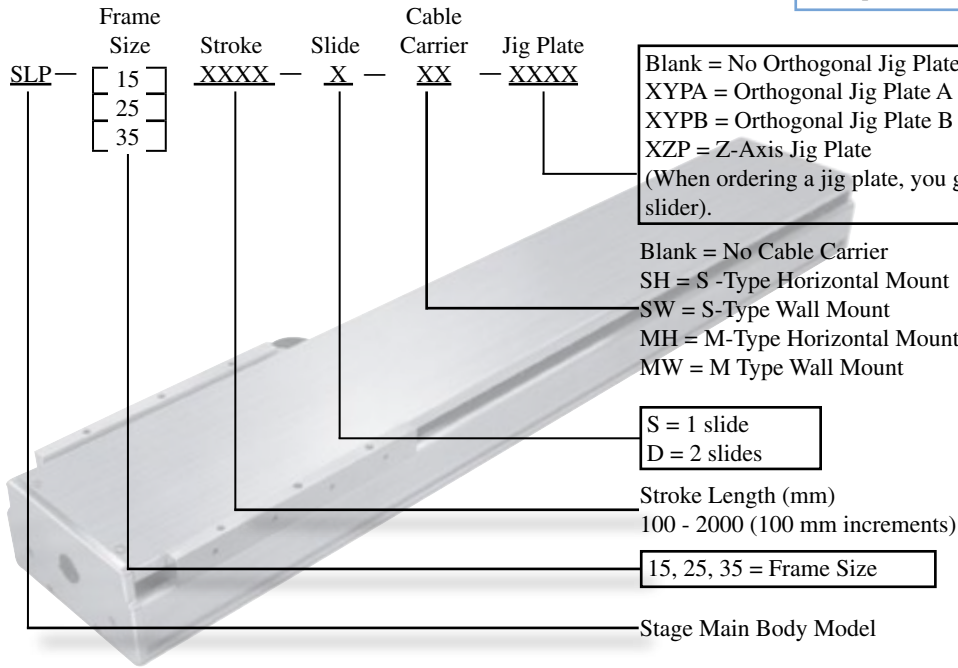


### SLP Stage Part Number Guide

Example model number: SLP15-200-S-SH



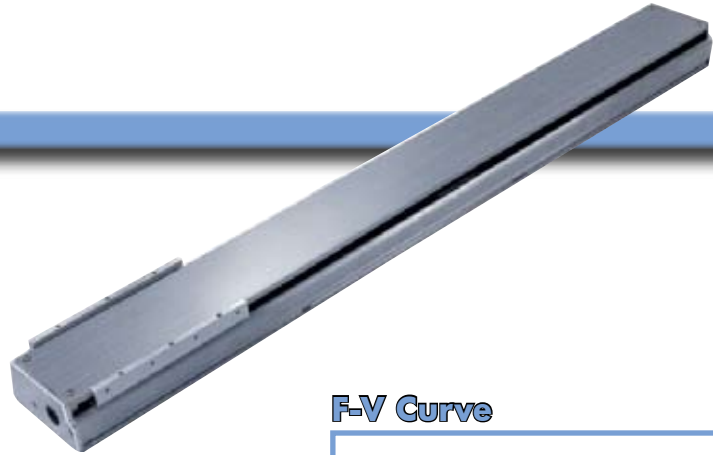
#### SLP Motor Cable Part Numbers

SL-M3: 3m motor cable  
SL-M6: 6m motor cable  
SL-M9: 9m motor cable

#### SLP Encoder Cable Part Numbers

SL-A3: Single-end D-sub 3m  
SL-A6: Single-end D-sub 6m  
SL-A9: Single-end D-sub 9m  
SL-B3: Double-end D-sub 3m  
SL-B6: Double-end D-sub 6m  
SL-B9: Double-end D-sub 9m

# SLP15

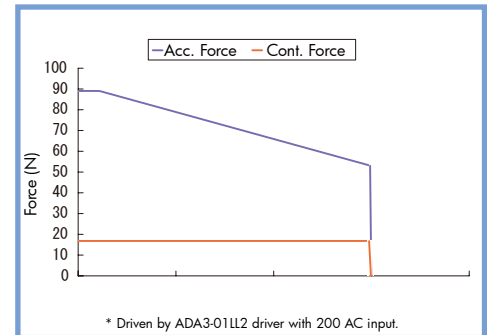


- High Thrust, High Speed, High Responsiveness, High Precision, Long Stroke
- Simple Design and Easy Installation
- No-Contact Drive means Low Noise, Long Lifespan, and Maintenance-Free

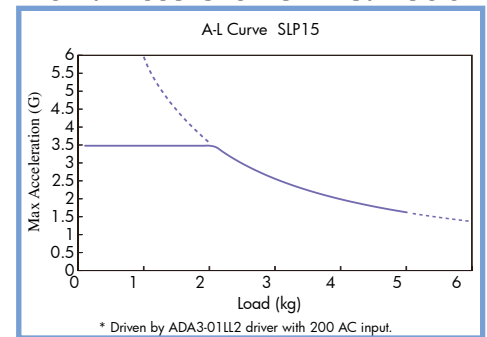
### Stage Specifications

Rated Spec	Unit	Specification
Encoder	$\mu\text{m}$	1 (HEIDENHAIN LIDA279)
Continuous Force	N	17
Peak Force*1	N	90
Continuous Current*2	A	0.51
Peak Current*1	A	2.7
Force Constant (Kf)	N/A rms	33
Back EMF	V/m/s	11
Resistance*3	ohm	56
Inductance*3	mH	24
Magnetic Pitch (N-N)	mm	60
Maximum Acceleration*4	G	3.5
Maximum Velocity*4,*5	m/s	3
Repeatability	mm	$\pm 0.0005$
Max Load, Horizontal	kg	5
Max Load, Wall	kg	3
Stroke, Single Forcer*6	mm	100-1300 (100 interval)
Stroke, Double Forcer*6	mm	100-1200 (100 interval)
Operating Temperature	$^{\circ}\text{C}$	0~+40
Operating Humidity	%	20-80 (no condensation)
Storage Temperature	$^{\circ}\text{C}$	-20~+60
Moving Mass	kg	0.5

### F-V Curve

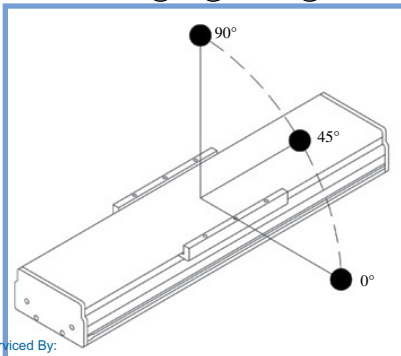


### Max. Acceleration vs. Load



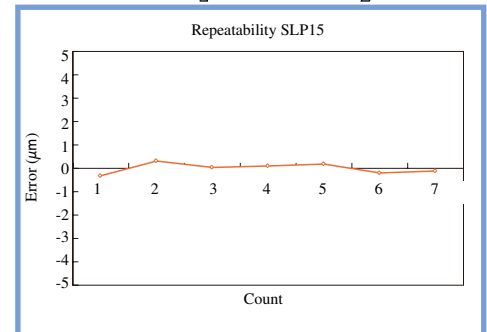
\*1 - Peak Force given is based on the output with the use of the following driver:  
SLP15: (14) Hitachi Production Machine System ADA3-01LL2  
\*2 - The effective amperage when the temperature increase of the coil front becomes 110K.  
\*3 - An average value of U-V, U-W, and V-W.  
\*4 - There are instances when this is not achieved due to load or operation specifications.  
\*5 - There are instances when this is not achieved due to the length of the stroke.  
\*6 - Please inquire further concerning strokes not explained.

### Overhanging Weight Tolerance (in mm)



	Load	0°	45°	90°
Horizontal	1kg	380	400	450
	2kg	220	250	270
	3kg	160	190	200
	4kg	120	140	150
	5kg	100	110	130
Wall	1kg	440	390	320
	2kg	260	230	180
	3kg	180	170	120

### Position Repeatability



## SLP Stages

# SLP15

### Single Slider Dimensions

For Frame Ground Travel  
EG Label

4-M3 Depth 4  
Opposite side is the same

Detail For P&Q

2 x N - M3 Depth 5 Pitch 100 x (N-1)

2 x N -  $\phi$ 3.5 Drill  $\phi$ 6 Countersink Depth 3 (From Rear)

10 (Including Mechanical Stop)  
4-M4 Depth 10 2- $\phi$ H7 Depth 10

Stroke

Encoder Cable

Motor Power Supply Cable

All units are listed as mm

**Power Supply Cable Specifications**  
Hitachi Cable  
UL2464  
AWG 25  
Outer Diameter  $\phi$  4.3mm  
JST XM Connector (Male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter  $\phi$  4.3 mm  
Dsub 15 Pin Connector (Male)

N = number of holes on stage

Stroke (mm)	L (mm)	N	Weight (Kg)
100	270	3	1.8
200	370	4	2.2
300	470	5	2.6
400	570	6	3.1
500	670	7	3.5
600	770	8	4.0
700	870	9	4.4
800	970	10	4.8
900	1070	11	5.3
1000	1170	12	5.7
1100	1270	13	6.1
1200	1370	14	6.6
1300	1470	15	7.0

### Double Slider Dimensions

For Frame Ground Travel  
EG Label

4-M3 Depth 4  
Opposite side is the same

Detail For P&Q

2 x N - M3 Depth 5 Pitch 100 x (N-1)

2 x N -  $\phi$ 3.5 Drill  $\phi$ 6 Countersink Depth 3 (From Rear)

10 (Including Mechanical Stop)  
4-M4 Depth 10 2- $\phi$ H7 Depth 10

Stroke

Encoder Cable

Motor Power Supply Cable

All units are listed as mm

**Power Supply Cable Specifications**  
Hitachi Cable  
UL2464  
AWG 25  
Outer Diameter  $\phi$  4.3mm  
JST XM Connector (Male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter  $\phi$  4.3 mm  
Dsub 15 Pin Connector (Male)

N = number of holes on stage

Stroke (mm)	L (mm)	N	Weight (Kg)
100	420	4	3.0
200	520	5	3.5
300	620	6	3.9
400	720	7	4.3
500	820	8	4.8
600	920	9	5.2
700	1020	10	5.6
800	1120	11	6.1
900	1220	12	6.5
1000	1320	13	6.9
1100	1420	14	7.4
1200	1520	15	7.8

# SLP25



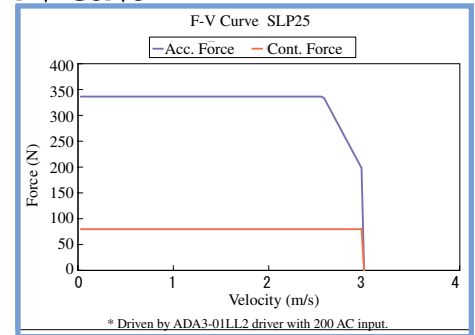
- High Thrust, High Speed, High Responsiveness, High Precision, Long Stroke
- Simple Design and Easy Installation
- No-Contact Drive means Low Noise, Long Lifespan, and Maintenance-Free

## Stage Specifications

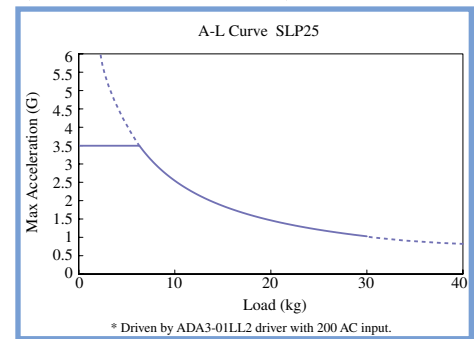
Rated Spec	Unit	Specification
Encoder	μm	1 (HEIDENHAIN LIDA279)
Continuous Force	N	80
Peak Force*1	N	340
Continuous Current*2	A	1.2
Peak Current*1	A	5.1
Force Constant (Kf)	N/A rms	66
Back EMF	V/m/s	22
Resistance*3	ohm	22
Inductance*3	mH	31
Magnetic Pitch (N-N)	mm	90
Maximum Acceleration*4	G	3.5
Maximum Velocity*4,*5	m/s	3
Repeatability	mm	±0.0005
Max Load, Horizontal	kg	30
Max Load, Wall	kg	15
Stroke, Single Forcer*6	mm	200-1200 (100 interval)
Stroke, Double Forcer*6	mm	200-1200 (100 interval)
Operating Temperature	°C	0~+40
Operating Humidity	%	20~80 (no condensation)
Storage Temperature	°C	-20~+60
Moving Mass	kg	2.7

\*1 - Peak Force given is based on the output with the use of the following driver:  
SLP15: (14) Hitachi Production Machine System ADA3-01LL2  
\*2 - The effective amperage when the temperature increase of the coil front becomes 110K.  
\*3 - An average value of U-V, U-W, and V-W.  
\*4 - There are instances when this is not achieved due to load or operation specifications.  
\*5 - There are instances when this is not achieved due to the length of the stroke.  
\*6 - Please inquire further concerning strokes not explained.

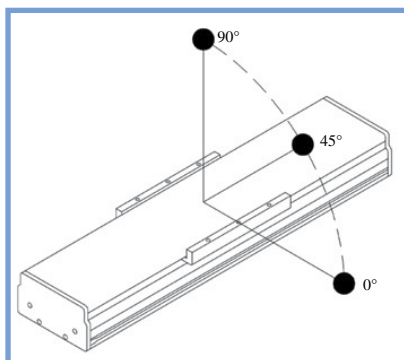
## F-V Curve



## Max. Acceleration vs. Load

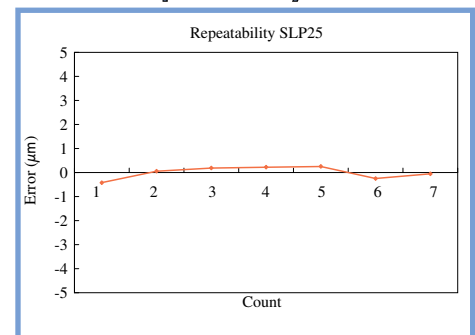


## Overhanging Weight Tolerance (in mm)



	Load	0°	45°	90°
Horizontal	5kg	1000	1000	1000
	10kg	1000	800	1000
	15kg	800	650	1000
	20kg	700	580	1000
	25kg	550	500	1000
	30kg	500	450	1000
Wall	3kg	1000	1000	1000
	6kg	1000	800	450
	9kg	1000	670	400
	12kg	1000	580	350
	15kg	1000	500	300

## Position Repeatability



# SLP25

## Single Slider Dimensions

Technical drawings for Single Slider Dimensions. The main drawing shows a side view of the stage with dimensions: 162 (width), 147 (width), 75 (height), 100 (height), and 100 (height). It also shows a top view with dimensions: 30, 50, 50, 50, 100, and Pitch 100 x (N-1). A detail for P&Q shows a cross-section with dimensions: 4.5, 10, 5.3, 13, 6.5, and 10. A table of specifications is provided on the right.

Stroke (mm)	L (mm)	N	Weight (Kg)
200	450	5	9.7
300	550	5	11
400	650	6	12
500	750	7	14
600	850	8	15
700	950	9	16
800	1050	10	18
900	1150	11	19
1000	1250	12	20
1100	1350	13	22
1200	1450	14	23

N = number of holes on stage

**Motor Power Supply Cable Specifications**  
Hitachi Cable  
UL2570  
AWG 18  
Outer Diameter ø 6.1  
JST HL Connector (male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter ø 4.3  
Dsub 15 Pin Connector (Male)

All units are listed as mm

## Double Slider Dimensions

Technical drawings for Double Slider Dimensions. The main drawing shows a side view of the stage with dimensions: 162 (width), 147 (width), 79 (height), 100 (height), and 100 (height). It also shows a top view with dimensions: 30, 50, 50, 50, 100, and Pitch 100 x (N-1). A detail for P&Q shows a cross-section with dimensions: 4.5, 10, 5.3, 13, 6.5, and 10. A table of specifications is provided on the right.

Stroke (mm)	L (mm)	N	Weight (Kg)
200	670	7	16
300	770	8	17
400	870	9	19
500	970	10	20
600	1070	11	22
700	1170	12	23
800	1270	13	24
900	1370	14	26
1000	1470	15	27
1100	1570	16	28
1200	1670	17	30

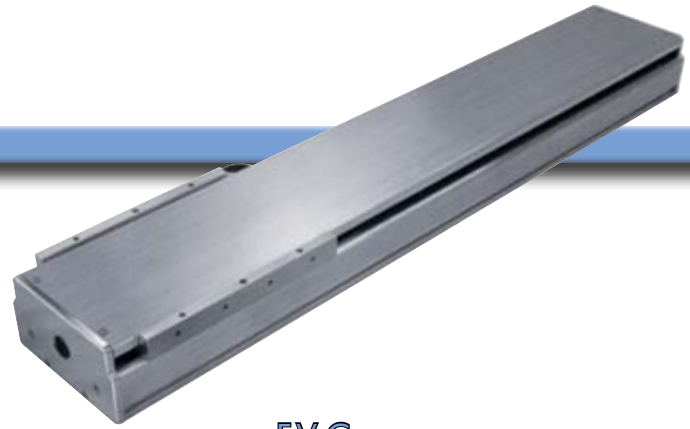
N = number of holes on stage

**Motor Power Supply Cable Specifications**  
Hitachi: Power Supply Co.  
UL2570  
AWG 18  
Outer Diameter ø 6.1  
JST HL Connector (male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter ø 4.3  
Dsub 15 Pin Connector (Male)

All units are listed as mm

# SLP35



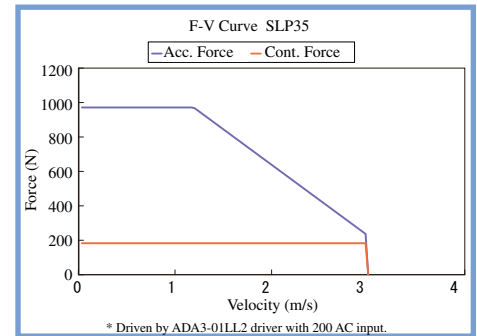
- High Thrust, High Speed, High Responsiveness, High Precision, Long Stroke
- Simple Design and Easy Installation
- No-Contact Drive means Low Noise, Long Lifespan, and Maintenance-Free

## Stage Specifications

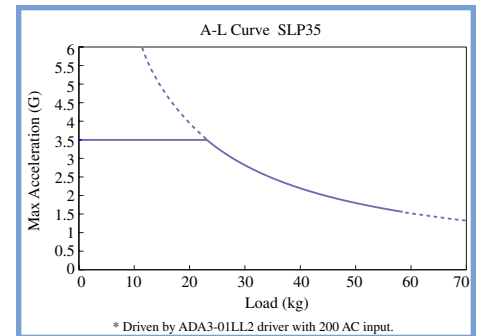
Rated Spec	Unit	Specification
Encoder	μm	1 (HEIDENHAIN LIDA279)
Continuous Force	N	185
Peak Force*1	N	970
Continuous Current*2	A	2.7
Peak Current*1	A	14.4
Force Constant (Kf)	N/A rms	68
Back EMF	V/m/s	22
Resistance*3	ohm	7.2
Inductance*3	mH	12
Magnetic Pitch (N-N)	mm	120
Maximum Acceleration*4	G	3.5
Maximum Velocity*4, *5	m/s	3
Repeatability	mm	±0.0005
Max Load, Horizontal	kg	60
Max Load, Wall	kg	30
Stroke, Single Forcer*6	mm	300-1200 (100 interval)
Stroke, Double Forcer*6	mm	300-900 (100 interval)
Operating Temperature	°C	0~+40
Operating Humidity	%	20~80 (no condensation)
Storage Temperature	°C	-20~+60
Moving Mass	kg	4.4

\*1 - Peak Force given is based on the output with the use of the following driver:  
SLP15: (14) Hitachi Production Machine System ADA3-01LL2  
\*2 - The effective amperage when the temperature increase of the coil front becomes 110K.  
\*3 - An average value of U-V, U-W, and V-W.  
\*4 - There are instances when this is not achieved due to load or operation specifications.  
\*5 - There are instances when this is not achieved due to the length of the stroke.  
\*6 - Please inquire further concerning strokes not explained.

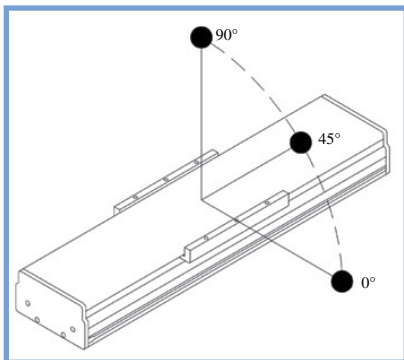
## F-V Curve



## Max. Acceleration vs. Load

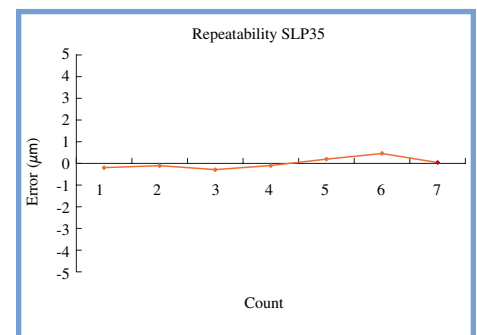


## Overhanging Weight Tolerance (in mm)



	Load	0°	45°	90°
Horizontal	10kg	1000	1000	1000
	20kg	1000	900	1000
	30kg	940	780	1000
	40kg	840	660	1000
	50kg	750	590	950
	60kg	680	540	900
Wall	5kg	1000	1000	700
	10kg	1000	900	600
	15kg	1000	810	520
	20kg	1000	710	430
	25kg	980	620	350
	30kg	890	530	300

## Position Repeatability



# SLP35

### Single Slider Dimensions

For frame ground terminal  
FG label

186  
90  
163  
P  
Q

30  
50  
50  
50

65  
2xN-M6 Depth 10  
Pitch 100 x (N-1)  
100  
110  
84  
2xN-ø6.5 Drill ø11 Countersink Depth 6.5 (From rear)

20 (Including mechanical stop)  
30 (Including mechanical stop)  
280  
90  
90  
2-ø6H7 Depth 15  
4-M8 Depth 15  
L  
Stroke  
170

Encoder Cable (140)  
Power Supply Cable (140)

All units are listed as mm

Stroke (mm)	L (mm)	N	Weight (Kg)
300	630	6	17
400	730	7	30
500	830	8	21
600	930	9	23
700	1030	10	25
800	1130	11	26
900	1230	12	28
1000	1330	13	30
1100	1430	14	32
1200	1530	15	34

N = number of holes on stage

**Motor Power Supply Cable Specifications**  
Hitachi Cable  
UL2570  
AWG 18  
Outer Diameter ø 6.1  
JST HL Connector (male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter ø 4.3  
Dsub 15 Pin Connector (Male)

### Double Slider Dimensions

For frame ground terminal  
FG label

186  
90  
163  
P  
Q

35  
70  
70  
70  
4-M5 Depth 10

60  
2xN-M6 Depth 10  
Pitch 100 x (N-1)  
100  
110  
118  
2xN-ø6.5 Drill ø6.5 Countersink Depth 6.5 (From rear)

20 (Including mechanical stop)  
5 (mechanical stop)  
30 (Including mechanical stop)  
4-M8 Depth 15  
2-ø6H7 Depth 15  
5 (mechanical stop)  
L  
Stroke  
280  
170

Encoder Cable (140)  
Power Supply Cable (140)

All units are listed as mm

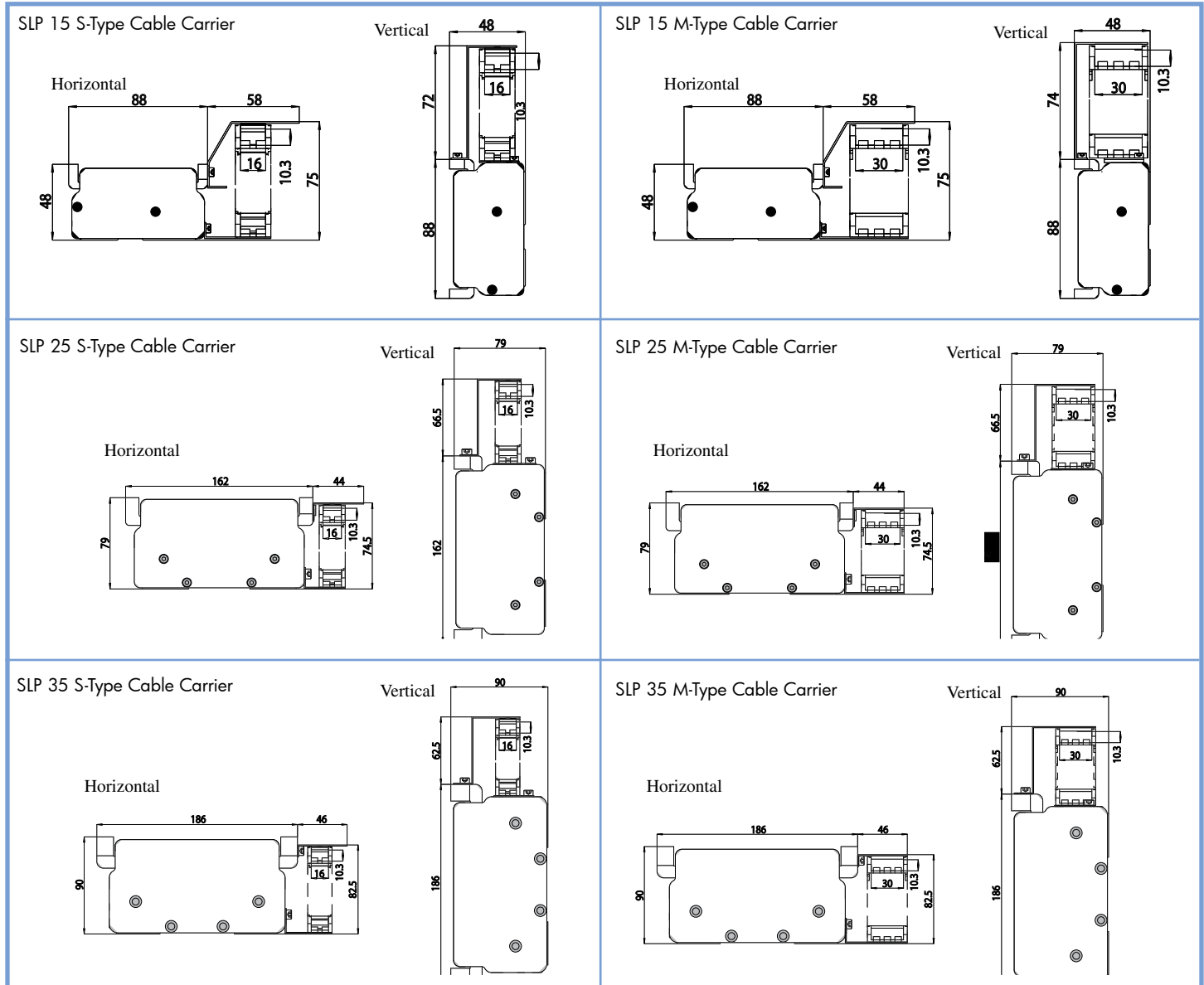
Stroke (mm)	L (mm)	N	Weight (Kg)
300	920	9	28
400	1020	10	30
500	1120	11	32
600	1220	12	33
700	1320	13	35
800	1420	14	37
900	1520	15	39

N = number of holes on stage

**Motor Power Supply Cable Specifications**  
Hitachi Cable  
UL2570  
AWG 18  
Outer Diameter ø 6.1  
JST HL Connector (male)

**Encoder Cable Specifications**  
Heidenhain  
Outer Diameter ø 4.3  
Dsub 15 Pin Connector (Male)

## SLP Cable Carrier Dimensions



## Custom Stages



In addition to the two standard stage series, Nippon Pulse America also has the ability to build custom stages to fit a client's applications. Please contact Nippon Pulse America or a local representative for more information and pricing of a custom stage unit.

To provide better support, a custom stage worksheet is available from NPA. Click the link below to download the worksheet. It is also available on the Nippon Pulse America web site. Follow the 'Product Manual' link and find the link at the bottom of the page. Complete this form and return it to NPA to make custom staging more efficient.