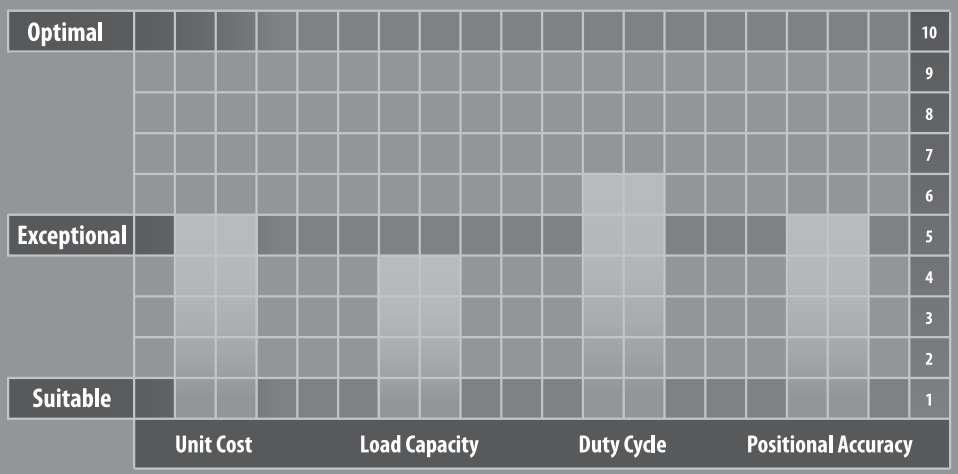
EVB-SERIES

This gearbox series is the right-angle version of the VRB, offering a compact configuration and output design that provides an OEM with maximum versatility. The through-bolt flange design at the output makes it much easier to assemble the reducer onto machinery. A 1:1 spiral bevel gear for the right-angle connection maintains good positional accuracy at ratios ranging from 3:1 – 100:1. The EVB units will have a minimum backlash of 4 arc-minutes and maximum loads approaching 600 NM.

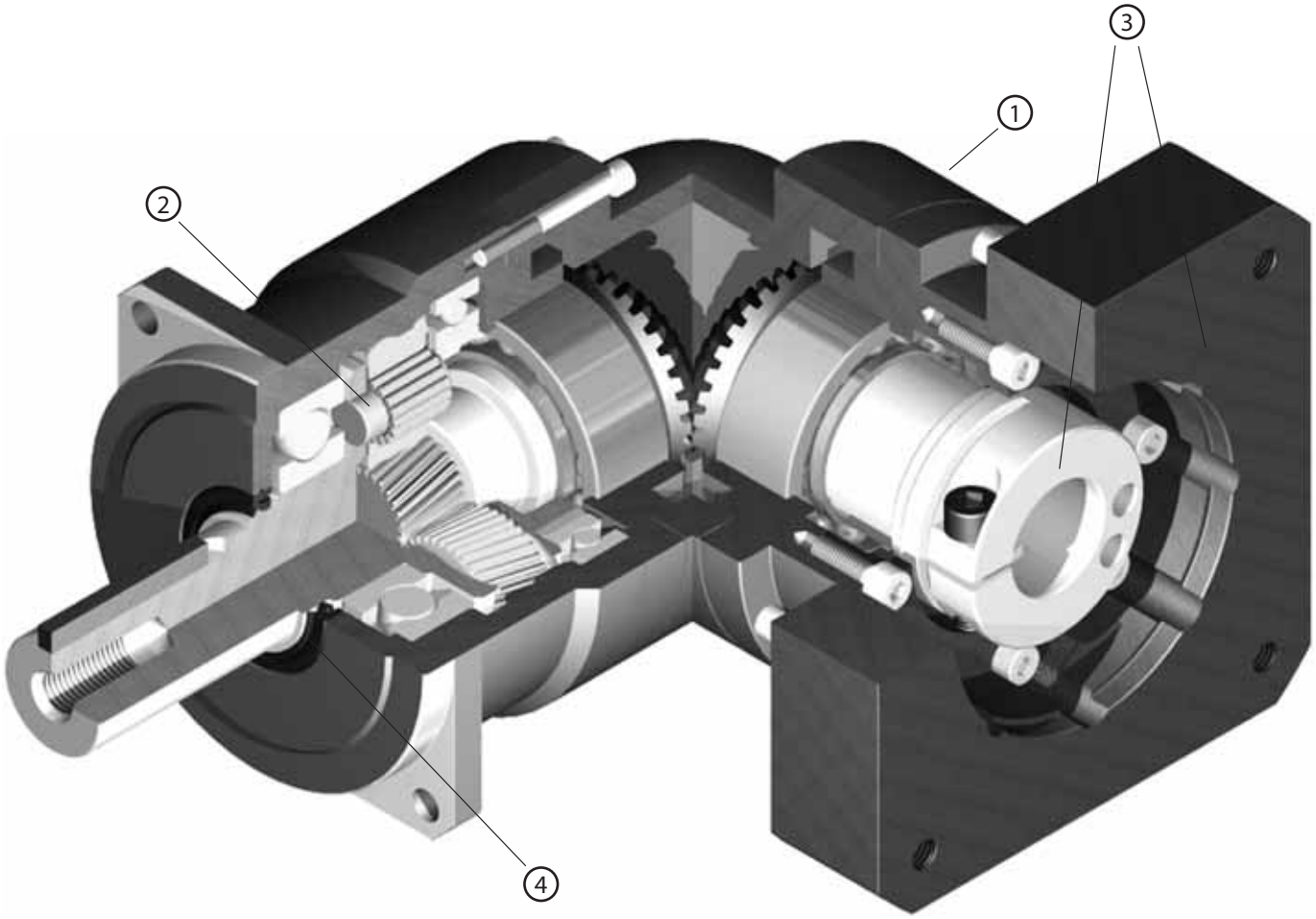
Equipment manufacturers building custom assembly automation systems will find the flexibility and space-saving features of the EVB an ideal fit for their unique projects. The EVB provides an excellent option when performance, space, and cost all equally impact your reducer selection.



EVB-SERIES

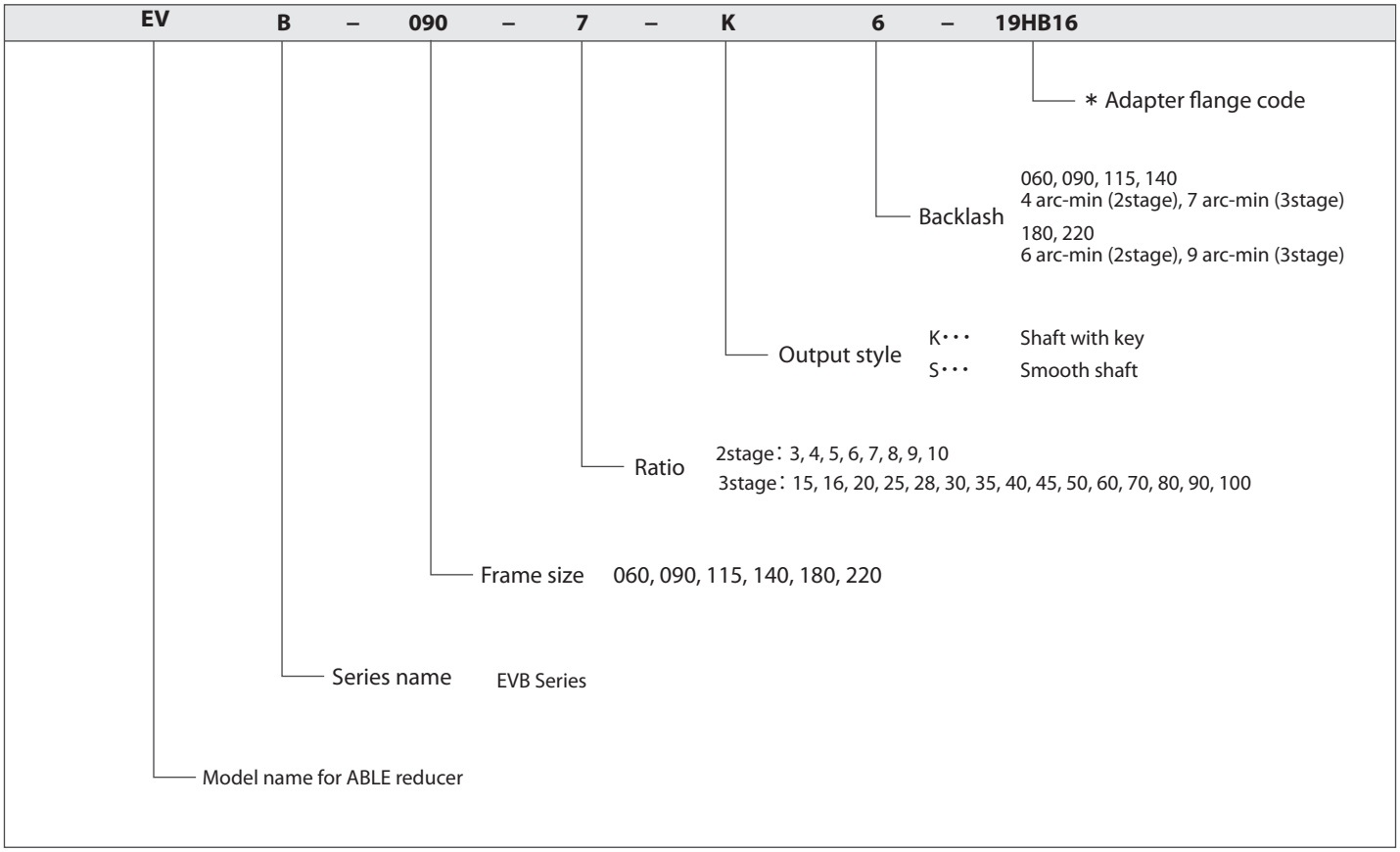
- Industry standard mounting dimensions
- Large variety of reduction ratios to choose from
- Thru-bolt mounting style
- Maximum flexibility for mounting and clearance constraints
- Low backlash (≤4 arc-min)
- Space-saving design, when minimal envelope required
- Readily available

EVB-Series – Features

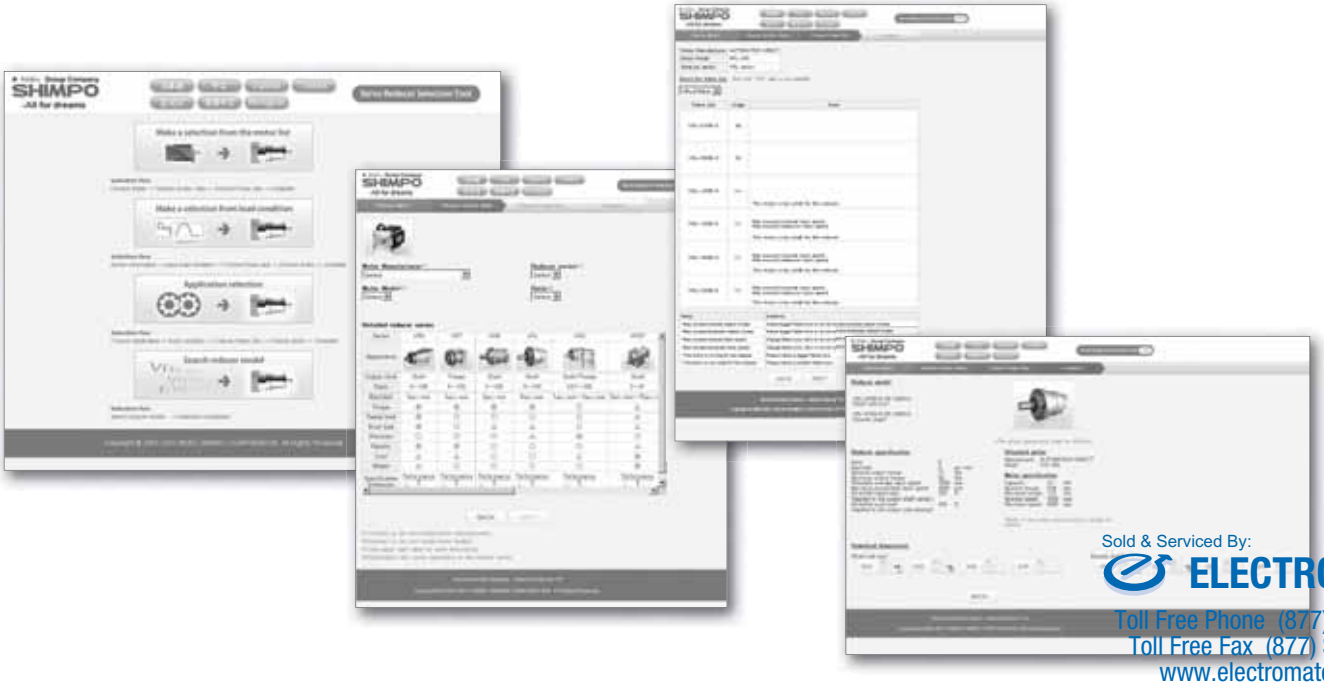


1. Space–saving features; motor can be located at a 90 degree position from the reducer providing a more compact footprint
2. High rigidity and torque capacity are achieved by using uncaged needle roller bearings
3. Adapter-bushing connection; enable a simple, effective attachment to most servo motors
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-060 – 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 (≤ Ø 8)	[kgcm2]	--	0.310	0.270	0.250	0.240	0.230	0.230	0.230	0.230
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.390	0.340	0.320	0.310	0.310	0.310	0.300	0.300
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	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-060 – 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 (≤ Ø 8)	[kgcm2]	--	0.073	0.079	0.071	0.071	0.077	0.062	0.070	0.061
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.118	0.124	0.116	0.115	0.122	0.106	0.115	0.106
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--	--
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-060 – 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 (≤ Ø 8)	[kgcm2]	--	0.070	0.061	0.061	0.061	0.061	0.061	0.061
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.115	0.106	0.106	0.105	0.105	0.105	0.105
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--
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 EVB060

*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

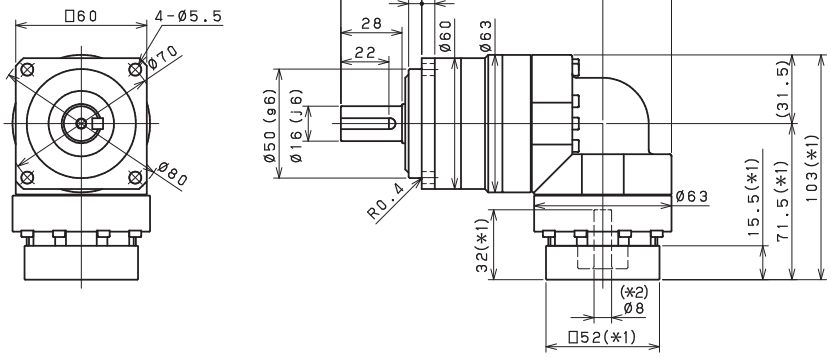
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

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

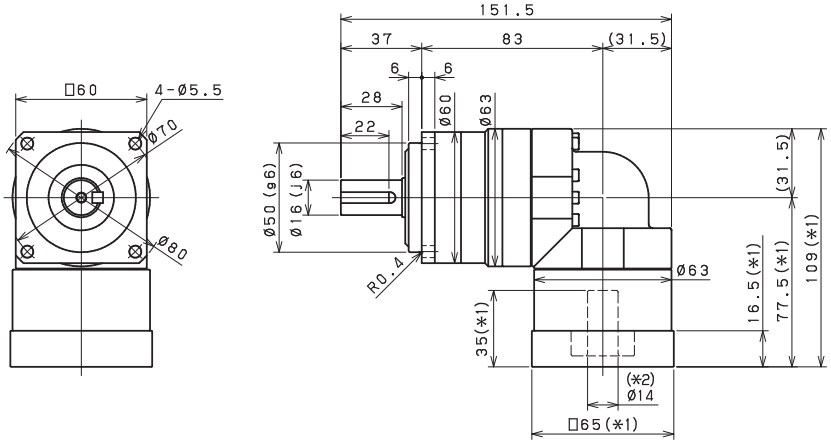
*15) The weight may vary slightly between models

EVB-060 – 2-Stage Dimensions

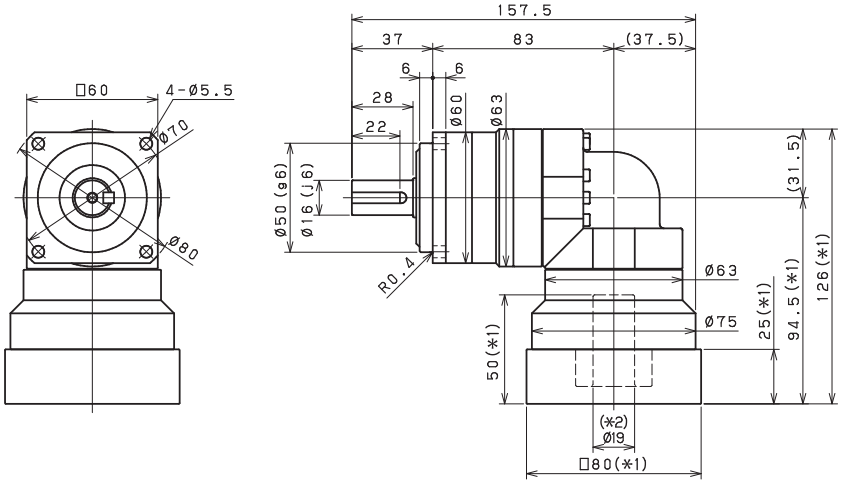
Input shaft bore ≦φ8

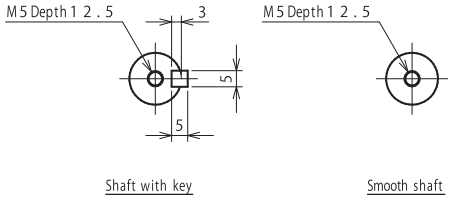


Input shaft bore ≦φ14



Input shaft bore ≦φ19





Shaft with key

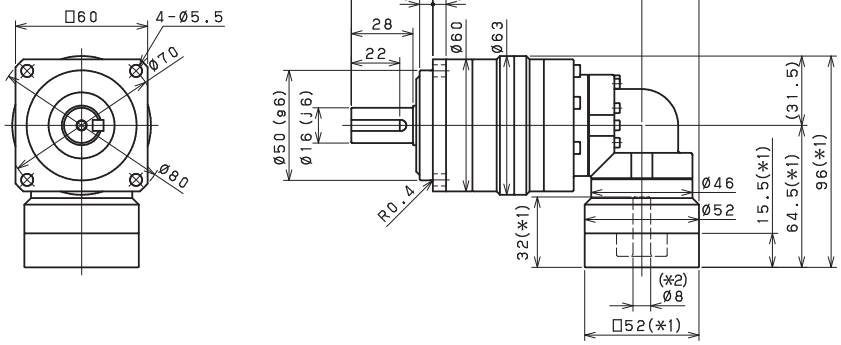
Smooth shaft

*1) Length will vary depending on motor.

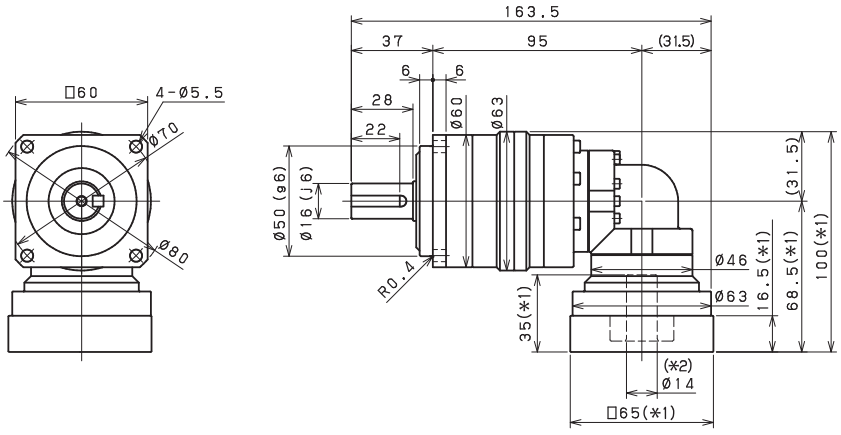
*2) Bushing will be inserted to adapt to motor shaft.

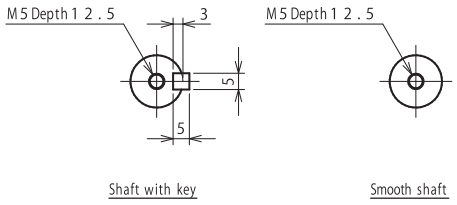
EVB-060 – 3-Stage Dimensions

Input shaft bore ≦φ8



Input shaft bore ≦φ14



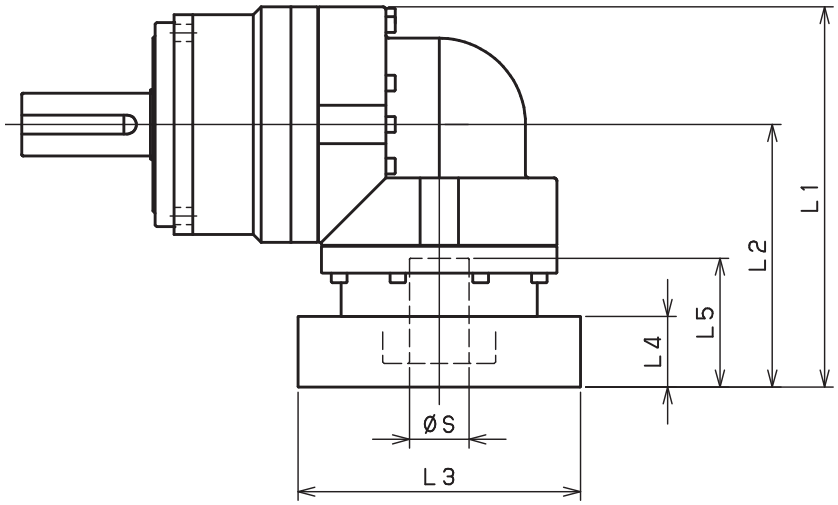


*1) Length will vary depending on motor

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

EVB

EVB-060 – 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

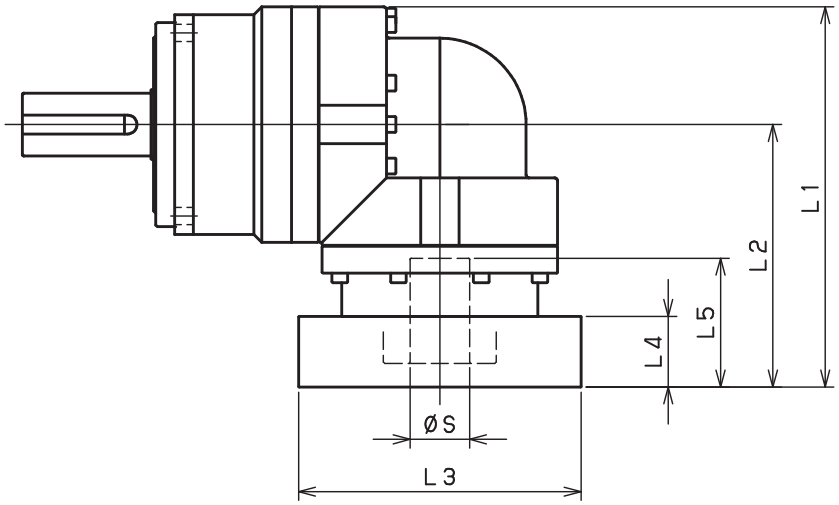
*1) Double reduction : 1/3~ 1/10

*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-060 – 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-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 (≤ Ø 8)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	2.120	1.890	1.800	1.760	1.730	1.710	1.700	1.690
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.450	2.220	2.130	2.090	2.060	2.040	2.030	2.020
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	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 (≤ Ø 8)	[kgcm2]	--	0.340	0.380	0.330	0.320	0.370	0.250	0.320	0.250
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.410	0.460	0.400	0.400	0.450	0.330	0.400	0.320
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.600	0.650	0.590	0.590	0.640	0.510	0.590	0.510
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--	--
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 (≤ Ø 8)	[kgcm2]	--	0.320	0.250	0.250	0.250	0.250	0.250	0.250
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.390	0.320	0.320	0.320	0.320	0.320	0.320
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.580	0.510	0.510	0.510	0.510	0.510	0.510
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--
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

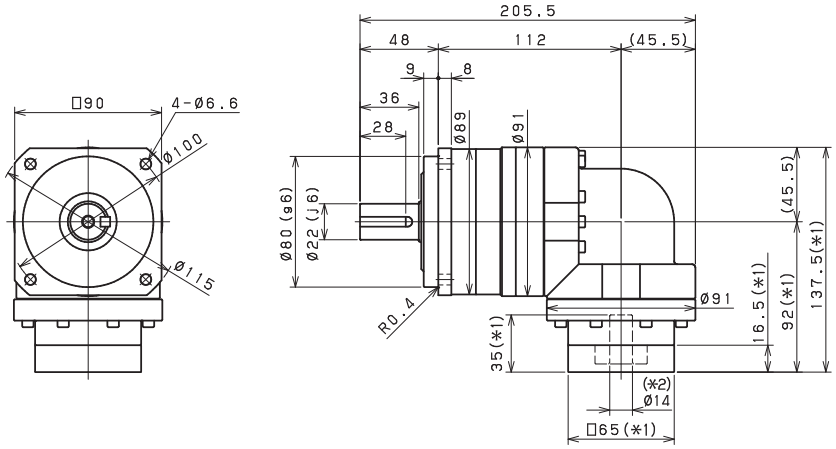
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

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

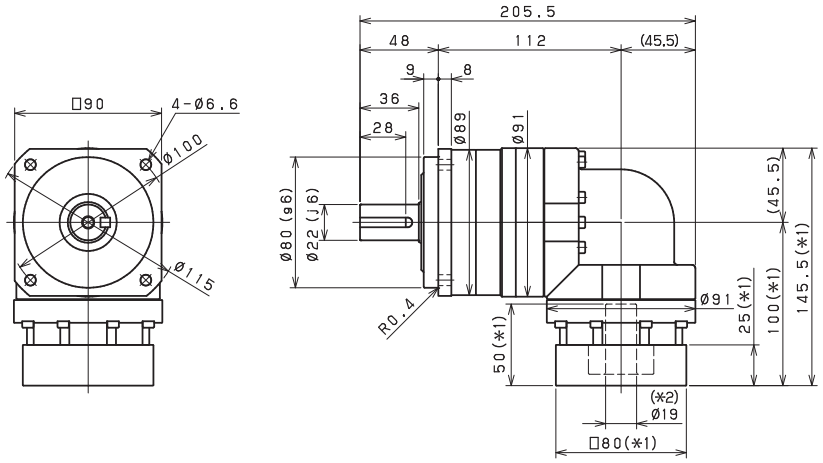
*15) The weight may vary slightly between models

EVB-090 – 2-Stage Dimensions

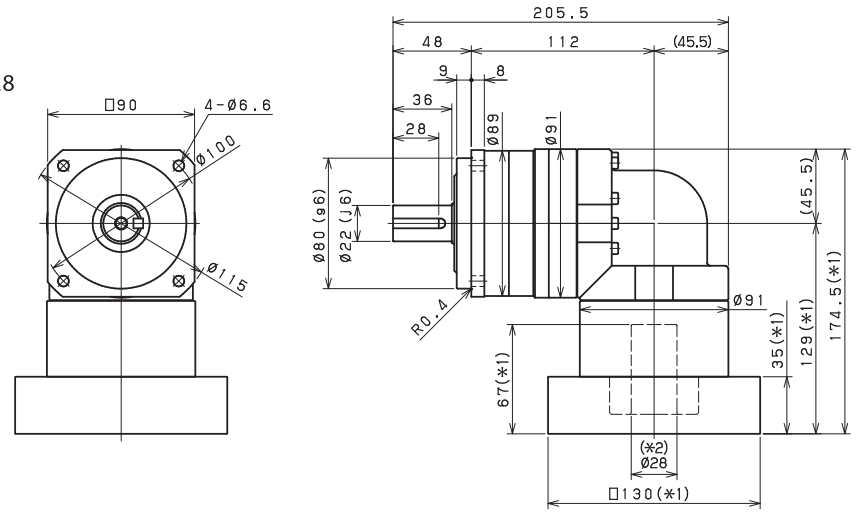
Input shaft bore ≦φ14

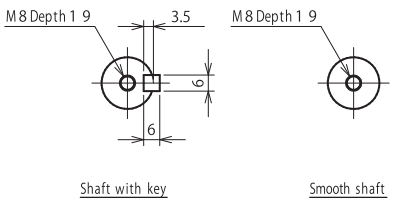


Input shaft bore ≦φ19



Input shaft bore ≦φ28



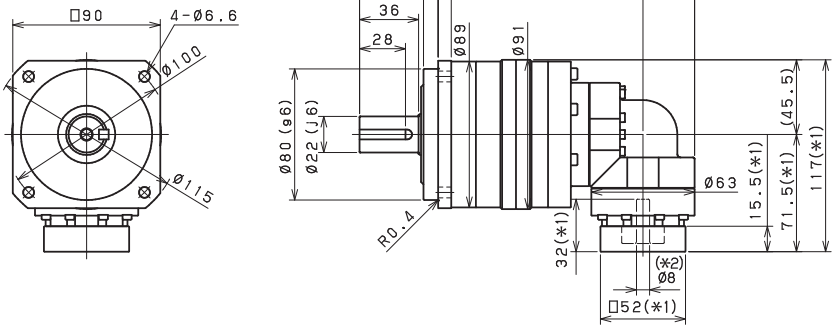


*1) Length will vary depending on motor

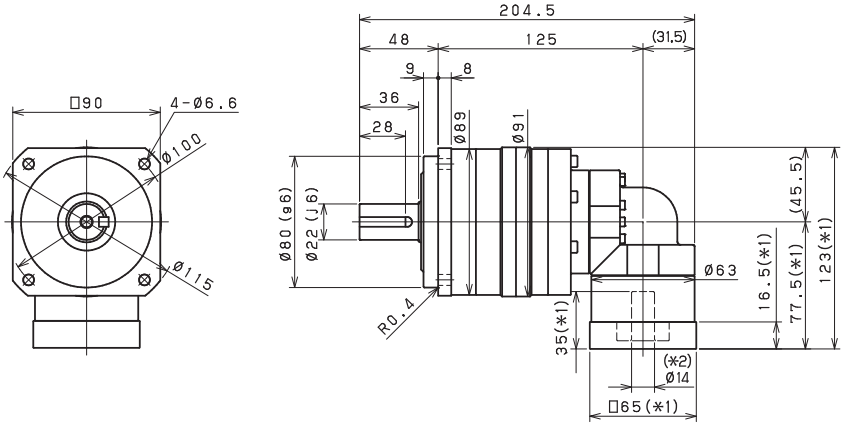
*2) Bushing will be inserted to adapt to motor shaft

EVB-090 – 3-Stage Dimensions

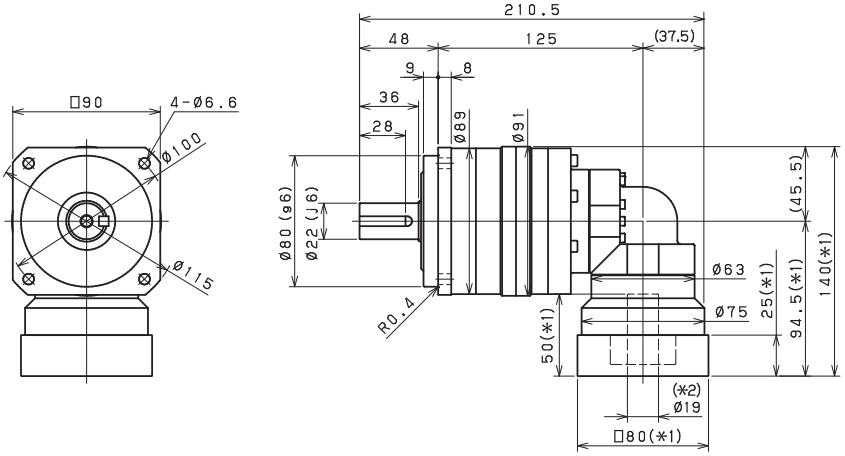
Input shaft bore ≦φ8

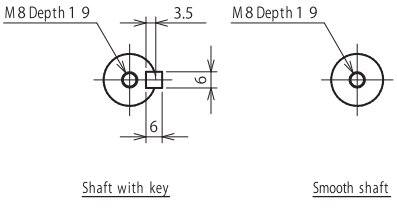


Input shaft bore ≦φ14



Input shaft bore ≦φ19

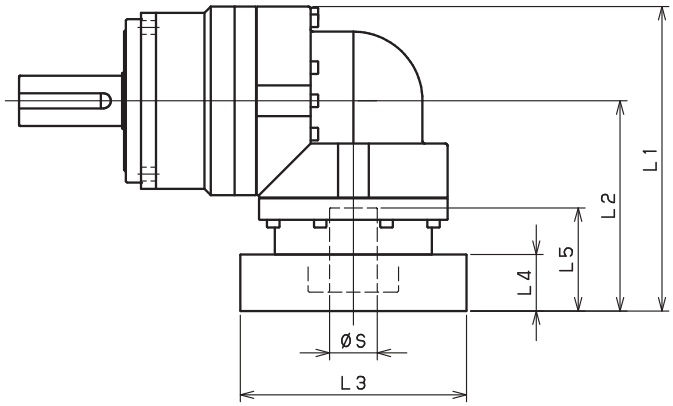




*1) Length will vary depending on motor

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

EVB-090 – 2-Stage Adapter Dimensions



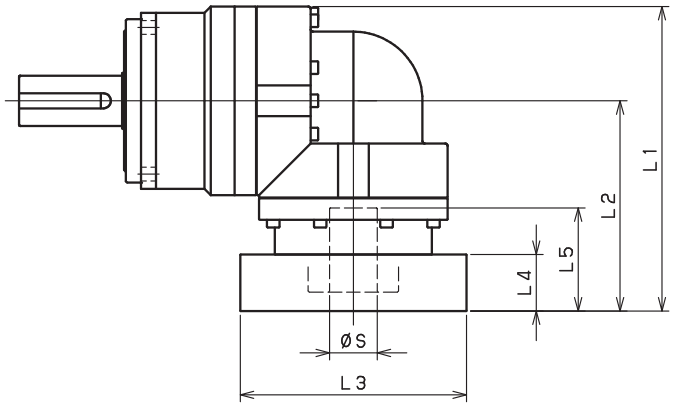
Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVB-090-□-□-8** (S≦8)	AA•AC•AD•AF•AG•AL•AM•AN•AQ	--	--	--	--	--
	AB•AE•AH•AJ•AK	--	--	--	--	--
	BA•BB•BD•BE•BG•BH•BJ	--	--	--	--	--
	CA	--	--	--	--	--
EVB-090-□-□-14** (8< S≦14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	137.5	92	□65	16.5	35
	BC•BH•BM•BN	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
	JA	152.5	107	□150	31.5	50
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
	JB	160.5	115	□150	40	65
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
	JA	138	92.5	□150	31.5	50
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
	JB	155	109.5	□150	40	65
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.

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 (≤ Ø 14)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	6.740	5.490	5.020	4.770	4.650	4.550	4.490	4.460
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	8.340	7.080	6.610	6.360	6.240	6.140	6.080	6.050
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	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 (≤ Ø 14)	[kgcm2]	--	2.250	2.460	2.200	2.180	2.400	1.870	2.160	1.860
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.580	2.790	2.530	2.510	2.730	2.200	2.490	2.190
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	4.700	4.910	4.650	4.640	4.860	4.330	4.620	4.320
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--	--
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 (≤ Ø 14)	[kgcm2]	--	2.150	1.860	1.850	1.850	1.850	1.850	1.850
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	2.480	2.190	2.180	2.180	2.180	2.180	2.180
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	4.610	4.310	4.310	4.310	4.310	4.310	4.310
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--
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

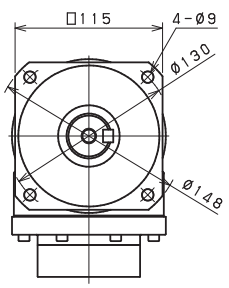
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

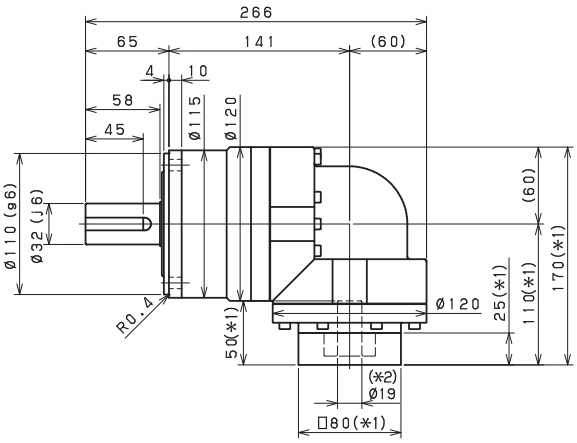
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

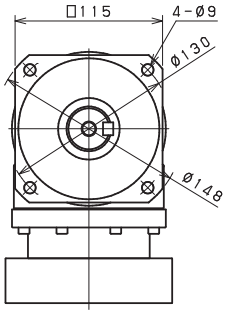
EVB-115 – 2-Stage Dimensions

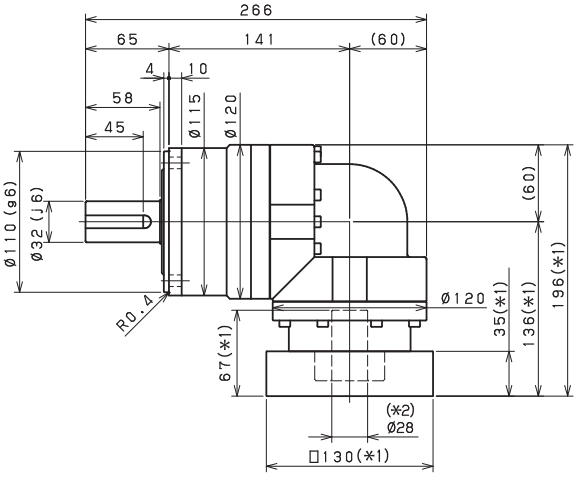
Input shaft bore ≦φ19



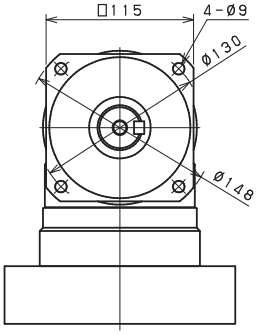


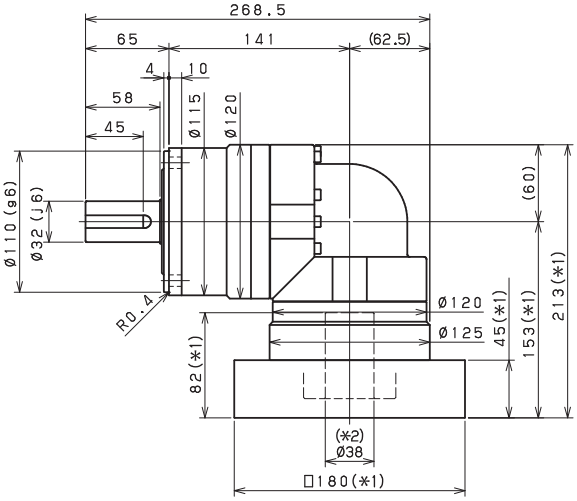
Input shaft bore ≦φ28

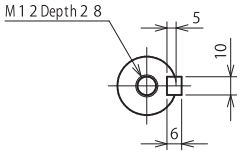




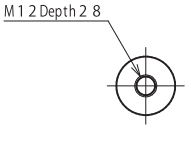
Input shaft bore ≦φ38







Shaft with key



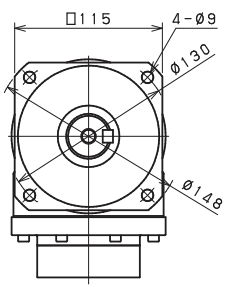
Smooth shaft

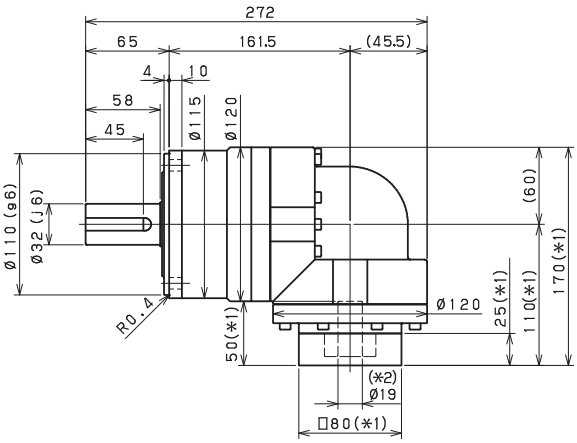
*1) Length will vary depending on motor.

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

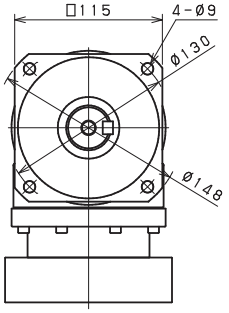
EVB-115 – 3-Stage Dimensions

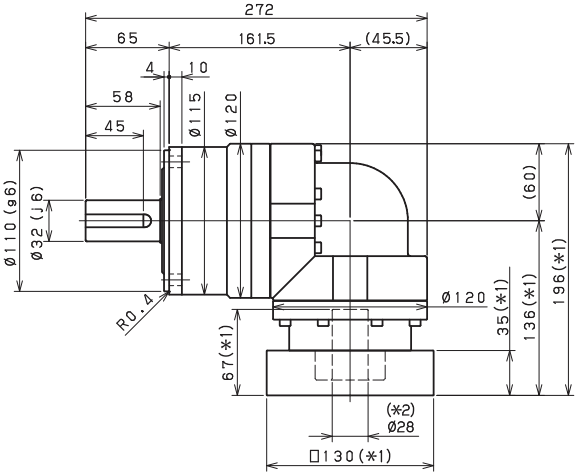
Input shaft bore ≦φ14



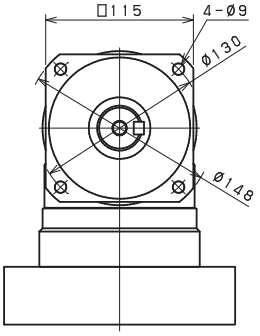


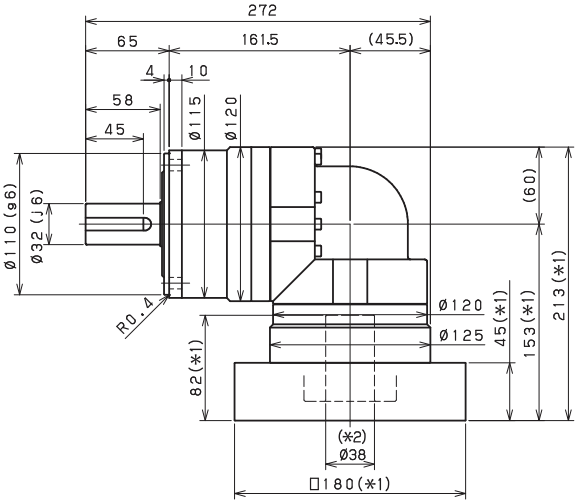
Input shaft bore ≦φ19

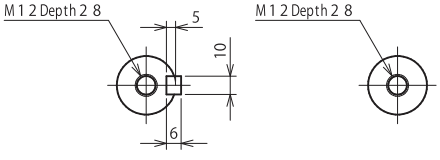




Input shaft bore ≦φ28





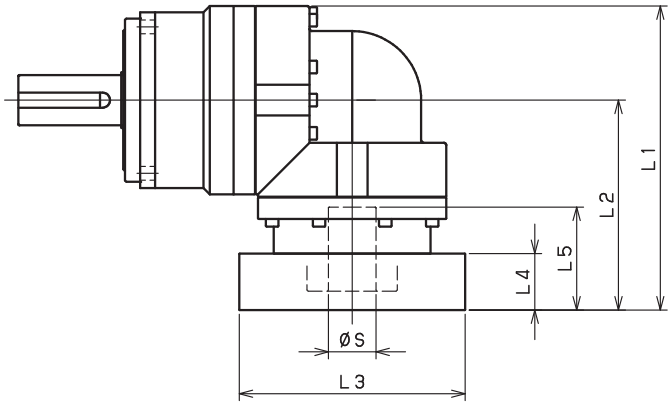


Shaft with key　　Smooth shaft

*1) Length will vary depending on motor.

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

EVB-115 – 2-Stage Adapter Dimensions



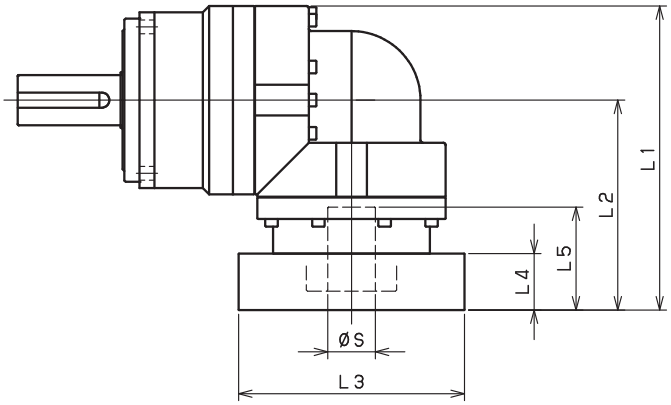
Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVB-115-□-□-14** (S≦ 14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	--	--	--	--	--
	BC•BH•BM•BN	--	--	--	--	--
	CA•CC	--	--	--	--	--
	DA•DB•DC•DD•DF•DH•DJ	--	--	--	--	--
	EA•EB•EC•EF•EG•EK•EL	--	--	--	--	--
	FA	--	--	--	--	--
	FB	--	--	--	--	--
	JA	--	--	--	--	--
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.

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 (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	23.130	18.570	16.910	16.010	15.580	15.230	14.770	14.660
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	27.500	22.940	21.280	20.380	19.950	19.610	19.410	19.030
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	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 (≤ Ø 19)	[kgcm2]	--	6.400	7.290	6.220	6.150	7.090	4.990	6.090	4.950
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	8.000	8.880	7.810	7.750	8.680	6.580	7.690	6.540
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	15.070	15.960	14.890	14.820	15.760	13.660	14.760	13.610
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--	--	--	--	--
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							

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 (≤ Ø 19)	[kgcm2]	--	6.070	4.930	4.920	4.910	4.910	4.910	4.910
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	7.660	6.520	6.510	6.510	6.500	6.500	6.500
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	14.740	13.590	13.590	13.580	13.580	13.570	13.570
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--	--	--	--
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

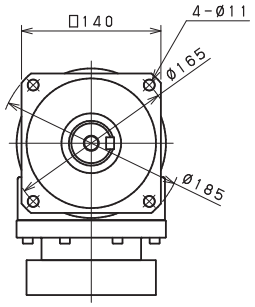
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

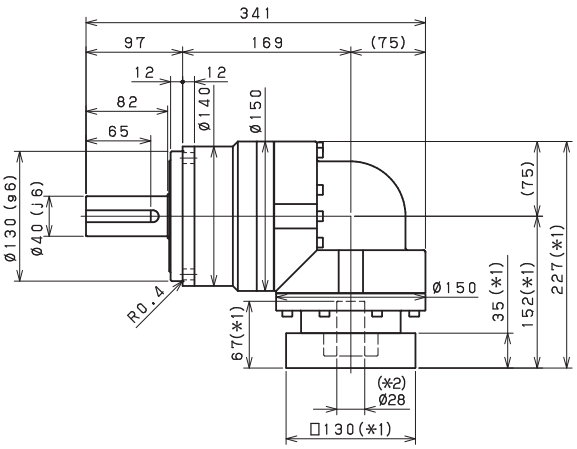
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

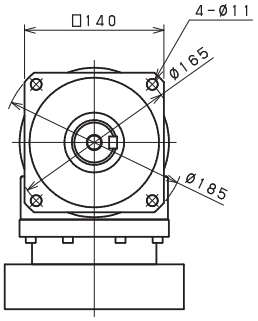
EVB-140 – 2-Stage Dimensions

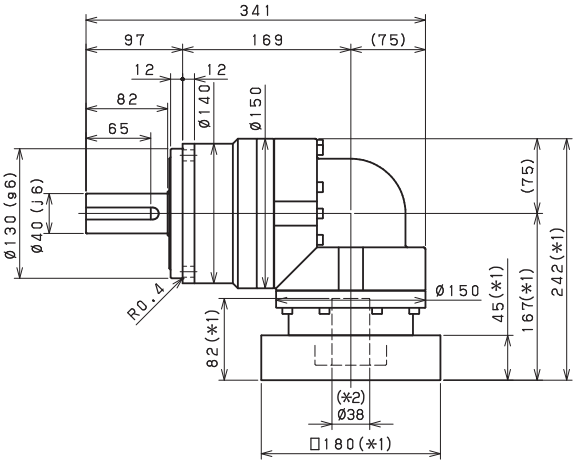
Input shaft bore ≦φ28



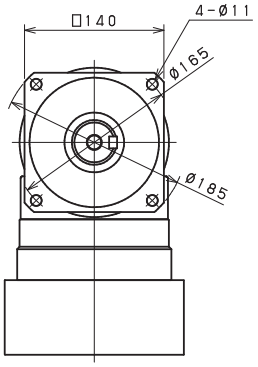


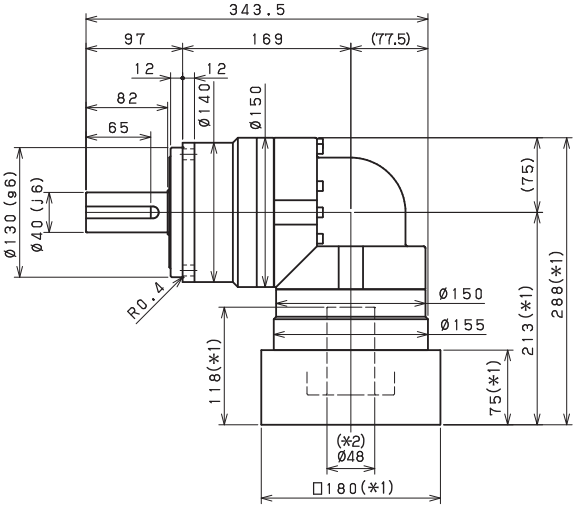
Input shaft bore ≦φ38

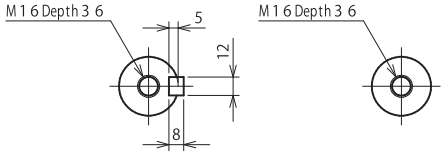




Input shaft bore ≦φ48







Shaft with key

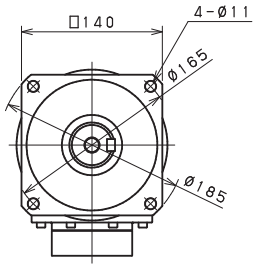
Smooth shaft

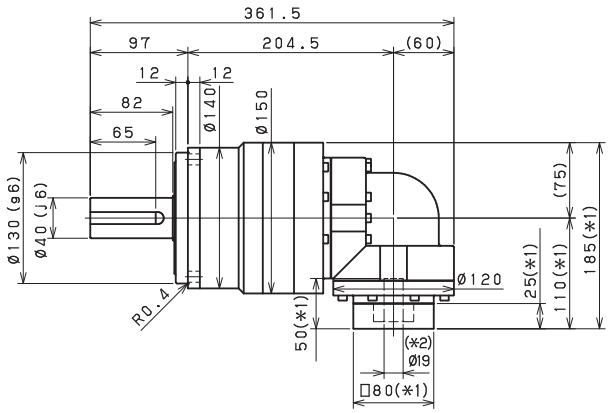
*1) Length will vary depending on motor.

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

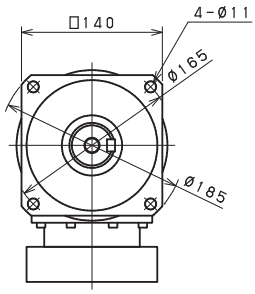
EVB-140 – 3-Stage Dimensions

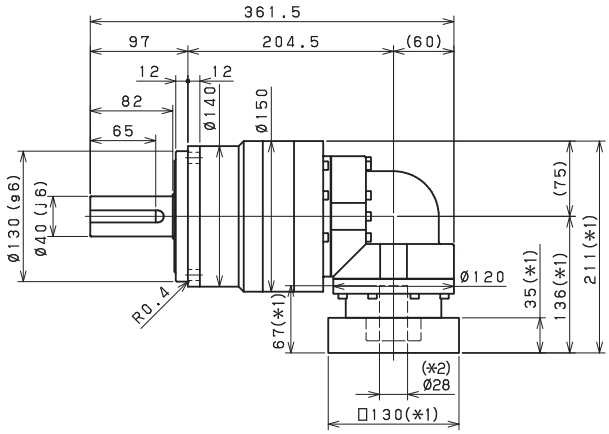
Input shaft bore ≦φ19



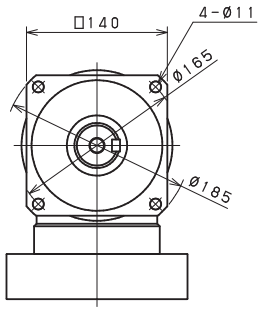


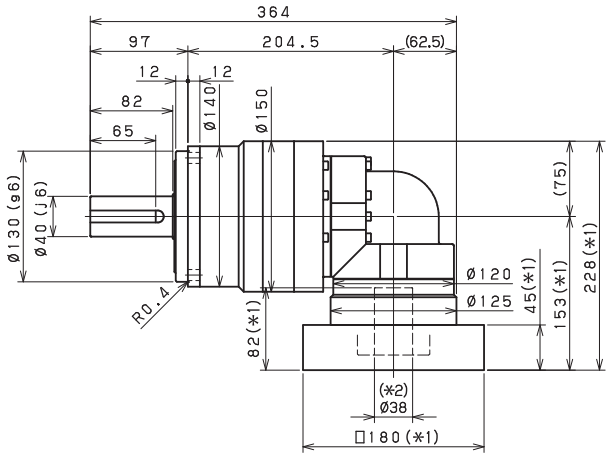
Input shaft bore ≦φ28

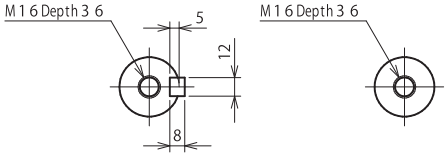




Input shaft bore ≦φ38



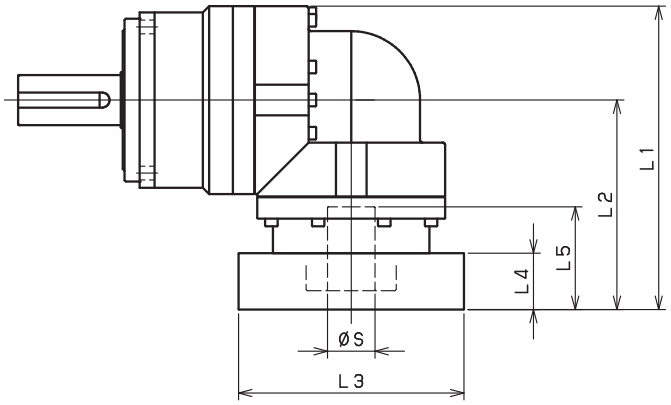




*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor 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	--	--	--	--	--
	JA	--	--	--	--	--
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
	MB	237	162	□220	45	77
EVB-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
	LA	242	167	□200	45	82
	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
EVB-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.

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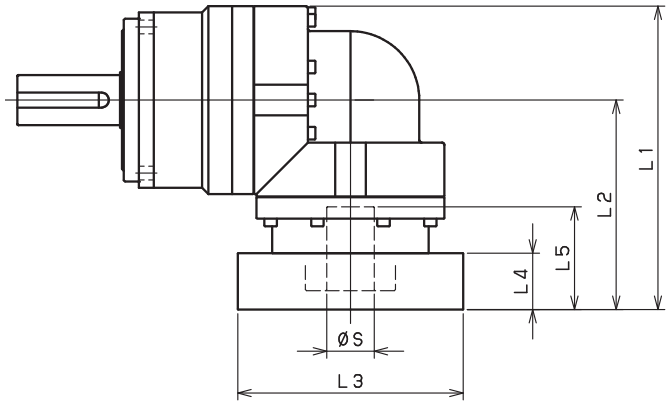
EVB-140 – 3-Stage Adapter Dimensions



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
	JA	195	120	□150	35	60
EVB-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
EVB-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
	LA	228	153	□200	45	82
	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
EVB-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.

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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 (≤Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤Ø 38)	[kgcm2]	--	93.71	77.72	71.89	68.74	66.43	65.27	64.60	64.28
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	128.6	112.6	106.8	103.6	101.3	100.1	99.46	99.14
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	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 (≤Ø 28)	[kgcm2]	--	11.49	12.09	11.15	10.98	11.59	10.33	10.83	10.24
Moment of Inertia (≤Ø 38)	[kgcm2]	--	20.28	20.88	19.94	19.77	20.38	19.11	19.62	19.03
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	25.10	25.70	24.76	24.59	25.20	23.94	24.44	23.85
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--	--
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 (≤Ø 28)	[kgcm2]	--	10.76	10.20	10.18	10.16	10.15	10.15	10.14
Moment of Inertia (≤Ø 38)	[kgcm2]	--	19.55	18.99	18.96	18.95	18.94	18.93	18.93
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	24.37	23.81	23.78	23.77	23.76	23.75	23.75
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--
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

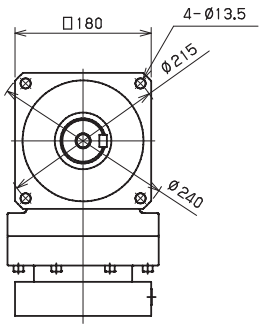
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

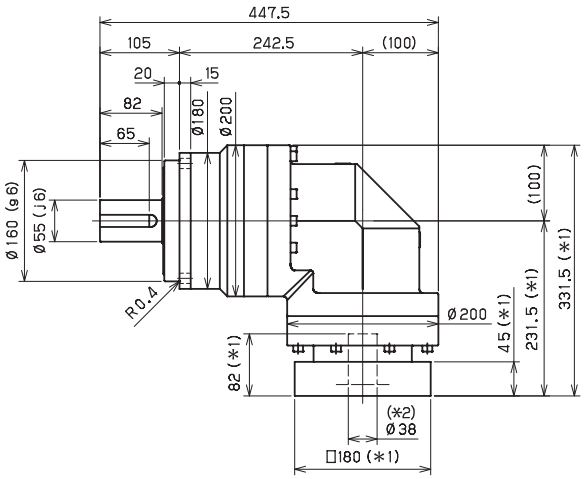
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

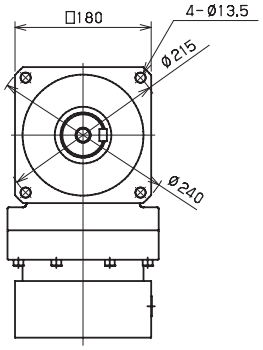
EVB-180 – 2-Stage Dimensions

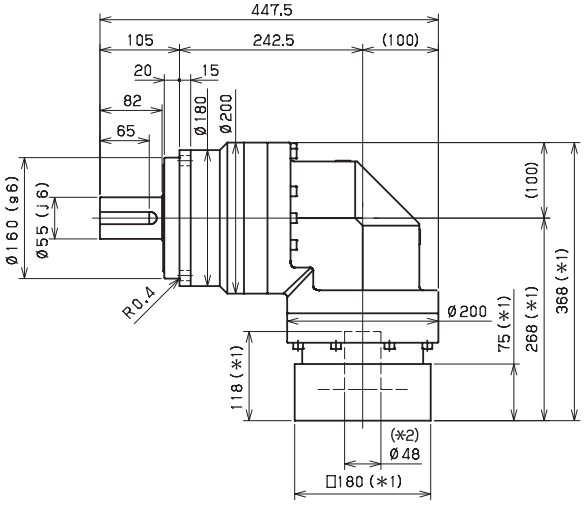
Input shaft bore ≦φ38



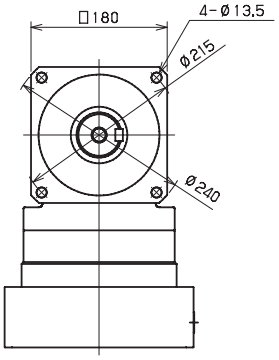


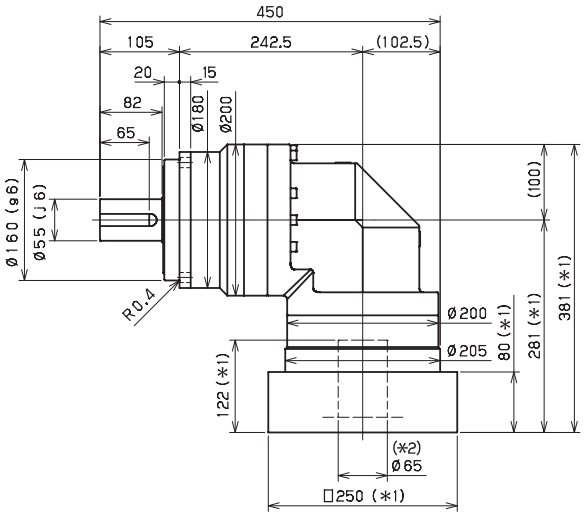
Input shaft bore ≦φ48

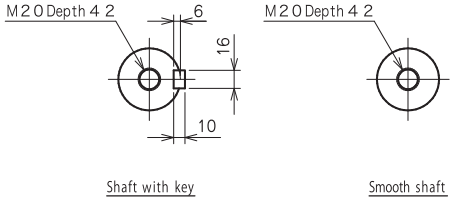




Input shaft bore ≦φ65





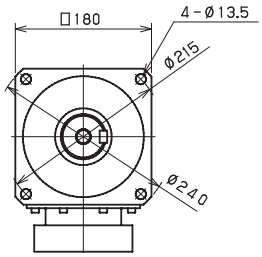


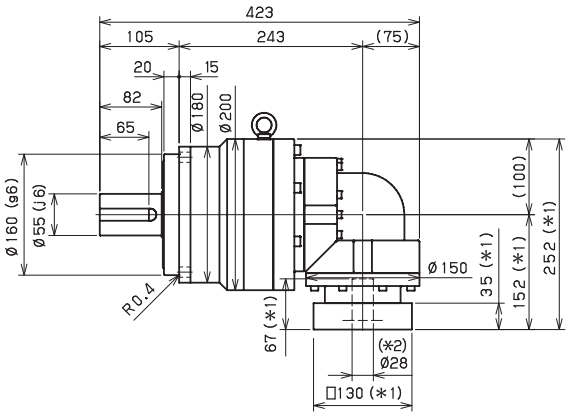
*1) Length will vary depending on motor.

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

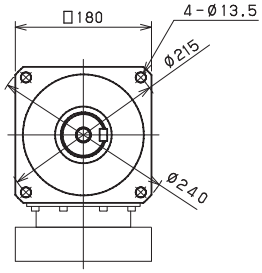
EVB-180 – 3-Stage Dimensions

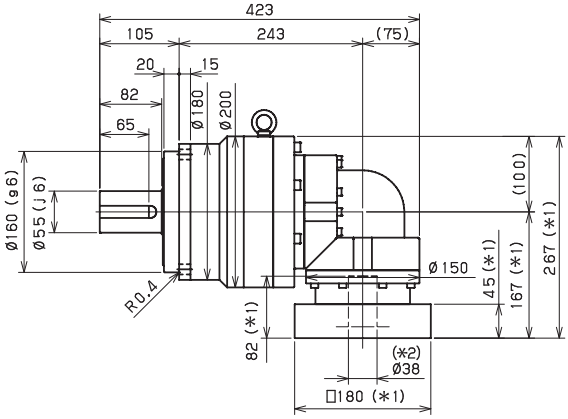
Input shaft bore ≦φ28



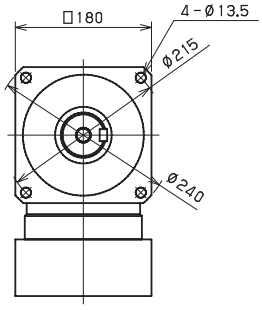


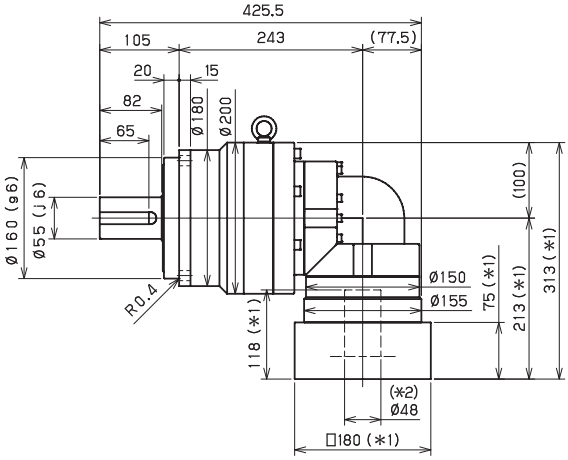
Input shaft bore ≦φ38

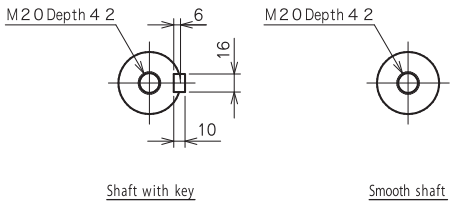




Input shaft bore ≦φ48



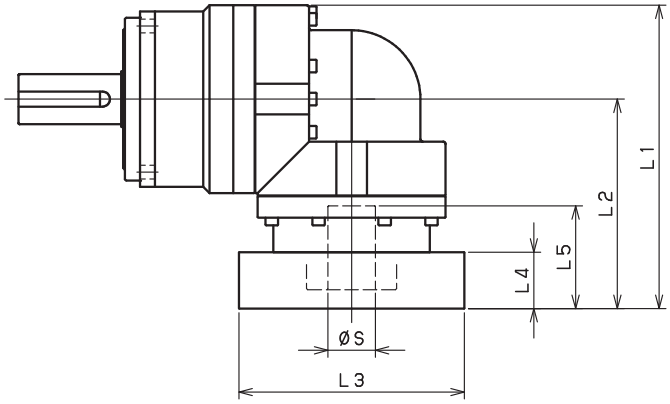




*1) Length will vary depending on motor.

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

EVB-180 – 2-Stage Adapter Dimensions



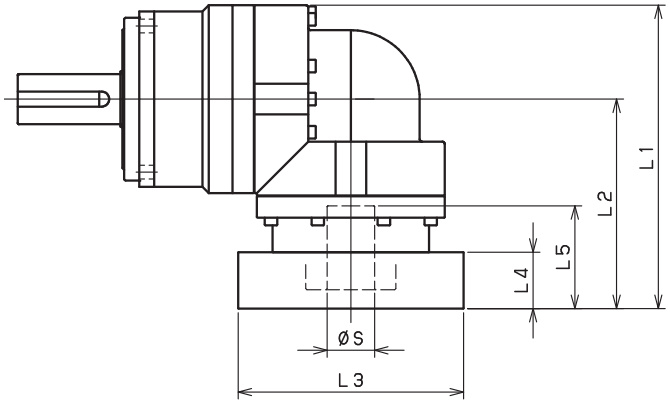
Model number	**: Adapter code	2-Stage				
		L1	L2	L3	L4	L5
EVB-180-□-□-28** (S≦ 28)	FA•FB•FC	--	--	--	--	--
	GA•GB•GC•GD•GE•GF•GG•GH	--	--	--	--	--
	HA•HC•HD	--	--	--	--	--
	HB	--	--	--	--	--
	HF	--	--	--	--	--
	JA•JB•JC•JF	--	--	--	--	--
	KA•KB•KE	--	--	--	--	--
	LA	--	--	--	--	--
	LB	--	--	--	--	--
	MA	--	--	--	--	--
	MB	--	--	--	--	--
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
	NA	331.5	231.5	□250	45	82
EVB-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
EVB-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.

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.

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 (≤Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤Ø 48)	[kgcm2]	--	148.0	122.9	113.3	108.1	104.7	102.7	101.6	101.0
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	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 (≤Ø 38)	[kgcm2]	--	36.32	37.24	35.75	35.47	36.39	34.39	35.21	34.25
Moment of Inertia (≤Ø 48)	[kgcm2]	--	66.14	67.06	65.57	65.28	66.21	64.21	65.03	64.07
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--	--
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 (≤Ø 38)	[kgcm2]	--	35.10	34.18	34.14	34.11	34.10	34.09	34.08
Moment of Inertia (≤Ø 48)	[kgcm2]	--	64.92	63.99	63.95	63.93	63.91	63.90	63.90
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--
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

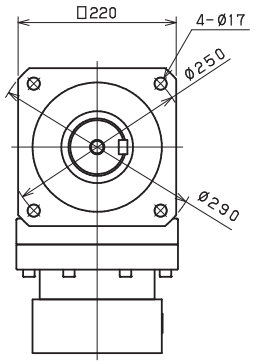
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

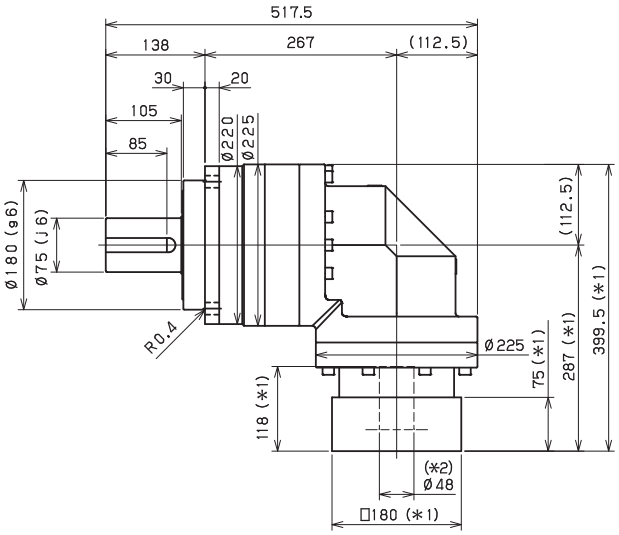
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

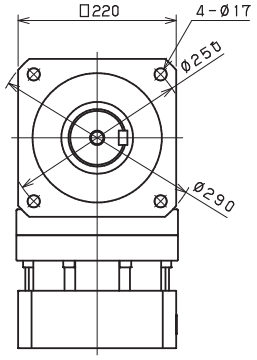
EVB-220 – 2-Stage Dimensions

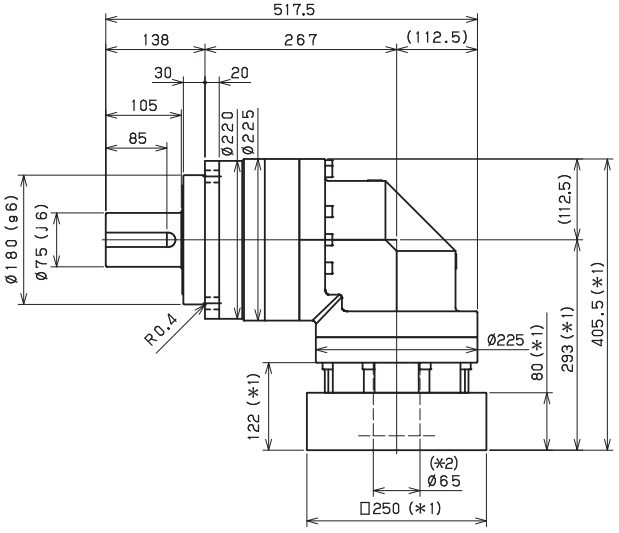
Input shaft bore ≦φ48

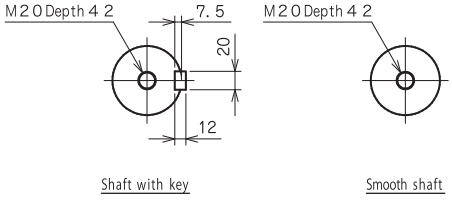




Input shaft bore ≦φ65





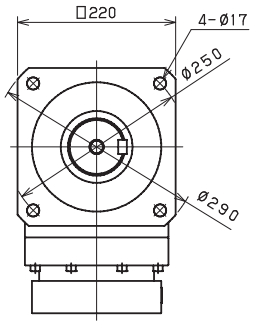


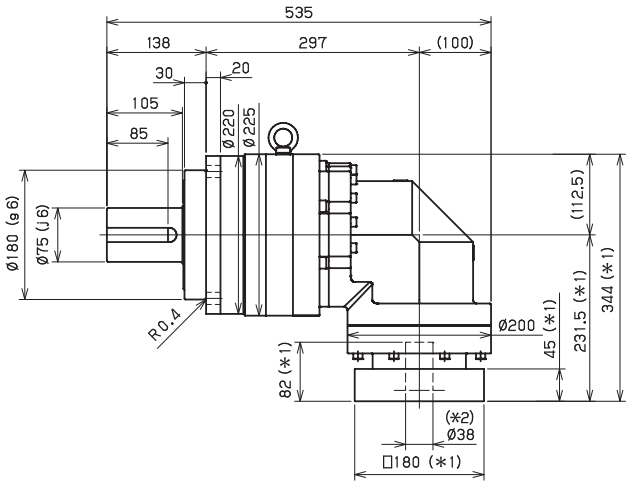
*1) Length will vary depending on motor

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

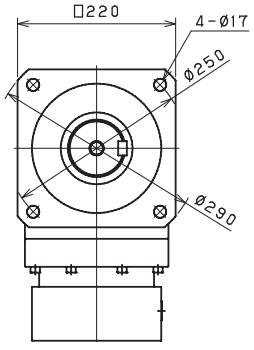
EVB-220 – 3-Stage Dimensions

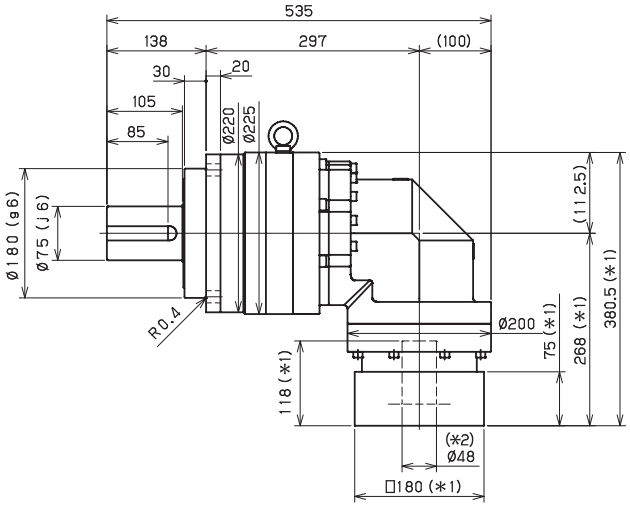
Input shaft bore ≦φ38

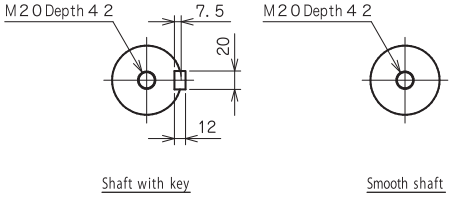




Input shaft bore ≦φ48





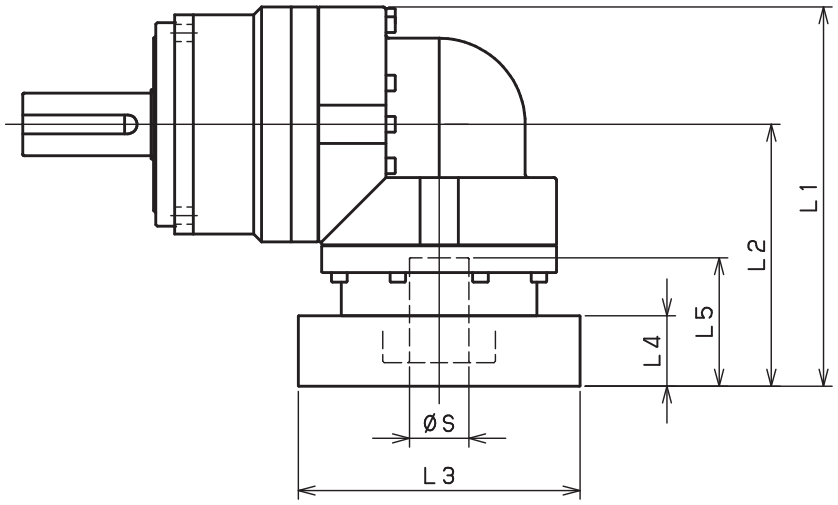


*1) Length will vary depending on motor

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

EVB

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

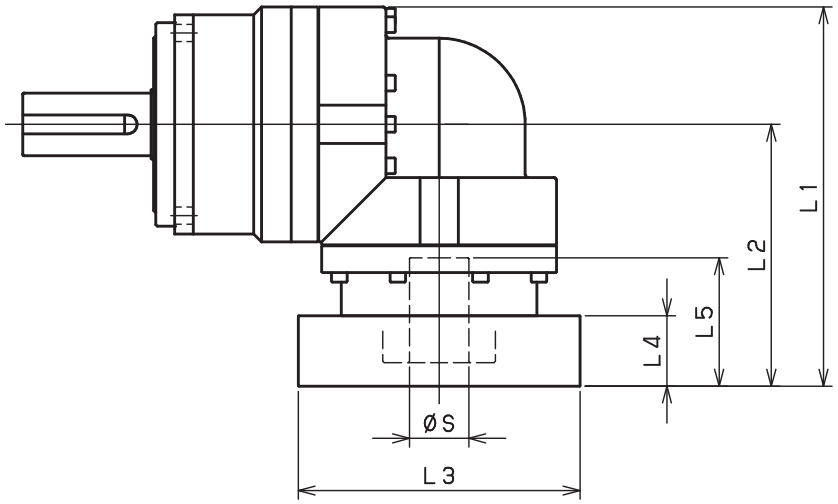
*1) Double reduction : 1/3~ 1/10

*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-SHIMP

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