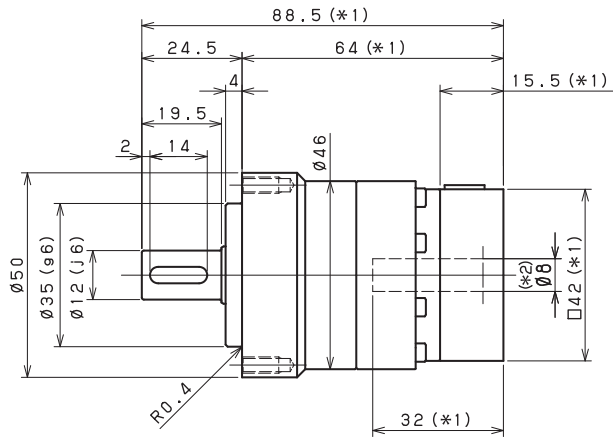
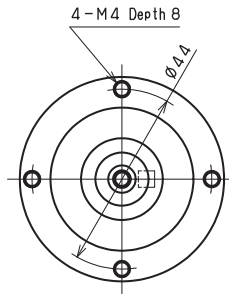
| Frame Size | 050 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 6 | 6 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 12 | 12 | | |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 30 | 30 | | |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 600 | 620 | 660 | 690 | 710 | 710 | 710 | | |
| Permitted Axial Load | [N] | *8 | 640 | 640 | 640 | 640 | 640 | 640 | 640 | | |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.034 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 0.8 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 4,000 rpm for VRL 050
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

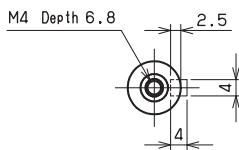
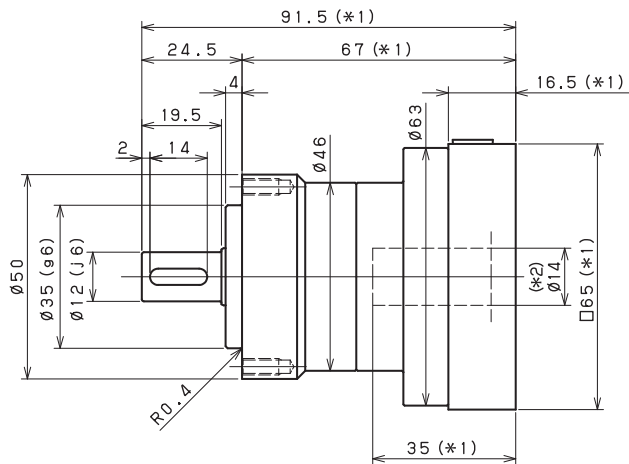
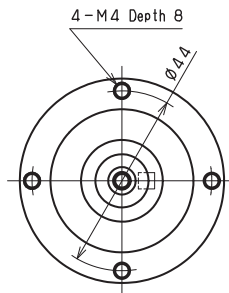
VRL-SERIES Inline shaft

VRL-050 – 1-Stage Dimensions

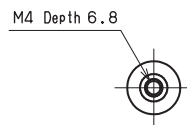
Input shaft bore $\leq \phi 8$



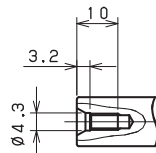
Input shaft bore $\leq \phi 14$



Shaft with key



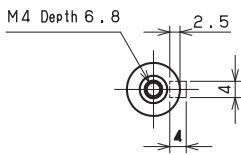
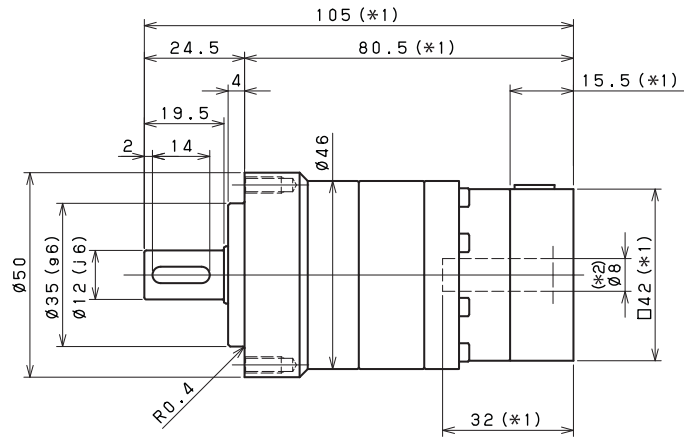
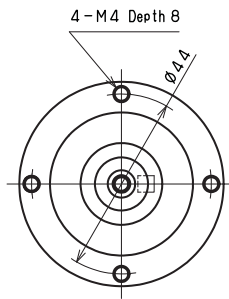
Smooth shaft



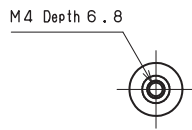
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-050 – 2-Stage Dimensions

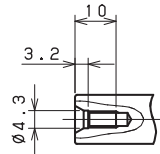
Input shaft bore $\leq \phi 8$



Shaft with key



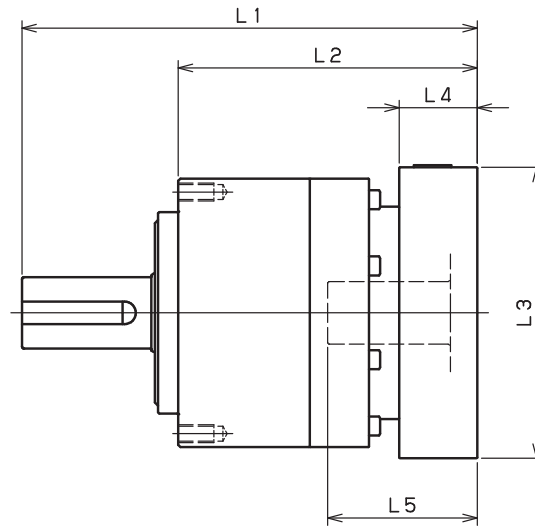
Smooth shaft



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL

VRL-050 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|----------------------------|---------|----|----|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-050-□-□-S8** (Input shaft bore ≤ φ8) | ZA·ZC·ZD·ZF·ZG·ZL·ZM·ZN·ZQ | 88.5 | 73 | 64 | □42 | 15.5 | 32 |
| | ZB·ZE·ZH·ZJ·ZK | 93.5 | 73 | 69 | □42 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 88.5 | 73 | 64 | □60 | 15.5 | 32 |
| | BC·BF | 93.5 | 73 | 69 | □60 | 20.5 | 37 |
| VRL-050-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | 91.5 | 75 | 67 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 96.5 | 75 | 72 | □65 | 21.5 | 40 |
| | BL | 101.5 | 75 | 77 | □65 | 26.5 | 45 |

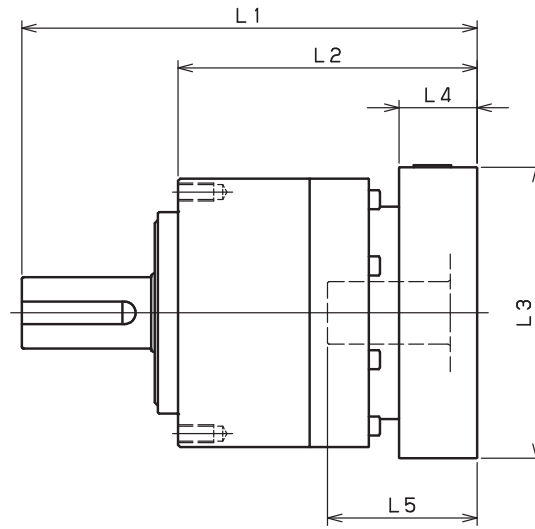
*1) Single reduction : 1/3 - 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-050 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|----------------------------|---------|------|------|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-050-□-□-S8** (Input shaft bore ≤ φ8) | ZA·ZC·ZD·ZF·ZG·ZL·ZM·ZN·ZQ | 105 | 89.5 | 80.5 | □42 | 15.5 | 32 |
| | ZB·ZE·ZH·ZJ·ZK | 110 | 89.5 | 85.5 | □42 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 105 | 89.5 | 80.5 | □60 | 15.5 | 32 |
| | BC·BF | 110 | 89.5 | 85.5 | □60 | 20.5 | 37 |
| VRL-050-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | -- | -- | -- | -- | -- | -- |
| | BC·BH·BM·BN | -- | -- | -- | -- | -- | -- |
| | BL | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15 - 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-070 – 1-Stage Specifications

| Frame Size | 070 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 27 | 18 | 18 |
| Maximum Output Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 50 | 35 | 35 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 100 | 80 | 80 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.08 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 430 | 470 | 510 | 540 | 570 | 600 | 620 | 640 |
| Permitted Axial Load | [N] | *8 | 310 | 360 | 390 | 430 | 460 | 480 | 510 | 530 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.140 | 0.095 | 0.077 | 0.068 | 0.062 | 0.059 | 0.057 | 0.056 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.220 | 0.170 | 0.160 | 0.150 | 0.140 | 0.140 | 0.140 | 0.140 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.430 | 0.380 | 0.360 | 0.360 | 0.350 | 0.350 | 0.340 | 0.340 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.5 | | | | | | | |

VRL-070 – 2-Stage Specifications

| Frame Size | 070 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 27 | 27 |
| Maximum Output Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 50 | 50 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 100 | 100 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 740 | 750 | 810 | 870 | 910 | 930 | 980 | 1000 |
| Permitted Axial Load | [N] | *8 | 630 | 650 | 720 | 790 | 830 | 860 | 920 | 970 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.055 | 0.057 | 0.054 | 0.053 | 0.055 | 0.049 | 0.053 | 0.049 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.140 | 0.140 | 0.130 | 0.130 | 0.140 | 0.130 | 0.130 | 0.130 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.350 | 0.360 | 0.350 | 0.350 | 0.360 | 0.340 | 0.350 | 0.340 |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.7 | | | | | | | |

VRL-070 – 2-Stage Specifications

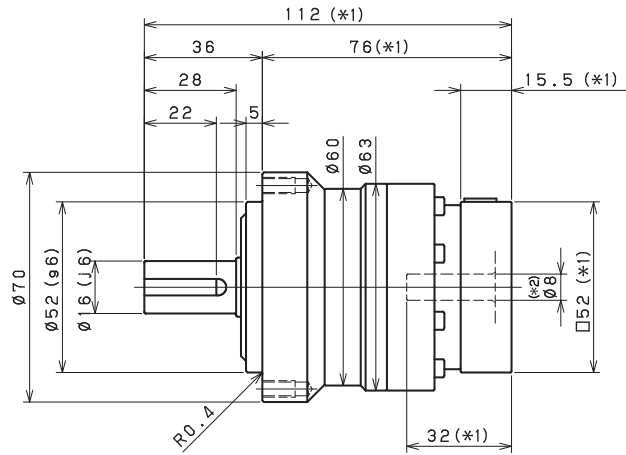
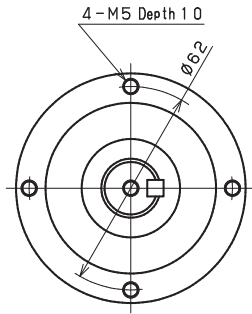
| Frame Size | 070 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 18 | | |
| Maximum Output Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 35 | | |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 80 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1100 | 1100 | 1200 | 1200 | 1200 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 1000 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | | |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.053 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.13 | 0.13 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.350 | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.7 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRL 070
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

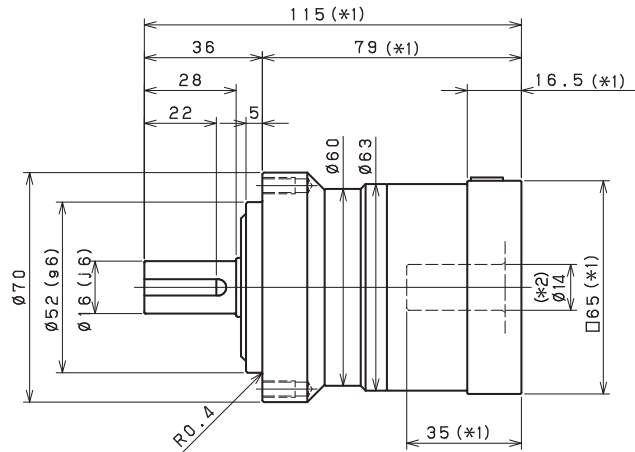
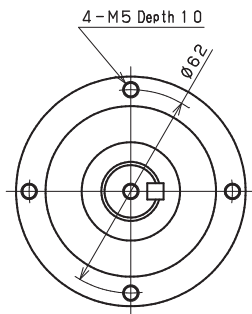
VRL-SERIES Inline shaft

VRL-070 – 1-Stage Dimensions

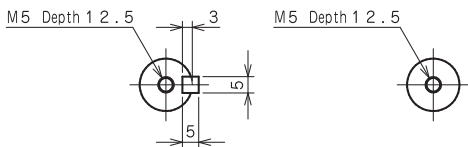
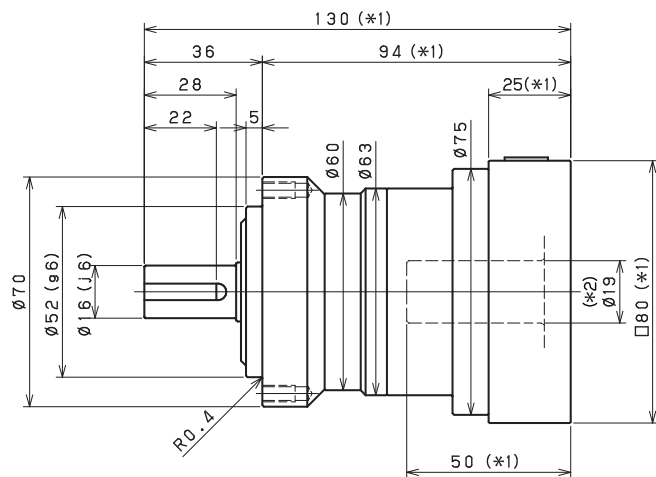
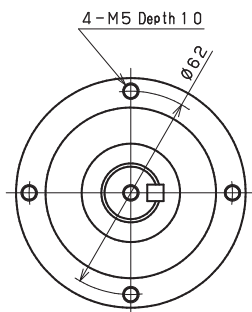
Input shaft bore $\leq \varnothing 8$



Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



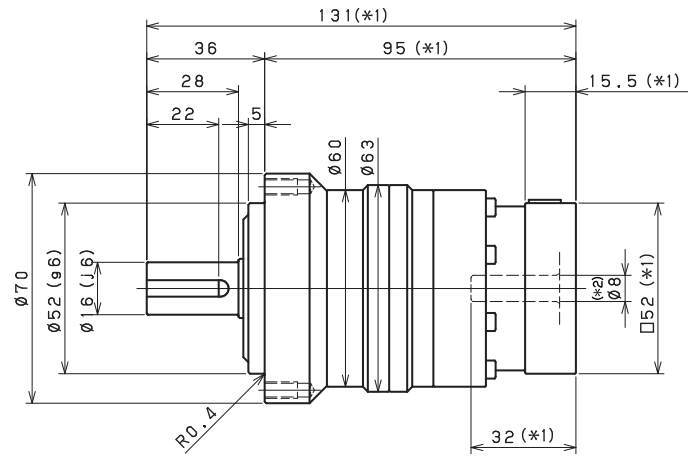
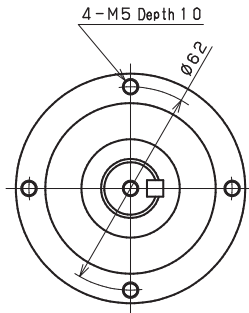
Shaft with key

Smooth shaft

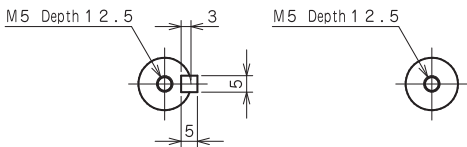
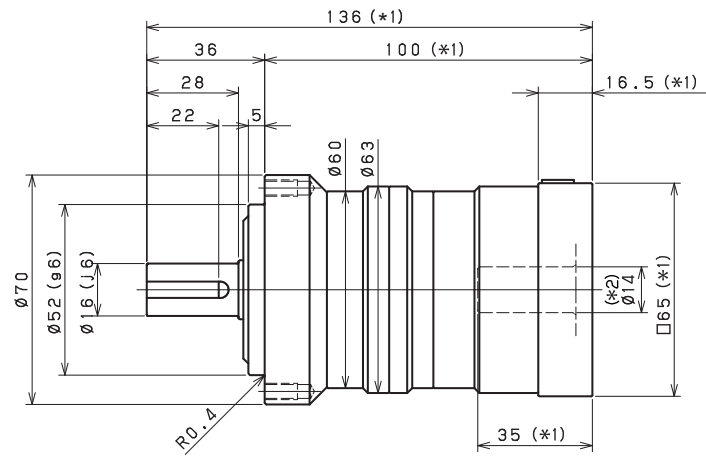
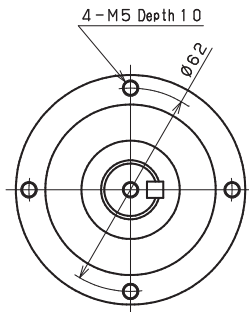
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-070 - 2-Stage Dimensions

Input shaft bore $\leq \varnothing 8$



Input shaft bore $\leq \varnothing 14$



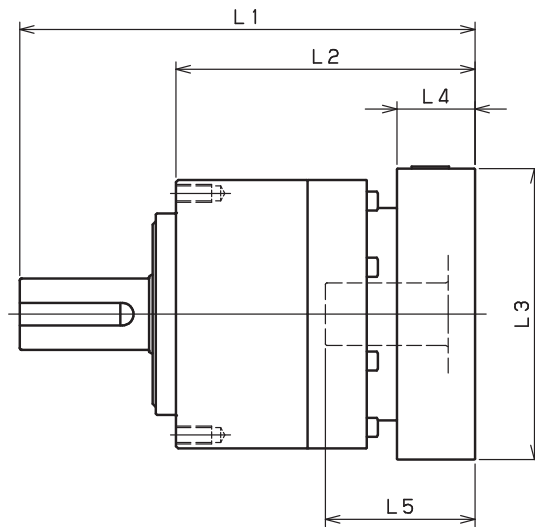
Shaft with key

Smooth shaft

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL

VRL-070 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-070-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 112 | 96.5 | 76 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 117 | 96.5 | 81 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 112 | 96.5 | 76 | □60 | 15.5 | 32 |
| | BC·BF | 117 | 96.5 | 81 | □60 | 20.5 | 37 |
| | CA | 117 | 96.5 | 81 | □70 | 20.5 | 37 |
| VRL-070-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 115 | 98.5 | 79 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 120 | 98.5 | 84 | □65 | 21.5 | 40 |
| | BL | 125 | 98.5 | 89 | □65 | 26.5 | 45 |
| | CA·CC | 115 | 98.5 | 79 | □70 | 16.5 | 35 |
| | CB | 120 | 98.5 | 84 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 115 | 98.5 | 79 | □80 | 16.5 | 35 |
| | DE·DL | 120 | 98.5 | 84 | □80 | 21.5 | 40 |
| | DG·DK | 125 | 98.5 | 89 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 115 | 98.5 | 79 | □90 | 16.5 | 35 |
| | EJ·EM | 120 | 98.5 | 84 | □90 | 21.5 | 40 |
| | ED·EE·EH | 125 | 98.5 | 89 | □90 | 26.5 | 45 |
| | FA | 115 | 98.5 | 79 | □100 | 16.5 | 35 |
| FB | 115 | 98.5 | 79 | □115 | 16.5 | 35 | |
| VRL-070-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 130 | 105 | 94 | □80 | 25 | 50 |
| | DD | 140 | 105 | 104 | □80 | 35 | 60 |
| | DE | 135 | 105 | 99 | □80 | 30 | 55 |
| | EA | 135 | 105 | 99 | □90 | 30 | 55 |
| | EB·ED | 130 | 105 | 94 | □90 | 25 | 50 |
| | EC | 140 | 105 | 104 | □90 | 35 | 60 |
| | FA | 130 | 105 | 94 | □100 | 25 | 50 |
| | FB | 140 | 105 | 104 | □100 | 35 | 60 |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

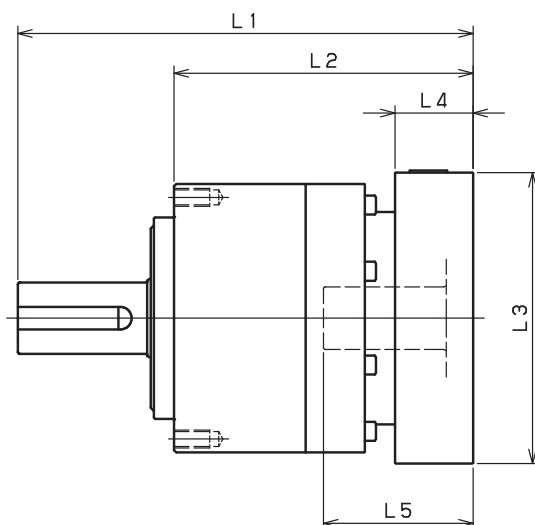
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-070 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-070-□-□-8** (Input shaft bore ≤ φ8) | AA•AC•AD•AF•AG•AL•AM•AN•AQ | 131 | 115.5 | 95 | □52 | 15.5 | 32 |
| | AB•AE•AH•AJ•AK | 136 | 115.5 | 100 | □52 | 20.5 | 37 |
| | BA•BB•BD•BE•BG•BH•BJ | 131 | 115.5 | 95 | □60 | 15.5 | 32 |
| | BC•BF | 136 | 115.5 | 100 | □60 | 20.5 | 37 |
| | CA | 136 | 115.5 | 100 | □70 | 20.5 | 37 |
| VRL-070-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 136 | 119.5 | 100 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 141 | 119.5 | 105 | □65 | 21.5 | 40 |
| | BL | 146 | 119.5 | 110 | □65 | 26.5 | 45 |
| | CA•CC | 136 | 119.5 | 100 | □70 | 16.5 | 35 |
| | CB | 141 | 119.5 | 105 | □70 | 21.5 | 40 |
| | DA•DB•DC•DD•DF•DH•DJ | 136 | 119.5 | 100 | □80 | 16.5 | 35 |
| | DE•DL | 141 | 119.5 | 105 | □80 | 21.5 | 40 |
| | DG•DK | 146 | 119.5 | 110 | □80 | 26.5 | 45 |
| | EA•EB•EC•EF•EG•EK•EL | 136 | 119.5 | 100 | □90 | 16.5 | 35 |
| | EJ•EM | 141 | 119.5 | 105 | □90 | 21.5 | 40 |
| | ED•EE•EH | 146 | 119.5 | 110 | □90 | 26.5 | 45 |
| | FA | 136 | 119.5 | 100 | □100 | 16.5 | 35 |
| FB | 136 | 119.5 | 100 | □115 | 16.5 | 35 | |
| VRL-070-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 151 | 126 | 115 | □80 | 25 | 50 |
| | DD | 161 | 126 | 125 | □80 | 35 | 60 |
| | DE | 156 | 126 | 120 | □80 | 30 | 55 |
| | EA | 156 | 126 | 120 | □90 | 30 | 55 |
| | EB•ED | 151 | 126 | 115 | □90 | 25 | 50 |
| | EC | 161 | 126 | 125 | □90 | 35 | 60 |
| | FA | 151 | 126 | 115 | □100 | 25 | 50 |
| | FB | 161 | 126 | 125 | □100 | 35 | 60 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-090 – 1-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.35 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 810 | 890 | 960 | 1000 | 1100 | 1100 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 930 | 1100 | 1200 | 1300 | 1300 | 1400 | 1500 | 1600 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.720 | 0.490 | 0.400 | 0.360 | 0.320 | 0.310 | 0.290 | 0.290 | | |
| Moment of Inertia ($\leq \emptyset 19$) | -- | -- | 1.200 | 0.950 | 0.860 | 0.820 | 0.790 | 0.770 | 0.760 | 0.750 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 3.200 | 3.000 | 2.900 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 3.5 | | | | | | | | | |

VRL-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 75 | 75 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 125 | 125 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 250 | 250 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1400 | 1400 | 1500 | 1600 | 1700 | 1700 | 1800 | 1900 | | |
| Permitted Axial Load | [N] | *8 | 1900 | 1900 | 2100 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.130 | 0.150 | 0.130 | 0.120 | 0.140 | 0.100 | 0.120 | 0.099 | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.280 | 0.300 | 0.280 | 0.280 | 0.290 | 0.250 | 0.270 | 0.250 | | |
| Moment of Inertia ($\leq \emptyset 19$) | -- | -- | 0.720 | 0.740 | 0.720 | 0.710 | 0.730 | 0.700 | 0.710 | 0.700 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 2.700 | 2.800 | 2.700 | 2.700 | 2.700 | 2.600 | 2.700 | 2.600 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4 | | | | | | | | | |

VRL-090 – 2-Stage Specifications

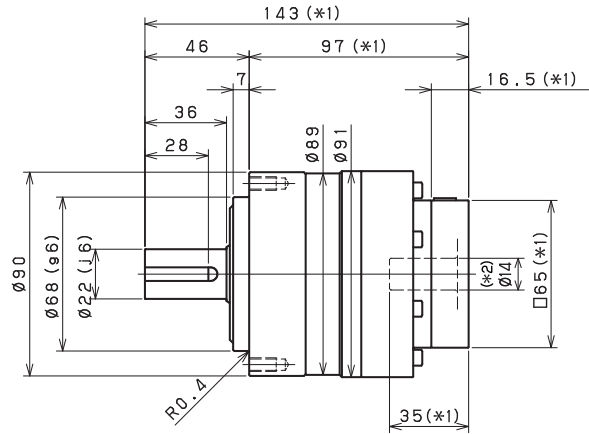
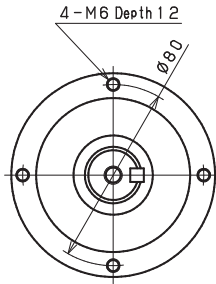
| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 | 2400 | | |
| Permitted Axial Load | [N] | *8 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.120 | 0.098 | 0.098 | 0.097 | 0.097 | 0.097 | 0.097 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.270 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 19$) | -- | -- | 0.710 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.700 | 2.600 | 2.600 | 2.600 | 2.600 | 2.600 | 2.600 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRL 090
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

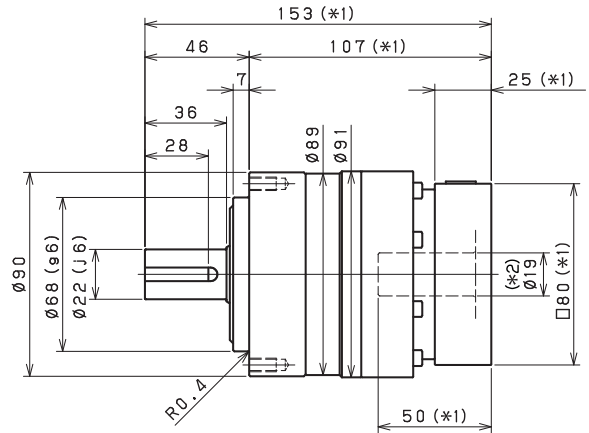
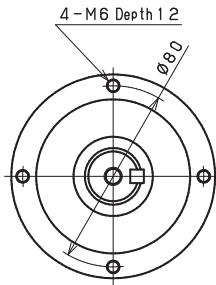
VRL-SERIES Inline shaft

VRL-090 – 1-Stage Dimensions

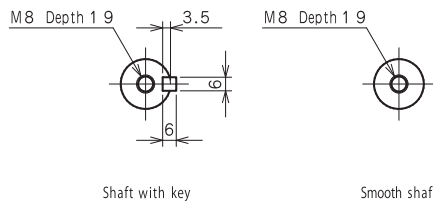
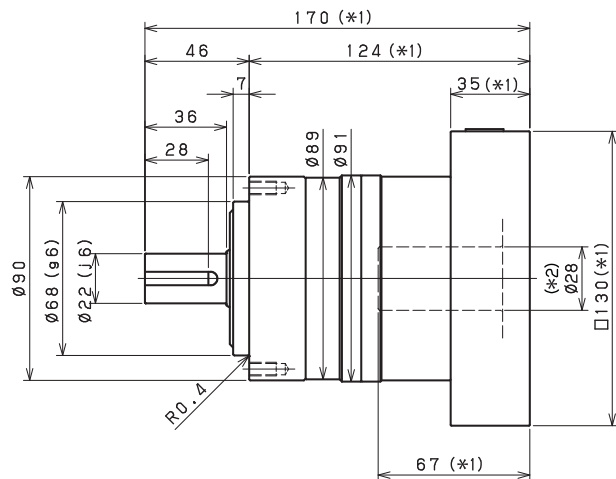
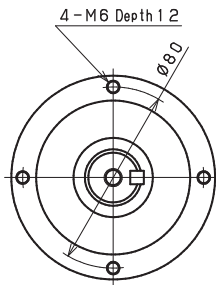
Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



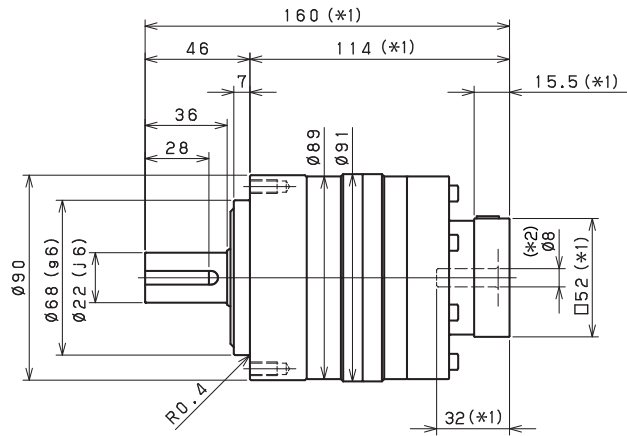
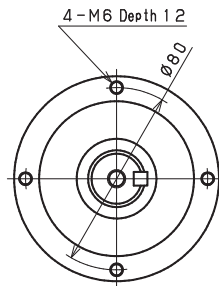
Shaft with key

Smooth shaft

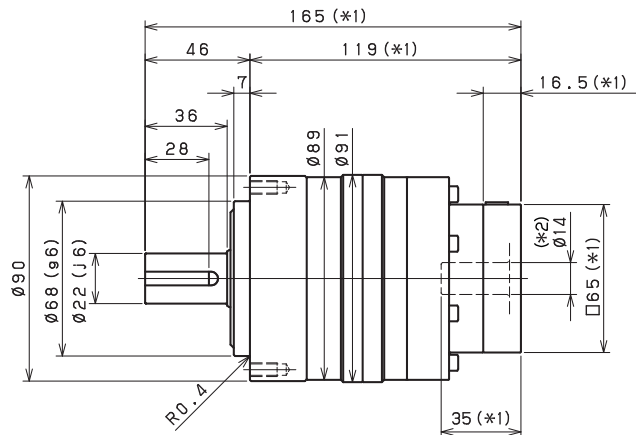
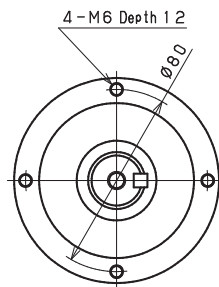
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-090 – 2-Stage Dimensions

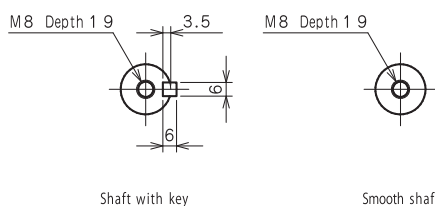
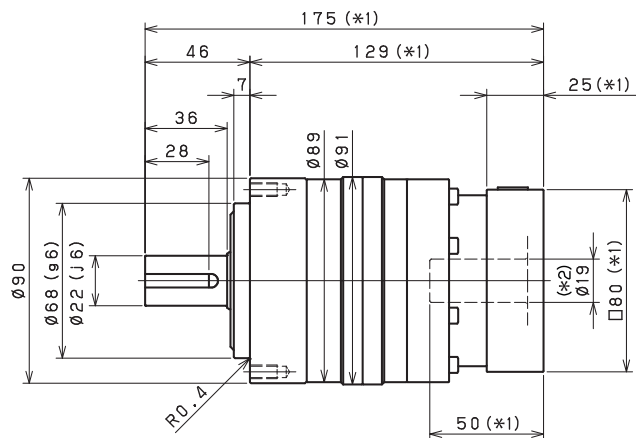
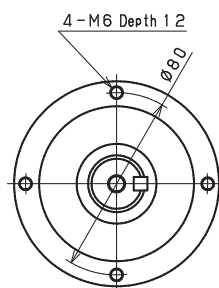
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

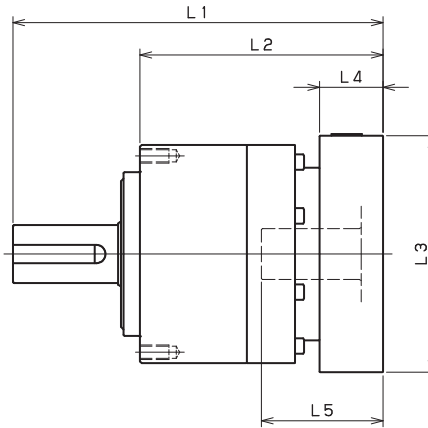
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL

VRL-090 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|-----|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-090-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | - | -- | -- | - | -- |
| | CA | -- | -- | -- | -- | -- | -- |
| VRL-090-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 143 | 126.5 | 97 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 148 | 126.5 | 102 | □65 | 21.5 | 40 |
| | CA·CC | 143 | 126.5 | 97 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 143 | 126.5 | 97 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 143 | 126.5 | 97 | □90 | 16.5 | 35 |
| | FA | 143 | 126.5 | 97 | □100 | 16.5 | 35 |
| | FB | 153 | 126.5 | 107 | □100 | 26.5 | 45 |
| VRL-090-□-□-19** (Input shaft bore ≤ φ19) | JA | 158 | 126.5 | 112 | □150 | 31.5 | 50 |
| | DA·DB·DC | 153 | 128 | 107 | □80 | 25 | 50 |
| | EB·ED | 153 | 128 | 107 | □90 | 25 | 50 |
| | FA | 153 | 128 | 107 | □100 | 25 | 50 |
| | FB | 163 | 128 | 117 | □100 | 35 | 60 |
| | GA·GC·GH | 158 | 128 | 112 | □115 | 30 | 55 |
| | GB·GD·GJ | 153 | 128 | 107 | □115 | 25 | 50 |
| | GE·GF | 163 | 128 | 117 | □115 | 35 | 60 |
| | HA | 153 | 128 | 107 | □130 | 25 | 50 |
| | HB | 168 | 128 | 122 | □130 | 40 | 65 |
| VRL-090-□-□-28** (Input shaft bore ≤ φ28) | HC·HD·HE | 158 | 128 | 112 | □130 | 30 | 55 |
| | JA | 163 | 128 | 117 | □150 | 35 | 60 |
| | JB | 168 | 128 | 122 | □150 | 40 | 65 |
| | FA·FB·FC | 170 | 135 | 124 | □100 | 35 | 67 |
| | FD·FE | 165 | 135 | 119 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 170 | 135 | 124 | □115 | 35 | 67 |
| | HA·HC·HD | 170 | 135 | 124 | □130 | 35 | 67 |
| | HB | 180 | 135 | 134 | □130 | 45 | 77 |
| | HE | 185 | 135 | 139 | □130 | 50 | 82 |
| | HF | 165 | 135 | 119 | □130 | 30 | 62 |
| VRL-090-□-□-28** (Input shaft bore ≤ φ28) | JA·JB·JC·JF | 170 | 135 | 124 | □150 | 35 | 67 |
| | JD | 190 | 135 | 144 | □150 | 55 | 87 |
| | JE | 180 | 135 | 134 | □150 | 45 | 77 |

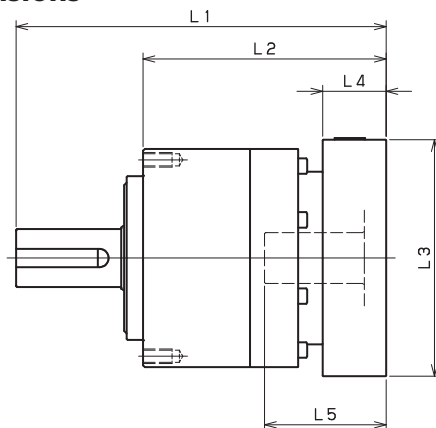
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-090 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-090-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 160 | 144.5 | 114 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 165 | 144.5 | 119 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 160 | 144.5 | 114 | □60 | 15.5 | 32 |
| | CA | 165 | 144.5 | 119 | □70 | 20.5 | 37 |
| VRL-090-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 165 | 148.5 | 119 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 170 | 148.5 | 124 | □65 | 21.5 | 40 |
| | CA·CC | 165 | 148.5 | 119 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 165 | 148.5 | 119 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 165 | 148.5 | 119 | □90 | 16.5 | 35 |
| | FA | 165 | 148.5 | 119 | □100 | 16.5 | 35 |
| | FB | 175 | 148.5 | 129 | □100 | 26.5 | 45 |
| VRL-090-□-□-19** (Input shaft bore ≤ φ19) | JA | 180 | 148.5 | 134 | □150 | 31.5 | 50 |
| | DA·DB·DC | 175 | 150 | 129 | □80 | 25 | 50 |
| | EB·ED | 175 | 150 | 129 | □90 | 25 | 50 |
| | FA | 175 | 150 | 129 | □100 | 25 | 50 |
| | FB | 185 | 150 | 139 | □100 | 35 | 60 |
| | GA·GC·GH | 180 | 150 | 134 | □115 | 30 | 55 |
| | GB·GD·GJ | 175 | 150 | 129 | □115 | 25 | 50 |
| | GE·GF | 185 | 150 | 139 | □115 | 35 | 60 |
| | HA | 175 | 150 | 129 | □130 | 25 | 50 |
| | HB | 190 | 150 | 144 | □130 | 40 | 65 |
| | HC·HD·HE | 180 | 150 | 134 | □130 | 30 | 55 |
| VRL-090-□-□-28** (Input shaft bore ≤ φ28) | JA | 185 | 150 | 139 | □150 | 35 | 60 |
| | JB | 190 | 150 | 144 | □150 | 40 | 65 |
| | FA·FB·FC | 194 | 159 | 148 | □100 | 35 | 67 |
| | FD·FE | 189 | 159 | 143 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 194 | 159 | 148 | □115 | 35 | 67 |
| | HA·HC·HD | 194 | 159 | 148 | □130 | 35 | 67 |
| | HB | 204 | 159 | 158 | □130 | 45 | 77 |
| | HE | 209 | 159 | 163 | □130 | 50 | 82 |
| | HF | 189 | 159 | 143 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 194 | 159 | 148 | □150 | 35 | 67 |
| JD | 214 | 159 | 168 | □150 | 55 | 87 | |
| JE | 204 | 159 | 158 | □150 | 45 | n | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com
sales@electromate.com

VRL-SERIES Inline shaft

VRL-120 – 1-Stage Specifications

| Frame Size | 120 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 120 | 120 | 180 | 180 | 180 | 180 | 120 | 120 |
| Maximum Output Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 330 | 225 | 225 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 625 | 500 | 500 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *14 | 1.30 | | | | | | | |
| Permitted Radial Load | [N] | *6 | 1300 | 1500 | 1600 | 1700 | 1800 | 1900 | 1900 | 2000 |
| Permitted Axial Load | [N] | *7 | 1500 | 1700 | 1900 | 2000 | 2100 | 2300 | 2400 | 2500 |
| Maximum Radial Load | [N] | *8 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *9 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | | 3.300 | 2.000 | 1.600 | 1.300 | 1.100 | 1.000 | 0.980 | 0.950 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | | 5.300 | 4.100 | 3.600 | 3.300 | 3.200 | 3.100 | 3.000 | 3.000 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | | 13.000 | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | | *15 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | *16 | 90 | | | | | | | |
| Weight | [kg] | *10 | 7.8 | | | | | | | |

VRL-120 – 2-Stage Specifications

| Frame Size | 120 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 180 | 180 |
| Maximum Output Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 330 | 330 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 625 | 625 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *14 | 0.42 | | | | | | | |
| Permitted Radial Load | [N] | *6 | 2300 | 2300 | 2500 | 2700 | 2800 | 2900 | 3000 | 3200 |
| Permitted Axial Load | [N] | *7 | 3000 | 3100 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 |
| Maximum Radial Load | [N] | *8 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *9 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | | 0.430 | 0.480 | 0.400 | 0.380 | 0.440 | 0.290 | 0.370 | 0.280 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | | 0.860 | 0.920 | 0.830 | 0.820 | 0.880 | 0.740 | 0.810 | 0.730 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | | 2.800 | 2.900 | 2.800 | 2.800 | 2.800 | 2.700 | 2.700 | 2.700 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | | *15 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | *16 | 90 | | | | | | | |
| Weight | [kg] | *10 | 8.7 | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-120 – 2-Stage Specifications

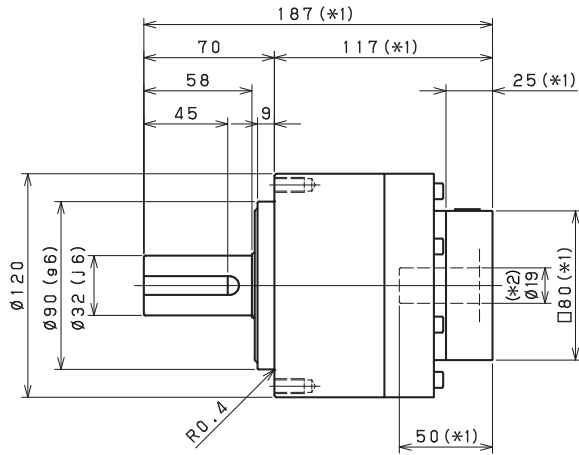
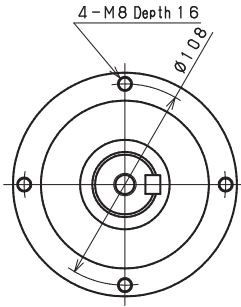
| Frame Size | 120 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 120 | | |
| Maximum Output Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 225 | | |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 500 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *14 | 0.42 | | | | | | | | |
| Permitted Radial Load | [N] | *6 | 3300 | 3400 | 3600 | 3800 | 4000 | 4200 | 4300 | | |
| Permitted Axial Load | [N] | *7 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *8 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *9 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | | 0.370 | 0.280 | 0.280 | 0.280 | 0.280 | 0.270 | 0.270 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | | 0.800 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | | |
| Protection Class | | *15 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | *16 | 90 | | | | | | | | |
| Weight | [kg] | *10 | 8.7 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRL 120
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

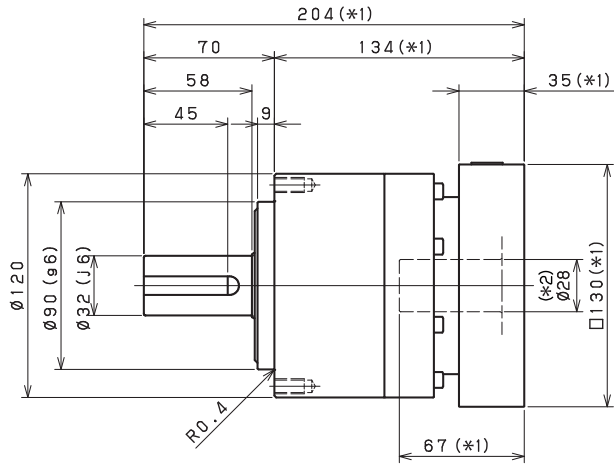
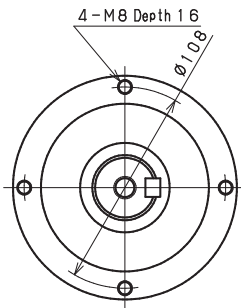
VRL-SERIES Inline shaft

VRL-120 – 1-Stage Dimensions

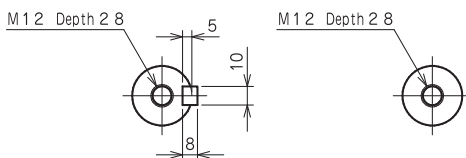
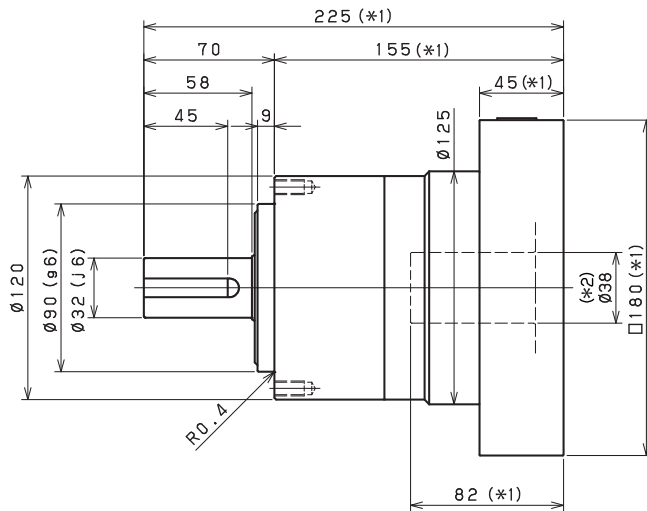
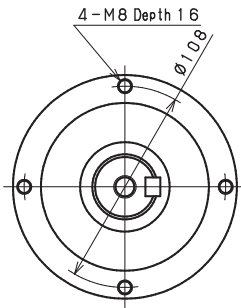
Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



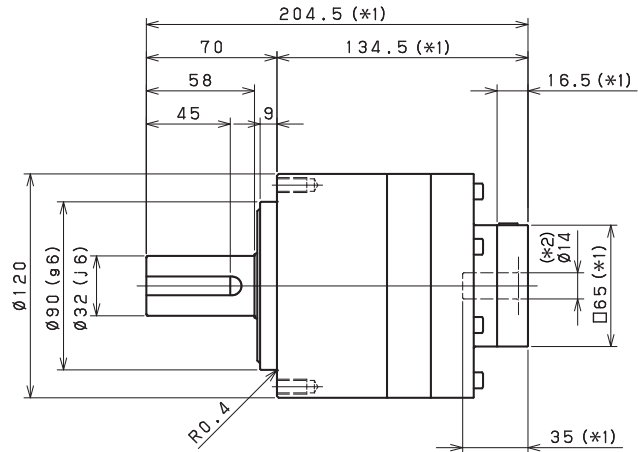
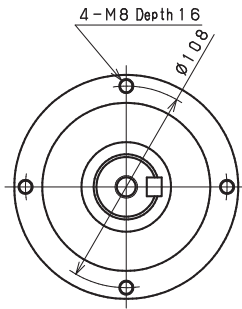
Shaft with key

Smooth shaft

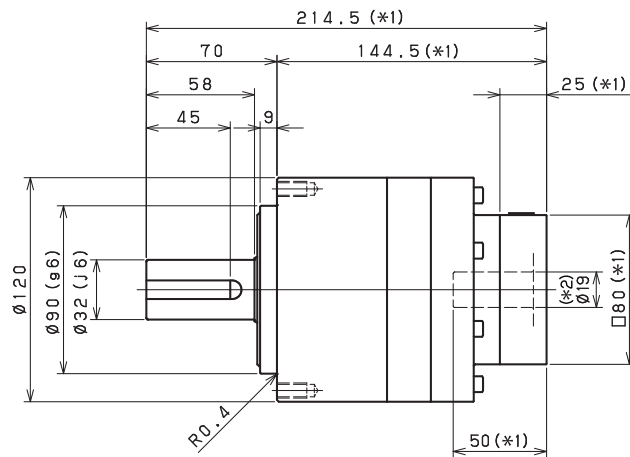
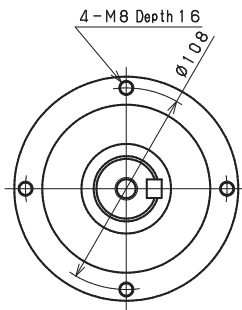
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-120 – 2-Stage Dimensions

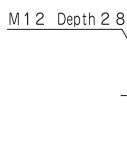
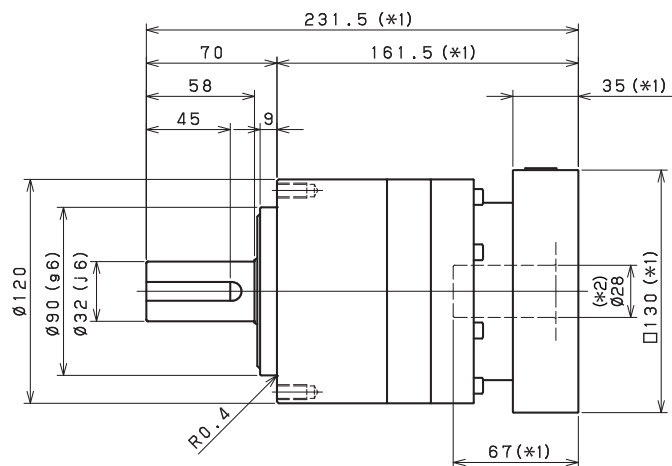
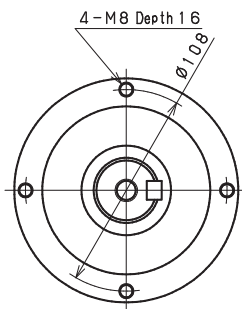
Input shaft bore $\leq \phi 14$



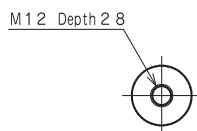
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

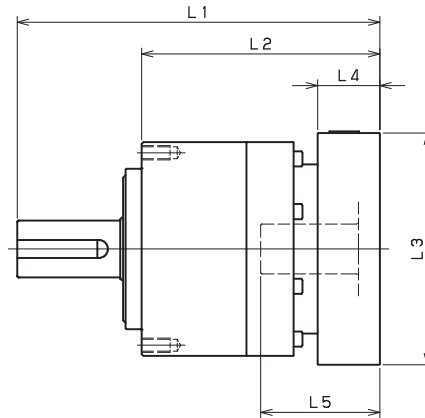
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-SERIES Inline shaft

VRL-120 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-----|------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-120-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| VRL-120-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 187 | 162 | 117 | □80 | 25 | 50 |
| | EB | 187 | 162 | 117 | □90 | 25 | 50 |
| | FA | 187 | 162 | 117 | □100 | 25 | 50 |
| | FB | 197 | 162 | 127 | □100 | 35 | 60 |
| | GB•GD | 187 | 162 | 117 | □115 | 25 | 50 |
| | HA | 197 | 162 | 127 | □115 | 35 | 60 |
| | -- | 187 | 162 | 117 | □130 | 25 | 50 |
| | -- | 202 | 162 | 132 | □130 | 40 | 65 |
| | -- | 192 | 162 | 122 | □130 | 30 | 55 |
| | HB | 197 | 162 | 127 | □150 | 35 | 60 |
| VRL-120-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 204 | 169 | 134 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 204 | 169 | 134 | □115 | 35 | 67 |
| | HA•HC•HD | 204 | 169 | 134 | □130 | 35 | 67 |
| | HB | 214 | 169 | 144 | □130 | 45 | 77 |
| | HF | 199 | 169 | 129 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 204 | 169 | 134 | □150 | 35 | 67 |
| | JE | 214 | 169 | 144 | □150 | 45 | 77 |
| | KA•KB•KE | 204 | 169 | 134 | □180 | 35 | 67 |
| VRL-120-□-□-38** (Input shaft bore ≤ φ38) | KD | 214 | 169 | 144 | □180 | 45 | 77 |
| | HA | 225 | 180 | 155 | □130 | 45 | 82 |
| | HB•HE | 220 | 180 | 150 | □130 | 40 | 77 |
| | JA | 225 | 180 | 155 | □150 | 45 | 82 |
| | KA•KB•KC | 225 | 180 | 155 | □180 | 45 | 82 |
| | KD | 260 | 180 | 190 | □180 | 80 | 117 |
| KE | 240 | 180 | 170 | □180 | 60 | 97 | |

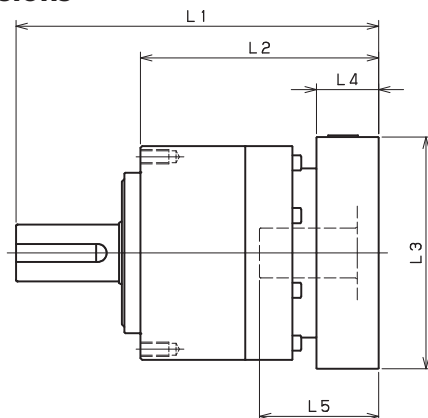
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-120 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-120-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 204.5 | 188 | 134.5 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 209.5 | 188 | 139.5 | □65 | 21.5 | 40 |
| | CA•CC | 204.5 | 188 | 134.5 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 204.5 | 188 | 134.5 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 204.5 | 188 | 134.5 | □90 | 16.5 | 35 |
| | FA | 204.5 | 188 | 134.5 | □100 | 16.5 | 35 |
| | FB | 214.5 | 188 | 144.5 | □100 | 26.5 | 45 |
| VRL-120-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 214.5 | 189.5 | 144.5 | □80 | 25 | 50 |
| | EB | 214.5 | 189.5 | 144.5 | □90 | 25 | 50 |
| | FA | 214.5 | 189.5 | 144.5 | □100 | 25 | 50 |
| | FB | 224.5 | 189.5 | 154.5 | □100 | 35 | 60 |
| | GB•GD | 214.5 | 189.5 | 144.5 | □115 | 25 | 50 |
| | HA | 224.5 | 189.5 | 154.5 | □115 | 35 | 60 |
| | -- | 214.5 | 189.5 | 144.5 | □130 | 25 | 50 |
| | -- | 229.5 | 189.5 | 159.5 | □130 | 40 | 65 |
| | -- | 219.5 | 189.5 | 149.5 | □130 | 30 | 55 |
| | HB | 224.5 | 189.5 | 154.5 | □150 | 35 | 60 |
| VRL-120-□-□-28** (Input shaft bore ≤ φ28) | HC•HD•HE | 229.5 | 189.5 | 159.5 | □150 | 40 | 65 |
| | FA•FB•FC | 231.5 | 196.5 | 161.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 231.5 | 196.5 | 161.5 | □115 | 35 | 67 |
| | HA•HC•HD | 231.5 | 196.5 | 161.5 | □130 | 35 | 67 |
| | HB | 241.5 | 196.5 | 171.5 | □130 | 45 | 77 |
| | HF | 226.5 | 196.5 | 156.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 231.5 | 196.5 | 161.5 | □150 | 35 | 67 |
| | JE | 241.5 | 196.5 | 171.5 | □150 | 45 | 77 |
| VRL-120-□-□-38** (Input shaft bore ≤ φ38) | KA•KB•KE | 231.5 | 196.5 | 161.5 | □180 | 35 | 67 |
| | KD | 241.5 | 196.5 | 171.5 | □180 | 45 | 77 |
| | HA | 249 | 204 | 179 | □130 | 45 | 82 |
| | HB•HE | 244 | 204 | 174 | □130 | 40 | 77 |
| | JA | 249 | 204 | 179 | □150 | 45 | 82 |
| | KA•KB•KC | 249 | 204 | 179 | □180 | 45 | 82 |
| | KD | 284 | 204 | 214 | □180 | 80 | 117 |
| | KE | 264 | 204 | 194 | □180 | 60 | 97 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-SERIES Inline shaft

VRL-155 – 1-Stage Specifications

| Frame Size | 155 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 240 | 360 | 360 | 360 | 360 | 240 | 240 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 700 | 470 | 470 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.63 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3200 | 3500 | 3800 | 4000 | 4200 | 4400 | 4600 | 4700 | | |
| Permitted Axial Load | [N] | *8 | 2400 | 2700 | 3000 | 3300 | 3500 | 3700 | 3900 | 4100 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 12.000 | 7.500 | 5.800 | 4.900 | 4.100 | 3.800 | 3.600 | 3.500 | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 20.000 | 15.000 | 14.000 | 13.000 | 12.000 | 12.000 | 11.000 | 11.000 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 42.000 | 37.000 | 36.000 | 35.000 | 34.000 | 34.000 | 34.000 | 34.000 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 16 | | | | | | | | | |

VRL-155 – 2-Stage Specifications

| Frame Size | 155 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 360 | 360 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 700 | 700 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1250 | 1250 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5400 | 5500 | 6000 | 6400 | 6700 | 6800 | 7200 | 7500 | | |
| Permitted Axial Load | [N] | *8 | 4900 | 5000 | 5500 | 6100 | 6400 | 6600 | 7000 | 7500 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 1.300 | 1.500 | 1.200 | 1.100 | 1.400 | 0.850 | 1.100 | 0.830 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 3.200 | 3.500 | 3.100 | 3.100 | 3.300 | 2.800 | 3.100 | 2.800 | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 10.000 | 11.000 | 10.000 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 18 | | | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRL-155 – 2-Stage Specifications

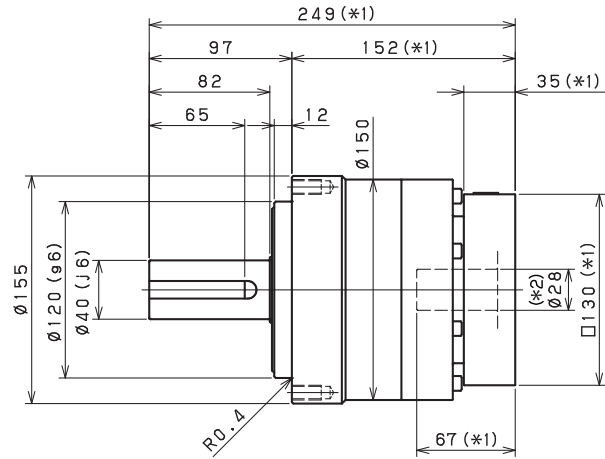
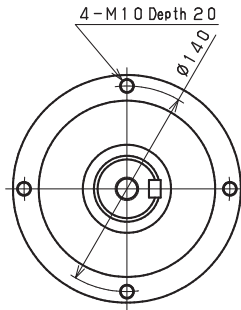
| Frame Size | 155 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 240 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 470 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7800 | 8100 | 8600 | 9100 | 9100 | 9100 | 9100 | | |
| Permitted Axial Load | [N] | *8 | 7900 | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.100 | 0.810 | 0.810 | 0.800 | 0.800 | 0.800 | 0.800 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.000 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 18 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2,000 rpm for VRL155
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

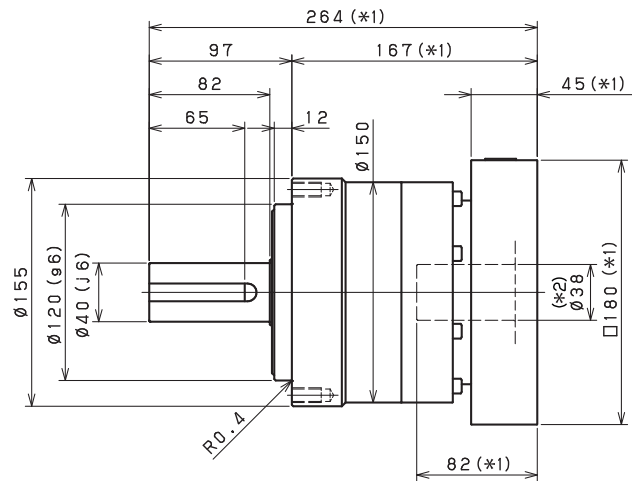
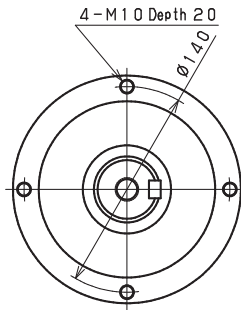
VRL-SERIES Inline shaft

VRL-155 – 1-Stage Dimensions

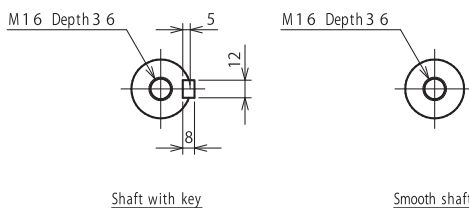
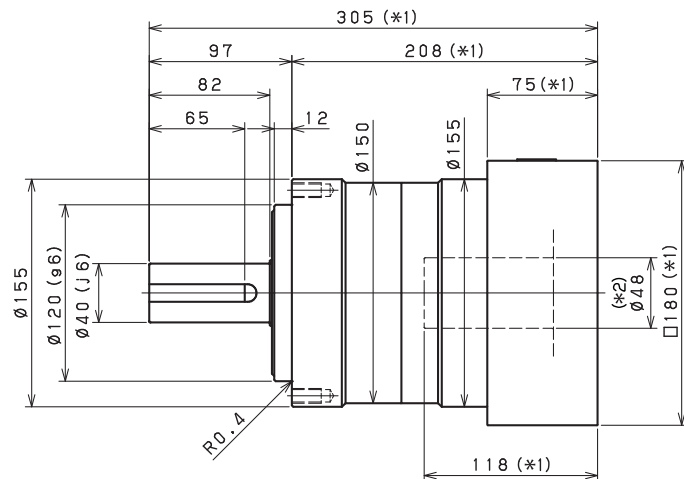
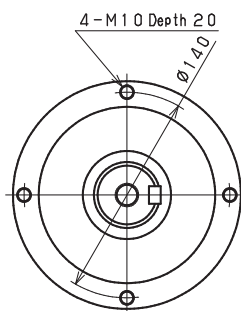
Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



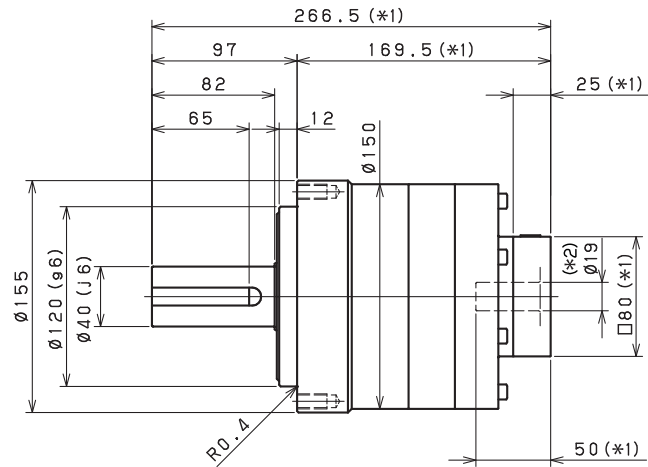
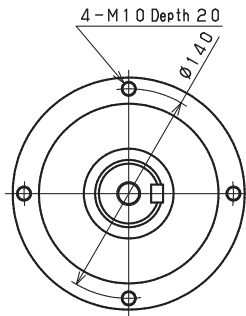
Input shaft bore $\leq \varnothing 48$



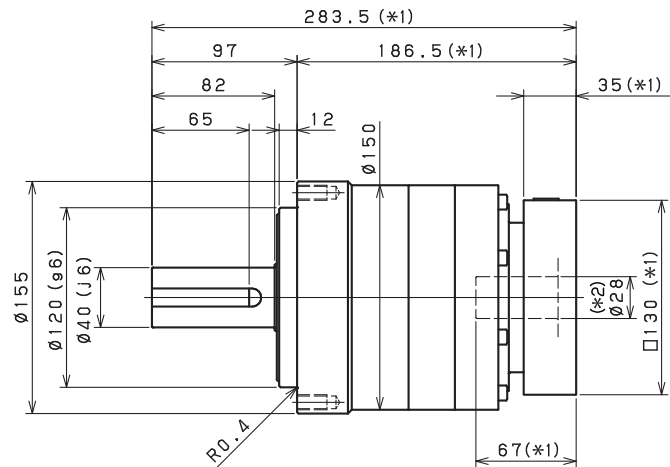
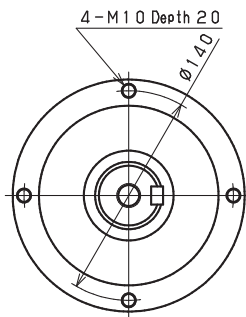
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-155 - 2-Stage Dimensions

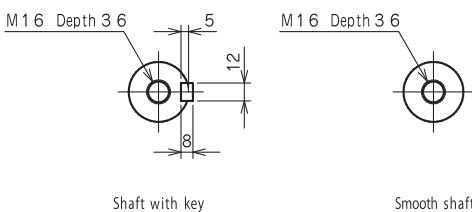
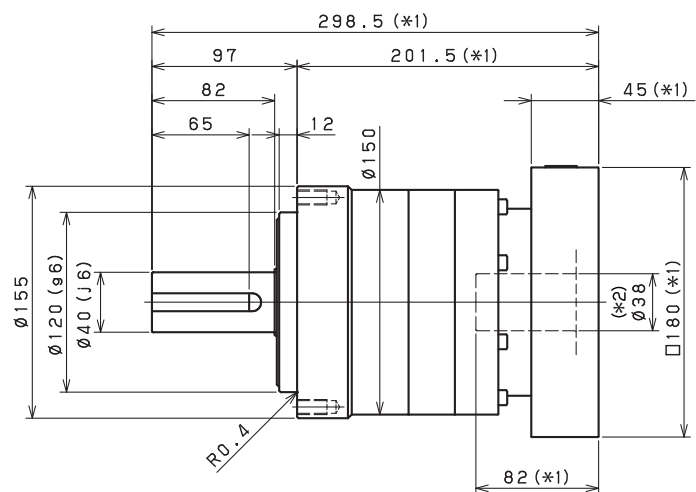
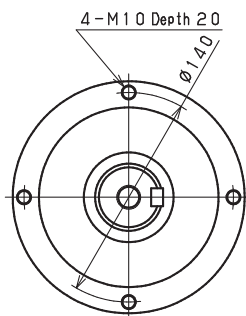
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

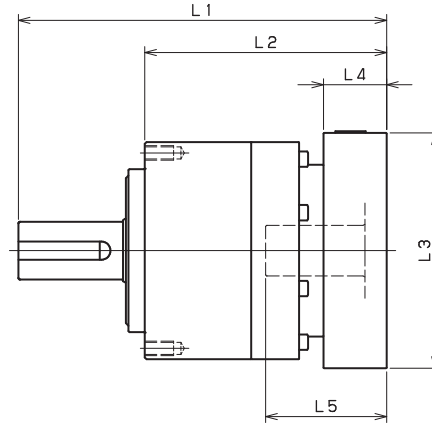
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-155 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-155-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | -- | -- | -- | -- | -- | -- |
| | EB•ED | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| | GB•GD•GJ | -- | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| VRL-155-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 249 | 214 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 249 | 214 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 249 | 214 | 152 | □130 | 35 | 67 |
| | HB | 259 | 214 | 162 | □130 | 45 | 77 |
| | HF | 244 | 214 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 249 | 214 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 249 | 214 | 152 | □180 | 35 | 67 |
| | LA | 249 | 214 | 152 | □200 | 35 | 67 |
| | LB | 259 | 214 | 162 | □200 | 45 | 77 |
| | MA | 249 | 214 | 152 | □220 | 35 | 67 |
| VRL-155-□-□-38** (Input shaft bore ≤ φ38) | MB | 259 | 214 | 162 | □220 | 45 | 77 |
| | HA | 264 | 219 | 167 | □130 | 45 | 82 |
| | HB•HE | 259 | 219 | 162 | □130 | 40 | 77 |
| | JA | 264 | 219 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 264 | 219 | 167 | □180 | 45 | 82 |
| | KD | 299 | 219 | 202 | □180 | 80 | 117 |
| | KE | 279 | 219 | 182 | □180 | 60 | 97 |
| | LB | 274 | 219 | 177 | □200 | 55 | 92 |
| | MA•MB | 264 | 219 | 167 | □220 | 45 | 82 |
| VRL-155-□-□-48** (Input shaft bore ≤ φ48) | MC | 279 | 219 | 182 | □220 | 60 | 97 |
| | MD | 274 | 219 | 177 | □220 | 55 | 92 |
| | KA | 305 | 230 | 208 | □180 | 75 | 118 |
| | KB•KC | 285 | 230 | 188 | □180 | 55 | 98 |
| | LA | 285 | 230 | 188 | □200 | 55 | 98 |
| MA | 285 | 230 | 188 | □220 | 55 | 98 | |
| MB | 305 | 230 | 208 | □220 | 75 | 118 | |

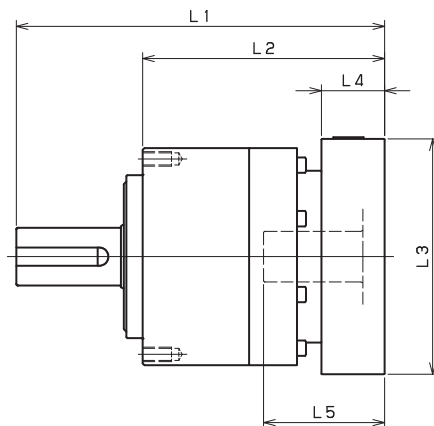
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-155 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-155-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 266.5 | 241.5 | 169.5 | □80 | 25 | 50 |
| | EB•ED | 266.5 | 241.5 | 169.5 | □90 | 25 | 50 |
| | FA | 266.5 | 241.5 | 169.5 | □100 | 25 | 50 |
| | FB | 276.5 | 241.5 | 179.5 | □100 | 35 | 60 |
| | GB•GD•GJ | 266.5 | 241.5 | 169.5 | □115 | 25 | 50 |
| | HA | 266.5 | 241.5 | 169.5 | □130 | 25 | 50 |
| | HB | 281.5 | 241.5 | 184.5 | □130 | 40 | 65 |
| VRL-155-□-□-28** (Input shaft bore ≤ φ28) | JA | 276.5 | 241.5 | 179.5 | □150 | 35 | 60 |
| | FA•FB•FC | 283.5 | 248.5 | 186.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 283.5 | 248.5 | 186.5 | □115 | 35 | 67 |
| | HA•HC•HD | 283.5 | 248.5 | 186.5 | □130 | 35 | 67 |
| | HB | 293.5 | 248.5 | 196.5 | □130 | 45 | 77 |
| | HF | 278.5 | 248.5 | 181.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 283.5 | 248.5 | 186.5 | □150 | 35 | 67 |
| | KA•KB•KE | 283.5 | 248.5 | 186.5 | □180 | 35 | 67 |
| | LA | 283.5 | 248.5 | 186.5 | □200 | 35 | 67 |
| | LB | 293.5 | 248.5 | 196.5 | □200 | 45 | 77 |
| VRL-155-□-□-38** (Input shaft bore ≤ φ38) | MA | 283.5 | 248.5 | 186.5 | □220 | 35 | 67 |
| | MB | 293.5 | 248.5 | 196.5 | □220 | 45 | 77 |
| | HA | 298.5 | 253.5 | 201.5 | □130 | 45 | 82 |
| | HB•HE | 293.5 | 253.5 | 196.5 | □130 | 40 | 77 |
| | JA | 298.5 | 253.5 | 201.5 | □150 | 45 | 82 |
| | KA•KB•KC | 298.5 | 253.5 | 201.5 | □180 | 45 | 82 |
| | KD | 333.5 | 253.5 | 236.5 | □180 | 80 | 117 |
| | KE | 313.5 | 253.5 | 216.5 | □180 | 60 | 97 |
| | LB | 308.5 | 253.5 | 211.5 | □200 | 55 | 92 |
| VRL-155-□-□-48** (Input shaft bore ≤ φ48) | MA•MB | 298.5 | 253.5 | 201.5 | □220 | 45 | 82 |
| | MC | 313.5 | 253.5 | 216.5 | □220 | 60 | 97 |
| | MD | 308.5 | 253.5 | 211.5 | □220 | 55 | 92 |
| | KA | 339.5 | 264.5 | 242.5 | □180 | 75 | 118 |
| | KB•KC | 319.5 | 264.5 | 222.5 | □180 | 55 | 98 |
| LA | 319.5 | 264.5 | 222.5 | □200 | 55 | 98 | |
| MA | 319.5 | 264.5 | 222.5 | □220 | 55 | 98 | |
| MB | 339.5 | 264.5 | 242.5 | □220 | 75 | 118 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com
sales@electromate.com

VRL-205 – 1-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 750 | 500 | 500 |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 1400 | 970 | 970 |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.68 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 6200 | 6700 | 7100 | 7400 | 7800 | 8100 | 8400 |
| Permitted Axial Load | [N] | *8 | 4300 | 4900 | 5400 | 5800 | 6300 | 6600 | 7000 | 7300 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 44.000 | 28.000 | 22.000 | 18.000 | 16.000 | 15.000 | 14.000 | 14.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 66.000 | 50.000 | 44.000 | 41.000 | 38.000 | 37.000 | 36.000 | 36.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 130.000 | 110.000 | 100.000 | 100.000 | 99.000 | 97.000 | 97.000 | 96.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | |

VRL-205 – 2-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 750 | 750 |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 1400 | 1400 |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2750 | 2750 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9600 | 9800 | 11000 | 11000 | 12000 | 12000 | 13000 | 13000 |
| Permitted Axial Load | [N] | *8 | 8700 | 8900 | 9900 | 11000 | 11000 | 12000 | 13000 | 13000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 5.400 | 4.400 | 4.200 | 4.900 | 3.200 | 4.100 | 3.200 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 13.000 | 12.000 | 12.000 | 13.000 | 11.000 | 12.000 | 11.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 35.000 | 34.000 | 34.000 | 35.000 | 33.000 | 34.000 | 33.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 40 | | | | | | | |

Sold & Serviced By:


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRL-205 – 2-Stage Specifications

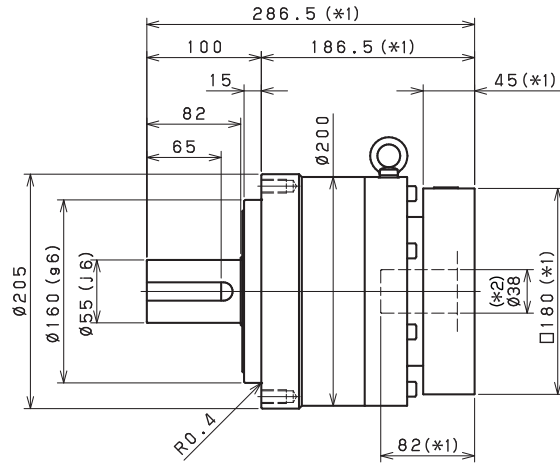
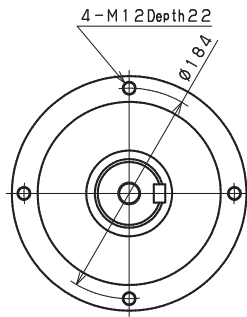
| Frame Size | 205 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 500 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 970 | | |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.000 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 40 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,500 rpm for VRL205
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

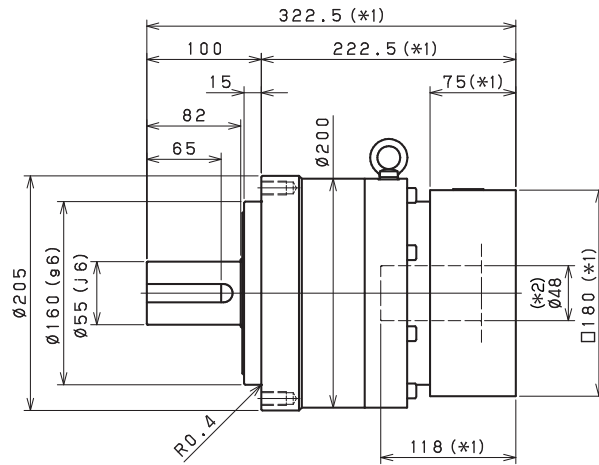
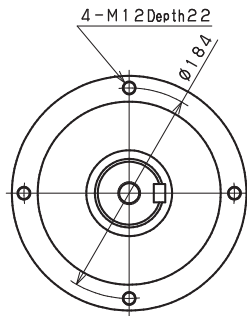
VRL-SERIES Inline shaft

VRL-205 – 1-Stage Dimensions

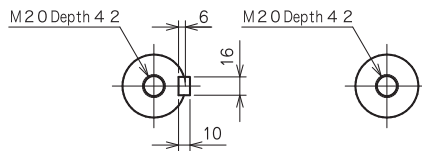
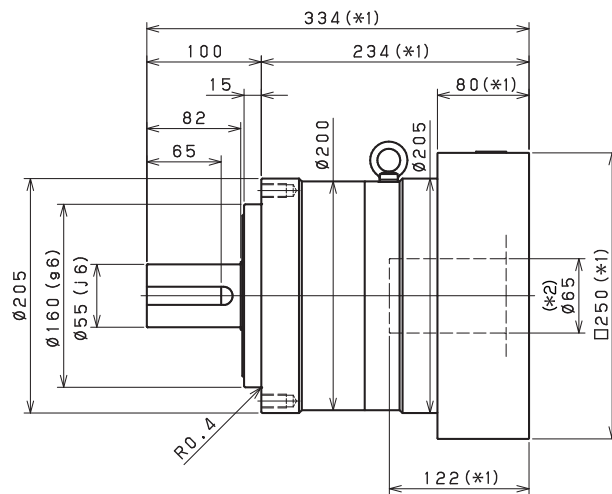
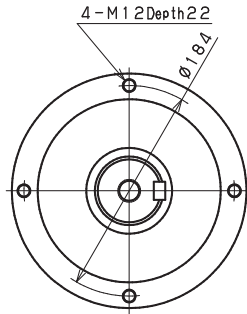
Input shaft bore $\cong \phi 38$



Input shaft bore $\cong \phi 48$



Input shaft bore $\cong \phi 65$



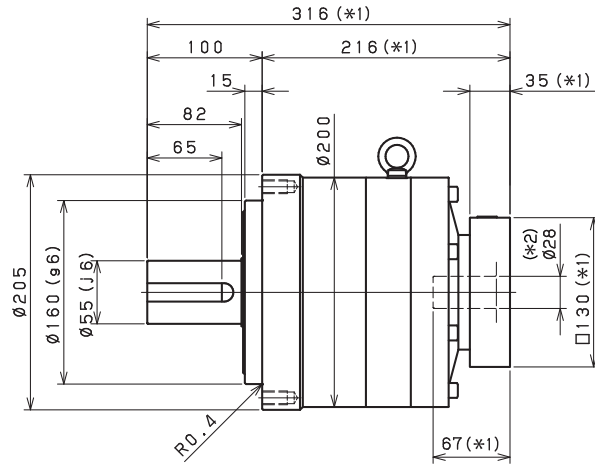
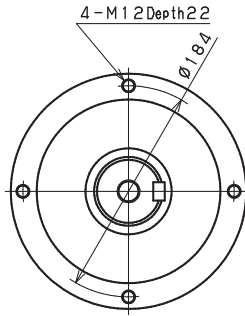
Shaft with key

Smooth shaft

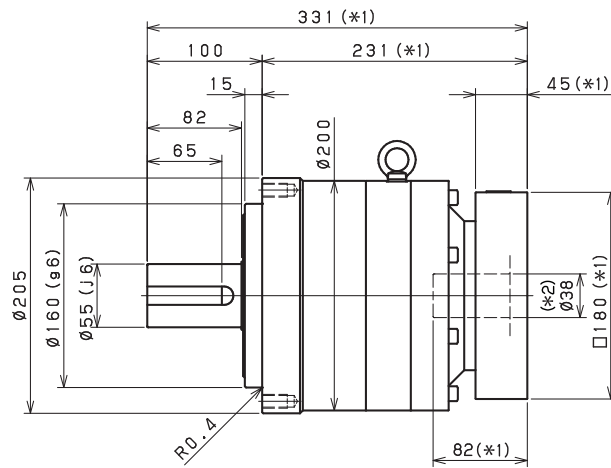
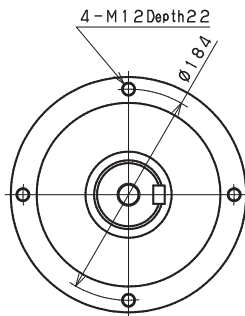
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRL-205 - 2-Stage Dimensions

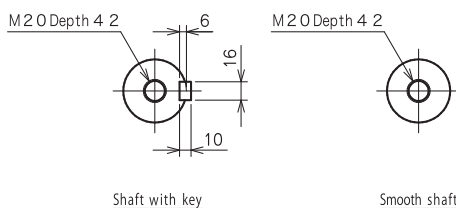
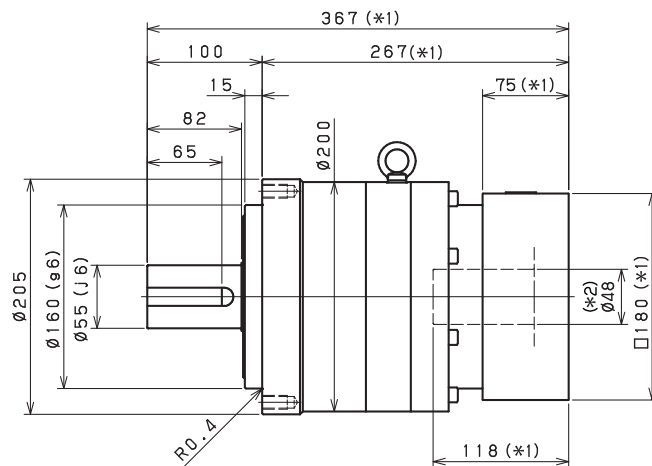
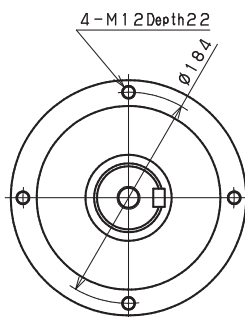
Input shaft bore $\cong \varnothing 28$



Input shaft bore $\cong \varnothing 38$



Input shaft bore $\cong \varnothing 48$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

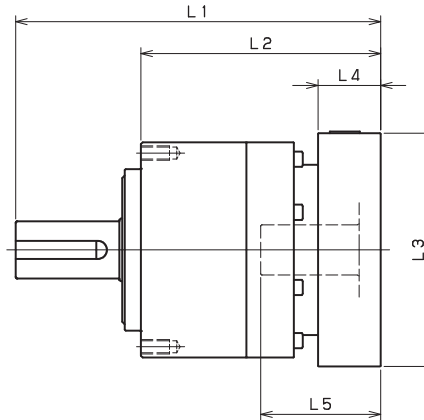
Sold & Serviced By:
ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRL

VRL-SERIES Inline shaft

VRL-205 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-205-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | -- | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| VRL-205-□-□-38** (Input shaft bore ≤ φ38) | HA | 286.5 | 241.5 | 186.5 | □130 | 45 | 82 |
| | HB•HE | 281.5 | 241.5 | 181.5 | □130 | 40 | 77 |
| | JA | 286.5 | 241.5 | 186.5 | □150 | 45 | 82 |
| | KA•KB•KC | 286.5 | 241.5 | 186.5 | □180 | 45 | 82 |
| | KD | 321.5 | 241.5 | 221.5 | □180 | 80 | 117 |
| | KE | 301.5 | 241.5 | 201.5 | □180 | 60 | 97 |
| | LB | 296.5 | 241.5 | 196.5 | □200 | 55 | 92 |
| | MA•MB | 286.5 | 241.5 | 186.5 | □220 | 45 | 82 |
| | MC | 301.5 | 241.5 | 201.5 | □220 | 60 | 97 |
| | MD | 296.5 | 241.5 | 196.5 | □220 | 55 | 92 |
| VRL-205-□-□-48** (Input shaft bore ≤ φ48) | NA | 286.5 | 241.5 | 186.5 | □250 | 45 | 82 |
| | KA | 322.5 | 247.5 | 222.5 | □180 | 75 | 118 |
| | KB•KC | 302.5 | 247.5 | 202.5 | □180 | 55 | 98 |
| | LA | 302.5 | 247.5 | 202.5 | □200 | 55 | 98 |
| | MA | 302.5 | 247.5 | 202.5 | □220 | 55 | 98 |
| | MB | 322.5 | 247.5 | 222.5 | □220 | 75 | 118 |
| | NA | 322.5 | 247.5 | 222.5 | □250 | 75 | 118 |
| VRL-205-□-□-65** (Input shaft bore ≤ φ65) | PA | 322.5 | 247.5 | 222.5 | □280 | 75 | 118 |
| | MA•MB•MC•MD | 334 | 254 | 234 | □220 | 80 | 122 |
| | NA•NC | 334 | 254 | 234 | □250 | 80 | 122 |
| | NB•ND | 364 | 254 | 264 | □250 | 110 | 152 |
| | PA | 354 | 254 | 254 | □280 | 100 | 142 |
| PB | 364 | 254 | 264 | □280 | 110 | 152 | |

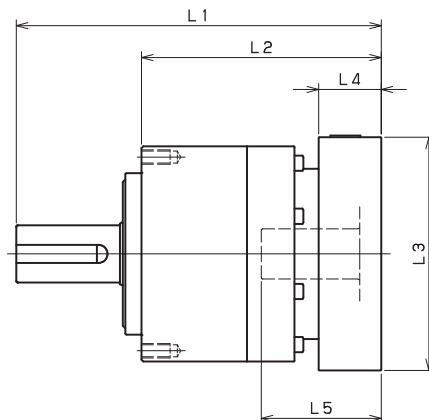
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-205 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-----|-----|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-205-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 316 | 281 | 216 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 316 | 281 | 216 | □115 | 35 | 67 |
| | HA•HC•HD | 316 | 281 | 216 | □130 | 35 | 67 |
| | HB | 326 | 281 | 226 | □130 | 45 | 77 |
| | HF | 311 | 281 | 211 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 316 | 281 | 216 | □150 | 35 | 67 |
| | KA•KB•KE | 316 | 281 | 216 | □180 | 35 | 67 |
| | LA | 316 | 281 | 216 | □200 | 35 | 67 |
| | LB | 326 | 281 | 226 | □200 | 45 | 77 |
| | MA | 316 | 281 | 216 | □220 | 35 | 67 |
| VRL-205-□-□-38** (Input shaft bore ≤ φ38) | HA | 331 | 286 | 231 | □130 | 45 | 82 |
| | HB•HE | 326 | 286 | 226 | □130 | 40 | 77 |
| | JA | 331 | 286 | 231 | □150 | 45 | 82 |
| | KA•KB•KC | 331 | 286 | 231 | □180 | 45 | 82 |
| | KD | 366 | 286 | 266 | □180 | 80 | 117 |
| | KE | 346 | 286 | 246 | □180 | 60 | 97 |
| | LB | 341 | 286 | 241 | □200 | 55 | 92 |
| | MA•MB | 331 | 286 | 231 | □220 | 45 | 82 |
| | MC | 346 | 286 | 246 | □220 | 60 | 97 |
| | MD | 341 | 286 | 241 | □220 | 55 | 92 |
| VRL-205-□-□-48** (Input shaft bore ≤ φ48) | KA | 367 | 292 | 267 | □180 | 75 | 118 |
| | KB•KC | 347 | 292 | 247 | □180 | 55 | 98 |
| | LA | 347 | 292 | 247 | □200 | 55 | 98 |
| | MA | 347 | 292 | 247 | □220 | 55 | 98 |
| | MB | 367 | 292 | 267 | □220 | 75 | 118 |
| | NA | 367 | 292 | 267 | □250 | 75 | 118 |
| | PA | 367 | 292 | 267 | □280 | 75 | 118 |
| VRL-205-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | -- | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRL-235 – 1-Stage Specifications

| Frame Size | 235 | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|---------|---------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 2200 | 1900 | 1600 |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.92 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5800 | 6400 | 6900 | 7300 | 7700 | 8000 | 8400 | 8700 |
| Permitted Axial Load | [N] | *8 | 6400 | 7200 | 7900 | 8600 | 9200 | 9700 | 10000 | 11000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 90.000 | 62.000 | 52.000 | 47.000 | 42.000 | 40.000 | 39.000 | 38.000 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | 150.000 | 120.000 | 110.000 | 110.000 | 100.000 | 100.000 | 99.000 | 98.000 |
| Efficiency | [%] | *11 | 97 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 55 | | | | | | | |

VRL-235 – 2-Stage Specifications

| Frame Size | 235 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1500 | 1500 |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 1600 | 2300 | 2300 |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 5000 | 5000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9900 | 10000 | 11000 | 12000 | 12000 | 13000 | 13000 | 14000 |
| Permitted Axial Load | [N] | *8 | 13000 | 13000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 14.000 | 16.000 | 14.000 | 14.000 | 15.000 | 12.000 | 13.000 | 12.000 |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 36.000 | 37.000 | 35.000 | 35.000 | 36.000 | 34.000 | 35.000 | 33.000 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 92 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 57 | | | | | | | |

VRL-235 – 2-Stage Specifications

| Frame Size | 235 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1300 | 2300 | 2300 | 2300 | 1800 | 1300 | 1200 | | |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 35.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 92 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 57 | | | | | | | | |

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for VRL235

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)

*9) The maximum radial load that the reducer can accept

*10) The maximum axial load that the reducer can accept

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

*13) Contact NIDEC-SHIMPO for the testing conditions and environment

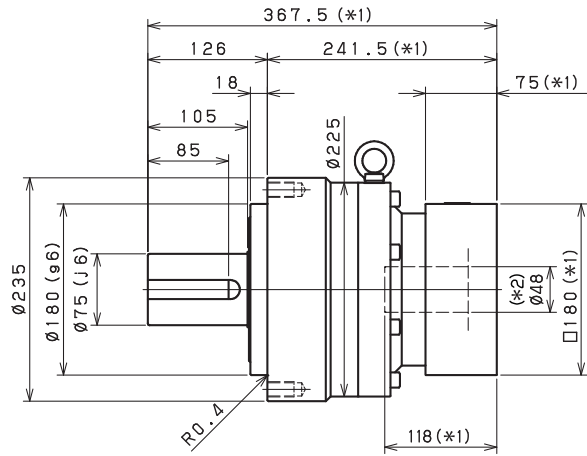
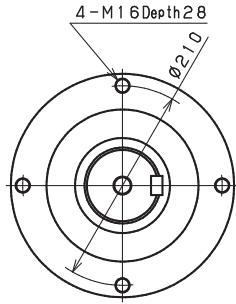
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

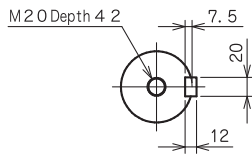
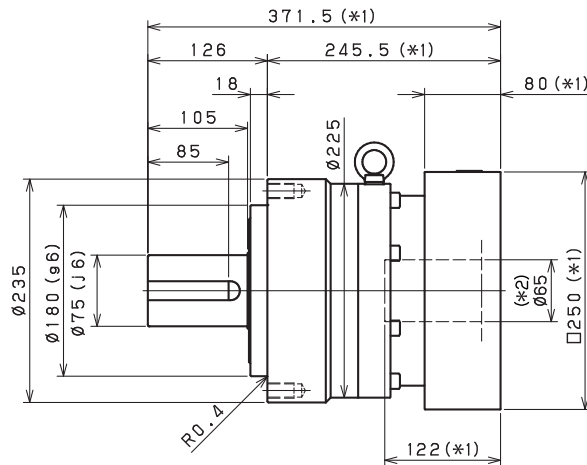
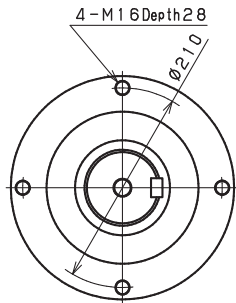
VRL-SERIES Inline shaft

VRL-235 – 1-Stage Dimensions

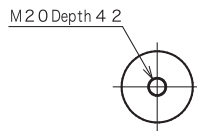
Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

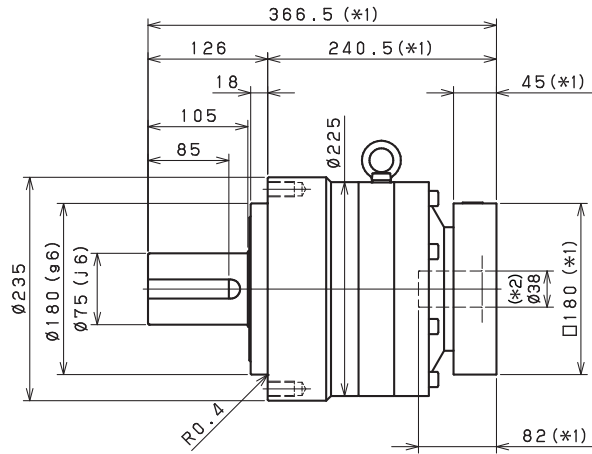
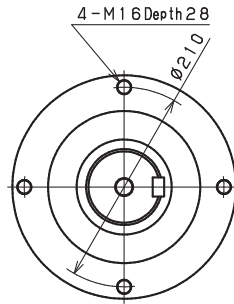
Toll Free Fax (877) SERV099

www.electromate.com

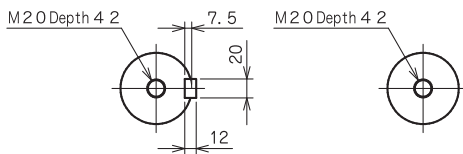
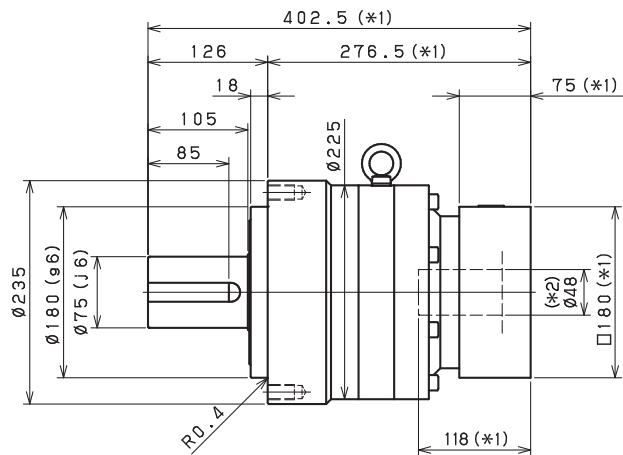
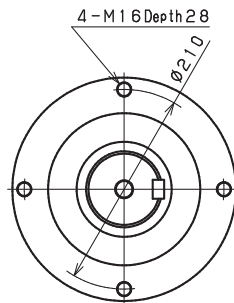
sales@electromate.com

VRL-235 – 2-Stage Dimensions

Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



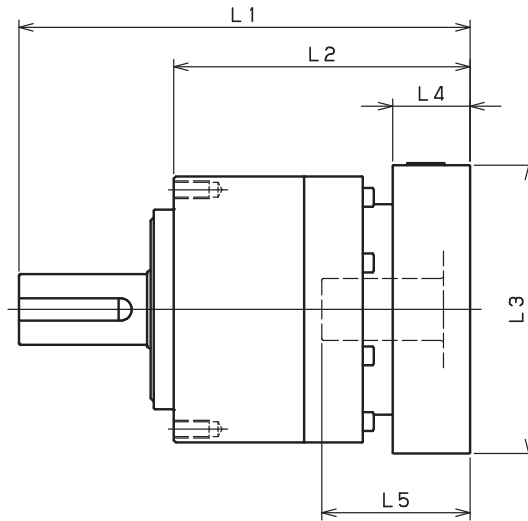
Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRL-235 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-235-□-□-38** (Input shaft bore ≤ φ38) | HA | -- | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- | -- |
| VRL-235-□-□-48** (Input shaft bore ≤ φ48) | KA | 367.5 | 292.5 | 241.5 | □180 | 75 | 118 |
| | KB-KC | 347.5 | 292.5 | 221.5 | □180 | 55 | 98 |
| | LA | 347.5 | 292.5 | 221.5 | □200 | 55 | 98 |
| | MA | 347.5 | 292.5 | 221.5 | □220 | 55 | 98 |
| | MB | 367.5 | 292.5 | 241.5 | □220 | 75 | 118 |
| | NA | 367.5 | 292.5 | 241.5 | □250 | 75 | 118 |
| | PA | 367.5 | 292.5 | 241.5 | □280 | 75 | 118 |
| VRL-235-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | 371.5 | 291.5 | 245.5 | □220 | 80 | 122 |
| | NA-NC | 371.5 | 291.5 | 245.5 | □250 | 80 | 122 |
| | NB-ND | 401.5 | 291.5 | 275.5 | □250 | 110 | 152 |
| | PA | 391.5 | 291.5 | 265.5 | □280 | 100 | 142 |
| | PB | 401.5 | 291.5 | 275.5 | □280 | 110 | 152 |
| | QA-QB | 391.5 | 291.5 | 265.5 | □320 | 100 | 142 |

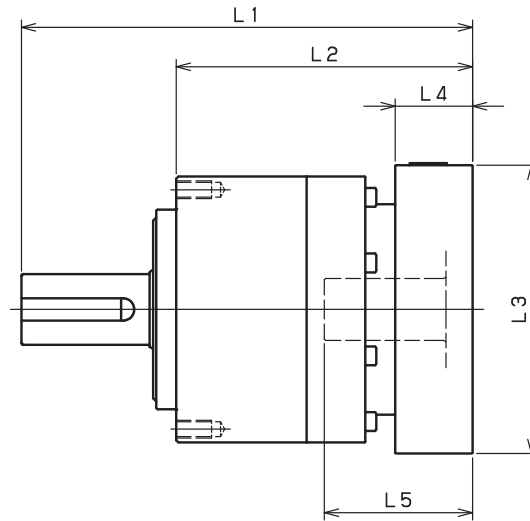
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRL-235 – 2-Stage Adapter Dimensions



VRL

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRL-235-□-□-38** (Input shaft bore ≤ φ38) | HA | 366.5 | 321.5 | 240.5 | □130 | 45 | 82 |
| | HB-HE | 361.5 | 321.5 | 235.5 | □130 | 40 | 77 |
| | JA | 366.5 | 321.5 | 240.5 | □150 | 45 | 82 |
| | KA-KB-KC | 366.5 | 321.5 | 240.5 | □180 | 45 | 82 |
| | KD | 401.5 | 321.5 | 275.5 | □180 | 80 | 117 |
| | KE | 381.5 | 321.5 | 255.5 | □180 | 60 | 97 |
| | LA | 366.5 | 321.5 | 240.5 | □200 | 45 | 82 |
| | LB | 376.5 | 321.5 | 250.5 | □200 | 55 | 92 |
| | MA-MB | 366.5 | 321.5 | 240.5 | □220 | 45 | 82 |
| | MC | 381.5 | 321.5 | 255.5 | □220 | 60 | 97 |
| | MD | 376.5 | 321.5 | 250.5 | □220 | 55 | 92 |
| VRL-235-□-□-48** (Input shaft bore ≤ φ48) | KA | 402.5 | 327.5 | 276.5 | □180 | 75 | 118 |
| | KB-KC | 382.5 | 327.5 | 256.5 | □180 | 55 | 98 |
| | LA | 382.5 | 327.5 | 256.5 | □200 | 55 | 98 |
| | MA | 382.5 | 327.5 | 256.5 | □220 | 55 | 98 |
| | MB | 402.5 | 327.5 | 276.5 | □220 | 75 | 118 |
| | NA | 402.5 | 327.5 | 276.5 | □250 | 75 | 118 |
| | PA | 402.5 | 327.5 | 276.5 | □280 | 75 | 118 |
| VRL-235-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | -- | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| QA-QB | -- | -- | -- | -- | -- | -- | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com



VRB-SERIES

- Industry standard mounting dimensions
- Large variety of frame sizes and ratios
- Thru-bolt mounting style
- Best-in-class backlash (≤ 3 arc-min)
- Ships in 48 hours in standard frame sizes
- Assembled in the USA

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

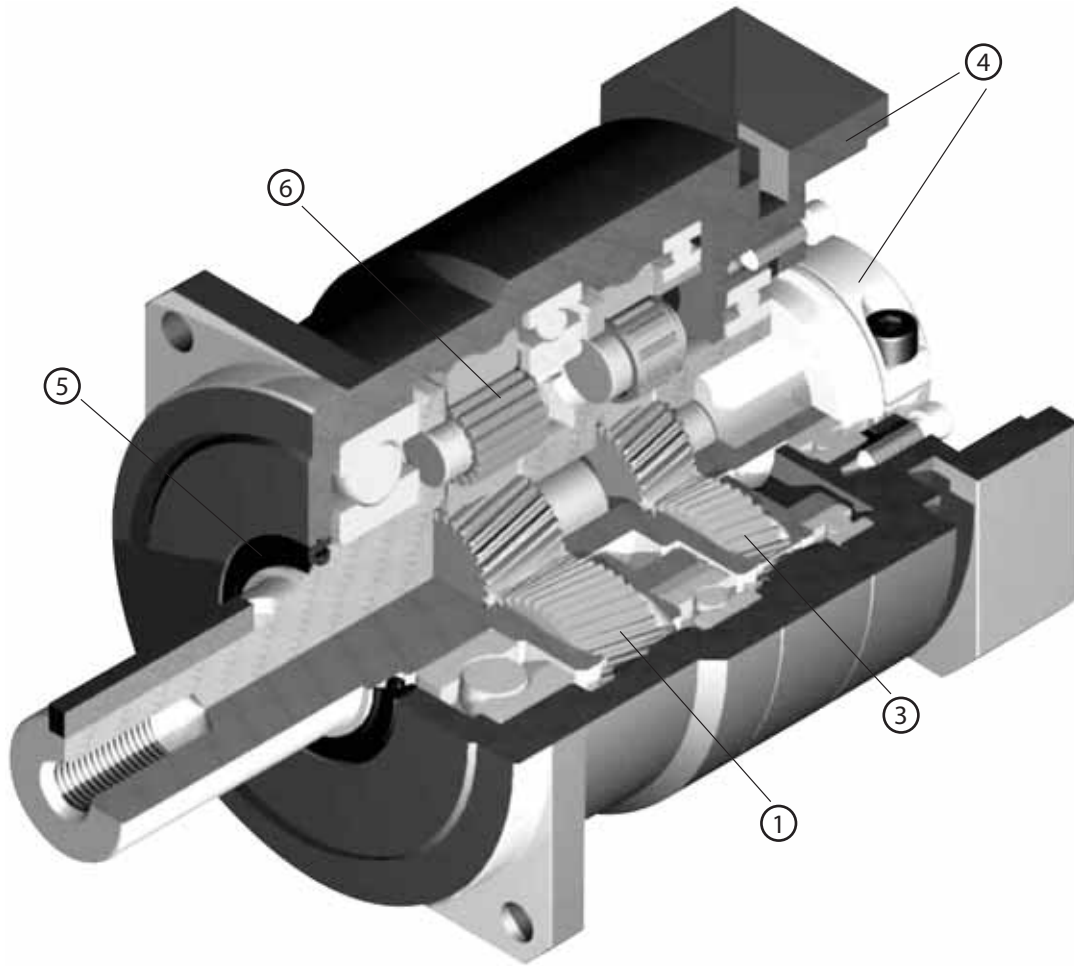
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

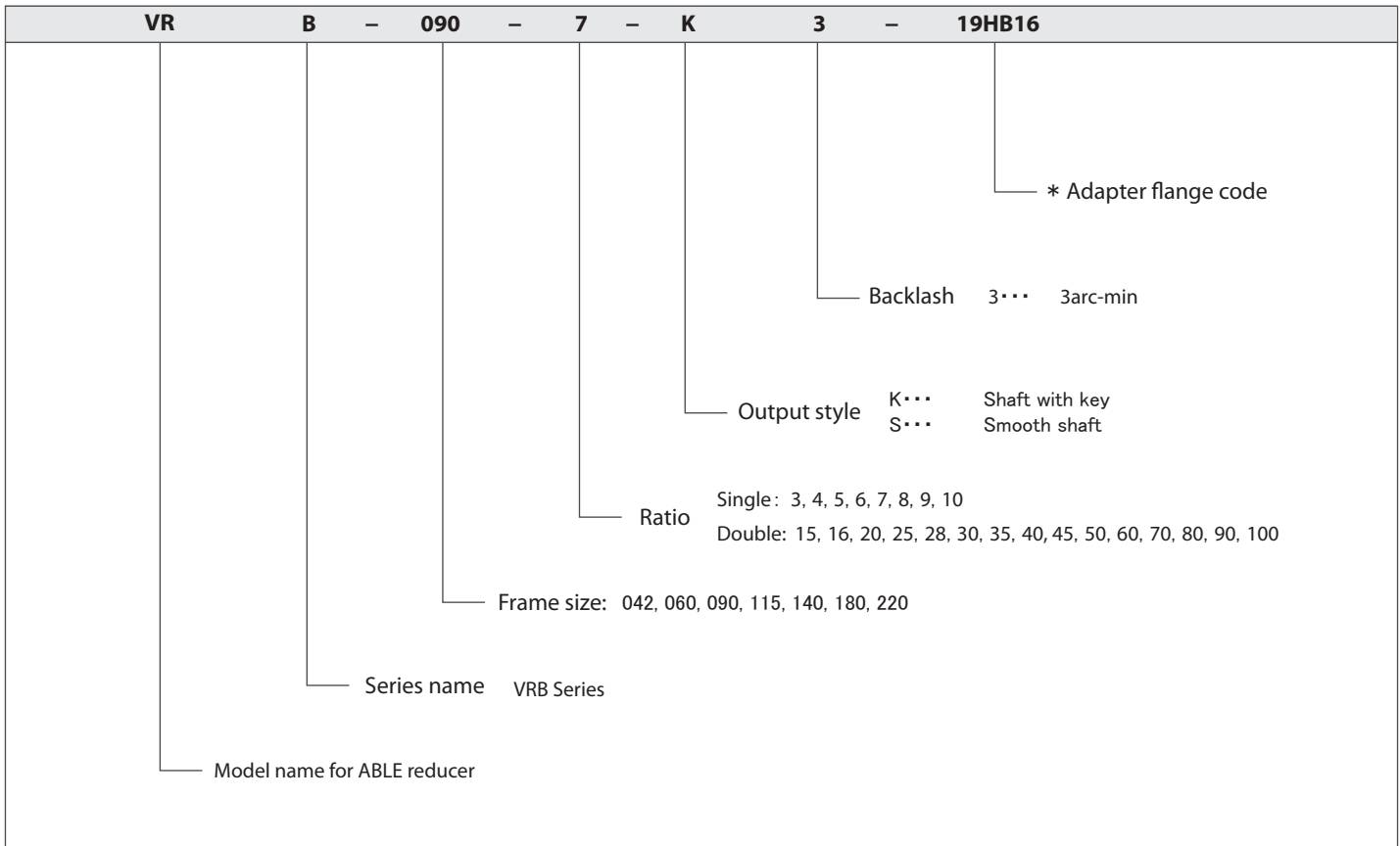
VRB-SERIES Inline shaft

VRB-Series – Features



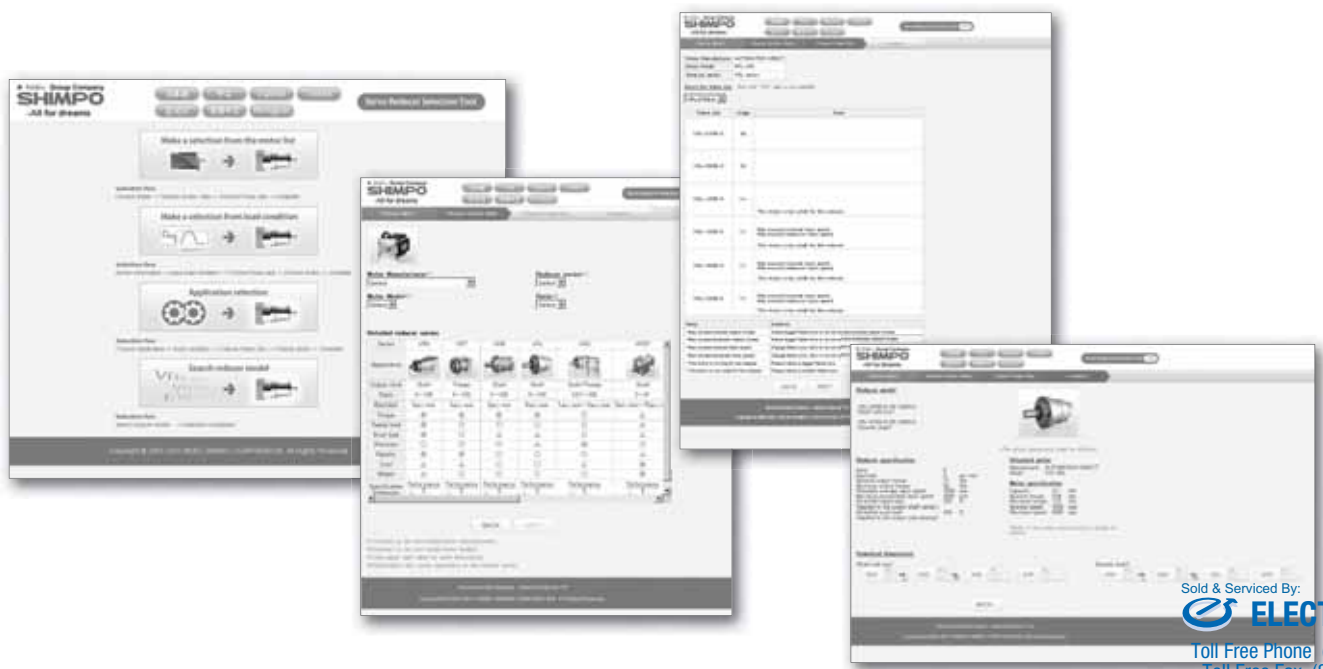
- ① Quiet operation: Helical cut gears contribute to reduced vibration and noise
- ② High precision: Standard backlash is 3 arc-min, ideal for higher levels of positional accuracy
- ③ High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ④ Adapter-bushing connection: Enables a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal: High viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ Maintenance-free: No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

VRB-Series – Model Code



VRB

- *1) Adapter flange code
Adapter flange code varies depending on the motor
- *2) For all washdown intensive and food grade options, refer to pages 36 and 37



VRB-SERIES Inline shaft

VRB-042 – 1-Stage Specifications

| Frame Size | 042 | | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Units | Notes | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 9 | 6 | 6 |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 18 | 12 | 12 |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 35 | 30 | 30 |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.03 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 240 | 270 | 290 | 310 | 320 | 340 | 350 | 360 |
| Permitted Axial Load | [N] | *8 | 270 | 300 | 330 | 360 | 380 | 410 | 430 | 450 |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.053 | 0.041 | 0.036 | 0.034 | 0.032 | 0.031 | 0.031 | 0.030 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.091 | 0.079 | 0.074 | 0.072 | 0.071 | 0.070 | 0.069 | 0.069 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 0.6 | | | | | | | |

VRB-042 – 2-Stage Specifications

| Frame Size | 042 | | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Notes | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 6 | 9 | 9 |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 12 | 18 | 18 |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 30 | 35 | 35 |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 410 | 420 | 460 | 490 | 510 | 520 | 550 | 570 |
| Permitted Axial Load | [N] | *8 | 540 | 550 | 610 | 640 | 640 | 640 | 640 | 640 |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.035 | 0.038 | 0.034 | 0.034 | 0.038 | 0.030 | 0.034 | 0.030 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 0.7 | | | | | | | |

Sold & Serviced By:



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRB-042 – 2-Stage Specifications

| Frame Size | 042 | | | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Units | Notes | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 6 | 9 | 9 | 9 | 9 | 6 | 6 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 12 | 18 | 18 | 18 | 18 | 12 | 12 | | |
| Emergency Stop Torque | [Nm] | *3 | 30 | 35 | 35 | 35 | 35 | 30 | 30 | | |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 600 | 620 | 660 | 690 | 710 | 710 | 710 | | |
| Permitted Axial Load | [N] | *8 | 640 | 640 | 640 | 640 | 640 | 640 | 640 | | |
| Maximum Radial Load | [N] | *9 | 710 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 640 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.034 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 0.7 | | | | | | | | |

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) This is the torque at no load applied on the input shaft. The input speed is 4,000 rpm for VRB 042

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)

*9) The maximum radial load that the reducer can accept

*10) The maximum axial load that the reducer can accept

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

*13) Contact NIDEC-SHIMPO for the testing conditions and environment

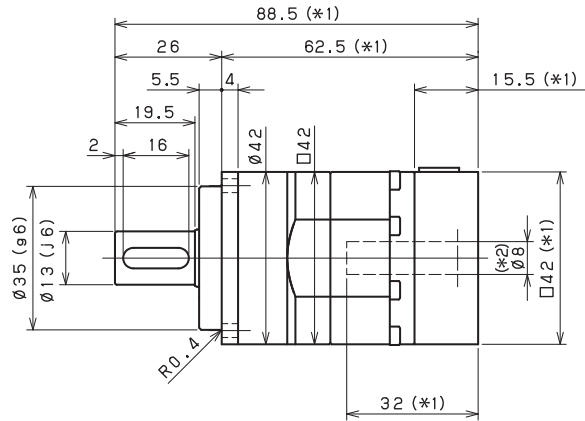
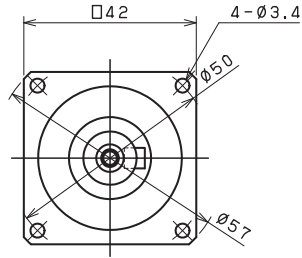
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

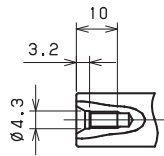
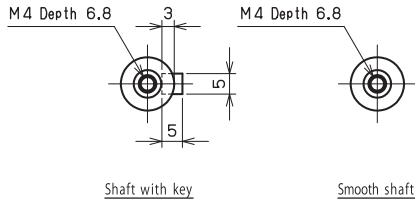
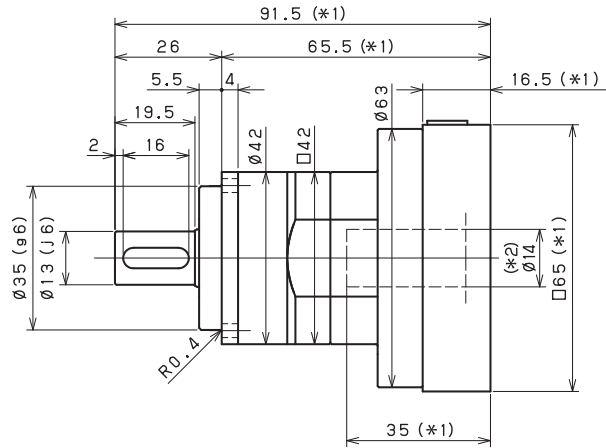
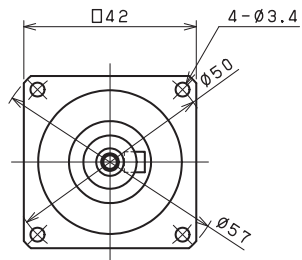
VRB-SERIES Inline shaft

VRB-042 – 1-Stage Dimensions

Input shaft bore $\leq \phi 8$



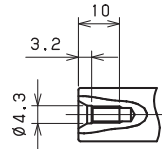
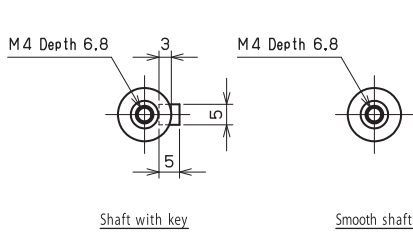
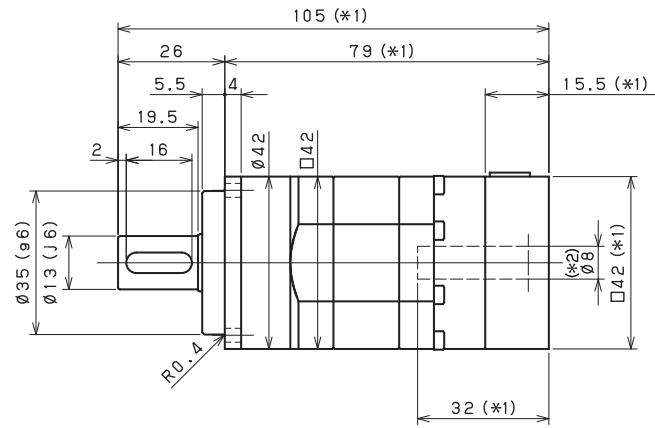
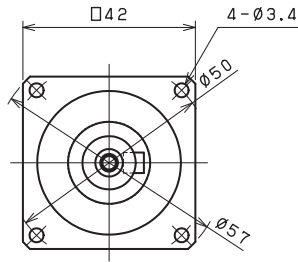
Input shaft bore $\leq \phi 14$



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRB-042 - 2-Stage Dimensions

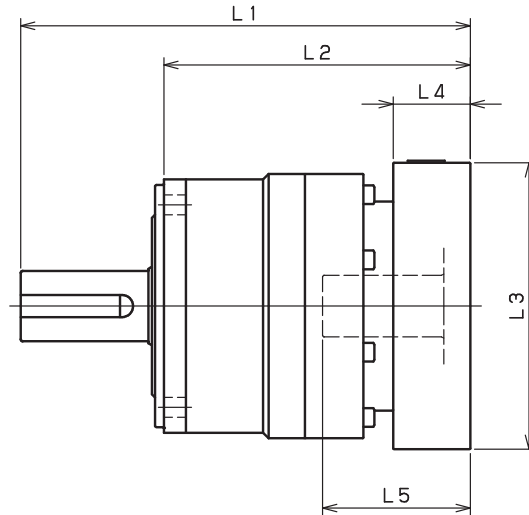
Input shaft bore $\cong \phi 8$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRB-042 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|----------------------------|---------|----|----|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-042-□-□-S8** (Input shaft bore ≤ φ8) | ZA·ZC·ZD·ZF·ZG·ZL·ZM·ZN·ZQ | 88.5 | 73 | 64 | □42 | 15.5 | 32 |
| | ZB·ZE·ZH·ZJ·ZK | 93.5 | 73 | 69 | □42 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 88.5 | 73 | 64 | □60 | 15.5 | 32 |
| | BC·BF | 93.5 | 73 | 69 | □60 | 20.5 | 37 |
| VRB-042-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | 91.5 | 75 | 67 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 96.5 | 75 | 72 | □65 | 21.5 | 40 |
| | BL | 101.5 | 75 | 77 | □65 | 26.5 | 45 |

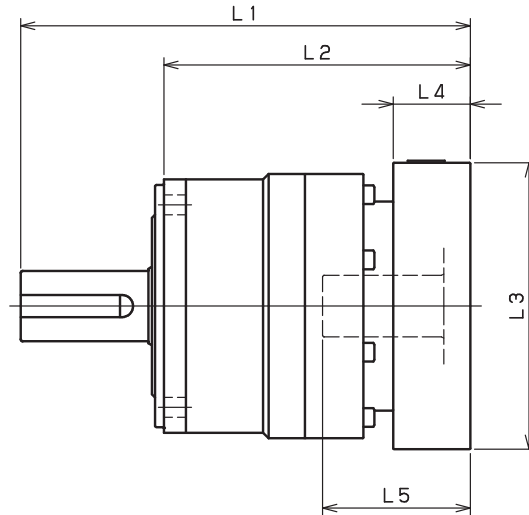
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-042 – 2-Stage Adapter Dimensions



VRB

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|----------------------------|---------|------|------|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-042-□-□-S8** (Input shaft bore ≤ φ8) | ZA·ZC·ZD·ZF·ZG·ZL·ZM·ZN·ZQ | 105 | 89.5 | 80.5 | □42 | 15.5 | 32 |
| | ZB·ZE·ZH·ZJ·ZK | 110 | 89.5 | 85.5 | □42 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 105 | 89.5 | 80.5 | □60 | 15.5 | 32 |
| | BC·BF | 110 | 89.5 | 85.5 | □60 | 20.5 | 37 |
| VRB-042-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | -- | -- | -- | -- | -- | -- |
| | BC·BH·BM·BN | -- | -- | -- | -- | -- | -- |
| | BL | -- | -- | -- | -- | -- | -- |

- *1) Double reduction : 1/15~ 1/100
- *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-o6o – 1-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 27 | 18 | 18 |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 50 | 35 | 35 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 100 | 80 | 80 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.15 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 430 | 470 | 510 | 540 | 570 | 600 | 620 | 640 |
| Permitted Axial Load | [N] | *8 | 310 | 360 | 390 | 430 | 460 | 480 | 510 | 530 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.140 | 0.095 | 0.077 | 0.068 | 0.062 | 0.059 | 0.057 | 0.056 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.220 | 0.170 | 0.160 | 0.150 | 0.140 | 0.140 | 0.140 | 0.140 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.430 | 0.380 | 0.360 | 0.360 | 0.350 | 0.350 | 0.340 | 0.340 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.4 | | | | | | | |

VRB-o6o – 2-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 27 | 27 |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 50 | 50 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 100 | 100 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 740 | 750 | 810 | 870 | 910 | 930 | 980 | 1000 |
| Permitted Axial Load | [N] | *8 | 630 | 650 | 720 | 790 | 830 | 860 | 920 | 970 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.055 | 0.057 | 0.054 | 0.053 | 0.055 | 0.049 | 0.053 | 0.049 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.140 | 0.140 | 0.130 | 0.130 | 0.140 | 0.130 | 0.130 | 0.130 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | |

VRB-o6o – 2-Stage Specifications

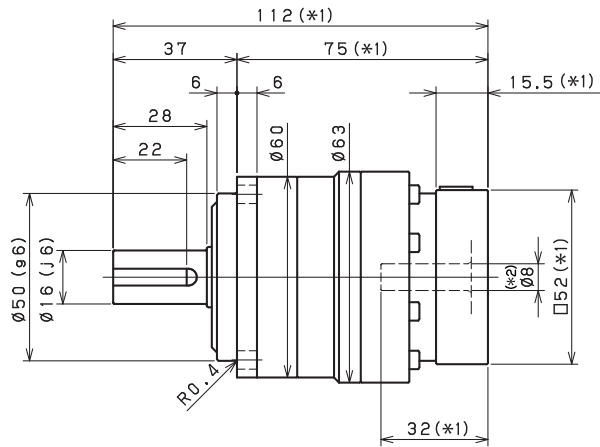
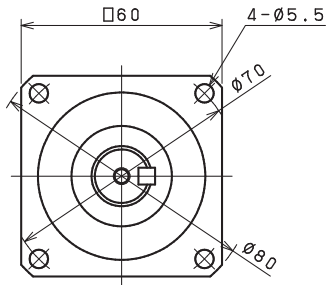
| Frame Size | 060 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 18 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 35 | | |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 80 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1100 | 1100 | 1200 | 1200 | 1200 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 1000 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | | |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.053 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRB o6o
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

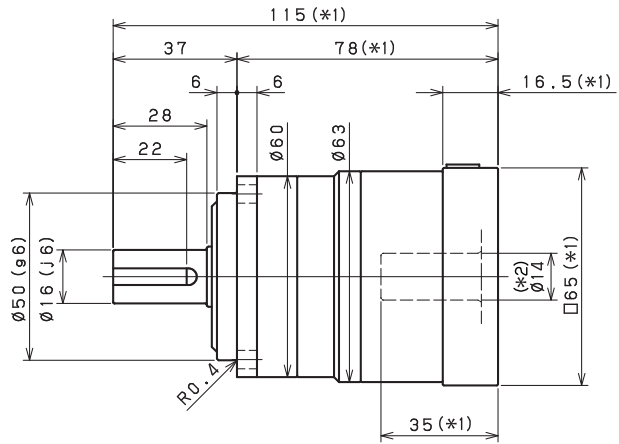
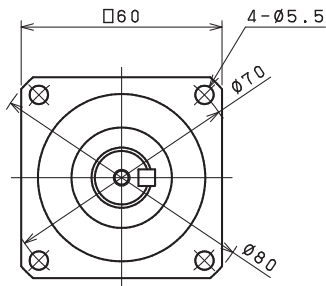
VRB-SERIES Inline shaft

VRB-o6o - 1-Stage Dimensions

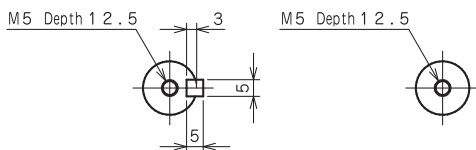
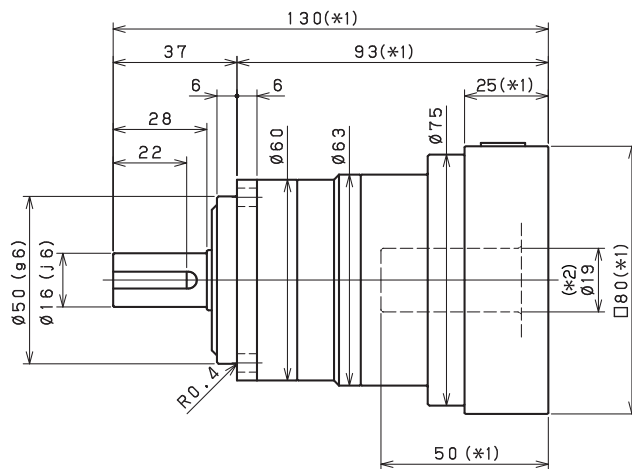
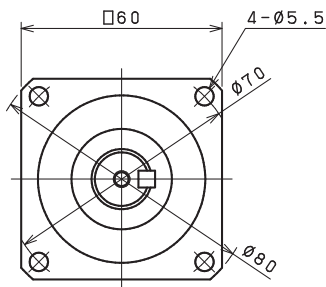
Input shaft bore $\leq \varnothing 8$



Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

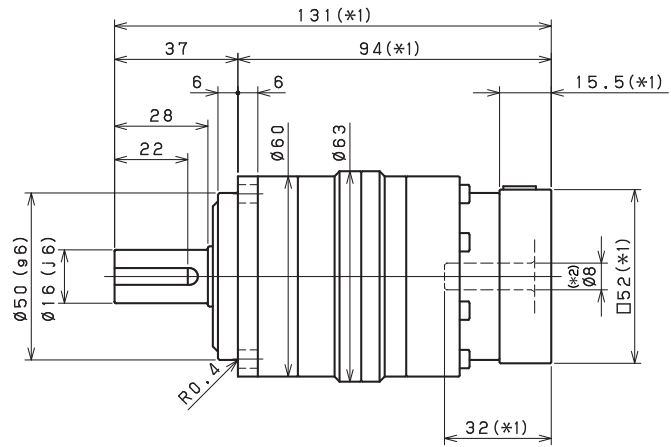
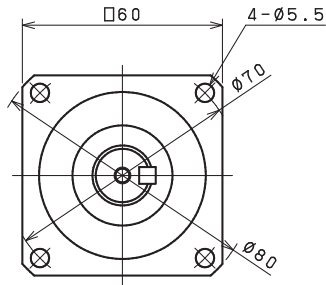
Toll Free Fax (877) SERV099

www.electromate.com

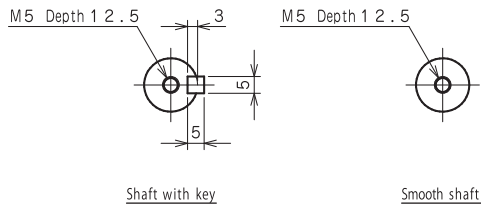
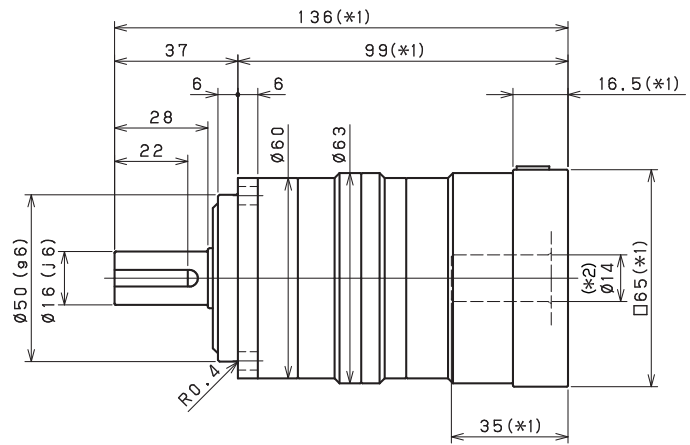
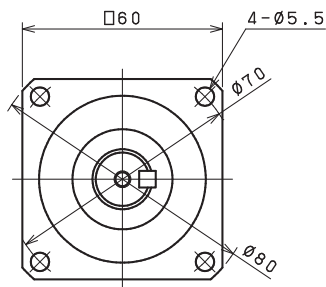
sales@electromate.com

VRB-o6o – 2-Stage Dimensions

Input shaft bore $\leq \phi 8$



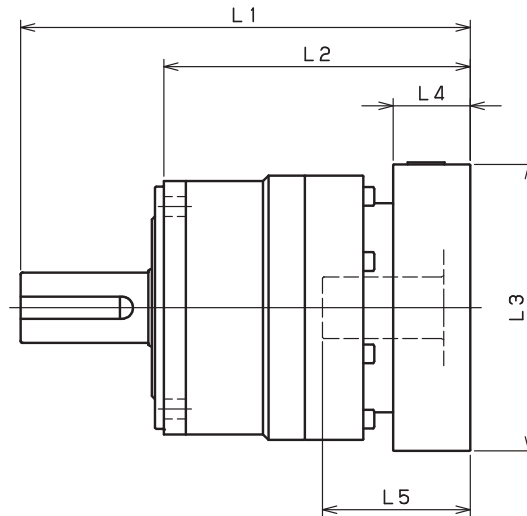
Input shaft bore $\leq \phi 14$



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRB

VRB-060 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-060-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 112 | 96.5 | 75 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 117 | 96.5 | 80 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 112 | 96.5 | 75 | □60 | 15.5 | 32 |
| | BC·BF | 117 | 96.5 | 80 | □60 | 20.5 | 37 |
| | CA | 117 | 96.5 | 80 | □70 | 20.5 | 37 |
| VRB-060-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 115 | 98.5 | 78 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 120 | 98.5 | 83 | □65 | 21.5 | 40 |
| | BL | 125 | 98.5 | 88 | □65 | 26.5 | 45 |
| | CA·CC | 115 | 98.5 | 78 | □70 | 16.5 | 35 |
| | CB | 120 | 98.5 | 83 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 115 | 98.5 | 78 | □80 | 16.5 | 35 |
| | DE·DL | 120 | 98.5 | 83 | □80 | 21.5 | 40 |
| | DG·DK | 125 | 98.5 | 88 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 115 | 98.5 | 78 | □90 | 16.5 | 35 |
| | EJ·EM | 120 | 98.5 | 83 | □90 | 21.5 | 40 |
| | ED·EE·EH | 125 | 98.5 | 88 | □90 | 26.5 | 45 |
| | FA | 115 | 98.5 | 78 | □100 | 16.5 | 35 |
| FB | 125 | 98.5 | 88 | □100 | 26.5 | 45 | |
| VRB-060-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 130 | 105 | 93 | □80 | 25 | 50 |
| | DD | 140 | 105 | 103 | □80 | 35 | 60 |
| | DE | 135 | 105 | 98 | □80 | 30 | 55 |
| | EA | 135 | 105 | 98 | □90 | 30 | 55 |
| | EB·ED | 130 | 105 | 93 | □90 | 25 | 50 |
| | EC | 140 | 105 | 103 | □90 | 35 | 60 |
| | FA | 130 | 105 | 93 | □100 | 25 | 50 |
| FB | 140 | 105 | 103 | □100 | 35 | 60 | |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

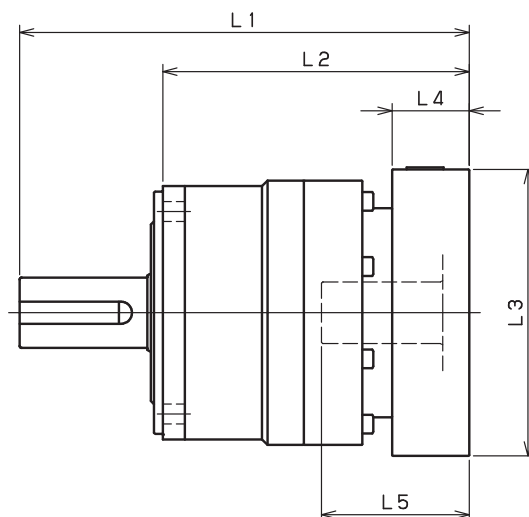
For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRB-o6o – 2-Stage Adapter Dimensions



VRB

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-060-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 131 | 115.5 | 94 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 136 | 115.5 | 99 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 131 | 115.5 | 94 | □60 | 15.5 | 32 |
| | BC·BF | 136 | 115.5 | 99 | □60 | 20.5 | 37 |
| | CA | 136 | 115.5 | 99 | □70 | 20.5 | 37 |
| VRB-060-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 136 | 119.5 | 99 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 141 | 119.5 | 104 | □65 | 21.5 | 40 |
| | BL | 146 | 119.5 | 109 | □65 | 26.5 | 45 |
| | CA·CC | 136 | 119.5 | 99 | □70 | 16.5 | 35 |
| | CB | 141 | 119.5 | 104 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 136 | 119.5 | 99 | □80 | 16.5 | 35 |
| | DE·DL | 141 | 119.5 | 104 | □80 | 21.5 | 40 |
| | DG·DK | 146 | 119.5 | 109 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 136 | 119.5 | 99 | □90 | 16.5 | 35 |
| | EJ·EM | 141 | 119.5 | 104 | □90 | 21.5 | 40 |
| | ED·EE·EH | 146 | 119.5 | 109 | □90 | 26.5 | 45 |
| | FA | 136 | 119.5 | 99 | □100 | 16.5 | 35 |
| FB | 146 | 119.5 | 109 | □100 | 26.5 | 45 | |
| VRB-060-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 151 | 126 | 114 | □80 | 25 | 50 |
| | DD | 161 | 126 | 124 | □80 | 35 | 60 |
| | DE | 156 | 126 | 119 | □80 | 30 | 55 |
| | EA | 156 | 126 | 119 | □90 | 30 | 55 |
| | EB·ED | 151 | 126 | 114 | □90 | 25 | 50 |
| | EC | 161 | 126 | 124 | □90 | 35 | 60 |
| | FA | 151 | 126 | 114 | □100 | 25 | 50 |
| | FB | 161 | 126 | 124 | □100 | 35 | 60 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-SERIES Inline shaft

VRB-090 – 1-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.35 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 810 | 890 | 960 | 1000 | 1100 | 1100 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 930 | 1100 | 1200 | 1300 | 1300 | 1400 | 1500 | 1600 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.720 | 0.490 | 0.400 | 0.360 | 0.320 | 0.310 | 0.290 | 0.290 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 1.200 | 0.950 | 0.860 | 0.820 | 0.790 | 0.770 | 0.760 | 0.750 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 3.200 | 3.000 | 2.900 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 3.7 | | | | | | | | | |

VRB-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 75 | 75 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 125 | 125 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 250 | 250 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1400 | 1400 | 1500 | 1600 | 1700 | 1700 | 1800 | 1900 | | |
| Permitted Axial Load | [N] | *8 | 1900 | 1900 | 2100 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.130 | 0.150 | 0.130 | 0.120 | 0.140 | 0.100 | 0.120 | 0.099 | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.280 | 0.300 | 0.280 | 0.280 | 0.290 | 0.250 | 0.270 | 0.250 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.720 | 0.740 | 0.720 | 0.710 | 0.730 | 0.700 | 0.710 | 0.700 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4.2 | | | | | | | | | |

Sold & Serviced By:


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRB-090 – 2-Stage Specifications

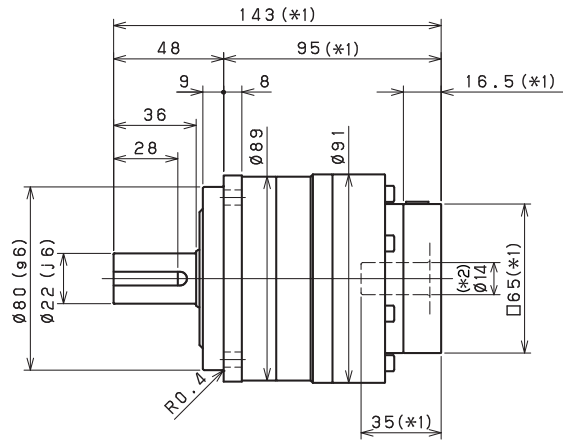
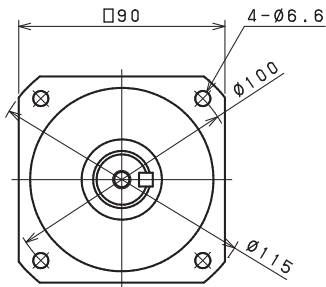
| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 | 2400 | | |
| Permitted Axial Load | [N] | *8 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.120 | 0.098 | 0.098 | 0.097 | 0.097 | 0.097 | 0.097 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.270 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.710 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4.2 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRB 090
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

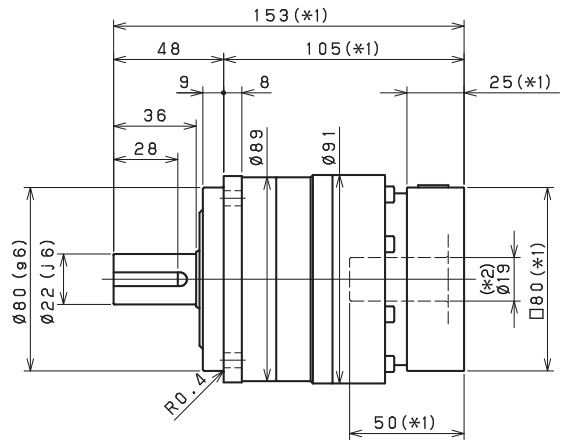
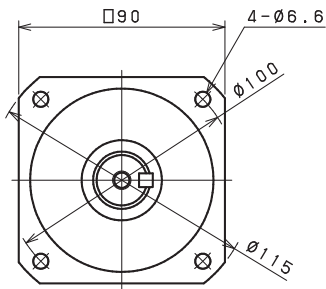
VRB-SERIES Inline shaft

VRB-090 - 1-Stage Dimensions

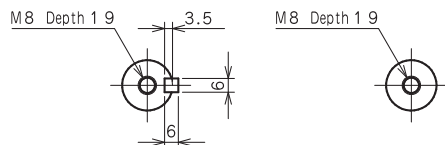
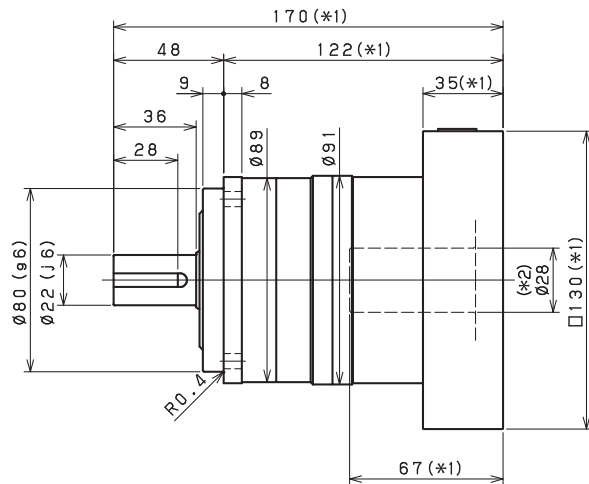
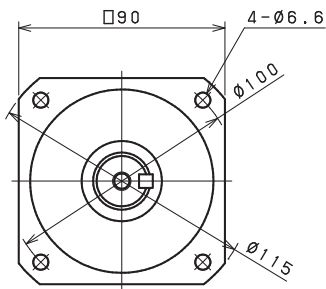
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



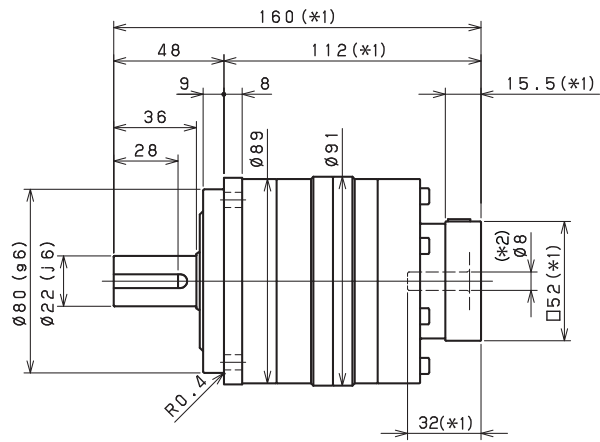
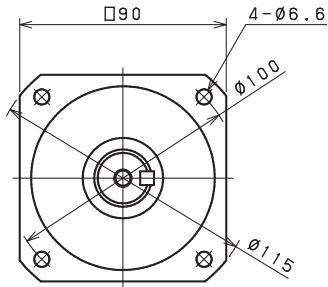
Shaft with key

Smooth shaft

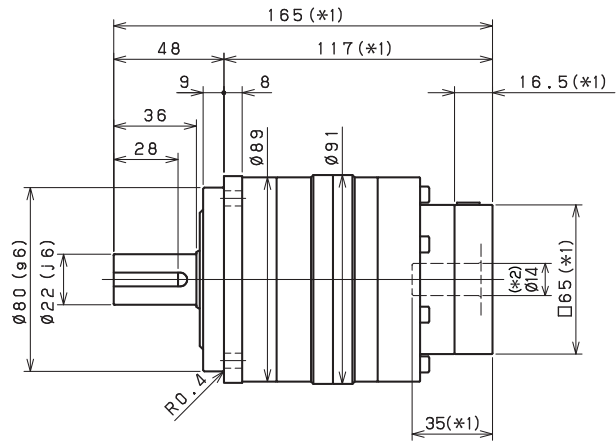
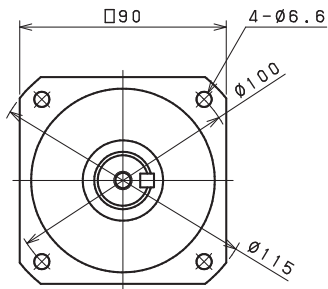
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRB-090 - 2-Stage Dimensions

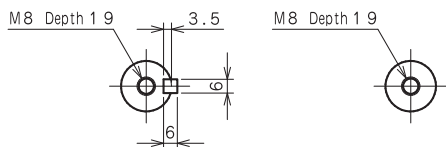
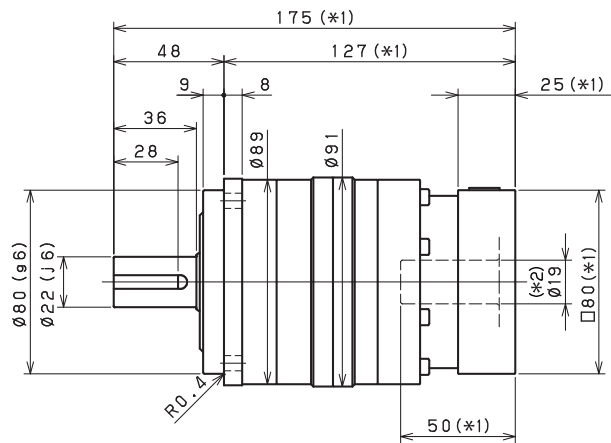
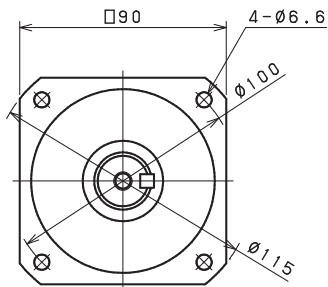
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

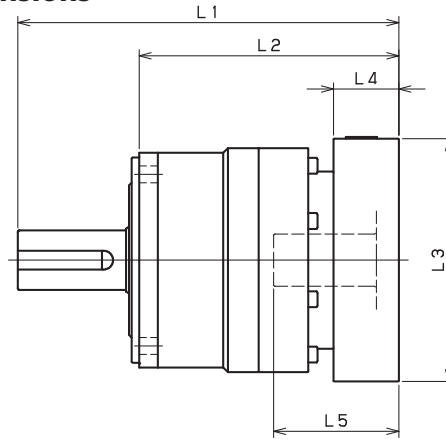
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-090 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-090-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- | -- |
| VRB-090-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 143 | 126.5 | 95 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 148 | 126.5 | 100 | □65 | 21.5 | 40 |
| | CA·CC | 143 | 126.5 | 95 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 143 | 126.5 | 95 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 143 | 126.5 | 95 | □90 | 16.5 | 35 |
| | FA | 143 | 126.5 | 95 | □100 | 16.5 | 35 |
| | FB | 153 | 126.5 | 105 | □100 | 26.5 | 45 |
| VRB-090-□-□-19** (Input shaft bore ≤ φ19) | JA | 158 | 126.5 | 110 | □150 | 31.5 | 50 |
| | DA·DB·DC | 153 | 128 | 105 | □80 | 25 | 50 |
| | EB·ED | 153 | 128 | 105 | □90 | 25 | 50 |
| | FA | 153 | 128 | 105 | □100 | 25 | 50 |
| | FB | 163 | 128 | 115 | □100 | 35 | 60 |
| | GA·GC·GH | 158 | 128 | 110 | □115 | 30 | 55 |
| | GB·GD·GJ | 153 | 128 | 105 | □115 | 25 | 50 |
| | GE·GF | 163 | 128 | 115 | □115 | 35 | 60 |
| | HA | 153 | 128 | 105 | □130 | 25 | 50 |
| | HB | 168 | 128 | 120 | □130 | 40 | 65 |
| | HC·HD·HE | 158 | 128 | 110 | □130 | 30 | 55 |
| VRB-090-□-□-28** (Input shaft bore ≤ φ28) | JA | 163 | 128 | 115 | □150 | 35 | 60 |
| | JB | 168 | 128 | 120 | □150 | 40 | 65 |
| | FA·FB·FC | 170 | 135 | 122 | □100 | 35 | 67 |
| | FD·FE | 165 | 135 | 117 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 170 | 135 | 122 | □115 | 35 | 67 |
| | HA·HC·HD | 170 | 135 | 122 | □130 | 35 | 67 |
| | HB | 180 | 135 | 132 | □130 | 45 | 77 |
| | HE | 185 | 135 | 137 | □130 | 50 | 82 |
| | HF | 165 | 135 | 117 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 170 | 135 | 122 | □150 | 35 | 67 |
| JD | 190 | 135 | 142 | □150 | 55 | 87 | |
| JE | 180 | 135 | 132 | □150 | 45 | 77 | |

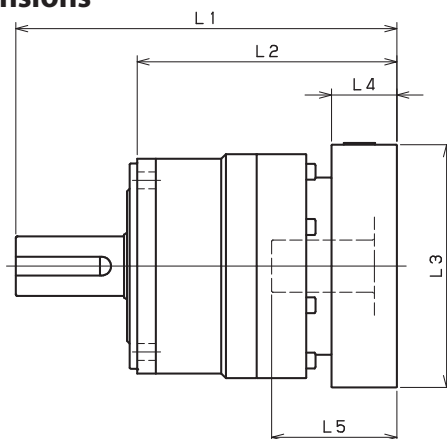
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-090 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-090-□-□-8** (Input shaft bore ≤ φ8) | AA•AC•AD•AF•AG•AL•AM•AN•AQ | 160 | 144.5 | 112 | □52 | 15.5 | 32 |
| | AB•AE•AH•AJ•AK | 165 | 144.5 | 117 | □52 | 20.5 | 37 |
| | BA•BB•BD•BE•BG•BH•BJ | 160 | 144.5 | 112 | □60 | 15.5 | 32 |
| | CA | 165 | 144.5 | 117 | □70 | 20.5 | 37 |
| VRB-090-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 165 | 148.5 | 117 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 170 | 148.5 | 122 | □65 | 21.5 | 40 |
| | CA•CC | 165 | 148.5 | 117 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 165 | 148.5 | 117 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 165 | 148.5 | 117 | □90 | 16.5 | 35 |
| | FA | 165 | 148.5 | 117 | □100 | 16.5 | 35 |
| | FB | 175 | 148.5 | 127 | □100 | 26.5 | 45 |
| VRB-090-□-□-19** (Input shaft bore ≤ φ19) | JA | 180 | 148.5 | 132 | □150 | 31.5 | 50 |
| | DA•DB•DC | 175 | 150 | 127 | □80 | 25 | 50 |
| | EB•ED | 175 | 150 | 127 | □90 | 25 | 50 |
| | FA | 175 | 150 | 127 | □100 | 25 | 50 |
| | FB | 185 | 150 | 137 | □100 | 35 | 60 |
| | GA•GC•GH | 180 | 150 | 132 | □115 | 30 | 55 |
| | GB•GD•GJ | 175 | 150 | 127 | □115 | 25 | 50 |
| | GE•GF | 185 | 150 | 137 | □115 | 35 | 60 |
| | HA | 175 | 150 | 127 | □130 | 25 | 50 |
| | HB | 190 | 150 | 142 | □130 | 40 | 65 |
| | HC•HD•HE | 180 | 150 | 132 | □130 | 30 | 55 |
| VRB-090-□-□-28** (Input shaft bore ≤ φ28) | JA | 185 | 150 | 137 | □150 | 35 | 60 |
| | JB | 190 | 150 | 142 | □150 | 40 | 65 |
| | FA•FB•FC | 194 | 159 | 146 | □100 | 35 | 67 |
| | FD•FE | 189 | 159 | 141 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 194 | 159 | 146 | □115 | 35 | 67 |
| | HA•HC•HD | 194 | 159 | 146 | □130 | 35 | 67 |
| | HB | 204 | 159 | 156 | □130 | 45 | 77 |
| | HE | 209 | 159 | 161 | □130 | 50 | 82 |
| | HF | 189 | 159 | 141 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 194 | 159 | 146 | □150 | 35 | 67 |
| JD | 214 | 159 | 166 | □150 | 55 | 87 | |
| JE | 204 | 159 | 156 | □150 | 45 | 77 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-SERIES Inline shaft

VRB-115 – 1-Stage Specifications

| Frame Size | 115 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 120 | 120 | 180 | 180 | 180 | 180 | 120 | 120 |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 330 | 225 | 225 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 625 | 500 | 500 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.30 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1300 | 1500 | 1600 | 1700 | 1800 | 1900 | 1900 | 2000 |
| Permitted Axial Load | [N] | *8 | 1500 | 1700 | 1900 | 2000 | 2100 | 2300 | 2400 | 2500 |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 3.300 | 2.000 | 1.600 | 1.300 | 1.100 | 1.000 | 0.980 | 0.950 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 5.300 | 4.100 | 3.600 | 3.300 | 3.200 | 3.100 | 3.000 | 3.000 |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 8 | | | | | | | |

VRB-115 – 2-Stage Specifications

| Frame Size | 115 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 180 | 180 |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 330 | 330 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 625 | 625 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.42 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2300 | 2300 | 2500 | 2700 | 2800 | 2900 | 3000 | 3200 |
| Permitted Axial Load | [N] | *8 | 3000 | 3100 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.430 | 0.480 | 0.400 | 0.380 | 0.440 | 0.290 | 0.370 | 0.280 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.860 | 0.920 | 0.830 | 0.820 | 0.880 | 0.740 | 0.810 | 0.730 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 2.800 | 2.900 | 2.800 | 2.800 | 2.800 | 2.700 | 2.700 | 2.700 |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 8.9 | | | | | | | |

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

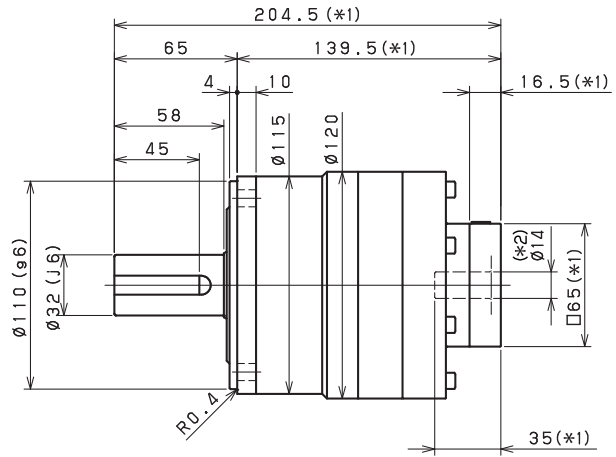
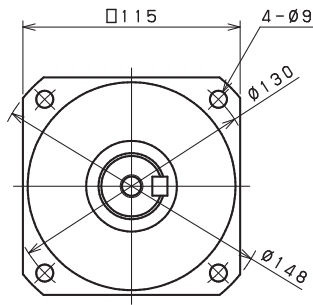
VRB-115 – 2-Stage Specifications

| Frame Size | 115 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 120 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 225 | | |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 500 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.42 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3300 | 3400 | 3600 | 3800 | 4000 | 4200 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.370 | 0.280 | 0.280 | 0.280 | 0.280 | 0.270 | 0.270 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.800 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 8.9 | | | | | | | | |

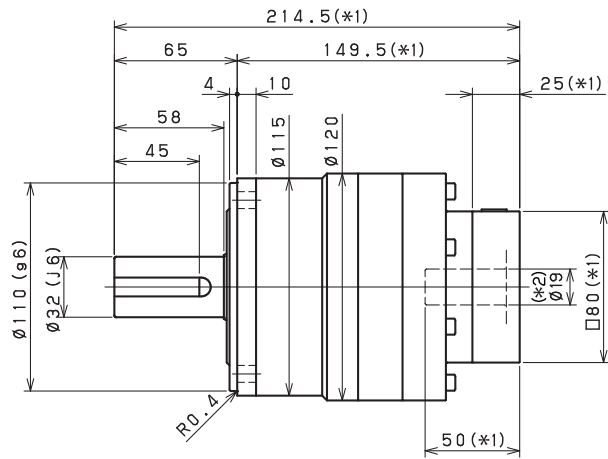
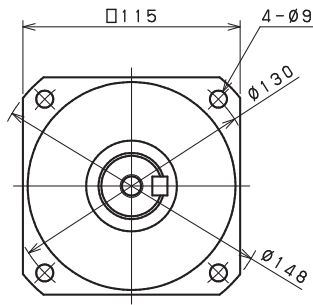
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRB 115
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRB-115 - 2-Stage Dimensions

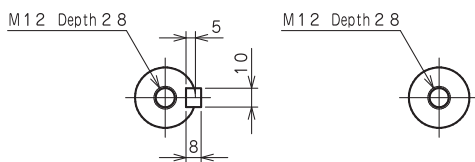
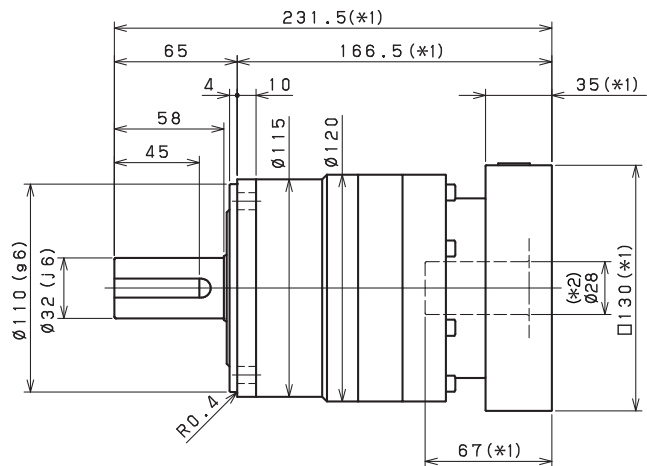
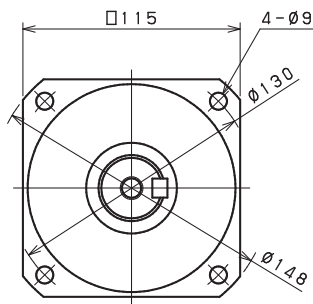
Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

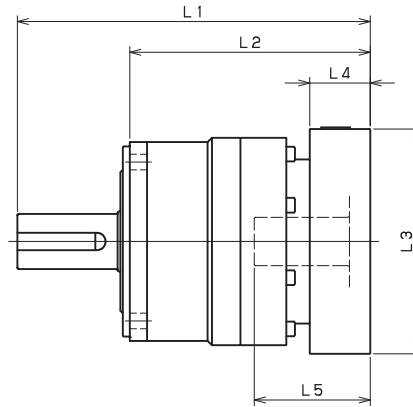
*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRB-115 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-----|-----|------|----|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-115-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- | -- |
| VRB-115-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 187 | 162 | 122 | □80 | 25 | 50 |
| | EB•ED | 187 | 162 | 122 | □90 | 25 | 50 |
| | FA | 187 | 162 | 122 | □100 | 25 | 50 |
| | FB | 197 | 162 | 132 | □100 | 35 | 60 |
| | GB•GD•GJ | 187 | 162 | 122 | □115 | 25 | 50 |
| | HA | 187 | 162 | 122 | □130 | 25 | 50 |
| | HB | 202 | 162 | 137 | □130 | 40 | 65 |
| | JA | 197 | 162 | 132 | □150 | 35 | 60 |
| VRB-115-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 204 | 169 | 139 | □100 | 35 | 67 |
| | FD•FE | 199 | 169 | 134 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 204 | 169 | 139 | □115 | 35 | 67 |
| | HA•HC•HD | 204 | 169 | 139 | □130 | 35 | 67 |
| | HB | 214 | 169 | 149 | □130 | 45 | 77 |
| | HE | 219 | 169 | 154 | □130 | 50 | 82 |
| | HF | 199 | 169 | 134 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 204 | 169 | 139 | □150 | 35 | 67 |
| | JD | 224 | 169 | 159 | □150 | 55 | 87 |
| | JE | 214 | 169 | 149 | □150 | 45 | 77 |
| | KA•KB•KE | 204 | 169 | 139 | □180 | 35 | 67 |
| VRB-115-□-□-38** (Input shaft bore ≤ φ38) | KD | 214 | 169 | 149 | □180 | 45 | 77 |
| | HA | 225 | 180 | 160 | □130 | 45 | 82 |
| | HB•HE | 220 | 180 | 155 | □130 | 40 | 77 |
| | JA | 225 | 180 | 160 | □150 | 45 | 82 |
| | KA•KB•KC | 225 | 180 | 160 | □180 | 45 | 82 |
| | KE | 240 | 180 | 175 | □180 | 60 | 97 |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

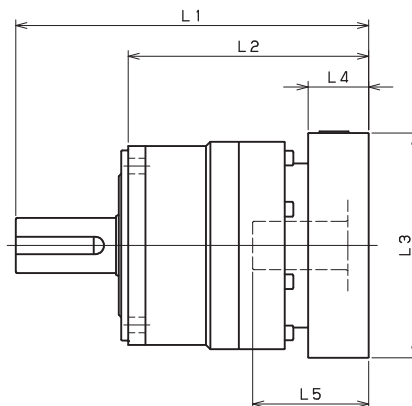
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-115 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-115-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 204.5 | 188 | 139.5 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 209.5 | 188 | 144.5 | □65 | 21.5 | 40 |
| | CA•CC | 204.5 | 188 | 139.5 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 204.5 | 188 | 139.5 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 204.5 | 188 | 139.5 | □90 | 16.5 | 35 |
| | FA | 204.5 | 188 | 139.5 | □100 | 16.5 | 35 |
| | FB | 214.5 | 188 | 149.5 | □100 | 26.5 | 45 |
| JA | 219.5 | 188 | 154.5 | □150 | 31.5 | 50 | |
| VRB-115-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 214.5 | 189.5 | 149.5 | □80 | 25 | 50 |
| | EB•ED | 214.5 | 189.5 | 149.5 | □90 | 25 | 50 |
| | FA | 214.5 | 189.5 | 149.5 | □100 | 25 | 50 |
| | FB | 224.5 | 189.5 | 159.5 | □100 | 35 | 60 |
| | GB•GD•GJ | 214.5 | 189.5 | 149.5 | □115 | 25 | 50 |
| | HA | 214.5 | 189.5 | 149.5 | □130 | 25 | 50 |
| | HB | 229.5 | 189.5 | 164.5 | □130 | 40 | 65 |
| JA | 224.5 | 189.5 | 159.5 | □150 | 35 | 60 | |
| VRB-115-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 231.5 | 196.5 | 166.5 | □100 | 35 | 67 |
| | FD•FE | 226.5 | 196.5 | 161.5 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 231.5 | 196.5 | 166.5 | □115 | 35 | 67 |
| | HA•HC•HD | 231.5 | 196.5 | 166.5 | □130 | 35 | 67 |
| | HB | 241.5 | 196.5 | 176.5 | □130 | 45 | 77 |
| | HE | 246.5 | 196.5 | 181.5 | □130 | 50 | 82 |
| | HF | 226.5 | 196.5 | 161.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 231.5 | 196.5 | 166.5 | □150 | 35 | 67 |
| | JD | 251.5 | 196.5 | 186.5 | □150 | 55 | 87 |
| | JE | 241.5 | 196.5 | 176.5 | □150 | 45 | 77 |
| VRB-115-□-□-38** (Input shaft bore ≤ φ38) | KA•KB•KE | 231.5 | 196.5 | 166.5 | □180 | 35 | 67 |
| | KD | 241.5 | 196.5 | 176.5 | □180 | 45 | 77 |
| | HA | 249 | 204 | 184 | □130 | 45 | 82 |
| | HB•HE | 244 | 204 | 179 | □130 | 40 | 77 |
| | JA | 249 | 204 | 184 | □150 | 45 | 82 |
| KA•KB•KC | 249 | 204 | 184 | □180 | 45 | 82 | |
| KD | 284 | 204 | 219 | □180 | 80 | 117 | |
| KE | 264 | 204 | 199 | □180 | 60 | 97 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-SERIES Inline shaft

VRB-140 – 1-Stage Specifications

| Frame Size | 140 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 240 | 240 | 360 | 360 | 360 | 360 | 240 | 240 |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 700 | 470 | 470 |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.63 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3200 | 3500 | 3800 | 4000 | 4200 | 4400 | 4600 | 4700 |
| Permitted Axial Load | [N] | *8 | 2400 | 2700 | 3000 | 3300 | 3500 | 3700 | 3900 | 4100 |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 12.000 | 7.500 | 5.800 | 4.900 | 4.100 | 3.800 | 3.600 | 3.500 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 20.000 | 15.000 | 14.000 | 13.000 | 12.000 | 12.000 | 11.000 | 11.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 42.000 | 37.000 | 36.000 | 35.000 | 34.000 | 34.000 | 34.000 | 34.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 16 | | | | | | | |

VRB-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 360 | 360 |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 700 | 700 |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1250 | 1250 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5400 | 5500 | 6000 | 6400 | 6700 | 6800 | 7200 | 7500 |
| Permitted Axial Load | [N] | *8 | 4900 | 5000 | 5500 | 6100 | 6400 | 6600 | 7000 | 7500 |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.300 | 1.500 | 1.200 | 1.100 | 1.400 | 0.850 | 1.100 | 0.830 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.200 | 3.500 | 3.100 | 3.100 | 3.300 | 2.800 | 3.100 | 2.800 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 10.000 | 11.000 | 10.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 17 | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

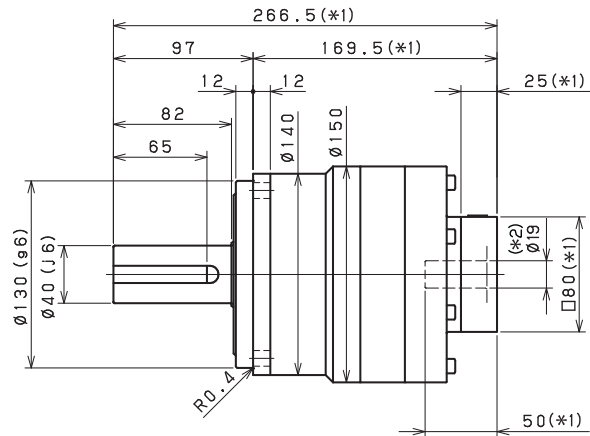
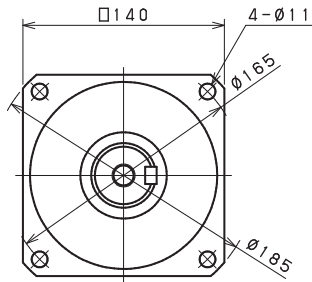
VRB-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 240 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 470 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7800 | 8100 | 8600 | 9100 | 9100 | 9100 | 9100 | | |
| Permitted Axial Load | [N] | *8 | 7900 | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.100 | 0.810 | 0.810 | 0.800 | 0.800 | 0.800 | 0.800 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.000 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 17 | | | | | | | | |

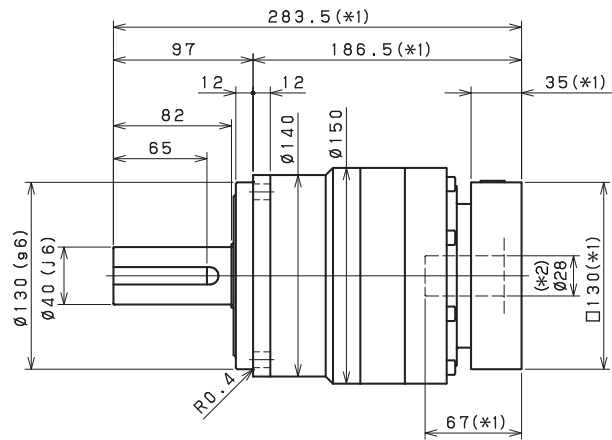
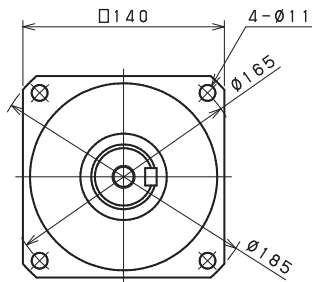
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2,000 rpm for VRB140
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRB-140 – 2-Stage Dimensions

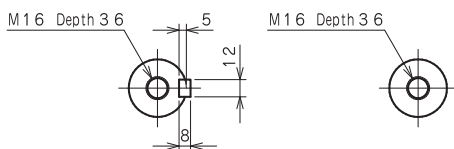
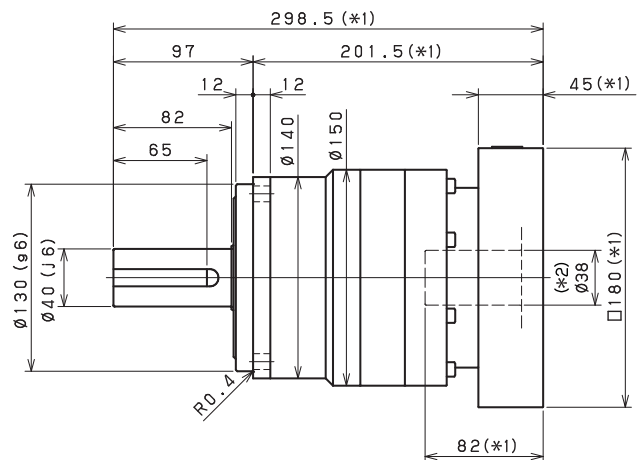
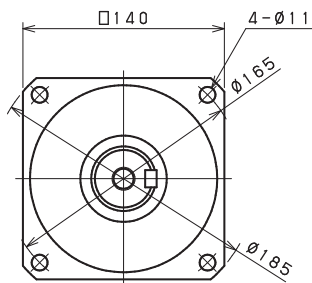
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

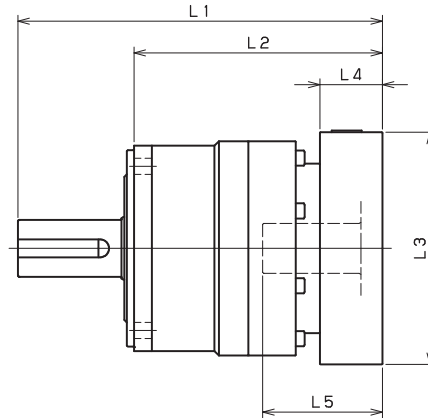
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-140 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-140-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | -- | -- | -- | -- | -- | -- |
| | EB•ED | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| | GB•GD•GJ | -- | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| VRB-140-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 249 | 214 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 249 | 214 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 249 | 214 | 152 | □130 | 35 | 67 |
| | HB | 259 | 214 | 162 | □130 | 45 | 77 |
| | HF | 244 | 214 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 249 | 214 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 249 | 214 | 152 | □180 | 35 | 67 |
| | LA | 249 | 214 | 152 | □200 | 35 | 67 |
| | LB | 259 | 214 | 162 | □200 | 45 | 77 |
| | MA | 249 | 214 | 152 | □220 | 35 | 67 |
| VRB-140-□-□-38** (Input shaft bore ≤ φ38) | MB | 259 | 214 | 162 | □220 | 45 | 77 |
| | HA | 264 | 219 | 167 | □130 | 45 | 82 |
| | HB•HE | 259 | 219 | 162 | □130 | 40 | 77 |
| | JA | 264 | 219 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 264 | 219 | 167 | □180 | 45 | 82 |
| | KD | 299 | 219 | 202 | □180 | 80 | 117 |
| | KE | 279 | 219 | 182 | □180 | 60 | 97 |
| | LB | 274 | 219 | 177 | □200 | 55 | 92 |
| | MA•MB | 264 | 219 | 167 | □220 | 45 | 82 |
| VRB-140-□-□-48** (Input shaft bore ≤ φ48) | MC | 279 | 219 | 182 | □220 | 60 | 97 |
| | MD | 274 | 219 | 177 | □220 | 55 | 92 |
| | KA | 305 | 230 | 208 | □180 | 75 | 118 |
| | KB•KC | 285 | 230 | 188 | □180 | 55 | 98 |
| | LA | 285 | 230 | 188 | □200 | 55 | 98 |
| MA | 285 | 230 | 188 | □220 | 55 | 98 | |
| MB | 305 | 230 | 208 | □220 | 75 | 118 | |

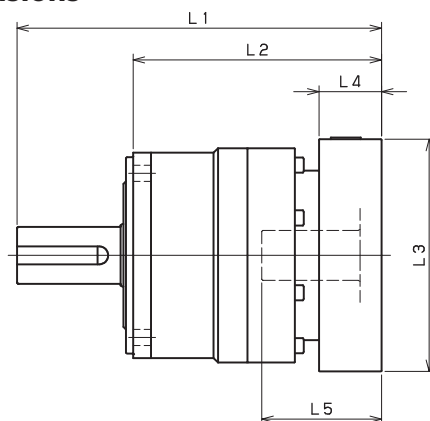
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-140 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-140-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 266.5 | 241.5 | 169.5 | □80 | 25 | 50 |
| | EB•ED | 266.5 | 241.5 | 169.5 | □90 | 25 | 50 |
| | FA | 266.5 | 241.5 | 169.5 | □100 | 25 | 50 |
| | FB | 276.5 | 241.5 | 179.5 | □100 | 35 | 60 |
| | GB•GD•GJ | 266.5 | 241.5 | 169.5 | □115 | 25 | 50 |
| | HA | 266.5 | 241.5 | 169.5 | □130 | 25 | 50 |
| | HB | 281.5 | 241.5 | 184.5 | □130 | 40 | 65 |
| VRB-140-□-□-28** (Input shaft bore ≤ φ28) | JA | 276.5 | 241.5 | 179.5 | □150 | 35 | 60 |
| | FA•FB•FC | 283.5 | 248.5 | 186.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 283.5 | 248.5 | 186.5 | □115 | 35 | 67 |
| | HA•HC•HD | 283.5 | 248.5 | 186.5 | □130 | 35 | 67 |
| | HB | 293.5 | 248.5 | 196.5 | □130 | 45 | 77 |
| | HF | 278.5 | 248.5 | 181.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 283.5 | 248.5 | 186.5 | □150 | 35 | 67 |
| | KA•KB•KE | 283.5 | 248.5 | 186.5 | □180 | 35 | 67 |
| | LA | 283.5 | 248.5 | 186.5 | □200 | 35 | 67 |
| | LB | 293.5 | 248.5 | 196.5 | □200 | 45 | 77 |
| VRB-140-□-□-38** (Input shaft bore ≤ φ38) | MA | 283.5 | 248.5 | 186.5 | □220 | 35 | 67 |
| | MB | 293.5 | 248.5 | 196.5 | □220 | 45 | 77 |
| | HA | 298.5 | 253.5 | 201.5 | □130 | 45 | 82 |
| | HB•HE | 293.5 | 253.5 | 196.5 | □130 | 40 | 77 |
| | JA | 298.5 | 253.5 | 201.5 | □150 | 45 | 82 |
| | KA•KB•KC | 298.5 | 253.5 | 201.5 | □180 | 45 | 82 |
| | KD | 333.5 | 253.5 | 236.5 | □180 | 80 | 117 |
| | KE | 313.5 | 253.5 | 216.5 | □180 | 60 | 97 |
| | LB | 308.5 | 253.5 | 211.5 | □200 | 55 | 92 |
| VRB-140-□-□-48** (Input shaft bore ≤ φ48) | MA•MB | 298.5 | 253.5 | 201.5 | □220 | 45 | 82 |
| | MC | 313.5 | 253.5 | 216.5 | □220 | 60 | 97 |
| | MD | 308.5 | 253.5 | 211.5 | □220 | 55 | 92 |
| | KA | 339.5 | 264.5 | 242.5 | □180 | 75 | 118 |
| | KB•KC | 319.5 | 264.5 | 222.5 | □180 | 55 | 98 |
| | LA | 319.5 | 264.5 | 222.5 | □200 | 55 | 98 |
| | MA | 319.5 | 264.5 | 222.5 | □220 | 55 | 98 |
| | MB | 339.5 | 264.5 | 242.5 | □220 | 75 | 118 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-SERIES Inline shaft

VRB-180 – 1-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 750 | 500 | 500 |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 1400 | 970 | 970 |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.68 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 6200 | 6700 | 7100 | 7400 | 7800 | 8100 | 8400 |
| Permitted Axial Load | [N] | *8 | 4300 | 4900 | 5400 | 5800 | 6300 | 6600 | 7000 | 7300 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 44.000 | 28.000 | 22.000 | 18.000 | 16.000 | 15.000 | 14.000 | 14.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 66.000 | 50.000 | 44.000 | 41.000 | 38.000 | 37.000 | 36.000 | 36.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 130.000 | 110.000 | 100.000 | 100.000 | 99.000 | 97.000 | 97.000 | 96.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 36 | | | | | | | |

VRB-180 – 2-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 750 | 750 |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 1400 | 1400 |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2750 | 2750 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9600 | 9800 | 11000 | 11000 | 12000 | 12000 | 13000 | 13000 |
| Permitted Axial Load | [N] | *8 | 8700 | 8900 | 9900 | 11000 | 11000 | 12000 | 13000 | 13000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 5.400 | 4.400 | 4.200 | 4.900 | 3.200 | 4.100 | 3.200 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 13.000 | 12.000 | 12.000 | 13.000 | 11.000 | 12.000 | 11.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 35.000 | 34.000 | 34.000 | 35.000 | 33.000 | 34.000 | 33.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 37 | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRB-180 – 2-Stage Specifications

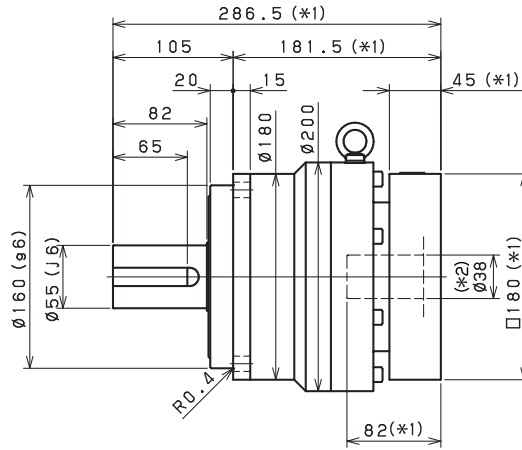
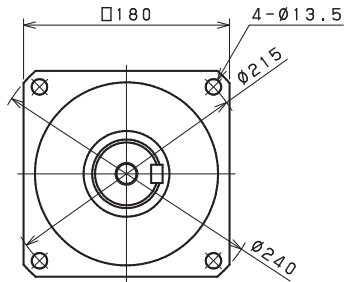
| Frame Size | 180 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 500 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 970 | | |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.000 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 37 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,500 rpm for VRB180
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

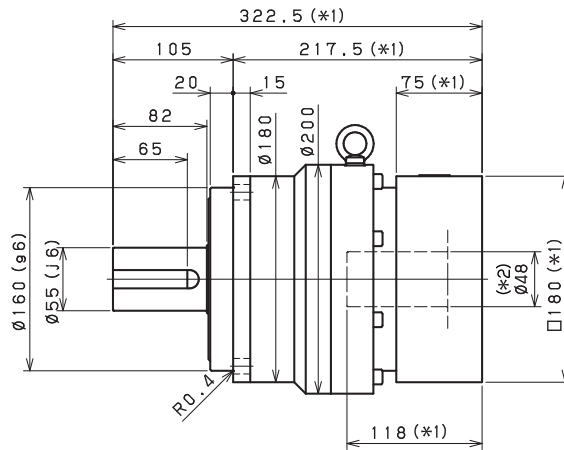
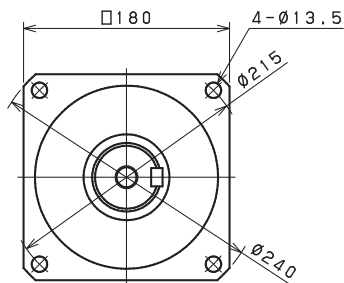
VRB-SERIES Inline shaft

VRB-180 – 1-Stage Dimensions

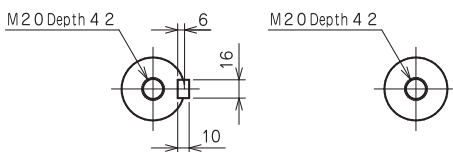
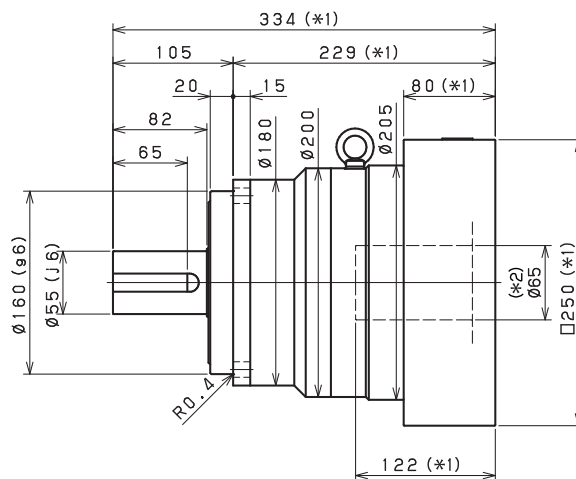
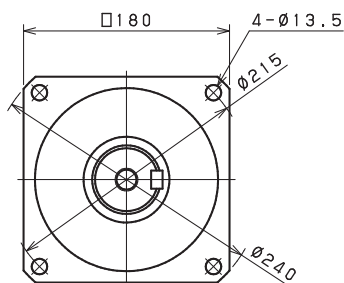
Input shaft bore $\cong \varnothing 38$



Input shaft bore $\cong \varnothing 48$



Input shaft bore $\cong \varnothing 65$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

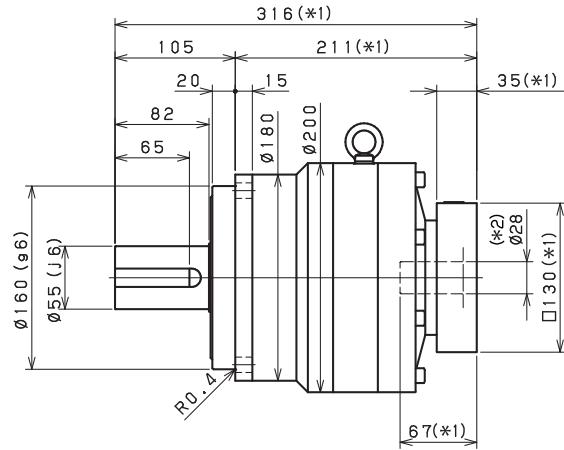
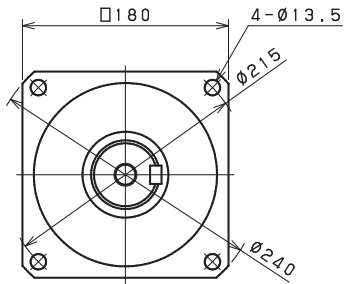
Toll Free Fax (877) SERV099

www.electromate.com

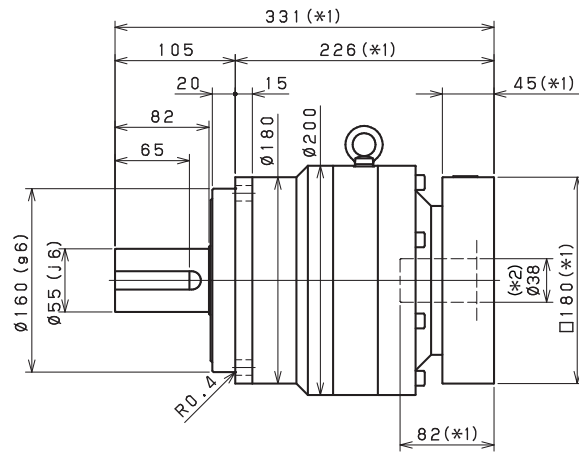
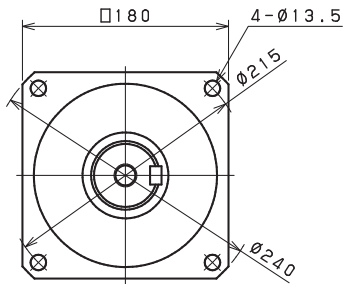
sales@electromate.com

VRB-180 – 2-Stage Dimensions

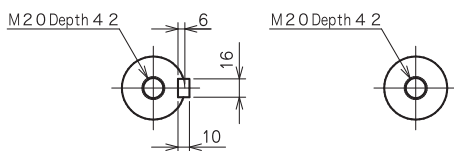
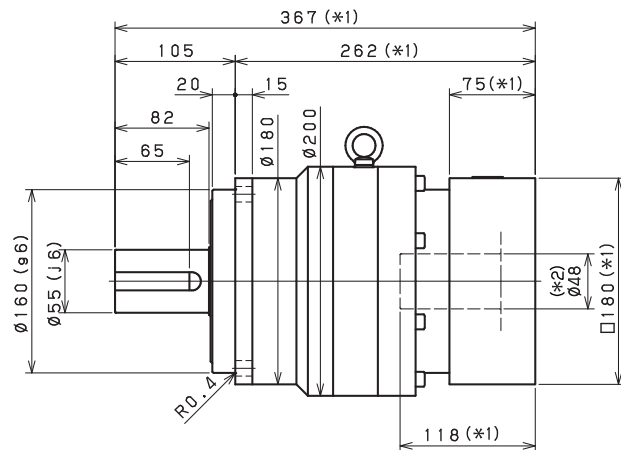
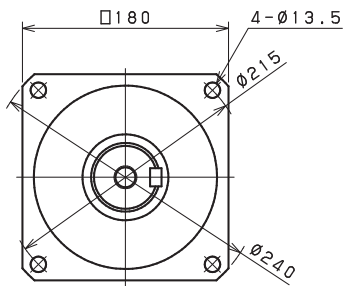
Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

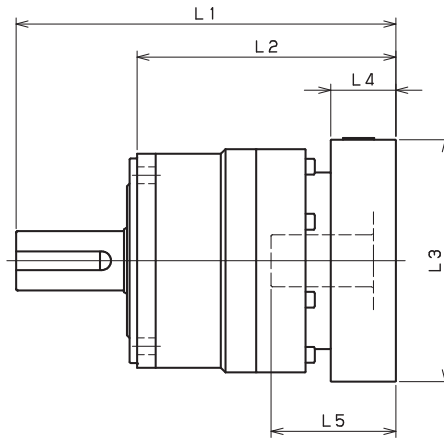
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-180 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-180-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | -- | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| VRB-180-□-□-38** (Input shaft bore ≤ φ38) | HA | 286.5 | 241.5 | 181.5 | □130 | 45 | 82 |
| | HB•HE | 281.5 | 241.5 | 176.5 | □130 | 40 | 77 |
| | JA | 286.5 | 241.5 | 181.5 | □150 | 45 | 82 |
| | KA•KB•KC | 286.5 | 241.5 | 181.5 | □180 | 45 | 82 |
| | KD | 321.5 | 241.5 | 216.5 | □180 | 80 | 117 |
| | KE | 301.5 | 241.5 | 196.5 | □180 | 60 | 97 |
| | MA•MB | 286.5 | 241.5 | 181.5 | □220 | 45 | 82 |
| | MC | 301.5 | 241.5 | 196.5 | □220 | 60 | 97 |
| | MD | 296.5 | 241.5 | 191.5 | □220 | 55 | 92 |
| | NA | 286.5 | 241.5 | 181.5 | □250 | 45 | 82 |
| VRB-180-□-□-48** (Input shaft bore ≤ φ48) | KA | 322.5 | 247.5 | 217.5 | □180 | 75 | 118 |
| | KB•KC | 302.5 | 247.5 | 197.5 | □180 | 55 | 98 |
| | LA | 302.5 | 247.5 | 197.5 | □200 | 55 | 98 |
| | MA | 302.5 | 247.5 | 197.5 | □220 | 55 | 98 |
| | MB | 322.5 | 247.5 | 217.5 | □220 | 75 | 118 |
| | NA | 322.5 | 247.5 | 217.5 | □250 | 75 | 118 |
| | PA | 322.5 | 247.5 | 217.5 | □280 | 75 | 118 |
| VRB-180-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | 334 | 254 | 229 | □220 | 80 | 122 |
| | NA•NC | 334 | 254 | 229 | □250 | 80 | 122 |
| | NB•ND | 364 | 254 | 259 | □250 | 110 | 152 |
| | PA | 354 | 254 | 249 | □280 | 100 | 142 |
| | PB | 364 | 254 | 259 | □280 | 110 | 152 |

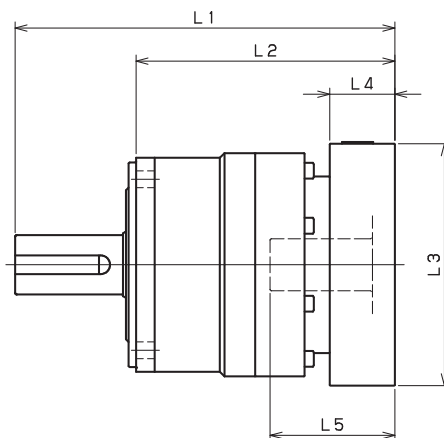
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-180 – 2-Stage Adapter Dimensions



VRB

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-180-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 316 | 281 | 211 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 316 | 281 | 211 | □115 | 35 | 67 |
| | HA•HC•HD | 316 | 281 | 211 | □130 | 35 | 67 |
| | HB | 326 | 281 | 221 | □130 | 45 | 77 |
| | HF | 311 | 281 | 206 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 316 | 281 | 211 | □150 | 35 | 67 |
| | KA•KB•KE | 316 | 281 | 211 | □180 | 35 | 67 |
| | LA | 316 | 281 | 211 | □200 | 35 | 67 |
| | LB | 326 | 281 | 221 | □200 | 45 | 77 |
| | MA | 316 | 281 | 211 | □220 | 35 | 67 |
| MB | 326 | 281 | 221 | □220 | 45 | 77 | |
| VRB-180-□-□-38** (Input shaft bore ≤ φ38) | HA | 331 | 286 | 226 | □130 | 45 | 82 |
| | HB•HE | 326 | 286 | 221 | □130 | 40 | 77 |
| | JA | 331 | 286 | 226 | □150 | 45 | 82 |
| | KA•KB•KC | 331 | 286 | 226 | □180 | 45 | 82 |
| | KD | 366 | 286 | 261 | □180 | 80 | 117 |
| | KE | 346 | 286 | 241 | □180 | 60 | 97 |
| | MA•MB | 331 | 286 | 226 | □220 | 45 | 82 |
| | MC | 346 | 286 | 241 | □220 | 60 | 97 |
| | MD | 341 | 286 | 236 | □220 | 55 | 92 |
| NA | 331 | 286 | 226 | □250 | 45 | 82 | |
| VRB-180-□-□-48** (Input shaft bore ≤ φ48) | KA | 367 | 292 | 262 | □180 | 75 | 118 |
| | KB•KC | 347 | 292 | 242 | □180 | 55 | 98 |
| | LA | 347 | 292 | 242 | □200 | 55 | 98 |
| | MA | 347 | 292 | 242 | □220 | 55 | 98 |
| | MB | 367 | 292 | 262 | □220 | 75 | 118 |
| | NA | 367 | 292 | 262 | □250 | 75 | 118 |
| | PA | 367 | 292 | 262 | □280 | 75 | 118 |
| VRB-180-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | -- | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRB-SERIES Inline shaft

VRB-220 – 1-Stage Specifications

| Frame Size | 220 | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|---------|---------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 2200 | 1900 | 1600 |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.92 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5800 | 6400 | 6900 | 7300 | 7700 | 8000 | 8400 | 8700 |
| Permitted Axial Load | [N] | *8 | 6400 | 7200 | 7900 | 8600 | 9200 | 9700 | 10000 | 11000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 90.000 | 62.000 | 52.000 | 47.000 | 42.000 | 40.000 | 39.000 | 38.000 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | 150.000 | 120.000 | 110.000 | 110.000 | 100.000 | 100.000 | 99.000 | 98.000 |
| Efficiency | [%] | *11 | 97 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 53 | | | | | | | |

VRB-220 – 2-Stage Specifications

| Frame Size | 220 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1500 | 1500 |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 1600 | 2300 | 2300 |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 5000 | 5000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9900 | 10000 | 11000 | 12000 | 12000 | 13000 | 13000 | 14000 |
| Permitted Axial Load | [N] | *8 | 13000 | 13000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 14.000 | 16.000 | 14.000 | 14.000 | 15.000 | 12.000 | 13.000 | 12.000 |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 36.000 | 37.000 | 35.000 | 35.000 | 36.000 | 34.000 | 35.000 | 33.000 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 92 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 54 | | | | | | | |

VRB-220 – 2-Stage Specifications

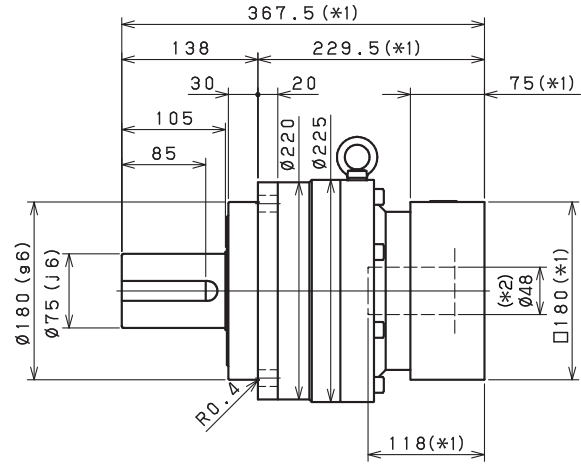
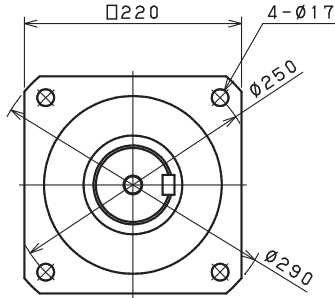
| Frame Size | 220 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1300 | 2300 | 2300 | 2300 | 1800 | 1300 | 1200 | | |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 35.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 92 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 54 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for VRB220
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

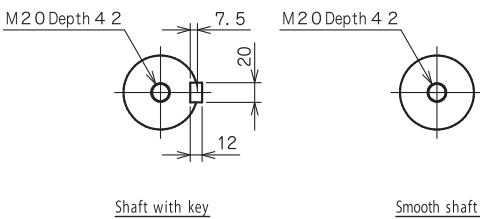
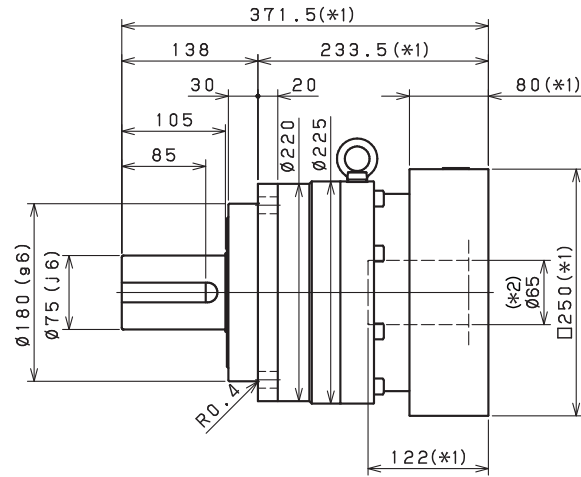
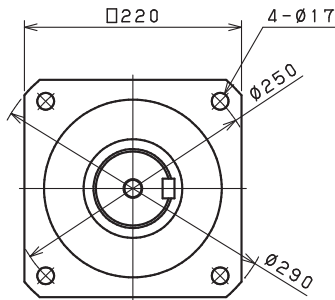
VRB-SERIES Inline shaft

VRB-220 – 1-Stage Dimensions

Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$



Shaft with key

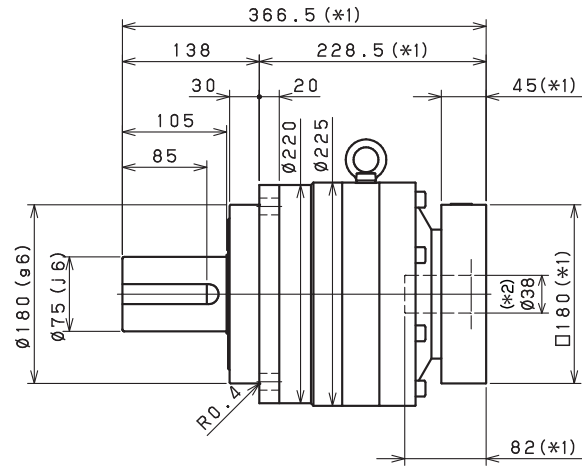
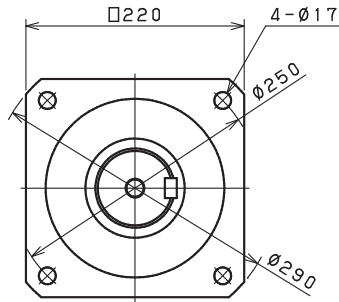
Smooth shaft

*1) Length will vary depending on motor

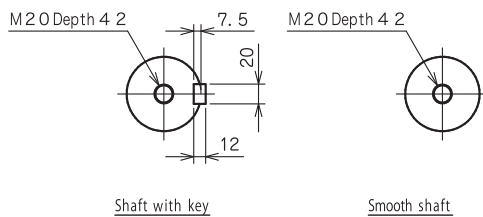
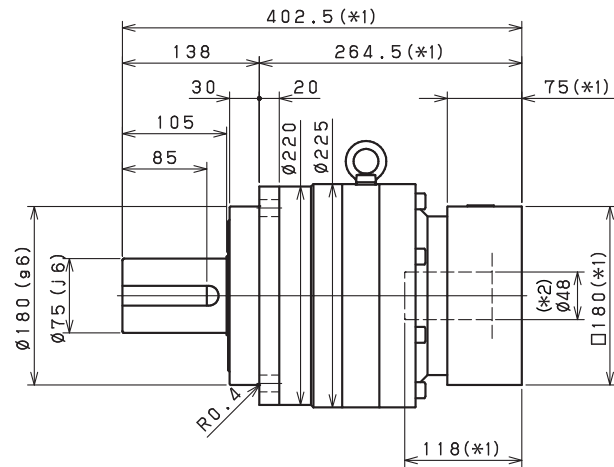
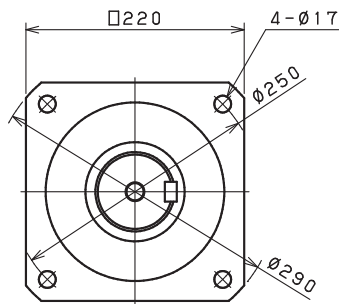
*2) Bushing will be inserted to adapt to motor shaft

VRB-220 – 2-Stage Dimensions

Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$

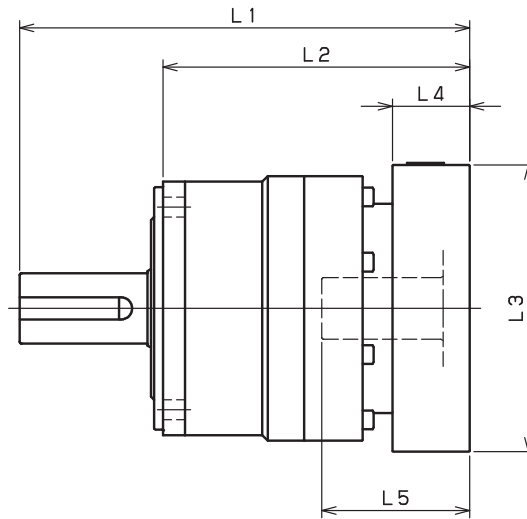


*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRB

VRB-220 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-220-□-□-38** (Input shaft bore ≤ φ38) | HA | -- | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- | -- |
| NA | -- | -- | -- | -- | -- | -- | |
| VRB-220-□-□-48** (Input shaft bore ≤ φ48) | KA | 367.5 | 292.5 | 229.5 | □180 | 75 | 118 |
| | KB-KC | 347.5 | 292.5 | 209.5 | □180 | 55 | 98 |
| | LA | 347.5 | 292.5 | 209.5 | □200 | 55 | 98 |
| | MA | 347.5 | 292.5 | 209.5 | □220 | 55 | 98 |
| | MB | 367.5 | 292.5 | 229.5 | □220 | 75 | 118 |
| | NA | 367.5 | 292.5 | 229.5 | □250 | 75 | 118 |
| | PA | 367.5 | 292.5 | 229.5 | □280 | 75 | 118 |
| VRB-220-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | 371.5 | 291.5 | 233.5 | □220 | 80 | 122 |
| | NA-NC | 371.5 | 291.5 | 233.5 | □250 | 80 | 122 |
| | NB-ND | 401.5 | 291.5 | 263.5 | □250 | 110 | 152 |
| | PA | 391.5 | 291.5 | 253.5 | □280 | 100 | 142 |
| | PB | 401.5 | 291.5 | 263.5 | □280 | 110 | 152 |
| | QA-QB | 391.5 | 291.5 | 253.5 | □320 | 100 | 142 |

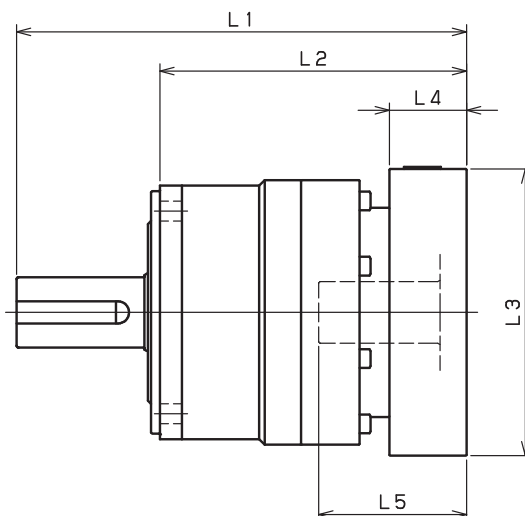
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRB-220 – 2-Stage Adapter Dimensions



VRB

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRB-220-□-□-38** (Input shaft bore ≤ φ38) | HA | 366.5 | 321.5 | 228.5 | □130 | 45 | 82 |
| | HB-HE | 361.5 | 321.5 | 223.5 | □130 | 40 | 77 |
| | JA | 366.5 | 321.5 | 228.5 | □150 | 45 | 82 |
| | KA-KB-KC | 366.5 | 321.5 | 228.5 | □180 | 45 | 82 |
| | KD | 401.5 | 321.5 | 263.5 | □180 | 80 | 117 |
| | KE | 381.5 | 321.5 | 243.5 | □180 | 60 | 97 |
| | LA | 366.5 | 321.5 | 228.5 | □200 | 45 | 82 |
| | LB | 376.5 | 321.5 | 238.5 | □200 | 55 | 92 |
| | MA-MB | 366.5 | 321.5 | 228.5 | □220 | 45 | 82 |
| | MC | 381.5 | 321.5 | 243.5 | □220 | 60 | 97 |
| | MD | 376.5 | 321.5 | 238.5 | □220 | 55 | 92 |
| VRB-220-□-□-48** (Input shaft bore ≤ φ48) | KA | 402.5 | 327.5 | 264.5 | □180 | 75 | 118 |
| | KB-KC | 382.5 | 327.5 | 244.5 | □180 | 55 | 98 |
| | LA | 382.5 | 327.5 | 244.5 | □200 | 55 | 98 |
| | MA | 382.5 | 327.5 | 244.5 | □220 | 55 | 98 |
| | MB | 402.5 | 327.5 | 264.5 | □220 | 75 | 118 |
| | NA | 402.5 | 327.5 | 264.5 | □250 | 75 | 118 |
| | PA | 402.5 | 327.5 | 264.5 | □280 | 75 | 118 |
| VRB-220-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | -- | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

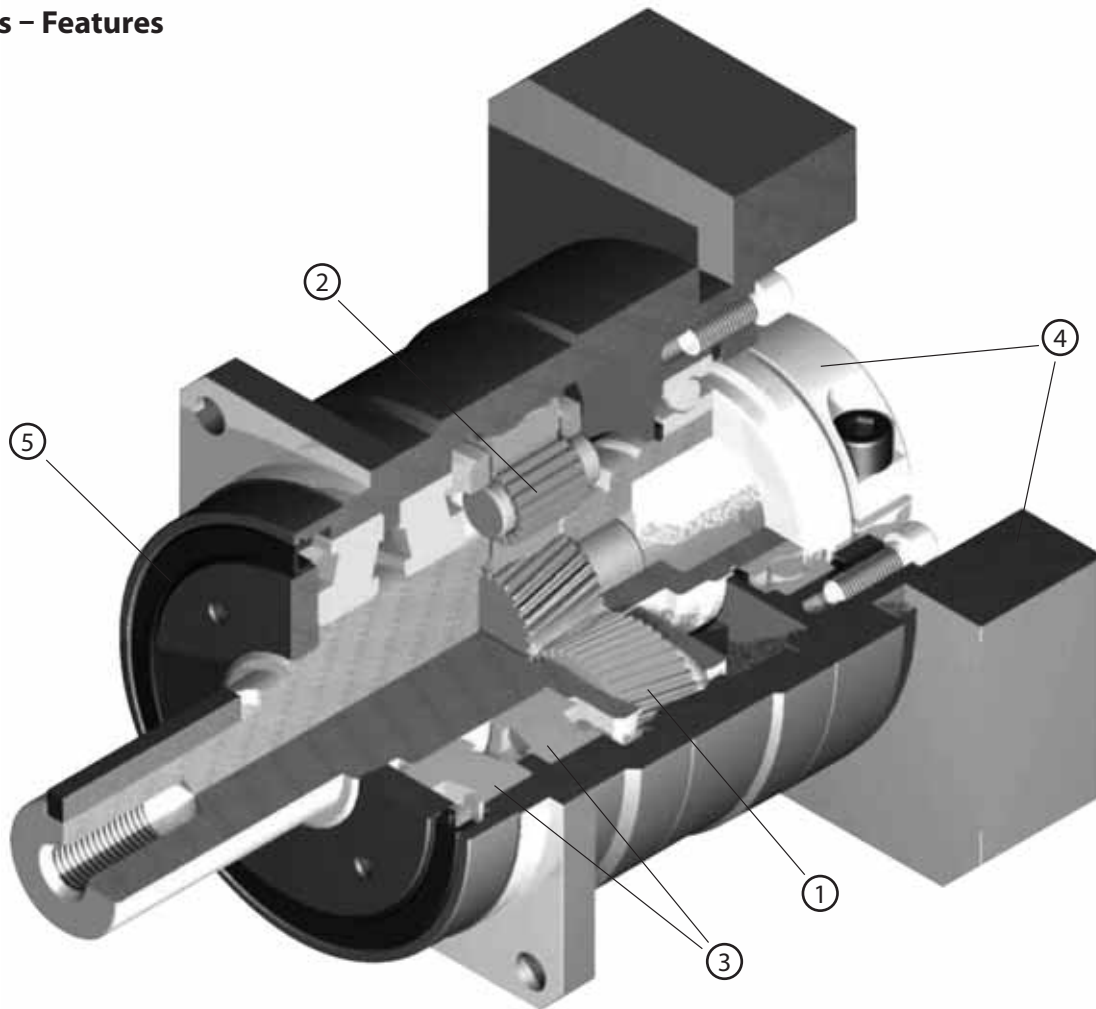


VRS-SERIES

- Industry standard mounting dimensions
- Large variety of frame sizes and ratios
- Thru-bolt mounting style
- Best-in-class backlash (≤ 3 arc-min)
- Impressive radial and axial load ratings
- Ships in 48 hours in standard frame sizes
- Assembled in the USA

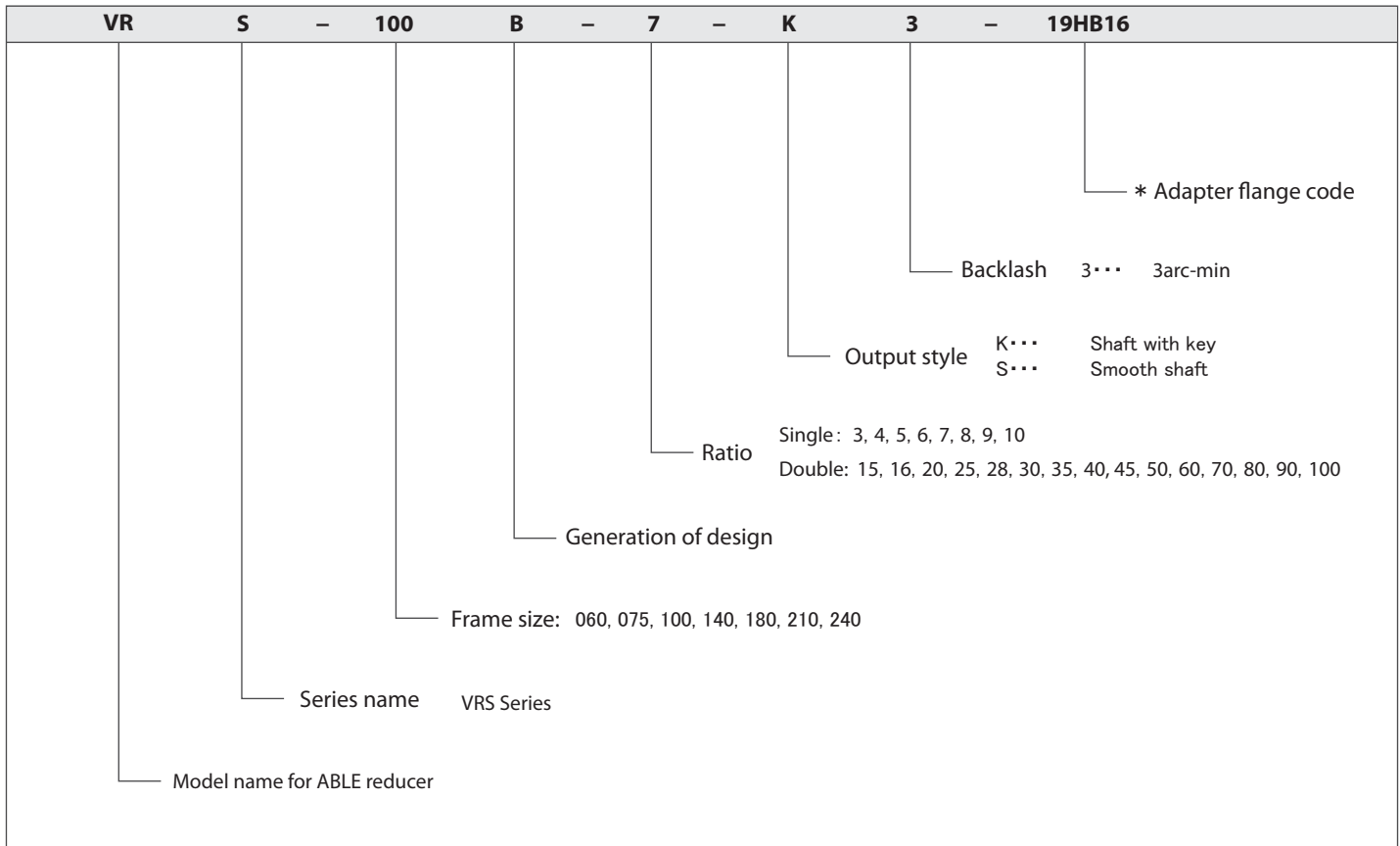
VRS-SERIES Inline shaft

VRS-Series – Features



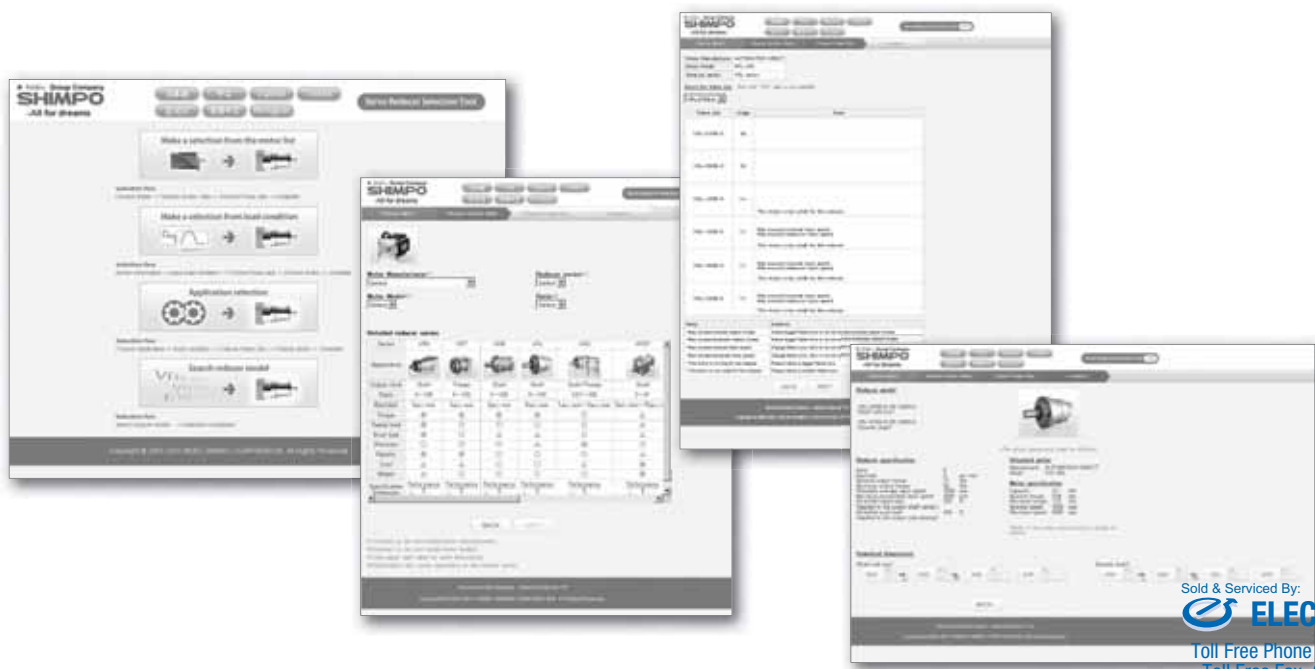
- ① High precision: Standard backlash is 3 arc-min, ideal for higher levels of positional accuracy
- ② High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ High load capacity: Taper roller bearings were added to the output section to increase radial and axial load ratings
- ④ Adapter-bushing connection: Enables a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal: High viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ Maintenance-free: No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

VRS-Series – Model Code



VRS

*1) Adapter flange code
 Adapter flange code varies depending on the motor



VRS-o6o – 1-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 27 | 18 | 18 |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 50 | 35 | 35 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 100 | 80 | 80 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.15 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1700 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 |
| Permitted Axial Load | [N] | *8 | 2300 | 2500 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.150 | 0.100 | 0.080 | 0.070 | 0.064 | 0.060 | 0.058 | 0.056 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.230 | 0.180 | 0.160 | 0.150 | 0.140 | 0.140 | 0.140 | 0.140 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.440 | 0.390 | 0.370 | 0.360 | 0.350 | 0.350 | 0.350 | 0.340 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | |

VRS-o6o – 2-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 27 | 27 |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 50 | 50 |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 100 | 100 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2800 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Permitted Axial Load | [N] | *8 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.055 | 0.057 | 0.054 | 0.053 | 0.055 | 0.049 | 0.053 | 0.049 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.140 | 0.140 | 0.130 | 0.130 | 0.140 | 0.130 | 0.130 | 0.130 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.8 | | | | | | | |

VRS-o6o – 2-Stage Specifications

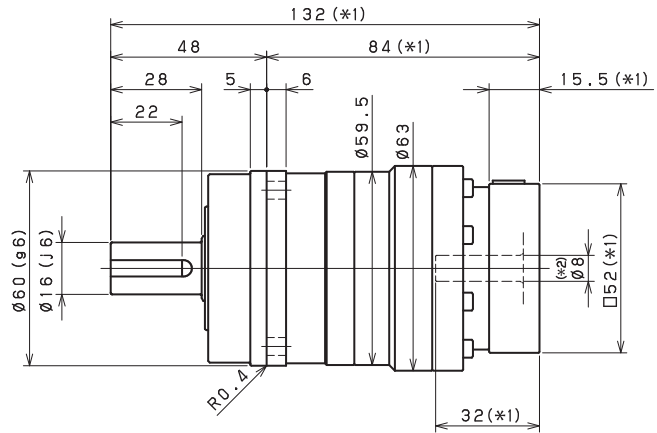
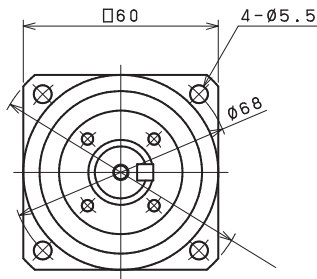
| Frame Size | 060 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 18 | 27 | 27 | 27 | 27 | 18 | 18 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 35 | 50 | 50 | 50 | 50 | 35 | 35 | | |
| Emergency Stop Torque | [Nm] | *3 | 80 | 100 | 100 | 100 | 100 | 80 | 80 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | | |
| Permitted Axial Load | [N] | *8 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | | |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.053 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 66 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.8 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS060
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

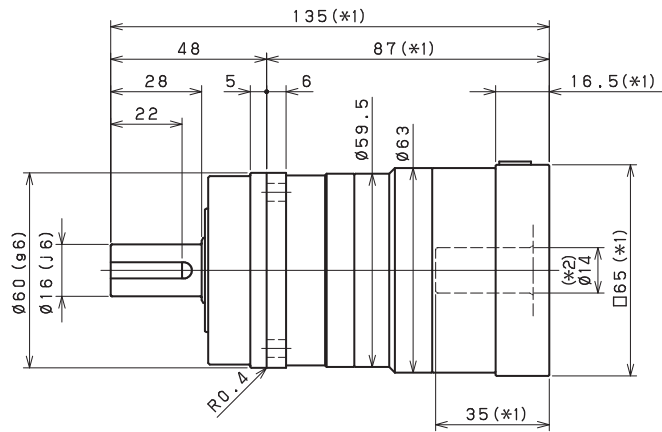
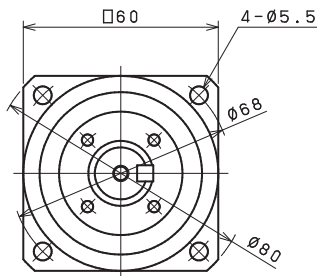
VRS-SERIES Inline shaft

VRS-o6o – 1-Stage Dimensions

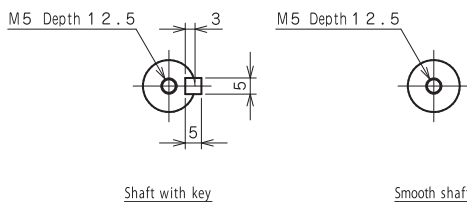
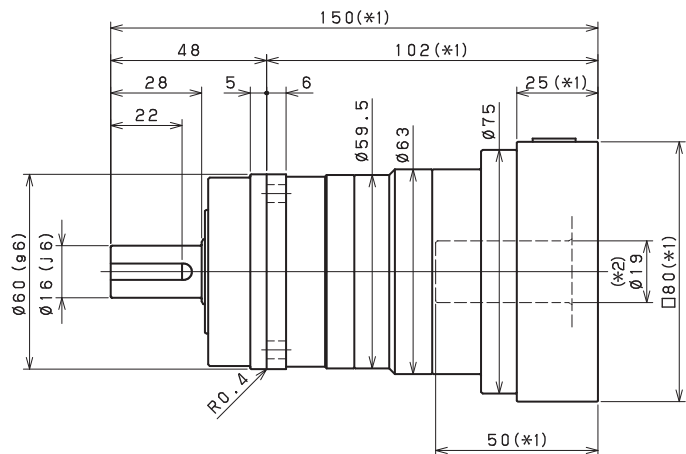
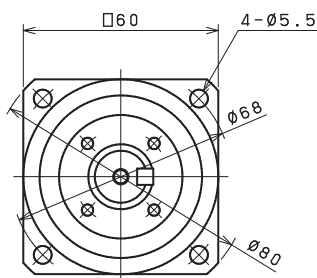
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$

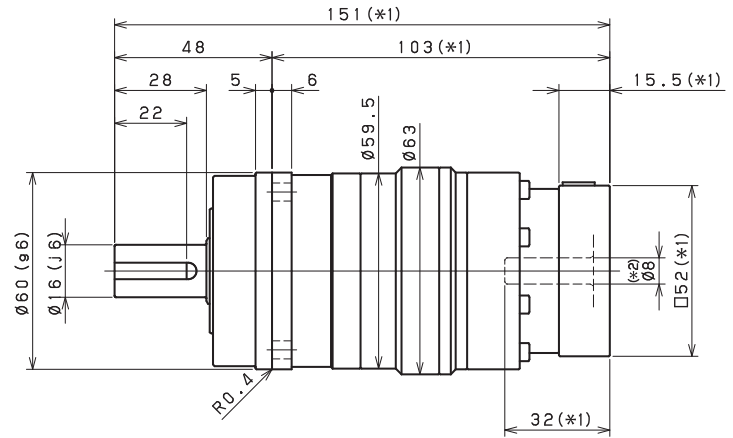
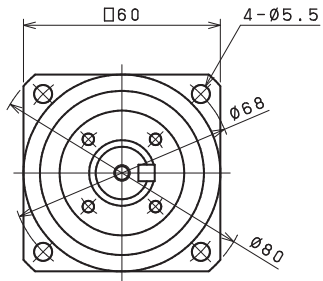


*1) Length will vary depending on motor

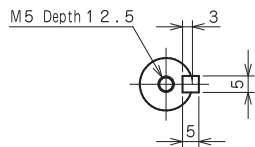
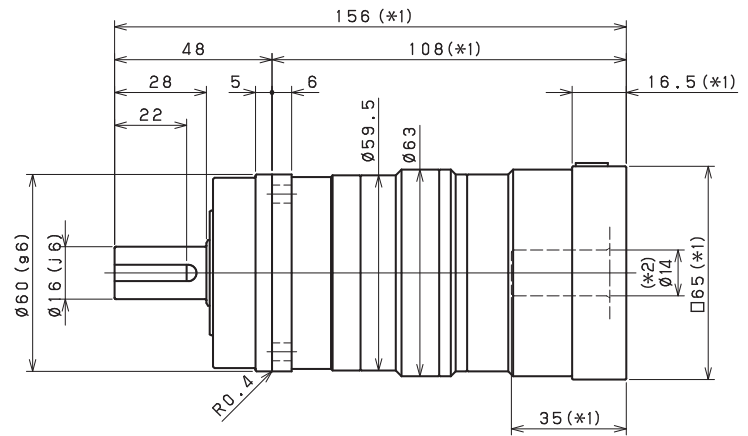
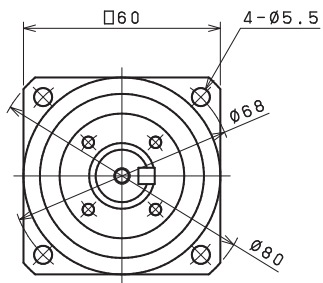
*2) Bushing will be inserted to adapt to motor shaft

VRS-o6o - 2-Stage Dimensions

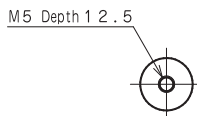
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Shaft with key

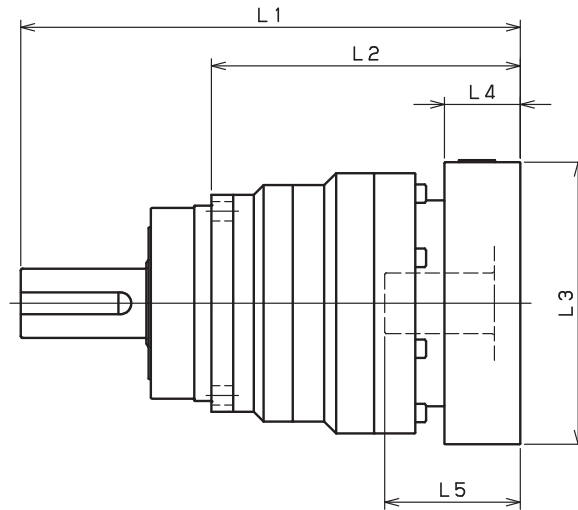


Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS-060 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-060-□-□-8** (Input shaft bore ≤ φ8) | AA•AC•AD•AF•AG•AL•AM•AN•AQ | 132 | 116.5 | 84 | □52 | 15.5 | 32 |
| | AB•AE•AH•AJ•AK | 137 | 116.5 | 89 | □52 | 20.5 | 37 |
| | BA•BB•BD•BE•BG•BH•BJ | 132 | 116.5 | 84 | □60 | 15.5 | 32 |
| | BC•BF | 137 | 116.5 | 89 | □60 | 20.5 | 37 |
| | CA | 137 | 116.5 | 89 | □70 | 20.5 | 37 |
| VRS-060-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 135 | 118.5 | 87 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 140 | 118.5 | 92 | □65 | 21.5 | 40 |
| | BL | 145 | 118.5 | 97 | □65 | 26.5 | 45 |
| | CA•CC | 135 | 118.5 | 87 | □70 | 16.5 | 35 |
| | CB | 140 | 118.5 | 92 | □70 | 21.5 | 40 |
| | DA•DB•DC•DD•DF•DH•DJ | 135 | 118.5 | 87 | □80 | 16.5 | 35 |
| | DE•DL | 140 | 118.5 | 92 | □80 | 21.5 | 40 |
| | DG•DK | 145 | 118.5 | 97 | □80 | 26.5 | 45 |
| | EA•EB•EC•EF•EG•EK•EL | 135 | 118.5 | 87 | □90 | 16.5 | 35 |
| | EJ•EM | 140 | 118.5 | 92 | □90 | 21.5 | 40 |
| | ED•EE•EH | 145 | 118.5 | 97 | □90 | 26.5 | 45 |
| | FA | 135 | 118.5 | 87 | □100 | 16.5 | 35 |
| FB | 135 | 118.5 | 87 | □115 | 16.5 | 35 | |
| VRS-060-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 150 | 125 | 102 | □80 | 25 | 50 |
| | DD | 160 | 125 | 112 | □80 | 35 | 60 |
| | DE | 155 | 125 | 107 | □80 | 30 | 55 |
| | EA | 155 | 125 | 107 | □90 | 30 | 55 |
| | EB•ED | 150 | 125 | 102 | □90 | 25 | 50 |
| | EC | 160 | 125 | 112 | □90 | 35 | 60 |
| | FA | 150 | 125 | 102 | □100 | 25 | 50 |
| | FB | 160 | 125 | 112 | □100 | 35 | 60 |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

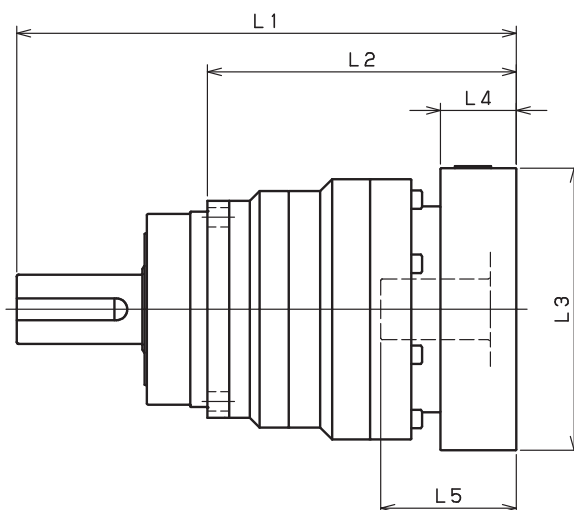
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-o6o – 2-Stage Adapter Dimensions



VRS

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-060-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 151 | 135.5 | 103 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 156 | 135.5 | 108 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 151 | 135.5 | 103 | □60 | 15.5 | 32 |
| | BC·BF | 156 | 135.5 | 108 | □60 | 20.5 | 37 |
| | CA | 156 | 135.5 | 108 | □70 | 20.5 | 37 |
| VRS-060-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 156 | 139.5 | 108 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 161 | 139.5 | 113 | □65 | 21.5 | 40 |
| | BL | 166 | 139.5 | 118 | □65 | 26.5 | 45 |
| | CA·CC | 156 | 139.5 | 108 | □70 | 16.5 | 35 |
| | CB | 161 | 139.5 | 113 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 156 | 139.5 | 108 | □80 | 16.5 | 35 |
| | DE·DL | 161 | 139.5 | 113 | □80 | 21.5 | 40 |
| | DG·DK | 166 | 139.5 | 118 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 156 | 139.5 | 108 | □90 | 16.5 | 35 |
| | EJ·EM | 161 | 139.5 | 113 | □90 | 21.5 | 40 |
| | ED·EE·EH | 166 | 139.5 | 118 | □90 | 26.5 | 45 |
| | FA | 156 | 139.5 | 108 | □100 | 16.5 | 35 |
| FB | 156 | 139.5 | 108 | □115 | 16.5 | 35 | |
| VRS-060-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 171 | 146 | 123 | □80 | 25 | 50 |
| | DD | 181 | 146 | 133 | □80 | 35 | 60 |
| | DE | 176 | 146 | 128 | □80 | 30 | 55 |
| | EA | 176 | 146 | 128 | □90 | 30 | 55 |
| | EB·ED | 171 | 146 | 123 | □90 | 25 | 50 |
| | EC | 181 | 146 | 133 | □90 | 35 | 60 |
| | FA | 171 | 146 | 123 | □100 | 25 | 50 |
| | FB | 181 | 146 | 133 | □100 | 35 | 60 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-SERIES Inline shaft

VRS-075 – 1-Stage Specifications

| Frame Size | 075 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.35 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2300 | 2500 | 2700 | 2800 | 3000 | 3100 | 3200 | 3300 | | |
| Permitted Axial Load | [N] | *8 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.670 | 0.470 | 0.380 | 0.340 | 0.310 | 0.300 | 0.290 | 0.290 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 1.100 | 0.930 | 0.850 | 0.810 | 0.780 | 0.760 | 0.750 | 0.750 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 3.100 | 2.900 | 2.900 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 3.4 | | | | | | | | | |

VRS-075 – 2-Stage Specifications

| Frame Size | 075 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 75 | 75 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 125 | 125 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 250 | 250 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3700 | 3800 | 4000 | 4300 | 4300 | 4300 | 4300 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.130 | 0.140 | 0.130 | 0.120 | 0.140 | 0.099 | 0.120 | 0.098 | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.280 | 0.300 | 0.280 | 0.280 | 0.290 | 0.250 | 0.270 | 0.250 | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.720 | 0.730 | 0.720 | 0.710 | 0.730 | 0.700 | 0.710 | 0.690 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 3.8 | | | | | | | | | |

Sold & Serviced By:


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRS-075 – 2-Stage Specifications

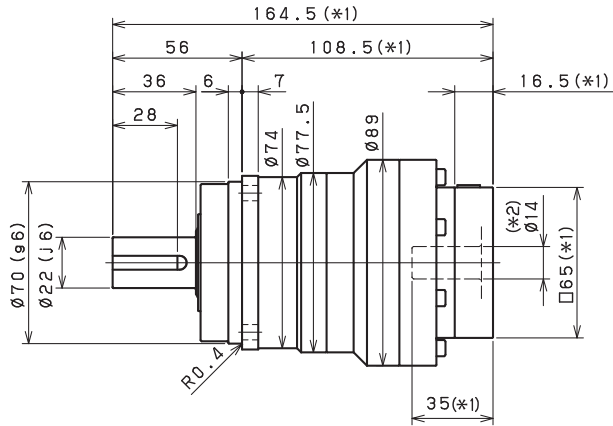
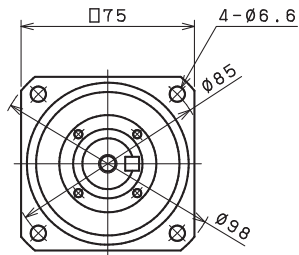
| Frame Size | 075 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.06 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 4300 | 4300 | 4300 | 4300 | 4300 | 4300 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.120 | 0.098 | 0.098 | 0.097 | 0.097 | 0.097 | 0.097 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.270 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.710 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | 0.690 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 3.8 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS075
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

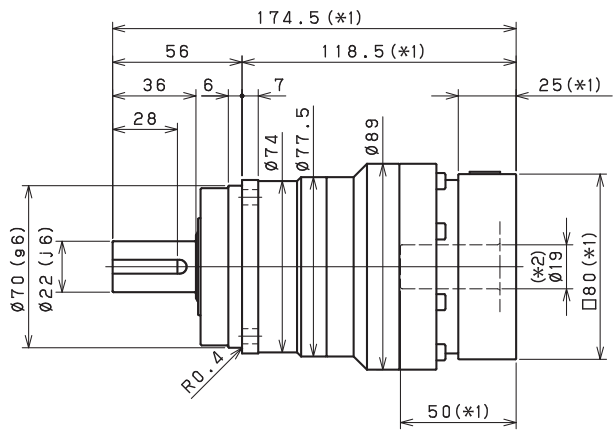
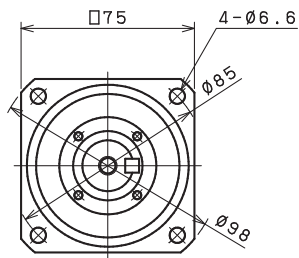
VRS-SERIES Inline shaft

VRS-075 - 1-Stage Dimensions

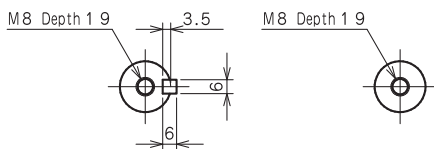
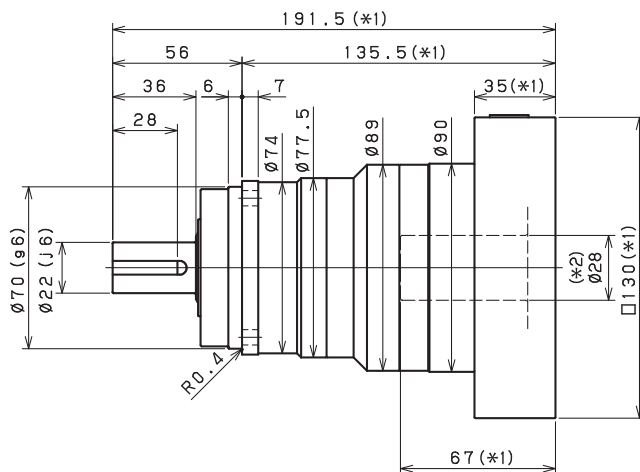
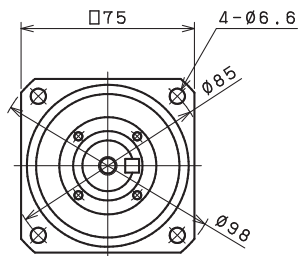
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

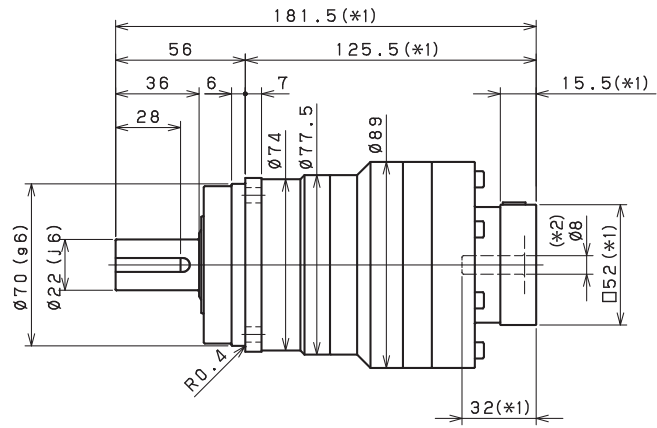
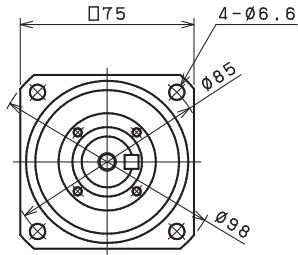
Toll Free Fax (877) SERV099

www.electromate.com

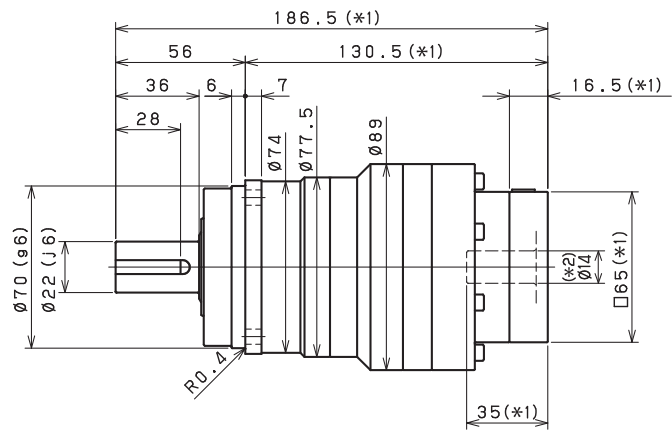
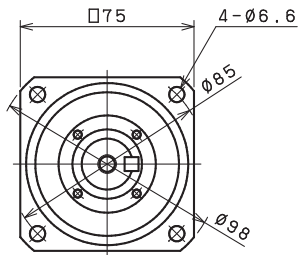
sales@electromate.com

VRS-075 - 2-Stage Dimensions

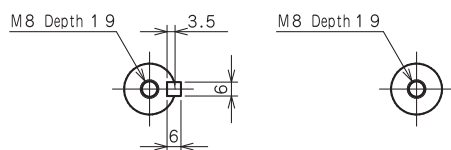
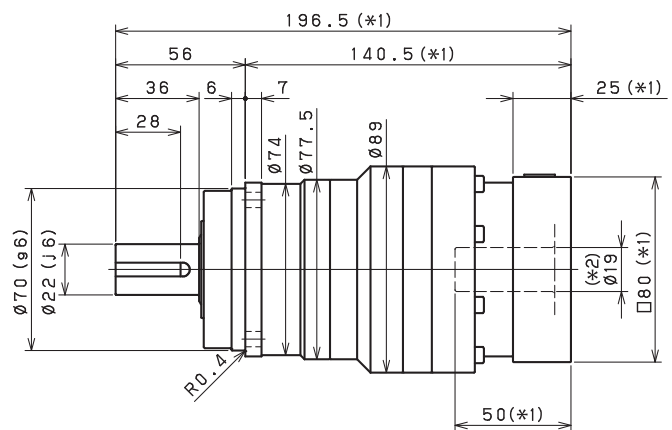
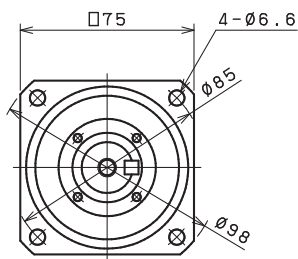
Input shaft bore $\cong \phi 8$



Input shaft bore $\cong \phi 14$



Input shaft bore $\cong \phi 19$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

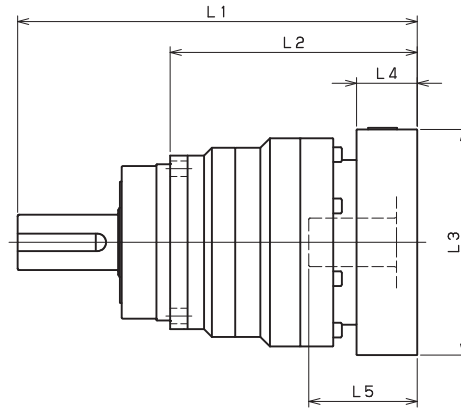
*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRS-075 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-075-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- | -- |
| VRS-075-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 164.5 | 148 | 108.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 169.5 | 148 | 113.5 | □65 | 21.5 | 40 |
| | CA·CC | 164.5 | 148 | 108.5 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 164.5 | 148 | 108.5 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 164.5 | 148 | 108.5 | □90 | 16.5 | 35 |
| | FA | 164.5 | 148 | 108.5 | □100 | 16.5 | 35 |
| | FB | 174.5 | 148 | 118.5 | □100 | 26.5 | 45 |
| VRS-075-□-□-19** (Input shaft bore ≤ φ19) | JA | 179.5 | 148 | 123.5 | □150 | 31.5 | 50 |
| | DA·DB·DC | 174.5 | 149.5 | 118.5 | □80 | 25 | 50 |
| | EB·ED | 174.5 | 149.5 | 118.5 | □90 | 25 | 50 |
| | FA | 174.5 | 149.5 | 118.5 | □100 | 25 | 50 |
| | FB | 184.5 | 149.5 | 128.5 | □100 | 35 | 60 |
| | GA·GC·GH | 179.5 | 149.5 | 123.5 | □115 | 30 | 55 |
| | GB·GD·GJ | 174.5 | 149.5 | 118.5 | □115 | 25 | 50 |
| | GE·GF | 184.5 | 149.5 | 128.5 | □115 | 35 | 60 |
| | HA | 174.5 | 149.5 | 118.5 | □130 | 25 | 50 |
| | HB | 189.5 | 149.5 | 133.5 | □130 | 40 | 65 |
| | HC·HD·HE | 179.5 | 149.5 | 123.5 | □130 | 30 | 55 |
| VRS-075-□-□-28** (Input shaft bore ≤ φ28) | JA | 184.5 | 149.5 | 128.5 | □150 | 35 | 60 |
| | JB | 189.5 | 149.5 | 133.5 | □150 | 40 | 65 |
| | FA·FB·FC | 191.5 | 156.5 | 135.5 | □100 | 35 | 67 |
| | FD·FE | 186.5 | 156.5 | 130.5 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 191.5 | 156.5 | 135.5 | □115 | 35 | 67 |
| | HA·HC·HD | 191.5 | 156.5 | 135.5 | □130 | 35 | 67 |
| | HB | 201.5 | 156.5 | 145.5 | □130 | 45 | 77 |
| | HE | 206.5 | 156.5 | 150.5 | □130 | 50 | 82 |
| | HF | 186.5 | 156.5 | 130.5 | □130 | 30 | 62 |
| JA·JB·JC·JF | 191.5 | 156.5 | 135.5 | □150 | 35 | 67 | |
| JD | 211.5 | 156.5 | 155.5 | □150 | 55 | 87 | |
| JE | 201.5 | 156.5 | 145.5 | □150 | 45 | 77 | |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

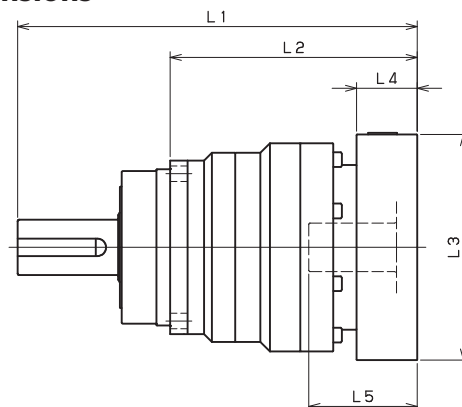
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-075 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-075-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 181.5 | 166 | 125.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 186.5 | 166 | 130.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 181.5 | 166 | 125.5 | □60 | 15.5 | 32 |
| | CA | 186.5 | 166 | 130.5 | □70 | 20.5 | 37 |
| VRS-075-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 186.5 | 170 | 130.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 191.5 | 170 | 135.5 | □65 | 21.5 | 40 |
| | CA·CC | 186.5 | 170 | 130.5 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 186.5 | 170 | 130.5 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 186.5 | 170 | 130.5 | □90 | 16.5 | 35 |
| | FA | 186.5 | 170 | 130.5 | □100 | 16.5 | 35 |
| | FB | 196.5 | 170 | 140.5 | □100 | 26.5 | 45 |
| VRS-075-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 196.5 | 171.5 | 140.5 | □80 | 25 | 50 |
| | EB·ED | 196.5 | 171.5 | 140.5 | □90 | 25 | 50 |
| | FA | 196.5 | 171.5 | 140.5 | □100 | 25 | 50 |
| | FB | 206.5 | 171.5 | 150.5 | □100 | 35 | 60 |
| | GA·GC·GH | 201.5 | 171.5 | 145.5 | □115 | 30 | 55 |
| | GB·GD·GJ | 196.5 | 171.5 | 140.5 | □115 | 25 | 50 |
| | GE·GF | 206.5 | 171.5 | 150.5 | □115 | 35 | 60 |
| | HA | 196.5 | 171.5 | 140.5 | □130 | 25 | 50 |
| | HB | 211.5 | 171.5 | 155.5 | □130 | 40 | 65 |
| | HC·HD·HE | 201.5 | 171.5 | 145.5 | □130 | 30 | 55 |
| | JA | 206.5 | 171.5 | 150.5 | □150 | 35 | 60 |
| VRS-075-□-□-28** (Input shaft bore ≤ φ28) | FA·FB·FC | 215.5 | 180.5 | 159.5 | □100 | 35 | 67 |
| | FD·FE | 210.5 | 180.5 | 154.5 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 215.5 | 180.5 | 159.5 | □115 | 35 | 67 |
| | HA·HC·HD | 215.5 | 180.5 | 159.5 | □130 | 35 | 67 |
| | HB | 225.5 | 180.5 | 169.5 | □130 | 45 | 77 |
| | HE | 230.5 | 180.5 | 174.5 | □130 | 50 | 82 |
| | HF | 210.5 | 180.5 | 154.5 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 215.5 | 180.5 | 159.5 | □150 | 35 | 67 |
| | JD | 235.5 | 180.5 | 179.5 | □150 | 55 | 87 |
| JE | 225.5 | 180.5 | 169.5 | □150 | 45 | 77 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS

VRS-SERIES Inline shaft

VRS-100 – 1-Stage Specifications

| Frame Size | 100 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 120 | 120 | 180 | 180 | 180 | 180 | 120 | 120 |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 330 | 225 | 225 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 625 | 500 | 500 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.30 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3400 | 3700 | 4000 | 4200 | 4400 | 4600 | 4800 | 4900 |
| Permitted Axial Load | [N] | *8 | 4800 | 5200 | 5600 | 5900 | 6100 | 6300 | 6300 | 6300 |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 3.200 | 2.000 | 1.500 | 1.300 | 1.100 | 1.000 | 0.960 | 0.930 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 5.200 | 4.000 | 3.600 | 3.300 | 3.100 | 3.000 | 3.000 | 3.000 |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 |
| Efficiency | [%] | *11 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 8.1 | | | | | | | |

VRS-100 – 2-Stage Specifications

| Frame Size | 100 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 180 | 180 |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 330 | 330 |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 625 | 625 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.42 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 5700 | 6100 | 6500 | 6700 | 6900 | 7000 | 7000 |
| Permitted Axial Load | [N] | *8 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.420 | 0.480 | 0.400 | 0.380 | 0.440 | 0.290 | 0.370 | 0.280 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.860 | 0.910 | 0.830 | 0.820 | 0.870 | 0.740 | 0.810 | 0.730 |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 2.800 | 2.900 | 2.800 | 2.800 | 2.800 | 2.700 | 2.700 | 2.700 |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 8.8 | | | | | | | |

VRS-100 – 2-Stage Specifications

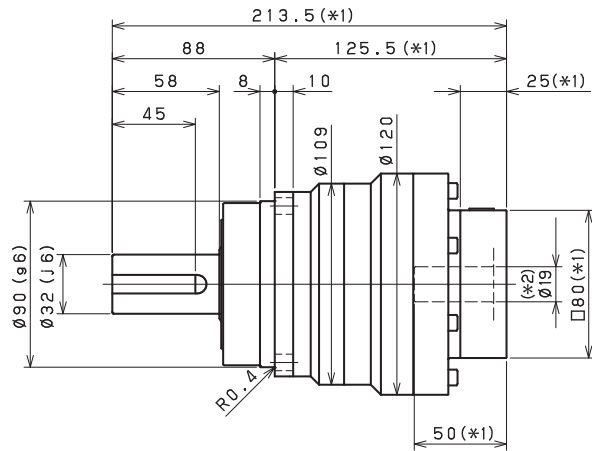
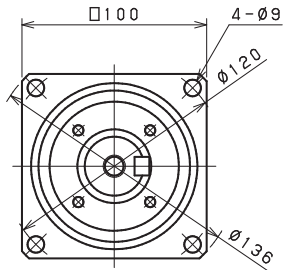
| Frame Size | 100 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 180 | 180 | 120 | 120 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 225 | 330 | 330 | 330 | 330 | 225 | 225 | | |
| Emergency Stop Torque | [Nm] | *3 | 500 | 625 | 625 | 625 | 625 | 500 | 500 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.42 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7000 | 7000 | 7000 | 7000 | 7000 | 7000 | 7000 | | |
| Permitted Axial Load | [N] | *8 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | | |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.370 | 0.280 | 0.280 | 0.280 | 0.280 | 0.270 | 0.270 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.800 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | 0.730 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | 2.700 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 71 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 8.8 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS100
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

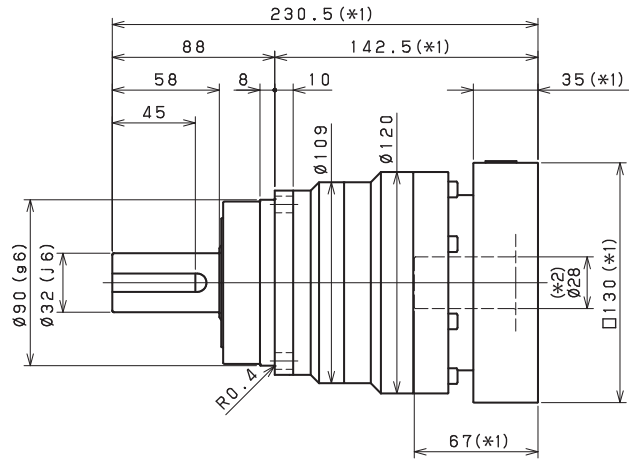
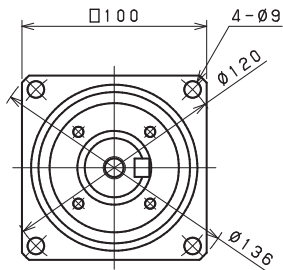
VRS-SERIES Inline shaft

VRS-100 – 1-Stage Dimensions

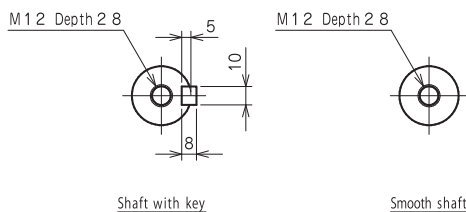
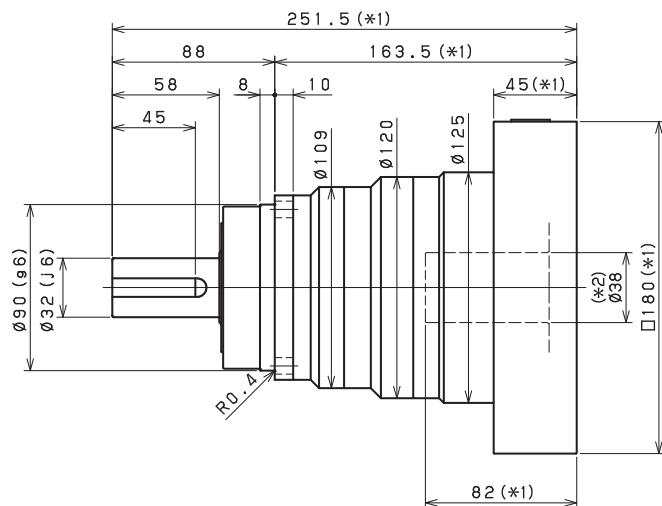
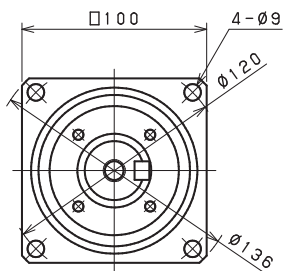
Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$

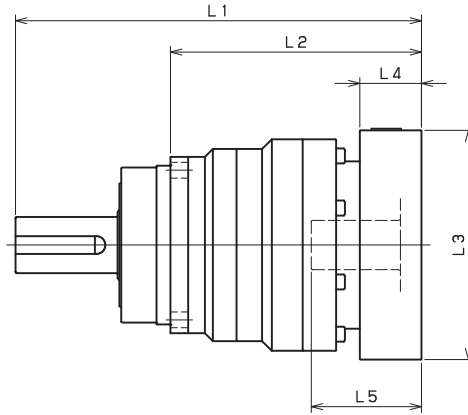


Input shaft bore $\leq \varnothing 38$



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRS-100 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-100-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| VRS-100-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 213.5 | 188.5 | 125.5 | □80 | 25 | 50 |
| | EB | 213.5 | 188.5 | 125.5 | □90 | 25 | 50 |
| | FA | 213.5 | 188.5 | 125.5 | □100 | 25 | 50 |
| | FB | 223.5 | 188.5 | 135.5 | □100 | 35 | 60 |
| | GB•GD | 213.5 | 188.5 | 125.5 | □115 | 25 | 50 |
| | HA | 223.5 | 188.5 | 135.5 | □115 | 35 | 60 |
| | -- | 213.5 | 188.5 | 125.5 | □130 | 25 | 50 |
| | -- | 228.5 | 188.5 | 140.5 | □130 | 40 | 65 |
| | -- | 218.5 | 188.5 | 130.5 | □130 | 30 | 55 |
| VRS-100-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 230.5 | 195.5 | 142.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 230.5 | 195.5 | 142.5 | □115 | 35 | 67 |
| | HA•HC•HD | 230.5 | 195.5 | 142.5 | □130 | 35 | 67 |
| | HB | 240.5 | 195.5 | 152.5 | □130 | 45 | 77 |
| | HF | 225.5 | 195.5 | 137.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 230.5 | 195.5 | 142.5 | □150 | 35 | 67 |
| | JD | 250.5 | 195.5 | 162.5 | □150 | 55 | 87 |
| | JE | 240.5 | 195.5 | 152.5 | □150 | 45 | 77 |
| | KA•KB•KE | 230.5 | 195.5 | 142.5 | □180 | 35 | 67 |
| VRS-100-□-□-38** (Input shaft bore ≤ φ38) | KD | 240.5 | 195.5 | 152.5 | □180 | 45 | 77 |
| | HA | 251.5 | 206.5 | 163.5 | □130 | 45 | 82 |
| | HB•HE | 246.5 | 206.5 | 158.5 | □130 | 40 | 77 |
| | JA | 251.5 | 206.5 | 163.5 | □150 | 45 | 82 |
| | KA•KB•KC | 251.5 | 206.5 | 163.5 | □180 | 45 | 82 |
| | KD | 286.5 | 206.5 | 198.5 | □180 | 80 | 117 |
| | KE | 266.5 | 206.5 | 178.5 | □180 | 60 | 97 |

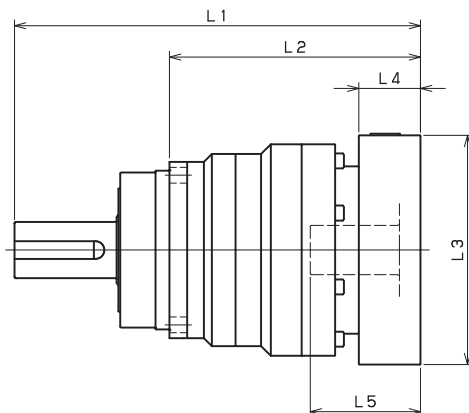
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-100 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-100-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 231 | 214.5 | 143 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 236 | 214.5 | 148 | □65 | 21.5 | 40 |
| | CA•CC | 231 | 214.5 | 143 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 231 | 214.5 | 143 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 231 | 214.5 | 143 | □90 | 16.5 | 35 |
| | FA | 231 | 214.5 | 143 | □100 | 16.5 | 35 |
| | FB | 241 | 214.5 | 153 | □100 | 26.5 | 45 |
| VRS-100-□-□-19** (Input shaft bore ≤ φ19) | JA | 246 | 214.5 | 158 | □150 | 31.5 | 50 |
| | DA•DB•DC | 241 | 216 | 153 | □80 | 25 | 50 |
| | EB | 241 | 216 | 153 | □90 | 25 | 50 |
| | FA | 241 | 216 | 153 | □100 | 25 | 50 |
| | FB | 251 | 216 | 163 | □100 | 35 | 60 |
| | GB•GD | 241 | 216 | 153 | □115 | 25 | 50 |
| | HA | 251 | 216 | 163 | □115 | 35 | 60 |
| | -- | 241 | 216 | 153 | □130 | 25 | 50 |
| | -- | 256 | 216 | 168 | □130 | 40 | 65 |
| -- | 246 | 216 | 158 | □130 | 30 | 55 | |
| VRS-100-□-□-28** (Input shaft bore ≤ φ28) | HB | 251 | 216 | 163 | □150 | 35 | 60 |
| | FA•FB•FC | 258 | 223 | 170 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 258 | 223 | 170 | □115 | 35 | 67 |
| | HA•HC•HD | 258 | 223 | 170 | □130 | 35 | 67 |
| | HB | 268 | 223 | 180 | □130 | 45 | 77 |
| | HF | 253 | 223 | 165 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 258 | 223 | 170 | □150 | 35 | 67 |
| | JD | 278 | 223 | 190 | □150 | 55 | 87 |
| | JE | 268 | 223 | 180 | □150 | 45 | 77 |
| VRS-100-□-□-38** (Input shaft bore ≤ φ38) | KA•KB•KE | 258 | 223 | 170 | □180 | 35 | 67 |
| | KD | 268 | 223 | 180 | □180 | 45 | 77 |
| | HA | 275.5 | 230.5 | 187.5 | □130 | 45 | 82 |
| | HB•HE | 270.5 | 230.5 | 182.5 | □130 | 40 | 77 |
| | JA | 275.5 | 230.5 | 187.5 | □150 | 45 | 82 |
| | KA•KB•KC | 275.5 | 230.5 | 187.5 | □180 | 45 | 82 |
| | KD | 310.5 | 230.5 | 222.5 | □180 | 80 | 117 |
| | KE | 290.5 | 230.5 | 202.5 | □180 | 60 | 97 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS

VRS-140 – 1-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 240 | 360 | 360 | 360 | 360 | 240 | 240 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 700 | 470 | 470 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.63 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 6700 | 7400 | 7900 | 8300 | 8700 | 9100 | 9400 | 9700 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 12.000 | 7.400 | 5.800 | 4.900 | 4.100 | 3.800 | 3.600 | 3.400 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 20.000 | 15.000 | 13.000 | 13.000 | 12.000 | 12.000 | 11.000 | 11.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 42.000 | 37.000 | 36.000 | 35.000 | 34.000 | 34.000 | 34.000 | 33.000 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 17 | | | | | | | | | |

VRS-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 360 | 360 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 700 | 700 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1250 | 1250 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.300 | 1.500 | 1.200 | 1.100 | 1.400 | 0.850 | 1.100 | 0.830 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.200 | 3.500 | 3.100 | 3.100 | 3.300 | 2.800 | 3.100 | 2.800 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 10.000 | 11.000 | 10.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 19 | | | | | | | | | |

Sold & Serviced By:

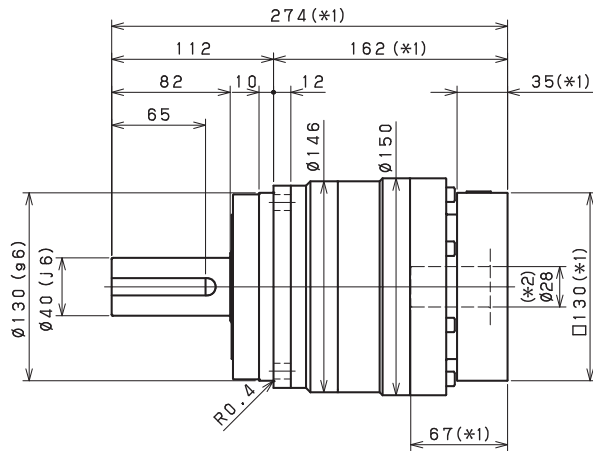
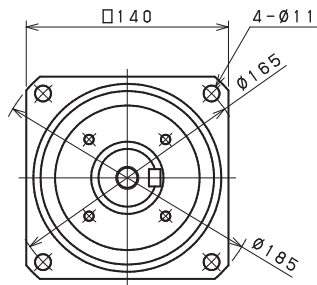
VRS-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 360 | 360 | 240 | 240 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 470 | 700 | 700 | 700 | 700 | 470 | 470 | | |
| Emergency Stop Torque | [Nm] | *3 | 1000 | 1250 | 1250 | 1250 | 1250 | 1000 | 1000 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 1.100 | 0.810 | 0.810 | 0.800 | 0.800 | 0.800 | 0.800 | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 3.000 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 11.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | 10.000 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 19 | | | | | | | | |

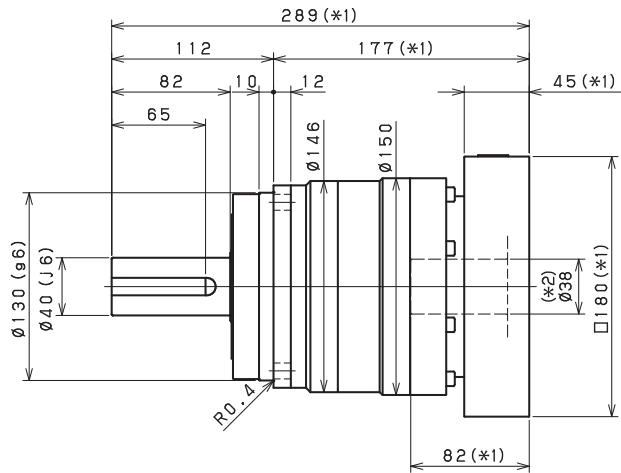
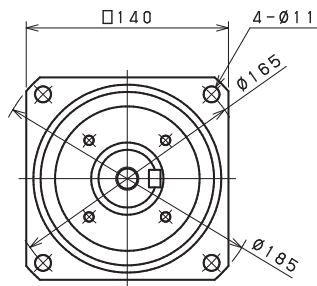
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2,000 rpm for VRS140
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRS-140 – 1-Stage Dimensions

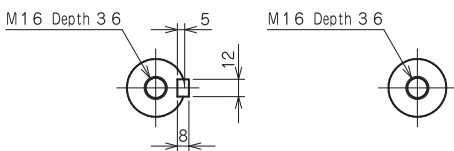
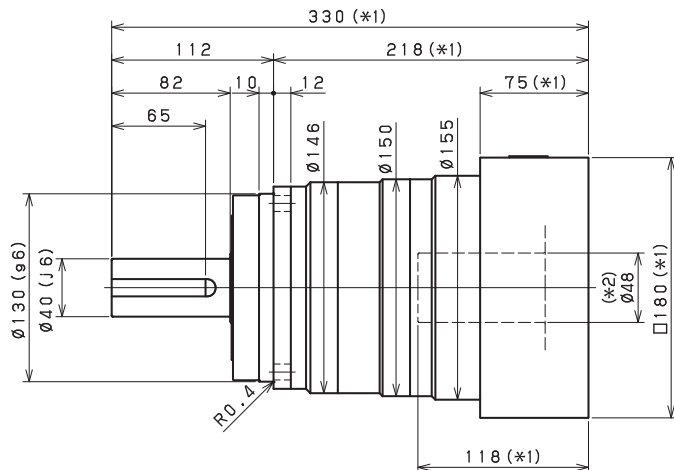
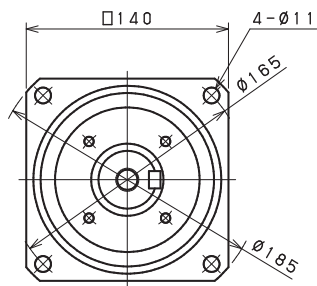
Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

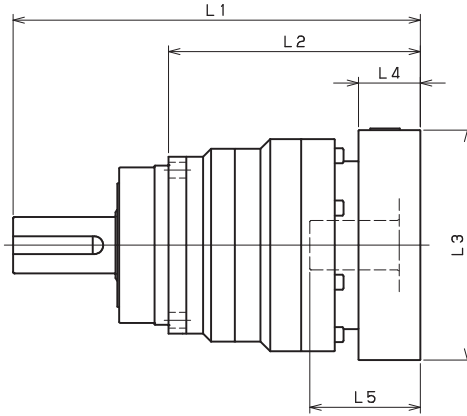
*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRS-SERIES Inline shaft

VRS-140 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-140-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | -- | -- | -- | -- | -- | -- |
| | EB•ED | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| | GB•GD•GJ | -- | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- | -- |
| VRS-140-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 274 | 239 | 162 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 274 | 239 | 162 | □115 | 35 | 67 |
| | HA•HC•HD | 274 | 239 | 162 | □130 | 35 | 67 |
| | HB | 284 | 239 | 172 | □130 | 45 | 77 |
| | HF | 269 | 239 | 157 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 274 | 239 | 162 | □150 | 35 | 67 |
| | KA•KB•KE | 274 | 239 | 162 | □180 | 35 | 67 |
| | LA | 274 | 239 | 162 | □200 | 35 | 67 |
| | LB | 284 | 239 | 172 | □200 | 45 | 77 |
| | MA | 274 | 239 | 162 | □220 | 35 | 67 |
| VRS-140-□-□-38** (Input shaft bore ≤ φ38) | MB | 284 | 239 | 172 | □220 | 45 | 77 |
| | HA | 289 | 244 | 177 | □130 | 45 | 82 |
| | HB•HE | 284 | 244 | 172 | □130 | 40 | 77 |
| | JA | 289 | 244 | 177 | □150 | 45 | 82 |
| | KA•KB•KC | 289 | 244 | 177 | □180 | 45 | 82 |
| | KD | 324 | 244 | 212 | □180 | 80 | 117 |
| | KE | 304 | 244 | 192 | □180 | 60 | 97 |
| | LB | 299 | 244 | 187 | □200 | 55 | 92 |
| | MA•MB | 289 | 244 | 177 | □220 | 45 | 82 |
| | MC | 304 | 244 | 192 | □220 | 60 | 97 |
| VRS-140-□-□-48** (Input shaft bore ≤ φ48) | MD | 299 | 244 | 187 | □220 | 55 | 92 |
| | KA | 330 | 255 | 218 | □180 | 75 | 118 |
| | KB•KC | 310 | 255 | 198 | □180 | 55 | 98 |
| | LA | 310 | 255 | 198 | □200 | 55 | 98 |
| | MA | 310 | 255 | 198 | □220 | 55 | 98 |
| MB | 330 | 255 | 218 | □220 | 75 | 118 | |

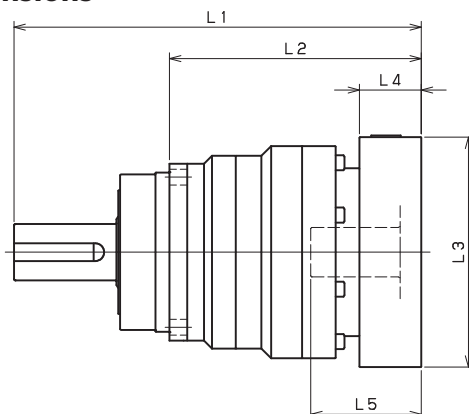
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-140 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-140-□-□-19** (Input shaft bore ≤ φ19) | DA•DB•DC | 291.5 | 266.5 | 179.5 | □80 | 25 | 50 |
| | EB•ED | 291.5 | 266.5 | 179.5 | □90 | 25 | 50 |
| | FA | 291.5 | 266.5 | 179.5 | □100 | 25 | 50 |
| | FB | 301.5 | 266.5 | 189.5 | □100 | 35 | 60 |
| | GB•GD•GJ | 291.5 | 266.5 | 179.5 | □115 | 25 | 50 |
| | HA | 291.5 | 266.5 | 179.5 | □130 | 25 | 50 |
| | HB | 306.5 | 266.5 | 194.5 | □130 | 40 | 65 |
| VRS-140-□-□-28** (Input shaft bore ≤ φ28) | JA | 301.5 | 266.5 | 189.5 | □150 | 35 | 60 |
| | FA•FB•FC | 308.5 | 273.5 | 196.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 308.5 | 273.5 | 196.5 | □115 | 35 | 67 |
| | HA•HC•HD | 308.5 | 273.5 | 196.5 | □130 | 35 | 67 |
| | HB | 318.5 | 273.5 | 206.5 | □130 | 45 | 77 |
| | HF | 303.5 | 273.5 | 191.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 308.5 | 273.5 | 196.5 | □150 | 35 | 67 |
| | KA•KB•KE | 308.5 | 273.5 | 196.5 | □180 | 35 | 67 |
| | LA | 308.5 | 273.5 | 196.5 | □200 | 35 | 67 |
| | LB | 318.5 | 273.5 | 206.5 | □200 | 45 | 77 |
| VRS-140-□-□-38** (Input shaft bore ≤ φ38) | MA | 308.5 | 273.5 | 196.5 | □220 | 35 | 67 |
| | MB | 318.5 | 273.5 | 206.5 | □220 | 45 | 77 |
| | HA | 323.5 | 278.5 | 211.5 | □130 | 45 | 82 |
| | HB•HE | 318.5 | 278.5 | 206.5 | □130 | 40 | 77 |
| | JA | 323.5 | 278.5 | 211.5 | □150 | 45 | 82 |
| | KA•KB•KC | 323.5 | 278.5 | 211.5 | □180 | 45 | 82 |
| | KD | 358.5 | 278.5 | 246.5 | □180 | 80 | 117 |
| | KE | 338.5 | 278.5 | 226.5 | □180 | 60 | 97 |
| | LB | 333.5 | 278.5 | 221.5 | □200 | 55 | 92 |
| VRS-140-□-□-48** (Input shaft bore ≤ φ48) | MA•MB | 323.5 | 278.5 | 211.5 | □220 | 45 | 82 |
| | MC | 338.5 | 278.5 | 226.5 | □220 | 60 | 97 |
| | MD | 333.5 | 278.5 | 221.5 | □220 | 55 | 92 |
| | KA | 364.5 | 289.5 | 252.5 | □180 | 75 | 118 |
| | KB•KC | 344.5 | 289.5 | 232.5 | □180 | 55 | 98 |
| | LA | 344.5 | 289.5 | 232.5 | □200 | 55 | 98 |
| | MA | 344.5 | 289.5 | 232.5 | □220 | 55 | 98 |
| | MB | 364.5 | 289.5 | 252.5 | □220 | 75 | 118 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-SERIES Inline shaft

VRS-180 – 1-Stage Specifications

| Frame Size | 180 | | | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|--------|--------|--------|--------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 750 | 500 | 500 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 1400 | 970 | 970 | | |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.68 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 | 17000 | 18000 | | |
| Permitted Axial Load | [N] | *8 | 16000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | | |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 42.000 | 27.000 | 21.000 | 18.000 | 16.000 | 15.000 | 14.000 | 14.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 64.000 | 49.000 | 43.000 | 40.000 | 38.000 | 37.000 | 36.000 | 36.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 120.000 | 110.000 | 100.000 | 100.000 | 98.000 | 97.000 | 96.000 | 96.000 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | | | |

VRS-180 – 2-Stage Specifications

| Frame Size | 180 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 750 | 750 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 1400 | 1400 | | |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2750 | 2750 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | | |
| Permitted Axial Load | [N] | *8 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | | |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 5.400 | 4.300 | 4.200 | 4.900 | 3.200 | 4.100 | 3.200 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 13.000 | 12.000 | 12.000 | 13.000 | 11.000 | 12.000 | 11.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 35.000 | 34.000 | 34.000 | 35.000 | 33.000 | 34.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | | | |

Sold & Serviced By:

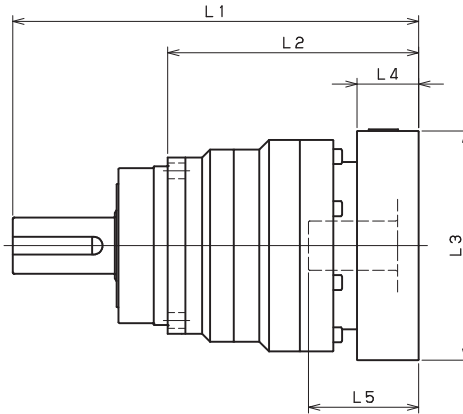

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRS-180 – 2-Stage Specifications

| Frame Size | 180 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 500 | 750 | 750 | 750 | 750 | 500 | 500 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 970 | 1400 | 1400 | 1400 | 1400 | 970 | 970 | | |
| Emergency Stop Torque | [Nm] | *3 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.39 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | | |
| Permitted Axial Load | [N] | *8 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | | |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.000 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | 3.100 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | 11.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,5000 rpm for VRS180
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRS-180 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-180-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | -- | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| VRS-180-□-□-38** (Input shaft bore ≤ φ38) | HA | 315.5 | 270.5 | 203.5 | □130 | 45 | 82 |
| | HB•HE | 310.5 | 270.5 | 198.5 | □130 | 40 | 77 |
| | JA | 315.5 | 270.5 | 203.5 | □150 | 45 | 82 |
| | KA•KB•KC | 315.5 | 270.5 | 203.5 | □180 | 45 | 82 |
| | KD | 350.5 | 270.5 | 238.5 | □180 | 80 | 117 |
| | KE | 330.5 | 270.5 | 218.5 | □180 | 60 | 97 |
| | LB | 325.5 | 270.5 | 213.5 | □200 | 55 | 92 |
| | MA•MB | 315.5 | 270.5 | 203.5 | □220 | 45 | 82 |
| | MC | 330.5 | 270.5 | 218.5 | □220 | 60 | 97 |
| | MD | 325.5 | 270.5 | 213.5 | □220 | 55 | 92 |
| VRS-180-□-□-48** (Input shaft bore ≤ φ48) | NA | 315.5 | 270.5 | 203.5 | □250 | 45 | 82 |
| | KA | 351.5 | 276.5 | 239.5 | □180 | 75 | 118 |
| | KB•KC | 331.5 | 276.5 | 219.5 | □180 | 55 | 98 |
| | LA | 331.5 | 276.5 | 219.5 | □200 | 55 | 98 |
| | MA | 331.5 | 276.5 | 219.5 | □220 | 55 | 98 |
| | MB | 351.5 | 276.5 | 239.5 | □220 | 75 | 118 |
| | NA | 351.5 | 276.5 | 239.5 | □250 | 75 | 118 |
| VRS-180-□-□-65** (Input shaft bore ≤ φ65) | PA | 351.5 | 276.5 | 239.5 | □280 | 75 | 118 |
| | MA•MB•MC•MD | 363 | 283 | 251 | □220 | 80 | 122 |
| | NA•NC | 363 | 283 | 251 | □250 | 80 | 122 |
| | NB•ND | 393 | 283 | 281 | □250 | 110 | 152 |
| | PA | 383 | 283 | 271 | □280 | 100 | 142 |
| PB | 393 | 283 | 281 | □280 | 110 | 152 | |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

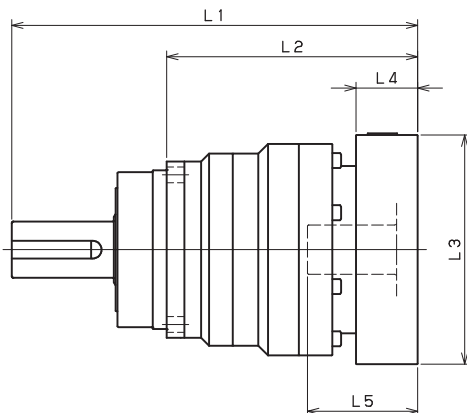
A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRS-180 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-180-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 345 | 310 | 233 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 345 | 310 | 233 | □115 | 35 | 67 |
| | HA•HC•HD | 345 | 310 | 233 | □130 | 35 | 67 |
| | HB | 355 | 310 | 243 | □130 | 45 | 77 |
| | HF | 340 | 310 | 228 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 345 | 310 | 233 | □150 | 35 | 67 |
| | KA•KB•KE | 345 | 310 | 233 | □180 | 35 | 67 |
| | LA | 345 | 310 | 233 | □200 | 35 | 67 |
| | LB | 355 | 310 | 243 | □200 | 45 | 77 |
| | MA | 345 | 310 | 233 | □220 | 35 | 67 |
| MB | 355 | 310 | 243 | □220 | 45 | 77 | |
| VRS-180-□-□-38** (Input shaft bore ≤ φ38) | HA | 360 | 315 | 248 | □130 | 45 | 82 |
| | HB•HE | 355 | 315 | 243 | □130 | 40 | 77 |
| | JA | 360 | 315 | 248 | □150 | 45 | 82 |
| | KA•KB•KC | 360 | 315 | 248 | □180 | 45 | 82 |
| | KD | 395 | 315 | 283 | □180 | 80 | 117 |
| | KE | 375 | 315 | 263 | □180 | 60 | 97 |
| | LB | 370 | 315 | 258 | □200 | 55 | 92 |
| | MA•MB | 360 | 315 | 248 | □220 | 45 | 82 |
| | MC | 375 | 315 | 263 | □220 | 60 | 97 |
| | MD | 370 | 315 | 258 | □220 | 55 | 92 |
| NA | 360 | 315 | 248 | □250 | 45 | 82 | |
| VRS-180-□-□-48** (Input shaft bore ≤ φ48) | KA | 396 | 321 | 284 | □180 | 75 | 118 |
| | KB•KC | 376 | 321 | 264 | □180 | 55 | 98 |
| | LA | 376 | 321 | 264 | □200 | 55 | 98 |
| | MA | 376 | 321 | 264 | □220 | 55 | 98 |
| | MB | 396 | 321 | 284 | □220 | 75 | 118 |
| | NA | 396 | 321 | 284 | □250 | 75 | 118 |
| | PA | 396 | 321 | 284 | □280 | 75 | 118 |
| VRS-180-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | -- | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-210 – 1-Stage Specifications

| Frame Size | 210 | | | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|---------|---------|--------|--------|--|--|
| Stage | 1-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 2200 | 1900 | 1600 | | |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.92 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 17000 | 18000 | 20000 | 21000 | 22000 | 23000 | 24000 | 24000 | | |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | | |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 92.000 | 63.000 | 53.000 | 47.000 | 43.000 | 40.000 | 39.000 | 38.000 | | |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | 150.000 | 120.000 | 110.000 | 110.000 | 100.000 | 100.000 | 99.000 | 98.000 | | |
| Efficiency | [%] | *11 | 97 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 59 | | | | | | | | | |

VRS-210 – 2-Stage Specifications

| Frame Size | 210 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1500 | 1500 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1600 | 2300 | 2300 | 2300 | 2300 | 1600 | 2300 | 2300 | | |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 5000 | 5000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | | |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | | |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 14.000 | 16.000 | 14.000 | 14.000 | 15.000 | 12.000 | 13.000 | 12.000 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 36.000 | 37.000 | 36.000 | 35.000 | 36.000 | 34.000 | 35.000 | 33.000 | | |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 92 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 60 | | | | | | | | | |

VRS-210 – 2-Stage Specifications

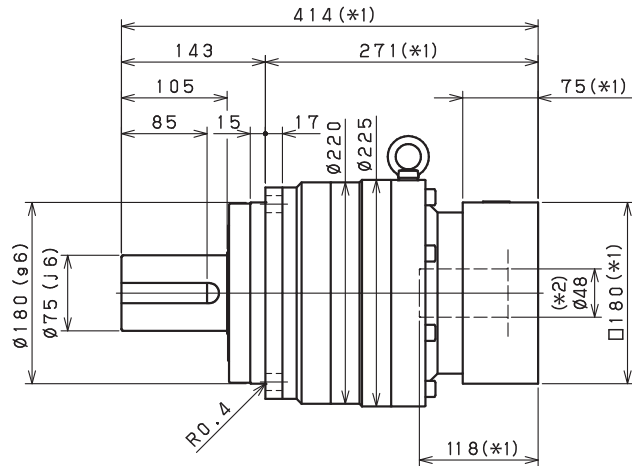
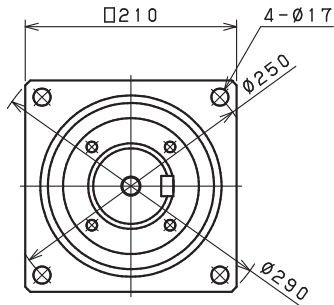
| Frame Size | 210 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 1000 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1300 | 2300 | 2300 | 2300 | 1800 | 1300 | 1200 | | |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5000 | 5000 | 5000 | 5000 | 4000 | 4000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.14 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | | |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | | |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | 12.000 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 35.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 92 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 60 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,5000 rpm for VRS210;
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

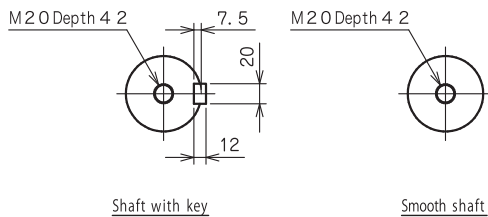
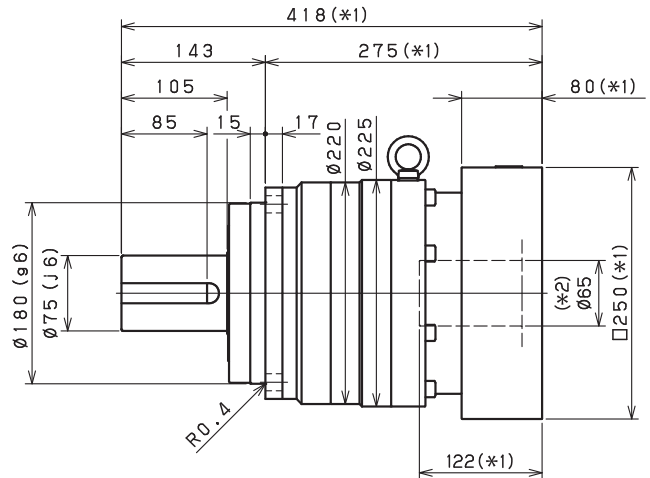
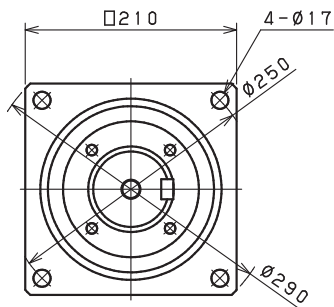
VRS-SERIES Inline shaft

VRS-210 – 1-Stage Dimensions

Input shaft bore $\leq \phi 48$



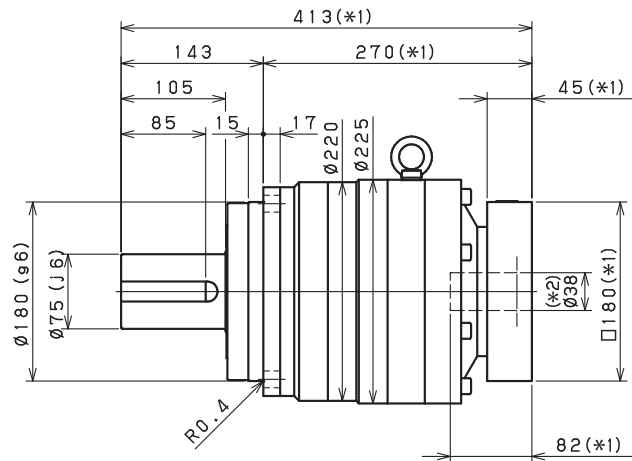
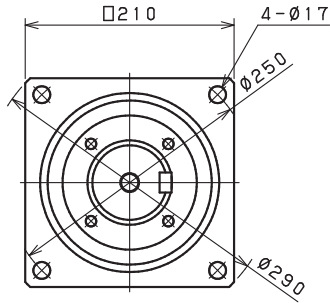
Input shaft bore $\leq \phi 65$



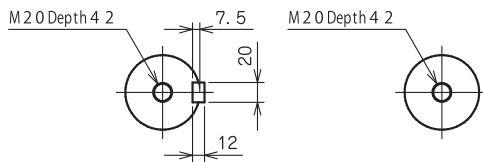
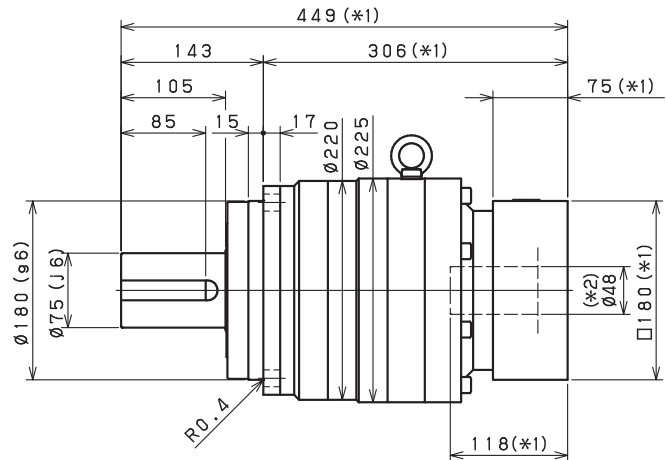
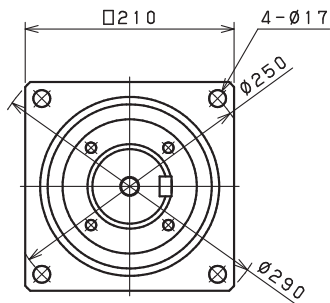
- *1) Length will vary depending on motor.
- *2) Bushing will be inserted to adapt to motor shaft

VRS-210 – 2-Stage Dimensions

Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



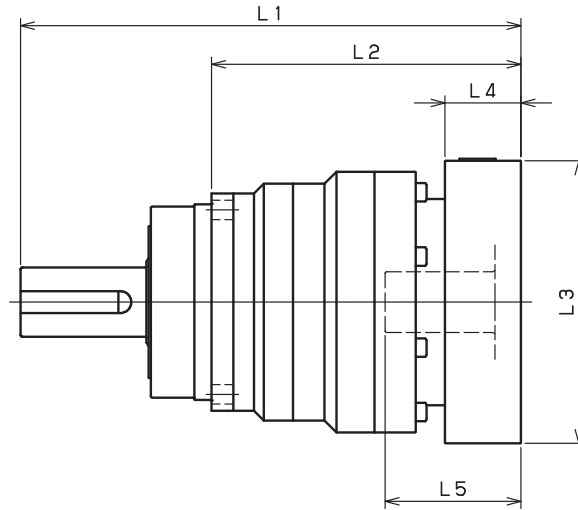
Shaft with key

Smooth shaft

*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

VRS-210 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|------------------|---------|-----|-----|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-210-□-□-38** (Input shaft bore ≤ φ38) | HA | -- | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- | -- |
| NA | -- | -- | -- | -- | -- | -- | |
| VRS-210-□-□-48** (Input shaft bore ≤ φ48) | KA | 414 | 339 | 271 | □180 | 75 | 118 |
| | KB-KC | 394 | 339 | 251 | □180 | 55 | 98 |
| | LA | 394 | 339 | 251 | □200 | 55 | 98 |
| | MA | 394 | 339 | 251 | □220 | 55 | 98 |
| | MB | 414 | 339 | 271 | □220 | 75 | 118 |
| | NA | 414 | 339 | 271 | □250 | 75 | 118 |
| | PA | 414 | 339 | 271 | □280 | 75 | 118 |
| VRS-210-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | 418 | 338 | 275 | □220 | 80 | 122 |
| | NA-NC | 418 | 338 | 275 | □250 | 80 | 122 |
| | NB-ND | 448 | 338 | 305 | □250 | 110 | 152 |
| | PA | 438 | 338 | 295 | □280 | 100 | 142 |
| | PB | 448 | 338 | 305 | □280 | 110 | 152 |
| | QA-QB | 438 | 338 | 295 | □320 | 100 | 142 |

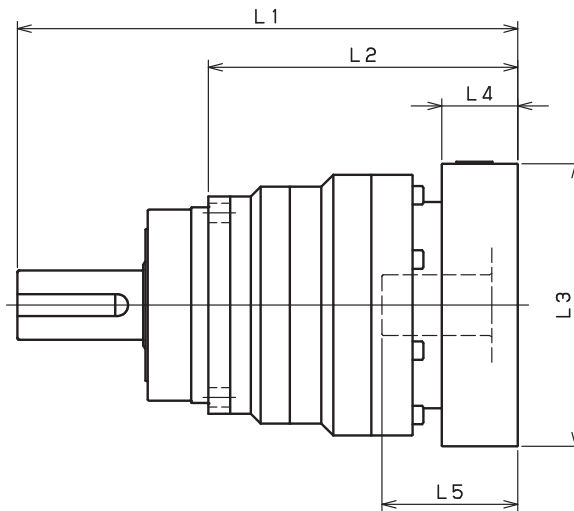
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-210 – 2-Stage Adapter Dimensions



VRS

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|------------------|---------|-----|------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-210-□-□-38** (Input shaft bore ≤ φ38) | HA | 413 | 368 | 270 | □130 | 45 | 82 |
| | HB-HE | 408 | 368 | 265 | □130 | 40 | 77 |
| | JA | 413 | 368 | 270 | □150 | 45 | 82 |
| | KA-KB-KC | 413 | 368 | 270 | □180 | 45 | 82 |
| | KD | 448 | 368 | 305 | □180 | 80 | 117 |
| | KE | 428 | 368 | 285 | □180 | 60 | 97 |
| | LA | 413 | 368 | 270 | □200 | 45 | 82 |
| | LB | 423 | 368 | 280 | □200 | 55 | 92 |
| | MA-MB | 413 | 368 | 270 | □220 | 45 | 82 |
| | MC | 428 | 368 | 285 | □220 | 60 | 97 |
| | MD | 423 | 368 | 280 | □220 | 55 | 92 |
| NA | 413 | 368 | 270 | □250 | 45 | 82 | |
| VRS-210-□-□-48** (Input shaft bore ≤ φ48) | KA | 449 | 374 | 306 | □180 | 75 | 118 |
| | KB-KC | 429 | 374 | 286 | □180 | 55 | 98 |
| | LA | 429 | 374 | 286 | □200 | 55 | 98 |
| | MA | 429 | 374 | 286 | □220 | 55 | 98 |
| | MB | 449 | 374 | 306 | □220 | 75 | 118 |
| | NA | 449 | 374 | 306 | □250 | 75 | 118 |
| | PA | 449 | 374 | 306 | □280 | 75 | 118 |
| VRS-210-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | -- | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-240 – 1-Stage Specifications

| Frame Size | 240 | | | | | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|---------|---------|---------|---------|
| Stage | 1-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 1600 | 2400 | 2400 | 2400 | 2400 | 2400 | 1600 | 1600 |
| Maximum Acceleration Torque | [Nm] | *2 | 2500 | 3700 | 3700 | 3700 | 3700 | 3600 | 3000 | 2600 |
| Emergency Stop Torque | [Nm] | *3 | 6000 | 8000 | 8000 | 8000 | 8000 | 8000 | 6000 | 6000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 5.96 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 21000 | 22000 | 24000 | 25000 | 26000 | 28000 | 29000 | 29000 |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 220.000 | 160.000 | 130.000 | 120.000 | 110.000 | 110.000 | 110.000 | 100.000 |
| Efficiency | [%] | *11 | 97 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 550 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 62 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 85 | | | | | | | |

VRS-240 – 2-Stage Specifications

| Frame Size | 240 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 1600 | 2400 | 2400 | 2400 | 2400 | 1600 | 2400 | 2400 |
| Maximum Acceleration Torque | [Nm] | *2 | 2500 | 3700 | 3700 | 3700 | 3700 | 2500 | 3700 | 3700 |
| Emergency Stop Torque | [Nm] | *3 | 6000 | 8000 | 8000 | 8000 | 8000 | 6000 | 8000 | 8000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.28 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 40.000 | 43.000 | 39.000 | 39.000 | 41.000 | 35.000 | 38.000 | 35.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 92 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 550 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | 62 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 89 | | | | | | | |

Sold & Serviced By:



Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

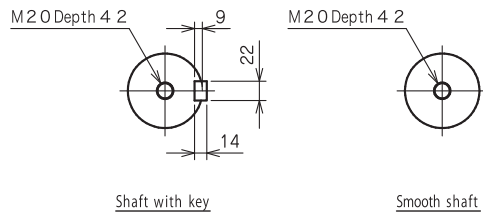
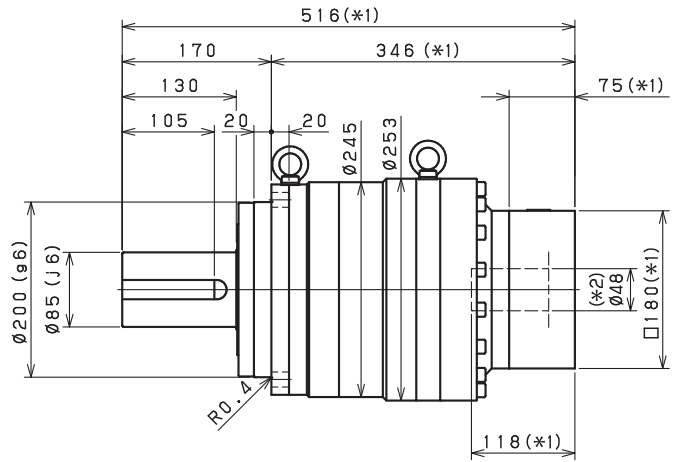
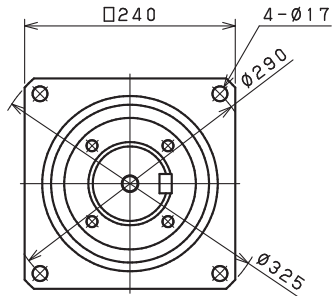
VRS-240 – 2-Stage Specifications

| Frame Size | 240 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 1600 | 2400 | 2400 | 2400 | 2400 | 1600 | 1600 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 2100 | 3700 | 3700 | 3700 | 2700 | 2100 | 1800 | | |
| Emergency Stop Torque | [Nm] | *3 | 6000 | 8000 | 8000 | 8000 | 8000 | 6000 | 6000 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.28 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | | |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | | |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 38.000 | 35.000 | 35.000 | 34.000 | 34.000 | 34.000 | 34.000 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 92 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 550 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | 62 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 89 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for VRS240
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRS-240 – 2-Stage Dimensions

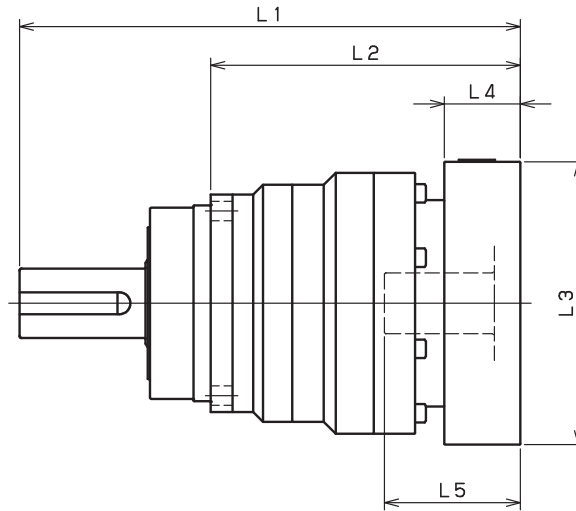
Input shaft bore $\leq \phi 48$



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRS

VRS-240 – 1-Stage Adapter Dimensions



| Model number | **: Adapter code | 1-Stage | | | | | |
|--|------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-240-□-□-48** (Input shaft bore ≤ φ48) | KA | -- | -- | -- | -- | -- | -- |
| | KB-KC | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- | -- |
| | NA | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| VRS-240-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | 465.5 | 385.5 | 295.5 | □220 | 80 | 122 |
| | NA-NC | 465.5 | 385.5 | 295.5 | □250 | 80 | 122 |
| | NB-ND | 495.5 | 385.5 | 325.5 | □250 | 110 | 152 |
| | PA | 485.5 | 385.5 | 315.5 | □280 | 100 | 142 |
| | PB | 495.5 | 385.5 | 325.5 | □280 | 110 | 152 |
| | QA-QB | 485.5 | 385.5 | 315.5 | □320 | 100 | 142 |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 **ELECTROMATE**

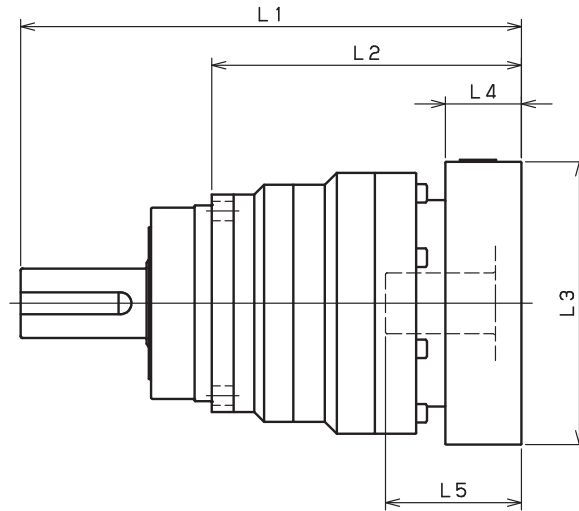
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRS-240 – 2-Stage Adapter Dimensions



VRS

| Model number | **: Adapter code | 2-Stage | | | | | |
|--|------------------|---------|-----|-----|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRS-240-□-□-48** (Input shaft bore ≤ φ48) | KA | 516 | 441 | 346 | □180 | 75 | 118 |
| | KB-KC | 496 | 441 | 326 | □180 | 55 | 98 |
| | LA | 496 | 441 | 326 | □200 | 55 | 98 |
| | MA | 496 | 441 | 326 | □220 | 55 | 98 |
| | MB | 516 | 441 | 346 | □220 | 75 | 118 |
| | NA | 516 | 441 | 346 | □250 | 75 | 118 |
| | PA | 516 | 441 | 346 | □280 | 75 | 118 |
| VRS-240-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | -- | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

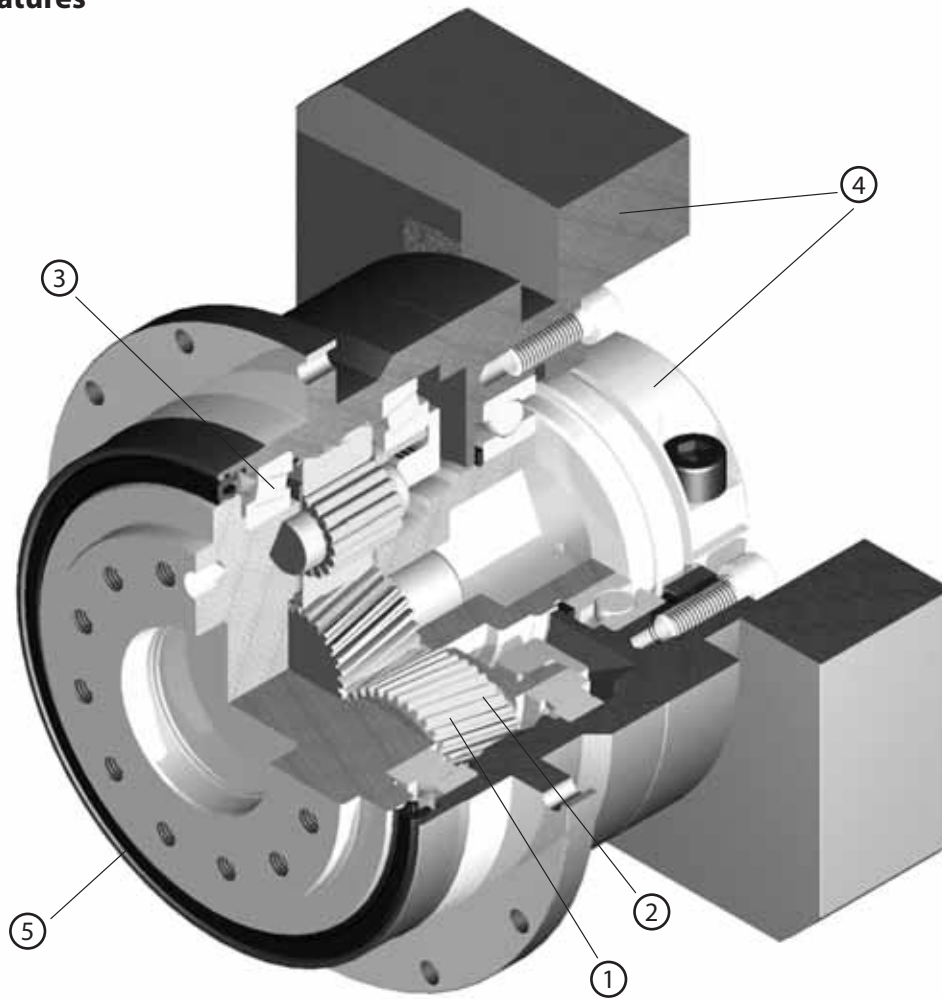


VRT-SERIES

- ISO9409 robotics industry mounting interface
- Superior flexibility in mounting of pinions, pulleys and turntables
- Exceptional torsional rigidity for high positional accuracy needs
- Nice compact and robust design
- Impressive radial and axial load capability

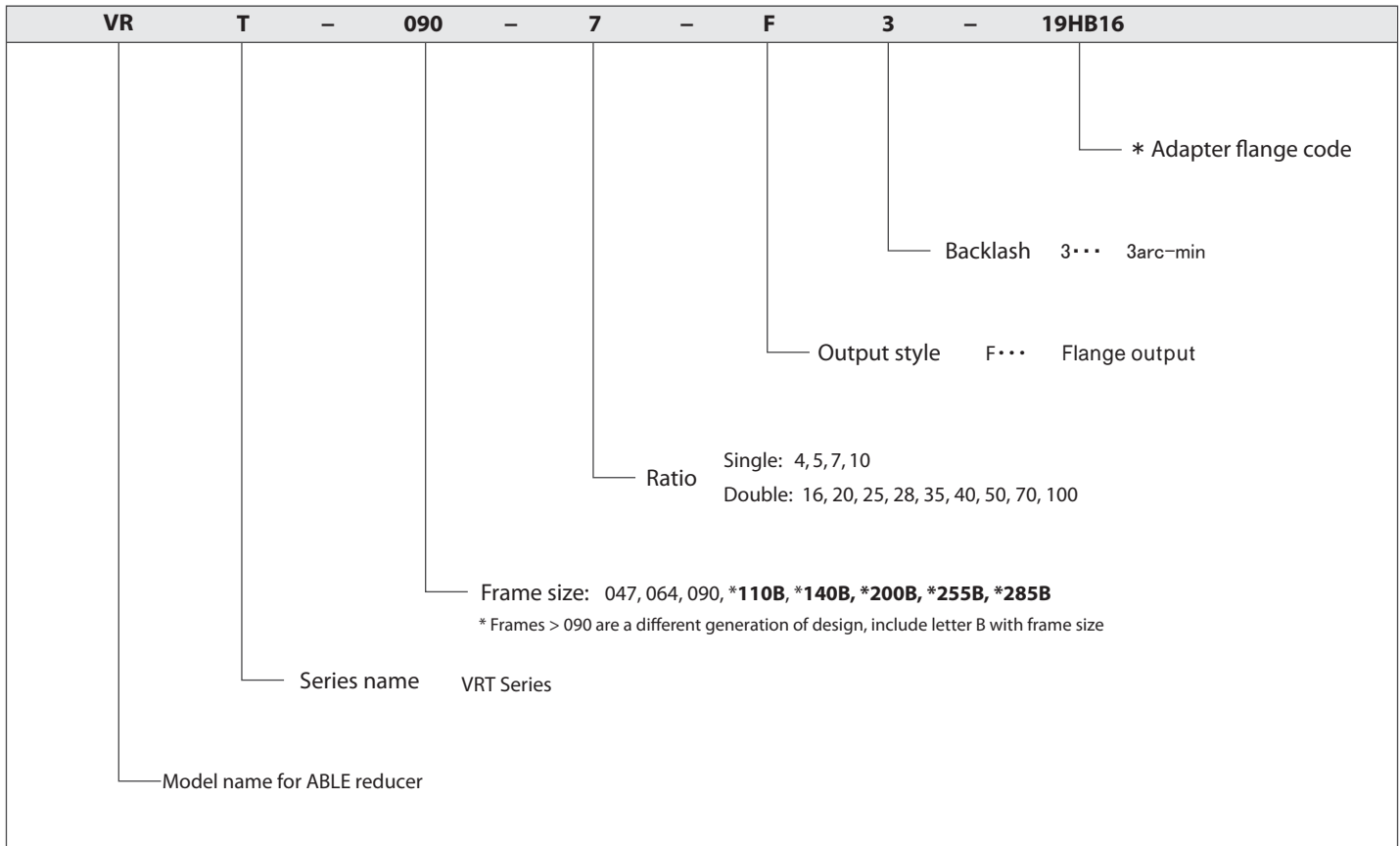
VRT-SERIES Inline shaft

VRT-Series – Features



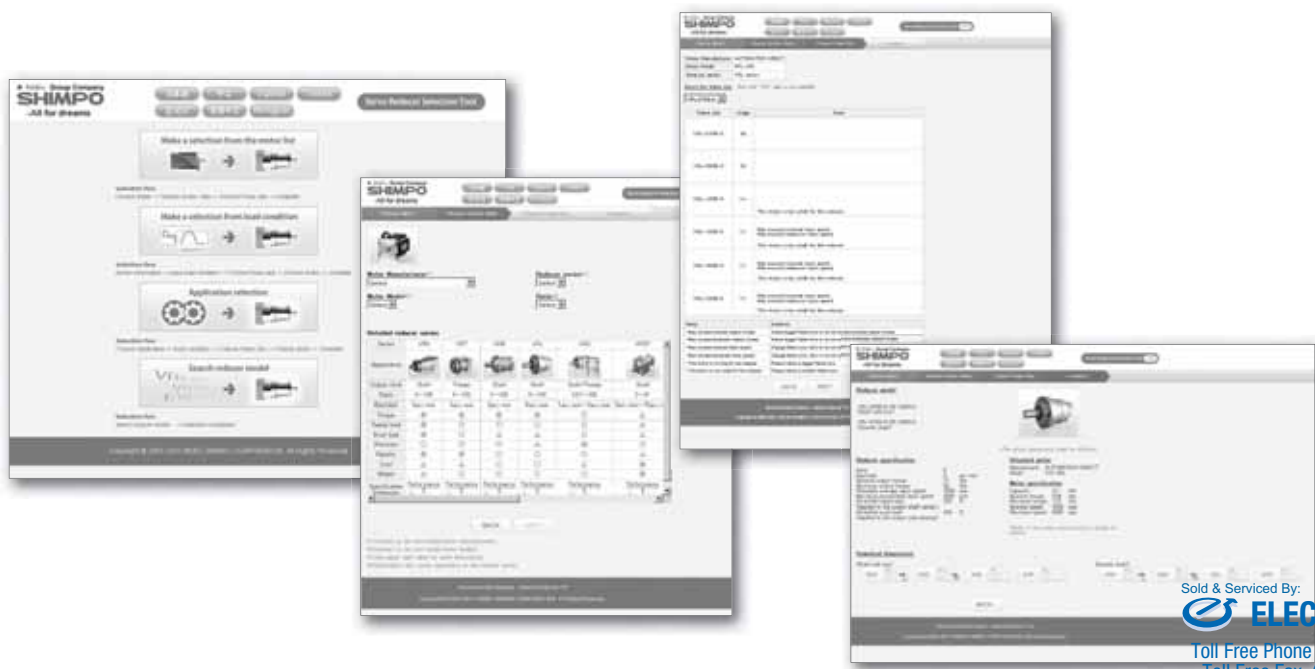
- ① High precision: Standard backlash is 3 arc-min, ideal for higher levels of positional accuracy
- ② High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ High load capacity: Tapered roller bearings were added to the output section to increase radial and axial load ratings on most frame sizes
- ④ Adapter-bushing connection: Enables a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal: High viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ Maintenance-free: No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

VRT-Series – Model Code



VRT

*1) Adapter flange code
 Adapter flange code varies depending on the motor.



VRT-047 – 1-Stage Specifications

| Frame Size | 047 | | | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | |
| Ratio | Unit | Notes | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 9 | 9 | 9 | 9 | 9 | 6 | 6 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 18 | 18 | 18 | 18 | 18 | 12 | 12 | | |
| Emergency Stop Torque | [Nm] | *3 | 35 | 35 | 35 | 35 | 35 | 30 | 30 | | |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.03 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 270 | 300 | 310 | 330 | 350 | 360 | 370 | | |
| Permitted Axial Load | [N] | *8 | 300 | 330 | 360 | 390 | 410 | 430 | 450 | | |
| Maximum Radial Load | [N] | *9 | 1100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 550 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.052 | 0.043 | 0.038 | 0.036 | 0.034 | 0.033 | 0.032 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.090 | 0.081 | 0.077 | 0.074 | 0.072 | 0.071 | 0.071 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 0.7 | | | | | | | | |

VRT-047 – 2-Stage Specifications

| Frame Size | 047 | | | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Notes | 16 | 20 | 25 | 28 | 35 | 40 | 45 | | |
| Nominal Output Torque | [Nm] | *1 | 9 | 9 | 9 | 9 | 9 | 9 | 6 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 18 | 18 | 18 | 18 | 18 | 18 | 12 | | |
| Emergency Stop Torque | [Nm] | *3 | 35 | 35 | 35 | 35 | 35 | 35 | 30 | | |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 440 | 470 | 510 | 530 | 570 | 590 | 620 | | |
| Permitted Axial Load | [N] | *8 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | | |
| Maximum Radial Load | [N] | *9 | 1100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 550 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.039 | 0.035 | 0.034 | 0.038 | 0.034 | 0.030 | 0.034 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 61 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 0.8 | | | | | | | | |

Sold & Serviced By:



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRT-047 – 2-Stage Specifications

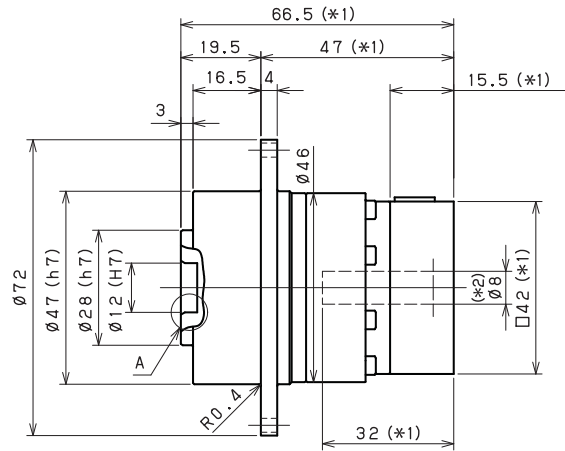
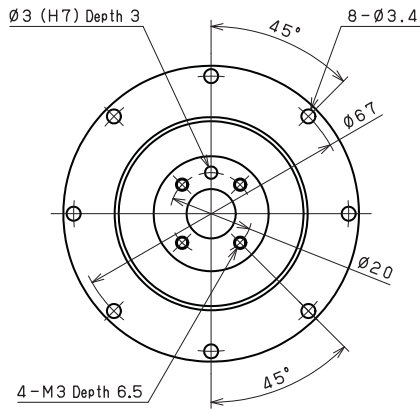
| Frame Size | 047 | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Notes | 50 | 60 | 70 | 80 | 90 | 100 |
| Nominal Output Torque | [Nm] | *1 | 9 | 9 | 9 | 9 | 6 | 6 |
| Maximum Acceleration Torque | [Nm] | *2 | 18 | 18 | 18 | 18 | 12 | 12 |
| Emergency Stop Torque | [Nm] | *3 | 35 | 35 | 35 | 35 | 30 | 30 |
| Nominal Input Speed | [rpm] | *4 | 4000 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 8000 | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.01 | | | | | |
| Permitted Radial Load | [N] | *7 | 640 | 680 | 710 | 750 | 780 | 800 |
| Permitted Axial Load | [N] | *8 | 550 | 550 | 550 | 550 | 550 | 550 |
| Maximum Radial Load | [N] | *9 | 1100 | | | | | |
| Maximum Axial Load | [N] | *10 | 550 | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 90 | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 2 | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | |
| Noise Level | [dB] | *13 | ≤ 61 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 0.8 | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 4,000 rpm for VRT 047
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

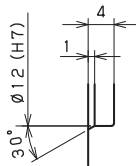
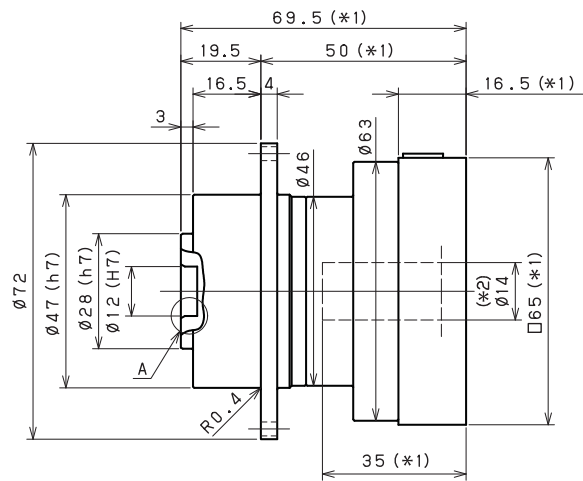
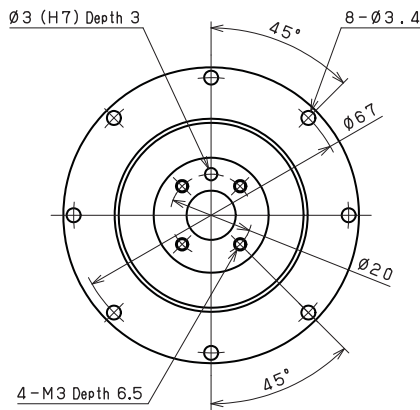
VRT-SERIES Inline shaft

VRT-047 – 1-Stage Dimensions

Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



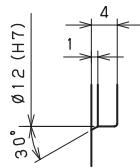
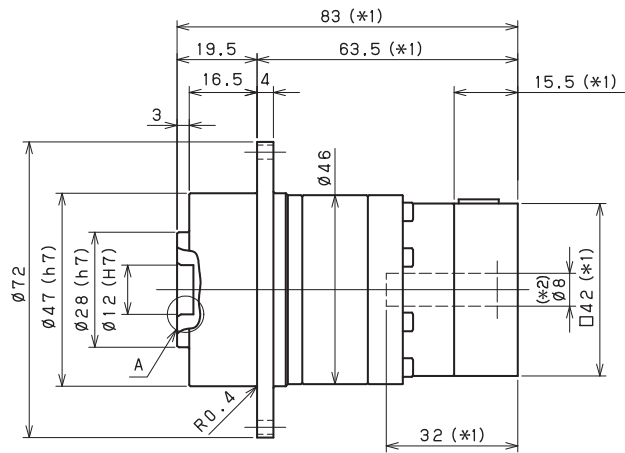
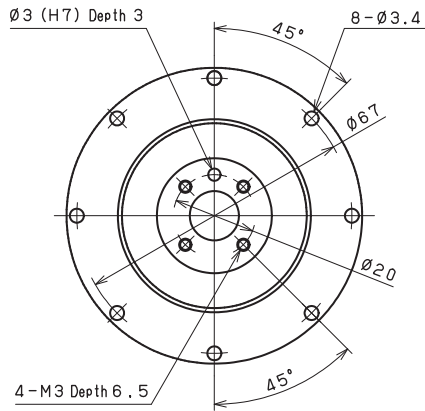
Enlarged detail A

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRT-047 – 2-Stage Dimensions

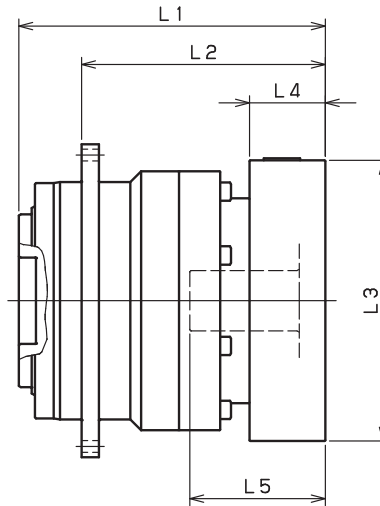
Input shaft bore $\leq \phi 8$



Enlarged detail A

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRT-047 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|----------------------------|---------|----|----|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-047-□-□-S8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG | 66.5 | 51 | 47 | □42 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 71.5 | 51 | 52 | □42 | 20.5 | 37 |
| | BC·BF | 66.5 | 51 | 47 | □60 | 15.5 | 32 |
| | CA | 71.5 | 51 | 52 | □60 | 20.5 | 37 |
| VRT-047-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | 69.5 | 53 | 50 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 74.5 | 53 | 55 | □65 | 21.5 | 40 |
| | BL | 79.5 | 53 | 60 | □65 | 26.5 | 45 |

*1) Single reduction : 1/4 - 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 **ELECTROMATE**

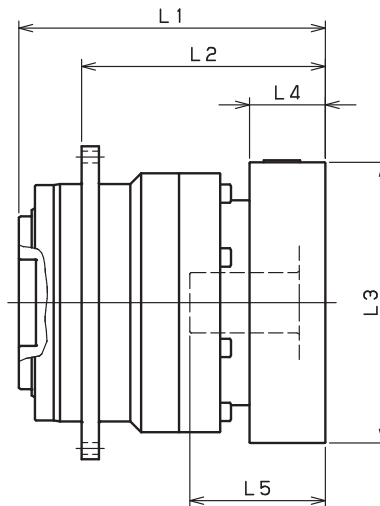
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-047 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|----------------------------|---------|------|------|-----|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-047-□-□-58** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG | 83 | 67.5 | 63.5 | □42 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 88 | 67.5 | 68.5 | □42 | 20.5 | 37 |
| | BC·BF | 83 | 67.5 | 63.5 | □60 | 15.5 | 32 |
| | CA | 88 | 67.5 | 68.5 | □60 | 20.5 | 37 |
| VRT-047-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BJ·BK·BP | -- | -- | -- | -- | -- | -- |
| | BC·BH·BM·BN | -- | -- | -- | -- | -- | -- |
| | BL | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/16 - 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-064 – 1-Stage Specifications

| Frame Size | 064 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 27 | 27 | 27 | 27 | 27 | 18 | 18 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 50 | 50 | 50 | 50 | 50 | 35 | 35 | | |
| Emergency Stop Torque | [Nm] | *3 | 100 | 100 | 100 | 100 | 100 | 80 | 80 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.08 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 370 | 400 | 420 | 440 | 460 | 480 | 500 | | |
| Permitted Axial Load | [N] | *8 | 360 | 390 | 430 | 460 | 480 | 510 | 530 | | |
| Maximum Radial Load | [N] | *9 | 1500 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 750 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.130 | 0.100 | 0.085 | 0.075 | 0.068 | 0.064 | 0.062 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.210 | 0.180 | 0.170 | 0.150 | 0.150 | 0.140 | 0.140 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.400 | 0.400 | 0.400 | 0.400 | 0.400 | 0.400 | 0.400 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.4 | | | | | | | | |

VRT-064 – 2-Stage Specifications

| Frame Size | 064 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 | 35 | 40 | 45 | | |
| Nominal Output Torque | [Nm] | *1 | 27 | 27 | 27 | 27 | 27 | 27 | 18 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 50 | 50 | 50 | 50 | 50 | 50 | 35 | | |
| Emergency Stop Torque | [Nm] | *3 | 100 | 100 | 100 | 100 | 100 | 100 | 80 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 580 | 630 | 680 | 700 | 760 | 790 | 820 | | |
| Permitted Axial Load | [N] | *8 | 650 | 720 | 750 | 750 | 750 | 750 | 750 | | |
| Maximum Radial Load | [N] | *9 | 1500 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 750 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.059 | 0.055 | 0.054 | 0.056 | 0.053 | 0.049 | 0.530 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.140 | 0.140 | 0.130 | 0.140 | 0.130 | 0.130 | 0.130 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.360 | 0.350 | 0.350 | 0.360 | 0.350 | 0.340 | 0.350 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | | |

Sold & Serviced By:



Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRT-o64 – 2-Stage Specifications

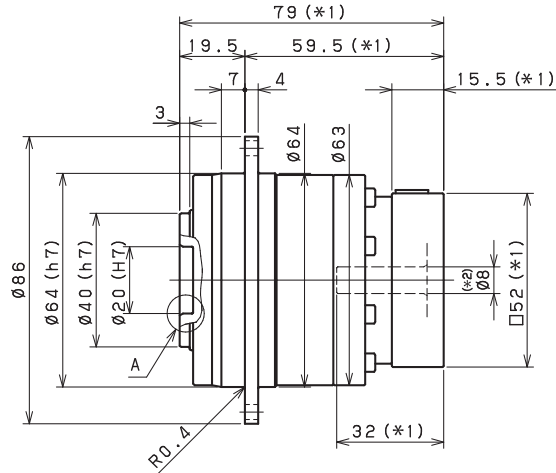
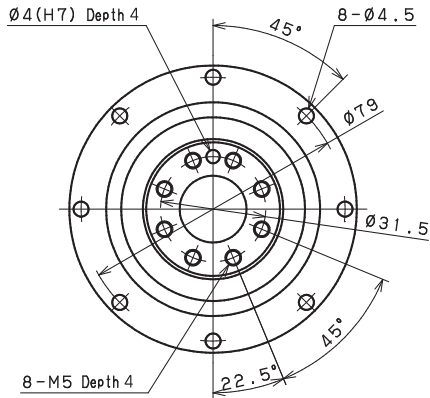
| Frame Size | 064 | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|--|
| Stage | 2-Stage | | | | | | | | |
| Ratio | Unit | Note | 50 | 60 | 70 | 80 | 90 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 27 | 27 | 27 | 27 | 18 | 18 | |
| Maximum Acceleration Torque | [Nm] | *2 | 50 | 50 | 50 | 50 | 35 | 35 | |
| Emergency Stop Torque | [Nm] | *3 | 100 | 100 | 100 | 100 | 80 | 80 | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.04 | | | | | | |
| Permitted Radial Load | [N] | *7 | 850 | 910 | 950 | 1000 | 1000 | 1100 | |
| Permitted Axial Load | [N] | *8 | 750 | 750 | 750 | 750 | 750 | 750 | |
| Maximum Radial Load | [N] | *9 | 1500 | | | | | | |
| Maximum Axial Load | [N] | *10 | 750 | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | 0.049 | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | 0.130 | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 | |
| Efficiency | [%] | *11 | 90 | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | |
| Noise Level | [dB] | *13 | ≤ 66 | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRT o64
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

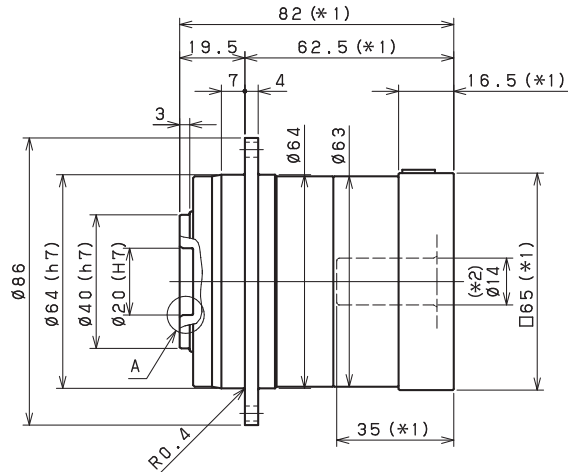
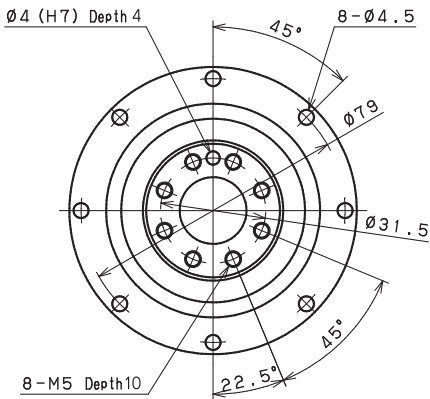
VRT-SERIES Inline shaft

VRT-o64 - 1-Stage Dimensions

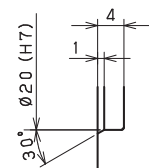
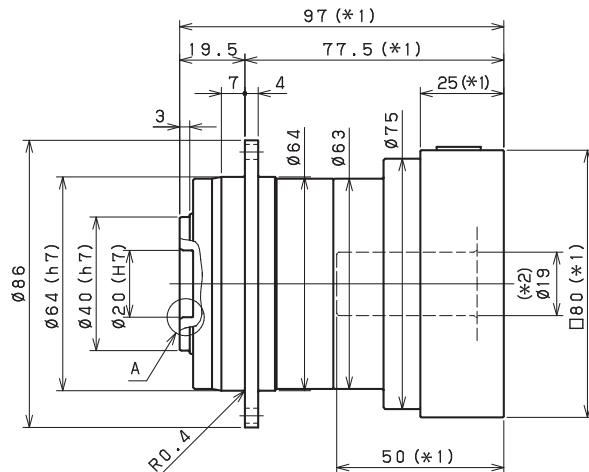
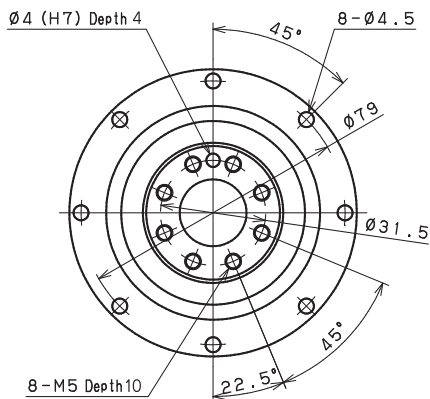
Input shaft bore $\cong \phi 8$



Input shaft bore $\cong \phi 14$



Input shaft bore $\cong \phi 19$



Enlarged detail A

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

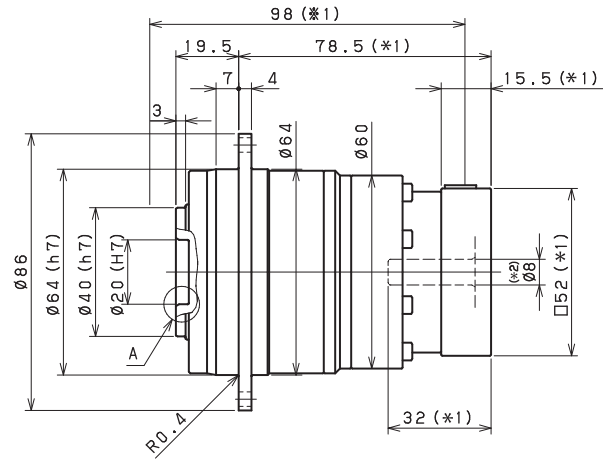
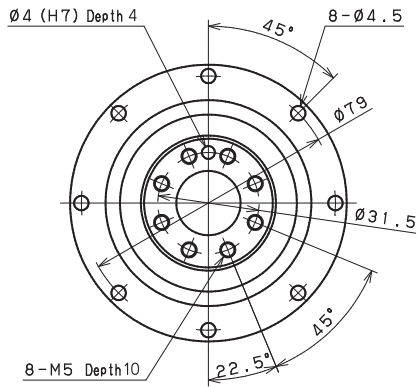
Toll Free Fax (877) SERV099

www.electromate.com

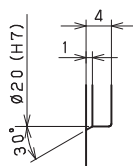
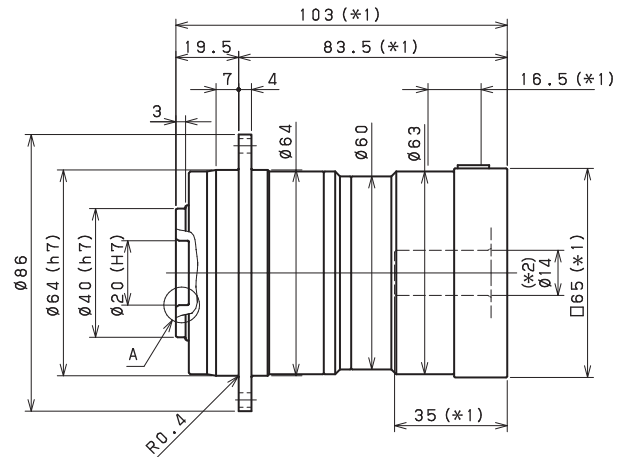
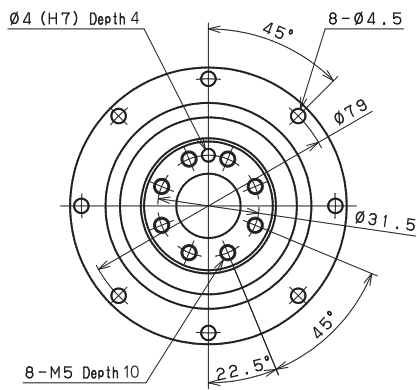
sales@electromate.com

VRT-o64 – 2-Stage Dimensions

Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$

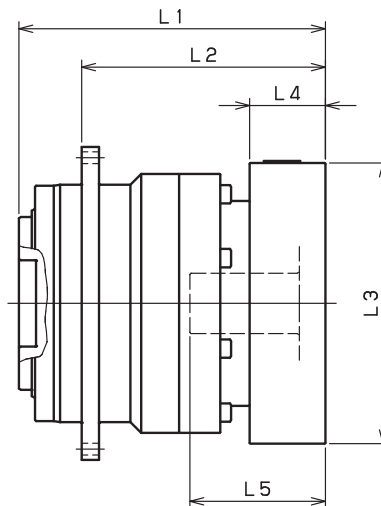


Enlarged detail A

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

VRT

VRT-064 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|-------------------------------|---------|------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-064-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 79 | 63.5 | 59.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 84 | 63.5 | 64.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 79 | 63.5 | 59.5 | □60 | 15.5 | 32 |
| | BC·BF | 84 | 63.5 | 64.5 | □60 | 20.5 | 37 |
| | CA | 84 | 63.5 | 64.5 | □70 | 20.5 | 37 |
| VRT-064-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 82 | 65.5 | 62.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 87 | 65.5 | 67.5 | □65 | 21.5 | 40 |
| | BL | 92 | 65.5 | 72.5 | □65 | 26.5 | 45 |
| | CA·CC | 82 | 65.5 | 62.5 | □70 | 16.5 | 35 |
| | CB | 87 | 65.5 | 67.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 82 | 65.5 | 62.5 | □80 | 16.5 | 35 |
| | DE·DL | 87 | 65.5 | 67.5 | □80 | 21.5 | 40 |
| | DG·DK | 92 | 65.5 | 72.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 82 | 65.5 | 62.5 | □90 | 16.5 | 35 |
| | EJ·EM | 87 | 65.5 | 67.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 92 | 65.5 | 72.5 | □90 | 26.5 | 45 |
| | FA | 82 | 65.5 | 62.5 | □100 | 16.5 | 35 |
| FB | 82 | 65.5 | 62.5 | □115 | 16.5 | 35 | |
| VRT-064-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 97 | 72 | 77.5 | □80 | 25 | 50 |
| | DD | 107 | 72 | 87.5 | □80 | 35 | 60 |
| | DE | 102 | 72 | 82.5 | □80 | 30 | 55 |
| | EA | 102 | 72 | 82.5 | □90 | 30 | 55 |
| | EB·ED | 97 | 72 | 77.5 | □90 | 25 | 50 |
| | EC | 107 | 72 | 87.5 | □90 | 35 | 60 |
| | FA | 97 | 72 | 77.5 | □100 | 25 | 50 |
| FB | 107 | 72 | 87.5 | □100 | 35 | 60 | |

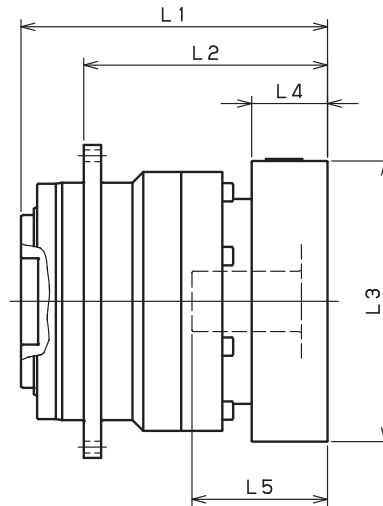
*1) Single reduction : 1/4 - 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT-064 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-064-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 98 | 82.5 | 78.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 103 | 82.5 | 83.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 98 | 82.5 | 78.5 | □60 | 15.5 | 32 |
| | BC·BF | 103 | 82.5 | 83.5 | □60 | 20.5 | 37 |
| | CA | 103 | 82.5 | 83.5 | □70 | 20.5 | 37 |
| VRT-064-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 103 | 86.5 | 83.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 108 | 86.5 | 88.5 | □65 | 21.5 | 40 |
| | BL | 113 | 86.5 | 93.5 | □65 | 26.5 | 45 |
| | CA·CC | 103 | 86.5 | 83.5 | □70 | 16.5 | 35 |
| | CB | 108 | 86.5 | 88.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 103 | 86.5 | 83.5 | □80 | 16.5 | 35 |
| | DE·DL | 108 | 86.5 | 88.5 | □80 | 21.5 | 40 |
| | DG·DK | 113 | 86.5 | 93.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 103 | 86.5 | 83.5 | □90 | 16.5 | 35 |
| | EJ·EM | 108 | 86.5 | 88.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 113 | 86.5 | 93.5 | □90 | 26.5 | 45 |
| | FA | 103 | 86.5 | 83.5 | □100 | 16.5 | 35 |
| | FB | 103 | 86.5 | 83.5 | □115 | 16.5 | 35 |
| VRT-064-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 118 | 93 | 98.5 | □80 | 25 | 50 |
| | DD | 128 | 93 | 108.5 | □80 | 35 | 60 |
| | DE | 123 | 93 | 103.5 | □80 | 30 | 55 |
| | EA | 123 | 93 | 103.5 | □90 | 30 | 55 |
| | EB·ED | 118 | 93 | 98.5 | □90 | 25 | 50 |
| | EC | 128 | 93 | 108.5 | □90 | 35 | 60 |
| | FA | 118 | 93 | 98.5 | □100 | 25 | 50 |
| FB | 128 | 93 | 108.5 | □100 | 35 | 60 | |

*1) Double reduction : 1/16 - 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRT-090 – 1-Stage Specifications

| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 1-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 75 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 125 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 250 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.17 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 720 | 780 | 830 | 870 | 910 | 950 | 980 | | |
| Permitted Axial Load | [N] | *8 | 620 | 680 | 740 | 790 | 830 | 880 | 920 | | |
| Maximum Radial Load | [N] | *9 | 3300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1700 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | - | - | - | - | - | - | - | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.770 | 0.580 | 0.480 | 0.410 | 0.370 | 0.350 | 0.330 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.200 | 1.000 | 0.940 | 0.880 | 0.840 | 0.810 | 0.800 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.900 | 2.900 | 2.800 | 2.800 | 2.800 | 2.800 | 2.800 | | |
| Efficiency | [%] | *11 | 95 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 3.6 | | | | | | | | |

VRT-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 75 | 75 | 75 | 75 | 75 | 75 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 125 | 125 | 125 | 125 | 125 | 125 | | |
| Emergency Stop Torque | [Nm] | *3 | 250 | 250 | 250 | 250 | 250 | 250 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.05 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1200 | 1200 | 1300 | 1400 | 1500 | 1600 | | |
| Permitted Axial Load | [N] | *8 | 1100 | 1200 | 1400 | 1400 | 1600 | 1700 | | |
| Maximum Radial Load | [N] | *9 | 3300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1700 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.160 | 0.140 | 0.130 | 0.140 | 0.130 | 0.100 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.310 | 0.290 | 0.280 | 0.300 | 0.280 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.750 | 0.730 | 0.720 | 0.730 | 0.720 | 0.700 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.800 | 2.700 | 2.700 | 2.800 | 2.700 | 2.600 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 67 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 4 | | | | | | | |

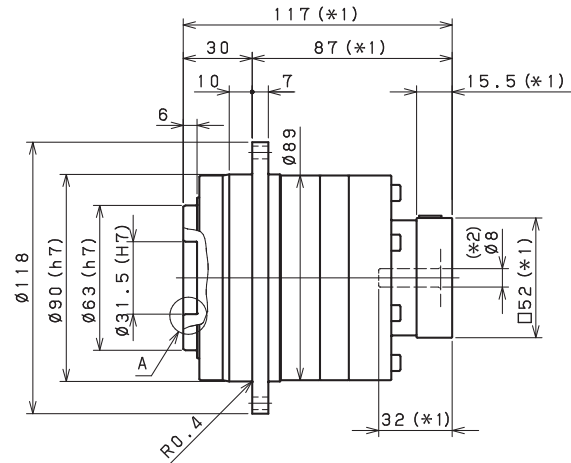
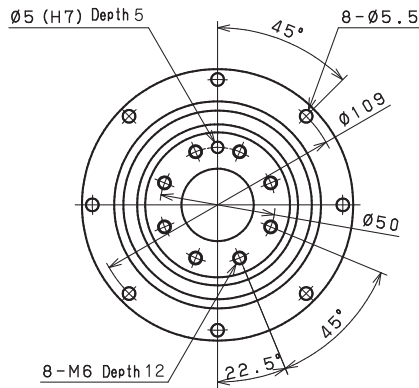
VRT-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 50 | 75 | 75 | 75 | 75 | 50 | 50 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 80 | 125 | 125 | 125 | 125 | 80 | 80 | | |
| Emergency Stop Torque | [Nm] | *3 | 200 | 250 | 250 | 250 | 250 | 200 | 200 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.05 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1600 | 1700 | 1800 | 1900 | 2000 | 2000 | 2100 | | |
| Permitted Axial Load | [N] | *8 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | | |
| Maximum Radial Load | [N] | *9 | 3300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1700 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.120 | 0.100 | 0.099 | 0.098 | 0.098 | 0.098 | 0.098 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.270 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.710 | 0.700 | 0.700 | 0.690 | 0.690 | 0.690 | 0.690 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 2.700 | 2.600 | 2.600 | 2.600 | 2.600 | 2.600 | 2.600 | | |
| Efficiency | [%] | *11 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 3 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 67 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4 | | | | | | | | |

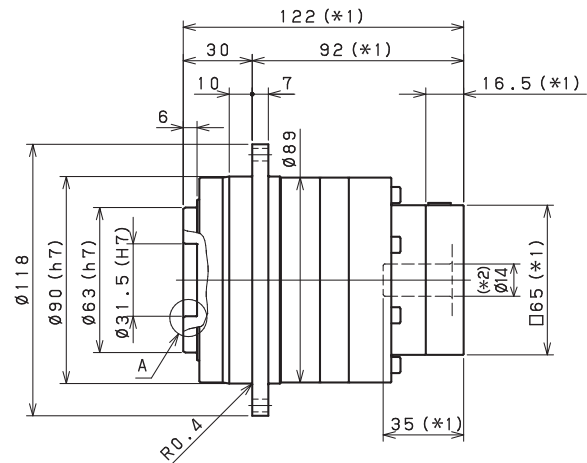
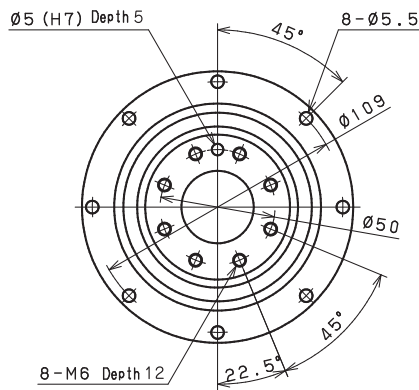
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRT 090
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRT-090 – 2-Stage Dimensions

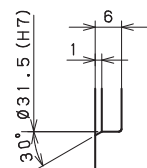
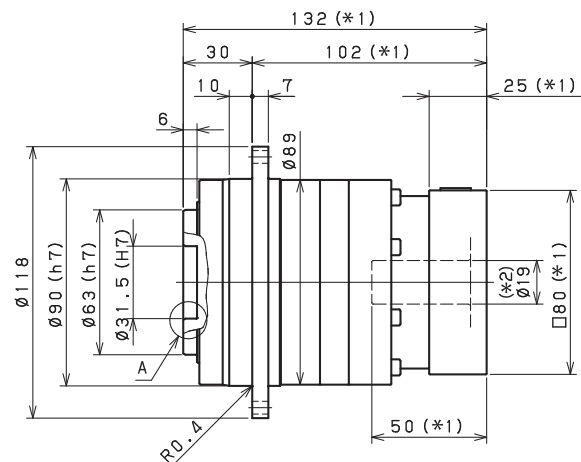
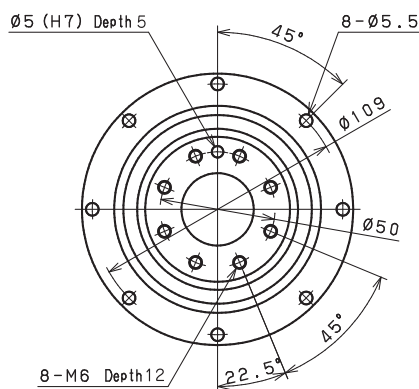
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Enlarged detail A

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

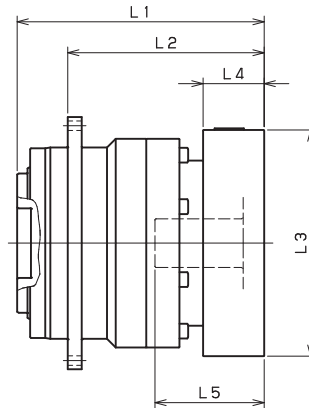
ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRT

VRT-SERIES Inline shaft

VRT-090 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|-------------------------------|---------|------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-090-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- | -- |
| VRT-090-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 100 | 83.5 | 70 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 105 | 83.5 | 75 | □65 | 21.5 | 40 |
| | CA·CC | 100 | 83.5 | 70 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 100 | 83.5 | 70 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 100 | 83.5 | 70 | □90 | 16.5 | 35 |
| | FA | 100 | 83.5 | 70 | □100 | 16.5 | 35 |
| | FB | 110 | 83.5 | 80 | □100 | 26.5 | 45 |
| VRT-090-□-□-19** (Input shaft bore ≤ φ19) | JA | 115 | 83.5 | 85 | □150 | 31.5 | 50 |
| | DA·DB·DC | 110 | 85 | 80 | □80 | 25 | 50 |
| | EB·ED | 110 | 85 | 80 | □90 | 25 | 50 |
| | FA | 110 | 85 | 80 | □100 | 25 | 50 |
| | FB | 120 | 85 | 90 | □100 | 35 | 60 |
| | GA·GC·GH | 115 | 85 | 85 | □115 | 30 | 55 |
| | GB·GD·GJ | 110 | 85 | 80 | □115 | 25 | 50 |
| | GE·GF | 120 | 85 | 90 | □115 | 35 | 60 |
| | HA | 110 | 85 | 80 | □130 | 25 | 50 |
| | HB | 125 | 85 | 95 | □130 | 40 | 65 |
| | HC·HD·HE | 115 | 85 | 85 | □130 | 30 | 55 |
| VRT-090-□-□-28** (Input shaft bore ≤ φ28) | JA | 120 | 85 | 90 | □150 | 35 | 60 |
| | JB | 125 | 85 | 95 | □150 | 40 | 65 |
| | FA·FB·FC | 127 | 92 | 97 | □100 | 35 | 67 |
| | FD·FE | 122 | 92 | 92 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 127 | 92 | 97 | □115 | 35 | 67 |
| | HA·HC·HD | 127 | 92 | 97 | □130 | 35 | 67 |
| | HB | 137 | 92 | 107 | □130 | 45 | 77 |
| | HE | 142 | 92 | 112 | □130 | 50 | 82 |
| | HF | 122 | 92 | 92 | □130 | 30 | 62 |
| JA·JB·JC·JF | 127 | 92 | 97 | □150 | 35 | 67 | |
| JD | 147 | 92 | 117 | □150 | 55 | 87 | |
| JE | 137 | 92 | 107 | □150 | 45 | 77 | |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

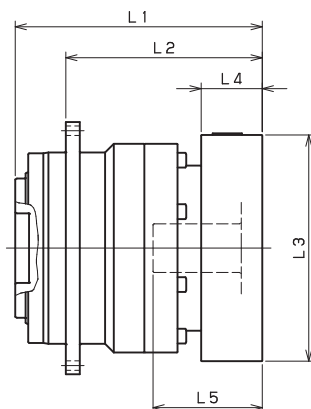
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-090 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|------|------|------|----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-090-□-□-8** (Input shaft bore ≤ φ8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 117 | 101.5 | 87 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 122 | 101.5 | 92 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 117 | 101.5 | 87 | □60 | 15.5 | 32 |
| | CA | 122 | 101.5 | 92 | □70 | 20.5 | 37 |
| VRT-090-□-□-14** (Input shaft bore ≤ φ14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 122 | 105.5 | 92 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 127 | 105.5 | 97 | □65 | 21.5 | 40 |
| | CA·CC | 122 | 105.5 | 92 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 122 | 105.5 | 92 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 122 | 105.5 | 92 | □90 | 16.5 | 35 |
| | FA | 122 | 105.5 | 92 | □100 | 16.5 | 35 |
| | FB | 132 | 105.5 | 102 | □100 | 26.5 | 45 |
| | JA | 137 | 105.5 | 107 | □150 | 31.5 | 50 |
| VRT-090-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 132 | 107 | 102 | □80 | 25 | 50 |
| | EB·ED | 132 | 107 | 102 | □90 | 25 | 50 |
| | FA | 132 | 107 | 102 | □100 | 25 | 50 |
| | FB | 142 | 107 | 112 | □100 | 35 | 60 |
| | GA·GC·GH | 137 | 107 | 107 | □115 | 30 | 55 |
| | GB·GD·GJ | 132 | 107 | 102 | □115 | 25 | 50 |
| | GE·GF | 142 | 107 | 112 | □115 | 35 | 60 |
| | HA | 132 | 107 | 102 | □130 | 25 | 50 |
| | HB | 147 | 107 | 117 | □130 | 40 | 65 |
| | HC·HD·HE | 137 | 107 | 107 | □130 | 30 | 55 |
| | JA | 142 | 107 | 112 | □150 | 35 | 60 |
| | JB | 147 | 107 | 117 | □150 | 40 | 65 |
| VRT-090-□-□-28** (Input shaft bore ≤ φ28) | FA·FB·FC | 151 | 116 | 121 | □100 | 35 | 67 |
| | FD·FE | 146 | 116 | 116 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 151 | 116 | 121 | □115 | 35 | 67 |
| | HA·HC·HD | 151 | 116 | 121 | □130 | 35 | 67 |
| | HB | 161 | 116 | 131 | □130 | 45 | 77 |
| | HE | 166 | 116 | 136 | □130 | 50 | 82 |
| | HF | 146 | 116 | 116 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 151 | 116 | 121 | □150 | 35 | 67 |
| | JD | 171 | 116 | 141 | □150 | 55 | 87 |
| JE | 161 | 116 | 131 | □150 | 45 | 77 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT

VRT-110 – 1-Stage Specifications

| Frame Size | 110 | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|
| Stage | 1-Stage | | | | | |
| Ratio | Unit | Note | 4 | 5 | 7 | 10 |
| Nominal Output Torque | [Nm] | *1 | 120 | 180 | 180 | 120 |
| Maximum Output Torque | [Nm] | *2 | 330 | 330 | 330 | 225 |
| Emergency Stop Torque | [Nm] | *3 | 625 | 625 | 625 | 500 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | |
| No Load Running Torque | [Nm] | *6 | 0.77 | | | |
| Permitted Radial Load | [N] | *7 | 4700 | 5000 | 5600 | 6200 |
| Permitted Axial Load | [N] | *8 | 3200 | 3400 | 3800 | 4200 |
| Maximum Radial Load | [N] | *9 | 12000 | | | |
| Maximum Axial Load | [N] | *10 | 8800 | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 3.100 | 2.300 | 1.500 | 1.100 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 5.100 | 4.300 | 3.500 | 3.100 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 11.000 | 11.000 |
| Efficiency | [%] | *11 | 95 | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 31 | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 3 | | | |
| Noise Level | [dB] | *13 | ≤ 71 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 7.8 | | | |

VRT-110 – 2-Stage Specifications

| Frame Size | 110 | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|
| Stage | 2-Stage | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 |
| Nominal Output Torque | [Nm] | *1 | 180 | 180 | 180 | 180 |
| Maximum Output Torque | [Nm] | *2 | 330 | 330 | 330 | 330 |
| Emergency Stop Torque | [Nm] | *3 | 625 | 625 | 625 | 625 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | |
| No Load Running Torque | [Nm] | *6 | 0.17 | | | |
| Permitted Radial Load | [N] | *7 | 7100 | 7600 | 8200 | 8500 |
| Permitted Axial Load | [N] | *8 | 4800 | 5200 | 5500 | 5700 |
| Maximum Radial Load | [N] | *9 | 12000 | | | |
| Maximum Axial Load | [N] | *10 | 8800 | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 1.000 | 0.800 | 0.700 | 0.900 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.500 | 1.200 | 1.200 | 1.400 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.400 | 3.100 | 3.100 | 3.300 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 11.000 | 11.000 | 11.000 |
| Efficiency | [%] | *11 | 90 | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 31 | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 3 | | | |
| Noise Level | [dB] | *13 | ≤ 71 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 8.6 | | | |

Sold & Serviced By:

 ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

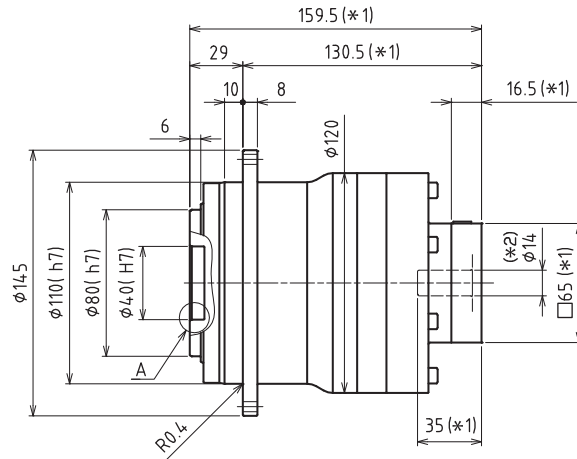
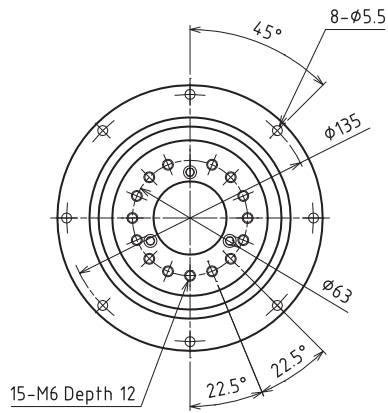
VRT-110 – 2-Stage Specifications

| Frame Size | 110 | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Note | 35 | 40 | 50 | 70 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 180 | 180 | 180 | 180 | 120 | |
| Maximum Output Torque | [Nm] | *2 | 330 | 330 | 330 | 330 | 225 | |
| Emergency Stop Torque | [Nm] | *3 | 625 | 625 | 625 | 625 | 500 | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.17 | | | | | |
| Permitted Radial Load | [N] | *7 | 9000 | 9400 | 10000 | 11000 | 12000 | |
| Permitted Axial Load | [N] | *8 | 6100 | 6400 | 6800 | 7500 | 8400 | |
| Maximum Radial Load | [N] | *9 | 12000 | | | | | |
| Maximum Axial Load | [N] | *10 | 8800 | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.700 | 0.400 | 0.400 | 0.400 | 0.400 | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 1.100 | 0.800 | 0.800 | 0.800 | 0.800 | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 3.100 | 2.800 | 2.800 | 2.700 | 2.700 | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 11.000 | 10.000 | 10.000 | 10.000 | 10.000 | |
| Efficiency | [%] | *11 | -- | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 31 | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 3 | | | | | |
| Noise Level | [dB] | *13 | ≤ 71 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 8.6 | | | | | |

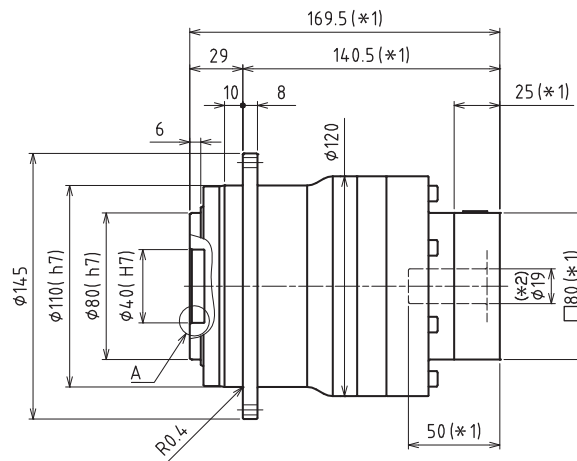
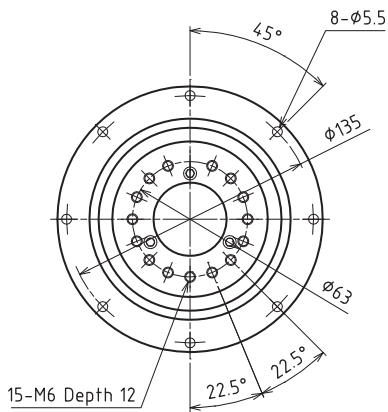
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRT 110
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRT-110 – 2-Stage Dimensions

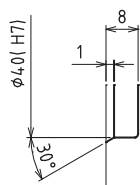
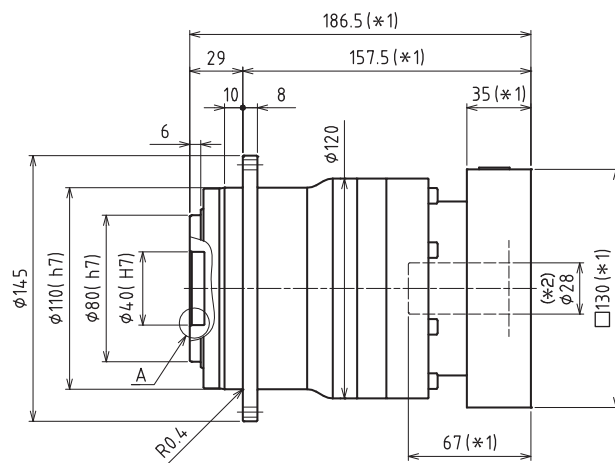
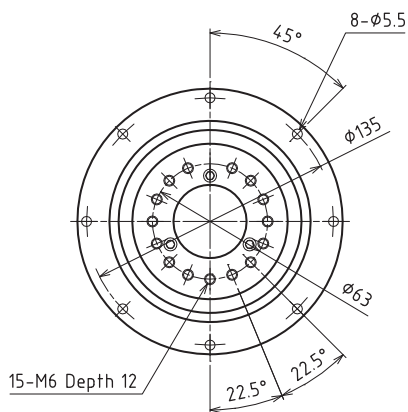
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



Enlarged detail A

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

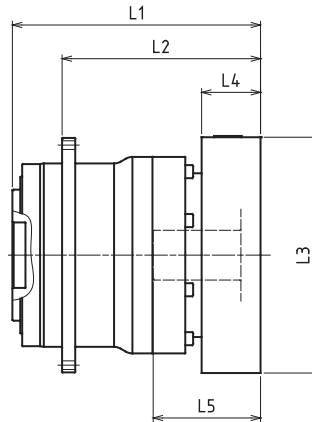
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT

VRT-110 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-110-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| VRT-110-□-□-19** (Input shaft bore ≤ φ19) | DA • DB • DC | 124.5 | 99.5 | 95.5 | □80 | 25 | 50 |
| | EB | 124.5 | 99.5 | 95.5 | □90 | 25 | 50 |
| | FA | 124.5 | 99.5 | 95.5 | □100 | 25 | 50 |
| | FB | 134.5 | 99.5 | 105.5 | □100 | 35 | 60 |
| | GB • GD | 124.5 | 99.5 | 95.5 | □115 | 25 | 50 |
| | HA | 134.5 | 99.5 | 105.5 | □115 | 35 | 60 |
| | -- | 124.5 | 99.5 | 95.5 | □130 | 25 | 50 |
| | -- | 139.5 | 99.5 | 110.5 | □130 | 40 | 65 |
| | -- | 129.5 | 99.5 | 100.5 | □130 | 30 | 55 |
| VRT-110-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 141.5 | 106.5 | 112.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 141.5 | 106.5 | 112.5 | □115 | 35 | 67 |
| | HA•HC•HD | 141.5 | 106.5 | 112.5 | □130 | 35 | 67 |
| | HB | 151.5 | 106.5 | 122.5 | □130 | 45 | 77 |
| | HF | 136.5 | 106.5 | 107.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 141.5 | 106.5 | 112.5 | □150 | 35 | 67 |
| | JD | 161.5 | 106.5 | 132.5 | □150 | 55 | 87 |
| | JE | 151.5 | 106.5 | 122.5 | □150 | 45 | 77 |
| | KA•KB•KE | 141.5 | 106.5 | 112.5 | □180 | 35 | 67 |
| VRT-110-□-□-38** (Input shaft bore ≤ φ38) | KD | 151.5 | 106.5 | 122.5 | □180 | 45 | 77 |
| | HA | 162.5 | 117.5 | 133.5 | □130 | 45 | 82 |
| | HB•HE | 157.5 | 117.5 | 128.5 | □130 | 40 | 77 |
| | JA | 162.5 | 117.5 | 133.5 | □150 | 45 | 82 |
| | KA•KB•KC | 162.5 | 117.5 | 133.5 | □180 | 45 | 82 |
| | KD | 197.5 | 117.5 | 168.5 | □180 | 80 | 117 |
| KE | 177.5 | 117.5 | 148.5 | □180 | 60 | 97 | |

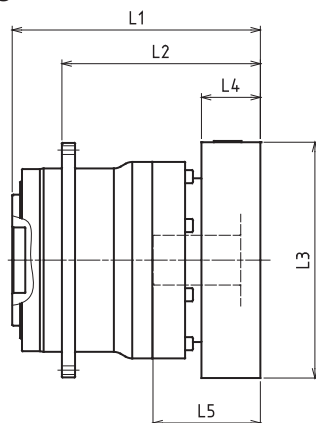
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT-110 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|-------------------------------|---------|-------|-------|------|------|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-110-□-□-14** (Input shaft bore ≤ φ14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 142 | 125.5 | 113 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 147 | 125.5 | 118 | □65 | 21.5 | 40 |
| | CA•CC | 142 | 125.5 | 113 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 142 | 125.5 | 113 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 142 | 125.5 | 113 | □90 | 16.5 | 35 |
| | FA | 142 | 125.5 | 113 | □100 | 16.5 | 35 |
| | FB | 152 | 125.5 | 123 | □100 | 26.5 | 45 |
| VRT-110-□-□-19** (Input shaft bore ≤ φ19) | DA • DB • DC | 152 | 127 | 123 | □80 | 25 | 50 |
| | EB | 152 | 127 | 123 | □90 | 25 | 50 |
| | FA | 152 | 127 | 123 | □100 | 25 | 50 |
| | FB | 162 | 127 | 133 | □100 | 35 | 60 |
| | GB • GD | 152 | 127 | 123 | □115 | 25 | 50 |
| | HA | 162 | 127 | 133 | □115 | 35 | 60 |
| | -- | 152 | 127 | 123 | □130 | 25 | 50 |
| | -- | 167 | 127 | 138 | □130 | 40 | 65 |
| | -- | 157 | 127 | 128 | □130 | 30 | 55 |
| VRT-110-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 169 | 134 | 140 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 169 | 134 | 140 | □115 | 35 | 67 |
| | HA•HC•HD | 169 | 134 | 140 | □130 | 35 | 67 |
| | HB | 179 | 134 | 150 | □130 | 45 | 77 |
| | HF | 164 | 134 | 135 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 169 | 134 | 140 | □150 | 35 | 67 |
| | JD | 189 | 134 | 160 | □150 | 55 | 87 |
| | JE | 179 | 134 | 150 | □150 | 45 | 77 |
| | KA•KB•KE | 169 | 134 | 140 | □180 | 35 | 67 |
| VRT-110-□-□-38** (Input shaft bore ≤ φ38) | KD | 179 | 134 | 150 | □180 | 45 | 77 |
| | HA | 186.5 | 141.5 | 157.5 | □130 | 45 | 82 |
| | HB•HE | 181.5 | 141.5 | 152.5 | □130 | 40 | 77 |
| | JA | 186.5 | 141.5 | 157.5 | □150 | 45 | 82 |
| | KA•KB•KC | 186.5 | 141.5 | 157.5 | □180 | 45 | 82 |
| | KD | 221.5 | 141.5 | 192.5 | □180 | 80 | 117 |
| KE | 201.5 | 141.5 | 172.5 | □180 | 60 | 97 | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

VRT

VRT-140 – 1-Stage Specifications

| Frame Size | 140 | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|
| Stage | 1-Stage | | | | | |
| Ratio | Unit | Note | 4 | 5 | 7 | 10 |
| Nominal Output Torque | [Nm] | *1 | 240 | 360 | 360 | 240 |
| Maximum Output Torque | [Nm] | *2 | 700 | 700 | 700 | 470 |
| Emergency Stop Torque | [Nm] | *3 | 1250 | 1250 | 1250 | 1000 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | |
| No Load Running Torque | [Nm] | *13 | 1.00 | | | |
| Permitted Radial Load | [N] | *6 | 8000 | 8500 | 9400 | 10000 |
| Permitted Axial Load | [N] | *7 | 5600 | 6000 | 6700 | 7400 |
| Maximum Radial Load | [N] | *8 | 19000 | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | *10 | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 11.000 | 8.400 | 5.400 | 4.100 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 19.000 | 16.000 | 13.000 | 12.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 41.000 | 38.000 | 35.000 | 34.000 |
| Efficiency | [%] | -- | 95 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 60 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 15 | | | |

VRT-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|
| Stage | 2-Stage | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 |
| Nominal Output Torque | [Nm] | *1 | 360 | 360 | 360 | 360 |
| Maximum Output Torque | [Nm] | *2 | 700 | 700 | 700 | 700 |
| Emergency Stop Torque | [Nm] | *3 | 1250 | 1250 | 1250 | 1250 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | |
| No Load Running Torque | [Nm] | *13 | 0.54 | | | |
| Permitted Radial Load | [N] | *6 | 12000 | 13000 | 14000 | 14000 |
| Permitted Axial Load | [N] | *7 | 8500 | 9100 | 9800 | 10000 |
| Maximum Radial Load | [N] | *8 | 19000 | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | *10 | 3.800 | 2.600 | 2.500 | 3.400 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 5.800 | 4.600 | 4.500 | 5.400 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 13.000 | 12.000 | 12.000 | 13.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 35.000 | 34.000 | 34.000 | 35.000 |
| Efficiency | [%] | -- | 90 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 60 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 17 | | | |

Sold & Serviced By:

 ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

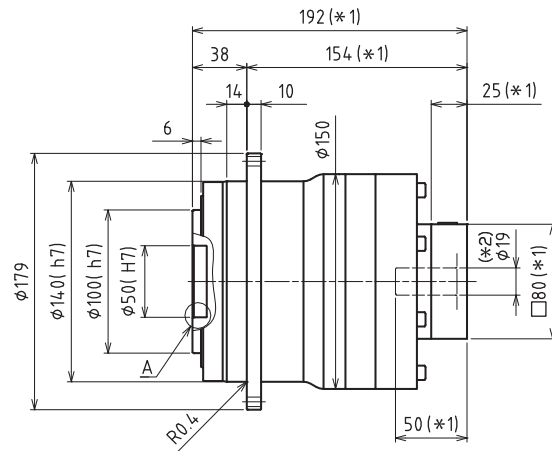
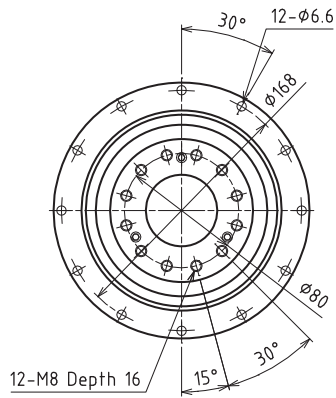
VRT-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Note | 35 | 40 | 50 | 70 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 360 | 360 | 360 | 360 | 240 | |
| Maximum Output Torque | [Nm] | *2 | 700 | 700 | 700 | 700 | 470 | |
| Emergency Stop Torque | [Nm] | *3 | 1250 | 1250 | 1250 | 1250 | 1000 | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | |
| No Load Running Torque | [Nm] | *13 | 0.54 | | | | | |
| Permitted Radial Load | [N] | *6 | 15000 | 16000 | 17000 | 19000 | 19000 | |
| Permitted Axial Load | [N] | *7 | 11000 | 11000 | 12000 | 13000 | 14000 | |
| Maximum Radial Load | [N] | *8 | 19000 | | | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | *10 | 2.400 | 1.200 | 1.100 | 1.100 | 1.100 | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.400 | 3.100 | 3.100 | 3.100 | 3.100 | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 12.000 | 11.000 | 11.000 | 11.000 | 11.000 | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 34.000 | 33.000 | 33.000 | 33.000 | 33.000 | |
| Efficiency | [%] | -- | 90 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 60 | | | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 17 | | | | | |

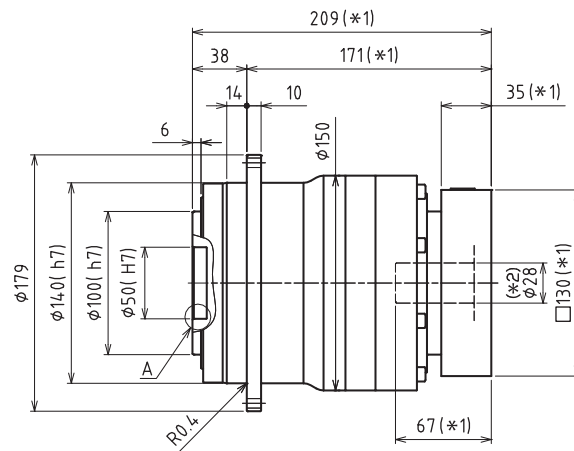
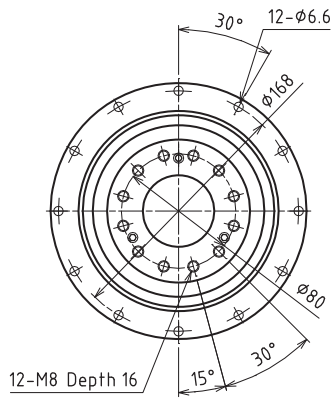
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2,000 rpm for VRT140
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRT-140 – 2-Stage Dimensions

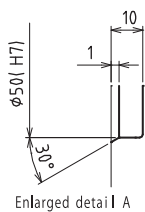
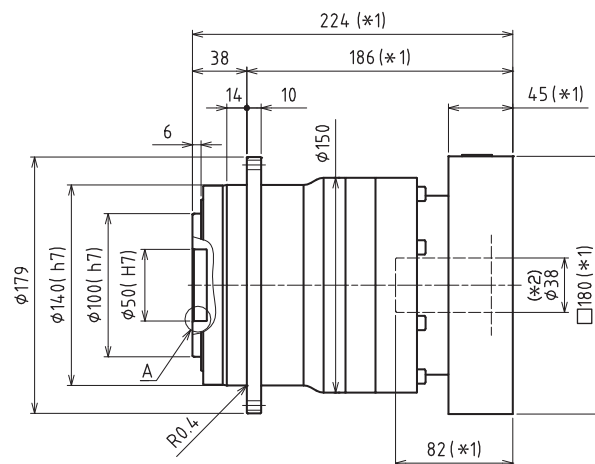
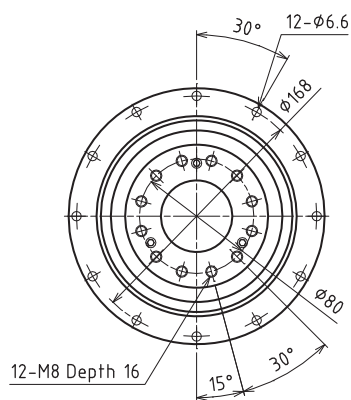
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



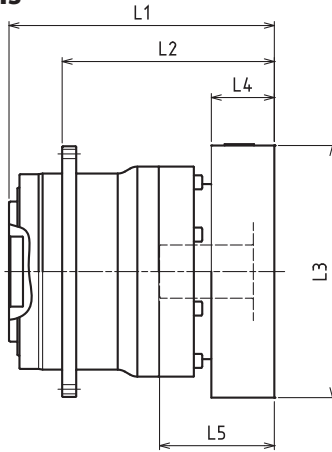
Input shaft bore $\leq \phi 38$



*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

VRT-140 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|-------------------------|---------|-----|------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-140-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | -- | -- | -- | -- | -- | -- |
| | EB·ED | -- | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- | -- |
| | GB·GD·GJ | -- | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| VRT-140-□-□-28** (Input shaft bore ≤ φ28) | FA·FB·FC | 154 | 119 | 116 | □100 | 35 | 67 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 154 | 119 | 116 | □115 | 35 | 67 |
| | HA·HC·HD | 154 | 119 | 116 | □130 | 35 | 67 |
| | HB | 164 | 119 | 126 | □130 | 45 | 77 |
| | HF | 149 | 119 | 111 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 154 | 119 | 116 | □150 | 35 | 67 |
| | KA·KB·KE | 154 | 119 | 116 | □180 | 35 | 67 |
| | LA | 154 | 119 | 116 | □200 | 35 | 67 |
| | LB | 164 | 119 | 126 | □200 | 45 | 77 |
| | MA | 154 | 119 | 116 | □220 | 35 | 67 |
| VRT-140-□-□-38** (Input shaft bore ≤ φ38) | MB | 164 | 119 | 126 | □220 | 45 | 77 |
| | HA | 169 | 124 | 131 | □130 | 45 | 82 |
| | HB·HE | 164 | 124 | 126 | □130 | 40 | 77 |
| | JA | 169 | 124 | 131 | □150 | 45 | 82 |
| | KA·KB·KC | 169 | 124 | 131 | □180 | 45 | 82 |
| | KD | 204 | 124 | 166 | □180 | 80 | 117 |
| | KE | 184 | 124 | 146 | □180 | 60 | 97 |
| | LB | 179 | 124 | 141 | □200 | 55 | 92 |
| | MA·MB | 169 | 124 | 131 | □220 | 45 | 82 |
| VRT-140-□-□-48** (Input shaft bore ≤ φ48) | MC | 184 | 124 | 146 | □220 | 60 | 97 |
| | MD | 179 | 124 | 141 | □220 | 55 | 92 |
| | KA | 210 | 135 | 172 | □180 | 75 | 118 |
| | KB·KC | 190 | 135 | 152 | □180 | 55 | 98 |
| | LA | 190 | 135 | 152 | □200 | 55 | 98 |
| MA | 190 | 135 | 152 | □220 | 55 | 98 | |
| MB | 210 | 135 | 172 | □220 | 75 | 118 | |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

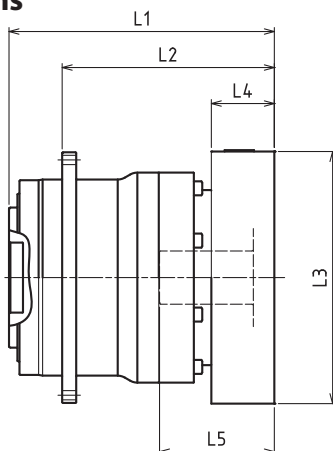
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-140 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-140-□-□-19** (Input shaft bore ≤ φ19) | DA·DB·DC | 171.5 | 146.5 | 133.5 | □80 | 25 | 50 |
| | EB·ED | 171.5 | 146.5 | 133.5 | □90 | 25 | 50 |
| | FA | 171.5 | 146.5 | 133.5 | □100 | 25 | 50 |
| | FB | 181.5 | 146.5 | 143.5 | □100 | 35 | 60 |
| | GB·GD·GJ | 171.5 | 146.5 | 133.5 | □115 | 25 | 50 |
| | HA | 171.5 | 146.5 | 133.5 | □130 | 25 | 50 |
| | HB | 186.5 | 146.5 | 148.5 | □130 | 40 | 65 |
| | JA | 181.5 | 146.5 | 143.5 | □150 | 35 | 60 |
| VRT-140-□-□-28** (Input shaft bore ≤ φ28) | FA·FB·FC | 188.5 | 153.5 | 150.5 | □100 | 35 | 67 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 188.5 | 153.5 | 150.5 | □115 | 35 | 67 |
| | HA·HC·HD | 188.5 | 153.5 | 150.5 | □130 | 35 | 67 |
| | HB | 198.5 | 153.5 | 160.5 | □130 | 45 | 77 |
| | HF | 183.5 | 153.5 | 145.5 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 188.5 | 153.5 | 150.5 | □150 | 35 | 67 |
| | KA·KB·KE | 188.5 | 153.5 | 150.5 | □180 | 35 | 67 |
| | LA | 188.5 | 153.5 | 150.5 | □200 | 35 | 67 |
| | LB | 198.5 | 153.5 | 160.5 | □200 | 45 | 77 |
| | MA | 188.5 | 153.5 | 150.5 | □220 | 35 | 67 |
| VRT-140-□-□-38** (Input shaft bore ≤ φ38) | HA | 203.5 | 158.5 | 165.5 | □130 | 45 | 82 |
| | HB·HE | 198.5 | 158.5 | 160.5 | □130 | 40 | 77 |
| | JA | 203.5 | 158.5 | 165.5 | □150 | 45 | 82 |
| | KA·KB·KC | 203.5 | 158.5 | 165.5 | □180 | 45 | 82 |
| | KD | 238.5 | 158.5 | 200.5 | □180 | 80 | 117 |
| | KE | 218.5 | 158.5 | 180.5 | □180 | 60 | 97 |
| | LB | 213.5 | 158.5 | 175.5 | □200 | 55 | 92 |
| | MA·MB | 203.5 | 158.5 | 165.5 | □220 | 45 | 82 |
| | MC | 218.5 | 158.5 | 180.5 | □220 | 60 | 97 |
| MD | 213.5 | 158.5 | 175.5 | □220 | 55 | 92 | |
| VRT-140-□-□-48** (Input shaft bore ≤ φ48) | KA | 244.5 | 169.5 | 206.5 | □180 | 75 | 118 |
| | KB·KC | 224.5 | 169.5 | 186.5 | □180 | 55 | 98 |
| | LA | 224.5 | 169.5 | 186.5 | □200 | 55 | 98 |
| | MA | 224.5 | 169.5 | 186.5 | □220 | 55 | 98 |
| | MB | 244.5 | 169.5 | 206.5 | □220 | 75 | 118 |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT

VRT-200 – 1-Stage Specifications

| Frame Size | 200 | | | | | |
|---|----------------------|------|-------------|---------|---------|---------|
| Stage | 1-Stage | | | | | |
| Ratio | Unit | Note | 4 | 5 | 7 | 10 |
| Nominal Output Torque | [Nm] | *1 | 750 | 750 | 750 | 500 |
| Maximum Output Torque | [Nm] | *2 | 1400 | 1400 | 1400 | 970 |
| Emergency Stop Torque | [Nm] | *3 | 2750 | 2750 | 2750 | 2200 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | |
| No Load Running Torque | [Nm] | *13 | 1.9 | | | |
| Permitted Radial Load | [N] | *6 | 18000 | 19000 | 21000 | 23000 |
| Permitted Axial Load | [N] | *7 | 12000 | 13000 | 14000 | 16000 |
| Maximum Radial Load | [N] | *8 | 40000 | | | |
| Maximum Axial Load | [N] | *9 | 30000 | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | *10 | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 54.000 | 39.000 | 25.000 | 18.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 76.000 | 61.000 | 47.000 | 40.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 140.000 | 120.000 | 110.000 | 100.000 |
| Efficiency | [%] | -- | 95 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 175 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 42 | | | |

VRT-200 – 2-Stage Specifications

| Frame Size | 200 | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|
| Stage | 2-Stage | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 |
| Nominal Output Torque | [Nm] | *1 | 750 | 750 | 750 | 750 |
| Maximum Output Torque | [Nm] | *2 | 1400 | 1400 | 1400 | 1400 |
| Emergency Stop Torque | [Nm] | *3 | 2750 | 2750 | 2750 | 2750 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | |
| No Load Running Torque | [Nm] | *13 | 1.3 | | | |
| Permitted Radial Load | [N] | *6 | 27000 | 28000 | 30000 | 31000 |
| Permitted Axial Load | [N] | *7 | 18000 | 19000 | 21000 | 21000 |
| Maximum Radial Load | [N] | *8 | 40000 | | | |
| Maximum Axial Load | [N] | *9 | 30000 | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | *10 | 13.000 | 9.400 | 8.800 | 11.000 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 21.000 | 17.000 | 16.000 | 19.000 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 43.000 | 39.000 | 38.000 | 41.000 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 175 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 43 | | | |

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-200 – 2-Stage Specifications

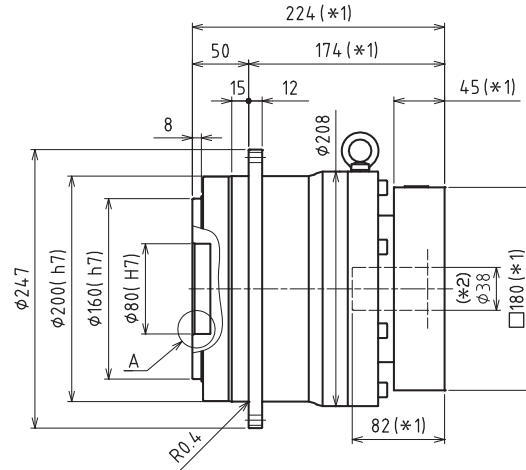
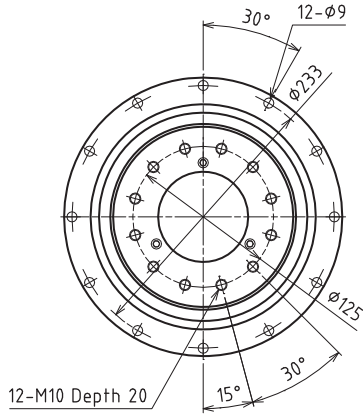
| Frame Size | 200 | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Note | 35 | 40 | 50 | 70 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 750 | 750 | 750 | 750 | 500 | |
| Maximum Output Torque | [Nm] | *2 | 1400 | 1400 | 1400 | 1400 | 970 | |
| Emergency Stop Torque | [Nm] | *3 | 2750 | 2750 | 2750 | 2750 | 2200 | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | |
| No Load Running Torque | [Nm] | *13 | 1.3 | | | | | |
| Permitted Radial Load | [N] | *6 | 34000 | 35000 | 37000 | 40000 | 40000 | |
| Permitted Axial Load | [N] | *7 | 23000 | 24000 | 25000 | 28000 | 30000 | |
| Maximum Radial Load | [N] | *8 | 40000 | | | | | |
| Maximum Axial Load | [N] | *9 | 30000 | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | *10 | 8.200 | 4.400 | 4.200 | 4.100 | 4.000 | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 16.000 | 12.000 | 12.000 | 12.000 | 12.000 | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 38.000 | 34.000 | 34.000 | 34.000 | 34.000 | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | |
| Efficiency | [%] | -- | 90 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 175 | | | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 67 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 43 | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,500 rpm for VRT 200
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

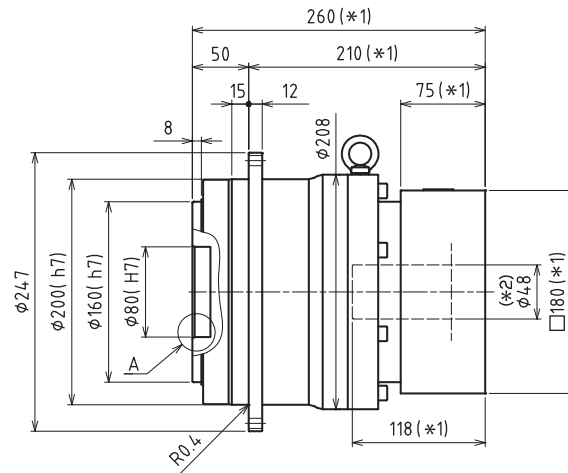
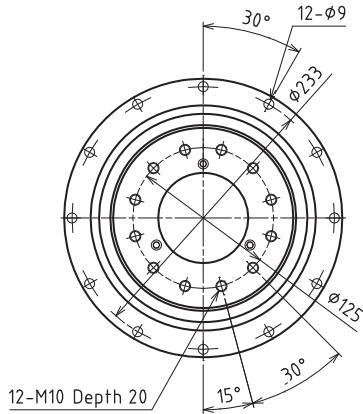
VRT-SERIES Inline shaft

VRT-200 – 1-Stage Dimensions

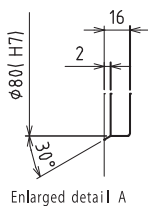
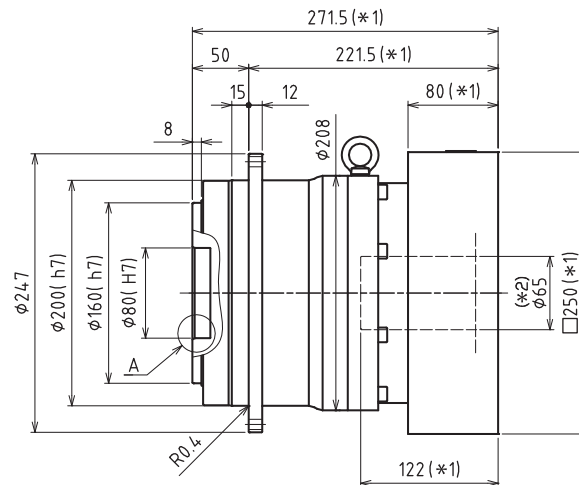
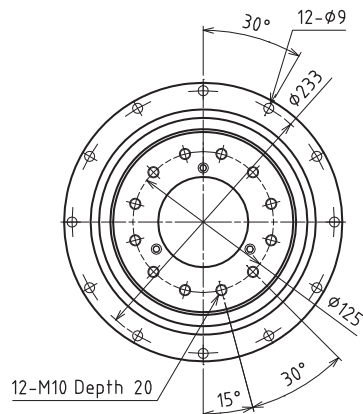
Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

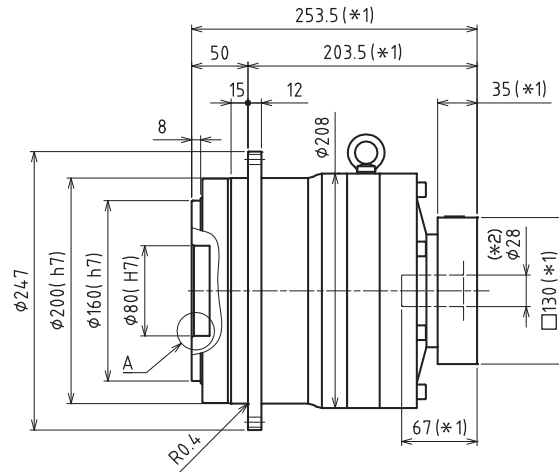
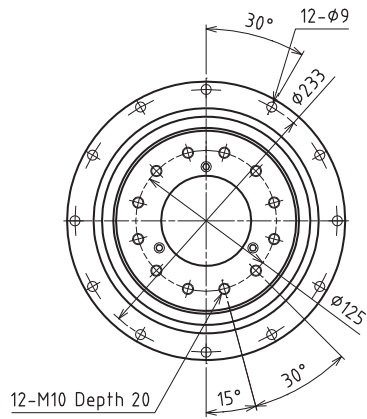
Toll Free Fax (877) SERV099

www.electromate.com

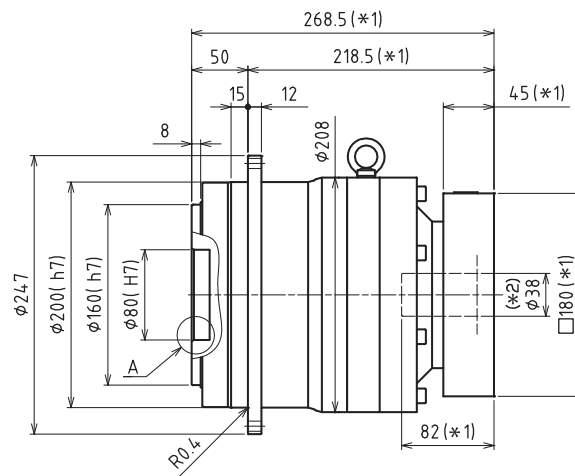
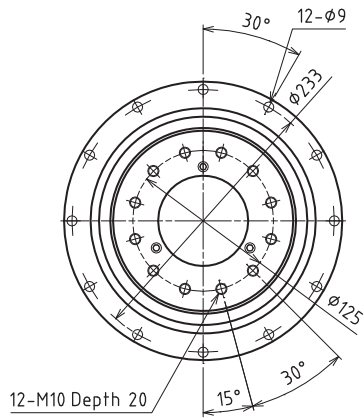
sales@electromate.com

VRT-200 – 2-Stage Dimensions

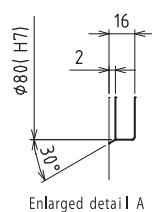
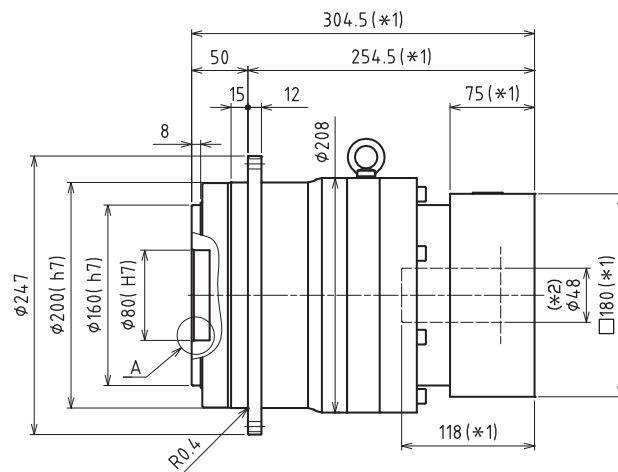
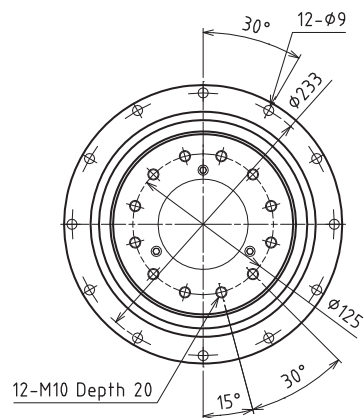
Input shaft bore $\cong \phi 28$



Input shaft bore $\cong \phi 38$



Input shaft bore $\cong \phi 48$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

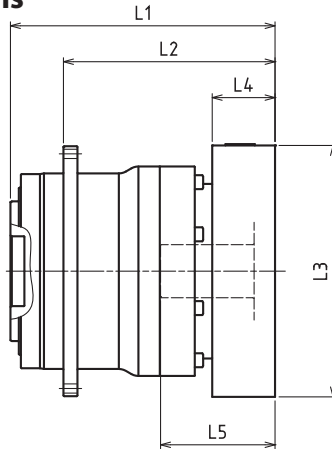
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT

VRT-200 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-200-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | -- | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| VRT-200-□-□-38** (Input shaft bore ≤ φ38) | HA | 192 | 147 | 142 | □130 | 45 | 82 |
| | HB•HE | 187 | 147 | 137 | □130 | 40 | 77 |
| | JA | 192 | 147 | 142 | □150 | 45 | 82 |
| | KA•KB•KC | 192 | 147 | 142 | □180 | 45 | 82 |
| | KD | 227 | 147 | 177 | □180 | 80 | 117 |
| | KE | 207 | 147 | 157 | □180 | 60 | 97 |
| | LB | 202 | 147 | 152 | □200 | 55 | 92 |
| | MA•MB | 192 | 147 | 142 | □220 | 45 | 82 |
| | MC | 207 | 147 | 157 | □220 | 60 | 97 |
| | MD | 202 | 147 | 152 | □220 | 55 | 92 |
| VRT-200-□-□-48** (Input shaft bore ≤ φ48) | NA | 192 | 147 | 142 | □250 | 45 | 82 |
| | KA | 228 | 153 | 178 | □180 | 75 | 118 |
| | KB•KC | 208 | 153 | 158 | □180 | 55 | 98 |
| | LA | 208 | 153 | 158 | □200 | 55 | 98 |
| | MA | 208 | 153 | 158 | □220 | 55 | 98 |
| | MB | 228 | 153 | 178 | □220 | 75 | 118 |
| | NA | 228 | 153 | 178 | □250 | 75 | 118 |
| VRT-200-□-□-65** (Input shaft bore ≤ φ65) | PA | 228 | 153 | 178 | □280 | 75 | 118 |
| | MA•MB•MC•MD | 239.5 | 159.5 | 189.5 | □220 | 80 | 122 |
| | NA•NC | 239.5 | 159.5 | 189.5 | □250 | 80 | 122 |
| | NB•ND | 269.5 | 159.5 | 219.5 | □250 | 110 | 152 |
| | PA | 259.5 | 159.5 | 209.5 | □280 | 100 | 142 |
| PB | 269.5 | 159.5 | 219.5 | □280 | 110 | 152 | |

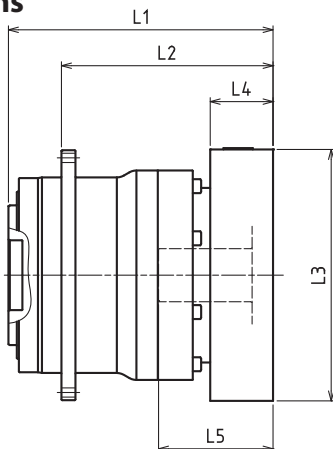
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT-200 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|-------------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-200-□-□-28** (Input shaft bore ≤ φ28) | FA•FB•FC | 221.5 | 186.5 | 171.5 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 221.5 | 186.5 | 171.5 | □115 | 35 | 67 |
| | HA•HC•HD | 221.5 | 186.5 | 171.5 | □130 | 35 | 67 |
| | HB | 231.5 | 186.5 | 181.5 | □130 | 45 | 77 |
| | HF | 216.5 | 186.5 | 166.5 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 221.5 | 186.5 | 171.5 | □150 | 35 | 67 |
| | KA•KB•KE | 221.5 | 186.5 | 171.5 | □180 | 35 | 67 |
| | LA | 221.5 | 186.5 | 171.5 | □200 | 35 | 67 |
| | LB | 231.5 | 186.5 | 181.5 | □200 | 45 | 77 |
| | MA | 221.5 | 186.5 | 171.5 | □220 | 35 | 67 |
| VRT-200-□-□-38** (Input shaft bore ≤ φ38) | MB | 231.5 | 186.5 | 181.5 | □220 | 45 | 77 |
| | HA | 236.5 | 191.5 | 186.5 | □130 | 45 | 82 |
| | HB•HE | 231.5 | 191.5 | 181.5 | □130 | 40 | 77 |
| | JA | 236.5 | 191.5 | 186.5 | □150 | 45 | 82 |
| | KA•KB•KC | 236.5 | 191.5 | 186.5 | □180 | 45 | 82 |
| | KD | 271.5 | 191.5 | 221.5 | □180 | 80 | 117 |
| | KE | 251.5 | 191.5 | 201.5 | □180 | 60 | 97 |
| | LB | 246.5 | 191.5 | 196.5 | □200 | 55 | 92 |
| | MA•MB | 236.5 | 191.5 | 186.5 | □220 | 45 | 82 |
| | MC | 251.5 | 191.5 | 201.5 | □220 | 60 | 97 |
| VRT-200-□-□-48** (Input shaft bore ≤ φ48) | MD | 246.5 | 191.5 | 196.5 | □220 | 55 | 92 |
| | NA | 236.5 | 191.5 | 186.5 | □250 | 45 | 82 |
| | KA | 272.5 | 197.5 | 222.5 | □180 | 75 | 118 |
| | KB•KC | 252.5 | 197.5 | 202.5 | □180 | 55 | 98 |
| | LA | 252.5 | 197.5 | 202.5 | □200 | 55 | 98 |
| | MA | 252.5 | 197.5 | 202.5 | □220 | 55 | 98 |
| | MB | 272.5 | 197.5 | 222.5 | □220 | 75 | 118 |
| VRT-200-□-□-65** (Input shaft bore ≤ φ65) | NA | 272.5 | 197.5 | 222.5 | □250 | 75 | 118 |
| | PA | 272.5 | 197.5 | 222.5 | □280 | 75 | 118 |
| | MA•MB•MC•MD | -- | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- | -- |
| PA | -- | -- | -- | -- | -- | -- | |
| PB | -- | -- | -- | -- | -- | -- | |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-255 – 1-Stage Specifications

| Frame Size | 255 | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|
| Stage | 1-Stage | | | | | |
| Ratio | Unit | Note | 4 | 5 | 7 | 10 |
| Nominal Output Torque | [Nm] | *1 | 2400 | 2400 | 2400 | 1600 |
| Maximum Output Torque | [Nm] | *2 | 3700 | 3700 | 3700 | 2600 |
| Emergency Stop Torque | [Nm] | *3 | 8000 | 8000 | 8000 | 6000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | |
| No Load Running Torque | [Nm] | *13 | 2.5 | | | |
| Permitted Radial Load | [N] | *6 | 31000 | 33000 | 36000 | 40000 |
| Permitted Axial Load | [N] | *7 | 22000 | 24000 | 26000 | 29000 |
| Maximum Radial Load | [N] | *8 | 64000 | | | |
| Maximum Axial Load | [N] | *9 | 48000 | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 200 | 170 | 130 | 110 |
| Efficiency | [%] | -- | 95 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 550 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 62 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 84 | | | |

VRT-255 – 2-Stage Specifications

| Frame Size | 255 | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 |
| Nominal Output Torque | [Nm] | *1 | 2400 | 2400 | 2400 | 2400 |
| Maximum Output Torque | [Nm] | *2 | 3700 | 3700 | 3700 | 3700 |
| Emergency Stop Torque | [Nm] | *3 | 8000 | 8000 | 8000 | 8000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | |
| No Load Running Torque | [Nm] | *13 | 1.0 | | | |
| Permitted Radial Load | [N] | *6 | 46000 | 49000 | 53000 | 55000 |
| Permitted Axial Load | [N] | *7 | 34000 | 36000 | 38000 | 40000 |
| Maximum Radial Load | [N] | *8 | 64000 | | | |
| Maximum Axial Load | [N] | *9 | 48000 | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | 64.0 | 53.0 | 51.0 | 59.0 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 550 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 62 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 89 | | | |

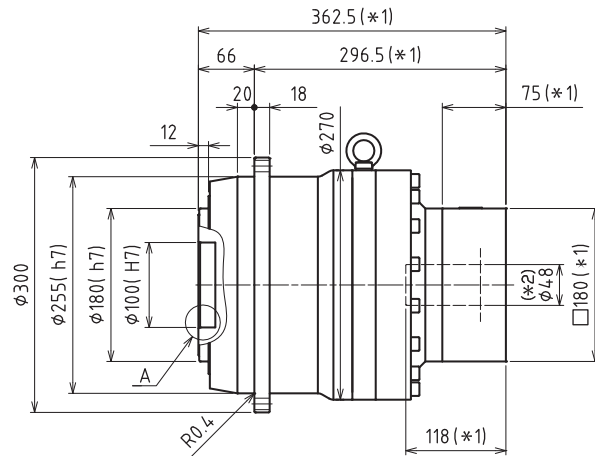
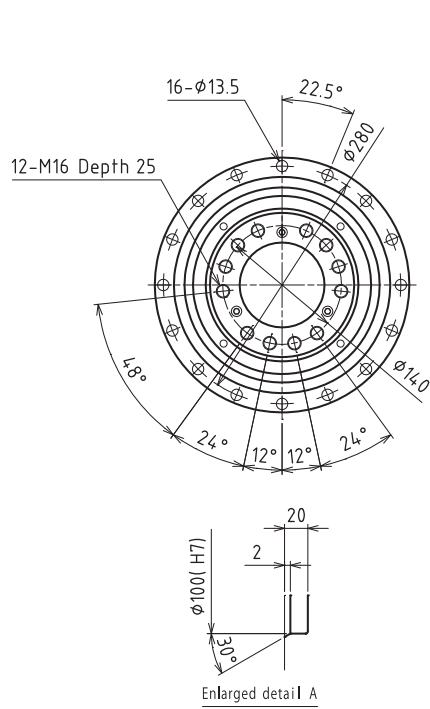
VRT-255 – 2-Stage Specifications

| Frame Size | 255 | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|--|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Note | 35 | 40 | 50 | 70 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 2400 | 2400 | 2400 | 2400 | 1600 | |
| Maximum Output Torque | [Nm] | *2 | 3700 | 3700 | 3700 | 3700 | 1800 | |
| Emergency Stop Torque | [Nm] | *3 | 8000 | 8000 | 8000 | 8000 | 6000 | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | |
| No Load Running Torque | [Nm] | *13 | 1.0 | | | | | |
| Permitted Radial Load | [N] | *6 | 59000 | 61000 | 64000 | 64000 | 64000 | |
| Permitted Axial Load | [N] | *7 | 42000 | 44000 | 47000 | 48000 | 48000 | |
| Maximum Radial Load | [N] | *8 | 64000 | | | | | |
| Maximum Axial Load | [N] | *9 | 48000 | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | 50.0 | 38.0 | 38.0 | 37.0 | 37.0 | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | |
| Efficiency | [%] | -- | 90 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 550 | | | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 62 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 89 | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for 255
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRT-255 – 2-Stage Dimensions

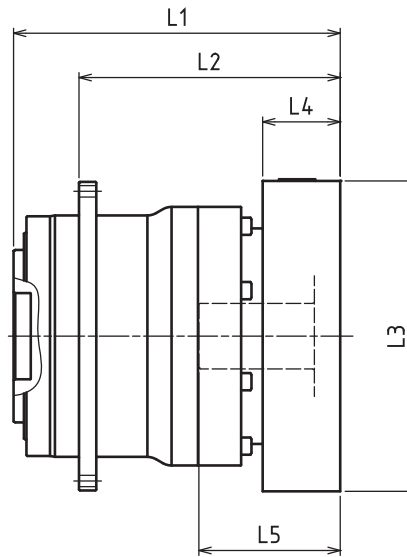
Input shaft bore $\cong \phi 48$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRT-255 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|------------------|---------|-----|-----|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-255-□-□-48** (Input shaft bore ≤ φ48) | KA | -- | -- | -- | -- | -- | -- |
| | KB-KC | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- | -- |
| | NA | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| VRT-255-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | 272 | 192 | 206 | □220 | 80 | 122 |
| | NA-NC | 272 | 192 | 206 | □250 | 80 | 122 |
| | NB-ND | 302 | 192 | 236 | □250 | 110 | 152 |
| | PA | 292 | 192 | 226 | □280 | 100 | 142 |
| | PB | 302 | 192 | 236 | □280 | 110 | 152 |
| | QA-QB | 292 | 192 | 226 | □320 | 100 | 142 |

*1) Single reduction : 1/4 - 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 **ELECTROMATE**

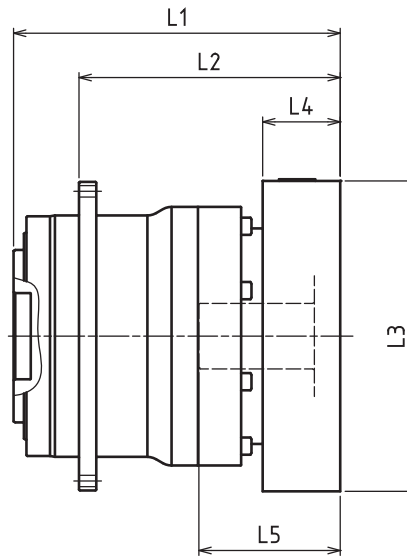
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-255 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|------------------|---------|-------|-------|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-255-□-□-48** (Input shaft bore ≤ φ48) | KA | 322.5 | 247.5 | 256.5 | □180 | 75 | 118 |
| | KB-KC | 302.5 | 247.5 | 236.5 | □180 | 55 | 98 |
| | LA | 302.5 | 247.5 | 236.5 | □200 | 55 | 98 |
| | MA | 302.5 | 247.5 | 236.5 | □220 | 55 | 98 |
| | MB | 322.5 | 247.5 | 256.5 | □220 | 75 | 118 |
| | NA | 322.5 | 247.5 | 256.5 | □250 | 75 | 118 |
| | PA | 322.5 | 247.5 | 256.5 | □280 | 75 | 118 |
| VRT-255-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | -- | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| | QA•QB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/16 - 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT

VRT-285 – 1-Stage Specifications

| Frame Size | 285 | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|
| Stage | 1-Stage | | | | | |
| Ratio | Unit | Note | 4 | 5 | 7 | 10 |
| Nominal Output Torque | [Nm] | *1 | 3300 | 3300 | 3300 | 2200 |
| Maximum Output Torque | [Nm] | *2 | 5300 | 5300 | 5300 | 3700 |
| Emergency Stop Torque | [Nm] | *3 | 12000 | 12000 | 12000 | 10000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | |
| No Load Running Torque | [Nm] | *13 | 2.7 | | | |
| Permitted Radial Load | [N] | *6 | 40000 | 42000 | 47000 | 52000 |
| Permitted Axial Load | [N] | *7 | 34000 | 36000 | 40000 | 45000 |
| Maximum Radial Load | [N] | *8 | 86000 | | | |
| Maximum Axial Load | [N] | *9 | 64000 | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 250 | 200 | 140 | 120 |
| Efficiency | [%] | -- | 95 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 850 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 63 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 110 | | | |

VRT-285 – 2-Stage Specifications

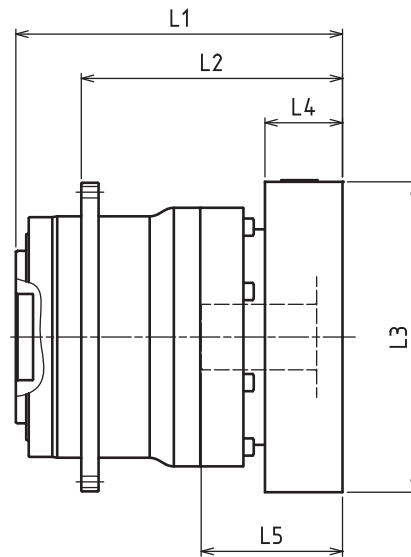
| Frame Size | 285 | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Unit | Note | 16 | 20 | 25 | 28 |
| Nominal Output Torque | [Nm] | *1 | 2750 | 3300 | 3300 | 3300 |
| Maximum Output Torque | [Nm] | *2 | 5300 | 5300 | 5300 | 5300 |
| Emergency Stop Torque | [Nm] | *3 | 12000 | 12000 | 12000 | 12000 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | |
| No Load Running Torque | [Nm] | *13 | 0.6 | | | |
| Permitted Radial Load | [N] | *6 | 60000 | 64000 | 69000 | 71000 |
| Permitted Axial Load | [N] | *7 | 51000 | 55000 | 59000 | 61000 |
| Maximum Radial Load | [N] | *8 | 86000 | | | |
| Maximum Axial Load | [N] | *9 | 64000 | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | 48.0 | 42.0 | 41.0 | 42.0 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- |
| Efficiency | [%] | -- | 90 | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 850 | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | |
| Noise Level | [dB] | -- | ≤ 63 | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight | [kg] | *15 | 120 | | | |

VRT-285 – 2-Stage Specifications

| Frame Size | 285 | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|--|
| Stage | 2-Stage | | | | | | | |
| Ratio | Unit | Note | 35 | 40 | 50 | 70 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 3300 | 3300 | 3300 | 3300 | 2200 | |
| Maximum Output Torque | [Nm] | *2 | 5300 | 5300 | 5300 | 5300 | 2500 | |
| Emergency Stop Torque | [Nm] | *3 | 12000 | 12000 | 12000 | 12000 | 10000 | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | |
| No Load Running Torque | [Nm] | *13 | 0.6 | | | | | |
| Permitted Radial Load | [N] | *6 | 76000 | 79000 | 85000 | 86000 | 86000 | |
| Permitted Axial Load | [N] | *7 | 64000 | 64000 | 64000 | 64000 | 64000 | |
| Maximum Radial Load | [N] | *8 | 86000 | | | | | |
| Maximum Axial Load | [N] | *9 | 64000 | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | *10 | 39.0 | 36.0 | 35.0 | 35.0 | 35.0 | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | |
| Efficiency | [%] | -- | 90 | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *11 | 850 | | | | | |
| Maximum Torsional Backlash | [Arc-min] | *12 | ≤ 3 | | | | | |
| Noise Level | [dB] | -- | ≤ 63 | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | |
| Ambient Temperature | [°C] | -- | 0 - 40 | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | |
| Weight | [kg] | *15 | 120 | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for VRT285
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output flange center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

VRT-285 – 1-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 1-Stage | | | | | |
|--|------------------|---------|-------|-------|------|-----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-285-□-□-48** (Input shaft bore ≤ φ48) | KA | -- | -- | -- | -- | -- | -- |
| | KB-KC | -- | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- | -- |
| | NA | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| VRT-285-□-□-65** (Input shaft bore ≤ φ65) | MA•MB•MC•MD | 283.5 | 203.5 | 208.5 | □220 | 80 | 122 |
| | NA•NC | 283.5 | 203.5 | 208.5 | □250 | 80 | 122 |
| | NB•ND | 313.5 | 203.5 | 238.5 | □250 | 110 | 152 |
| | PA | 303.5 | 203.5 | 228.5 | □280 | 100 | 142 |
| | PB | 313.5 | 203.5 | 238.5 | □280 | 110 | 152 |
| | QA•QB | 303.5 | 203.5 | 228.5 | □320 | 100 | 142 |

*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

 **ELECTROMATE**

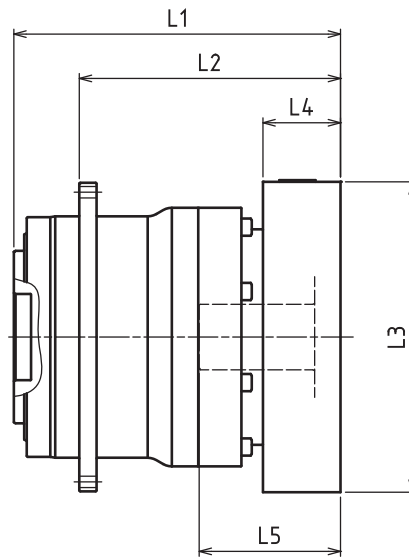
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

VRT-285 – 2-Stage Adapter Dimensions



| Model Number | **: Adapter Code | 2-Stage | | | | | |
|--|------------------|---------|-----|-----|------|----|-----|
| | | L1 | L* | L2 | L3 | L4 | L5 |
| VRT-285-□-□-48** (Input shaft bore ≤ φ48) | KA | 339 | 264 | 264 | □180 | 75 | 118 |
| | KB-KC | 319 | 264 | 244 | □180 | 55 | 98 |
| | LA | 319 | 264 | 244 | □200 | 55 | 98 |
| | MA | 319 | 264 | 244 | □220 | 55 | 98 |
| | MB | 339 | 264 | 264 | □220 | 75 | 118 |
| | NA | 339 | 264 | 264 | □250 | 75 | 118 |
| | PA | 339 | 264 | 264 | □280 | 75 | 118 |
| VRT-285-□-□-65** (Input shaft bore ≤ φ65) | MA-MB-MC-MD | -- | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- | -- |

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRT

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

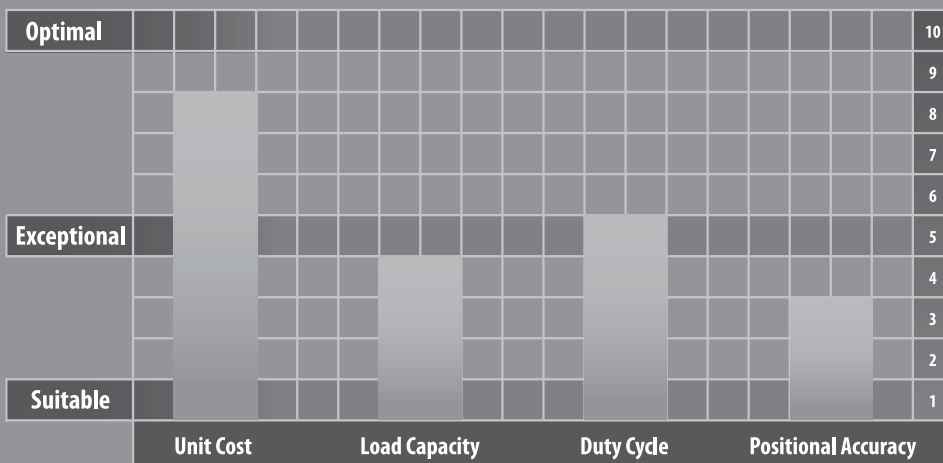
www.electromate.com

sales@electromate.com

NEV-SERIES

The NEV right-angle series is the ideal gearbox for simpler one-directional servo motor applications where space and cost take precedence. The performance and efficiency of the NEV outperforms worm or helical gear options, so many machine builders strongly consider this series, instead of settling for their old default right-angle gearbox. Many times, our OEM customers are upgrading from an induction motor and a helical or worm assembly because their customer is requiring increased throughput and control. In this type of sensitive situation, the NEV is a very price competitive option to help keep the OEMs equipment costs in check and meet the improved functionality required.

The NEV has a lightweight aluminum frame with either a hollow or solid shaft configuration at the output. The series can handle motors ranging between 50w to 3.5 kW, and it achieves nominal output torque ratings ranging between 6 Nm to 90 Nm. The different NEV frame sizes are available in ratios between 5:1 and 105:1, and the gearbox can be provided in special coatings, lubrication, and materials of construction that make it ideal for applications in direct food-grade exposure or heavy washdown intensive environments.





NEW

NEV-SERIES

- Hollow bore output option, provides a very compact footprint and cost-effective right-angle solution
- Quiet operation: Helical cut gears contribute to reduced vibration and noise
- High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
- Extremely light weight aluminum body to reduce excess weight from your equipment
- Maintenance-free: No need to replace the grease for the life of the unit. The gearbox can be positioned in any orientation

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

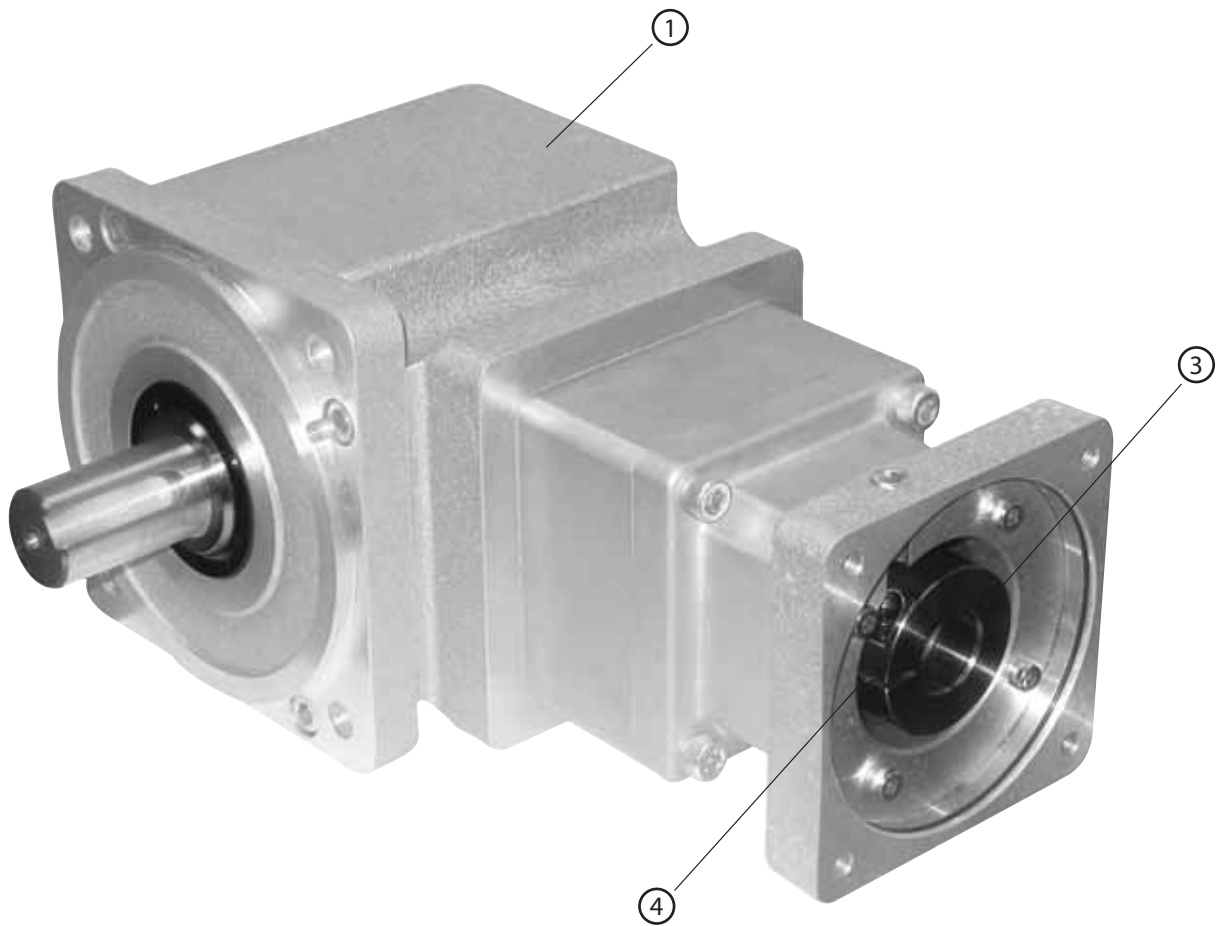
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

NEV-SERIES Right-angle shaft

NEV-Series – Features



- ① This space saving Right-angle gearbox utilizes a spiral bevel gear. Motor can be located at a 90 degree position from the reducer providing a more compact footprint
- ② High rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ Adapter-bushing connection enables a simple, effective attachment to most servo motors
- ④ No leakage through the seal; and the high viscosity, anti-separation grease does not liquefy or migrate away from the gears

NEV-Series – Model Code

| NEV | | F | | | | | | | | | | | |
|-------|-------|---|-------|-------|------------------|----------|--|--|---------------|---|---|-------------------|--|
| Model | Input | | Frame | Ratio | Motor Attachment | Bushings | | | Modifications | | | | |
| | | | | | | | | | 1 | 2 | 3 | (See Notes Below) | |

Model

Ordering Code

| | |
|-----|-------------|
| NEV | Right Angle |
|-----|-------------|

Input

Ordering Code

| | |
|---|------------------------|
| A | Adaptor Flange |
| S | Dedicated w/ clamp hub |

Frame Size

Ordering Code

| | |
|---|---------|
| B | B Frame |
| C | C Frame |
| D | D Frame |
| E | E Frame |

Ordering Code

NEVAF/NEVSF

| | | |
|----|------------------|-------|
| 05 | Double Reduction | 5:1 |
| 09 | | 9:1 |
| 15 | | 15:1 |
| 27 | | 27:1 |
| 45 | Triple Reduction | 45:1 |
| 75 | | 75:1 |
| 1H | | 105:1 |

Motor Attachment

(Bolt Circle of motor in mm)

Ordering Code

| | |
|-----|------------------|
| 044 | 43.80 (NEMA 17) |
| 045 | 45 |
| 046 | 46 |
| 060 | 60 |
| 063 | 63 |
| 067 | 66.68 (NEMA 23) |
| 070 | 70 |
| 075 | 75 |
| 090 | 90 |
| 095 | 95 |
| 098 | 98.43 (NEMA 34) |
| 100 | 100 |
| 115 | 115 |
| 126 | 125.73 (NEMA 42) |
| 130 | 130 |
| 145 | 145 |
| 149 | 149.23 (NEMA 56) |
| 165 | 165 |
| 200 | 200 |

Bushing

Ordering Code

| | | |
|------|--|--------|
| 0000 | No Bushing Required OD (mm) ID (mm) | |
| 00__ | Non-catalog edicated bore in mm- specify | |
| 0801 | 8 | 6 |
| 0802 | 8 | 6.350 |
| 0803 | 8 | 5 |
| 1401 | 14 | 6 |
| 1402 | 14 | 8 |
| 1403 | 14 | 11 |
| 1404 | 14 | 6.350 |
| 1405 | 14 | 9.525 |
| 1406 | 14 | 12.700 |
| 1407 | 14 | 12 |
| 1408 | 14 | 10 |
| 1409 | 14 | 9 |
| 1410 | 14 | 5 |
| 1901 | 19 | 11 |
| 1902 | 19 | 14 |
| 1903 | 19 | 16 |
| 1904 | 19 | 9.525 |
| 1905 | 19 | 12.700 |
| 1906 | 19 | 15.875 |
| 1907 | 19 | 12 |
| 1908 | 19 | 10 |
| 1909 | 19 | 9 |
| 1910 | 19 | 8 |
| 2401 | 24 | 14 |
| 2402 | 24 | 16 |
| 2403 | 24 | 19 |
| 2404 | 24 | 12.700 |
| 2405 | 24 | 15.875 |
| 2406 | 24 | 22 |
| 2407 | 24 | 19.050 |
| 2408 | 24 | 11 |

Modifications/Motor

Attachment Threaded Hole

Ordering Code

| | |
|-----|---|
| 000 | Standard |
| 5 | Keyless output shaft |
| 6 | NEVAF - solid output shaft |
| 7 | NEVAF - hollow output shaft |
| I | IP65 - no paint - standard grease |
| F | Food grade grease - no paint - IP65 |
| G | Food grade grease - Steel-It paint - IP65 |
| S | Steel-It paint - standard grease - IP65 |
| W | White epoxy paint - standard grease - IP65 |
| X | Food grade grease - white epoxy paint - IP65 |
| T | Re-tap motor attachment flange one size larger |
| H | Through hole on motor attachment flange |
| L | Larger through hole on motor attachment flange |
| B | Pilot diameter reduced |
| R | Deeper motor attachment flange/add spacer plate |
| A_ | Specify |

Adaptor Flange

Re-Threaded Hole

(with T Code)

| | |
|----------|-----|
| Standard | T |
| M3 | M4 |
| M4 | M5 |
| M5 | M6 |
| M6 | M8 |
| M8 | M10 |
| M10 | M12 |

NEW

Options & Modifications Available

- Custom motor attachment dimensions
- Food grade grease (needed when unit is placed above a food line)
- Stainless steel output shaft
- Custom ratios
- Custom outputs
- Output shaft drilled and tapped

Notes on "Modifications" Section of Code:

- 1) Feature 5, 6, or 7 would be entered in Box1 of the section of code.
- 2) Feature B or R would be entered in Box3 of the code.
- 3) Enter additional features in Box1, 2, 3 if available, organize in either numeric or alphabetical order.
- 4) If Box that is not utilized, enter a 0 fill the Boxes within the Modifications section.

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

NEV-SERIES Right-angle shaft

NEV B-Frame – 2-Stage Specifications

| Frame Size | B (78mm) | | | | | |
|---|----------------------|------|-----------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Units | Note | 5 | 9 | 15 | 27 |
| Nominal Output Torque | [Nm] | -- | 6 | 6 | 10 | 10 |
| Maximum Acceleration Torque | [Nm] | -- | 20 | 20 | 30 | 30 |
| Emergency Stop Torque | [Nm] | -- | 35 | 40 | 50 | 50 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | | |
| No Load Running Torque | [Nm] | -- | 0.18 | | | |
| Permitted Radial Load | [N] | -- | 1000 | 1200 | 1500 | 1800 |
| Permitted Axial Load | [N] | -- | 500 | 600 | 750 | 900 |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.275 | 0.110 | 0.059 | 0.146 |
| Efficiency | [%] | -- | 85 | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 0.4 | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | | |
| Noise Level | [dB] | -- | ≤ 73 | | | |
| Protection Class | -- | -- | IP65 | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight (Solid Output Shaft) | [kg] | -- | 3.8 | | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 3.6 | | | |

NEV B-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|-----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| B1 | mm | 45 | 30 | 42 | M3x0.5 | 8 | 168.5 | 129.5 | 10 | 6 | 5 | 32 |
| | in | 1.772 | 1.181 | 1.65 | -- | 0.31 | 6.634 | 5.098 | 0.39 | 0.24 | 0.20 | 1.26 |
| B2 | mm | 46 | 30 | 42 | M4X0.7 | 10 | 168.5 | 129.5 | 10 | 6 | 5 | 32 |
| | in | 1.811 | 1.181 | 1.65 | -- | 0.39 | 6.634 | 5.098 | 0.39 | 0.24 | 0.20 | 1.26 |
| B8 | mm | 46 | 30 | 42 | M4X0.7 | 10 | 171.5 | 132.5 | 13 | 6 | 8 | 35 |
| | in | 1.811 | 1.181 | 1.65 | -- | 0.39 | 6.752 | 5.217 | 0.51 | 0.24 | 0.31 | 1.38 |
| B4 | mm | 60 | 50 | 60 | M4X0.7 | 10 | 168.5 | 129.5 | 10 | 4 | 5 | 32 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 6.634 | 5.098 | 0.39 | 0.16 | 0.20 | 1.26 |
| B4 | mm | 70 | 50 | 60 | M4X0.7 | 10 | 168.5 | 129.5 | 10 | 4 | 5 | 32 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 6.634 | 5.098 | 0.39 | 0.16 | 0.20 | 1.26 |
| B9 | mm | 70 | 50 | 60 | M5X0.8 | 20 | 173.5 | 134.5 | 15 | 9 | 10 | 37 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.79 | 6.831 | 5.295 | 0.59 | 0.35 | 0.39 | 1.46 |
| B5 | mm | 66.68 | 38.100 | 58 | M4X0.7 | 10 | 168.5 | 129.5 | 10 | 4 | 5 | 32 |
| (NEMA23) | in | 2.625 | 1.500 | 2.28 | -- | 0.39 | 6.634 | 5.098 | 0.39 | 0.16 | 0.20 | 1.26 |
| B5+Spacer | mm | 66.68 | 38.100 | 60 | M5X0.8 | -- | 176.5 | 137.5 | 18 | 3 | 13 | 40 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | -- | 6.949 | 5.413 | 0.71 | 0.12 | 0.51 | 1.57 |
| B6 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 168.5 | 129.5 | 10 | 4 | 5 | 32 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 6.634 | 5.098 | 0.39 | 0.16 | 0.20 | 1.26 |
| B7 | mm | 43.80 | 22 | 42 | 2-3.3 dia. | -- | 170.5 | 131.5 | 12 | 4 | 7 | 34 |
| (NEMA17) | in | 1.724 | 0.866 | 1.65 | 2-0.13 dia. | -- | 6.713 | 5.177 | 0.47 | 0.16 | 0.28 | 1.34 |
| B10 | mm | 63 | 40 | 58 | M4X0.7 | 10 | 168.5 | 129.5 | 10 | 4 | 5 | 32 |
| | in | 2.480 | 1.575 | 2.28 | -- | 0.39 | 6.634 | 5.098 | 0.39 | 0.16 | 0.20 | 1.26 |

NEV-SERIES Right-angle shaft

NEV B-Frame – 3-Stage Specifications

| Frame Size | B (78mm) | | | | |
|---|----------------------|------|-----------|-------|-------|
| Stage | 3-Stage | | | | |
| Ratio | Units | Note | 45 | 75 | 105 |
| Nominal Output Torque | [Nm] | -- | 10 | 15 | 15 |
| Maximum Acceleration Torque | [Nm] | -- | 30 | 30 | 30 |
| Emergency Stop Torque | [Nm] | -- | 50 | 50 | 50 |
| Nominal Input Speed | [rpm] | -- | 3000 | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | |
| No Load Running Torque | [Nm] | -- | 0.109 | | |
| Permitted Radial Load | [N] | -- | 1800 | 1800 | 1800 |
| Permitted Axial Load | [N] | -- | 900 | 900 | 900 |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.091 | 0.083 | 0.078 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | -- | -- | -- |
| Efficiency | [%] | -- | 80 | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 0.4 | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | |
| Noise Level | [dB] | -- | ≤ 63 | | |
| Protection Class | -- | -- | IP65 | | |
| Ambient Temperature | [°C] | -- | 0-40 | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | |
| Weight (Solid Output Shaft) | [kg] | -- | 3.9 | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 3.7 | | |

NEV B-Frame, 3-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 45:1, 75:1, 105:1

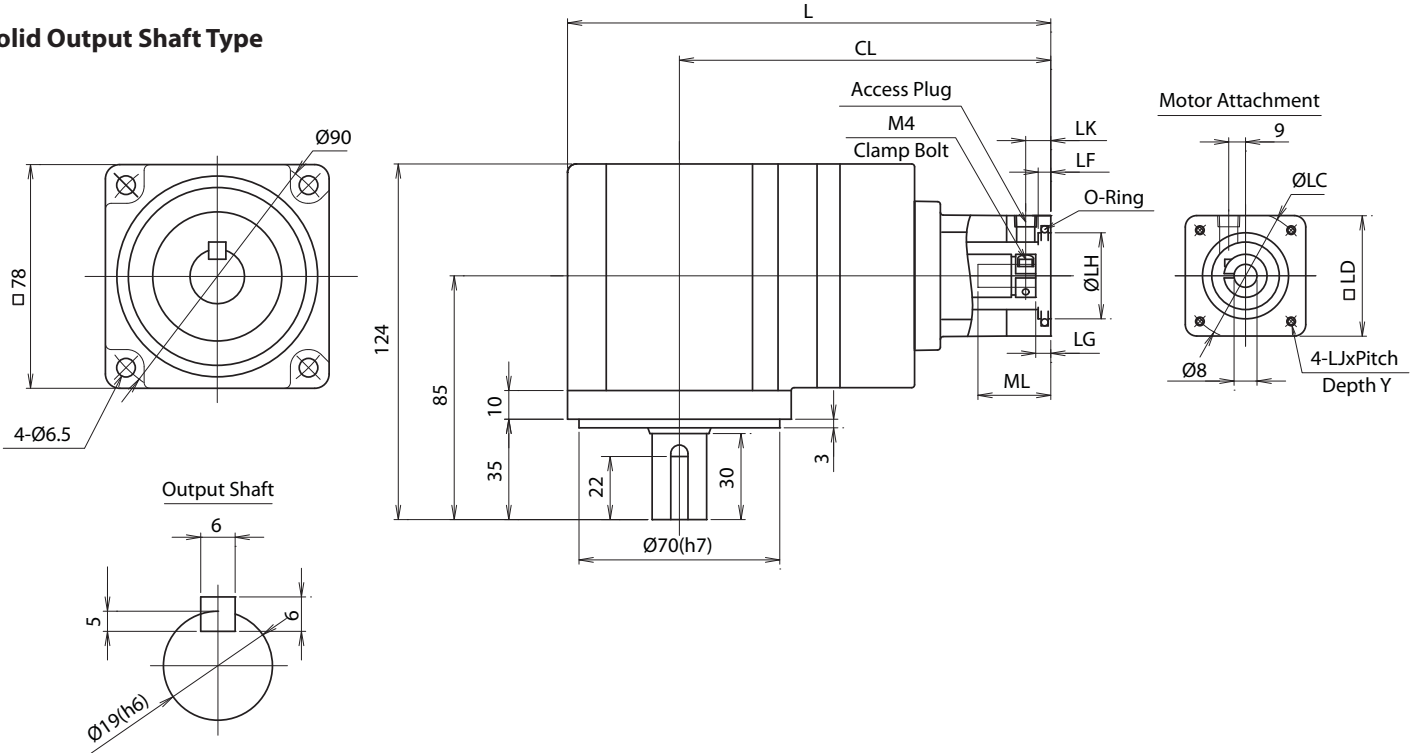
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|------------------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| B1 | mm | 45 | 30 | 42 | M3x0.5 | 8 | 174 | 135 | 10 | 6 | 5 | 32 |
| | in | 1.772 | 1.181 | 1.65 | -- | 0.31 | 6.850 | 5.315 | 0.39 | 0.24 | 0.20 | 1.26 |
| B2 | mm | 46 | 30 | 42 | M4X0.7 | 10 | 174 | 135 | 10 | 6 | 5 | 32 |
| | in | 1.811 | 1.181 | 1.65 | -- | 0.39 | 6.850 | 5.315 | 0.39 | 0.24 | 0.20 | 1.26 |
| B8 | mm | 46 | 30 | 42 | M4X0.7 | 10 | 177 | 138 | 13 | 6 | 8 | 35 |
| | in | 1.811 | 1.181 | 1.65 | -- | 0.39 | 6.969 | 5.433 | 0.51 | 0.24 | 0.31 | 1.38 |
| B4 | mm | 60 | 50 | 60 | M4X0.7 | 10 | 174 | 135 | 10 | 4 | 5 | 32 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 6.850 | 5.315 | 0.39 | 0.16 | 0.20 | 1.26 |
| B4 | mm | 70 | 50 | 60 | M4X0.7 | 10 | 174 | 135 | 10 | 4 | 5 | 32 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 6.850 | 5.315 | 0.39 | 0.16 | 0.20 | 1.26 |
| B9 | mm | 70 | 50 | 60 | M5X0.8 | 20 | 179 | 140 | 15 | 9 | 10 | 37 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.79 | 7.047 | 5.512 | 0.59 | 0.35 | 0.39 | 1.46 |
| B5 | mm | 66.68 | 38.100 | 58 | M4X0.7 | 10 | 174 | 135 | 10 | 4 | 5 | 32 |
| (NEMA23) | in | 2.625 | 1.500 | 2.28 | -- | 0.39 | 6.850 | 5.315 | 0.39 | 0.16 | 0.20 | 1.26 |
| B5+Spacer | mm | 66.68 | 38.100 | 60 | M5X0.8 | 12 | 182 | 143 | 18 | 3 | 13 | 40 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | 0.47 | 7.165 | 5.630 | 0.71 | 0.12 | 0.51 | 1.57 |
| B6 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 174 | 135 | 10 | 4 | 5 | 32 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 6.850 | 5.315 | 0.39 | 0.16 | 0.20 | 1.26 |
| B7 | mm | 43.80 | 22 | 42 | 2-3.3 dia. | -- | 176 | 137 | 12 | 4 | 7 | 34 |
| (NEMA17) | in | 1.724 | 0.866 | 1.65 | 2-0.13 dia. | -- | 6.929 | 5.394 | 0.47 | 0.16 | 0.28 | 1.34 |
| B10 | mm | 63 | 40 | 58 | M4X0.7 | 10 | 174 | 135 | 10 | 4 | 5 | 32 |
| | in | 2.480 | 1.575 | 2.28 | -- | 0.39 | 6.850 | 5.315 | 0.39 | 0.16 | 0.20 | 1.26 |

Sold & Serviced By: 

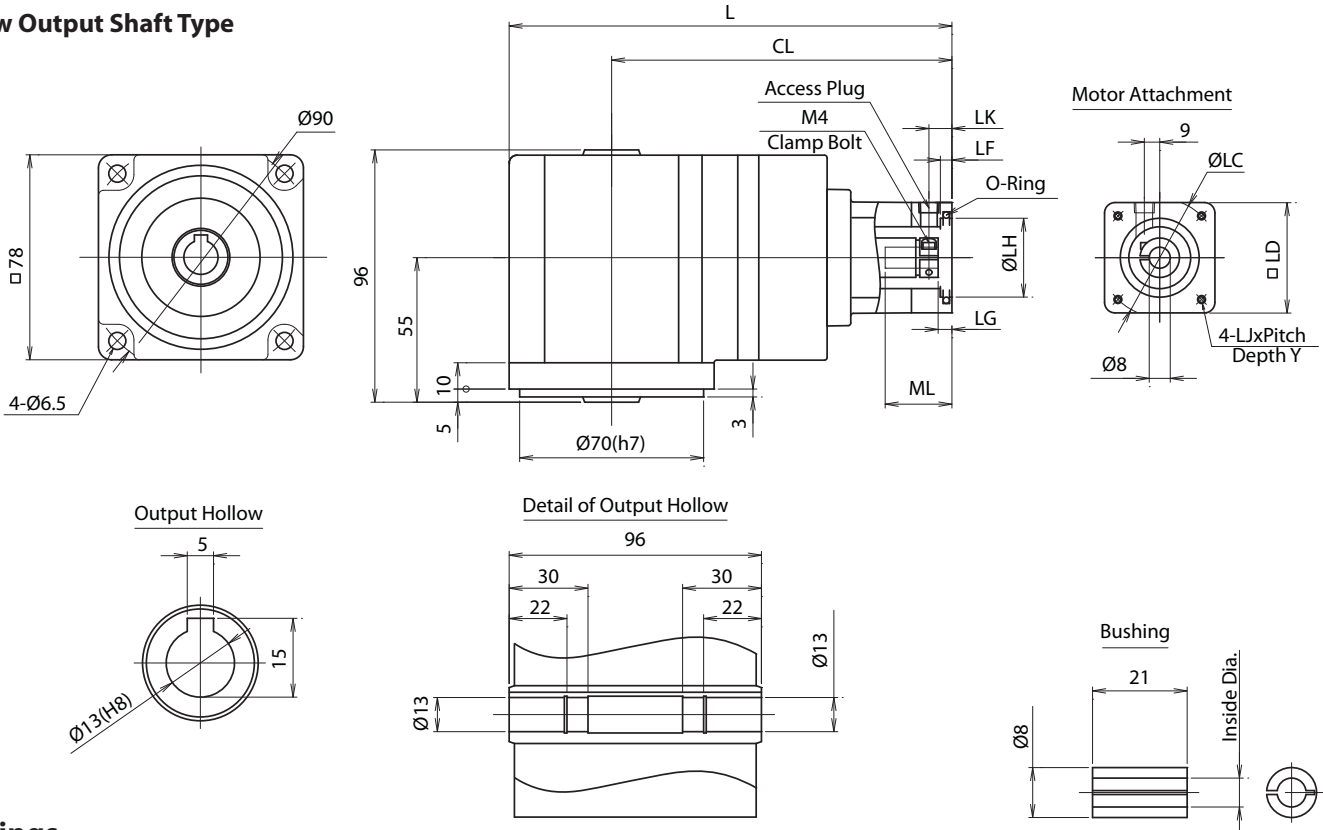
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

NEV B-Frame (78mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1

Solid Output Shaft Type



Hollow Output Shaft Type



Bushings

| Bushing | 0801 | 0802 | 0803 |
|----------|-------|-------|-------|
| Inside | 6 | 6.350 | 5 |
| Diameter | 0.236 | 0.250 | 0.197 |

NEW

NEV-SERIES Right-angle shaft

NEV C-Frame – 2-Stage Specifications

| Frame Size | C (90mm) | | | | | |
|-------------------------------|----------------------|------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Units | Note | 5 | 9 | 15 | 27 |
| Nominal Output Torque | [Nm] | -- | 15 | 20 | 20 | 30 |
| Maximum Acceleration Torque | [Nm] | -- | 30 | 35 | 40 | 40 |
| Emergency Stop Torque | [Nm] | -- | 50 | 50 | 60 | 75 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | | |
| No Load Running Torque | [Nm] | -- | 0.3 | | | |
| Permitted Radial Load | [N] | -- | 1000 | 1500 | 1800 | 1800 |
| Permitted Axial Load | [N] | -- | 500 | 750 | 900 | 900 |
| Moment of Inertia (≤Ø14) | [kgcm ²] | -- | -- | -- | -- | -- |
| Moment of Inertia (≤Ø19) | [kgcm ²] | -- | 0.806 | 0.744 | 0.415 | 0.585 |
| Efficiency | [%] | -- | 85 | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 1.0 | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | | |
| Noise Level | [dB] | -- | ≤ 73 | | | |
| Protection Class | -- | -- | IP65 | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight (Solid Output Shaft) | [kg] | -- | 4.1 | | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 4.0 | | | |

NEV C-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

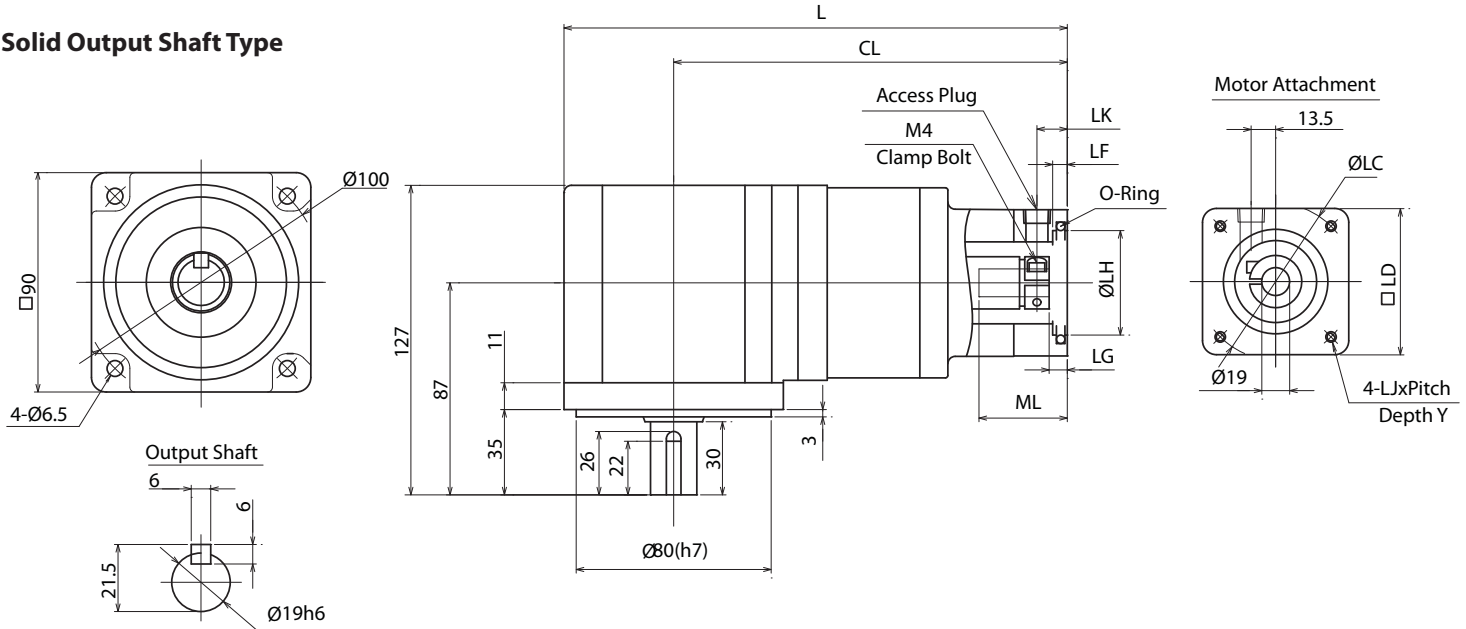
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|-----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| C1 | mm | 60 | 50 | 60 | M4x0.7 | 10 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C1 | mm | 70 | 50 | 60 | M4x0.7 | 10 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C7 | mm | 70 | 50 | 60 | M5x0.8 | 12 | 210.5 | 165.5 | 15 | 6 | 9 | 46 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.47 | 8.287 | 6.516 | 0.59 | 0.24 | 0.35 | 1.81 |
| C2 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C8 | mm | 90 | 70 | 80 | M6X1.0 | 21 | 211.5 | 166.5 | 16 | 9 | 10 | 47 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.83 | 8.327 | 6.555 | 0.63 | 0.35 | 0.39 | 1.85 |
| C3 | mm | 100 | 80 | 86 | M6X1.0 | 16 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 3.937 | 3.150 | 3.39 | -- | 0.63 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C4 | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C4+Spacer | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 214.5 | 169.5 | 19 | 3 | 13 | 50 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 8.445 | 6.673 | 0.75 | 0.12 | 0.51 | 1.97 |
| C5 | mm | 75 | 60 | 67 | M5X0.8 | 12 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 2.953 | 2.362 | 2.64 | -- | 0.47 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C6 | mm | 115 | 95 | 100 | M6X1.0 | 16 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 4.528 | 3.740 | 3.94 | -- | 0.63 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C9 | mm | 66.68 | 38.100 | 60 | M4x0.7 | 10 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | 0.39 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C14 | mm | 66.68 | 38.100 | 60 | M5x0.8 | -- | 214.5 | 169.5 | 18 | 11 | 13 | 50 |
| | in | 2.625 | 1.500 | 2.36 | -- | -- | 8.445 | 6.673 | 0.71 | 0.43 | 0.51 | 1.97 |

NEV C-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

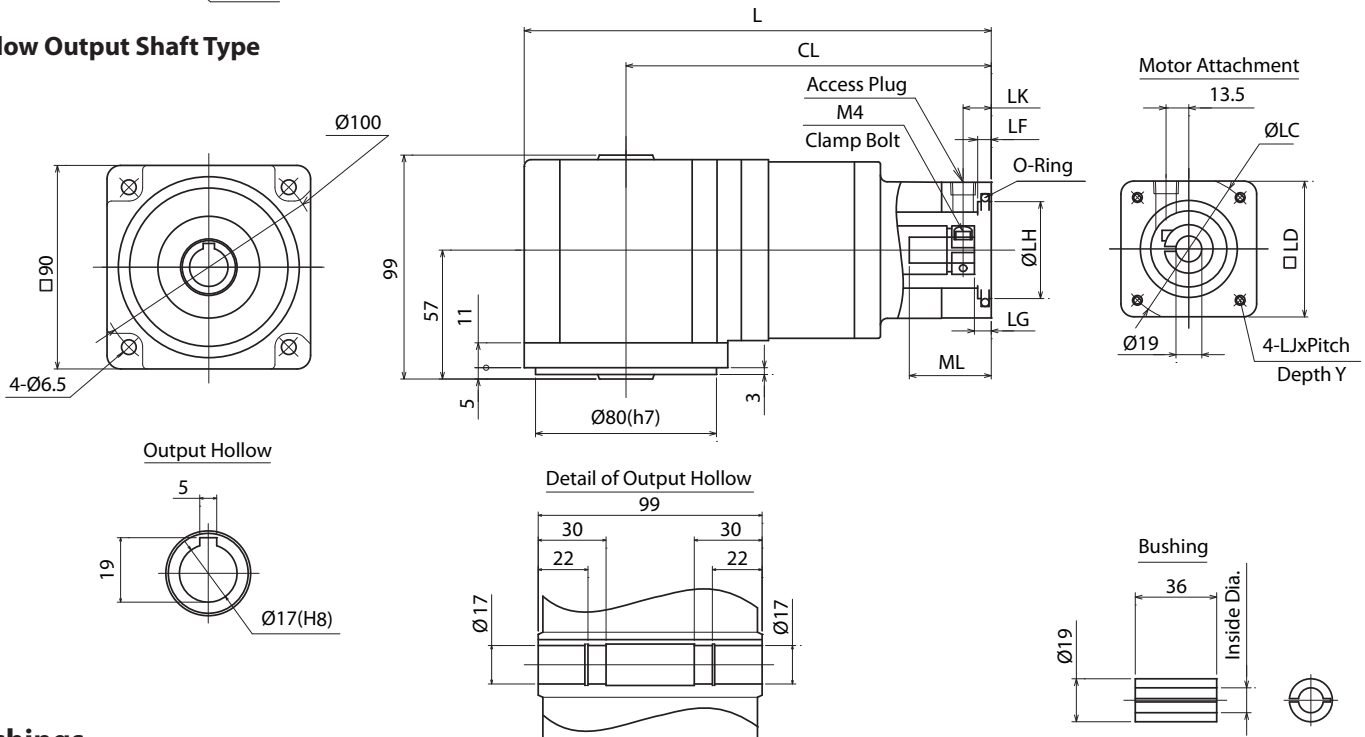
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|---------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| C10 | mm | 63 | 40 | 60 | M4x0.7 | 10 | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 2.480 | 1.575 | 2.36 | -- | 0.39 | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |
| C11 | mm | 95 | 80 | 86 | M6x1.0 | -- | 206.5 | 161.5 | 11 | 4 | 5 | 42 |
| | in | 3.740 | 3.150 | 3.39 | -- | -- | 8.130 | 6.358 | 0.43 | 0.16 | 0.20 | 1.65 |

NEV C-Frame (90mm) 2-Stage Dimensions – Ratios: 5:1, 9:1, 15:1, 27:1

Solid Output Shaft Type



Hollow Output Shaft Type



Bushings

| Bushing | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 |
|----------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|
| Inside | 11 | 14 | 16 | 9.525 | 12.700 | 15.875 | 12 | 10 | 9 | 8 | 6.25 |
| Diameter | 0.433 | 0.551 | 0.630 | 0.375 | 0.500 | 0.625 | 0.472 | 0.394 | 0.354 | 0.315 | 0.250 |

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

NEW

NEV-SERIES Right-angle shaft

NEV C-Frame – 3-Stage Specifications

| Frame Size | C (90mm) | | | | |
|-------------------------------|----------------------|------|-------|-------|-------|
| Stage | 3-Stage | | | | |
| Ratio | Units | Note | 45 | 75 | 105 |
| Nominal Output Torque | [Nm] | -- | 30 | 30 | 30 |
| Maximum Acceleration Torque | [Nm] | -- | 40 | 40 | 40 |
| Emergency Stop Torque | [Nm] | -- | 75 | 75 | 75 |
| Nominal Input Speed | [rpm] | -- | 3000 | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | |
| No Load Running Torque | [Nm] | -- | 0.205 | | |
| Permitted Radial Load | [N] | -- | 1800 | 1800 | 1800 |
| Permitted Axial Load | [N] | -- | 900 | 900 | 900 |
| Moment of Inertia (≤Ø14) | [kgcm ²] | -- | 0.794 | 0.690 | 0.590 |
| Moment of Inertia (≤ Ø19) | [kgcm ²] | -- | -- | -- | -- |
| Efficiency | [%] | -- | 80 | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 1.0 | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | |
| Noise Level | [dB] | -- | ≤ 63 | | |
| Protection Class | -- | -- | IP65 | | |
| Ambient Temperature | [°C] | -- | 0-40 | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | |
| Weight (Solid Output Shaft) | [kg] | -- | 4.3 | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 4.2 | | |

NEV C-Frame, 3-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 45:1, 75:1, 105:1

| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|-----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| C1 | mm | 60 | 50 | 60 | M4x0.7 | 10 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C1 | mm | 70 | 50 | 60 | M4x0.7 | 10 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C7 | mm | 70 | 50 | 60 | M5x0.8 | 12 | 213 | 168 | 15 | 6 | 9 | 46 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.47 | 8.386 | 6.614 | 0.59 | 0.24 | 0.35 | 1.81 |
| C2 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C8 | mm | 90 | 70 | 80 | M6X1.0 | 21 | 214 | 169 | 16 | 9 | 10 | 47 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.83 | 8.425 | 6.654 | 0.63 | 0.35 | 0.39 | 1.85 |
| C3 | mm | 100 | 80 | 86 | M6X1.0 | 16 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 3.937 | 3.150 | 3.39 | -- | 0.63 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C4 | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 209 | 164 | 11 | 4 | 5 | 42 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C4+Spacer | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 217 | 172 | 19 | 3 | 13 | 50 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 8.543 | 6.772 | 0.75 | 0.12 | 0.51 | 1.97 |
| C5 | mm | 75 | 60 | 67 | M5X0.8 | 12 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 2.953 | 2.362 | 2.64 | -- | 0.47 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C6 | mm | 115 | 95 | 100 | M6X1.0 | 16 | 209 | 164 | 11 | 4 | 5 | 42 |
| | in | 4.528 | 3.740 | 3.94 | -- | 0.63 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C9 | mm | 66.68 | 38.100 | 60 | M4x0.7 | 10 | 209 | 164 | 11 | 4 | 5 | 42 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | 0.39 | 8.228 | 6.457 | 0.43 | 0.16 | 0.20 | 1.65 |
| C14 | mm | 66.68 | 38.100 | 60 | M5x0.8 | 12 | 217 | 172 | 18 | 11 | 13 | 42 |
| | in | 2.625 | 1.500 | 2.36 | -- | 0.47 | 8.543 | 6.772 | 0.71 | 0.43 | 0.51 | 1.65 |

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com


NEV-SERIES Right-angle shaft

NEV D-Frame – 2-Stage Specifications

| Frame Size | D (115mm) | | | | | |
|-------------------------------|----------------------|------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Units | Note | 5 | 9 | 15 | 27 |
| Nominal Output Torque | [Nm] | -- | 25 | 25 | 25 | 40 |
| Maximum Acceleration Torque | [Nm] | -- | 55 | 75 | 75 | 80 |
| Emergency Stop Torque | [Nm] | -- | 100 | 140 | 140 | 180 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | | |
| No Load Running Torque | [Nm] | -- | 0.45 | | | |
| Permitted Radial Load | [N] | -- | 2200 | 2200 | 2600 | 2600 |
| Permitted Axial Load | [N] | -- | 1100 | 1100 | 1300 | 1300 |
| Moment of Inertia (≤Ø14) | [kgcm ²] | -- | -- | -- | -- | -- |
| Moment of Inertia (≤ Ø19) | [kgcm ²] | -- | 1.502 | 1.254 | 0.464 | 0.720 |
| Efficiency | [%] | -- | 85 | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 1.2 | 1.5 | 1.5 | 1.5 |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | | |
| Noise Level | [dB] | -- | ≤ 73 | | | |
| Protection Class | -- | -- | IP65 | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight (Solid Output Shaft) | [kg] | -- | 7.1 | | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 6.7 | | | |

NEV D-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|-----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| D1 | mm | 60 | 50 | 60 | M4x0.7 | 10 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D1 | mm | 70 | 50 | 60 | M4x0.7 | 10 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D7 | mm | 70 | 50 | 60 | M5x0.8 | 12 | 238 | 180.5 | 15 | 6 | 9 | 46 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.47 | 9.370 | 7.106 | 0.59 | 0.24 | 0.35 | 1.81 |
| D2 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D8 | mm | 90 | 70 | 80 | M6X1.0 | 21 | 239 | 181.5 | 16 | 9 | 10 | 47 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.83 | 9.409 | 7.146 | 0.63 | 0.35 | 0.39 | 1.85 |
| D3 | mm | 100 | 80 | 86 | M6X1.0 | 16 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 3.937 | 3.150 | 3.39 | -- | 0.63 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D4 | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D4+Spacer | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 242 | 184.5 | 19 | 3 | 13 | 50 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 9.528 | 7.264 | 0.75 | 0.12 | 0.51 | 1.97 |
| D5 | mm | 75 | 60 | 67 | M5X0.8 | 12 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 2.953 | 2.362 | 2.64 | -- | 0.47 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D6 | mm | 115 | 95 | 100 | M6X1.0 | 16 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 4.528 | 3.740 | 3.94 | -- | 0.63 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D9 | mm | 66.68 | 38.100 | 60 | M4X0.7 | 10 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | 0.39 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D14 | mm | 66.68 | 38.100 | 60 | M5X0.8 | - | 242 | 184.5 | 18 | 11 | 13 | 50 |
| | in | 2.625 | 1.500 | 2.36 | -- | - | 9.528 | 7.264 | 0.71 | 0.43 | 0.51 | 1.97 |



 Sold & Shipped By: 1.65

 0.31

 13

 50

 Toll Free Phone (877) SERV098

 Toll Free Fax (877) SERV099

www.electromate.com

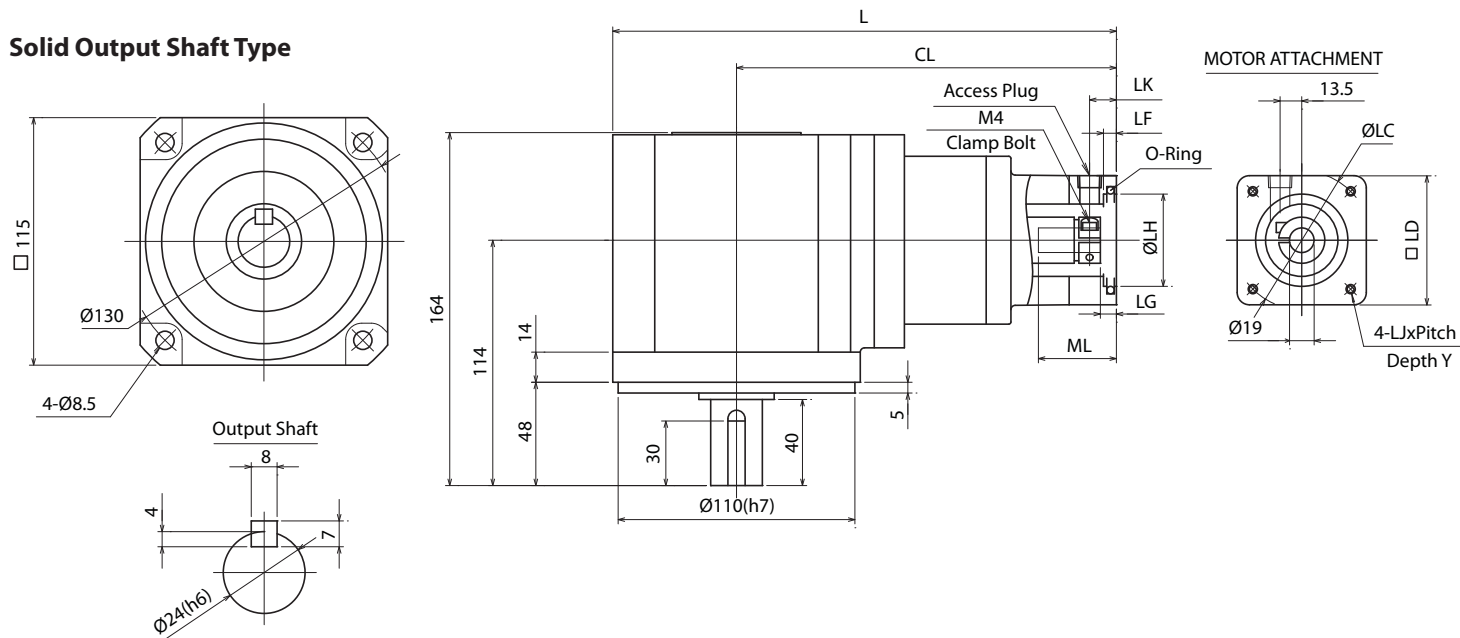
sales@electromate.com

NEV D-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

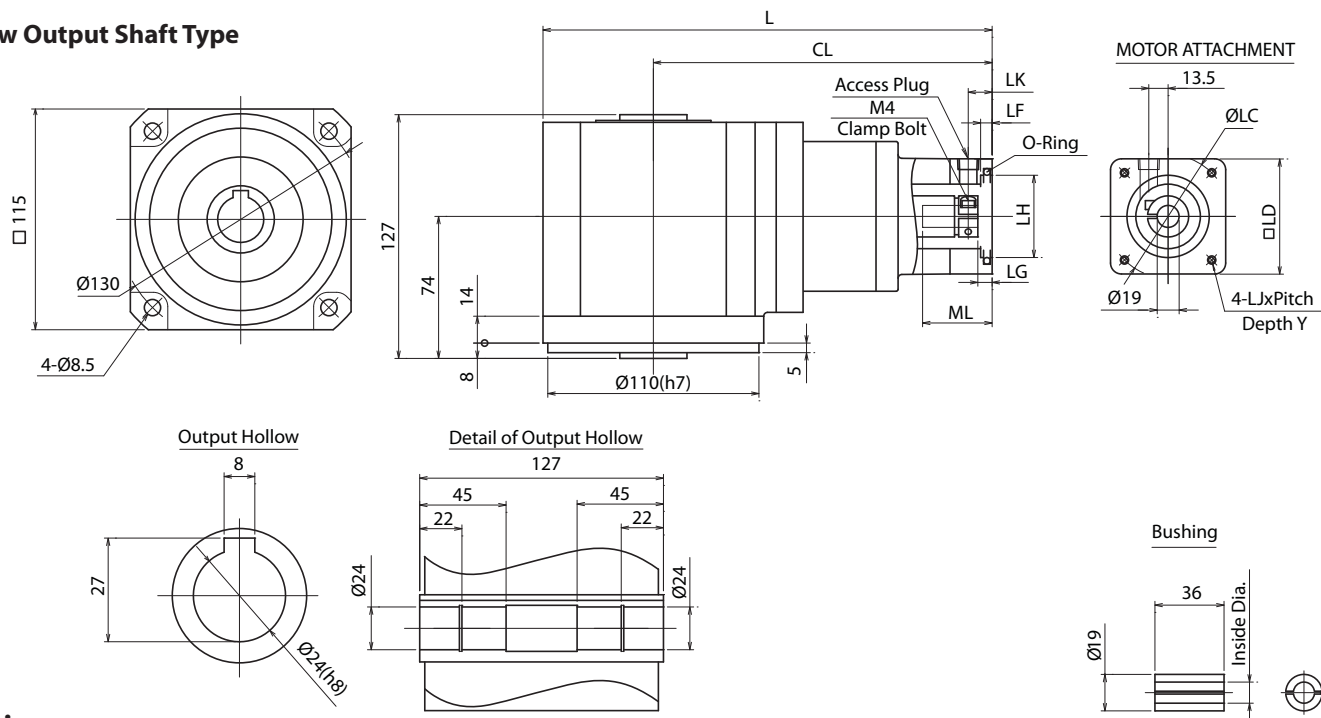
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|---------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| D10 | mm | 63 | 40 | 60 | M4x0.7 | 10 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 2.480 | 1.575 | 2.36 | -- | 0.39 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |
| D11 | mm | 95 | 80 | 86 | M6x1.0 | 16 | 234 | 176.5 | 11 | 4 | 5 | 42 |
| | in | 3.740 | 3.150 | 3.39 | -- | 0.63 | 9.213 | 6.949 | 0.43 | 0.16 | 0.20 | 1.65 |

NEV D-Frame (115mm) 2-Stage Dimensions – Ratios: 5:1, 9:1, 15:1, 27:1

Solid Output Shaft Type



Hollow Output Shaft Type



Bushings

| Bushing | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 |
|----------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|
| Inside | 11 | 14 | 16 | 9.525 | 12.700 | 15.875 | 12 | 10 | 9 | 8 | 6.250 |
| Diameter | 0.433 | 0.551 | 0.630 | 0.375 | 0.500 | 0.625 | 0.472 | 0.394 | 0.354 | 0.315 | 0.250 |

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099

www.electromate.com
sales@electromate.com

NEW

NEV-SERIES Right-angle shaft

NEV D-Frame – 3-Stage Specifications

| Frame Size | D (115mm) | | | | |
|---|----------------------|------|-----------|-------|-------|
| Stage | 3-Stage | | | | |
| Ratio | Units | Note | 45 | 75 | 105 |
| Nominal Output Torque | [Nm] | -- | 45 | 50 | 50 |
| Maximum Acceleration Torque | [Nm] | -- | 80 | 80 | 80 |
| Emergency Stop Torque | [Nm] | -- | 180 | 180 | 180 |
| Nominal Input Speed | [rpm] | -- | 3000 | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | |
| No Load Running Torque | [Nm] | -- | 0.355 | | |
| Permitted Radial Load | [N] | -- | 2600 | 2600 | 2600 |
| Permitted Axial Load | [N] | -- | 1300 | 1300 | 1300 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.806 | 0.694 | 0.648 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | -- | -- | -- |
| Efficiency | [%] | -- | 80 | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 1.5 | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | |
| Noise Level | [dB] | -- | ≤ 67 | | |
| Protection Class | -- | -- | IP65 | | |
| Ambient Temperature | [°C] | -- | 0-40 | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | |
| Weight (Solid Output Shaft) | [kg] | -- | 7.3 | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 6.9 | | |

NEV D-Frame, 3-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 45:1, 75:1, 105:1

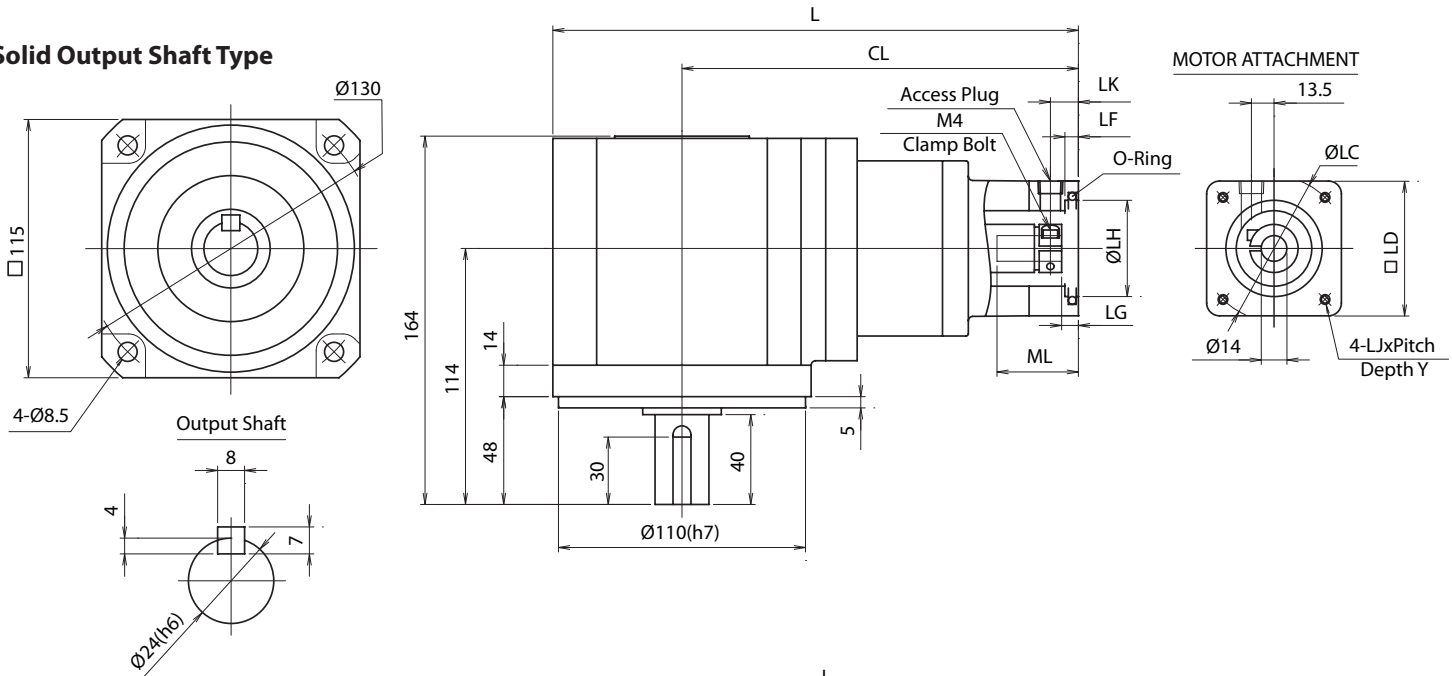
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|-----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| D1 | mm | 60 | 50 | 60 | M4x0.7 | 10 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 2.362 | 1.969 | 2.36 | -- | 0.39 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D1 | mm | 70 | 50 | 60 | M4x0.7 | 10 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.39 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D7 | mm | 70 | 50 | 60 | M5x0.8 | 12 | 240.5 | 183 | 15 | 6 | 9 | 46 |
| | in | 2.756 | 1.969 | 2.36 | -- | 0.47 | 9.469 | 7.205 | 0.59 | 0.24 | 0.35 | 1.81 |
| D2 | mm | 90 | 70 | 80 | M5X0.8 | 12 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D8 | mm | 90 | 70 | 80 | M6X1.0 | 21 | 241.5 | 184 | 16 | 9 | 10 | 47 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.83 | 9.508 | 7.244 | 0.63 | 0.35 | 0.39 | 1.85 |
| D3 | mm | 100 | 80 | 86 | M6X1.0 | 16 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 3.937 | 3.150 | 3.39 | -- | 0.63 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D4 | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D4+Spacer | mm | 98.43 | 73.025 | 83 | M5X0.8 | 12 | 244.5 | 187 | 19 | 3 | 13 | 50 |
| (NEMA34) | in | 3.875 | 2.875 | 3.27 | -- | 0.47 | 9.626 | 7.362 | 0.75 | 0.12 | 0.51 | 1.97 |
| D5 | mm | 75 | 60 | 67 | M5X0.8 | 12 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 2.953 | 2.362 | 2.64 | -- | 0.47 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D6 | mm | 115 | 95 | 100 | M6X1.0 | 16 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 4.528 | 3.740 | 3.94 | -- | 0.63 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D9 | mm | 66.68 | 38.100 | 60 | M4X0.7 | 10 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| (NEMA23) | in | 2.625 | 1.500 | 2.36 | -- | 0.39 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D14 | mm | 66.68 | 38.100 | 60 | M5X0.8 | 12 | 244.5 | 187 | 18 | 11 | 13 | 50 |
| | in | 2.625 | 1.500 | 2.36 | -- | 0.47 | 9.626 | 7.362 | 0.71 | 0.43 | 0.51 | 1.97 |

NEV D-Frame, 3-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 45:1, 75:1, 105:1

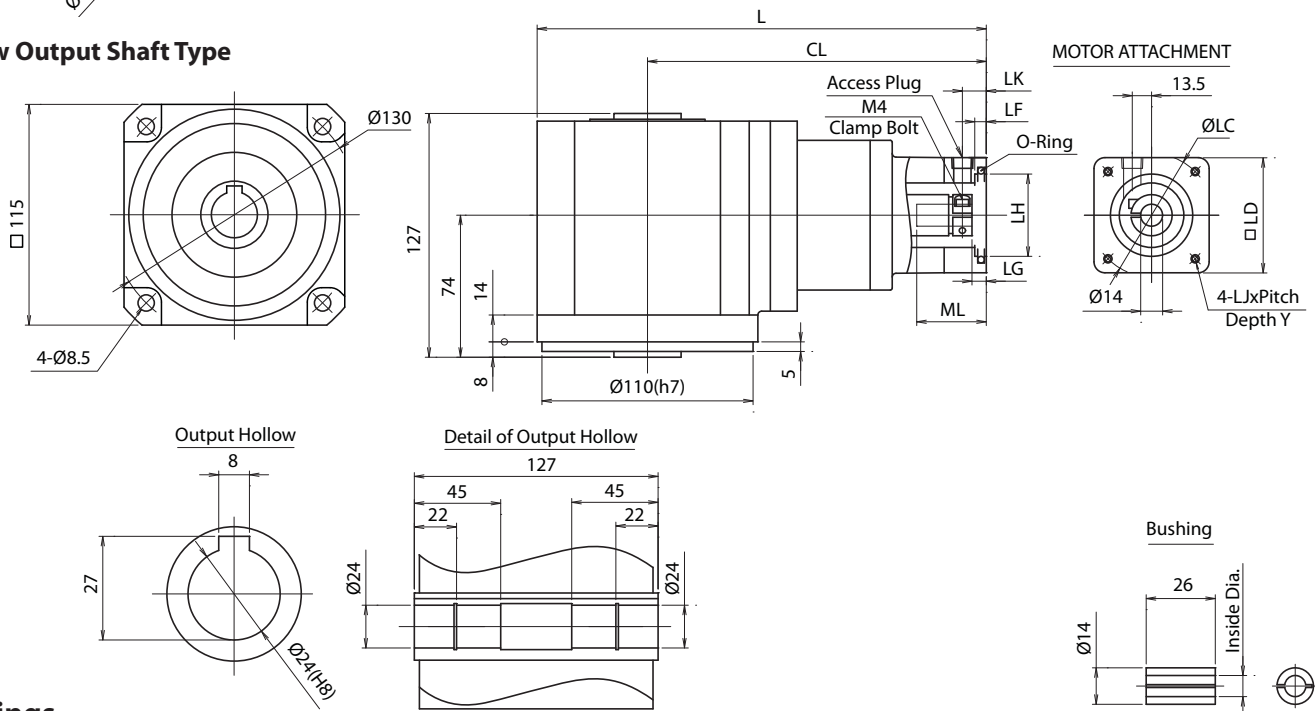
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|---------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| D10 | mm | 63 | 40 | 60 | M4x0.7 | 10 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 2.480 | 1.575 | 2.36 | -- | 0.39 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |
| D11 | mm | 95 | 80 | 86 | M6x1.0 | 16 | 236.5 | 179 | 11 | 4 | 5 | 42 |
| | in | 3.740 | 3.150 | 3.39 | -- | 0.63 | 9.311 | 7.047 | 0.43 | 0.16 | 0.20 | 1.65 |

NEV D-Frame (115mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1

Solid Output Shaft Type



Hollow Output Shaft Type



Bushings

| Bushing | 1401 | 1402 | 1403 | 1404 | 1405 | 1406 | 1407 | 1408 | 1409 | 1410 |
|----------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| Inside | 6 | 8 | 11 | 6.350 | 9.525 | 12.700 | 12 | 10 | 6 | 6 |
| Diameter | 0.236 | 0.315 | 0.433 | 0.250 | 0.375 | 0.500 | 0.472 | 0.394 | 0.354 | 0.199 |

NEW


NEV-SERIES Right-angle shaft

NEV E-Frame – 2-Stage Specifications

| Frame Size | E (145mm) | | | | | |
|-------------------------------|----------------------|------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | |
| Ratio | Units | Note | 5 | 9 | 15 | 27 |
| Nominal Output Torque | [Nm] | -- | 50 | 50 | 55 | 60 |
| Maximum Acceleration Torque | [Nm] | -- | 100 | 140 | 140 | 180 |
| Emergency Stop Torque | [Nm] | -- | 250 | 250 | 250 | 300 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | | |
| No Load Running Torque | [Nm] | -- | 1.21 | | | |
| Permitted Radial Load | [N] | -- | 3000 | 3000 | 3000 | 4000 |
| Permitted Axial Load | [N] | -- | 1500 | 1500 | 1500 | 2000 |
| Moment of Inertia (≤Ø19) | [kgcm ²] | -- | -- | -- | -- | -- |
| Moment of Inertia (≤ Ø24) | [kgcm ²] | -- | 3.559 | 2.940 | 1.193 | 2.044 |
| Efficiency | [%] | -- | 85 | | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 3.2 | 4.0 | 4.0 | 4.0 |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | | |
| Noise Level | [dB] | -- | ≤ 74 | | | |
| Protection Class | -- | -- | IP65 | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | |
| Weight (Solid Output Shaft) | [kg] | -- | 11.0 | | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 10.0 | | | |

NEV E-Frame, 2-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 5:1, 9:1, 15:1, 27:1

| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| E1 | mm | 115 | 95 | 100 | M6x1.0 | 15 | 282.5 | 210 | 15 | 4 | 7 | 57 |
| | in | 4.528 | 3.740 | 3.94 | -- | 0.59 | 11.122 | 8.268 | 0.59 | 0.16 | 0.28 | 2.24 |
| E2 | mm | 90 | 70 | 80 | M5x0.8 | 12 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.47 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |
| E7 | mm | 90 | 70 | 80 | M6x1.0 | 15 | 285.5 | 213 | 17 | 6 | 10 | 60 |
| | in | 3.543 | 2.756 | 3.15 | -- | 0.59 | 11.240 | 8.386 | 0.67 | 0.24 | 0.39 | 2.36 |
| E3 | mm | 100 | 80 | 90 | M6x1.0 | 15 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| | in | 3.937 | 3.150 | 3.54 | -- | 0.59 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |
| E4 | mm | 125.73 | 55.563 | 108 | M6x1.0 | 15 | 282.5 | 210 | 15 | 5 | 7 | 57 |
| (NEMA42) | in | 4.950 | 2.188 | 4.25 | -- | 0.59 | 11.122 | 8.268 | 0.59 | 0.20 | 0.28 | 2.24 |
| E5 | mm | 145 | 110 | 130 | M8x1.25 | 16 | 285.5 | 213 | 18 | 6 | 10 | 60 |
| | in | 5.709 | 4.331 | 5.12 | -- | 0.63 | 11.240 | 8.386 | 0.71 | 0.24 | 0.39 | 2.36 |
| E6 | mm | 130 | 110 | 115 | M8x1.25 | 16 | 282.5 | 210 | 15 | 6 | 7 | 60 |
| | in | 5.118 | 4.331 | 4.53 | -- | 0.63 | 11.122 | 8.268 | 0.59 | 0.24 | 0.28 | 2.36 |
| E11 | mm | 98.43 | 73.025 | 90 | M5x0.8 | 12 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| (NEMA34) | in | 3.875 | 2.875 | 3.54 | -- | 0.47 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |
| E12 | mm | 149.22 | 114.300 | 130 | -- | - | 285.5 | 213 | 18 | 6 | 10 | 60 |
| (NEMA56) | in | 5.875 | 4.500 | 5.12 | 3/8UNC-16 | - | 11.240 | 8.386 | 0.71 | 0.24 | 0.39 | 2.36 |
| E13 | mm | 66.7 | 38.1 | 80 | M4x0.7 | 10 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| | in | 2.626 | 1.500 | 3.15 | -- | 0.39 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |
| E14 | mm | 70 | 50 | 80 | M4x0.7 | 10 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| | in | 2.756 | 1.969 | 3.15 | -- | 0.39 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |
| E15 | mm | 75 | 60 | 80 | M5x0.8 | 12 | 282.5 | 210 | 14 | 4 | 7 | 57 |
| | in | 2.953 | 2.362 | 3.15 | -- | 0.47 | 11.122 | 8.268 | 0.55 | 0.16 | 0.28 | 2.24 |



 Sold & Accepted By: 2.24

 0.28

 7

 5

 Toll Free Phone (877) SERV098

 Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

NEV-SERIES Right-angle shaft

NEV E-Frame – 3-Stage Specifications

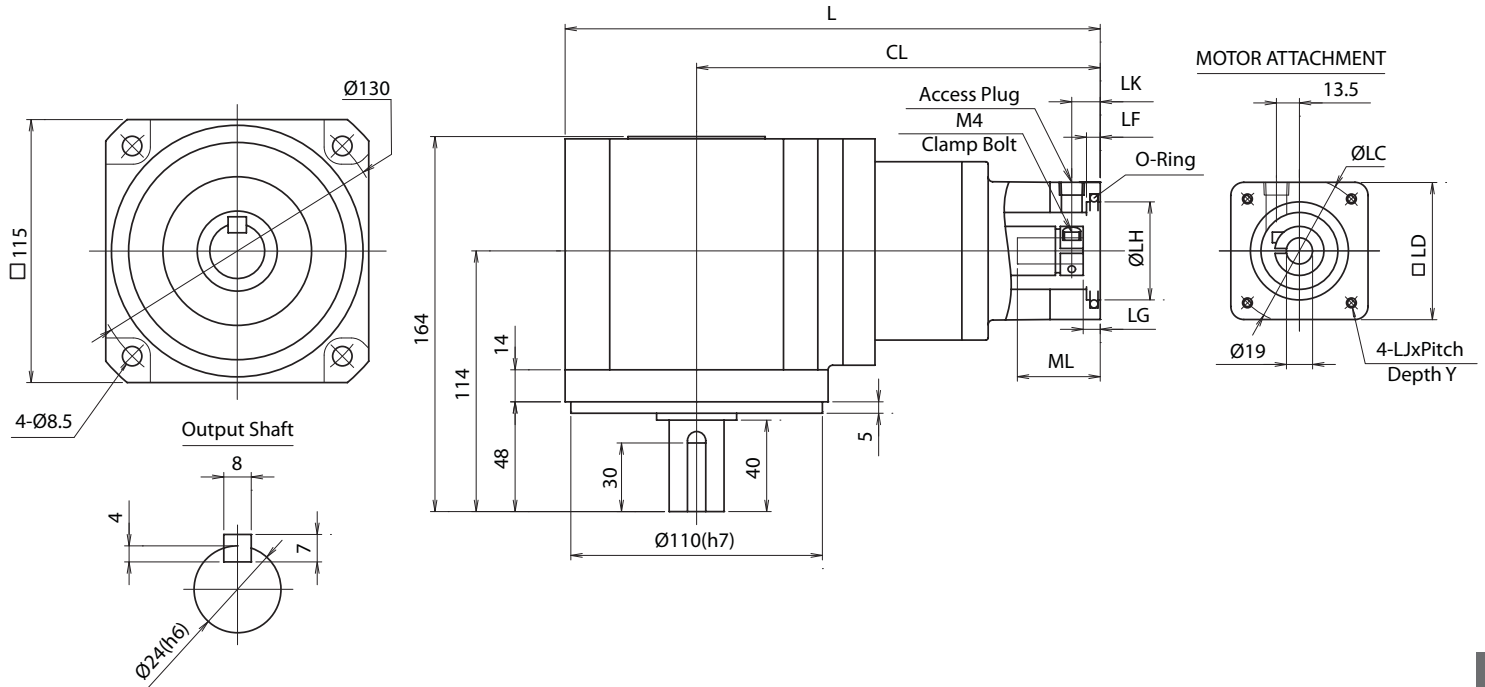
| Frame Size | E (145mm) | | | | |
|-------------------------------|----------------------|------|-------|-------|-------|
| Stage | 3-Stage | | | | |
| Ratio | Units | Note | 45 | 75 | 105 |
| Nominal Output Torque | [Nm] | -- | 80 | 90 | 90 |
| Maximum Acceleration Torque | [Nm] | -- | 180 | 180 | 180 |
| Emergency Stop Torque | [Nm] | -- | 300 | 300 | 300 |
| Nominal Input Speed | [rpm] | -- | 3000 | | |
| Maximum Input Speed | [rpm] | -- | 6000 | | |
| No Load Running Torque | [Nm] | -- | 0.961 | | |
| Permitted Radial Load | [N] | -- | 4000 | 4000 | 4000 |
| Permitted Axial Load | [N] | -- | 2000 | 2000 | 2000 |
| Moment of Inertia (≤Ø19) | [kgcm ²] | -- | 1.878 | 1.303 | 1.184 |
| Moment of Inertia (≤ Ø24) | [kgcm ²] | -- | -- | -- | -- |
| Efficiency | [%] | -- | 80 | | |
| Torsional Rigidity | [Nm/arcmin] | -- | 4.0 | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 30 | | |
| Noise Level | [dB] | -- | ≤ 69 | | |
| Protection Class | -- | -- | IP65 | | |
| Ambient Temperature | [°C] | -- | 0-40 | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | |
| Weight (Solid Output Shaft) | [kg] | -- | 11.4 | | |
| Weight (Hollow Output Shaft) | [kg] | -- | 10.4 | | |

NEV E-Frame, 3-Stage Dimensions, Solid / Hollow Output Shaft Type – Ratios: 45:1, 75:1, 105:1

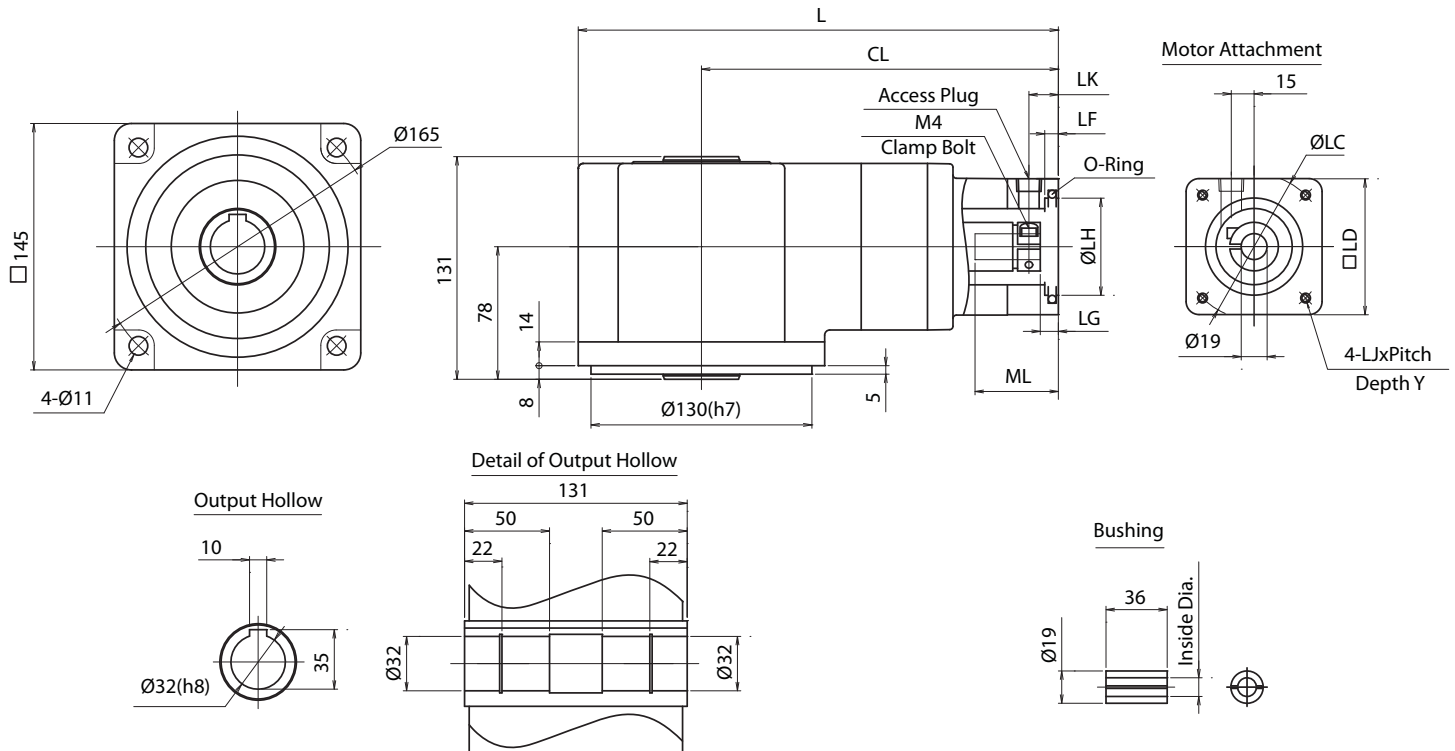
| Adapter | Unit | Bolt Circle LC | Pilot LH | Square LD | Tapping Bolt LJ | Depth Y | Length | | Plug LK | Flange Depth | | |
|----------|------|----------------|----------|-----------|-----------------|---------|--------|-------|---------|--------------|------|------|
| | | | | | | | L | CL | | LF | LG | ML |
| E1 | mm | 115 | 95 | 100 | M6x1.0 | 15 | 283.5 | 211 | 15 | 4 | 7 | 57 |
| | in | 4.528 | 3.740 | 3.94 | - | 0.59 | 11.161 | 8.307 | 0.59 | 0.16 | 0.28 | 2.24 |
| E2 | mm | 90 | 70 | 80 | M5x0.8 | 12 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| | in | 3.543 | 2.756 | 3.15 | - | 0.47 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |
| E7 | mm | 90 | 70 | 80 | M6x1.0 | 15 | 286.5 | 214 | 17 | 6 | 10 | 60 |
| | in | 3.543 | 2.756 | 3.15 | - | 0.59 | 11.280 | 8.425 | 0.67 | 0.24 | 0.39 | 2.36 |
| E3 | mm | 100 | 80 | 90 | M6x1.0 | 15 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| | in | 3.937 | 3.150 | 3.54 | - | 0.59 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |
| E4 | mm | 125.73 | 55.563 | 108 | M6x1.0 | 15 | 283.5 | 211 | 15 | 5 | 7 | 57 |
| (NEMA42) | in | 4.950 | 2.188 | 4.25 | - | 0.59 | 11.161 | 8.307 | 0.59 | 0.20 | 0.28 | 2.24 |
| E5 | mm | 145 | 110 | 130 | M8x1.25 | 16 | 286.5 | 214 | 18 | 6 | 10 | 60 |
| | in | 5.709 | 4.331 | 5.12 | - | 0.63 | 11.280 | 8.425 | 0.71 | 0.24 | 0.39 | 2.36 |
| E6 | mm | 130 | 110 | 115 | M8x1.25 | 16 | 283.5 | 211 | 15 | 6 | 7 | 60 |
| | in | 5.118 | 4.331 | 4.53 | - | 0.63 | 11.161 | 8.307 | 0.59 | 0.24 | 0.28 | 2.36 |
| E11 | mm | 98.43 | 73.025 | 90 | M5x0.8 | 12 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| (NEMA34) | in | 3.875 | 2.875 | 3.54 | - | 0.47 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |
| E12 | mm | 149.22 | 114.300 | 130 | - | - | 286.5 | 214 | 18 | 6 | 10 | 60 |
| (NEMA56) | in | 5.875 | 4.500 | 5.12 | 3/8UNC-16 | - | 11.280 | 8.425 | 0.71 | 0.24 | 0.39 | 2.36 |
| E13 | mm | 66.7 | 38.1 | 80 | M4x0.7 | 10 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| | in | 2.626 | 1.500 | 3.15 | - | 0.39 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |
| E14 | mm | 70 | 50 | 80 | M4x0.7 | 10 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| | in | 2.756 | 1.969 | 3.15 | - | 0.39 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |
| E15 | mm | 75 | 60 | 80 | M5x0.8 | 12 | 283.5 | 211 | 14 | 4 | 7 | 57 |
| | in | 2.953 | 2.362 | 3.15 | - | 0.47 | 11.161 | 8.307 | 0.55 | 0.16 | 0.28 | 2.24 |

NEV E-Frame (145mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1

Solid Output Shaft Type



Hollow Output Shaft Type



Bushings

| Bushing | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 |
|----------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|
| Inside | 11 | 14 | 16 | 9.525 | 12.700 | 15.875 | 12 | 10 | 9 | 8 | 6.5 |
| Diameter | 0.433 | 0.551 | 0.630 | 0.375 | 0.500 | 0.625 | 0.472 | 0.394 | 0.354 | 0.315 | 0.250 |

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

NEW



EVL-SERIES

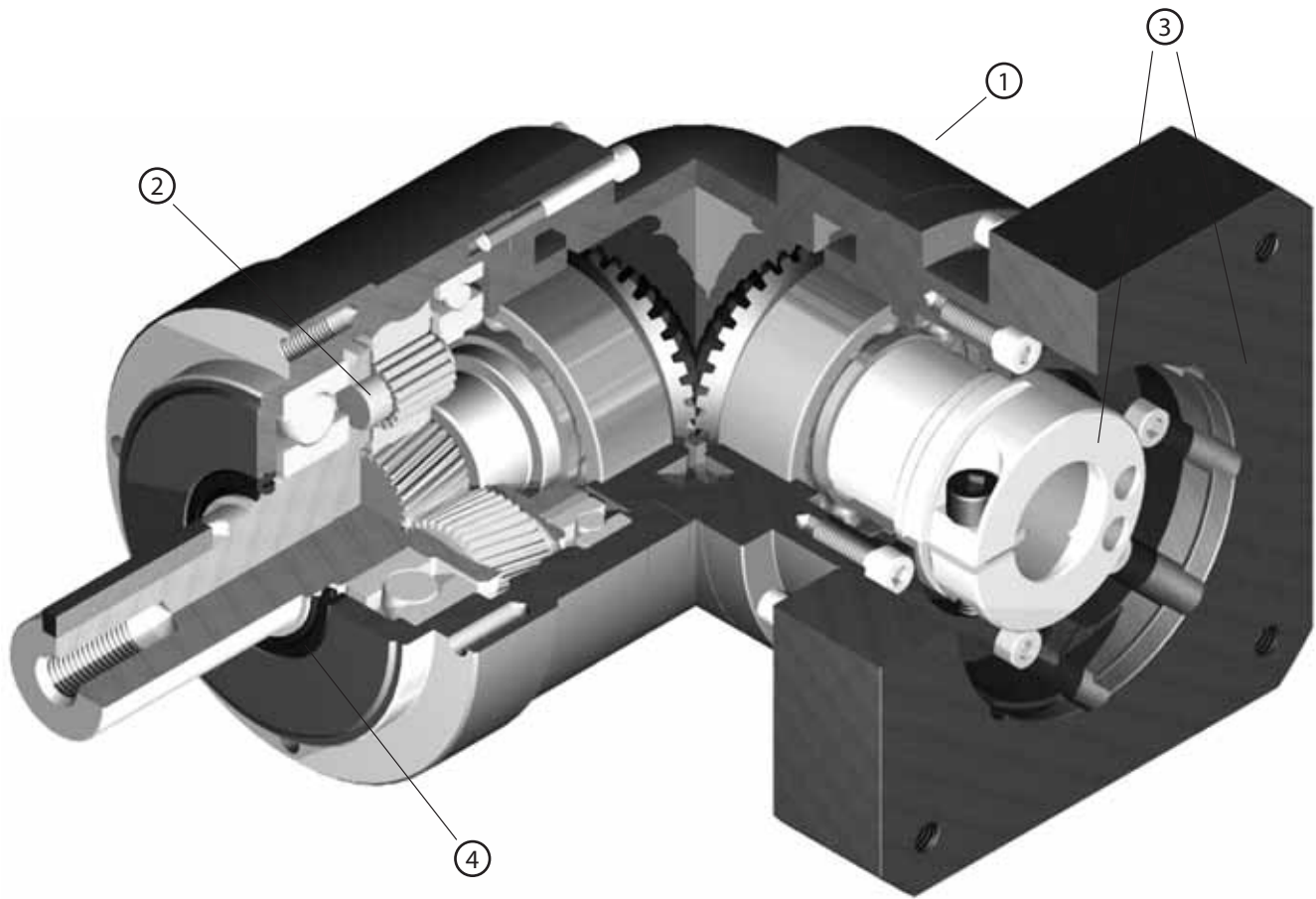
- Industry standard mounting dimensions
- Large variety of reduction ratios to choose from
- Thread-in mounting style
- Best-in-class value for right-angle reducers
- Low backlash (≤ 6 arc-min)
- Space-saving design when minimal envelope available
- Readily available

Sold & Serviced By:
 **ELECTROMATE**

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

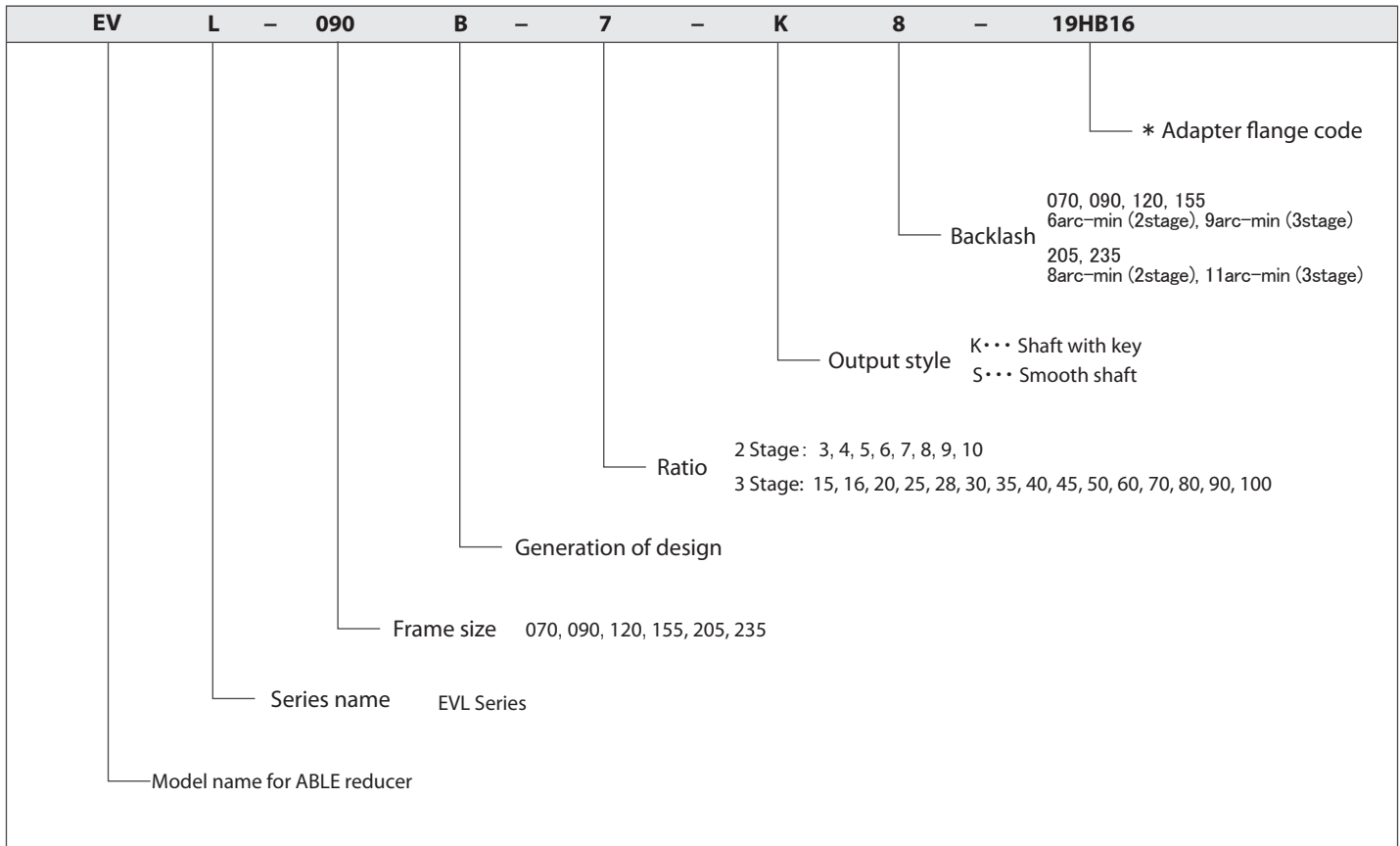
EVL-SERIES Right-angle shaft

EVL-Series – Features



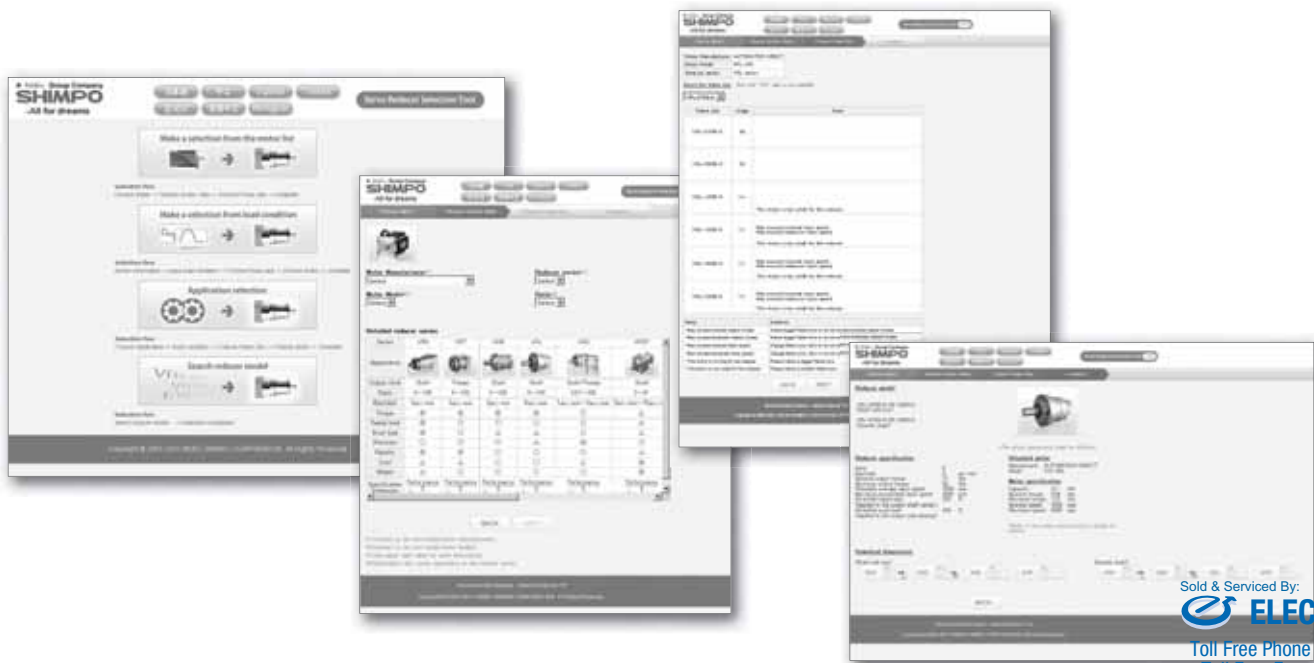
- ① Space-saving features, motor can be located at a 90 degree position from the reducer providing a more compact footprint
- ② High rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ Adapter-bushing connection, enable a simple, effective attachment to most servo motors
- ④ No leakage through the seal, high viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑤ No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

EVL-Series – Model Code



*1) Adapter flange code
 Adapter flange code varies depending on the motor.

EVL



EVL-SERIES Right-angle shaft

EVL-070 – 2-Stage Specifications

| Frame Size | 070 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 12 | 16 | 22 | 24 | 24 | 24 | 16 | 16 |
| Maximum Acceleration Torque | [Nm] | *2 | 24 | 32 | 40 | 45 | 45 | 45 | 32 | 32 |
| Emergency Stop Torque | [Nm] | *3 | 50 | 65 | 80 | 90 | 90 | 90 | 65 | 65 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.33 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 430 | 470 | 510 | 540 | 570 | 600 | 620 | 640 |
| Permitted Axial Load | [N] | *8 | 310 | 360 | 390 | 430 | 460 | 480 | 510 | 530 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.310 | 0.270 | 0.250 | 0.240 | 0.230 | 0.230 | 0.230 | 0.230 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.390 | 0.340 | 0.320 | 0.310 | 0.310 | 0.310 | 0.300 | 0.300 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.580 | 0.530 | 0.510 | 0.500 | 0.500 | 0.500 | 0.490 | 0.490 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.9 | | | | | | | |

EVL-070 – 3-Stage Specifications

| Frame Size | 070 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 24 | 24 |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 45 | 45 |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 90 | 90 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 740 | 750 | 810 | 870 | 910 | 930 | 980 | 100 |
| Permitted Axial Load | [N] | *8 | 630 | 650 | 720 | 790 | 830 | 860 | 920 | 970 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.073 | 0.079 | 0.071 | 0.071 | 0.077 | 0.062 | 0.070 | 0.061 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.118 | 0.124 | 0.116 | 0.115 | 0.122 | 0.106 | 0.115 | 0.106 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.7 | | | | | | | |

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-070 – 3-Stage Specifications

| Frame Size | 070 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 16 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 32 | | |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 65 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1100 | 1100 | 1200 | 1200 | 1200 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 1000 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | | |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.070 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.115 | 0.106 | 0.106 | 0.105 | 0.105 | 0.105 | 0.105 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.7 | | | | | | | | |

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVL070

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)

*9) The maximum radial load that the reducer can accept

*10) The maximum axial load that the reducer can accept

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

*13) Contact NIDEC-SHIMPO for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

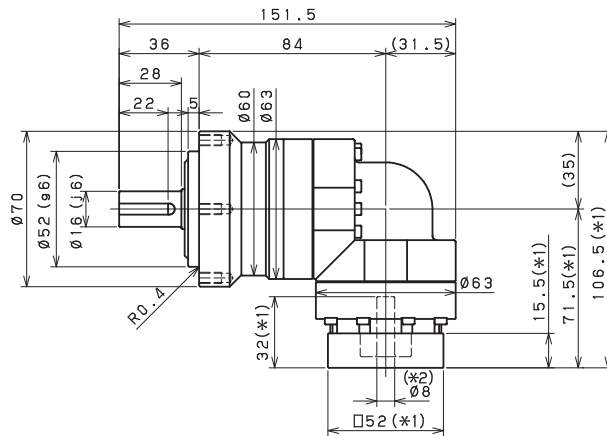
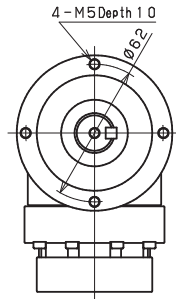
www.electromate.com

sales@electromate.com

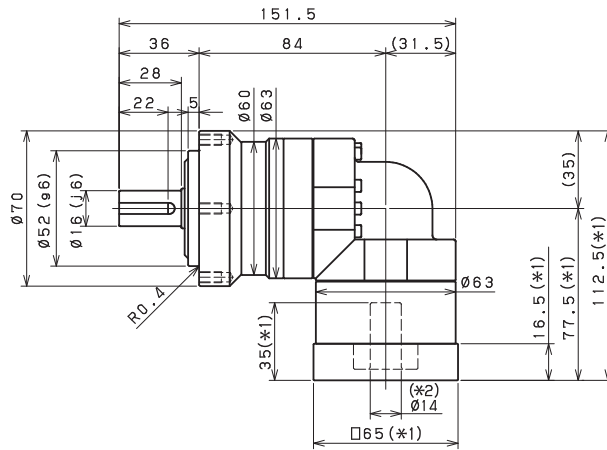
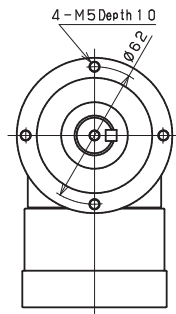
EVL-SERIES Right-angle shaft

EVL-070 – 2-Stage Dimensions

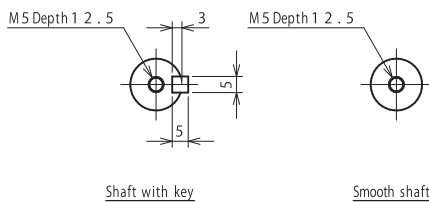
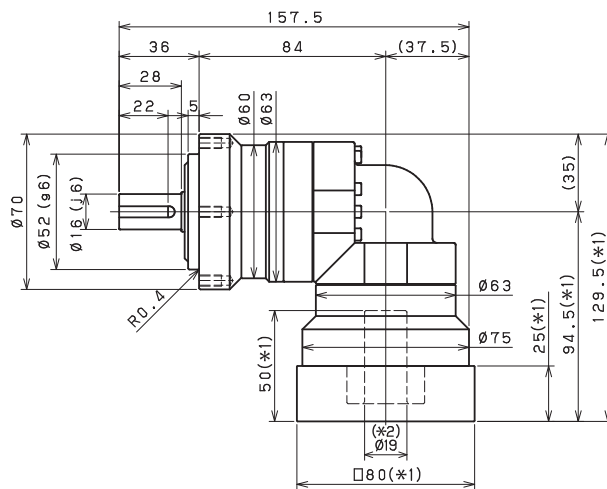
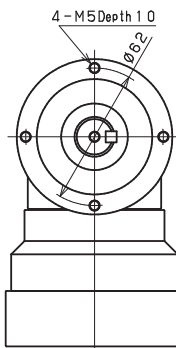
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



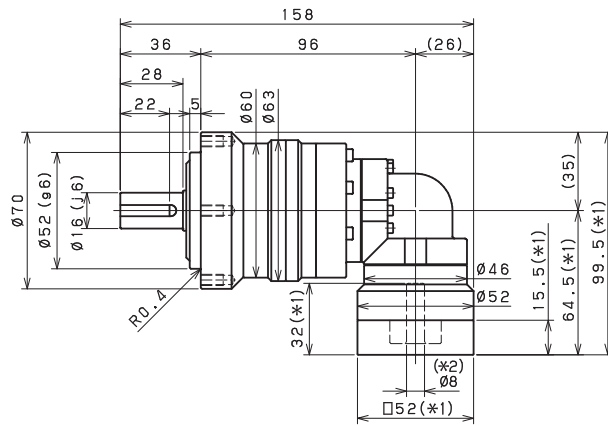
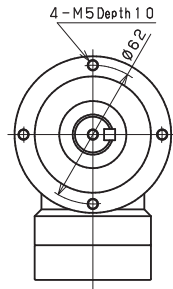
Input shaft bore $\leq \phi 19$



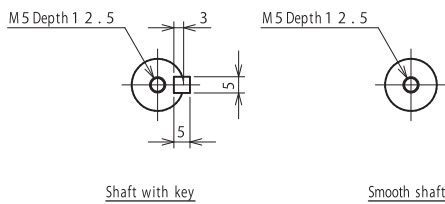
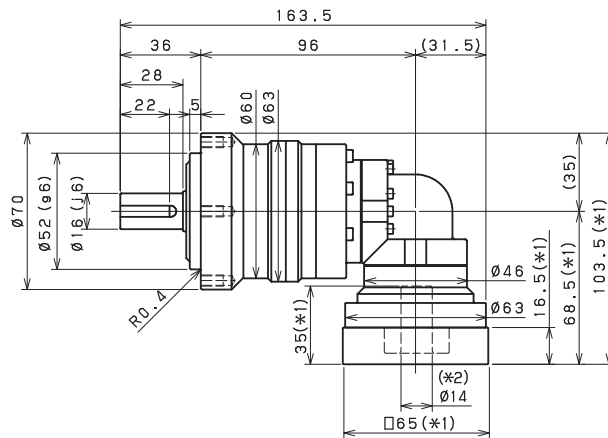
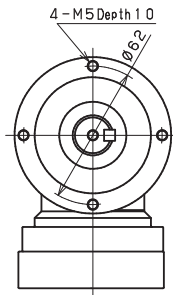
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVL-070 – 3-Stage Dimensions

Input shaft bore $\leq \varnothing 8$



Input shaft bore $\leq \varnothing 14$

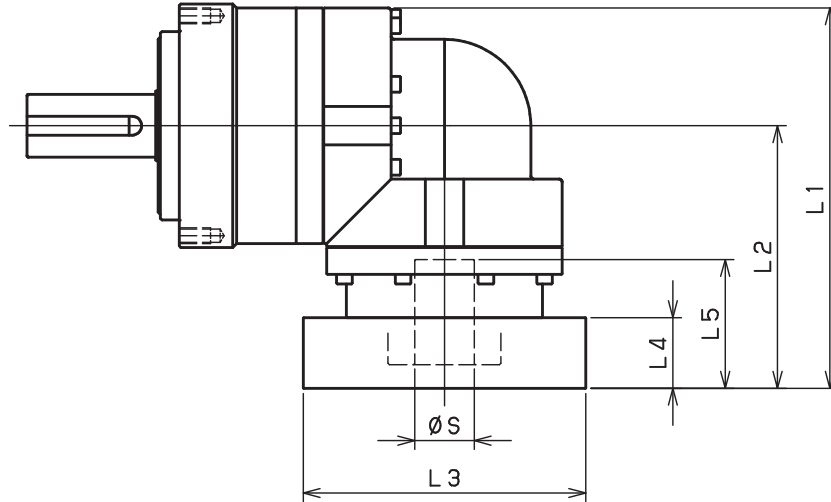


- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVL

EVL-SERIES Right-angle shaft

EVL-070 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-070-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 106.5 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 111.5 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 106.5 | 71.5 | □60 | 15.5 | 32 |
| | BC·BF | 111.5 | 76.5 | □60 | 20.5 | 37 |
| | CA | 111.5 | 76.5 | □70 | 20.5 | 37 |
| EVL-070-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 112.5 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 117.5 | 82.5 | □65 | 21.5 | 40 |
| | BL | 122.5 | 87.5 | □65 | 26.5 | 45 |
| | CA·CC | 112.5 | 77.5 | □70 | 16.5 | 35 |
| | CB | 117.5 | 82.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 112.5 | 77.5 | □80 | 16.5 | 35 |
| | DE·DL | 117.5 | 82.5 | □80 | 21.5 | 40 |
| | DG·DK | 122.5 | 87.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 112.5 | 77.5 | □90 | 16.5 | 35 |
| | EJ·EM | 117.5 | 82.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 122.5 | 87.5 | □90 | 26.5 | 45 |
| | FA | 112.5 | 77.5 | □100 | 16.5 | 35 |
| | FB | 122.5 | 87.5 | □100 | 26.5 | 45 |
| EVL-070-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 129.5 | 94.5 | □80 | 25 | 50 |
| | DD | 139.5 | 104.5 | □80 | 35 | 60 |
| | DE | 134.5 | 99.5 | □80 | 30 | 55 |
| | EA | 134.5 | 99.5 | □90 | 30 | 55 |
| | EB·ED | 129.5 | 94.5 | □90 | 25 | 50 |
| | EC | 139.5 | 104.5 | □90 | 35 | 60 |
| | FA | 129.5 | 94.5 | □100 | 25 | 50 |
| FB | 139.5 | 104.5 | □100 | 35 | 60 | |

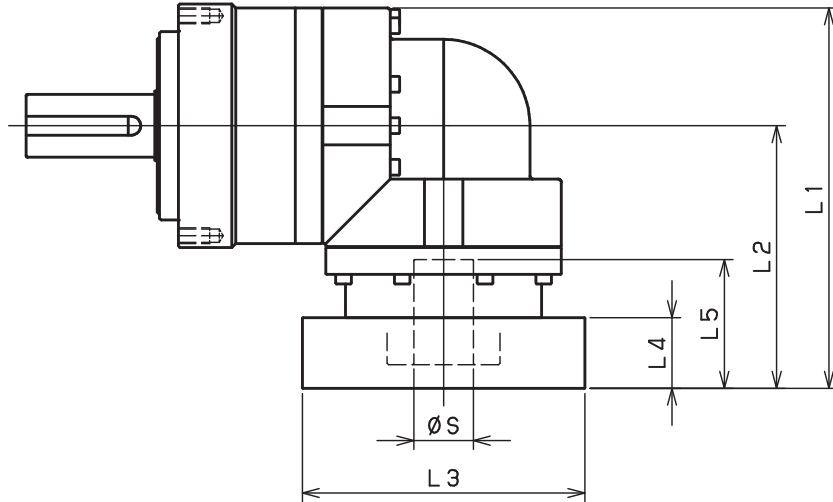
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVL-070 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-070-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 99.5 | 64.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 104.5 | 69.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 99.5 | 64.5 | □60 | 15.5 | 32 |
| | BC·BF | 104.5 | 69.5 | □60 | 20.5 | 37 |
| | CA | 104.5 | 69.5 | □70 | 20.5 | 37 |
| EVL-070-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 103.5 | 68.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 108.5 | 73.5 | □65 | 21.5 | 40 |
| | BL | 113.5 | 78.5 | □65 | 26.5 | 45 |
| | CA·CC | 103.5 | 68.5 | □70 | 16.5 | 35 |
| | CB | 108.5 | 73.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 103.5 | 68.5 | □80 | 16.5 | 35 |
| | DE·DL | 108.5 | 73.5 | □80 | 21.5 | 40 |
| | DG·DK | 113.5 | 78.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 103.5 | 68.5 | □90 | 16.5 | 35 |
| | EJ·EM | 108.5 | 73.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 113.5 | 78.5 | □90 | 26.5 | 45 |
| | FA | 103.5 | 68.5 | □100 | 16.5 | 35 |
| | FB | 113.5 | 78.5 | □100 | 26.5 | 45 |
| EVL-070-□-□-19** (14 < S ≤ 19) | DA·DB·DC | -- | -- | -- | -- | -- |
| | DD | -- | -- | -- | -- | -- |
| | DE | -- | -- | -- | -- | -- |
| | EA | -- | -- | -- | -- | -- |
| | EB·ED | -- | -- | -- | -- | -- |
| | EC | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVL-SERIES Right-angle shaft

EVL-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 60 | 65 | 65 | 65 | 65 | 45 | 45 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 90 | 90 | 90 | 90 | 90 | 65 | 65 | | |
| Emergency Stop Torque | [Nm] | *3 | 130 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.13 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 810 | 890 | 960 | 1000 | 1100 | 1100 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 930 | 1100 | 1200 | 1300 | 1300 | 1400 | 1500 | 1600 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.120 | 1.890 | 1.800 | 1.760 | 1.730 | 1.710 | 1.700 | 1.690 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.450 | 2.220 | 2.130 | 2.090 | 2.060 | 2.040 | 2.030 | 2.020 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.570 | 4.350 | 4.260 | 4.210 | 4.180 | 4.170 | 4.160 | 4.150 | | |
| Efficiency | [%] | *11 | 93 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 6 | | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4.9 | | | | | | | | | |

EVL-090 – 3-Stage Specifications

| Frame Size | 090 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 65 | 65 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 110 | 110 | 110 | 65 | 110 | 110 | | |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 220 | 220 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1400 | 1400 | 1500 | 1600 | 1700 | 1700 | 1800 | 1900 | | |
| Permitted Axial Load | [N] | *8 | 1900 | 1900 | 2100 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.340 | 0.380 | 0.330 | 0.320 | 0.370 | 0.250 | 0.320 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.410 | 0.460 | 0.400 | 0.400 | 0.450 | 0.330 | 0.400 | 0.320 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.600 | 0.650 | 0.590 | 0.590 | 0.640 | 0.510 | 0.590 | 0.510 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4.3 | | | | | | | | | |

EVL-090 – 3-Stage Specifications

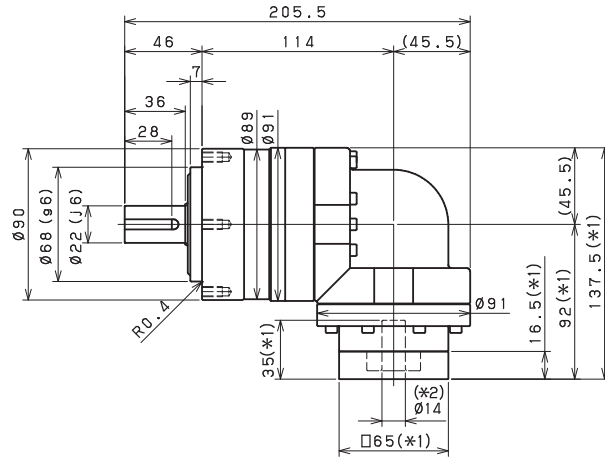
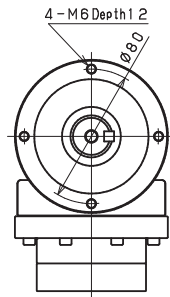
| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 45 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 1110 | 110 | 110 | 65 | 65 | | |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 | 2400 | | |
| Permitted Axial Load | [N] | *8 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.320 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.390 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.580 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4.3 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVL090
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

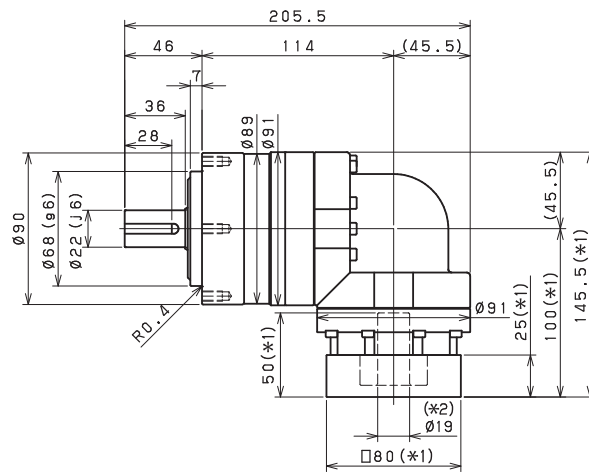
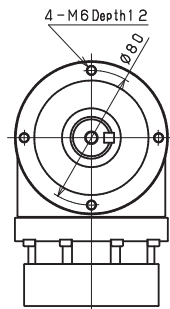
EVL-SERIES Right-angle shaft

EVL-090 – 2-Stage Dimensions

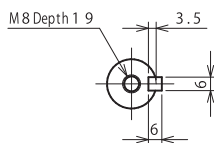
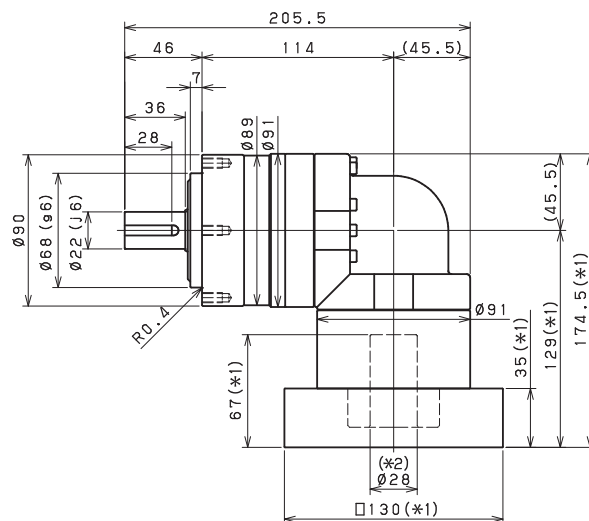
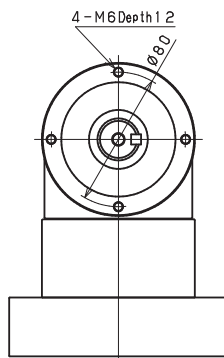
Input shaft bore $\cong \varnothing 14$



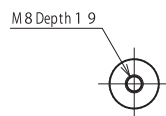
Input shaft bore $\cong \varnothing 19$



Input shaft bore $\cong \varnothing 28$



Shaft with key



Smooth shaft

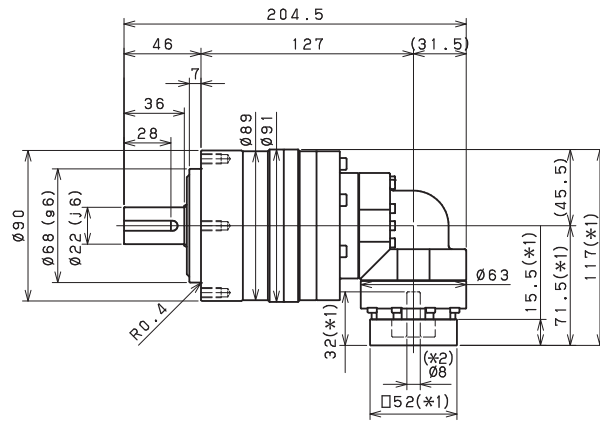
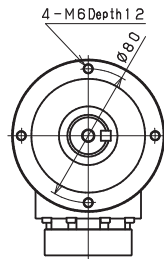
- *1) Length will vary depending on motor.
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

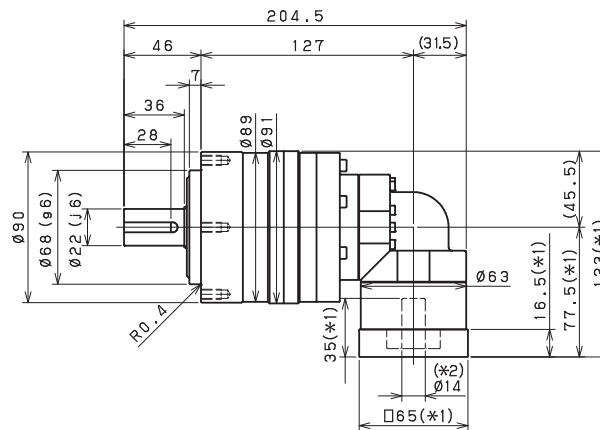
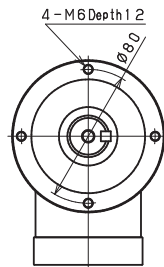
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-090 – 3-Stage Dimensions

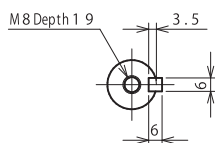
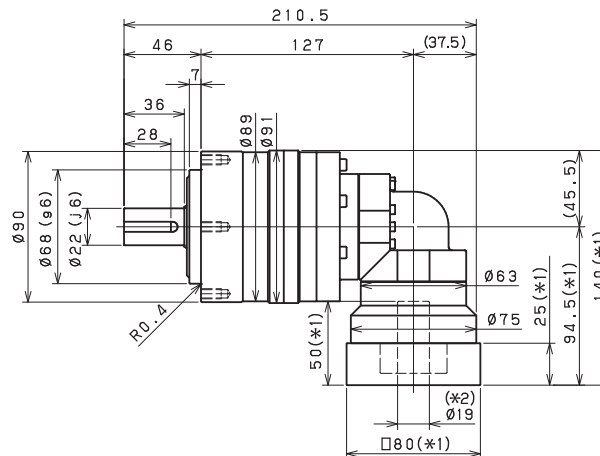
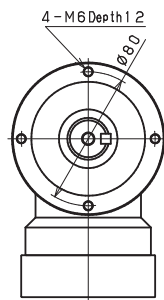
Input shaft bore $\leq \phi 8$



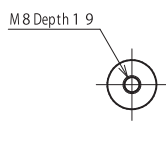
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

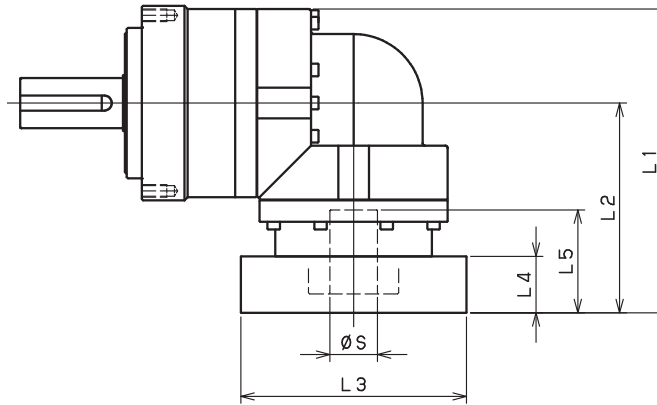
Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-090 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-090-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- |
| EVL-090-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 137.5 | 92 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 142.5 | 97 | □65 | 21.5 | 40 |
| | CA·CC | 137.5 | 92 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 137.5 | 92 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 137.5 | 92 | □90 | 16.5 | 35 |
| | FA | 137.5 | 92 | □100 | 16.5 | 35 |
| | FB | 147.5 | 102 | □100 | 26.5 | 45 |
| | JA | 152.5 | 107 | □150 | 31.5 | 50 |
| EVL-090-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 145.5 | 100 | □80 | 25 | 50 |
| | EB·ED | 145.5 | 100 | □90 | 25 | 50 |
| | FA | 145.5 | 100 | □100 | 25 | 50 |
| | FB | 155.5 | 110 | □100 | 35 | 60 |
| | GA·GC·GH | 150.5 | 105 | □115 | 30 | 55 |
| | GB·GD·GJ | 145.5 | 100 | □115 | 25 | 50 |
| | GE·GF | 155.5 | 110 | □115 | 35 | 60 |
| | HA | 145.5 | 100 | □130 | 25 | 50 |
| | HB | 160.5 | 115 | □130 | 40 | 65 |
| | HC·HD·HE | 150.5 | 105 | □130 | 30 | 55 |
| | JA | 155.5 | 110 | □150 | 35 | 60 |
| | JB | 160.5 | 115 | □150 | 40 | 65 |
| EVL-090-□-□-28** (19 < S ≤ 28) | FA·FB·FC | 174.5 | 129 | □100 | 35 | 67 |
| | FD·FE | 169.5 | 124 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 174.5 | 129 | □115 | 35 | 67 |
| | HA·HC·HD | 174.5 | 129 | □130 | 35 | 67 |
| | HB | 184.5 | 139 | □130 | 45 | 77 |
| | HE | 189.5 | 144 | □130 | 50 | 82 |
| | HF | 169.5 | 124 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 174.5 | 129 | □150 | 35 | 67 |
| | JD | 194.5 | 149 | □150 | 55 | 87 |
| JE | 184.5 | 139 | □150 | 45 | 77 | |

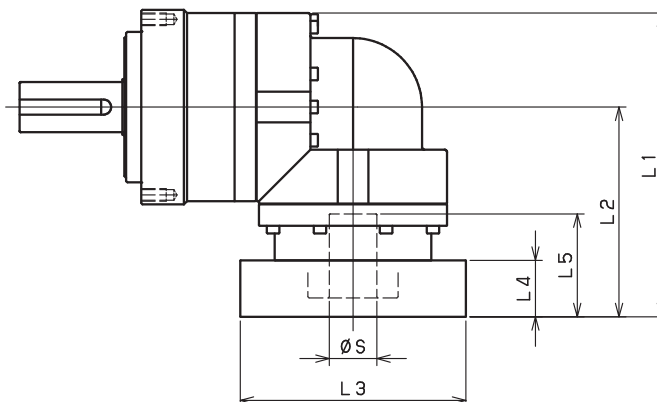
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVL-090 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-090-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 117 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 122 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 117 | 71.5 | □60 | 15.5 | 32 |
| | CA | 122 | 76.5 | □70 | 20.5 | 37 |
| EVL-090-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 123 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 128 | 82.5 | □65 | 21.5 | 40 |
| | CA·CC | 123 | 77.5 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 123 | 77.5 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 123 | 77.5 | □90 | 16.5 | 35 |
| | FA | 123 | 77.5 | □100 | 16.5 | 35 |
| | FB | 133 | 87.5 | □100 | 26.5 | 45 |
| EVL-090-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 140 | 94.5 | □80 | 25 | 50 |
| | EB·ED | 140 | 94.5 | □90 | 25 | 50 |
| | FA | 140 | 94.5 | □100 | 25 | 50 |
| | FB | 150 | 104.5 | □100 | 35 | 60 |
| | GA·GC·GH | 145 | 99.5 | □115 | 30 | 55 |
| | GB·GD·GJ | 140 | 94.5 | □115 | 25 | 50 |
| | GE·GF | 150 | 104.5 | □115 | 35 | 60 |
| | HA | 140 | 94.5 | □130 | 25 | 50 |
| | HB | 155 | 109.5 | □130 | 40 | 65 |
| | HC·HD·HE | 145 | 99.5 | □130 | 30 | 55 |
| | JA | 150 | 104.5 | □150 | 35 | 60 |
| | JB | 155 | 109.5 | □150 | 40 | 65 |
| EVL-090-□-□-28** (19 < S ≤ 28) | FA·FB·FC | -- | -- | -- | -- | -- |
| | FD·FE | -- | -- | -- | -- | -- |
| | GA·GB·GC·GD·GE·GF·GG·GH | -- | -- | -- | -- | -- |
| | HA·HC·HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HE | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA·JB·JC·JF | -- | -- | -- | -- | -- |
| | JD | -- | -- | -- | -- | -- |
| JE | -- | -- | -- | -- | -- | |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-120 – 2-Stage Specifications

| Frame Size | 120 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 75 | 100 | 120 | 150 | 150 | 150 | 110 | 110 |
| Maximum Acceleration Torque | [Nm] | *2 | 150 | 200 | 240 | 300 | 300 | 300 | 200 | 200 |
| Emergency Stop Torque | [Nm] | *3 | 320 | 430 | 500 | 550 | 550 | 550 | 450 | 450 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.88 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1300 | 1500 | 1600 | 1700 | 1800 | 1900 | 1900 | 2000 |
| Permitted Axial Load | [N] | *8 | 1500 | 1700 | 1900 | 2000 | 2100 | 2300 | 2400 | 2500 |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.740 | 5.490 | 5.020 | 4.770 | 4.650 | 4.550 | 4.490 | 4.460 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.340 | 7.080 | 6.610 | 6.360 | 6.240 | 6.140 | 6.080 | 6.050 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.410 | 14.150 | 13.690 | 13.430 | 13.310 | 13.220 | 13.160 | 13.120 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10.2 | | | | | | | |

EVL-120 – 3-Stage Specifications

| Frame Size | 120 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 110 | 130 | 150 | 150 | 150 | 110 | 150 | 150 |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 260 | 300 | 300 | 300 | 200 | 300 | 300 |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 550 | 550 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2300 | 2300 | 2500 | 2700 | 2800 | 2900 | 3000 | 3200 |
| Permitted Axial Load | [N] | *8 | 3000 | 3100 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.250 | 2.460 | 2.200 | 2.180 | 2.400 | 1.870 | 2.160 | 1.860 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.580 | 2.790 | 2.530 | 2.510 | 2.730 | 2.200 | 2.490 | 2.190 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 4.910 | 4.650 | 4.640 | 4.860 | 4.330 | 4.620 | 4.320 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10 | | | | | | | |

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

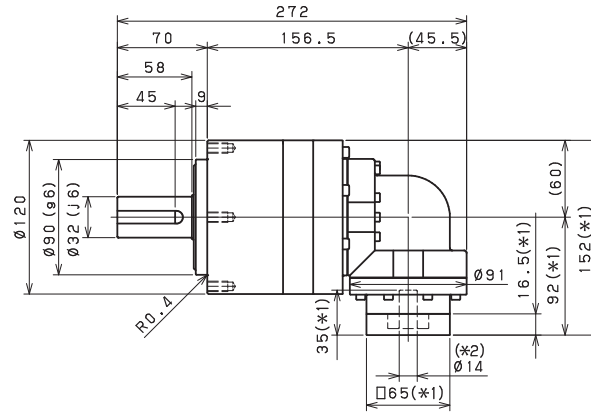
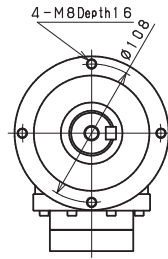
EVL-120 – 3-Stage Specifications

| Frame Size | 120 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 110 | 150 | 150 | 150 | 150 | 110 | 110 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 450 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3300 | 3400 | 3600 | 3800 | 4000 | 4200 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.150 | 1.860 | 1.850 | 1.850 | 1.850 | 1.850 | 1.850 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.480 | 2.190 | 2.180 | 2.180 | 2.180 | 2.180 | 2.180 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.610 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 10 | | | | | | | | |

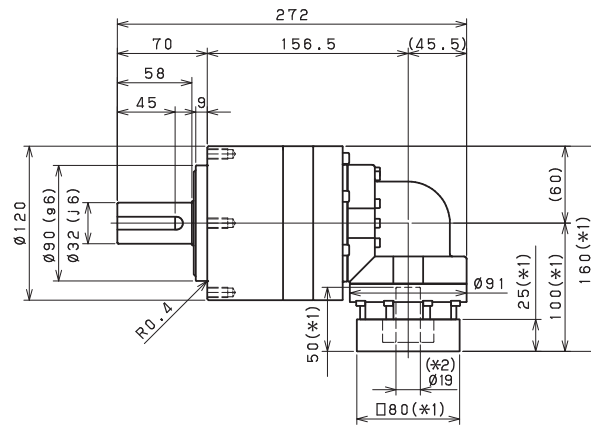
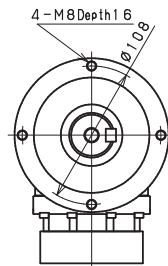
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVL120
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

EVL-120 – 3-Stage Dimensions

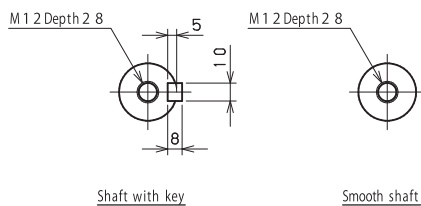
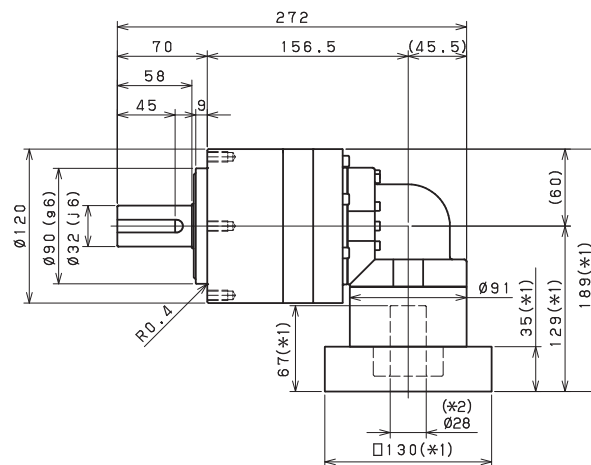
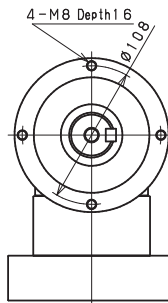
Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

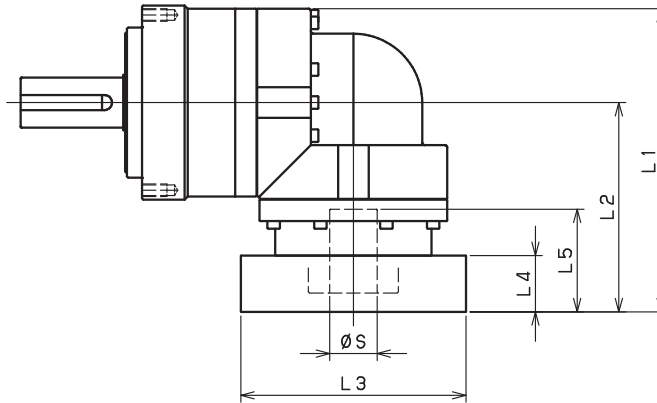
Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-120 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-120-□-□-14** (S ≤ 14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| EVL-120-□-□-19** (14 < S ≤ 19) | DA•DB•DC | 170 | 110 | □80 | 25 | 50 |
| | EB•ED | 170 | 110 | □90 | 25 | 50 |
| | FA | 170 | 110 | □100 | 25 | 50 |
| | FB | 180 | 120 | □100 | 35 | 60 |
| | GB•GD•GJ | 170 | 110 | □115 | 25 | 50 |
| | HA | 170 | 110 | □130 | 25 | 50 |
| | HB | 185 | 125 | □130 | 40 | 65 |
| | JA | 180 | 120 | □150 | 35 | 60 |
| EVL-120-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 196 | 136 | □100 | 35 | 67 |
| | FD•FE | 191 | 131 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 196 | 136 | □115 | 35 | 67 |
| | HA•HC•HD | 196 | 136 | □130 | 35 | 67 |
| | HB | 206 | 146 | □130 | 45 | 77 |
| | HE | 211 | 151 | □130 | 50 | 82 |
| | HF | 191 | 131 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 196 | 136 | □150 | 35 | 67 |
| | JD | 216 | 156 | □150 | 55 | 87 |
| | JE | 206 | 146 | □150 | 45 | 77 |
| | KA•KB•KE | 196 | 136 | □180 | 35 | 67 |
| | KD | 206 | 146 | □180 | 45 | 77 |
| EVL-120-□-□-38** (28 < S ≤ 38) | HA | 213 | 153 | □130 | 45 | 82 |
| | HB•HE | 208 | 148 | □130 | 40 | 77 |
| | JA | 213 | 153 | □150 | 45 | 82 |
| | KA•KB•KC | 213 | 153 | □180 | 45 | 82 |
| | KD | 248 | 188 | □180 | 80 | 117 |
| | KE | 228 | 168 | □180 | 60 | 97 |

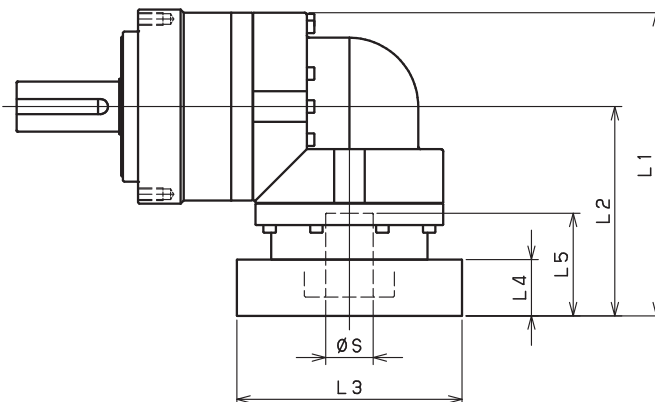
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVL-120 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-120-□-□-14** (S ≤ 14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 152 | 92 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 157 | 97 | □65 | 21.5 | 40 |
| | CA•CC | 152 | 92 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 152 | 92 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 152 | 92 | □90 | 16.5 | 35 |
| | FA | 152 | 92 | □100 | 16.5 | 35 |
| | FB | 162 | 102 | □100 | 26.5 | 45 |
| | JA | 167 | 107 | □150 | 31.5 | 50 |
| EVL-120-□-□-19** (14 < S ≤ 19) | DA•DB•DC | 160 | 100 | □80 | 25 | 50 |
| | EB•ED | 160 | 100 | □90 | 25 | 50 |
| | FA | 160 | 100 | □100 | 25 | 50 |
| | FB | 170 | 110 | □100 | 35 | 60 |
| | GB•GD•GJ | 160 | 100 | □115 | 25 | 50 |
| | HA | 160 | 100 | □130 | 25 | 50 |
| | HB | 175 | 115 | □130 | 40 | 65 |
| | JA | 170 | 110 | □150 | 35 | 60 |
| EVL-120-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 189 | 129 | □100 | 35 | 67 |
| | FD•FE | 184 | 124 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 189 | 129 | □115 | 35 | 67 |
| | HA•HC•HD | 189 | 129 | □130 | 35 | 67 |
| | HB | 199 | 139 | □130 | 45 | 77 |
| | HE | 204 | 144 | □130 | 50 | 82 |
| | HF | 184 | 124 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 189 | 129 | □150 | 35 | 67 |
| | JD | 209 | 149 | □150 | 55 | 87 |
| | JE | 199 | 139 | □150 | 45 | 77 |
| | KA•KB•KE | 189 | 129 | □180 | 35 | 67 |
| | KD | 199 | 139 | □180 | 45 | 77 |
| EVL-120-□-□-38** (28 < S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB•HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA•KB•KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-155 – 2-Stage Specifications

| Frame Size | 155 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 130 | 170 | 200 | 260 | 300 | 300 | 200 | 200 |
| Maximum Acceleration Torque | [Nm] | *2 | 260 | 340 | 400 | 520 | 600 | 600 | 400 | 400 |
| Emergency Stop Torque | [Nm] | *3 | 700 | 950 | 1100 | 1100 | 1100 | 1100 | 750 | 750 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 3.26 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3200 | 3500 | 3800 | 4000 | 4200 | 4400 | 4600 | 4700 |
| Permitted Axial Load | [N] | *8 | 2400 | 2700 | 3000 | 3300 | 3500 | 3700 | 3900 | 4100 |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 23.130 | 18.570 | 16.910 | 16.010 | 15.580 | 15.230 | 14.770 | 14.660 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 27.500 | 22.940 | 21.280 | 20.380 | 19.950 | 19.610 | 19.410 | 19.030 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 40.730 | 36.170 | 34.510 | 33.610 | 33.180 | 32.840 | 32.370 | 32.260 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 19.8 | | | | | | | |

EVL-155 – 3-Stage Specifications

| Frame Size | 155 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 300 | 300 |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 600 | 600 |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 1100 | 1100 |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5400 | 5500 | 6000 | 6400 | 6700 | 6800 | 7200 | 7500 |
| Permitted Axial Load | [N] | *8 | 4900 | 5000 | 5500 | 6100 | 6400 | 6600 | 7000 | 7500 |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.400 | 7.290 | 6.220 | 6.150 | 7.090 | 4.990 | 6.090 | 4.950 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.000 | 8.880 | 7.810 | 7.750 | 8.680 | 6.580 | 7.690 | 6.540 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.070 | 15.960 | 14.890 | 14.820 | 15.760 | 13.660 | 14.760 | 13.610 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 20.4 | | | | | | | |

EVL-155 – 3-Stage Specifications

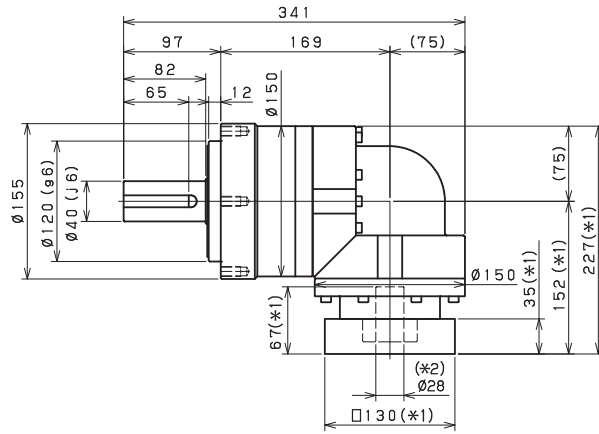
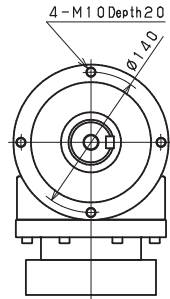
| Frame Size | 155 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 750 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7800 | 8100 | 8600 | 9100 | 9100 | 9100 | 9100 | | |
| Permitted Axial Load | [N] | *8 | 7900 | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.070 | 4.930 | 4.920 | 4.910 | 4.910 | 4.910 | 4.910 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 7.660 | 6.520 | 6.510 | 6.510 | 6.500 | 6.500 | 6.500 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 14.740 | 13.590 | 13.590 | 13.580 | 13.580 | 13.570 | 13.570 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 20.4 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2000 rpm for EVL155
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

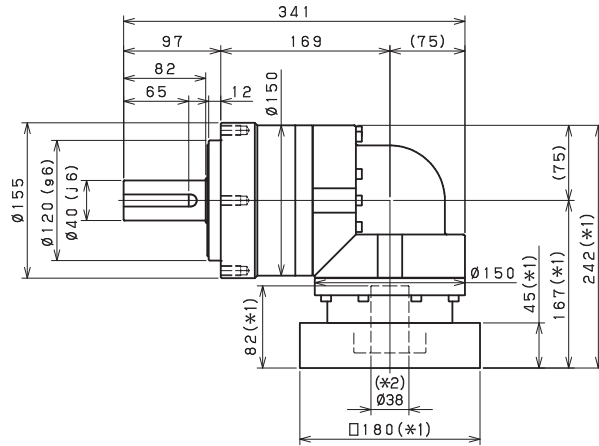
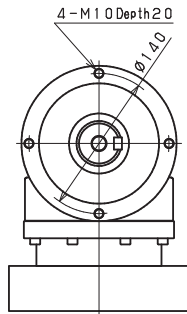
EVL-SERIES Right-angle shaft

EVL-155 – 2-Stage Dimensions

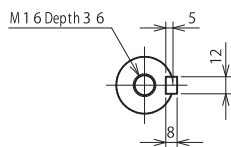
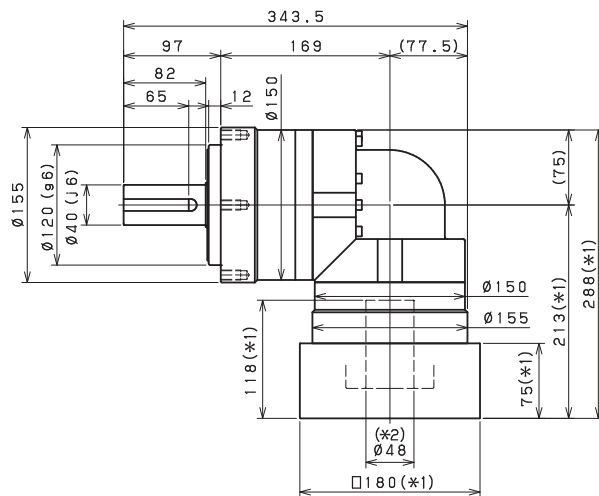
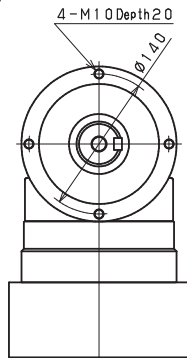
Input shaft bore $\leq \varnothing 28$



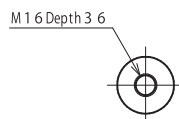
Input shaft bore $\leq \varnothing 38$



Input shaft bore $\leq \varnothing 48$



Shaft with key



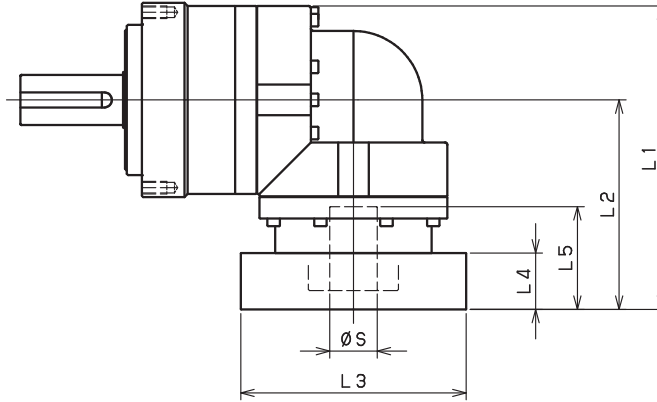
Smooth shaft

- *1) Length will vary depending on motor.
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-155 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|--------------------------------|-------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-155-□-□-19** (S≤19) | DA•DB•DC | -- | -- | -- | -- | -- |
| | EB•ED | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| | GB•GD•GJ | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| EVL-155-□-□-28** (19< S≤28) | FA•FB•FC | 229.5 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 229.5 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 229.5 | 152 | □130 | 35 | 67 |
| | HB | 239.5 | 162 | □130 | 45 | 77 |
| | HF | 224.5 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 229.5 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 229.5 | 152 | □180 | 35 | 67 |
| | LA | 229.5 | 152 | □200 | 35 | 67 |
| | LB | 239.5 | 162 | □200 | 45 | 77 |
| | MA | 229.5 | 152 | □220 | 35 | 67 |
| | MB | 239.5 | 162 | □220 | 45 | 77 |
| EVL-155-□-□-38** (28< S≤38) | HA | 244.5 | 167 | □130 | 45 | 82 |
| | HB•HE | 239.5 | 162 | □130 | 40 | 77 |
| | JA | 244.5 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 244.5 | 167 | □180 | 45 | 82 |
| | KD | 279.5 | 202 | □180 | 80 | 117 |
| | KE | 259.5 | 182 | □180 | 60 | 97 |
| | LB | 254.5 | 177 | □200 | 55 | 92 |
| | MA•MB | 244.5 | 167 | □220 | 45 | 82 |
| | MC | 259.5 | 182 | □220 | 60 | 97 |
| | MD | 254.5 | 177 | □220 | 55 | 92 |
| EVL-155-□-□-48** (38< S≤48) | KA | 290.5 | 213 | □180 | 75 | 118 |
| | KB•KC | 270.5 | 193 | □180 | 55 | 98 |
| | LA | 270.5 | 193 | □200 | 55 | 98 |
| | MA | 270.5 | 193 | □220 | 55 | 98 |
| | MB | 290.5 | 213 | □220 | 75 | 118 |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

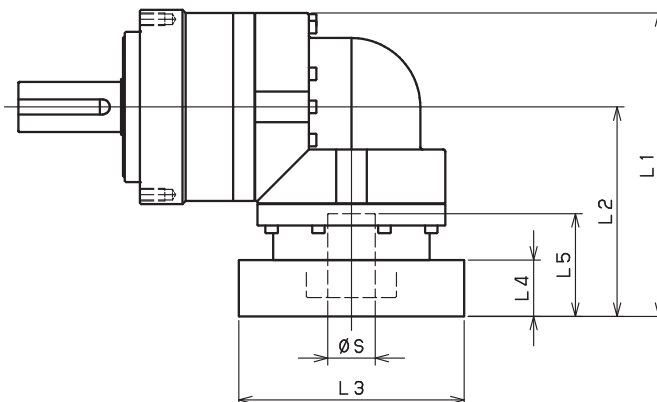
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-155 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-----------------------------------|---------|-------|------|------|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-155-□-□-19** (S ≤ 19) | DA•DB•DC | 187.5 | 110 | □80 | 25 | 50 |
| | EB•ED | 187.5 | 110 | □90 | 25 | 50 |
| | FA | 187.5 | 110 | □100 | 25 | 50 |
| | FB | 197.5 | 120 | □100 | 35 | 60 |
| | GB•GD•GJ | 187.5 | 110 | □115 | 25 | 50 |
| | HA | 187.5 | 110 | □130 | 25 | 50 |
| | HB | 202.5 | 125 | □130 | 40 | 65 |
| | JA | 197.5 | 120 | □150 | 35 | 60 |
| EVL-155-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 213.5 | 136 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 213.5 | 136 | □115 | 35 | 67 |
| | HA•HC•HD | 213.5 | 136 | □130 | 35 | 67 |
| | HB | 223.5 | 146 | □130 | 45 | 77 |
| | HF | 208.5 | 131 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 213.5 | 136 | □150 | 35 | 67 |
| | KA•KB•KE | 213.5 | 136 | □180 | 35 | 67 |
| | LA | 213.5 | 136 | □200 | 35 | 67 |
| | LB | 223.5 | 146 | □200 | 45 | 77 |
| | MA | 213.5 | 136 | □220 | 35 | 67 |
| | MB | 223.5 | 146 | □220 | 45 | 77 |
| | EVL-155-□-□-38** (28 < S ≤ 38) | HA | 230.5 | 153 | □130 | 45 |
| HB•HE | | 225.5 | 148 | □130 | 40 | 77 |
| JA | | 230.5 | 153 | □150 | 45 | 82 |
| KA•KB•KC | | 230.5 | 153 | □180 | 45 | 82 |
| KD | | 265.5 | 188 | □180 | 80 | 117 |
| KE | | 245.5 | 168 | □180 | 60 | 97 |
| LB | | 240.5 | 163 | □200 | 55 | 92 |
| MA•MB | | 230.5 | 153 | □220 | 45 | 82 |
| MC | | 245.5 | 168 | □220 | 60 | 97 |
| MD | | 240.5 | 163 | □220 | 55 | 92 |
| EVL-155-□-□-48** (38 < S ≤ 48) | KA | -- | -- | -- | -- | -- |
| | KB•KC | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-205 – 2-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 400 | 575 | 600 | 600 | 600 | 600 | 400 | 400 |
| Maximum Acceleration Torque | [Nm] | *2 | 575 | 770 | 960 | 1120 | 1120 | 1120 | 775 | 775 |
| Emergency Stop Torque | [Nm] | *3 | 1300 | 1700 | 2000 | 2500 | 2500 | 2500 | 2000 | 2000 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.8 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 6200 | 6700 | 7100 | 7400 | 7800 | 8100 | 8400 |
| Permitted Axial Load | [N] | *8 | 4300 | 4900 | 5400 | 5800 | 6300 | 6600 | 7000 | 7300 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 93.71 | 77.72 | 71.89 | 68.74 | 66.43 | 65.27 | 64.60 | 64.28 |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 128.6 | 112.6 | 106.8 | 103.6 | 101.3 | 100.1 | 99.46 | 99.14 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | 214.2 | 198.2 | 192.4 | 189.2 | 186.9 | 185.7 | 185.1 | 184.7 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 8 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 52 | | | | | | | |

EVL-205 – 3-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 400 | 555 | 600 | 600 | 600 | 400 | 600 | 600 |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 1120 | 1120 |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2500 | 2500 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9600 | 9800 | 11000 | 11000 | 12000 | 12000 | 13000 | 13000 |
| Permitted Axial Load | [N] | *8 | 8700 | 8900 | 9900 | 11000 | 11000 | 12000 | 13000 | 13000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 11.49 | 12.09 | 11.15 | 10.98 | 11.59 | 10.33 | 10.83 | 10.24 |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 20.28 | 20.88 | 19.94 | 19.77 | 20.38 | 19.11 | 19.62 | 19.03 |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 25.10 | 25.70 | 24.76 | 24.59 | 25.20 | 23.94 | 24.44 | 23.85 |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 11 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | |

Sold & Serviced By:

ELECTROMATE
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

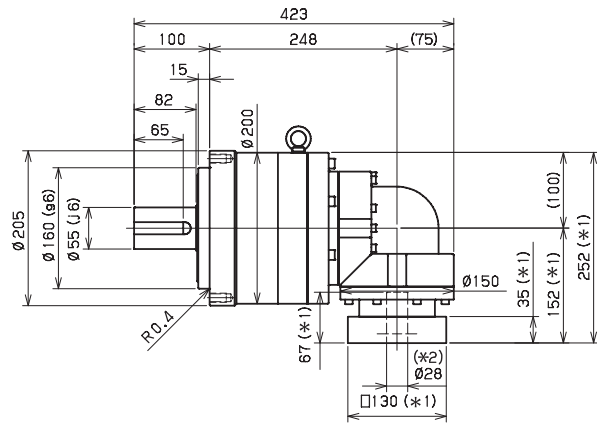
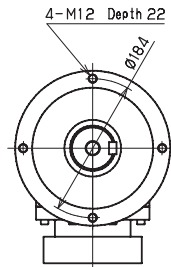
EVL-205 – 3-Stage Specifications

| Frame Size | 205 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 775 | | |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2000 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 10.76 | 10.20 | 10.18 | 10.16 | 10.15 | 10.15 | 10.14 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 19.55 | 18.99 | 18.96 | 18.95 | 18.94 | 18.93 | 18.93 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 24.37 | 23.81 | 23.78 | 23.77 | 23.76 | 23.75 | 23.75 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 11 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | | |

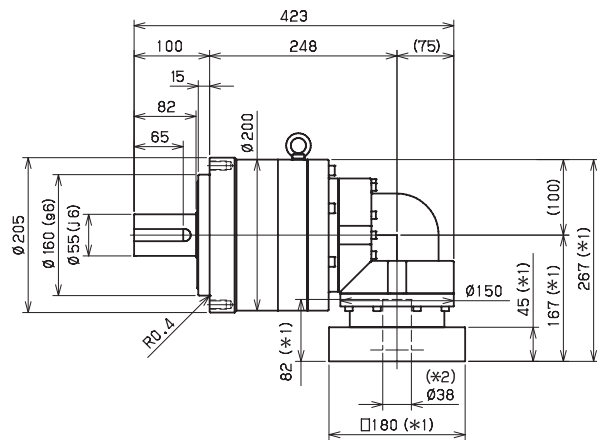
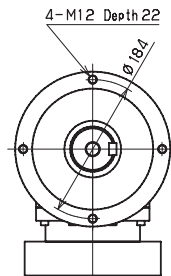
- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1500 rpm for EVL205
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

EVL-205 - 3-Stage Dimensions

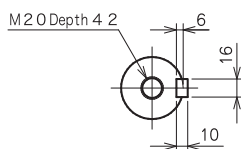
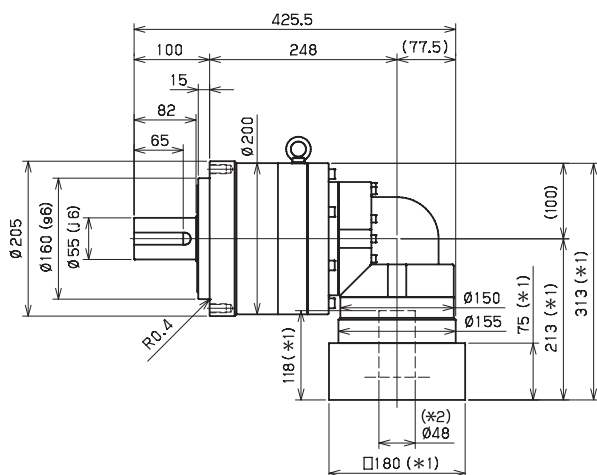
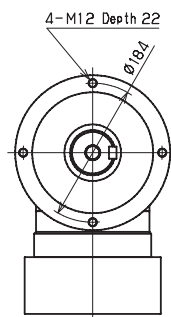
Input shaft bore $\leq \varnothing 28$



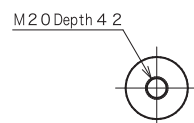
Input shaft bore $\leq \varnothing 38$



Input shaft bore $\leq \varnothing 48$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

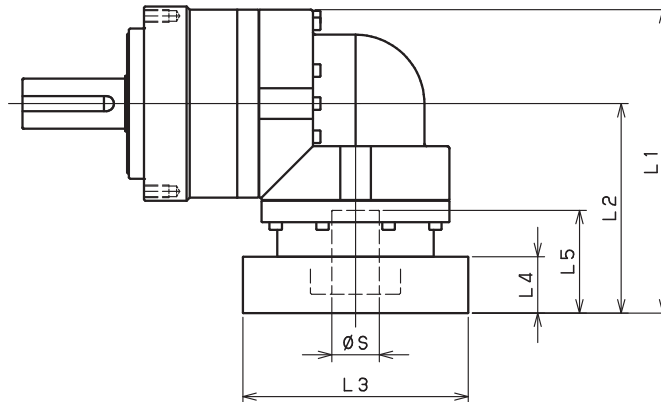
Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVL-SERIES Right-angle shaft

EVL-205 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------|---------|-------|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-205-□-□-28** (S ≤ 28) | FA•FB•FC | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| EVL-205-□-□-38** (28 < S ≤ 38) | HA | 331.5 | 231.5 | □130 | 45 | 82 |
| | HB•HE | 326.5 | 226.5 | □130 | 40 | 77 |
| | JA | 331.5 | 231.5 | □150 | 45 | 82 |
| | KA•KB•KC | 331.5 | 231.5 | □180 | 45 | 82 |
| | KD | 366.5 | 266.5 | □180 | 80 | 117 |
| | KE | 346.5 | 246.5 | □180 | 60 | 97 |
| | LA | 331.5 | 231.5 | □200 | 45 | 82 |
| | LB | 341.5 | 241.5 | □200 | 55 | 92 |
| | MA•MB | 331.5 | 231.5 | □220 | 45 | 82 |
| | MC | 346.5 | 246.5 | □220 | 60 | 97 |
| | MD | 341.5 | 241.5 | □220 | 55 | 92 |
| EVL-205-□-□-48** (38 < S ≤ 48) | KA | 368 | 268 | □180 | 75 | 118 |
| | KB•KC | 348 | 248 | □180 | 55 | 98 |
| | LA | 348 | 248 | □200 | 55 | 98 |
| | MA | 348 | 248 | □220 | 55 | 98 |
| | MB | 368 | 268 | □220 | 75 | 118 |
| | NA | 368 | 268 | □250 | 75 | 118 |
| | PA | 368 | 268 | □280 | 75 | 118 |
| EVL-205-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | 381 | 281 | □220 | 80 | 122 |
| | NA•NC | 381 | 281 | □250 | 80 | 122 |
| | NB•ND | 411 | 311 | □250 | 110 | 152 |
| | PA | 401 | 301 | □280 | 100 | 142 |
| | PB | 411 | 311 | □280 | 110 | 152 |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

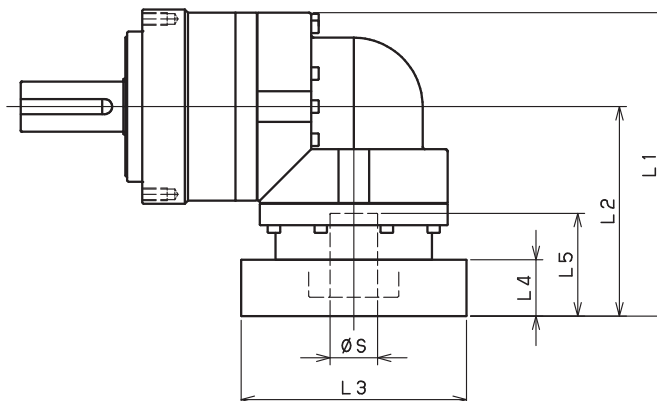
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-205 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-205-□-□-28** (S ≤ 28) | FA•FB•FC | 252 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 252 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 252 | 152 | □130 | 35 | 67 |
| | HB | 262 | 162 | □130 | 45 | 77 |
| | HF | 247 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 252 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 252 | 152 | □180 | 35 | 67 |
| | LA | 252 | 152 | □200 | 35 | 67 |
| | LB | 262 | 162 | □200 | 45 | 77 |
| | MA | 252 | 152 | □220 | 35 | 67 |
| | MB | 262 | 162 | □220 | 45 | 77 |
| EVL-205-□-□-38** (28 < S ≤ 38) | HA | 267 | 167 | □130 | 45 | 82 |
| | HB•HE | 262 | 162 | □130 | 40 | 77 |
| | JA | 267 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 267 | 167 | □180 | 45 | 82 |
| | KD | 302 | 202 | □180 | 80 | 117 |
| | KE | 282 | 182 | □180 | 60 | 97 |
| | LA | 267 | 167 | □200 | 45 | 82 |
| | LB | 277 | 177 | □200 | 55 | 92 |
| | MA•MB | 267 | 167 | □220 | 45 | 82 |
| | MC | 282 | 182 | □220 | 60 | 97 |
| | MD | 277 | 177 | □220 | 55 | 92 |
| EVL-205-□-□-48** (38 < S ≤ 48) | KA | 313 | 213 | □180 | 75 | 118 |
| | KB•KC | 293 | 193 | □180 | 55 | 98 |
| | LA | 293 | 193 | □200 | 55 | 98 |
| | MA | 293 | 193 | □220 | 55 | 98 |
| | MB | 313 | 213 | □220 | 75 | 118 |
| | NA | 313 | 213 | □250 | 75 | 118 |
| | PA | 313 | 213 | □280 | 75 | 118 |
| EVL-205-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-235 – 2-Stage Specifications

| Frame Size | 235 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 575 | 765 | 960 | 1150 | 1200 | 1200 | 800 | 800 |
| Maximum Acceleration Torque | [Nm] | *2 | 1015 | 1355 | 1695 | 1840 | 1840 | 1760 | 1520 | 1280 |
| Emergency Stop Torque | [Nm] | *3 | 2500 | 3300 | 4000 | 4500 | 4500 | 4500 | 3600 | 3600 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 14.5 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5800 | 6400 | 6900 | 7300 | 7700 | 8000 | 8400 | 8700 |
| Permitted Axial Load | [N] | *8 | 6400 | 7200 | 7900 | 8600 | 9200 | 9700 | 10000 | 11000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 148.00 | 122.90 | 113.30 | 108.10 | 104.70 | 102.70 | 101.60 | 101.00 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 223.20 | 198.10 | 188.60 | 183.30 | 180.00 | 178.00 | 176.80 | 176.20 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 8 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 68 | | | | | | | |

EVL-235 – 3-Stage Specifications

| Frame Size | 235 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 1200 | 1200 |
| Maximum Acceleration Torque | [Nm] | *2 | 1280 | 1840 | 1840 | 1840 | 1840 | 1280 | 1840 | 1840 |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 4500 | 4500 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9900 | 10000 | 11000 | 12000 | 12000 | 13000 | 13000 | 14000 |
| Permitted Axial Load | [N] | *8 | 13000 | 13000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 36.32 | 37.24 | 35.75 | 35.47 | 36.39 | 34.39 | 35.21 | 34.25 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 66.14 | 67.06 | 65.57 | 65.28 | 66.21 | 64.21 | 65.03 | 64.07 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 11 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 70 | | | | | | | |

EVL-235 – 3-Stage Specifications

| Frame Size | 235 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 800 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1040 | 1840 | 1840 | 1840 | 1440 | 1040 | 960 | | |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 3600 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 35.10 | 34.18 | 34.14 | 34.11 | 34.10 | 34.09 | 34.08 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 64.92 | 63.99 | 63.95 | 63.93 | 63.91 | 63.90 | 63.90 | | |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 11 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 70 | | | | | | | | |

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVL235

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)

*9) The maximum radial load that the reducer can accept

*10) The maximum axial load that the reducer can accept

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

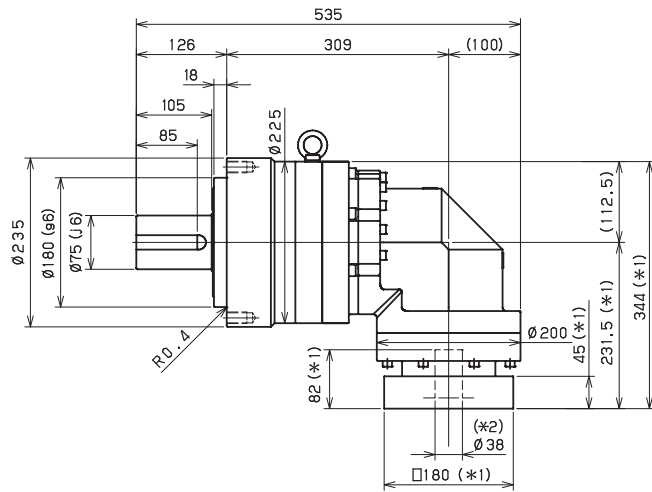
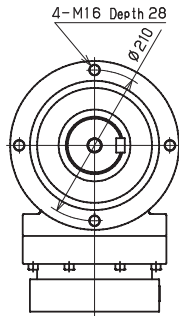
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

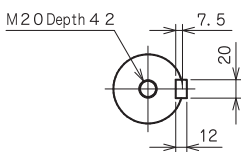
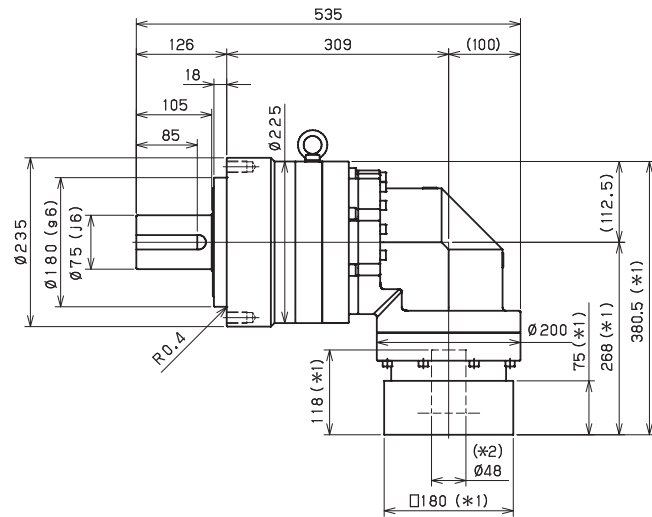
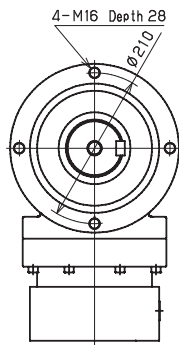
*15) The weight may vary slightly between models

EVL-235 – 3-Stage Dimensions

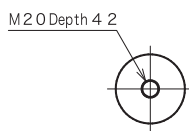
Input shaft bore $\leq \varnothing 38$



Input shaft bore $\leq \varnothing 48$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

EVL

Sold & Serviced By:

ELECTROMATE

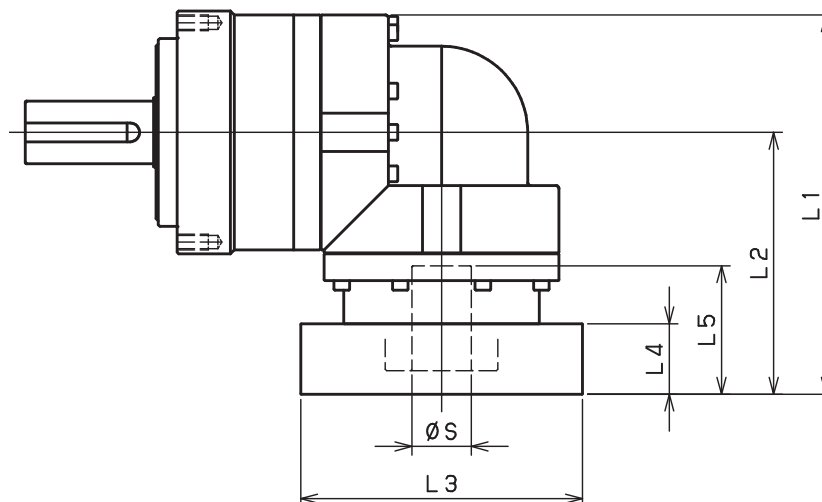
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVL-235 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|------------------|---------|-----|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-235-□-□-38** (S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- |
| EVL-235-□-□-48** (38 < S ≤ 48) | KA | 399.5 | 287 | □180 | 75 | 118 |
| | KB-KC | 379.5 | 267 | □180 | 55 | 98 |
| | LA | 379.5 | 267 | □200 | 55 | 98 |
| | MA | 379.5 | 267 | □220 | 55 | 98 |
| | MB | 399.5 | 287 | □220 | 75 | 118 |
| | NA | 399.5 | 287 | □250 | 75 | 118 |
| | PA | 399.5 | 287 | □280 | 75 | 118 |
| EVL-235-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | 405.5 | 293 | □220 | 80 | 122 |
| | NA-NC | 405.5 | 293 | □250 | 80 | 122 |
| | NB-ND | 435.5 | 323 | □250 | 110 | 152 |
| | PA | 425.5 | 313 | □280 | 100 | 142 |
| | PB | 435.5 | 323 | □280 | 110 | 152 |
| | QA-QB | 425.5 | 313 | □320 | 100 | 142 |

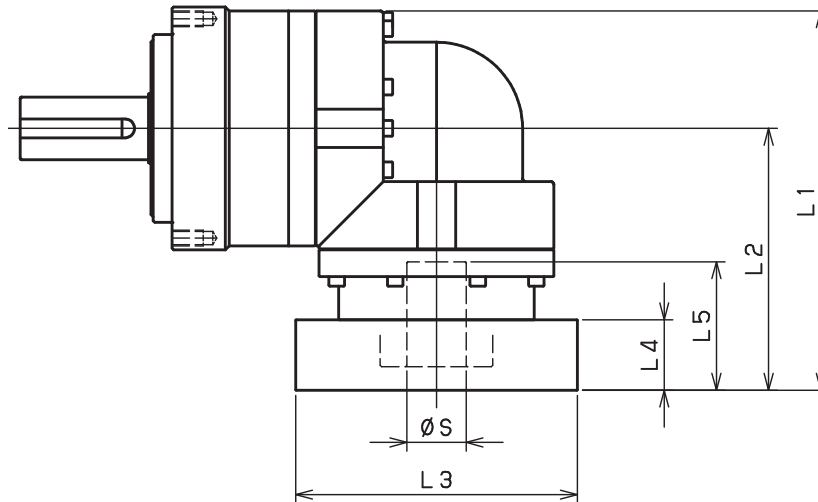
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVL-235 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|------------------|---------|-------|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVL-235-□-□-38** (S ≤ 38) | HA | 344 | 231.5 | □130 | 45 | 82 |
| | HB•HE | 339 | 226.5 | □130 | 40 | 77 |
| | JA | 344 | 231.5 | □150 | 45 | 82 |
| | KA•KB•KC | 344 | 231.5 | □180 | 45 | 82 |
| | KD | 379 | 266.5 | □180 | 80 | 117 |
| | KE | 359 | 246.5 | □180 | 60 | 97 |
| | LA | 344 | 231.5 | □200 | 45 | 82 |
| | LB | 354 | 241.5 | □200 | 55 | 92 |
| | MA•MB | 344 | 231.5 | □220 | 45 | 82 |
| | MC | 359 | 246.5 | □220 | 60 | 97 |
| | MD | 354 | 241.5 | □220 | 55 | 92 |
| EVL-235-□-□-48** (38 < S ≤ 48) | KA | 380.5 | 268 | □180 | 75 | 118 |
| | KB•KC | 360.5 | 248 | □180 | 55 | 98 |
| | LA | 360.5 | 248 | □200 | 55 | 98 |
| | MA | 360.5 | 248 | □220 | 55 | 98 |
| | MB | 380.5 | 268 | □220 | 75 | 118 |
| | NA | 380.5 | 268 | □250 | 75 | 118 |
| | PA | 380.5 | 268 | □280 | 75 | 118 |
| EVL-235-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |
| | QA•QB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.



EVB-SERIES

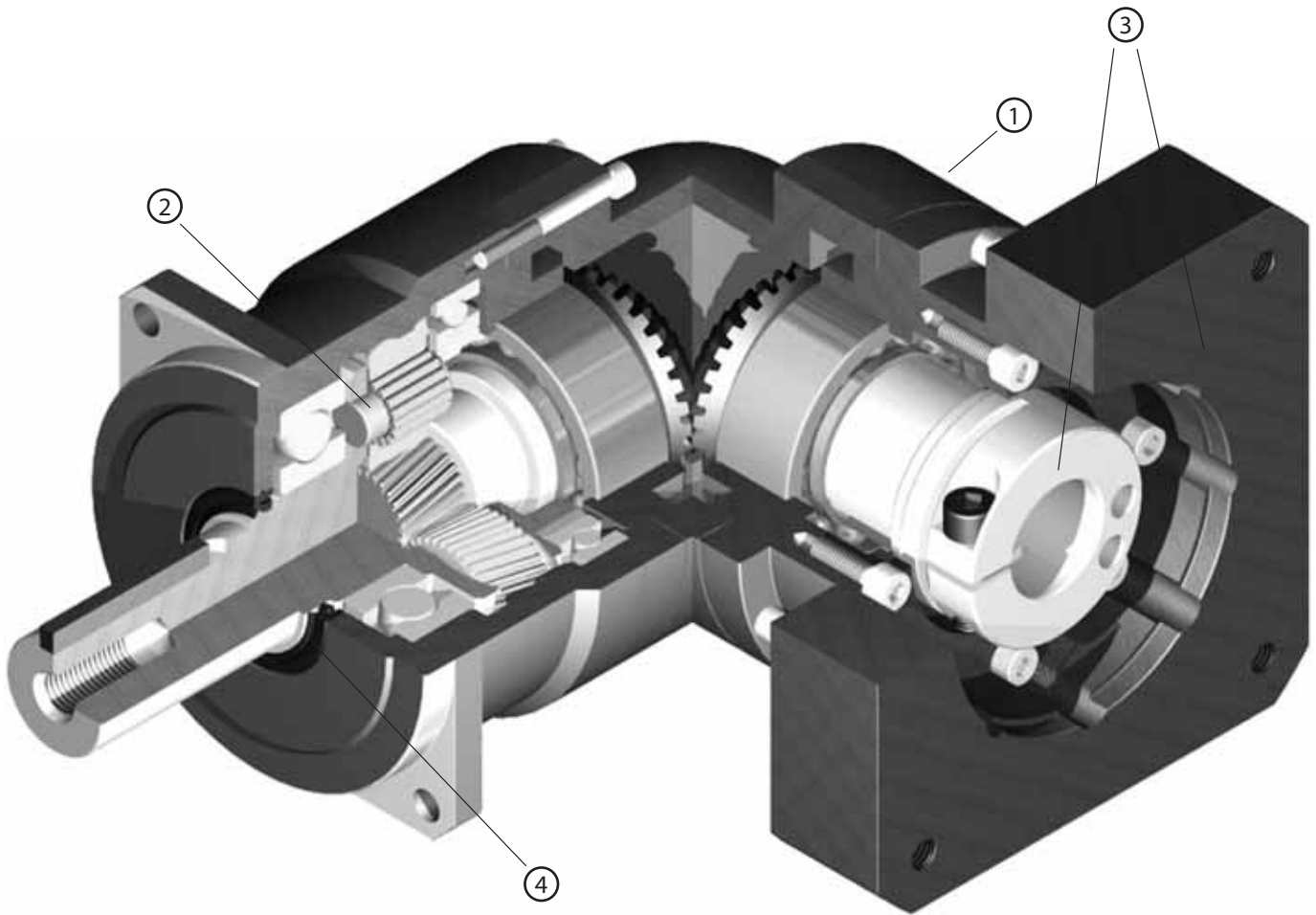
- Industry standard mounting dimensions
- Large variety of reduction ratios to choose from
- Thru-bolt mounting style
- Maximum flexibility for mounting and clearance constraints
- Low backlash (≤ 4 arc-min)
- Space-saving design, when minimal envelope required
- Readily available

Sold & Serviced By:
 **ELECTROMATE**

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

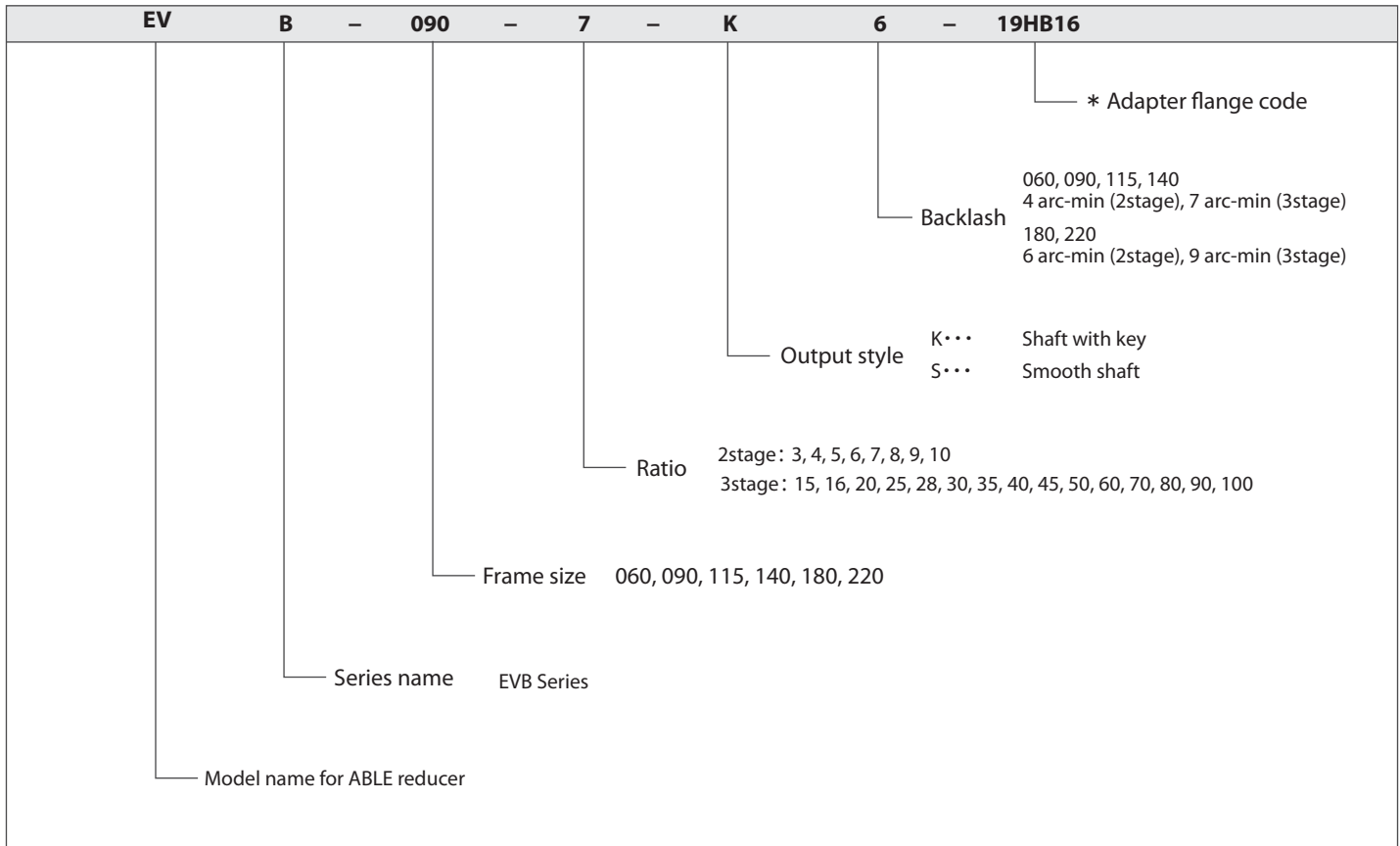
EVB-SERIES Right-angle shaft

EVB-Series – Features

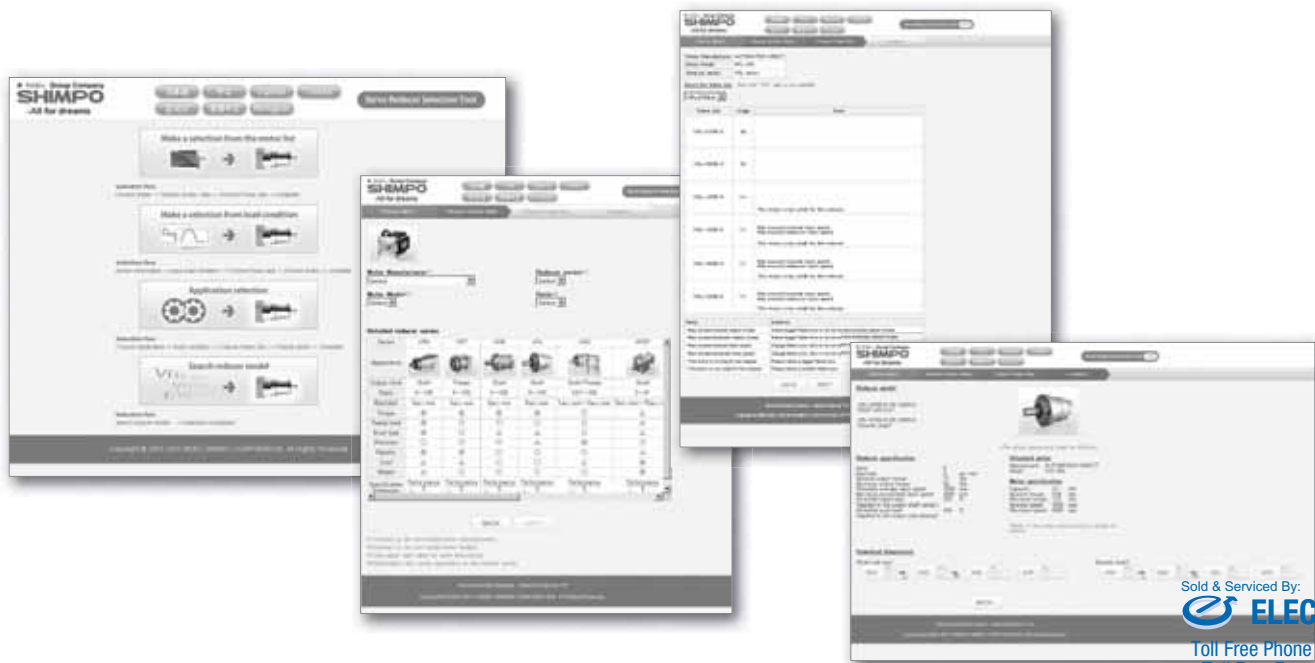


- ① Space-saving features; motor can be located at a 90 degree position from the reducer providing a more compact footprint
- ② High rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ Adapter-bushing connection; enable a simple, effective attachment to most servo motors
- ④ No leakage through the seal; high viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑤ No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

EVB-Series – Model Code



*1) Adapter flange code
 Adapter flange code varies depending on the motor.



EVB-SERIES Right-angle shaft

EVB-o6o – 2-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 12 | 16 | 22 | 24 | 24 | 24 | 16 | 16 |
| Maximum Acceleration Torque | [Nm] | *2 | 24 | 32 | 40 | 45 | 45 | 45 | 32 | 32 |
| Emergency Stop Torque | [Nm] | *3 | 50 | 65 | 80 | 90 | 90 | 90 | 65 | 65 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.33 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 430 | 470 | 510 | 540 | 570 | 600 | 620 | 640 |
| Permitted Axial Load | [N] | *8 | 310 | 360 | 390 | 430 | 460 | 480 | 510 | 530 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.310 | 0.270 | 0.250 | 0.240 | 0.230 | 0.230 | 0.230 | 0.230 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.390 | 0.340 | 0.320 | 0.310 | 0.310 | 0.310 | 0.300 | 0.300 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.580 | 0.530 | 0.510 | 0.500 | 0.500 | 0.500 | 0.490 | 0.490 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.8 | | | | | | | |

EVB-o6o – 3-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 24 | 24 |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 45 | 45 |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 90 | 90 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 740 | 750 | 810 | 870 | 910 | 930 | 980 | 1000 |
| Permitted Axial Load | [N] | *8 | 630 | 650 | 720 | 790 | 830 | 860 | 920 | 970 |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.073 | 0.079 | 0.071 | 0.071 | 0.077 | 0.062 | 0.070 | 0.061 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.118 | 0.124 | 0.116 | 0.115 | 0.122 | 0.106 | 0.115 | 0.106 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | |

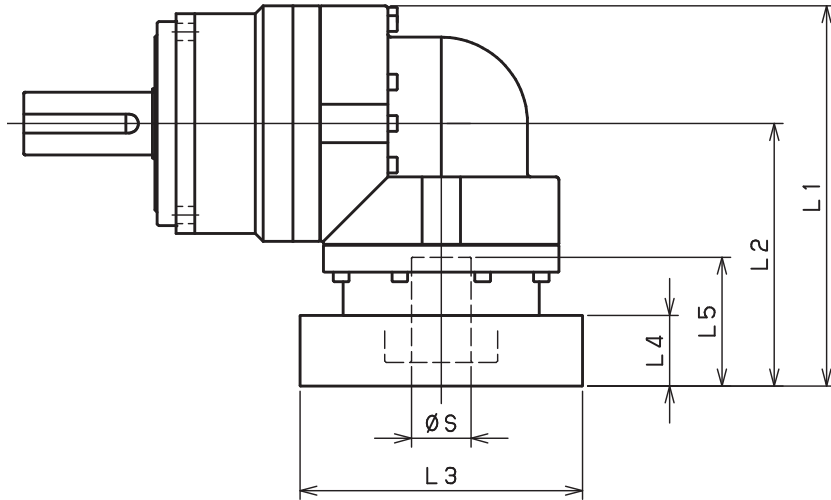
EVB-o6o – 3-Stage Specifications

| Frame Size | 060 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 16 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 32 | | |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 65 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1100 | 1100 | 1200 | 1200 | 1200 | 1200 | 1200 | | |
| Permitted Axial Load | [N] | *8 | 1000 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | | |
| Maximum Radial Load | [N] | *9 | 1200 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 1100 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.070 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.115 | 0.106 | 0.106 | 0.105 | 0.105 | 0.105 | 0.105 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.6 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVBo6o
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

EVB-SERIES Right-angle shaft

EVB-o6o – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-060-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 103 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 108 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 103 | 71.5 | □60 | 15.5 | 32 |
| | BC·BF | 108 | 76.5 | □60 | 20.5 | 37 |
| | CA | 108 | 76.5 | □70 | 20.5 | 37 |
| EVB-060-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 109 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 114 | 82.5 | □65 | 21.5 | 40 |
| | BL | 119 | 87.5 | □65 | 26.5 | 45 |
| | CA·CC | 109 | 77.5 | □70 | 16.5 | 35 |
| | CB | 114 | 82.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 109 | 77.5 | □80 | 16.5 | 35 |
| | DE·DL | 114 | 82.5 | □80 | 21.5 | 40 |
| | DG·DK | 119 | 87.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 109 | 77.5 | □90 | 16.5 | 35 |
| | EJ·EM | 114 | 82.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 119 | 87.5 | □90 | 26.5 | 45 |
| | FA | 109 | 77.5 | □100 | 16.5 | 35 |
| | FB | 119 | 87.5 | □100 | 26.5 | 45 |
| EVB-060-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 126 | 94.5 | □80 | 25 | 50 |
| | DD | 136 | 104.5 | □80 | 35 | 60 |
| | DE | 131 | 99.5 | □80 | 30 | 55 |
| | EA | 131 | 99.5 | □90 | 30 | 55 |
| | EB·ED | 126 | 94.5 | □90 | 25 | 50 |
| | EC | 136 | 104.5 | □90 | 35 | 60 |
| | FA | 126 | 94.5 | □100 | 25 | 50 |
| | FB | 136 | 104.5 | □100 | 35 | 60 |

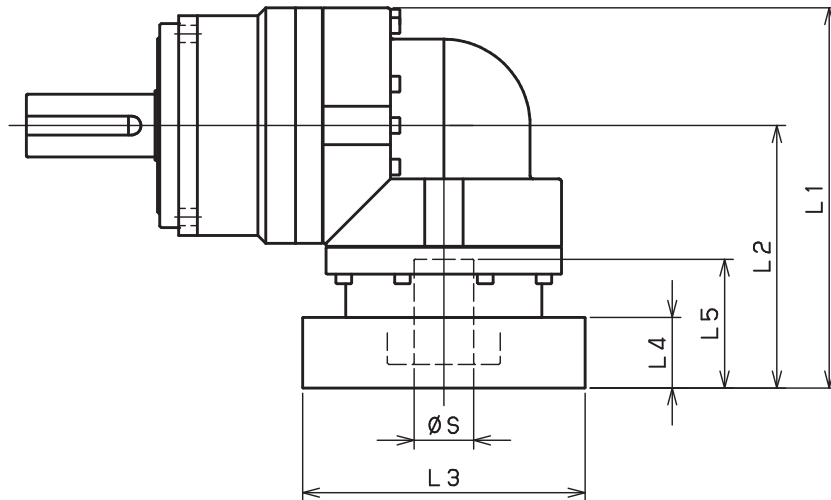
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVB-o6o – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-060-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 96 | 64.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 101 | 69.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 96 | 64.5 | □60 | 15.5 | 32 |
| | BC·BF | 101 | 69.5 | □60 | 20.5 | 37 |
| | CA | 101 | 69.5 | □70 | 20.5 | 37 |
| EVB-060-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 100 | 68.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 105 | 73.5 | □65 | 21.5 | 40 |
| | BL | 110 | 78.5 | □65 | 26.5 | 45 |
| | CA·CC | 100 | 68.5 | □70 | 16.5 | 35 |
| | CB | 105 | 73.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 100 | 68.5 | □80 | 16.5 | 35 |
| | DE·DL | 105 | 73.5 | □80 | 21.5 | 40 |
| | DG·DK | 110 | 78.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 100 | 68.5 | □90 | 16.5 | 35 |
| | EJ·EM | 105 | 73.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 110 | 78.5 | □90 | 26.5 | 45 |
| | FA | 100 | 68.5 | □100 | 16.5 | 35 |
| | FB | 110 | 78.5 | □100 | 26.5 | 45 |
| EVB-060-□-□-19** (14 < S ≤ 19) | DA·DB·DC | -- | -- | -- | -- | -- |
| | DD | -- | -- | -- | -- | -- |
| | DE | -- | -- | -- | -- | -- |
| | EA | -- | -- | -- | -- | -- |
| | EB·ED | -- | -- | -- | -- | -- |
| | EC | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVB-SERIES Right-angle shaft

EVB-090 – 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 45 | 60 | 65 | 65 | 65 | 65 | 45 | 45 |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 90 | 90 | 90 | 90 | 90 | 65 | 65 |
| Emergency Stop Torque | [Nm] | *3 | 130 | 170 | 220 | 220 | 220 | 220 | 170 | 170 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.13 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 810 | 890 | 960 | 1000 | 1100 | 1100 | 1200 | 1200 |
| Permitted Axial Load | [N] | *8 | 930 | 1100 | 1200 | 1300 | 1300 | 1400 | 1500 | 1600 |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.120 | 1.890 | 1.800 | 1.760 | 1.730 | 1.710 | 1.700 | 1.690 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.450 | 2.220 | 2.130 | 2.090 | 2.060 | 2.040 | 2.030 | 2.020 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.570 | 4.350 | 4.260 | 4.210 | 4.180 | 4.170 | 4.160 | 4.150 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 5.1 | | | | | | | |

EVB-090 – 3-Stage Specifications

| Frame Size | 090 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 65 | 65 |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 110 | 110 | 110 | 65 | 110 | 110 |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 220 | 220 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1400 | 1400 | 1500 | 1600 | 1700 | 1700 | 1800 | 1900 |
| Permitted Axial Load | [N] | *8 | 1900 | 1900 | 2100 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.340 | 0.380 | 0.330 | 0.320 | 0.370 | 0.250 | 0.320 | 0.250 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.410 | 0.460 | 0.400 | 0.400 | 0.450 | 0.330 | 0.400 | 0.320 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.600 | 0.650 | 0.590 | 0.590 | 0.640 | 0.510 | 0.590 | 0.510 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 4.4 | | | | | | | |

EVB-090 – 3-Stage Specifications

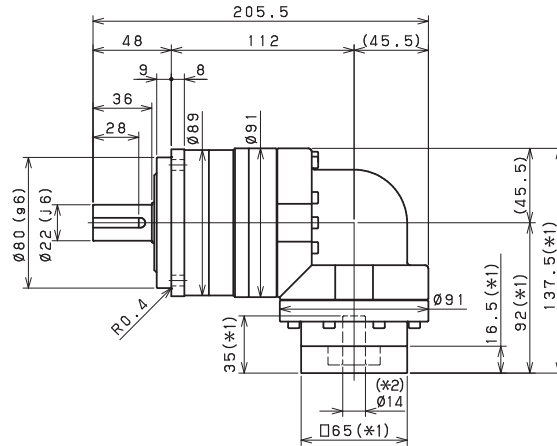
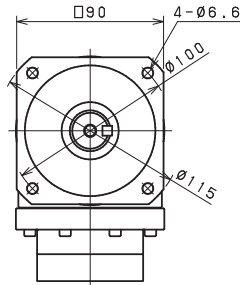
| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 45 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 110 | 110 | 110 | 65 | 65 | | |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 | 2400 | | |
| Permitted Axial Load | [N] | *8 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | | |
| Maximum Radial Load | [N] | *9 | 2400 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.320 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.390 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.580 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4.4 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVB090
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

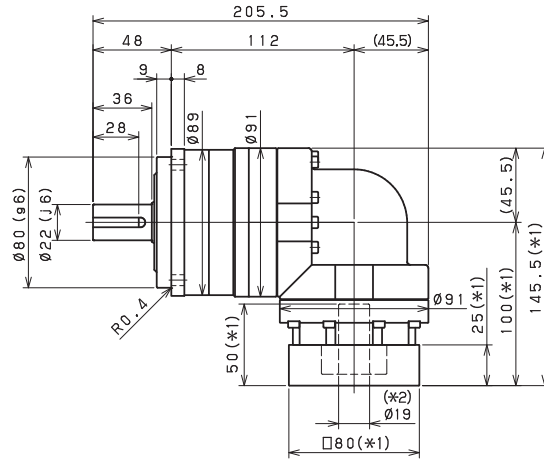
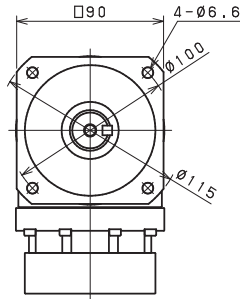
EVB-SERIES Right-angle shaft

EVB-090 – 2-Stage Dimensions

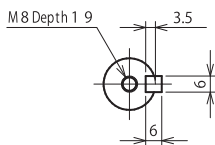
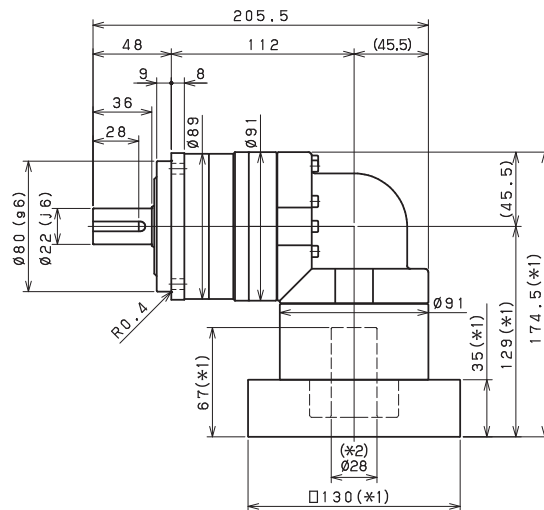
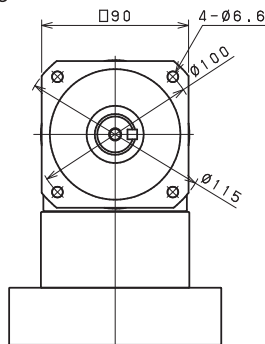
Input shaft bore $\leq \varnothing 14$



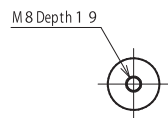
Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



Shaft with key



Smooth shaft

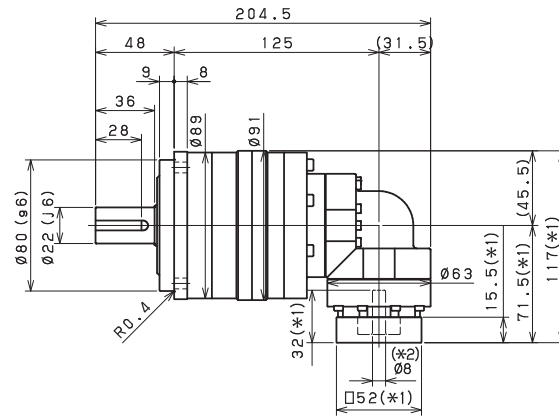
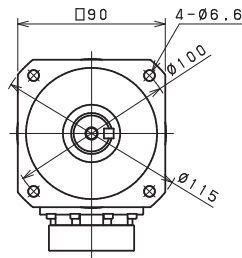
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

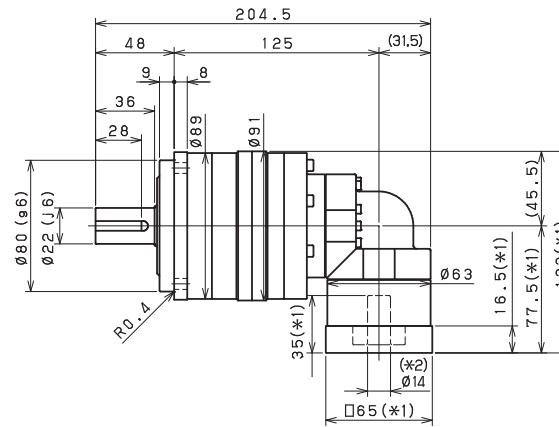
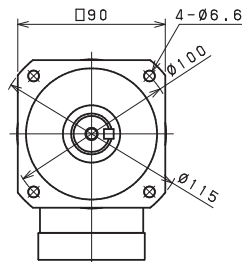
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVb-090 – 3-Stage Dimensions

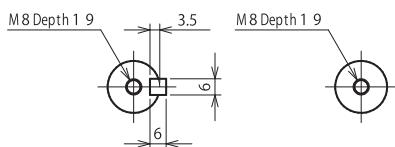
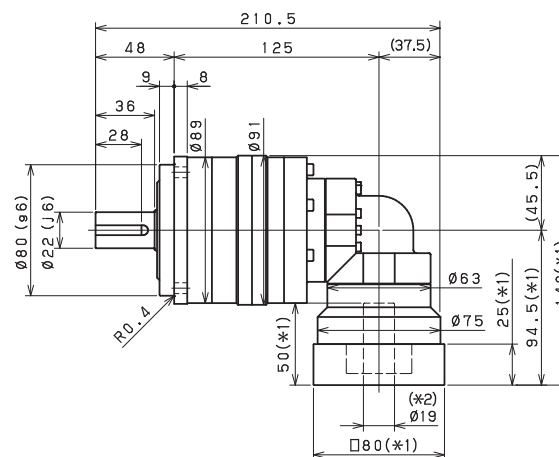
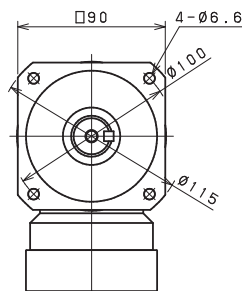
Input shaft bore $\leq \varnothing 8$



Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

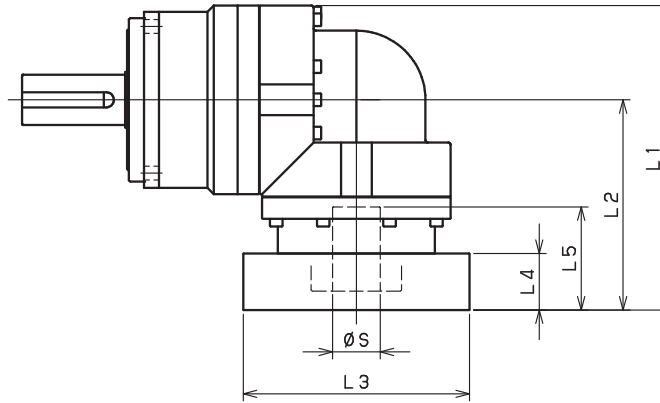
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-090 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-090-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- |
| EVB-090-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 137.5 | 92 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 142.5 | 97 | □65 | 21.5 | 40 |
| | CA·CC | 137.5 | 92 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 137.5 | 92 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 137.5 | 92 | □90 | 16.5 | 35 |
| | FA | 137.5 | 92 | □100 | 16.5 | 35 |
| | FB | 147.5 | 102 | □100 | 26.5 | 45 |
| EVB-090-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 145.5 | 100 | □80 | 25 | 50 |
| | EB·ED | 145.5 | 100 | □90 | 25 | 50 |
| | FA | 145.5 | 100 | □100 | 25 | 50 |
| | FB | 155.5 | 110 | □100 | 35 | 60 |
| | GA·GC·GH | 150.5 | 105 | □115 | 30 | 55 |
| | GB·GD·GJ | 145.5 | 100 | □115 | 25 | 50 |
| | GE·GF | 155.5 | 110 | □115 | 35 | 60 |
| | HA | 145.5 | 100 | □130 | 25 | 50 |
| | HB | 160.5 | 115 | □130 | 40 | 65 |
| | HC·HD·HE | 150.5 | 105 | □130 | 30 | 55 |
| | JA | 155.5 | 110 | □150 | 35 | 60 |
| EVB-090-□-□-28** (19 < S ≤ 28) | FA·FB·FC | 174.5 | 129 | □100 | 35 | 67 |
| | FD·FE | 169.5 | 124 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 174.5 | 129 | □115 | 35 | 67 |
| | HA·HC·HD | 174.5 | 129 | □130 | 35 | 67 |
| | HB | 184.5 | 139 | □130 | 45 | 77 |
| | HE | 189.5 | 144 | □130 | 50 | 82 |
| | HF | 169.5 | 124 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 174.5 | 129 | □150 | 35 | 67 |
| | JD | 194.5 | 149 | □150 | 55 | 87 |
| JE | 184.5 | 139 | □150 | 45 | 77 | |

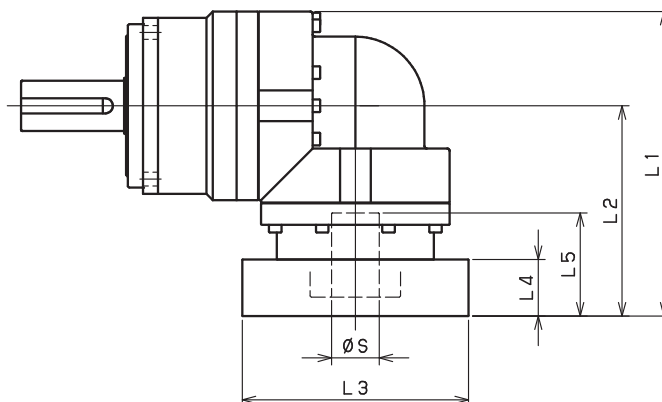
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVB-090 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-090-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 117 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 122 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 117 | 71.5 | □60 | 15.5 | 32 |
| | CA | 122 | 76.5 | □70 | 20.5 | 37 |
| EVB-090-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 123 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 128 | 82.5 | □65 | 21.5 | 40 |
| | CA·CC | 123 | 77.5 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 123 | 77.5 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 123 | 77.5 | □90 | 16.5 | 35 |
| | FA | 123 | 77.5 | □100 | 16.5 | 35 |
| | FB | 133 | 87.5 | □100 | 26.5 | 45 |
| EVB-090-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 140 | 94.5 | □80 | 25 | 50 |
| | EB·ED | 140 | 94.5 | □90 | 25 | 50 |
| | FA | 140 | 94.5 | □100 | 25 | 50 |
| | FB | 150 | 104.5 | □100 | 35 | 60 |
| | GA·GC·GH | 145 | 99.5 | □115 | 30 | 55 |
| | GB·GD·GJ | 140 | 94.5 | □115 | 25 | 50 |
| | GE·GF | 150 | 104.5 | □115 | 35 | 60 |
| | HA | 140 | 94.5 | □130 | 25 | 50 |
| | HB | 155 | 109.5 | □130 | 40 | 65 |
| | HC·HD·HE | 145 | 99.5 | □130 | 30 | 55 |
| | JA | 150 | 104.5 | □150 | 35 | 60 |
| EVB-090-□-□-28** (19 < S ≤ 28) | FA·FB·FC | -- | -- | -- | -- | -- |
| | FD·FE | -- | -- | -- | -- | -- |
| | GA·GB·GC·GD·GE·GF·GG·GH | -- | -- | -- | -- | -- |
| | HA·HC·HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HE | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA·JB·JC·JF | -- | -- | -- | -- | -- |
| | JD | -- | -- | -- | -- | -- |
| JE | -- | -- | -- | -- | -- | |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-115 – 2-Stage Specifications

| Frame Size | 115 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 75 | 100 | 120 | 150 | 150 | 150 | 110 | 110 |
| Maximum Acceleration Torque | [Nm] | *2 | 150 | 200 | 240 | 300 | 300 | 300 | 200 | 200 |
| Emergency Stop Torque | [Nm] | *3 | 320 | 430 | 500 | 550 | 550 | 550 | 450 | 450 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.88 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1300 | 1500 | 1600 | 1700 | 1800 | 1900 | 1900 | 2000 |
| Permitted Axial Load | [N] | *8 | 1500 | 1700 | 1900 | 2000 | 2100 | 2300 | 2400 | 2500 |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.740 | 5.490 | 5.020 | 4.770 | 4.650 | 4.550 | 4.490 | 4.460 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.340 | 7.080 | 6.610 | 6.360 | 6.240 | 6.140 | 6.080 | 6.050 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.410 | 14.150 | 13.690 | 13.430 | 13.310 | 13.220 | 13.160 | 13.120 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10.4 | | | | | | | |

EVB-115 – 3-Stage Specifications

| Frame Size | 115 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 110 | 130 | 150 | 150 | 150 | 110 | 150 | 150 |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 260 | 300 | 300 | 300 | 200 | 300 | 300 |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 550 | 550 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2300 | 2300 | 2500 | 2700 | 2800 | 2900 | 3000 | 3200 |
| Permitted Axial Load | [N] | *8 | 3000 | 3100 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 |
| Maximum Radial Load | [N] | *9 | 3900 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.250 | 2.460 | 2.200 | 2.180 | 2.400 | 1.870 | 2.160 | 1.860 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.580 | 2.790 | 2.530 | 2.510 | 2.730 | 2.200 | 2.490 | 2.190 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 4.910 | 4.650 | 4.640 | 4.860 | 4.330 | 4.620 | 4.320 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10.1 | | | | | | | |

EVB-115 – 3-Stage Specifications

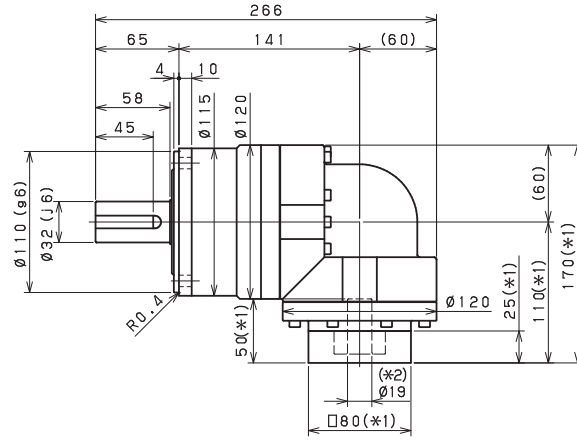
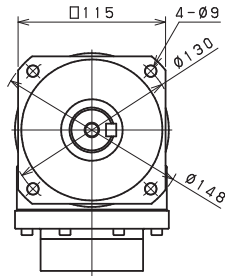
| Frame Size | 115 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 110 | 150 | 150 | 150 | 150 | 110 | 110 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 450 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3300 | 3400 | 3600 | 3800 | 4000 | 4200 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.150 | 1.860 | 1.850 | 1.850 | 1.850 | 1.850 | 1.850 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.480 | 2.190 | 2.180 | 2.180 | 2.180 | 2.180 | 2.180 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.610 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 10.1 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVB115
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

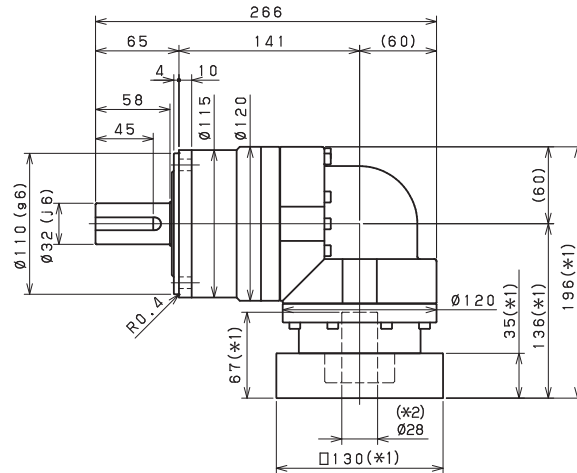
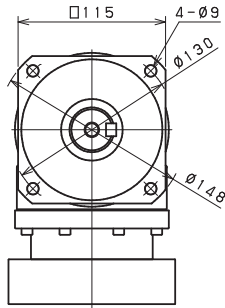
EVB-SERIES Right-angle shaft

EVB-115 – 2-Stage Dimensions

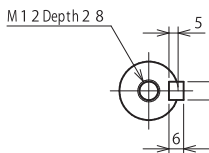
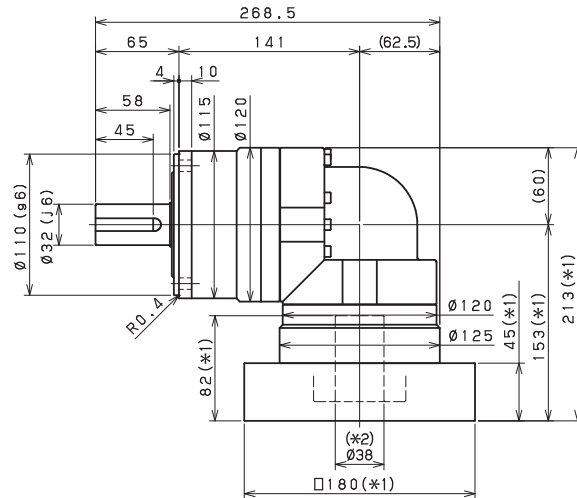
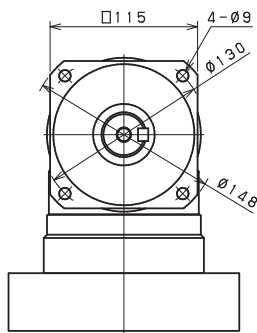
Input shaft bore $\leq \varnothing 19$



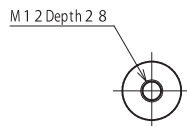
Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



Shaft with key



Smooth shaft

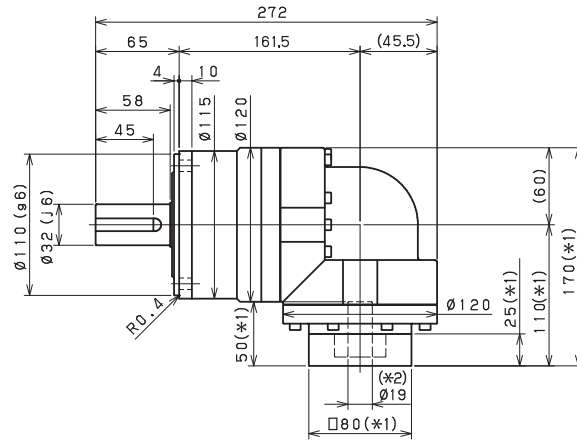
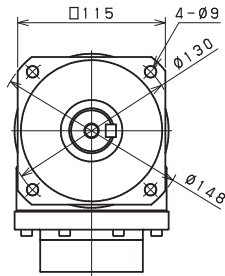
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

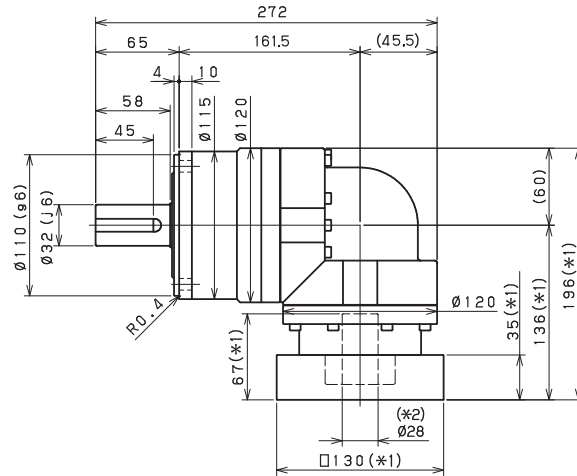
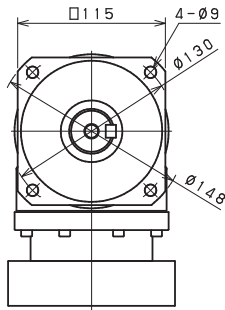
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVB-115 - 3-Stage Dimensions

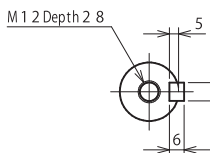
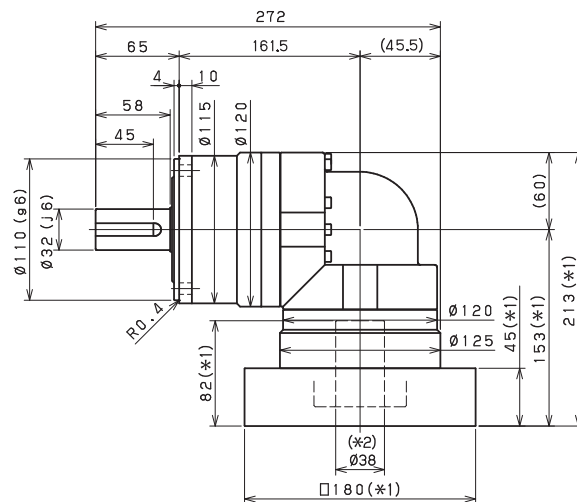
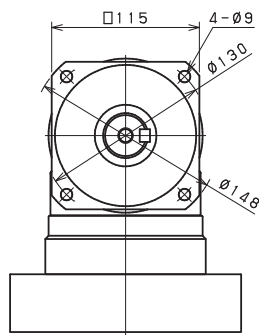
Input shaft bore $\leq \varnothing 14$



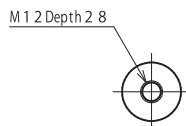
Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

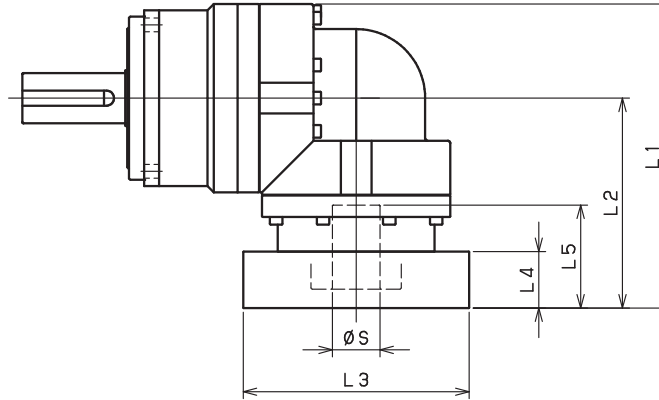
Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-115 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-115-□-□-14** (S ≤ 14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| EVB-115-□-□-19** (14 < S ≤ 19) | DA•DB•DC | 170 | 110 | □80 | 25 | 50 |
| | EB•ED | 170 | 110 | □90 | 25 | 50 |
| | FA | 170 | 110 | □100 | 25 | 50 |
| | FB | 180 | 120 | □100 | 35 | 60 |
| | GB•GD•GJ | 170 | 110 | □115 | 25 | 50 |
| | HA | 170 | 110 | □130 | 25 | 50 |
| | HB | 185 | 125 | □130 | 40 | 65 |
| | JA | 180 | 120 | □150 | 35 | 60 |
| EVB-115-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 196 | 136 | □100 | 35 | 67 |
| | FD•FE | 191 | 131 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 196 | 136 | □115 | 35 | 67 |
| | HA•HC•HD | 196 | 136 | □130 | 35 | 67 |
| | HB | 206 | 146 | □130 | 45 | 77 |
| | HE | 211 | 151 | □130 | 50 | 82 |
| | HF | 191 | 131 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 196 | 136 | □150 | 35 | 67 |
| | JD | 216 | 156 | □150 | 55 | 87 |
| | JE | 206 | 146 | □150 | 45 | 77 |
| | KA•KB•KE | 196 | 136 | □180 | 35 | 67 |
| | KD | 206 | 146 | □180 | 45 | 77 |
| EVB-115-□-□-38** (28 < S ≤ 38) | HA | 213 | 153 | □130 | 45 | 82 |
| | HB•HE | 208 | 148 | □130 | 40 | 77 |
| | JA | 213 | 153 | □150 | 45 | 82 |
| | KA•KB•KC | 213 | 153 | □180 | 45 | 82 |
| | KD | 248 | 188 | □180 | 80 | 117 |
| | KE | 228 | 168 | □180 | 60 | 97 |

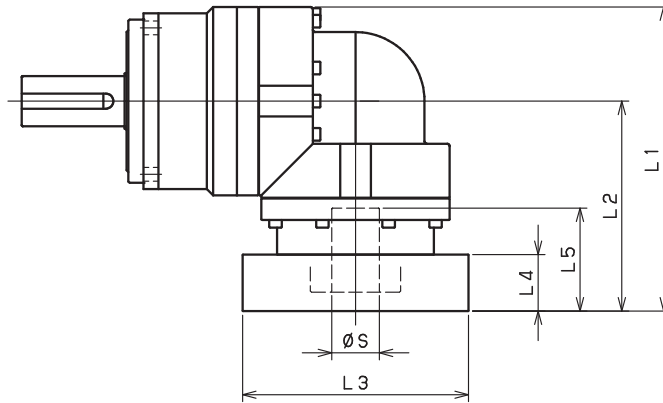
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVB-115 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-115-□-□-14** (S ≤ 14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 152 | 92 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 157 | 97 | □65 | 21.5 | 40 |
| | CA•CC | 152 | 92 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 152 | 92 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 152 | 92 | □90 | 16.5 | 35 |
| | FA | 152 | 92 | □100 | 16.5 | 35 |
| | FB | 162 | 102 | □100 | 26.5 | 45 |
| | JA | 167 | 107 | □150 | 31.5 | 50 |
| EVB-115-□-□-19** (14 < S ≤ 19) | DA•DB•DC | 160 | 100 | □80 | 25 | 50 |
| | EB•ED | 160 | 100 | □90 | 25 | 50 |
| | FA | 160 | 100 | □100 | 25 | 50 |
| | FB | 170 | 110 | □100 | 35 | 60 |
| | GB•GD•GJ | 160 | 100 | □115 | 25 | 50 |
| | HA | 160 | 100 | □130 | 25 | 50 |
| | HB | 175 | 115 | □130 | 40 | 65 |
| | JA | 170 | 110 | □150 | 35 | 60 |
| EVB-115-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 189 | 129 | □100 | 35 | 67 |
| | FD•FE | 184 | 124 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 189 | 129 | □115 | 35 | 67 |
| | HA•HC•HD | 189 | 129 | □130 | 35 | 67 |
| | HB | 199 | 139 | □130 | 45 | 77 |
| | HE | 204 | 144 | □130 | 50 | 82 |
| | HF | 184 | 124 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 189 | 129 | □150 | 35 | 67 |
| | JD | 209 | 149 | □150 | 55 | 87 |
| | JE | 199 | 139 | □150 | 45 | 77 |
| | KA•KB•KE | 189 | 129 | □180 | 35 | 67 |
| | KD | 199 | 139 | □180 | 45 | 77 |
| EVB-115-□-□-38** (28 < S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB•HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA•KB•KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB

EVB-SERIES Right-angle shaft

EVB-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 130 | 170 | 200 | 260 | 300 | 300 | 200 | 200 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 260 | 340 | 400 | 520 | 600 | 600 | 400 | 400 | | |
| Emergency Stop Torque | [Nm] | *3 | 700 | 950 | 1100 | 1100 | 1100 | 1100 | 750 | 750 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 3.26 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3200 | 3500 | 3800 | 4000 | 4200 | 4400 | 4600 | 4700 | | |
| Permitted Axial Load | [N] | *8 | 2400 | 2700 | 3000 | 3300 | 3500 | 3700 | 3900 | 4100 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 23.130 | 18.570 | 16.910 | 16.010 | 15.580 | 15.230 | 14.770 | 14.660 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 27.500 | 22.940 | 21.280 | 20.380 | 19.950 | 19.610 | 19.410 | 19.030 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 40.730 | 36.170 | 34.510 | 33.610 | 33.180 | 32.840 | 32.370 | 32.260 | | |
| Efficiency | [%] | *11 | 93 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 19.1 | | | | | | | | | |

EVB-140 – 3-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 3-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 300 | 300 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 600 | 600 | | |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 1100 | 1100 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5400 | 5500 | 6000 | 6400 | 6700 | 6800 | 7200 | 7500 | | |
| Permitted Axial Load | [N] | *8 | 4900 | 5000 | 5500 | 6100 | 6400 | 6600 | 7000 | 7500 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.400 | 7.290 | 6.220 | 6.150 | 7.090 | 4.990 | 6.090 | 4.950 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.000 | 8.880 | 7.810 | 7.750 | 8.680 | 6.580 | 7.690 | 6.540 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.070 | 15.960 | 14.890 | 14.820 | 15.760 | 13.660 | 14.760 | 13.610 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 19.6 | | | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVB-140 – 3-Stage Specifications

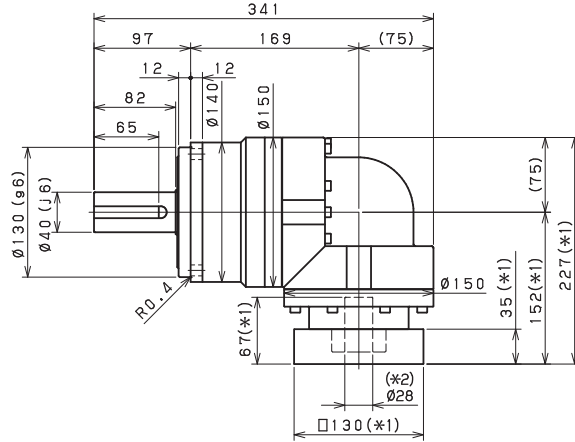
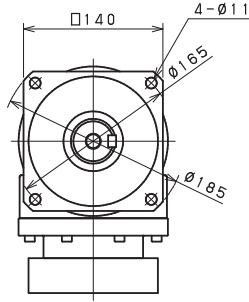
| Frame Size | 140 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 750 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7800 | 8100 | 8600 | 9100 | 9100 | 9100 | 9100 | | |
| Permitted Axial Load | [N] | *8 | 7900 | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 | | |
| Maximum Radial Load | [N] | *9 | 9100 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 8200 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.070 | 4.930 | 4.920 | 4.910 | 4.910 | 4.910 | 4.910 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 7.660 | 6.520 | 6.510 | 6.510 | 6.500 | 6.500 | 6.500 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 14.740 | 13.590 | 13.590 | 13.580 | 13.580 | 13.570 | 13.570 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 19.6 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2000 rpm for EVB140
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

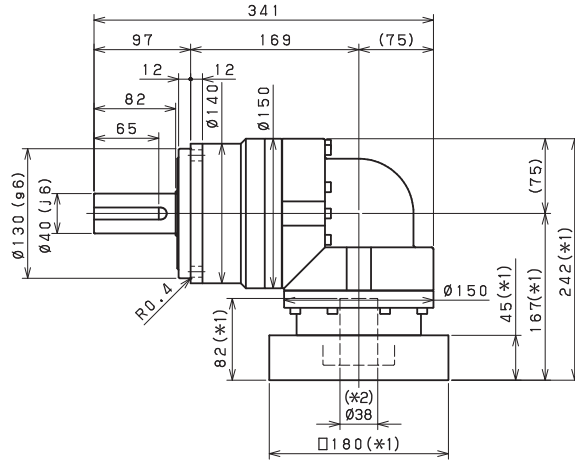
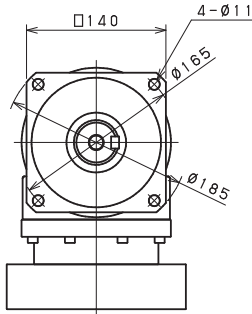
EVB-SERIES Right-angle shaft

EVB-140 – 2-Stage Dimensions

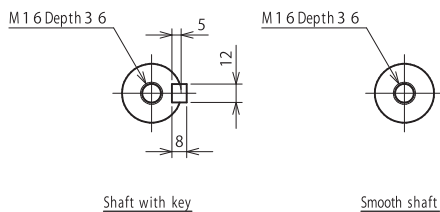
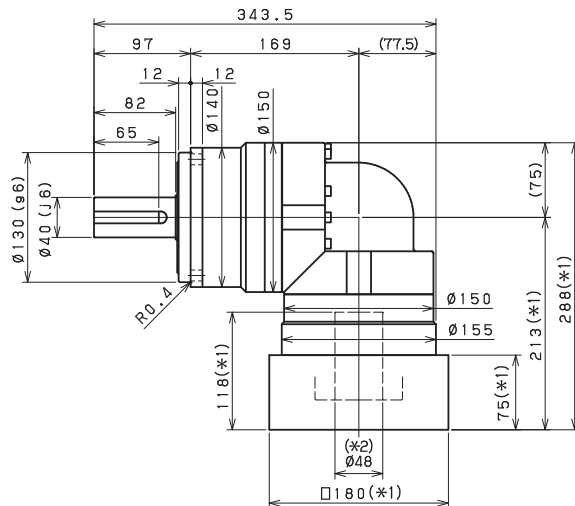
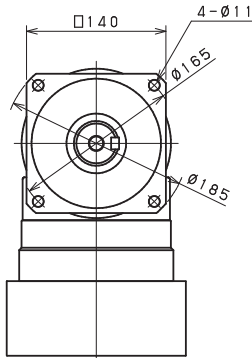
Input shaft bore $\cong \varnothing 28$



Input shaft bore $\cong \varnothing 38$



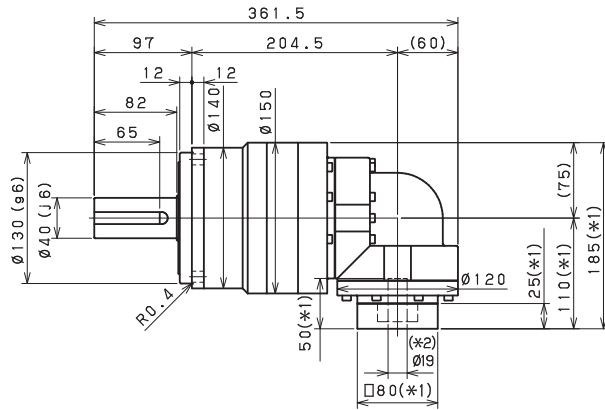
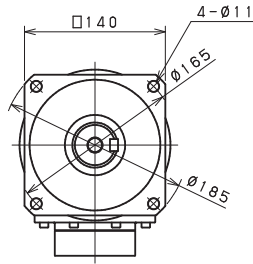
Input shaft bore $\cong \varnothing 48$



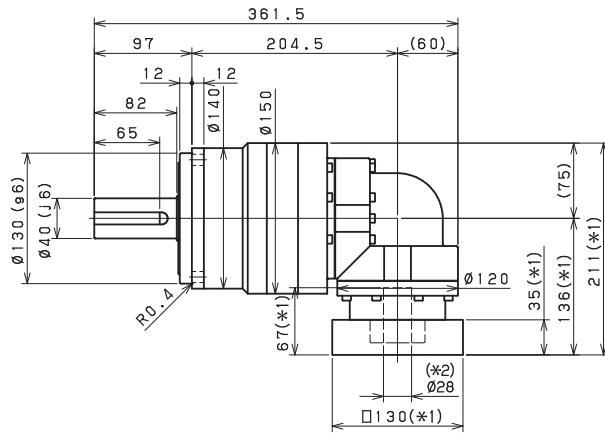
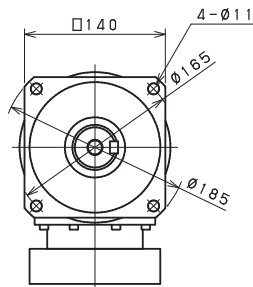
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB-140 – 3-Stage Dimensions

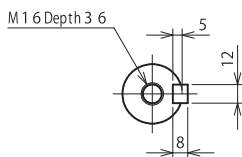
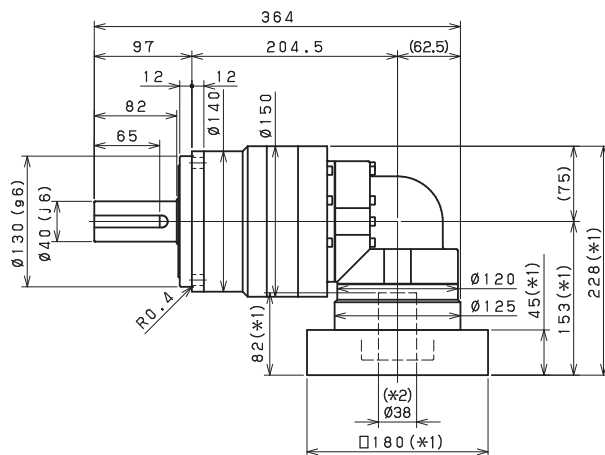
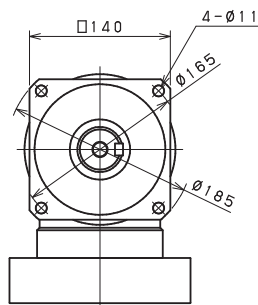
Input shaft bore $\leq \varnothing 19$



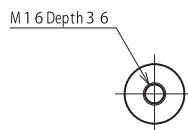
Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

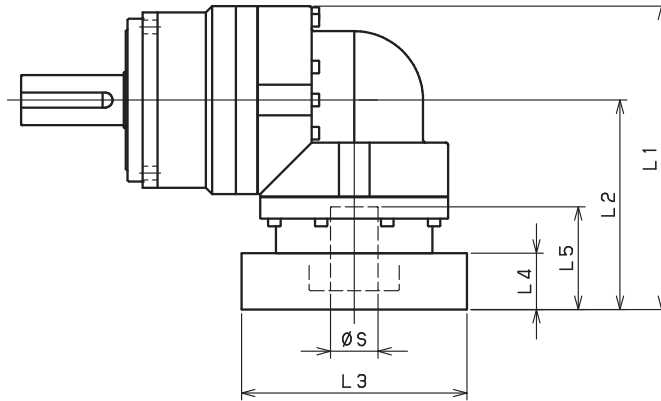
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-140 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------|---------|------|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-140-□-□-19** (S ≤ 19) | DA·DB·DC | -- | -- | -- | -- | -- |
| | EB·ED | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| | GB·GD·GJ | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| EVB-140-□-□-28** (19 < S ≤ 28) | FA·FB·FC | 227 | 152 | □100 | 35 | 67 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 227 | 152 | □115 | 35 | 67 |
| | HA·HC·HD | 227 | 152 | □130 | 35 | 67 |
| | HB | 237 | 162 | □130 | 45 | 77 |
| | HF | 222 | 147 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 227 | 152 | □150 | 35 | 67 |
| | KA·KB·KE | 227 | 152 | □180 | 35 | 67 |
| | LA | 227 | 152 | □200 | 35 | 67 |
| | LB | 237 | 162 | □200 | 45 | 77 |
| | MA | 227 | 152 | □220 | 35 | 67 |
| EVB-140-□-□-38** (28 < S ≤ 38) | MB | 237 | 162 | □220 | 45 | 77 |
| | HA | 242 | 167 | □130 | 45 | 82 |
| | HB·HE | 237 | 162 | □130 | 40 | 77 |
| | JA | 242 | 167 | □150 | 45 | 82 |
| | KA·KB·KC | 242 | 167 | □180 | 45 | 82 |
| | KD | 277 | 202 | □180 | 80 | 117 |
| | KE | 257 | 182 | □180 | 60 | 97 |
| | LA | 242 | 167 | □200 | 45 | 82 |
| | LB | 252 | 177 | □200 | 55 | 92 |
| | MA·MB | 242 | 167 | □220 | 45 | 82 |
| EVB-140-□-□-48** (38 < S ≤ 48) | MC | 257 | 182 | □220 | 60 | 97 |
| | MD | 252 | 177 | □220 | 55 | 92 |
| | KA | 288 | 213 | □180 | 75 | 118 |
| | KB·KC | 268 | 193 | □180 | 55 | 98 |
| | LA | 268 | 193 | □200 | 55 | 98 |
| MA | 268 | 193 | □220 | 55 | 98 | |
| MB | 288 | 213 | □220 | 75 | 118 | |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

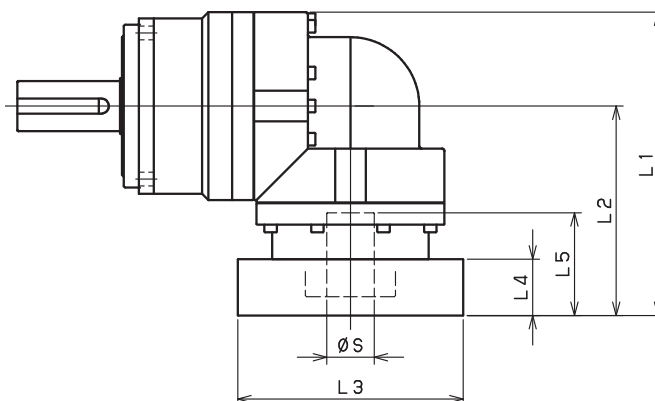
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-140 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-140-□-□-19** (S ≤ 19) | DA·DB·DC | 185 | 110 | □80 | 25 | 50 |
| | EB·ED | 185 | 110 | □90 | 25 | 50 |
| | FA | 185 | 110 | □100 | 25 | 50 |
| | FB | 195 | 120 | □100 | 35 | 60 |
| | GB·GD·GJ | 185 | 110 | □115 | 25 | 50 |
| | HA | 185 | 110 | □130 | 25 | 50 |
| | HB | 200 | 125 | □130 | 40 | 65 |
| EVB-140-□-□-28** (19 < S ≤ 28) | JA | 195 | 120 | □150 | 35 | 60 |
| | FA·FB·FC | 211 | 136 | □100 | 35 | 67 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 211 | 136 | □115 | 35 | 67 |
| | HA·HC·HD | 211 | 136 | □130 | 35 | 67 |
| | HB | 221 | 146 | □130 | 45 | 77 |
| | HF | 206 | 131 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 211 | 136 | □150 | 35 | 67 |
| | KA·KB·KE | 211 | 136 | □180 | 35 | 67 |
| | LA | 211 | 136 | □200 | 35 | 67 |
| | LB | 221 | 146 | □200 | 45 | 77 |
| EVB-140-□-□-38** (28 < S ≤ 38) | MA | 211 | 136 | □220 | 35 | 67 |
| | MB | 221 | 146 | □220 | 45 | 77 |
| | HA | 228 | 153 | □130 | 45 | 82 |
| | HB·HE | 223 | 148 | □130 | 40 | 77 |
| | JA | 228 | 153 | □150 | 45 | 82 |
| | KA·KB·KC | 228 | 153 | □180 | 45 | 82 |
| | KD | 263 | 188 | □180 | 80 | 117 |
| | KE | 243 | 168 | □180 | 60 | 97 |
| | LA | 228 | 153 | □200 | 45 | 82 |
| | LB | 238 | 163 | □200 | 55 | 92 |
| EVB-140-□-□-48** (38 < S ≤ 48) | MA·MB | 228 | 153 | □220 | 45 | 82 |
| | MC | 243 | 168 | □220 | 60 | 97 |
| | MD | 238 | 163 | □220 | 55 | 92 |
| | KA | -- | -- | -- | -- | -- |
| | KB·KC | -- | -- | -- | -- | -- |
| LA | -- | -- | -- | -- | -- | |
| MA | -- | -- | -- | -- | -- | |
| MB | -- | -- | -- | -- | -- | |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-180 – 2-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 400 | 575 | 600 | 600 | 600 | 600 | 400 | 400 |
| Maximum Acceleration Torque | [Nm] | *2 | 575 | 770 | 960 | 1120 | 1120 | 1120 | 775 | 775 |
| Emergency Stop Torque | [Nm] | *3 | 1300 | 1700 | 2000 | 2500 | 2500 | 2500 | 2000 | 2000 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.8 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 6200 | 6700 | 7100 | 7400 | 7800 | 8100 | 8400 |
| Permitted Axial Load | [N] | *8 | 4300 | 4900 | 5400 | 5800 | 6300 | 6600 | 7000 | 7300 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 93.71 | 77.72 | 71.89 | 68.74 | 66.43 | 65.27 | 64.60 | 64.28 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 128.6 | 112.6 | 106.8 | 103.6 | 101.3 | 100.1 | 99.46 | 99.14 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 214.2 | 198.2 | 192.4 | 189.2 | 186.9 | 185.7 | 185.1 | 184.7 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 49 | | | | | | | |

EVB-180 – 3-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 400 | 555 | 600 | 600 | 600 | 400 | 600 | 600 |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 1120 | 1120 |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2500 | 2500 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9600 | 9800 | 11000 | 11000 | 12000 | 12000 | 13000 | 13000 |
| Permitted Axial Load | [N] | *8 | 8700 | 8900 | 9900 | 11000 | 11000 | 12000 | 13000 | 13000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 11.49 | 12.09 | 11.15 | 10.98 | 11.59 | 10.33 | 10.83 | 10.24 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 20.28 | 20.88 | 19.94 | 19.77 | 20.38 | 19.11 | 19.62 | 19.03 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 25.10 | 25.70 | 24.76 | 24.59 | 25.20 | 23.94 | 24.44 | 23.85 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 36 | | | | | | | |

EVB-180 – 3-Stage Specifications

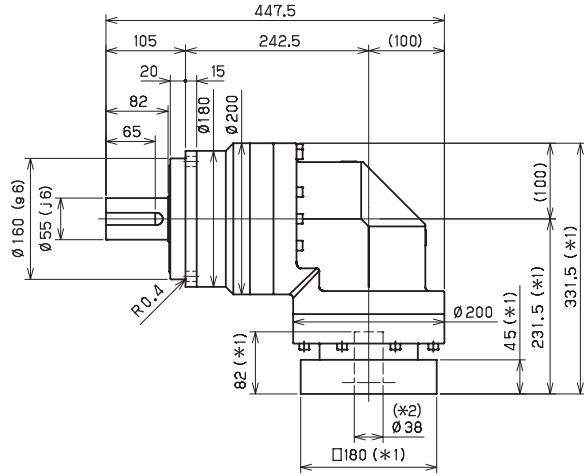
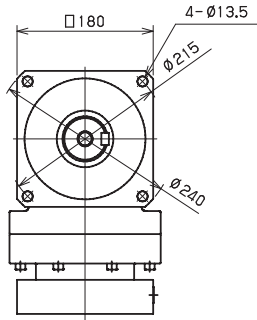
| Frame Size | 180 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 775 | | |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2000 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 10.76 | 10.20 | 10.18 | 10.16 | 10.15 | 10.15 | 10.14 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 19.55 | 18.99 | 18.96 | 18.95 | 18.94 | 18.93 | 18.93 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 24.37 | 23.81 | 23.78 | 23.77 | 23.76 | 23.75 | 23.75 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 36 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1500 rpm for EVB180
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

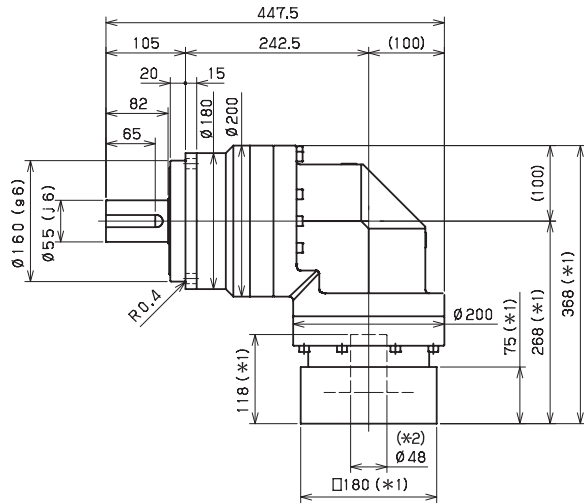
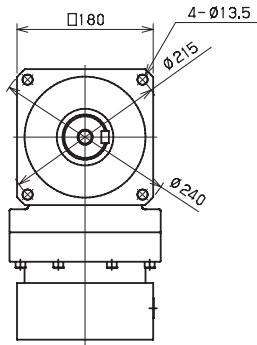
EVB-SERIES Right-angle shaft

EVB-180 – 2-Stage Dimensions

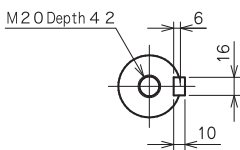
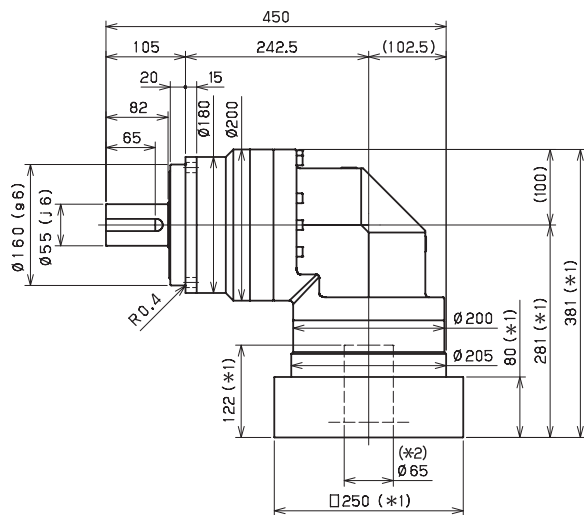
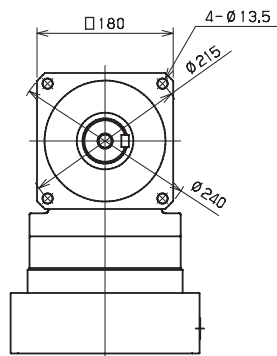
Input shaft bore $\leq \varnothing 38$



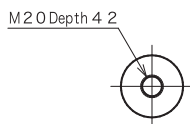
Input shaft bore $\leq \varnothing 48$



Input shaft bore $\leq \varnothing 65$



Shaft with key



Smooth shaft

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

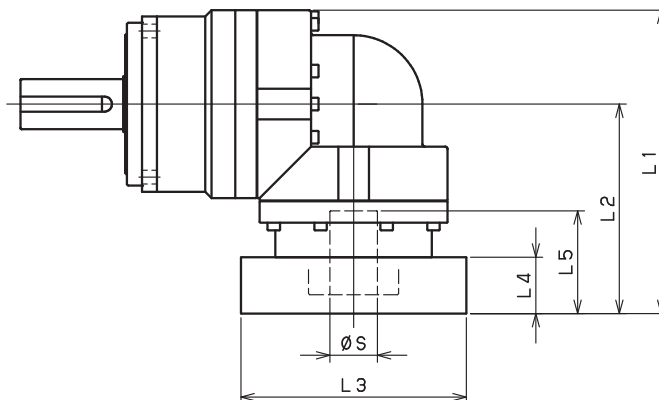
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-180 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------|---------|-------|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-180-□-□-28** (S ≤ 28) | FA•FB•FC | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| EVB-180-□-□-38** (28 < S ≤ 38) | HA | 331.5 | 231.5 | □130 | 45 | 82 |
| | HB•HE | 326.5 | 226.5 | □130 | 40 | 77 |
| | JA | 331.5 | 231.5 | □150 | 45 | 82 |
| | KA•KB•KC | 331.5 | 231.5 | □180 | 45 | 82 |
| | KD | 366.5 | 266.5 | □180 | 80 | 117 |
| | KE | 346.5 | 246.5 | □180 | 60 | 97 |
| | LB | 341.5 | 241.5 | □200 | 55 | 92 |
| | MA•MB | 331.5 | 231.5 | □220 | 45 | 82 |
| | MC | 346.5 | 246.5 | □220 | 60 | 97 |
| | MD | 341.5 | 241.5 | □220 | 55 | 92 |
| EVB-180-□-□-48** (38 < S ≤ 48) | NA | 331.5 | 231.5 | □250 | 45 | 82 |
| | KA | 368 | 268 | □180 | 75 | 118 |
| | KB•KC | 348 | 248 | □180 | 55 | 98 |
| | LA | 348 | 248 | □200 | 55 | 98 |
| | MA | 348 | 248 | □220 | 55 | 98 |
| | MB | 368 | 268 | □220 | 75 | 118 |
| EVB-180-□-□-65** (48 < S ≤ 65) | NA | 368 | 268 | □250 | 75 | 118 |
| | PA | 368 | 268 | □280 | 75 | 118 |
| | MA•MB•MC•MD | 381 | 281 | □220 | 80 | 122 |
| | NA•NC | 381 | 281 | □250 | 80 | 122 |
| | NB•ND | 411 | 311 | □250 | 110 | 152 |
| PA | 401 | 301 | □280 | 100 | 142 | |
| PB | 411 | 311 | □280 | 110 | 152 | |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

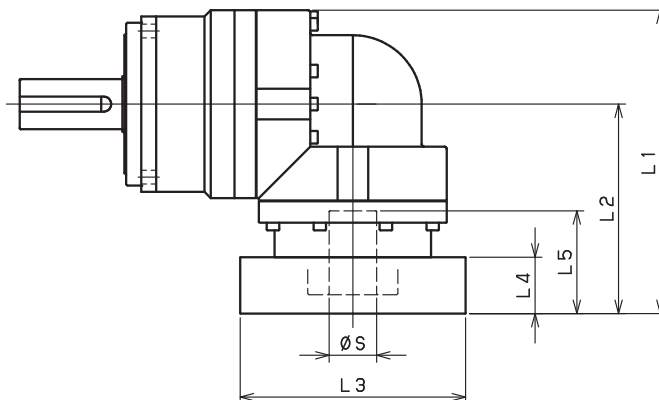
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-180 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-180-□-□-28** (S ≤ 28) | FA•FB•FC | 252 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 252 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 252 | 152 | □130 | 35 | 67 |
| | HB | 262 | 162 | □130 | 45 | 77 |
| | HF | 247 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 252 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 252 | 152 | □180 | 35 | 67 |
| | LA | 252 | 152 | □200 | 35 | 67 |
| | LB | 262 | 162 | □200 | 45 | 77 |
| | MA | 252 | 152 | □220 | 35 | 67 |
| | MB | 262 | 162 | □220 | 45 | 77 |
| EVB-180-□-□-38** (28 < S ≤ 38) | HA | 267 | 167 | □130 | 45 | 82 |
| | HB•HE | 262 | 162 | □130 | 40 | 77 |
| | JA | 267 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 267 | 167 | □180 | 45 | 82 |
| | KD | 302 | 202 | □180 | 80 | 117 |
| | KE | 282 | 182 | □180 | 60 | 97 |
| | LB | 277 | 177 | □200 | 55 | 92 |
| | MA•MB | 267 | 167 | □220 | 45 | 82 |
| | MC | 282 | 182 | □220 | 60 | 97 |
| | MD | 277 | 177 | □220 | 55 | 92 |
| | NA | 267 | 167 | □250 | 45 | 82 |
| EVB-180-□-□-48** (38 < S ≤ 48) | KA | 313 | 213 | □180 | 75 | 118 |
| | KB•KC | 293 | 193 | □180 | 55 | 98 |
| | LA | 293 | 193 | □200 | 55 | 98 |
| | MA | 293 | 193 | □220 | 55 | 98 |
| | MB | 313 | 213 | □220 | 75 | 118 |
| | NA | 313 | 213 | □250 | 75 | 118 |
| | PA | 313 | 213 | □280 | 75 | 118 |
| EVB-180-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVB-SERIES Right-angle shaft

EVB-220 – 2-Stage Specifications

| Frame Size | 220 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 575 | 765 | 960 | 1150 | 1200 | 1200 | 800 | 800 |
| Maximum Acceleration Torque | [Nm] | *2 | 1015 | 1355 | 1695 | 1840 | 1840 | 1760 | 1520 | 1280 |
| Emergency Stop Torque | [Nm] | *3 | 2500 | 3300 | 4000 | 4500 | 4500 | 4500 | 3600 | 3600 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 14.5 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5800 | 6400 | 6900 | 7300 | 7700 | 8000 | 8400 | 8700 |
| Permitted Axial Load | [N] | *8 | 6400 | 7200 | 7900 | 8600 | 9200 | 9700 | 10000 | 11000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 148.0 | 122.9 | 113.3 | 108.1 | 104.7 | 102.7 | 101.6 | 101.0 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 223.2 | 198.1 | 188.6 | 183.3 | 180.0 | 178.0 | 176.8 | 176.2 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 66 | | | | | | | |

EVB-220 – 3-Stage Specifications

| Frame Size | 220 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 1200 | 1200 |
| Maximum Acceleration Torque | [Nm] | *2 | 1280 | 1840 | 1840 | 1840 | 1840 | 1280 | 1840 | 1840 |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 4500 | 4500 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 9900 | 10000 | 11000 | 12000 | 12000 | 13000 | 13000 | 14000 |
| Permitted Axial Load | [N] | *8 | 13000 | 13000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 36.32 | 37.24 | 35.75 | 35.47 | 36.39 | 34.39 | 35.21 | 34.25 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 66.14 | 67.06 | 65.57 | 65.28 | 66.21 | 64.21 | 65.03 | 64.07 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 67 | | | | | | | |

EVB-220 – 3-Stage Specifications

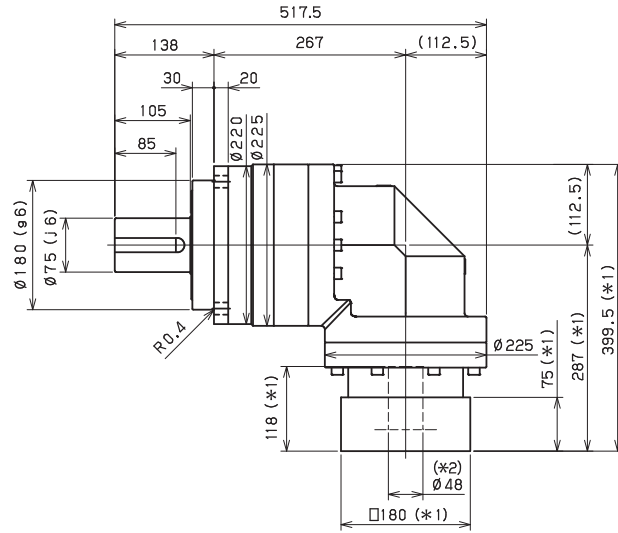
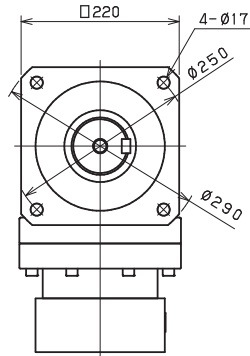
| Frame Size | 220 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 800 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1040 | 1840 | 1840 | 1840 | 1440 | 1040 | 960 | | |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 3600 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 14000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | | |
| Permitted Axial Load | [N] | *8 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | 14000 | | |
| Maximum Radial Load | [N] | *9 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 35.10 | 34.18 | 34.14 | 34.11 | 34.10 | 34.09 | 34.08 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 64.92 | 63.99 | 63.95 | 63.93 | 63.91 | 63.90 | 63.90 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 67 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVB220
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

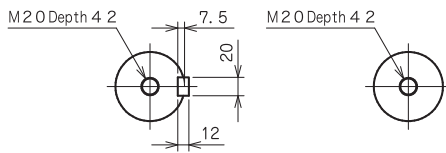
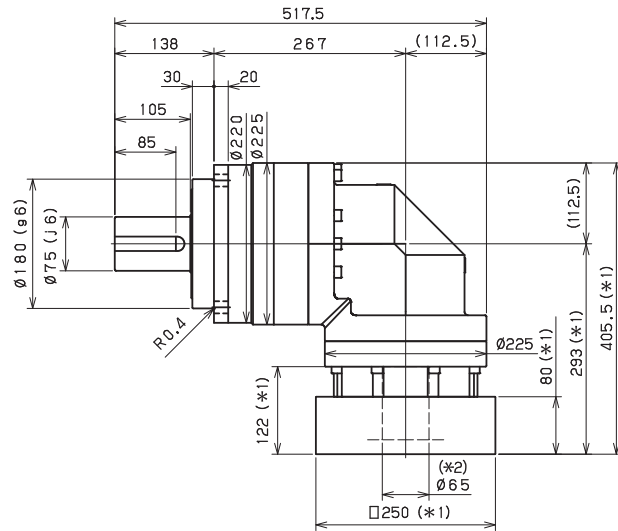
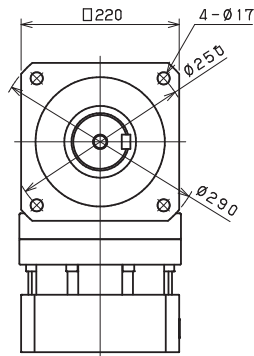
EVB-SERIES Right-angle shaft

EVB-220 – 2-Stage Dimensions

Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$

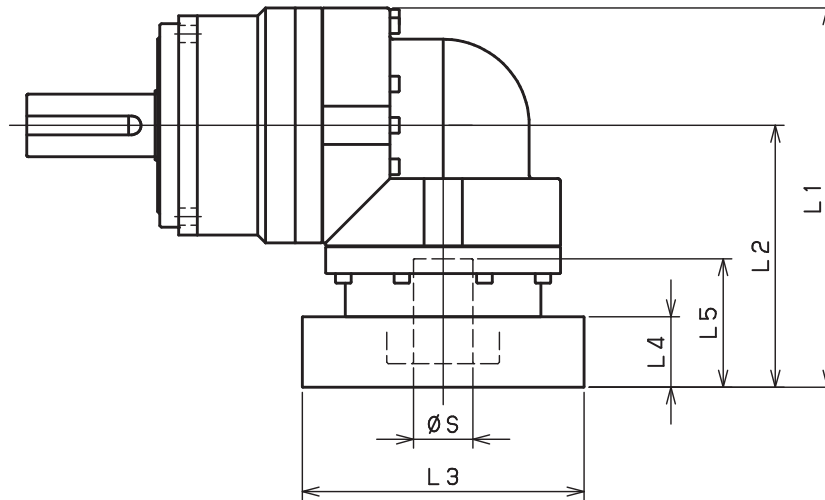


Shaft with key

Smooth shaft

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVB-220 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|------------------|---------|-----|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-220-□-□-38** (S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- |
| NA | -- | -- | -- | -- | -- | |
| EVB-220-□-□-48** (38 < S ≤ 48) | KA | 399.5 | 287 | □180 | 75 | 118 |
| | KB-KC | 379.5 | 267 | □180 | 55 | 98 |
| | LA | 379.5 | 267 | □200 | 55 | 98 |
| | MA | 379.5 | 267 | □220 | 55 | 98 |
| | MB | 399.5 | 287 | □220 | 75 | 118 |
| | NA | 399.5 | 287 | □250 | 75 | 118 |
| | PA | 399.5 | 287 | □280 | 75 | 118 |
| EVB-220-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | 405.5 | 293 | □220 | 80 | 122 |
| | NA-NC | 405.5 | 293 | □250 | 80 | 122 |
| | NB-ND | 435.5 | 323 | □250 | 110 | 152 |
| | PA | 425.5 | 313 | □280 | 100 | 142 |
| | PB | 435.5 | 323 | □280 | 110 | 152 |
| | QA-QB | 425.5 | 313 | □320 | 100 | 142 |

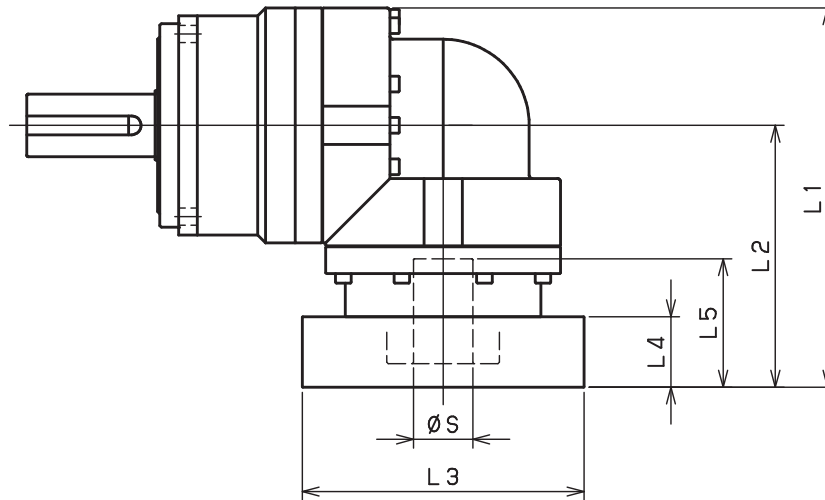
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVB-220 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|------------------|---------|-------|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVB-220-□-□-38** (S ≤ 38) | HA | 344 | 231.5 | □130 | 45 | 82 |
| | HB-HE | 339 | 226.5 | □130 | 40 | 77 |
| | JA | 344 | 231.5 | □150 | 45 | 82 |
| | KA-KB-KC | 344 | 231.5 | □180 | 45 | 82 |
| | KD | 379 | 266.5 | □180 | 80 | 117 |
| | KE | 359 | 246.5 | □180 | 60 | 97 |
| | LA | 344 | 231.5 | □200 | 45 | 82 |
| | LB | 354 | 241.5 | □200 | 55 | 92 |
| | MA-MB | 344 | 231.5 | □220 | 45 | 82 |
| | MC | 359 | 246.5 | □220 | 60 | 97 |
| | MD | 354 | 241.5 | □220 | 55 | 92 |
| NA | 344 | 231.5 | □250 | 45 | 82 | |
| EVB-220-□-□-48** (38 < S ≤ 48) | KA | 380.5 | 268 | □180 | 75 | 118 |
| | KB-KC | 360.5 | 248 | □180 | 55 | 98 |
| | LA | 360.5 | 248 | □200 | 55 | 98 |
| | MA | 360.5 | 248 | □220 | 55 | 98 |
| | MB | 380.5 | 268 | □220 | 75 | 118 |
| | NA | 380.5 | 268 | □250 | 75 | 118 |
| | PA | 380.5 | 268 | □280 | 75 | 118 |
| EVB-220-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

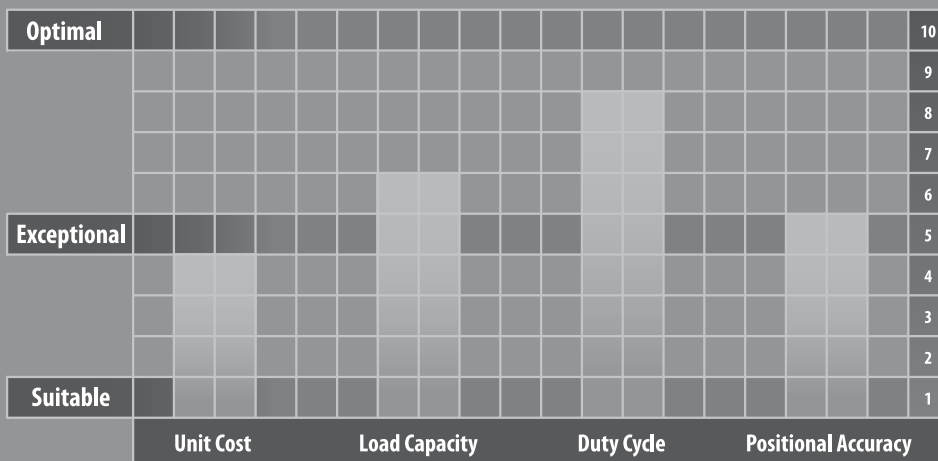
For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-SERIES

For applications that require exceptional load handling capabilities in an optimum foot print, the EVS series is the performance leader. The right-angle equivalent to the VRS, the EVS internal design provides an extremely smooth running, quiet reducer even when challenging static forces are applied. The tapered roller bearings at the output side allow the EVS to handle larger radial and thrust load forces than the typical planetary gearbox.

The EVS series is a high precision right-angle gearhead having a maximum 4 arc-min backlash rating, while handling a peak output torque reaching 600 Nm. The series is commonly utilized in custom assembly applications or in robotic tooling. Very low backlash and off-set load handling capabilities are critical characteristics for these types of applications.





EVS-SERIES

- Industry standard mounting dimensions
- Large variety of reduction ratios to choose from
- Thru-bolt mounting style
- Low backlash (≤ 4 arc-min)
- Space-saving design, when minimal envelope available
- Highest radial and axial load ratings among right-angle options
- Readily available

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

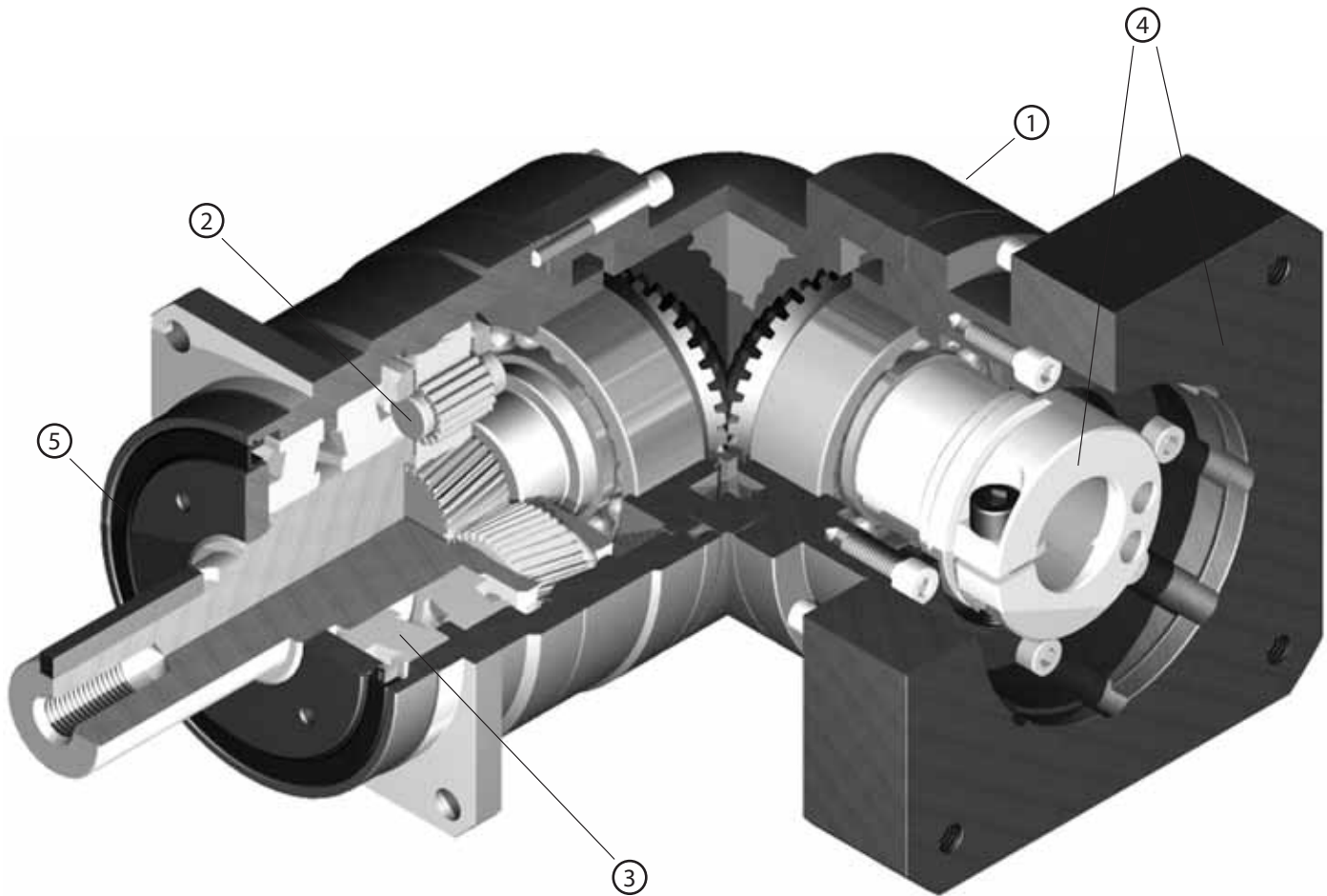
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

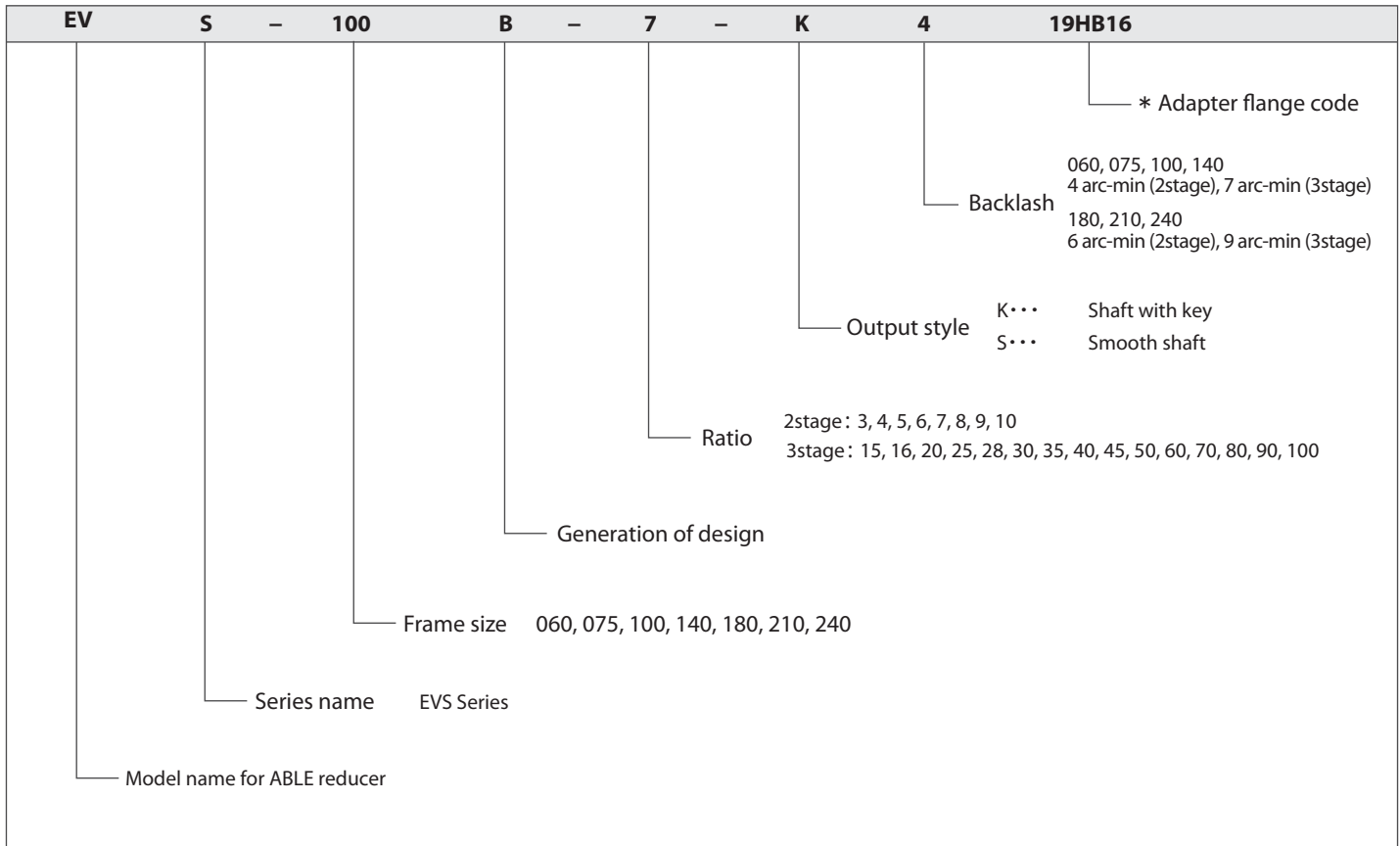
EVS-SERIES Right-angle shaft

EVS-Series – Features

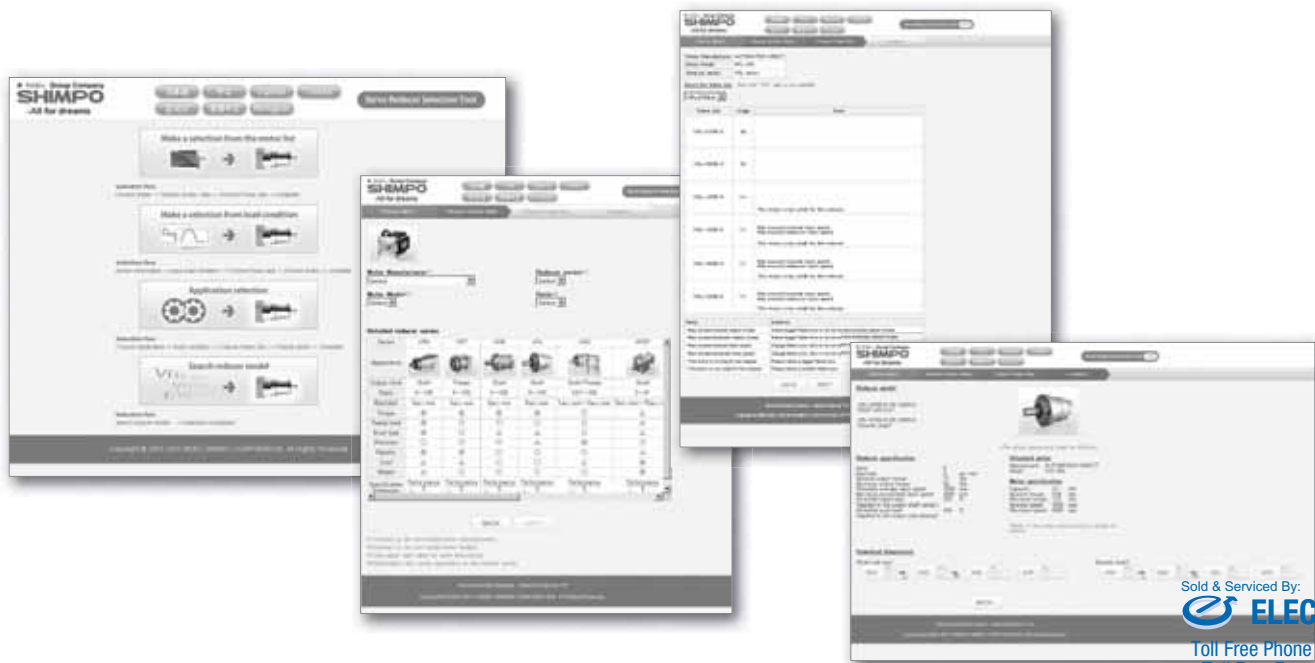


- ① Space-saving features; motor can be located at a 90 degree position from the reducer providing a more compact footprint
- ② High rigidity and torque capacity are achieved by using uncaged needle roller bearings
- ③ High load capacity: Tapered roller bearings were added to the output section to increase radial and axial load ratings
- ④ Adapter-bushing connection enable a simple, effective attachment to most servo motors
- ⑤ No leakage through the seal; high viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
- ⑥ No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

EVS-Series – Model Code



*1) Adapter flange code
 Adapter flange code varies depending on the motor.



EVS

EVS-SERIES Right-angle shaft

EVS-o6o – 2-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 12 | 16 | 22 | 24 | 24 | 24 | 16 | 16 |
| Maximum Acceleration Torque | [Nm] | *2 | 24 | 32 | 40 | 45 | 45 | 45 | 32 | 32 |
| Emergency Stop Torque | [Nm] | *3 | 50 | 65 | 80 | 90 | 90 | 90 | 65 | 65 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.33 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 1700 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2400 |
| Permitted Axial Load | [N] | *8 | 2300 | 2500 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.320 | 0.271 | 0.251 | 0.242 | 0.235 | 0.232 | 0.229 | 0.228 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.395 | 0.346 | 0.326 | 0.317 | 0.310 | 0.307 | 0.304 | 0.303 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | 0.584 | 0.535 | 0.516 | 0.506 | 0.500 | 0.496 | 0.494 | 0.492 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 2 | | | | | | | |

EVS-o6o – 3-Stage Specifications

| Frame Size | 060 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 24 | 24 |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 45 | 45 |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 90 | 90 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2800 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Permitted Axial Load | [N] | *8 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | |
| Moment of Inertia ($\leq \emptyset 8$) | [kgcm ²] | -- | 0.074 | 0.079 | 0.072 | 0.071 | 0.077 | 0.062 | 0.070 | 0.061 |
| Moment of Inertia ($\leq \emptyset 14$) | [kgcm ²] | -- | 0.118 | 0.124 | 0.116 | 0.115 | 0.122 | 0.106 | 0.115 | 0.106 |
| Moment of Inertia ($\leq \emptyset 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 1.8 | | | | | | | |

EVS-o6o – 3-Stage Specifications

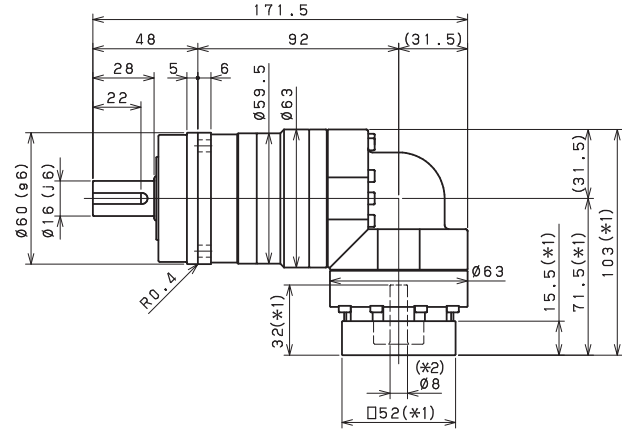
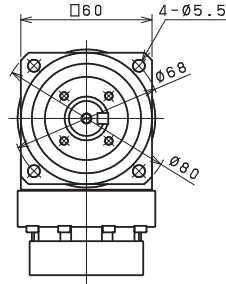
| Frame Size | 060 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 16 | 24 | 24 | 24 | 24 | 16 | 16 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 32 | 45 | 45 | 45 | 45 | 32 | 32 | | |
| Emergency Stop Torque | [Nm] | *3 | 65 | 90 | 90 | 90 | 90 | 65 | 65 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.20 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | | |
| Permitted Axial Load | [N] | *8 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | | |
| Maximum Radial Load | [N] | *9 | 3000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 2700 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.070 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.115 | 0.106 | 0.106 | 0.106 | 0.105 | 0.105 | 0.105 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 3 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 1.8 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVSo6o
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

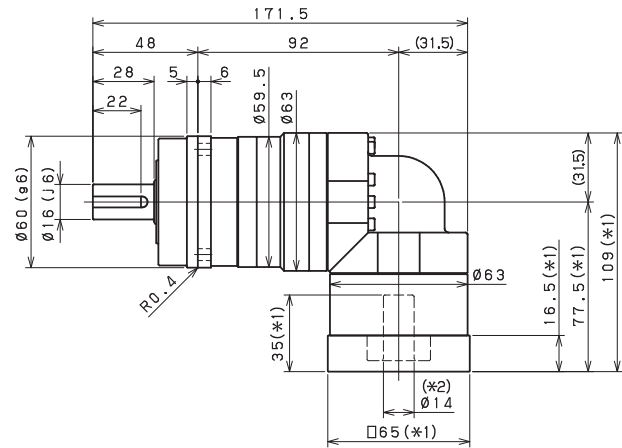
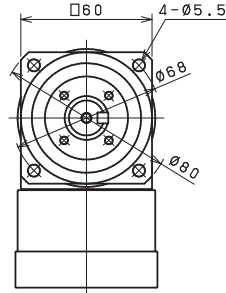
EVS-SERIES Right-angle shaft

EVS-o6o – 2-Stage Dimensions

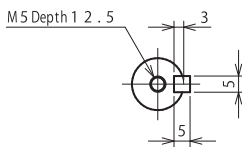
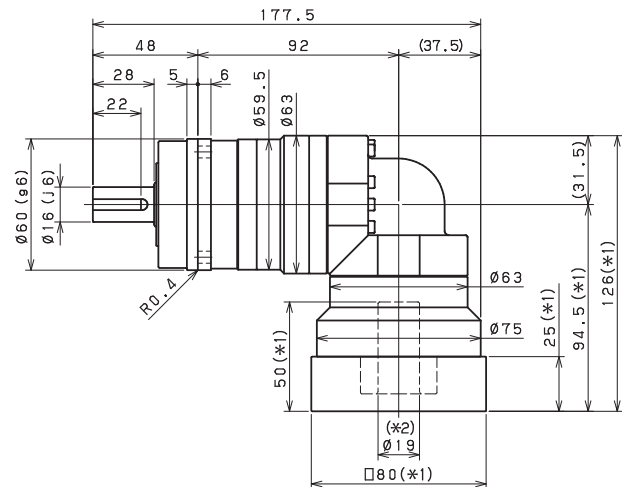
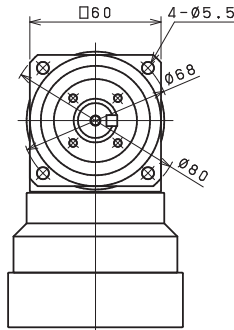
Input shaft bore $\leq \varnothing 8$



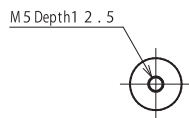
Input shaft bore $\leq \varnothing 14$



Input shaft bore $\leq \varnothing 19$



Shaft with key



Smooth shaft

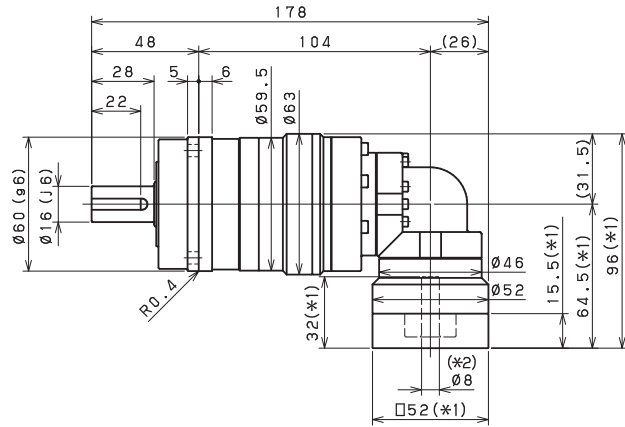
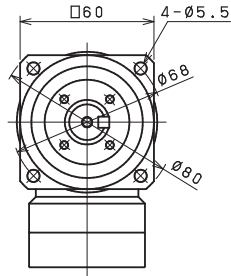
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

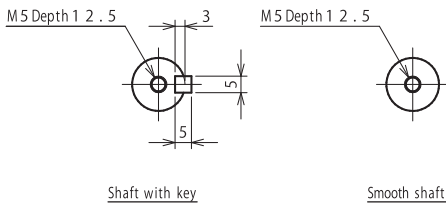
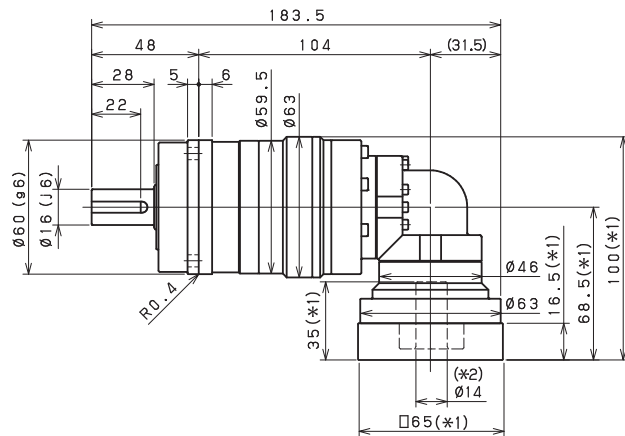
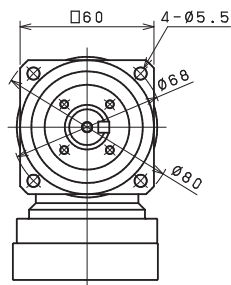
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-o6o – 3-Stage Dimensions

Input shaft bore $\leq \varnothing 8$



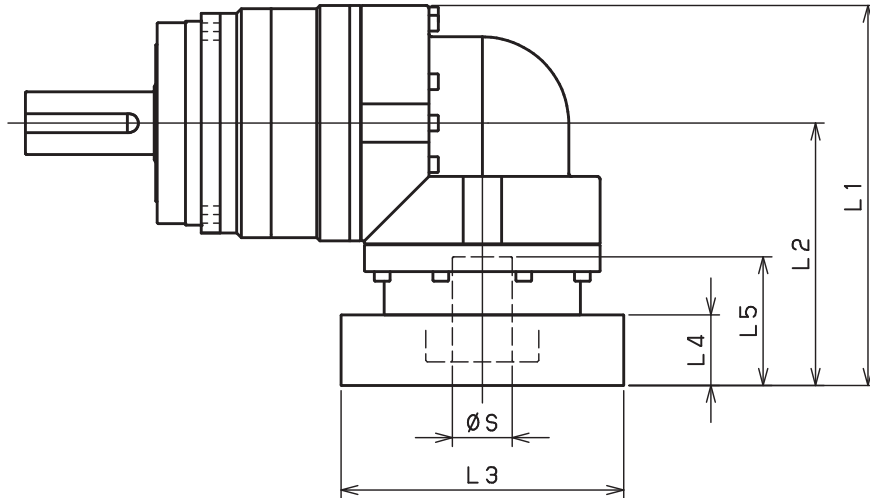
Input shaft bore $\leq \varnothing 14$



- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS-SERIES Right-angle shaft

EVS-o6o – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-060-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 103 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 108 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 103 | 71.5 | □60 | 15.5 | 32 |
| | BC·BF | 108 | 76.5 | □60 | 20.5 | 37 |
| | CA | 108 | 76.5 | □70 | 20.5 | 37 |
| EVS-060-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 109 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 114 | 82.5 | □65 | 21.5 | 40 |
| | BL | 119 | 87.5 | □65 | 26.5 | 45 |
| | CA·CC | 109 | 77.5 | □70 | 16.5 | 35 |
| | CB | 114 | 82.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 109 | 77.5 | □80 | 16.5 | 35 |
| | DE·DL | 114 | 82.5 | □80 | 21.5 | 40 |
| | DG·DK | 119 | 87.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 109 | 77.5 | □90 | 16.5 | 35 |
| | EJ·EM | 114 | 82.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 119 | 87.5 | □90 | 26.5 | 45 |
| | FA | 109 | 77.5 | □100 | 16.5 | 35 |
| | FB | 119 | 87.5 | □100 | 26.5 | 45 |
| EVS-060-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 126 | 94.5 | □80 | 25 | 50 |
| | DD | 136 | 104.5 | □80 | 35 | 60 |
| | DE | 131 | 99.5 | □80 | 30 | 55 |
| | EA | 131 | 99.5 | □90 | 30 | 55 |
| | EB·ED | 126 | 94.5 | □90 | 25 | 50 |
| | EC | 136 | 104.5 | □90 | 35 | 60 |
| | FA | 126 | 94.5 | □100 | 25 | 50 |
| FB | 136 | 104.5 | □100 | 35 | 60 | |

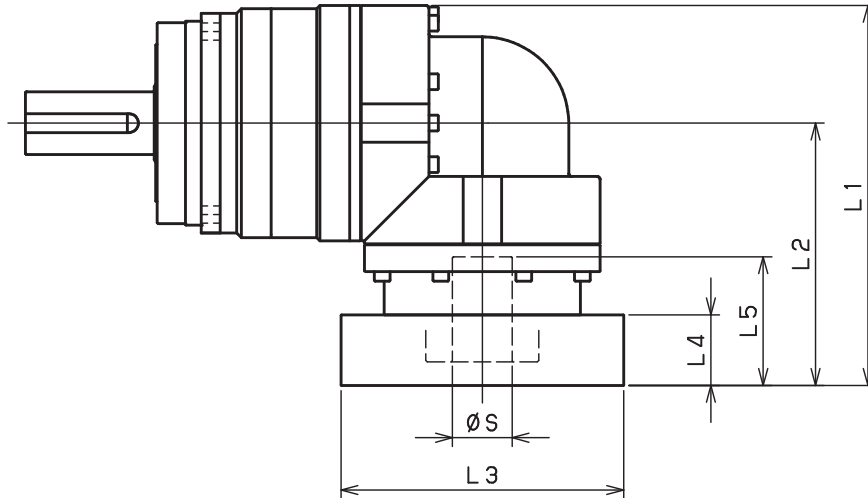
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft.

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-o6o – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-060-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 96 | 64.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 101 | 69.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 96 | 64.5 | □60 | 15.5 | 32 |
| | BC·BF | 101 | 69.5 | □60 | 20.5 | 37 |
| | CA | 101 | 69.5 | □70 | 20.5 | 37 |
| EVS-060-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 100 | 68.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 105 | 73.5 | □65 | 21.5 | 40 |
| | BL | 110 | 78.5 | □65 | 26.5 | 45 |
| | CA·CC | 100 | 68.5 | □70 | 16.5 | 35 |
| | CB | 105 | 73.5 | □70 | 21.5 | 40 |
| | DA·DB·DC·DD·DF·DH·DJ | 100 | 68.5 | □80 | 16.5 | 35 |
| | DE·DL | 105 | 73.5 | □80 | 21.5 | 40 |
| | DG·DK | 110 | 78.5 | □80 | 26.5 | 45 |
| | EA·EB·EC·EF·EG·EK·EL | 100 | 68.5 | □90 | 16.5 | 35 |
| | EJ·EM | 105 | 73.5 | □90 | 21.5 | 40 |
| | ED·EE·EH | 110 | 78.5 | □90 | 26.5 | 45 |
| | FA | 100 | 68.5 | □100 | 16.5 | 35 |
| | FB | 110 | 78.5 | □100 | 26.5 | 45 |
| EVS-060-□-□-19** (14 < S ≤ 19) | DA·DB·DC | -- | -- | -- | -- | -- |
| | DD | -- | -- | -- | -- | -- |
| | DE | -- | -- | -- | -- | -- |
| | EA | -- | -- | -- | -- | -- |
| | EB·ED | -- | -- | -- | -- | -- |
| | EC | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft.

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-SERIES Right-angle shaft

EVS-075 – 2-Stage Specifications

| Frame Size | 075 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 60 | 65 | 65 | 65 | 65 | 45 | 45 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 90 | 90 | 90 | 90 | 90 | 65 | 65 | | |
| Emergency Stop Torque | [Nm] | *3 | 130 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.13 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 2300 | 2500 | 2700 | 2800 | 3000 | 3100 | 3200 | 3300 | | |
| Permitted Axial Load | [N] | *8 | 3400 | 3700 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.070 | 1.870 | 1.780 | 1.740 | 1.720 | 1.700 | 1.690 | 1.690 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.400 | 2.200 | 2.110 | 2.070 | 2.050 | 2.030 | 2.020 | 2.020 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.530 | 4.320 | 4.240 | 4.200 | 4.170 | 4.160 | 4.150 | 4.150 | | |
| Efficiency | [%] | *11 | 93 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4.8 | | | | | | | | | |

EVS-075 – 3-Stage Specifications

| Frame Size | 075 | | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 65 | 65 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 110 | 110 | 110 | 65 | 110 | 110 | | |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 220 | 220 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3700 | 3800 | 4000 | 4300 | 4300 | 4300 | 4300 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.330 | 0.380 | 0.330 | 0.320 | 0.370 | 0.250 | 0.320 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.410 | 0.460 | 0.400 | 0.400 | 0.450 | 0.320 | 0.400 | 0.320 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.600 | 0.650 | 0.590 | 0.590 | 0.640 | 0.510 | 0.580 | 0.510 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 4.1 | | | | | | | | | |

Sold & Serviced By:

 **ELECTROMATE**
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-075 – 3-Stage Specifications

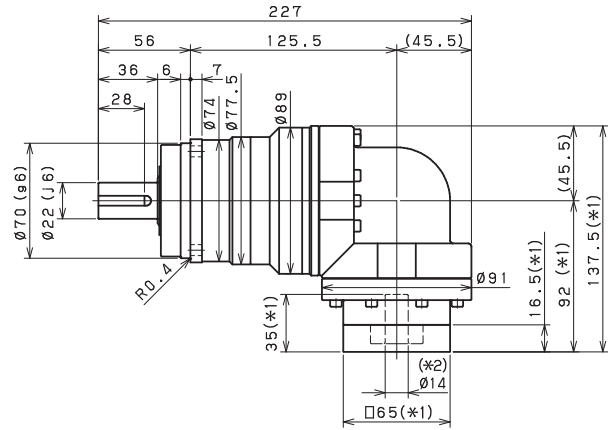
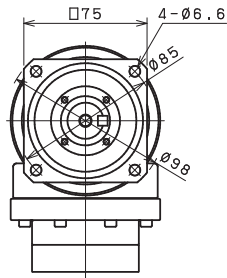
| Frame Size | 075 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 45 | 65 | 65 | 65 | 65 | 45 | 45 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 65 | 110 | 110 | 110 | 110 | 65 | 65 | | |
| Emergency Stop Torque | [Nm] | *3 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 0.55 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 4300 | 4300 | 4300 | 4300 | 4300 | 4300 | 4300 | | |
| Permitted Axial Load | [N] | *8 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | | |
| Maximum Radial Load | [N] | *9 | 4300 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 3900 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.320 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.390 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | 0.320 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.580 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | 0.510 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 10 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4.1 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVS075
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

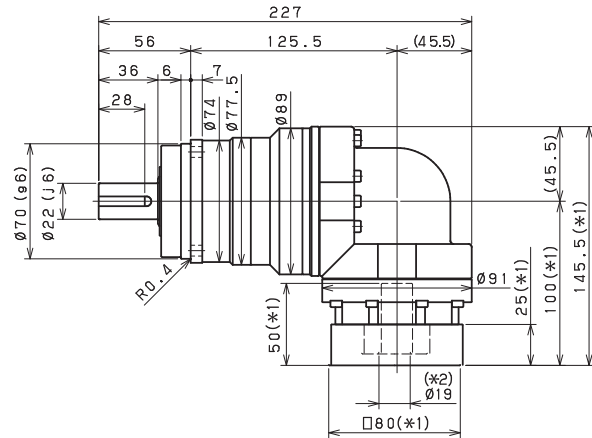
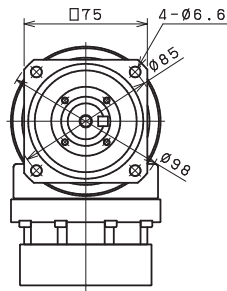
EVS-SERIES Right-angle shaft

EVS-075 – 2-Stage Dimensions

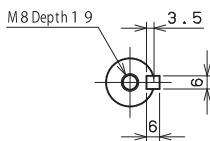
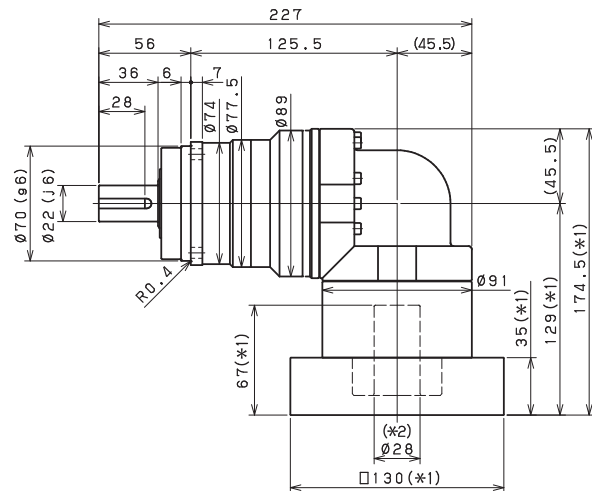
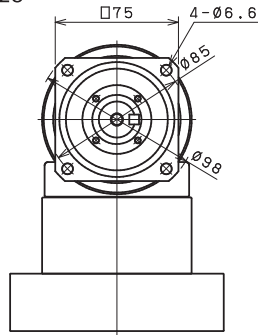
Input shaft bore $\leq \varnothing 14$



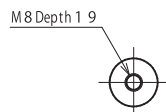
Input shaft bore $\leq \varnothing 19$



Input shaft bore $\leq \varnothing 28$



Shaft with key



Smooth shaft

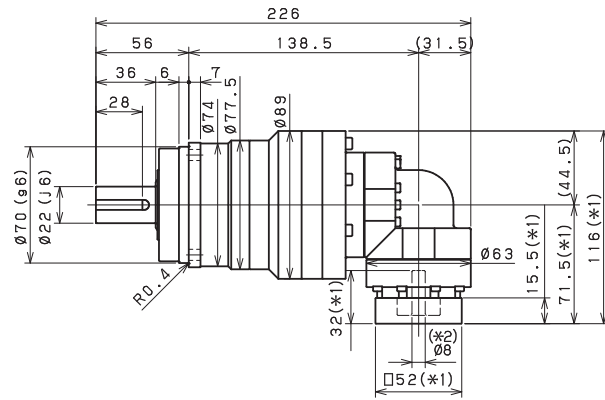
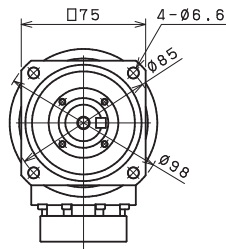
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:
ELECTROMATE

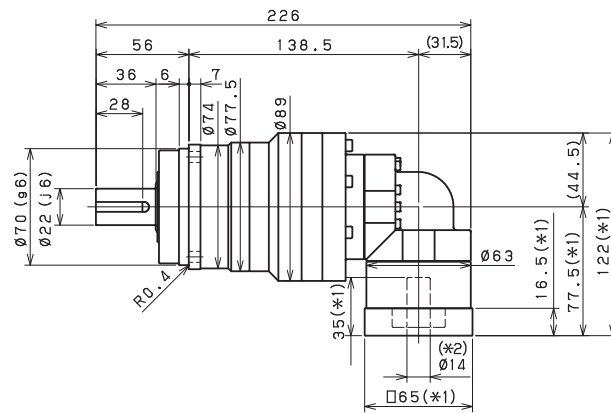
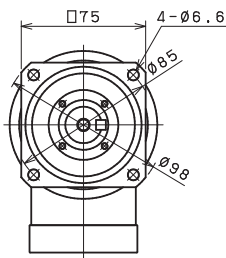
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-075 – 3-Stage Dimensions

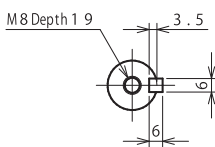
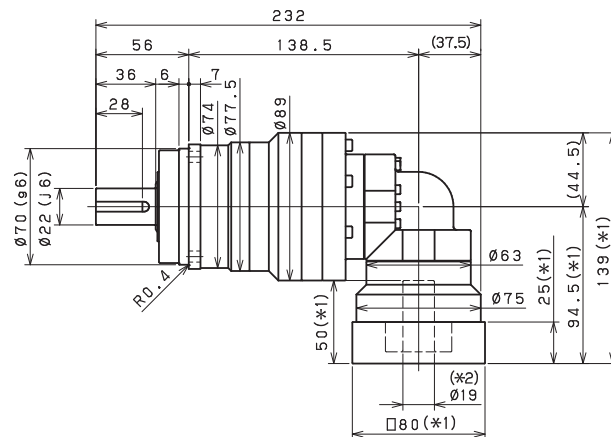
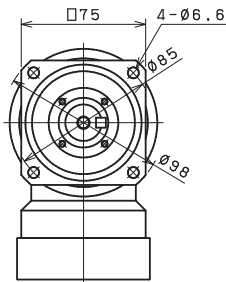
Input shaft bore $\leq \phi 8$



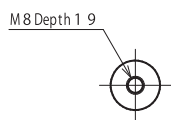
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

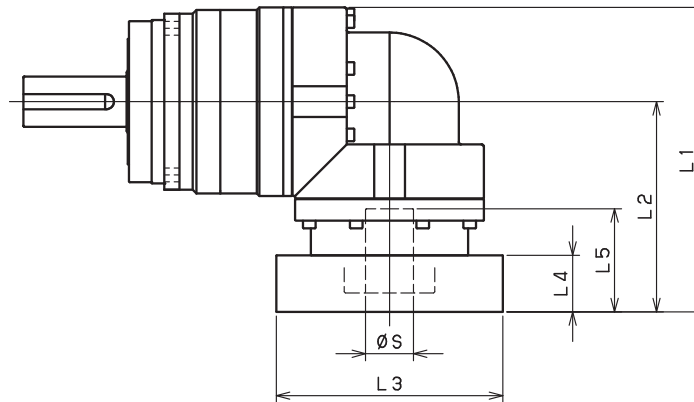
Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-075 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-075-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | -- | -- | -- | -- | -- |
| | AB·AE·AH·AJ·AK | -- | -- | -- | -- | -- |
| | BA·BB·BD·BE·BG·BH·BJ | -- | -- | -- | -- | -- |
| | CA | -- | -- | -- | -- | -- |
| EVS-075-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 137.5 | 92 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 142.5 | 97 | □65 | 21.5 | 40 |
| | CA·CC | 137.5 | 92 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 137.5 | 92 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 137.5 | 92 | □90 | 16.5 | 35 |
| | FA | 137.5 | 92 | □100 | 16.5 | 35 |
| | FB | 147.5 | 102 | □100 | 26.5 | 45 |
| EVS-075-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 145.5 | 100 | □80 | 25 | 50 |
| | EB·ED | 145.5 | 100 | □90 | 25 | 50 |
| | FA | 145.5 | 100 | □100 | 25 | 50 |
| | FB | 155.5 | 110 | □100 | 35 | 60 |
| | GA·GC·GH | 150.5 | 105 | □115 | 30 | 55 |
| | GB·GD·GJ | 145.5 | 100 | □115 | 25 | 50 |
| | GE·GF | 155.5 | 110 | □115 | 35 | 60 |
| | HA | 145.5 | 100 | □130 | 25 | 50 |
| | HB | 160.5 | 115 | □130 | 40 | 65 |
| | HC·HD·HE | 150.5 | 105 | □130 | 30 | 55 |
| | JA | 155.5 | 110 | □150 | 35 | 60 |
| EVS-075-□-□-28** (19 < S ≤ 28) | FA·FB·FC | 174.5 | 129 | □100 | 35 | 67 |
| | FD·FE | 169.5 | 124 | □100 | 30 | 62 |
| | GA·GB·GC·GD·GE·GF·GG·GH | 174.5 | 129 | □115 | 35 | 67 |
| | HA·HC·HD | 174.5 | 129 | □130 | 35 | 67 |
| | HB | 184.5 | 139 | □130 | 45 | 77 |
| | HE | 189.5 | 144 | □130 | 50 | 82 |
| | HF | 169.5 | 124 | □130 | 30 | 62 |
| | JA·JB·JC·JF | 174.5 | 129 | □150 | 35 | 67 |
| | JD | 194.5 | 149 | □150 | 55 | 87 |
| | JE | 184.5 | 139 | □150 | 45 | 77 |

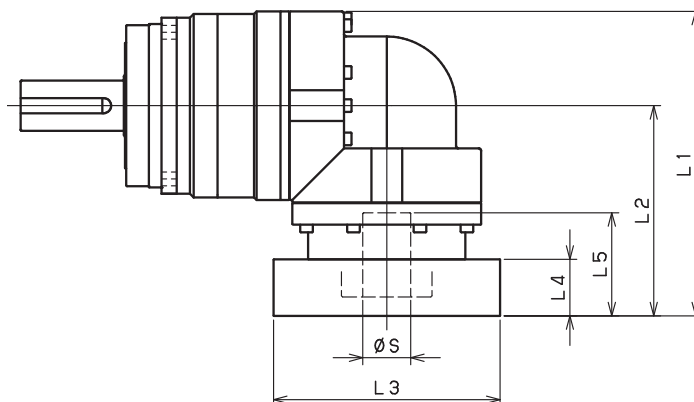
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-075 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-------|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-075-□-□-8** (S ≤ 8) | AA·AC·AD·AF·AG·AL·AM·AN·AQ | 116 | 71.5 | □52 | 15.5 | 32 |
| | AB·AE·AH·AJ·AK | 121 | 76.5 | □52 | 20.5 | 37 |
| | BA·BB·BD·BE·BG·BH·BJ | 116 | 71.5 | □60 | 15.5 | 32 |
| | CA | 121 | 76.5 | □70 | 20.5 | 37 |
| EVS-075-□-□-14** (8 < S ≤ 14) | BA·BB·BD·BE·BF·BG·BH·BJ·BK·BP | 122 | 77.5 | □65 | 16.5 | 35 |
| | BC·BH·BM·BN | 127 | 82.5 | □65 | 21.5 | 40 |
| | CA·CC | 122 | 77.5 | □70 | 16.5 | 35 |
| | DA·DB·DC·DD·DF·DH·DJ | 122 | 77.5 | □80 | 16.5 | 35 |
| | EA·EB·EC·EF·EG·EK·EL | 122 | 77.5 | □90 | 16.5 | 35 |
| | FA | 122 | 77.5 | □100 | 16.5 | 35 |
| | FB | 132 | 87.5 | □100 | 26.5 | 45 |
| | JA | 137 | 92.5 | □150 | 31.5 | 50 |
| EVS-075-□-□-19** (14 < S ≤ 19) | DA·DB·DC | 139 | 94.5 | □80 | 25 | 50 |
| | EB·ED | 139 | 94.5 | □90 | 25 | 50 |
| | FA | 139 | 94.5 | □100 | 25 | 50 |
| | FB | 149 | 104.5 | □100 | 35 | 60 |
| | GA·GC·GH | 144 | 99.5 | □115 | 30 | 55 |
| | GB·GD·GJ | 139 | 94.5 | □115 | 25 | 50 |
| | GE·GF | 149 | 104.5 | □115 | 35 | 60 |
| | HA | 139 | 94.5 | □130 | 25 | 50 |
| | HB | 154 | 109.5 | □130 | 40 | 65 |
| | HC·HD·HE | 144 | 99.5 | □130 | 30 | 55 |
| | JA | 149 | 104.5 | □150 | 35 | 60 |
| | JB | 154 | 109.5 | □150 | 40 | 65 |
| EVS-075-□-□-28** (19 < S ≤ 28) | FA·FB·FC | -- | -- | -- | -- | -- |
| | FD·FE | -- | -- | -- | -- | -- |
| | GA·GB·GC·GD·GE·GF·GG·GH | -- | -- | -- | -- | -- |
| | HA·HC·HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HE | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA·JB·JC·JF | -- | -- | -- | -- | -- |
| | JD | -- | -- | -- | -- | -- |
| JE | -- | -- | -- | -- | -- | |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-100 – 2-Stage Specifications

| Frame Size | 100 | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 75 | 100 | 120 | 150 | 150 | 150 | 110 | 110 |
| Maximum Acceleration Torque | [Nm] | *2 | 150 | 200 | 240 | 300 | 300 | 300 | 200 | 200 |
| Emergency Stop Torque | [Nm] | *3 | 320 | 430 | 500 | 550 | 550 | 550 | 450 | 450 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.88 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 3400 | 3700 | 4000 | 4200 | 4400 | 4600 | 4800 | 4900 |
| Permitted Axial Load | [N] | *8 | 4800 | 5200 | 5600 | 5900 | 6100 | 6300 | 6300 | 6300 |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.610 | 5.410 | 4.970 | 4.730 | 4.620 | 4.530 | 4.470 | 4.450 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.210 | 7.010 | 6.570 | 6.330 | 6.220 | 6.120 | 6.070 | 6.040 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.280 | 14.080 | 13.640 | 13.400 | 13.290 | 13.200 | 13.140 | 13.110 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10.5 | | | | | | | |

EVS-100 – 3-Stage Specifications

| Frame Size | 100 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 110 | 130 | 150 | 150 | 150 | 110 | 150 | 150 |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 260 | 300 | 300 | 300 | 200 | 300 | 300 |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 550 | 550 |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 5600 | 5700 | 6100 | 6500 | 6700 | 6900 | 7000 | 7000 |
| Permitted Axial Load | [N] | *8 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.240 | 2.450 | 2.190 | 2.180 | 2.400 | 1.870 | 2.160 | 1.860 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.570 | 2.780 | 2.520 | 2.510 | 2.730 | 2.200 | 2.490 | 2.190 |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.700 | 4.910 | 4.650 | 4.630 | 4.860 | 4.330 | 4.620 | 4.320 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 10.1 | | | | | | | |

Sold & Serviced By:

 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-100 – 3-Stage Specifications

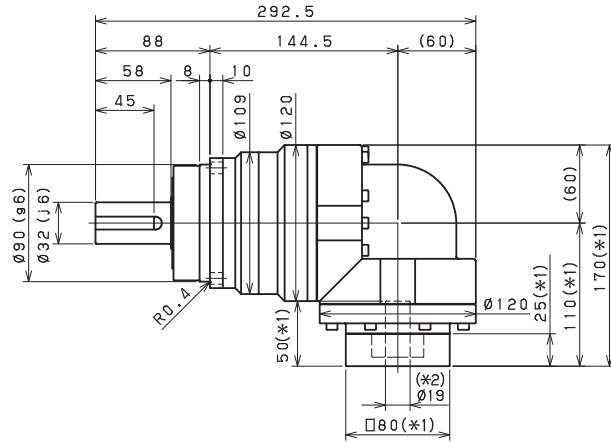
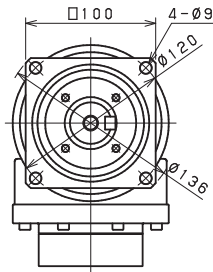
| Frame Size | 100 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 110 | 150 | 150 | 150 | 150 | 110 | 110 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Emergency Stop Torque | [Nm] | *3 | 450 | 550 | 550 | 550 | 550 | 450 | 450 | | |
| Nominal Input Speed | [rpm] | *4 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 1.11 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 7000 | 7000 | 7000 | 7000 | 7000 | 7000 | 7000 | | |
| Permitted Axial Load | [N] | *8 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | 6300 | | |
| Maximum Radial Load | [N] | *9 | 7000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 6300 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.150 | 1.860 | 1.850 | 1.850 | 1.850 | 1.850 | 1.850 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.480 | 2.190 | 2.180 | 2.180 | 2.180 | 2.180 | 2.180 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.610 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | 4.310 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 31 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 10.1 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 3000 rpm for EVS100
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

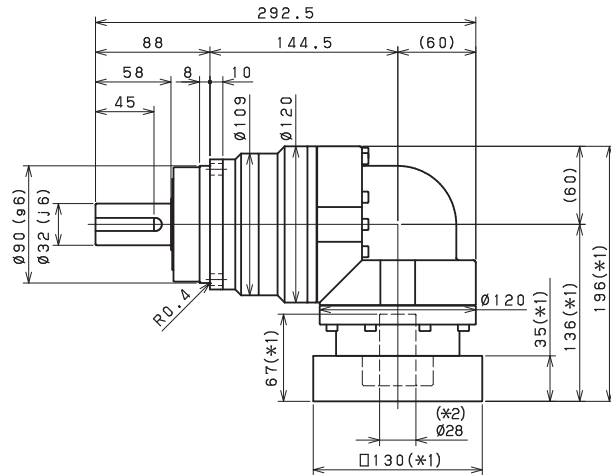
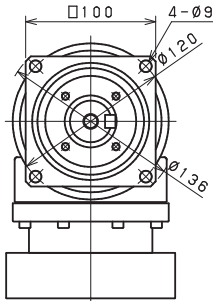
EVS-SERIES Right-angle shaft

EVS-100 – 2-Stage Dimensions

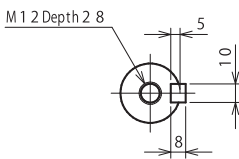
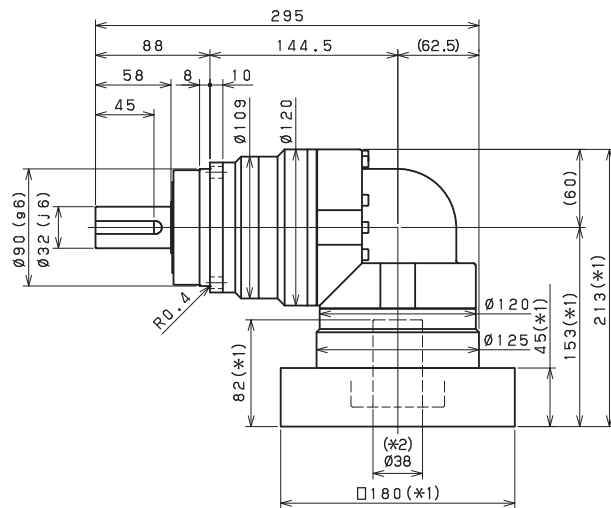
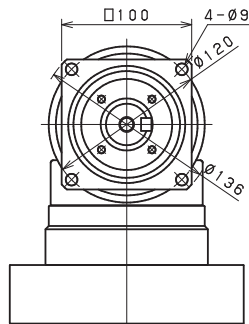
Input shaft bore $\leq \varnothing 19$



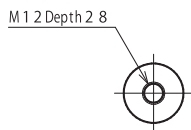
Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



Shaft with key



Smooth shaft

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

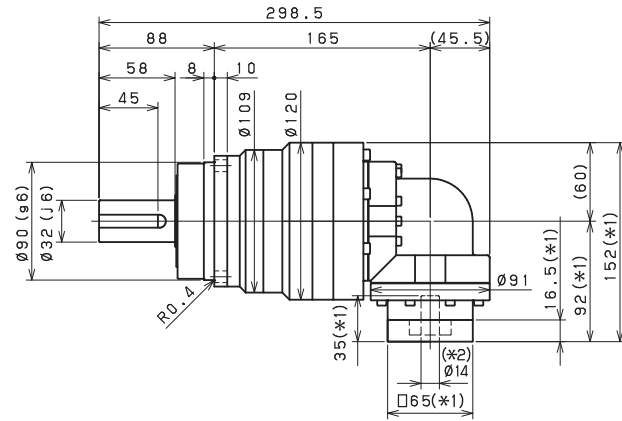
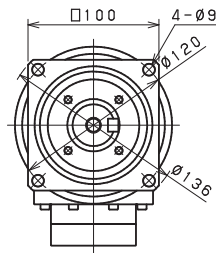
Sold & Serviced By:

ELECTROMATE

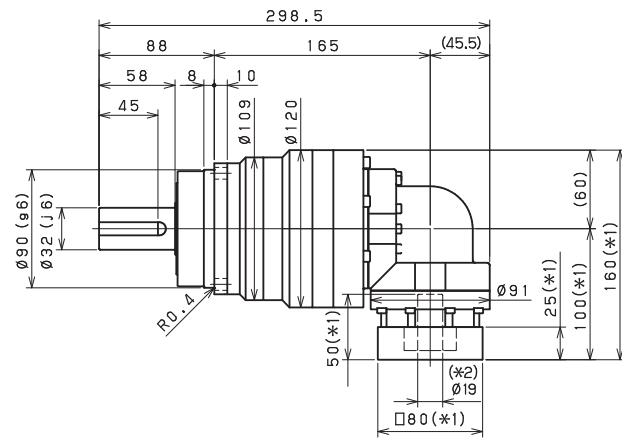
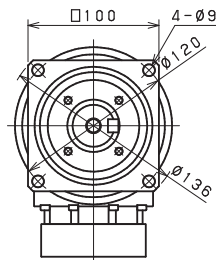
Toll Free Phone (877) SERVOC
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-100 – 3-Stage Dimensions

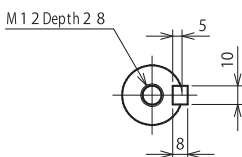
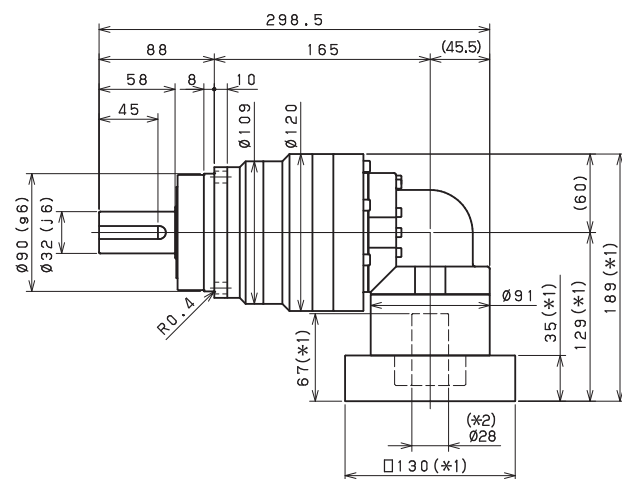
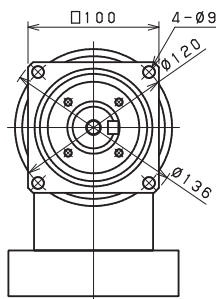
Input shaft bore $\cong \phi 14$



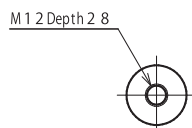
Input shaft bore $\cong \phi 19$



Input shaft bore $\cong \phi 28$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

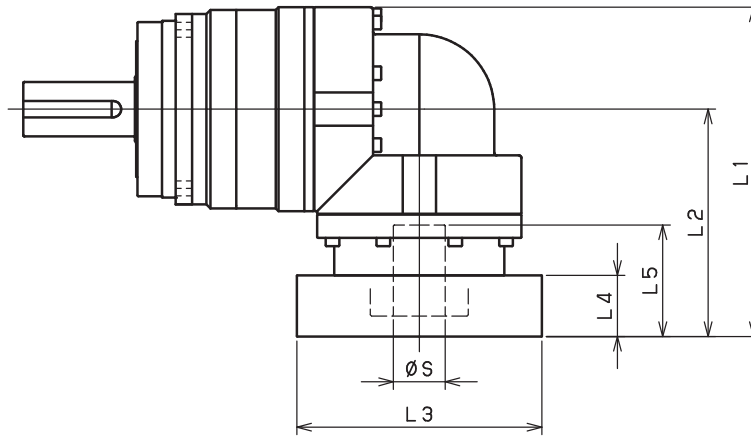
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-100 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|--|-------------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-100-□-□-14** ($S \leq 14$) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | -- | -- | -- | -- | -- |
| | BC•BH•BM•BN | -- | -- | -- | -- | -- |
| | CA•CC | -- | -- | -- | -- | -- |
| | DA•DB•DC•DD•DF•DH•DJ | -- | -- | -- | -- | -- |
| | EA•EB•EC•EF•EG•EK•EL | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| EVS-100-□-□-19** ($14 < S \leq 19$) | DA•DB•DC | 170 | 110 | □80 | 25 | 50 |
| | EB•ED | 170 | 110 | □90 | 25 | 50 |
| | FA | 170 | 110 | □100 | 25 | 50 |
| | FB | 180 | 120 | □100 | 35 | 60 |
| | GB•GD•GJ | 170 | 110 | □115 | 25 | 50 |
| | HA | 170 | 110 | □130 | 25 | 50 |
| | HB | 185 | 125 | □130 | 40 | 65 |
| EVS-100-□-□-28** ($19 < S \leq 28$) | FA•FB•FC | 196 | 136 | □100 | 35 | 67 |
| | FD•FE | 191 | 131 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 196 | 136 | □115 | 35 | 67 |
| | HA•HC•HD | 196 | 136 | □130 | 35 | 67 |
| | HB | 206 | 146 | □130 | 45 | 77 |
| | HE | 211 | 151 | □130 | 50 | 82 |
| | HF | 191 | 131 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 196 | 136 | □150 | 35 | 67 |
| | JD | 216 | 156 | □150 | 55 | 87 |
| | JE | 206 | 146 | □150 | 45 | 77 |
| | KA•KB•KE | 196 | 136 | □180 | 35 | 67 |
| EVS-100-□-□-38** ($28 < S \leq 38$) | HA | 213 | 153 | □130 | 45 | 82 |
| | HB•HE | 208 | 148 | □130 | 40 | 77 |
| | JA | 213 | 153 | □150 | 45 | 82 |
| | KA•KB•KC | 213 | 153 | □180 | 45 | 82 |
| | KD | 248 | 188 | □180 | 80 | 117 |
| | KE | 228 | 168 | □180 | 60 | 97 |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

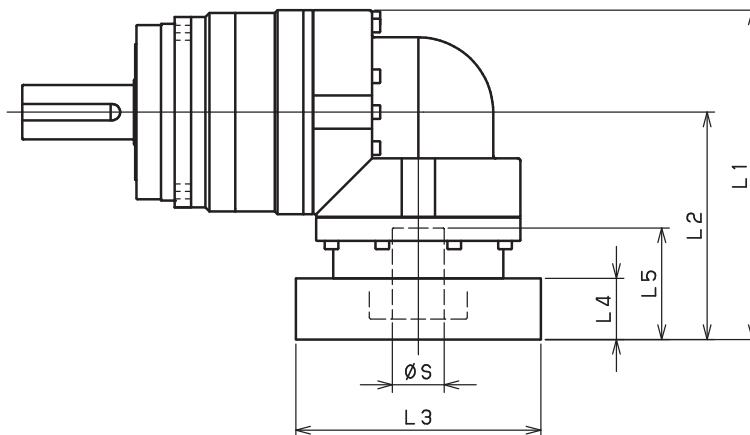
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-100 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------------|---------|-----|------|------|----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-100-□-□-14** (S ≤ 14) | BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP | 152 | 92 | □65 | 16.5 | 35 |
| | BC•BH•BM•BN | 157 | 97 | □65 | 21.5 | 40 |
| | CA•CC | 152 | 92 | □70 | 16.5 | 35 |
| | DA•DB•DC•DD•DF•DH•DJ | 152 | 92 | □80 | 16.5 | 35 |
| | EA•EB•EC•EF•EG•EK•EL | 152 | 92 | □90 | 16.5 | 35 |
| | FA | 152 | 92 | □100 | 16.5 | 35 |
| | FB | 162 | 102 | □100 | 26.5 | 45 |
| EVS-100-□-□-19** (14 < S ≤ 19) | DA•DB•DC | 160 | 100 | □80 | 25 | 50 |
| | EB•ED | 160 | 100 | □90 | 25 | 50 |
| | FA | 160 | 100 | □100 | 25 | 50 |
| | FB | 170 | 110 | □100 | 35 | 60 |
| | GB•GD•GJ | 160 | 100 | □115 | 25 | 50 |
| | HA | 160 | 100 | □130 | 25 | 50 |
| | HB | 175 | 115 | □130 | 40 | 65 |
| EVS-100-□-□-28** (19 < S ≤ 28) | FA•FB•FC | 189 | 129 | □100 | 35 | 67 |
| | FD•FE | 184 | 124 | □100 | 30 | 62 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 189 | 129 | □115 | 35 | 67 |
| | HA•HC•HD | 189 | 129 | □130 | 35 | 67 |
| | HB | 199 | 139 | □130 | 45 | 77 |
| | HE | 204 | 144 | □130 | 50 | 82 |
| | HF | 184 | 124 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 189 | 129 | □150 | 35 | 67 |
| | JD | 209 | 149 | □150 | 55 | 87 |
| | JE | 199 | 139 | □150 | 45 | 77 |
| | KA•KB•KE | 189 | 129 | □180 | 35 | 67 |
| EVS-100-□-□-38** (28 < S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB•HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA•KB•KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-140 – 2-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 2-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 130 | 170 | 200 | 260 | 300 | 300 | 200 | 200 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 260 | 340 | 400 | 520 | 600 | 600 | 400 | 400 | | |
| Emergency Stop Torque | [Nm] | *3 | 700 | 950 | 1100 | 1100 | 1100 | 1100 | 750 | 750 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 3.26 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 6700 | 7400 | 7900 | 8300 | 8700 | 9100 | 9400 | 9700 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 23.010 | 18.490 | 16.850 | 15.970 | 15.550 | 15.210 | 14.750 | 14.640 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 27.380 | 22.860 | 21.220 | 20.340 | 19.920 | 19.580 | 19.120 | 19.020 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 40.610 | 36.090 | 34.450 | 33.570 | 33.150 | 32.810 | 32.250 | 32.250 | | |
| Efficiency | [%] | *11 | 93 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 4 | | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 20.6 | | | | | | | | | |

EVS-140 – 3-Stage Specifications

| Frame Size | 140 | | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 3-Stage | | | | | | | | | | | |
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 | | |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 300 | 300 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 600 | 600 | | |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 1100 | 1100 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.400 | 7.290 | 6.220 | 6.150 | 7.090 | 4.990 | 6.090 | 4.940 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 7.990 | 8.880 | 7.810 | 7.750 | 8.680 | 6.580 | 7.680 | 6.540 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15.060 | 15.950 | 14.880 | 14.820 | 15.750 | 13.660 | 14.760 | 13.610 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | | |
| Weight | [kg] | *15 | 20.7 | | | | | | | | | |

EVS-140 – 3-Stage Specifications

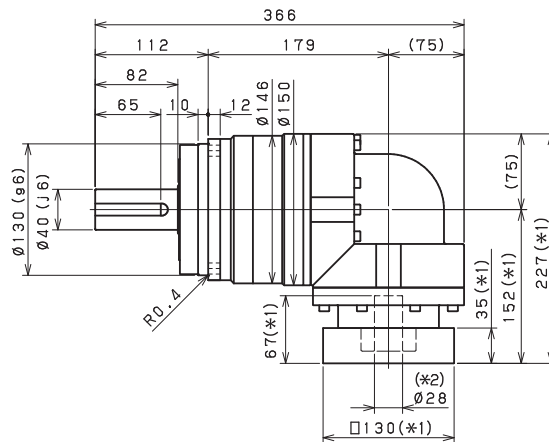
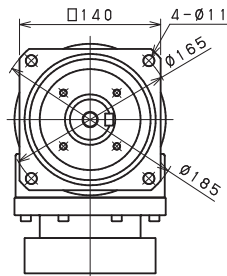
| Frame Size | 140 | | | | | | | | | | |
|---|----------------------|------|-------------|--------|--------|--------|--------|--------|--------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 200 | 300 | 300 | 300 | 300 | 200 | 200 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Emergency Stop Torque | [Nm] | *3 | 750 | 1100 | 1100 | 1100 | 1100 | 750 | 750 | | |
| Nominal Input Speed | [rpm] | *4 | 2000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 4000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 2.56 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | | |
| Permitted Axial Load | [N] | *8 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 | | |
| Maximum Radial Load | [N] | *9 | 10000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 9000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 6.070 | 4.930 | 4.920 | 4.910 | 4.910 | 4.910 | 4.910 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 7.660 | 6.520 | 6.510 | 6.510 | 6.500 | 6.500 | 6.500 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 14.730 | 13.590 | 13.590 | 13.580 | 13.580 | 13.570 | 13.570 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *12 | 60 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | [dB] | *13 | 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 20.7 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 2000 rpm for EVS140
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

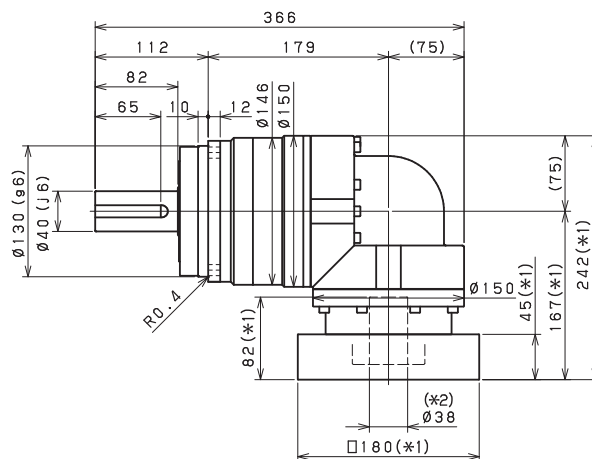
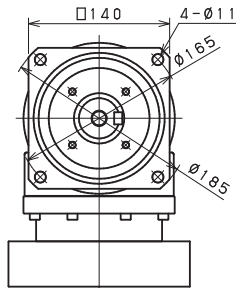
EVS-SERIES Right-angle shaft

EVS-140 – 2-Stage Dimensions

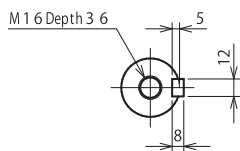
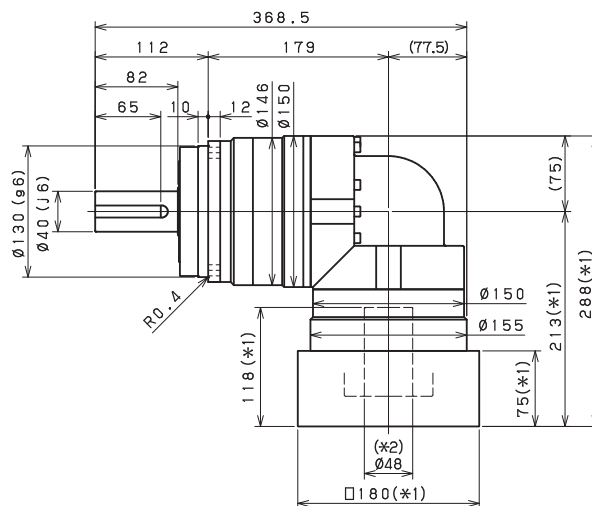
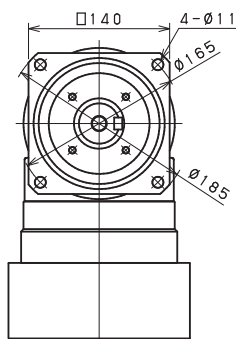
Input shaft bore $\cong \varnothing 28$



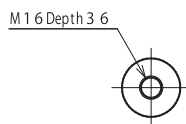
Input shaft bore $\cong \varnothing 38$



Input shaft bore $\cong \varnothing 48$



Shaft with key



Smooth shaft

- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

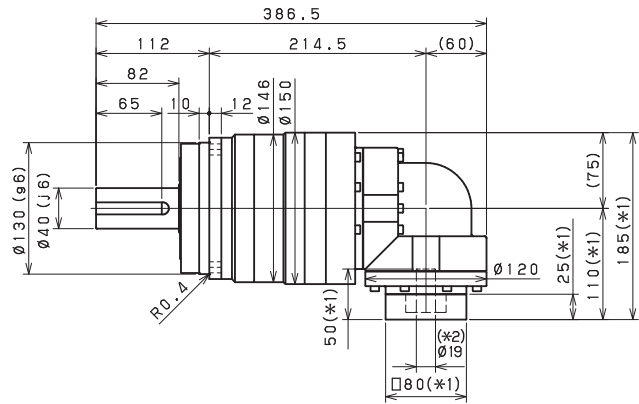
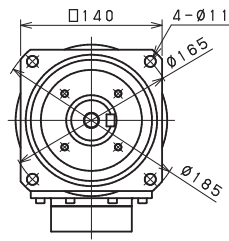
Sold & Serviced By:



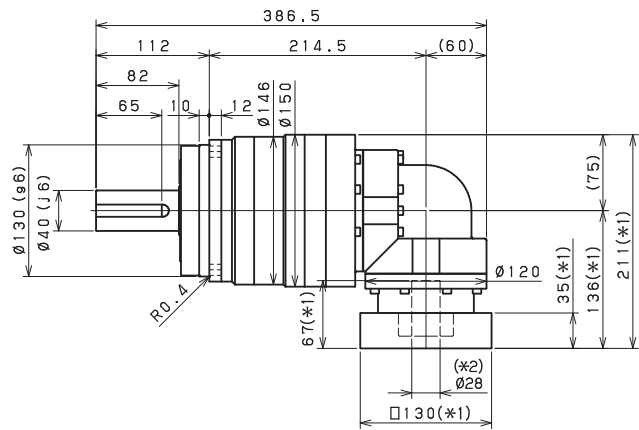
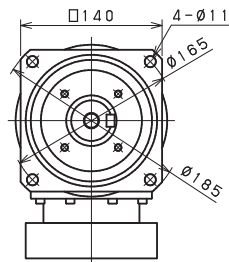
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-140 – 3-Stage Dimensions

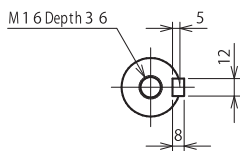
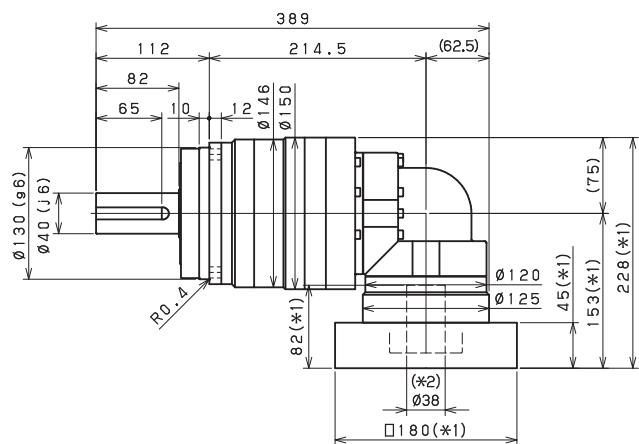
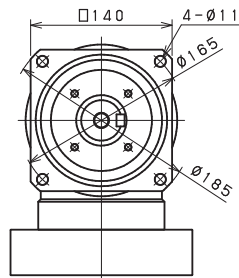
Input shaft bore $\leq \varnothing 19$



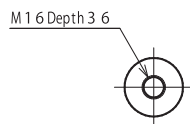
Input shaft bore $\leq \varnothing 28$



Input shaft bore $\leq \varnothing 38$



Shaft with key



Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

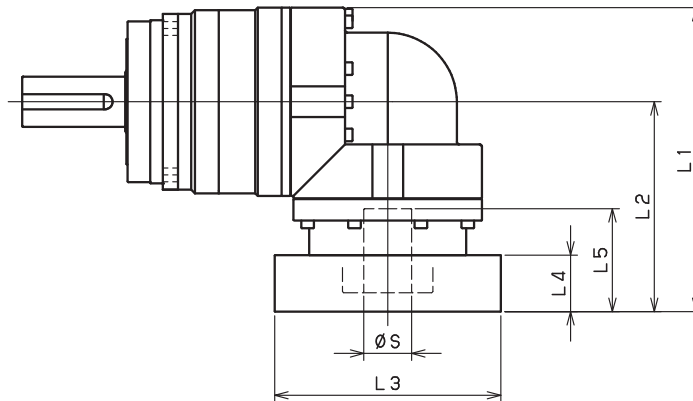
www.electromate.com

sales@electromate.com

EVS

EVS-SERIES Right-angle shaft

EVS-140 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-140-□-□-19** (S ≤ 19) | DA•DB•DC | -- | -- | -- | -- | -- |
| | EB•ED | -- | -- | -- | -- | -- |
| | FA | -- | -- | -- | -- | -- |
| | FB | -- | -- | -- | -- | -- |
| | GB•GD•GJ | -- | -- | -- | -- | -- |
| | HA | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| EVS-140-□-□-28** (19 ≤ S ≤ 28) | FA•FB•FC | 227 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 227 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 227 | 152 | □130 | 35 | 67 |
| | HB | 237 | 162 | □130 | 45 | 77 |
| | HF | 222 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 227 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 227 | 152 | □180 | 35 | 67 |
| | LA | 227 | 152 | □200 | 35 | 67 |
| | LB | 237 | 162 | □200 | 45 | 77 |
| | MA | 227 | 152 | □220 | 35 | 67 |
| | MB | 237 | 162 | □220 | 45 | 77 |
| EVS-140-□-□-38** (28 < S ≤ 38) | HA | 242 | 167 | □130 | 45 | 82 |
| | HB•HE | 237 | 162 | □130 | 40 | 77 |
| | JA | 242 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 242 | 167 | □180 | 45 | 82 |
| | KD | 277 | 202 | □180 | 80 | 117 |
| | KE | 257 | 182 | □180 | 60 | 97 |
| | LB | 252 | 177 | □200 | 55 | 92 |
| | MA•MB | 242 | 167 | □220 | 45 | 82 |
| | MC | 257 | 182 | □220 | 60 | 97 |
| | MD | 252 | 177 | □220 | 55 | 92 |
| EVS-140-□-□-48** (38 < S ≤ 48) | KA | 288 | 213 | □180 | 75 | 118 |
| | KB•KC | 268 | 193 | □180 | 55 | 98 |
| | LA | 268 | 193 | □200 | 55 | 98 |
| | MA | 268 | 193 | □220 | 55 | 98 |
| | MB | 288 | 213 | □220 | 75 | 118 |

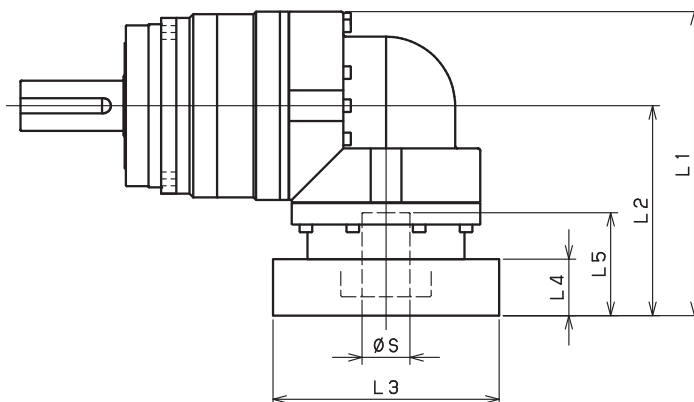
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-140 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------|---------|------|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-140-□-□-19** (S ≤ 19) | DA•DB•DC | 185 | 110 | □80 | 25 | 50 |
| | EB•ED | 185 | 110 | □90 | 25 | 50 |
| | FA | 185 | 110 | □100 | 25 | 50 |
| | FB | 195 | 120 | □100 | 35 | 60 |
| | GB•GD•GJ | 185 | 110 | □115 | 25 | 50 |
| | HA | 185 | 110 | □130 | 25 | 50 |
| | HB | 200 | 125 | □130 | 40 | 65 |
| | JA | 195 | 120 | □150 | 35 | 60 |
| EVS-140-□-□-28** (19 ≤ S ≤ 28) | FA•FB•FC | 211 | 136 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 211 | 136 | □115 | 35 | 67 |
| | HA•HC•HD | 211 | 136 | □130 | 35 | 67 |
| | HB | 221 | 146 | □130 | 45 | 77 |
| | HF | 206 | 131 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 211 | 136 | □150 | 35 | 67 |
| | KA•KB•KE | 211 | 136 | □180 | 35 | 67 |
| | LA | 211 | 136 | □200 | 35 | 67 |
| | LB | 221 | 146 | □200 | 45 | 77 |
| | MA | 211 | 136 | □220 | 35 | 67 |
| | MB | 221 | 146 | □220 | 45 | 77 |
| EVS-140-□-□-38** (28 < S ≤ 38) | HA | 228 | 153 | □130 | 45 | 82 |
| | HB•HE | 223 | 148 | □130 | 40 | 77 |
| | JA | 228 | 153 | □150 | 45 | 82 |
| | KA•KB•KC | 228 | 153 | □180 | 45 | 82 |
| | KD | 263 | 188 | □180 | 80 | 117 |
| | KE | 243 | 168 | □180 | 60 | 97 |
| | LB | 238 | 163 | □200 | 55 | 92 |
| | MA•MB | 228 | 153 | □220 | 45 | 82 |
| | MC | 243 | 168 | □220 | 60 | 97 |
| MD | 238 | 163 | □220 | 55 | 92 | |
| EVS-140-□-□-48** (38 < S ≤ 48) | KA | -- | -- | -- | -- | -- |
| | KB•KC | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-180 – 2-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 400 | 575 | 600 | 600 | 600 | 600 | 400 | 400 |
| Maximum Acceleration Torque | [Nm] | *2 | 575 | 770 | 960 | 1120 | 1120 | 1120 | 775 | 775 |
| Emergency Stop Torque | [Nm] | *3 | 1300 | 1700 | 2000 | 2500 | 2500 | 2500 | 2000 | 2000 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.8 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 | 17000 | 18000 |
| Permitted Axial Load | [N] | *8 | 16000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 92.00 | 76.72 | 71.23 | 68.28 | 66.08 | 65.00 | 64.38 | 64.10 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 126.9 | 111.6 | 106.1 | 103.1 | 100.9 | 99.86 | 99.25 | 98.97 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 212.5 | 197.2 | 191.7 | 188.7 | 186.6 | 185.5 | 184.9 | 184.6 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 52 | | | | | | | |

EVS-180 – 3-Stage Specifications

| Frame Size | 180 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 400 | 555 | 600 | 600 | 600 | 400 | 600 | 600 |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 1120 | 1120 |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2500 | 2500 |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 |
| Permitted Axial Load | [N] | *8 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 11.42 | 12.03 | 11.11 | 10.96 | 11.57 | 10.31 | 10.82 | 10.23 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 20.21 | 20.82 | 19.90 | 19.74 | 20.36 | 19.10 | 19.60 | 19.02 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 25.03 | 25.64 | 24.72 | 24.56 | 25.18 | 23.92 | 24.42 | 23.84 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | |

Sold & Serviced By:


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

EVS-180 – 3-Stage Specifications

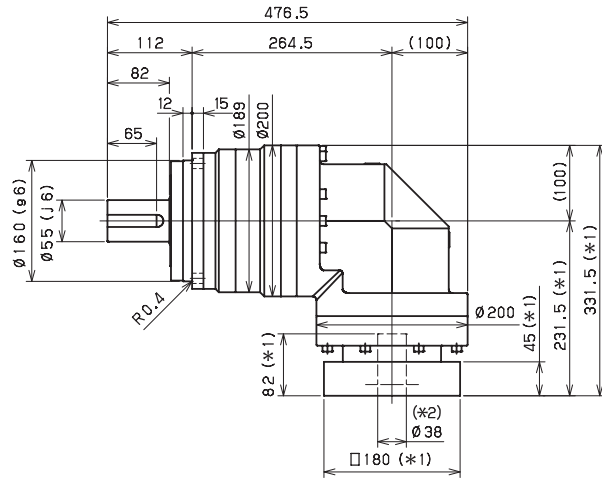
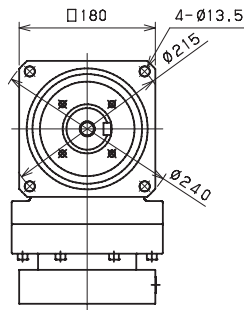
| Frame Size | 180 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 400 | 600 | 600 | 600 | 600 | 400 | 400 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 775 | 1120 | 1120 | 1120 | 1120 | 775 | 775 | | |
| Emergency Stop Torque | [Nm] | *3 | 2000 | 2500 | 2500 | 2500 | 2500 | 2000 | 2000 | | |
| Nominal Input Speed | [rpm] | *4 | 1500 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 4.7 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | | |
| Permitted Axial Load | [N] | *8 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | 17000 | | |
| Maximum Radial Load | [N] | *9 | 19000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 17000 | | | | | | | | |
| Moment of Inertia ($\leq \emptyset 28$) | [kgcm ²] | -- | 10.76 | 10.19 | 10.17 | 10.16 | 10.15 | 10.14 | 10.14 | | |
| Moment of Inertia ($\leq \emptyset 38$) | [kgcm ²] | -- | 19.54 | 18.98 | 18.96 | 18.94 | 18.94 | 18.93 | 18.93 | | |
| Moment of Inertia ($\leq \emptyset 48$) | [kgcm ²] | -- | 24.36 | 23.80 | 23.78 | 23.77 | 23.76 | 23.75 | 23.75 | | |
| Moment of Inertia ($\leq \emptyset 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 39 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1500 rpm for EVS180
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

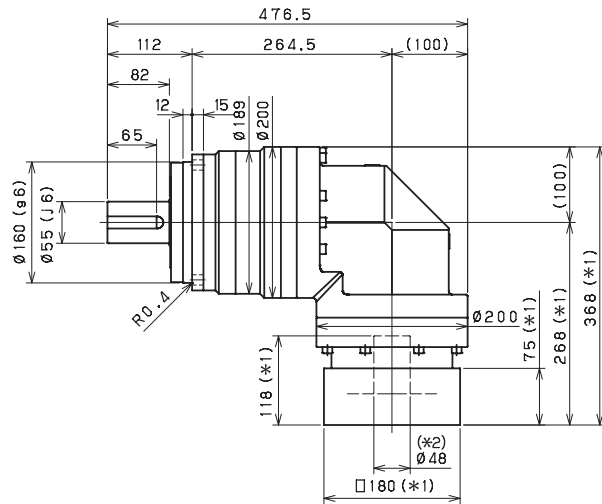
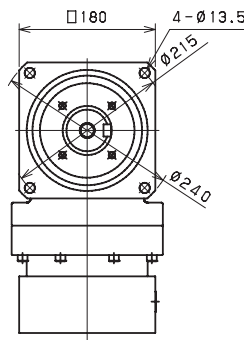
EVS-SERIES Right-angle shaft

EVS-180 – 2-Stage Dimensions

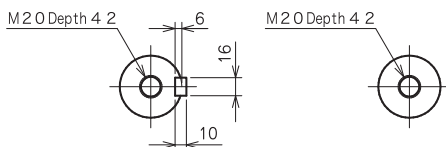
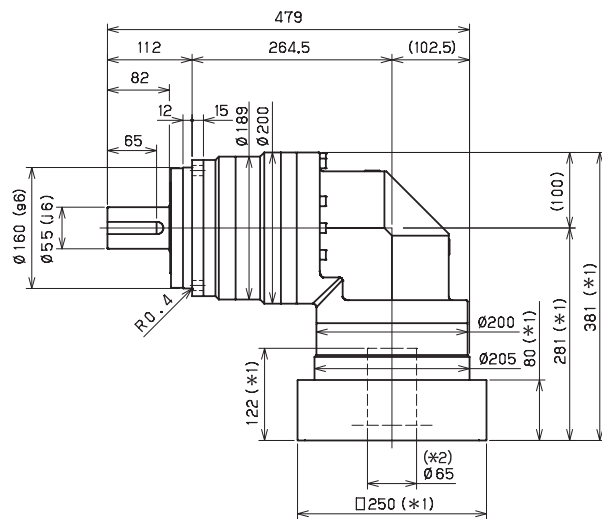
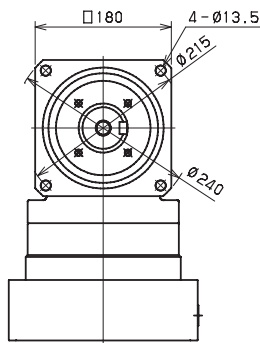
Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$



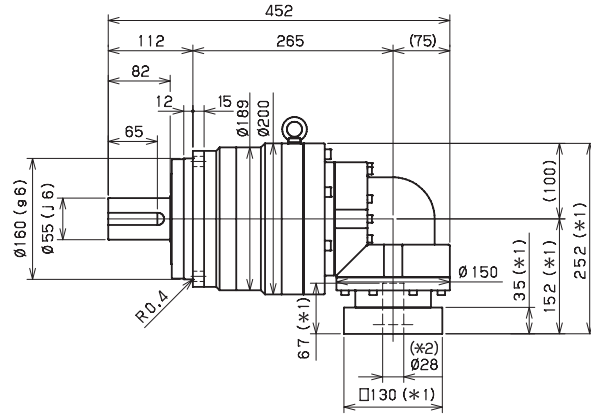
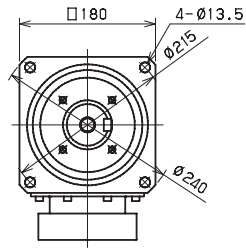
Shaft with key

Smooth shaft

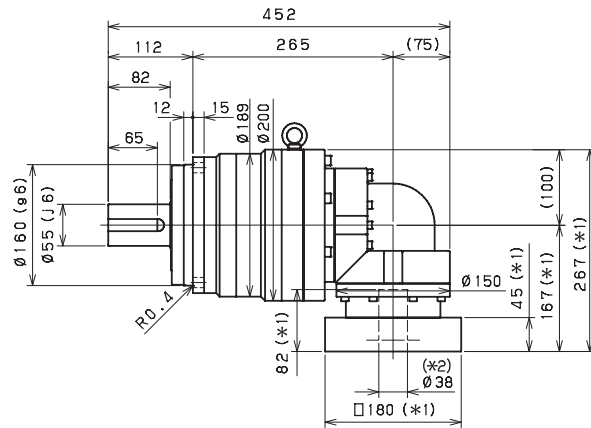
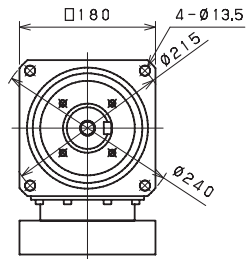
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS-180 – 3-Stage Dimensions

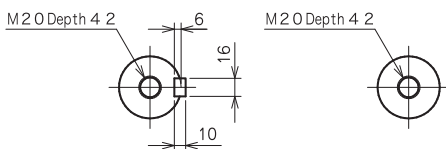
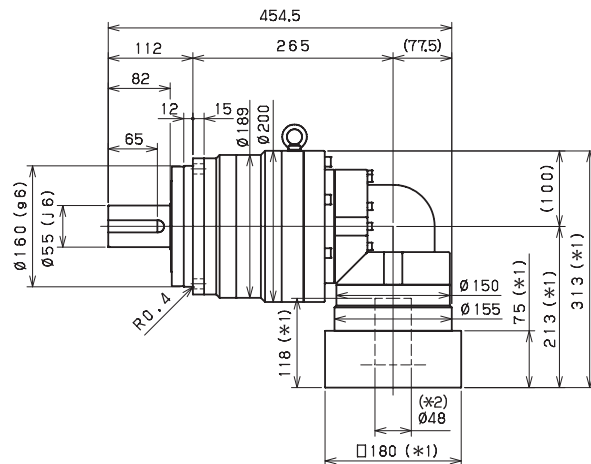
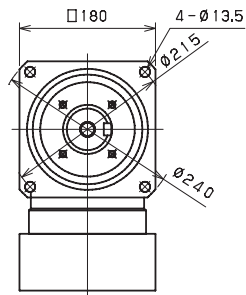
Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

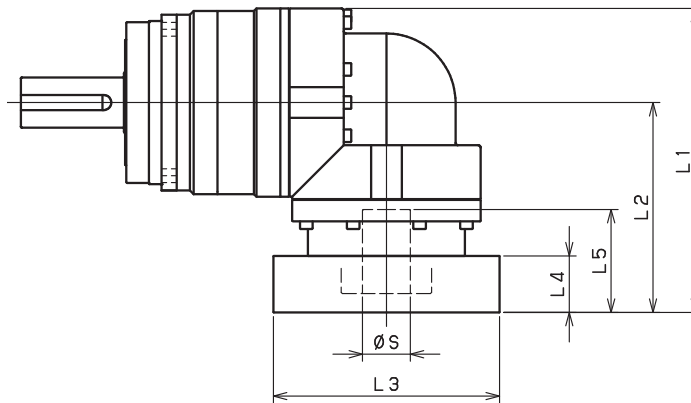
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-180 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|-------------------------|---------|-------|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-180-□-□-28** (S ≤ 28) | FA•FB•FC | -- | -- | -- | -- | -- |
| | GA•GB•GC•GD•GE•GF•GG•GH | -- | -- | -- | -- | -- |
| | HA•HC•HD | -- | -- | -- | -- | -- |
| | HB | -- | -- | -- | -- | -- |
| | HF | -- | -- | -- | -- | -- |
| | JA•JB•JC•JF | -- | -- | -- | -- | -- |
| | KA•KB•KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| EVS-180-□-□-38** (28 < S ≤ 38) | HA | 331.5 | 231.5 | □130 | 45 | 82 |
| | HB•HE | 326.5 | 226.5 | □130 | 40 | 77 |
| | JA | 331.5 | 231.5 | □150 | 45 | 82 |
| | KA•KB•KC | 331.5 | 231.5 | □180 | 45 | 82 |
| | KD | 366.5 | 266.5 | □180 | 80 | 117 |
| | KE | 346.5 | 246.5 | □180 | 60 | 97 |
| | LB | 341.5 | 241.5 | □200 | 55 | 92 |
| | MA•MB | 331.5 | 231.5 | □220 | 45 | 82 |
| | MC | 346.5 | 246.5 | □220 | 60 | 97 |
| | MD | 341.5 | 241.5 | □220 | 55 | 92 |
| NA | 331.5 | 231.5 | □250 | 45 | 82 | |
| EVS-180-□-□-48** (38 < S ≤ 48) | KA | 368 | 268 | □180 | 75 | 118 |
| | KB•KC | 348 | 248 | □180 | 55 | 98 |
| | LA | 348 | 248 | □200 | 55 | 98 |
| | MA | 348 | 248 | □220 | 55 | 98 |
| | MB | 368 | 268 | □220 | 75 | 118 |
| | NA | 368 | 268 | □250 | 75 | 118 |
| | PA | 368 | 268 | □280 | 75 | 118 |
| EVS-180-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | 381 | 281 | □220 | 80 | 122 |
| | NA•NC | 381 | 281 | □250 | 80 | 122 |
| | NB•ND | 411 | 311 | □250 | 110 | 152 |
| | PA | 401 | 301 | □280 | 100 | 142 |
| | PB | 411 | 311 | □280 | 110 | 152 |

*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

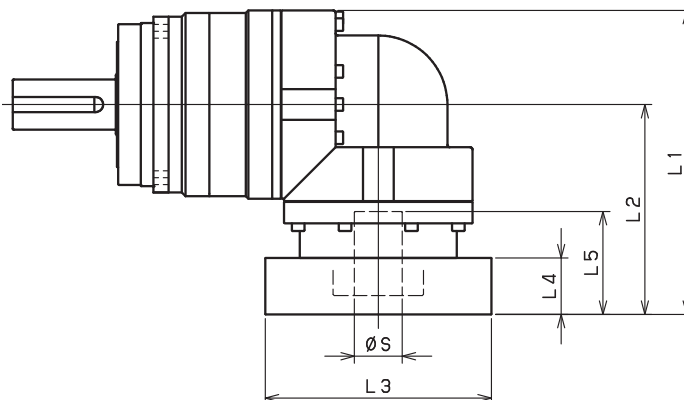
Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-180 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|-------------------------|---------|------|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-180-□-□-28** (S ≤ 28) | FA•FB•FC | 252 | 152 | □100 | 35 | 67 |
| | GA•GB•GC•GD•GE•GF•GG•GH | 252 | 152 | □115 | 35 | 67 |
| | HA•HC•HD | 252 | 152 | □130 | 35 | 67 |
| | HB | 262 | 162 | □130 | 45 | 77 |
| | HF | 247 | 147 | □130 | 30 | 62 |
| | JA•JB•JC•JF | 252 | 152 | □150 | 35 | 67 |
| | KA•KB•KE | 252 | 152 | □180 | 35 | 67 |
| | LA | 252 | 152 | □200 | 35 | 67 |
| | LB | 262 | 162 | □200 | 45 | 77 |
| | MA | 252 | 152 | □220 | 35 | 67 |
| | MB | 262 | 162 | □220 | 45 | 77 |
| EVS-180-□-□-38** (28 < S ≤ 38) | HA | 267 | 167 | □130 | 45 | 82 |
| | HB•HE | 262 | 162 | □130 | 40 | 77 |
| | JA | 267 | 167 | □150 | 45 | 82 |
| | KA•KB•KC | 267 | 167 | □180 | 45 | 82 |
| | KD | 302 | 202 | □180 | 80 | 117 |
| | KE | 282 | 182 | □180 | 60 | 97 |
| | LB | 277 | 177 | □200 | 55 | 92 |
| | MA•MB | 267 | 167 | □220 | 45 | 82 |
| | MC | 282 | 182 | □220 | 60 | 97 |
| | MD | 277 | 177 | □220 | 55 | 92 |
| NA | 267 | 167 | □250 | 45 | 82 | |
| EVS-180-□-□-48** (38 < S ≤ 48) | KA | 313 | 213 | □180 | 75 | 118 |
| | KB•KC | 293 | 193 | □180 | 55 | 98 |
| | LA | 293 | 193 | □200 | 55 | 98 |
| | MA | 293 | 193 | □220 | 55 | 98 |
| | MB | 313 | 213 | □220 | 75 | 118 |
| | NA | 313 | 213 | □250 | 75 | 118 |
| | PA | 313 | 213 | □280 | 75 | 118 |
| EVS-180-□-□-65** (48 < S ≤ 65) | MA•MB•MC•MD | -- | -- | -- | -- | -- |
| | NA•NC | -- | -- | -- | -- | -- |
| | NB•ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

EVS-SERIES Right-angle shaft

EVS-210 – 2-Stage Specifications

| Frame Size | 210 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 575 | 765 | 960 | 1150 | 1200 | 1200 | 800 | 800 |
| Maximum Acceleration Torque | [Nm] | *2 | 1015 | 1355 | 1695 | 1840 | 1840 | 1760 | 1520 | 1280 |
| Emergency Stop Torque | [Nm] | *3 | 2500 | 3300 | 4000 | 4500 | 4500 | 4500 | 3600 | 3600 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 14.5 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 17000 | 18000 | 20000 | 21000 | 22000 | 23000 | 24000 | 24000 |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 149.7 | 123.8 | 113.9 | 108.5 | 105.0 | 103.0 | 101.7 | 101.1 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 224.9 | 199.0 | 189.1 | 183.7 | 180.3 | 178.2 | 176.9 | 176.3 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 71 | | | | | | | |

EVS-210 – 3-Stage Specifications

| Frame Size | 210 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 1200 | 1200 |
| Maximum Acceleration Torque | [Nm] | *2 | 1280 | 1840 | 1840 | 1840 | 1840 | 1280 | 1840 | 1840 |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 4500 | 4500 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 36.39 | 37.30 | 35.79 | 35.49 | 36.41 | 34.41 | 35.22 | 34.26 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 66.21 | 67.12 | 65.61 | 65.31 | 66.23 | 64.23 | 65.04 | 64.08 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 73 | | | | | | | |

EVS-210 – 3-Stage Specifications

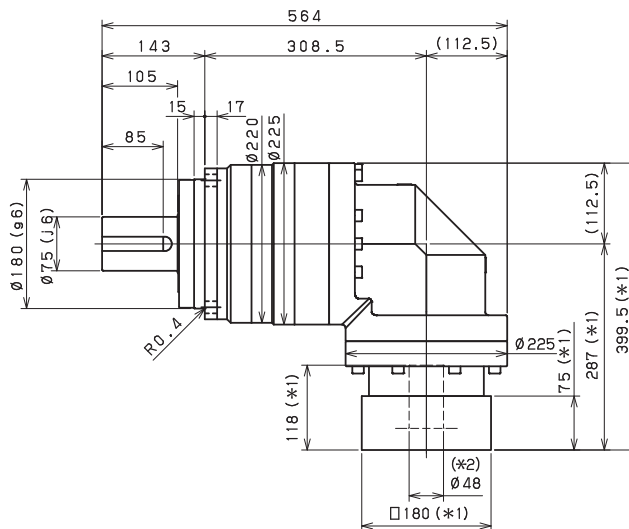
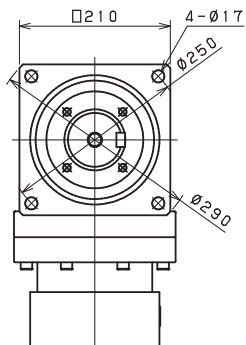
| Frame Size | 210 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 800 | 1200 | 1200 | 1200 | 1200 | 800 | 800 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1040 | 1840 | 1840 | 1840 | 1440 | 1040 | 960 | | |
| Emergency Stop Torque | [Nm] | *3 | 3600 | 4500 | 4500 | 4500 | 4500 | 3600 | 3600 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 10.2 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | 24000 | | |
| Permitted Axial Load | [N] | *8 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | 22000 | | |
| Maximum Radial Load | [N] | *9 | 24000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 22000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 35.11 | 34.18 | 34.14 | 34.12 | 34.10 | 34.09 | 34.08 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 64.92 | 64.00 | 63.96 | 63.93 | 63.92 | 63.90 | 63.90 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 400 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 73 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVS210
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

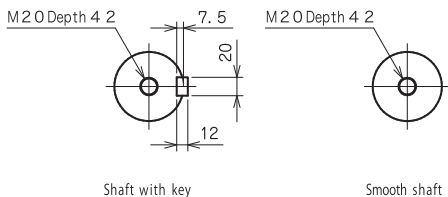
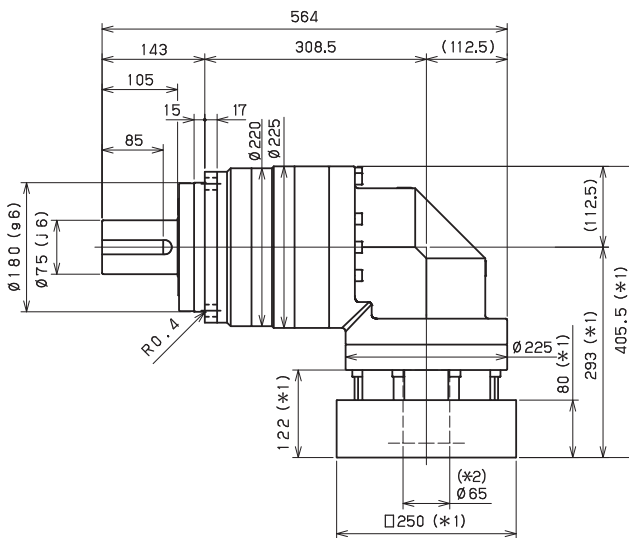
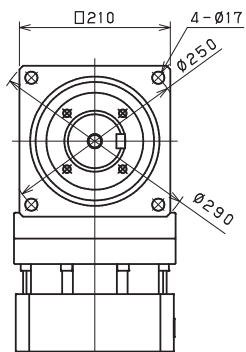
EVS-SERIES Right-angle shaft

EVS-210 – 2-Stage Dimensions

Input shaft bore $\leq \phi 48$



Input shaft bore $\leq \phi 65$



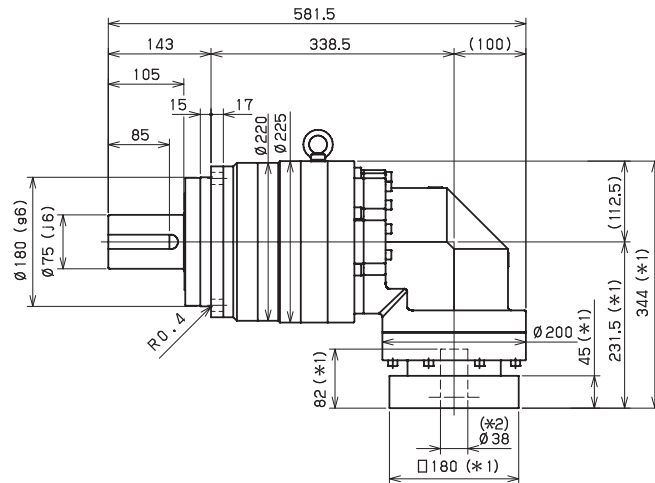
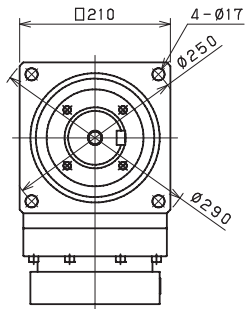
Shaft with key

Smooth shaft

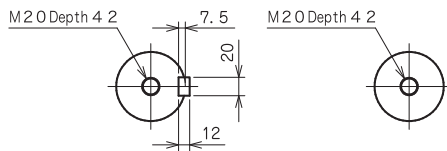
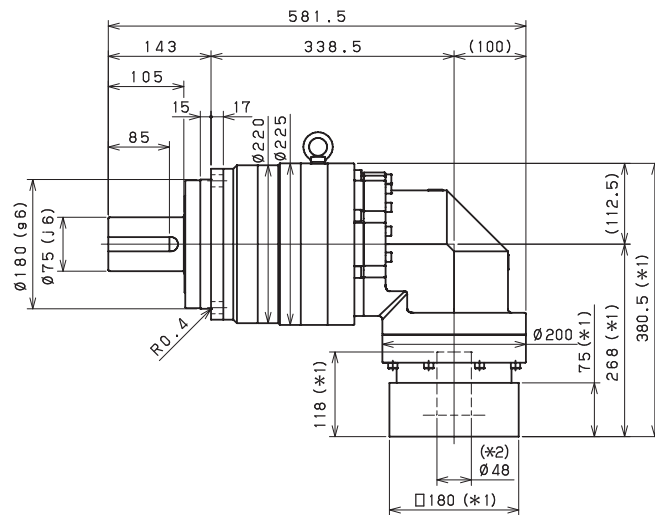
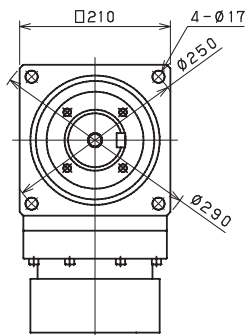
- *1) Length will vary depending on motor
- *2) Bushing will be inserted to adapt to motor shaft

EVS-210 – 3-Stage Dimensions

Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$



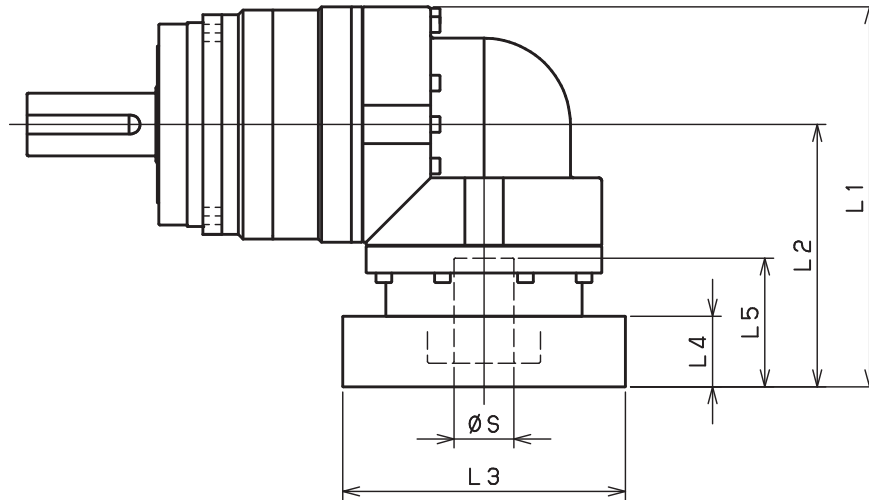
Shaft with key

Smooth shaft

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

EVS-210 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|------------------|---------|-----|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-210-□-□-38** (S ≤ 38) | HA | -- | -- | -- | -- | -- |
| | HB-HE | -- | -- | -- | -- | -- |
| | JA | -- | -- | -- | -- | -- |
| | KA-KB-KC | -- | -- | -- | -- | -- |
| | KD | -- | -- | -- | -- | -- |
| | KE | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | LB | -- | -- | -- | -- | -- |
| | MA-MB | -- | -- | -- | -- | -- |
| | MC | -- | -- | -- | -- | -- |
| | MD | -- | -- | -- | -- | -- |
| NA | -- | -- | -- | -- | -- | |
| EVS-210-□-□-48** (38 < S ≤ 48) | KA | 399.5 | 287 | □180 | 75 | 118 |
| | KB-KC | 379.5 | 267 | □180 | 55 | 98 |
| | LA | 379.5 | 267 | □200 | 55 | 98 |
| | MA | 379.5 | 267 | □220 | 55 | 98 |
| | MB | 399.5 | 287 | □220 | 75 | 118 |
| | NA | 399.5 | 287 | □250 | 75 | 118 |
| | PA | 399.5 | 287 | □280 | 75 | 118 |
| EVS-210-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | 405.5 | 293 | □220 | 80 | 122 |
| | NA-NC | 405.5 | 293 | □250 | 80 | 122 |
| | NB-ND | 435.5 | 323 | □250 | 110 | 152 |
| | PA | 425.5 | 313 | □280 | 100 | 142 |
| | PB | 435.5 | 323 | □280 | 110 | 152 |
| | QA-QB | 425.5 | 313 | □320 | 100 | 142 |

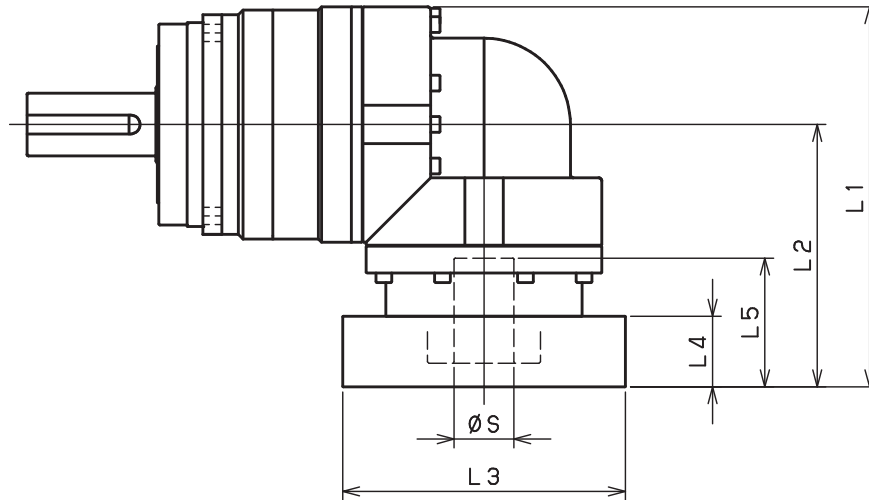
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-210 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|------------------|---------|-------|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-210-□-□-38** (S ≤ 38) | HA | 344 | 231.5 | □130 | 45 | 82 |
| | HB-HE | 339 | 226.5 | □130 | 40 | 77 |
| | JA | 344 | 231.5 | □150 | 45 | 82 |
| | KA-KB-KC | 344 | 231.5 | □180 | 45 | 82 |
| | KD | 379 | 266.5 | □180 | 80 | 117 |
| | KE | 359 | 246.5 | □180 | 60 | 97 |
| | LA | 344 | 231.5 | □200 | 45 | 82 |
| | LB | 354 | 241.5 | □200 | 55 | 92 |
| | MA-MB | 344 | 231.5 | □220 | 45 | 82 |
| | MC | 359 | 246.5 | □220 | 60 | 97 |
| | MD | 354 | 241.5 | □220 | 55 | 92 |
| EVS-210-□-□-48** (38 < S ≤ 48) | KA | 380.5 | 268 | □180 | 75 | 118 |
| | KB-KC | 360.5 | 248 | □180 | 55 | 98 |
| | LA | 360.5 | 248 | □200 | 55 | 98 |
| | MA | 360.5 | 248 | □220 | 55 | 98 |
| | MB | 380.5 | 268 | □220 | 75 | 118 |
| | NA | 380.5 | 268 | □250 | 75 | 118 |
| | PA | 380.5 | 268 | □280 | 75 | 118 |
| EVS-210-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-SERIES Right-angle shaft

EVS-240 – 2-Stage Specifications

| Frame Size | 240 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 2-Stage | | | | | | | | | |
| Ratio | Units | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 1005 | 1340 | 1680 | 1920 | 1920 | 1920 | 1280 | 1280 |
| Maximum Acceleration Torque | [Nm] | *2 | 2000 | 2960 | 2960 | 2960 | 2960 | 2880 | 2400 | 2080 |
| Emergency Stop Torque | [Nm] | *3 | 4000 | 5400 | 6500 | 7200 | 7200 | 7200 | 5400 | 5400 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 25.3 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 21000 | 22000 | 24000 | 25000 | 26000 | 28000 | 29000 | 29000 |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 217.5 | 156.7 | 134.5 | 122.4 | 112.9 | 108.3 | 105.5 | 104.0 |
| Efficiency | [%] | *11 | 93 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 550 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 6 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 122 | | | | | | | |

EVS-240 – 3-Stage Specifications

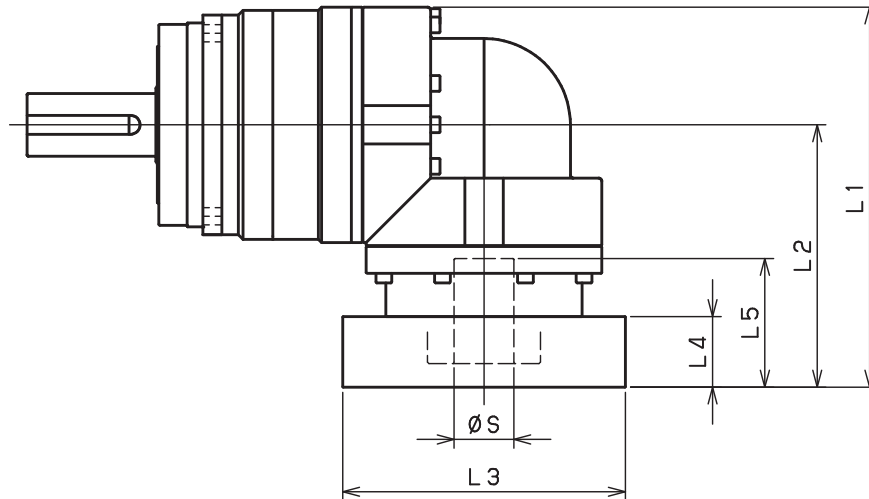
| Frame Size | 240 | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 1280 | 1920 | 1920 | 1920 | 1920 | 1280 | 1920 | 1920 |
| Maximum Acceleration Torque | [Nm] | *2 | 2000 | 2960 | 2960 | 2960 | 2960 | 2000 | 2960 | 2960 |
| Emergency Stop Torque | [Nm] | *3 | 5400 | 7200 | 7200 | 7200 | 7200 | 5400 | 7200 | 7200 |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 16.4 | | | | | | | |
| Permitted Radial Load | [N] | *7 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 40.47 | 42.59 | 39.21 | 38.59 | 40.73 | 35.09 | 38.02 | 34.78 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *11 | 88 | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 550 | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *15 | 113 | | | | | | | |

EVS-240 – 3-Stage Specifications

| Frame Size | 240 | | | | | | | | | | |
|---|----------------------|------|-------------|-------|-------|-------|-------|-------|-------|--|--|
| Stage | 3-Stage | | | | | | | | | | |
| Ratio | Units | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 1280 | 1920 | 1920 | 1920 | 1920 | 1280 | 1280 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1680 | 2960 | 2960 | 2960 | 2160 | 1680 | 1440 | | |
| Emergency Stop Torque | [Nm] | *3 | 5400 | 7200 | 7200 | 7200 | 7200 | 5400 | 5400 | | |
| Nominal Input Speed | [rpm] | *4 | 1000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *5 | 2000 | | | | | | | | |
| No Load Running Torque | [Nm] | *6 | 16.4 | | | | | | | | |
| Permitted Radial Load | [N] | *7 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 | | |
| Permitted Axial Load | [N] | *8 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | 27000 | | |
| Maximum Radial Load | [N] | *9 | 30000 | | | | | | | | |
| Maximum Axial Load | [N] | *10 | 27000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 37.78 | 34.62 | 34.53 | 34.48 | 34.45 | 34.42 | 34.41 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 550 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 9 | | | | | | | | |
| Noise Level | [dB] | *13 | ≤ 85 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 113 | | | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation
- *3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- *4) The average input speed
- *5) The maximum intermittent input speed
- *6) This is the torque at no load applied on the input shaft. The input speed is 1000 rpm for EVS210
- *7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side bearing)
- *8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output shaft center)
- *9) The maximum radial load that the reducer can accept
- *10) The maximum axial load that the reducer can accept
- *11) The efficiency at the nominal torque rating
- *12) This does not include the lost motion
- *13) Contact NIDEC-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options
- *15) The weight may vary slightly between models

EVS-240 – 2-Stage Adapter Dimensions



| Model number | **: Adapter code | 2-Stage | | | | |
|-----------------------------------|------------------|---------|-----|------|-----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-240-□-□-48** (S ≤ 48) | KA | -- | -- | -- | -- | -- |
| | KB-KC | -- | -- | -- | -- | -- |
| | LA | -- | -- | -- | -- | -- |
| | MA | -- | -- | -- | -- | -- |
| | MB | -- | -- | -- | -- | -- |
| | NA | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| EVS-240-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | 447.5 | 321 | □220 | 80 | 122 |
| | NA-NC | 447.5 | 321 | □250 | 80 | 122 |
| | NB-ND | 477.5 | 351 | □250 | 110 | 152 |
| | PA | 467.5 | 341 | □280 | 100 | 142 |
| | PB | 477.5 | 351 | □280 | 110 | 152 |
| | QA-QB | 467.5 | 341 | □320 | 100 | 142 |

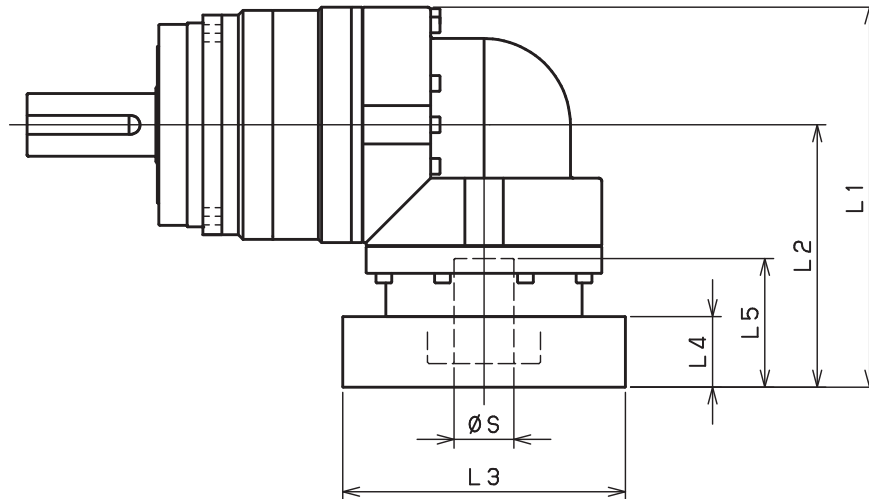
*1) Double reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

EVS-240 – 3-Stage Adapter Dimensions



| Model number | **: Adapter code | 3-Stage | | | | |
|-----------------------------------|------------------|---------|-----|------|----|-----|
| | | L1 | L2 | L3 | L4 | L5 |
| EVS-240-□-□-48** (S ≤ 48) | KA | 413.5 | 287 | □180 | 75 | 118 |
| | KB-KC | 393.5 | 267 | □180 | 55 | 98 |
| | LA | 393.5 | 267 | □200 | 55 | 98 |
| | MA | 393.5 | 267 | □220 | 55 | 98 |
| | MB | 413.5 | 287 | □220 | 75 | 118 |
| | NA | 413.5 | 287 | □250 | 75 | 118 |
| | PA | 413.5 | 287 | □280 | 75 | 118 |
| EVS-240-□-□-65** (48 < S ≤ 65) | MA-MB-MC-MD | -- | -- | -- | -- | -- |
| | NA-NC | -- | -- | -- | -- | -- |
| | NB-ND | -- | -- | -- | -- | -- |
| | PA | -- | -- | -- | -- | -- |
| | PB | -- | -- | -- | -- | -- |
| | QA-QB | -- | -- | -- | -- | -- |

*1) Triple reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.



STH-SERIES

- 85 mm pass-through hole allows use of air lines or wiring
- Input is compatible with most servo motor brands
- Exceptional value for small to mid-range indexing applications
- Available ratios range from 12:1 through 400:1
- Ships within 48 hours
- Assembled in the USA

STH

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

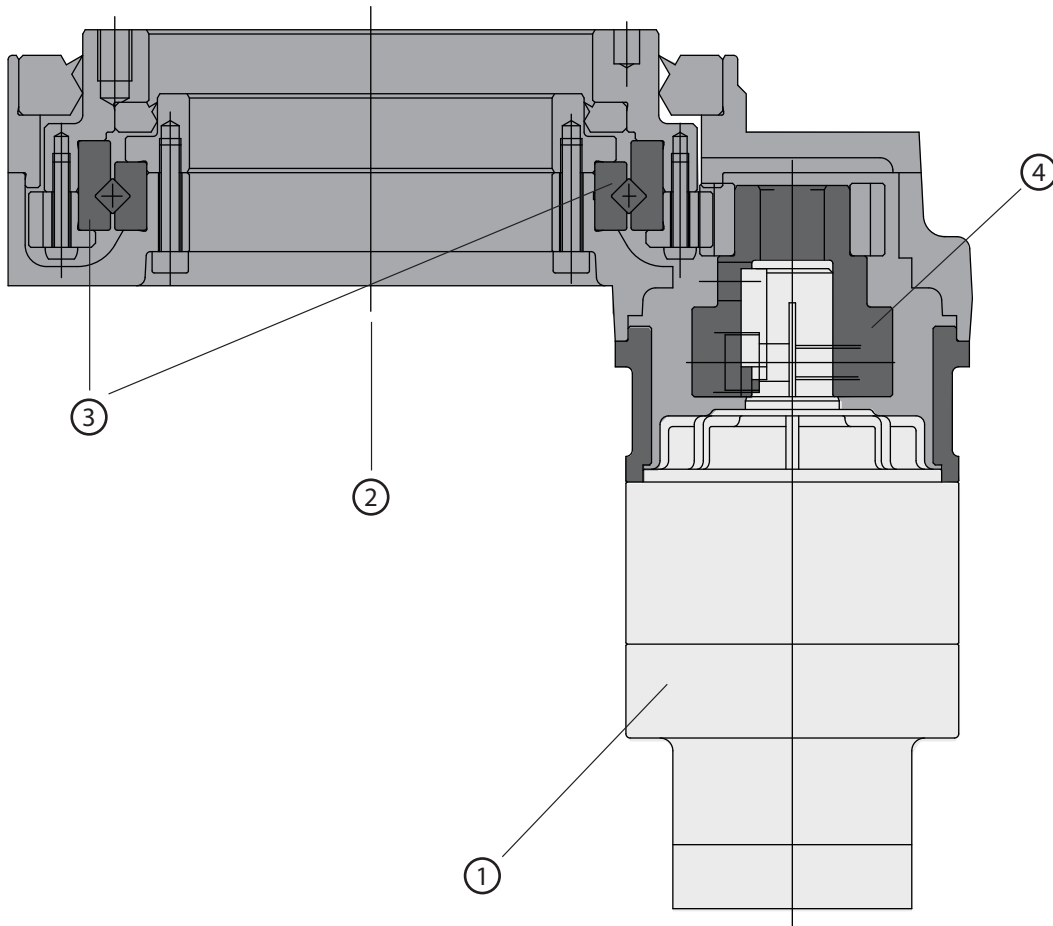
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STH-SERIES Hollow output rotary actuators

STH-Series – Features



- ① One or two stage planetary reducer
- ② 85 mm hollow bore diameter
- ③ Heavy duty cross-roller bearing
- ④ Final stage primary gear

STHVL7 and STHEL7 Series – Model Code

| STH | V | L | 7 | U | 1 | 0 | 0 | 9 | 1 | 9 | H | A | 1 | 9 | 0 | 0 |
|-------|-------|---|----------------------|-------|---|---|----------|--------------------|---|------------------|----------------|---|---------------|---|---|---|
| Model | Input | | Input Unit Direction | Ratio | | | Backlash | Reducer Input Bore | | Motor Attachment | Motor Shaft OD | | Modifications | | | |

Model

Order Code

| | |
|-----|---------------|
| STH | Hollow output |
|-----|---------------|

Input

Order Code

| | |
|-----|---------|
| VL7 | VRL-070 |
| EL7 | EVL-070 |

Input Unit Direction

Order Code

| | |
|---|-------------|
| 0 | VRL input |
| U | R/A - Up |
| D | R/A - Down |
| R | R/A - Right |
| L | R/A - Left |

Backlash

Order Code

| | |
|---|-----------|
| 2 | 2 Arc-min |
| 8 | 8 Arc-min |
| | |
| | |

Ratio

Order Code

| | | | |
|-----|-------------------------|----------------------------|-------|
| 012 | Double Reduction w/ VRL | 12:1 | |
| 016 | | 16:1 | |
| 020 | | 20:1 | |
| 028 | Triple Reduction w/ EVL | 28:1 | |
| 040 | | 40:1 | |
| 060 | Triple Reduction w/ VRL | 60:1 | |
| 080 | | 80:1 | |
| 100 | | 100:1 | |
| 120 | | 120:1 | |
| 140 | | 140:1 | |
| 160 | | Quadruple Reduction w/ EVL | 160:1 |
| 200 | | | 200:1 |
| 280 | | | 280:1 |
| 400 | 400:1 | | |

Reducer Input Bore

Order Code

| | |
|----|-------|
| 08 | 8 mm |
| 14 | 14 mm |
| 19 | 19 mm |
| | |

Motor Shaft OD

Order Code

| | |
|----|-----------|
| 05 | 5 mm |
| 06 | 6 mm |
| N1 | 6.35 mm |
| 07 | 7 mm |
| 08 | 8 mm |
| 09 | 9 mm |
| N2 | 9.525 mm |
| 10 | 10 mm |
| 11 | 11 mm |
| 12 | 12 mm |
| N3 | 12.7 mm |
| 14 | 14 mm |
| N4 | 15.875 mm |
| 16 | 16 mm |
| 17 | 17 mm |
| 19 | 19 mm |
| | |

Modifications/Motor Attachment Tapped Holes

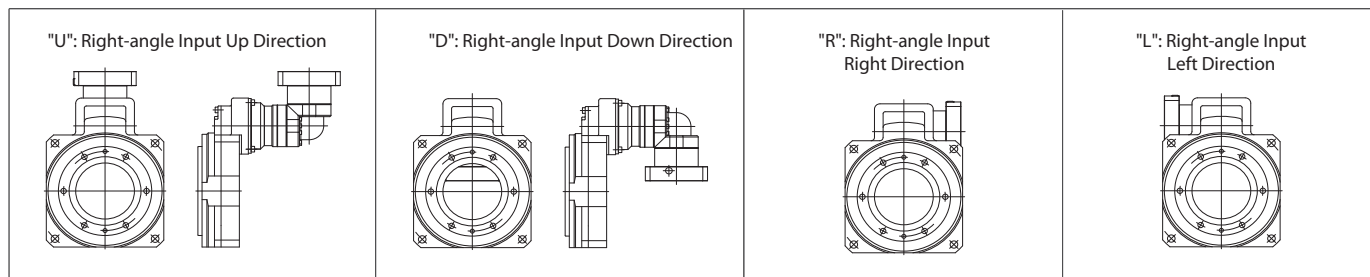
Order Code

| | |
|----|--|
| 00 | Standard |
| I | IP65 - standard grease |
| F | N/A |
| G | N/A |
| S | Steel-It paint - standard grease - IP65 |
| W | White epoxy paint - standard grease - IP65 |
| X | N/A |
| F | N/A |
| T | Re-tap adapter flange one size larger |
| H | Through hole on motor attachment flange |
| L | Larger through hole on adapter flange |
| B | Pilot diameter reduced |
| R | Deeper adapter flange/add spacer plate |
| A_ | Specify |

Notes:

Use 0's (zeros) for unused modification.

Input Unit Direction (Right-angle Detail)



Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STHVL7 3-Stage Specifications

| Frame Size | STHVL7 | | | | | | | | |
|---------------------------|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|
| Stage | Units | Notes | 3-Stage | | | | | | |
| Ratio | -- | *1 | 100:1 | 120:1 | 140:1 | 160:1 | 200:1 | 280:1 | 400:1 |
| Nominal Torque 1 | [Nm] | *2 | 85 | 68 | 85 | 85 | 85 | 85 | 68 |
| Acceleration Torque | [Nm] | -- | 170 | 133 | 170 | 170 | 170 | 170 | 133 |
| Emergency Stop Torque | [Nm] | -- | 240 | 240 | 240 | 240 | 240 | 240 | 240 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | | | | |
| Max. Input Speed | [rpm] | -- | 6000 | | | | | | |
| Moment of Inertia (≤Ø 8) | [kgcm ²] | *3 | 0.067 | 0.059 | 0.060 | 0.054 | 0.052 | 0.051 | 0.050 |
| Moment of Inertia (≤Ø 14) | [kgcm ²] | *3 | 0.144 | 0.140 | 0.137 | 0.135 | 0.133 | 0.132 | 0.131 |
| Moment of Inertia (≤Ø 19) | [kgcm ²] | *3 | 0.364 | 0.350 | 0.357 | 0.345 | 0.343 | 0.342 | 0.341 |
| Backlash | [arc-min] | -- | 2 | | | | | | |
| Accuracy | [arc-sec] | -- | ±60 | | | | | | |
| Torsional Stiffness | [Nm/arc-min] | -- | 7.6 | | | | | | |
| Weight | [kg] | -- | 7.8 | | | | | | |
| Max. Axial Load | [N] | -- | 4000 | | | | | | |
| Max. Radial Load | [N] | -- | 5000 | | | | | | |
| Max. Tilting Moment Load | [Nm] | -- | 200 | | | | | | |
| Max. Surface Runout | [mm] | -- | 0.070 | | | | | | |
| Max. Deflection | [mm] | -- | 0.70 | | | | | | |
| Efficiency | [%] | -- | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Noise Level | [dB] | -- | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| Max. Ambient Temperature | °C | -- | 0-40 | | | | | | |
| Max. Surface Temperature | °C | -- | 90 | | | | | | |
| Lubrication | -- | -- | Grease | | | | | | |
| Protection | -- | *4 | IP54 (IP65) | | | | | | |
| Unit Life | hr | -- | 20000 | | | | | | |

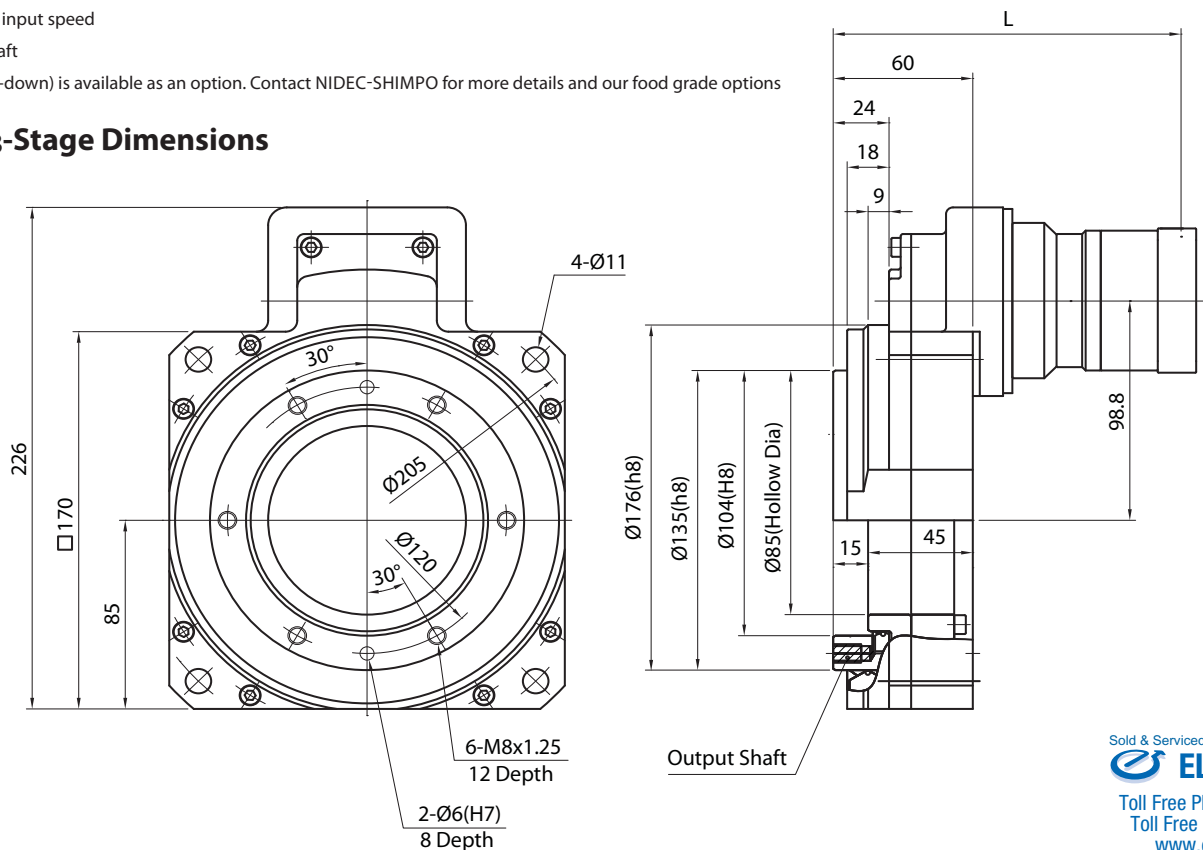
*1) Contact NIDEC-SHIMPO for more optional ratios

*2) At nominal input speed

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STHVL7 3-Stage Dimensions



STH

STH-SERIES Hollow output rotary actuators

STHEL7 2-Stage & 3-Stage Specifications

| Frame Size | STHEL7 | | | | | | | | |
|---|----------------------|-------|-------------|-------|-------|-------|-------|-------------|-------|
| Stage | Units | Notes | 2-Stage | | | | | 3-Stage | |
| Ratio | -- | *1 | 12:1 | 16:1 | 20:1 | 28:1 | 40:1 | 60:1 | 80:1 |
| Nominal Torque 1 | [Nm] | *2 | 43 | 58 | 84 | 85 | 61 | 61 | 85 |
| Acceleration Torque | [Nm] | -- | 86 | 115 | 152 | 170 | 122 | 122 | 170 |
| Emergency Stop Torque | [Nm] | -- | 180 | 234 | 240 | 240 | 204 | 240 | 240 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | | | 3000 | |
| Max. Input Speed | [rpm] | -- | 6000 | | | | | 6000 | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | *3 | 1.280 | 0.811 | 0.597 | 0.412 | 0.314 | 0.112 | 0.093 |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | *3 | 1.355 | 0.886 | 0.672 | 0.487 | 0.389 | 0.157 | 0.138 |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | *3 | 1.544 | 1.075 | 0.862 | 0.676 | 0.578 | -- | -- |
| Backlash | [arc-min] | -- | 8 | | | | | 8 | |
| Accuracy | [arc-sec] | -- | ± 60 | | | | | ± 60 | |
| Torsional Stiffness | [Nm/arc-min] | -- | 7.6 | | | | | 7.6 | |
| Weight | [kg] | -- | 8.0 | | | | | 7.8 | |
| Max. Axial Load | [N] | -- | 4000 | | | | | 4000 | |
| Max. Radial Load | [N] | -- | 5000 | | | | | 5000 | |
| Max. Tilting Moment Load | [Nm] | -- | 200 | | | | | 200 | |
| Max. Surface Runout | [mm] | -- | 0.070 | | | | | 0.070 | |
| Max. Deflection | [mm] | -- | 0.70 | | | | | 0.70 | |
| Efficiency | [%] | -- | 84 | 84 | 88 | 88 | 88 | 84 | 84 |
| Noise Level | [dB] | -- | 72 | 72 | 65 | 65 | 65 | 65 | 65 |
| Max. Ambient Temperature | $^{\circ}\text{C}$ | -- | 0-40 | | | | | 0-40 | |
| Max. Surface Temperature | $^{\circ}\text{C}$ | -- | 90 | | | | | 90 | |
| Lubrication | -- | -- | Grease | | | | | Grease | |
| Protection | -- | *4 | IP54 (IP65) | | | | | IP54 (IP65) | |
| Unit Life | hr | -- | 20000 | | | | | 20000 | |

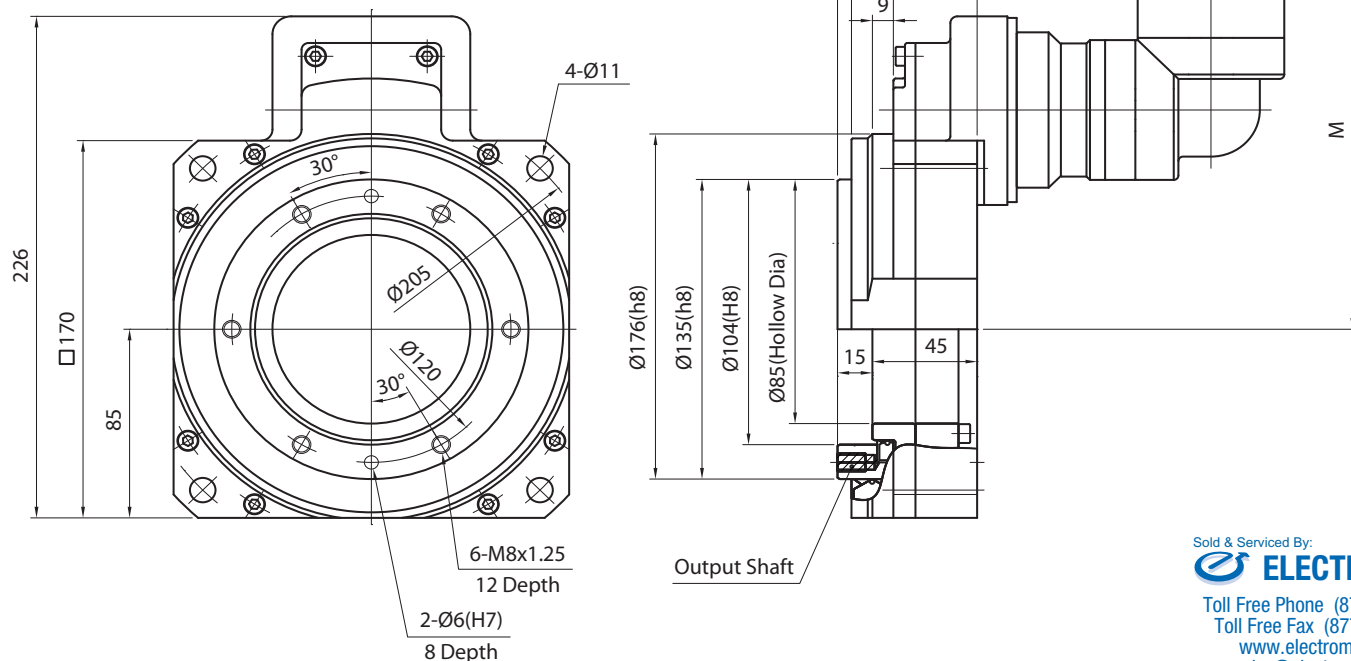
*1) Contact NIDEC-SHIMPO for more optional ratios

*2) At nominal input speed

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STHEL7 2-Stage & 3-Stage Dimensions



STHEL7 3-Stage Specifications

| Frame Size | STHEL7 | | | | | | | | |
|---------------------------|----------------------|-------|-------------|-------|-------|-------|-------|-------|-------|
| Stage | Units | Notes | 3-Stage | | | | | | |
| Ratio | -- | *1 | 100:1 | 120:1 | 140:1 | 160:1 | 200:1 | 280:1 | 400:1 |
| Nominal Torque 1 | [Nm] | *2 | 85 | 61 | 85 | 85 | 85 | 85 | 61 |
| Acceleration Torque | [Nm] | -- | 170 | 122 | 170 | 170 | 170 | 170 | 122 |
| Emergency Stop Torque | [Nm] | -- | 240 | 240 | 240 | 240 | 240 | 240 | 240 |
| Nominal Input Speed | [rpm] | -- | 3000 | | | | | | |
| Max. Input Speed | [rpm] | -- | 6000 | | | | | | |
| Moment of Inertia (≤Ø 8) | [kgcm ²] | *3 | 0.085 | 0.072 | 0.077 | 0.066 | 0.064 | 0.063 | 0.062 |
| Moment of Inertia (≤Ø 14) | [kgcm ²] | *3 | 0.129 | 0.116 | 0.122 | 0.111 | 0.108 | 0.106 | 0.106 |
| Moment of Inertia (≤Ø 19) | [kgcm ²] | *3 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 8 | | | | | | |
| Accuracy | [arc-sec] | -- | ±60 | | | | | | |
| Torsional Stiffness | [Nm/arc-min] | -- | 7.6 | | | | | | |
| Weight | [kg] | -- | 7.8 | | | | | | |
| Max. Axial Load | [N] | -- | 4000 | | | | | | |
| Max. Radial Load | [N] | -- | 5000 | | | | | | |
| Max. Tilting Moment Load | [Nm] | -- | 200 | | | | | | |
| Max. Surface Runout | [mm] | -- | 0.070 | | | | | | |
| Max. Deflection | [mm] | -- | 0.70 | | | | | | |
| Efficiency | [%] | -- | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| Noise Level | [dB] | -- | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| Max. Ambient Temperature | °C | -- | 0-40 | | | | | | |
| Max. Surface Temperature | °C | -- | 90 | | | | | | |
| Lubrication | -- | -- | Grease | | | | | | |
| Protection | -- | *4 | IP54 (IP65) | | | | | | |
| Unit Life | hr | -- | 20000 | | | | | | |

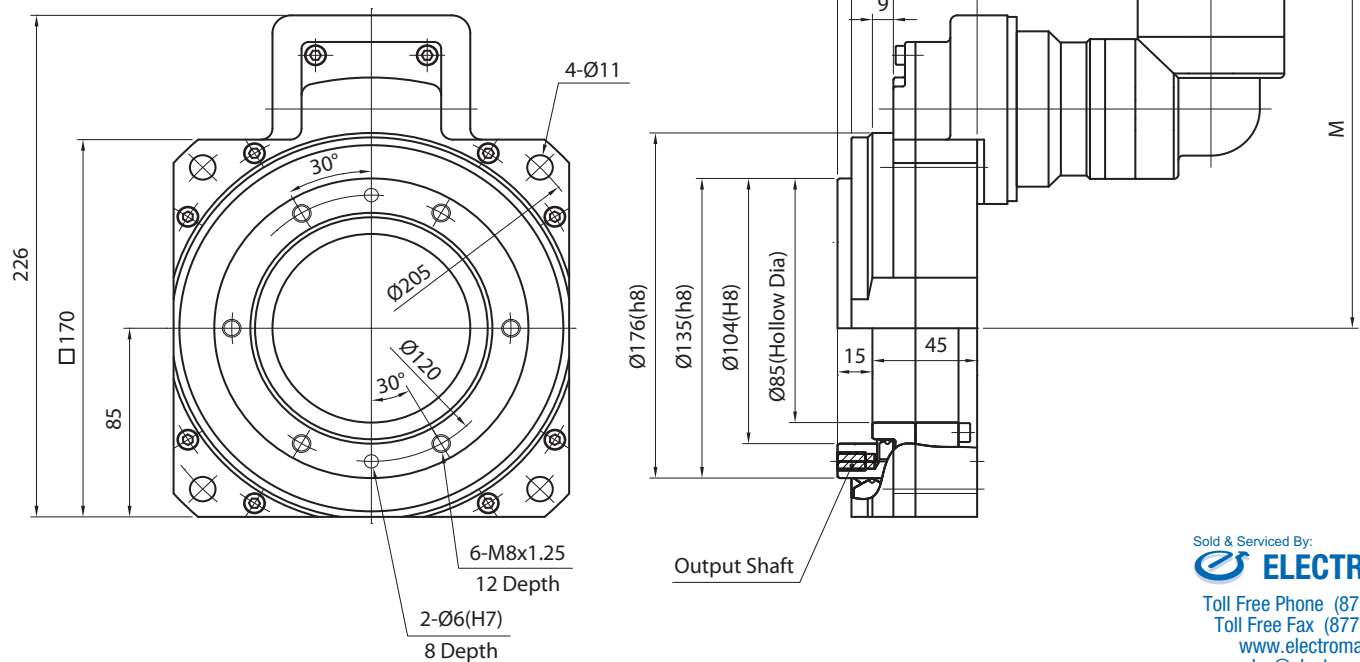
*1) Contact NIDEC-SHIMPO for more optional ratios

*2) At nominal input speed

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STHEL7 3-Stage Dimensions



STH



STR-SERIES

- Compatible with nearly any servo motor
- High output torque, high rigidity, high moment loads
- Large variety of reduction ratios to choose from
- Zero backlash, with precision as tight as 20 arc-secs
- Large hollow shaft design allows use of air lines or wiring
- Multiple ratios to match application requirements

STR

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

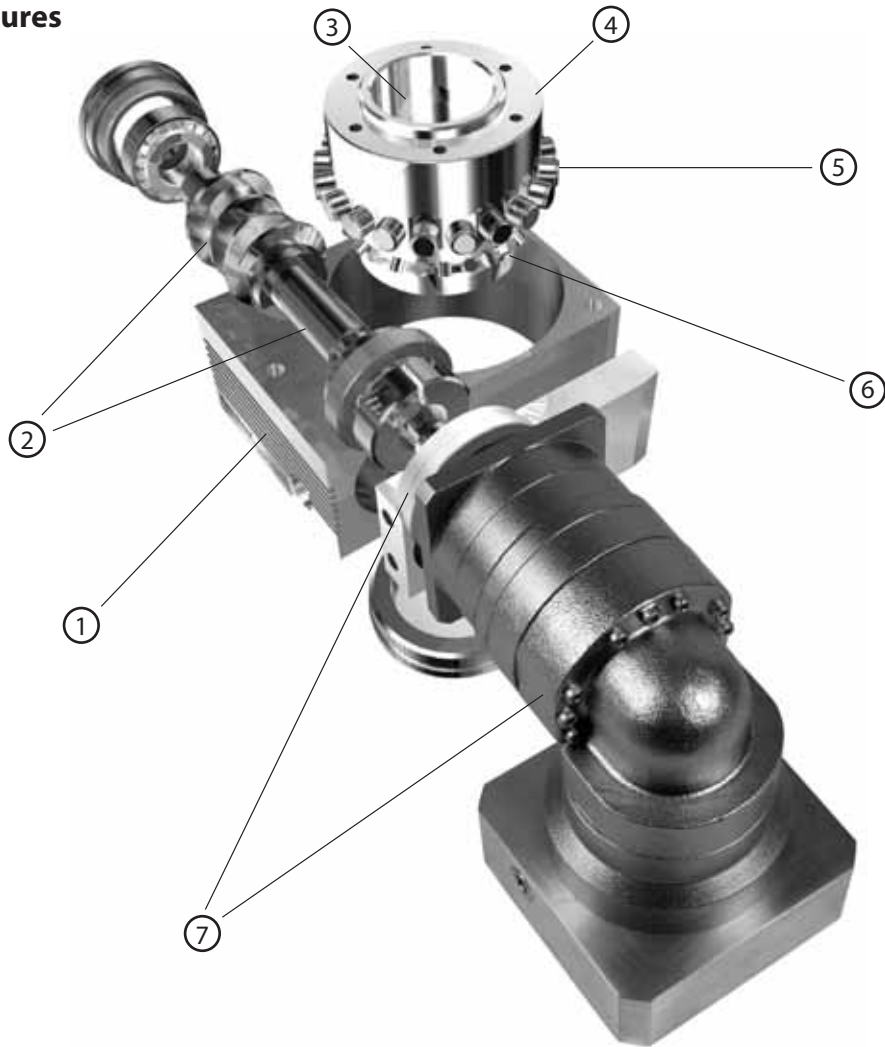
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

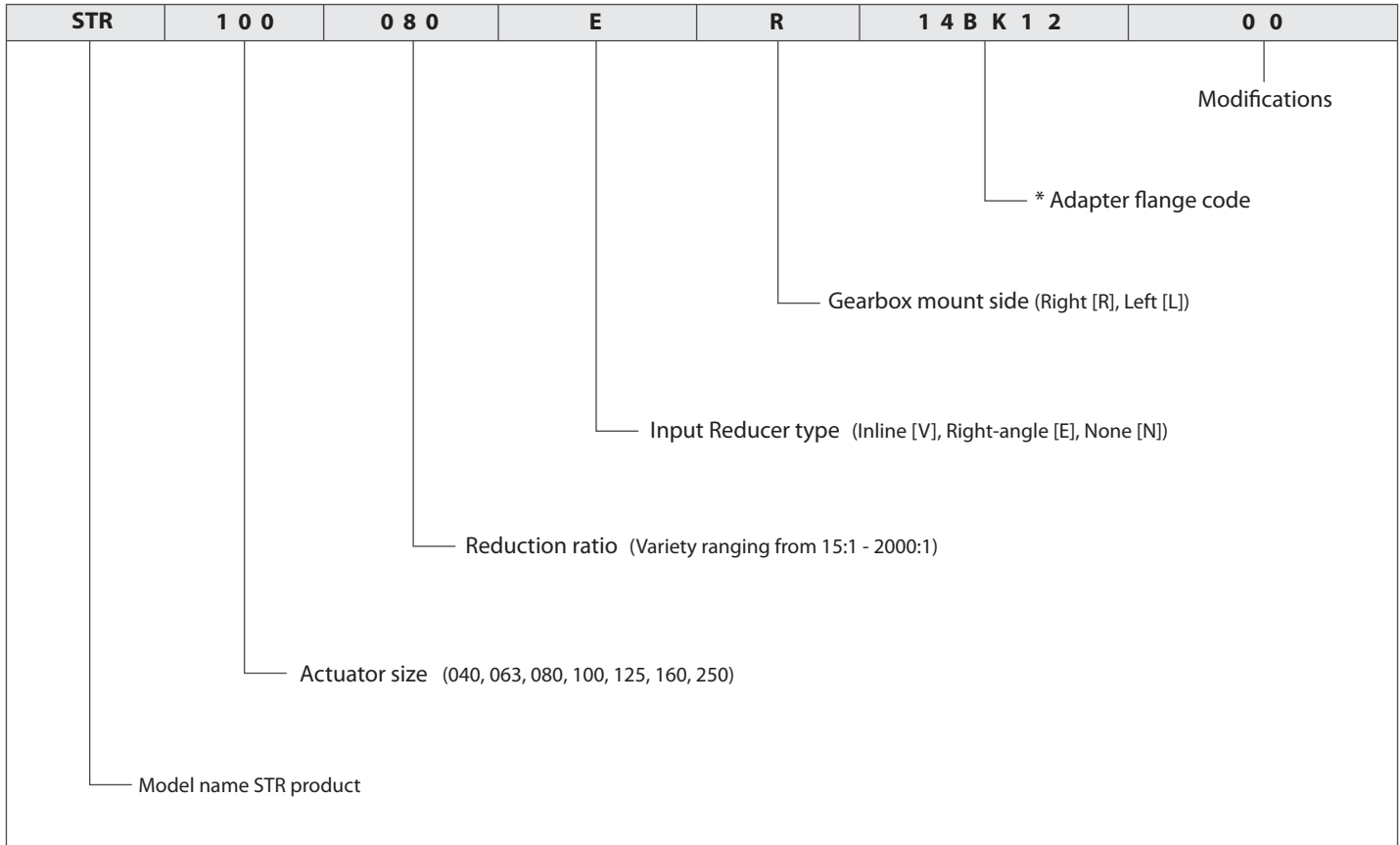
STR-SERIES Rotary indexer

STR-Series – Features

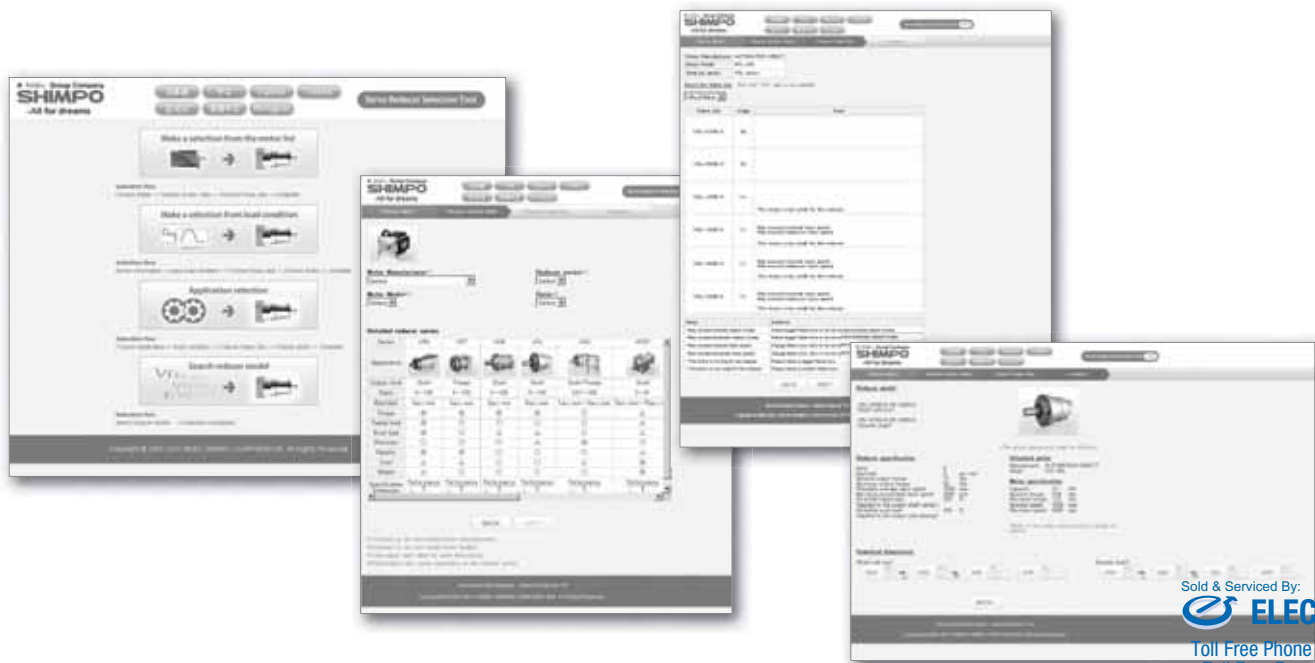


- ① Housing constructed from aluminum alloy
- ② Special worm input shaft providing screw like transmission
- ③ Hollow-bore output shaft
- ④ Output shaft
- ⑤ Cam roller followers
- ⑥ Cross-roller bearing
- ⑦ Direct connection to VRB or EVB planetary reducer

STR-Series – Model Code



*1) Adapter flange code
 Adapter flange code varies depending on the motor.



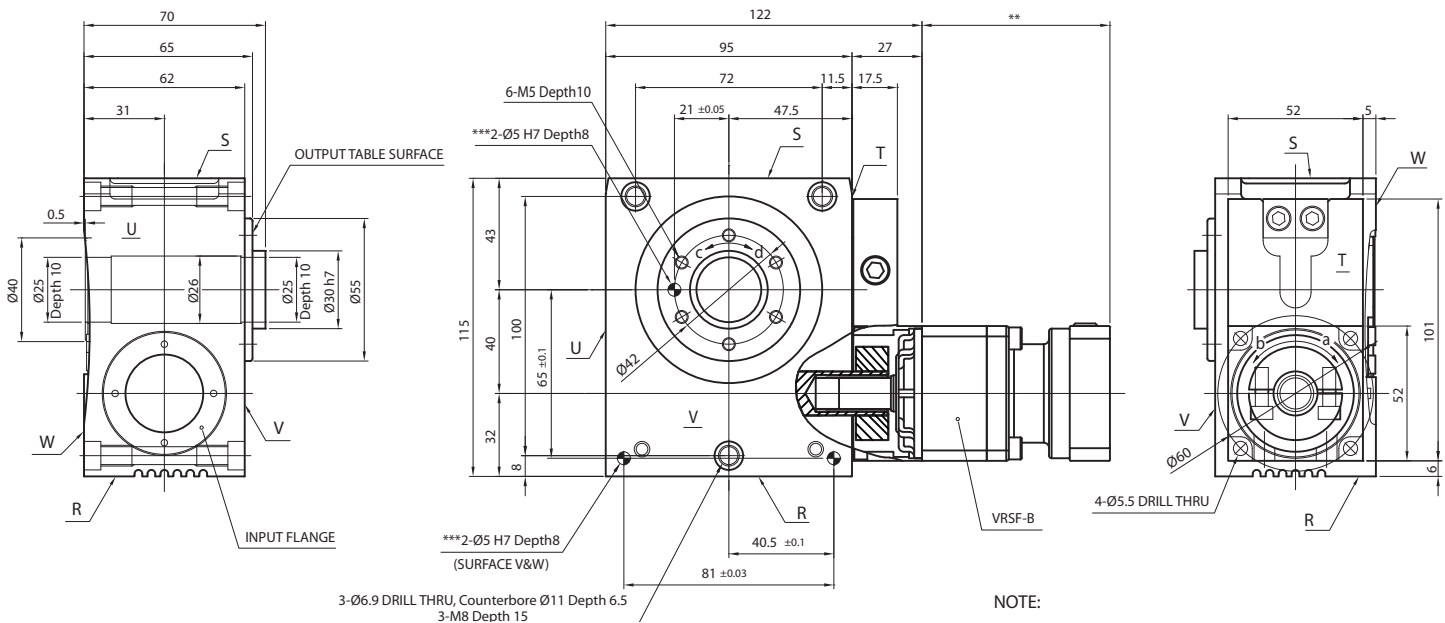
STR

STR-040V – 1-Stage and 2-Stage Specifications with VRSF-B

| Frame Size | 040V | | | | | |
|--------------------------------|--|-------|-------------|-------|---------|-------|
| | | | 1-Stage | | 2-Stage | |
| Stage | | | | | | |
| Ratio | Units | Notes | 15 | 45 | 75 | 135 |
| Nominal Torque | [Nm] | *1 | 27 | 27 | 27 | 27 |
| Acceleration Torque | [Nm] | -- | 58 | 58 | 58 | 58 |
| No Load Torque | [Nm] | *1 | 0.5 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 900 | 2700 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 5000 | 5000 | 5000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 0.292 | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.082 | 0.06 | 0.053 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.151 | 0.131 | 0.121 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.2 | ± 0.2 | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 2.5 | 3.2 | 3.2 | 3.2 |
| Maximum Axial Load | [N] | -- | 999 | 999 | 999 | 999 |
| Maximum Radial Load | [N] | -- | 669 | 669 | 669 | 669 |
| Maximum Tilting Moment Load | [Nm] | -- | 33 | 33 | 33 | 33 |
| Efficiency | [%] | -- | 80 | 76 | 76 | 76 |
| Protection Class | -- | *4 | IP54 (IP65) | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-040 Dimensions with VRSF-B



NOTE:

** Refer to page 22, for VRSF B-Frame dimensions

*** Optional

ROTATION:

a=d

a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

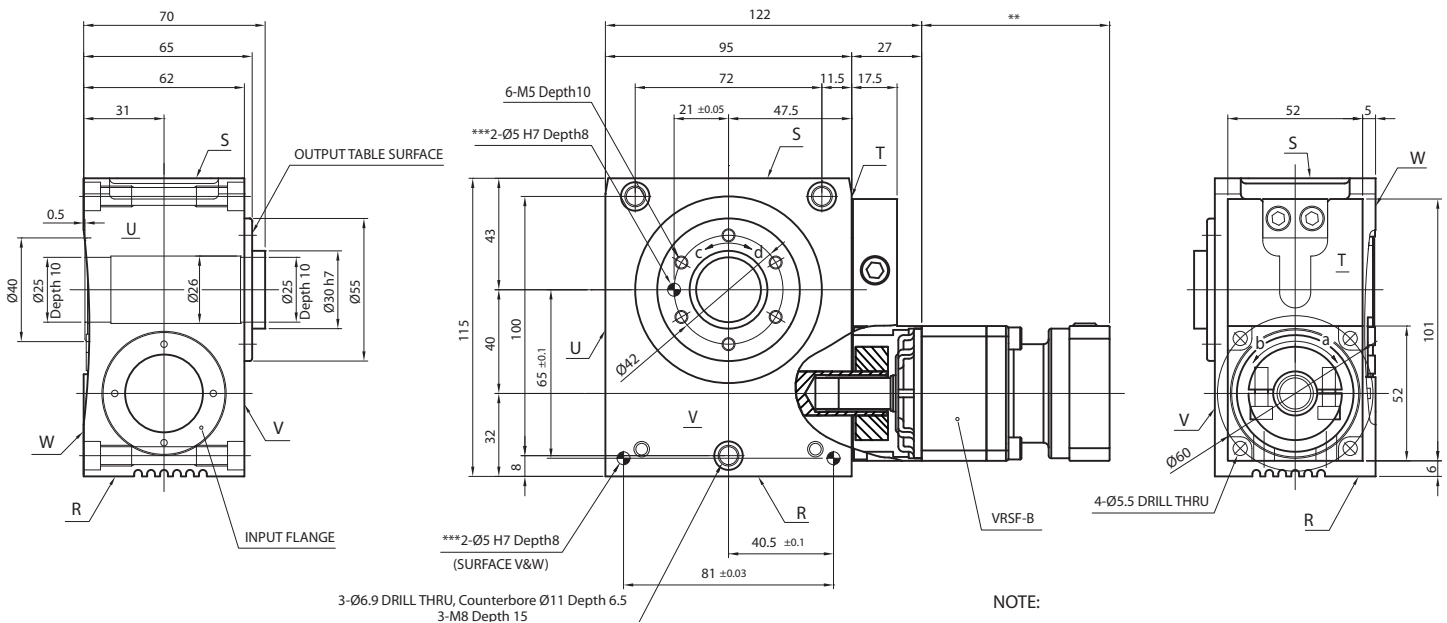
sales@electromate.com

STR-040V – 3-Stage Specifications with VRSF-B

| Frame Size | 040V | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|
| Stage | 3-Stage | | | | | |
| Ratio | Units | Notes | 225 | 300 | 375 | 525 |
| Nominal Torque | [Nm] | *1 | 27 | 27 | 27 | 27 |
| Acceleration Torque | [Nm] | -- | 58 | 58 | 58 | 58 |
| No Load Torque | [Nm] | *1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 5000 | 5000 | 5000 | 5000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.058 | 0.057 | 0.057 | 0.053 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.131 | 0.131 | 0.131 | 0.121 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.2 | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 3.4 | 3.4 | 3.4 | 3.4 |
| Maximum Axial Load | [N] | -- | 999 | 999 | 999 | 999 |
| Maximum Radial Load | [N] | -- | 669 | 669 | 669 | 669 |
| Maximum Tilting Moment Load | [Nm] | -- | 33 | 33 | 33 | 33 |
| Efficiency | [%] | -- | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-040 Dimensions with VRSF-B



NOTE:

- ** Refer to page 22, for VRSF B-Frame dimensions
- *** Optional

ROTATION:

- a=d
- a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR

STR-063V – 1-Stage and 2-Stage Specifications with VRB-060

| Frame Size | 063V | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|---------|-------|-------|-------|-------|
| | Stage | | 1-Stage | | | 2-Stage | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.8 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 0.862 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.142 | 0.097 | 0.079 | 0.070 | 0.064 | 0.061 | 0.059 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.222 | 0.172 | 0.162 | 0.152 | 0.142 | 0.142 | 0.142 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.432 | 0.382 | 0.362 | 0.362 | 0.352 | 0.352 | 0.342 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | ≤ 1.0 | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | ± 0.1 | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 5.6 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 82 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-063V – 2-Stage and 3-Stage Specifications with VRB-060

| Frame Size | 063V | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|---------|-------|-------|-------|-------|
| | Stage | | 2-Stage | | | 3-Stage | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.058 | 0.057 | 0.059 | 0.056 | 0.055 | 0.057 | 0.051 | 0.055 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.142 | 0.142 | 0.142 | 0.132 | 0.132 | 0.142 | 0.132 | 0.132 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.342 | 0.352 | 0.362 | 0.352 | 0.352 | 0.362 | 0.342 | 0.352 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | ≤ 1.0 | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | ± 0.1 | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 7.0 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 78 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

Sold & Serviced By:


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-o63V – 3-Stage Specifications with VRB-o60

| Frame Size | 063V | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² ×10 ⁻⁴] | *3 | --- | --- | --- | --- | --- | --- | --- | --- |
| Reflected Inertia (≤Ø 8) | [kg-m ² ×10 ⁻⁴] | *3 | 0.051 | 0.055 | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 |
| Reflected Inertia (≤Ø 14) | [kg-m ² ×10 ⁻⁴] | *3 | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 |
| Reflected Inertia (≤Ø 19) | [kg-m ² ×10 ⁻⁴] | *3 | 0.342 | 0.352 | 0.342 | 0.342 | 0.342 | 0.342 | 0.342 | 0.342 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

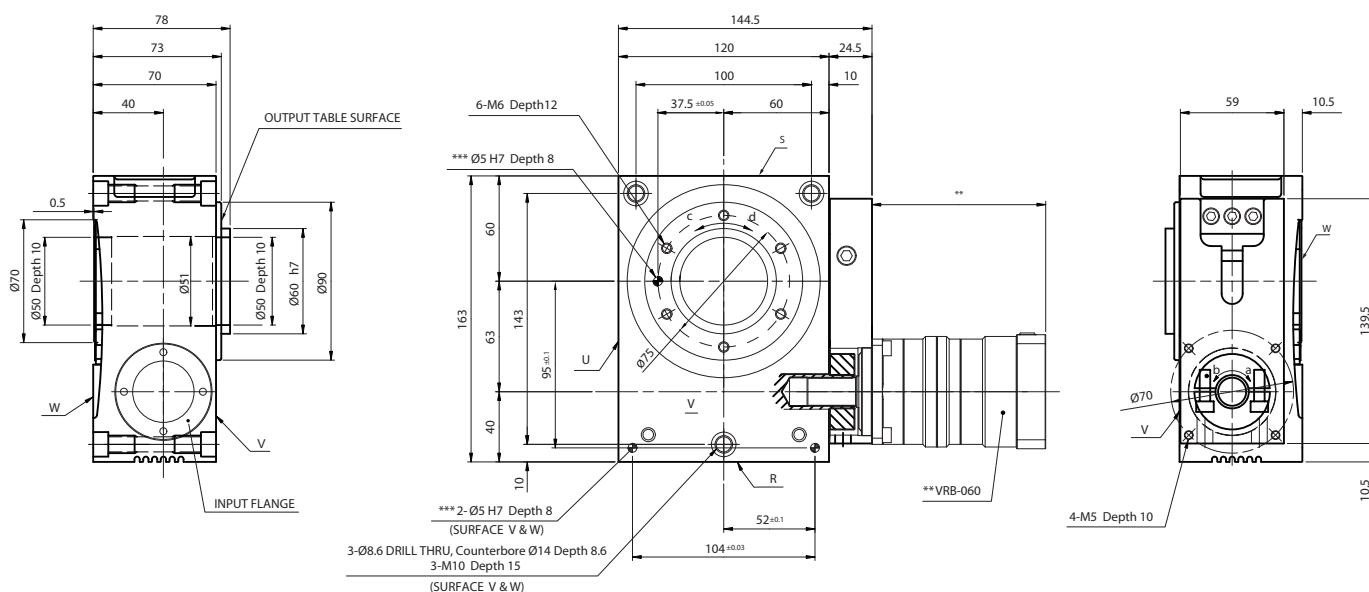
*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o63 Dimensions with VRB-o60



NOTE:

** Refer to page 92, for VRB-060 dimensions

*** Optional

ROTATION:

a=d

a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STR

STR-063E – 1-Stage and 2-Stage Specifications with EVB-060

| Frame Size | 063E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|---------|-------|-------|-------|-------|
| | Stage | | 1-Stage | | | 2-Stage | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.8 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Nominal Input Speed | [rpm] | *2 | 800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 0.862 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.311 | 0.266 | 0.248 | 0.239 | 0.234 | 0.230 | 0.228 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.386 | 0.341 | 0.323 | 0.314 | 0.309 | 0.305 | 0.303 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.575 | 0.53 | 0.513 | 0.504 | 0.498 | 0.495 | 0.493 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | ≤ 1.0 | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | ± 0.1 | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 5.6 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 82 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-063E – 2-Stage and 3-Stage Specifications with EVB-060

| Frame Size | 063E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|---------|-------|-------|-------|-------|
| | Stage | | 2-Stage | | | 3-Stage | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.227 | 0.073 | 0.079 | 0.071 | 0.071 | 0.077 | 0.062 | 0.07 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.302 | 0.118 | 0.124 | 0.116 | 0.115 | 0.122 | 0.106 | 0.115 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.491 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | ≤ 1.0 | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | ± 0.1 | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 7.4 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 74 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-063E – 3-Stage Specifications with EVB-060

| Frame Size | 063E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Acceleration Torque | [Nm] | -- | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| No Load Torque | [Nm] | *1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.061 | 0.07 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 | 0.061 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.106 | 0.115 | 0.106 | 0.106 | 0.105 | 0.105 | 0.105 | 0.105 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.0 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.1 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| Maximum Axial Load | [N] | -- | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 | 1657 |
| Maximum Radial Load | [N] | -- | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 | 1359 |
| Maximum Tilting Moment Load | [Nm] | -- | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 |
| Efficiency | [%] | -- | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

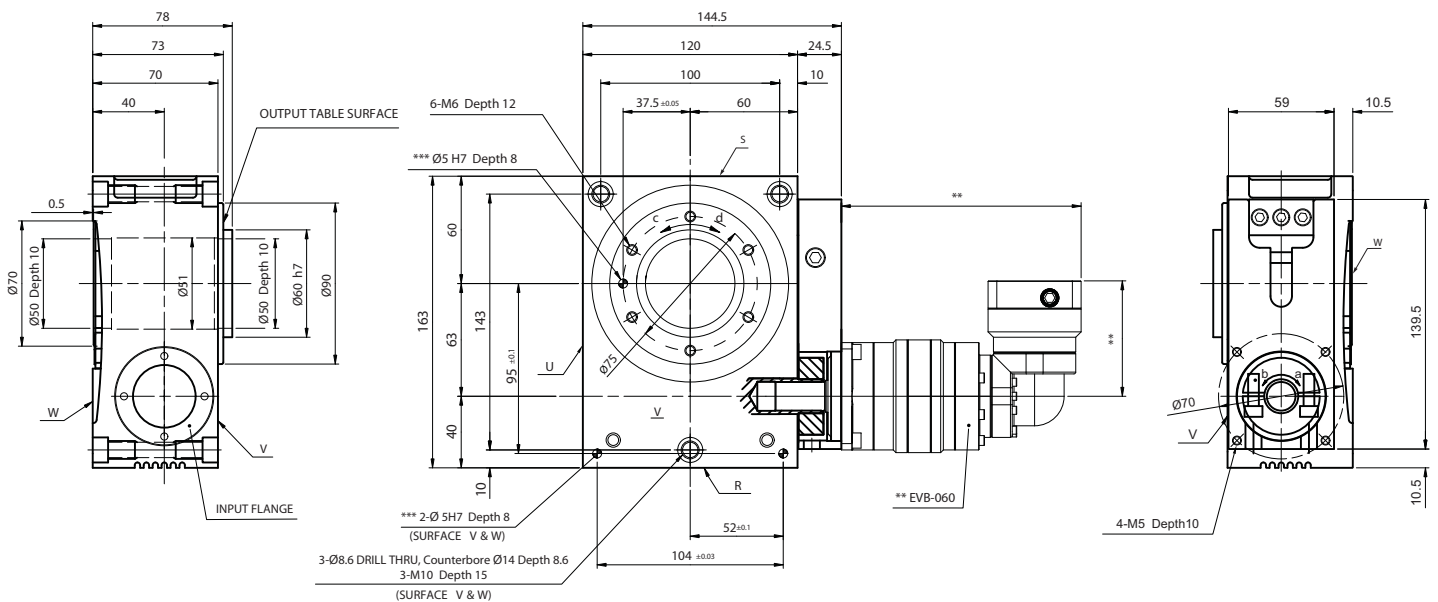
*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-063 Dimensions with EVB-060



NOTE:

** Refer to page 290, for EVB-060 dimensions

*** Optional

ROTATION:

a=d

a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STR

STR-o8oV – 1-Stage and 2-Stage Specifications with VRB-o6o

| Frame Size | 080V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 1.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 700 | 2100 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 2500 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 3.066 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.148 | 0.103 | 0.085 | 0.076 | 0.070 | 0.067 | 0.065 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.228 | 0.178 | 0.168 | 0.158 | 0.148 | 0.148 | 0.148 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.438 | 0.388 | 0.368 | 0.368 | 0.358 | 0.358 | 0.348 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 11.6 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 80 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o8oV – 2-Stage and 3-Stage Specifications with VRB-o6o

| Frame Size | 080V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.064 | 0.063 | 0.065 | 0.062 | 0.061 | 0.063 | 0.057 | 0.061 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.148 | 0.148 | 0.148 | 0.138 | 0.138 | 0.148 | 0.138 | 0.138 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.348 | 0.358 | 0.368 | 0.358 | 0.358 | 0.368 | 0.348 | 0.358 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 13.0 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 76 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

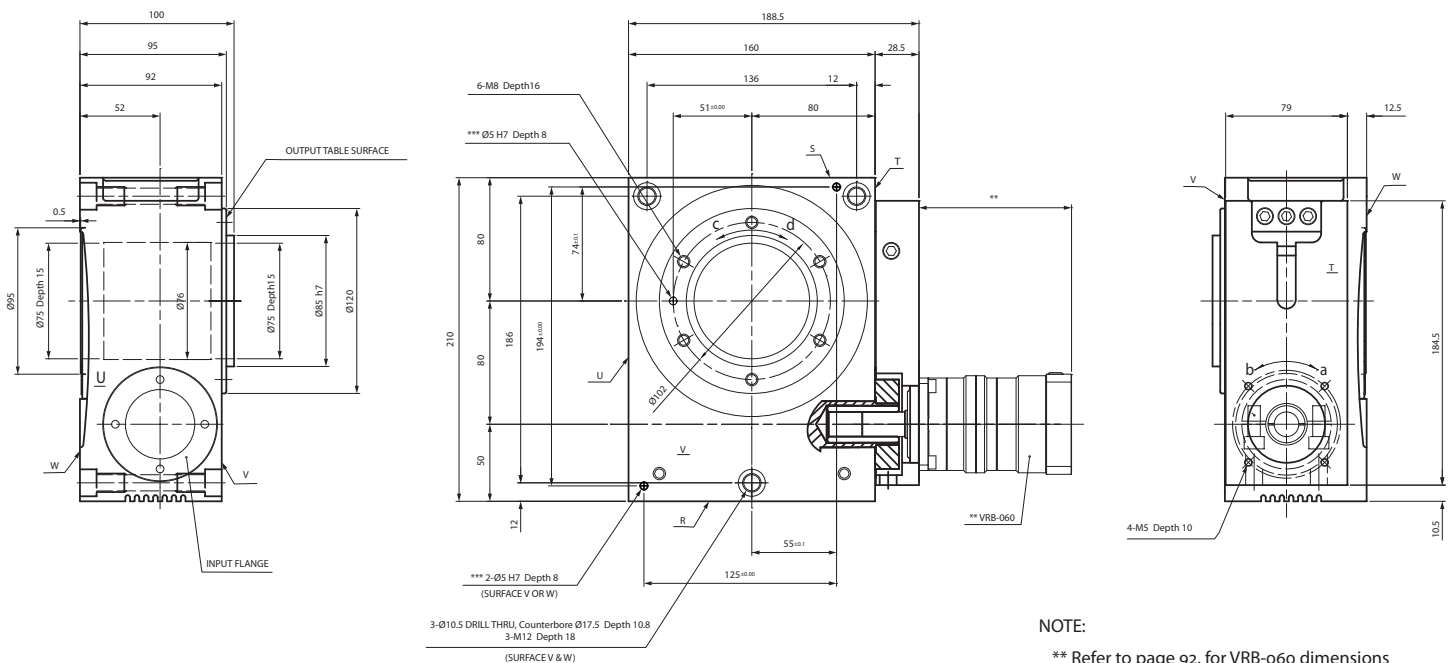
*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o8oV – 3-Stage Specifications with VRB-o6o

| Frame Size | 080V | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg·m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg·m ² ×10 ⁻⁴] | *3 | 0.057 | 0.061 | 0.057 | 0.057 | 0.057 | 0.057 | 0.057 | 0.057 |
| Reflected Inertia (≤Ø 14) | [kg·m ² ×10 ⁻⁴] | *3 | 0.138 | 0.138 | 0.138 | 0.138 | 0.138 | 0.138 | 0.138 | 0.138 |
| Reflected Inertia (≤Ø 19) | [kg·m ² ×10 ⁻⁴] | *3 | 0.348 | 0.358 | 0.348 | 0.348 | 0.348 | 0.348 | 0.348 | 0.348 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o8oV Dimensions with VRB-o6o



NOTE:

- ** Refer to page 92, for VRB-o6o dimensions
- *** Optional

ROTATION:

- a=d
- a=c (upon special request)

STR-o8oE – 1-Stage and 2-Stage Specifications with EVB-o6o

| Frame Size | 080E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 1.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Nominal Input Speed | [rpm] | *2 | 700 | 2100 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 2500 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 3.066 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.319 | 0.274 | 0.256 | 0.247 | 0.242 | 0.238 | 0.236 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.394 | 0.349 | 0.331 | 0.322 | 0.317 | 0.313 | 0.311 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.583 | 0.538 | 0.521 | 0.512 | 0.506 | 0.503 | 0.501 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 11.6 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 80 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o8oE – 2-Stage and 3-Stage Specifications with EVB-o6o

| Frame Size | 080E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.235 | 0.081 | 0.087 | 0.079 | 0.079 | 0.085 | 0.070 | 0.078 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.310 | 0.126 | 0.132 | 0.124 | 0.123 | 0.130 | 0.114 | 0.123 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.499 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 13.4 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 72 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

Sold & Serviced By:

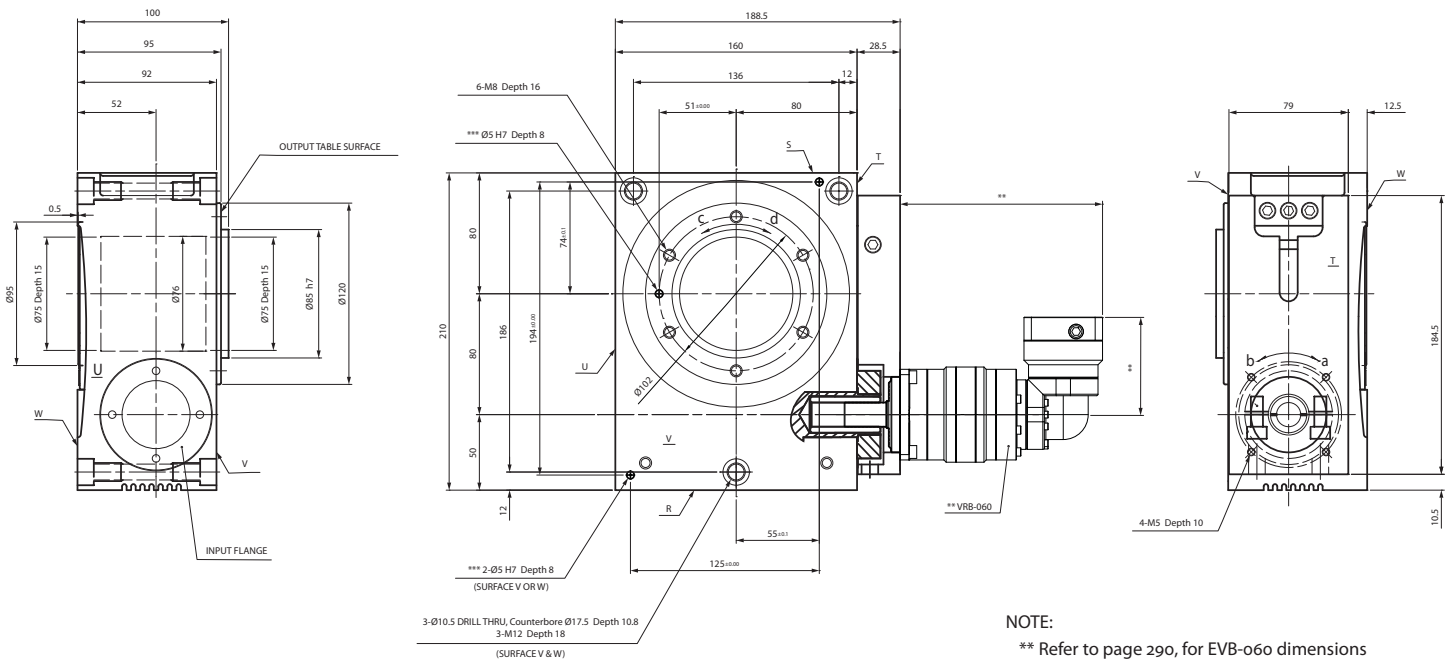

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-o8oE – 3-Stage Specifications with EVB-o6o

| Frame Size | 080E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 113 | 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| Acceleration Torque | [Nm] | -- | 202 | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| No Load Torque | [Nm] | *1 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg·m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg·m ² ×10 ⁻⁴] | *3 | 0.069 | 0.078 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 |
| Reflected Inertia (≤Ø 14) | [kg·m ² ×10 ⁻⁴] | *3 | 0.114 | 0.123 | 0.114 | 0.114 | 0.113 | 0.113 | 0.113 | 0.113 |
| Reflected Inertia (≤Ø 19) | [kg·m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| Maximum Axial Load | [N] | -- | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 | 3302 |
| Maximum Radial Load | [N] | -- | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 | 2819 |
| Maximum Tilting Moment Load | [Nm] | -- | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 |
| Efficiency | [%] | -- | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-o8oE Dimensions with EVB-o6o



ROTATION:
a=d
a=c (upon special request)

STR-100V – 1-Stage and 2-Stage Specifications with VRB-090

| Frame Size | 100V | | | | | | | | | |
|--------------------------------|--|-------|---------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 2.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nominal Input Speed | [rpm] | *2 | 600 | 1800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 2000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 8.687 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.742 | 0.512 | 0.422 | 0.382 | 0.342 | 0.332 | 0.312 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 1.222 | 0.972 | 0.882 | 0.842 | 0.812 | 0.792 | 0.782 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 3.222 | 3.022 | 2.922 | 2.822 | 2.822 | 2.822 | 2.822 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 21.5 | 25.2 | 25.2 | 25.2 | 25.2 | 25.2 | 25.2 | 25.2 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 82 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| Protection Class | IP54 (IP65) | | | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-100V – 2-Stage and 3-Stage Specifications with VRB-090

| Frame Size | 100V | | | | | | | | | |
|--------------------------------|--|-------|---------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.152 | 0.172 | 0.152 | 0.142 | 0.162 | 0.122 | 0.142 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.312 | 0.302 | 0.322 | 0.302 | 0.302 | 0.312 | 0.272 | 0.292 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.772 | 0.742 | 0.762 | 0.742 | 0.732 | 0.752 | 0.722 | 0.732 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 2.822 | 2.722 | 2.822 | 2.722 | 2.722 | 2.722 | 2.622 | 2.722 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 25.2 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 78 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | IP54 (IP65) | | | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

Sold & Serviced By:

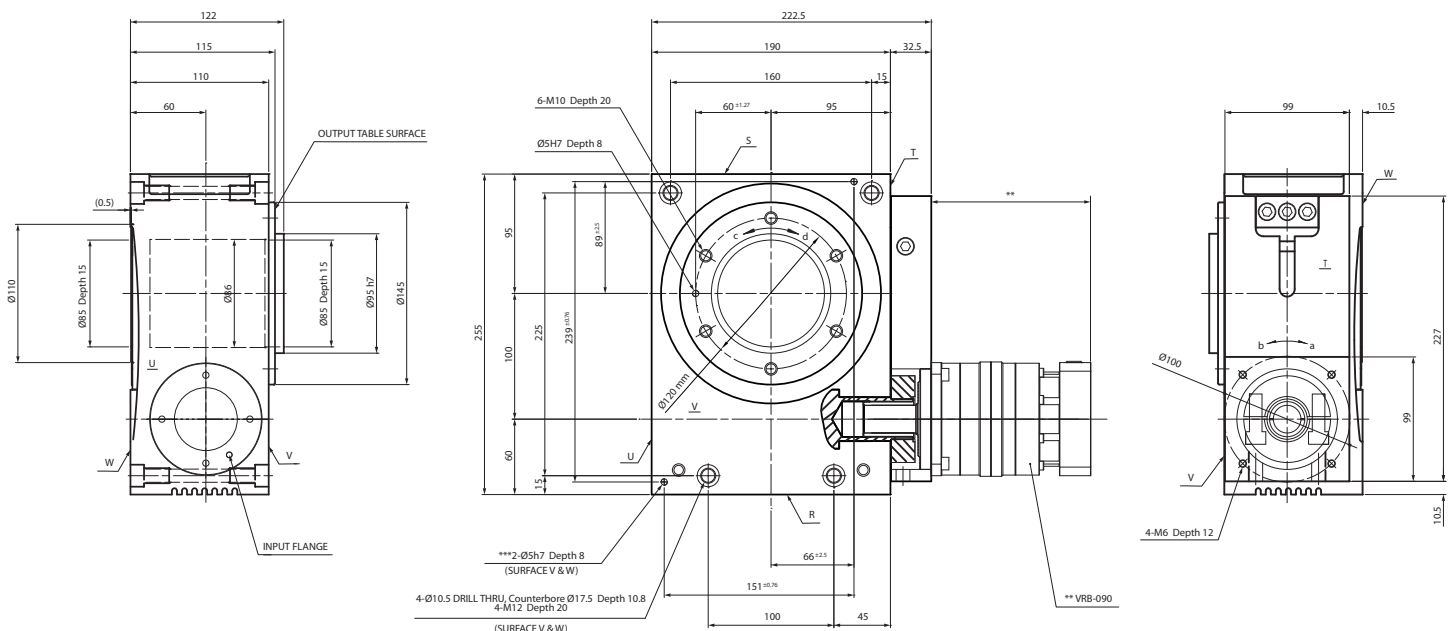

Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-100V – 1-Stage and 3-Stage Specifications with VRB-090

| Frame Size | 100V | | | | | | | | | |
|--------------------------------|--|-------|---------|-------|-------|-------|-------|-------|-------|-------|
| | | | 3-Stage | | | | | | | |
| Stage | | | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Ratio | Units | Notes | | | | | | | | |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² ×10 ⁻⁴] | *3 | 0.121 | 0.142 | 0.120 | 0.120 | 0.119 | 0.119 | 0.119 | 0.119 |
| Reflected Inertia (≤Ø 14) | [kg-m ² ×10 ⁻⁴] | *3 | 0.272 | 0.292 | 0.272 | 0.272 | 0.272 | 0.272 | 0.272 | 0.272 |
| Reflected Inertia (≤Ø 19) | [kg-m ² ×10 ⁻⁴] | *3 | 0.722 | 0.732 | 0.712 | 0.712 | 0.712 | 0.712 | 0.712 | 0.712 |
| Reflected Inertia (≤Ø 28) | [kg-m ² ×10 ⁻⁴] | *3 | 2.622 | 2.722 | 2.622 | 2.622 | 2.622 | 2.622 | 2.622 | 2.622 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | IP54 (IP65) | | | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-100 Dimensions with VRB-090



NOTE:

** Refer to page 98, for VRB-090 dimensions

*** Optional

ROTATION:

a=d

a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STR

STR-100E – 1-Stage and 2-Stage Specifications with EVB-090

| Frame Size | 100E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 2.6 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Nominal Input Speed | [rpm] | *2 | 600 | 1800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 2000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia | [kg-m ² x10 ⁻⁴] | *3 | 8.687 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 2.132 | 1.912 | 1.822 | 1.782 | 1.752 | 1.732 | 1.722 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 2.462 | 2.242 | 2.152 | 2.112 | 2.082 | 2.062 | 2.052 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 4.592 | 4.372 | 4.282 | 4.232 | 4.202 | 4.192 | 4.182 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 21.5 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 82 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-100E – 2-Stage and 3-Stage Specifications with EVB-090

| Frame Size | 100E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 1.3 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.362 | 0.402 | 0.352 | 0.342 | 0.392 | 0.272 | 0.342 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 1.712 | 0.432 | 0.482 | 0.422 | 0.422 | 0.472 | 0.352 | 0.422 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 2.042 | 0.622 | 0.672 | 0.612 | 0.612 | 0.662 | 0.532 | 0.612 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 4.172 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 26.6 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 74 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options



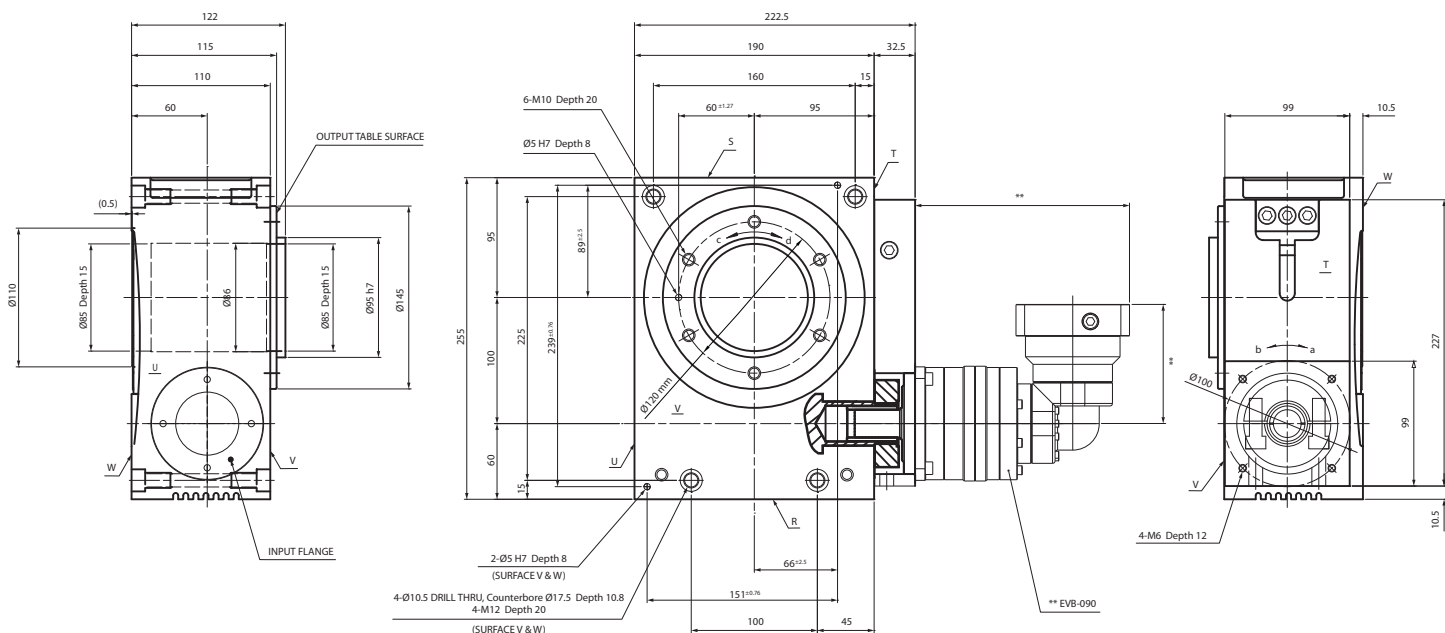
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-100E – 3-Stage Specifications with EVB-090

| Frame Size | 100E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| Acceleration Torque | [Nm] | -- | 565 | 565 | 565 | 565 | 565 | 565 | 565 | 565 |
| No Load Torque | [Nm] | *1 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | 0.272 | 0.342 | 0.272 | 0.272 | 0.272 | 0.272 | 0.272 | 0.272 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.342 | 0.412 | 0.342 | 0.342 | 0.342 | 0.342 | 0.342 | 0.342 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.532 | 0.602 | 0.532 | 0.532 | 0.532 | 0.532 | 0.532 | 0.532 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 |
| Maximum Axial Load | [N] | -- | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 | 3724 |
| Maximum Radial Load | [N] | -- | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 | 3109 |
| Maximum Tilting Moment Load | [Nm] | -- | 284 | 284 | 284 | 284 | 284 | 284 | 284 | 284 |
| Efficiency | [%] | -- | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-100 Dimensions with EVB-090



NOTE:
 ** Refer to page 296, for EVB-090 dimensions
 *** Optional

ROTATION:
 a=d
 a=c (upon special request)

Sold & Serviced By:
ELECTROMATE
 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR

STR-125V – 1-Stage and 2-Stage Specifications with VRB-090

| Frame Size | 125V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 3.8 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Nominal Input Speed | [rpm] | *2 | 600 | 1800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 1600 | 4800 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 14.85 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.757 | 0.527 | 0.437 | 0.397 | 0.357 | 0.347 | 0.327 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 1.237 | 0.987 | 0.897 | 0.857 | 0.827 | 0.807 | 0.797 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 3.237 | 3.037 | 2.937 | 2.837 | 2.837 | 2.837 | 2.837 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 36.3 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 80 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-125V – 2-Stage and 3-Stage Specifications with VRB-090

| Frame Size | 125V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.167 | 0.187 | 0.167 | 0.157 | 0.177 | 0.137 | 0.157 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.327 | 0.317 | 0.337 | 0.317 | 0.317 | 0.327 | 0.287 | 0.307 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.787 | 0.757 | 0.777 | 0.757 | 0.747 | 0.767 | 0.737 | 0.747 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 2.837 | 2.737 | 2.837 | 2.737 | 2.737 | 2.737 | 2.637 | 2.737 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 40.0 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 76 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options



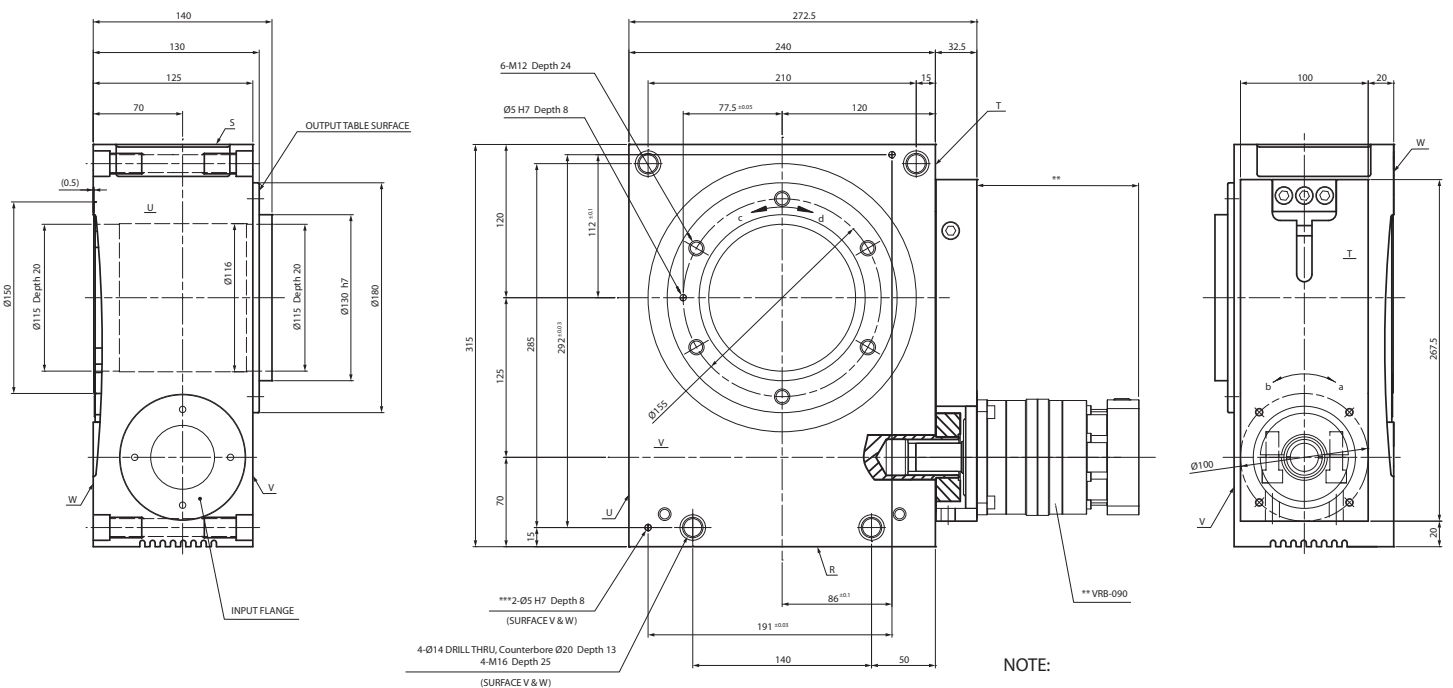
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-125V – 3-Stage Specifications with VRB-090

| Frame Size | 125V | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² ×10 ⁻⁴] | *3 | 0.136 | 0.157 | 0.135 | 0.135 | 0.134 | 0.134 | 0.134 | 0.134 |
| Reflected Inertia (≤Ø 14) | [kg-m ² ×10 ⁻⁴] | *3 | 0.287 | 0.307 | 0.287 | 0.287 | 0.287 | 0.287 | 0.287 | 0.287 |
| Reflected Inertia (≤Ø 19) | [kg-m ² ×10 ⁻⁴] | *3 | 0.737 | 0.747 | 0.727 | 0.727 | 0.727 | 0.727 | 0.727 | 0.727 |
| Reflected Inertia (≤Ø 28) | [kg-m ² ×10 ⁻⁴] | *3 | 2.637 | 2.737 | 2.637 | 2.637 | 2.637 | 2.637 | 2.637 | 2.637 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 | 40.5 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-125 Dimensions with VRB-090



NOTE:
 ** Refer to page 98, for VRB-090 dimensions
 *** Optional

ROTATION:
 a=d
 a=c (upon special request)

STR-125E – 1-Stage and 2-Stage Specifications with EVB-090

| Frame Size | 125E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 3.8 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Nominal Input Speed | [rpm] | *2 | 600 | 1800 | 2400 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 1600 | 4800 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 14.85 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 2.147 | 1.927 | 1.837 | 1.797 | 1.767 | 1.747 | 1.737 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 2.477 | 2.257 | 2.167 | 2.127 | 2.097 | 2.077 | 2.067 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 4.607 | 4.387 | 4.297 | 4.247 | 4.217 | 4.207 | 4.197 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 36.3 | 41.4 | 41.4 | 41.4 | 41.4 | 41.4 | 41.4 | 41.4 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 80 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-125E – 2-Stage and 3-Stage Specifications with EVB-090

| Frame Size | 125E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|-------|-------|-------|-------|-------|-------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 1.3 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.377 | 0.417 | 0.367 | 0.357 | 0.407 | 0.287 | 0.357 |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 1.727 | 0.447 | 0.497 | 0.437 | 0.437 | 0.487 | 0.367 | 0.437 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 2.057 | 0.637 | 0.687 | 0.627 | 0.627 | 0.677 | 0.547 | 0.627 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 4.187 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | ≤ 0.7 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | ± 0.08 | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 41.4 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 72 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

Sold & Serviced By: 

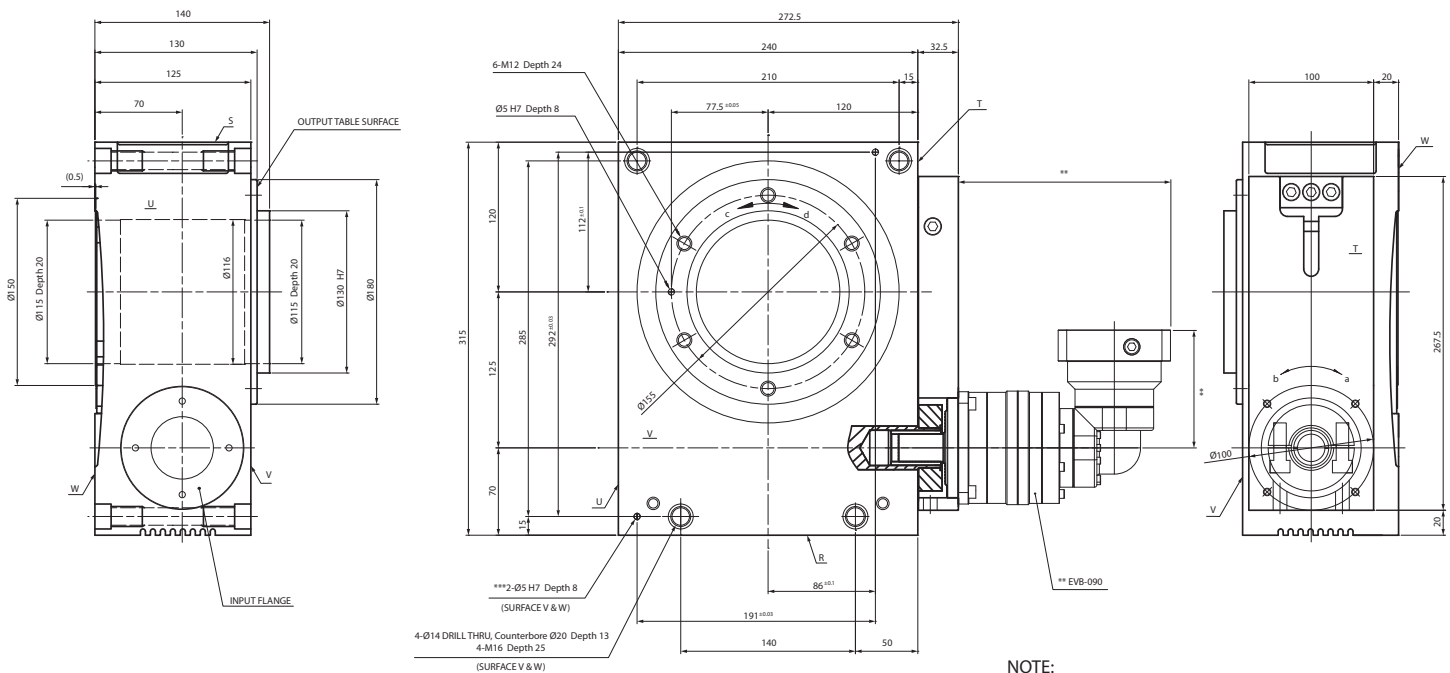
Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

STR-125E – 3-Stage Specifications with EVB-090

| Frame Size | 125E | | | | | | | | | |
|--------------------------------|--|-------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 548 | 548 | 548 | 548 | 548 | 548 | 548 | 548 |
| Acceleration Torque | [Nm] | -- | 939 | 939 | 939 | 939 | 939 | 939 | 939 | 939 |
| No Load Torque | [Nm] | *1 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 8) | [kg-m ² ×10 ⁻⁴] | *3 | 0.287 | 0.357 | 0.287 | 0.287 | 0.287 | 0.287 | 0.287 | 0.287 |
| Reflected Inertia (≤Ø 14) | [kg-m ² ×10 ⁻⁴] | *3 | 0.357 | 0.427 | 0.357 | 0.357 | 0.357 | 0.357 | 0.357 | 0.357 |
| Reflected Inertia (≤Ø 19) | [kg-m ² ×10 ⁻⁴] | *3 | 0.547 | 0.617 | 0.547 | 0.547 | 0.547 | 0.547 | 0.547 | 0.547 |
| Reflected Inertia (≤Ø 28) | [kg-m ² ×10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 0.7 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.08 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Weight | [kg] | -- | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 |
| Maximum Axial Load | [N] | -- | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 | 8178 |
| Maximum Radial Load | [N] | -- | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 | 7452 |
| Maximum Tilting Moment Load | [Nm] | -- | 764 | 764 | 764 | 764 | 764 | 764 | 764 | 764 |
| Efficiency | [%] | -- | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-125 Dimensions with EVB-090



NOTE:

** Refer to page 296, for EVB-090 dimensions

*** Optional

ROTATION:

a=d

a=c (upon special request)

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

STR

STR-160V – 1-Stage and 2-Stage Specifications with VRB-115

| Frame Size | 160V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 |
| Acceleration Torque | [Nm] | -- | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 |
| No Load Torque | [Nm] | *1 | 6.6 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| Nominal Input Speed | [rpm] | *2 | 500 | 1500 | 2000 | 2500 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 1000 | 3000 | 4000 | 5000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 46.99 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 3.417 | 2.117 | 1.717 | 1.417 | 1.217 | 1.117 | 1.097 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 5.417 | 4.217 | 3.717 | 3.417 | 3.317 | 3.217 | 3.117 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | -- | 13.12 | 12.12 | 11.12 | 11.12 | 11.12 | 11.12 | 11.12 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 126 | 134 | 134 | 134 | 134 | 134 | 134 | 134 |
| Maximum Axial Load | [N] | -- | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 |
| Maximum Radial Load | [N] | -- | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 |
| Maximum Tilting Moment Load | [Nm] | -- | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 |
| Efficiency | [%] | -- | 80 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-160V – 2-Stage and 3-Stage Specifications with VRB-115

| Frame Size | 160V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 |
| Acceleration Torque | [Nm] | -- | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 |
| No Load Torque | [Nm] | *1 | 1.1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 0.547 | 0.597 | 0.517 | 0.497 | 0.557 | 0.407 | 0.487 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 1.097 | 0.977 | 1.037 | 0.947 | 0.937 | 0.997 | 0.857 | 0.927 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 3.117 | 2.917 | 3.017 | 2.917 | 2.917 | 2.917 | 2.817 | 2.817 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 11.12 | 11.12 | 11.12 | 11.12 | 11.12 | 11.12 | 10.12 | 11.12 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 134 | 135 | 135 | 135 | 135 | 135 | 135 | 135 |
| Maximum Axial Load | [N] | -- | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 |
| Maximum Radial Load | [N] | -- | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 |
| Maximum Tilting Moment Load | [Nm] | -- | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 |
| Efficiency | [%] | -- | 76 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

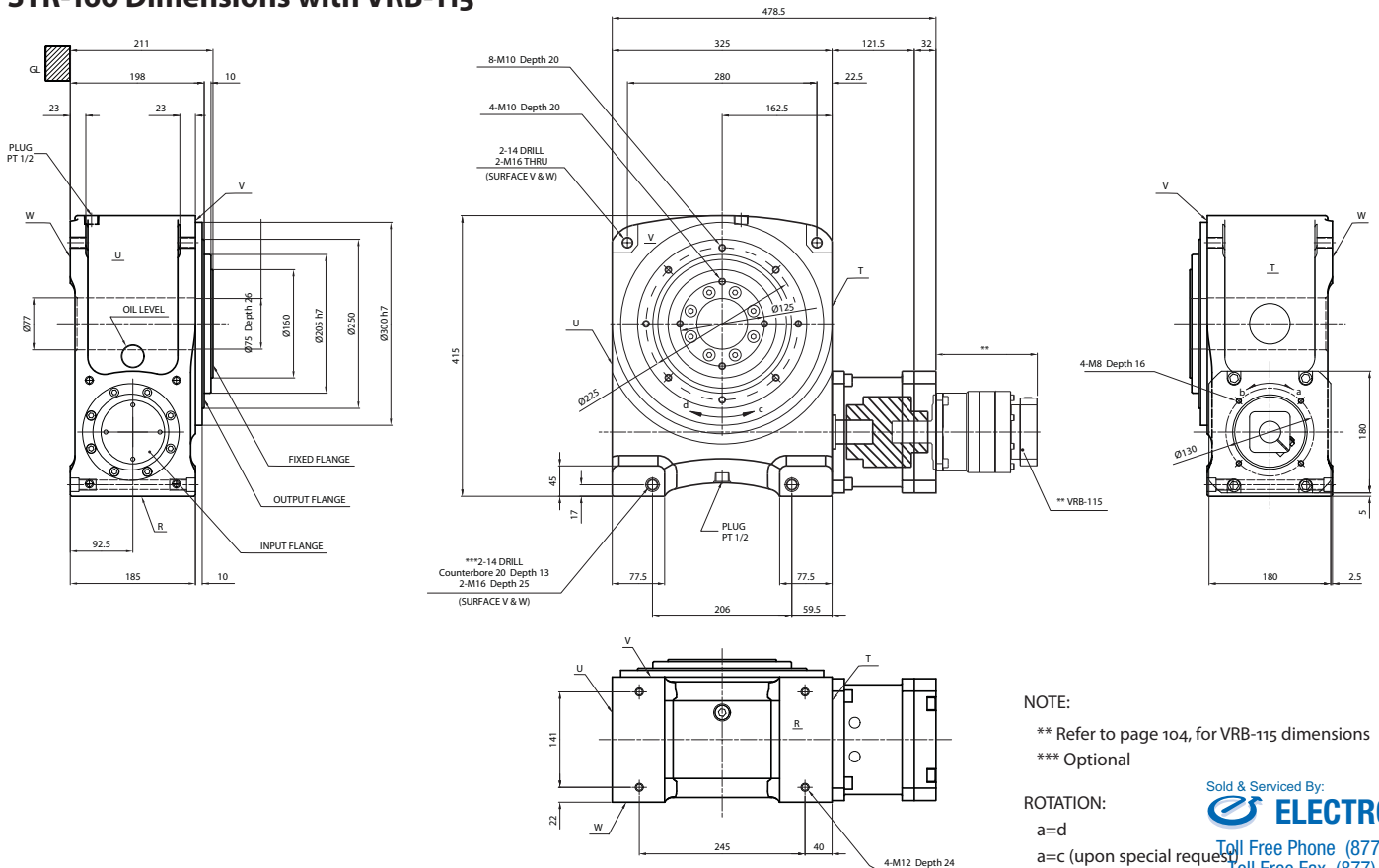
*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-160V – 3-Stage Specifications with VRB-115

| Frame Size | 160V | | | | | | | | | |
|--------------------------------|--|-------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 |
| Acceleration Torque | [Nm] | -- | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 |
| No Load Torque | [Nm] | *1 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | 0.397 | 0.487 | 0.397 | 0.397 | 0.397 | 0.397 | 0.387 | 0.387 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 0.847 | 0.917 | 0.847 | 0.847 | 0.847 | 0.847 | 0.847 | 0.847 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 2.817 | 2.817 | 2.817 | 2.817 | 2.817 | 2.817 | 2.817 | 2.817 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 10.12 | 11.12 | 10.12 | 10.12 | 10.12 | 10.12 | 10.12 | 10.12 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 |
| Maximum Axial Load | [N] | -- | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 |
| Maximum Radial Load | [N] | -- | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 |
| Maximum Tilting Moment Load | [Nm] | -- | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 |
| Efficiency | [%] | -- | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-160 Dimensions with VRB-115



NOTE:
 ** Refer to page 104, for VRB-115 dimensions
 *** Optional

ROTATION:
 a=d
 a=c (upon special request)

Sold & Serviced By:
ELECTROMATE
 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
 www.electromate.com
 sales@electromate.com

STR

STR-160E – 1-Stage and 2-Stage Specifications with EVB-115

| Frame Size | 160E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 |
| Acceleration Torque | [Nm] | -- | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 |
| No Load Torque | [Nm] | *1 | 6.6 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Nominal Input Speed | [rpm] | *2 | 500 | 1500 | 2000 | 2500 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 1000 | 3000 | 4000 | 5000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 46.99 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 6.857 | 5.607 | 5.137 | 4.887 | 4.767 | 4.667 | 4.607 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 8.457 | 7.197 | 6.727 | 6.477 | 6.357 | 6.257 | 6.197 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | -- | 15.53 | 14.27 | 13.81 | 13.55 | 13.43 | 13.34 | 13.28 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 126 | 137 | 137 | 137 | 137 | 137 | 137 | 137 |
| Maximum Axial Load | [N] | -- | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 |
| Maximum Radial Load | [N] | -- | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 |
| Maximum Tilting Moment Load | [Nm] | -- | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 |
| Efficiency | [%] | -- | 80 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-160E – 2-Stage and 3-Stage Specifications with EVB-115

| Frame Size | 160E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 | 1165 |
| Acceleration Torque | [Nm] | -- | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 |
| No Load Torque | [Nm] | *1 | 2.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Nominal Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Maximum Input Speed | [rpm] | *2 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 2.367 | 2.577 | 2.317 | 2.297 | 2.517 | 1.987 | 2.277 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 4.577 | 2.697 | 2.907 | 2.647 | 2.627 | 2.847 | 2.317 | 2.607 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 6.167 | 4.817 | 5.027 | 4.767 | 4.757 | 4.977 | 4.447 | 4.737 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 13.24 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 137 | 136 | 136 | 136 | 136 | 136 | 136 | 136 |
| Maximum Axial Load | [N] | -- | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 | 17170 |
| Maximum Radial Load | [N] | -- | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 | 7283 |
| Maximum Tilting Moment Load | [Nm] | -- | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 | 1216.3 |
| Efficiency | [%] | -- | 72 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-250V – 1-Stage and 2-Stage Specifications with VRB-180

| Frame Size | 250V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 |
| Acceleration Torque | [Nm] | -- | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 |
| No Load Torque | [Nm] | *1 | 14.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Nominal Input Speed | [rpm] | *2 | 400 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Maximum Input Speed | [rpm] | *2 | 800 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 430.0 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | -- | 45.08 | 29.08 | 23.08 | 19.08 | 17.08 | 16.08 | 15.08 |
| Reflected Inertia (≤Ø 48) | [kg-m ² x10 ⁻⁴] | *3 | -- | 67.08 | 51.08 | 45.08 | 42.08 | 39.08 | 38.08 | 37.08 |
| Reflected Inertia (≤Ø 65) | [kg-m ² x10 ⁻⁴] | *3 | -- | 131.1 | 111.1 | 101.1 | 101.1 | 100.1 | 98.08 | 98.08 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 383 | 419 | 419 | 419 | 419 | 419 | 419 | 419 |
| Maximum Axial Load | [N] | -- | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 |
| Maximum Radial Load | [N] | -- | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 |
| Maximum Tilting Moment Load | [Nm] | -- | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 |
| Efficiency | [%] | -- | 80 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-250V – 2-Stage and 3-Stage Specifications with VRB-180

| Frame Size | 250V | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 |
| Acceleration Torque | [Nm] | -- | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 |
| No Load Torque | [Nm] | *1 | 2.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Nominal Input Speed | [rpm] | *2 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 5.775 | 6.475 | 5.475 | 5.275 | 5.975 | 4.275 | 5.175 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 15.08 | 13.08 | 14.08 | 13.08 | 13.08 | 14.08 | 12.08 | 13.08 |
| Reflected Inertia (≤Ø 48) | [kg-m ² x10 ⁻⁴] | *3 | 37.08 | 35.08 | 36.08 | 35.08 | 35.08 | 36.08 | 34.08 | 35.08 |
| Reflected Inertia (≤Ø 65) | [kg-m ² x10 ⁻⁴] | *3 | 97.08 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 419 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| Maximum Axial Load | [N] | -- | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 |
| Maximum Radial Load | [N] | -- | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 |
| Maximum Tilting Moment Load | [Nm] | -- | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 |
| Efficiency | [%] | -- | 76 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

Sold & Serviced By:

 ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

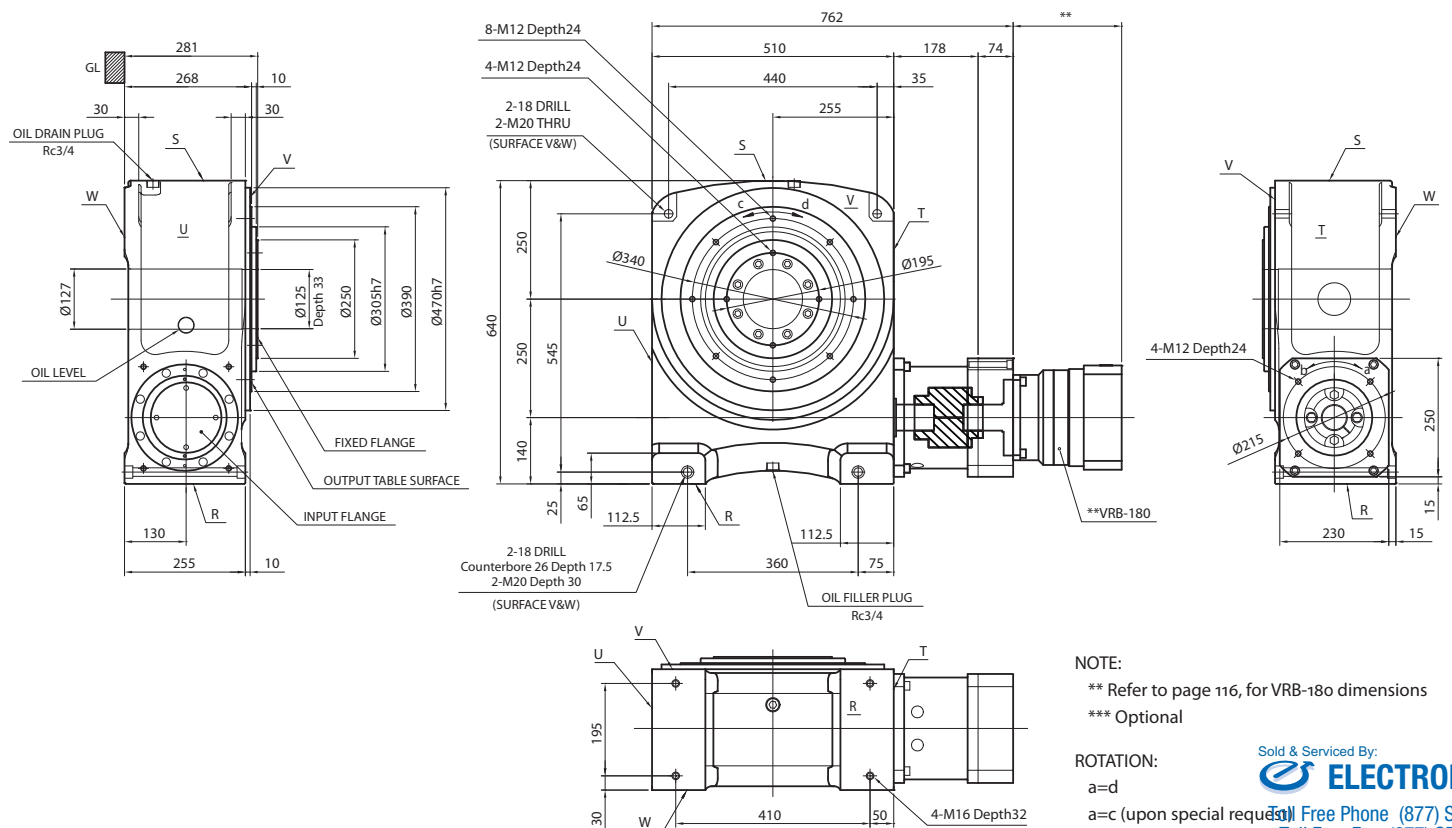
sales@electromate.com

STR-250V – 3-Stage Specifications with VRB-180

| Frame Size | 250V | | | | | | | | | |
|--------------------------------|--|-------|-------------|--------|--------|--------|--------|--------|--------|--------|
| Stage | 3-Stage | | | | | | | | | |
| Ratio | Units | Notes | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| Nominal Torque | [Nm] | *1 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 |
| Acceleration Torque | [Nm] | -- | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 |
| No Load Torque | [Nm] | *1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Nominal Input Speed | [rpm] | *2 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 4.275 | 5.075 | 4.175 | 4.175 | 4.175 | 4.175 | 4.175 | 4.175 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 12.08 | 13.08 | 12.08 | 12.08 | 12.08 | 12.08 | 12.08 | 12.08 |
| Reflected Inertia (≤Ø 48) | [kg-m ² x10 ⁻⁴] | *3 | 34.08 | 35.08 | 34.08 | 34.08 | 34.08 | 34.08 | 34.08 | 34.08 |
| Reflected Inertia (≤Ø 65) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| Maximum Axial Load | [N] | -- | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 |
| Maximum Radial Load | [N] | -- | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 |
| Maximum Tilting Moment Load | [Nm] | -- | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 |
| Efficiency | [%] | -- | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

- *1) At nominal input speed
- *2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- *3) At input shaft
- *4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-250 Dimensions with VRB-180



NOTE:
 ** Refer to page 116, for VRB-180 dimensions
 *** Optional

ROTATION:
 a=d
 a=c (upon special request)

Sold & Serviced By:
ELECTROMATE
 Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
 www.electromate.com
 sales@electromate.com

STR

STR-250E – 1-Stage and 2-Stage Specifications with EVB-180

| Frame Size | 250E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|---------|---------|---------|---------|---------|---------|
| Stage | | | 1-Stage | 2-Stage | | | | | | |
| Ratio | Units | Notes | 20 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| Nominal Torque | [Nm] | *1 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 |
| Acceleration Torque | [Nm] | -- | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 |
| No Load Torque | [Nm] | *1 | 14.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Nominal Input Speed | [rpm] | *2 | 400 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Maximum Input Speed | [rpm] | *2 | 800 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | 430.041 | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | -- | 94.785 | 78.795 | 72.965 | 69.815 | 67.505 | 66.345 | 65.675 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | -- | 129.675 | 113.675 | 107.875 | 104.675 | 102.375 | 101.175 | 100.535 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | -- | 215.275 | 199.275 | 193.475 | 190.275 | 187.975 | 186.775 | 186.175 |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 383 | 432 | 432 | 432 | 432 | 432 | 432 | 432 |
| Maximum Axial Load | [N] | -- | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 |
| Maximum Radial Load | [N] | -- | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 |
| Maximum Tilting Moment Load | [Nm] | -- | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 |
| Efficiency | [%] | -- | 80 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

*3) At input shaft

*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

STR-250E – 2-Stage and 3-Stage Specifications with EVB-180

| Frame Size | 250E | | | | | | | | | |
|--------------------------------|--|-------|-------------|---------|--------|--------|--------|--------|--------|--------|
| Stage | | | 2-Stage | 3-Stage | | | | | | |
| Ratio | Units | Notes | 200 | 300 | 320 | 400 | 500 | 560 | 600 | 700 |
| Nominal Torque | [Nm] | *1 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 | 4006 |
| Acceleration Torque | [Nm] | -- | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 | 6072 |
| No Load Torque | [Nm] | *1 | 11.5 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| Nominal Input Speed | [rpm] | *2 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Maximum Input Speed | [rpm] | *2 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Reflected Inertia (Single) | [kg-m ² x10 ⁻⁴] | *3 | -- | -- | -- | -- | -- | -- | -- | -- |
| Reflected Inertia (≤Ø 14) | [kg-m ² x10 ⁻⁴] | *3 | -- | 12.565 | 13.165 | 12.225 | 12.055 | 12.665 | 11.405 | 11.905 |
| Reflected Inertia (≤Ø 19) | [kg-m ² x10 ⁻⁴] | *3 | 65.355 | 21.355 | 21.955 | 21.015 | 20.845 | 21.455 | 20.185 | 20.695 |
| Reflected Inertia (≤Ø 28) | [kg-m ² x10 ⁻⁴] | *3 | 100.215 | 26.175 | 26.775 | 25.835 | 25.665 | 26.275 | 25.015 | 25.515 |
| Reflected Inertia (≤Ø 38) | [kg-m ² x10 ⁻⁴] | *3 | 185.775 | -- | -- | -- | -- | -- | -- | -- |
| Backlash | [arc-min] | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angular Transmission Accuracy | [arc-min] | -- | ≤ 1.5 | ≤ 1.5 | | | | | | |
| Angular Repeatability Accuracy | [arc-min] | -- | ± 0.15 | ± 0.15 | | | | | | |
| Surface Runout | [µm (max)] | -- | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Weight | [kg] | -- | 432 | 419 | 419 | 419 | 419 | 419 | 419 | 419 |
| Maximum Axial Load | [N] | -- | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 | 38051 |
| Maximum Radial Load | [N] | -- | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 | 11165 |
| Maximum Tilting Moment Load | [Nm] | -- | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 | 2478.6 |
| Efficiency | [%] | -- | 72 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| Protection Class | -- | *4 | IP54 (IP65) | | | | | | | |

*1) At nominal input speed

*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

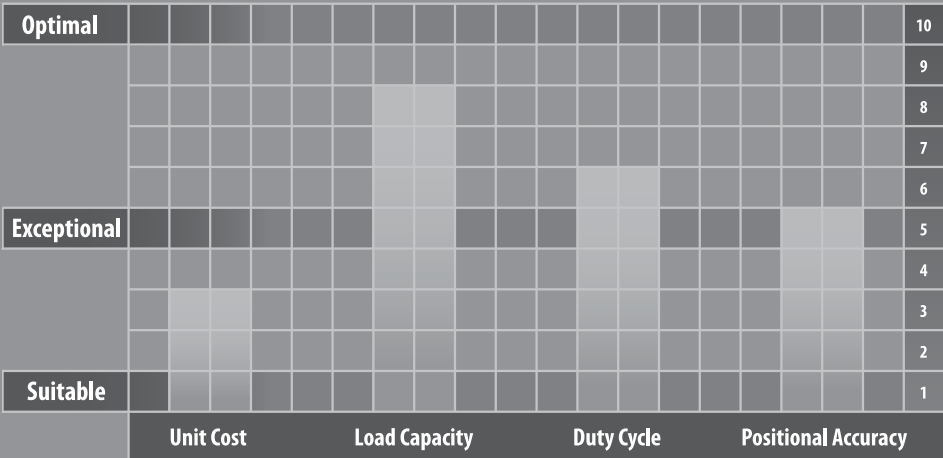
*3) At input shaft

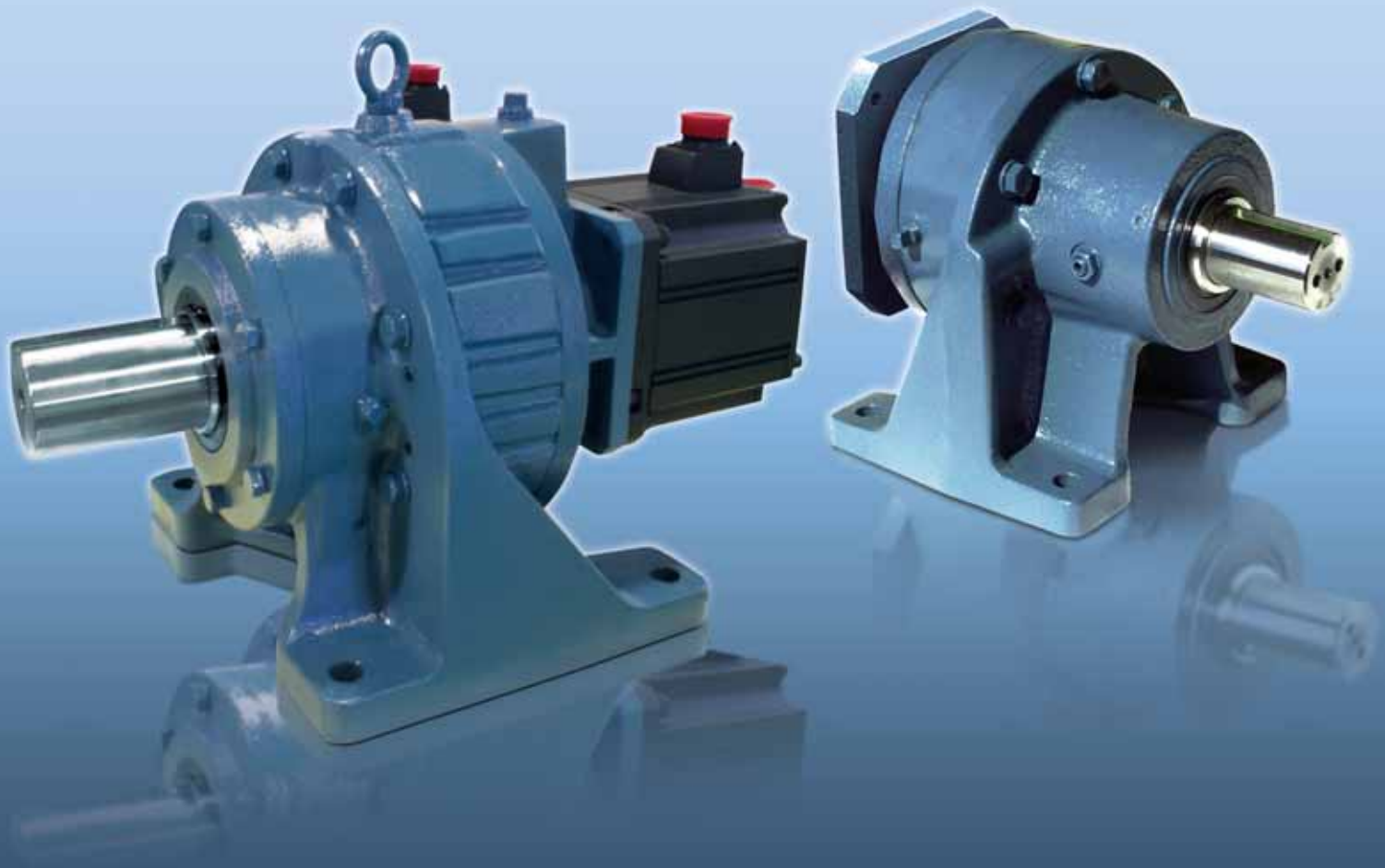
*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

ER-SERIES

High reduction ratios, without sacrificing efficiency. Compact designs, without requiring special motors. Exceptional shock load capacity, without having to oversize. Greater overhung load capacities, without using expensive special components. The (Servo ER) Circulute is ideal for those applications in heavier industrial environments where a more robust cycloidal gearbox is necessary.

The dual pin-housing of the cycloidal provides the ability to pre-load one wheel against the other reducing the output shaft backlash to less than 6 arc-min. The long output shaft bearing span provides exceptional overhung load capabilities. At 3,000 rpm input the (Servo ER) Circulute can handle motors up to 12 kW and single reduction ratios ranging from 11:1 to 71:1.





ER-SERIES

- High efficiency cycloidal reducer design
- Multiple inputs: NEMA C-Face, Servo Square Flange, Shaft Input, Shovel Base, Top Mount
- Straddle mount output shaft bearings (sizes D, E, F)
- Multiple mounting options: Base, flange, ring
- Readily available
- Assembled in the USA

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

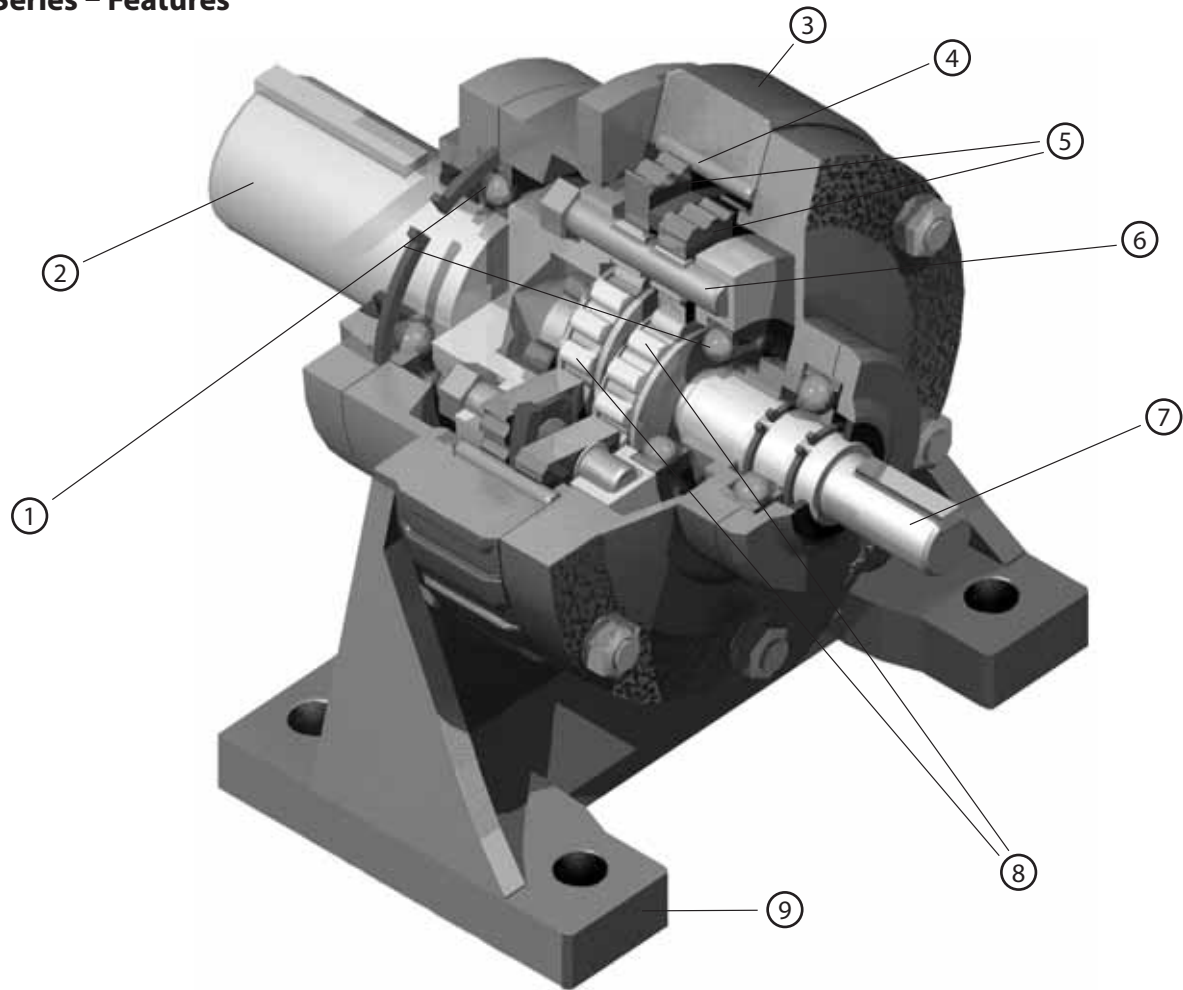
Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

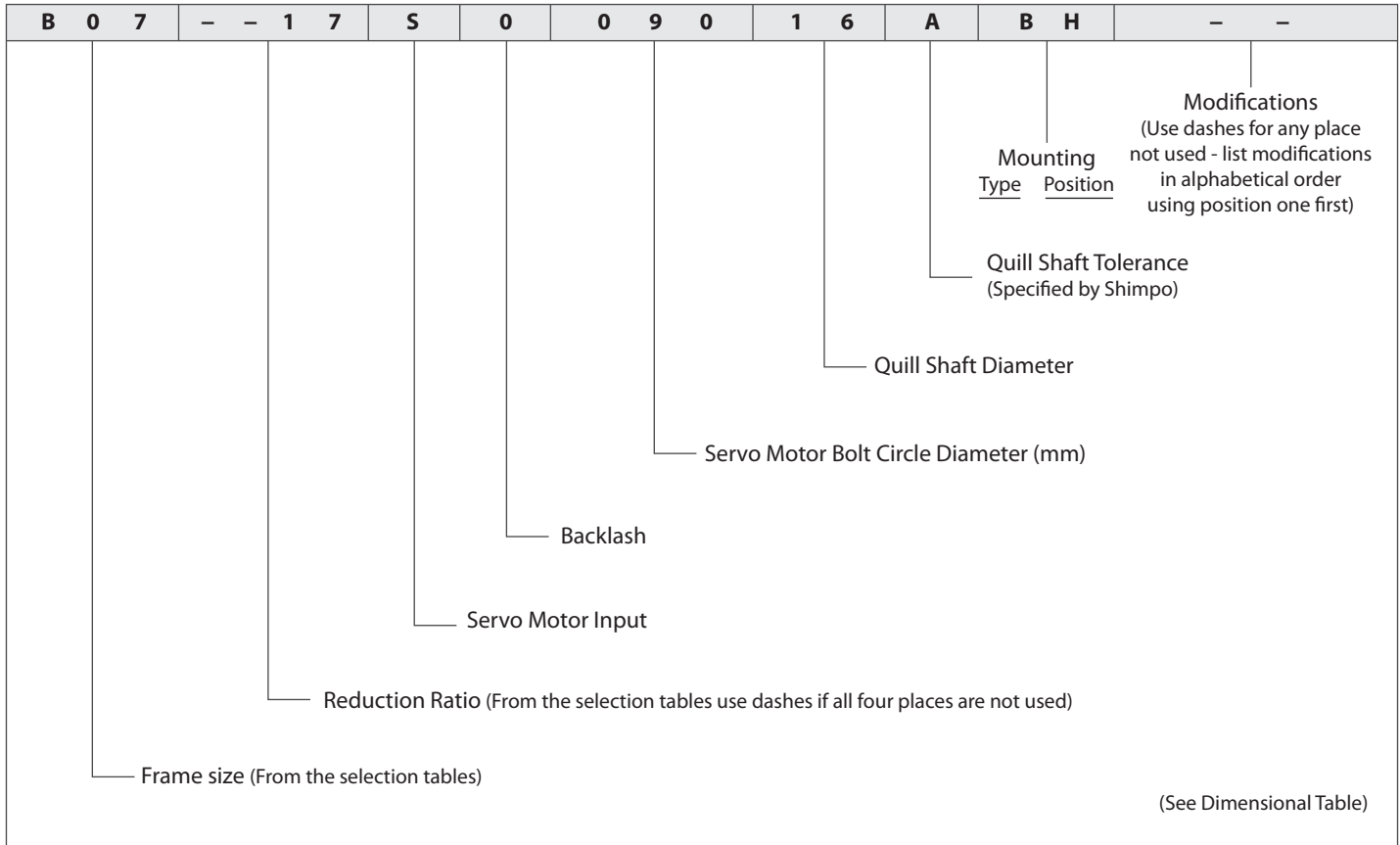
ER-SERIES Circulute 3000 cycloidal reducer

ER-Series – Features



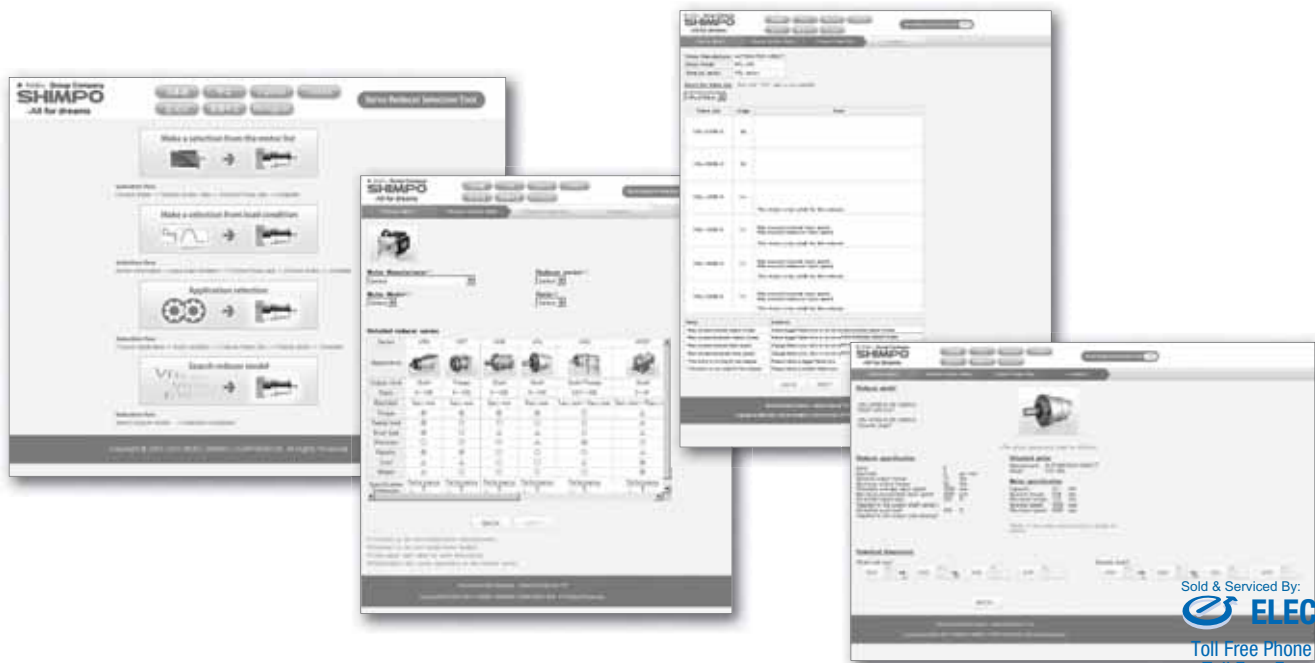
- ① Output shaft bearings
- ② Output shaft
- ③ Internal pin housing
- ④ Internal pin
- ⑤ Wheels
- ⑥ Carrier pins
- ⑦ Input shaft
- ⑧ Eccentric roller bearings
- ⑨ Various mounting options

ER-Series – Model Code



Backlash

- *1) Standard Backlash: Approximately 60 arc-min - 0
- *2) Precision Backlash: Less than 6 arc-min - P



Rating Table - 3000 rpm Input, Single Reduction, Precision Backlash (less than 6 arc-min)

| Frame Size | Ratio | Units | Notes | 11 | 17 | 29 | 35 | 47 | 59 | 71 |
|------------|---------------------------|-----------------------|-------|--------|--------|--------|--------|--------|--------|--------|
| B03 | Input | [kW] | -- | 1.430 | 1.160 | 0.710 | 0.560 | 0.390 | 0.320 | 0.250 |
| | Nominal Output Torque | [Nm] | *1 | 45.000 | 56.300 | 59.200 | 56.600 | 52.800 | 54.000 | 51.400 |
| | Emergency Stopping Torque | [Nm] | *2 | 112 | 141 | 148 | 141 | 132 | 135 | 128 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 3.000 | 4.700 | 5.000 | 5.400 | 5.400 | 5.400 | 5.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 0.716 | 0.969 | 0.927 | 0.927 | 0.927 | 0.927 | 0.927 |
| B07 | Input | [kW] | -- | 1.900 | 1.540 | 0.950 | 0.750 | 0.520 | 0.430 | 0.340 |
| | Nominal Output Torque | [Nm] | *1 | 60.000 | 75.000 | 78.900 | 75.400 | 78.200 | 79.900 | 76.100 |
| | Emergency Stopping Torque | [Nm] | *2 | 150 | 188 | 197 | 189 | 196 | 200 | 190 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 3.000 | 4.700 | 5.000 | 5.400 | 5.400 | 5.400 | 5.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 0.716 | 0.969 | 0.927 | 0.927 | 0.927 | 0.927 | 0.927 |
| C03 | Input | [kW] | -- | 2.910 | 2.690 | 1.690 | 1.550 | 1.080 | 0.860 | 0.710 |
| | Nominal Output Torque | [Nm] | *1 | 91.700 | 131 | 140 | 155 | 145 | 145 | 144 |
| | Emergency Stopping Torque | [Nm] | *2 | 229 | 328 | 350 | 388 | 362 | 362 | 361 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 6.200 | 11.200 | 11.900 | 12.600 | 12.600 | 12.600 | 12.600 |
| | Moment of Inertia | [kg-cm ²] | -- | 3.118 | 3.412 | 4.171 | 4.129 | 4.086 | 4.086 | 4.086 |
| C07 | Input | [kW] | -- | 3.880 | 3.590 | 2.250 | 2.060 | 1.430 | 1.140 | 0.950 |
| | Nominal Output Torque | [Nm] | *1 | 122 | 175 | 187 | 207 | 214 | 214 | 214 |
| | Emergency Stopping Torque | [Nm] | *2 | 306 | 437 | 467 | 517 | 536 | 536 | 535 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 6.200 | 11.200 | 11.900 | 12.600 | 12.600 | 12.600 | 12.600 |
| | Moment of Inertia | [kg-cm ²] | -- | 3.118 | 3.412 | 4.171 | 4.129 | 4.086 | 4.086 | 4.086 |
| D03 | Input | [kW] | -- | 6.830 | 5.380 | 3.400 | 3.010 | 2.240 | 1.720 | 1.360 |
| | Nominal Output Torque | [Nm] | *1 | 215 | 262 | 282 | 302 | 302 | 290 | 277 |
| | Emergency Stopping Torque | [Nm] | *2 | 538 | 654 | 705 | 754 | 754 | 725 | 693 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 17.800 | 23.000 | 25.200 | 27.400 | 27.400 | 27.400 | 27.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 7.752 | 10.996 | 12.007 | 11.754 | 11.754 | 11.754 | 11.501 |
| D07 | Input | [kW] | -- | 9.110 | 7.170 | 4.530 | 4.010 | 2.990 | 2.290 | 1.820 |
| | Nominal Output Torque | [Nm] | *1 | 287 | 349 | 376 | 402 | 447 | 430 | 411 |
| | Emergency Stopping Torque | [Nm] | *2 | 718 | 872 | 940 | 1,010 | 1,120 | 1,070 | 1,030 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 17.800 | 23.000 | 25.200 | 27.400 | 27.400 | 27.400 | 27.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 7.752 | 10.996 | 12.007 | 11.754 | 11.754 | 11.754 | 11.501 |

*1) The reducer can continuously sustain this torque value without overheating

*2) The reducer can sustain this torque value for 1000 cycles without failure

*3) Acceleration torque is 1.5 times the nominal output torque

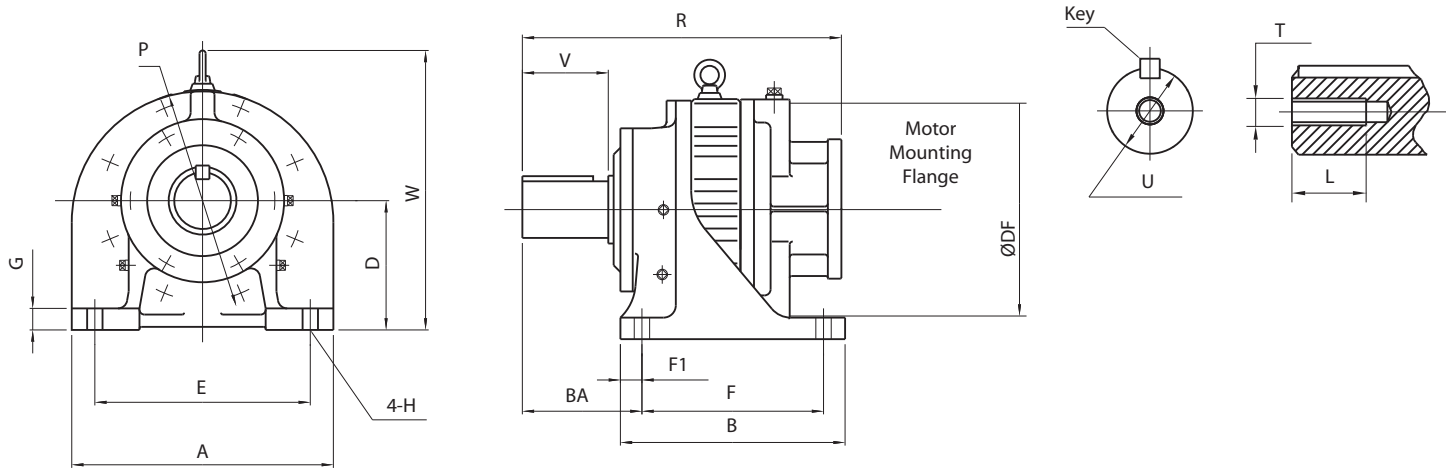
Rating Table - 2000 rpm Input, Single Reduction, Precision Backlash (less than 6 arc-min)

| Frame Size | Ratio | Units | Notes | 11 | 17 | 29 | 35 | 47 | 59 | 71 |
|------------|---------------------------|-----------------------|-------|---------|---------|---------|---------|---------|---------|---------|
| E03 | Input | [kW] | -- | 13.100 | 11.600 | 9.710 | 8.050 | 5.390 | 4.430 | 3.420 |
| | Nominal Output Torque | [Nm] | *1 | 618 | 849 | 1,210 | 1,210 | 1,090 | 1,120 | 1,040 |
| | Emergency Stopping Torque | [Nm] | *2 | 1,540 | 2,120 | 3,030 | 3,030 | 2,730 | 2,800 | 2,600 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 54.800 | 70.400 | 85.200 | 85.200 | 85.200 | 85.200 | 85.200 |
| | Moment of Inertia | [kg-cm ²] | -- | 31.512 | 52.661 | 49.291 | 48.869 | 48.448 | 48.448 | 48.027 |
| E07 | Input | [kW] | -- | 17.400 | 15.500 | 13.000 | 10.700 | 7.190 | 5.910 | 4.570 |
| | Nominal Output Torque | [Nm] | *1 | 824 | 1,130 | 1,610 | 1,610 | 1,450 | 1,500 | 1,390 |
| | Emergency Stopping Torque | [Nm] | *2 | 2,060 | 2,660 | 3,520 | 3,520 | 3,520 | 3,520 | 3,480 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 54.800 | 70.400 | 85.200 | 85.200 | 85.200 | 85.200 | 85.200 |
| | Moment of Inertia | [kg-cm ²] | -- | 31.512 | 52.661 | 49.291 | 48.869 | 48.448 | 48.448 | 48.027 |
| F03 | Input | [kW] | -- | 20.200 | 19.900 | 17.000 | 14.800 | 10.800 | 8.170 | 6.790 |
| | Nominal Output Torque | [Nm] | *1 | 953 | 1,450 | 2,120 | 2,230 | 2,180 | 2,070 | 2,070 |
| | Emergency Stopping Torque | [Nm] | *2 | 2,380 | 3,630 | 5,300 | 5,580 | 5,450 | 5,180 | 5,180 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 116.700 | 122.300 | 133.400 | 133.400 | 133.400 | 133.400 | 133.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 87.628 | 74.989 | 130.178 | 127.650 | 127.650 | 127.650 | 125.122 |
| F07 | Input | [kW] | -- | 26.900 | 26.500 | 22.600 | 19.800 | 14.400 | 10.900 | 9.060 |
| | Nominal Output Torque | [Nm] | *1 | 1,270 | 1,940 | 2,820 | 2,970 | 2,900 | 2,760 | 2,760 |
| | Emergency Stopping Torque | [Nm] | *2 | 3,180 | 4,850 | 7,050 | 7,350 | 7,350 | 6,900 | 6,900 |
| | Torsional Rigidity | [Nm/arc-min] | -- | 116.700 | 122.300 | 133.400 | 133.400 | 133.400 | 133.400 | 133.400 |
| | Moment of Inertia | [kg-cm ²] | -- | 87.628 | 74.989 | 130.178 | 127.650 | 127.650 | 127.650 | 125.122 |

- *1) The reducer can continuously sustain this torque value without overheating
- *2) The reducer can sustain this torque value for 1000 cycles without failure
- *3) Acceleration torque is 1.5 times the nominal output torque

ER-SERIES Circulute 3000 cycloidal reducer

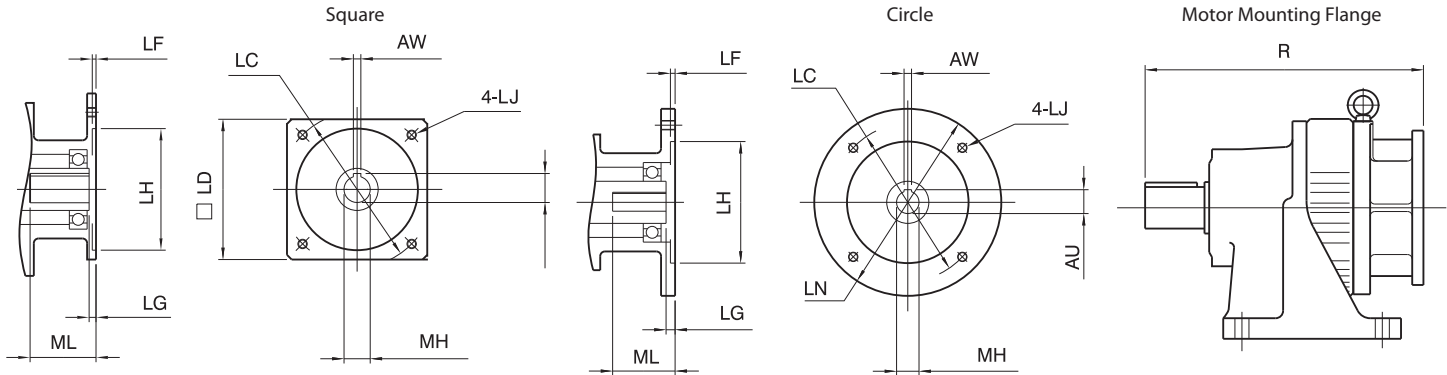
ER Common Dimensions – Single Stage Base Mount



| Frame Size | Units | A | B | BA | D | DF | E | F | F1 | G | H | P |
|-------------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|
| A03 - A07 | [mm] | 175.01 | 119.89 | 65.28 | 89.99 | N/A | 145.03 | 89.92 | 14.99 | 16.00 | 11.94 | 147.07 |
| A190 - A195 | [mm] | 180.09 | 134.87 | 59.94 | 100.00 | N/A | 150.11 | 89.92 | 14.99 | 11.94 | 10.92 | 147.07 |
| B01 - B07 | [mm] | 175.01 | 150.11 | 85.85 | 115.01 | N/A | 145.03 | 119.89 | 14.99 | 16.00 | 11.94 | 150.11 |
| B195 - B105 | [mm] | 180.09 | 134.87 | 59.94 | 100.00 | N/A | 150.11 | 89.92 | 14.99 | 11.94 | 10.92 | 150.11 |
| B20H | [mm] | 180.09 | 134.87 | 59.94 | 119.99 | N/A | 150.11 | 89.92 | 14.99 | 11.94 | 10.92 | 150.11 |
| C01 - C07 | [mm] | 219.96 | 189.99 | 103.38 | 140.00 | N/A | 180.09 | 150.11 | 20.07 | 22.10 | 14.99 | 189.99 |
| C110 - C115 | [mm] | 230.12 | 154.94 | 82.04 | 119.99 | N/A | 189.99 | 115.06 | 20.07 | 14.99 | 13.97 | 189.99 |
| C225 | [mm] | 230.12 | 154.94 | 82.04 | 140.00 | N/A | 189.99 | 115.06 | 20.07 | 14.99 | 13.97 | 189.99 |
| D01 - D07 | [mm] | 275.08 | 230.12 | 135.38 | 165.00 | N/A | 225.04 | 180.09 | 24.89 | 25.91 | 19.05 | 234.95 |
| D135 | [mm] | 330.20 | 195.07 | 100.08 | 149.99 | N/A | 290.07 | 145.03 | 24.89 | 22.10 | 18.03 | 234.95 |
| D145 | [mm] | 330.20 | 195.07 | 119.89 | 149.99 | N/A | 290.07 | 145.03 | 24.89 | 22.10 | 18.03 | 234.95 |
| D225 | [mm] | 330.20 | 195.07 | 119.89 | 159.99 | N/A | 290.07 | 145.03 | 24.89 | 22.10 | 18.03 | 233.68 |
| E01 - E07 | [mm] | 359.92 | 299.97 | 150.88 | 184.99 | 312.93 | 299.97 | 249.94 | 24.89 | 29.97 | 22.10 | 299.97 |
| E165 | [mm] | 409.96 | 238.00 | 138.94 | 159.99 | 312.93 | 369.82 | 150.11 | 43.94 | 24.89 | 18.03 | 299.97 |
| E370 - E375 | [mm] | 430.02 | 335.03 | 124.97 | 200.00 | 312.93 | 379.98 | 275.08 | 29.97 | 29.97 | 22.10 | 414.02 |
| F03 - F07 | [mm] | 424.94 | 365.00 | 194.82 | 210.01 | 368.05 | 350.01 | 294.89 | 35.05 | 35.05 | 24.89 | 359.92 |

*1) Sizes A through B do not have a lifting eye

ER Flange Dimensions – Single Stage Base Mount



| Frame Size | LC | LD | LF | LG | LH | LN | LJ | MH | ML | R | Net Weight (kg) |
|------------------|-----|-----|----|----|-------|-----|-----|--------|----|---------|-----------------|
| A03 - A07 | 70 | -- | 5 | 5 | 50 | 120 | M5 | 14, 16 | 37 | 202.692 | 9.98 |
| | 90 | -- | 5 | 7 | 70 | 120 | M6 | 16, 19 | 57 | 212.60 | 9.98 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 214.63 | 9.98 |
| | 115 | 100 | 7 | 7 | 95 | -- | M6 | 19, 24 | 57 | 212.60 | 9.98 |
| | 145 | 110 | 7 | 8 | 110 | -- | M8 | 22, 24 | -- | 212.60 | 12.70 |
| B03 - B07 | 70 | -- | 5 | 5 | 50 | 120 | M5 | 14, 16 | 37 | 238.00 | 16.33 |
| | 90 | -- | 5 | 7 | 70 | 120 | M6 | 16, 19 | 57 | 247.90 | 16.33 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 249.94 | 16.33 |
| | 115 | 100 | 7 | 7 | 95 | -- | M6 | 19, 24 | 57 | 247.90 | 16.33 |
| | 145 | 110 | 7 | 8 | 110 | -- | M8 | 22, 24 | -- | 247.90 | 17.23 |
| C03 - C07 | 90 | -- | 7 | 7 | 70 | 160 | M6 | 16 | -- | 293.88 | 30.84 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 300.99 | 30.84 |
| | 115 | 130 | 7 | 7 | 95 | -- | M6 | 22, 24 | -- | 293.88 | 30.84 |
| | 145 | 130 | 7 | 8 | 110 | -- | M8 | 24, 28 | -- | 293.88 | 30.84 |
| | 200 | 176 | 7 | 7 | 114.3 | -- | M12 | 28, 35 | -- | 328.93 | 38.55 |
| D03 - D07 | 115 | -- | 7 | 7 | 95 | 200 | M6 | 22, 24 | -- | 354.08 | 52.15 |
| | 145 | 130 | 8 | 8 | 110 | -- | M8 | 22, 24 | -- | 349.00 | 52.15 |
| | 165 | -- | 8 | 8 | 130 | 200 | M10 | 24, 28 | -- | 360.93 | 52.15 |
| | 200 | 176 | 10 | 7 | 114.3 | -- | M12 | 28, 35 | -- | 378.97 | 56.69 |
| | 215 | -- | 10 | 10 | 180 | 300 | M12 | 35, 38 | -- | 399.03 | 61.22 |
| E03 - E07 | 145 | -- | 10 | 7 | 110 | 250 | M8 | 24, 28 | -- | 409.96 | 111.56 |
| | 165 | 176 | 7 | 7 | 130 | -- | M12 | 24, 28 | -- | 399.03 | 101.59 |
| | 200 | 176 | 7 | 6 | 114.3 | -- | M12 | 28, 35 | -- | 399.03 | 101.59 |
| | 215 | -- | 10 | 11 | 180 | 300 | M12 | 35, 38 | -- | 459.99 | 116.55 |
| | 235 | -- | 8 | 11 | 200 | 350 | M12 | 38, 42 | -- | 494.03 | 129.71 |
| F03 - F07 | 200 | -- | 10 | 7 | 114.3 | 300 | M12 | 28, 35 | -- | 546.10 | 207.71 |
| | 215 | -- | 10 | 8 | 180 | 300 | M12 | 35, 38 | -- | 546.10 | 207.71 |
| | 235 | -- | 5 | 11 | 200 | 300 | M12 | 38, 42 | -- | 546.10 | 207.71 |
| | 265 | -- | 5 | 11 | 230 | 400 | M12 | 42, 48 | -- | 564.90 | 219.50 |

| MH | AU | AW | ML |
|----|------|----|----|
| 14 | 16 | 5 | 32 |
| 16 | 18 | 5 | 37 |
| 19 | 21.5 | 6 | 42 |
| 22 | 25 | 8 | 57 |
| 24 | 27 | 8 | 67 |

| MH | AU | AW | ML |
|----|------|----|-----|
| 28 | 31 | 8 | 67 |
| 35 | 38 | 10 | 67 |
| 38 | 41 | 10 | 88 |
| 42 | 45 | 12 | 118 |
| 48 | 51.5 | 14 | 118 |

*1) Other servo flanges and bore sizes are available.

Contact Shimpo Drives Customer Service for additional information

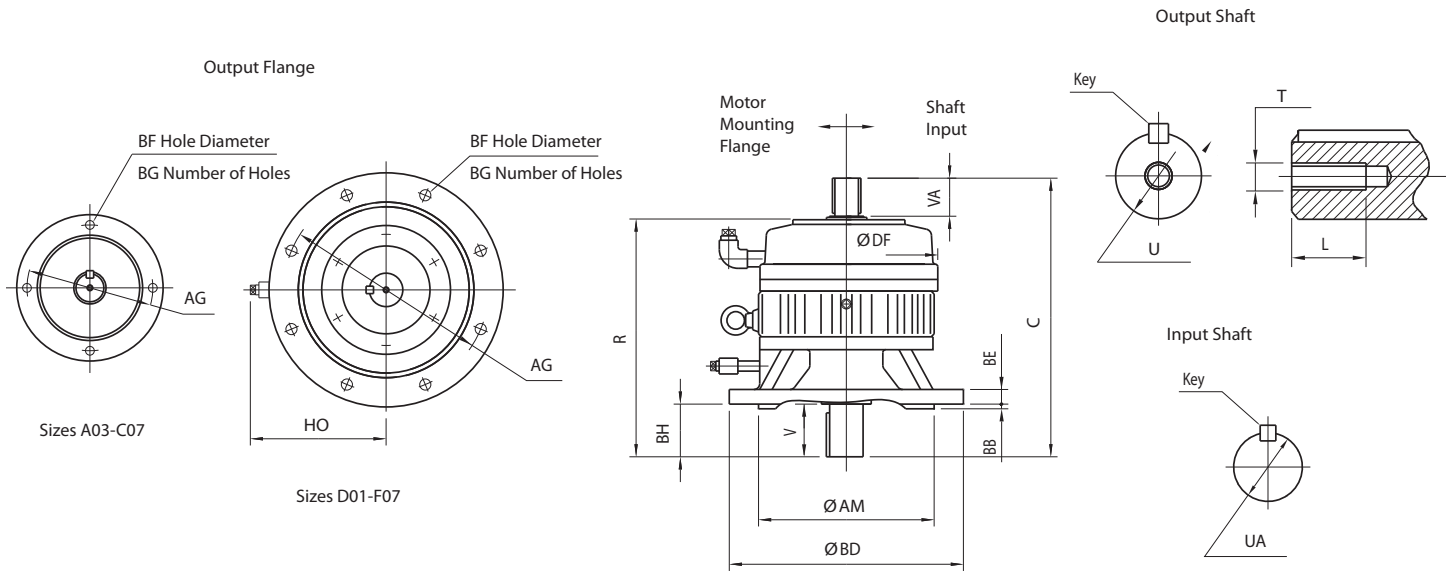
*2) All dimensions are in mm, except for «R» dimension, which is in inches

*3) To download CAD drawings, visit our website: www.shimpodrives.com

*4) The "R" dimension is the length from the flange face to output shaft end

ER-SERIES Circulute 3000 cycloidal reducer

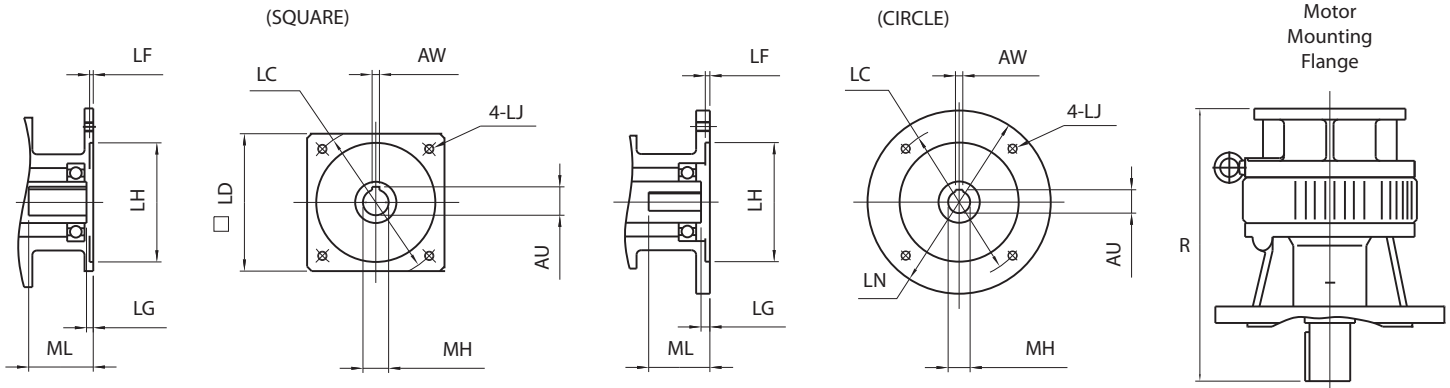
ER Common Dimensions – Single Stage Flange Mount



| Frame Size | Units | AG | AM | BB | BD | BE | BF | BG | BH | HO |
|------------|-------|--------|--------|------|--------|-------|-------|--------|--------|--------|
| A03 - A07 | [mm] | 130.05 | 110.01 | 4.06 | 160.02 | 13.97 | 11.94 | 101.60 | 29.97 | N/A |
| B01 - B07 | [mm] | 165.10 | 130.00 | 4.06 | 199.90 | 13.97 | 11.94 | 101.60 | 40.13 | N/A |
| C01 - C07 | [mm] | 214.88 | 180.01 | 4.06 | 249.94 | 18.03 | 14.99 | 101.60 | 55.12 | N/A |
| D01 - D07 | [mm] | 264.92 | 230.00 | 5.08 | 299.97 | 22.10 | 14.99 | 203.20 | 70.10 | 184.91 |
| E01 - E07 | [mm] | 350.01 | 300.00 | 7.87 | 400.05 | 24.89 | 19.05 | 203.20 | 89.92 | 230.12 |
| F03 - F07 | [mm] | 400.05 | 350.01 | 7.87 | 450.09 | 24.89 | 19.05 | 203.20 | 109.98 | 260.10 |

| Frame Size | Units | Output Shaft | | | | |
|------------|-------|--------------|--------|--------------------|-----------|-------|
| | | U | V | Key | T | L |
| A03 - A07 | [mm] | 22.23 | 30.23 | 4.78x4.78x24.89 | N/A | N/A |
| B01 - B07 | [mm] | 34.925 | 50.80 | 7.95x7.95x44.96 | N/A | N/A |
| C01 - C07 | [mm] | 44.450 | 63.50 | 9.53x9.53x54.86 | N/A | N/A |
| D01 - D07 | [mm] | 63.500 | 95.25 | 15.88x15.88x74.93 | M10 x 1.5 | 18.03 |
| E01 - E07 | [mm] | 73.025 | 111.00 | 19.05x19.05x95.00 | M20 x 2.5 | 35.05 |
| F03 - F07 | [mm] | 92.075 | 139.70 | 22.23x22.23x115.06 | M20 x 2.5 | 35.05 |

ER Flange Dimensions – Single Stage Flange Mount



| Frame Size | LC | LD | LF | LG | LH | LN | LJ | MH | ML | R | Net Weight (kg) |
|------------|-----|-----|----|----|-------|-----|-----|--------|----|--------|-----------------|
| A03 - A07 | 70 | -- | 5 | 5 | 50 | 120 | M5 | 14, 16 | 37 | 202.69 | 9.98 |
| | 90 | -- | 5 | 7 | 70 | 120 | M6 | 16, 19 | 57 | 212.60 | 9.98 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 214.63 | 9.98 |
| | 115 | 100 | 7 | 7 | 95 | -- | M6 | 19, 24 | 57 | 212.60 | 9.98 |
| | 145 | 110 | 7 | 8 | 110 | -- | M8 | 22, 24 | -- | 212.60 | 12.70 |
| B03 - B07 | 70 | -- | 5 | 5 | 50 | 120 | M5 | 14, 16 | 37 | 238.00 | 16.33 |
| | 90 | -- | 5 | 7 | 70 | 120 | M6 | 16, 19 | 57 | 247.90 | 16.33 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 249.94 | 16.33 |
| | 115 | 100 | 7 | 7 | 95 | -- | M6 | 19, 24 | 57 | 247.90 | 16.33 |
| | 145 | 110 | 7 | 8 | 110 | -- | M8 | 22, 24 | -- | 247.90 | 17.23 |
| C03 - C07 | 90 | -- | 7 | 7 | 70 | 160 | M6 | 16 | -- | 293.88 | 30.84 |
| | 100 | -- | 7 | 7 | 80 | 120 | M6 | 16, 19 | -- | 300.99 | 30.84 |
| | 115 | 130 | 7 | 7 | 95 | -- | M6 | 22, 24 | -- | 293.88 | 30.84 |
| | 145 | 130 | 7 | 8 | 110 | -- | M8 | 24, 28 | -- | 293.88 | 30.84 |
| | 200 | 176 | 7 | 7 | 114.3 | -- | M12 | 28, 35 | -- | 328.93 | 38.55 |
| D03 - D07 | 115 | -- | 7 | 7 | 95 | 200 | M6 | 22, 24 | -- | 354.08 | 52.15 |
| | 145 | 130 | 8 | 8 | 110 | -- | M8 | 22, 24 | -- | 349.00 | 52.15 |
| | 165 | -- | 8 | 8 | 130 | 200 | M10 | 24, 28 | -- | 360.93 | 52.15 |
| | 200 | 176 | 10 | 7 | 114.3 | -- | M12 | 28, 35 | -- | 378.97 | 56.69 |
| | 215 | -- | 10 | 10 | 180 | 300 | M12 | 35, 38 | -- | 399.03 | 61.22 |
| E03 - E07 | 145 | -- | 10 | 7 | 110 | 250 | M8 | 24, 28 | -- | 409.96 | 111.56 |
| | 165 | 176 | 7 | 7 | 130 | -- | M12 | 24, 28 | -- | 399.03 | 101.59 |
| | 200 | 176 | 7 | 6 | 114.3 | -- | M12 | 28, 35 | -- | 399.03 | 101.59 |
| | 215 | -- | 10 | 11 | 180 | 300 | M12 | 35, 38 | -- | 459.99 | 116.55 |
| | 235 | -- | 8 | 11 | 200 | 350 | M12 | 38, 42 | -- | 494.03 | 129.71 |
| F03 - F07 | 200 | -- | 10 | 7 | 114.3 | 300 | M12 | 28, 35 | -- | 546.10 | 207.71 |
| | 215 | -- | 10 | 8 | 180 | 300 | M12 | 35, 38 | -- | 546.10 | 207.71 |
| | 235 | -- | 5 | 11 | 200 | 300 | M12 | 38, 42 | -- | 546.10 | 207.71 |
| | 265 | -- | 5 | 11 | 230 | 400 | M12 | 42, 48 | -- | 564.90 | 219.50 |

| MH | AU | AW | ML |
|----|------|----|----|
| 14 | 16 | 5 | 32 |
| 16 | 18 | 5 | 37 |
| 19 | 21.5 | 6 | 42 |
| 22 | 25 | 8 | 57 |
| 24 | 27 | 8 | 67 |

| MH | AU | AW | ML |
|----|------|----|-----|
| 28 | 31 | 8 | 67 |
| 35 | 38 | 10 | 67 |
| 38 | 41 | 10 | 88 |
| 42 | 45 | 12 | 118 |
| 48 | 51.5 | 14 | 118 |

*1) Other servo flanges and bore sizes are available.

Contact Shimpo Drives Customer Service for additional information

*2) All dimensions are in mm, except for «R» dimension, which is in inches

*3) To download CAD drawings, visit our website: www.shimpodrives.com

Technical Information

| | |
|--|---------|
| Installation Instructions..... | 420 |
| Safety Precautions..... | 421 |
| Adapter Flange Codes..... | 422-425 |
| Selection Flow Charts..... | 426-427 |
| Online Sizing and Selection Tool | 428-429 |



Sold & Serviced By:



Toll Free Phone (877) SERV098

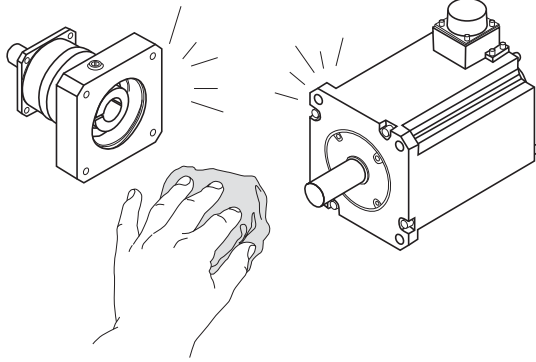
Toll Free Fax (877) SERV099

www.electromate.com

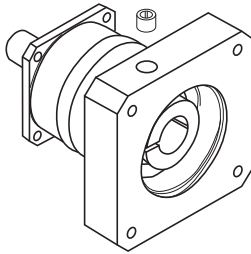
sales@electromate.com

Installation Instructions

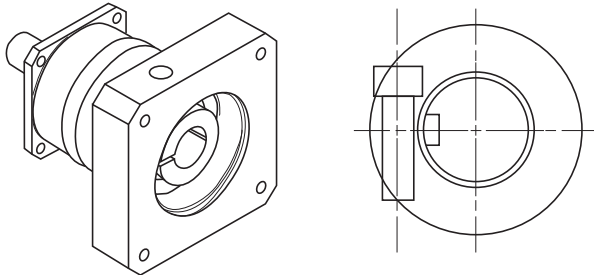
Mounting Procedure to Motor



1. Wipe off anti-rust agent and oil on the motor shaft.



2. Remove the plug.



3. Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened. Place reducer vertically on the flat surface so the motor mounting part faces up.

NOTE: In case the bushing has been attached, see reducer drawing example below to fix.

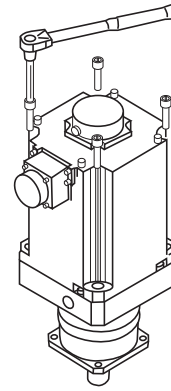
Table 1

| Bolt Size | Motor Installing Bolts | | Clamping Bolts | |
|-----------|------------------------|------|----------------|------|
| | Nm | kgfm | Nm | kgfm |
| M3 | 1.1 | 0.11 | 1.9 | 0.18 |
| M4 | 2.5 | 0.26 | 4.3 | 0.44 |
| M5 | 5.1 | 0.52 | 8.7 | 0.89 |
| M6 | 8.7 | 0.89 | 15 | 1.5 |
| M8 | 21 | 2.1 | 36 | 3.7 |
| M10 | 42 | 4.3 | 71 | 7.2 |
| M12 | 72 | 7.3 | 125 | 13 |
| M16 | 134 | 14 | -- | -- |

Table 2

| Bolt Size | Tightening Torque | |
|-----------|-------------------|------|
| | Nm | kgfm |
| M3 | 1.9 | 0.18 |
| M4 | 4.3 | 0.44 |
| M5 | 8.7 | 0.89 |
| M6 | 15 | 1.5 |
| M8 | 36 | 3.7 |
| M10 | 71 | 7.2 |
| M12 | 125 | 13 |
| M16 | 310 | 32 |
| M20 | 603 | 62 |

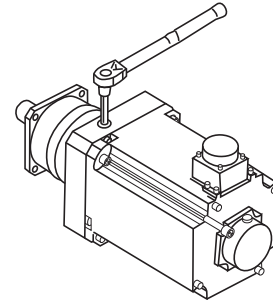
* Recommended bolt: Strength 12.9



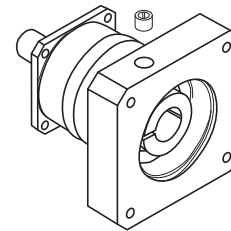
4. Carefully and gently insert the motor shaft into the input shaft. Make sure the motor flange is perfectly fit to the reducer's flange. Tighten the motor by installing and tightening bolts to the proper torque. (See table 1)

Reducer Installation

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque. (See table 2)



5. Tighten the clamping bolt of the input shaft with torque wrench to the proper torque. (See table 1)



6. Reinstall the plug. The procedure is complete.

Cautions for Operation

- When the reducer is delivered to you, confirm that you received the exact model that you ordered.
Please wipe out the input and output shaft of the reducer which is covered by anti-corrosive oil.
 - * Remove rubber cap on the input shaft before you wipe the shafts.
 - * Lubricant (grease) is already filled in the reducer. The reducer is ready for operation out of the box.

Fixation and Installation

- Avoid use in places where rain or water drops directly, unless special wash down design.
 - In case of use outdoors or in a places where dust and water drops directly, consult SHIMPO in advance.
- Install at 0°~40°C of surrounding temperature.
 - In case of use at temperature out of the mentioned (0°~40°C) range, consult SHIMPO in advance.
- Firmly fix with a bolt onto a solid stand without vibration.
- Install in a convenient location for future repair and inspection.

Cautions Prior to Starting the Operation

- Reducer can be used on arrival, since it has already been filled with lubrication.
- At initial operation, check the rotating direction of the output shaft and then gradually apply load.

Cautions During Operation

- Avoid overload.
- Ensure that input speed shall not exceed the number of maximum revolutions per minute specified.
- In the event the following occurs, stop the operation and check the following points:
 - If temperature sharply increases
 - If an abnormal noise appears sharply
 - If the number of revolutions becomes unstable sharply
- In the event the following occurs, respond immediately to the issue or contact us as soon as possible.
 - Is it under overload condition?
 - Is lubricant insufficient or deteriorated, or was another lubricant applied?
 - Is the axis, gear, and/or motor input damaged?
 - Are any connections unstable?

Disassembly

- ABLE REDUCER is designed to not be disassembled.

Lubricant Use

- The ABLE REDUCER is of grease-seal type in all models.
A specified amount of grease is filled at factory release so you can use as soon as it is delivered to you.
- It is impossible to exchange grease.
- In case of use outside of the recommended temperature range, consult SHIMPO in advance.

Daily Check Points

- Is the reducer case temperature excessively high during operation? (Up to + 50°C is not significant.)
- Is there an abnormal noise in the bearing, gear, etc?
- Is there an abnormal vibration in the reducer?
 - * Upon an abnormal phenomenon, immediately stop the operation and contact us.
- Is there a lubricant leak?

Periodic Check Points

- Are there overload and abnormal rotation?
- Are free, sprocket, and reducer assembling bolts loose?
- Is there an abnormal condition in the electric system?
- Checkup and repair of major parts
 - * Upon an abnormal condition, immediately stop the operation and contact us.
- Oil leak
 - * Upon an oil leak, contact us.

Scrapping

Whenever scrapping the ABLE REDUCER, classify the parts by material into industrial wastes as specified in the laws and regulations of your local government. Materials of construction can be divided into the following four categories:

1. Rubber parts: Oil seal, seat packing, rubber cap, seal used for bearing on the motor flange, etc.
2. Aluminum parts: Motor flange, output shaft holder
3. Grease: Wipe off the grease from the individual parts with dry cloth and scrap into oils.
4. Iron parts: Parts other than those mentioned in the above

Adapter Flange Codes

Adapter Flange Codes

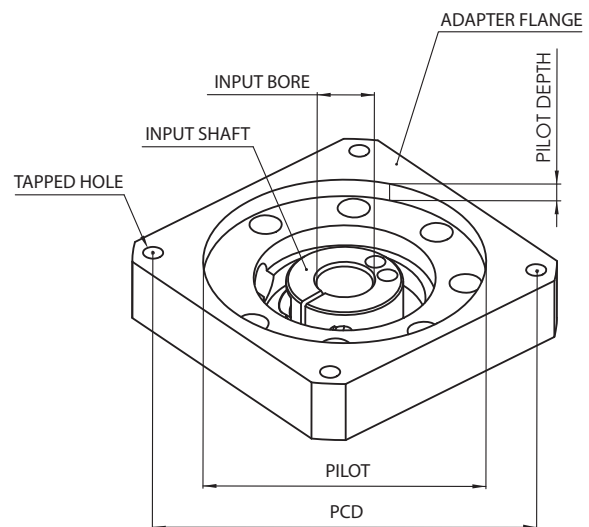
These tables provide an explanation for the adapter codes. The tables start with Input Bore measurement and the Part # Code, which are indicated at the end of every model code. For each Part # Code, the Pilot, PCD, Tapped Hole, and Pilot Depth, are explained.

Please note that even though the Part# Code may have the same letters (i.e. DC, FB, HA, etc), the Pilot and PCD dimensions may not be the same if a different input bore diameter. Locate the table by input bore diameter first, and then find the appropriate adapter Part# Code to check the dimensions. If you have any questions, contact NIDEC-SHIMPO for support.

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 65 | MA | 114.3 | 200 | M12 | 8 |
| 65 | MB | 200 | 235 | M12 | 8 |
| 65 | MC | 180 | 215 | M12 | 8 |
| 65 | MD | 180 | 265 | M12 | 8 |
| 65 | NA | 230 | 265 | M12 | 8 |
| 65 | NB | 230 | 265 | M12 | 18 |
| 65 | NC | 230 | 290 | M12 | 8 |
| 65 | ND | 230 | 265 | M20 | 18 |
| 65 | PA | 250 | 300 | M16 | 8 |
| 65 | PB | 250 | 320 | M16 | 18 |
| 65 | QA | 300 | 350 | M16 | 8 |
| 65 | QB | 280 | 325 | M16 | 8 |

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 38 | HA | 110 | 130 | 8.8 | 8 |
| 38 | HB | 110 | 145 | M8 | 8 |
| 38 | HE | 110 | 130 | M8 | 8 |
| 38 | JA | 130 | 165 | M10 | 8 |
| 38 | KA | 114.3 | 200 | M12 | 8 |
| 38 | KB | 130 | 215 | M10 | 8 |
| 38 | KC | 130 | 215 | M12 | 8 |
| 38 | KD | 95 | 200 | M10 | 18 |
| 38 | KE | 114.3 | 200 | M12 | 18 |
| 38 | LA | 180 | 215 | M12 | 8 |
| 38 | LB | 180 | 215 | M12 | 18 |
| 38 | MA | 180 | 265 | M12 | 8 |
| 38 | MB | 200 | 235 | M12 | 8 |
| 38 | MC | 215.9 | 184.15 | 13.7 | 5.5 |
| 38 | MD | 200 | 250 | M8 | 18 |
| 38 | NA | 230 | 265 | M12 | 8 |

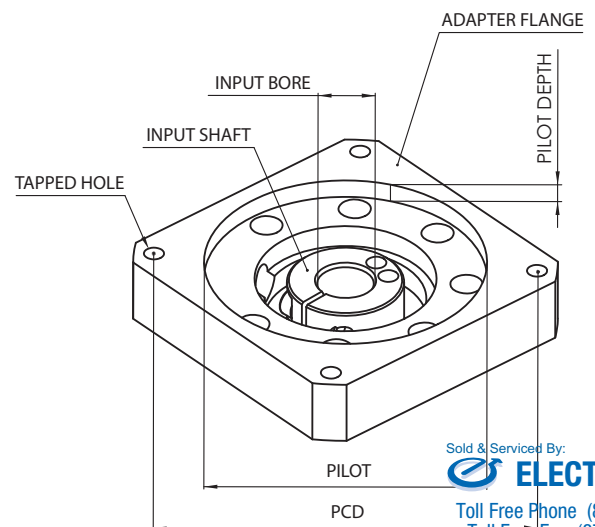
| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 48 | KA | 114.3 | 200 | M12 | 8 |
| 48 | KB | 110 | 130 | 8.8 | 8 |
| 48 | KC | 130 | 215 | M12 | 8 |
| 48 | LA | 180 | 215 | M12 | 8 |
| 48 | MA | 180 | 265 | M12 | 8 |
| 48 | MB | 200 | 235 | M12 | 8 |
| 48 | NA | 230 | 265 | M12 | 8 |
| 48 | PA | 250 | 300 | M16 | 8 |



Adapter Flange Codes

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 28 | FA | 80 | 100 | M6 | 8 |
| 28 | FB | 95 | 115 | M6 | 8 |
| 28 | FC | 95 | 115 | M8 | 8 |
| 28 | FD | 95 | 115 | M6 | 8 |
| 28 | FE | 95 | 115 | M8 | 8 |
| 28 | GA | 55.563 | 125.73 | M6 | 8 |
| 28 | GB | 63.5 | 127 | M6 | 8 |
| 28 | GC | 95 | 130 | M8 | 8 |
| 28 | GD | 110 | 130 | M8 | 8 |
| 28 | GE | 110 | 130 | M10 | 8 |
| 28 | GF | 110 | 130 | 8.8 | 8 |
| 28 | GG | 110 | 135 | M8 | 8 |
| 28 | GH | 95 | 135 | M8 | 8 |
| 28 | HA | 110 | 145 | M8 | 8 |
| 28 | HB | 110 | 145 | M8 | 18 |
| 28 | HC | 110 | 145 | 10.5 | 8 |
| 28 | HD | 114.3 | 149.23 | 10.5 | 8 |
| 28 | HE | 95 | 145 | M8 | 18 |
| 28 | HF | 110 | 145 | M8 | 8 |
| 28 | JA | 110 | 165 | M8 | 8 |
| 28 | JB | 110 | 165 | M10 | 8 |
| 28 | JC | 130 | 165 | M10 | 8 |
| 28 | JD | 130 | 174 | M10 | 28 |
| 28 | JE | 130 | 165 | M10 | 18 |
| 28 | JF | 114.3 | 160 | M10 | 8 |
| 28 | KA | 114.3 | 200 | M12 | 8 |
| 28 | KB | 130 | 215 | M10 | 8 |
| 28 | KD | 114.3 | 200 | M12 | 18 |
| 28 | KE | 150 | 185 | M10 | 8 |
| 28 | LA | 180 | 215 | M12 | 8 |
| 28 | LB | 180 | 220 | M12 | 18 |
| 28 | MA | 200 | 235 | M12 | 8 |
| 28 | MB | 200 | 250 | M8 | 18 |

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 19 | DA | 60 | 90 | M5 | 6 |
| 19 | DB | 70 | 90 | M5 | 6 |
| 19 | DC | 70 | 90 | M6 | 6 |
| 19 | DD | 70 | 90 | M6 | 16 |
| 19 | DE | 70 | 90 | M5 | 11 |
| 19 | EA | 73.025 | 98.43 | M5 | 11 |
| 19 | EB | 80 | 100 | M6 | 6 |
| 19 | EC | 80 | 100 | M6 | 16 |
| 19 | ED | 60 | 98.99 | M6 | 6 |
| 19 | FA | 95 | 115 | M8 | 6 |
| 19 | FB | 95 | 115 | M8 | 16 |
| 19 | GA | 55.563 | 125.73 | M6 | 11 |
| 19 | GB | 95 | 130 | M8 | 6 |
| 19 | GC | 110 | 130 | M8 | 11 |
| 19 | GD | 110 | 130 | 8.8 | 6 |
| 19 | GE | 95 | 130 | M8 | 16 |
| 19 | GF | 100 | 125 | M8 | 16 |
| 19 | GH | 95 | 135 | M8 | 11 |
| 19 | HA | 110 | 145 | M8 | 6 |
| 19 | HB | 110 | 145 | M8 | 21 |
| 19 | HC | 110 | 145 | 10.5 | 11 |
| 19 | HD | 114.3 | 149.23 | M8 | 11 |
| 19 | HE | 114.3 | 149.23 | 10.5 | 11 |
| 19 | JA | 130 | 165 | M10 | 16 |
| 19 | JB | 115 | 165 | M8 | 21 |



Adapter Flange Codes

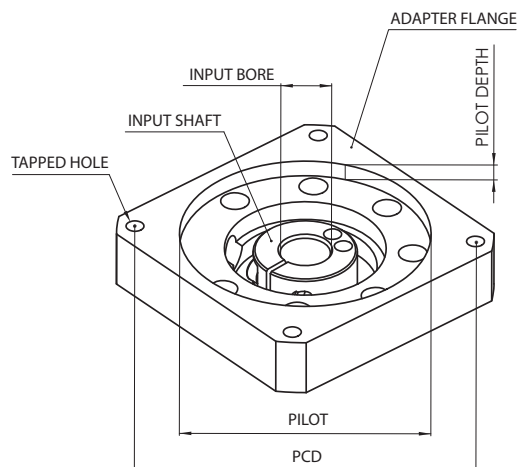
Adapter Flange Codes

These tables provide an explanation for the adapter codes. The tables start with Input Bore measurement and the Part # Code, which are indicated at the end of every model code. For each Part # Code, the Pilot, PCD, Tapped Hole, and Pilot Depth, are explained.

Please note that even though the Part# Code may have the same letters (i.e. DC, FB, HA, etc), the Pilot and PCD dimensions may not be the same if a different input bore diameter. Locate the table by input bore diameter first, and then find the appropriate adapter Part# Code to check the dimensions. If you have any questions, contact NIDEC-SHIMPO for support.

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 14 | BA | 38.1 | 66.68 | M4 | 5 |
| 14 | BB | 38.1 | 66.68 | M5 | 5 |
| 14 | BC | 38.1 | 66.68 | M5 | 10 |
| 14 | BD | 40 | 63 | M4 | 5 |
| 14 | BE | 40 | 63 | M5 | 5 |
| 14 | BF | 40 | 65 | M5 | 5 |
| 14 | BG | 40 | 70 | M4 | 5 |
| 14 | BH | 50 | 60 | M4 | 10 |
| 14 | BJ | 50 | 70 | M4 | 5 |
| 14 | BK | 50 | 70 | M5 | 5 |
| 14 | BL | 50 | 70 | M5 | 15 |
| 14 | BM | 50 | 70 | M5 | 10 |
| 14 | BN | 50 | 70 | M4 | 10 |
| 14 | BP | 36 | 70.71 | M4 | 5 |
| 14 | CA | 60 | 75 | M5 | 5 |
| 14 | CB | 60 | 75 | M6 | 10 |
| 14 | CC | 60 | 80 | M4 | 5 |
| 14 | DA | 50 | 95 | M6 | 5 |
| 14 | DB | 60 | 85 | M5 | 5 |
| 14 | DC | 60 | 90 | M5 | 5 |
| 14 | DD | 70 | 85 | 6.5 | 5 |
| 14 | DE | 70 | 90 | M5 | 10 |
| 14 | DF | 70 | 90 | M6 | 5 |

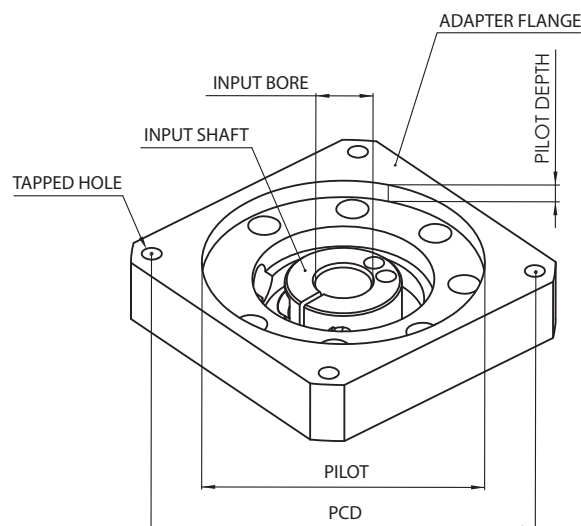
| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 14 | DG | 70 | 90 | M6 | 15 |
| 14 | DH | 70 | 95 | M6 | 5 |
| 14 | DJ | 60 | 95 | M5 | 5 |
| 14 | DK | 36.8 | 82.024 | M6 | 15 |
| 14 | DL | 62 | 91.924 | M5 | 10 |
| 14 | EA | 50 | 100 | M6 | 5 |
| 14 | EB | 73.025 | 98.43 | M5 | 5 |
| 14 | EC | 80 | 100 | M6 | 5 |
| 14 | ED | 80 | 100 | M6 | 15 |
| 14 | EE | 73.025 | 98.43 | M6 | 15 |
| 14 | EF | 50 | 98.43 | M5 | 5 |
| 14 | EG | 60 | 98.995 | M5 | 5 |
| 14 | EH | 80 | 105 | M6 | 15 |
| 14 | EJ | 60 | 98.995 | M6 | 10 |
| 14 | EK | 73.025 | 98.43 | M6 | 5 |
| 14 | EL | 73 | 94 | M6 | 5 |
| 14 | EM | 83 | 104 | M8 | 10 |
| 14 | FA | 60 | 115 | M6 | 5 |
| 14 | FB | 95 | 115 | M8 | 15 |
| 14 | GA | 80 | 139.7 | M6 | 5 |
| 14 | GB | 80 | 130 | M5 | 20 |
| 14 | GC | 94 | 120 | M8 | 10 |
| 14 | JA | 115 | 165 | M8 | 10 |



Adapter Flange Codes

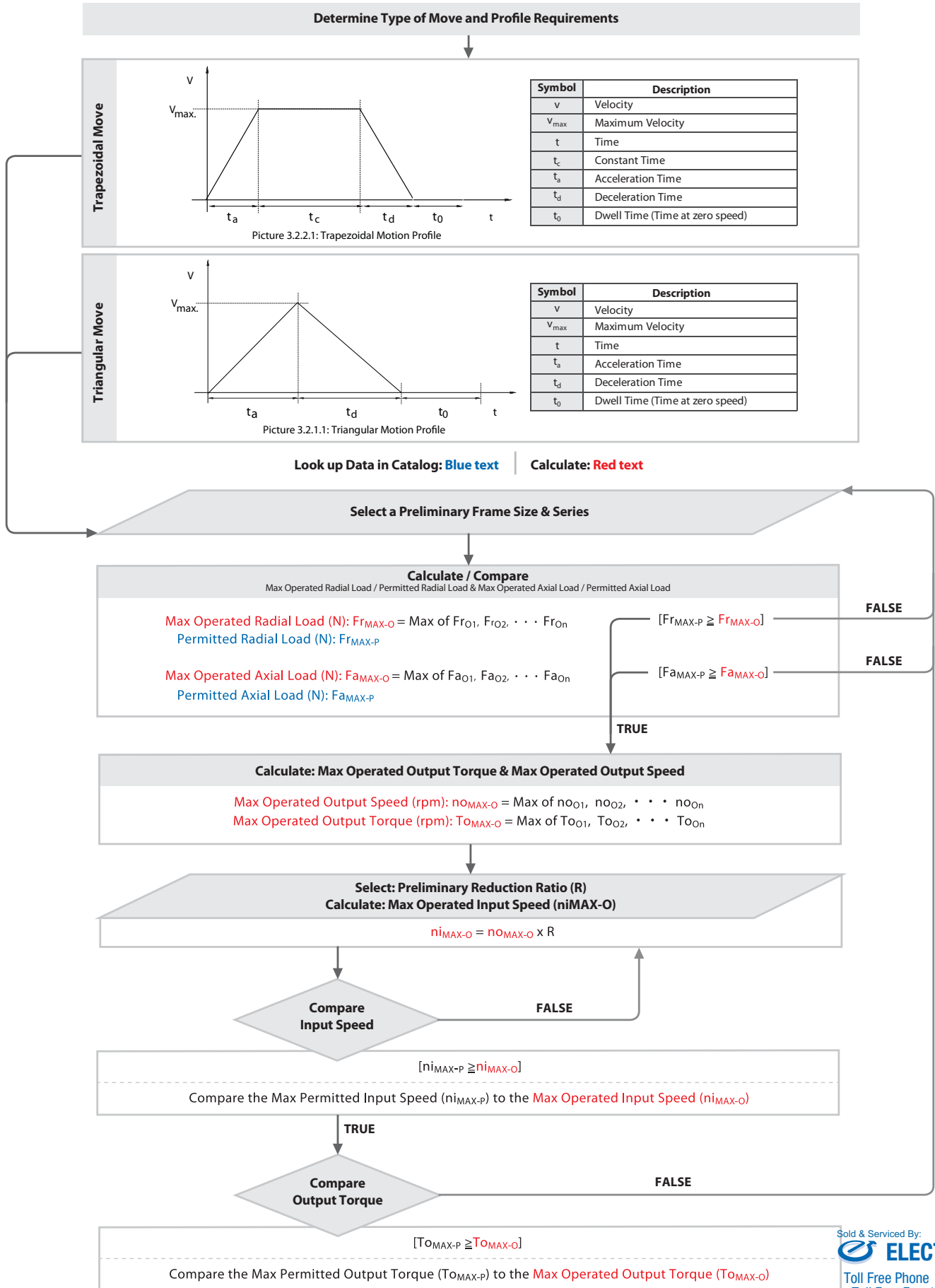
| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| 8 | AA | 20.02 | 46.69 | M3 | 5 |
| 8 | AB | 22 | 43.82 | 4.7 | 10 |
| 8 | AC | 22 | 48 | M3 | 5 |
| 8 | AD | 22.22 | 50.8 | M3 | 5 |
| 8 | AE | 25.4 | 38.89 | 4 | 10 |
| 8 | AF | 30 | 45 | M3 | 5 |
| 8 | AG | 30 | 46 | M4 | 5 |
| 8 | AH | 30 | 46 | M4 | 10 |
| 8 | AJ | 30 | 46 | 3.5 | 10 |
| 8 | AK | 34 | 48 | M3 | 10 |
| 8 | AL | 30 | 48 | M3 | 5 |
| 8 | AM | 22 | 43.82 | 3.5 | 5 |
| 8 | AN | 40 | 50 | M4 | 5 |
| 8 | AQ | 37.6 | 48 | M3 | 5 |
| 8 | BA | 38.1 | 66.68 | M4 | 5 |
| 8 | BB | 38.1 | 66.68 | M5 | 5 |
| 8 | BC | 50 | 60 | M4 | 10 |
| 8 | BD | 50 | 70 | M4 | 5 |
| 8 | BE | 50 | 70 | M5 | 5 |
| 8 | BF | 50 | 70 | M5 | 10 |
| 8 | BG | 36 | 70.71 | M4 | 5 |
| 8 | BH | 54 | 70 | M4 | 5 |
| 8 | BJ | 50 | 58 | M3 | 5 |
| 8 | CA | 50 | 80 | M4 | 10 |

| Input Bore (mm) | Part# Code | Pilot (mm) | PCD (mm) | Tapped Hole | Pilot Depth (mm) |
|-----------------|------------|------------|----------|-------------|------------------|
| S8 | ZA | 20.02 | 46.69 | M3 | 5 |
| S8 | ZB | 22 | 43.82 | 4.7 | 10 |
| S8 | ZC | 22 | 48 | M3 | 5 |
| S8 | ZD | 22.22 | 50.8 | M3 | 5 |
| S8 | ZE | 25.4 | 38.89 | 4 | 10 |
| S8 | ZF | 30 | 45 | M3 | 5 |
| S8 | ZG | 30 | 46 | M4 | 5 |
| S8 | ZH | 30 | 46 | M4 | 10 |
| S8 | ZJ | 30 | 46 | 3.5 | 10 |
| S8 | ZK | 34 | 48 | M3 | 10 |
| S8 | ZL | 30 | 48 | M3 | 5 |
| S8 | ZM | 22 | 43.82 | 3.5 | 5 |
| S8 | ZN | 40 | 50 | M4 | 5 |
| S8 | ZQ | 37.6 | 48 | M3 | 5 |
| S8 | BA | 38.1 | 66.68 | M4 | 5 |
| S8 | BB | 38.1 | 66.68 | M5 | 5 |
| S8 | BC | 50 | 60 | M4 | 10 |
| S8 | BD | 50 | 70 | M4 | 5 |
| S8 | BE | 50 | 70 | M5 | 5 |
| S8 | BF | 50 | 70 | M5 | 10 |
| S8 | BG | 36 | 70.71 | M4 | 5 |
| S8 | BH | 54 | 70 | M4 | 5 |
| S8 | BJ | 50 | 58 | M3 | 5 |

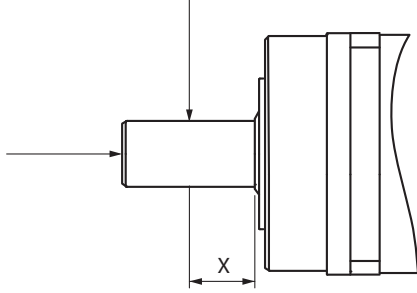


Selection Flow Charts

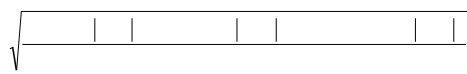
Procedure for Gear Reducer Selection



Calculate: Average Operated Radial Load & Average Operated Axial Load



Average Operated Radial Load (N):



$$Fa_{AVG-O} = \sqrt[3]{\frac{no_{O1} \cdot t_1 \cdot |Ft_{O1}|^3 + no_{O2} \cdot t_2 \cdot |Ft_{O2}|^3 + \dots + no_{On} \cdot t_n \cdot |Ft_{On}|^3}{no_{O1} \cdot t_1 + no_{O2} \cdot t_2 + \dots + no_{On} \cdot t_n}}$$

Calculate: Average Operated Output Torque & Average Operated Output Speed

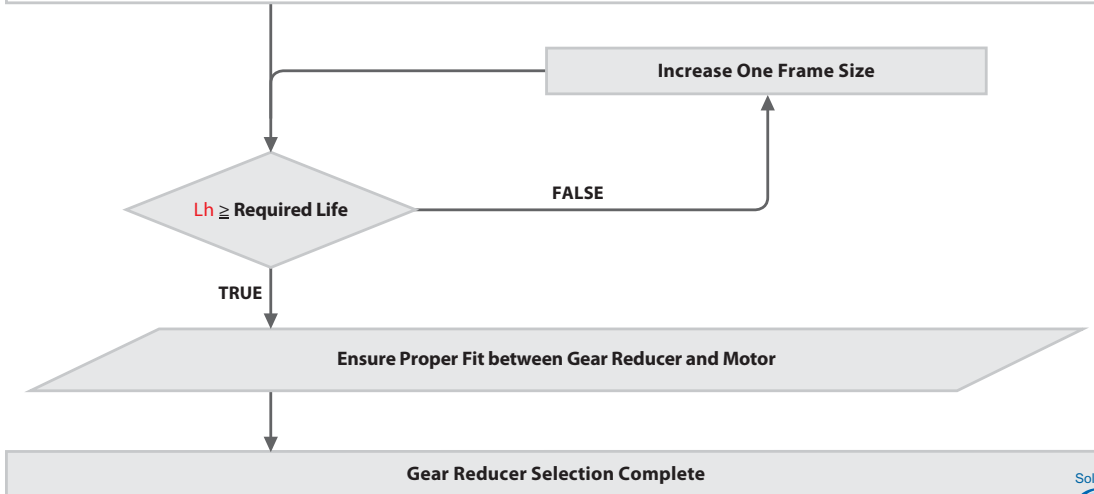
$$To_{AVG-O} = \sqrt[10]{\frac{no_{O1} \cdot t_1 \cdot |To_{O1}|^{10/3} + no_{O2} \cdot t_2 \cdot |To_{O2}|^{10/3} + \dots + no_{On} \cdot t_n \cdot |To_{On}|^{10/3}}{no_{O1} \cdot t_1 + no_{O2} \cdot t_2 + \dots + no_{On} \cdot t_n}}$$

$$no_{AVG-O} = \frac{no_{O1} \cdot t_1 + no_{O2} \cdot t_2 + \dots + no_{On} \cdot t_n}{t_1 + t_2 + \dots + t_n}$$

Calculate: Life

$$Lh = 20,000 \cdot \left(\frac{To_{AVG-P}}{To_{AVG-O}}\right)^p \cdot \left(\frac{ni_{AVG-P}}{no_{AVG-O}}\right)$$

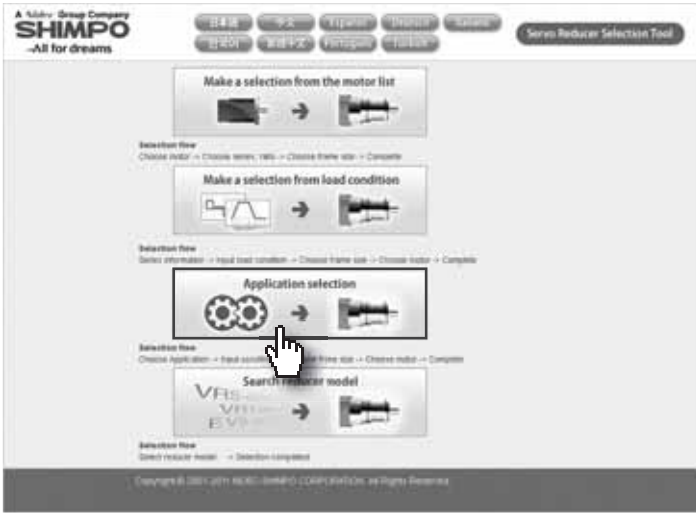
To_{AVG-P}: Average Permitted Output Torque
To_{AVG-O}: Average Operated Output Torque
ni_{AVG-P}: Average Permitted Input Speed
no_{AVG-O}: Average Operated Output Speed



Online Sizing and Selection Tool

SHIMPO's online Selection Tool offers additional information that exceeds this catalog. The online Selection Tool has an extensive list of Servo Motor Specifications, Requirements and Application Specifications. See the Selection Tool example screens below to guide, support and help you with your application needs.

Selection Tool Screen Example 1



- Selection based on the Servo Motor Specifications
- Selection based on the Servo Motor Movement profile requirements
- Selection based on the Application Specifications includes all the above

Selection Tool Screen Example 3



- Fill in all the information for your application

| Load condition | | |
|-----------------|----|---------|
| Delivery weight | Ww | 10 (kg) |
| Belt weight | Wc | 1 (kg) |

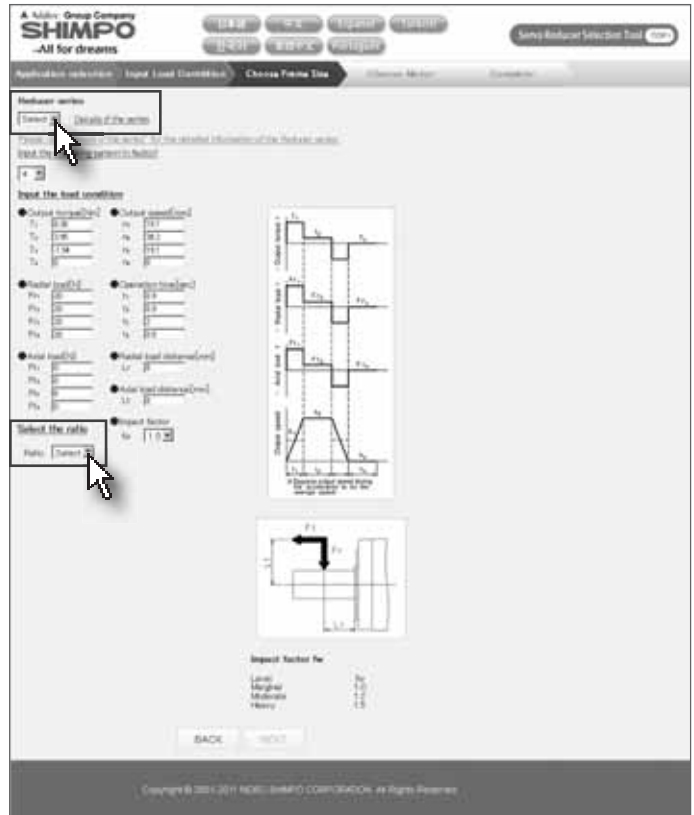
- Including the velocity, forces, mass, and move profile

Selection Tool Screen Example 2



- Select a application template based on your criteria

Selection Tool Screen Example 4



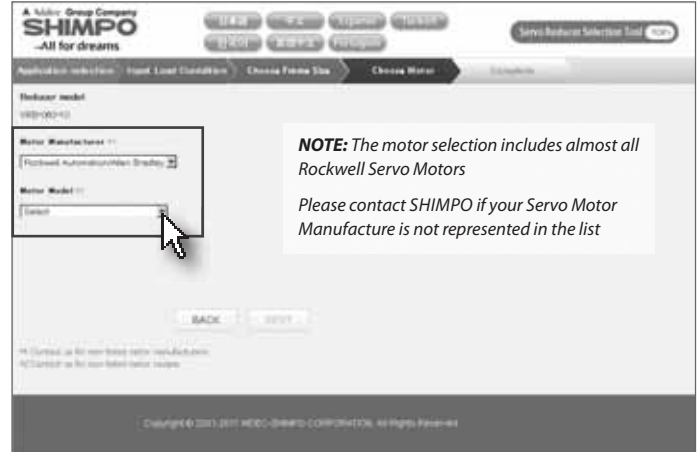
- Select a SHIMPO Reducer Series
- Select a Ratio that would put you near the rpm range for your application

Selection Tool Screen Example 5



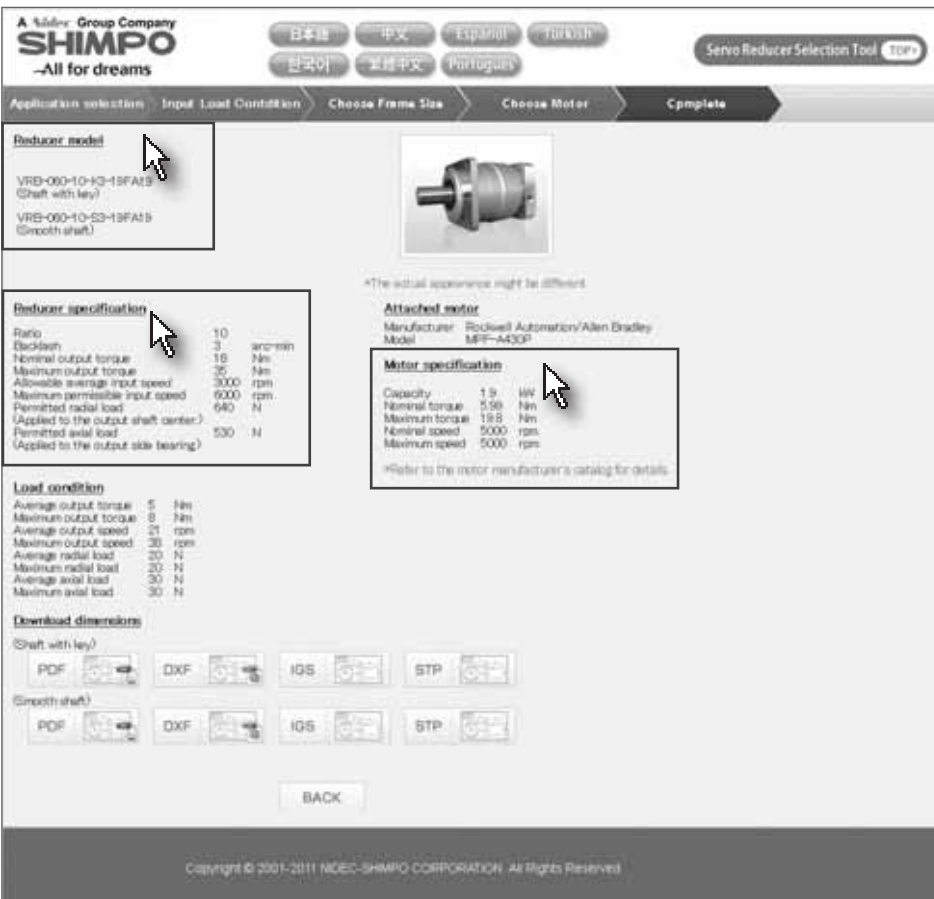
- The proper SHIMPO reducer frame size has been selected based on your application's criteria

Selection Tool Screen Example 6



- Select the Motor Manufacturer for your application from the list
- Select the appropriate motor via the "Motor Model drop down box"
- The manufacture Motor Model list includes new and former servo motors
- The sizing program does not select the servo motor drive

Selection Tool Screen Example 7



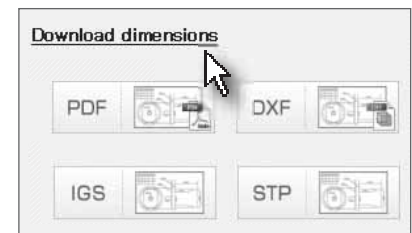
The resulting Load Condition can be helpful for sizing other related machine components

The Load Condition includes:

- Output Torque (Nm) and Output Velocity (rpm) of the Gearmotor

| Load condition | | |
|-----------------------|----|-----|
| Average output torque | 5 | Nm |
| Maximum output torque | 8 | Nm |
| Average output speed | 21 | rpm |
| Maximum output speed | 30 | rpm |
| Average radial load | 20 | N |
| Maximum radial load | 20 | N |
| Average axial load | 30 | N |
| Maximum axial load | 30 | N |

- These drawing formats can be downloaded: PDF, DXF, IGS, STP



Commercial Information

Customer Service and Support..... 432

Warranty 433

Standard Terms and Conditions 434-435

Locations and Contact Information..... 440



Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

Standard Terms and Conditions

STANDARD TERMS AND CONDITIONS

- 1. SHIPPING AND PAYMENT TERMS.** Unless otherwise specified, shipping terms are FOB shipping point, and payment terms are net 30 days. All payments are to be made in United States funds.
- 2. TAXES AND SECURITY INTEREST.** Unless otherwise specified, the prices stated do not include any taxes which may now or hereafter be applicable to the products or performance of any services by Seller. Buyer agrees to pay or reimburse Seller for any such required taxes and all connected penalties and interests, or in lieu thereof, Buyer shall provide Seller with tax exemption documents acceptable to the taxing authorities involved. Buyer, by acceptance of the goods ordered, represents and warrants that Buyer is solvent and able to pay for the goods in accordance with the terms of sale. As security for payment of the purchase price for the products and all other amounts due from the Buyer under these Terms, Buyer hereby grants Seller a security interest in the products and agrees to execute and permit Seller to file and record all documents which may be requested by Seller in order to create, perfect, evidence and establish the foregoing security interest. If Buyer fails to pay any amount when due, or, prior to payment of all amounts due, removes all or any part of the products from Buyer's premises, we shall exercise any or all of the rights and remedies given to secured parties under the UCC of the State of Illinois, and under similar laws of any other state, if applicable.
- 3. RETURN GOODS.** No product will be accepted for return unless authorized with appropriate returned goods number assigned. In all cases, freight charges must be prepaid. Buyer will be responsible for any damages incurred in transit to goods being returned. Title shall pass to Seller upon Seller's acceptance of return goods.
- 4. CANCELLATION.** Terms, once accepted and approved by Seller, shall not be canceled or altered by Buyer, and Buyer shall not otherwise cause the work or shipment to be delayed, except with the consent of and upon the terms and conditions approved by Seller in writing. Orders canceled or suspended with our consent are subject to cancellation and/ or other charges as determined by Seller.
- 5. DELAY IN DELIVERIES.** In no event shall Seller be liable for nondelivery or delays in delivery of products, or in the performance of any other obligations, arising directly or indirectly from acts of God, acts (including delay or failure to act) of any governmental authority (de jure or de facto), war (declared or undeclared), riot, fires, floods, weather, labor disputes, sabotage, epidemics, factory shutdowns or alterations, embargoes, delays, shortages or inability to procure transportation, labor, manufacturing facilities or materials, failure to obtain timely instructions or information from Buyer, or inability due to causes of any other kind beyond our control. The foregoing provisions shall apply even though such cause may occur after performance of our obligations has been delayed for other causes.
- 6. INDEMNIFICATION.** Buyer shall notify Seller promptly in writing and in all events within ten (10) days after its occurrence, of any accident or malfunction involving the products which results in injury to or death of any persons, property damage or economic loss of any kind, and Buyer shall cooperate fully with Seller in investigating and determining the cause of any such accident or malfunction. Buyer further agrees to indemnify and hold Seller harmless from and against all claims and damages imposed upon Seller or incurred arising, directly or indirectly, from Buyer's failure to perform or satisfy any of the Terms described herein.
- 7. GENERAL PROVISIONS.** These Terms shall be governed, construed and enforced in accordance with the laws of the State of Illinois, and shall be binding upon and inure to the benefit of any successors, assigns, and legal Distributors of Seller and Buyer. The Terms are not assignable without Seller's prior written approval. A judicial or administrative declaration in any jurisdiction of the invalidity of any one or more of the provisions of the Terms in any jurisdiction, nor shall such declaration have any effect on the validity of interpretation of the Terms outside that jurisdiction.

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

- 8. MINIMUM ORDER CHARGE.** The minimum charge on an order will be \$60.00.
- 9. BOXING ORDER CHARGE.** No charge is made for standard boxing or crating required by transportation companies for domestic shipments. Cost of special boxing, export boxing, cartage to steamer or transfer expenses will be added to the invoice unless charges are shown to be included in the prices.

Any and all Terms are subject to change prior to Buyer's acceptance of these Terms.

PROPERTY AND PATENT RIGHTS

1. Seller retains for itself any and all property rights, including but not limited to all patent, copyright, and trade secret rights, to any software materials and to all designs, engineering details, documentation, and other data pertaining to any product designed in connection herewith and to all right of discovery, invention or patent rights arising out of the work done in connection herewith. Buyer expressly agrees that it will not assert any property rights herein, except the right for itself and subsequent owners to use the product.
2. Buyer acknowledges that any software materials constitute valuable trade secrets of Seller and are unpublished works on which Seller holds the sole and exclusive copyright. Buyer agrees to maintain and protect the confidentiality of these trade secrets and agrees not to disclose them or use them for any purpose not contemplated by this Agreement. Buyer agrees to formulate and adopt appropriate safeguards in light of its own operating activities, to insure protection of the confidentiality of these trade secrets. Buyer shall immediately notify Seller of any information which comes to its attention which indicates that there has been any loss of confidentiality of Seller trade secret information.

SUBMISSION AND ACCEPTANCE OF ORDERS

1. All orders and contracts are subject to acceptance or rejection by an officer of Seller or any individual authorized by Seller in writing, at the main offices of Seller, which approval or rejection shall in all cases be in writing to the Buyer, and no order or contract shall be binding until so accepted. Seller reserves the right to refuse any business originating in the Territory of the Buyer, for any reason which in the considered judgment of Seller is sufficient grounds for refusal.
2. On orders and contracts of a deferred-payment nature, all such payment and credit extensions are subject to final review and approval by Seller. Seller may accept such orders or contracts, withhold shipment after initial acceptance if for any reason the Buyer's credit has become impaired.

SHIPMENTS AND SHIPPING INFORMATION

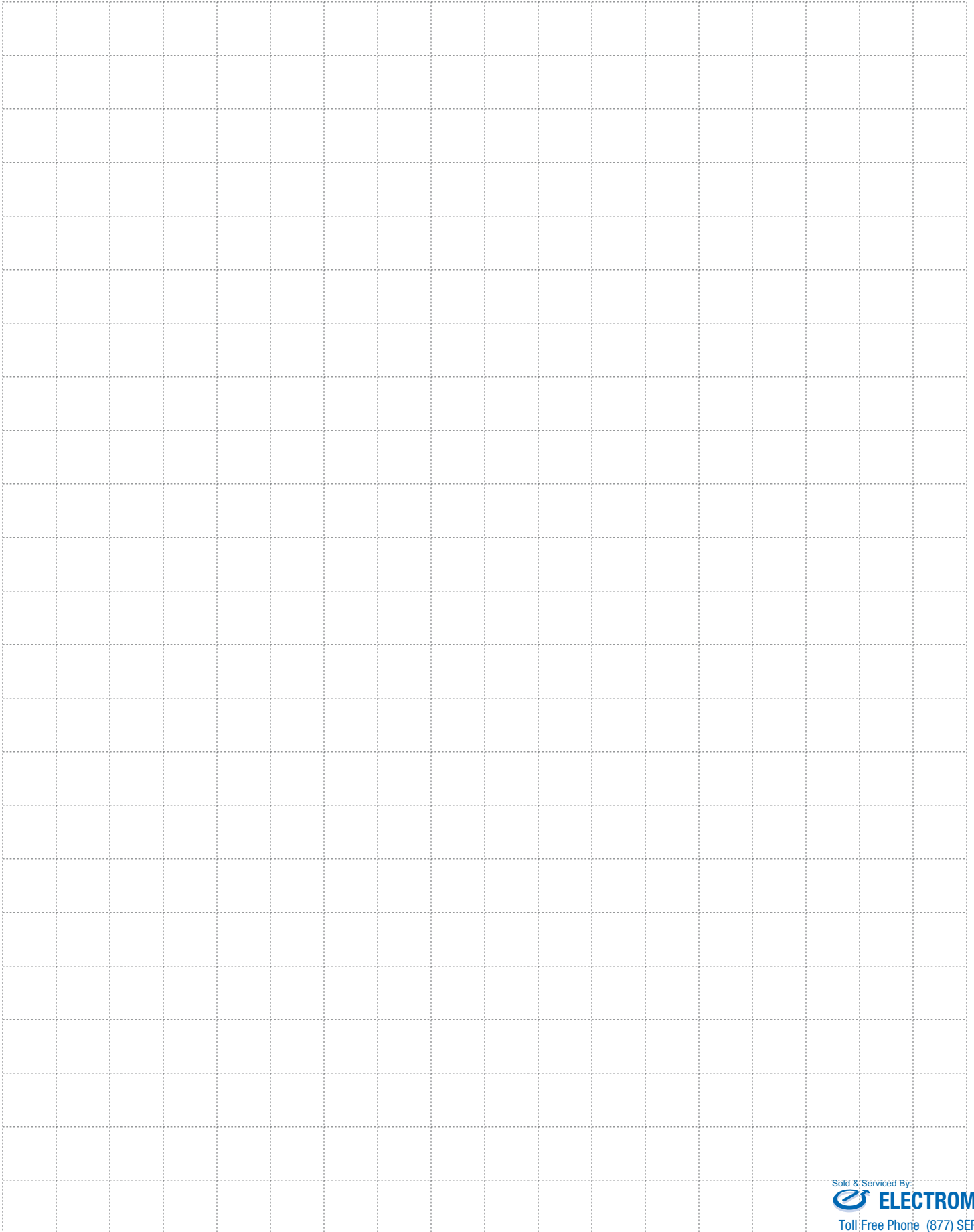
1. All shipments, from whatever source, shall be contingent upon prior approval of the order or contract by Seller, and after such prior approval, upon the effect of strikes, accidents, embargoes, priorities, or any cause natural or otherwise, beyond the control of this Seller. Seller, in effect, assumes no liability hereunder for its failure to make shipment on any order or contract.
2. All Products are prepared by Seller for North American land shipment only under this Agreement. Any special preparations, for water shipment or foreign trade outside of the North Americas, must be arranged for as a special consideration.

Sold & Serviced By:

 **ELECTROMATE**

Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

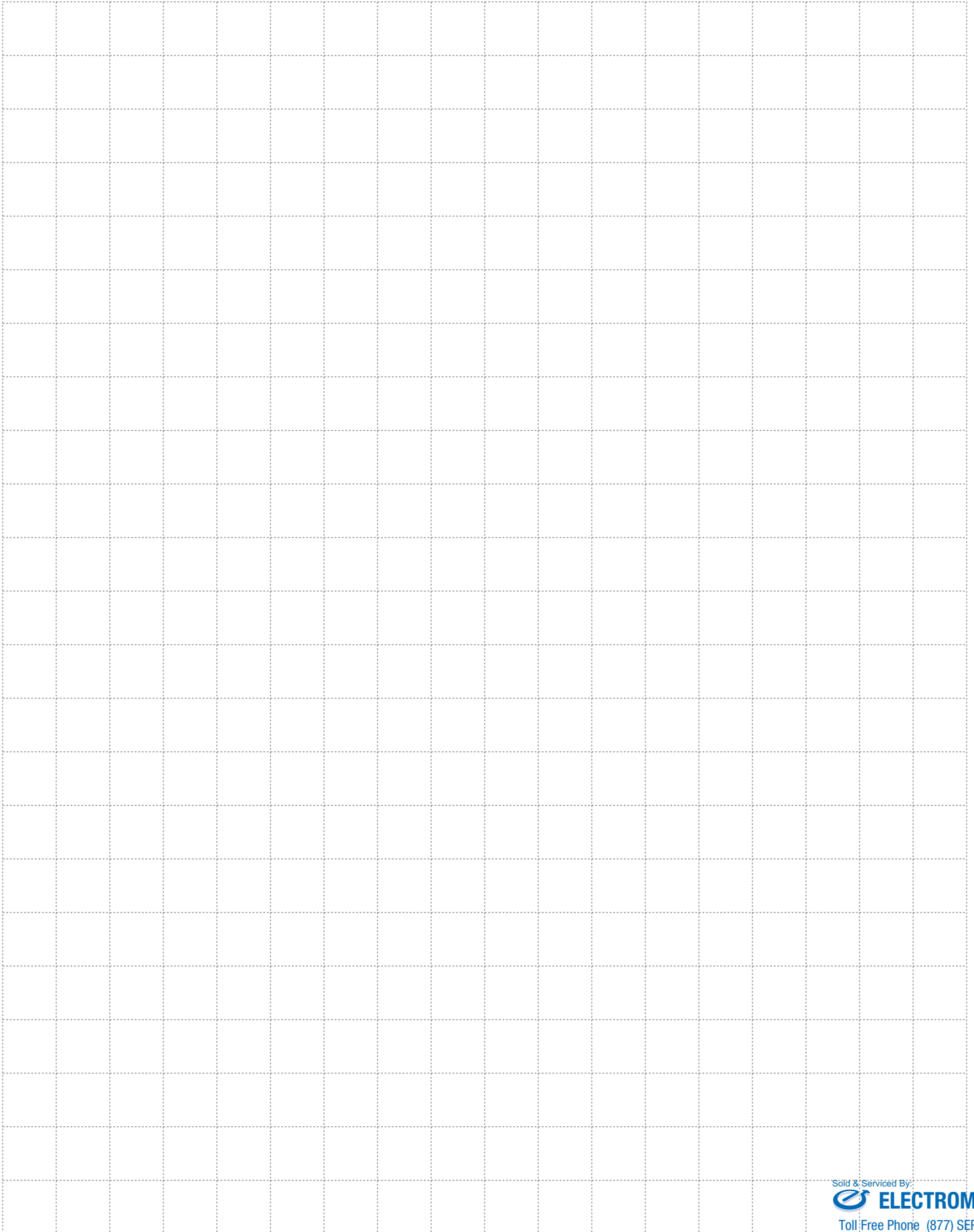
Graph Template



Sold & Serviced By:



Toll-Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

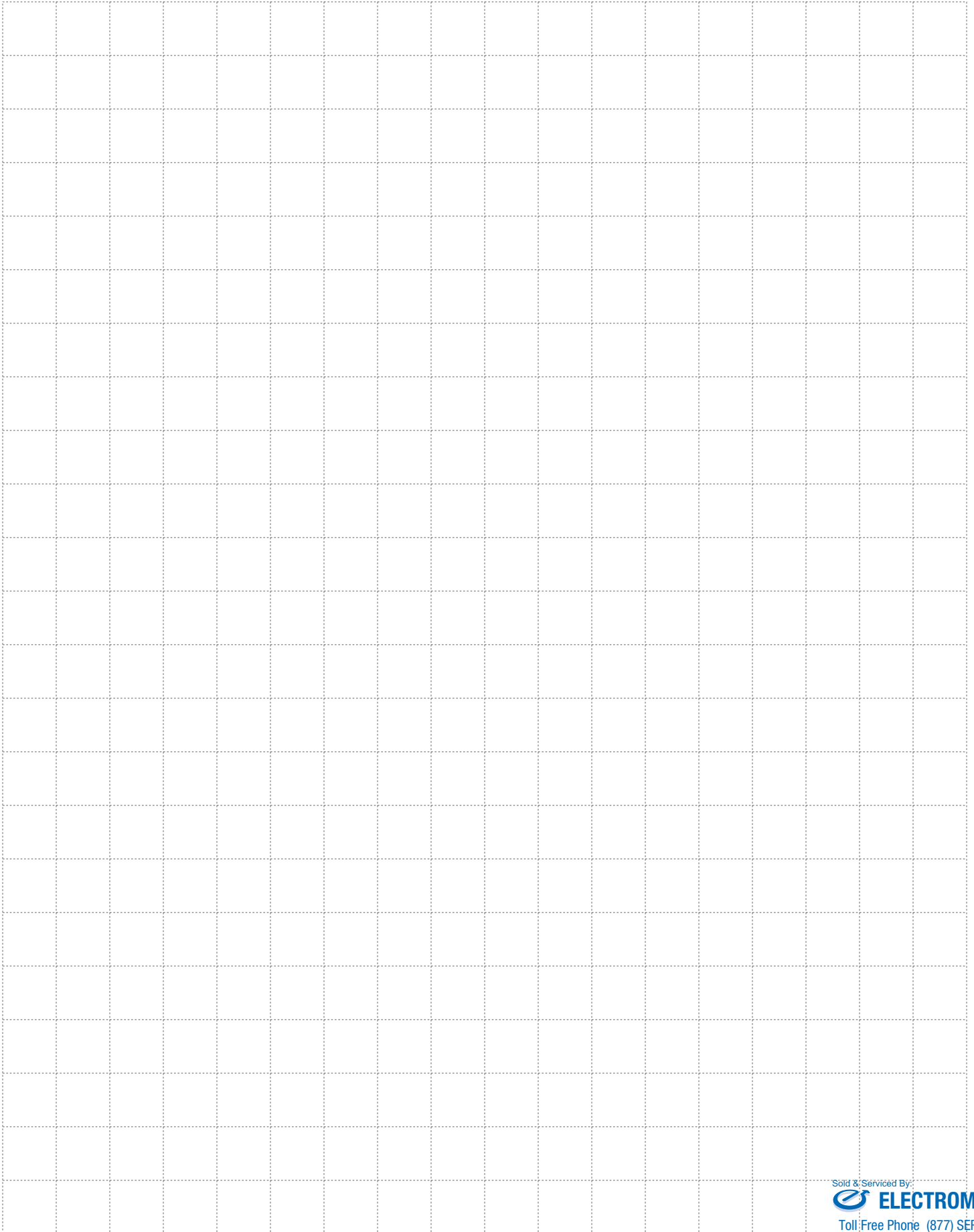


Sold & Serviced By:



Toll-Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

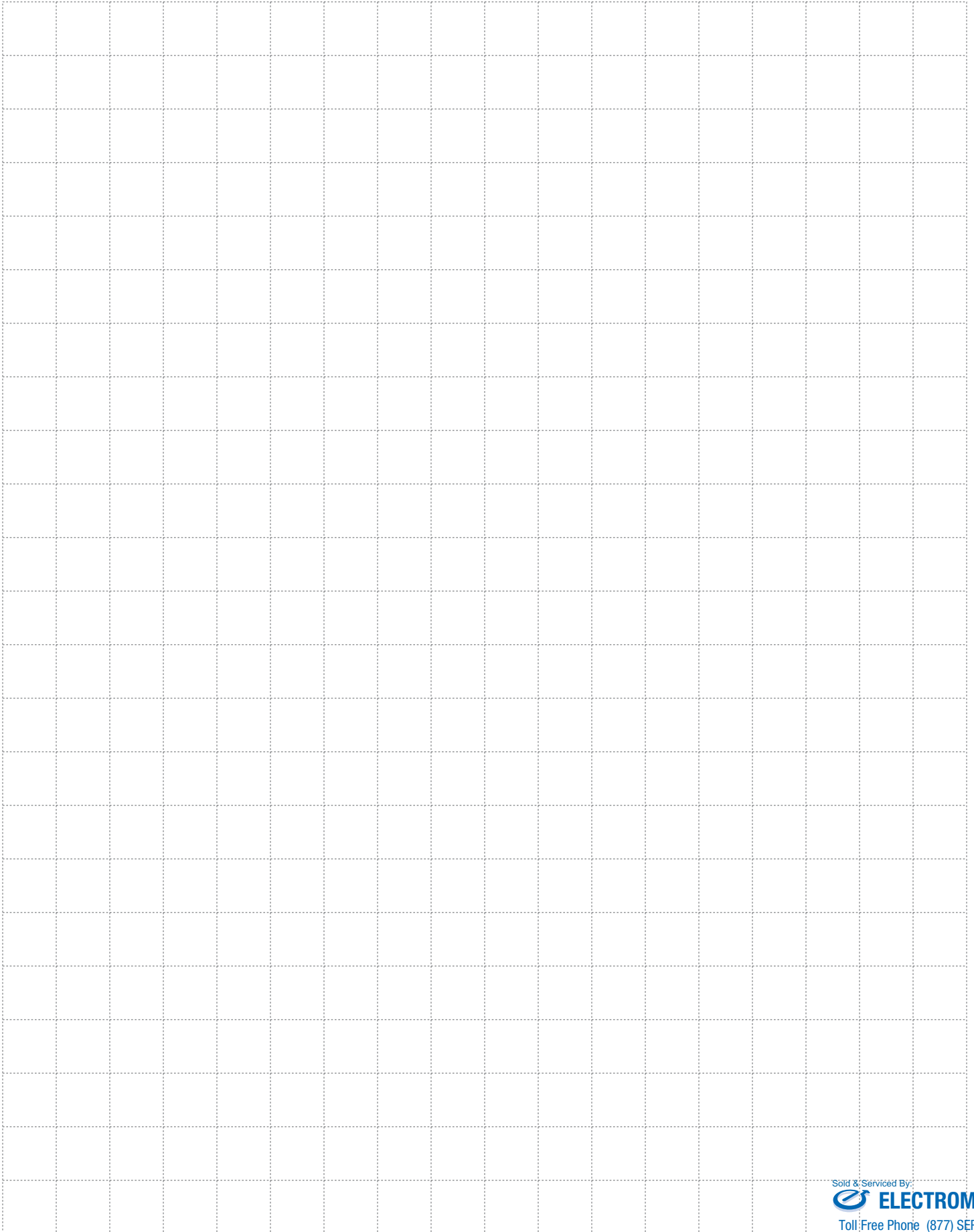
Graph Template



Sold & Serviced By:



Toll-Free Phone (877) SERV098
Toll-Free Fax (877) SERV099
www.electromate.com
sales@electromate.com



Sold & Serviced By:

 **ELECTROMATE**

Toll-Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com

sales@electromate.com

Locations and Contact Information

Americas



NIDEC-SHIMPO AMERICA CORPORATION

1701 Glenlake Avenue
Itasca, IL 60143 USA

Sales & Customer Service
Engineering & Product
Support

Toll-free: (800) 842-1479

Local: (630) 924-7138

Fax: (630) 924-7382

info@shimpodrives.com

www.drives.nidec-shimpo.com



NIDEC-SHIMPO MEXICO

Bldv. Carlos Salinas de Gortari
km. 9.5 Apodaca
Nuevo León. 66600. México



NIDEC-SHIMPO MEXICO

Parque Industrial El Marques
Circuito El Marques
Sur #12 Local 13
Mpio. El Marques Querétaro,
Mexico C.P.72646



NIDEC-SHIMPO BRASIL

Av. Paulista, 2073 - Ed. Horsa II,
17º andar, Conj. 1702
São Paulo - SP, Brasil CEP
01311-000

Asia-Pacific



NIDEC-SHIMPO CORPORATION

Corporate Headquarters
1 Terada, Kohtari
Nagaokakyō-City
Kyoto Japan 617-0833



NIDEC-SHIMPO (ZHEJIANG) CORPORATION

288 Ping Cheng Street
Pinghu Economic
Development Zone
Zhejiang, China



NIDEC-CORPORATION

Corporate Headquarters
338 Tonoshiro-cho
Kuze Minami-ku
Kyoto 601-8205, Japan

NIDEC-SHIMPO (SHANGHAI)

Trading Company Ltd.
Shanghai, China

NIDEC-SHIMPO (KOREA) CORPORATION

Seoul, Korea

NIDEC-SHIMPO (TAIWAN) CORPORATION

Taichung City, China

NIDEC-SHIMPO (HONG KONG) COMPANY, LTD.

Hong Kong, China

NIDEC-SHIMPO (SINGAPORE) CORPORATION

Singapore

NIDEC-SHIMPO INDIA SALES AND TRADING

Bangalore, India

Many other satellite sales office locations throughout Asia-Pacific.

Please contact NIDEC-SHIMPO for more information.



Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

*SHIMPO's North American headquarters
is located in suburban Chicago*



Nidec
SHIMPO
NIDE SHIMPO AMERICA CORPORATION

1701

Now & Served By


Toll Free Phone (877) SERV098
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com