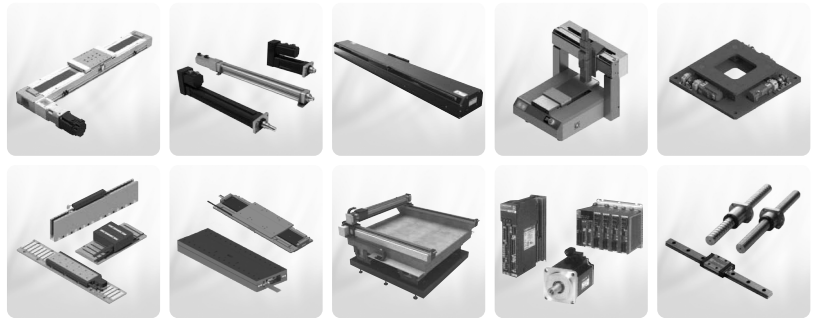


TPC

Motion Control System



- || Cartesian Robot
- || Electric Actuator
- || Linear Robot
- || Compact Stage
- || Desktop Robot
- || Alignment Stage
- || Gantry Stage
- || Linear Motor

Precautions

► Safety Precautions

- As the actuator is in motion or ready to be in motion, please do not touch any moving parts and do not move to near the actuator.
- Before performing maintenance, installation, adjustment or checking, please ensure that all power is off and take countermeasures to prevent anyone from turning on the power.
- Operating actuator with over the torque limit value could cause damage of item or injury, so please follow instructions of the torque limit settings in our catalog.
- Even though a stopper is built-in, it is intended to limit the stroke, so damage on the unit can happen in case of strong impact.

► Operation

- Please do not needlessly disassemble the actuator or control device. It could allow foreign particles to enter or reduce functionality.
- Please do not drop or knock the actuator or control device. It could cause injury or damage the unit. If the product is dropped or impacted, functionality may be reduced though there is no surface damage.

► Environment

Inappropriate or wrong environment can cause failures of the actuator and control device. We recommend the best place to use the product as follows:

- Actuator and controller: A place with an ambient temperature from 32 to 104°F (0 to 40°C) and humidity of 80% RH or lower. It should not expose to freezing or condensation.
- Free from corrosive and combustible gas.
- Free from cutting fluid, dust, oil, moisture, salt, organic solvent and electrically conductive powder.
- Free from direct sunlight and radiant heat.
- Free from strong electric and magnetic areas.
- Free from vibration or impact transmitted to the actuator and controller.
- Easy access for maintenance and cleaning purposes.

► Lubrication

- Please remove anti-rust oil thoroughly and feed lubricant before using the product.
- Not enough lubrication may cause abrasion on the moving parts and reduce the durability.
- Please do not use mixed lubricants with different type of lubricants.
- The greasing interval may vary up to the working conditions, so we recom-

mend determining it during the first checking.

► Storage

- Please store actuator in a horizontal position and avoid high temperature, low temperature and high humidity.

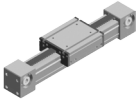


► Note

- Outer appearances or specifications are subject to change without notice for the purpose of improvement.
- Even though we have taken great care in this catalog, we will not take any responsibility for damage resulting from typo-errors or omissions.

Belt(LM guide) type





	QB series 11 <ul style="list-style-type: none"> ■ 40/60/80/100
	QBE series 11 <ul style="list-style-type: none"> ■ 60/80/100
	QBC series 25 <ul style="list-style-type: none"> ■ 160
	LRB series 29 <ul style="list-style-type: none"> ■ 100/120/166/210
	QL series(For clean) 39 <ul style="list-style-type: none"> ■ 60/80/100
	LCB series(For clean) 47 <ul style="list-style-type: none"> ■ 130

Belt(Track roller guide) type

	MB series 51 <ul style="list-style-type: none"> ■ 30/40/60/80/100
	MBB series 62 <ul style="list-style-type: none"> ■ 60/80/100
	MBT series 68 <ul style="list-style-type: none"> ■ 40/60/80/100
	MC series 75 <ul style="list-style-type: none"> ■ 60/80/100
	MS series 81 <ul style="list-style-type: none"> ■ 40/60/80/100

※ Specifications subject to change without notice

Ballscrew type

	LRS series 91
	■ 80/100/120/166/210
	LRSD series 119
	■ 120
	QS series(For clean) 123
	■ 48/70/88
	LCS series (For clean) 139
	■ 130/170
	MZ series 151
	■ 40/60/80/100

Guide type

	MG seires 158
	■ 30/40/60/80/100

Accessory

	Accessory 161
	■ Motor connection & Axis combination
	■ Sensor & Dog
	■ Sensor bracket
	■ Mounting bracket

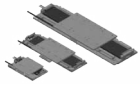
Electric Cylinder

	Electric Cylinder 173
	■ TKC series
	■ 40/45/50/60/80/120/140

Linear Robot

	Linear Robot 195
	■ LSI series
	■ 150/175/200/280

Ultra thin linear stage



Ultra thin linear stage	201
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- PLS Series

Compact linear stage



Compact linear stage	203
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- TLR Series

Desktop Robot



Desktop Robot	207
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- TDR Series

Alignment Stage



Alignment Stage	209
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- TAS Series
- 200/300/400/500/600/700

Gantry Stage



Coreless Motor Type	215
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Linear Servo Motor



Linear Servo Motor	217
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- Core Type
- Coreless Type
- Slotless Type

TPC motion Item selection

* Belt type

Model	Stroke(mm), Maximum speed(mm/s)																				
	800	1000	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	3000	3500	4000	4500	5000
QB40	400																				
	800																				
QB60 (QL60)	330																				
	650																				
	1300																				
QB80 (QL80)	440																				
	880																				
	1760																				
QB100 (QL100)	560																				
	1120																				
	2240																				
QBE60 (QLE60)	330																				
	650																				
	1300																				
QBE80 (QLE80)	440																				
	880																				
	1760																				
QBE100 (QLE100)	560																				
	1120																				
	2240																				
QBC160	520																				
	1040																				
	2000																				
LRB100	500																				
	1000																				
LRB120	500																				
	1000																				
	1000																				
LRB166	330																				
	650																				
	1300																				
	2170																				
LRB210	480																				
	960																				
	1920																				
LCB130	500																				
	1000																				
MB30-S	750																				
	1250																				
MB40-S	500																				
	1000																				
MB60-S	650																				
	1300																				
MB80-S	480																				
	960																				
	1920																				
MB100-S	640																				
	1280																				
	2560																				
MS40-S	500																				
	1000																				
MS60-S	650																				
	1300																				
MS80-H	480																				
	960																				
	1920																				
MS100-H	640																				
	1280																				

For MC, MBB and MBT, please refer to related pages.

* The expected lifetime is 16,000 hours based on indicated speed and working distance below.
 * Maximum payload can be changed as to working conditions such as speed, working distance, accelerating rate and distance apart.
 * Please contact us for using step motor

Model	Gear ratio	Speed (mm/s)	Motor (W)	Payload (kg)			Driving belt	Guide type
				Direction	0,3G	0,5G		
QB40	10	400	100	Horizontal	10	8	RPP5 W11	No9 1R, 2B
	5	800			5	3		
QB60 (QL60)	20	330	200	Horizontal	70	60	RPP5 W25 (W20)	No15 1R, 2B
	10	650			50	40		
	5	1300			15	12		
QB80 (QL80)	20	440	400	Horizontal	110	80	RPP8 W30 (W25)	No20 1R, 2B
	10	880			70	60		
	5	1760			25	20		
QB100 (QL100)	20	560	750	Horizontal	150	120	RPP8 W50 (W45)	No30 1R, 2B
	10	1120			80	70		
	5	2240			40	35		
QBE60 (QLE60)	20	330	200	Horizontal	125	80	RPP5 W25	No15 2R, 4B
	10	650	400		80	50		
	5	1300	40		30			
QBE80 (QLE80)	20	440	400	Horizontal	150	120	RPP8 W30	No20 2R, 4B
	10	880	750		90	70		
	5	1760	60		50			
QBE100 (QLE100)	20	560	750	Horizontal	200	170	RPP8 W50	No30 2R, 4B
	10	1120	1000		150	120		
	5	2240	100		70			
QBC160	20	520	1000	Horizontal	300	270	RPP8 W62	No35 1R, 2B
	10	1040	1500		180	140		
	5	2000	80		50			
LRB100	10	500	100	Horizontal	25	18	RPP5 W15	No20 1R, 1B
	5	1000	200		20	15		
LRB120	10	500	200	Horizontal	60	50	RPP5 W15	No15 2R, 4B
	5	1000	400		25	20		
	5	1000	40		35			
LRB166	20	330	400	Horizontal	130	100	RPP5 W25	No15 2R, 4B
	10	650			80	70		
	5	1300			50	40		
	3	2170			10	8		
LRB210	20	480	750	Horizontal	200	160	RPP8 W30	No25 2R, 4B
	10	960			150	120		
	5	1920			40	35		
LCB130	10	500	200	Horizontal	65	60	RPP5 W25	No15 2R, 4B
	5	1000	400		60	50		
MB30-S	5	750	100	Horizontal	8	6	S3M W12	
	3	1250			5	3		
MB40-S	10	500	100	Horizontal	25	20	RPP5 W15	
	5	1000			9	9		
MB60-S	10	650	200	Horizontal	40	30	RPP5 W25	
	5	1300			20	15		
MB80-S	20	480	400	Horizontal	50	40	RPP8 W30	
	10	960			40	30		
	5	1920			18	15		
MB100-S	20	640	750	Horizontal	90	80	RPP8 W50	Track roller
	10	1280			70	60		
	5	2560			20	18		
MS40-S	10	500	200	Horizontal	30	25	RPP5 W15	
	5	1000			22	20		
MS60-S	10	650	400	Horizontal	55	50	RPP5 W25	
	5	1300			45	40		
MS80-H	20	480	750	Horizontal	35	30	RPP8 W30	
	10	960			30	25		
	5	1920			20	15		
MS100-H	20	640	750	Horizontal	80	70	RPP8 W50	
	10	1280			60	55		

For MC, MBB and MBT, please refer to related pages.

TPC motion Item selection

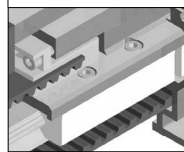
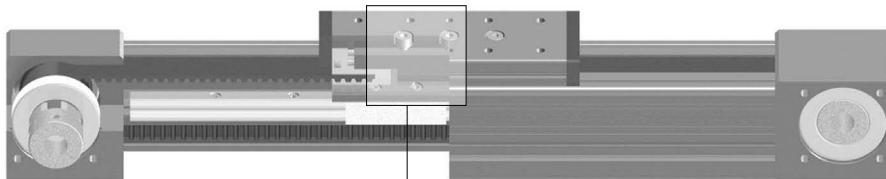
✦ Ball screw type

Model	Stroke(mm), Maximum speed(mm/s)														
	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
LRS80	500					490	390	320	260						
	1000					980	780	630	520						
LRS100	500					470	380	320	260						
	1000					950	770	630	520						
LRS120 (LRSD120)	500					480	390	310	260						
	1000					950	830	630	520						
	1000					950	830	630	520						
LRS166	500					460	360	290	250						
	1000					930	720	590	500						
	1000					930	720	590	500						
LRS210	500					470	390	330							
	1000					930	790	650							
QS48	500					450	350								
QS70	500					460	370								
	1000					930	740								
QS88	500					440	350								
	1000					890	700								
LCS130	500					480	380	310							
	1000					950	750	610							
	1000					950	750	610							
MZ40-S	250					230	180	150	120						
	500					470	370	300	250						
MZ60-S	500							490	400	340	290				
	500							490	400	340	290				
	1250							1190	1000	840	720				
MZ80-S	500							430	360	310	260				
	1250							1050	880	760	650				
	1250							1050	880	760	650				
MZ100-S	500							450	380	320	280				
	1250							1110	930	790	680				
	1600								1560	1320	1140				

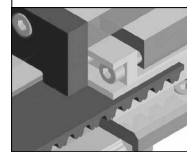
* The expected lifetime is 16,000 hours based on indicated speed and working distance below.
 * Maximum payload can be changed as to working conditions such as speed, working distance, accelerating rate and distance apart.
 * Please contact us for using step motor

Model	Lead (mm)	Speed (mm/s)	Motor (W)	Payload (kg)			Ball Screw	Guide Type		
				Direction	0,3G	0,5G				
LRS80	10	500	100	Horizontal	20	18	Ø15 (Grinding)	No15W 1R, 1B		
				Vertical	6	5				
	20	1000	200	Horizontal	20	18				
				Vertical	4	2				
LRS100	10	500	200	Horizontal	40	30	Ø15 (Grinding)	No20 1R, 1B		
				Vertical	12	10				
	20	1000		Horizontal	20	18				
				Vertical	5	3				
LRS120 (LRSD120)	10	500	200	Horizontal	80	60	Ø15 (Grinding)	No15 2R, 4B		
				Vertical	18	15				
	20	1000		Horizontal	25	20				
			Vertical	6	5					
			400	Horizontal	40	35				
	Vertical	15		12						
LRS166	10	500	400	Horizontal	120	90	Ø20 (Grinding)	No15 2R, 4B		
				Vertical	40	30				
	20	1000		Horizontal	45	40				
			Vertical	15	12					
			750	Horizontal	100	80				
	Vertical	35		30						
LRS210	10	500	750	Horizontal	170	150	Ø20 (Grinding)	No25 2R, 4B		
				Vertical	80	60				
	20	1000		Horizontal	120	100				
				Vertical	35	30				
QS48	10	500	100	Horizontal	15	12	Ø10 (Rolled)	No12 1R, 1B		
				Vertical	5	4				
QS70	10	500	100	Horizontal	20	18	Ø15 (Grinding)	No12 1R, 2B		
				Vertical	10	9				
	20	1000	200	Horizontal	20	18				
				Vertical	6	5				
QS88	10	500	200	Horizontal	35	32	Ø15 (Grinding)	No15 1R, 2B		
				Vertical	15	12				
	20	1000		Horizontal	30	28				
				Vertical	8	7				
LCS130	10	500	200	Horizontal	80	60	Ø15 (Grinding)	No15 2R, 4B		
				Vertical	20	18				
	20	1000		Horizontal	25	20				
			Vertical	8	7					
			400	Horizontal	40	35				
	Vertical	15		12						
MZ40-S	5	250	100	Horizontal	40	30	Ø16 (Rolled)			
				Vertical	20	18				
	10	500		Horizontal	30	25				
				Vertical	10	9				
MZ60-S	10	500	200	Horizontal	50	40	Ø25 (Rolled)			
				Vertical	10	7				
	10	500	400	Horizontal	50	40				
				Vertical	30	25				
				25	1250	Horizontal			15	12
						Vertical			10	8
MZ80-S	10	500	400	Horizontal	60	50	Ø25 (Rolled)	Track Roller		
				Vertical	35	30				
	25	1250		Horizontal	12	10				
			Vertical	8	6					
			750	Horizontal	50	40				
	Vertical	25		20						
MZ100-S	10	500	750	Horizontal	120	100	Ø25 (Rolled)			
				Vertical	70	60				
	25	1250		Horizontal	100	80				
				Vertical	20	15				
	32	1600		Horizontal	30	25				
				Vertical	5	3				

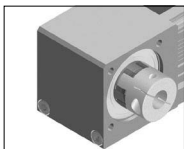
QB/QBE Series



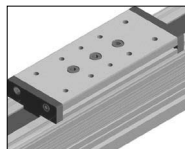
LM guide with high stiffness and high precision



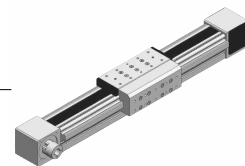
Improved RPP timing belt



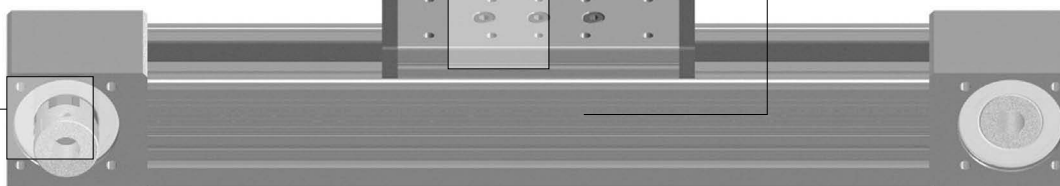
Various models of motor and reducer available

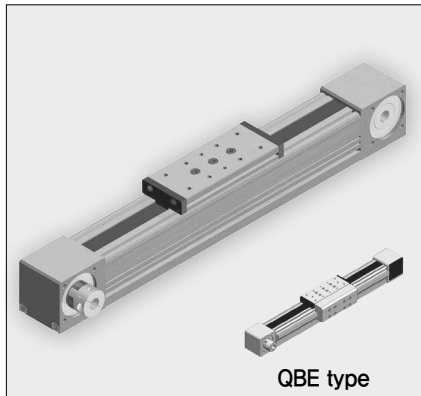


Customized slider available



Side-strengthened LM for sided load or cantilever

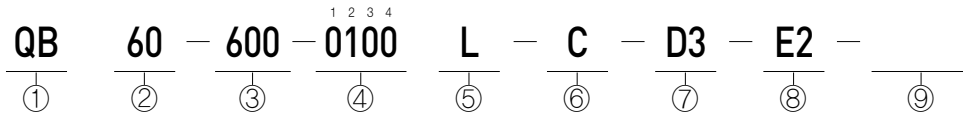




Features

- LM Guide & Belt type unit
- Compact design and high stiffness
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance
- Side strengthened LM(QBE) available

How to order



① **Sereis**
QB / QBE

② **Model**
40 / 60 / 80 / 100

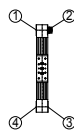
※ LM : Please contact us for customized LM

③ **Stroke**
40 : 50 ~ 800mm
60 / 80 / 100 : 50 ~ 3500mm

※ Please contact us for longer stroke than standard

④ **Drive version (0:Standard, 1:Coupling type 2:Shaft type)**

TYPE	Pulley shape	MODEL			
		40	60	80	100
0100		●	●	●	●
1100		●	●	●	●
2000		●	●	●	●
2200		●	●	●	●
1200		●	●	●	●



※ Please contact us for customized pulley type

⑤ **Color**
Blank : White(outer)
L:White + LM raydent
B:Black (outer)
BL:Black(outer)+LM raydent

⑥ **Sensor (dog included)**
Blank :None
C:Photo sensor + Basic socket – Basic 3EA
CJ:C + Cable socket 2M – Basic 3EA
Other than basic :C(J)(Q'ty) Example)C2,CJ2

⑦ **Mounting bracket**
Blank : None
D(Q'ty):Necessary quantity, Example) D2,D3
※ Please refer to drawings for the shape of mounting bracket (excluding QB40)

⑧ **Bracket of reducer (including coupling)**
Blank:None

SYMBOL	TYPE	SIZE	MODEL			
			40	60	80	100
E1	42	●	●			
E2	62		●	●		
E3	90			●	●	
E4	120				●	

Basic option : ATG, APLUS, SESAME

⑨ **Customized code**

Sensor

Model	Item number	Sensor and connector
40	SX912-R-PL	 EE-SX912-R
60	SX672-PL	 EE-SX672 + EE1001
80		
100		
60	SX672-L-PL	 EE-SX672 + EE1006
80		
100		

Sensor dog

Model	Item number	Remarks
40	PDG-QB40-PL	EE-SX912-R only
60	PDG-QB60-PL	EE-SX672 only
80	PDG-QB80-PL	
100	PDG-QB100-PL	

Mounting bracket

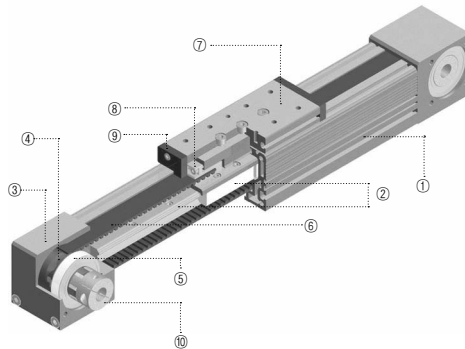
Model	Item number	Remarks
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

QB specifications

Specification	QB40	QB60	QB80	QB100
Max speed (mm/s)	2000	2000	2000	2000
Payload (kgf)	10 (horizontal)	40 (horizontal)	60 (horizontal)	100 (horizontal)
Stroke (mm)	Max. 800	Max. 3500	Max. 3500	Max. 3500
Repeatability (mm)	± 0.05	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	∅ 27.03	∅ 41.38	∅ 56.02	∅ 71.3
Pulley action perimeter (mm/rev)	84.9	130	176	224
No load torque (Nm)	0.5	1.0	1.4	1.8
Belt	RPP5 / W11	RPP5 / W25	RPP8 / W30	RPP8 / W50
LM Guide	NO.9 / 1 Rail 2 Block	NO.15 / 1 Rail 2 Block	NO.20 / 1 Rail 2 Block	NO.30 / 1 Rail 2 Block
Basic weight (kgf)	1.5	4.0	10.9	20.2
Weight per 100mm stroke (kgf)	0.2	0.53	1.1	1.7
Motor (W)	50 ~ 100	200	400	750
Size (mm, W x H)	40 x 56	60 x 80	80 x 105	100 x 130

Note) Customized options such as motor, raydent and LM guide are available.

QB structure



► Component list

No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	6	Timing belt	Urethane
2	Model	LM GUIDE		7	Slide block	Aluminum alloy
	60	No.15 / 1RAIL 2BLOCK				
	80	No.20 / 1RAIL 2BLOCK				
	100	No.30 / 1RAIL 2BLOCK				
3	Pulley box		Aluminum alloy	8	Belt clip	Carbon steel
4	Timing pulley		High carbon steel	9	Sealing	EP
5	Bearing			10	COUPLING	Aluminum alloy

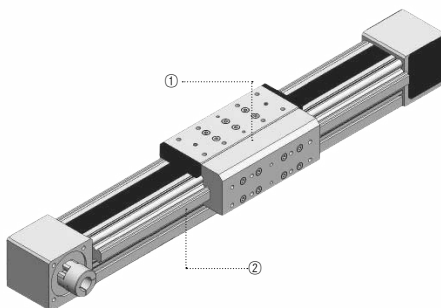
QBE Series Specifications

QBE specifications

Specification	QBE60	QBE80	QBE100
Max speed (mm/s)	2000	2000	2000
Payload (kgf)	50 (horizontal)	70 (horizontal)	120 (horizontal)
Stroke (mm)	Max. 3500	Max. 3500	Max. 3500
Repeatability (mm)	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	Ø 41.38	Ø 56.02	Ø 71.3
Pulley action perimeter (mm/rev)	130	176	224
No load torque (Nm)	1.7	1.8	2.1
Belt	RPP5 / W25	RPP8 / W30	RPP8 / W50
LM Guide	NO.15 / 2 Rail 4 Block	NO.20 / 2 Rail 4 Block	NO.30 / 2 Rail 4 Block
Basic weight (kgf)	4.5	13.6	24.5
Weight per 100mm stroke (kgf)	0.68	1.4	2.2
Motor (W)	200	400	750
Size (mm, W x H)	60 x 80	80 x 105	100 x 130

Note) Customized options such as motor, raydent and LM guide are available.

QBE structure



► Component list

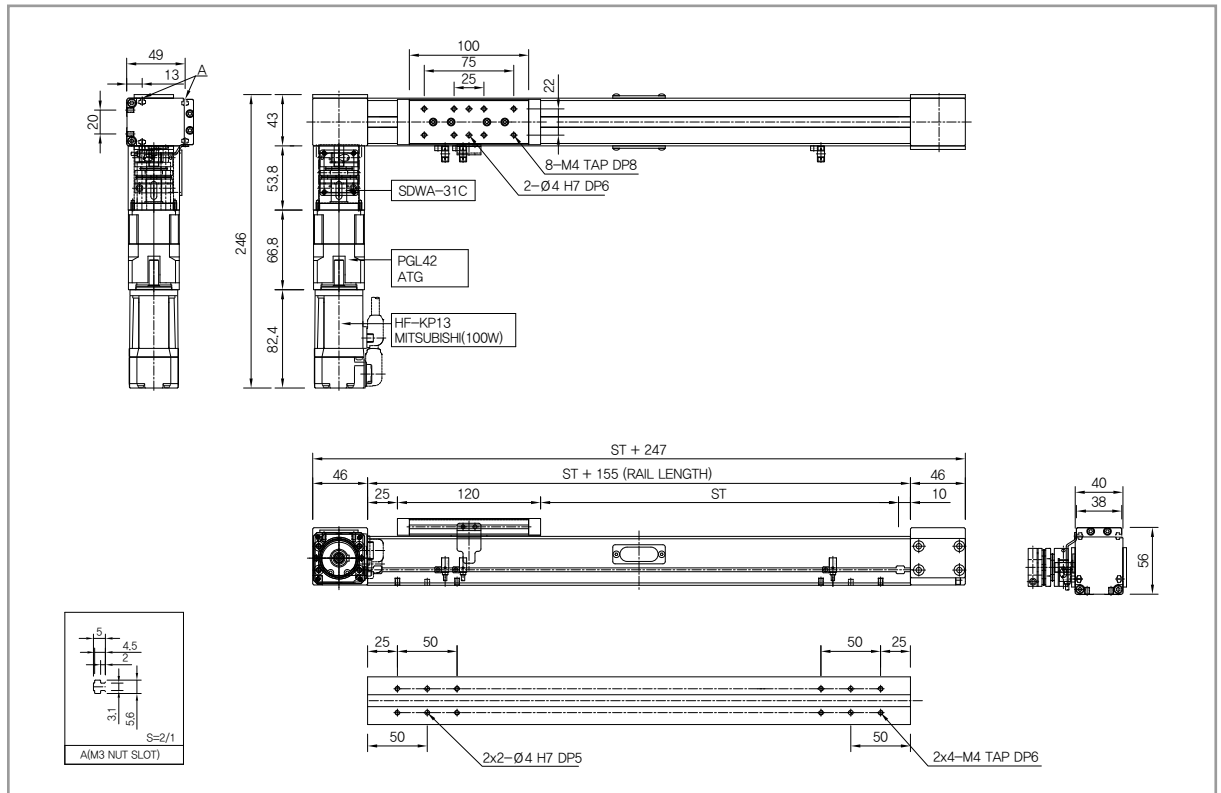
No	Component name		Material
1	Side strengthened block		Aluminum alloy
2	Model	LM GUIDE	
	60	No.15 / 2RAIL 4BLOCK	
	80	No.20 / 2RAIL 4BLOCK	
	100	No.30 / 2RAIL 4BLOCK	

Note) The other components are same as QB basic type.

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QB40	50~800	10	400	100	10	8
		5	800		5	3

QB40



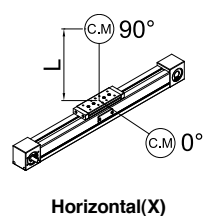
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Gear ratio	Motor (W)
Weight(kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1		
Max. Speed (mm/s)	400								10	100
	800								5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



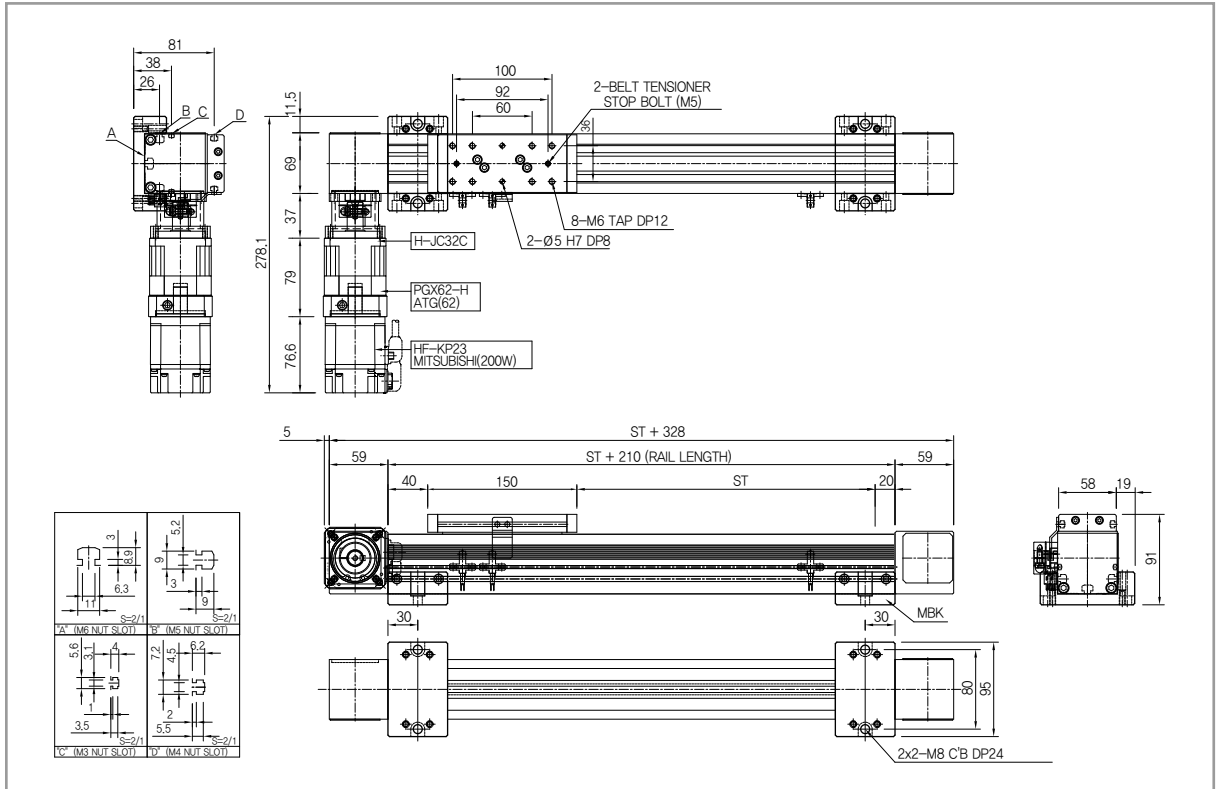
Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
10	8 kg	25 mm	350 mm		
	4 kg	55 mm	700 mm		
5	4 kg	25 mm	450 mm		
	2 kg	60 mm	700 mm		

QB 60

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QB60	50~3500	20	330	200	70	60
		10	650		50	40
		5	1300		15	12

QB60



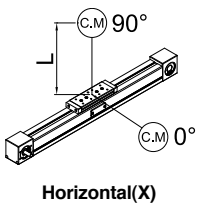
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	9.3	9.8	10.4	10.9	11.4	12.0	12.5	13.0	13.5	14.1	14.6	15.7	16.7	17.8	18.8	19.9		
Max. Speed (mm/s)																	20	200
																	10	
																	5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance

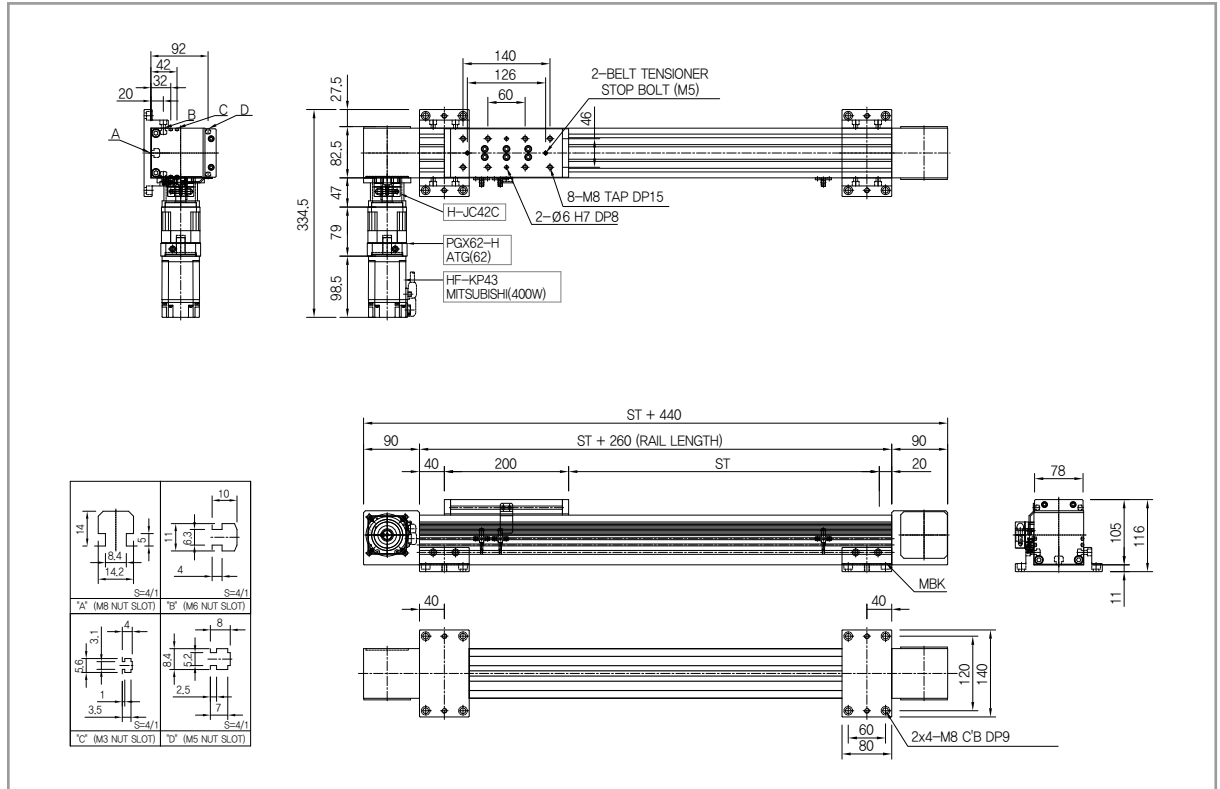


Gear Ratio	Payload	0°	90°
20	40 kg	20 mm	750 mm
	20 kg	50 mm	1000 mm
10	30 kg	15 mm	400 mm
	15 kg	40 mm	600 mm
5	12 kg	20 mm	400 mm
	6 kg	40 mm	600 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QB80	50~3500	20	440	400	110	80
		10	880		70	60
		5	1760		25	20

QB80



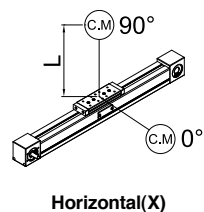
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	Gear ratio	Motor (W)	
Weight(kg)	21.9	23.0	24.1	25.2	26.3	27.4	28.5	29.6	30.7	31.8	32.9	38.4	43.9	49.4	54.9	20	400	
Max. Speed (mm/s)																		10
																		5

Note) The weight of motor and reducer is not included.

Allowable overhang distance



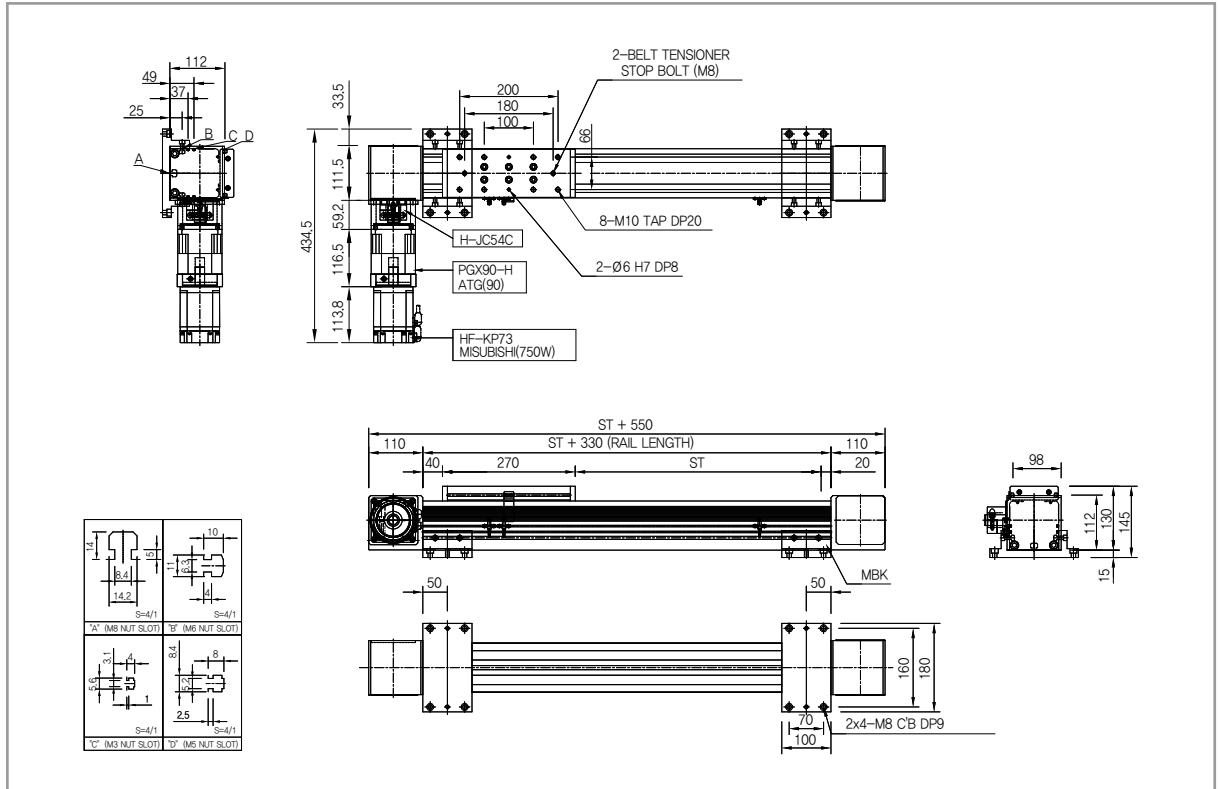
Gear Ratio	Payload	0°	90°
20	80 kg	20 mm	500 mm
	40 kg	40 mm	800 mm
10	50 kg	20 mm	200 mm
	25 kg	40 mm	500 mm
5	20 kg	20 mm	350 mm
	10 kg	50 mm	550 mm

QB 100

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QB100	50~3500	20	560	750	150	120
		10	1120		80	70
		5	2240		40	35

QB100



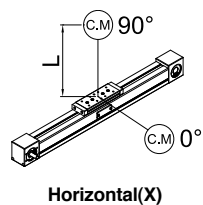
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	37.2	38.9	40.6	42.3	44.0	45.7	47.4	49.1	50.8	52.5	54.2	62.7	71.2	79.7	88.2	96.7	105.2		
Max. Speed (mm/s)																		20	750
																		10	
																		5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance

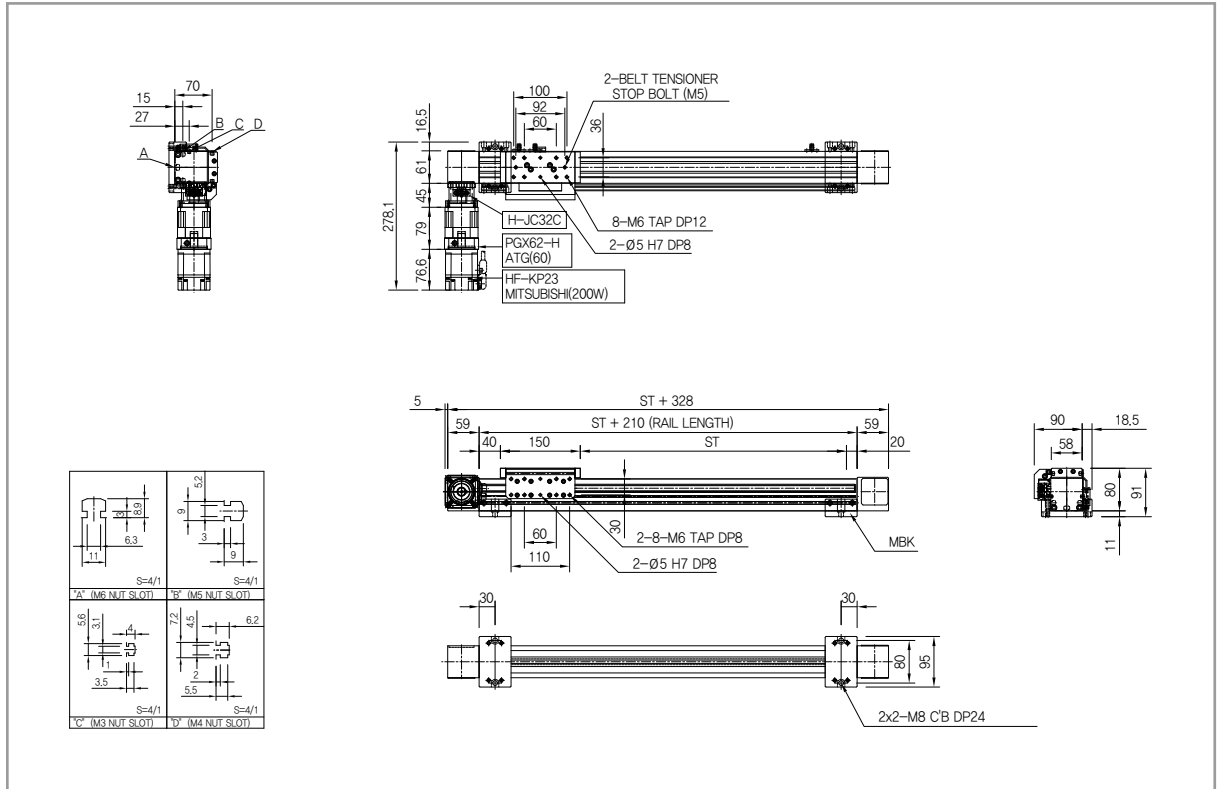


Gear Ratio	Payload	0°	90°
20	120 kg	25 mm	300 mm
	60 kg	60 mm	800 mm
10	70 kg	25 mm	300 mm
	35 kg	60 mm	600 mm
5	30 kg	25 mm	300 mm
	15 kg	60 mm	500 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QBE60	50~3500	20	330	200	125	80
		10	650		80	50
		5	1300	400	40	30

QBE60



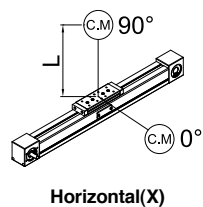
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	11.3	12.0	12.7	13.3	14.0	14.7	15.4	16.1	16.7	17.4	18.1	19.5	20.8	22.2	23.5	24.9		
Max. Speed (mm/s)																	20	200
																	10	400
																	5	1300

Note) The weight of motor and reducer is not included.

Allowable overhang distance

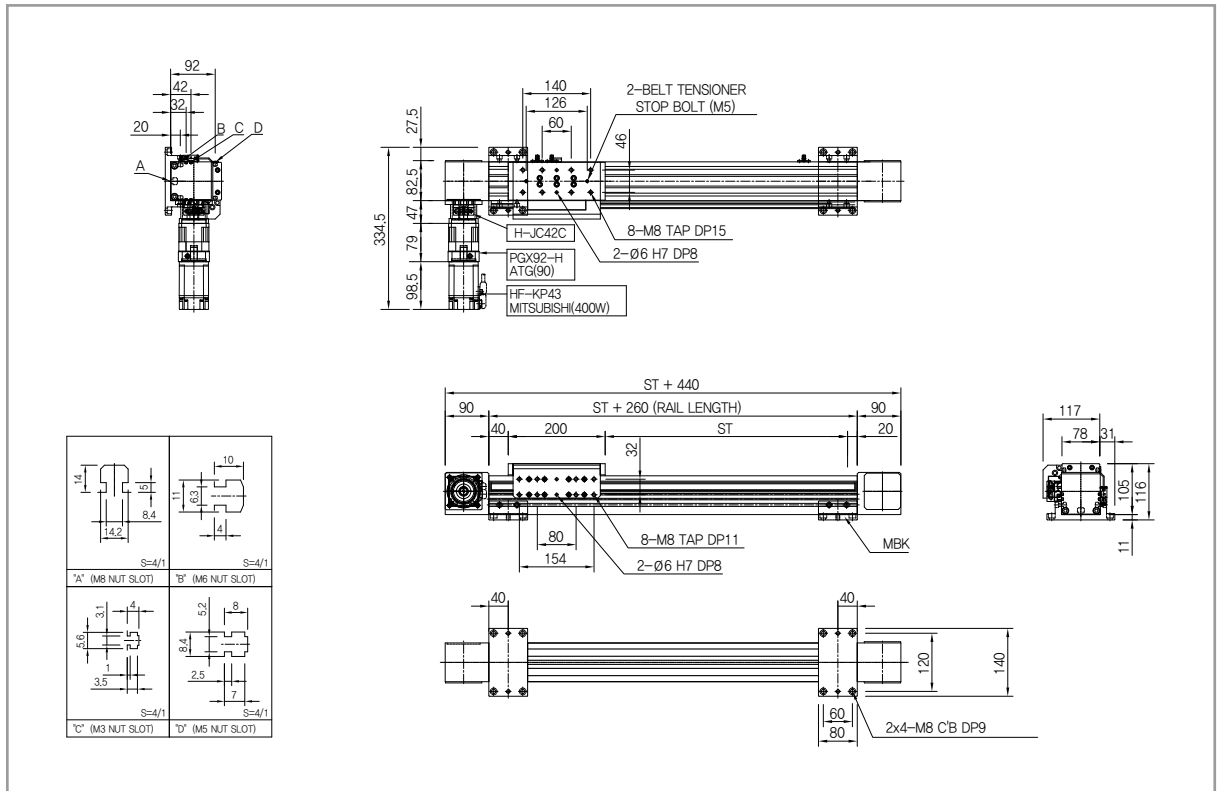


Gear Ratio	Payload	Rotation	
		0°	90°
20	80 kg	75 mm	300 mm
	40 kg	150 mm	600 mm
10	50 kg	75 mm	300 mm
	25 kg	150 mm	500 mm
5 (400W)	20 kg	75 mm	250 mm
	10 kg	150 mm	500 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QBE80	50~3500	20	440	400	150	120
		10	880		90	70
		5	1760	750	60	50

QBE80



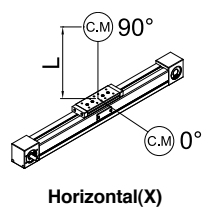
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	Gear ratio	Motor (W)
Weight(kg)	27.6	29.0	30.4	31.8	33.2	34.6	36.0	37.4	38.8	40.2	41.6	48.6	55.6	62.6	69.6		
Max. Speed (mm/s)																20	400
																10	
																5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance

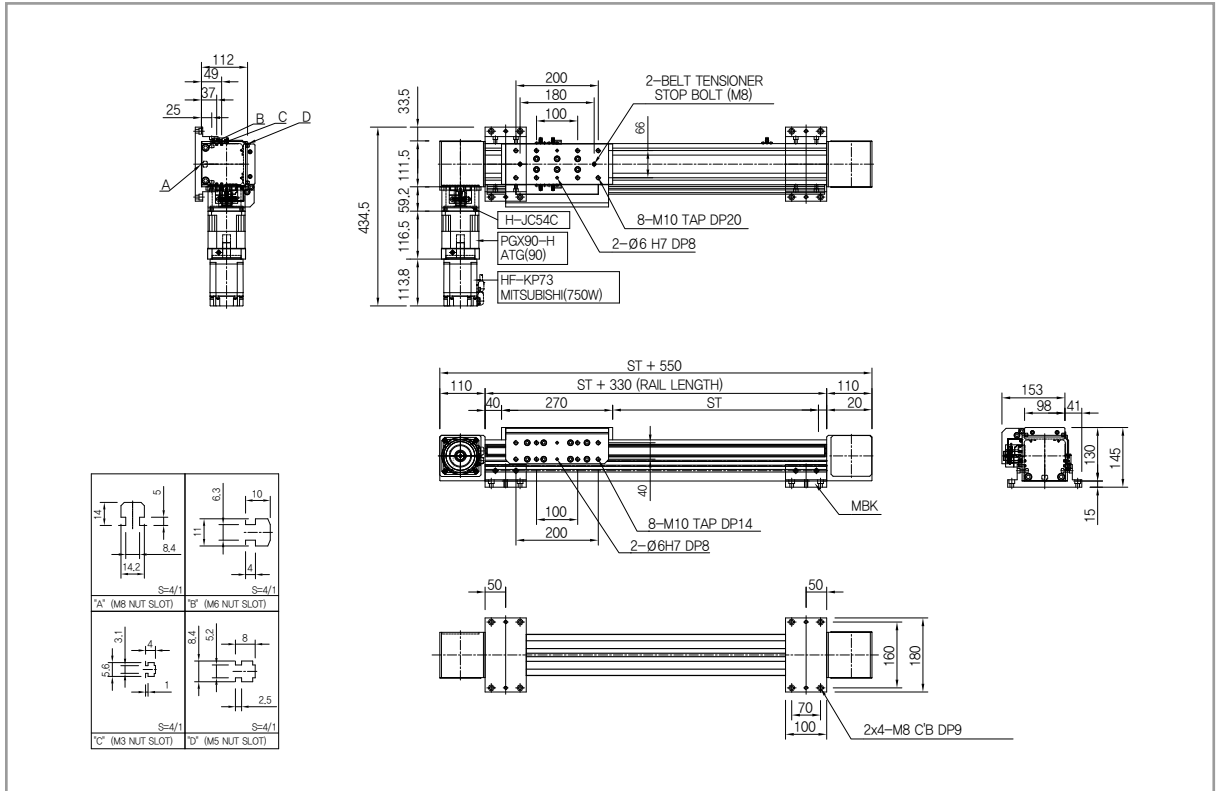


Gear Ratio	Payload	0°	90°
		20	120 kg
10	60 kg	180 mm	600 mm
	70 kg	90 mm	400 mm
5 (750W)	35 kg	180 mm	800 mm
	30 kg	100 mm	300 mm
	15 kg	200 mm	600 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QBE100	50~3500	20	560	750	200	170
		10	1120		150	120
		5	2240	1000	100	70

QBE100



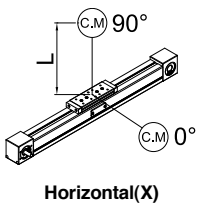
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	46.5	48.7	50.9	53.1	55.3	57.5	59.7	61.9	64.1	66.3	68.5	79.5	90.5	101.5	112.5	123.5	134.5		
Max. Speed (mm/s)																		20	750
																		10	
																		5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



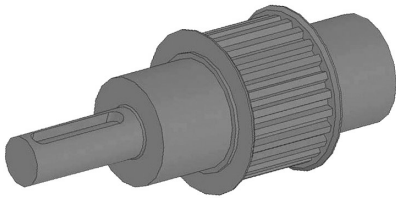
Gear Ratio	Payload	0°	90°
20	170 kg	120 mm	500 mm
	85 kg	250 mm	800 mm
10	100 kg	120 mm	400 mm
	50 kg	250 mm	800 mm
5 (1000W)	50 kg	150 mm	500 mm
	25 kg	300 mm	800 mm

QB PULLEY OPTION

PULLEY OPTION

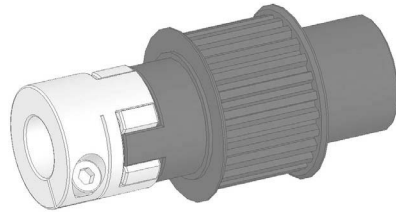
PSH Type

One body type pulley that having driving shaft



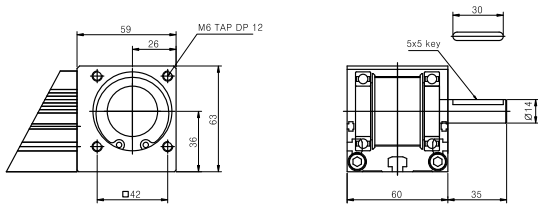
PCP Type

This type pulley is joined with Jaw-coupling directly and supplied with coupling.

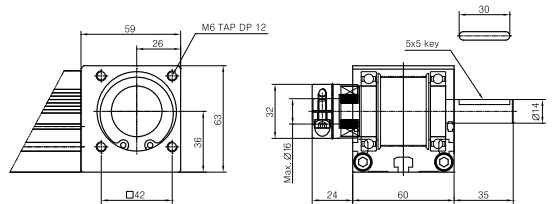


■ Pulley of QB60 / QBE60

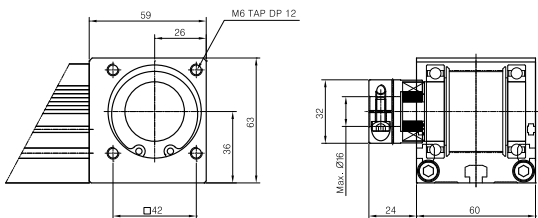
PSH-S (QB60-18A)



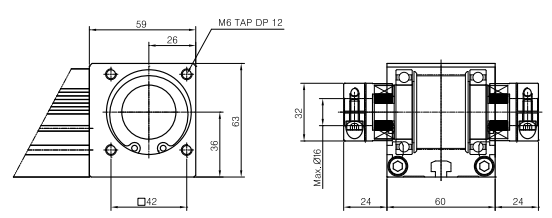
PSH-C (QB60-20A)



PCP-S (MB60-21A)

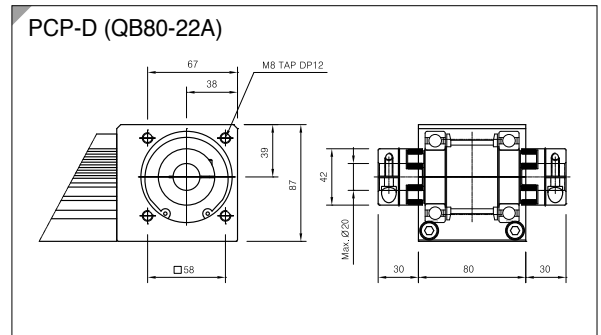
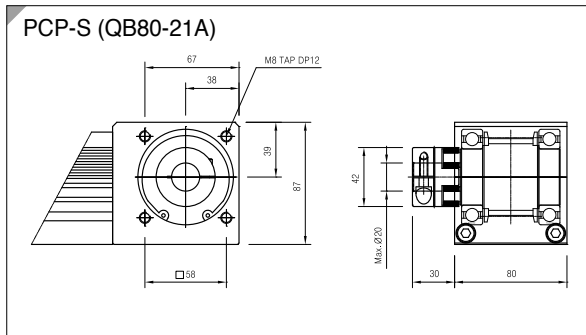
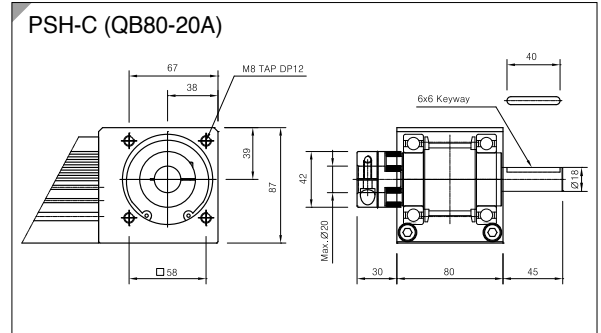
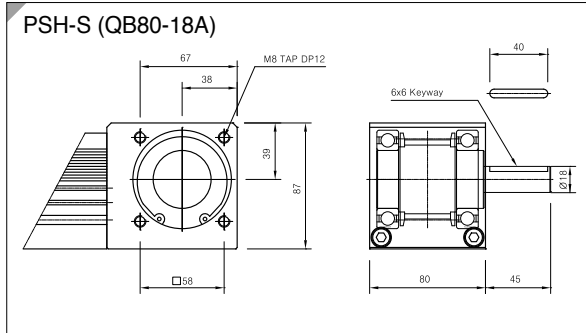


PCP-D (MB60-22A)

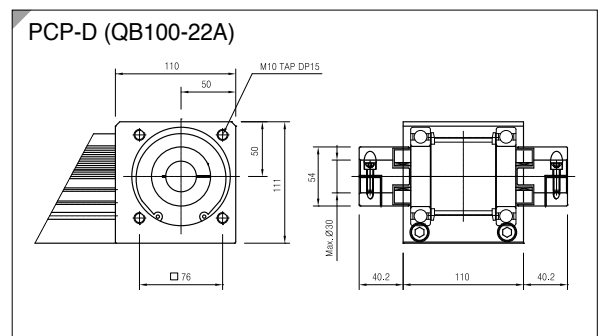
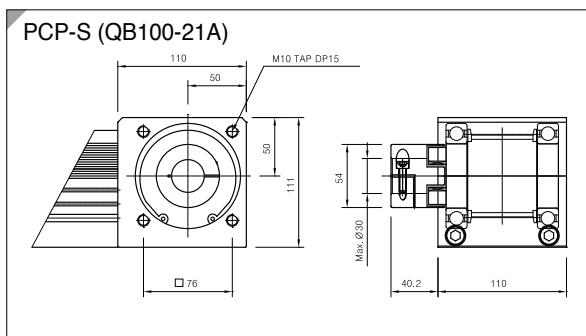
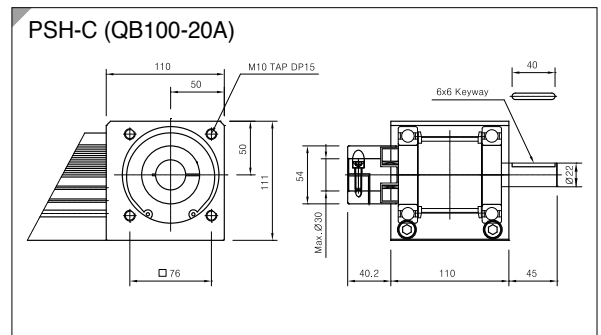
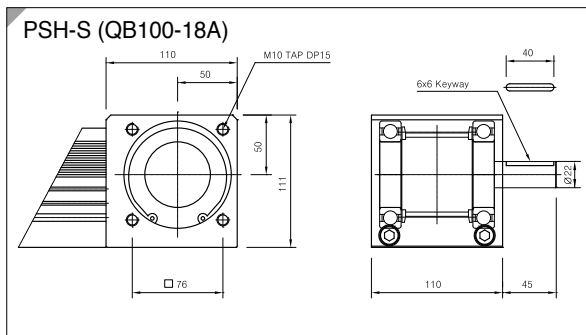


QB PULLEY OPTION

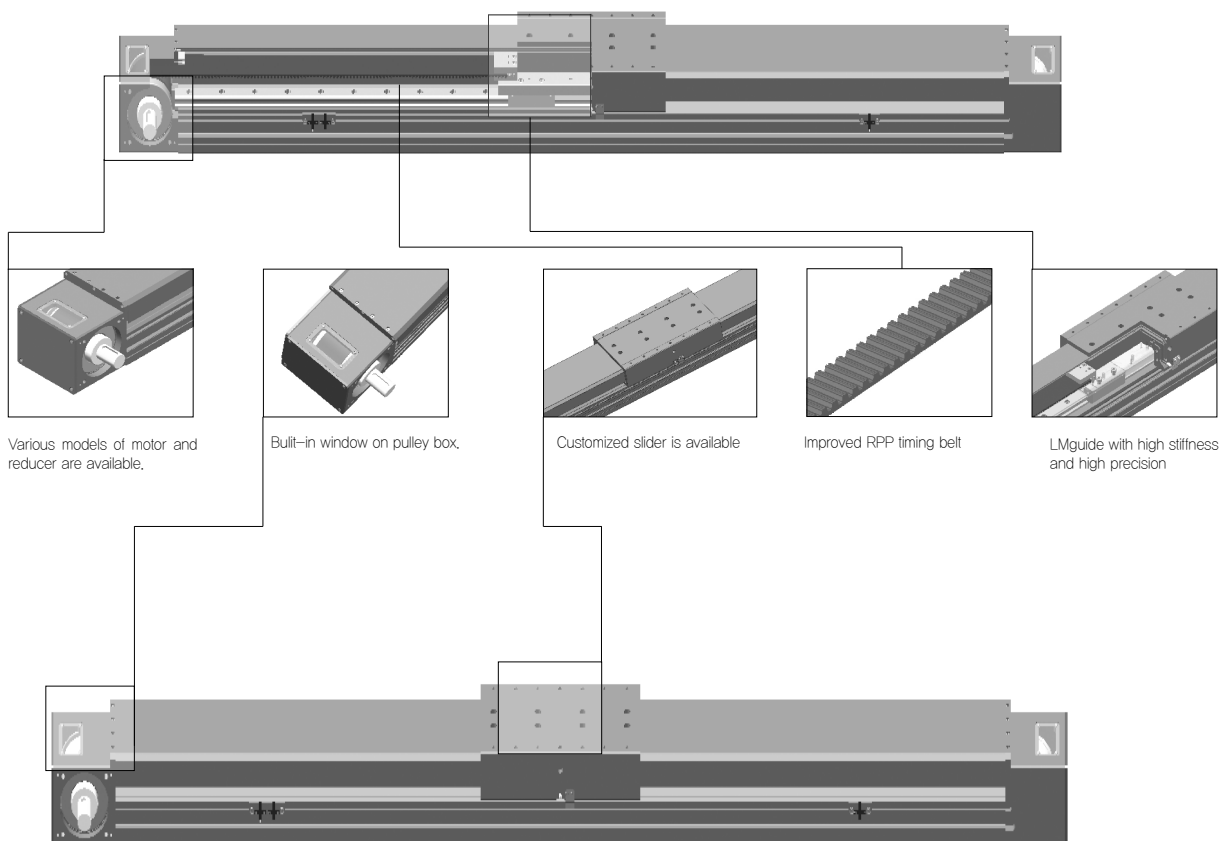
■ Pulley of QB80 / QBE80



■ Pulley of QB100 / QBE100



QBC series





Features

- LM Guide & Belt type unit
- Dust proof cover attached
- Compact design and high stiffness
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance

How to order

QBC 160 - 2600 - 0200 - C - E2 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Model

160

※ Please contact us for customized LM

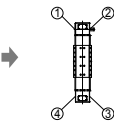
③ Stroke(unit:mm)

500 ~ 3500mm

※ Please contact us for longer stroke than standard

④ Drive version (0 : Standard 2 : Shaft type)

TYPE		MODEL
Pulley direction	Pulley type	160
0100		•
1100		•



※ Please contact us for customized pulley type

⑤ Color

Blank : White(outer)

L:White(outer) + LM raydent

B:Black(outer)

BL:Black(outer) + LM raydent

⑥ Sensor(dog included)

Blank: None

C:Photo sensor + Basic socket - Basic 3EA

CJ:C + Cable socket 2M - Basic 3EA

Other than basic :C(J)(Qty) Example)C2,CJ2

⑦ Bracket of reducer (including coupling)

Blank: None

TYPE		MODEL
SYMBOL	SIZE	
E1	90	•
E2	120	•
E3	142	•

Basic option : ATG, APLUS, SESAME

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
160	SX672-PL	EE-SX672 + EE1001
160	SX672-L-PL	EE-SX672 + EE1006

Sensor dog

Model	Item number	Remarks
160	PDG-QBC160-PL	EE-SX672 only

Sensor bracket

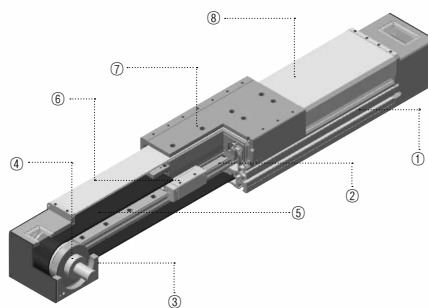
Model	Photosensor for single	Photo sensor for double
160	PBS-160-PL	PBSD-160-PL

QBC specifications

Specification	QBC 160	Remarks
Max speed (mm/s)	2000	
Payload (kgf)	300 (horizontal)	
Stroke (mm)	Max. 3500	* Please contact us for longer than 3500mm
Repeatability (mm)	± 0.05	
Diameter of pulley (mm)	Ø 99,31	
Pulley action perimeter (mm/rev)	314	
No load torque (Nm)	2.5	
Belt	RPP8 / W62	
LM Guide	NO.35 / 1 Rail 2 Block	* Please contact us fro over 2 blocks
Basic weight (kgf)	45,9	
Weight per 100mm stroke (kgf)	24,1	
Motor (W)	1000	
Size (mm, W x H)	160 x 170	

Note) Customized options such as motor, raydent and LM guide are available.

QBC structure



► Component list

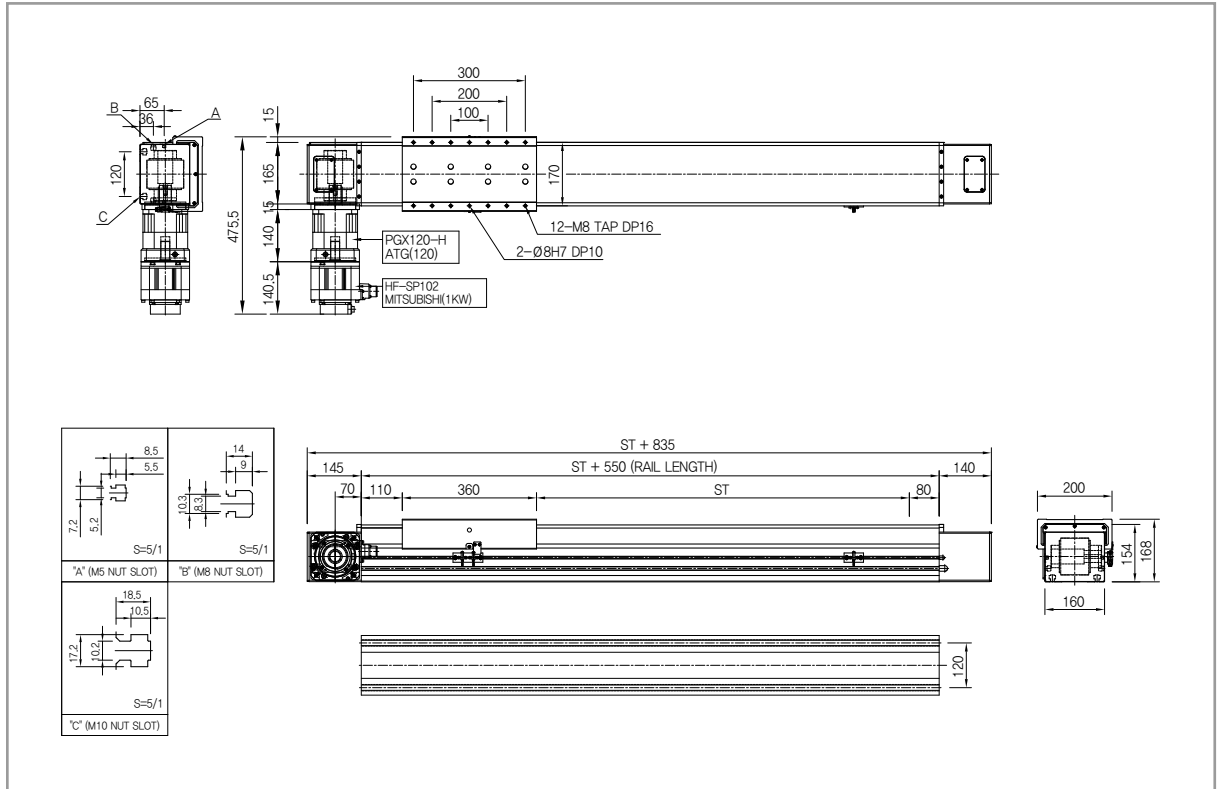
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Timing belt	Urethane
2	Model	Rail		6	Belt clip	Carbon steel
	160	No.35 / 1RAIL 2BLOCK				
3	Pulley box		Aluminum alloy	7	Slide block	Aluminum alloy
4	Timing pulley		High carbon steel	8	COVER	Aluminum alloy

QBC 160

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QBC 160	50~3500	20	520	1000	300	270
		10	1040		180	140
		5	2000	1500	80	50

QBE80



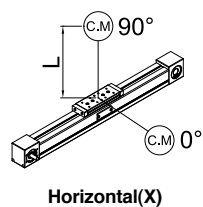
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)	
Weight(kg)	69.9	72.3	74.7	77.1	79.5	81.9	84.3	86.7	89.1	91.5	93.9	105.9	117.9	129.9	141.9	153.9	165.9			
Max. Speed (mm/s)																		20	1000	
																		10		1500
																		5		

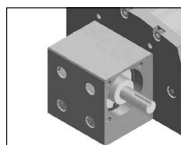
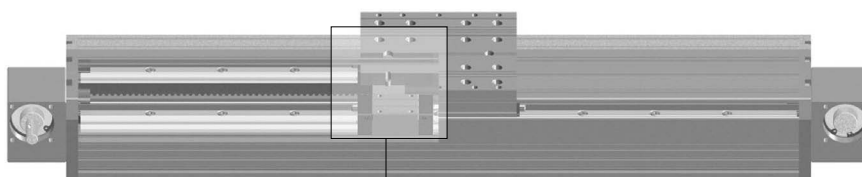
Note) The weight of motor and reducer is not included.

Allowable overhang distance

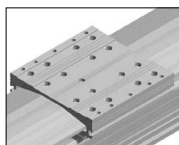


Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
20	260 kg	30 mm	550 mm	70 mm	900 mm
	130 kg	40 mm	700 mm	85 mm	1000 mm
10	80 kg	50 mm	600 mm	110 mm	1200 mm
	40 kg				

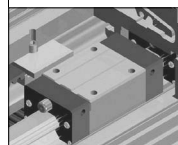
LRB Series



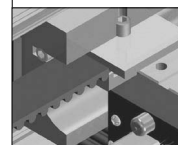
Various models of motor and reducer are available.



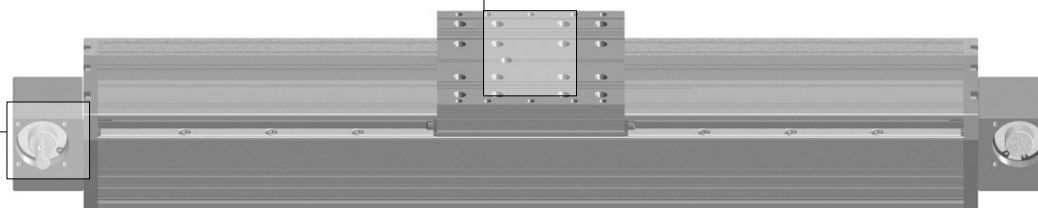
Customized slider is available.

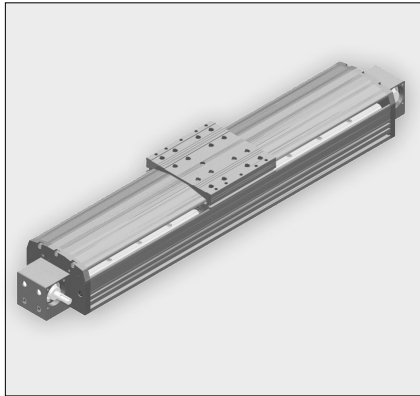


LM guide with high stiffness and high precision.



Improved RPP timing belt.





Features

- LM Guide & Belt type unit
- Compact design and high stiffness
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance

How to order

LRB 120 - 600 - 0200 - C - E2 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Model

100 / 120 / 166 / 210

※ LM : Please contact us for customized LM

③ Stroke

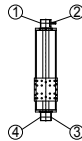
100 : 50 ~ 1500

120 / 166 / 210 : 50 ~ 3500

※ Please contact us for longer stroke than standard

④ Drive version (0:Standard, 1:Coupling type 2:Shaft type)

Pulley direction	TYPE		MODEL			
	Pulley shape		100	120	166	210
0100				•	•	•
1100				•	•	•
2000			•	•	•	•
2200			•	•	•	•
1200			•	•	•	•



※ Please contact us for customized pulley type

⑤ Color

Blank : White(outer)

L : White + LM raydent

B : Black (outer)

BL : Black(outer)+LM raydent

⑥ Sensor (dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket 2M – Basic 3EA

Other than basic : C(J)(Qty) Example)C2,CJ2

⑦ Bracket of reducer (including coupling)

Blank : None

SYMBOL	SIZE	MODEL			
		100	120	166	210
E1	42	•	•		
E2	62	•	•	•	
E3	90			•	•
E4	120				•

Basic option : ATG, APLUS, SESAME

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
100	SX672-PL	 EE-SX672 + EE1001
120		
166		
210		
100	SX672-L-PL	 EE-SX672 + EE1006
120		
166		
210		

Sensor dog

Model	Item number	Remarks
100	PDG-L100-PL	EE-SX672 only
120	PDG-L120-PL	
166	PDG-L166-PL	
210	PDG-L210-PL	

Sensor bracket

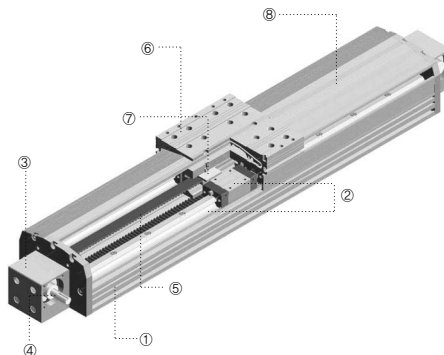
Model	Photosensor for single	Photosensor for double
166	PSBS-166-PL	PSBD-166-PL
210	PSBS-210-PL	PSBD-210-PL

LRB specification

Specification	LRB100	LRB120	LRB166	LRB210
Max speed (mm/s)	2000	2000	2000	2000
Payload (kgf)	30 (horizontal)	40 (horizontal)	70 (horizontal)	150 (horizontal)
Stroke (mm)	Max. 1500	Max. 3500	Max. 3500	Max. 3500
Repeatability (mm)	± 0.05	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	∅ 31.83	∅ 31.83	∅ 41.38	∅ 61.12
Pulley action perimeter (mm/rev)	100	100	130	192
No load torque (Nm)	RPP5 / W15	RPP5 / W15	RPP5 / W25	RPP8 / W25
Belt	0.8	1.2	1.2	2
LM Guide	NO.20 / 1 Rail 1 Block	NO.15 / 2 Rail 4 Block	NO.15 / 2 Rail 4 Block	NO.25 / 2 Rail 4 Block
Basic weight (kgf)	3.4	4.4	7.3	18.5
Weight per 100mm stroke (kgf)	0.7	1	1.4	2.8
Motor (W)	100 ~ 200	200 ~ 400	400 ~ 750	750
Size (mm, W x H)	98 x 97	118 x 90	166 x 100	210 x 139

Note) Customized options such as motor, raydent and LM guide are available.

LRB structure



► Component list

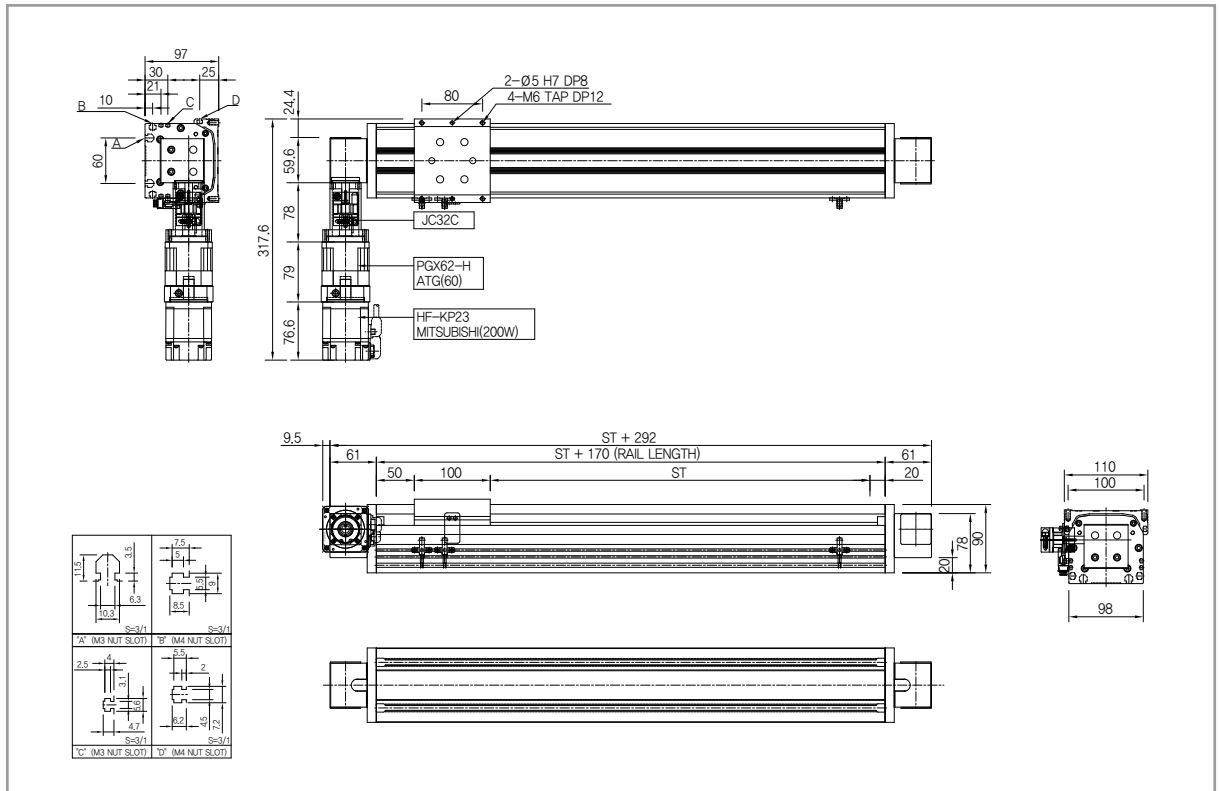
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Timing belt	Urethane
2	Model	LM GUIDE	Bearing steel	6	Slider	Aluminum alloy
	100	No.20 / 1RAIL 1BLOCK				
	120	No.15 / 2RAIL 4BLOCK				
	166	No.15 / 2RAIL 4BLOCK				
	210	No.25 / 2RAIL 4BLOCK				
3	Pulley box		Aluminum alloy	7	Belt clip	Carbon steel
4	Timing pulley		High carbon steel	8	COVER	Aluminum alloy

LRB 100

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
LRB100	50~1500	10	500	100	25	18
		5	1000	200	20	15

LRB100



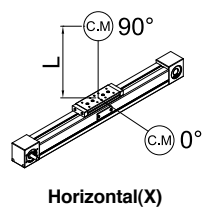
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	Gear ratio	Motor (W)
Weight(kg)	10.3	11.0	11.7	12.4	13.1	13.8	14.5	15.2	15.9	16.6	17.3	18.0	18.7	19.4	20.1	20.8		
Max. Speed (mm/s)																	5	200
																	10	100
																	5	200

Note) The weight of motor and reducer is not included.

Allowable overhang distance

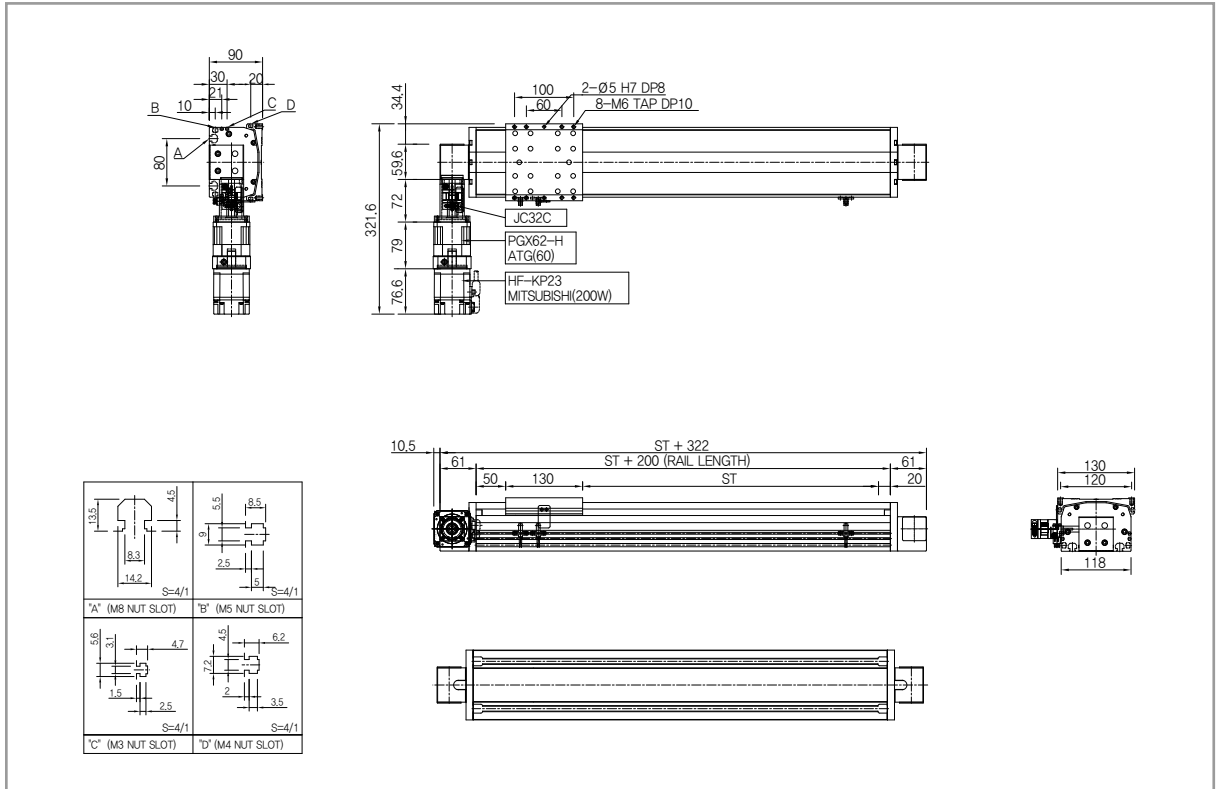


Gear Ratio	Payload	0°	90°
10 (100W)	40 kg	35 mm	270 mm
	20 kg	80 mm	530 mm
5 (200W)	24 kg	35 mm	100 mm
	12 kg	85 mm	250 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
LRB120	50~3500	10	500	200	60	50
		5	1000		25	20
		5	1000	400	40	35

LRB120



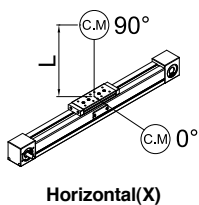
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	Gear ratio	Motor (W)
Weight(kg)	14.4	15.4	16.4	17.4	18.4	19.4	20.4	21.4	22.4	23.4	24.4	25.4	26.4	27.4	28.4	29.4		
Max. Speed (mm/s)																	10	200
																	5	400
																	5	400

Note) The weight of motor and reducer is not included.

Allowable overhang distance



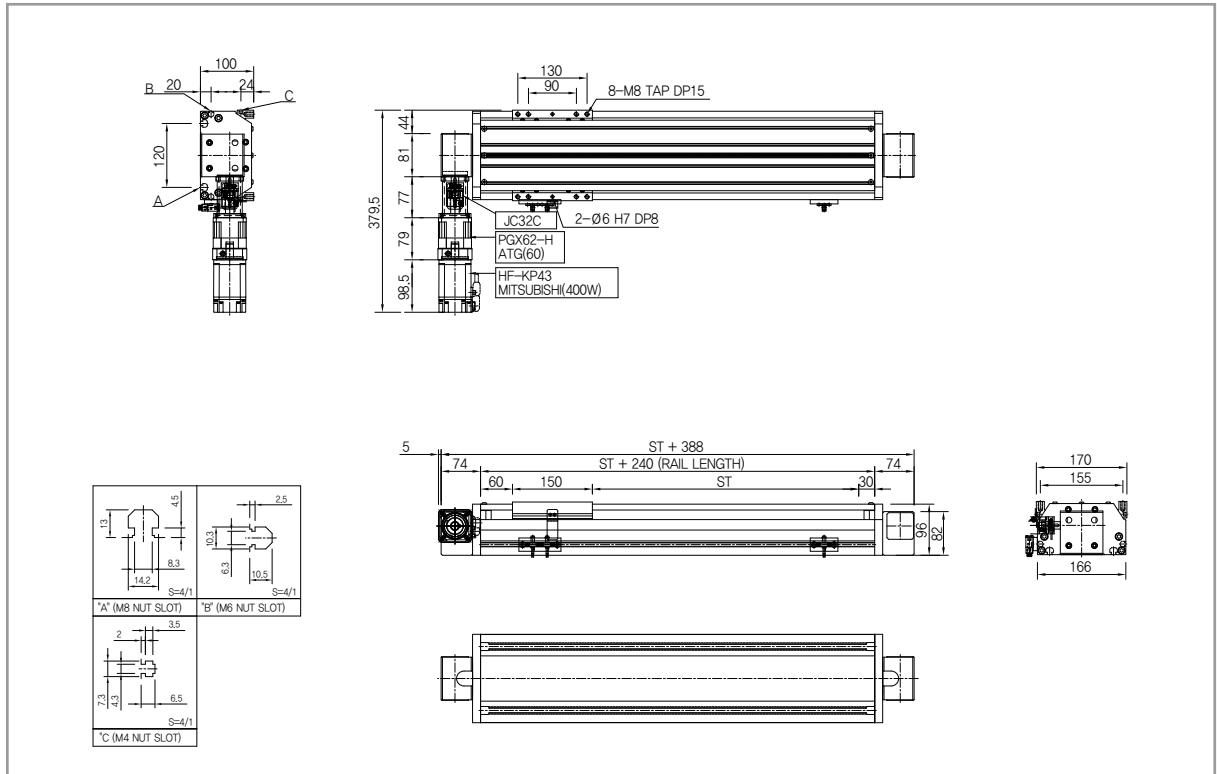
Gear Ratio	Payload	0°	90°
10	60 kg	150 mm	450 mm
	30 kg	300 mm	700 mm
5	20 kg	150 mm	500 mm
	10 kg	300 mm	1000 mm
5 (400W)	30 kg	150 mm	400 mm
	15 kg	300 mm	900 mm

LRB166

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
LRB166	50~3500	20	330	400	130	100
		10	650		80	70
		5	1300		50	40
		3	2170		10	8

LRB166



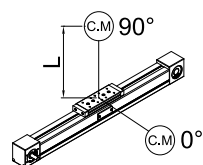
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	Gear ratio	Motor (W)
Weight(kg)	21.3	22.7	24.1	25.5	26.9	28.3	29.7	31.1	32.5	33.9	35.3	36.7	38.1	39.5	40.9	42.3		
Max. Speed (mm/s)																	20	400
																	10	
																	5	
																	3	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



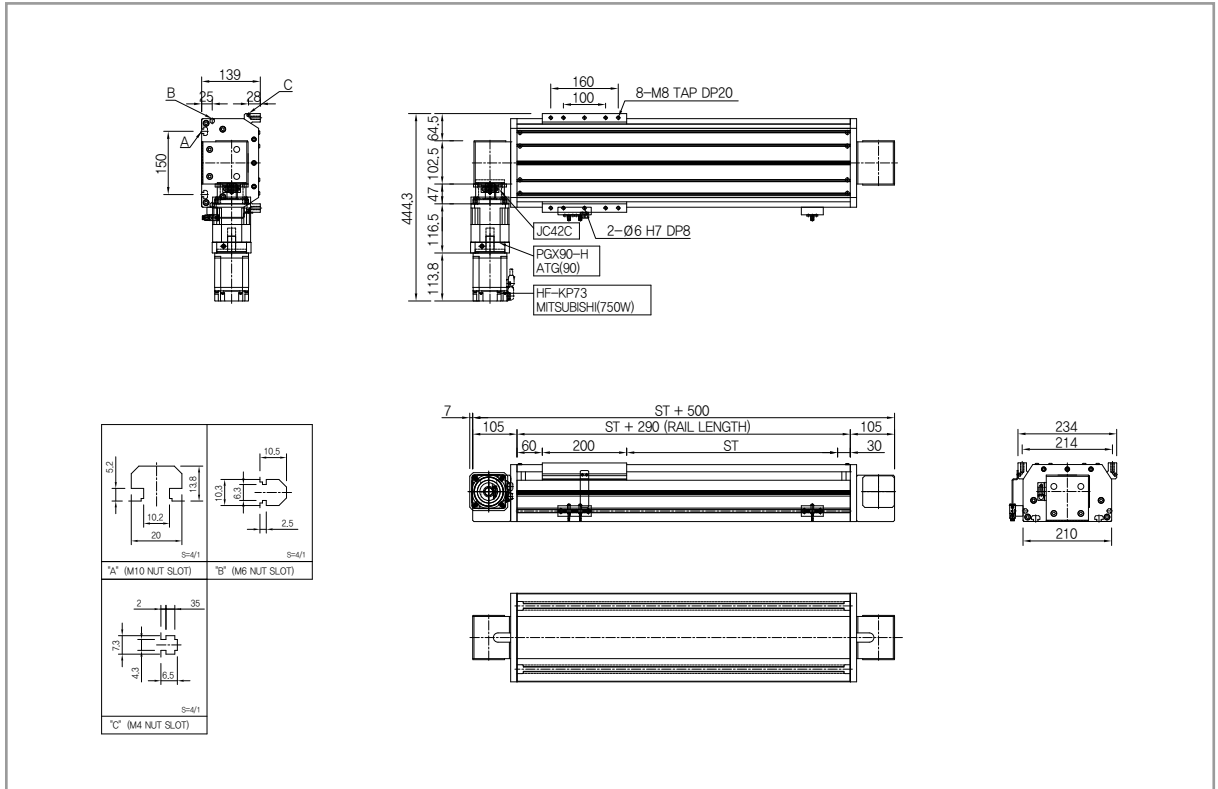
Horizontal(X)

Gear Ratio	Payload	0°		90°	
		150 mm	300 mm	300 mm	1000 mm
20	100 kg	150 mm	300 mm	200 mm	900 mm
	50 kg	300 mm	900 mm		
10	60 kg	150 mm	300 mm	300 mm	
	30 kg	300 mm	1000 mm		
5	30 kg	150 mm	300 mm	300 mm	
	15 kg	300 mm	500 mm		
3	10 kg	150 mm	600 mm	600 mm	
	5 kg	400 mm	900 mm		

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
LRB210	50~3500	20	480	750	200	160
		10	960		150	120
		5	1920		40	35

LRB210



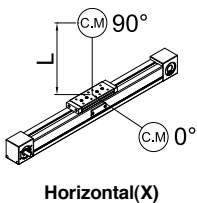
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	3500	Gear ratio	Motor (W)	
Weight(kg)	46.5	49.3	52.1	54.9	57.7	60.5	63.3	66.1	68.9	71.7	74.5	80.1	85.7	91.3	96.9	102.5	116.5			20
Max. Speed (mm/s)																		10		
																		5		

Note) The weight of motor and reducer is not included.

Allowable overhang distance



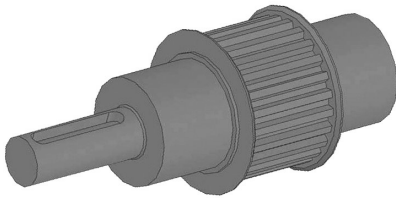
Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
20	140 kg	150 mm	1150 mm	300 mm	2000 mm
	70 kg	150 mm	580 mm	300 mm	1400 mm
10	100 kg	150 mm	600 mm	300 mm	1250 mm
	50 kg	150 mm	1250 mm	300 mm	1250 mm
5	20 kg	150 mm	1250 mm	300 mm	1250 mm
	10 kg	150 mm	1250 mm	300 mm	1250 mm

LRB PULLEY OPTION

PULLEY OPTION

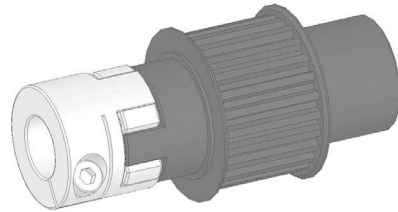
PSH Type

One body type pulley that having driving shaft



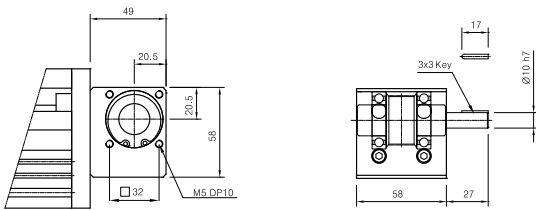
PCP Type

This type pulley is joined with Jaw-coupling directly and supplied with coupling.

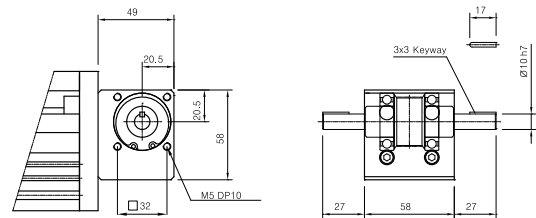


■ Pulley of LRB100

PSH-S (MB40-18A)

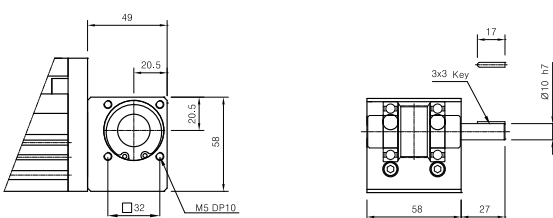


PSH-D (MB40-19A)

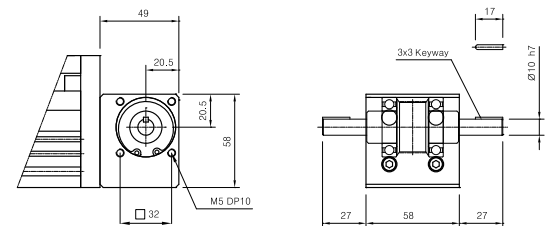


■ Pulley of LRB 120

PSH-S (MB40-18A)



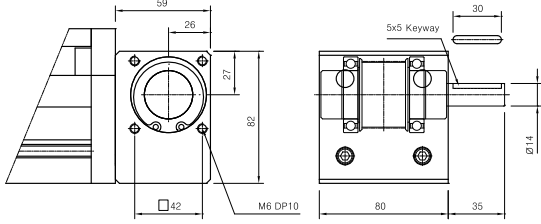
PSH-D (MB40-19A)



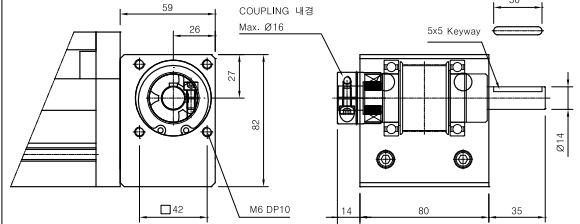
LRB PULLEY OPTION

■ Pulley of LRB166

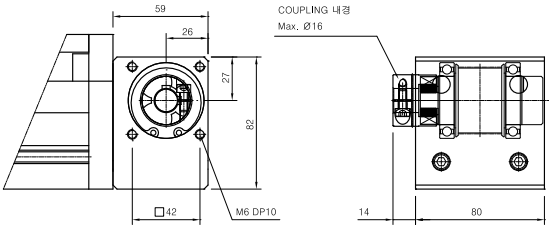
PSH-S (MB60-18A)



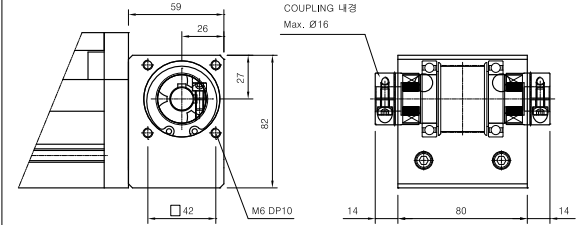
PSH-C (MB60-20A)



PCP-S (MB60-21A)

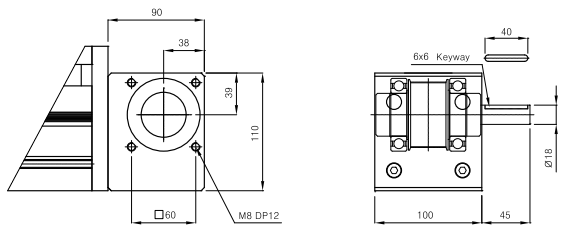


PCP-D (MB60-22A)

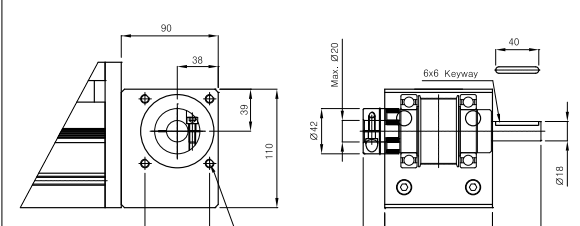


■ Pulley of LRB210

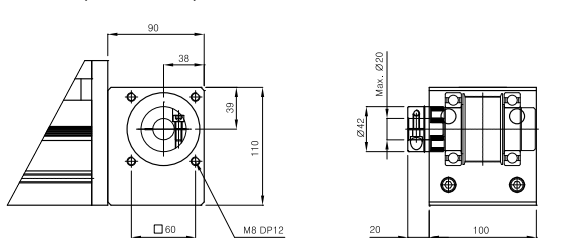
PSH-S (MB80-18A)



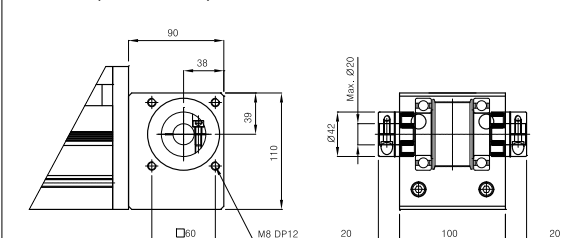
PSH-C (MB80-20A)



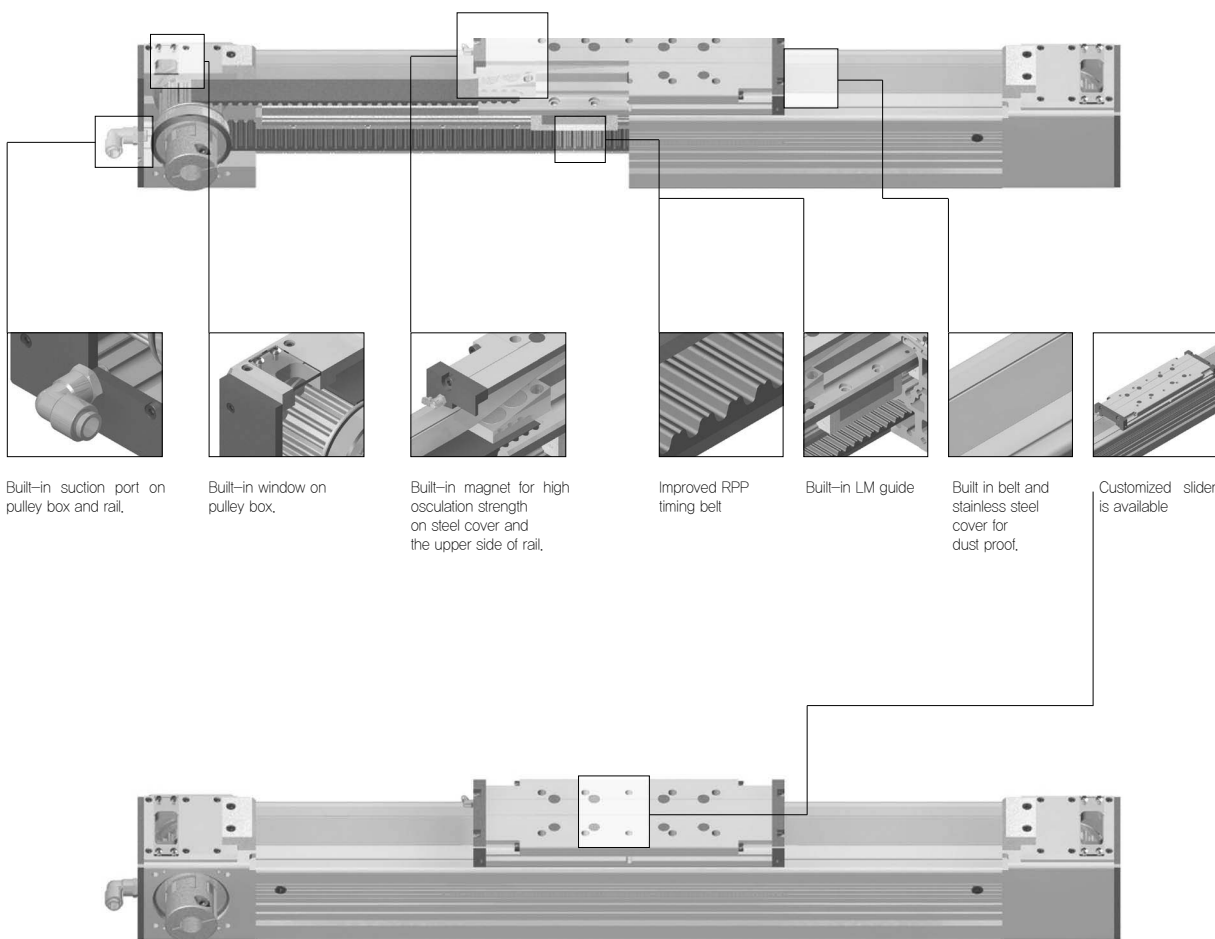
PCP-S (MB80-21A)

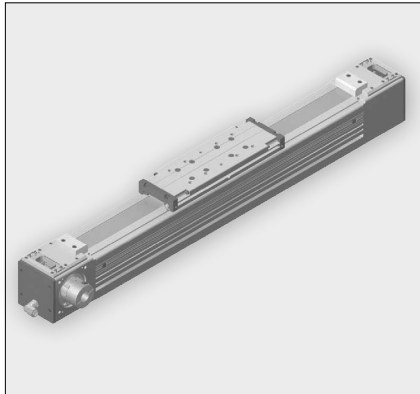


PCP-D (MB80-22A)



QL Series





Features

- LM Guide & Belt type
- Clean type(Class 100)
- Compact design and high stiffness
- Various axis combination
- High tensile timing belt
- Customized optoin
- Easy maintenance

How to order

QL
 60 —
 600 —
 0100 —
 L —
 C —
 D3 —
 E2 —

①
 ②
 ③
 ④
 ⑤
 ⑥
 ⑦
 ⑧
 ⑨

① **Sereis**
QL

② **Model**

60 / 80 / 100

※ LM : Please contact us for customized LM

③ **Stroke (Unit : mm)**

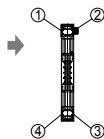
50 ~ 3500

※ Please contact us for longer stroke than standard

④ **Drive version (0:Standard, 1:Coupling type 2:Shaft type)**

TYPE	Pulley direction	Pulley shape	MODEL		
			60	80	100
0100	□	□	●	●	●
1100	□	□	●	●	●
2000	□	□	●	●	●
2200	□	□	●	●	●
1200	□	□	●	●	●

※ Please contact us for customized pulley type



⑤ **Color**

Blank : White(outer)
L : White + LM raydent
B : Black (outer)
BL : Black(outer) + LM raydent

⑥ **Sensor (dog included)**

Blank : None
C : Photo sensor + Basic socket – Basic 3EA
CJ : C + Cable socket 2M – Basic 3EA
Other than basic : C(J)(Qty) Example)C2,CJ2

⑦ **Mounting bracket**

Blank : None
D(Q'ty) : Necessary quantity, Example) D2,D3

⑧ **Bracket of reducer (including coupling)**

Blank : None

SYMBOL	TYPE	SIZE	MODEL		
			60	80	100
E1	42	●	●	●	
E2	62	●	●	●	
E3	90	●	●	●	
E4	120	●	●	●	

Basic option : ATG, APLUS, SESAME

⑨ **Customized code**

Sensor

Model	Item number	Sensor and connector
60	SX672-PL	 EE-SX672 + EE1001
80		
100		
60	SX672-L-PL	 EE-SX672 + EE1006
80		
100		

Sensor dog

Model	Item number	Remarks
60	PDG-QB60-PL	EE-SX672 only
80	PDG-QB80-PL	
100	PDG-QB100-PL	

Mounting bracket

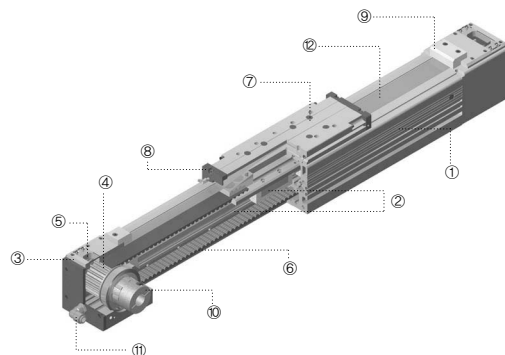
Model	Item number	Remarks
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

QL specifications

Specification	QL60	QL80	QL100
Max speed (mm/s)	2000	2000	2000
Payload (kgf)	40 (horizontal)	60 (horizontal)	100 (horizontal)
Stroke (mm)	Max. 3500	Max. 3500	Max. 3500
Repeatability (mm)	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	Ø 41.38	Ø 53.48	Ø 68.75
Pulley action perimeter (mm/rev)	130	168	216
No load torque (Nm)	1.0	1.4	1.8
Belt	RPP5 / W20	RPP8 / W25	RPP8 / W45
LM Guide	NO.15 / 1 Rail 2 Block	NO.20 / 1 Rail 2 Block	NO.30 / 1 Rail 2 Block
Basic weight (kgf)	4.2	11.3	20.5
Weight per 100mm stroke (kgf)	0.55	1.13	1.6
Motor (W)	200	400	750
Size (mm, W x H)	60 x 80	80 x 105	100 x 130

Note) Customized options such as motor, raydent and LM guide are available.

QL structure



► Component list

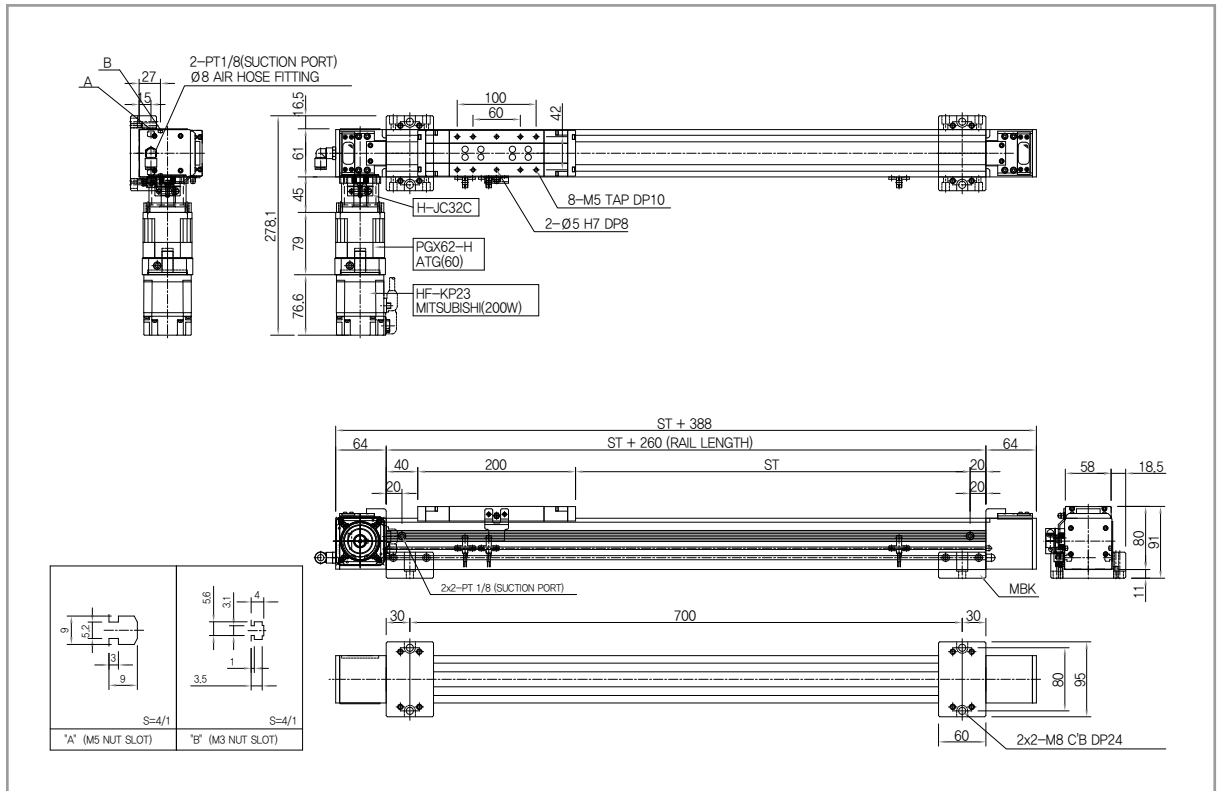
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	7	Slide block	Aluminum alloy
2	Model	LM GUIDE		8	Grease nipple	
	60	No.15 / 1RAIL 2BLOCK				
	80	No.20 / 1RAIL 2BLOCK				
	100	No.30 / 1RAIL 2BLOCK				
3	Pulley box		Aluminum alloy	9	Stopper	Urethane
4	Timing pulley		High carbon steel	10	Coupling	Aluminum alloy
5	Window		PC	11	Suction port	
6	Timing belt		Aluminum alloy	12	Steel cover	Stainless steel

QL 60

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QL60	50~3500	20	330	200	70	60
		10	650		50	40
		5	1300		15	12

QL60



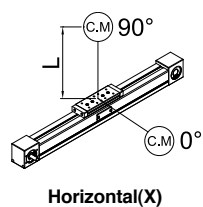
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	9.7	10.3	10.8	11.4	11.9	12.5	13.0	13.6	14.1	14.7	15.2	16.3	17.4	18.5	19.6	20.7		
Max. Speed (mm/s)																	20	200
																	10	
																	5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance

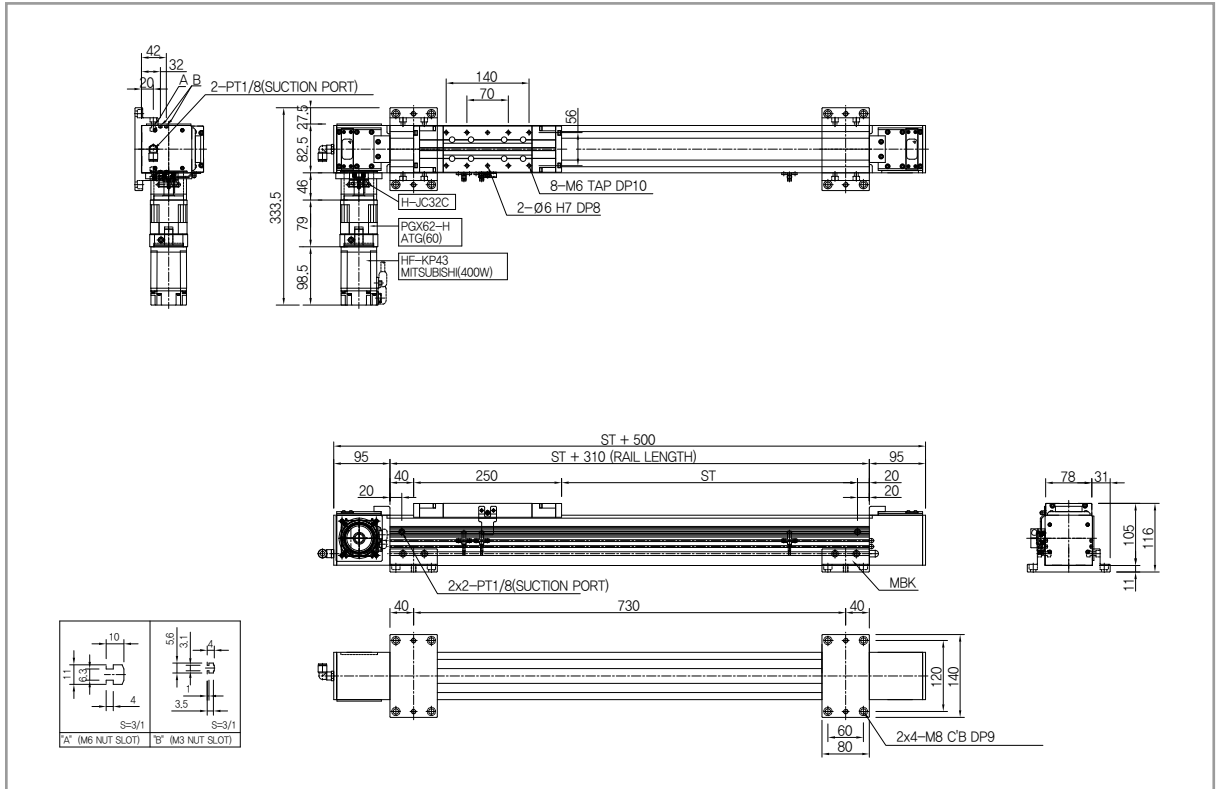


Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
20	40 kg	20 mm	750 mm		
	20 kg	50 mm	1000 mm		
10	30 kg	15 mm	400 mm		
	15 kg	40 mm	600 mm		
5	12 kg	20 mm	400 mm		
	6 kg	40 mm	600 mm		

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QL80	50~3500	20	420	400	110	80
		10	840		70	60
		5	1680		25	20

QL80



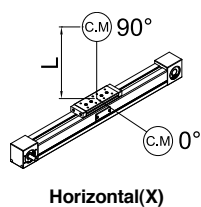
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	Gear ratio	Motor (W)	
Weight(kg)	22.6	23.7	24.9	26.0	27.1	28.3	29.4	30.5	31.6	32.8	33.9	39.6	45.2	50.9	56.5			400
Max. Speed (mm/s)																20		
																10		
																5		

Note) The weight of motor and reducer is not included.

Allowable overhang distance



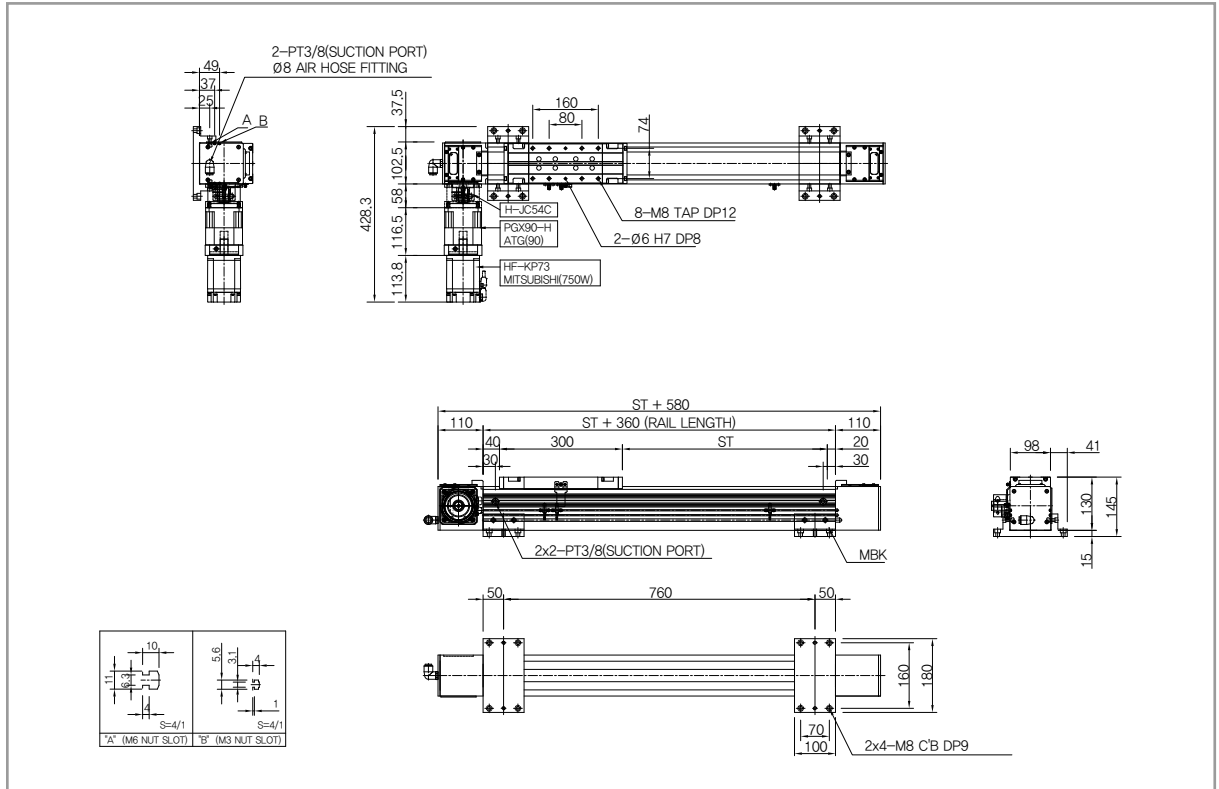
Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
20	80 kg	20 mm	500 mm		
	40 kg	40 mm	800 mm		
10	50 kg	20 mm	200 mm		
	25 kg	40 mm	500 mm		
5	20 kg	20 mm	350 mm		
	10 kg	50 mm	550 mm		

QL 100

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
QL100	50~3500	20	540	750	150	120
		10	1080		80	70
		5	2160		40	35

QL100



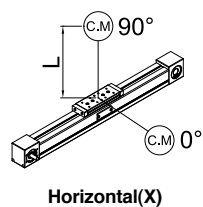
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	36.5	38.1	39.7	41.3	42.9	44.5	46.1	47.7	49.3	50.9	52.5	60.5	68.5	76.5	84.5	92.5	100.5		
Max. Speed (mm/s)																		20	750
																		10	
																		5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



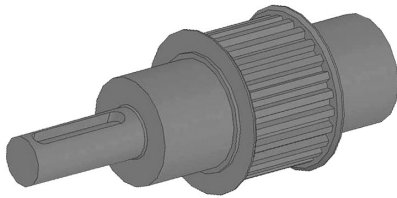
Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
20	120 kg	25 mm	300 mm		
	60 kg	60 mm	800 mm		
10	70 kg	25 mm	300 mm		
	35 kg	60 mm	600 mm		
5	30 kg	25 mm	300 mm		
	15 kg	60 mm	500 mm		

QL PULLEY OPTION

PULLEY OPTION

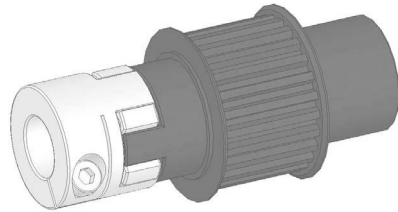
PSH Type

One body type pulley that having driving shaft



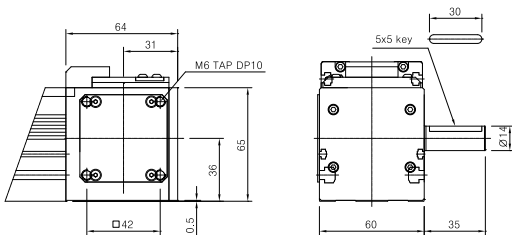
PCP Type

This type pulley is joined with Jaw-coupling directly and supplied with coupling.

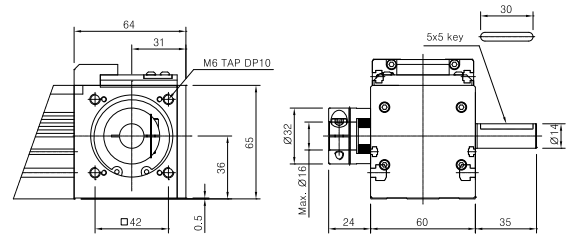


■ Pulley of QL60

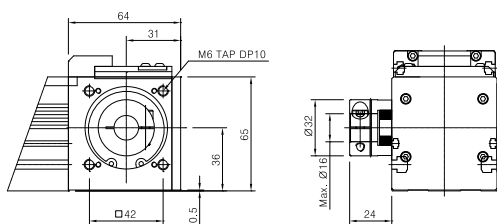
PSH-S (QB60-18A)



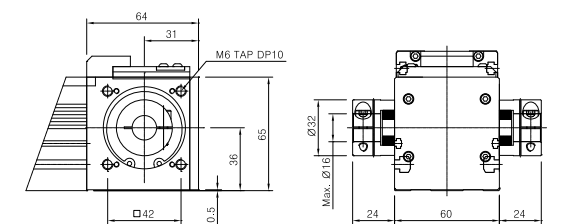
PSH-C (QB60-20A)



PCP-S (MB60-21A)

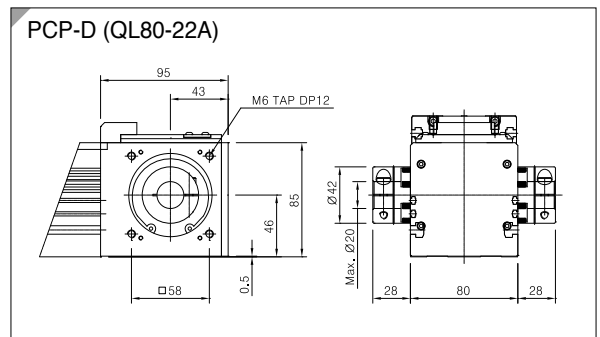
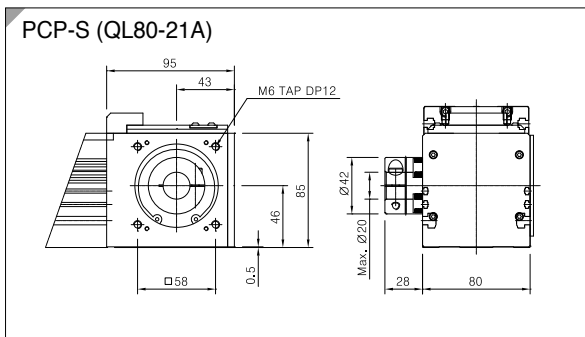
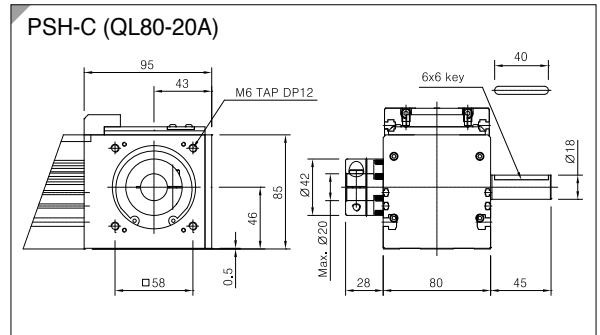
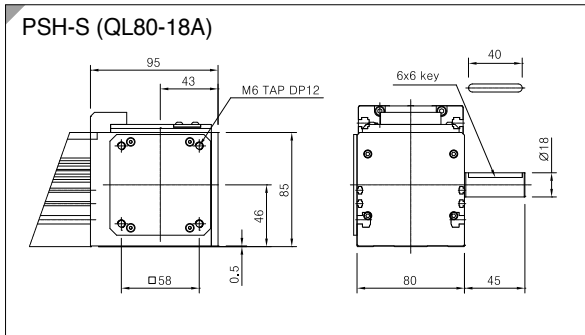


PCP-D (MB60-22A)

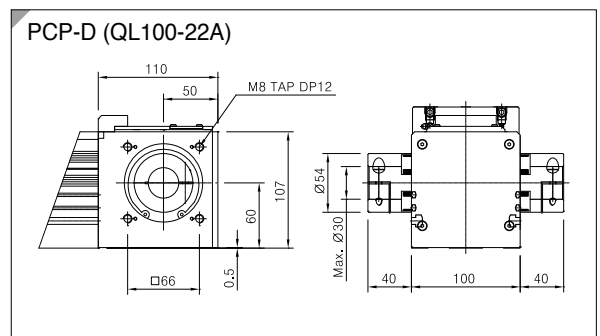
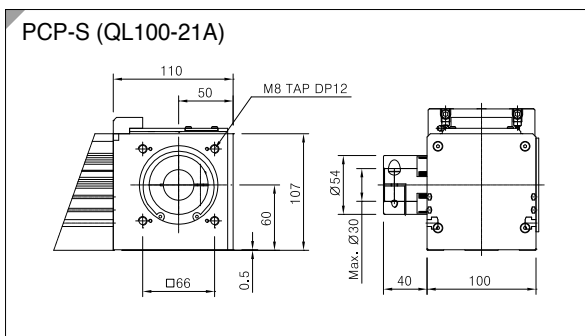
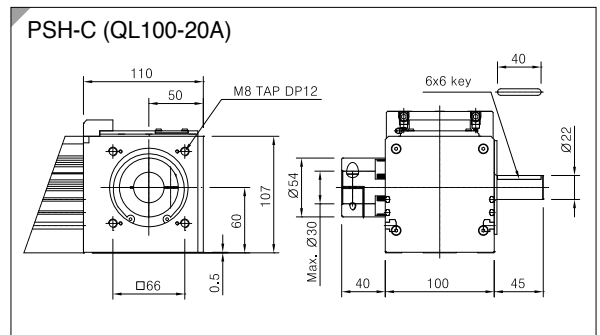
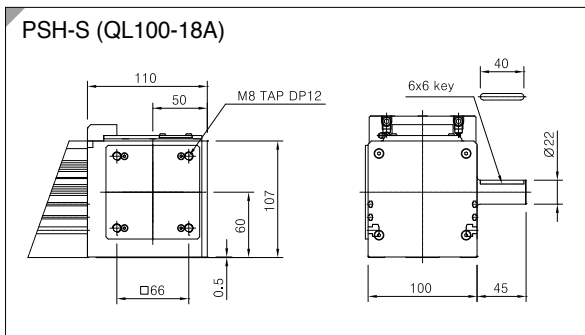


QL PULLEY OPTION

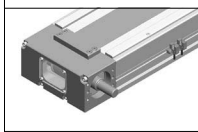
■ Pulley of QL80



■ Pulley of QL100



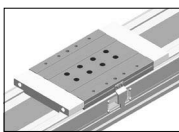
LCB series



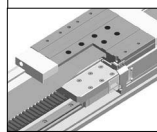
Various models of motor and reducer are available.



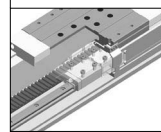
Built-in window on pulley box.



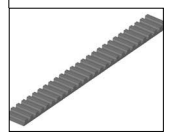
Various length of slider based on customer's needs are available.



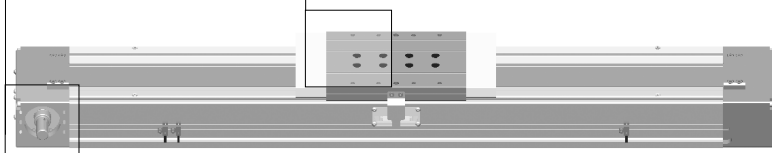
Built-in belt and stainless steel cover for dust proof.



LM guide with high stiffness and high precision.



Improved RPP type belt.





Features

- LM Guide & Belt type
- Clean type(Class 100)
- Compact design and high stiffness
- Various axis combination
- High tensile timing belt
- Easy maintenance

How to order

LCB 130 - 600 - 0200 - C - E2 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Model

130

※ LM: Please contact us for customized LM

③ Stroke

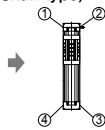
50 ~ 3500

※ Please contact us for longer stroke than standard

④ Drive version (0:Standard, 2:Shaft type)

TYPE		MODEL
Pulley direction	Pulley shape	130
0200		•
2200		•

※ Please contact us for customized pulley type.



⑤ Color

Blank : White(outer)
L : White + LM raydent
B : Black (outer)
BL : Black(outer) + LM raydent

⑥ Sensor (dog included)

Blank : None
C : Photo sensor - Basic 3EA
Other than basic :C(J)(Q'ty) Example)C2

⑦ Bracket of reducer (including coupling)

Blank : None

TYPE		MODEL
SYMBOL	SIZE	130
E1	42	•
E2	62	•

Basic option : ATG, APLUS, SESAME

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
130	SX912-R-PL	 EE-SX912-R

Sensor dog

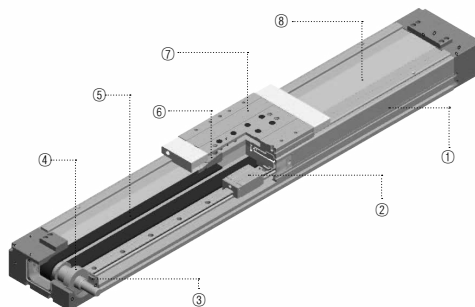
Model	Item number	Remarks
130	PDG-LC130-PL	EE-SX912-R

LCB Specification

Specification	LCB130	Remarks
Max speed (mm/s)	2000	
Payload (kgf)	65 (horizontal)	
Stroke (mm)	Max. 3500	* Please contact us for longer than 3500mm
Repeatability (mm)	± 0.05	
Diameter of pulley (mm)	∅ 31.83	
Pulley action perimeter (mm/rev)	100	
No load torque (Nm)	1.2	
Belt	RPP5 / W25	
LM Guide	NO.15 / 2 Rail 4 Block	* Please contact us for over 2 blocks
Basic weight (kgf)	7.1	
Weight per 100mm stroke (kgf)	0.7	
Motor (W)	200 ~ 400	
Size (mm, W x H)	130 x 80	

Note) Customized options such as motor, raydent and LM guide are available.

LCB structure



► Component list

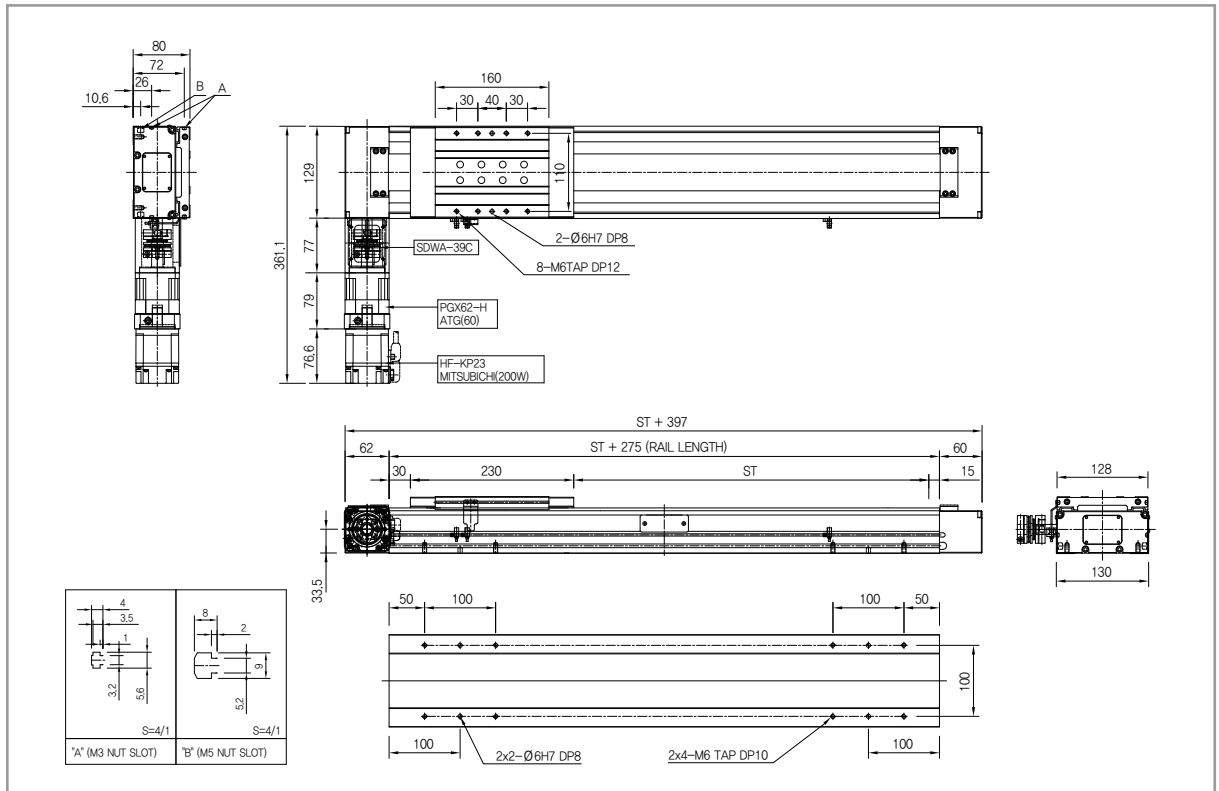
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Timing belt	Urethane
2	Model	LM GUIDE		6	Belt clip	Carbon steel
	130	No.15 / 2Rail 4Block				
3	Pulley box		Aluminum alloy	7	Slide block	Aluminum alloy
4	Timing pulley		High carbon steel	8	Steel cover	Stainless steel

LCB 130

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
LCB 130	50~3500	10	500	200	65	60
		5	1000	400	60	50

LCB130



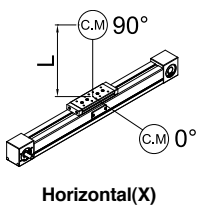
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	14.1	14.8	15.5	16.2	16.9	17.6	18.3	19	19.7	20.4	21.1	24.6	28.1	31.6	35.1	38.6	42.1		
Max. Speed (mm/s)																		10	200
																		5	400

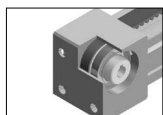
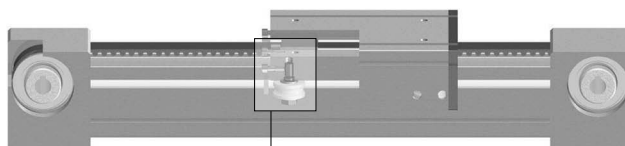
Note) The weight of motor and reducer is not included.

Allowable overhang distance

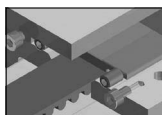


Gear Ratio	Payload	0°	90°
10 (200W)	60 kg	150 mm	500 mm
	30 kg	300 mm	800 mm
5 (400W)	50 kg	100 mm	400 mm
	15 kg	200 mm	900 mm

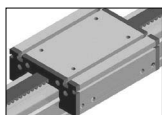
MB series



Various axis combination are available and easy maintenance



Improved RPP timing belt

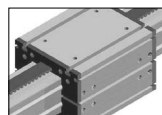


MB 40/60/80/100

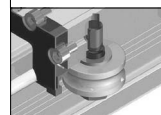
Basic slider block

- * Various length of slider based on customer's needs are available.
- * Customized roller bearing is available

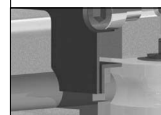
S: Standard slider block
H: Standard slider + 4 rollers



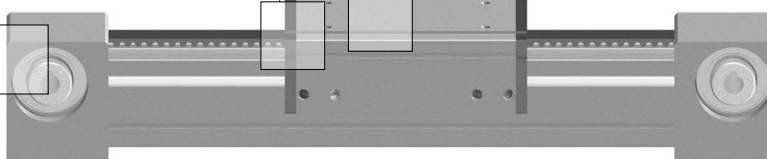
MB 40/60/80/100-D
(Customized type)

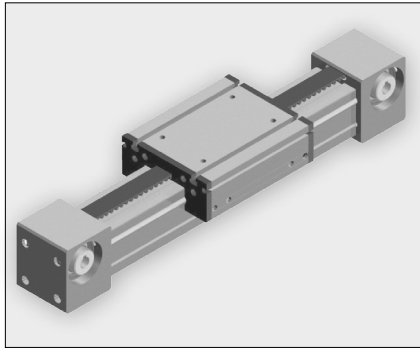


Using high-quality of bearing steel shaft



- Felt wiper prevents stiffening after long time of operation
- Spring inside of seal keeps certain level of frictional resistance





Features

- Track roller guide & Belt type unit
- Various axis combination
- High tensile timing belt
- Customized optoin
- Easy maintenance

How to order

① MB
② 40
③ S
④ — 600 —
⑤ 0011
⑥ —
⑦ C
⑧ — D3 —
⑨ E2
⑩ —

① Sereis

② Model

30 / 40 / 60 / 80 / 100

③ Block(slider)

S : Standard(4 roller bearings)
 T : S + 2 additional bearings
 H : S + 4 additional bearings
 ※ Please contact us for additional quantity of slider

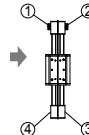
④ Stroke(Unit : mm)

30 : 50 ~ 2800
 40 : 50 ~ 3500
 60 / 80 / 100 : 50 ~ 5500
 ※ Please contact us for longer stroke than standard

⑤ Drive version (0:Standard,1:Coupling type 2:Shaft type)

TYPE	Pulley direction	Pulley shape	MODEL			
			30	40	80	100
0100	□	□		●	●	●
1100	□	□		●	●	●
2000	□	□	●	●	●	●
2200	□	□	●	●	●	●
1200	□	□	●	●	●	●

※ Please contact us for customized pulley type



⑥ Color

Blank : White(outer)
 L : White + LM raydent
 B : Black (outer)
 BL : Black(outer) + LM raydent

⑦ Sensor (dog included)

Blank : None
 C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket 2M – Basic 3EA
 Other than basic : C(J(Q'ty) Example)C2,CJ2

⑧ Mounting bracket

Blank : None
 D(Q'ty) necessary quantity. Example)D2,D3

⑨ Bracket of reducer (including coupling)

Blank : None

SYMBOL	TYPE	SIZE	MODEL			
			30	40	80	100
E1	42		●			
E2	62				●	●
E3	90				●	●
E4	120				●	●

Basic option : ATG, APLUS, SESAME

⑩ Customized code

Sensor

Model	Item number	Sensor and connector
30	SX671-PL	 EE-SX671 + EE1001
40		
60		
80		
100		
30	SX671-L-PL	 EE-SX671 + EE1006
40		
60		
80		
100		

Sensor bracket

Model	Photo sensor for single	Photo sensor for double
30	PSBS-30-PL	PSBD-30-PL
40	PSBS-40-PL	PSBD-40-PL
60	PSBS-60-PL	PSBD-60-PL
80	PSBS-80-PL	PSBD-80-PL
100	PSBS-100-PL	PSBD-100-PL

Sensor dog

Model	Item number	Remarks
30	PDG-M30-PL	SX672-PL
40	PDG-M40-PL	
60	PDG-M60-PL	
80	PDG-M80-PL	
100	PDG-M100-PL	

Mounting bracket

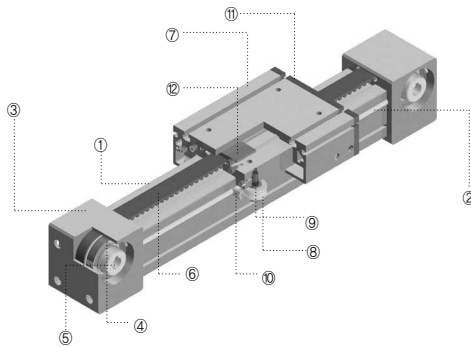
Model	Item number	Remarks
30	MBK30-PL	
40	MBK40-PL	
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

MB specifications

Specification	MB30	MB40	MB60	MB80	MB100
Max speed (mm/s)	2000	2000	2000	2000	2000
Payload (kgf)	3 (horizontal)	10 (horizontal)	15 (horizontal)	40 (horizontal)	70 (horizontal)
Stroke (mm)	Max. 2800	Max. 3500	Max. 5500	Max. 5500	Max. 5500
Repeatability (mm)	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	Ø 23.87	Ø 31.83	Ø 41.38	Ø 61.12	Ø 81.49
Pulley action perimeter (mm/rev)	75	100	130	192	256
No load torque (Nm)	0.2	0.3	0.6	0.9	1.4
Belt	S3M / W12	RPP5 / W15	RPP5 / W25	RPP8 / W30	RPP8 / W50
LM Guide	S: 4 roller bearing standard / T : S type + 2 roller bearing / H : S type + 4 roller bearing				
Basic weight (kgf)	1	2.1	5.6	12.9	28
Weight per 100mm stroke (kgf)	0.14	0.3	0.5	0.8	1.4
Motor (W)	100	100	200	400	750
Size (mm, W x H)	30 x 47	40 x 64	60 x 90	80 x 121	100 x 155

Note) Customized options such as motor, raydent and LM guide are available.

MB structure



► Component list

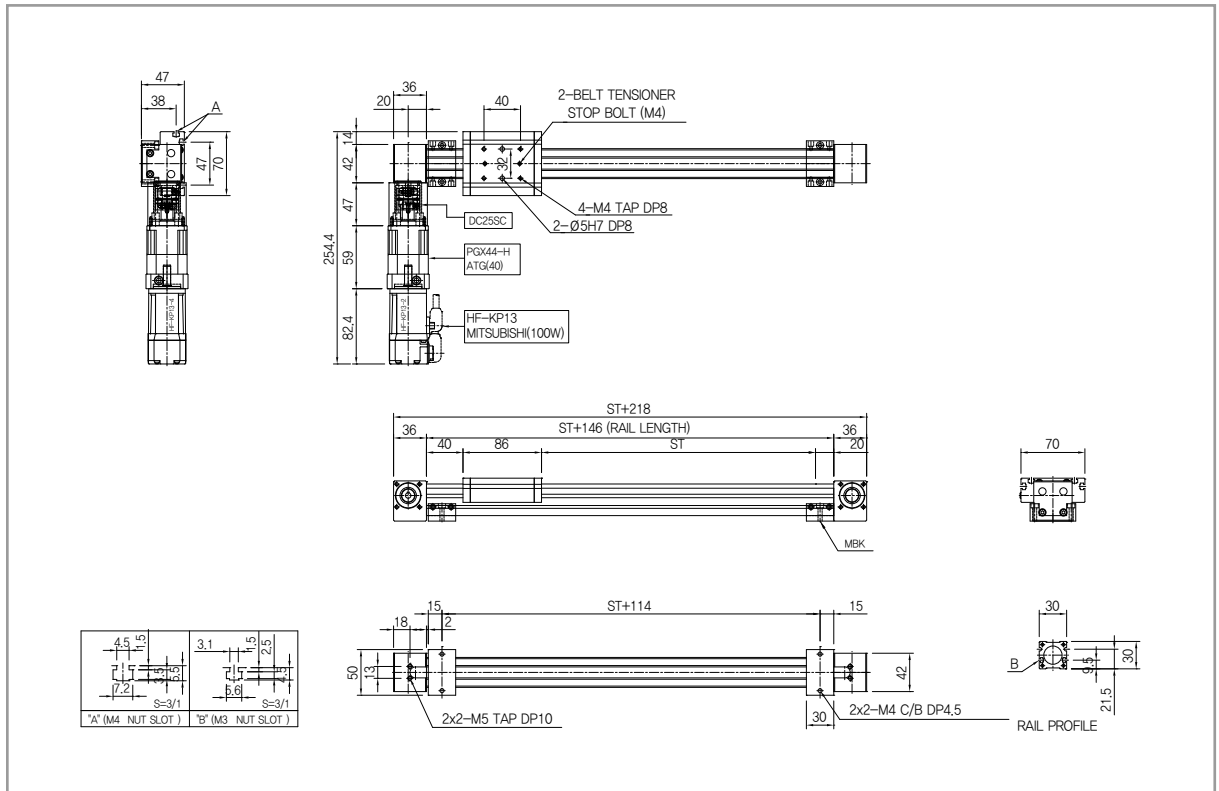
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	7	Rail	Aluminum alloy
2	Model	Shaft	Bearing steel	8	Track roller	Bearing steel
	30	Ø4				
	40	Ø6				
	60	Ø10				
	80	Ø12				
	100	Ø16				
3	Pulley box		Aluminum alloy	9	Washer	-
4	Bearing		-	10	Wiper	FELT
5	Timing pulley		High carbon steel	11	Sealing	EP
6	Timing belt		Urethane	12	Belt clip	Carbon steel

MB 30

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MB30	50~2800	5	750	100	8	6
		3	1250		5	3

MB30



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

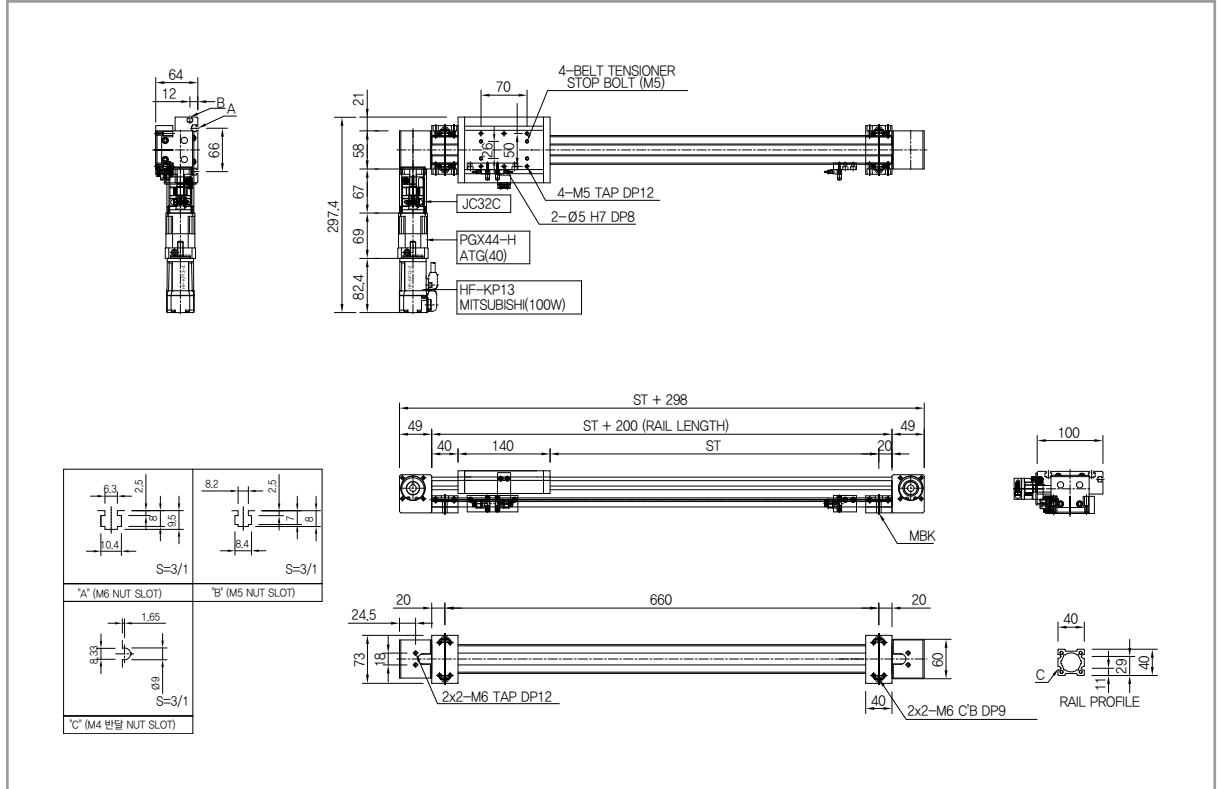
Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	Gear ratio	Motor (W)
Weight(kg)	2.4	2.5	2.7	2.8	3.0	3.1	3.2	3.4	3.5	3.7	3.8	4.1	4.4	4.6	4.9		
Max. Speed (mm/s)	750														5	100	
	1250														3		

Note) The weight of motor and reducer is not included.

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MB40	50~3500	10	500	100	25	20
		5	1000		9	9

MB40



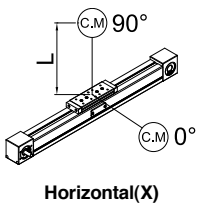
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.6	9.2	9.8	10.4	11.0		
Max. Speed (mm/s)																	500	100
																	1000	5

Note) The weight of motor and reducer is not included.

Allowable overhang distance



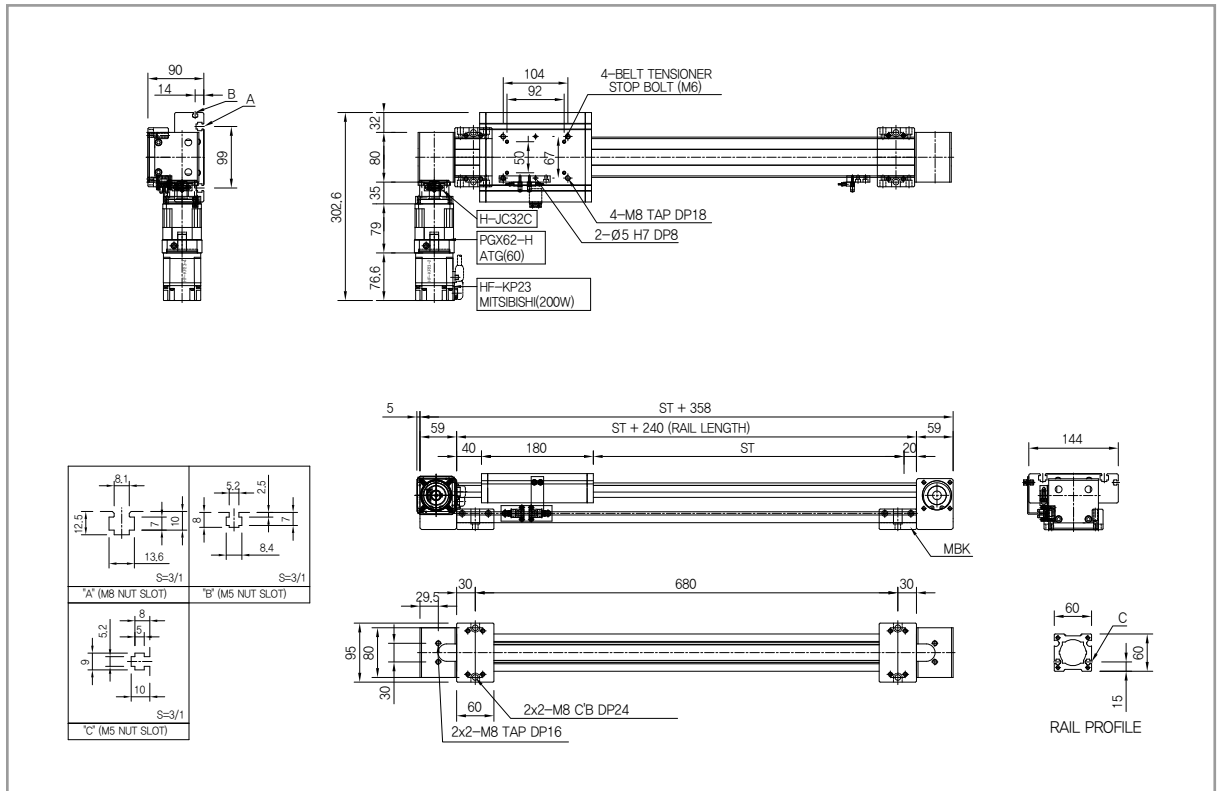
Gear Ratio	Payload	0°	90°
10	24 kg	20 mm	150 mm
	12 kg	70 mm	600 mm
5	8kg	110 mm	500 mm
	4 kg	240 mm	1000 mm

MB 60

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MB60	50~5500	10	650	200	40	30
		5	1300		20	15

MB60



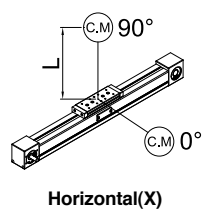
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	10.6	11.1	11.6	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.6	17.6	18.6	19.6	20.6		
Max. Speed (mm/s)	650																10	200
	1300																5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance

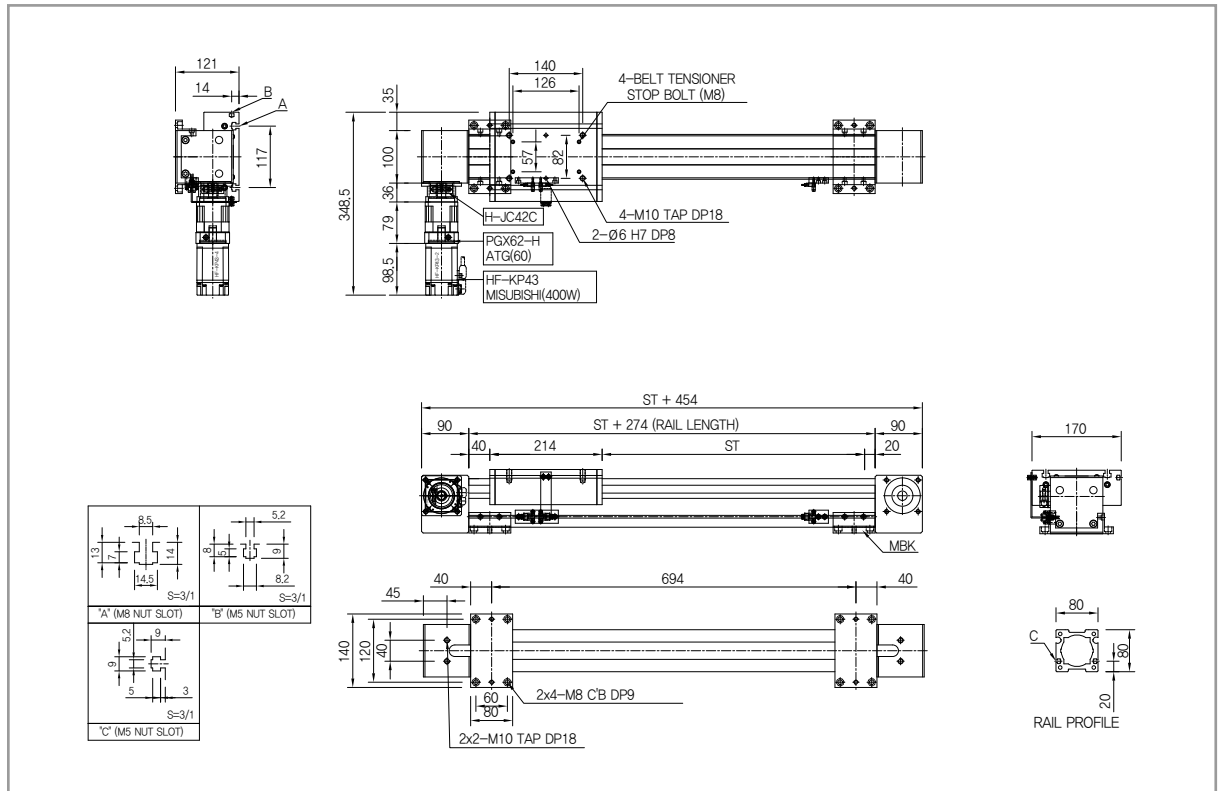


Gear Ratio	Payload	0°		90°	
		0°	90°	0°	90°
10	40 kg	45 mm	200 mm		
	20 kg	120 mm	800 mm		
5	14 kg	170 mm	600 mm		
	7 kg	380 mm	1200 mm		

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MB80	50~5500	20	480	400	50	40
		10	960		40	30
		5	1920		18	15

MB80



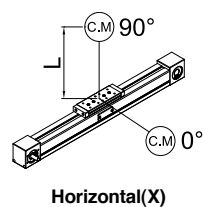
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	Gear ratio	Motor (W)	
Weight(kg)	20.9	21.7	22.5	23.3	24.1	24.9	25.7	26.5	27.3	28.1	28.9	32.9	36.9	40.9	44.9			400
Max. Speed (mm/s)																10		
																5		

Note) The weight of motor and reducer is not included.

Allowable overhang distance



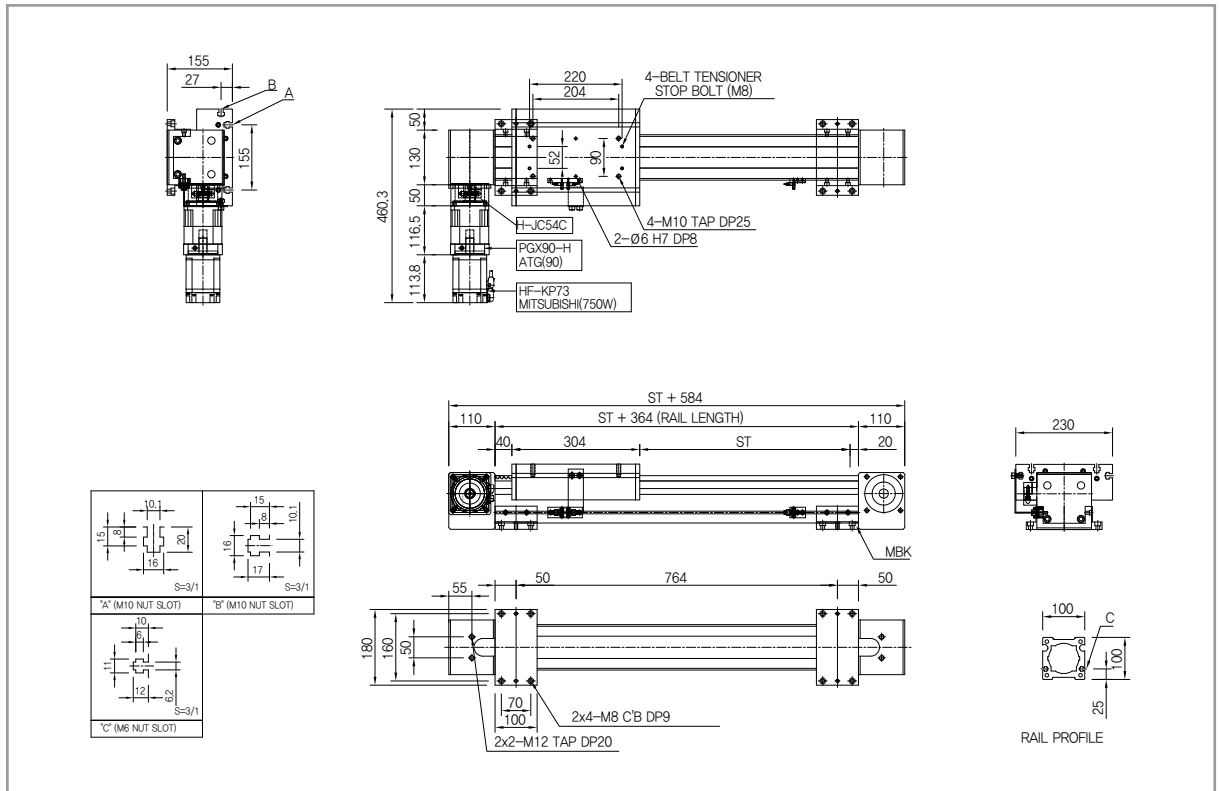
Gear Ratio	Payload	Angle	
		0°	90°
20	50 kg	20 mm	150 mm
	25 kg	85 mm	600 mm
10	40 kg	30 mm	150 mm
	20 kg	110 mm	400 mm
5	10 kg	240 mm	500 mm
	5 kg	540 mm	1000 mm

MB 100

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MB100	50~5500	20	640	750	90	80
		10	1280		70	60
		5	2560		20	18

MB100



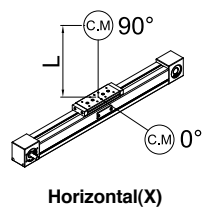
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	42.0	43.4	44.8	46.2	47.6	49.0	50.4	51.8	53.2	54.6	56.0	63.0	70.0	77.0	84.0	91.0	98.0		
Max. Speed (mm/s)																		20	750
																		10	
																		5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



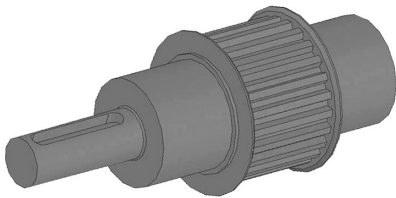
Gear Ratio	Payload	0°	90°
20	90 kg	35 mm	200 mm
	45 kg	130 mm	800 mm
10	70 kg	50 mm	150 mm
	35 kg	170 mm	600 mm
5	20 kg	300 mm	400 mm
	10 kg	650 mm	800 mm

MB PULLEY OPTION

PULLEY OPTION

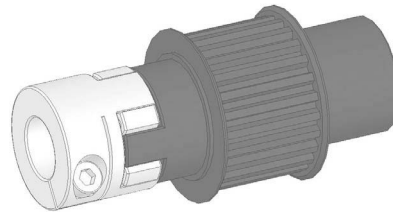
PSH Type

One body type pulley that having driving shaft



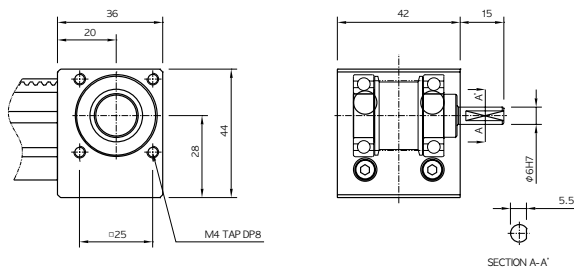
PCP Type

This type pulley is joined with Jaw-coupling directly and supplied with coupling.

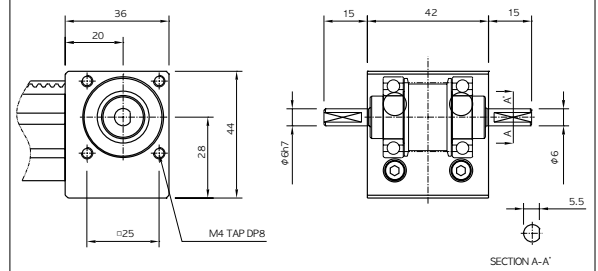


■ Pulley of MB30

PSH-S (MB30-18A)

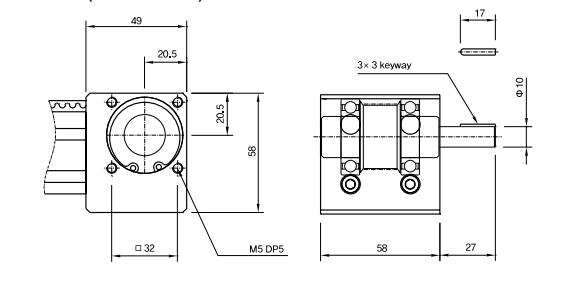


PSH-D (MB30-19A)

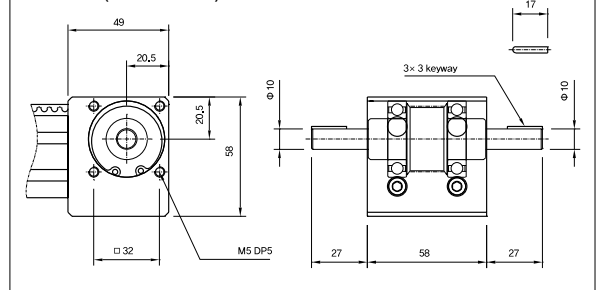


■ Pulley of MB40

PSH-S (MB40-18A)

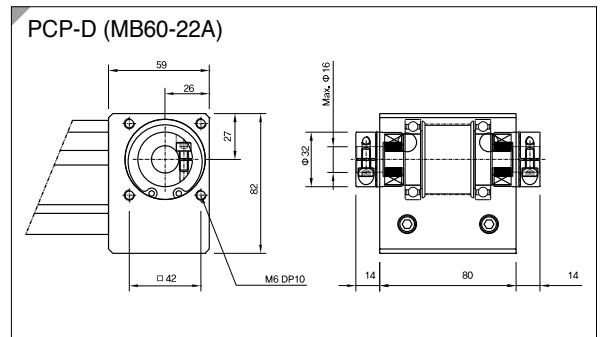
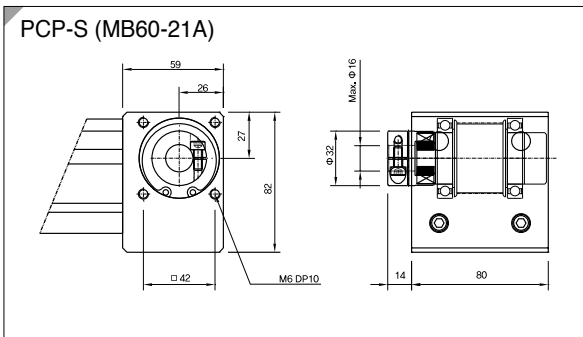
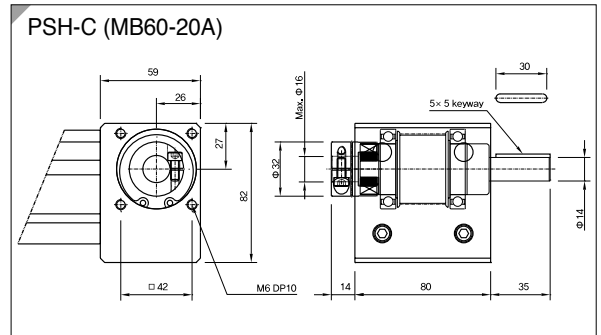
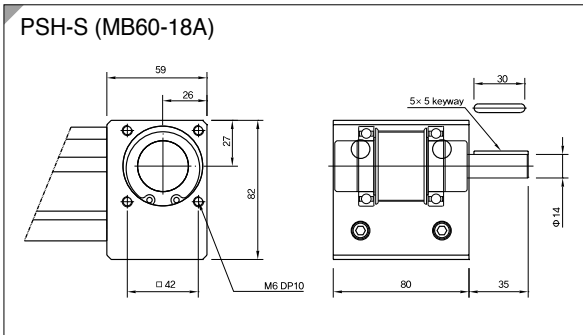


PSH-D (MB40-19A)

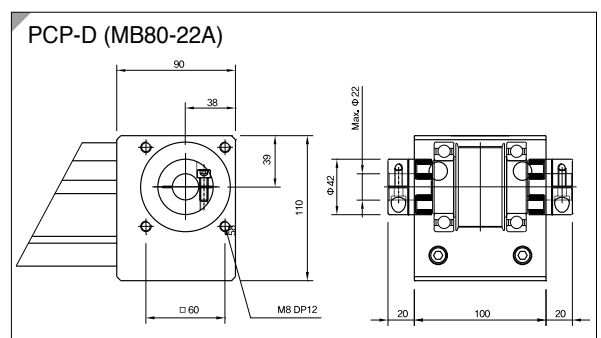
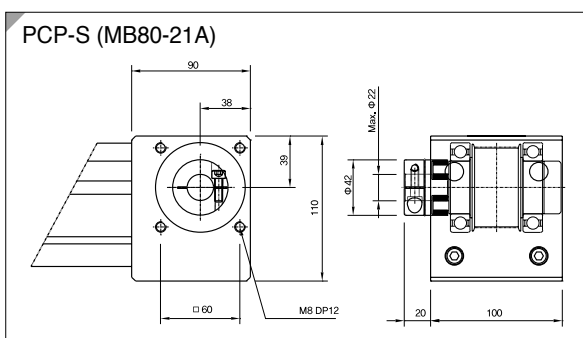
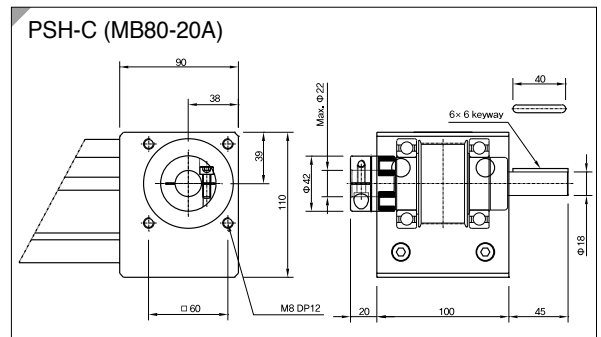
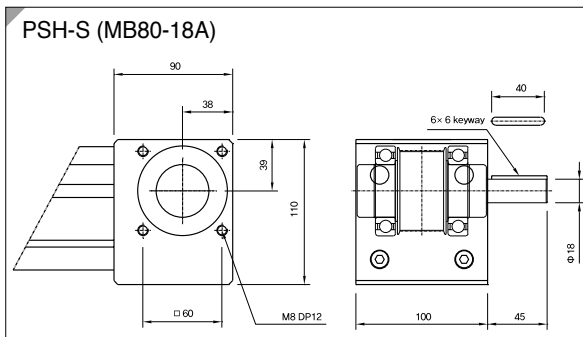


MB PULLEY OPTION

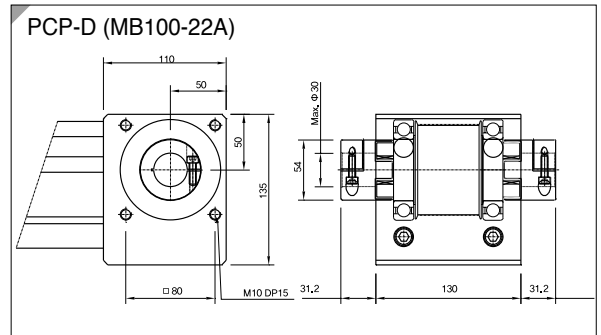
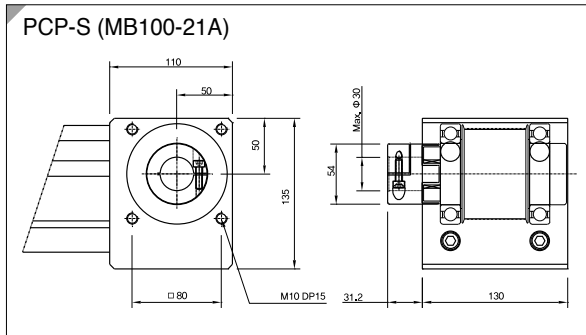
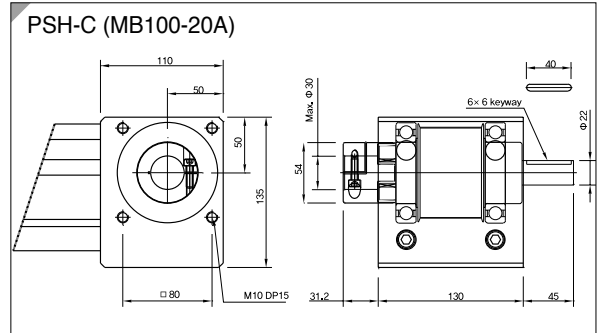
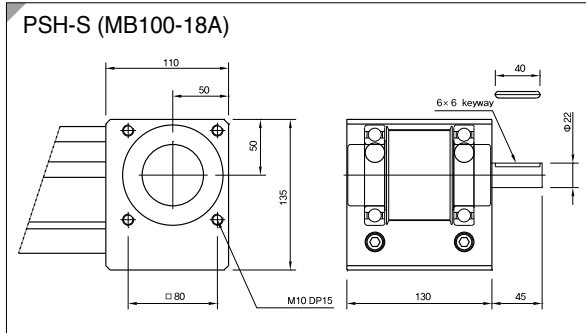
■ Pulley of MB60

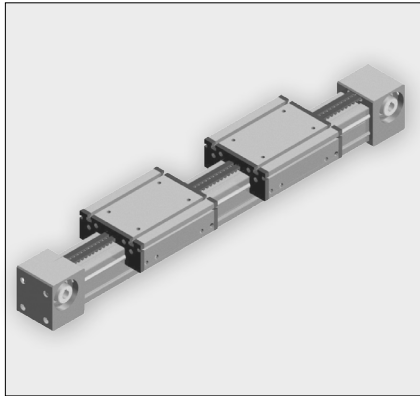


■ Pulley of MB80



■ Pulley of MB100





Features

- Track roller guide & Belt type unit
- Multi mover available
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance

How to order

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

① Sereis

② Model
60 / 80 / 100

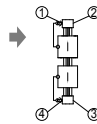
③ Slider option
S: Standard (4 roller bearings)
T: S + 2 additional bearings
H: S + 4 additional bearings
※ Please contact us for additional quantity of slider

④ Rail Length (Unit: mm)
60 : 700 ~ 5000
80 : 800 ~ 5000
100 : 700 ~ 5000
※ Please contact us for longer stroke than standard

⑤ Drive version (0 : Standard, 2 : Shaft type)

TYPE		MODEL		
Pulley direction	Pulley type	60	80	100
2002	-	●	●	●

※ Please contact us for customized pulley type



⑥ Color
Blank : White (outer)
B : Black (outer)

⑦ Sensor (dog included)
Blank : None
C : Photo sensor + Basic socket – Basic 3EA
CJ : C + Cable socket 2M – Basic socket
Other than basic : C(J)(Qty) Example)C2,CJ2

⑧ Mounting bracket
Blank : None
D(Qty) : Necessary quantity. Example)D2,D3

⑨ Bracket of reducer (including coupling)
Blank : None

TYPE		MODEL		
SYMBOL	SIZE	60	80	100
E2	62	●	●	
E3	90	●	●	●
E4	120			●

Basic option : ATG, APLUS, SESAME

⑩ Customized code

Sensor

Model	Item number	Sensor and connector
60	SX671-PL	 EE-SX671 + EE1001
80		
100		
60	SX671-L-PL	 EE-SX671 + EE1006
80		
100		

Sensor dog

Model	Photo sensor for single	Photo sensor for double
60	PSBS-60-PL	PSBD-60-PL
80	PSBS-80-PL	PSBD-80-PL
100	PSBS-100-PL	PSBD-100-PL

Mounting bracket

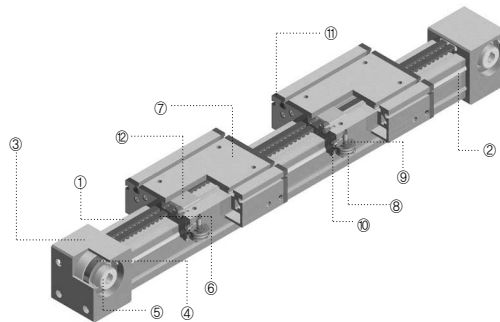
Model	Item number	Remarks
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

MBB specifications

Specification	MBB60	MBB80	MBB100
Max speed (mm/s)	2000	2000	2000
Payload (kgf)	30 (horizontal)	40 (horizontal)	60 (horizontal)
Stroke (mm)	Max. 5000	Max. 5000	Max. 5000
Repeatability (mm)	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	∅ 41.38	∅ 61.12	∅ 81.49
Pulley action perimeter (mm/rev)	130	192	256
No load torque (Nm)	0.6	0.9	1.4
Belt	RPP5 / W9	RPP8 / W12	RPP8 / W20
LM Guide	S : 4roller bearing Standard / H : S type + 4 roller bearings		
Basic weight (kgf)	7.3	15.9	36.0
Weight per 100mm stroke (kgf)	0.5	0.8	1.4
Motor (W)	200	400	750
Size (mm, W x H)	60 x 90	80 x 121	100 x 155

Note) Customized options such as motor raydent and LM guide are available.

MBB structure



► Component list

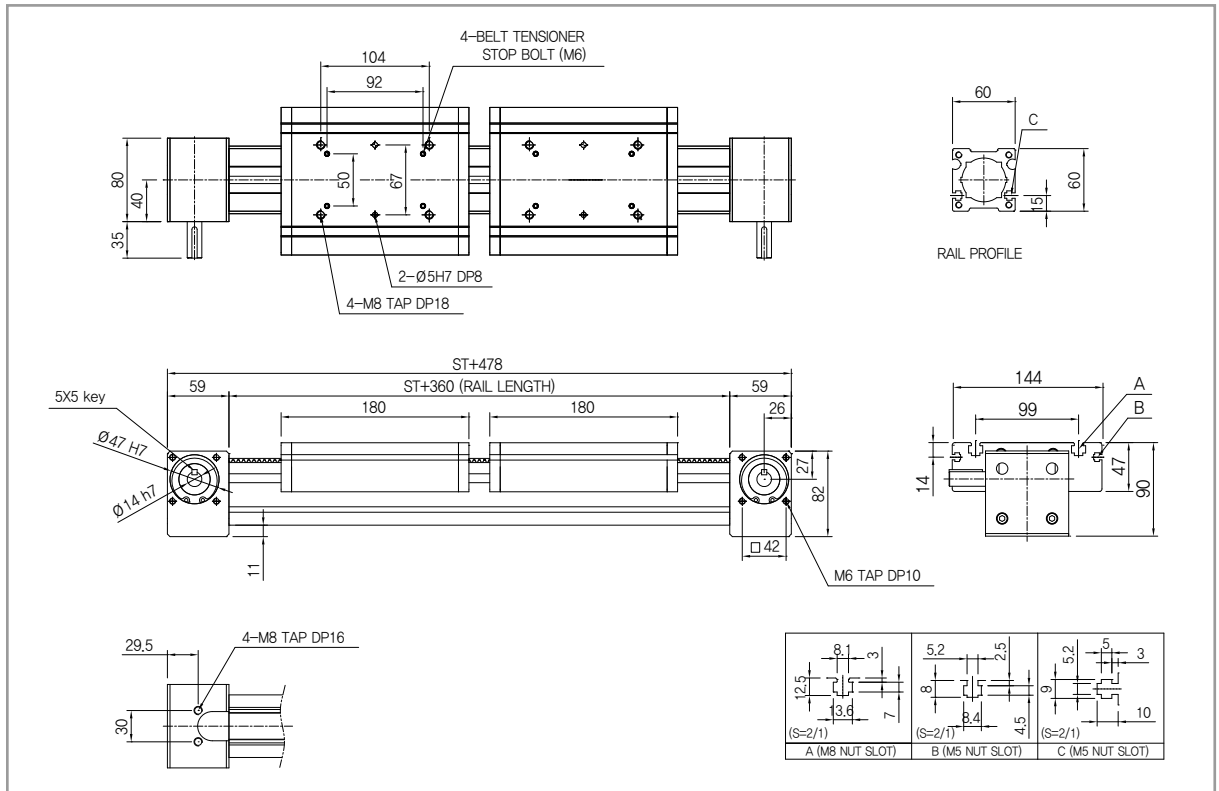
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	7	Slider block	Aluminum alloy
2	Model	Shaft	Bearing steel	8	Track roller	Bearing steel
	60	∅10				
	80	∅12				
	100	∅16				
3	Pulley box		Aluminum alloy	9	Washer	-
4	Bearing		-	10	Wiper	FELT
5	Timing pulley		High carbon steel	11	Sealing	EP
6	Timing belt		Urethane	12	Belt clip	Carbon steel

MBB 60

Basic specifications

Model	Rail Length(mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBB60	700~5000	10	650	200	30	25
		5	1300		14	12

MBB60



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

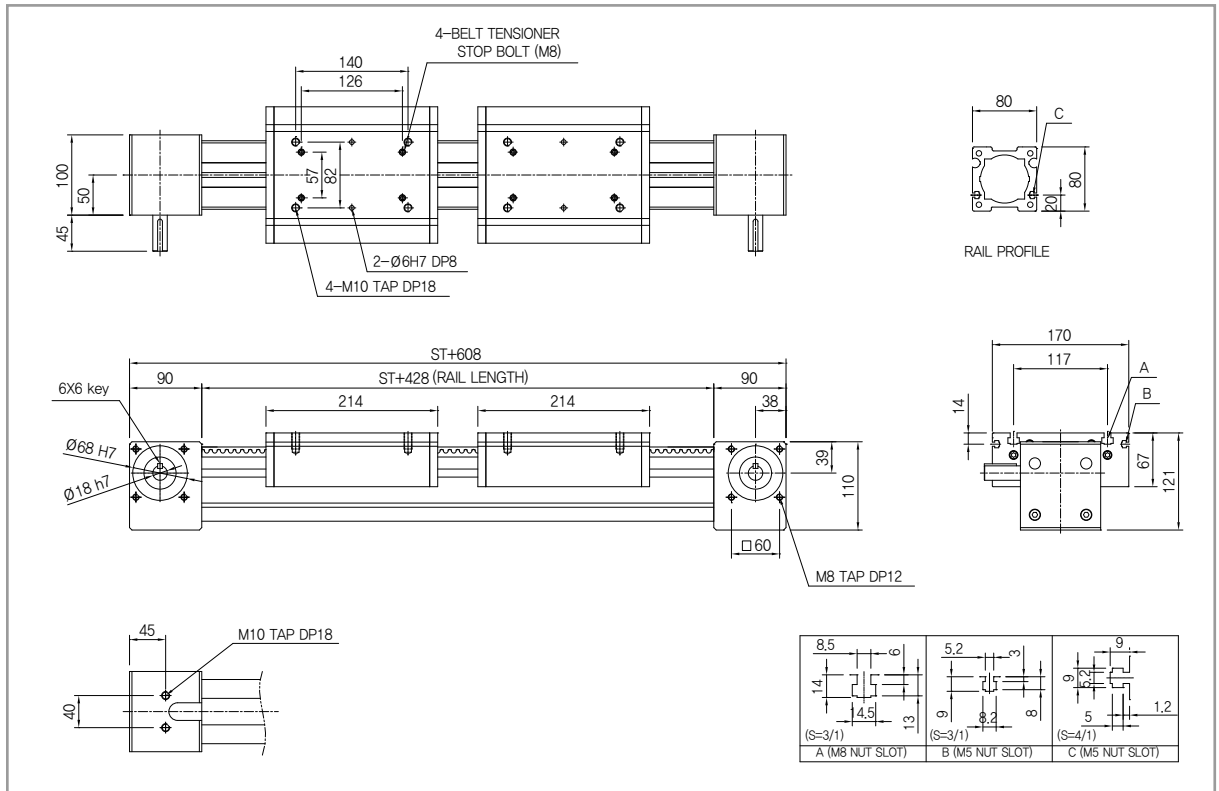
Rail Length(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.3	16.8	17.3	19.8	22.3	24.8	27.3	29.8	32.3	MBB60

Note) The weight of motor and reducer is not included.

Basic specifications

Model	Rail Length (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBB80	800~5000	20	480	400	40	35
		10	960		20	15

MBB80



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Rail Length(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	23.9	24.7	25.5	26.3	27.1	27.9	28.7	29.5	30.3	31.1	31.9	35.9	39.9	43.9	47.9	51.9	55.9	MBB80

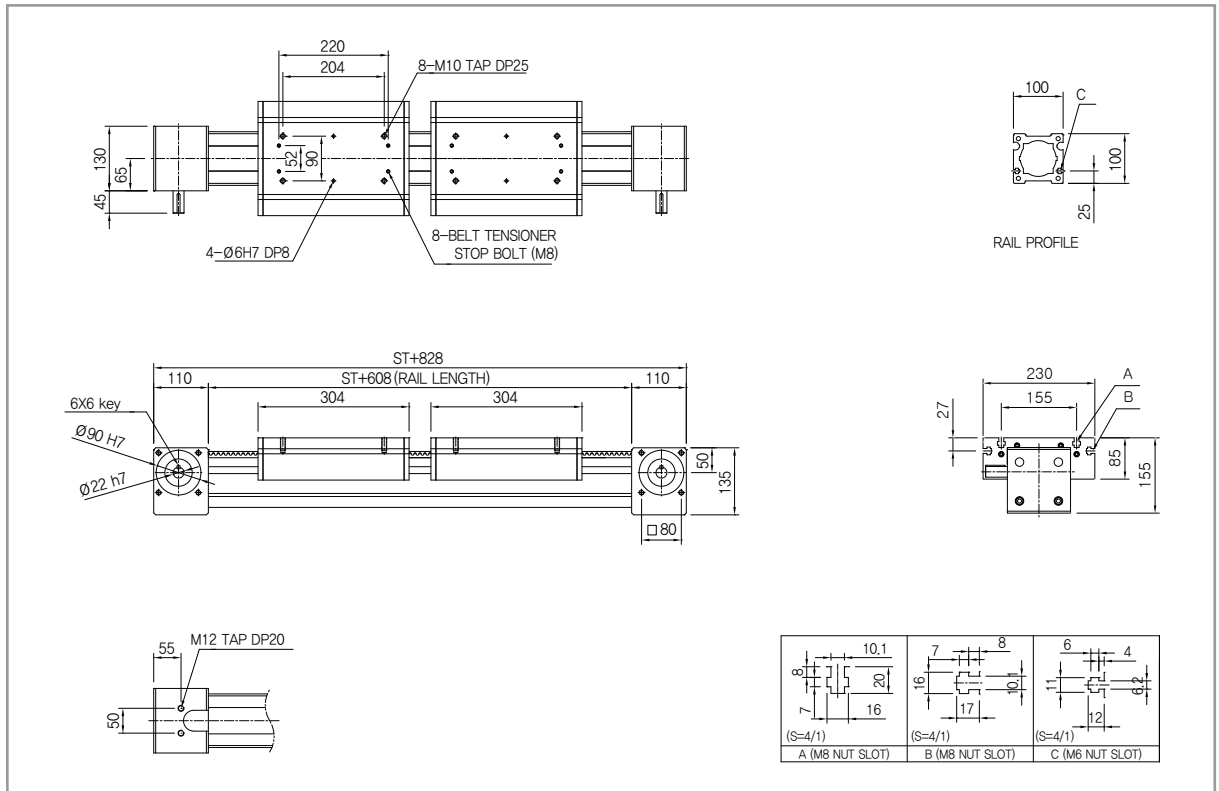
Note) The weight of motor and reducer is not included.

MBB 100

Basic specifications

Model	Rail Length(mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBB100	700~5000	20	640	750	60	50
		10	1280		40	30

MBB100

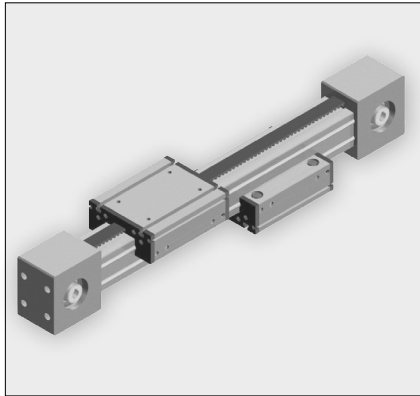


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Rail Length(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	47.0	48.1	49.2	50.3	51.4	57.0	58.4	59.8	61.2	62.6	64.0	71.0	78.0	85.0	92.0	99.0	106.0	MBB100

Note) The weight of motor and reducer is not included.



Features

- Track roller guide & Belt type unit
- Multi mover available
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance

How to order

① MBT
② 40
③ S
④ — 600 —
⑤ 2000
⑥ — E2 —
⑦
⑧

① Sereis

② Model

40 / 60 / 80 / 100

③ Slider option

S : Standard(4 roller bearings)
 T : S + 2 additional bearings
 H : S + 4 additional bearings
 ※ Please contact us for additional quantity of slider

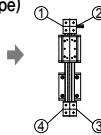
④ Stroke (Unit : mm)

40 : 50 ~ 3500
 60/ 80 / 100 : 50 ~ 5000
 ※ Please contact us for longer stroke than standard

⑤ Drive pulley (0:Standard, 2:Shaft type)

TYPE		MODEL			
Pulley direction	Pulley type	40	60	80	100
2000		●	●	●	●
2200		●	●	●	●

※ Please contact us for customized pulley type



⑧ Customized code

⑥ Color

Blank : White(outer)
 B : Black (outer)

⑦ Bracket of reducer (including coupling)

Blank : None

TYPE		MODEL		
SYMBOL	SIZE	60	80	100
E2	62	●	●	
E3	90	●	●	●
E4	120			●

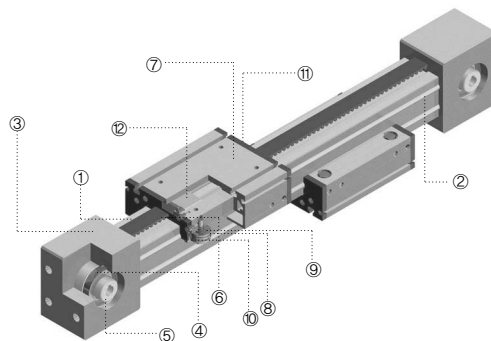
Basic option : ATG, APLUS, SESAME

MBT specifications

Specification	MBT40	MBT60	MBT80	MBT100
Max speed (mm/s)	2000	2000	2000	2000
Payload (kgf)	15 (horizontal)	15 (horizontal)	40 (horizontal)	80 (horizontal)
Stroke (mm)	Max. 3500	Max. 5000	Max. 5000	Max. 5000
Repeatability (mm)	± 0.05	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	∅ 47.74	∅ 70.3	∅ 101.86	∅ 122.23
Pulley action perimeter (mm/rev)	150	220	320	384
No load torque (Nm)	0.3	0.6	0.9	1.4
Belt	RPP5 / W15	RPP5 / W25	RPP8 / W30	RPP8 / W50
LM Guide	S : 4 roller bearing standard / H : S type + 4 roller bearings			
Basic weight (kgf)	2.7	7.3	15.9	36.0
Weight per 100mm stroke (kgf)	0.3	0.5	0.8	1.4
Motor (W)	100 ~ 200	200 ~ 400	400	750
Size (mm, W x H)	40 x 70	60 x 98	80 x 140	100 x 180

Note) Customized options such as motor, raydent and LM guide are available.

MBT structure



► Component list

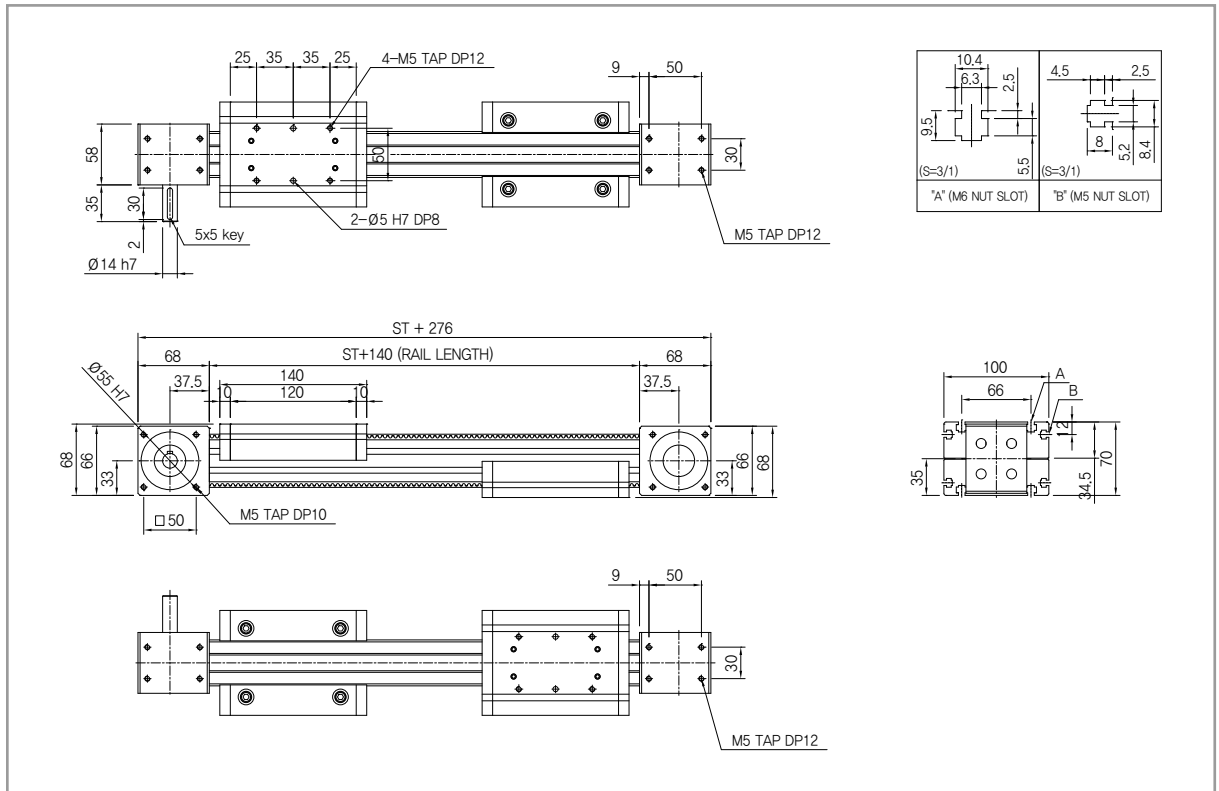
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	7	Slider block	Aluminum alloy
2	Model	Shaft	Bearing steel	8	Track roller	Bearing steel
	40	∅6				
	60	∅10				
	80	∅12				
	100	∅16				
3	Pulley box		Aluminum alloy	9	Washer	-
4	Bearing		-	10	Wiper	FELT
5	Timing pulley		High carbon steel	11	Sealing	EP
6	Timing belt		Urethane	12	Belt clip	Carbon steel

MBT 40

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBT40	50~3500	10	750	100	15	12
		5	1500	200	10	8

MBT40



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

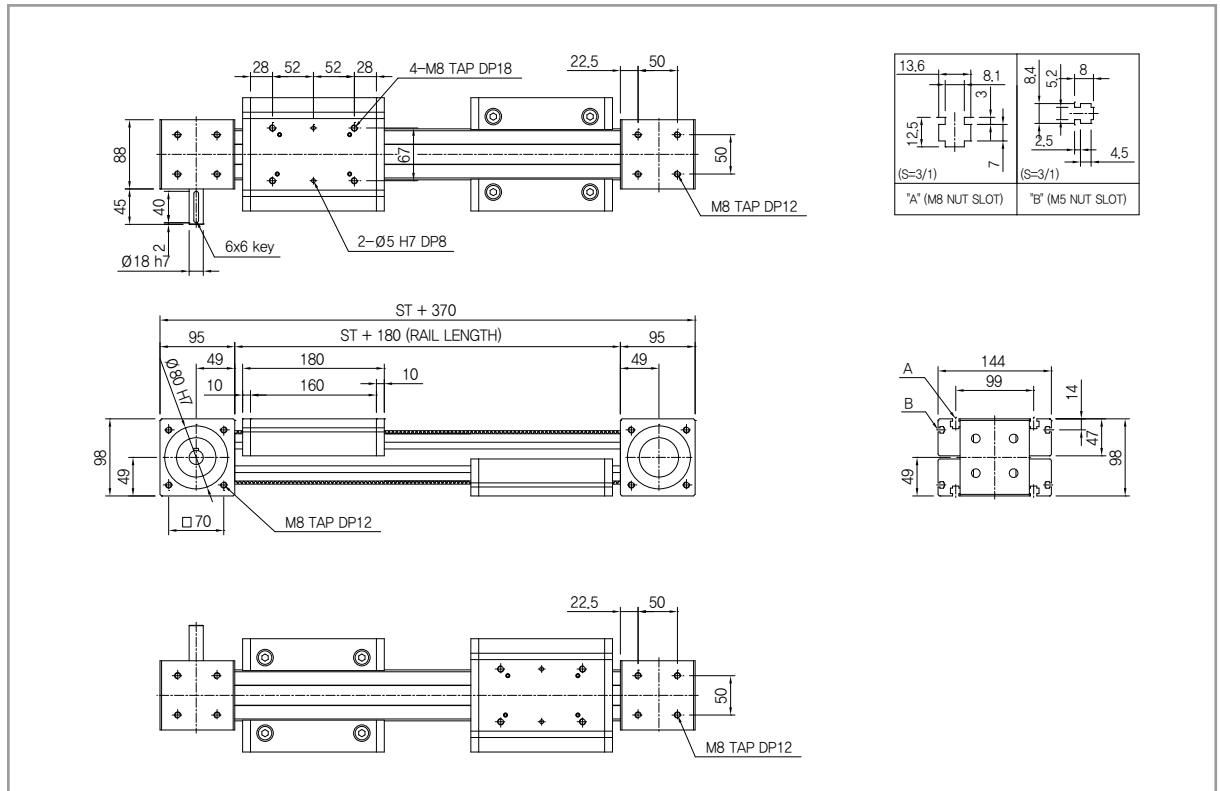
Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	10.2	11.7	13.2	14.7	16.2	17.7	MBT40

Note) The weight of motor and reducer is not included.

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBT60	50~5000	10	1100	200	15	12
		5	2200	400	5	3

MBT60



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.3	16.8	17.3	19.8	22.3	24.8	27.3	29.8	32.3	MBT60

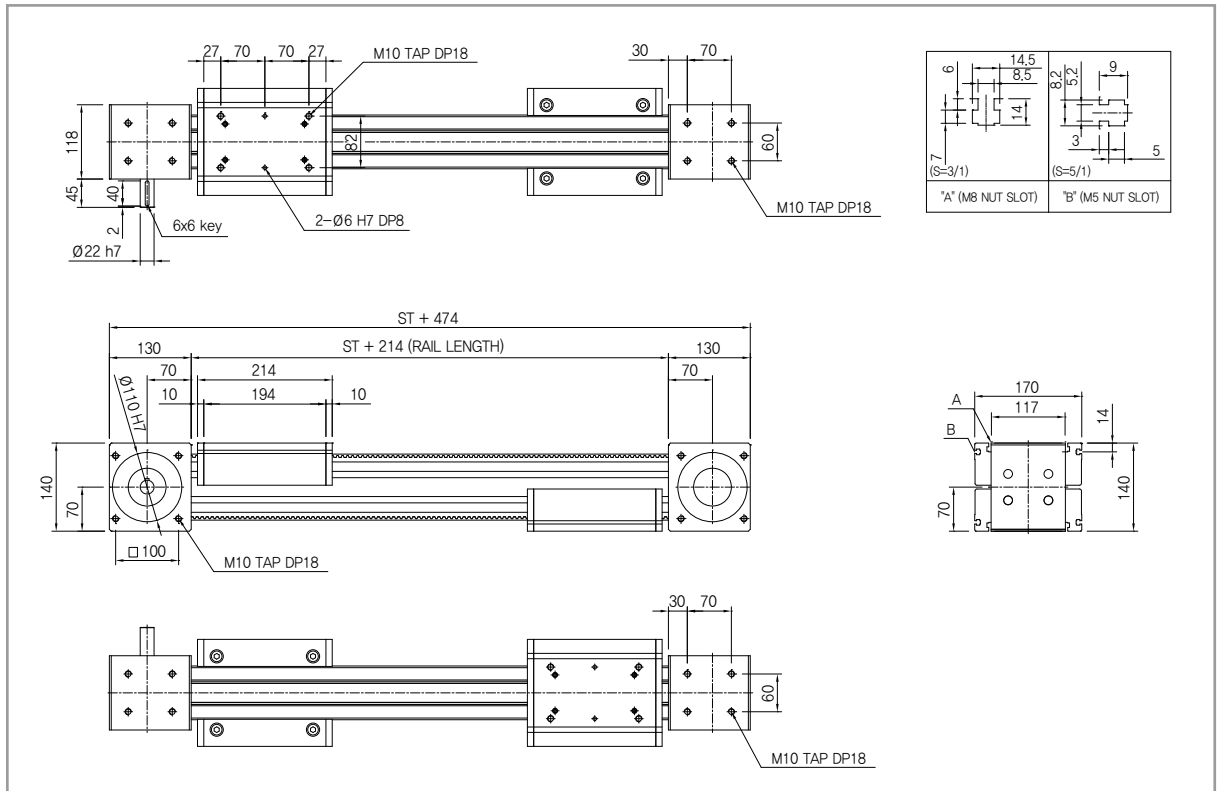
Note) The weight of motor and reducer is not included.

MBT 80

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBT80	50~5000	20	800	400	40	35
		10	1600		12	10

MBT80



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

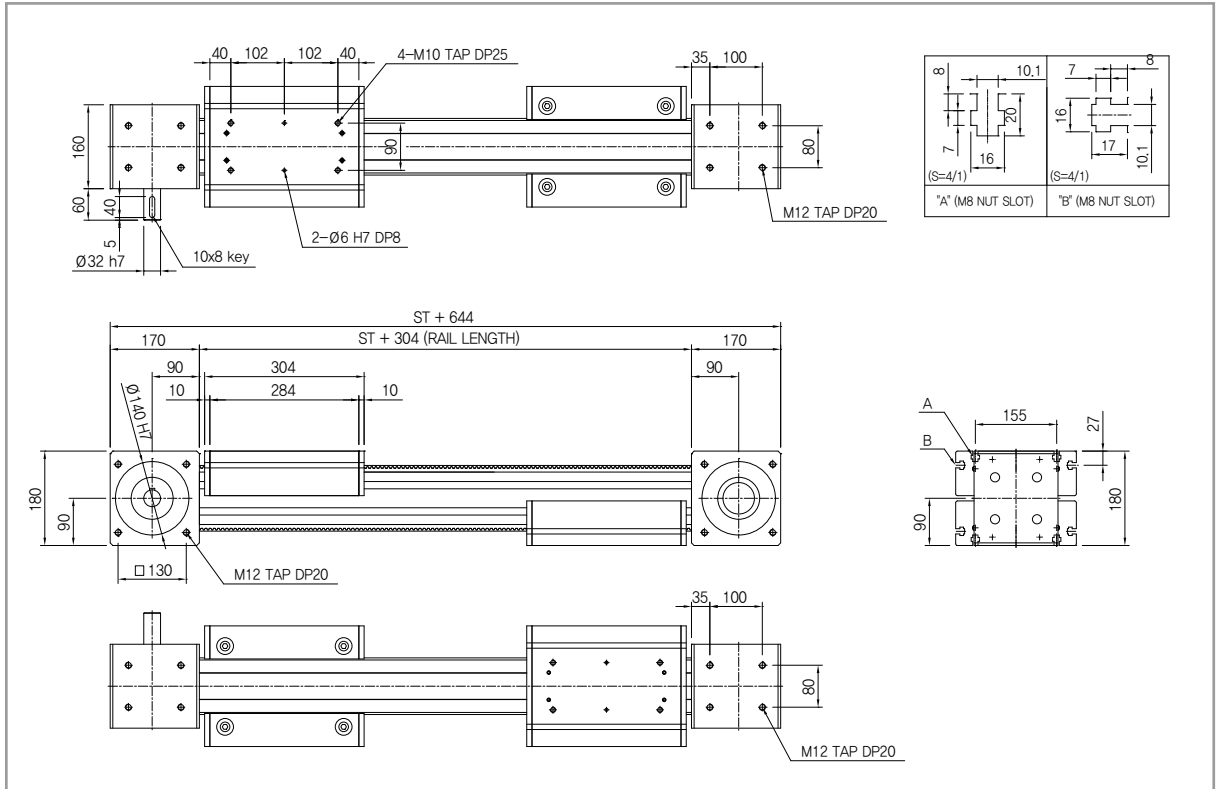
Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	23.9	24.7	25.5	26.3	27.1	27.9	28.7	29.5	30.3	31.1	31.9	35.9	39.9	43.9	47.9	51.9	55.9	MBT80

Note) The weight of motor and reducer is not included.

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MBT100	50~5000	20	960	750	80	70
		10	1920		30	20

MBT100



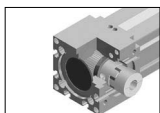
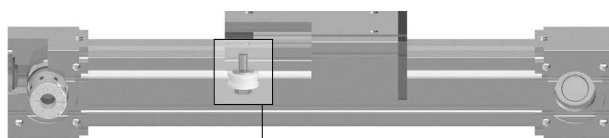
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

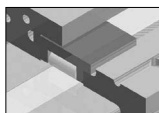
Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	50.0	51.4	52.8	54.2	55.6	57.0	58.4	59.8	61.2	62.6	64.0	71.0	78.0	85.0	92.0	99.0	106.0	MBT100

Note) The weight of motor and reducer is not included.

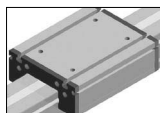
MC series



- Easy maintenance
- Long lifetime
- Easy mounting with various mounting holes.

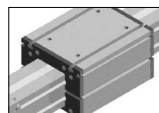


- Built-in belt and stainless steel cover for dust proof.



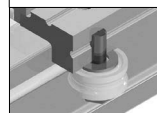
MC 60/80/100
Standard slider block

- * Various length of slider based on customer's needs are available.

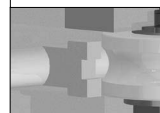


MC 60/80/100-D

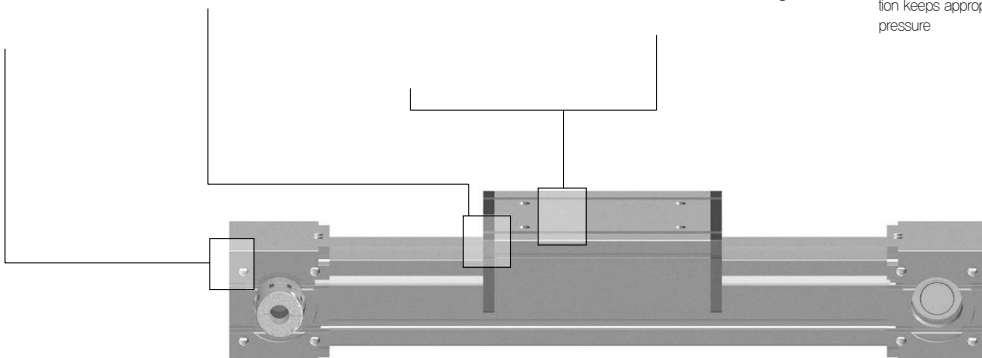
- Slider on the top and bottom
- More suitable for heavy payload
- Suitable for fixing slider and moving rail

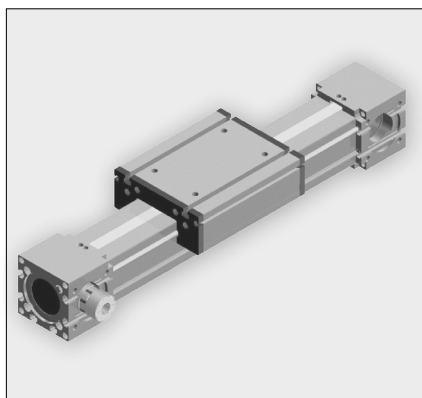


- Silent operation with high quality bearing steel shaft
- Preventing abrasion with chrome plated bearing steel
- Special bolts combination keeps appropriate pressure



- Felt wiper prevents stiffening after long time of operation
- Spring inside of seal keeps certain level of frictional resistance

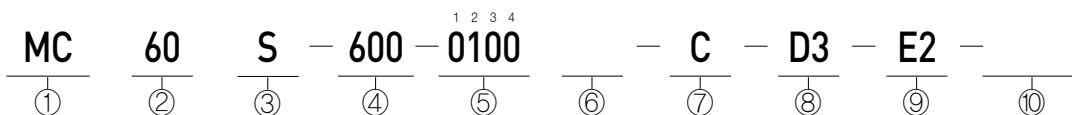




Features

- Track roller guide & belt type unit & cover
- Belt operating module with dust proof structure
- Various axis combination
- High tensile timing belt
- Customized option
- Easy maintenance

How to order



① Series

② Model

60 / 80 / 100

③ Slider option

S : Standard(4 roller bearings)

T : S + 2 additional bearings

H : S + 4 additional bearings

※ Please contact us for additional quantity of slider

④ Stroke (Unit : mm)

60 : 100 ~ 1800

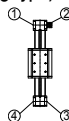
80 / 100 : 100 ~ 2000

※ Please contact us for longer stroke than standard

⑤ Drive version (0:Standard,1:Coupling type)

Pully direction	TYPE		MODEL	
	Pully shape	60	80	100
1000		●	●	●
1100		●	●	●

※ Please contact us for customized pulley type



⑥ Color

Blank : White (outer)

B : Black (outer)

⑦ Sensor (dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket2M – Basic 3EA

Other than basic : C(J)(Qty) Example)C2,CJ2

⑧ Mounting bracket

Blank : None

D(Q'ty) : Necessary quantity. Example)D2,D3

⑨ Bracket of reducer (including coupling)

Blank : None

SYMBOL	TYPE	MODEL		
		SIZE	60	80
E1	42	●		
E2	62	●	●	
E3	90		●	●
E4	120			●

Basic option : ATG, APLUS, SESAME

⑩ Customized code

Sensor

Model	Item number	Sensor and connector
60	SX671-PL	 EE-SX671 + EE1001
80		
100		
60	SX671-L-PL	 EE-SX671 + EE1006
80		
100		

Sensor dog

Model	Item number	Remarks
60	PDG-M60-PL	EE-SX671 only
80	PDG-M80-PL	
100	PDG-M100-PL	

Sensor bracket

Model	Photo sensor for single	Photo sensor for double
60	PSBS-60-PL	PSBD-60-PL
80	PSBS-80-PL	PSBD-80-PL
100	PSBS-100-PL	PSBD-100-PL

Mounting bracket

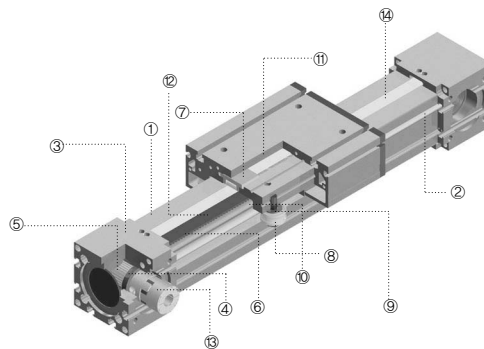
Model	Item number	Remarks
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

MC specifications

Specification	MC60	MC80	MC100
Max speed (mm/s)	2000	2000	2000
Payload (kgf)	30 (horizontal)	50 (horizontal)	100 (horizontal)
Stroke (mm)	Max. 1800	Max. 2000	Max. 2000
Repeatability (mm)	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	∅ 25.46	∅ 41.38	∅ 50.93
Pulley action perimeter (mm/rev)	80	130	160
No load torque (Nm)	0.5	0.7	1.2
Belt	RPP5 / W25	RPP5 / W25	RPP8 / W30
Track roller guide	S:4 roller bearing standard T:S type + 4 roller bearing		
Basic weight (kgf)	5.1	13.2	29.0
Weight per 100mm stroke (kgf)	0.5	1.2	1.8
Motor (W)	200	400 ~ 750	750
Size (mm, W x H)	60 x 90	80 x 121	100 x 155

Note) Customized options are available.

MC structure



► Components list

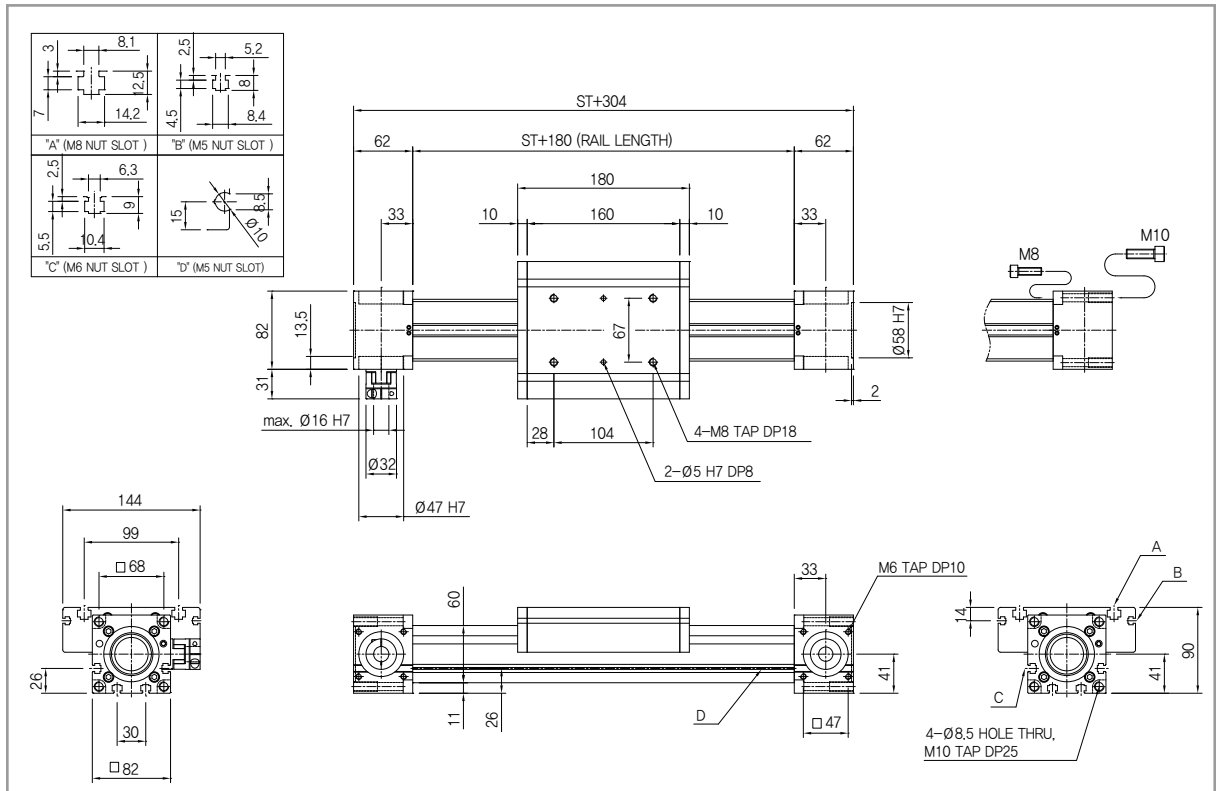
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	8	Track roller	Bearing steel
2	Model	Shaft		9	Washer	
	60	∅10				
	80	∅12				
	100	∅16				
3	Pulley box		Aluminum alloy	10	Wiper	FELT
4	Bearing			11	Sealing	EP
5	Timing pulley		High carbon steel	12	Belt clip	Carbon steel
6	Timing belt		Urethane	13	Coupling	Aluminum alloy
7	Slide block		Aluminum alloy	14	Steel cover	Stainless steel

MC 60

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MC60	100~1800	10	400	200	30	25
		5	800		20	18

MC60



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

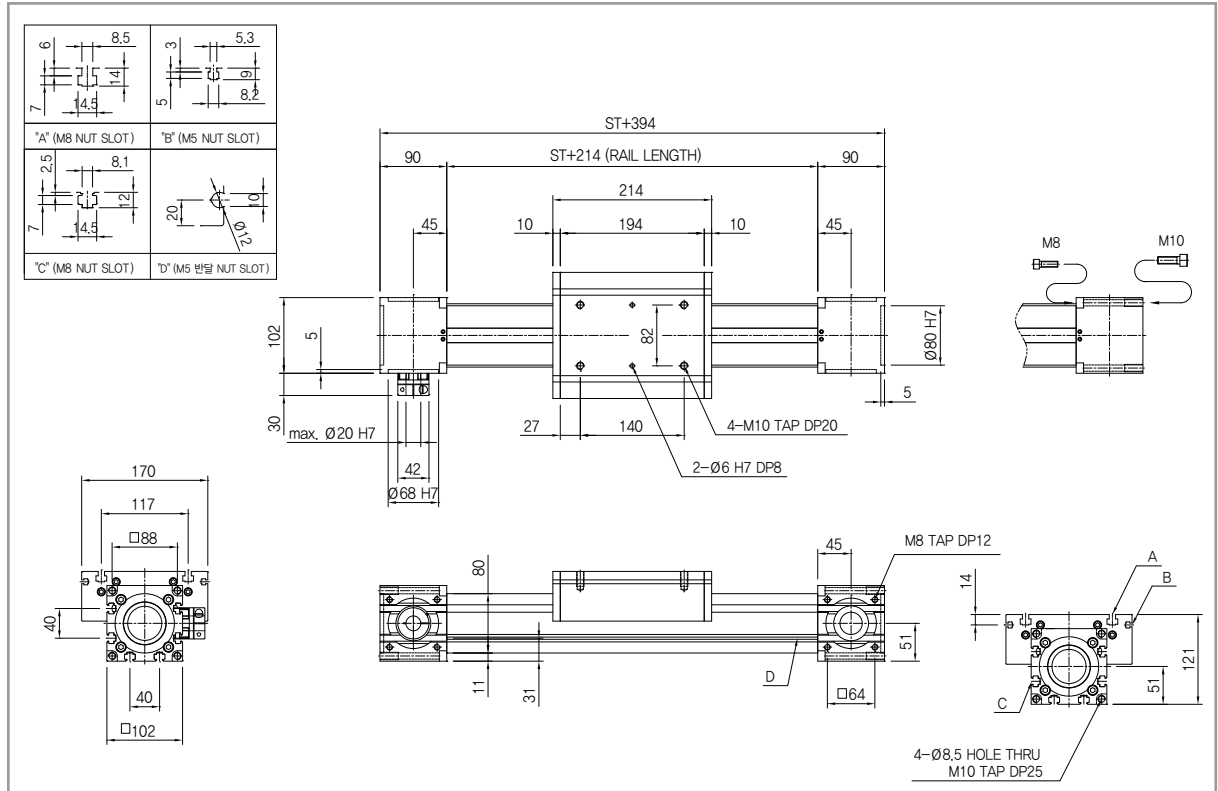
Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.6	14.1	14.6	15.1	17.6	20.1	22.6	25.1	27.6	30.1	MC60

Note) The weight of motor and reducer is not included.

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MC80	100~4000	10	650	400	50	40
		5	1300	750	40	35

MC80



- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	25.2	26.4	27.6	28.8	30.0	31.2	32.4	33.6	34.8	36.0	37.2	43.2	49.2	55.2	61.2	67.2	73.2	MC80

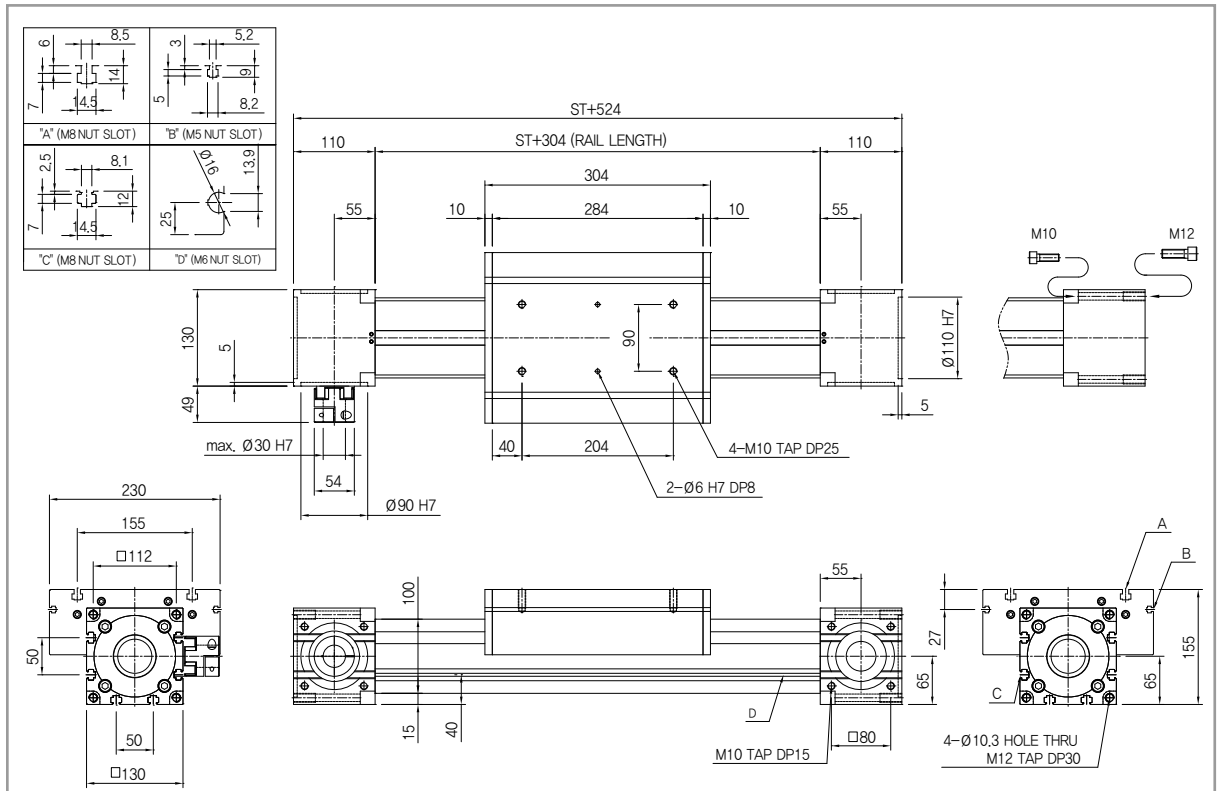
Note) The weight of motor and reducer is not included.

MC 100

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MC100	100~2000	20	400	750	100	90
		10	800		90	80
		5	1600		40	35

MC100



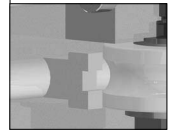
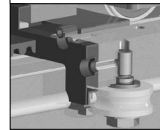
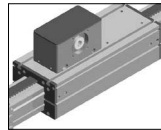
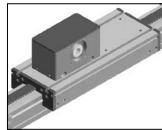
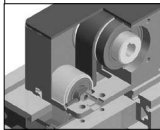
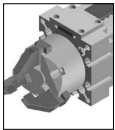
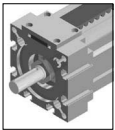
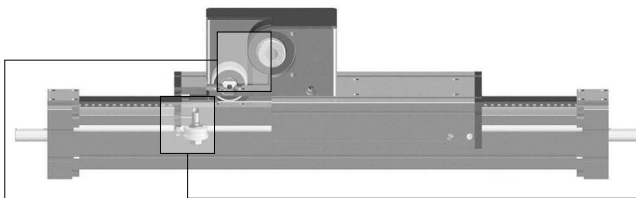
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Model
Weight(kg)	47.0	48.8	50.6	52.4	54.2	56.0	57.8	59.6	61.4	63.2	65.0	74.0	83.0	92.0	101.0	110.0	119.0	MC100

Note) The weight of motor and reducer is not included.

MS series



Rotating axis can be equipped on empty rail, so combination of moving and rotation is possible without additional parts.

- Better for longer axis with a pulley box on block
- Suitable for fixing block and moving rail

MS 40/60/80/100
Standard slider block

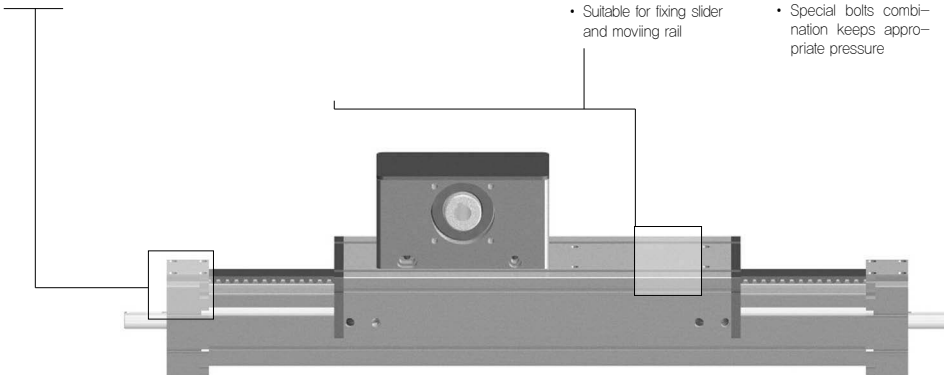
- Various length of slider based on customer's needs are available

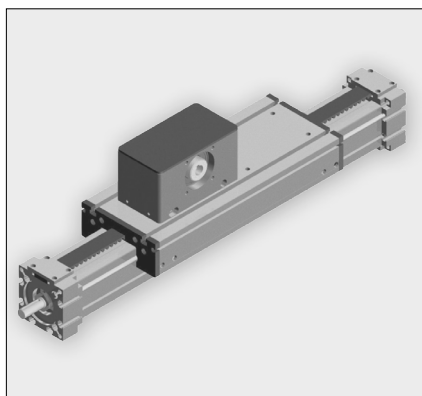
MS 40/60/80/100-D (customized)

- Sliders on the top and bottom
- More suitable for heavy payload
- Suitable for fixing slider and moving rail

- Silent operation with high quality bearing steel shaft
- Preventing abrasion with chrome plated bearing steel
- Special bolts combination keeps appropriate pressure

- Felt wiper prevents stiffening after long time of operation
- Spring inside of seal keeps certain level of frictional resistance

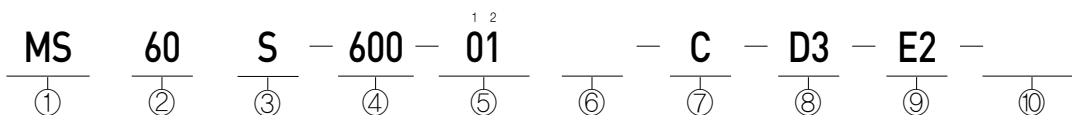




Features

- Track roller guide & belt type unit
- Belt type module with rack and pinion shape
- Various axis combination
- High tensile timing belt
- Customized options
- Easy maintenance

How to order



① Series

② Model

40 / 60 / 80 / 100

③ Slider option

S : Standard(4 roller bearings)

T : S + 2 additional bearings

H : S + 4 additional bearings

※ Please contact us for additional quantity of slider

④ Stroke (Unit : mm)

40 : 50 ~ 3500

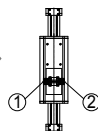
60 / 80 / 100 : 50 ~ 5500

※ Please contact us for longer stroke than standard

⑤ Pulley type

Pulley direction	TYPE	MODEL		
		40	60	80 / 100
0100		●	●	●
1100		●	●	●
0200		●	●	●
2200		●	●	●
1200		●	●	●

※ Please contact us for customized pulley type



⑥ Color

Blank : White (outer)

B : Black (outer)

⑦ Sensor (dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket2M – Basic 3EA

Other than basic : C(J)(Qty) Example)C2,CJ2

⑧ Mounting bracket

Blank : None

D(Qty) : Necessary quantity. Example)D2,D3

⑨ Bracket of reducer (including coupling)

Blank : None

SYMBOL	SIZE	MODEL			
		40	60	80	100
E1	42	●	●	●	●
E2	62	●	●	●	●
E3	90	●	●	●	●
E4	120	●	●	●	●

Basic option : ATG, APLUS, SESAME

⑩ Customized code

Sensor

Model	Item number	Sensor and connector
40	SX671-PL	EE-SX671 + EE1001
60		
80		
100	SX671-L-PL	EE-SX671 + EE1006
40		
60		
80		
100		

Sensor dog

Model	Item number	Remarks
40	PDG-M40-PL	EE-SX671 only
60	PDG-M60-PL	
80	PDG-M80-PL	
100	PDG-M100-PL	

Sensor bracket

Model	Photo sensor for single	Photo sensor for double
40	PSBS-40-PL	PSBD-40-PL
60	PSBS-60-PL	PSBD-60-PL
80	PSBS-80-PL	PSBD-80-PL
100	PSBS-100-PL	PSBD-100-PL

Mounting bracket

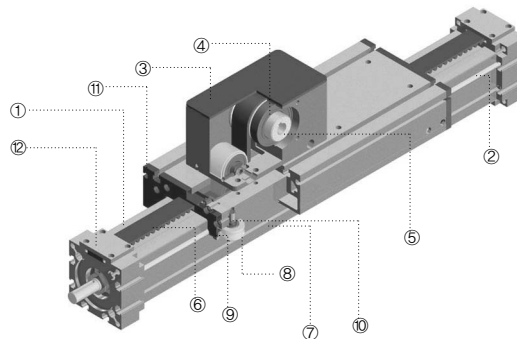
Model	Item number	Remarks
40	MBK40-PL	
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

MS specifications

Specification	MB40	MB60	MB80	MB100
Max speed (mm/s)	2000	2000	2000	2000
Payload (kgf)	16 (horizontal)	35 (horizontal)	35 (horizontal)	60 (horizontal)
Stroke (mm)	Max. 3500	Max. 5500	Max. 5500	Max. 5500
Repeatability (mm)	± 0.05	± 0.05	± 0.05	± 0.05
Diameter of pulley (mm)	Ø 31.83	Ø 41.38	Ø 61.12	Ø 81.49
Pulley action perimeter (mm/rev)	100	130	192	256
No load torque (Nm)	0.3	0.6	0.9	1.4
Belt	RPP5 / W15	RPP5 / W25	RPP8 / W30	RPP8 / W50
Track roller guide	S:4 roller bearing standard T:S type + 4 roller bearing			
Basic weight (kgf)	3.4	7.8	16.9	41.0
Weight per 100mm stroke (kgf)	0.3	0.5	0.8	1.4
Motor (W)	200	400	750	750
Size (mm, W x H)	40 x 64	60 x 90	80 x 121	100 x 155

Note) Customized options such as motor, raydent and LM guide are available.

MS structure



► Components list

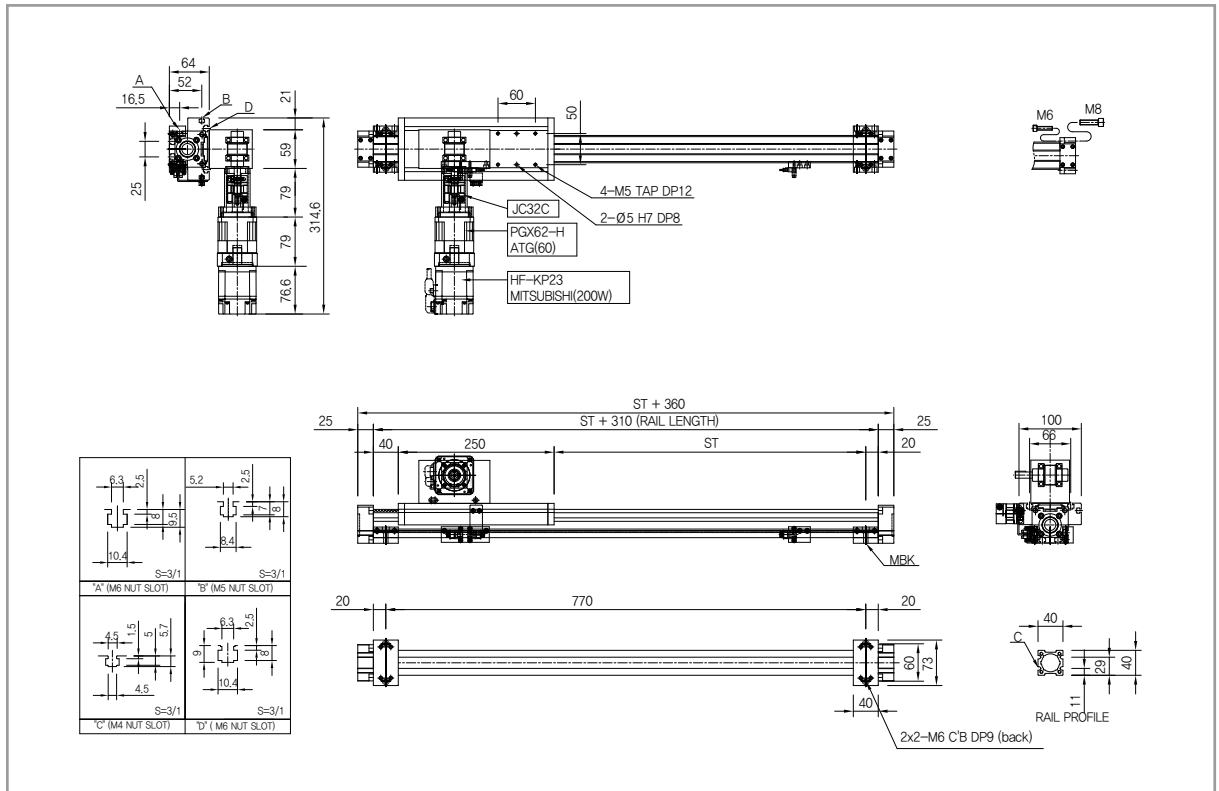
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	7	Slide block	Aluminum alloy
2	Model	Shaft	Bearing steel	8	Track roller	Bearing steel
	40	Ø6				
	60	Ø10				
	80	Ø12				
	100	Ø16				
3	Pulley box		Aluminum alloy	9	Washer	-
4	Bearing		-	10	Wiper	FELT
5	Timing pulley		High carbon steel	11	Sealing	EP
6	Timing belt		Urethane	12	Belt clip	Carbon steel

MS 40

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MS40	50~3500	10	500	200	30	25
		5	1000		22	20

MS40



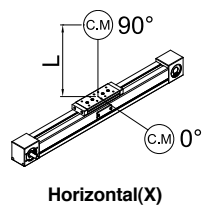
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.1	9.4	10.0	10.6	11.2	11.8	12.4		
Max. Speed (mm/s)	500																10	
																	5	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



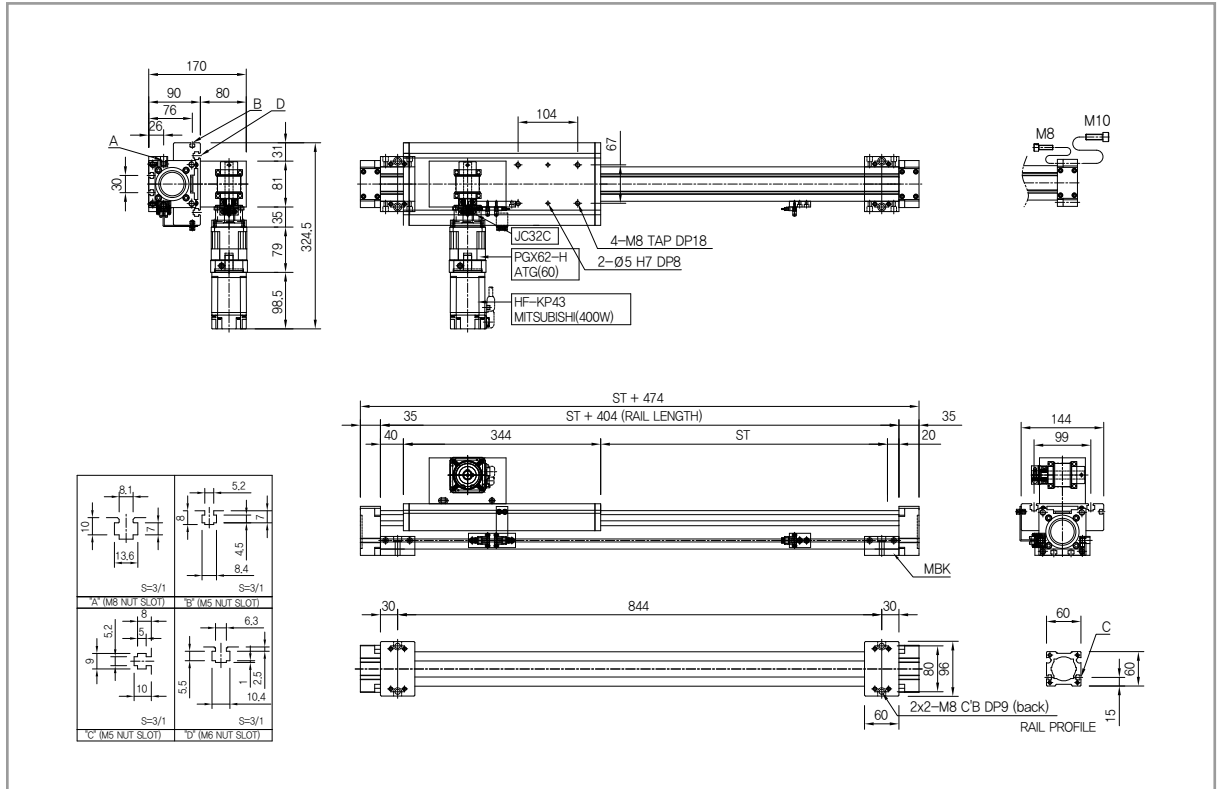
Horizontal(X)

Gear Ratio	Payload	0°	90°
10	16 kg	25 mm	400 mm
	8kg	70 mm	800 mm
5	8kg	65 mm	300 mm
	4 kg	150 mm	600 mm

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MS60	50~5500	10	650	400	55	50
		5	1300		45	40

MS60



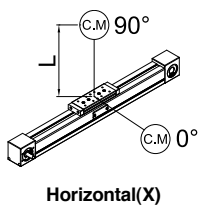
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	2800	3000	Gear ratio	Motor (W)
Weight(kg)	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.3	16.8	17.3	17.8	18.8	19.8	20.8	21.8	22.8		
Max. Speed (mm/s)	650																5	400
	1300																	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



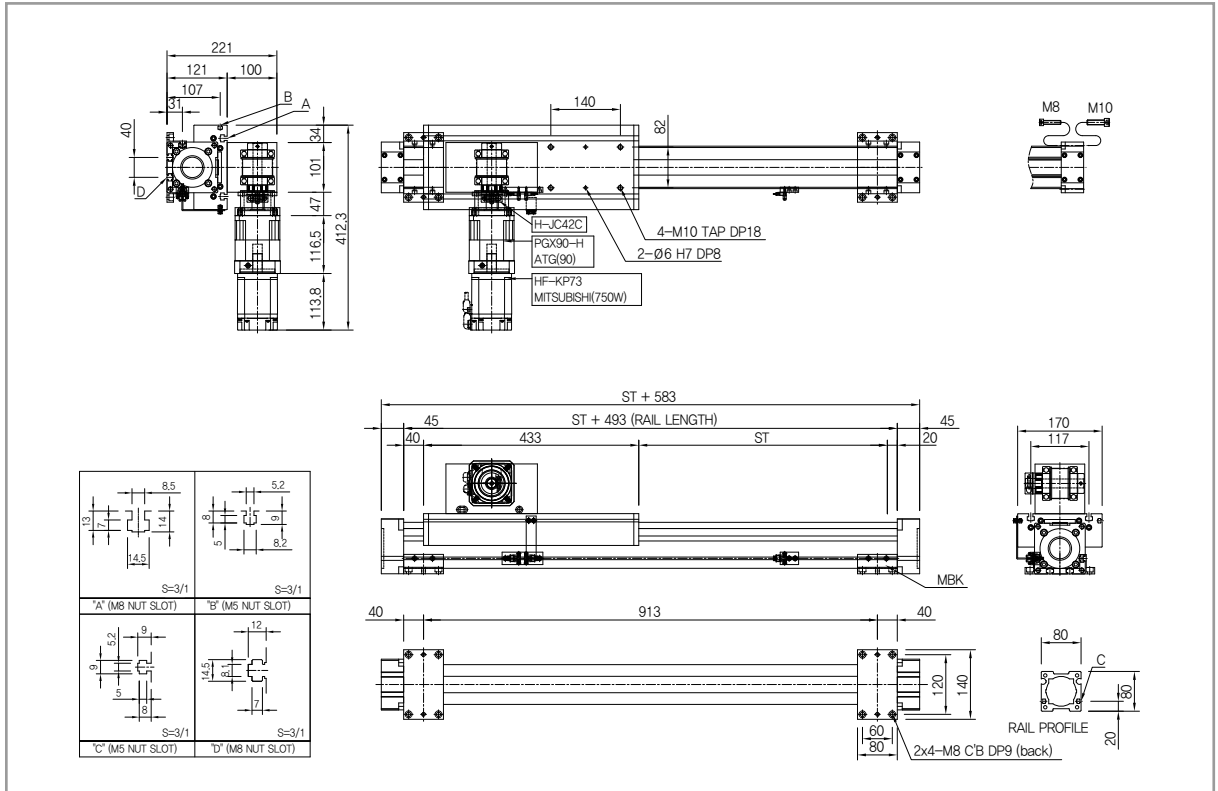
Gear Ratio	Payload	0°	90°
10	34 kg	30 mm	100 mm
	17 kg	90 mm	400 mm
5	20 kg	70 mm	400 mm
	10 kg	170 mm	800 mm

MS 80

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MS80	50~5500	20	480	750	35	30
		10	960		30	25
		5	1920		20	15

MS80



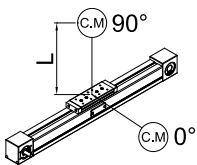
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	Gear ratio	Motor (W)	
Weight(kg)	24.9	25.7	26.5	27.3	28.1	28.9	29.7	30.5	31.3	32.1	32.9	36.9	40.9	44.9	48.9			20
Max. Speed (mm/s)																10		
																5		

Note) The weight of motor and reducer is not included.

Allowable overhang distance



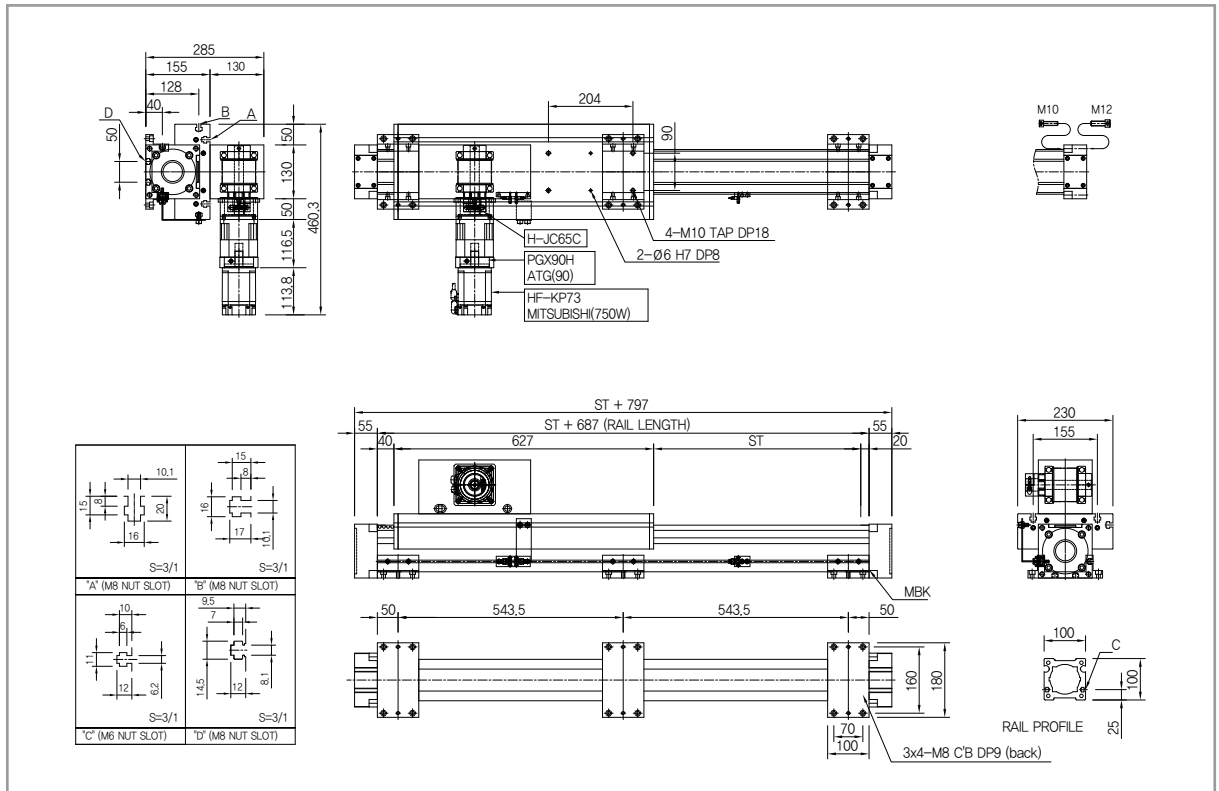
Horizontal(X)

Gear Ratio	Payload	0°		90°	
		80 mm	500 mm	80 mm	400 mm
20	34 kg	80 mm	500 mm	80 mm	400 mm
	17 kg	200 mm	1000 mm	80 mm	400 mm
10	30 kg	80 mm	800 mm	90 mm	400 mm
	15 kg	180 mm	800 mm	90 mm	400 mm
5	20 kg	90 mm	400 mm	200 mm	800 mm
	10 kg	200 mm	800 mm		

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal(0.3G)	Horizontal(0.5G)
MS100	50~5500	20	640	750	80	70
		10	1280		60	55

MS100



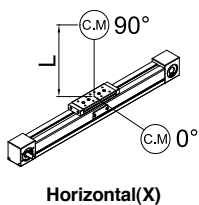
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	3500	4000	4500	5000	Gear ratio	Motor (W)
Weight(kg)	55.0	56.4	57.8	59.2	60.6	62.0	63.4	64.8	66.2	67.6	69.0	76.0	83.0	90.0	97.0	104.0	111.0	20	750
Max. Speed (mm/s)	640																		
	1280																	10	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



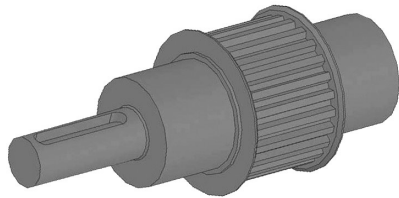
Gear Ratio	Payload	0°	90°
10	60 kg	100 mm	500 mm
	30 kg	200 mm	1000 mm
5	50 kg	90 mm	400 mm
	25 kg	200 mm	800 mm

MS PULLEY OPTION

PULLEY OPTION

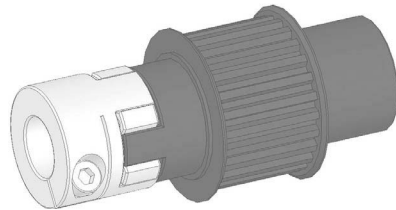
PSH Type

One body type pulley that having driving shaft



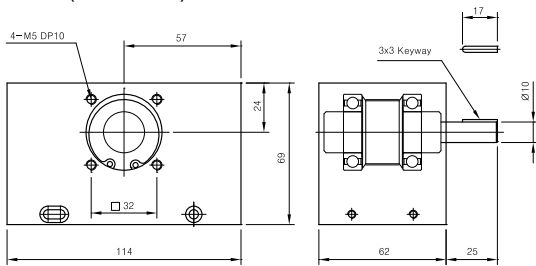
PCP Type

This type pulley is joined with Jaw-coupling directly and supplied with coupling.

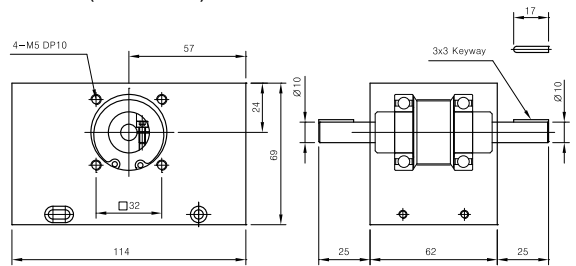


■ Pulley of MS40

PSH-S (MB40-18A)

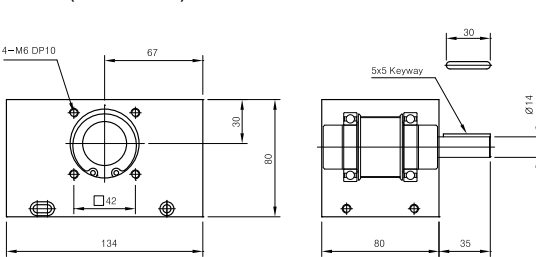


PSH-D (MB40-19A)

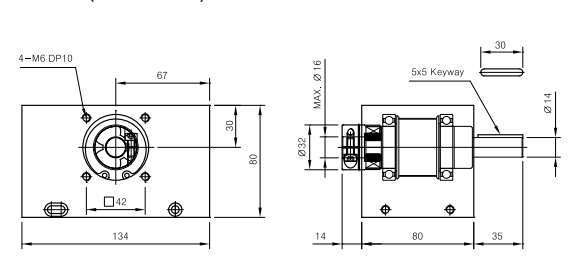


■ Pulley of MS60

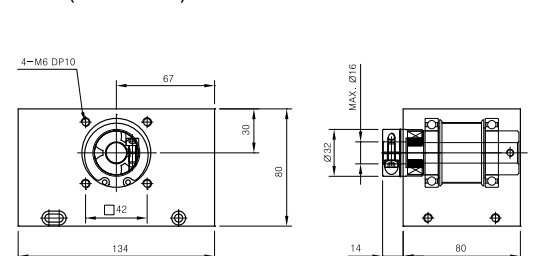
PSH-S (MB60-18A)



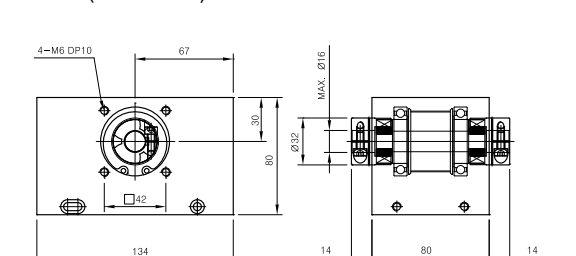
PSH-C (MB60-20A)



PCP-S (MB60-21A)

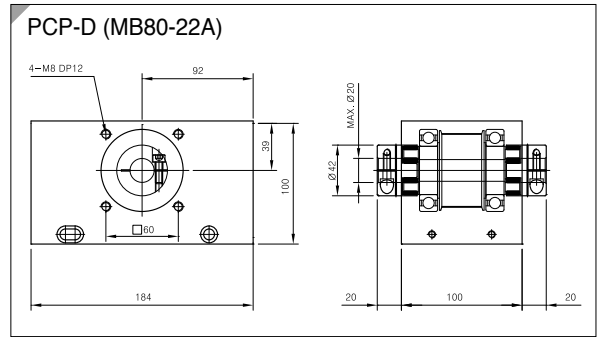
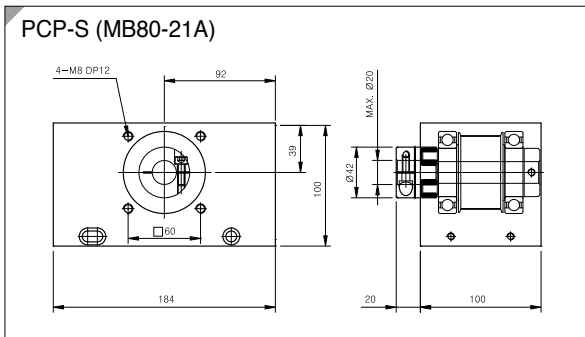
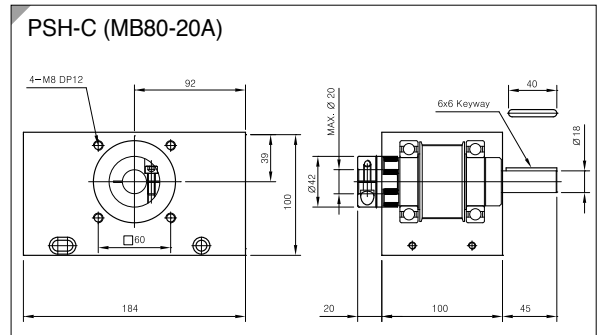
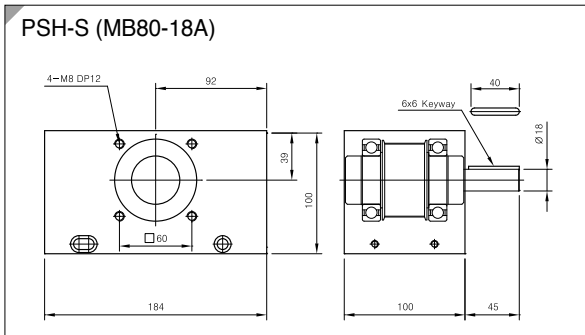


PCP-D (MB60-22A)

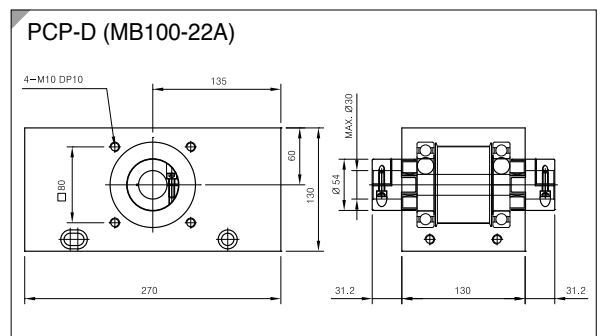
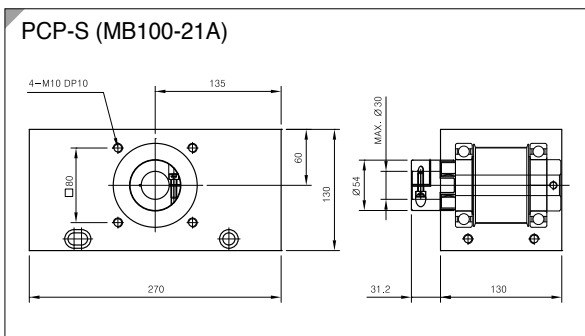
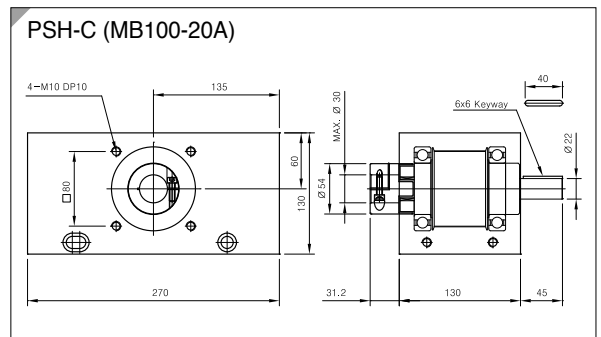
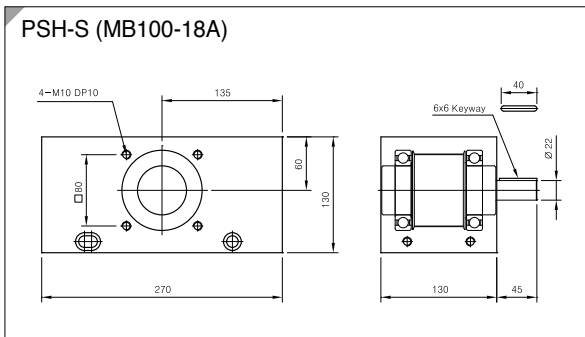


MS PULLEY OPTION

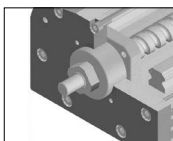
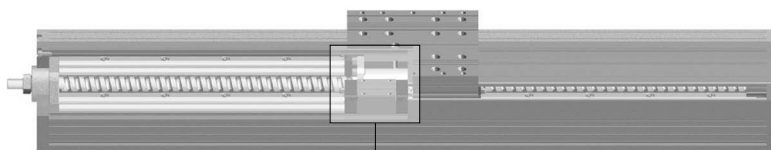
■ Pulley of MS80



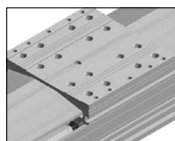
■ Pulley of MS100



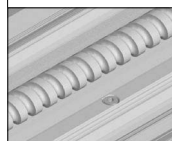
LRS series



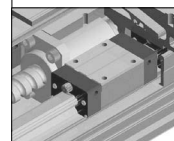
Various models of motor and reducer are available



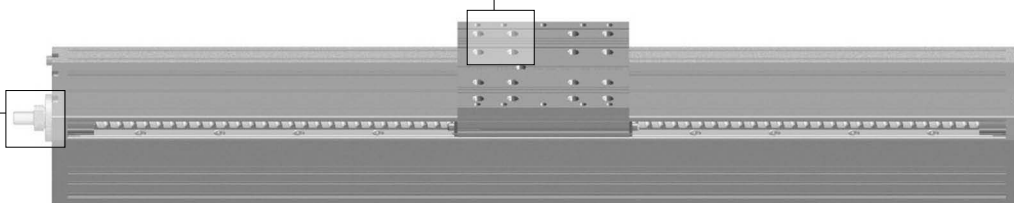
Customized slider available

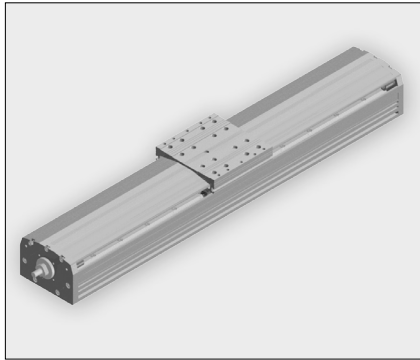


Various types of ball screw are available.



LM guide with high stiffness and high precision.

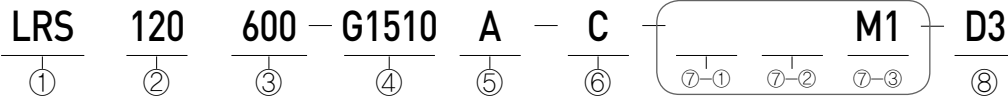




Features

- LM guide & ball screw type unit
- Compact design and high stiffness
- Various axis combination
- Customized options
- Easy maintenance

How to order



① Series

② Model

80 / 100 / 120 / 166 / 210 / 280
 ※ LM : Please contact us for customized LM

③ Stroke (Unit : mm)

Rolled : 50 ~ 1500
 Ground - 80 / 100 : 50 ~ 950
 Ground - 120 : 50 ~ 900
 Ground - 166 : 50 ~ 1050
 Ground - 210 : 50 ~ 1000
 ※ Please contact us for longer stroke than standard

④ Ball screw

Symbol	Ball screw		Model				
	Ball screw		80	100	120	166	210
L1510	Rolled Ø15-10 lead	●	●	●	●		
L1520	Rolled Ø15-20 lead	●	●	●	●		
L2010	Rolled Ø20-10 lead					●	●
L2020	Rolled Ø20-20 lead					●	●
G1510	Ground Ø15-10 lead	●	●	●	●		
G1520	Ground Ø15-20 lead	●	●	●	●		
G2010	Ground Ø20-10 lead					●	●
G2020	Ground Ø20-20 lead					●	●

※ Please contact us for customized option

⑤ Color

Blank : White(outer)
 L : White(outer) + LM raydent
 S : White(outer) + Ball screw raydent
 A : White(outer) + LM/Ball screw raydent
 B : Black (outer)
 BL : Black(outer) + LM raydent
 BS : Black(outer) + Ball screw raydent
 BA : Black(outer) + LM/Ball screw raydent

⑥ Sensor (Dog included)

Blank : None
 C : Photo sensor + Basic socket - Basic 3EA
 CJ : C + Cable socket2M - Basic 3EA
 Other than basic : C(J)(Qty) Example)C2,CJ2

⑦ Motor mounting

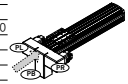
Blank : None

⑦-① Motor bracket for in-line type(coupling included)

SYMBOL	MOTOR	MODEL				
		80	100	120	166	210
E1	100W	●	●	●	●	
E2	200W/400W	●	●	●	●	
E3	750W				●	●
E4	1KW / 1.5KW					●

⑦-② Motor-bracket for parallel type

SYMBOL	MOTOR	MODEL				
		80	100	120	166	210
PL1	100W	●	●			
PR1	100W	●	●			
PB1	100W	●	●	●	●	
PL2	200/400W	●	●	●	●	
PR2	200/400W	●	●	●	●	
PB2	200/400W	●	●	●	●	
PL3	750W				●	●
PR3	750W				●	●
PB3	750W				●	●



⑦-③ Built-in motor type (coupling included)

SYMBOL	MOTOR	MODEL				
		80	100	120	166	210
M1	100W	●	●			
M2	200W	●	●			
M3	400W				●	●
M4	750W					●

Basic option : Mitsubishi, Yaskawa, Sanyo

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
80	SX672-PL	 EE-SX672 + EE1001
100		
120		
166		
210		
80	SX672-L-PL	 EE-SX672 + EE1006
100		
120		
166		
210		

Sensor dog

Model	Item number	Remarks
80	PDG-L80-PL	EE-SX672 only
100	PDG-L100-PL	
120	PDG-L120-PL	
166	PDG-L166-PL	
210	PDG-L210-PL	

Sensor bracket

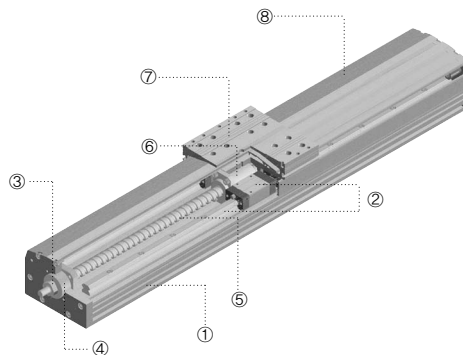
Model	Photo sensor for single	Photo sensor for double
166	PSBS-166-PL	PSBD-166-PL
210	PSBS-210-PL	PSBD-210-PL

LRS specifications

Specification	LRS80	LRS100	LRS120	LRS166	LRS210
Max speed (mm/s)	1000	1000	1000	1000	1000
Payload (kgf)	20 (horizontal) 7 (vertical)	40 (horizontal) 15 (vertical)	80 (horizontal) 20 (vertical)	120 (horizontal) 40 (vertical)	170 (horizontal) 80 (vertical)
Stroke (mm)	Rolled : Max. 1500 Ground : Max. 950	Rolled : Max. 1500 Ground : Max. 950	Rolled : Max. 1500 Ground : Max. 900	Rolled : Max. 1500 Ground : Max. 1050	Rolled : Max. 1500 Ground : Max. 1000
Repeatability (mm)	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Ball screw / Lead (mm)	Ø15 / L10 (20L)	Ø15 / L10 (20L)	Ø15 / L10 (L20)	Ø20 / L10 (L20)	Ø20 / L10 (L20)
Noload torque (Nm)	0.6	0.7	1	1.4	2.2
LM Guide	NO.15W, 1 Rail 1 Block	NO.20, 1 Rail 1 Block	NO.15, 2 Rail 4 Block	NO.15, 2 Rail 4 Block	NO.25, 2 Rail 4 Block
Basic weight (kgf)	1.6	2.6	3.5	5.7	12.1
Weight per 100mm stroke (kgf)	0.8	0.9	1.1	1.7	3.3
Motor (W)	100 ~ 200	100 ~ 200	200 ~ 400	400 ~ 750	750
Size (mm, W x H)	78 x 78	98 x 97	118 x 90	166 x 100	210 x 139

Note) Customized options such as motor, raydent, LM guide and ball screw are available.

LRS structure



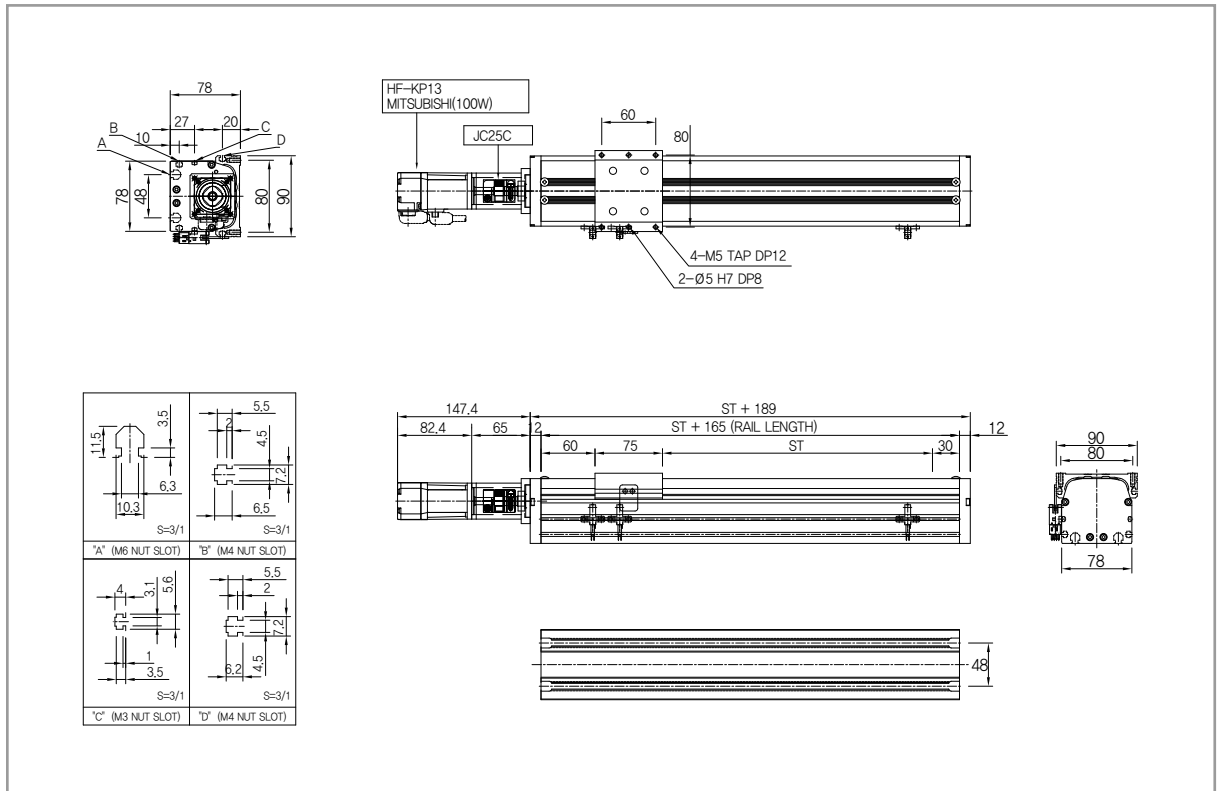
► Components list

No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Ball screw	Cr-Mo steel
2	Model	LM GUIDE	Bearing steel	6	Ball screw nut	
	80	No.15W / 1RAIL 1BLOCK				
	100	No.20 / 1RAIL 1BLOCK				
	120	No.15 / 2RAIL 4BLOCK				
	166	No.15 / 2RAIL 4BLOCK				
	210	No.25 / 2RAIL 4BLOCK				
3	Lock nut			7	Slide block	Aluminum alloy
4	Support unit			8	COVER	Aluminum alloy

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS80	50~850	L10	500	100	20	6
		L20	1000	200	20	4

LRS80

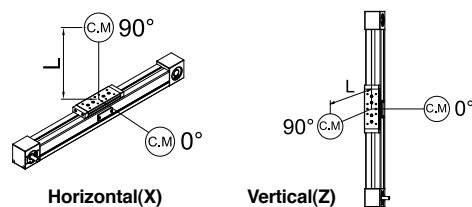


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	3.4	4.2	5.0	5.8	6.6	6.4	8.2	9.0	9.8	10.6		
Max. Speed (mm/s)	500						490	390	320	260	L10	100
	1000						980	780	630	520	L20	200

Allowable overhang distance



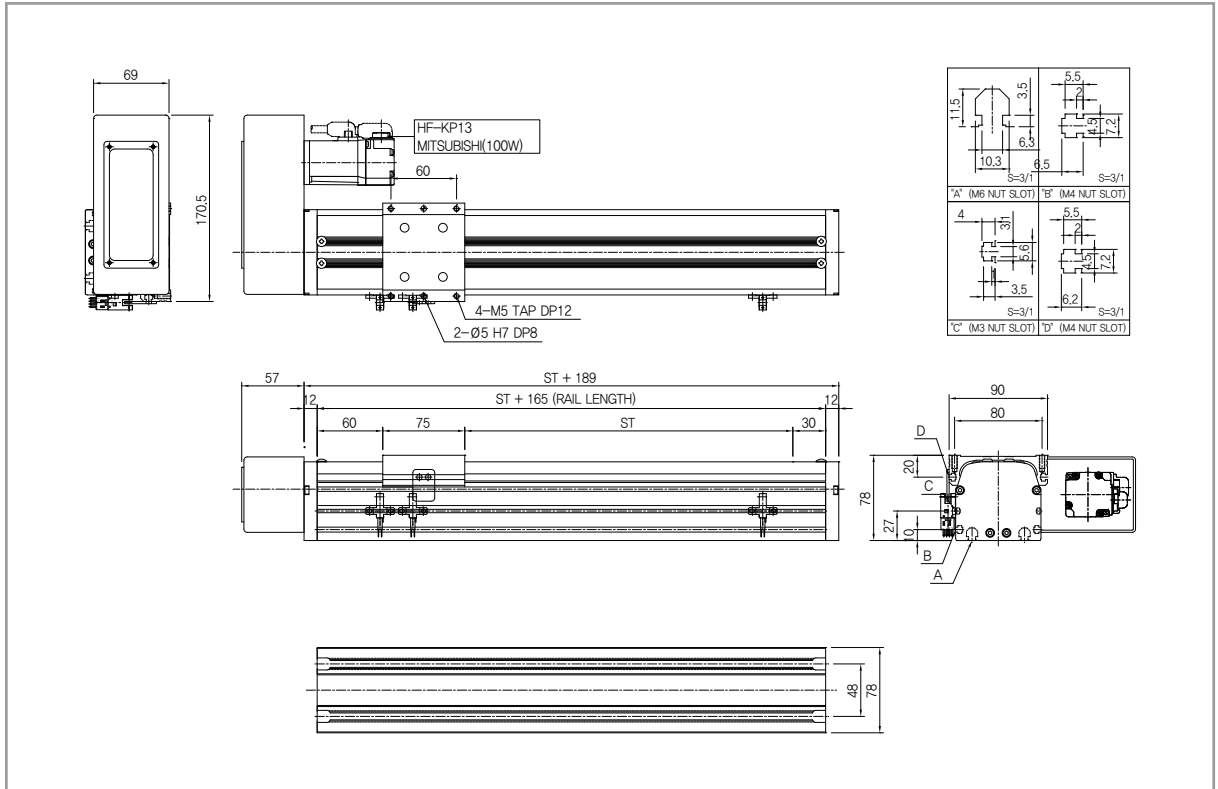
Direction	LRS80-L10		LRS80-L20		
	20 kg	10 kg	12 kg	6 kg	
Horizontal (X)	0°	20 mm	80 mm	15 mm	75 mm
	90°	130 mm	330 mm	30 mm	120 mm
Vertical (Z)		6 kg	3 kg	3 kg	1.5 kg
	0°	20 mm	60 mm	25 mm	90 mm
	90°	30 mm	85 mm	40 mm	100 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS80-PL	50~950	L10	500	100	20	6
		L20	1000	200	20	4

LRS80-PL

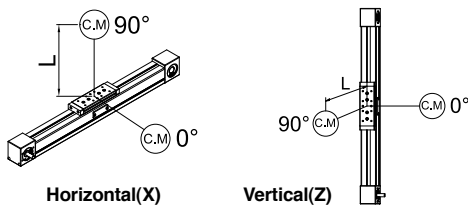


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	4.5	5.3	6.1	6.9	7.7	8.5	9.3	10.1	10.9	11.7		
Max. Speed (mm/s)	500						490	390	320	260	L10	100
	1000						980	780	630	520	L20	200

Allowable overhang distance



Direction	LRS80-L10		LRS80-L20		
	20 kg	10 kg	12 kg	6 kg	
Horizontal (X)	0°	20 mm	80 mm	15 mm	75 mm
	90°	130 mm	330 mm	30 mm	120 mm
Vertical (Z)		6 kg	3 kg	3 kg	1.5 kg
	0°	20 mm	60 mm	25 mm	90 mm
	90°	30 mm	85 mm	40 mm	100 mm

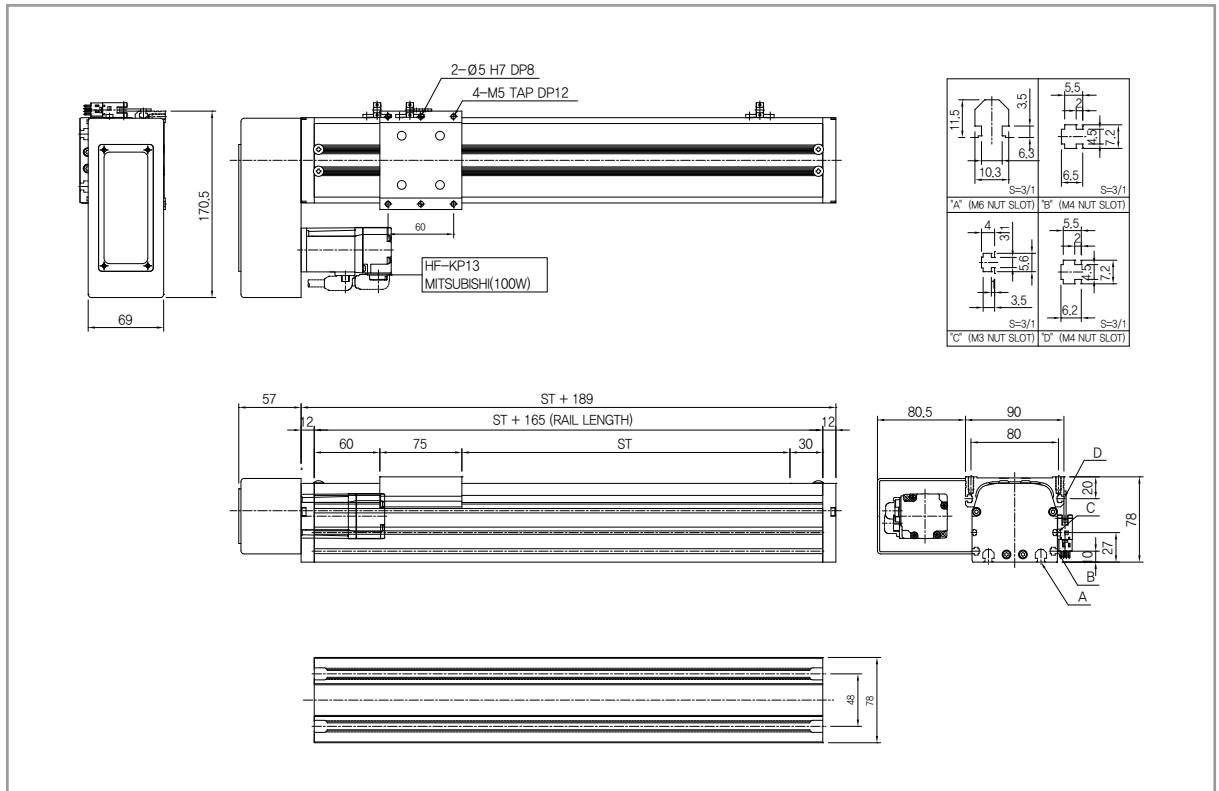
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS80-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS80-PR	50~950	L10	500	100	20	6
		L20	1000	200	20	4

LRS80-PR

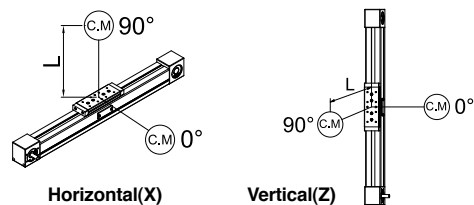


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	4.5	5.3	6.1	6.9	7.7	8.5	9.3	10.1	10.9	11.7		
Max. Speed (mm/s)	500						490	390	320	260	L10	100
	1000						980	780	630	520	L20	200

Allowable overhang distance



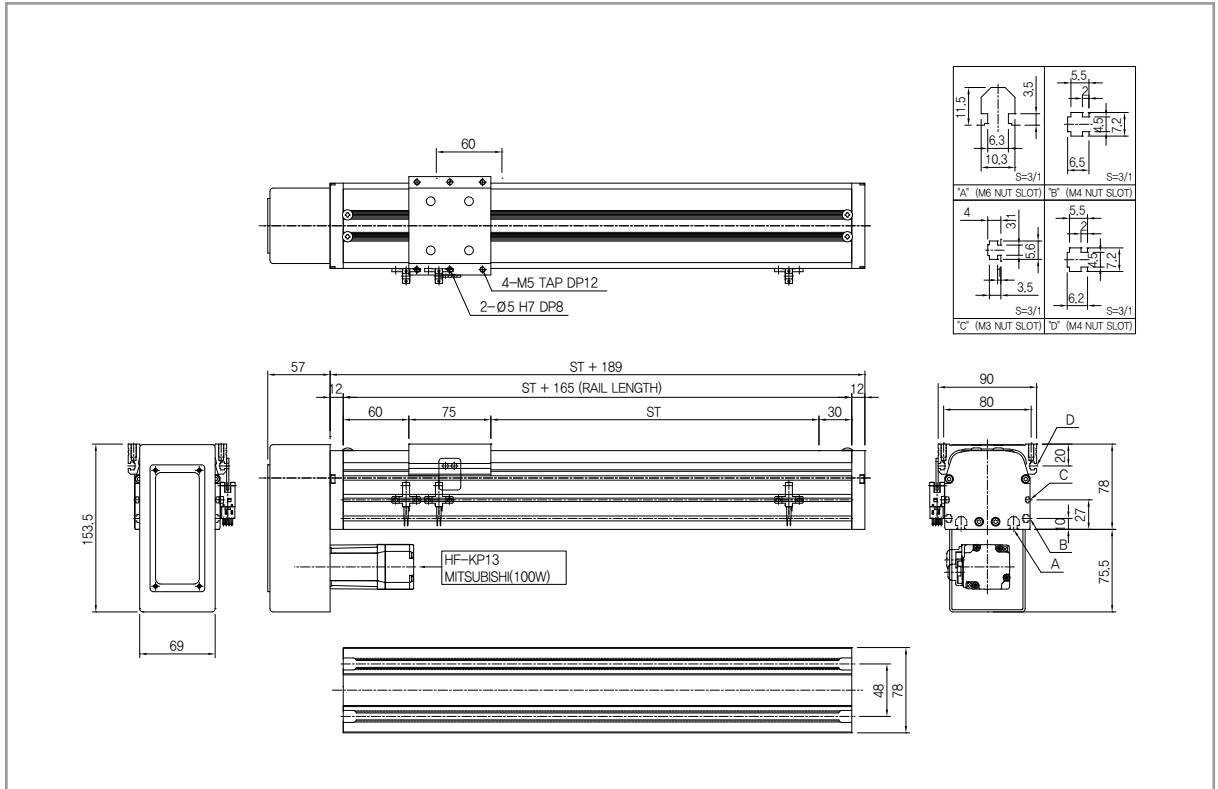
Direction		LRS80-L10		LRS80-L20	
		20 kg	10 kg	12 kg	6 kg
Horizontal (X)	0°	20 mm	80 mm	15 mm	75 mm
	90°	130 mm	330 mm	30 mm	120 mm
Vertical (Z)		6 kg	3 kg	3 kg	1.5 kg
	0°	20 mm	60 mm	25 mm	90 mm
	90°	30 mm	85 mm	40 mm	100 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS80-PB	50~950	L10	500	100	20	6
		L20	1000	200	20	4

LRS80-PB

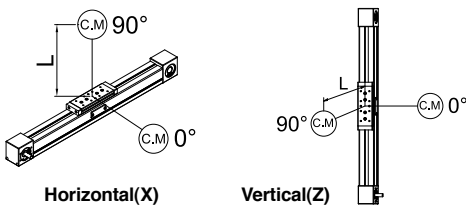


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	4.5	5.3	6.1	6.9	7.7	8.5	9.3	10.1	10.9	11.7		
Max. Speed (mm/s)	500						490	390	320	260	L10	100
	1000						980	780	630	520	L20	200

Allowable overhang distance



Direction	LRS80-L10		LRS80-L20		
	20 kg	10 kg	12 kg	6 kg	
Horizontal (X)	0°	20 mm	80 mm	15 mm	75 mm
	90°	130 mm	330 mm	30 mm	120 mm
Vertical (Z)		6 kg	3 kg	3 kg	1.5 kg
	0°	20 mm	60 mm	25 mm	90 mm
	90°	30 mm	85 mm	40 mm	100 mm

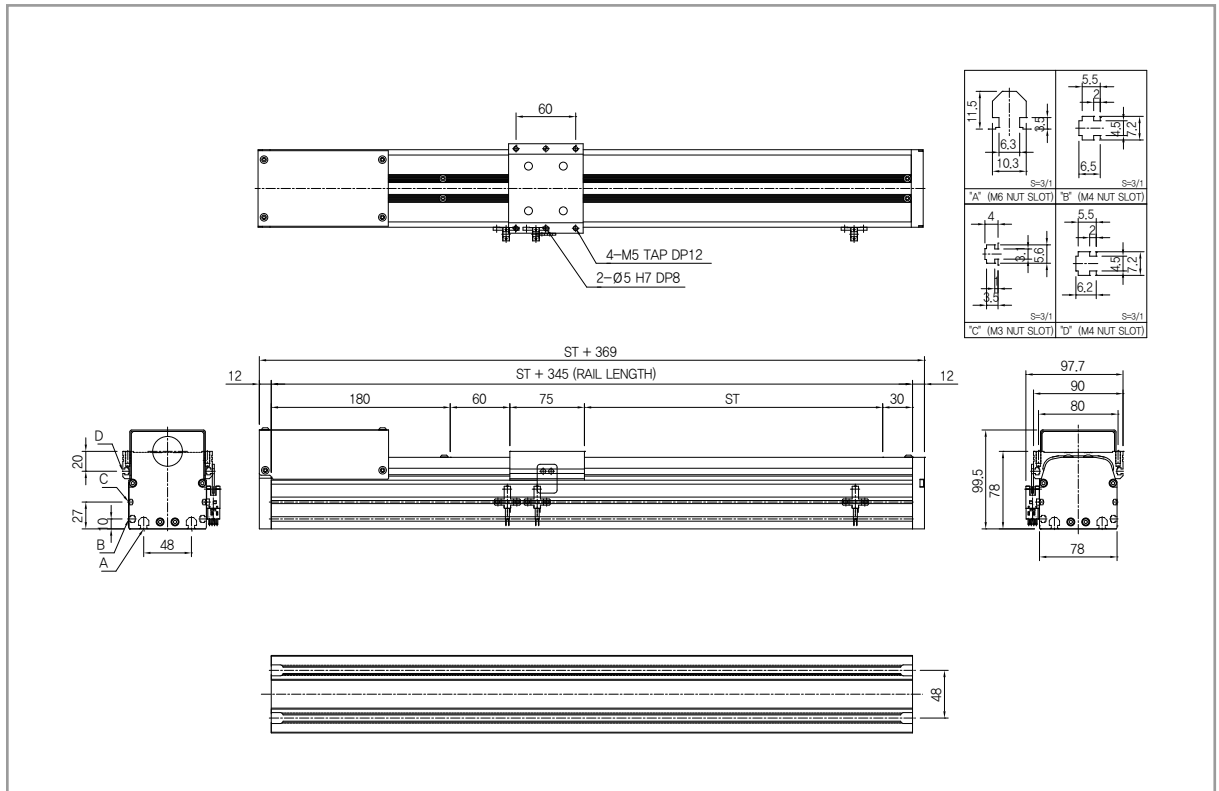
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS80-M

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS80-M	50~950	L10	500	100	20	6
		L20	1000	200	20	4

LRS80-M

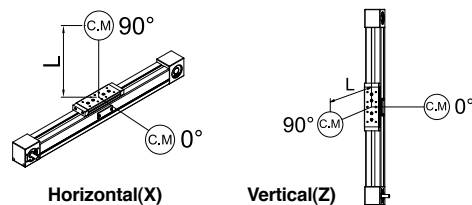


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	5.0	5.8	6.6	7.4	8.2	9.0	9.8	10.6	11.4	12.1		
Max. Speed (mm/s)	500						490	390	320	260	L10	100
	1000						980	780	630	520	L20	200

Allowable overhang distance



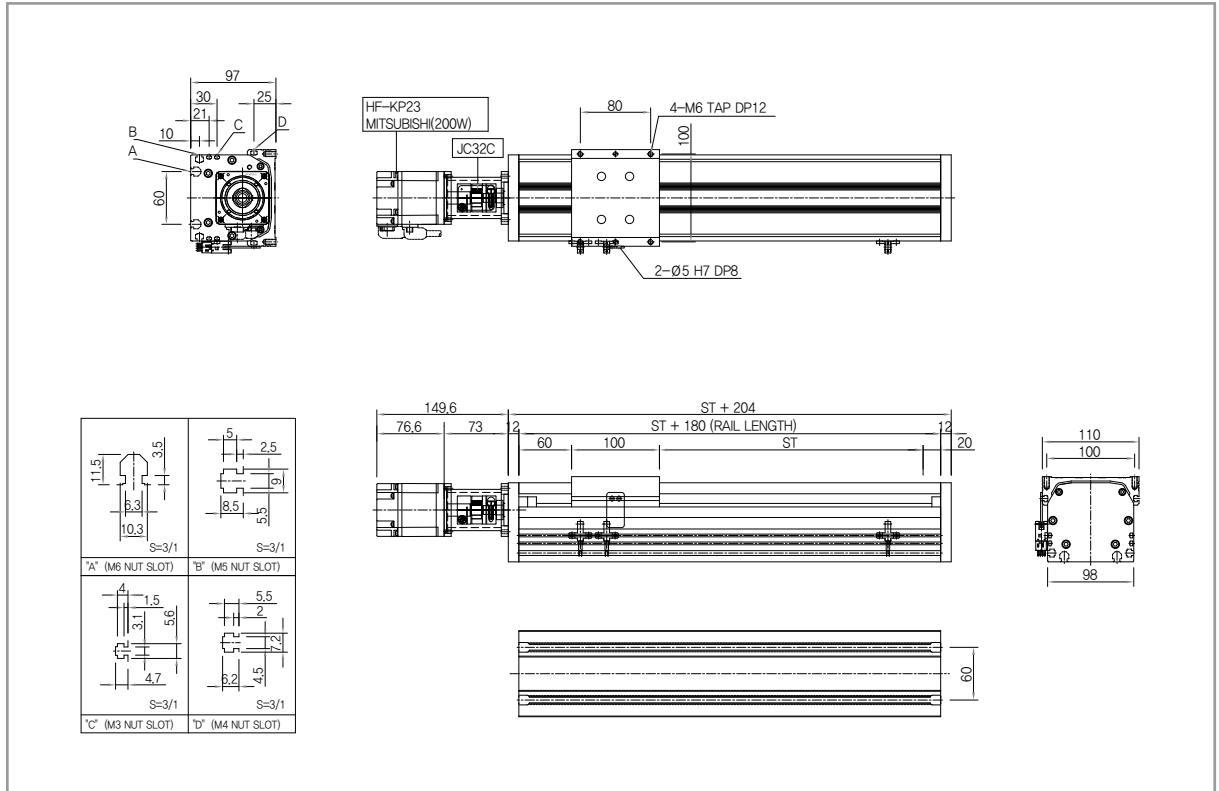
Direction		LRS80-L10		LRS80-L20	
		20 kg	10 kg	12 kg	6 kg
Horizontal (X)	0°	20 mm	80 mm	15 mm	75 mm
	90°	130 mm	330 mm	30 mm	120 mm
Vertical (Z)		6 kg	3 kg	3 kg	1.5 kg
	0°	20 mm	60 mm	25 mm	90 mm
	90°	30 mm	85 mm	40 mm	100 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS100	50~950	L10	500	200	40	12
		L20	1000		20	5

LRS100

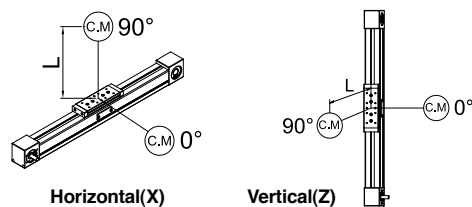


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	5.0	5.9	6.8	7.7	8.6	9.5	10.4	11.3	12.2	13.1		
Max. Speed (mm/s)	500						470	380	320	260	L10	200
	1000						950	770	630	520	L20	

Allowable overhang distance



Direction	LRS100-L10		LRS100-L20	
	Max. Payload	Max. Overhang	Max. Payload	Max. Overhang
Horizontal (X)	40 kg	80 mm	24 kg	85 mm
	20 kg	530 mm	12 kg	250 mm
Vertical (Z)	20 kg	10 kg	8 kg	4 kg
	35 mm	90 mm	155 mm	335 mm
	35 mm	90 mm	155 mm	335 mm

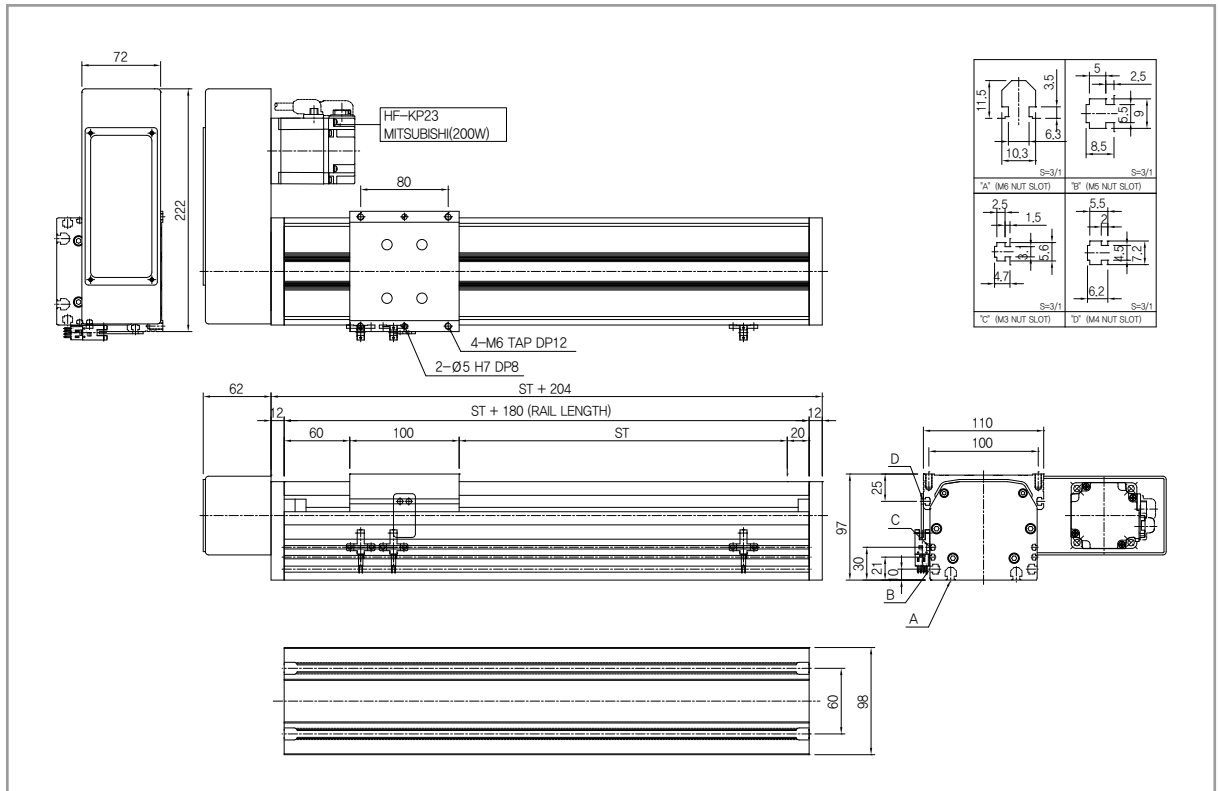
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS100-PL

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS100-PL	50~950	L10	500	200	40	12
		L20	1000		20	5

LRS100-PL

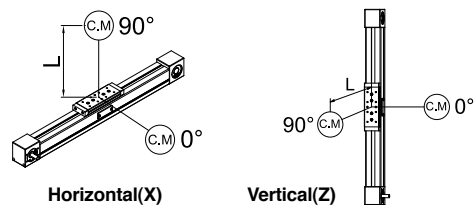


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	6.2	7.1	8.0	8.9	9.8	10.7	11.6	12.5	13.4	14.4		
Max. Speed (mm/s)	500						470	380	320	260	L10	200
	1000						950	770	630	520	L20	

Allowable overhang distance



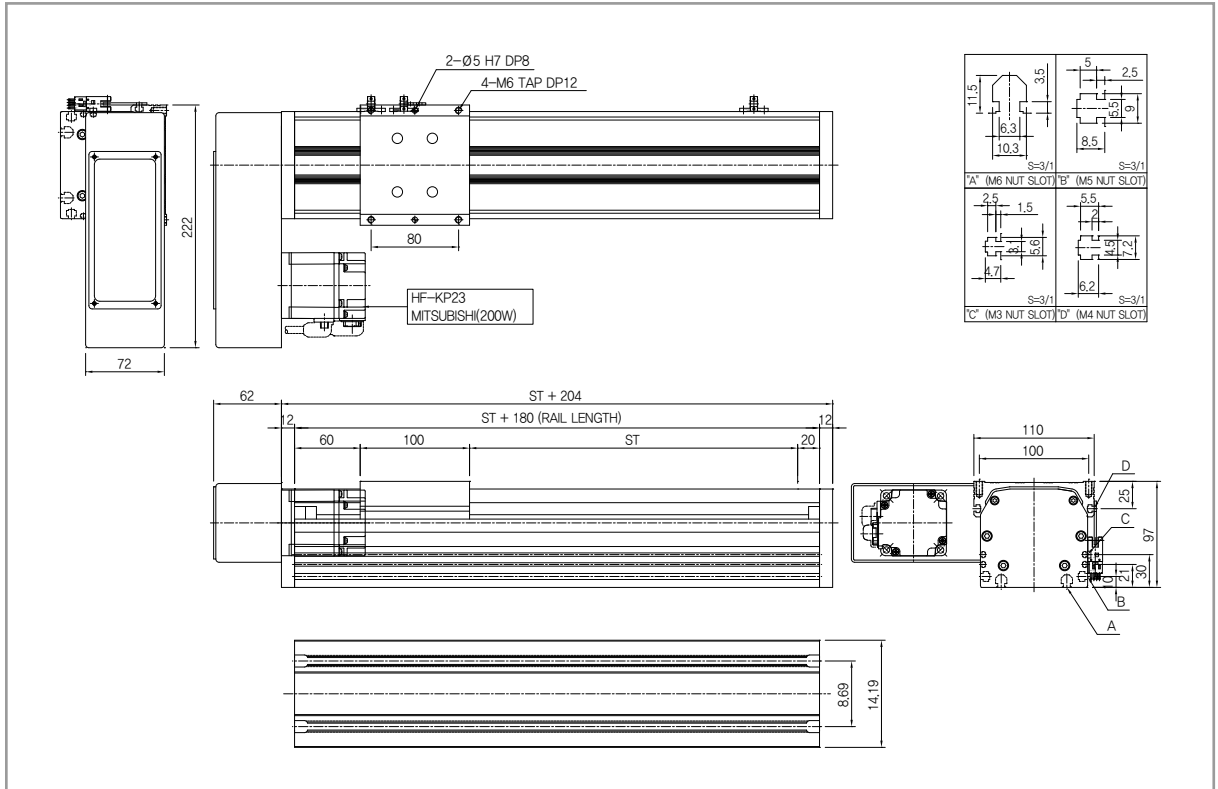
Direction		LRS100-L10		LRS100-L20	
Horizontal (X)		40 kg	20 kg	24 kg	12 kg
	0°	35 mm	80 mm	35 mm	85 mm
	90°	270 mm	530 mm	100 mm	250 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg
	0°	35 mm	90 mm	155 mm	335 mm
	90°	35 mm	90 mm	155 mm	335 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS100-PR	50~950	L10	500	200	40	12
		L20	1000		20	5

LRS100-PR

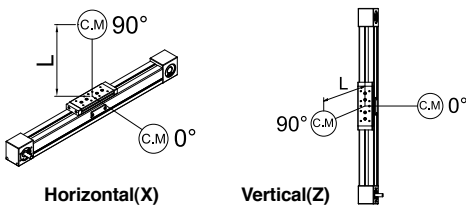


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	6.2	7.1	8.0	8.9	9.8	10.7	11.6	12.5	13.4	14.4		
Max. Speed (mm/s)	500						470	380	320	260	L10	200
	1000						950	770	630	520	L20	

Allowable overhang distance



Direction		LRS100-L10		LRS100-L20	
Horizontal (X)		40 kg	20 kg	24 kg	12 kg
	0°	35 mm	80 mm	35 mm	85 mm
	90°	270 mm	530 mm	100 mm	250 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg
	0°	35 mm	90 mm	155 mm	335 mm
	90°	35 mm	90 mm	155 mm	335 mm

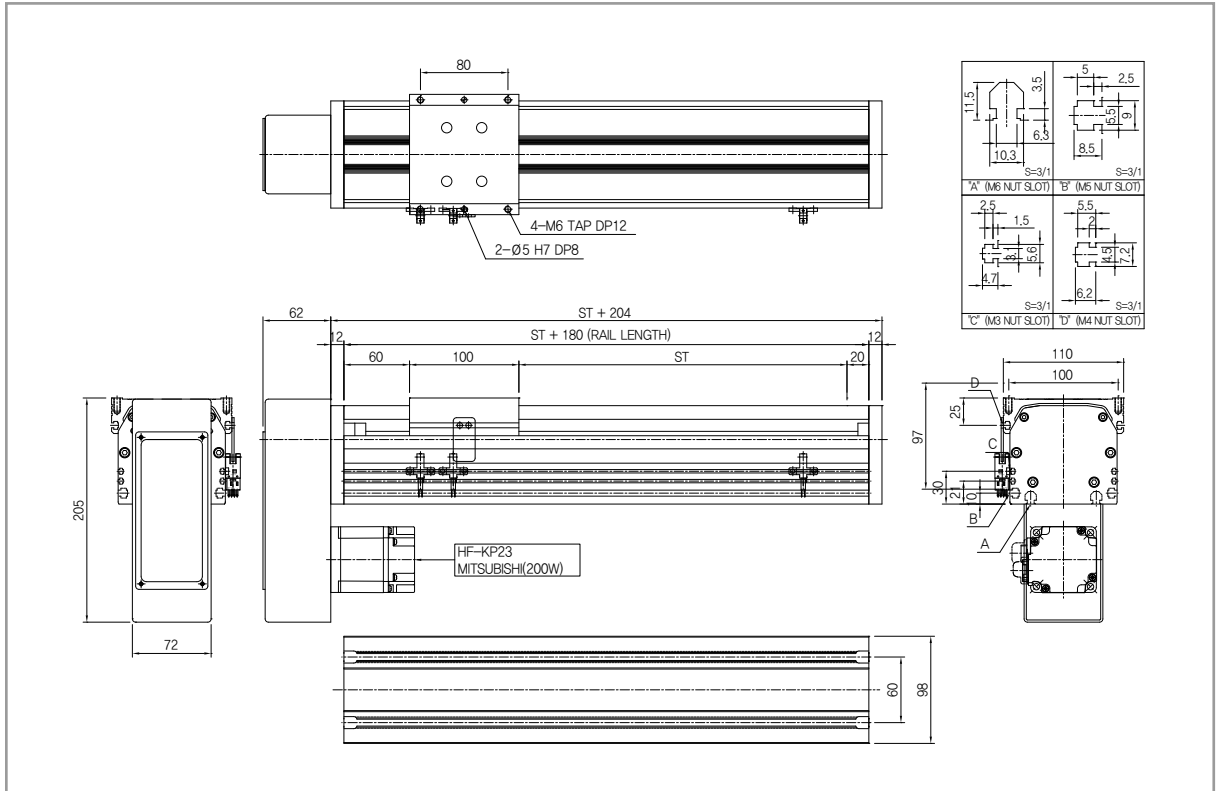
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS100-PB

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS100-PB	50~950	L10	500	200	40	12
		L20	1000		20	5

LRS100-PB

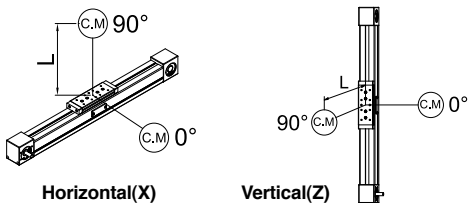


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	6.2	7.1	8.0	8.9	9.8	10.7	11.6	12.5	13.4	14.4		
Max. Speed (mm/s)	500						470	380	320	260	L10	
	1000						950	770	630	520	L20	L20

Allowable overhang distance



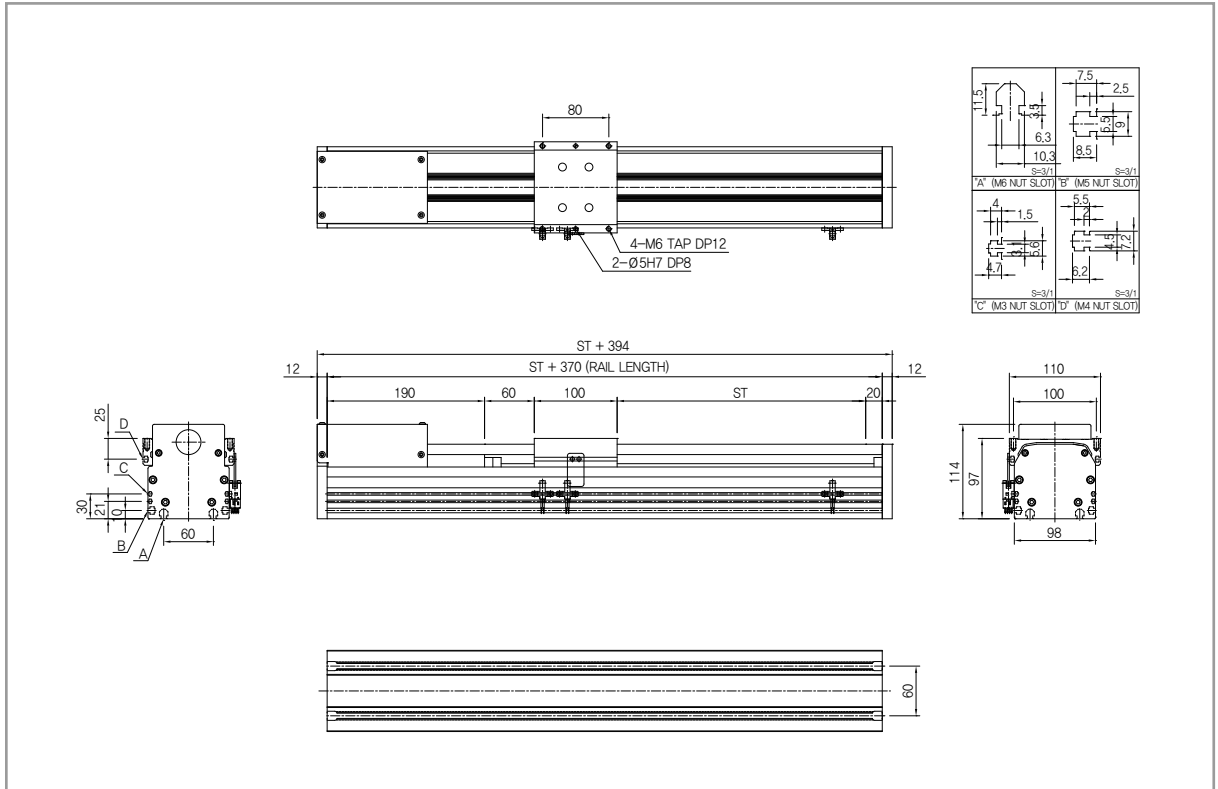
Direction		LRS100-L10		LRS100-L20	
Horizontal (X)		40 kg	20 kg	24 kg	12 kg
	0°	35 mm	80 mm	35 mm	85 mm
	90°	270 mm	530 mm	100 mm	250 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg
	0°	35 mm	90 mm	155 mm	335 mm
	90°	35 mm	90 mm	155 mm	335 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS100-M	50~950	L10	500	200	40	12
		L20	1000		20	5

LRS100-M

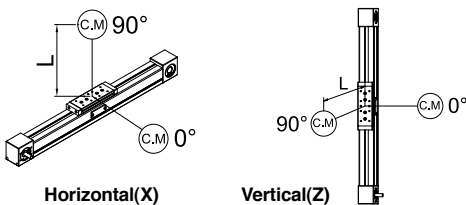


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	7.0	7.9	8.8	9.7	10.6	11.5	12.4	13.3	14.2	15.1		
Max. Speed (mm/s)	500						470	380	320	260	L10	200
	1000						950	770	630	520	L20	

Allowable overhang distance



Direction	LRS100-L10		LRS100-L20		
	40 kg	20 kg	24 kg	12 kg	
Horizontal (X)	0°	35 mm	80 mm	35 mm	85 mm
	90°	270 mm	530 mm	100 mm	250 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg
	0°	35 mm	90 mm	155 mm	335 mm
	90°	35 mm	90 mm	155 mm	335 mm

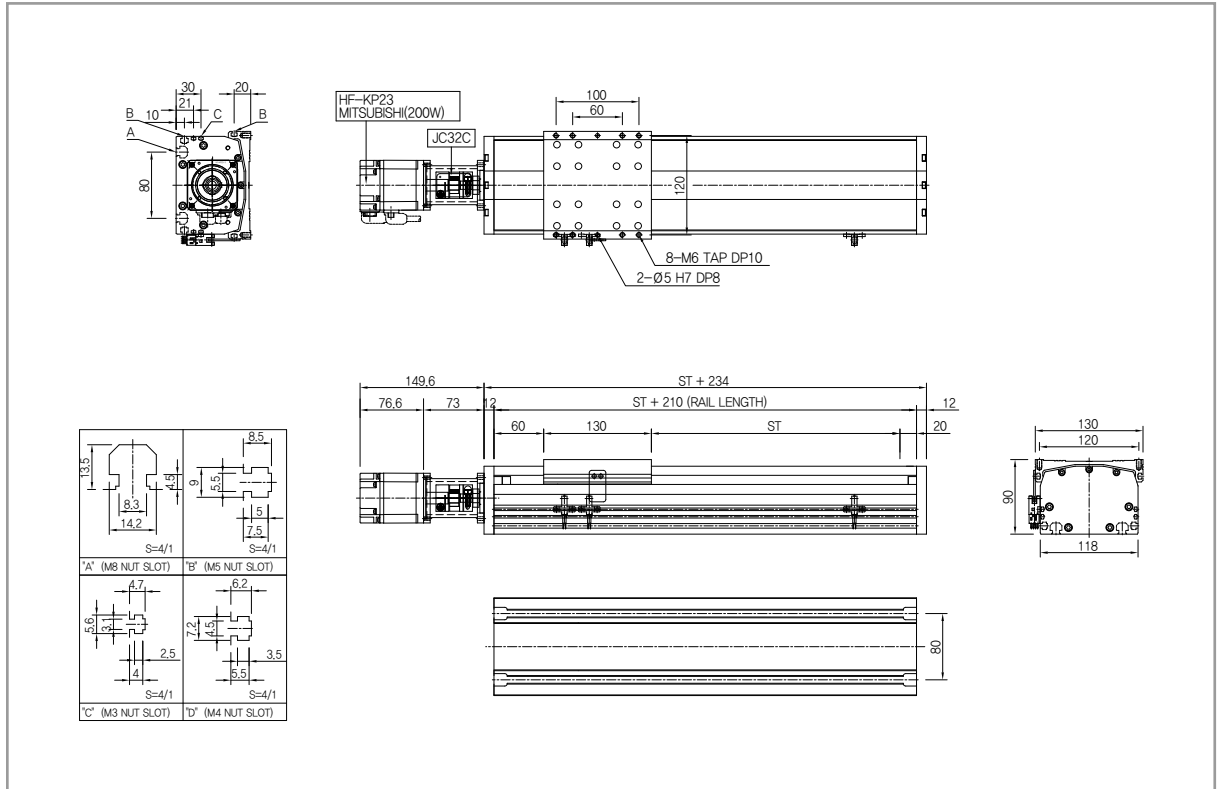
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS 120

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS120	50~900	L10	500	200	80	18
		L20	1000		25	6
		L20	1000	400	40	15

LRS120

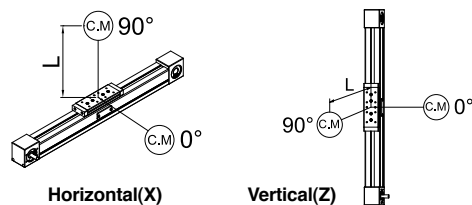


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	6.1	7.2	8.3	9.4	10.5	11.6	12.7	13.8	14.9	16.0		
Max. Speed (mm/s)	500						480	390	310	260	L10	200 (400)
	1000						950	780	630	520	L20	

Allowable overhang distance



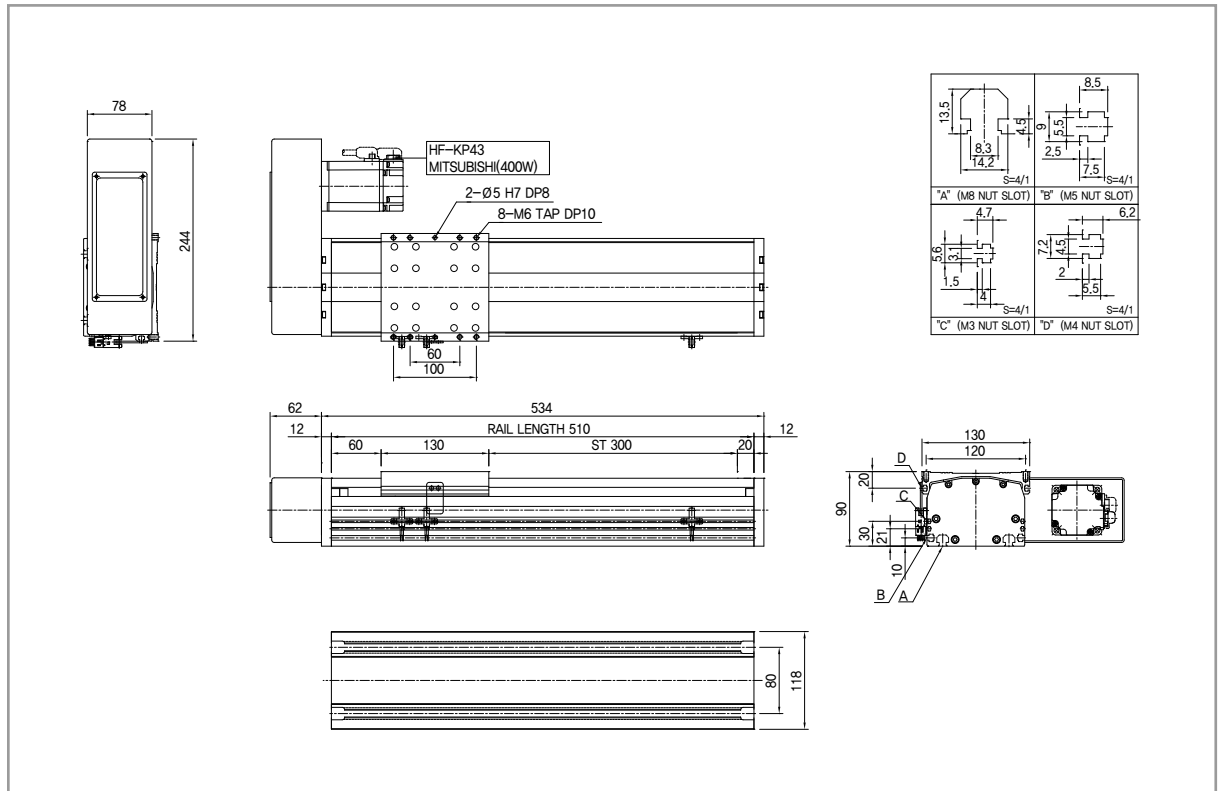
Direction	LRS120-L10		LRS120-L20		LRS120-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	450 mm	1350 mm	1000 mm	2100 mm	300 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	150 mm	400 mm	300 mm	650 mm	300 mm	700 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS120-PL	50~900	L10	500	200	80	18
		L20	1000		25	6
		L20	1000	400	40	15

LRS120-PL

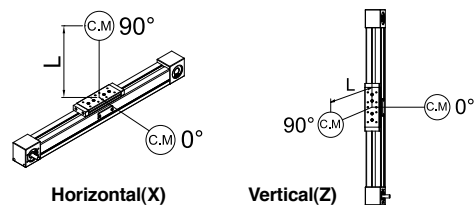


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	7.9	9.0	10.1	11.2	12.3	13.4	14.5	15.6	16.7	17.8		
Max. Speed (mm/s)	500						480	390	310	260	L10	200 (400)
	1000						950	780	630	520	L20	

Allowable overhang distance



Direction	LRS120-L10		LRS120-L20		LRS120-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	450 mm	1350 mm	1000 mm	2100 mm	300 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	150 mm	400 mm	300 mm	650 mm	300 mm	700 mm

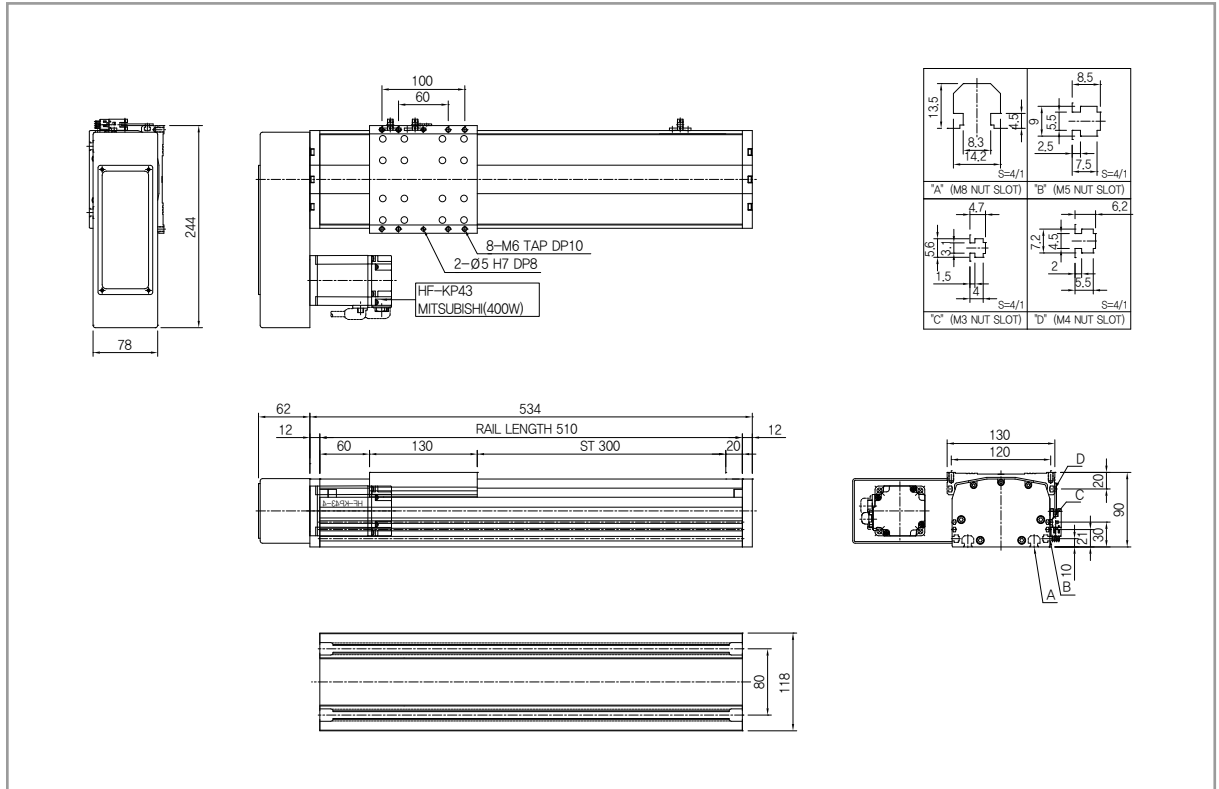
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS120-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS120-PR	50~900	L10	500	200	80	18
		L20	1000		25	6
		L20	1000	400	40	15

LRS120-PR

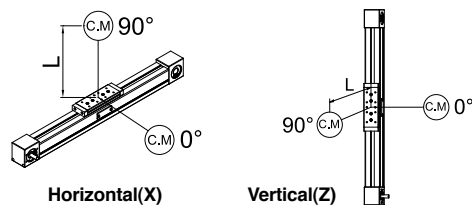


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	7.9	9.0	10.1	11.2	12.3	13.4	14.5	15.6	16.7	17.8		
Max. Speed (mm/s)	500						480	390	310	260	L10	200 (400)
	1000						950	780	630	520	L20	

Allowable overhang distance



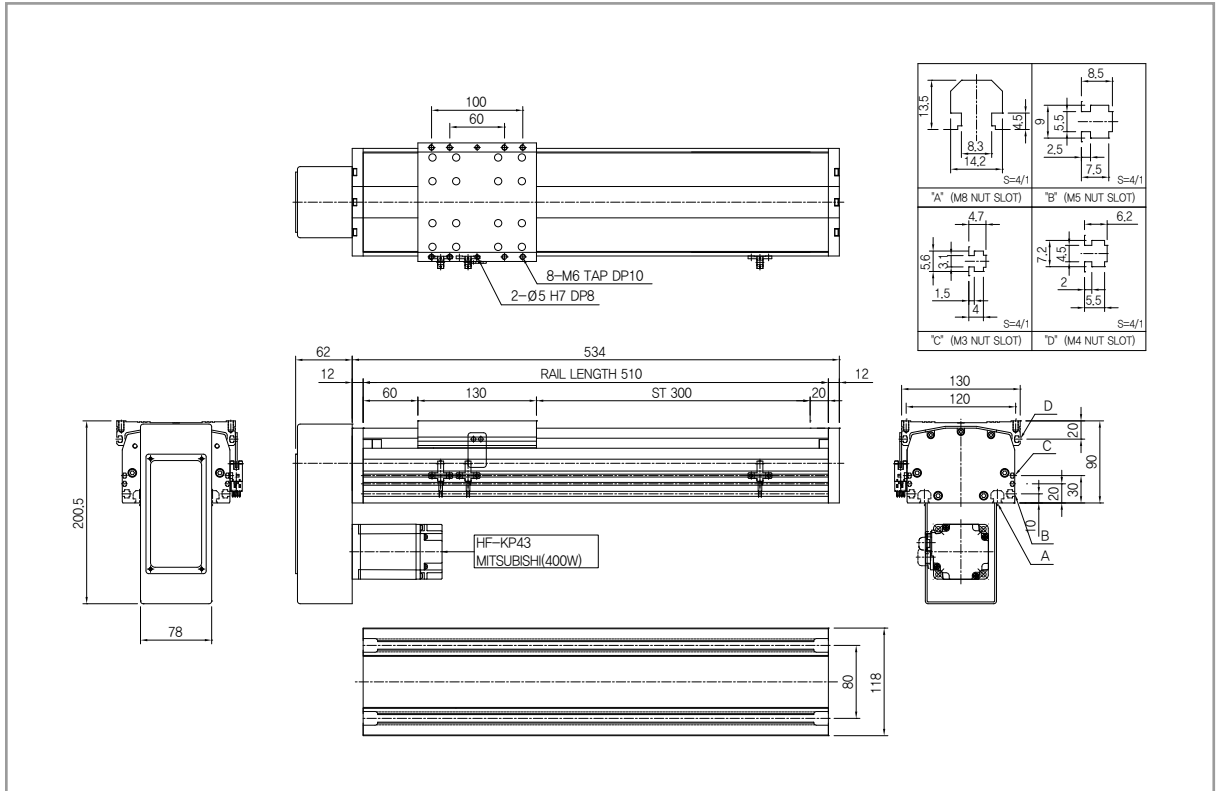
Direction	LRS120-L10		LRS120-L20		LRS120-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	450 mm	1350 mm	1000 mm	2100 mm	300 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	150 mm	400 mm	300 mm	650 mm	300 mm	700 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS120-PB	50~900	L10	500	200	80	18
		L20	1000		25	6
		L20	1000	400	40	15

LRS120-PB

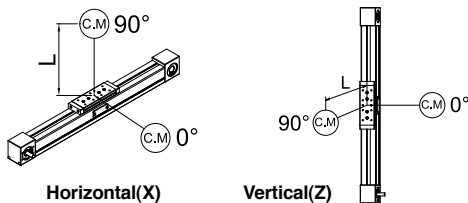


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	7.9	9.0	10.1	11.2	12.3	13.4	14.5	15.6	16.7	17.8		
Max. Speed (mm/s)	500						480	390	310	260	L20	400
	1000						950	780	630	520		

Allowable overhang distance



Direction	LRS120-L10		LRS120-L20		LRS120-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	450 mm	1350 mm	1000 mm	2100 mm	300 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	150 mm	400 mm	300 mm	650 mm	300 mm	700 mm

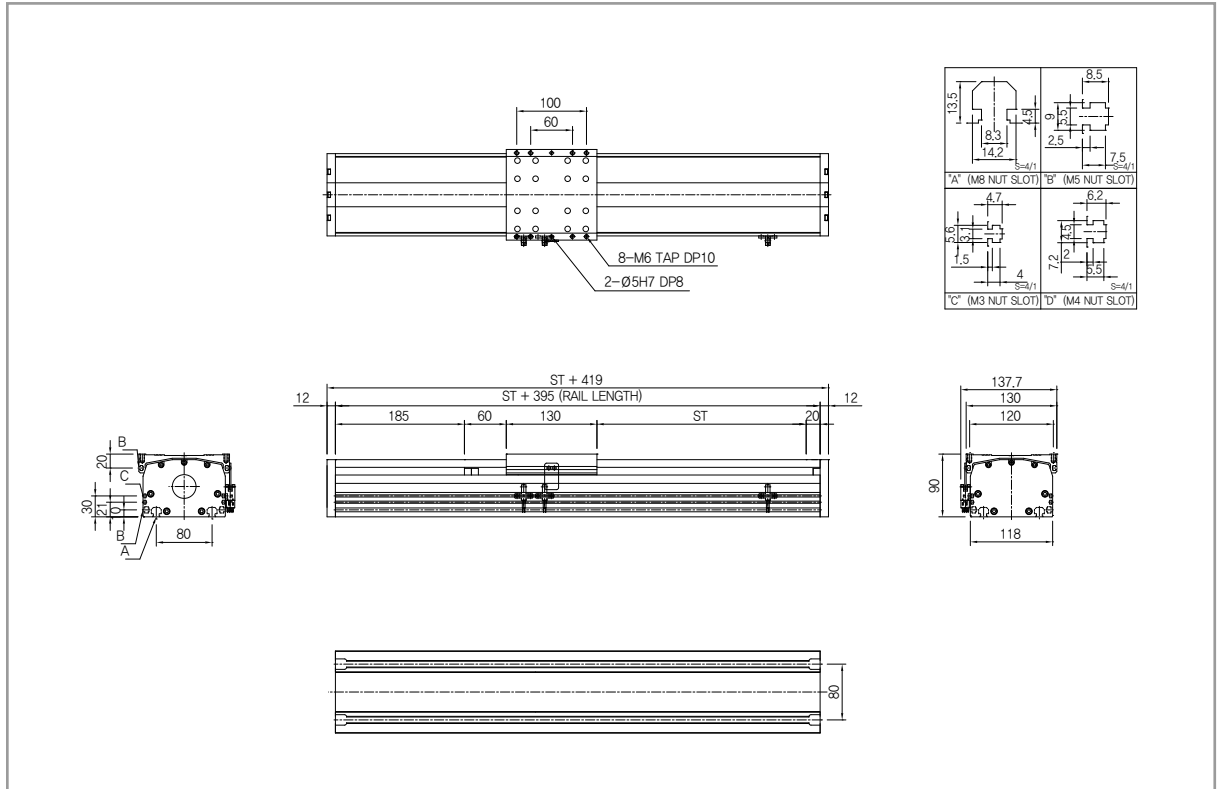
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS120-M

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS120-M	50~900	L10	500	200	80	18
		L20	1000		25	6
		L20	1000	400	40	15

LRS120-M

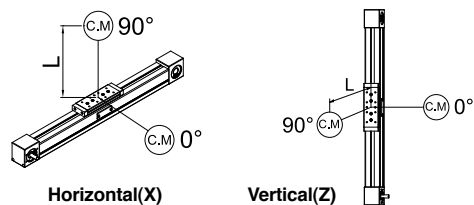


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	8.1	9.2	10.3	11.4	12.5	13.6	14.7	15.8	16.9	18.0		
Max. Speed (mm/s)	500						480	390	310	260	L10	200 (400)
	1000						950	780	630	520	L20	

Allowable overhang distance



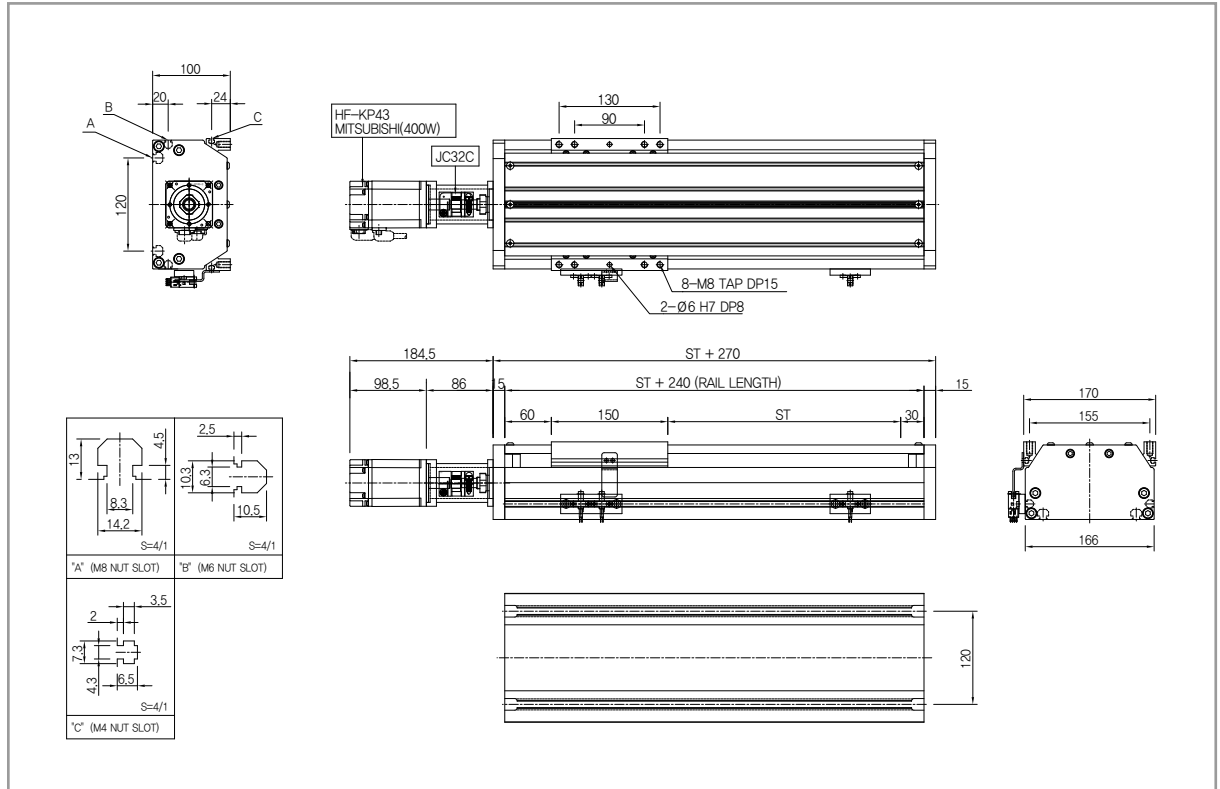
Direction	LRS120-L10		LRS120-L20		LRS120-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	450 mm	1350 mm	1000 mm	2100 mm	300 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	150 mm	400 mm	300 mm	650 mm	300 mm	700 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS166	50~1050	L10	500	400	120	40
		L20	1000		45	15
		L20	1000	750	100	35

LRS166

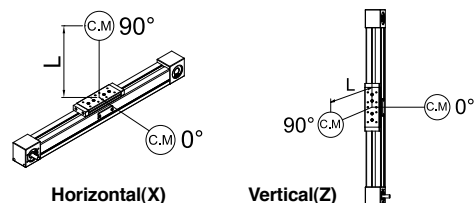


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	9.2	10.9	12.6	14.3	16.0	17.7	19.4	21.4	22.8	24.5		
Max. Speed (mm/s)	500						460	360	290	250	L10	400 (750)
	1000						930	720	590	500	L20	

Allowable overhang distance



Direction	LRS166-L10		LRS166-L20		LRS166-L20 (750W)		
	80 kg	40 kg	40 kg	20 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1550 mm	430 mm	1020 mm	500 mm	1550 mm
Vertical (Z)		30 kg	15 kg	12 kg	6 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	550 mm	530 mm	1200 mm	300 mm	550 mm

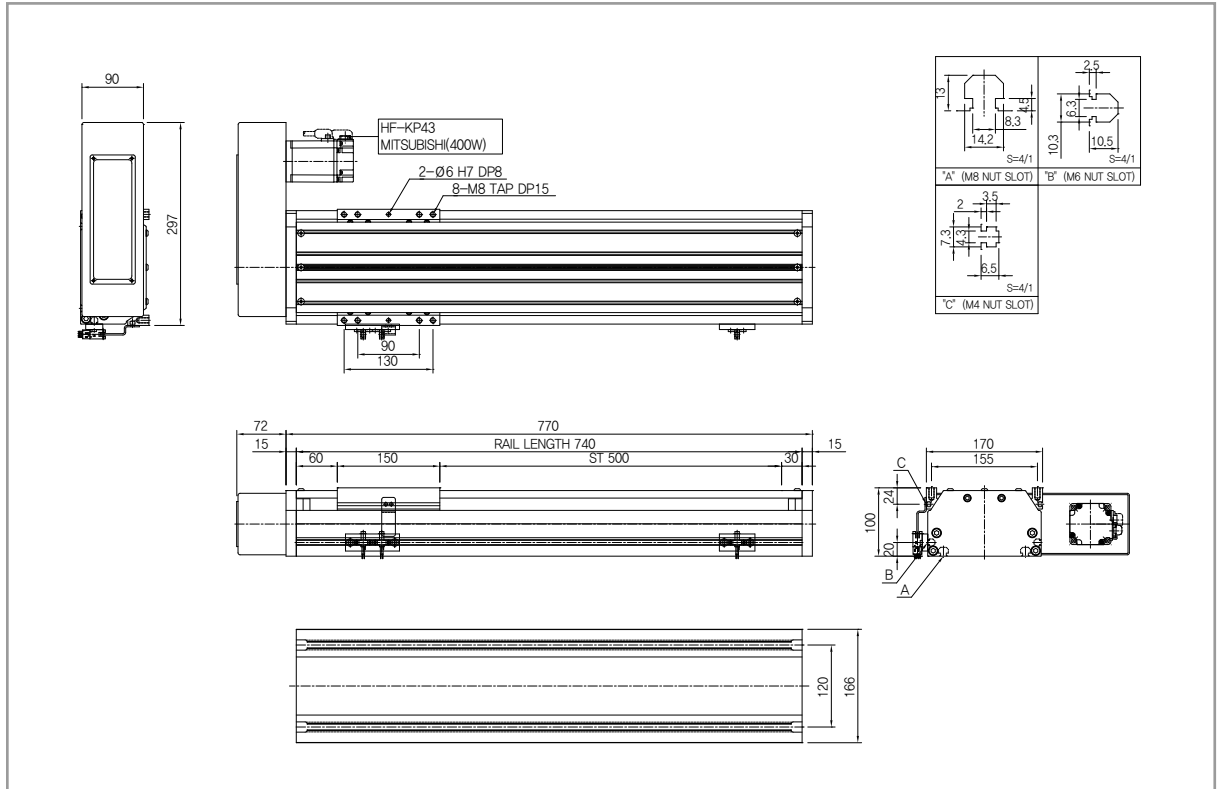
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS166-PL

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS166-PL	50~1050	L10	500	400	120	40
		L20	1000		45	15
		L20	1000	750	100	35

LRS166-PL

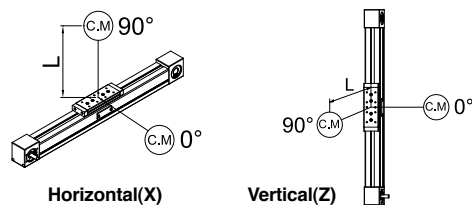


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	12.2	13.9	15.6	17.3	19.0	20.7	22.4	24.1	25.8	27.5		
Max. Speed (mm/s)	500						460	360	290	250	L10	400 (750)
	1000						930	720	590	500	L20	

Allowable overhang distance



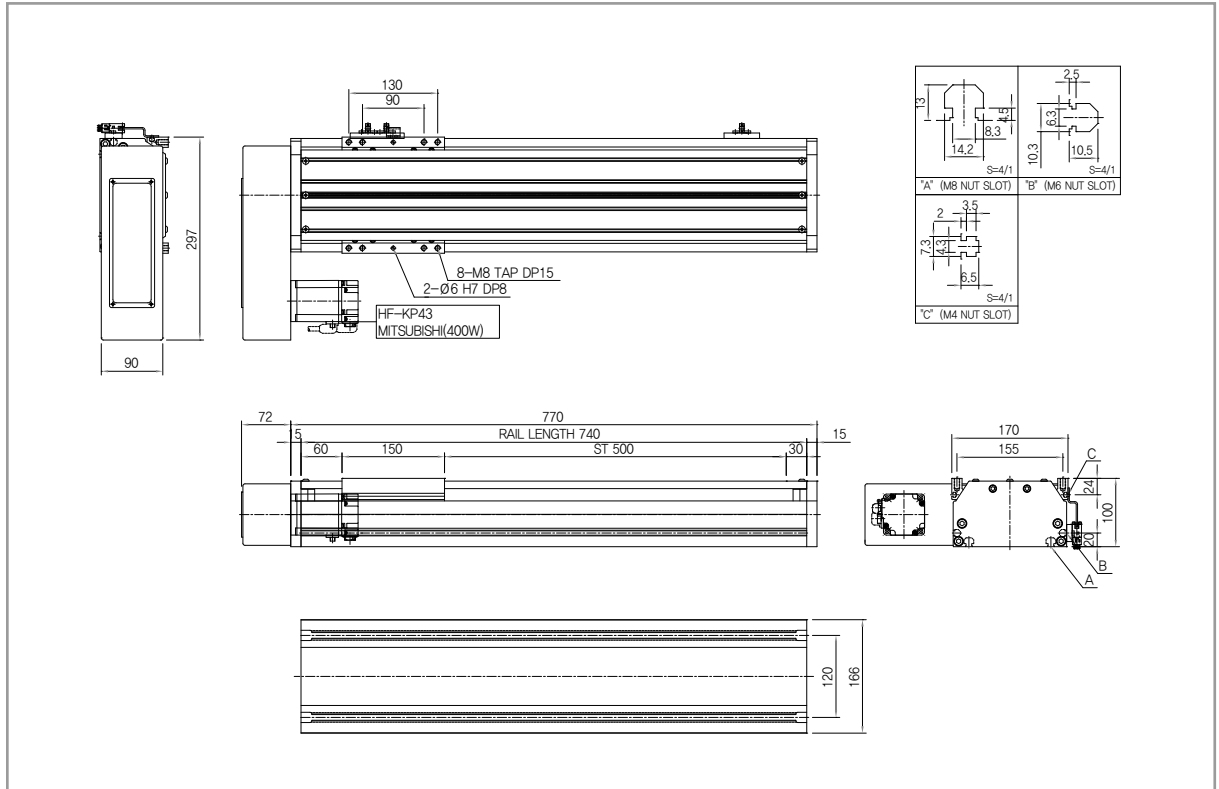
Direction	LRS166-L10		LRS166-L20		LRS166-L20 (750W)		
	80 kg	40 kg	40 kg	20 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1550 mm	430 mm	1020 mm	500 mm	1550 mm
Vertical (Z)		30 kg	15 kg	12 kg	6 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	550 mm	530 mm	1200 mm	300 mm	550 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS166-PR	50~1050	L10	500	400	120	40
		L20	1000		45	15
		L20	1000	750	100	35

LRS166-PR

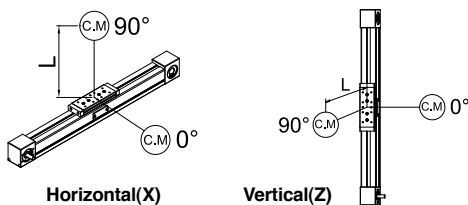


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	12.2	13.9	15.6	17.3	19.0	20.7	22.4	24.1	25.8	27.5		
Max. Speed (mm/s)	500						460	360	290	250	L10	400
	1000						930	720	590	500	L20	(750)

Allowable overhang distance



Direction	LRS166-L10		LRS166-L20		LRS166-L20 (750W)		
	80 kg	40 kg	40 kg	20 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1550 mm	430 mm	1020 mm	500 mm	1550 mm
Vertical (Z)		30 kg	15 kg	12 kg	6 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	550 mm	530 mm	1200 mm	300 mm	550 mm

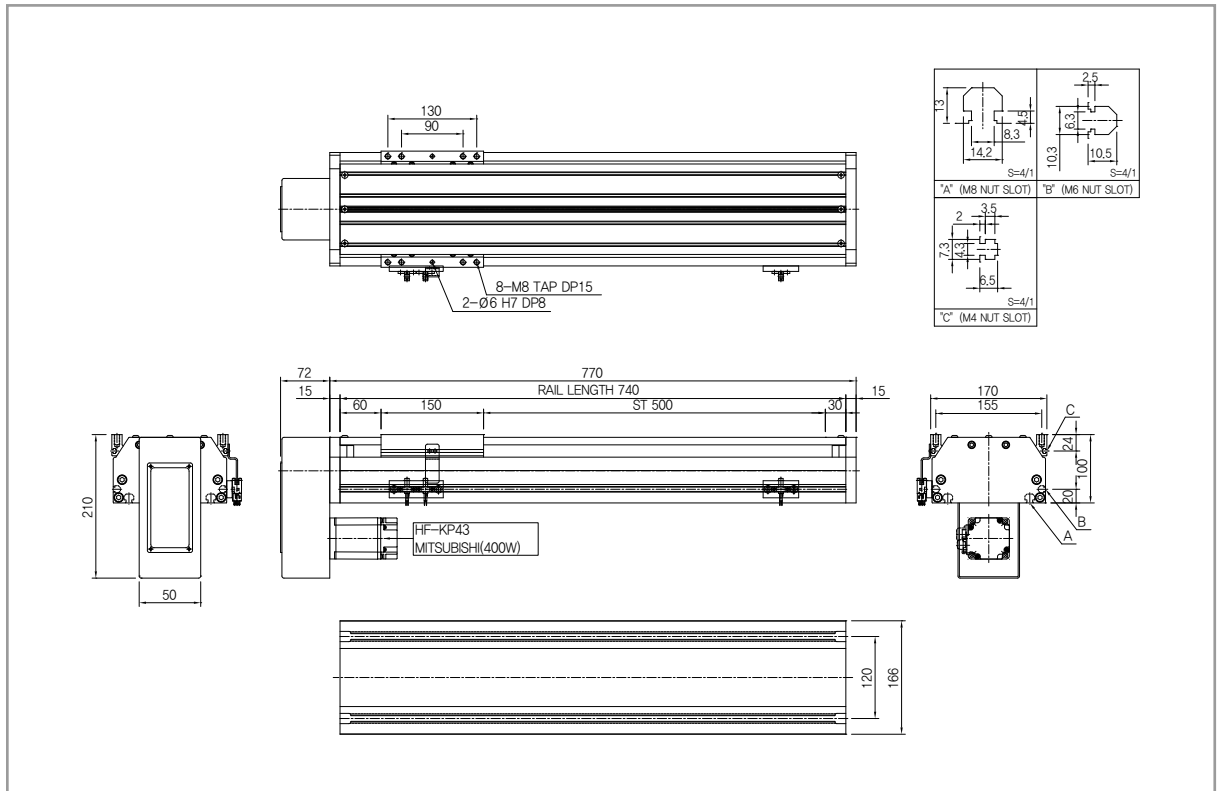
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS166-PB

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS166-PB	50~1050	L10	500	400	120	40
		L20	1000		45	15
		L20	1000	750	100	35

LRS166-PB

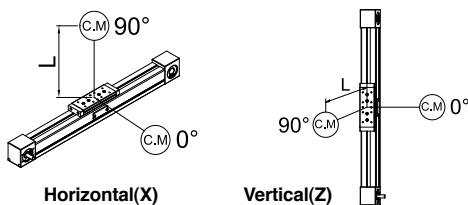


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	12.2	13.9	15.6	17.3	19.0	20.7	22.4	24.1	25.8	27.5		
Max. Speed (mm/s)	500						460	360	290	250	L10	400 (750)
	1000						930	720	590	500	L20	

Allowable overhang distance



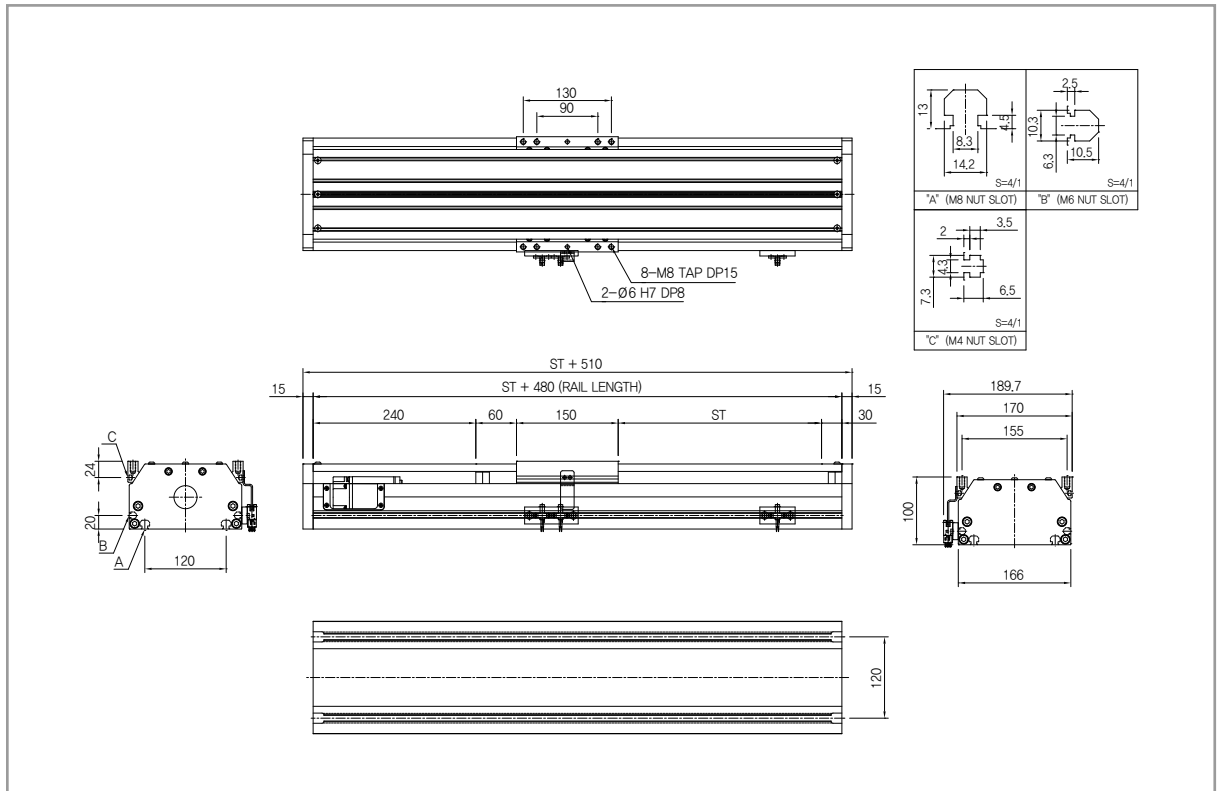
Direction	LRS166-L10		LRS166-L20		LRS166-L20 (750W)		
	80 kg	40 kg	40 kg	20 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1550 mm	430 mm	1020 mm	500 mm	1550 mm
Vertical (Z)		30 kg	15 kg	12 kg	6 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	550 mm	530 mm	1200 mm	300 mm	550 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS166-M	50~1050	L10	500	400	120	40
		L20	1000		45	15
		L20	1000	750	100	35

LRS166-M

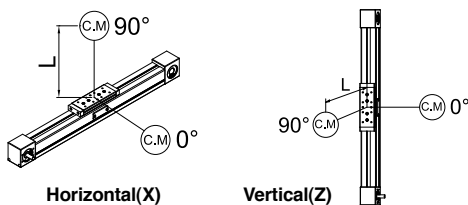


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	13.9	15.6	17.3	19.0	20.7	22.4	24.1	25.8	27.5	29.2		
Max. Speed (mm/s)	500						460	360	290	250	L10	400
	1000						930	720	590	500	L20	(750)

Allowable overhang distance



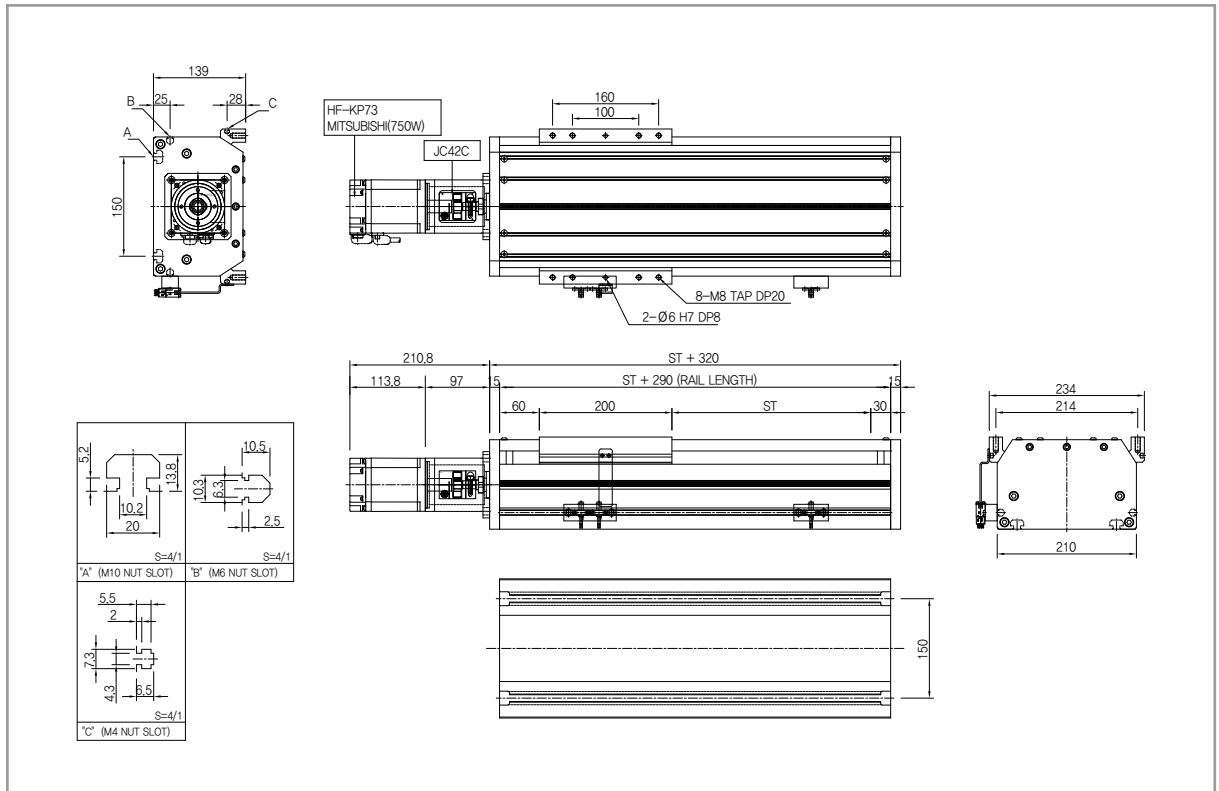
Direction	LRS166-L10		LRS166-L20		LRS166-L20 (750W)		
	80 kg	40 kg	40 kg	20 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1550 mm	430 mm	1020 mm	500 mm	1550 mm
Vertical (Z)		30 kg	15 kg	12 kg	6 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	550 mm	530 mm	1200 mm	300 mm	550 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS210	50~1000	L10	500	750	170	80
		L20	1000		120	35

LRS210

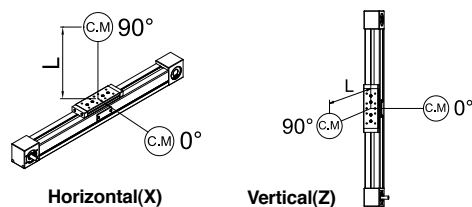


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)	
Weight(kg)	18.9	22.2	28.8	32.1	35.4	38.7	38.7	42.0	45.3	48.6			
Max. Speed (mm/s)								500	470	390	330	L10	750
								1000	930	790	650	L20	

Allowable overhang distance



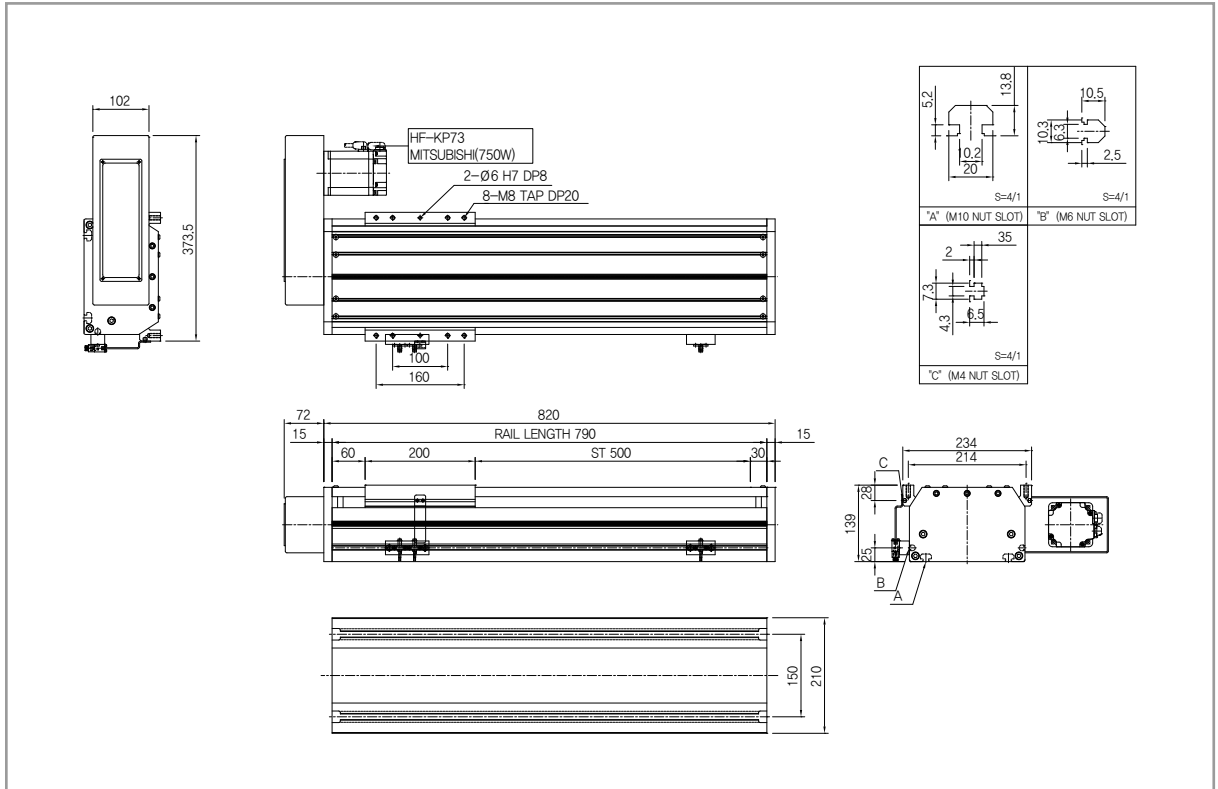
Direction	LRS210-L10		LRS210-L20		
	Load	Overhang	Load	Overhang	
Horizontal (X)	140 kg	70 kg	100 kg	50 kg	
	0°	150 mm	300 mm	150 mm	300 mm
	90°	1150 mm	2500 mm	580 mm	1400 mm
Vertical (Z)	50 kg	25 kg	30 kg	15 kg	
	0°	150 mm	300 mm	150 mm	300 mm
	90°	650 mm	1200 mm	700 mm	1550 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS210-PL	50~1000	L10	500	750	170	80
		L20	1000		120	35

LRS210-PL

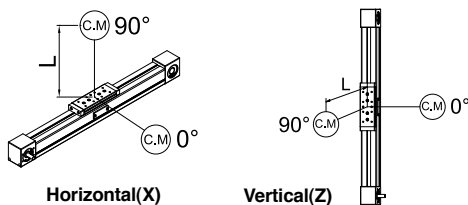


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	22.4	25.7	29.0	32.3	35.6	38.9	42.2	45.5	48.8	52.1		
Max. Speed (mm/s)								470	390	330	L10	750
								930	790	650	L20	

Allowable overhang distance



Direction	LRS210-L10		LRS210-L20		
	Load	Overhang	Load	Overhang	
Horizontal (X)	140 kg	70 mm	100 kg	50 mm	
	0°	150 mm	300 mm	150 mm	300 mm
	90°	1150 mm	2500 mm	580 mm	1400 mm
Vertical (Z)	50 kg	25 mm	30 kg	15 mm	
	0°	150 mm	300 mm	150 mm	300 mm
	90°	650 mm	1200 mm	700 mm	1550 mm

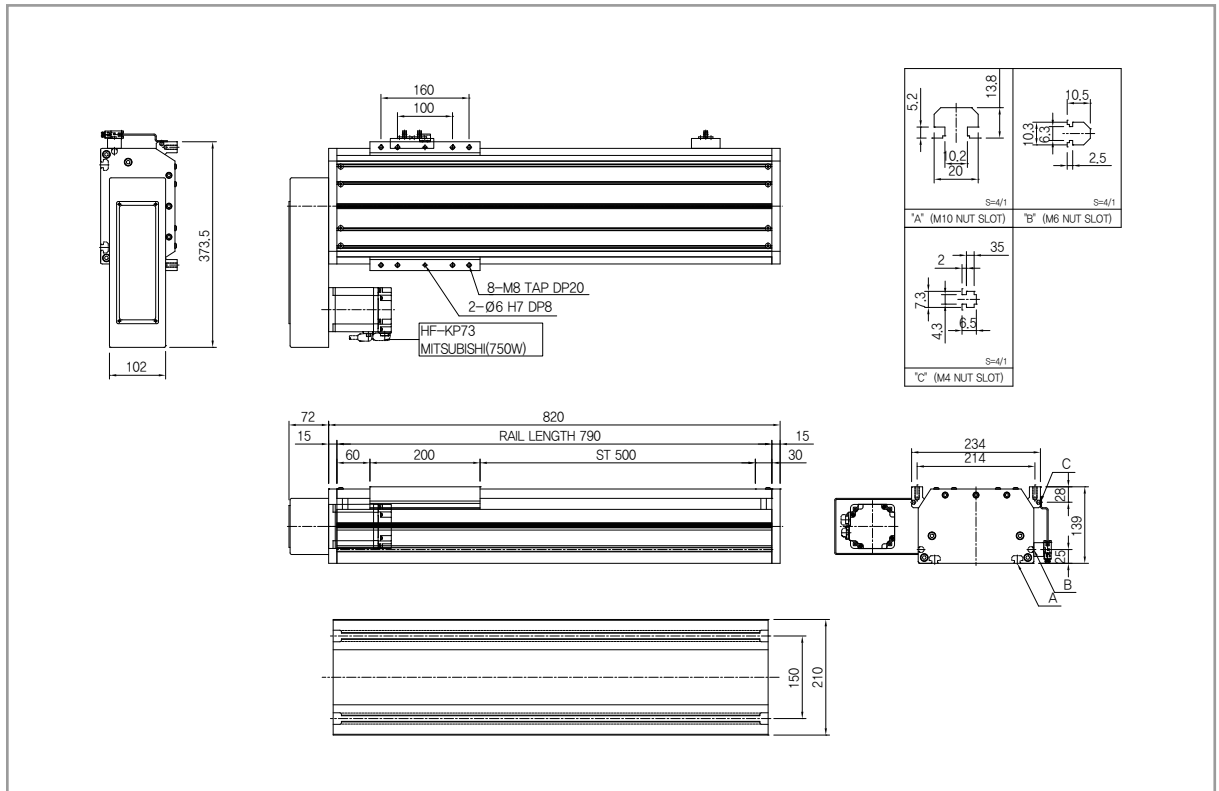
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS210-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS210-PR	50~1000	L10	500	750	170	80
		L20	1000		120	35

LRS210-PR

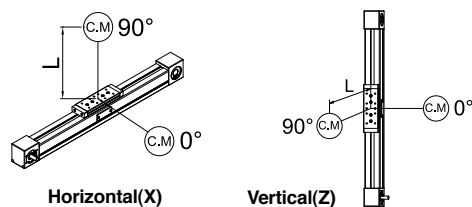


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	22.4	25.7	29.0	32.3	35.6	38.9	42.2	45.5	48.8	52.1		
Max. Speed (mm/s)	500							470	390	330	L10	750
	1000							930	790	650	L20	

Allowable overhang distance



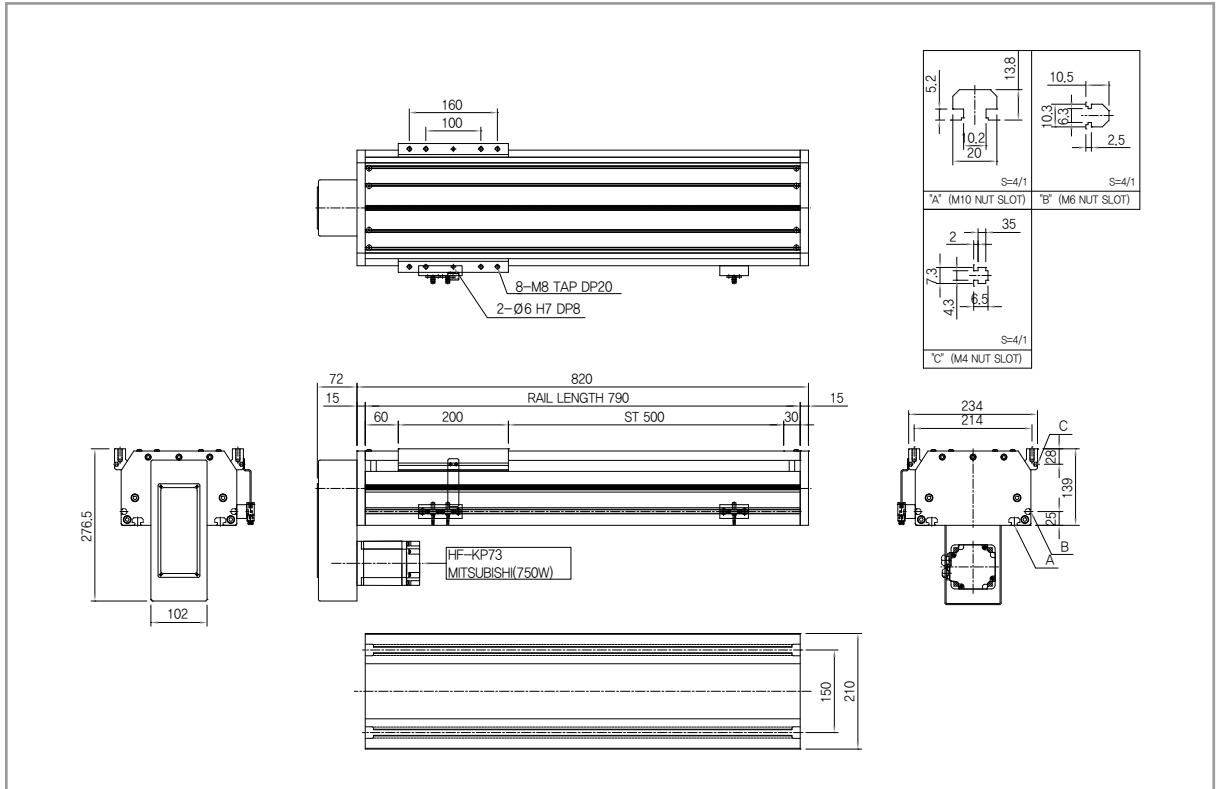
Direction	LRS210-L10		LRS210-L20	
	Load	Overhang	Load	Overhang
Horizontal (X)	140 kg	70 kg	100 kg	50 kg
	0°	150 mm	300 mm	150 mm
Vertical (Z)	1150 mm	2500 mm	580 mm	1400 mm
	90°	50 kg	25 kg	30 kg
Vertical (Z)	150 mm	300 mm	150 mm	300 mm
	90°	650 mm	1200 mm	700 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS210-PB	50~1000	L10	500	750	170	80
		L20	1000		120	35

LRS210-PB

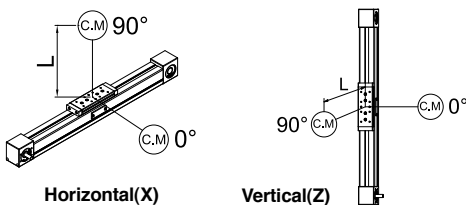


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	22.4	25.7	29.0	32.3	35.6	38.9	42.2	45.5	48.8	52.1		
Max. Speed (mm/s)								470	390	330	L10	750
								930	790	650	L20	

Allowable overhang distance



Direction	LRS210-L10		LRS210-L20	
	Load	Overhang	Load	Overhang
Horizontal (X)	140 kg	70 mm	100 kg	50 mm
	0°	150 mm	300 mm	150 mm
	90°	1150 mm	2500 mm	580 mm
Vertical (Z)	50 kg	25 mm	30 kg	15 mm
	0°	150 mm	300 mm	150 mm
	90°	650 mm	1200 mm	700 mm

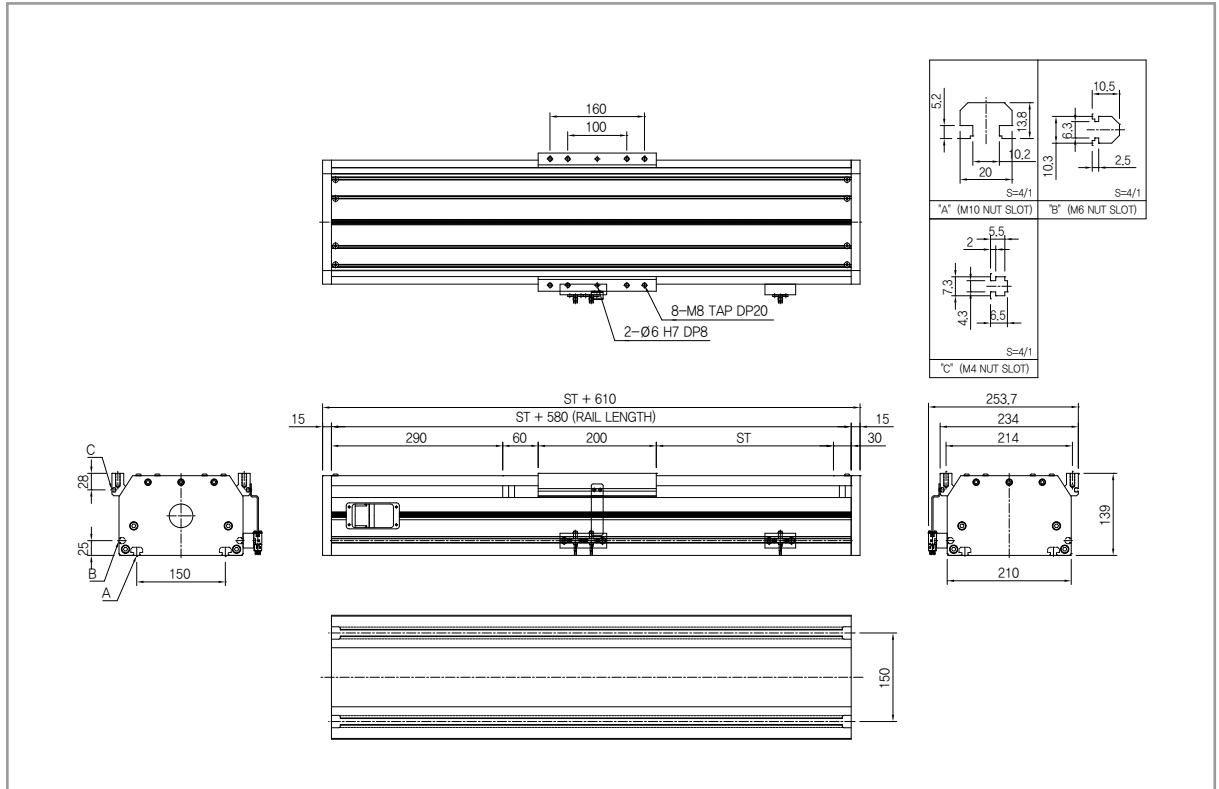
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRS210-M

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRS210-M	50~1000	L10	500	750	170	80
		L20	1000		120	35

LRS210-M

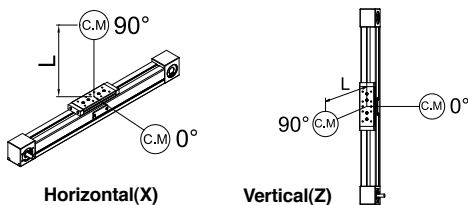


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	25.4	28.7	32.0	35.3	38.6	41.9	45.2	48.5	51.8	55.1		
Max. Speed (mm/s)	500							470	390	330	L20	
		1000							930	790	650	

Allowable overhang distance

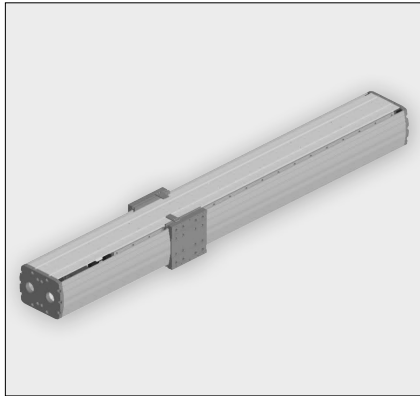


Direction	LRS210-L10		LRS210-L20		
	140 kg	70 kg	100 kg	50 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm
	90°	1150 mm	2500 mm	580 mm	1400 mm
Vertical (Z)		50 kg	25 kg	30 kg	15 kg
	0°	150 mm	300 mm	150 mm	300 mm
	90°	650 mm	1200 mm	700 mm	1550 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LRSD series





Features

- LM guide & ballscrew type unit
- Double slider structure
- Compact design and high stiffness
- Customized options
- Easy maintenance

How to order

LRSD — 120 — 600 — L1520 B — — E2 — D3

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Model

120

※ LM : Please contact us for customized LM

③ Stroke (Unit : mm)

Rolled : 50 ~ 1500

Ground : 50 ~ 900

※ Please contact us for longer stroke than standard

④ Ball screw

SYMBOL	Ball screw		Model
	Ball screw	Model	
L1510	Rolled Ø15-10 lead	●	120
L1520	Rolled Ø15-20 lead	●	
G1510	Ground Ø15-10 lead	●	
G1520	Ground Ø15-20 lead	●	

※ Please contact us for customized option

⑤ Color

Blank : White (outer)

L : White (outer) + LM raydent

S : White (outer) + Ball screw raydent

A : White (outer) + LM/Ball screw raydent

B : Black (outer)

BL : Black (outer) + LM raydent

BS : Black (outer) + Ball screw raydent

BA : Black (outer) + LM/Ball screw raydent

⑥ Sensor(dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket2M – Basic 3EA

Other than basic : C(J)(Qty) Example)C2,CJ2

⑦ Built in motor(coupling included)



Blank : None

SYMBOL	TYPE		MODEL
	OUTPUT	120	
E1	100W	●	
E2	200W/400W	●	

Basic option : mitsubishi, yaskawa, sanyo

⑧ Customized code

Sensor

Model	Item number	Sensor and Connector
120	SX672-PL	 EE-SX672 + EE1001
120	SX672-L-PL	 EE-SX672 + EE1006

Sensor dog

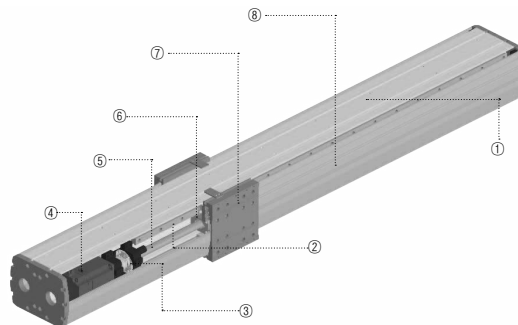
Model	Item number	Remarks
120	PDG-L120-PL	EE-SX672 only

LRSD specifications

Specification	LRSD120	Remarks
Max speed (mm/s)	1000	
Payload (kgf)	80 (horizontal), 20 (vertical)	
Stroke (mm)	Rolled : Max. 1500 Ground : Max. 900	Please refer to how to order
Repeatability (mm)	± 0.02	
Ball screw/ Lead (mm)	Ø15 / L10 (L20)	
No load torque (Nm)	1	
LM Guide	NO.15, 4 Rail 8 Block	
Basic weight (kgf)	17 (200W), 18.8 (400W)	
Weight per 100mm stroke (kgf)	2.1	
Motor (W)	200 ~ 400	Built-in motor
Size (mm, W x H)	130 x 168	

Note) Customized options such as motor, raydent, LM guide and ball screw are available.

LRSD structure



► Components list

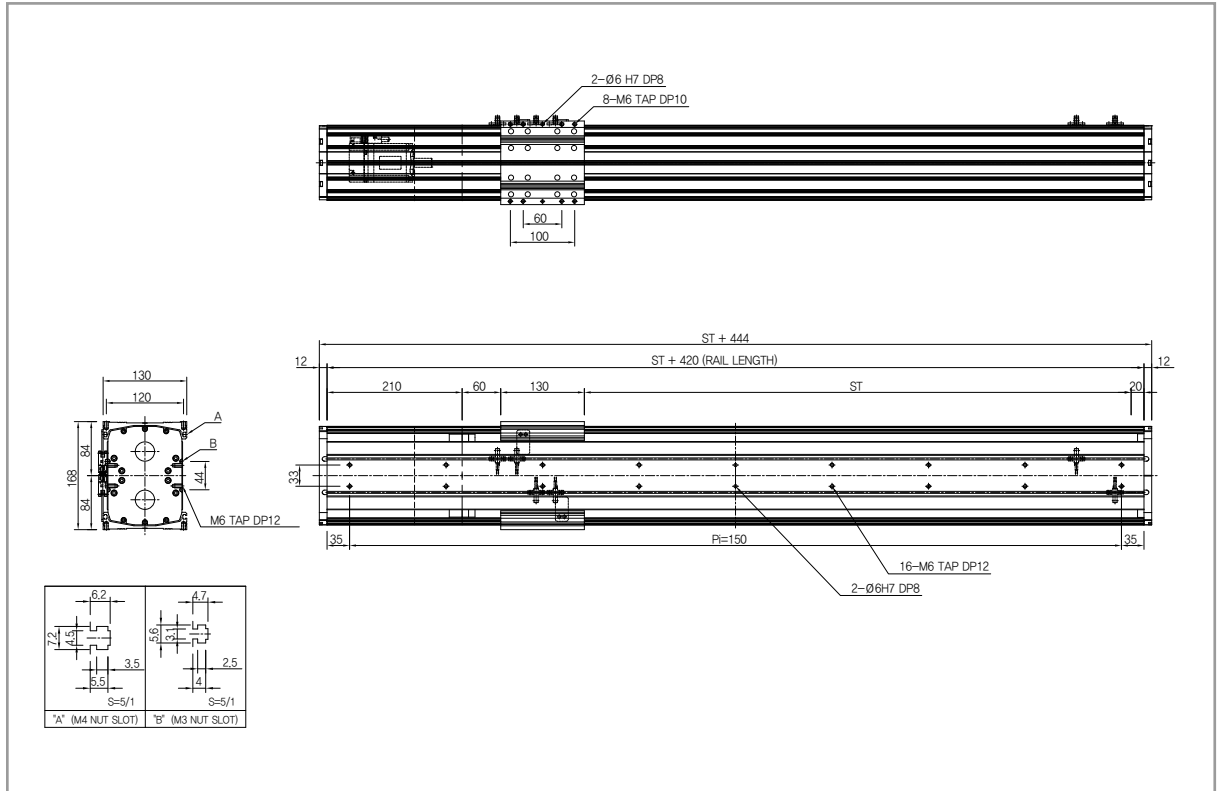
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Ball screw	Carbon steel
2	Model	LM GUIDE	Bearing steel	6	Ball screw nut	Cr-Mo steel
	120	No.15 / 4RAIL 8BLOCK				
3	Coupling & support unit			7	Slider	Aluminum alloy
4	Servo motor(200~400W)			8	COVER	Aluminum alloy

LRSD 120

Basic specifications

Model	Stroke (mm)	Gear Ratio	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LRSD120	50~900	L10	500	200	80	20
		L20	1000		25	8
		L20	1000	400	40	15

LRSD120



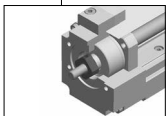
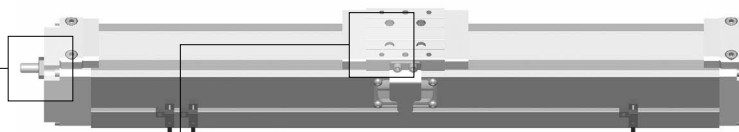
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

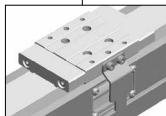
Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	18,6	20,0	21,4	22,8	24,2	25,6	27,0	28,4	29,8	31,2	-	200
	19,1	20,5	21,9	23,3	24,7	26,1	27,5	28,9	30,3	31,7	-	400
Max. Speed (mm/s)	500						470	380	300	250	L10	200 (400)
	1000						950	750	610	500	L20	

Note) Built-in motor type. The weight of motor is included.

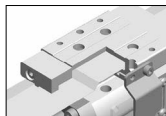
QS series



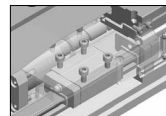
- Application with various axis combination is available
- Long life time



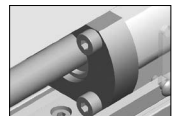
- Customized slider is available



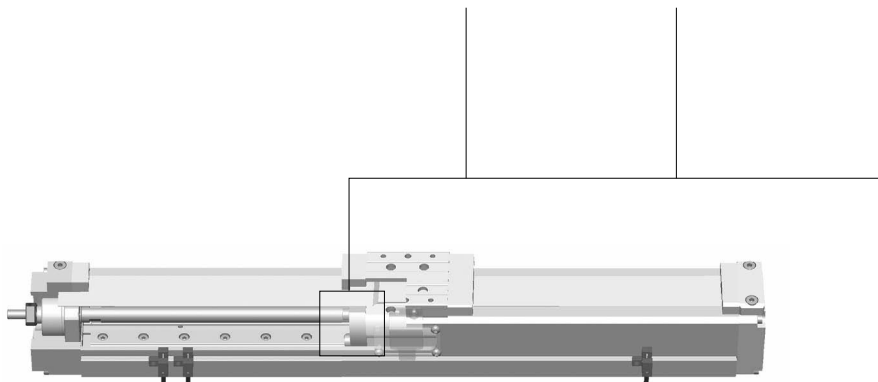
- Built-in stainless steel cover for dust proof



- LM guide with high stiffness and high precision



- Various types of ball screw are available

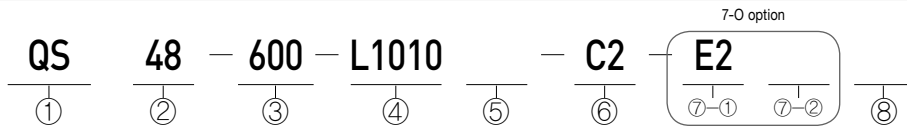




Features

- LM Guide & Ball screw type unit
- Clean & Cover type
- Compact design and high stiffness
- Various axis combination
- Customized options
- Easy maintenance

How to order



① Series

② Model

48 / 70 / 88

※ LM : Please contact us for customized LM

③ Stroke (Unit : mm)

50 ~ 800

※ Please contact us for longer stroke than standard

④ Ball screw

Symbol	Ball screw type	Model		
		48	70	88
L1510	Rolled Ø15-10 lead	●	●	●
L1520	Rolled Ø15-20 lead		●	●
G1510	Ground Ø15-10 lead	●	●	●
G1520	Ground Ø15-20 lead		●	●
L1010	Rolled Ø10-10 lead	●		

※ Please contact us for customized ball screw type

⑤ Color

Blank : White(outer)

L : White(outer) + LM raydent

S : White(outer) + Ball screw raydent

A : White(outer) + LM/Ball screw raydent

B : Black (outer)

BL : Black(outer) + LM raydent

BS : Black(outer) + Ball screw raydent

BA : Black(outer) + LM/Ball screw raydent

⑥ Sensor(dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket 2M – Basic 3EA

Other than basic : C(J)(Q'ty) Example)C2,CJ2

⑦ Motor mounting

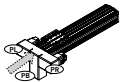
Blank : None

⑦-① Motor bracket for in-line type (including coupling)

Symbol	Type	Model		
		48	70	88
E1	100W	●	●	●
E2	200W/400W	●	●	●

⑦-② Motor bracket for parallel type


Symbol	Type	Model		
		48	70	88
PL1	100W	●	●	●
PR1	100W	●	●	●
PB1	100W	●	●	●
PL2	200/400W	●	●	●
PR2	200/400W	●	●	●
PB2	200/400W	●	●	●



Basic option : Mitsubishi, Yaskawa, Sanyo

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
48	SX912-R-PL	 EE-SX912-R
70		
88		

Sensor dog

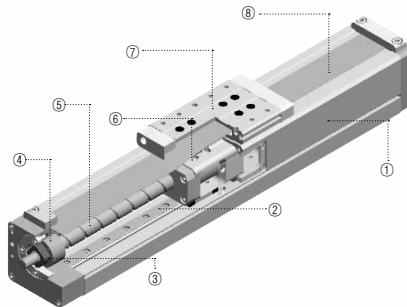
Model	Item number	Remarks
48	PDG-QS48-PL	EE-SX912-R only
70	PDG-QS70-PL	
88	PDG-QS88-PL	

QS specifications

Specification	QS48	QS70	QS88
Max speed (mm/s)	500	1000	1000
Payload (kgf)	15 (horizontal), 5 (vertical)	18 (horizontal), 8 (vertical)	28 (horizontal), 9 (vertical)
Stroke (mm)	Max. 800	Max. 800	Max. 800
Repeatability (mm)	± 0.02	± 0.02	± 0.02
Ball screw / Lead (mm)	Ø10 / L10	Ø15 / L10 (20L)	Ø15 / L10 (L20)
No load torque (Nm)	0.4	0.6	0.7
LM Guide	NO.12, 1 Rail 1 Block	NO.12, 1 Rail 2 Block	NO.15, 1 Rail 2 Block
Basic weight (kgf)	1.5	3.2	4.2
Weight per 100mm stroke (kgf)	0.4	0.6	0.8
Motor (W)	50 ~ 100	100 ~ 200	200
Size (mm, W x H)	48 x 63	70 x 81	88 x 87

Note) Customized options such as motor, raydent, LM guide and ball screw are available.

QS structure



► Component list

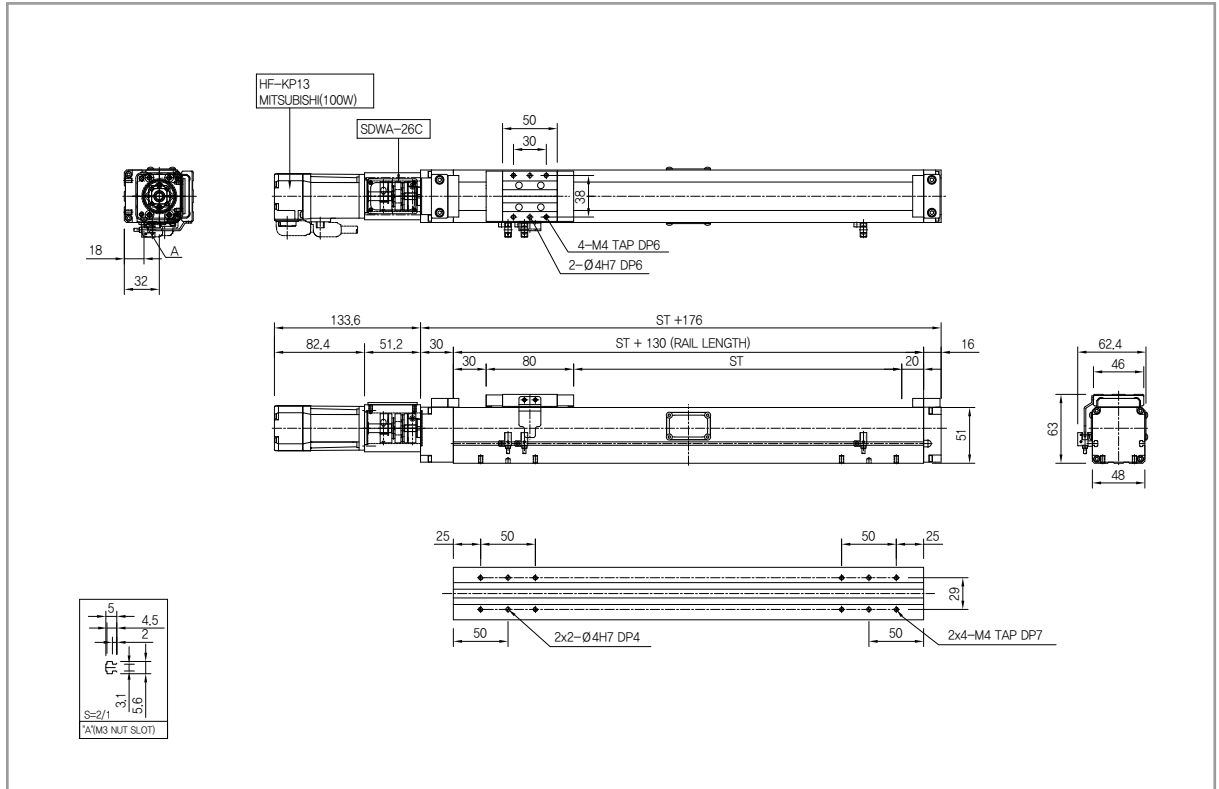
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	5	Ball screw	Carbon steel
2	Model	LM GUIDE		6	Ball screw nut	Cr-Mo steel
	48	No.12 / 1RAIL 1BLOCK				
	70	No.12 / 1RAIL 2BLOCK				
	88	No.15 / 1RAIL 2BLOCK				
3	Lock nut			7	Slide block	Aluminum alloy
4	Support unit			8	Steel cover	Stainless steel

QS 48

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS48	100~500	L10	500	100	15	5

QS48

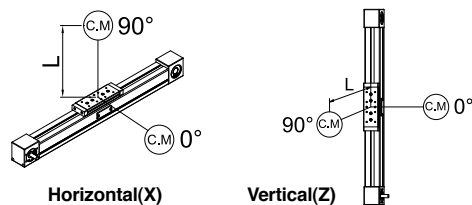


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	2.7	3.1	3.5	3.9	4.3	4.7	5.1	5.5		
Max. Speed (mm/s)	500					500	450	350		

Allowable overhang distance



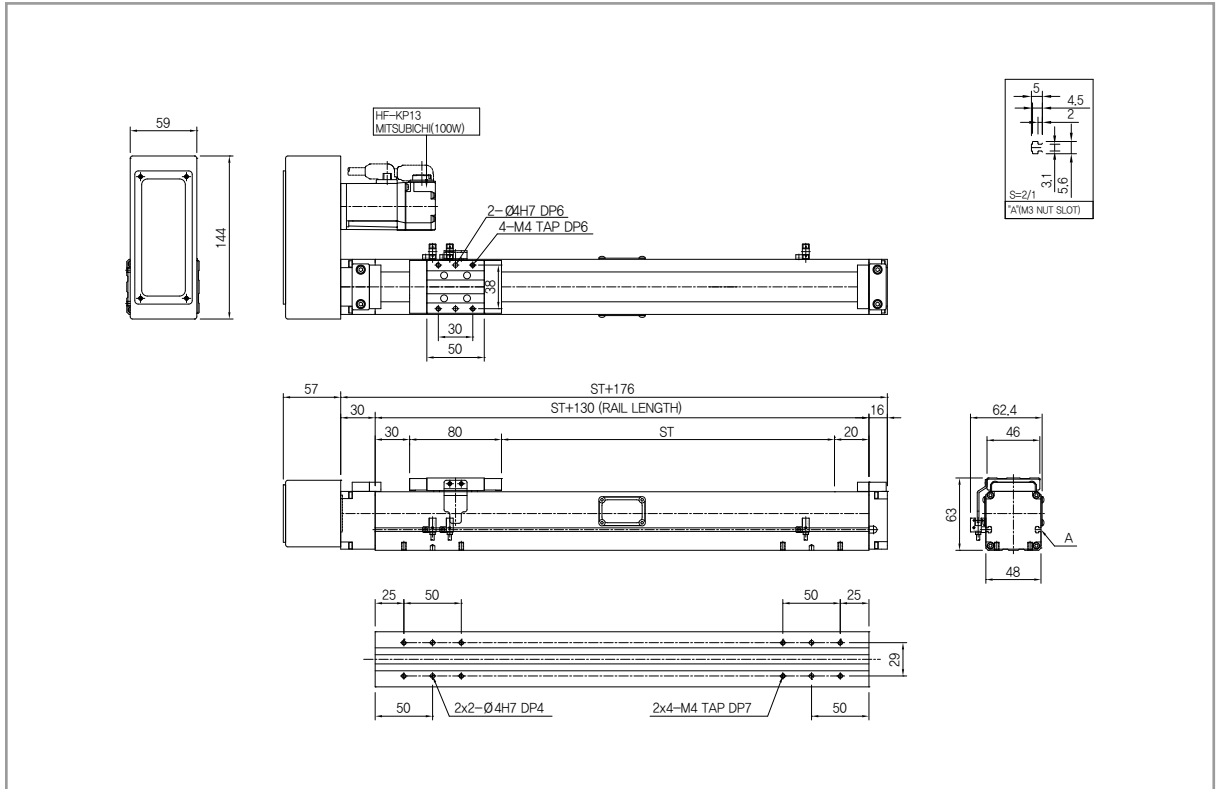
Direction		QS48-L10	
Horizontal (X)		12 kg	6 kg
	0°	10 mm	30 mm
	90°	100 mm	280 mm
Vertical (Z)		4 kg	2 kg
	0°	15 mm	50 mm
	90°	20 mm	60 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS48-PL	50~800	L10	500	100	15	5

QS48-PL

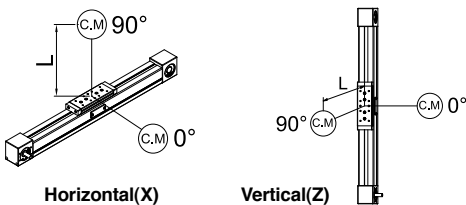


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)	
Weight(kg)	3.4	3.8	4.2	4.6	5.0	5.4	5.8	6.2			L10
Max. Speed (mm/s)	500						450	350			

Allowable overhang distance



Direction		QS48-L10	
Horizontal (X)		12 kg	6 kg
	0°	10 mm	30 mm
	90°	100 mm	280 mm
Vertical (Z)		4 kg	2 kg
	0°	15 mm	50 mm
	90°	20 mm	60 mm

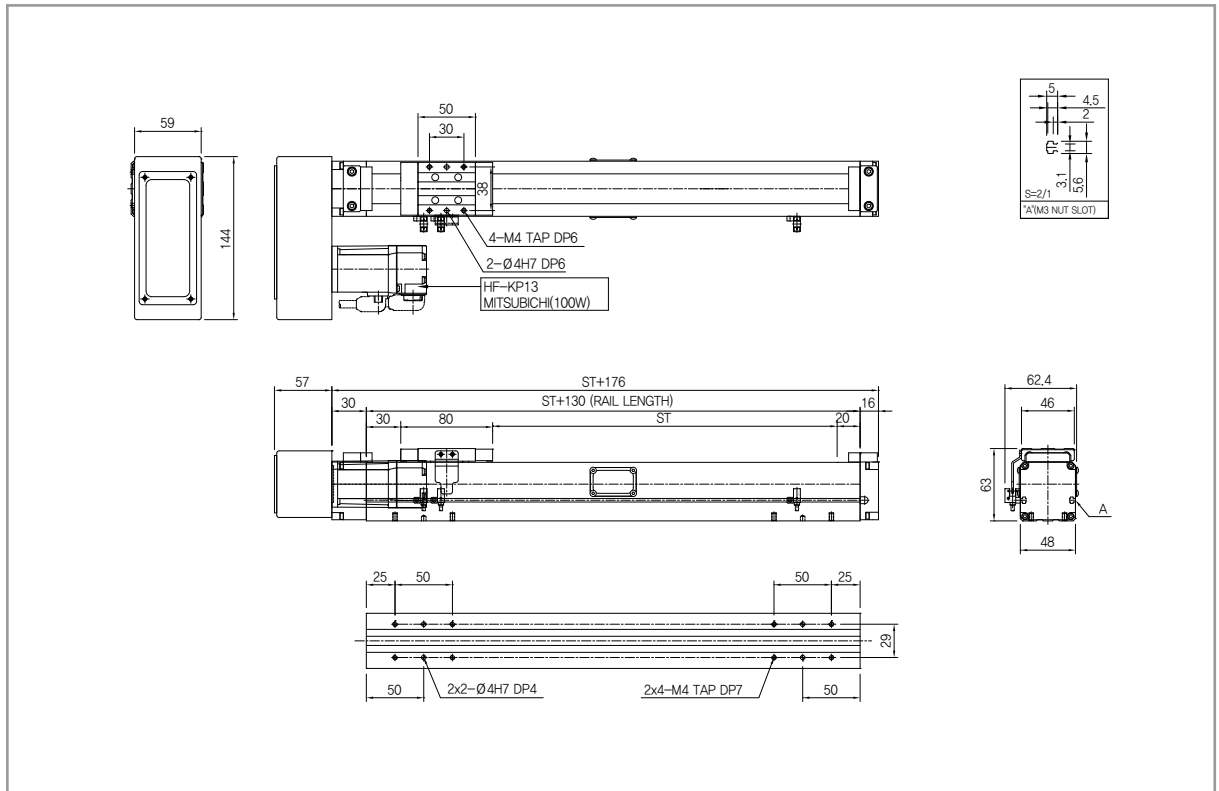
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

QS48-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS48-PR	50~800	L10	500	100	15	5

QS48-PR

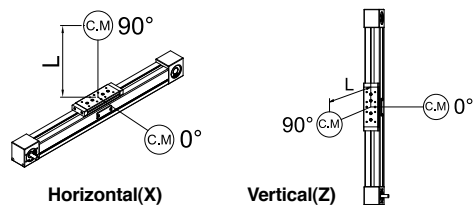


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)	
Weight(kg)	3.4	3.8	4.2	4.6	5.0	5.4	5.8	6.2			L10
Max. Speed (mm/s)	500						450	350			

Allowable overhang distance



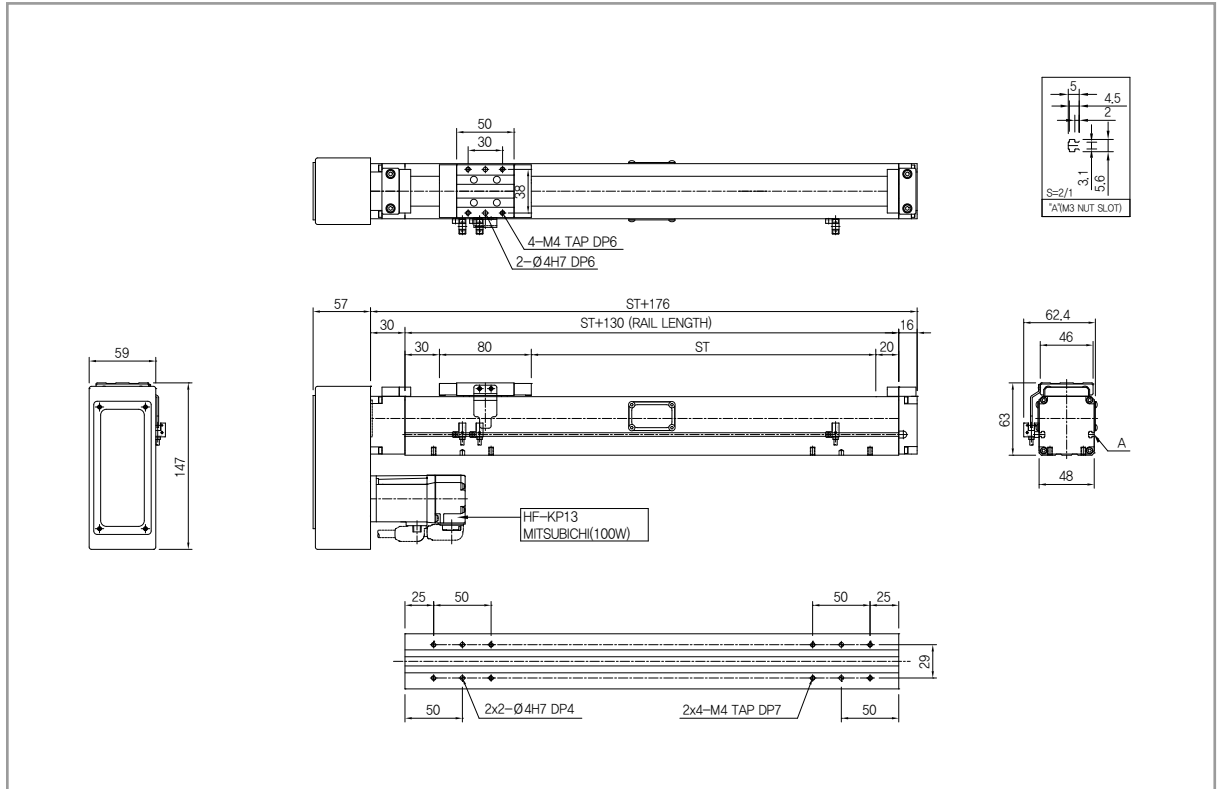
Direction		QS48-L10	
Horizontal (X)		12 kg	6 kg
	0°	10 mm	30 mm
	90°	100 mm	280 mm
Vertical (Z)		4 kg	2 kg
	0°	15 mm	50 mm
	90°	20 mm	60 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS48-PB	50~800	L10	500	100	15	5

QS48-PB

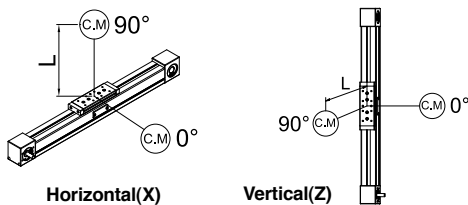


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)	
Weight(kg)	3.4	3.8	4.2	4.6	5.0	5.4	5.8	6.2			L10
Max. Speed (mm/s)	500						450	350			

Allowable overhang distance



Direction		QS48-L10	
Horizontal (X)		12 kg	6 kg
	0°	10 mm	30 mm
	90°	100 mm	280 mm
Vertical (Z)		4 kg	2 kg
	0°	15 mm	50 mm
	90°	20 mm	60 mm

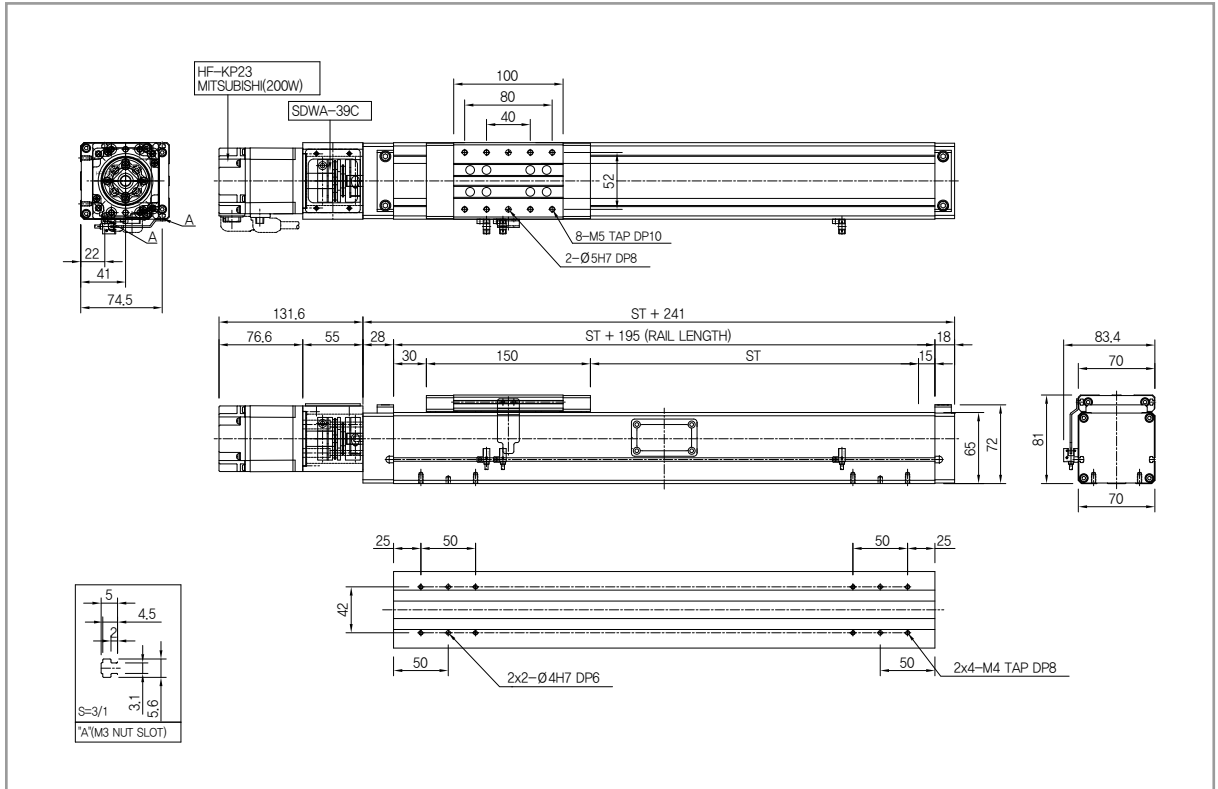
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

QS 70

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS70	100~800	L10	500	100	20	10
		L20	1000	200	20	6

QS70

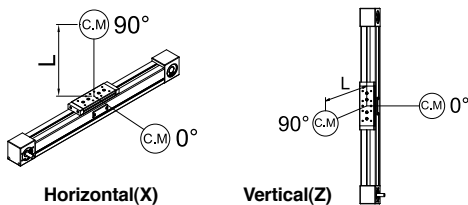


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	5.0	5.6	6.2	6.8	7.4	8.0	8.6	9.2		
Max. Speed (mm/s)	500						460	370	L20	200
	1000						930	740		

Allowable overhang distance



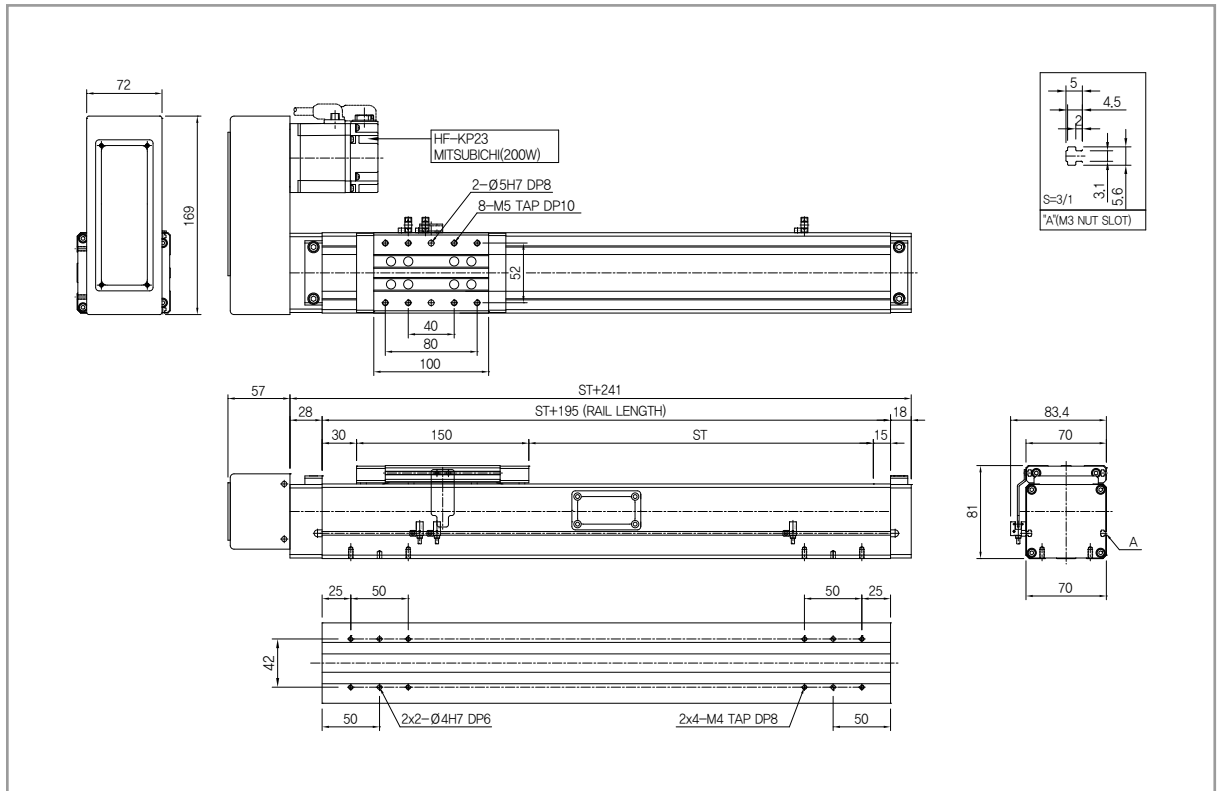
Direction		QS70-L10		QS70-L20	
Horizontal (X)		18 kg	9 kg	10 kg	5 kg
	0°	10 mm	25 mm	12 mm	30 mm
	90°	470 mm	650 mm	400 mm	650 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	35 mm	140 mm	40 mm	150 mm
	90°	35 mm	130 mm	70 mm	150 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS70-PL	50~800	L10	500	100	20	10
		L20	1000	200	20	6

QS70-PL

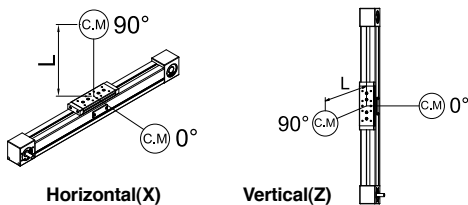


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	6.3	6.9	7.5	8.1	8.7	9.3	9.9	10.5		
Max. Speed (mm/s)	500						460	370	L10	100
	1000						930	740	L20	200

Allowable overhang distance



Direction		QS70-L10		QS70-L20	
Horizontal (X)		18 kg	9 kg	10 kg	5 kg
	0°	10 mm	25 mm	12 mm	30 mm
	90°	470 mm	650 mm	400 mm	650 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	35 mm	140 mm	40 mm	150 mm
	90°	35 mm	130 mm	70 mm	150 mm

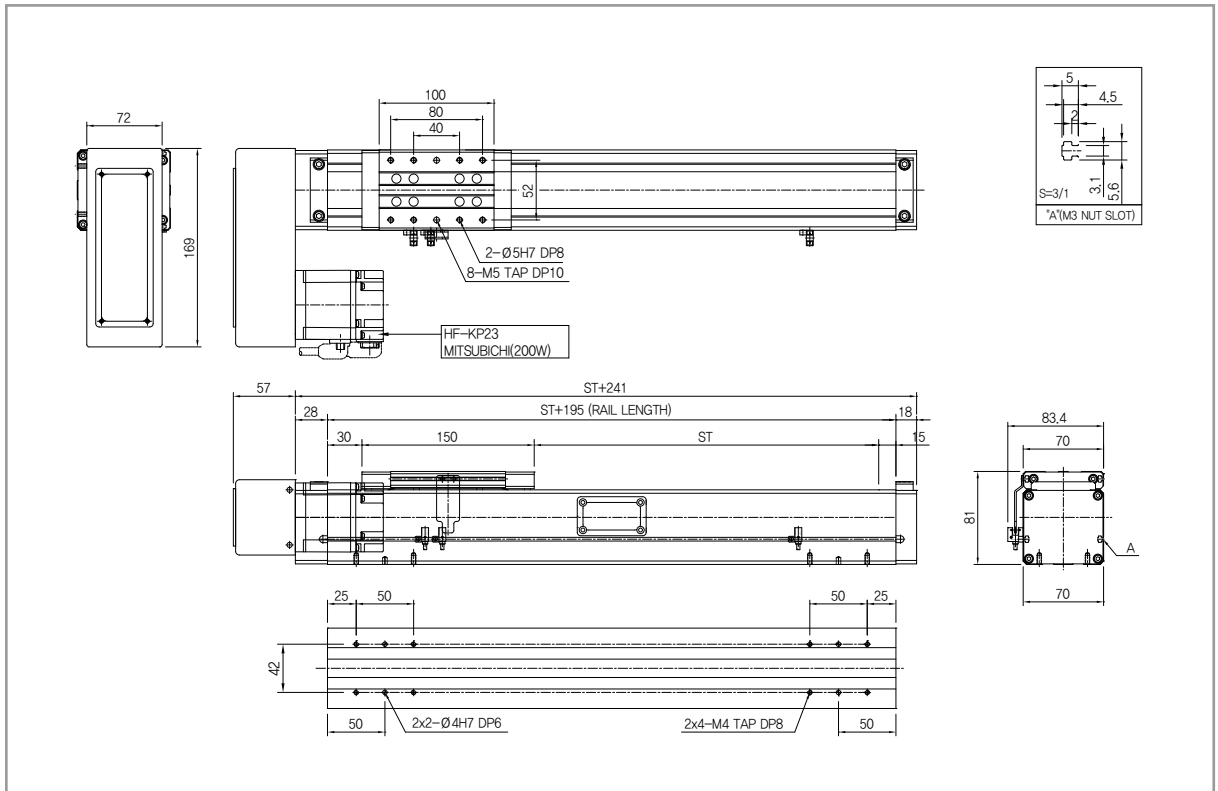
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

QS70-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS70-PR	50~800	L10	500	100	20	10
		L20	1000	200	20	6

QS70-PR

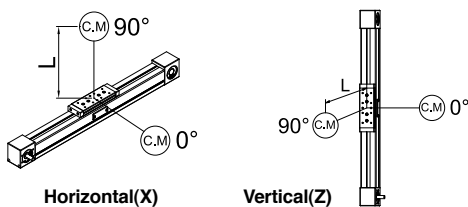


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	6.3	6.9	7.5	8.1	8.7	9.3	9.9	10.5		
Max. Speed (mm/s)	500						460	370	L10	100
	1000						930	740	L20	200

Allowable overhang distance



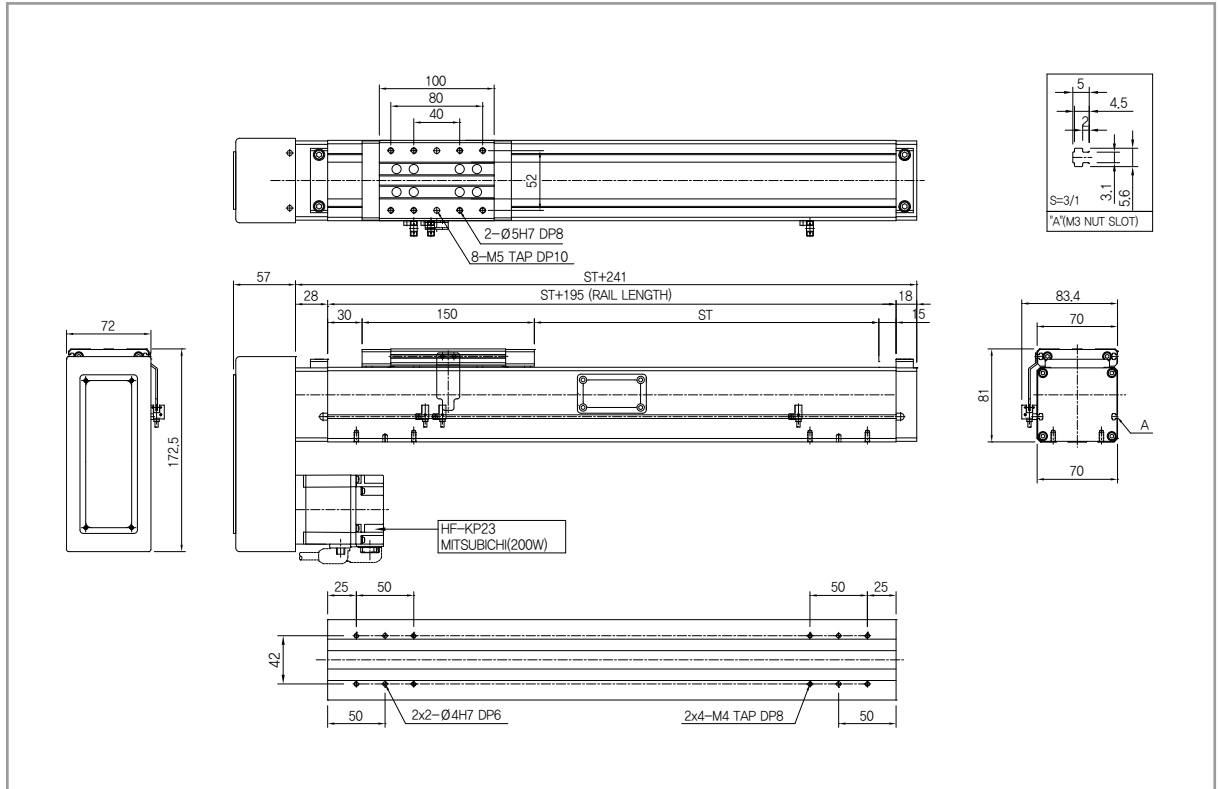
Direction	QS70-L10		QS70-L20		
	18 kg	9 kg	10 kg	5 kg	
Horizontal (X)	0°	10 mm	25 mm	30 mm	
	90°	470 mm	650 mm	650 mm	
Vertical (Z)	10 kg	5 kg	6 kg	3 kg	
	0°	35 mm	140 mm	40 mm	150 mm
	90°	35 mm	130 mm	70 mm	150 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS70-PB	50~800	L10	500	100	20	10
		L20	1000	200	20	6

QS70-PB

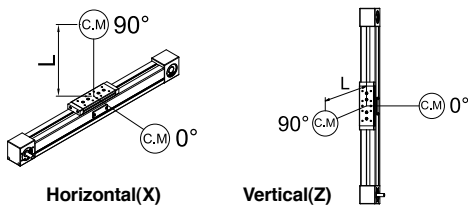


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	6.3	6.9	7.5	8.1	8.7	9.3	9.9	10.5		
Max. Speed (mm/s)	500						460	370	L10	100
	1000						930	740	L20	200

Allowable overhang distance



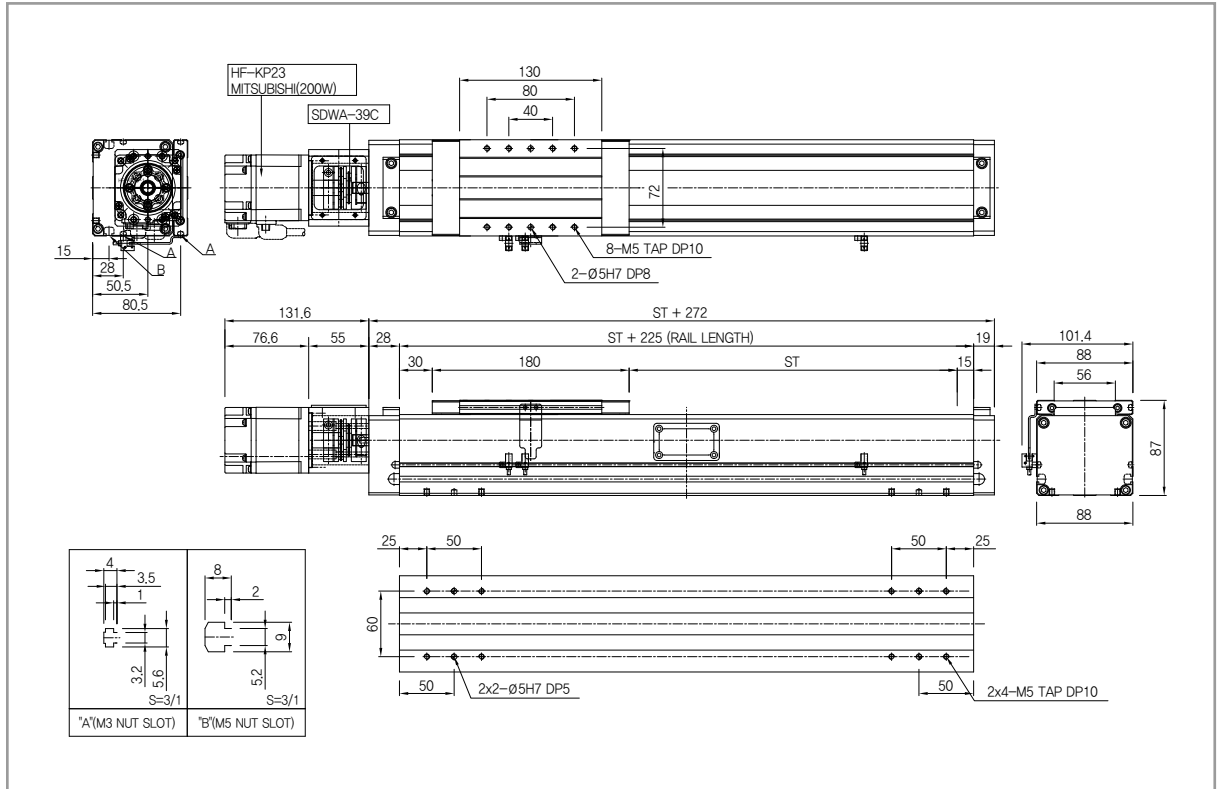
Direction		QS70-L10		QS70-L20	
Horizontal (X)		18 kg	9 kg	10 kg	5 kg
	0°	10 mm	25 mm	12 mm	30 mm
	90°	470 mm	650 mm	400 mm	650 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	35 mm	140 mm	40 mm	150 mm
	90°	35 mm	130 mm	70 mm	150 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS88	100~800	L10	500	200	35	15
		L20	1000		30	8

QS88



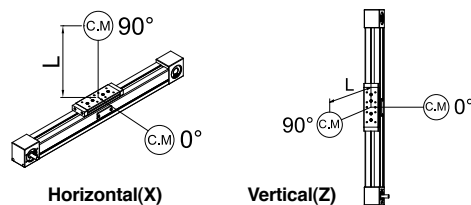
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	6.2	7.0	7.8	8.6	9.4	10.2	11.0	11.8		
Max. Speed (mm/s)	500				440				L20	
	1000				890				L20	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



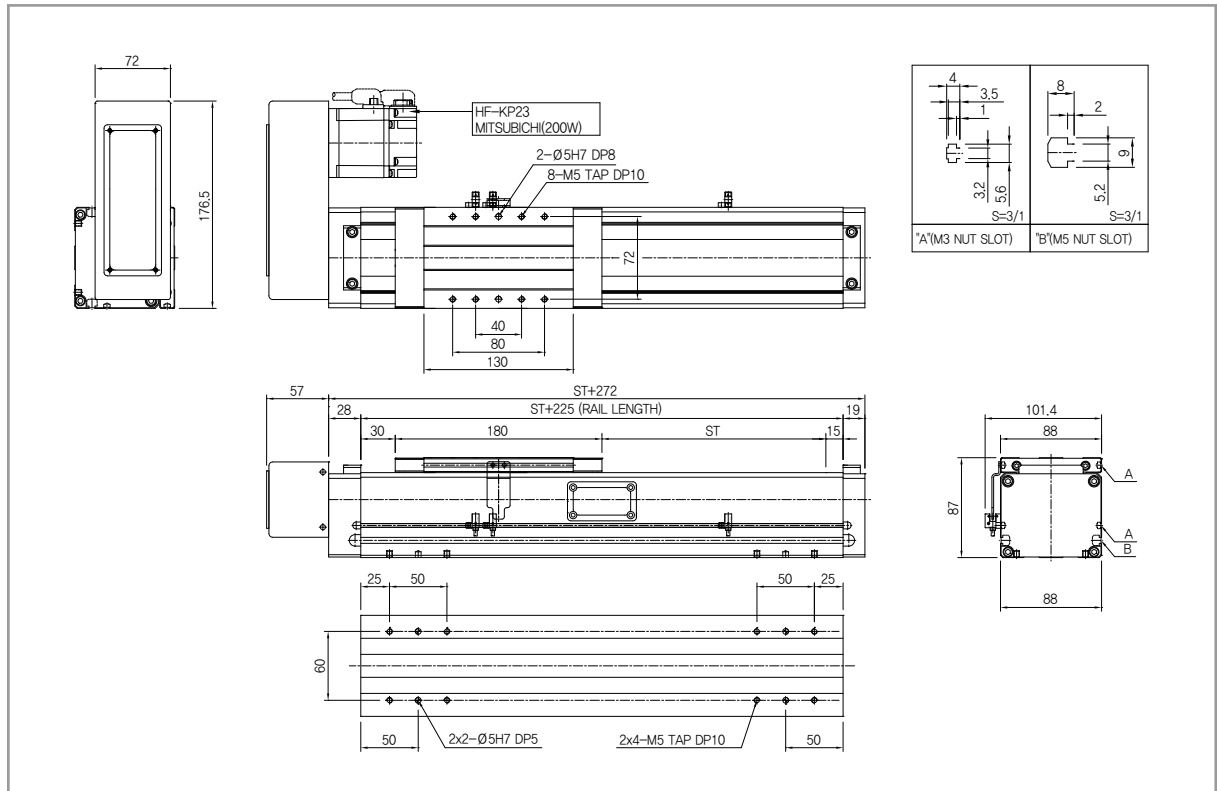
Direction	QS88-L10		QS88-L20		
	30 kg	15 kg	20 kg	10 kg	
Horizontal (X)	0°	25 mm	50 mm	25 mm	50 mm
	90°	200 mm	750 mm	150 mm	490 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	25 mm	50 mm	25 mm	50 mm
	90°	250 mm	470 mm	270 mm	500 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS88-PL	50~800	L10	500	200	35	15
		L20	1000		30	8

QS88-PL



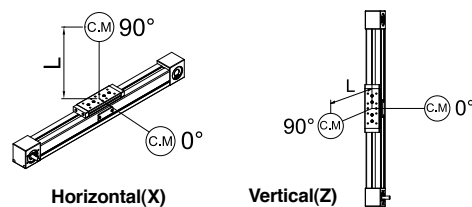
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	7.5	8.3	9.1	9.9	10.7	11.5	12.3	13.1		
Max. Speed (mm/s)	500						440	350	L20	
		1000						890	700	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



Direction	QS88-L10		QS88-L20		
	30 kg	15 kg	20 kg	10 kg	
Horizontal (X)	0°	25 mm	50 mm	25 mm	50 mm
	90°	200 mm	750 mm	150 mm	490 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	25 mm	50 mm	25 mm	50 mm
	90°	250 mm	470 mm	270 mm	500 mm

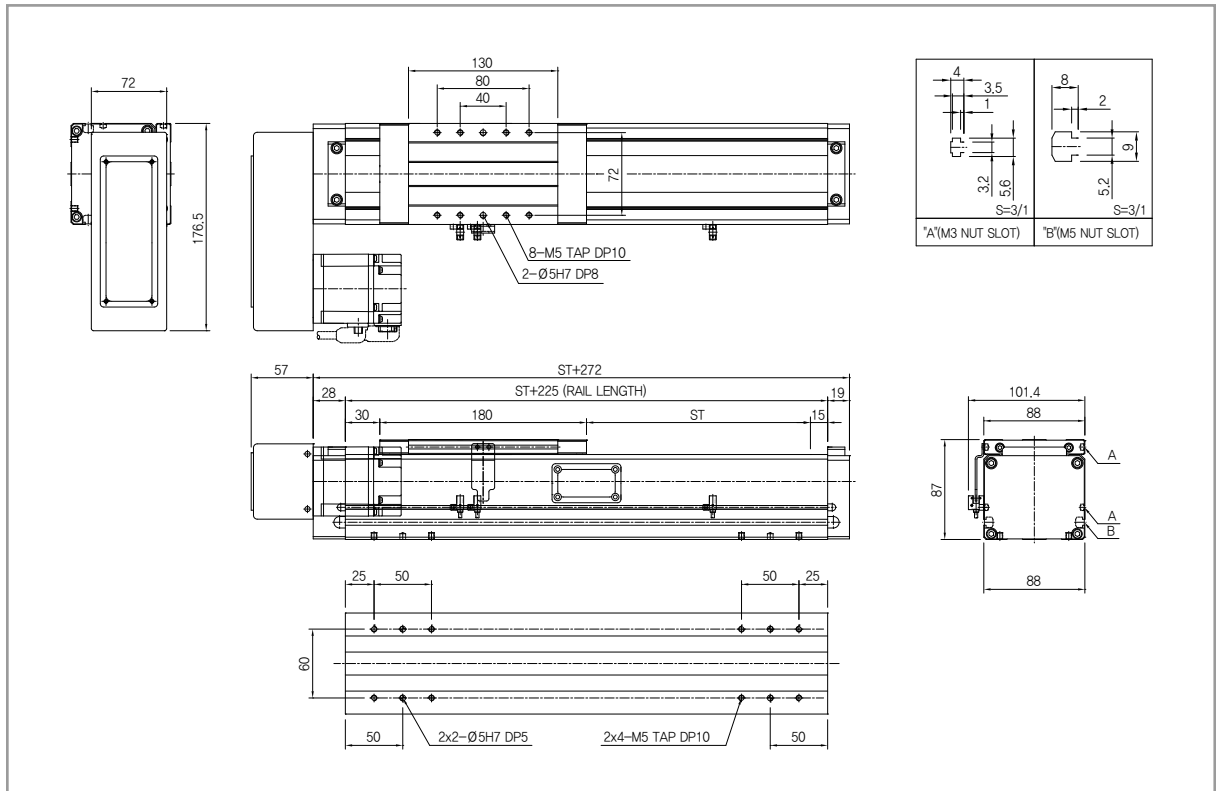
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

QS88-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS88-PR	50~800	L10	500	200	35	15
		L20	1000		30	8

QS88-PR



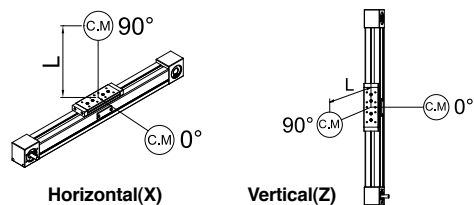
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	7.5	8.3	9.1	9.9	10.7	11.5	12.3	13.1		
Max. Speed (mm/s)	500						440	350	L20	
		1000						890	700	

Note) The weight of motor and reducer is not included.

Allowable overhang distance



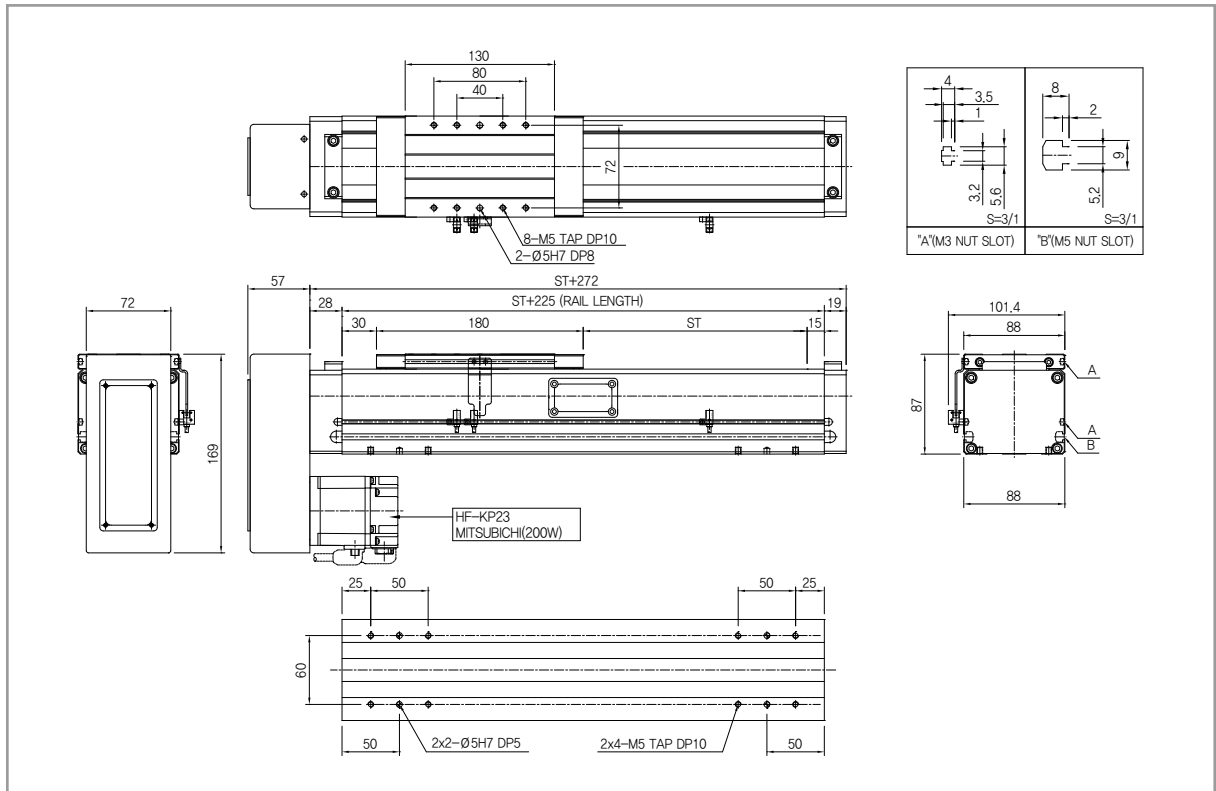
Direction	QS88-L10		QS88-L20		
	30 kg	15 kg	20 kg	10 kg	
Horizontal (X)	0°	25 mm	50 mm	25 mm	50 mm
	90°	200 mm	750 mm	150 mm	490 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	25 mm	50 mm	25 mm	50 mm
	90°	250 mm	470 mm	270 mm	500 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
QS88-PB	50~800	L10	500	200	35	15
		L20	1000		30	8

QS88-PB



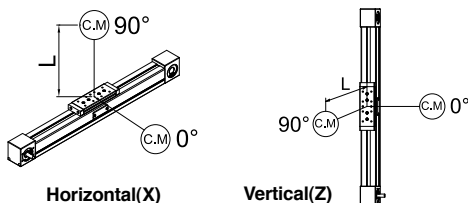
- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	Lead (mm)	Motor (W)
Weight(kg)	7.5	8.3	9.1	9.9	10.7	11.5	12.3	13.1		
Max. Speed (mm/s)	500						440	350	L20	
		1000						890	700	

Note) The weight of motor and reducer is not included.

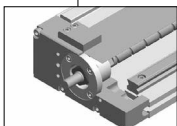
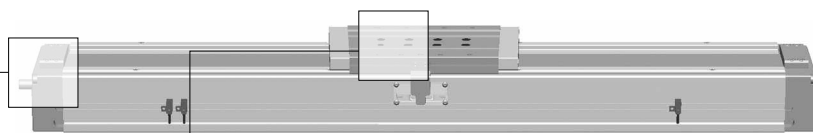
Allowable overhang distance



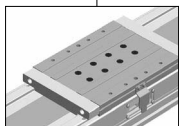
Direction		QS88-L10		QS88-L20	
Horizontal (X)		30 kg	15 kg	20 kg	10 kg
	0°	25 mm	50 mm	25 mm	50 mm
	90°	200 mm	750 mm	150 mm	490 mm
Vertical (Z)		10 kg	5 kg	6 kg	3 kg
	0°	25 mm	50 mm	25 mm	50 mm
	90°	250 mm	470 mm	270 mm	500 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

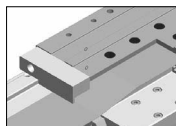
LCS series



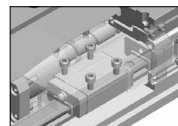
- Application with various axis combination is available



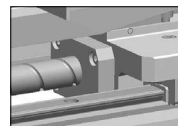
- Customized slider is available



- Built-in stainless steel cover for dust proof

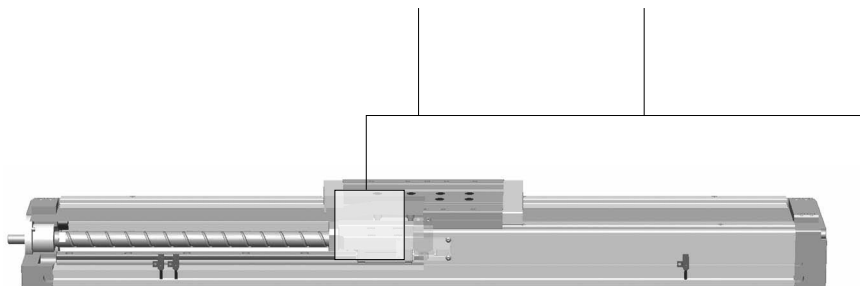


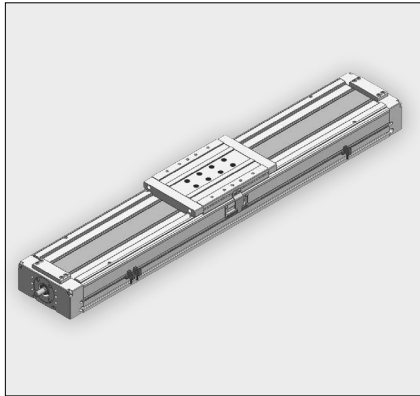
- LM guide with high stiffness and high precision



- Various types of ball screw are available

- Long life time

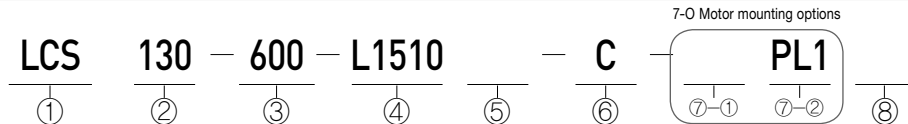




Features

- LM Guide & Ball screw type unit
- Clean & Cover type
- Compact design and high stiffness
- Various axis combination
- Customized options
- Easy maintenance

How to order



① Series

② Model

130 / 170

※ LM : Please contact us for customized LM

③ Stroke (Unit : mm)

Rolled type : 50 ~ 1500

Ground type - 130 : 50 ~ 850

Ground type - 170 : 50 ~ 1000

※ Please contact us for longer stroke than standard

④ Ball screw

Symbol	Ball screw		Model	
	Type		130	170
L1510	Rolled	Ø15-10 Lead	●	
L1520	Rolled	Ø15-20 Lead	●	
L2010	Rolled	Ø20-10 Lead		●
L2020	Rolled	Ø20-20 Lead		●
G1510	Ground	Ø15-10 Lead	●	
G1520	Ground	Ø15-20 Lead	●	
G2010	Ground	Ø20-10 Lead		●
G2020	Ground	Ø20-20 Lead		●

※ Please contact us for customized option

⑤ Color

Blank : White (outer)

L : White (outer) + LM raydent

S : White (outer) + Ball screw raydent

A : White (outer) +LM/Ball screw raydent

B : Black (outer)

BL : Black (outer) + LM raydent

BS : Black (outer) + Ball screw raydent

BA : Black (outer) + LM/Ball screw raydent

⑥ Sensor(dog included)

Blank : None

C : Photo sensor + Basic socket - Basic 3EA

CJ : C + Cable socket2M - Basic 3EA

Other than basic : C(J)(Q'ty) Example)C2,CJ2

⑦ Motor mounting

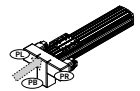
Blank : None

⑦-① Motor bracket for in-line type (including coupling)

Symbol	Motor	Model	
		130	170
E1	100W	●	
E2	200W/400W	●	●
E3	750W		●

⑦-② Motor bracket for parallel type


Symbol	Motor	Model	
		130	170
PL1	100W	●	
PR1	100W	●	
PB1	100W	●	
PL2	200/400W	●	●
PR2	200/400W	●	●
PB2	200/400W	●	●
PL3	750W		●
PR3	750W		●
PB3	750W		●



Basic option : Mitsubishi, Yaskawa, Sanyo

⑧ Customized code

Sensor

Model	Item number	Sensor and connector
130	SX912-R-PL	 EE-SX912-R
170		

Sensor dog

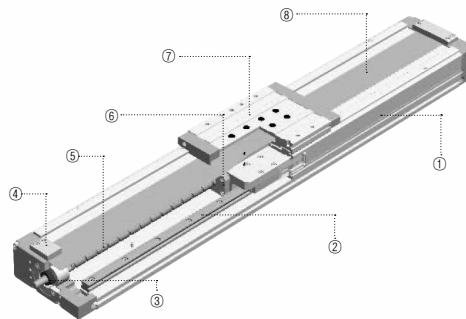
Model	Item number	Remarks
130	PDG-LC130-PL	EE-SX912-R only
170	PDG-LC170-PL	

LCS specifications

Specification	LCS130	LCS170
Max speed (mm/s)	1000	1000
Payload (kgf)	56 (horizontal), 27 (vertical)	120 (horizontal), 60 (vertical)
Stroke (mm)	Rolled : Max. 1500 Ground : Max. 850	Rolled : Max. 1600 Ground : Max. 2600
Repeatability (mm)	± 0.02	± 0.02
Ball screw / Lead (mm)	Ø15 / L10 (L20)	Ø20 / L10 (L20)
No load torque (Nm)	1	1
LM Guide	NO.15, 2 Rail 4 Block	NO.20, 2 Rail 4 Block
Basic weight (kgf)	7.1	13.1
Weight per 100mm stroke (kgf)	1	2
Motor (W)	400 ~ 750	400 ~ 750
Size (mm, W x H)	130 x 80	170 x 115

Note) Customized options such as motor, raydent and LM guide are available.

LCS structure



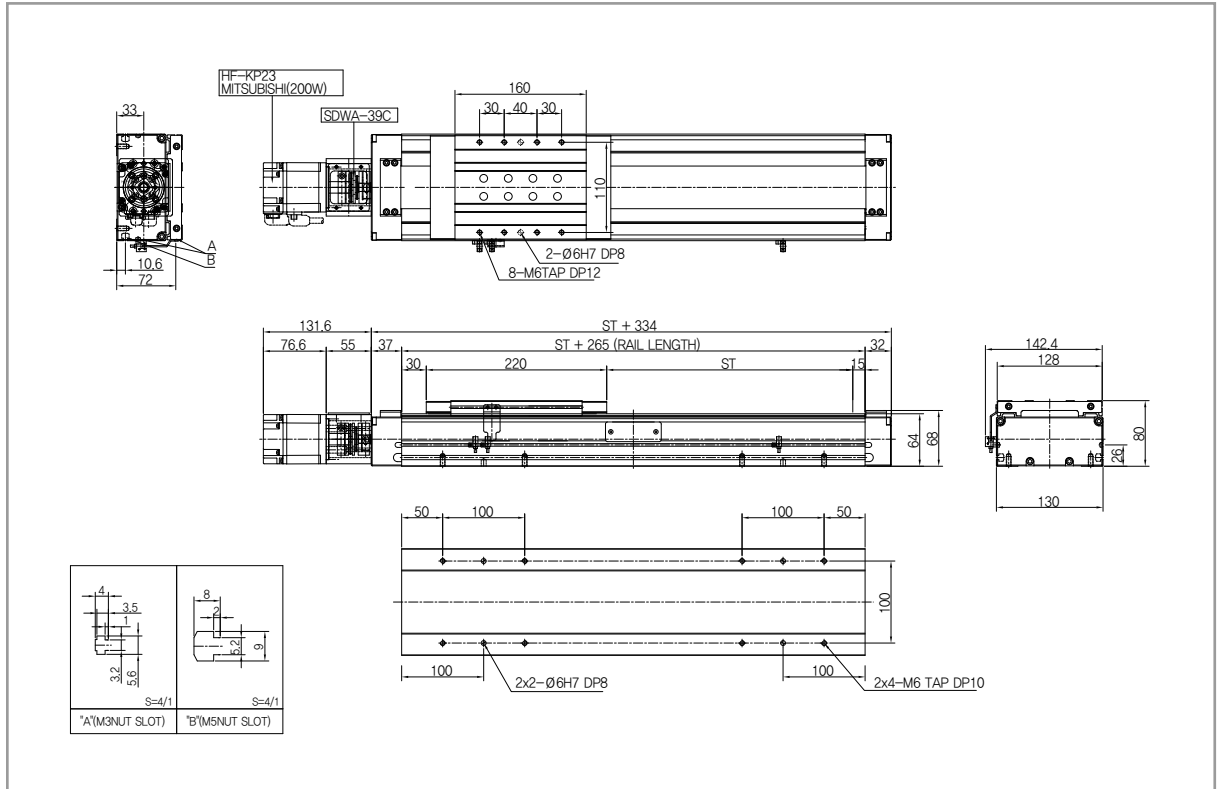
► Component list

No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	6	Ball screw	Carbon steel
2	Model	LM GUIDE	Bearing steel	7	Ball screw nut	Cr-Mo steel
	130	No.15 / 2RAIL 4BLOCK				
	170	No.20 / 2RAIL 4BLOCK				
3	Lock nut			8	Slide block	Aluminum alloy
4	Support unit			9	Steel cover	Stainless steel

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS130	50~850	L10	500	200	80	20
		L20	1000		25	8
		L20	1000	400	40	15

LCS130

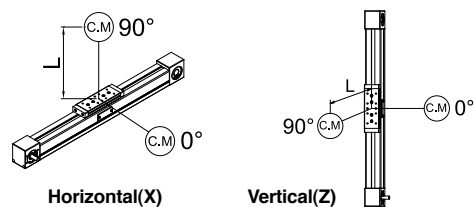


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	Lead (mm)	Motor (W)
Weight(kg)	9.3	10.3	11.3	12.3	13.3	14.3	15.3	16.3	17.3		
Max. Speed (mm/s)	500						480	380	310	L10	200 (400)
	1000						950	750	610	L20	

Allowable overhang distance



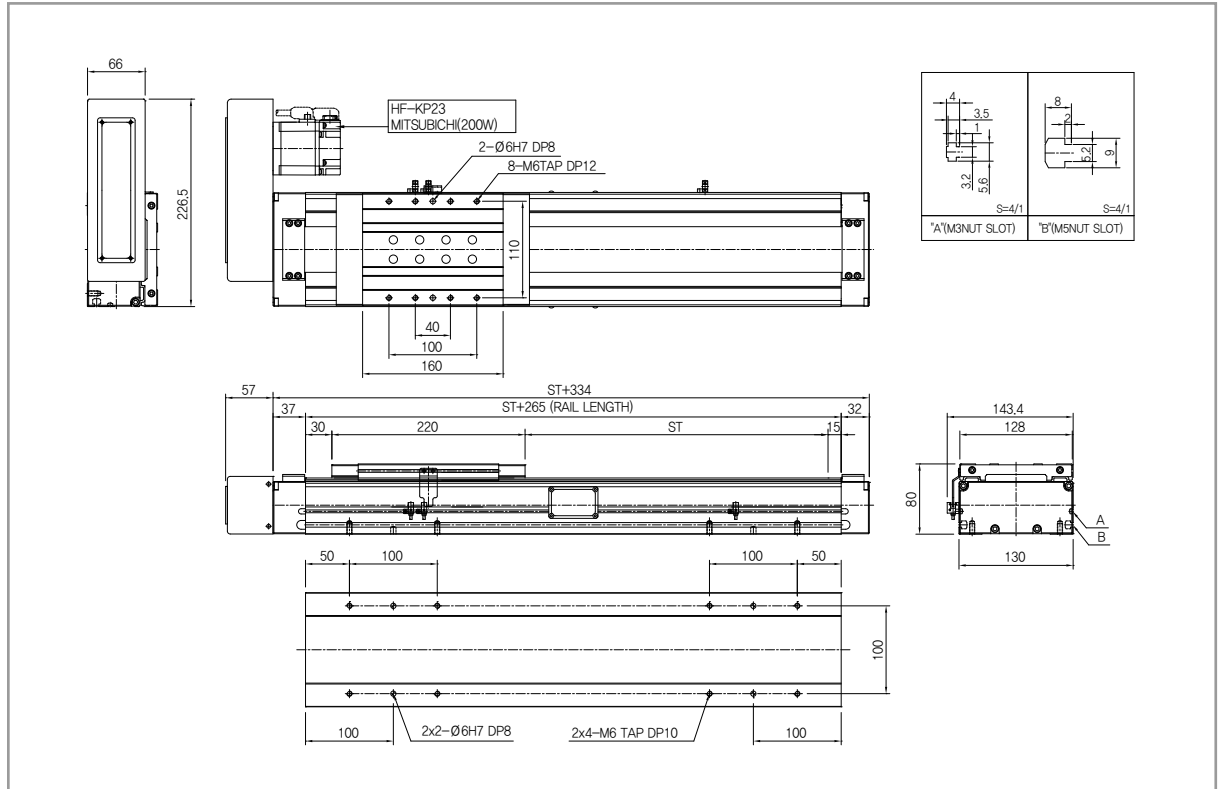
Direction	LCS130-L10		LCS130-L20		LCS130-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1000 mm	800 mm	1500 mm	400 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	600 mm	600 mm	1000 mm	400 mm	600 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS130-PL	50~850	L10	500	200	80	20
		L20	1000		25	8
		L20	1000	400	40	15

LCS130-PL

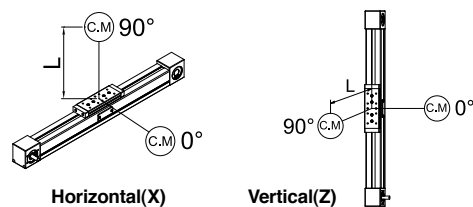


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	Lead (mm)	Motor (W)
Weight(kg)	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6		
Max. Speed (mm/s)	500						480	380	310	L20	(400)
	1000						950	750	610		

Allowable overhang distance



Direction	LCS130-L10		LCS130-L20		LCS130-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1000 mm	800 mm	1500 mm	400 mm	800 mm
Vertical (Z)	0°	20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	90°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	600 mm	600 mm	1000 mm	400 mm	600 mm

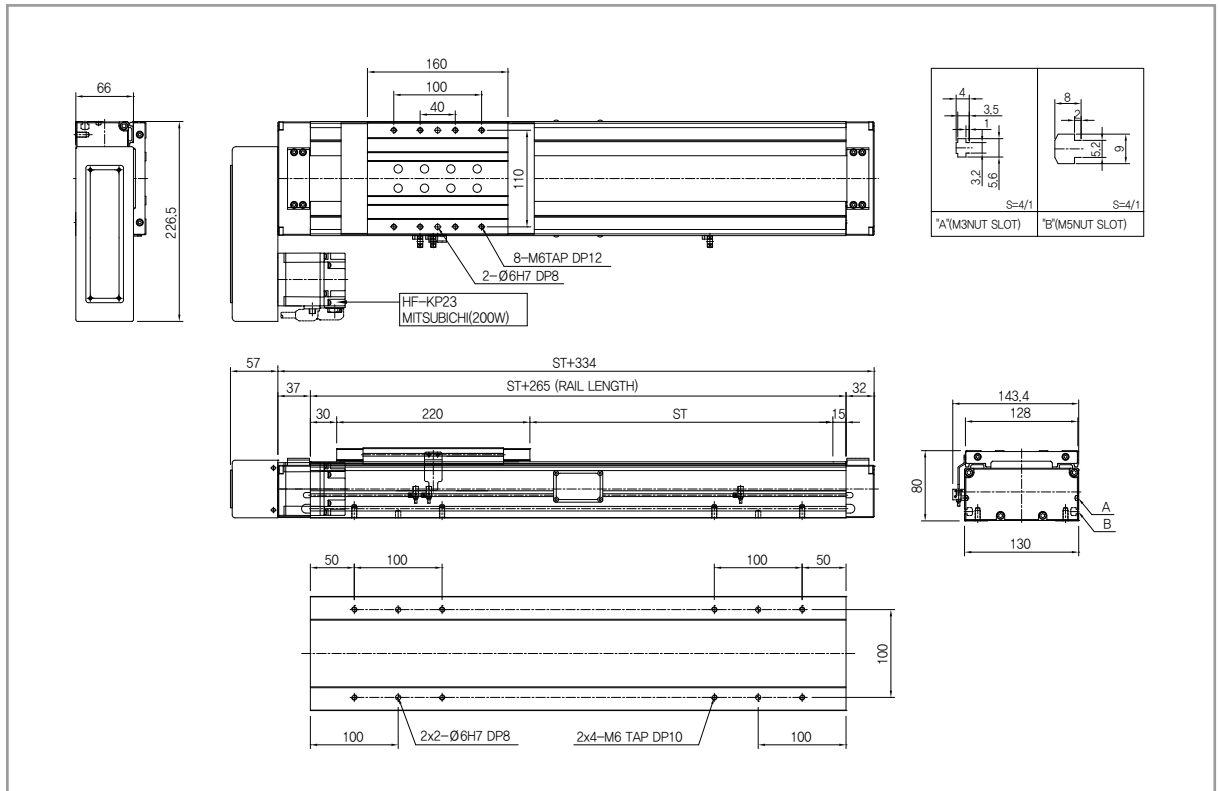
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LCS130-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS130-PR	50~850	L10	500	200	80	20
		L20	1000		25	8
		L20	1000	400	40	15

LCS130-PR

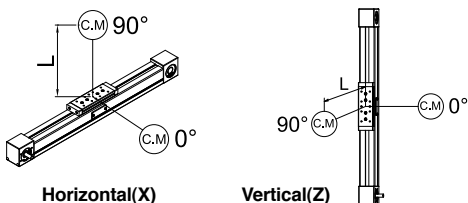


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	Lead (mm)	Motor (W)
Weight(kg)	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6		
Max. Speed (mm/s)	500						480	380	310	L10	200 (400)
	1000						950	750	610	L20	

Allowable overhang distance



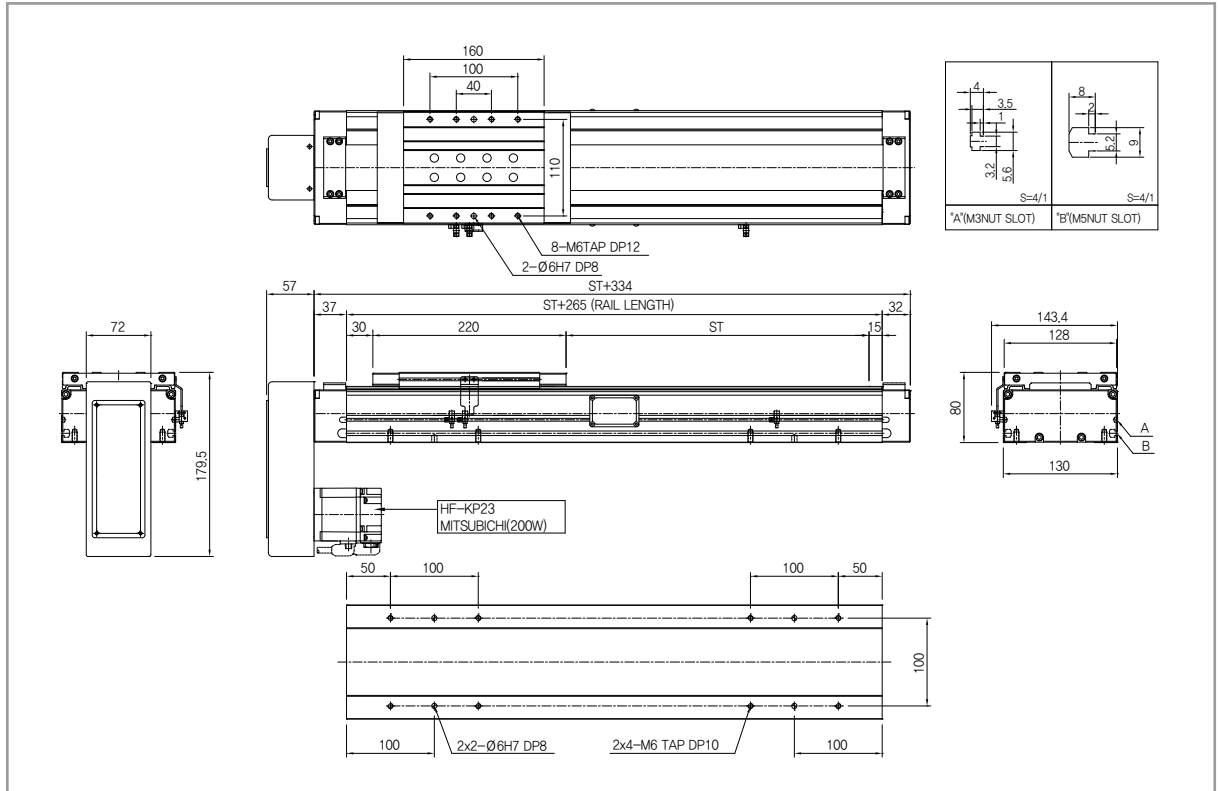
Direction	LCS130-L10		LCS130-L20		LCS130-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1000 mm	800 mm	1500 mm	400 mm	800 mm
Vertical (Z)		20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	600 mm	600 mm	1000 mm	400 mm	600 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS130-PB	50~850	L10	500	200	80	20
		L20	1000		25	8
		L20	1000	400	40	15

LCS130-PB

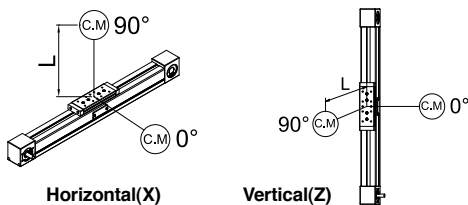


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	Lead (mm)	Motor (W)
Weight(kg)	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6		
Max. Speed (mm/s)	500						480	380	310	L20	(400)
	1000						950	750	610		

Allowable overhang distance



Direction	LCS130-L10		LCS130-L20		LCS130-L20(400W)		
	60 kg	30 kg	20 kg	10 kg	30 kg	15 kg	
Horizontal (X)	0°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	500 mm	1000 mm	800 mm	1500 mm	400 mm	800 mm
Vertical (Z)	0°	20 kg	10 kg	8 kg	4 kg	12 kg	6 kg
	90°	150 mm	300 mm	150 mm	300 mm	150 mm	300 mm
	90°	300 mm	600 mm	600 mm	1000 mm	400 mm	600 mm

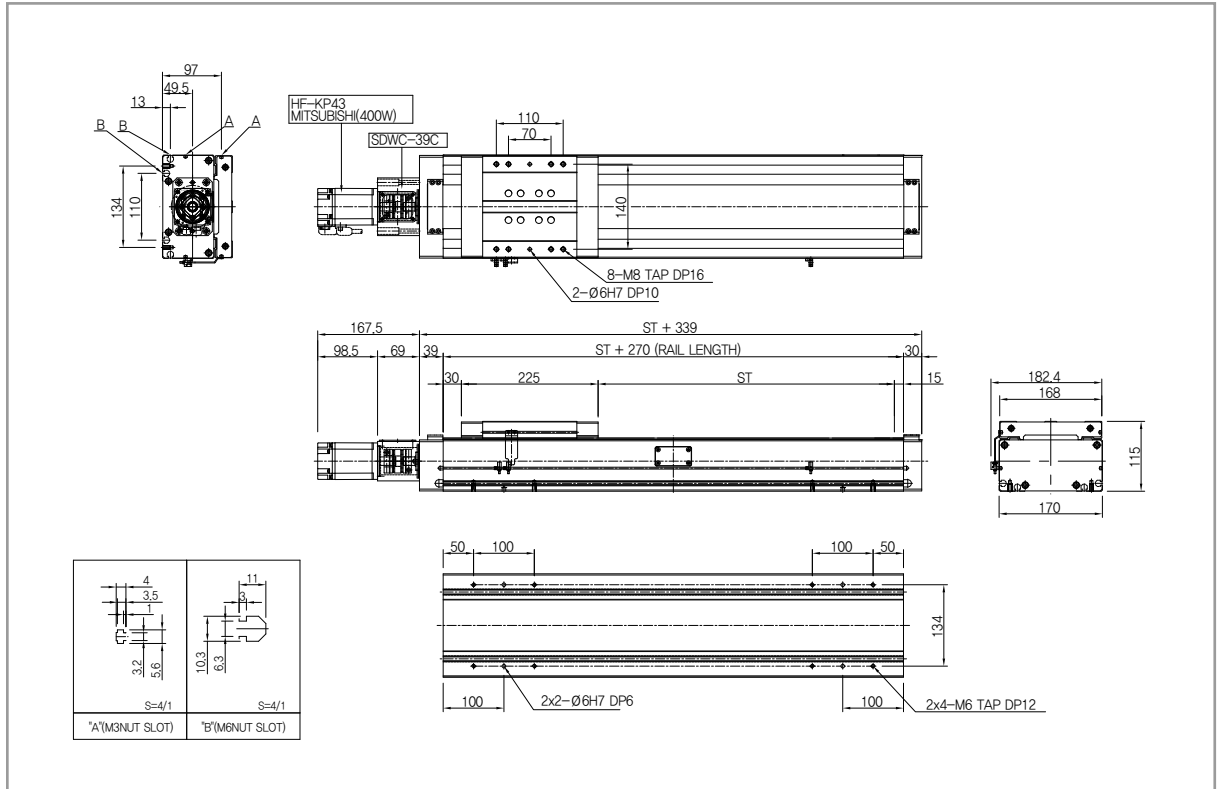
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LCS 170

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS 170	100~1000	L10	500	400	120	30
		L20	1000		60	12
		L20	1000	750	100	23

LCS170

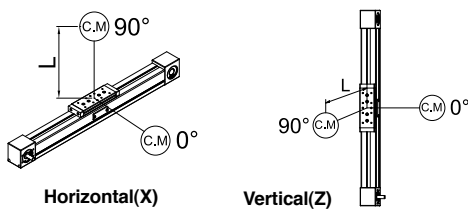


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	17.1	19.1	21.1	23.1	25.1	27.1	29.1	31.1	33.1	35.1		
Max. Speed (mm/s)	500							440	360	300	L20	(750)
	1000							870	720	600		

Allowable overhang distance



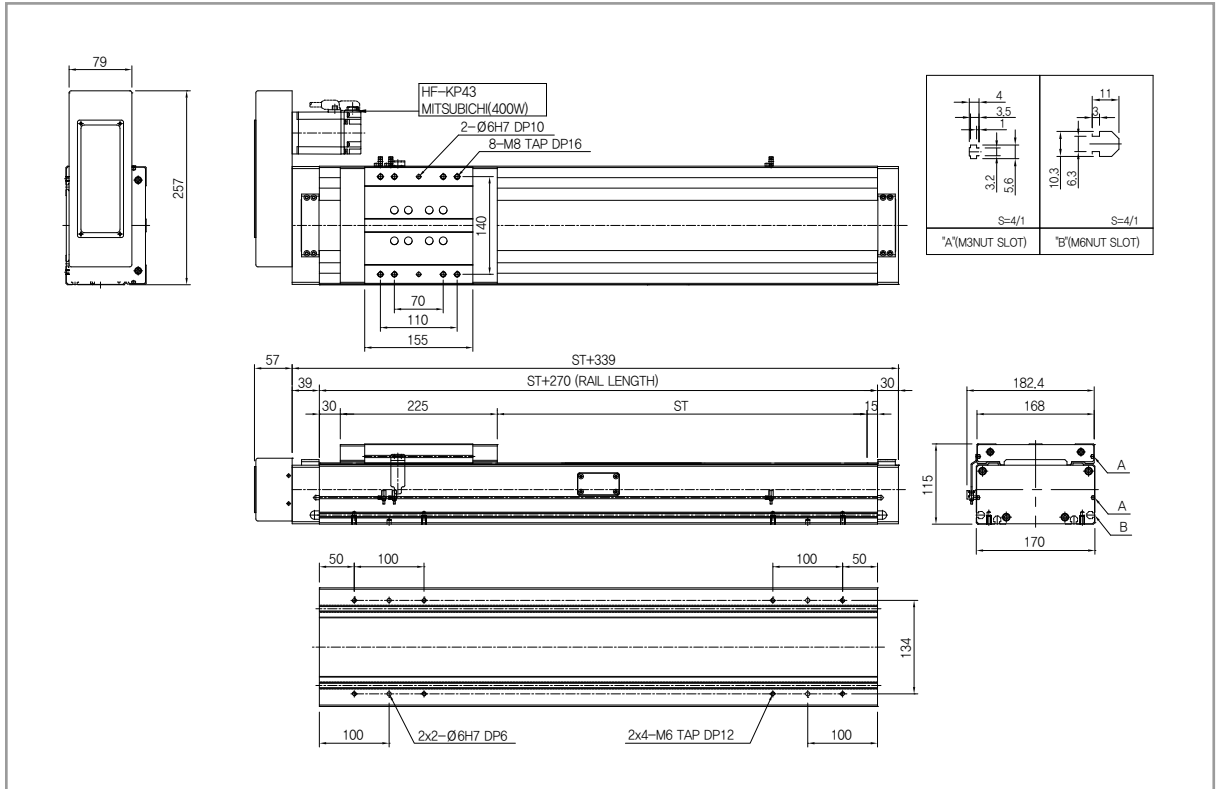
Direction	LCS170-L10		LCS170-L20		LCS170-L20 (750W)		
	90 kg	45 kg	50 kg	25 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	350 mm	100 mm	200 mm	50 mm	150 mm
	90°	550 mm	800 mm	550 mm	1000 mm	450 mm	800 mm
Vertical (Z)		30 kg	15 kg	10 kg	5 kg	16 kg	8 kg
	0°	100 mm	200 mm	200 mm	400 mm	150 mm	300 mm
	90°	300 mm	550 mm	550 mm	1100 mm	300 mm	600 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS170-PL	50~1000	L10	500	400	120	30
		L20	1000		60	12
		L20	1000	750	100	23

LCS170-PL

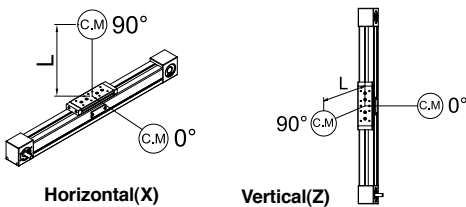


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	18.7	20.7	22.7	24.7	26.7	28.7	30.7	32.7	34.7	36.7		
Max. Speed (mm/s)	500							440	360	300	L20	(750)
	1000							870	720	600		

Allowable overhang distance



Direction	LCS170-L10		LCS170-L20		LCS170-L20 (750W)		
	90 kg	45 kg	50 kg	25 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	350 mm	100 mm	200 mm	50 mm	150 mm
	90°	550 mm	800 mm	550 mm	1000 mm	450 mm	800 mm
Vertical (Z)		30 kg	15 kg	10 kg	5 kg	16 kg	8 kg
	0°	100 mm	200 mm	200 mm	400 mm	150 mm	300 mm
	90°	300 mm	550 mm	550 mm	1100 mm	300 mm	600 mm

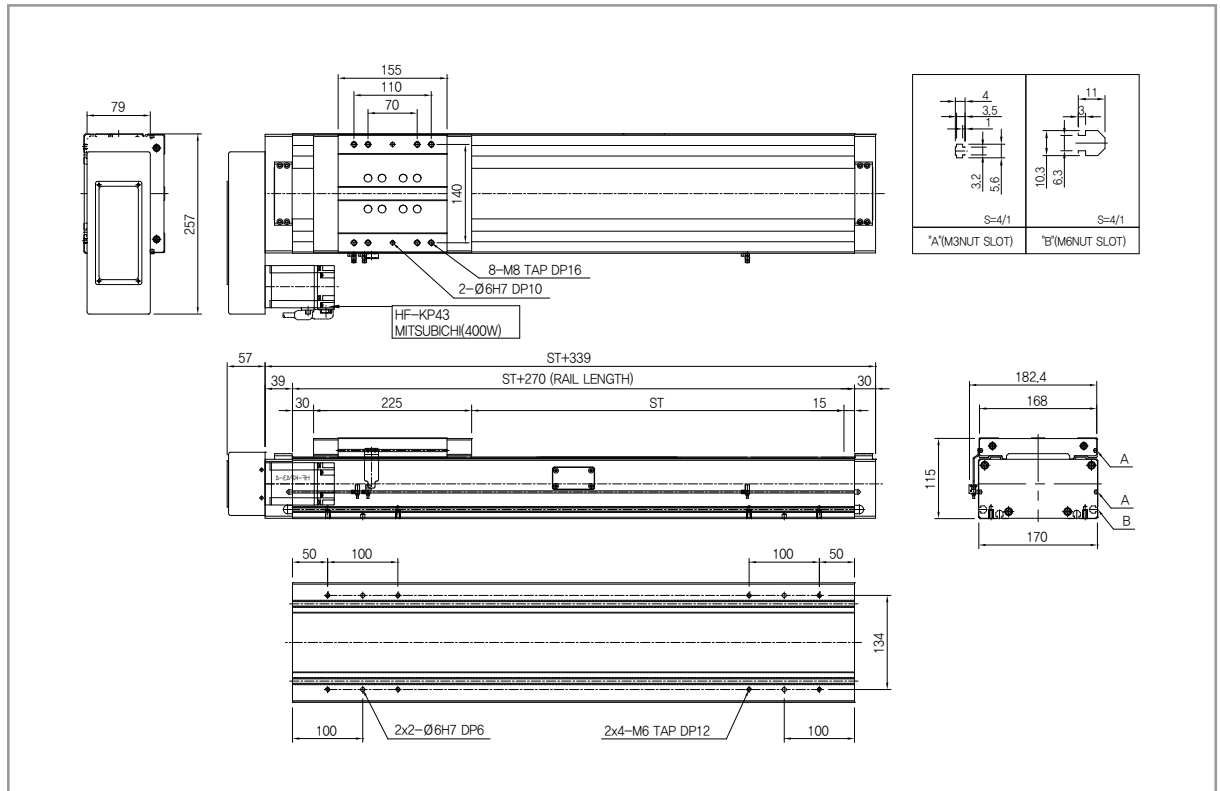
* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

LCS170-PR

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS170-PR	50~1000	L10	500	400	120	30
		L20	1000		60	12
		L20	1000	750	100	23

LCS170-PR

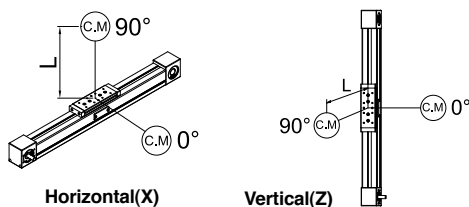


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	18.7	20.7	22.7	24.7	26.7	28.7	30.7	32.7	34.7	36.7		
Max. Speed (mm/s)	500							440	360	300	L20	(750)
	1000							870	720	600		

Allowable overhang distance



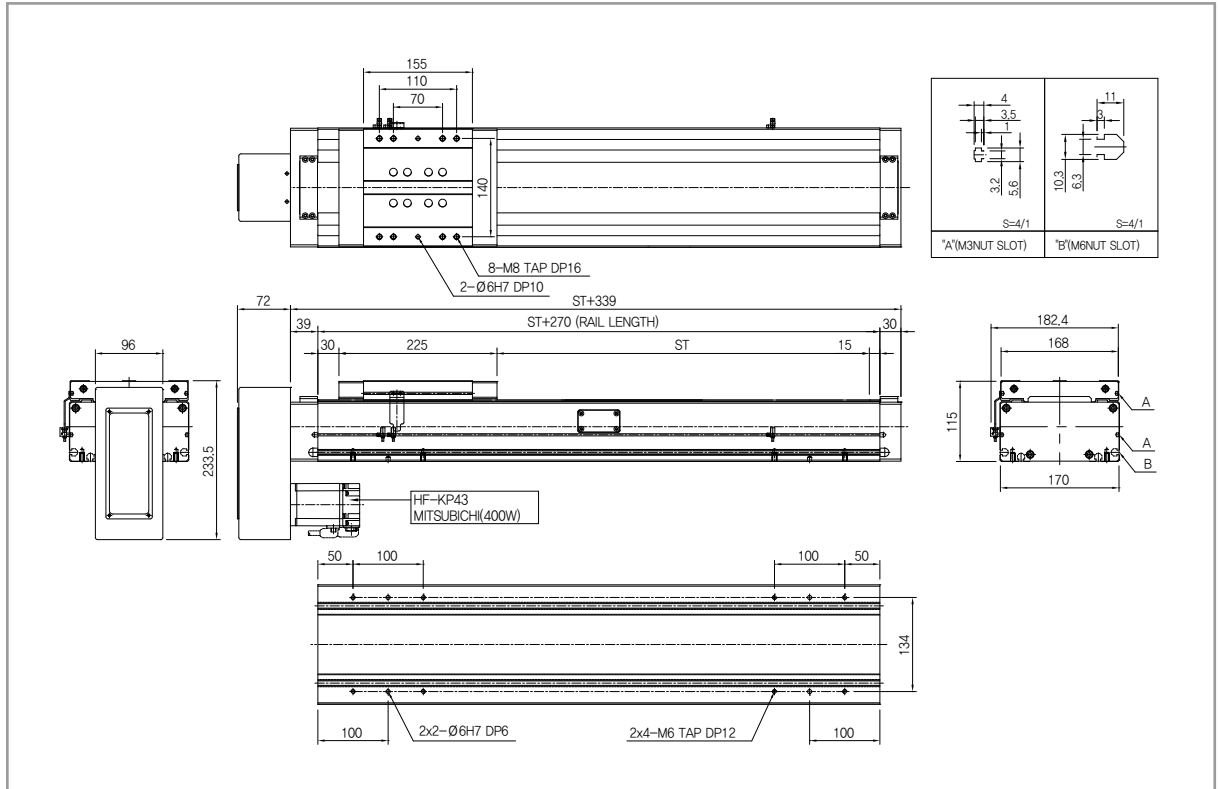
Direction	LCS170-L10		LCS170-L20		LCS170-L20 (750W)		
	90 kg	45 kg	50 kg	25 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	350 mm	100 mm	200 mm	50 mm	150 mm
	90°	550 mm	800 mm	550 mm	1000 mm	450 mm	800 mm
Vertical (Z)		30 kg	15 kg	10 kg	5 kg	16 kg	8 kg
	0°	100 mm	200 mm	200 mm	400 mm	150 mm	300 mm
	90°	300 mm	550 mm	550 mm	1100 mm	300 mm	600 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
LCS170-PB	50~1000	L10	500	400	120	30
		L20	1000		60	12
		L20	1000	750	100	23

LCS170-PB

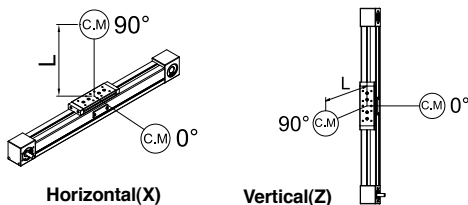


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	18.7	20.7	22.7	24.7	26.7	28.7	30.7	32.7	34.7	36.7		
Max. Speed (mm/s)	500							440	360	300	L10	400 (750)
	1000							870	720	600	L20	

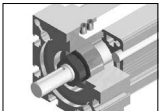
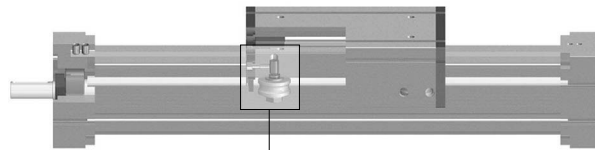
Allowable overhang distance



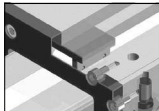
Direction	LCS170-L10		LCS170-L20		LCS170-L20 (750W)		
	90 kg	45 kg	50 kg	25 kg	80 kg	40 kg	
Horizontal (X)	0°	150 mm	350 mm	100 mm	200 mm	50 mm	150 mm
	90°	550 mm	800 mm	550 mm	1000 mm	450 mm	800 mm
Vertical (Z)		30 kg	15 kg	10 kg	5 kg	16 kg	8 kg
	0°	100 mm	200 mm	200 mm	400 mm	150 mm	300 mm
	90°	300 mm	550 mm	550 mm	1100 mm	300 mm	600 mm

* This value is decided based on the lifetime formula of LM guide. (The lifetime of LM is 16,000 hours.)

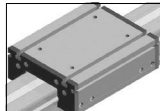
MZ series



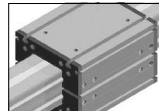
- Application with various axis combination is available
- Long life time
- Easy mounting with various mounting holes



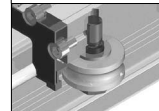
- Built-in stainless steel cover for dust proof



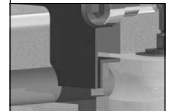
- **MZ 40/60/80/100**
Standard slider block
* Various length of slider based on customer's needs are available



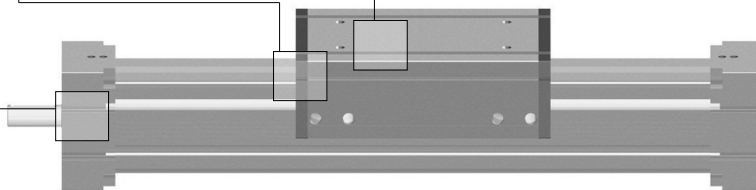
- **MZ 40/60/80/100-D (customized type)**
- Slider on the top and bottom
- More suitable for heavy payload
- Suitable for fixing slider and moving rail

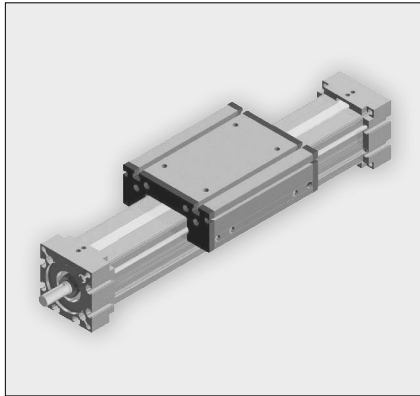


- Silent operation with high quality bearing steel shaft
- Preventing abrasion with chrome plated bearing steel
- Special bolts combination keeps appropriate pressure



- Felt wiper prevents stiffening after long time of operation
- Spring inside of seal keeps certain level of frictional resistance





Features

- Track roller guide & Ballscrew type unit
- High quality and resonable price
- Ball screw option
- Customized options
- Easy maintenance

How to order

MZ
40
S
—
600
—
L1605
S
—
C
—
D3
—
E2
—

① Series

② Model

40 / 60 / 80 / 100

③ Slider option

S : STANDARD(4 roller bearings)

T : S + 2 additional bearings

H : S + 4 additional bearings

※ Please contact us for additional quantity of slider

④ Stroke (Unit : mm)

50 ~ 1500

※ Please contact us for longer stroke than standard

⑤ Ball screw

Ball screw		Model			
Symbol	Type	40	60	80	100
L1605	Rolled Ø16-5Lead	●			
L1610	Rolled Ø16-10Lead	●			
L2510	Rolled Ø25-10Lead		●	●	●
L2525	Rolled Ø25-25Lead		●	●	●
L3232	Rolled Ø32-32Lead			●	●

※ Please contact us for customized option

⑥ Color

Blank : White (outer)

S : White (outer) + Ball screw raydent

B : Black (outer)

BS : Black (outer) + Ball screw raydent

⑦ Sensor(dog included)

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket2M – Basic 3EA

Other than basic : C(J)(Q'ty) Example)C2,CJ2

⑧ Mounting bracket

Blank : None

D(Q'ty):Necessary quantity example)D2,D3

⑨ Bracket for motor(including coupling)



Blank : None

Symbol	Motor	Model			
		40	60	80	100
E1	100W	●	●		
E2	200W/400W	●	●	●	●
E3	750W			●	●

Basic option : Mitsubishi, Yaskawa, Sanyo

⑩ Customized code

Sensor

Model	Item number	Sensor and connector
40	SX671-PL	 EE-SX671 + EE1001
60		
80		
100		
40	SX671-L-PL	 EE-SX671 + EE1006
60		
80		
100		

Sensor dog

Model	Item number	Remarks
40	PDG-M40-PL	EE-SX671only
60	PDG-M60-PL	
80	PDG-M80-PL	
100	PDG-M100-PL	

Sensor bracket

Model	Photo sensor for single	Photo sensor for double
40	PSBS-40-PL	PSBD-40-PL
60	PSBS-60-PL	PSBD-60-PL
80	PSBS-80-PL	PSBD-80-PL
100	PSBS-100-PL	PSBD-100-PL

Mounting bracket

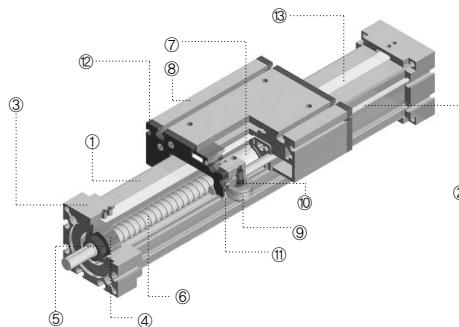
Model	Item number	Remarks
40	MBK40-PL	
60	MBK60-PL	
80	MBK80-PL	
100	MBK100-PL	

Mz specification

Specification	MZ40	MZ60	MZ80	MZ100
Max speed (mm/s)	500	1250	1250	1600
Payload (kgf)	30 (horizontal), 10 (vertical)	50 (horizontal), 30 (vertical)	60 (horizontal), 35 (vertical)	120 (horizontal), 70 (vertical)
Stroke (mm)	Rolled Max. 3500	Rolled Max. 5500	Rolled Max. 5500	Rolled Max. 5500
Repeatability (mm)	± 0.025	± 0.025	± 0.025	± 0.025
Ball screw / Lead (mm)	Ø16 / L05 (L0L)	Ø25 / L10 (L25)	Ø25 / L10 (L25)	Ø25 / L10 (L25) Ø32 / L32
No load torque (Nm)	0.25 / 0.44	0.6 / 0.8	0.6 / 0.8	0.6 / 0.8 / 0.9
Track roller guide	S:4 roller bearing standard / T:S type + 4 roller bearing			
Basic weight (kgf)	1.9	5.8	11	20
Weight per 100mm stroke (kgf)	0.38	0.86	1.7	2.2
Motor (W)	100 ~ 200	200 ~ 400	400 ~ 750	750
Size (mm, W x H)	40 x 64	60 x 90	80 x 121	100 x 155

Note) Customized options such as motor, raydent, LM guide and ball screw are available.

MZ structure



► Component list

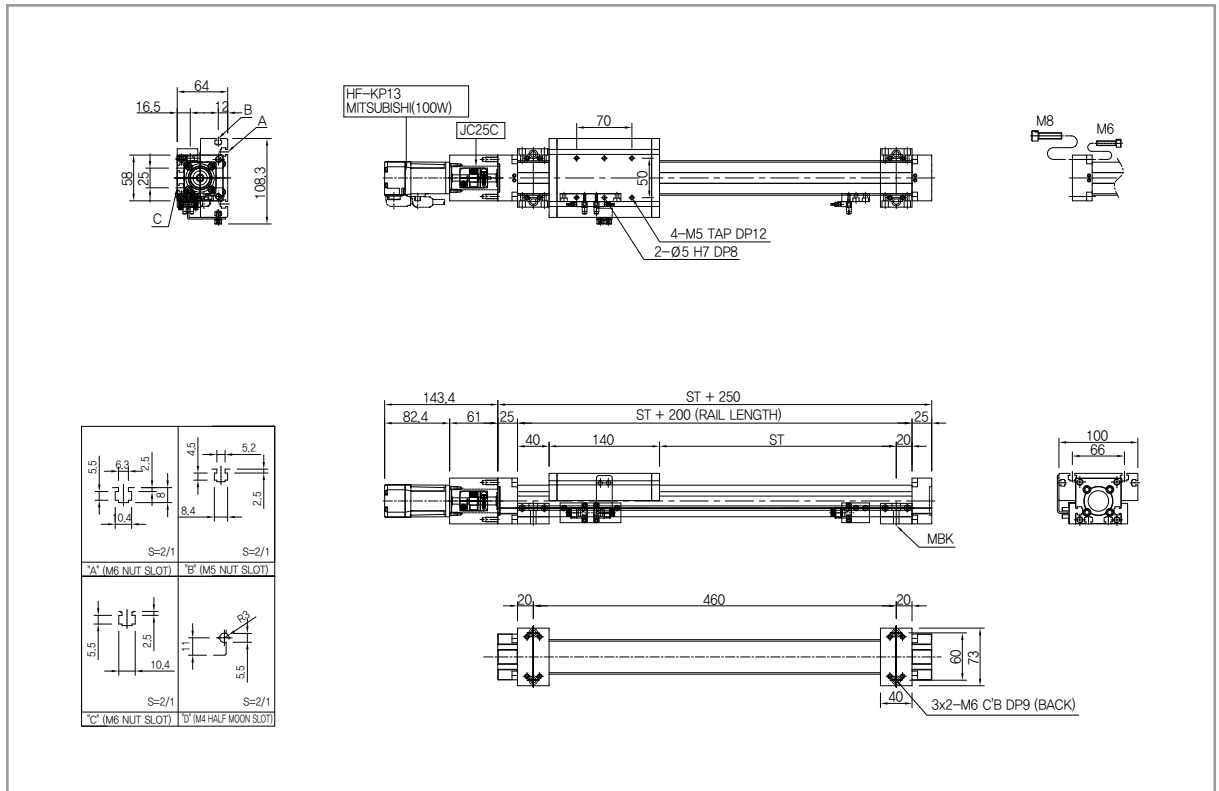
No	Component name		Material	No	Component name	Material
1	Rail		Aluminum alloy	8	Slider	Aluminum alloy
2	Model	LM GUIDE	Bearing steel	9	Track roller	Bearing steel
	40	Ø6				
	60	Ø10				
	80	Ø12				
	100	Ø16				
3	Bearing housig		Aluminum alloy	10	Washer	-
4	Bearing		-	11	Wiper	FELT
5	Lock nut		-	12	Sealing	EP
6	Ball screw		Cr-Mo steel	13	Steel cover	Stainless steel
7	Ball screw nut		-			

MZ 40

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
MZ40	50~1500	L05	250	100	40	20
		L10	500		30	10

MZ40

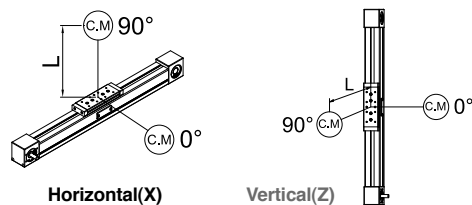


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	Lead (mm)	Motor (W)
Weight(kg)	3.3	3.7	4.0	4.4	4.8	5.2	5.6	5.9	6.3	6.7		
Max. Speed (mm/s)	250						230	180	150	120	L05	100
	500						470	370	300	250	L10	

Allowable overhang distance



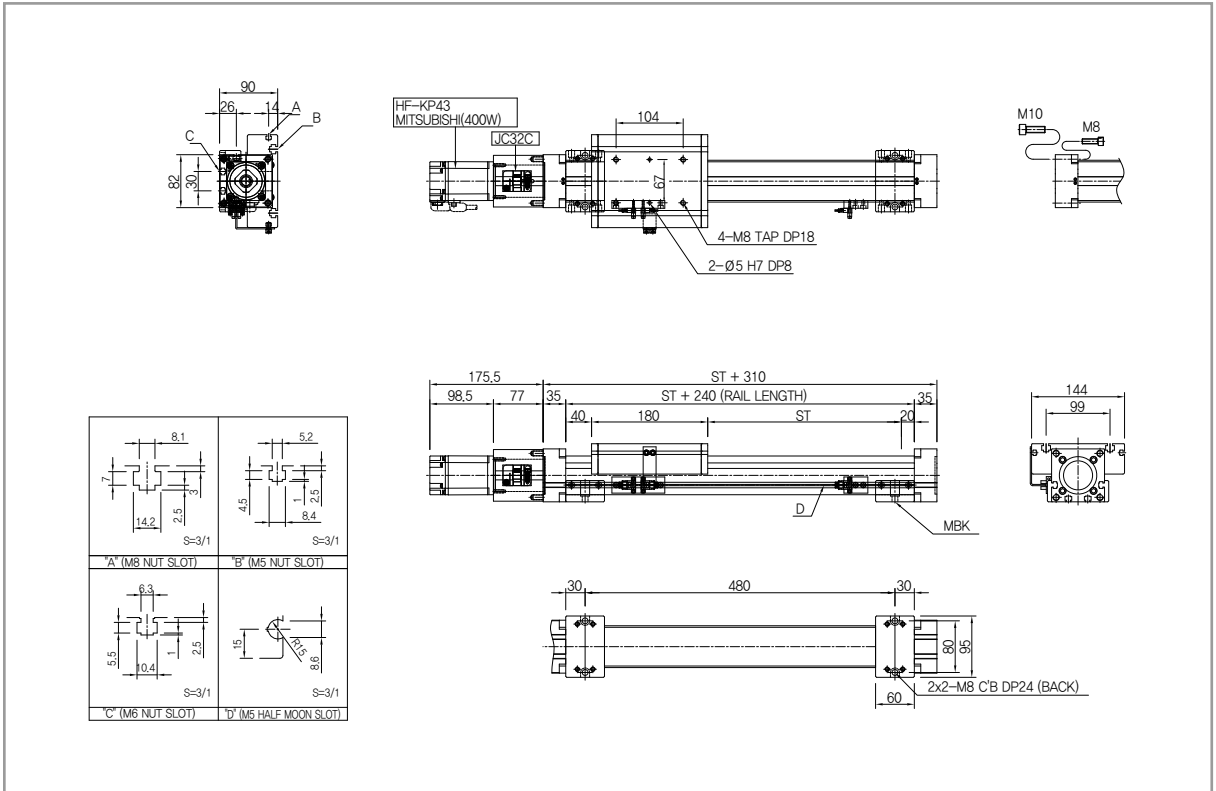
Direction	MZ40-L05		MZ40-L10		
	30 kg	15 kg	20 kg	10 kg	
Horizontal (X)	0°	10 mm	50 mm	30 mm	90 mm
	90°	200 mm	900 mm	250 mm	800 mm
Vertical (Z)		20 kg	10 kg	10 kg	5 kg
	0°	50 mm	200 mm	150 mm	400 mm
	90°	50 mm	150 mm	150 mm	300 mm

* This value is decided based on the lifetime formula of track roller guide. (The lifetime of track roller is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
MZ60	50~1500	L10	500	200	50	10
		L10	500	400	50	30
		L25	1250	400	15	10

MZ60

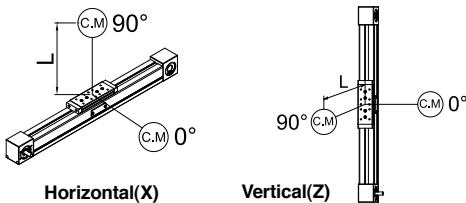


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	Lead (mm)	Motor (W)
Weight(kg)	8.7	9.5	10.4	11.2	12.1	13.0	13.8	14.7	15.5	16.4	17.3	18.1	L10	200
Max. Speed (mm/s)									490	400	340	290	L10	400
									490	400	340	290	L10	
									1190	1000	840	720	L25	

Allowable overhang distance



Direction	MZ60-L10		MZ60-L25	
	40 kg	20 kg	14 kg	7 kg
Horizontal (X)	0°	45 mm	120 mm	350 mm
	90°	300 mm	1000 mm	1400 mm
Vertical (Z)	30 kg		15 kg	10 kg
	0°	100 mm	400 mm	500 mm
	90°	100 mm	300 mm	300 mm

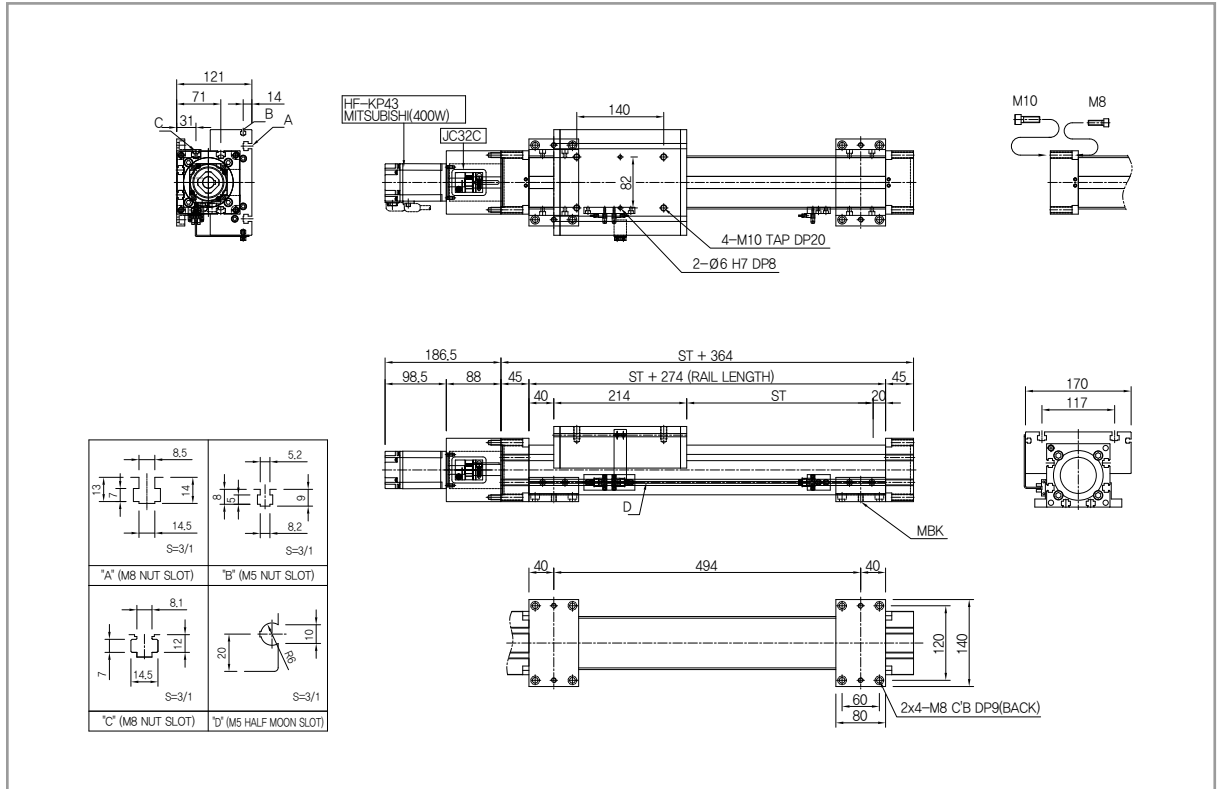
* This value is decided based on the lifetime formula of track roller guide. (The lifetime of track roller is 16,000 hours.)

MZ 80

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
MZ80	50~1500	L10	500	400	60	35
		L25	1250		12	8
		L25	1250	750	50	25

MZ80

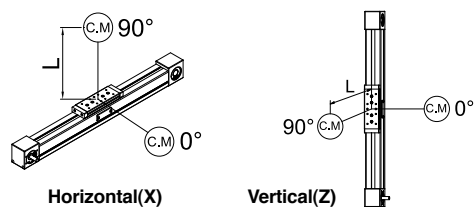


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	Lead (mm)	Motor (W)
Weight(kg)	15.7	17.4	19.1	20.8	22.5	24.2	25.9	27.6	29.3	31.0	32.7	34.4	L10	400
Max. Speed (mm/s)	500								430	360	310	260	L10	
	1250								1050	880	760	650	L25	
	1250								1050	880	760	650	L25	750

Allowable overhang distance



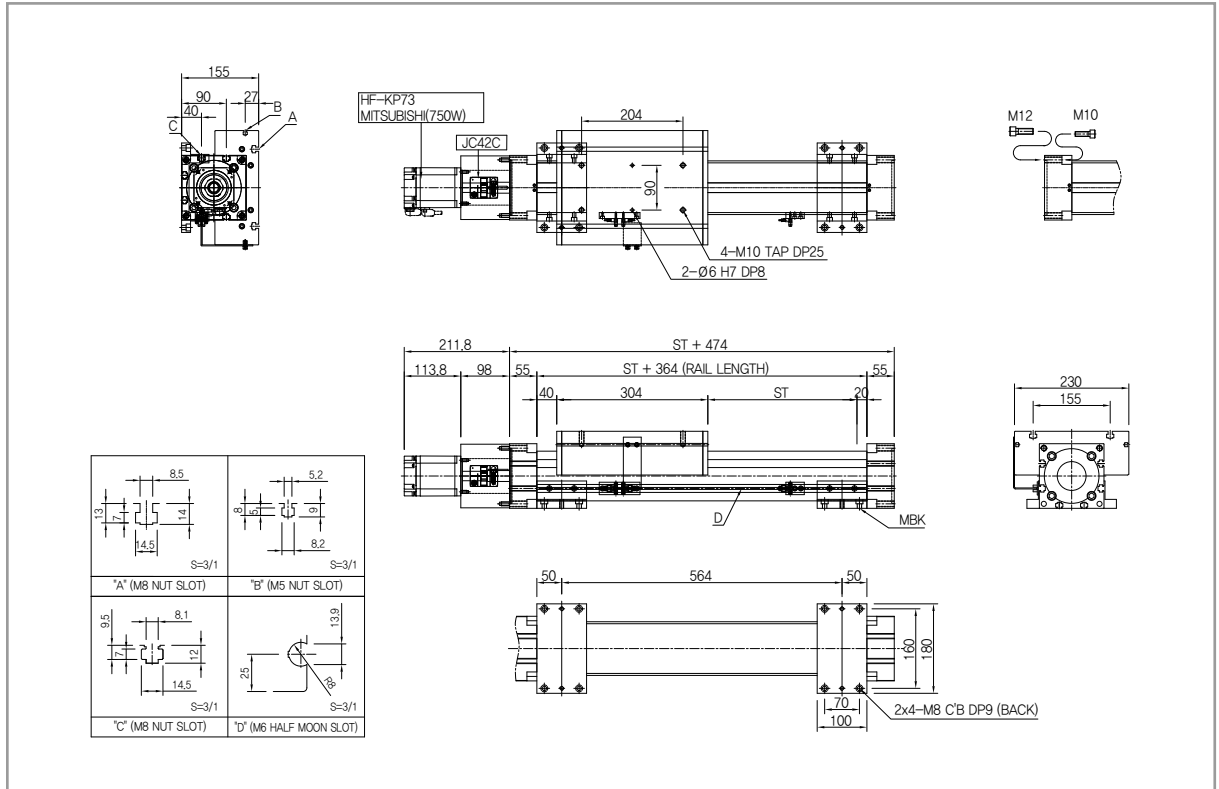
Direction	MZ80-L10		MZ80-L25		
	50 kg	25 kg	40 kg	20 kg	
Horizontal (X)	0°	20 mm	85 mm	25 mm	100 mm
	90°	100 mm	500 mm	100 mm	300 mm
Vertical (Z)		34 kg	17 kg	24 kg	12 kg
	0°	50 mm	400 mm	100 mm	400 mm
	90°	50 mm	250 mm	100 mm	250 mm

* This value is decided based on the lifetime formula of track roller guide. (The lifetime of track roller is 16,000 hours.)

Basic specifications

Model	Stroke (mm)	Lead (mm)	Speed (mm/s)	Motor (W)	Max. Payload(kg)	
					Horizontal	Vertical
MZ100	50~1500	L10	500	750	120	70
		L25	1250		100	20
		L32	1600		30	5

MZ100

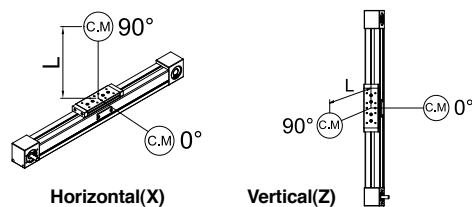


- Please contact us to change sensor or motor options.
- Customized tap or pin pitch on the bottom is available.

Weight & speed for each stroke

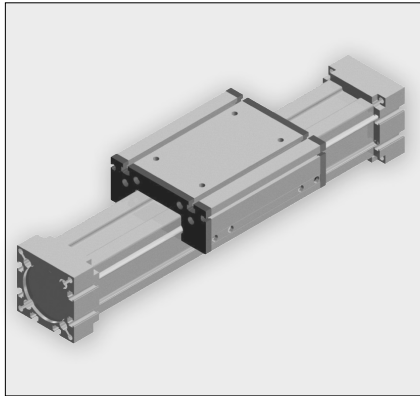
Stroke(mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	Lead (mm)	Motor (W)
Weight(kg)	27.2	29.4	31.6	33.8	36.0	38.2	40.4	42.6	44.8	46.0	49.2	51.4	L10	750
Max. Speed (mm/s)	500								450	380	320	280	L25	
	1250								110	930	790	680	L32	
	1600								1560	1320	1140			

Allowable overhang distance



Direction	MZ100-L10		MZ100-L25		MZ100-L32		
	100 kg	50 kg	80 kg	40 kg	30 kg	15 kg	
Horizontal (X)	0°	30 mm	110 mm	40 mm	140 mm	200 mm	450 mm
	90°	200 mm	800 mm	150 mm	500 mm	500 mm	1000 mm
Vertical (Z)		60 kg	30 kg	20 kg	10 kg	10 kg	5 kg
	0°	200 mm	600 mm	800 mm	1600 mm	1000 mm	2000 mm
	90°	150 mm	350 mm	400 mm	900 mm	500 mm	1000 mm

* This value is decided based on the lifetime formula of track roller guide. (The lifetime of track roller is 16,000 hours.)



Features

- Track roller guide & Non drive type unit
- Customized options
- Easy maintenance

How to order

MG
①
40
②
S — 1000
③ ④
B — C2 — D2 —
⑤ ⑥ ⑦ ⑧

① **Series**

② **Model**

30 / 40 / 60 / 80 / 100

③ **Slider option**

S : STANDARD(4 roller bearings)

T : S + 2 additional bearings

H : S + 4 additional bearings

※ Please contact us for additional quantity of slider

④ **Stroke (Unit : mm)**

30 : 50~2800

40 : 50 ~ 3500

60 / 80 / 100 : 50 ~ 5500

※ Please contact us for longer stroke than standard

⑤ **Color**

Blank : White(outer)

B : Black (outer)

⑥ **Sensor(dog included)**

Blank : None

C : Photo sensor + Basic socket – Basic 3EA

CJ : C + Cable socket2M – Basic 3EA

Other than basic : C(J)(Q'ty) Example)C2,CJ2

⑦ **Mounting bracket**

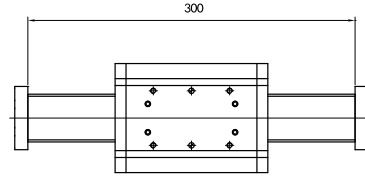
Blank : None

D(Q'ty) : necessary quantity example)D2,D3

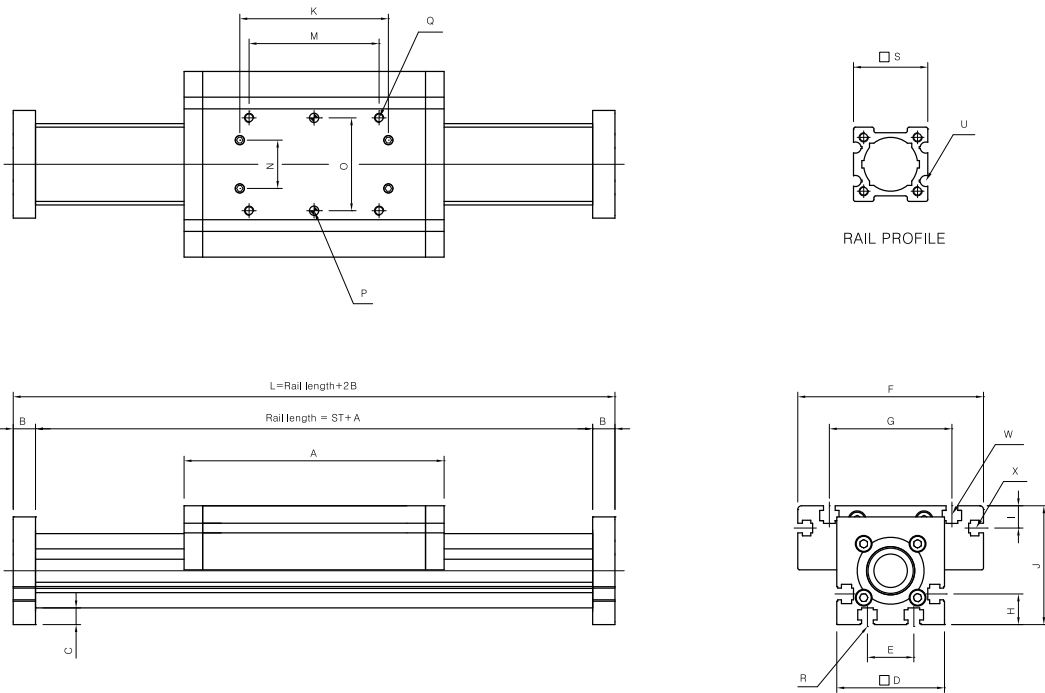
⑧ **Customized code**

Ordering of Module

MG40S-300



Dimensions

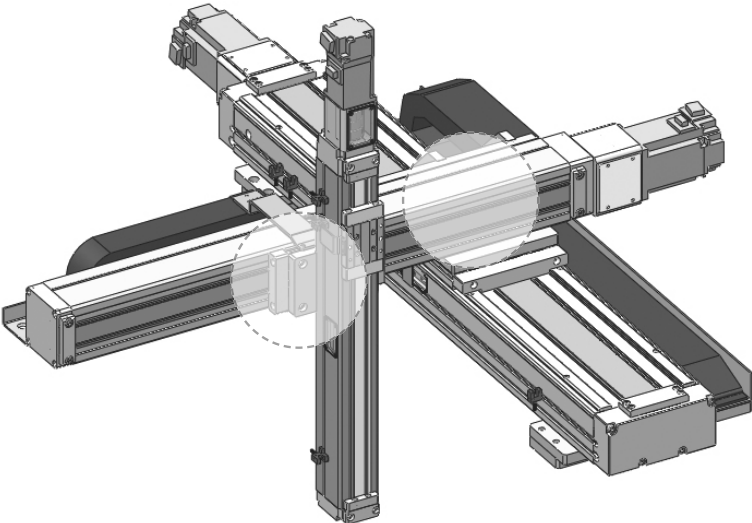
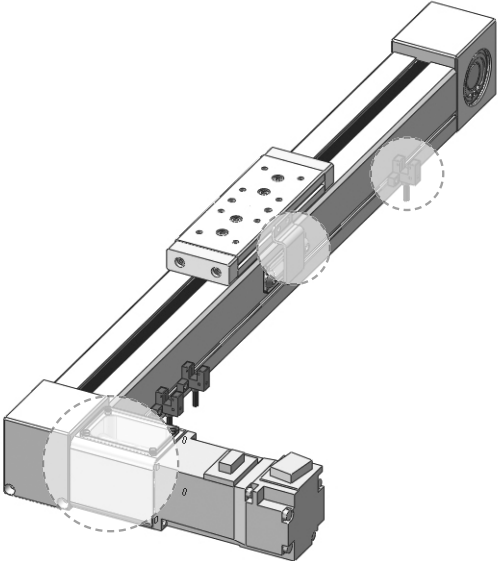


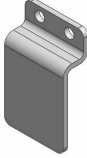
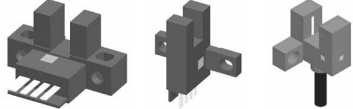
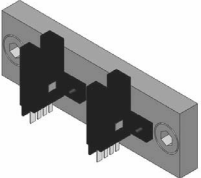
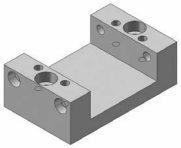
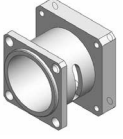

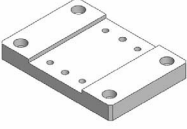
Size of model

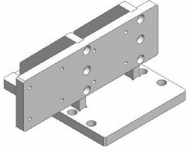

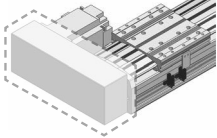
Model	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	S	U	W	X
MG40	140	12	9	58	25	100	66	17	12	64	80	70	26	50	Ø5H7 DP8	M5 DP12	40	M4 half moon nut groove	M6 nut groove	M5 nut groove
MG60	180	15	11	82	30	144	99	26	14	90	120	104	32	67	Ø5H7 DP8	M8 DP18	60	M5 nut groove	M8 nut groove	M5 nut groove
MG80	214	20	11	102	40	170	117	31	14	121	130	140	34	82	Ø6H7 DP8	M10 DP18	80	M5 nut groove	M8 nut groove	M5 nut groove
MG100	304	20	15	130	50	230	155	40	27	155	220	204	52	90	Ø6H7 DP8	M10 DP25	100	M5 nut groove	M8 nut groove	M5 nut groove

Accessory

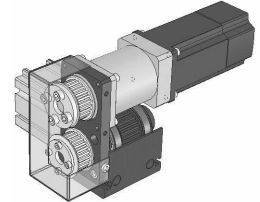
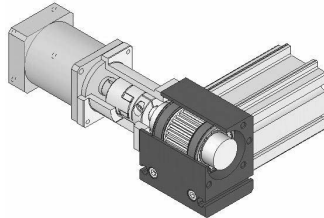
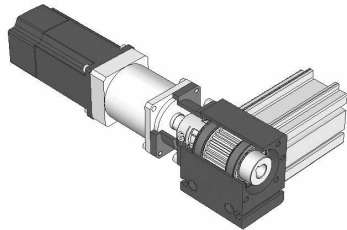
Position of accessories



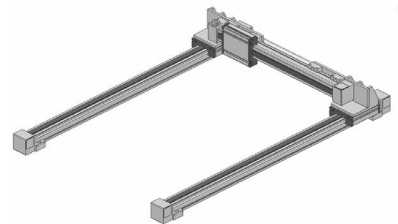
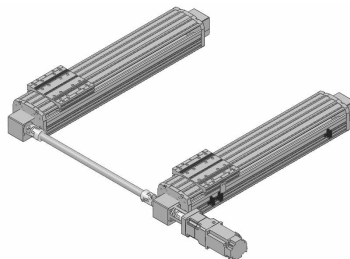
Specifications	Shape of accessories
Sensor dog	 <p>*Each model has different shape</p>
Photo sensor	 <p>*SX671, 672, 912 used</p>
Photo sensor + Bracket	 <p>*Each model has different shape</p>
Mounting Bracket	 <p>*Each model has different shape</p>
Motor(reducer) Bracket	 <p>*Each model has different shape</p>
Axis for tandem operation	 <p>*Each model has different shape</p>
Connecting pad	 <p>*Axis combination type</p>

Specifications	Shape of accessories
Connecting bracket	 <p>*Axis combination type</p>
Motor Bracket for parallel type	
Motor cover for parallel type	
Supporter for tandem axis	
Cable bear	
Built-in motor type	*Customized option
Raydent	*Customized option

Motor connecting & Axis combination



① Motor connecting



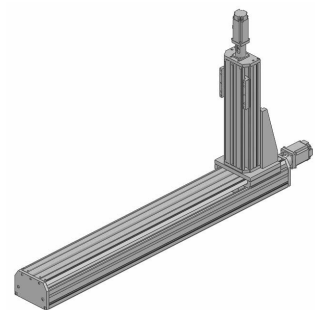
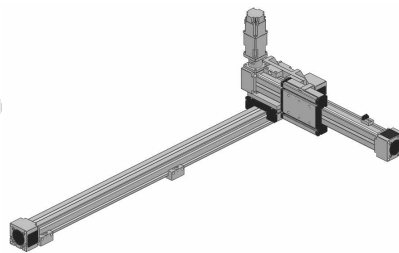
② Single axis

③ Double axis with tandem operation

④ X-Y gantry combination



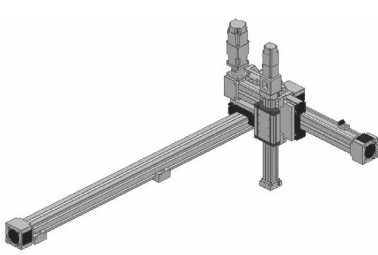
ncl



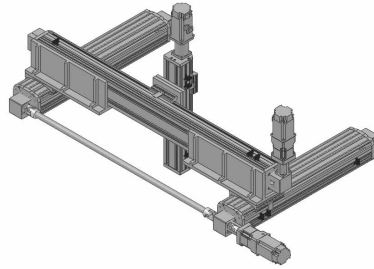
⑤ X-Y cross combination

⑥ X-Y cantilever combination

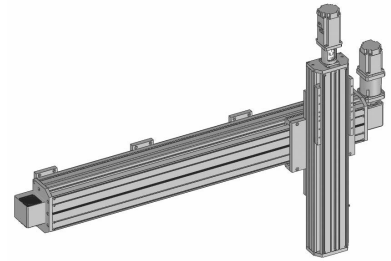
⑦ X-Z combination



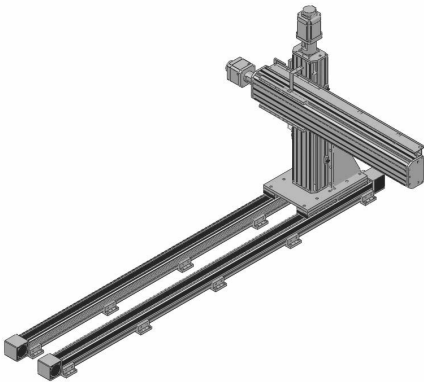
⑧ X-Y-Z cantilever combination



⑨ X-Y-Z gantry combination



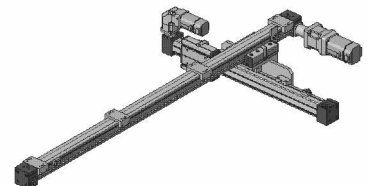
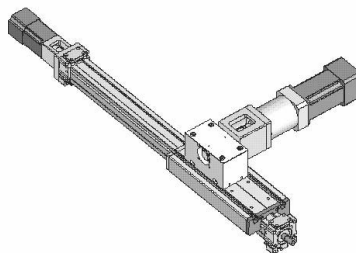
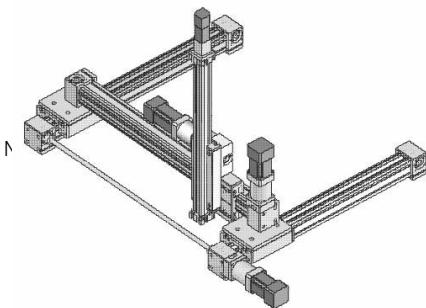
⑩ X-Y Cross wall mounting



⑪ X-Y-Z combination



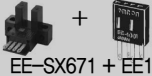
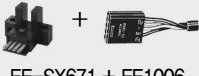
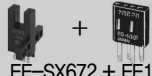


⑫ X-Y-Z gantry combination



⑬ ⑭ ⑮ Other axis combinations

Accessory

Sensor specification (picture) and part number

Part number	Sensor and connector	Model	Remarks
SX671-PL	 + EE-SX671 + EE1001	MZ / MB / MBB / MC / MCS / MS/ MG	<ul style="list-style-type: none"> ■ Maker : OMRON ■ Bolts and nuts included
SX671-L-PL	 + EE-SX671 + EE1006	MZ / MB / MBB / MC / MCS / MS/ MG	<ul style="list-style-type: none"> ■ Maker : OMRON ■ Length of connector cable 2M ■ Bolts and nuts included
SX672-PL	 + EE-SX672 + EE1001	LRS / LRB / QB / QBE / QL / QLE	<ul style="list-style-type: none"> ■ Maker : OMRON ■ MQB40 excluded ■ Bolts and nuts included
SX672-L-PL	 + EE-SX672 + EE1006	LRS / LRB / QB / QBE / QL / QLE	<ul style="list-style-type: none"> ■ Maker : OMRON ■ Length of connector cable 2M ■ MQB40 excluded ■ Bolts and nuts included
SX912-R-PL	 EE-SX912-R	QL / LCS / LCB / QB40	<ul style="list-style-type: none"> ■ Maker : OMRON ■ All-in- one cable(1M) ■ Bolts and nuts included

Sensor Bracket part number & drawings

Part number	Component name	Model	Remarks
PSBS-40-PL	Photo sensor bracket single	MZ40 / MB40 / MBB40 / MS40	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PSBD-40-PL	Photo sensor bracket double		
PSBS-60-PL	Photo sensor bracket single	MZ60 / MB60 / MBB60 / MS60	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PSBD-60-PL	Photo sensor bracket double		
PSBS-80-PL	Photo sensor bracket single	MZ80 / MB80 / MBB80 / MS80	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PSBD-80-PL	Photo sensor bracket double		
PSBS-100-PL	Photo sensor bracket single	MZ100 / MB100 / MBB100 / MS100	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PSBD-100-PL	Photo sensor bracket double		
PSBS-166-PL	Photo sensor bracket single	LRS166 / LRB166	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PSBD-166-PL	Photo sensor bracket double		
PSBS-210-PL	Photo sensor bracket single	LRS210 / LRB210	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PSBD-210-PL	Photo sensor bracket double		
PSBS-160-PL	Photo sensor bracket single	QBC160	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PSBD-160-PL	Photo sensor bracket double		

Sensor bracket partnumber & drawings

Part number	Componet name	Model	Remarks
PDG-M40-PL	Photo sensor dog	MZ40 / MB40 / MBB40 / MS40	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PDG-M60-PL	Photo sensor dog	MZ60 / MB60 / MBB60 / MS60	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PDG-M80-PL	Photo sensor dog	MZ80 / MB80 / MBB80 / MS80	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PDG-M100-PL	Photo sensor dog	MB100 / MBB100 / MS100	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PDG-Z100-PL	Photo sensor dog	MZ100	<ul style="list-style-type: none"> ■ EE-SX671 only ■ Bolts and nuts included
PDG-L80-PL	Photo sensor dog	LRS80	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-L100-PL	Photo sensor dog	LRS100 / LRB100	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-L120-PL	Photo sensor dog	LRS120 / LRB120	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-L166-PL	Photo sensor dog	LRS166 / LRB166	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-L210-PL	Photo sensor dog	LRS210 / LRB210	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-QB40-PL	Photo sensor dog	QB40	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-QB60-PL	Photo sensor dog	QB60 / QBE60	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-QB80-PL	Photo sensor dog	QB80 / QBE80	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included

Part number	Componet name	Model	Remarks
PDG-QB100-PL	Photo sensor dog	QB100 / QBE100	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-QL60-PL	Photo sensor dog	QL60 / QLE60	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-QL80-PL	Photo sensor dog	QL80 / QLE800	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-QL100-PL	Photo sensor dog	QL100 / QLE100	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included
PDG-LC130-PL	Photo sensor dog	LCS130 / LCB130	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-LC170-PL	Photo sensor dog	LCS170	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-QS48-PL	Photo sensor dog	QS48	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-QS70-PL	Photo sensor dog	QS70	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-QS88-PL	Photo sensor dog	QS88	<ul style="list-style-type: none"> ■ EE-SX912-R only ■ Bolts and nuts included
PDG-QBC160-PL	Photo sensor dog	QBC160	<ul style="list-style-type: none"> ■ EE-SX672 only ■ Bolts and nuts included

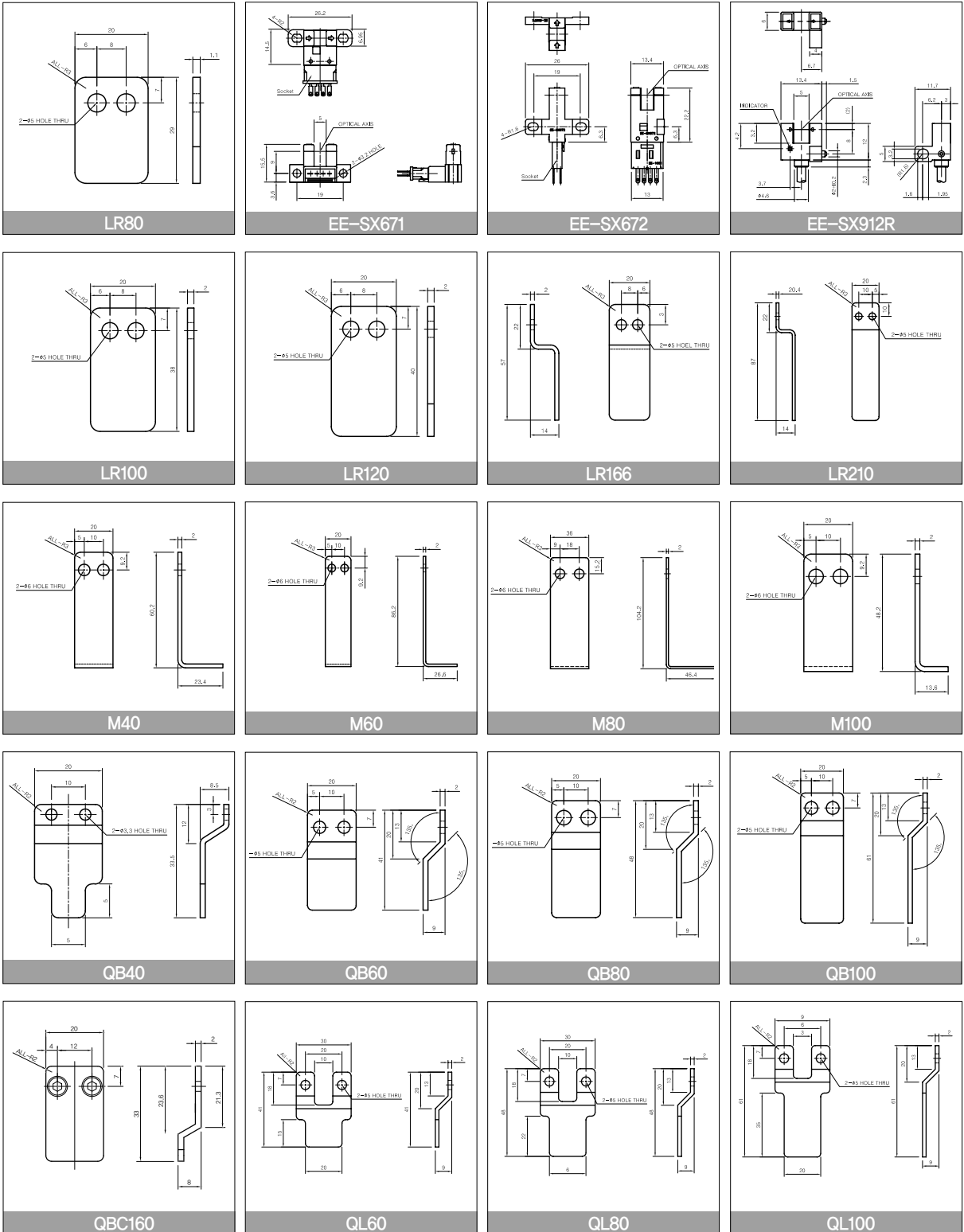
Accessory

Sensor specification & Part number

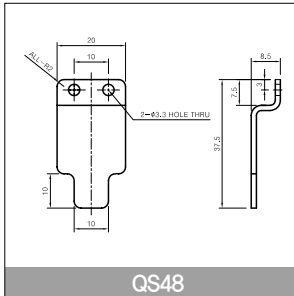
Part number	Sensor and connector	Model	Remarks
MBK40-PL	Mounting bracket	MZ40 / MB40 / MBB40 / MS40	<ul style="list-style-type: none"> ▪ Bolts and nuts included
MBK60-PL	Mounting bracket	MZ60 / MB60 / MBB60 / MS60 QB60 / QBE60 / QL60 / QLE60	<ul style="list-style-type: none"> ▪ Bolts and nuts included
MBK80-PL	Mounting bracket	MZ80 / MB80 / MBB80 / MS80	<ul style="list-style-type: none"> ▪ Bolts and nuts included
MBKQ80-PL	Mounting bracket	QB80 / QBE80 / QL80 / QLE80	<ul style="list-style-type: none"> ▪ Bolts and nuts included
MBK100-PL	Mounting bracket	MZ100 / MB100 / MBB100 / MS100 QB100 / QBE100 / QL100 / QLE100	<ul style="list-style-type: none"> ▪ Bolts and nuts included

Basic specifications

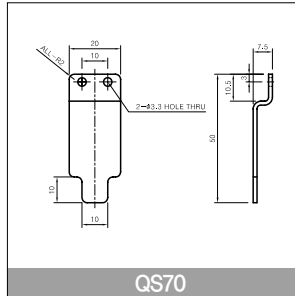
■ Sensor & dog



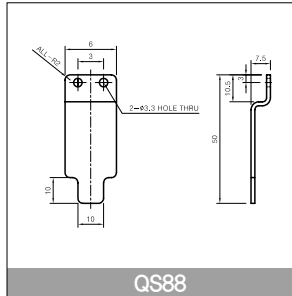
Sensor specification & Part number



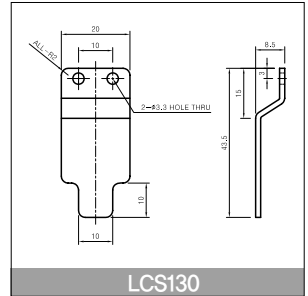
QS48



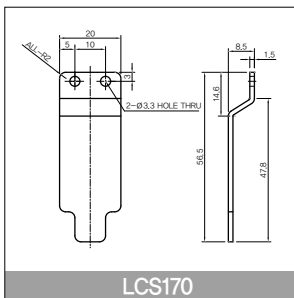
QS70



QS88

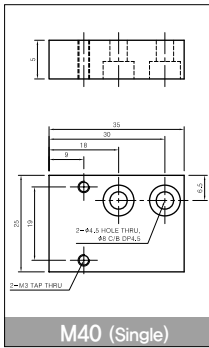


LCS130

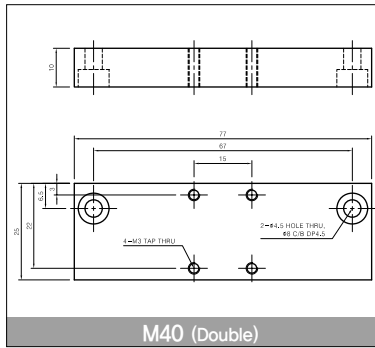


LCS170

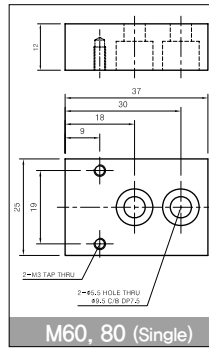
■ Sensor bracket



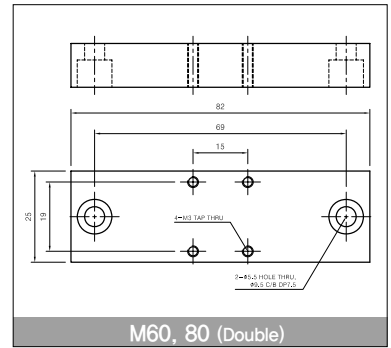
M40 (Single)



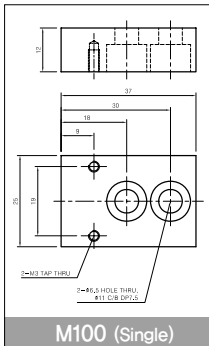
M40 (Double)



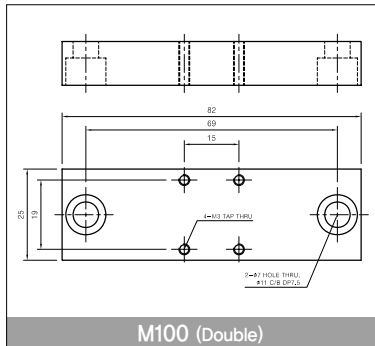
M60, 80 (Single)



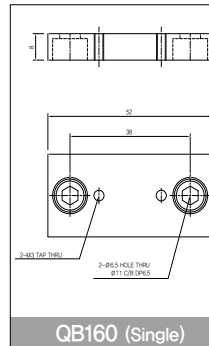
M60, 80 (Double)



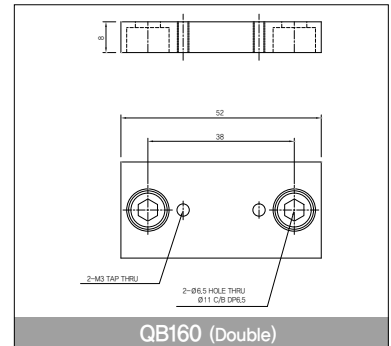
M100 (Single)



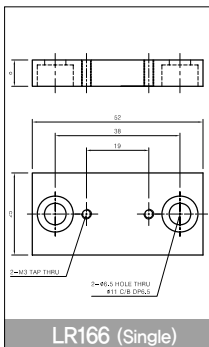
M100 (Double)



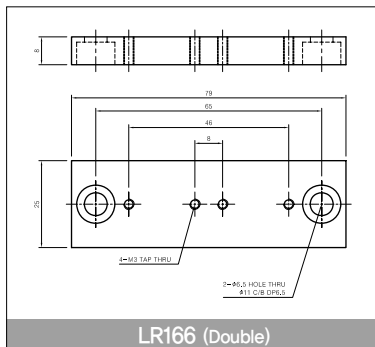
QB160 (Single)



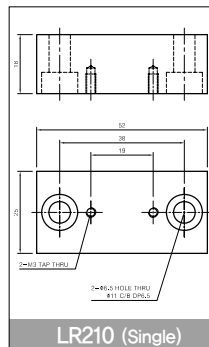
QB160 (Double)



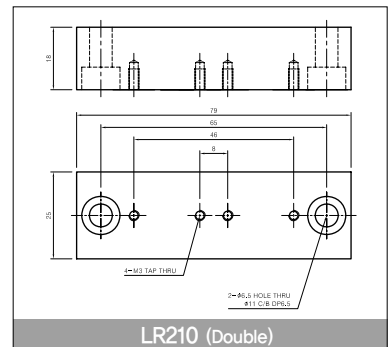
LR166 (Single)



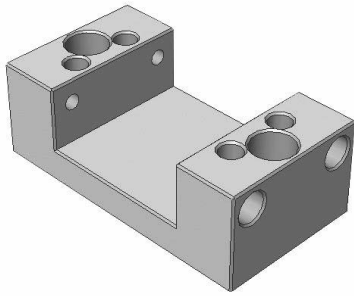
LR166 (Double)



LR210 (Single)

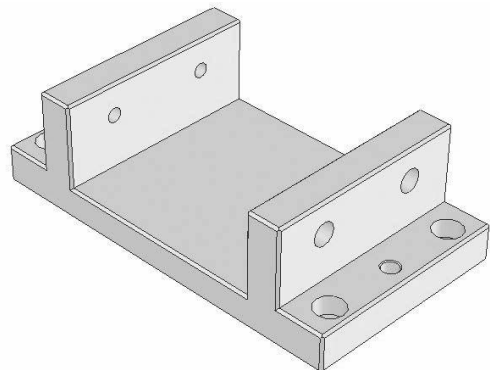
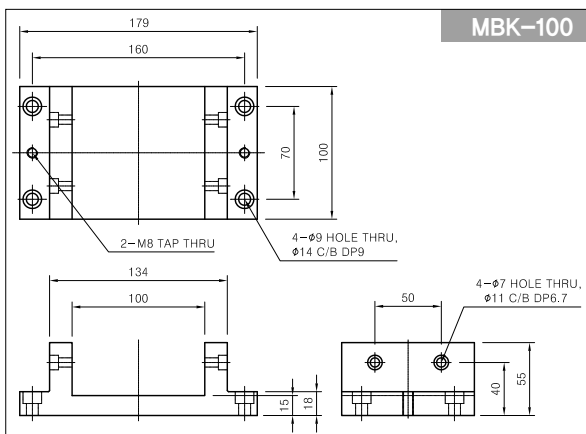
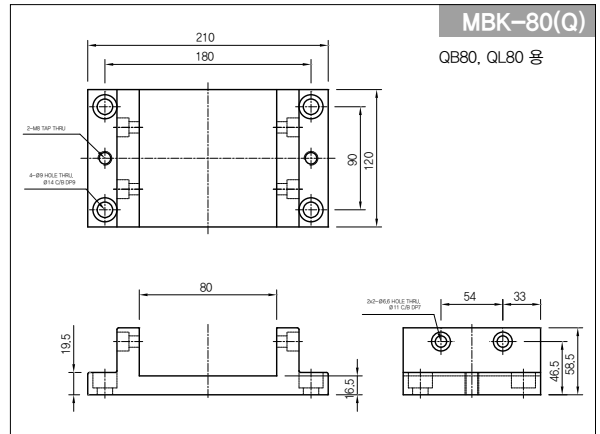
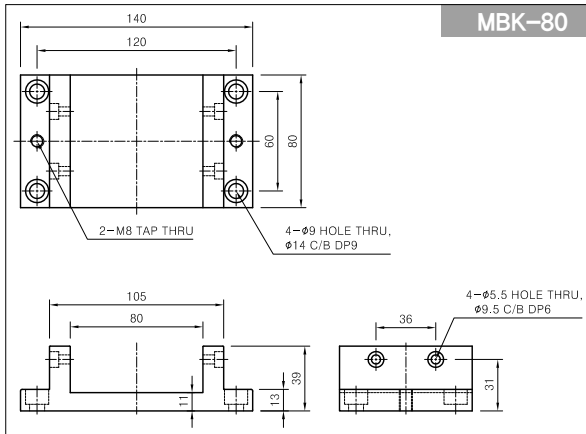
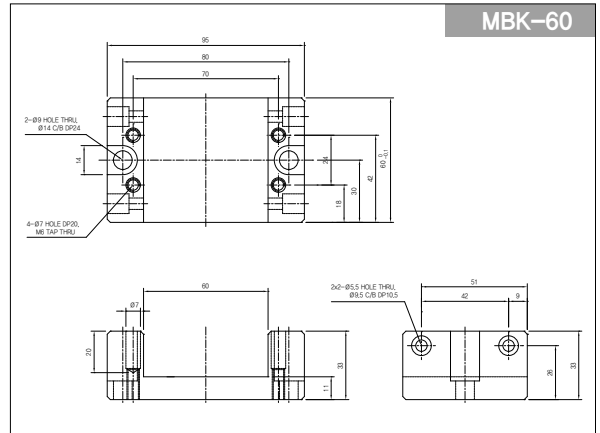
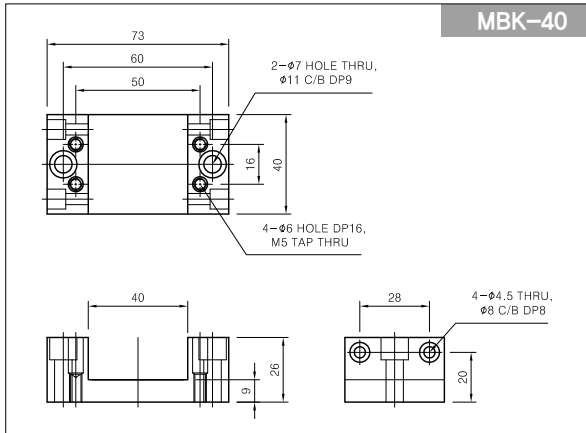


LR210 (Double)

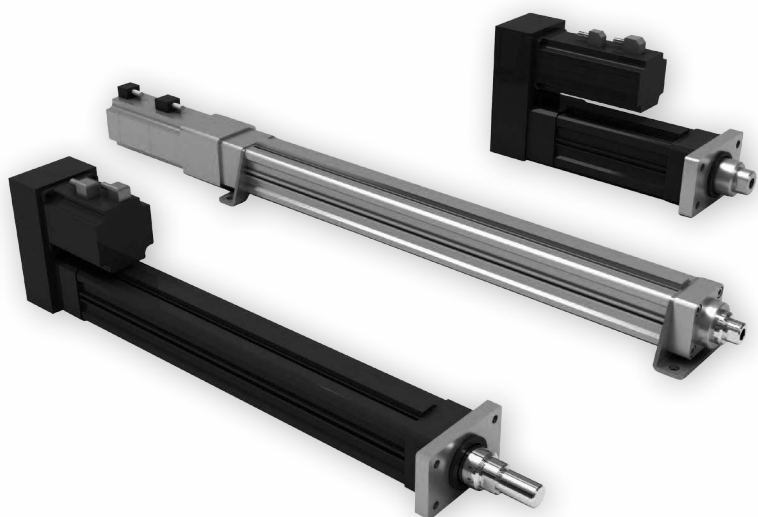


Mounting bracket

- Mounting bracket for M,Q series
- As component for stiff mounting, equipment at industrial robot is available
- All-in-one processing with aluminum alloy secures the stiffness and precision.
- Additional equipment is available, depending on the length of industrial robot



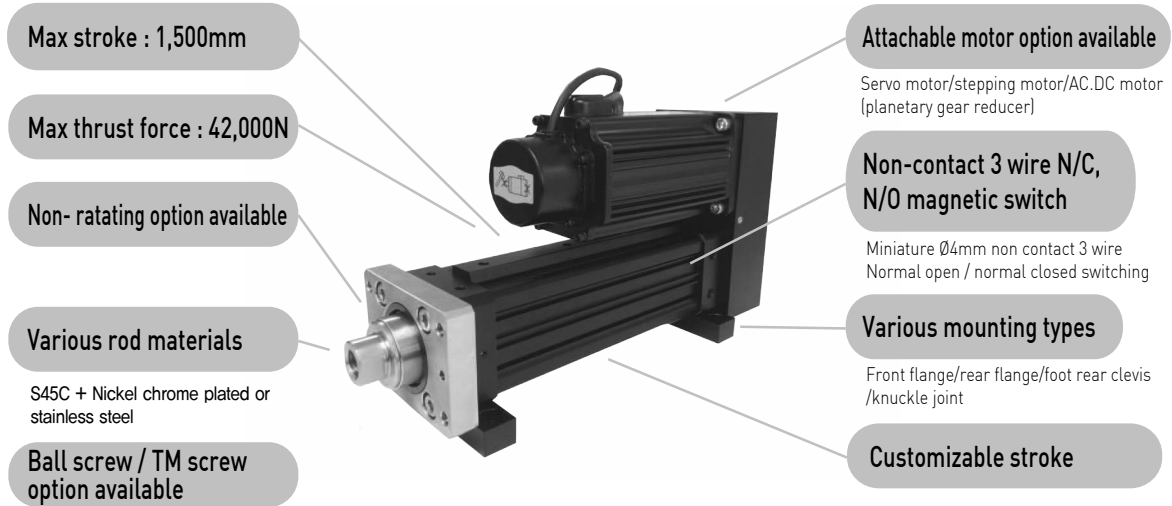
Electric Cylinders



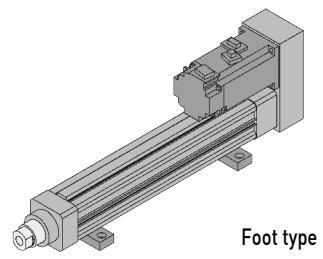
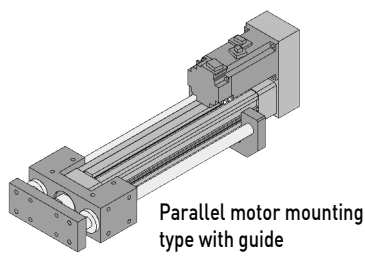
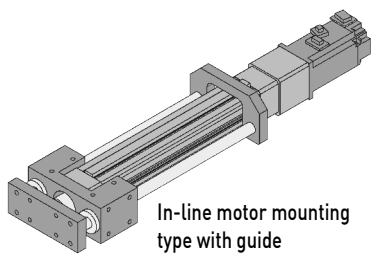
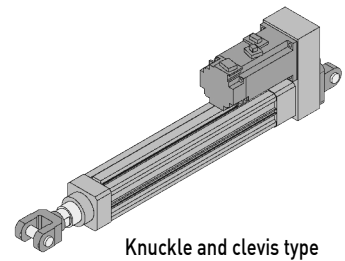
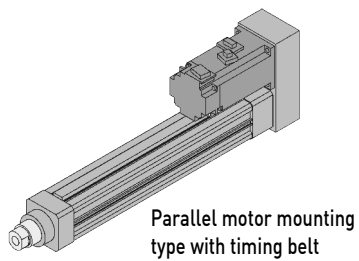
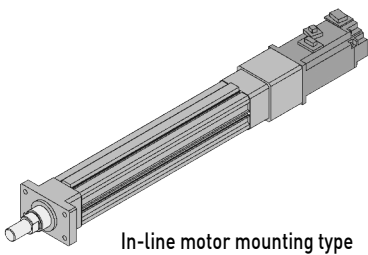
Electric Cylinders

TKC / size : 40, 45, 50, 60, 80, 120, 140mm

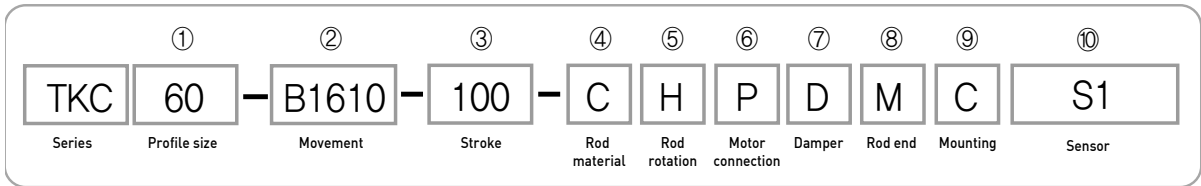
- * Precise positioning control
- * Hydraulic system replacement
- * Applications : Electric press, electric lift, tilting , printing equipment, alignment equipment, automobile and FPD manufacturing , food and medical production



Combination types



How to order



① Model	Profile size (mm)	② Movement	Type of movement (Screw diameter(mm)/Lead(mm))	③ Max stroke (mm)	Max motor capacity [W]	Max stroke for non-rotating type
40	40	B0802	Ball Screw 8 / 2 Lead	300	100w	150
		T1002	TM Screw 10 / 2 Lead			
45	45	B1002	Ball Screw 8 / 2 Lead	400	200w	200
		B1204	Ball Screw 12 / 4 Lead			
		T1202	TM Screw 12 / 2 Lead			
50	52	B1205	Ball Screw 12 / 5 Lead	600	400w	300
		B1210	Ball Screw 12 / 10 Lead			
		T1403	TM Screw 14 / 3 Lead			
60	64	B1605	Ball Screw 16 / 5 Lead	800	1kW	500
		B1610	Ball Screw 16 / 10 Lead			
		T1804	TM Screw 18 / 4 Lead			
80	77	B2505	Ball Screw 25 / 5 Lead	1000	2kW	500
		B2510	Ball Screw 25 / 10 Lead			
		B2020	Ball Screw 20 / 20 Lead			
		T2004	TM Screw 20 / 4 Lead			
		T2805	TM Screw 28 / 5 Lead			
120	117	B4005	Ball Screw 40 / 5 Lead	1200	3.5kW	500
		B4010	Ball Screw 40 / 10 Lead			
		B4020	Ball Screw 40 / 20 Lead			
		B4040	Ball Screw 40 / 40 Lead			
		T4006	TM Screw 40 / 6 Lead			
		T5008	TM Screw 50 / 8 Lead			
140	142	B5005	Ball Screw 50 / 5 Lead	1500	3.5kW이상	500
		B5010	Ball Screw 50 / 10 Lead			
		B5020	Ball Screw 50 / 20 Lead			
		T5008	TM Screw 50 / 8 Lead			

④ Rod	Rod material
C	S45C + Nickel chrome plated
S	SUS

⑤ Rod	Rod rotation
N	Rotating type
H	Non-rotating type

⑥ Motor	Motor mounting
D	In-line mounting type
P	Parallel mounting type with timing belt

⑦ Damper	Damper
N	None
D	Front/rear damper

* TKC40: damper unavailable

⑧ Rod end	Rod end type
M	Male thread
F	Female thread
K	Knuckle joint
G	Rod guide

⑨ Mounting	Mounting type
F	Front flange
R	Rear flange
B	Bar foot
C	Clevis (parallel type only)

* Please contact us for clevis mounting straight way type

⑩ Sensor	Type of magnetic sensor	N/C	N/O	PNP
Blank	None	-	-	-
S1	Miniature (Ø4)no-contact 3wire	2	1	-
S2		2	-	-
S3		-	2	-
S4		-	3	-
S5		-	-	2
S6		-	-	3

* Standard length : 1M

* N/O : normal open for NPN type.



Electric Cylinders

Technical data

- Standard : C7 rolled ball screw

Model	TKC40		TKC45				TKC50		
	B0802,5	T1002	B1002	B1205	B1210	T1202	B1205	B1210	T1403
Ball screw									
Screw lead [mm]	2.5	2	2	5	10	2	5	10	3
Screw diameter [mm]	8	10	10	12	12	12	12	12	16
Max still axis load(Note1) [N]	2240	1293	1774	6091	2422	1705	6091	2422	2058
Max moving load (Note2) [N]	1296	517	1103	4541	1715	682	4541	1715	823
Continuous moving load(Note3) [N]	1111	361	926	3892	1470	477	3892	1470	576
Max rotation torque [Nm]	0.57	0.60	0.40	4.02	3.03	0.90	4.02	3.03	1.60
Continuous rotation torque [Nm]	0.49	0.60	0.33	3.44	2.60	0.90	3.44	2.60	1.60
Max lateral load [N]	5		10				15		
Max speed [mm/sec]	83	20	67	167	500	20	167	500	40
Max rotation speed [rpm]	2000	600	2000	2000	3000	600	2000	3000	800
Backlash repetition (Note4) [mm]	0.1	0.5	0.1	0.1	0.1	0.5	0.1	0.1	0.5
Rotating rod movement limit [Nm]	Less 10								
Repetition accuracy	In-line [mm]	±0.02 (±0.2)							
	Parallel [mm]	±0.08 (±0.8)							

Model	TKC60			TKC80				
	B1605	B1610	T1804	B2505	B2510	B2020	T2004	T2805
Ball screw								
Screw lead [mm]	5	10	4	5	10	20	4	5
Screw diameter [mm]	16	16	18	25	25	20	20	28
Max still axis load(Note1) [N]	10525	7344	4939	18286	22796	25166	4116	8643
Max moving load (Note2) [N]	5350	5714	1975	8780	13335	2210	1646	3457
Continuous moving load(Note3) [N]	4586	4898	1382	7526	11430	10466	1152	2419
Max rotation torque [Nm]	4.73	10.10	5.00	7.77	23.60	43.20	4.50	11.00
Continuous rotation torque [Nm]	4.06	8.67	5.00	6.66	20.20	37.10	3.50	8.00
Max lateral load [N]	20			30				
Max speed [mm/sec]	167	500	53	167	500	1000	53	66
Max rotation speed [rpm]	2000	3000	800	2000	3000	3000	800	800
Backlash repetition (Note4) [mm]	0.1	0.1	0.7	0.1	0.1	0.1	0.7	0.7
Rotating rod movement limit [Nm]	Less 10							
Repetition accuracy	In-line [mm]	±0.02 (±0.2)						
	Parallel [mm]	±0.08 (±0.8)						

Model	TKC120						TKC140			
	B4005	B4010	B4020	B4040	T4006	T5008	B5005	B5010	B5020	T5008
Ball screw										
Screw lead [mm]	5	10	20	40	6	8	5	10	20	8
Screw diameter [mm]	40	40	40	40	40	50	50	50	50	50
Max still axis load(Note1) [N]	31340	55979	36479	29106	15582	24049	70871	104969	132817	24049
Max moving load (Note2) [N]	11044	26822	17403	13239	6232	9619	18508	38676	48994	9619
Continuous moving load(Note3) [N]	9466	22990	14917	11348	4362	6733	15861	33145	42000	6733
Max rotation torque [Nm]	9.77	47.50	61.60	93.70	23.00	95.00	16.37	68.43	171.37	95.00
Continuous rotation torque [Nm]	8.37	40.70	52.80	80.30	17.00	67.00	14.03	58.64	148.62	67.00
Max lateral load [N]	50						50			
Max speed [mm/sec]	167	500	1000	2000	80	133	167	500	1000	133
Max rotation speed [rpm]	2000	3000	3000	3000	800	1000	2000	3000	3000	1000
Backlash repetition (Note4) [mm]	0.2	0.2	0.2	0.2	1.0	1.0	0.1	0.1	0.1	2.0
Rotating rod movement limit [Nm]	Less 10									
Repetition accuracy	In-line [mm]	±0.02 (±0.2)								
	Parallel [mm]	±0.08 (±0.8)								

Note1) Max still axis load : up to 10% (duty cycle)

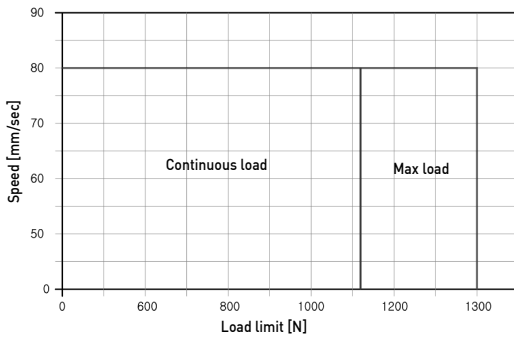
Note2) Max moving load (duty cycle) : horizontal mounting-up to 50%, vertical mounting-up to 30%

Note3) Continuous moving load : up to 100% (duty cycle)

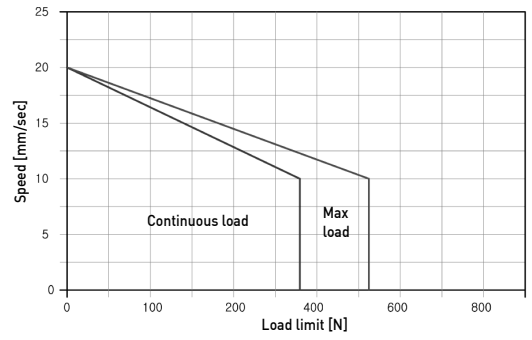
Note4) Backlash repetition : depends on working conditions

Performance graph

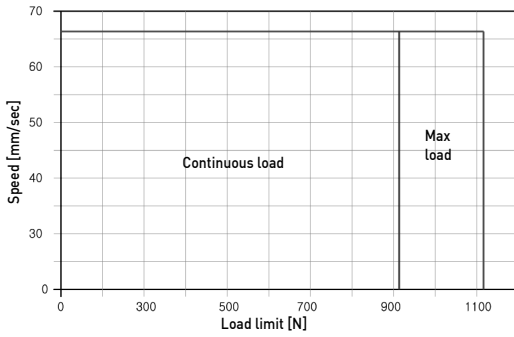
TKC40-**-B0802.5



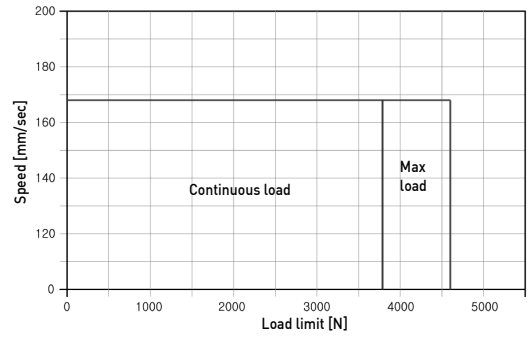
TKC40-**-T1002



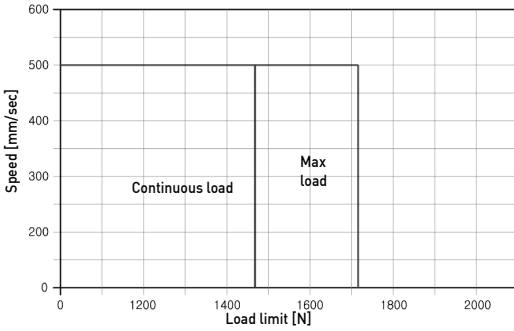
TKC45-**-B1002



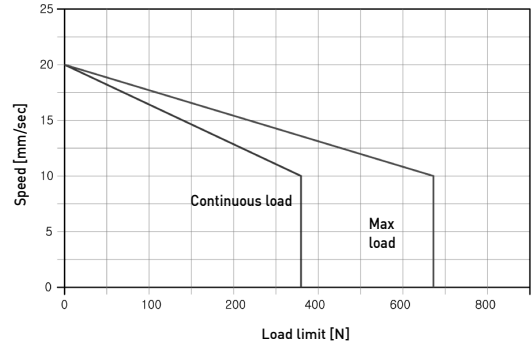
TKC45-**-B1205



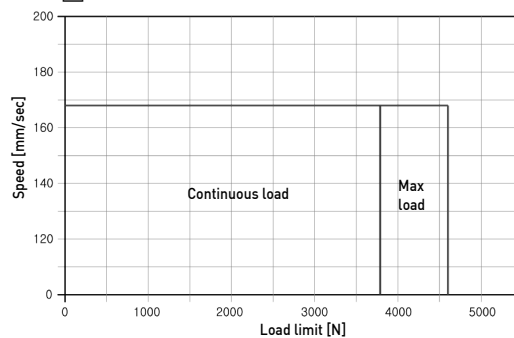
TKC45-**-B1210



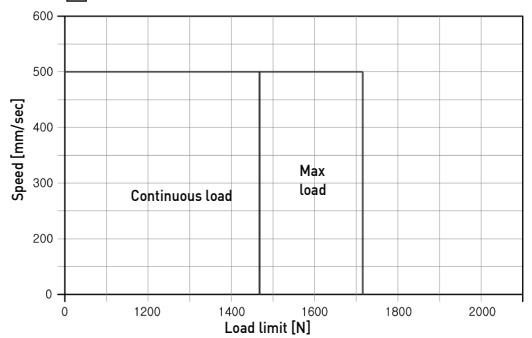
TKC45-**-T1202



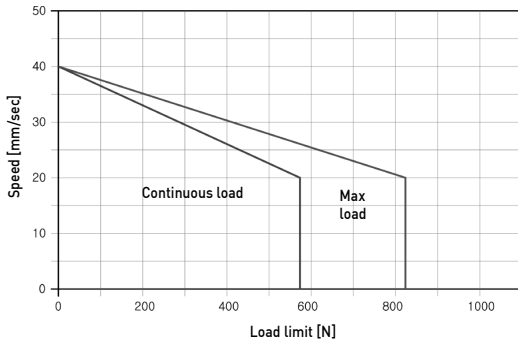
TKC50-**-B1205



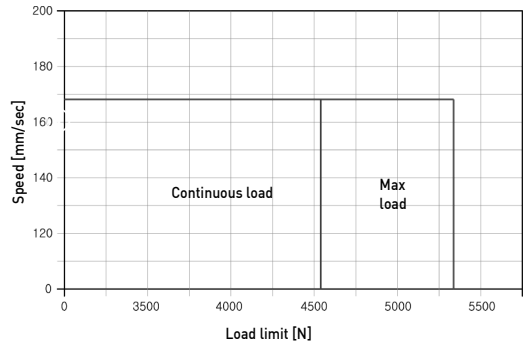
TKC50-**-B1210



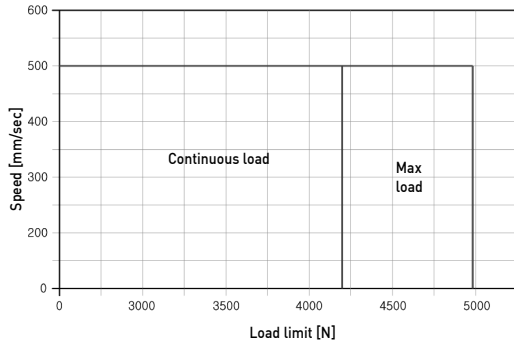
TKC50-**-T1403



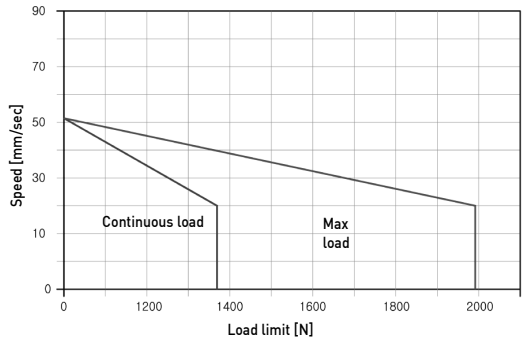
TKC60-**-B1605



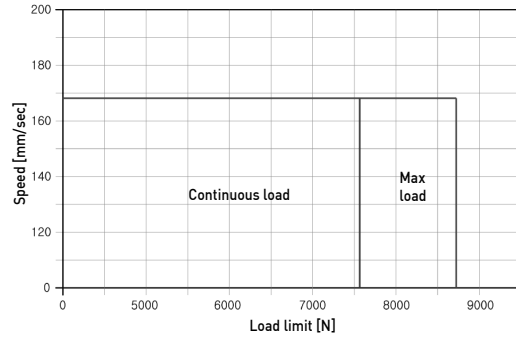
TKC60-**-B1610



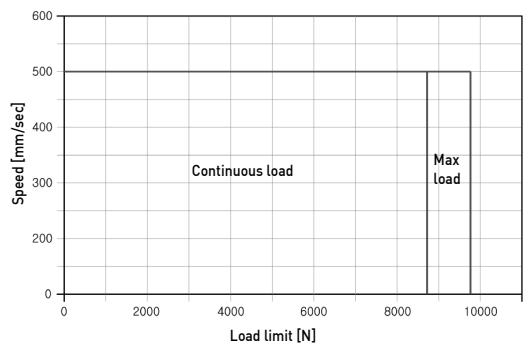
TKC60-**-T1804



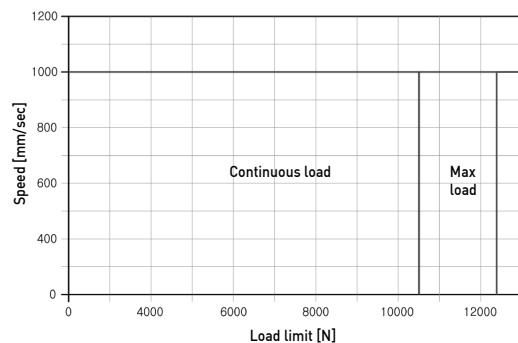
TKC80-**-B2505



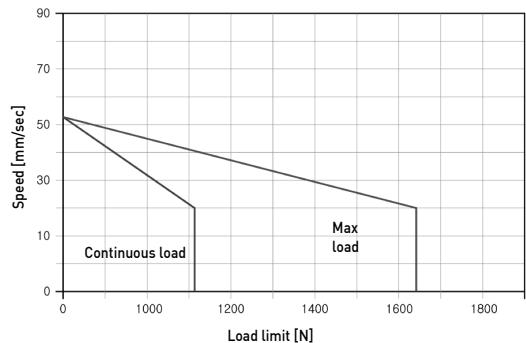
TKC80-**-B2510



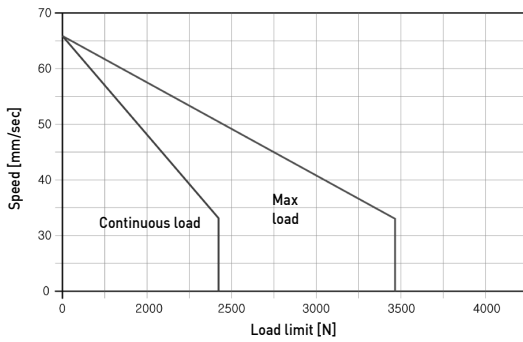
TKC80-**-B2020



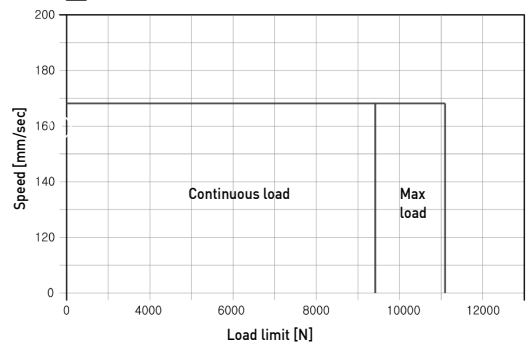
TKC80-**-T2004



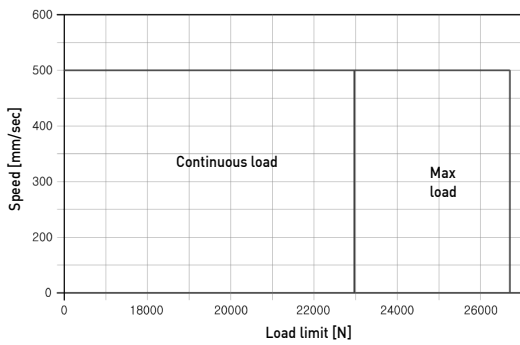
TKC80-**-T2805



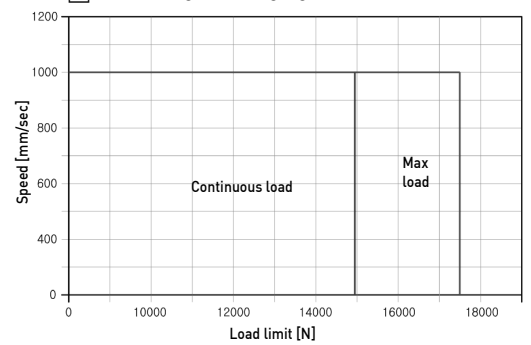
TKC120-**-B4005



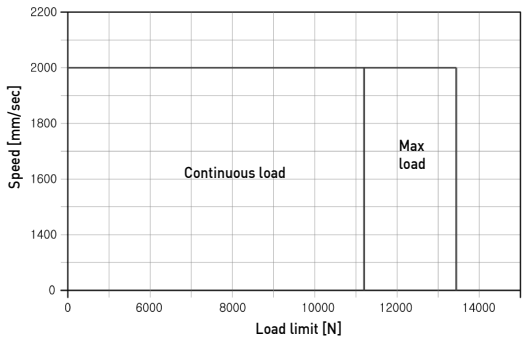
TKC120-**-B4010



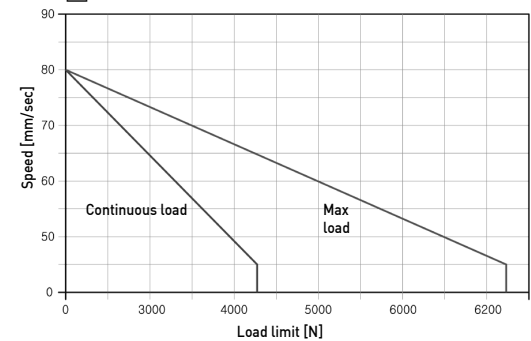
TKC120-**-B4020



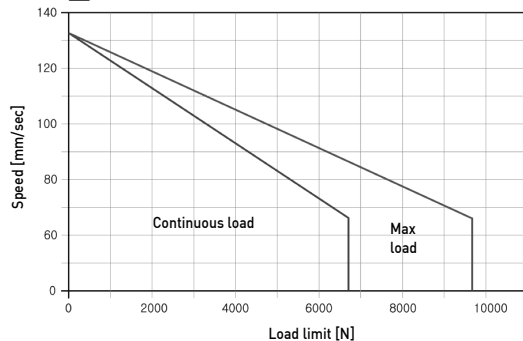
TKC120-**-B4040



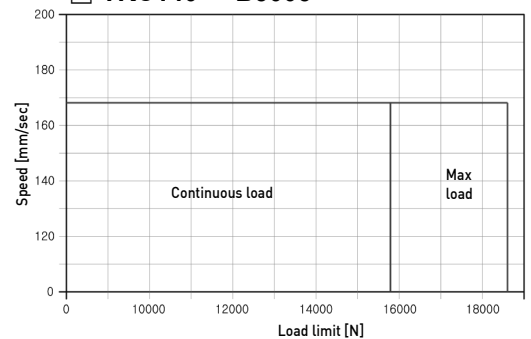
TKC120-**-T4006



TKC120-**-T5008

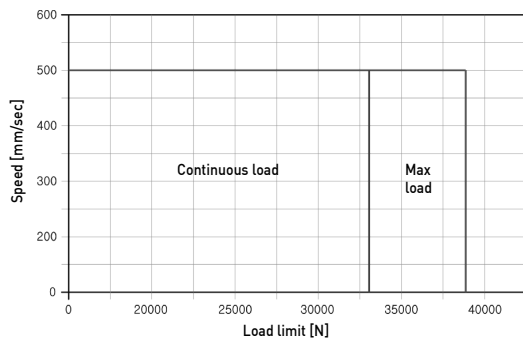


TKC140-**-B5005

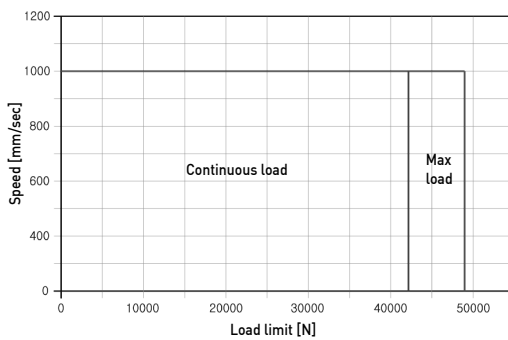


Electric Cylinders

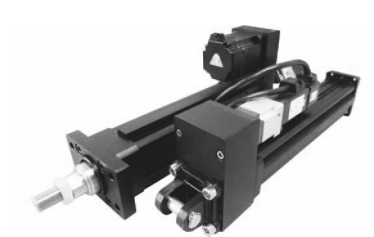
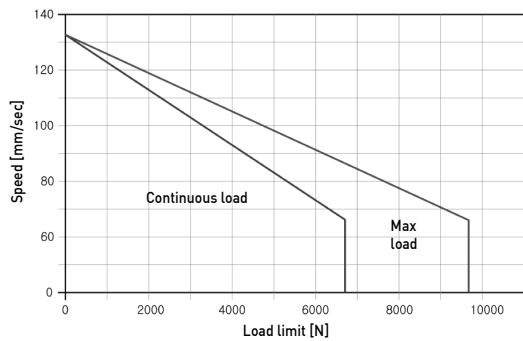
TKC140-**-B5010

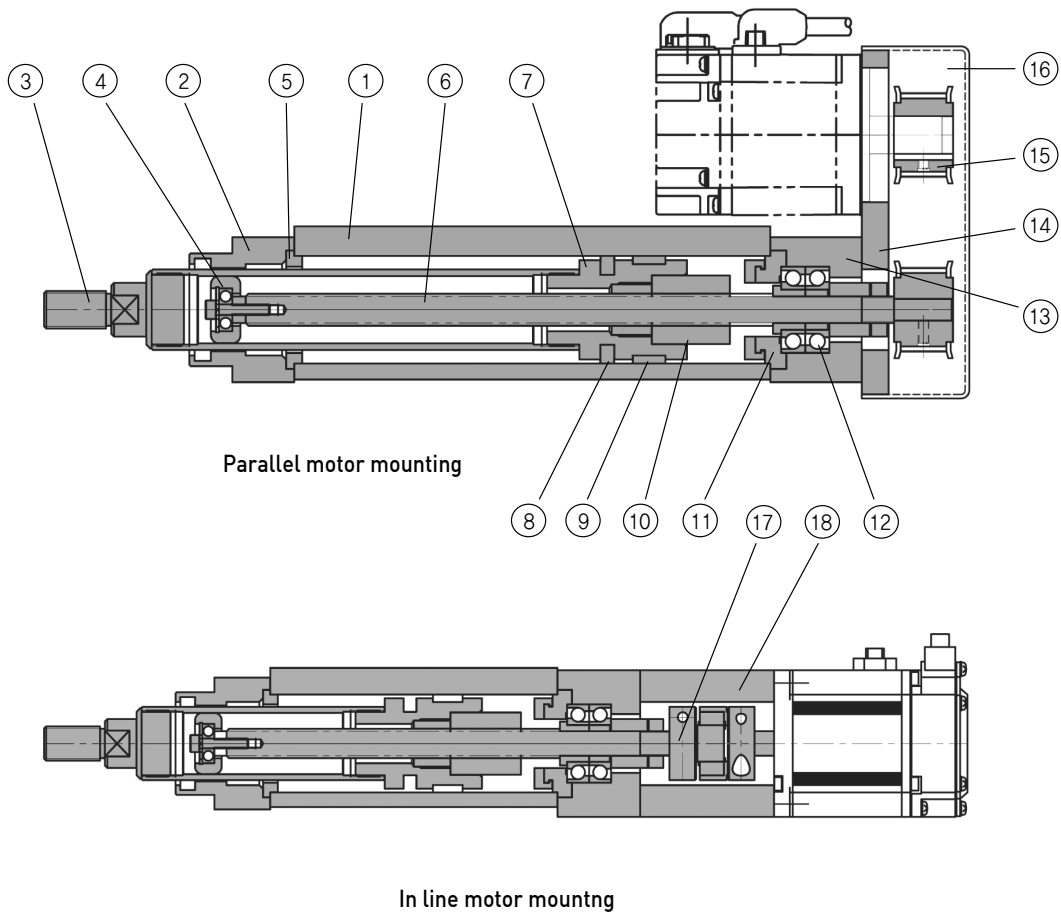


TKC140-**-B5020



TKC140-**-T5008

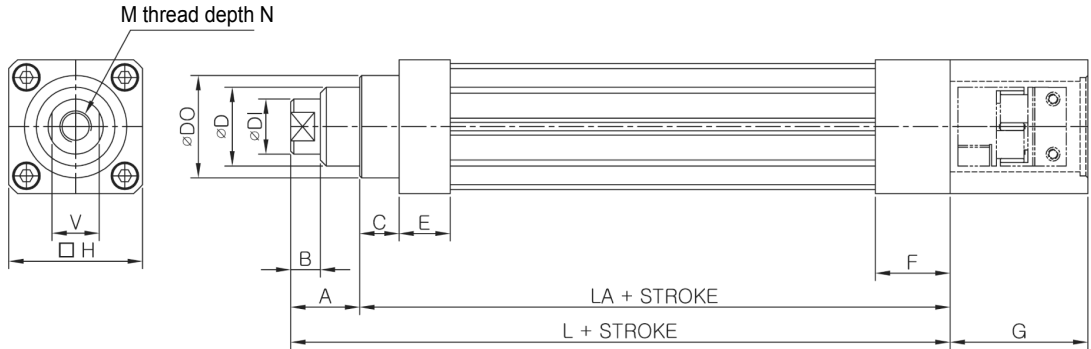




◆ List of components

NO.	Component	Material	NO.	Component	Material
1	Body	Aluminum	10	Screw nut	Heat treated steel
2	Rod cover	Aluminum	11	Tension plate	Stainless steel
3	Rod	Sus/S45+Chrome	12	Angular bearing	Heat treated steel
4	Roller unit	-	13	Bearing cover	Aluminum
5	Damper	Urethane	14	Motor bracket(parallel)	Aluminum
6	Ball screw	Heat treated steel	15	Belt/pulley	Synthetic rubber/Aluminum
7	Joint	Aluminum/stainless steel	16	Belt cover	Aluminum
8	Rubber magnet	Rubber	17	Coupling	-
9	Wearing	Synthetic resin	18	Motor bracket(In-line)	Aluminum

■ In- line motor mounting type [D]

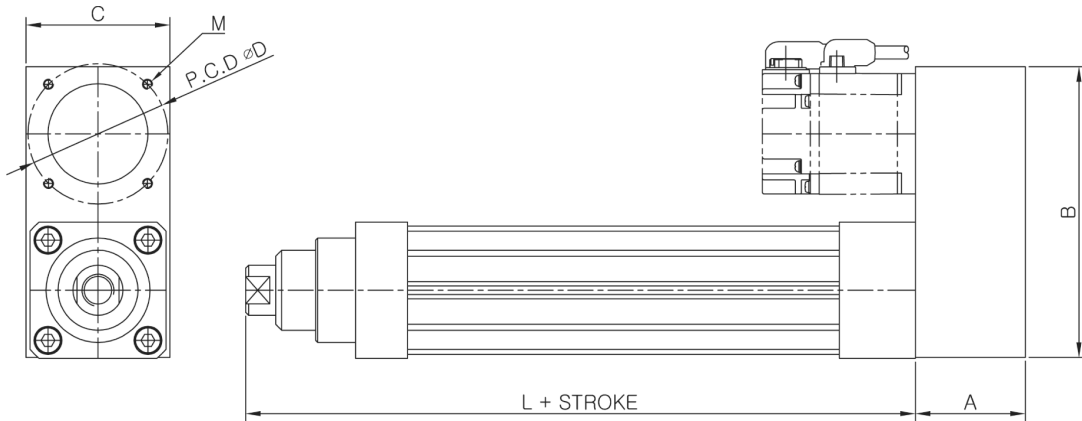


MODEL	A	B	C	D	DI	DO	E	F
TKC40	20	8	14	Ø 16	Ø 14	Ø 27	17	26
TKC45	22	10	14	Ø 25	Ø 21	Ø 34	24	30
TKC50	29	13	16	Ø 30	Ø 25	Ø 42	26	34
TKC60	35	15	20	Ø 40	Ø 30	Ø 52	29	44
TKC80	46	20	26	Ø 45	Ø 35	Ø 60	42	56
TKC120	59	25	34	Ø 85	Ø 60	Ø 106	60	82
TKC140	70	35	44	Ø 100	Ø 80	Ø 120	100	120

MODEL	[Note 1] G	H	L	LA	M	N	V
TKC40	46	42	162	142	M8x1.25	12	12
TKC45	50	48	190	168	M10x1.5	14	18
TKC50	56	54	215 (225)	186 (196)	M12x1.75	17	21
TKC60	70	68	248 (259)	213 (224)	M14x2.0	20	24
TKC80	80	80	330 (346)	284 (300)	M18x2.5	25	30
TKC120	110	120	429 (451)	370 (392)	M24x3.0	40	50
TKC140	170	150	581 (616)	511 (546)	M30x3.5	45	68

- () : Includes damper
- (Note 1) : changes depending on motor

■ Parallel motor mounting type [P]

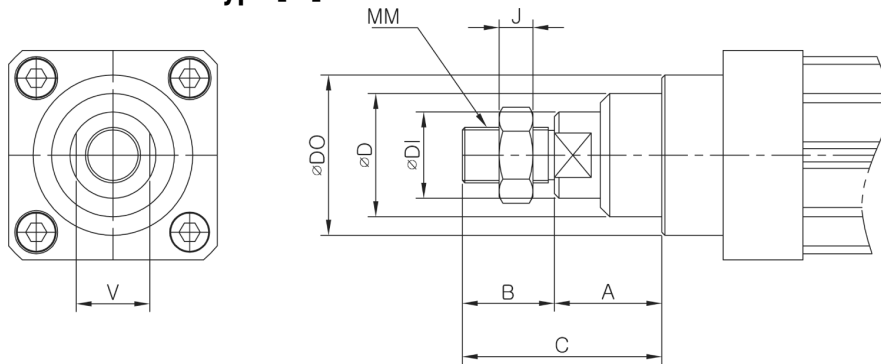


MODEL	(Note 1) A	(Note 1) B	(Note 1) C	(Note 1) D	L	(Note 1) M
TKC40	30	96	45	∅46	162	M4
TKC45	35	101	51	∅46	190 (200)	M4
TKC50	40	128	63	∅70	215 (225)	M5
TKC60	40	154	71	∅70	248 (259)	M5
TKC80	55	178	83	∅90	330 (346)	M6
TKC120	70	259	124	∅115	429 (451)	M8
TKC140	95	363	180	∅200	581 (616)	M12

- () : Includes damper
- (Note1) : changes depending on motor

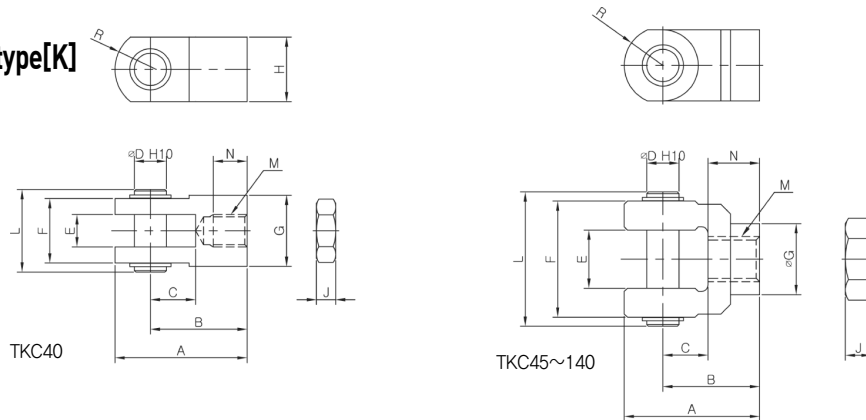


■ Male thread rod end type [M]



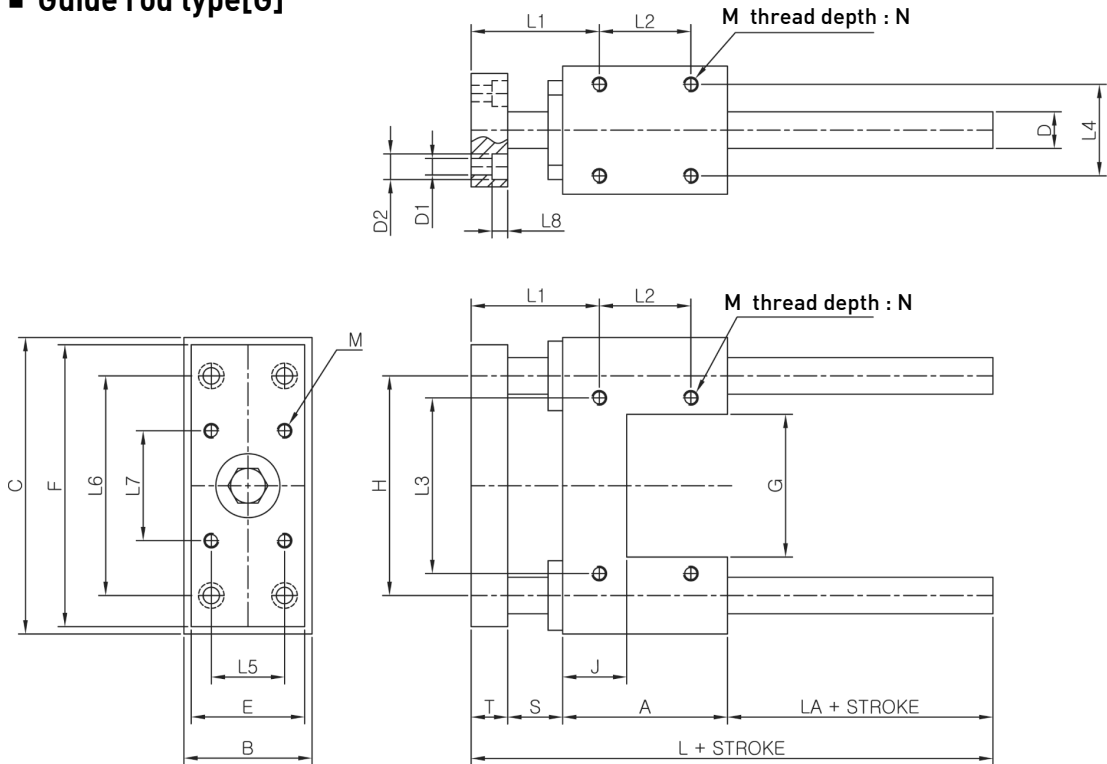
MODEL	A	B	C	D	DI	DO	J	MM	V
TKC40	20	20	40	∅16	∅14	∅27	6	M10x1.25	12
TKC45	22	25	47	∅25	∅21	∅34	8	M14x1.5	18
TKC50	29	30	59	∅30	∅25	∅42	11	M18x1.5	21
TKC60	35	40	75	∅40	∅30	∅52	13	M22x1.5	24
TKC80	46	50	96	∅45	∅35	∅60	16	M26x1.5	30
TKC120	59	70	129	∅85	∅60	∅106	21	M36x1.5	50
TKC140	70	100	170	∅100	∅80	∅120	27	M45x1.5	68

■ Knuckle joint type [K]



MODEL	A	B	C	D	E	F	G	H	J	L	M	N	R
TKC40	41	30	14	∅10	10 ^{+0.3} ₀	20	22	20	6	25.6	M10x1.25	10.5	12.8
TKC45	42	30	14	∅10	18 ^{+0.4} ₀	36	∅22	-	8	41.6	M14x1.5	16	12
TKC50	56	40	20	∅14	22 ^{+0.4} ₀	44	∅28	-	11	50.6	M18x1.5	20	16
TKC60	71	50	27	∅18	28 ^{+0.4} ₀	56	∅38	-	13	64	M22x1.5	23	21
TKC80	79	55	31	∅22	32 ^{+0.4} ₀	64	∅44	-	16	72	M26x1.5	24	24
TKC120	144	110	46	∅32	40 ^{+0.4} ₀	80	∅55	-	21	94.5	M36x1.5	64	34
TKC140	167.5	125	54	∅40	50 ^{+0.4} ₀	100	∅70	-	27	116	M45x1.5	71	42.5

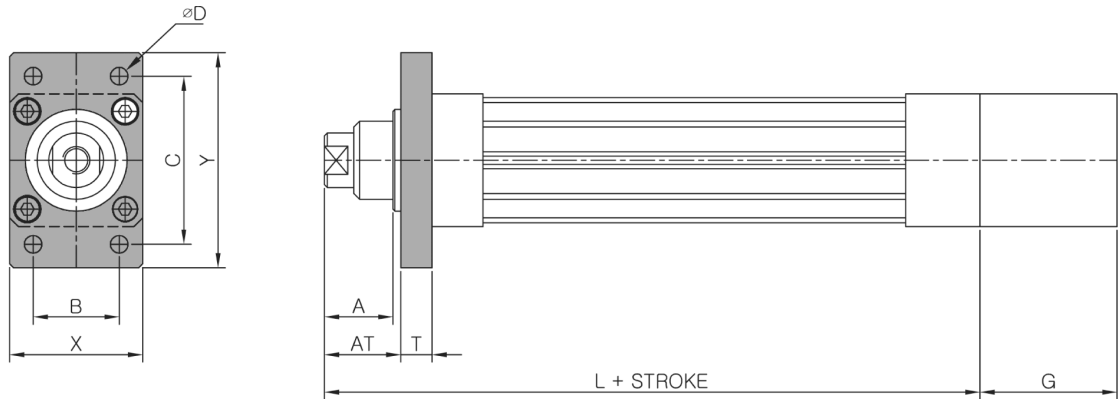
■ Guide rod type[G]



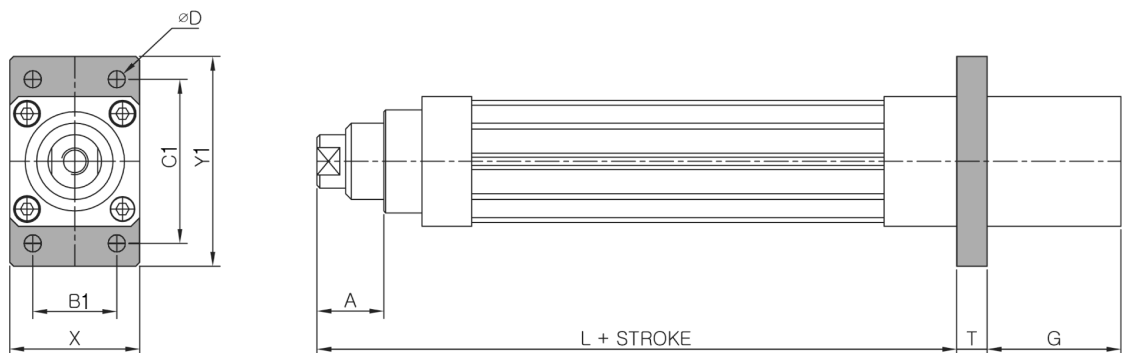
MODEL	A	B	C	D	D1	D2	E	F	G	H	J	L
TKC40	50	44	104	Ø10	Ø5.5	Ø9.5	38	98	48	76	16	117
TKC45	60	50	114	Ø12	Ø5.5	Ø9.5	44	108	54	84	16	131
TKC50	70	56	136	Ø16	Ø6.6	Ø11	50	130	60	98	25	154
TKC60	90	70	162	Ø20	Ø9	Ø14	62	154	78	120	35	185
TKC80	110	84	194	Ø25	Ø11	Ø17.5	74	184	94	144	50	220
TKC120	120	128	256	Ø30	Ø16	Ø23	114	242	136	196	70	255
TKC140	160	160	330	Ø35	Ø20	Ø29	140	310	170	250	70	314

MODEL	LA	L1	L2	L3	L4	L5	L6	L7	L8	M	N	S	T
TKC40	40	37	30	60	30	24	80	40	5.4	M5x0.8	10	17	10
TKC45	40	46	30	64	36	28	86	44	5.4	M5x0.8	10	19	12
TKC50	45	54	40	74	40	32	100	50	6.5	M6x1.0	12	23	16
TKC60	45	70	50	96	50	40	120	60	8.6	M8x1.25	16	30	20
TKC80	50	80	70	112	60	48	144	70	10.8	M10x1.5	20	36	24
TKC120	55	105	70	166	90	70	200	100	15.2	M14x2.0	28	45	35
TKC140	70	114	100	210	100	90	250	130	19.5	M18x2.5	40	44	40

■ In-line front flange type [F]



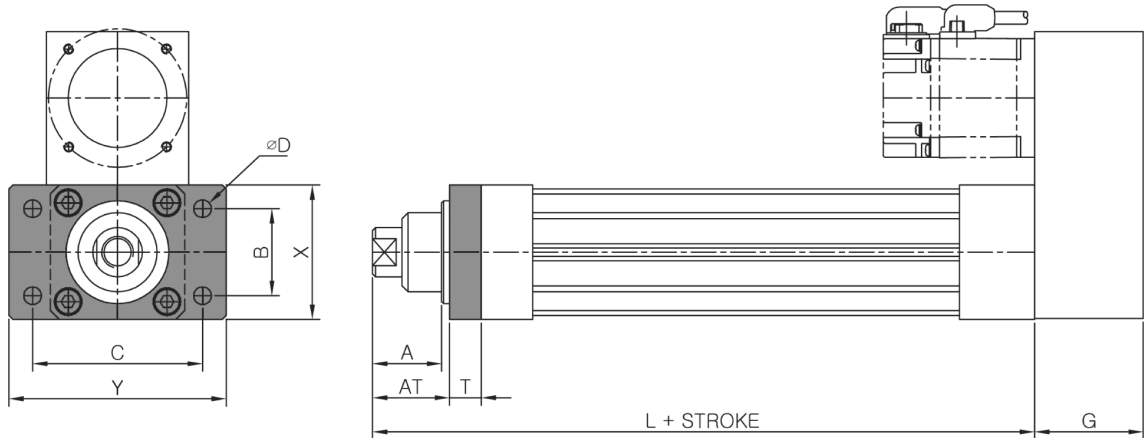
■ In-line rear flange type [R]



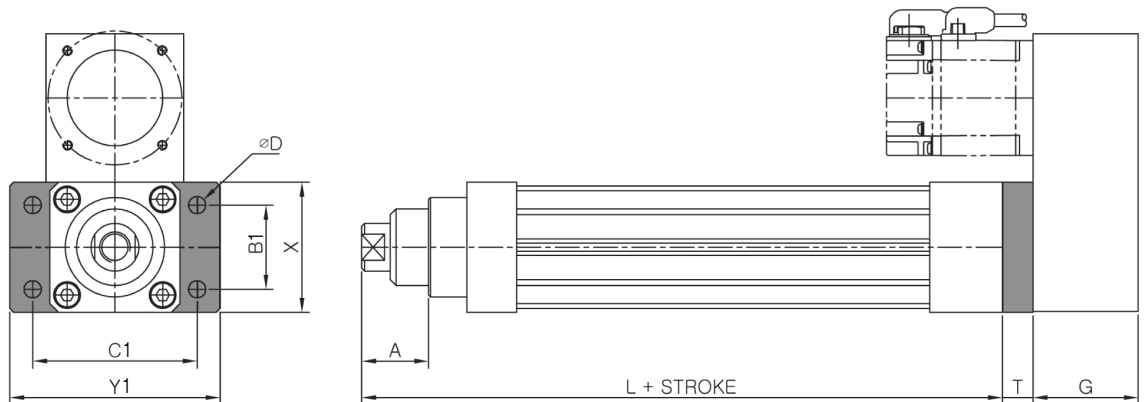
MODEL	A	AT	B	C	D	[Note 1] G	L	T	X	Y
			B1	C1						Y1
TKC40	20	24	28	52	ø5.5	46	162	10	42	66
			28	58						72
TKC45	22	26	34	60	ø5.5	50	190 (200)	10	48	74
			34	66						80
TKC50	29	33	36	70	ø6.6	56	215 (225)	12	54	88
			36	80						98
TKC60	35	39	44	86	ø9	70	248 (259)	16	68	110
			44	96						120
TKC80	46	52	50	104	ø11	80	330 (346)	20	80	134
			50	110						140
TKC120	59	65	84	158	ø16	110	429 (451)	28	130	194
			84	164						200
TKC140	70	78	100	200	ø20	170	581 (616)	36	162	252
			100	230						282

- () : Includes damper
- (Note1) : changes depending on motor

■ Parallel front flange[F]



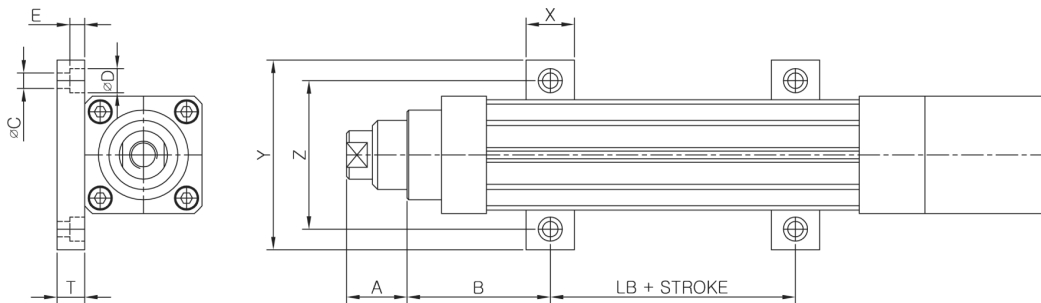
■ Parallel rear flange[R]



MODEL	A	AT	B	C	D	(Note 1) G	L	T	X	Y
			B1	C1						Y1
TKC40	20	24	28	52	Ø5.5	30	162	10	42	66
			28	58						72
TKC45	22	26	34	60	Ø5.5	35	190 (200)	10	48	74
			34	66						80
TKC50	29	33	36	70	Ø6.6	40	215 (225)	12	54	88
			36	80						98
TKC60	35	39	44	86	Ø9	40	248 (259)	16	68	110
			44	96						120
TKC80	46	52	50	104	Ø11	55	330 (346)	20	80	134
			50	110						140
TKC120	59	65	84	158	Ø16	70	429 (451)	28	130	194
			84	164						200
TKC140	70	78	100	200	Ø20	95	581 (616)	36	162	252
			100	230						282

- () : Includes damper
- (Note 1) : changes depending on motor

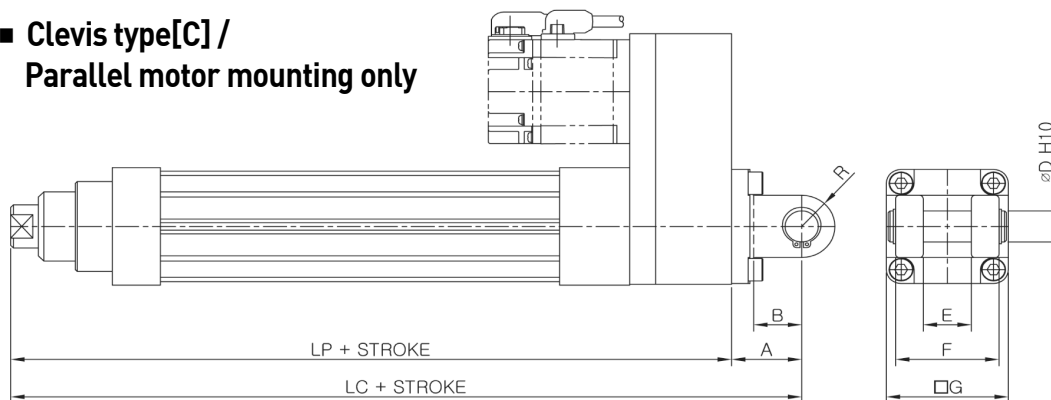
■ Foot mounting type



MODEL	A	B	C	D	E	LB	T	X	Y	Z
TKC40	20	58	Ø4.5	Ø8	4.4	31	8	14	66	52
TKC45	22	73	Ø5.5	Ø9.5	5.4	30	10	20	74	60
TKC50	29	77	Ø6.6	Ø11	6.5	40	12	24	88	70
TKC60	35	93	Ø9	Ø14	8.6	32	16	28	110	86
TKC80	46	115	Ø11	Ø17.5	10.8	66	20	34	132	104
TKC120	59	154	Ø16	Ø23	15.2	74	28	46	184	148
TKC140	70	214	Ø20	Ø29	19.5	107	36	60	260	200

■ "LB" can be customized

■ Clevis type[C] /
Parallel motor mounting only



MODEL	A	B	D	E	F	G	LC	LP	R
TKC40	20	14	Ø10	12	36	44	222	202	10
TKC45	20	14	Ø10	18	42	50	255 (265)	235 (245)	10
TKC50	30	20	Ø14	22	44	62	295 (305)	265 (275)	14
TKC60	38	27	Ø18	28	56	68	341 (352)	303 (314)	18
TKC80	45	31	Ø22	32	64	80	445 (461)	400 (416)	22
TKC120	66	46	Ø32	40	80	120	585 (607)	519 (541)	34
TKC140	84	54	Ø40	50	100	168	785 (820)	701 (736)	42.5

■ () : Includes damper

◆ Electric cylinder with gear box

(Order made)

①
②
③
④
⑤
⑥
⑦

TGC	60	-	B1610	-	100	-	C	D	M	-	S1
Series	Profile size		Movement		Stroke		Rod material	Damper	Rod end		Sensor

① Model	Profile size (mm)	② Movement	Type of movement (Screw diameter(mm)/Lead(mm))	③ Max stroke (mm)	Max motor capacity [W]
60	64	B1605	Ball Screw 16 / 5 Lead	800	1kW
		B1610	Ball Screw 16 / 10 Lead		
		T1804	TM Screw 18 / 4 Lead		
80	77	B2505	Ball Screw 25 / 5 Lead	1000	2kW
		B2510	Ball Screw 25 / 10 Lead		
		B2020	Ball Screw 20 / 20 Lead		
		T2004	TM Screw 20 / 4 Lead		
		T2805	TM Screw 28 / 5 Lead		
120	117	B4005	Ball Screw 40 / 5 Lead	1200	3.5kW
		B4010	Ball Screw 40 / 10 Lead		
		B4020	Ball Screw 40 / 20 Lead		
		B4040	Ball Screw 40 / 40 Lead		
		T4006	TM Screw 40 / 6 Lead		
		T5008	TM Screw 50 / 8 Lead		

④ Rod	Rod material
C	S45C + Chrome plate
S	SUS

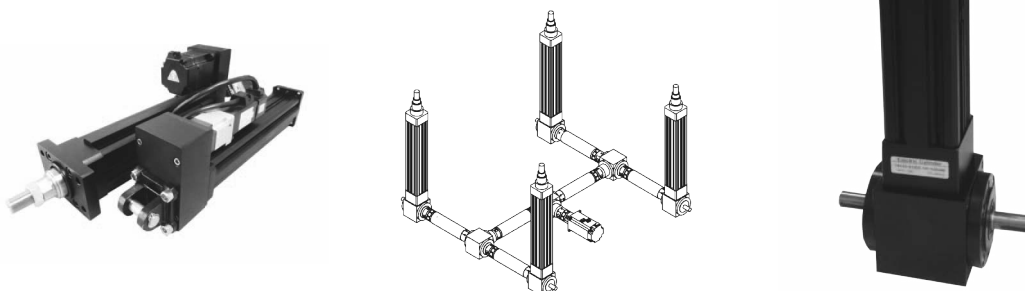
⑤ Damper	Damper
N	None
D	Front/rear damper

⑥ Rod end	Rod end type
M	Male thread
F	Female thread
K	Knuckle joint

⑦ Sensor	Type of magnet sensor	N/C	N/O	PNP
Blank	None	-	-	-
S1	Miniature (Ø4)no contact 3wire	2	1	-
S2		2	-	-
S3		-	2	-
S4		-	3	-
S5		-	-	2
S6		-	-	3

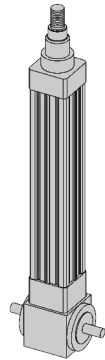
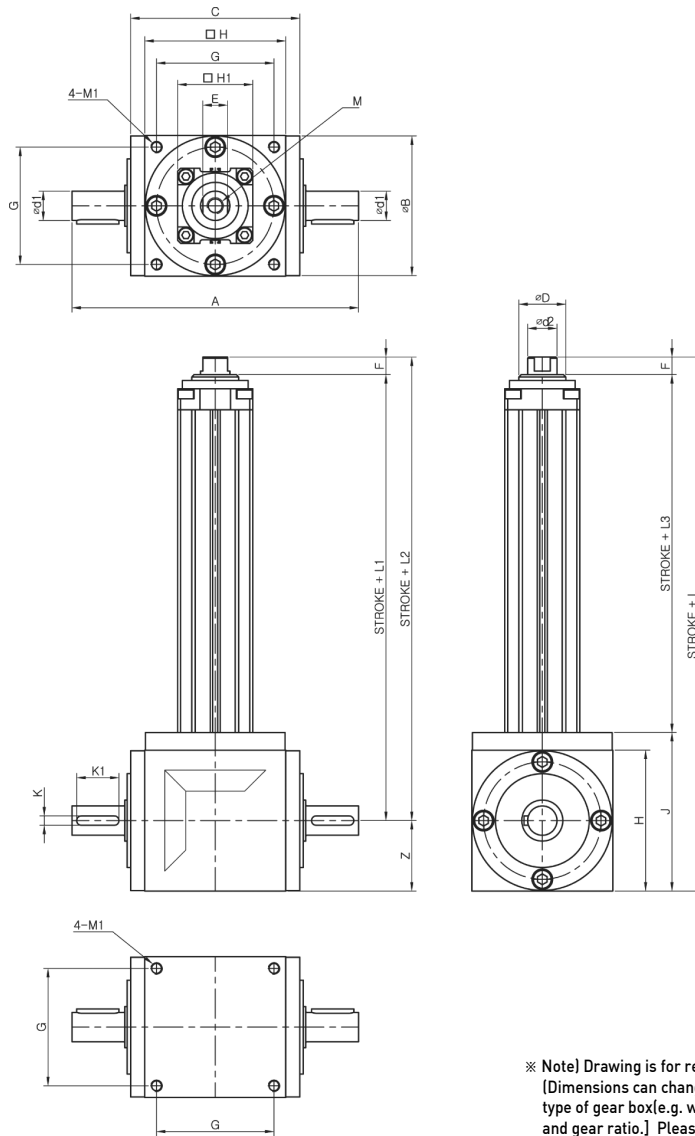
* Standard length : 1M

* N/O : normal open for NPN type



■ TGC

(Order made)



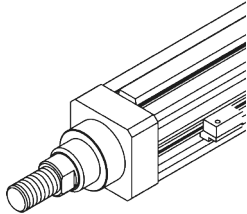
※ Note) Drawing is for reference only
 [Dimensions can change depending on
 type of gear box(e.g. worm gear, bevel)
 and gear ratio.] Please contact us for more information.

MODEL	L	L1	L2	L3	A	B	C	D	d1	d2	E	F	G	H	H1	J	K	K1	M	M1
TGC60	339	291.5	306.5	249	144	64	84	40	12	28	24	15	54	65	64	75	4	20	M14x2.0P	M6
TGC80	450	385	405	330	190	89	110	45	18	35	30	20	70	90	77	100	6	28	M18x2.5P	M8
TGC120	603	518	543	466	244	119	144	70	25	56	42	25	100	120	117	112	8	36	M24x3.0P	M10

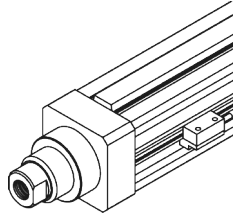
※ L, L1, L2 and L3 changes depending on type of ball screw.

■ Types of rod end

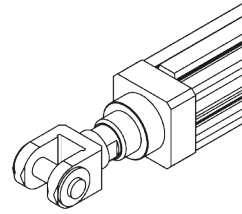
(Order made)



Male thread



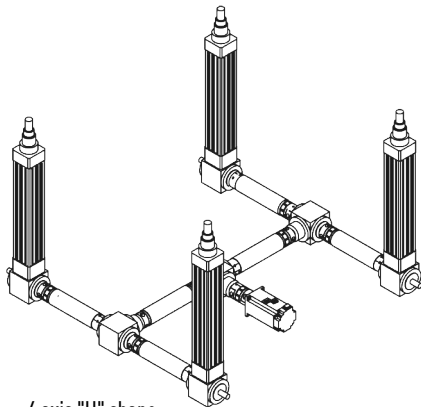
Female thread



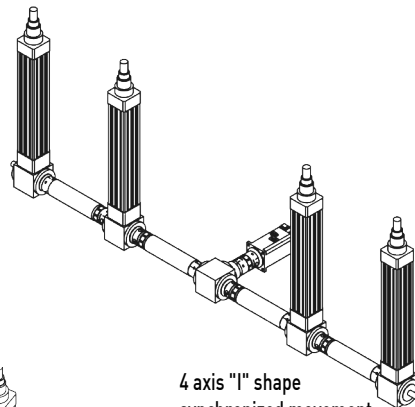
Knuckle joint

MODEL	Input axis torque limit[Nm]							
	Input RPM							
	3000	2400	1500	1000	750	500	250	50
TGC60	10	10	11	12	13	15	17	18
TGC80	27	28	32	34	37	40	44	50
TGC120	66	70	82	92	103	115	123	130

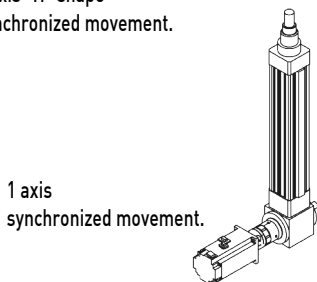
Layouts of various applications



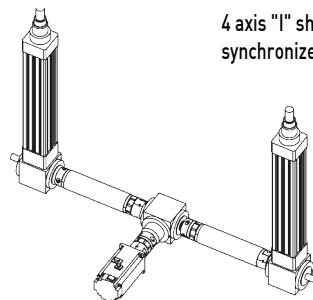
4 axis "H" shape synchronized movement.



4 axis "I" shape synchronized movement.

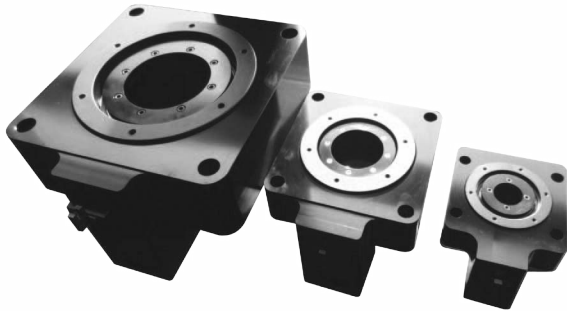


1 axis synchronized movement.



2 axis synchronized movement.

KRA series– Electric rotary actuator(hollow type)



Series	KRA104-SV	KRA104-ST	KRA150-SV
Motor	100W-40, Servo Motor	EDCI-42V24/L, Step Motor	400W-60, Servo Motor
Input table support bearing	Crossed Roller Bearing(4010)	Crossed Roller Bearing(4010)	Crossed Roller Bearing(7013)
Table torque limit [N.m]	1.6	1.2	13
Table rotation speed limit [rpm]	200	100	200
Gear ratio	1:5	1:5	1:10
Backlash(lost Motion) [°]	0.16~0.33	0.16~0.33	0.16~0.33
Resolving power [ppr]	4,194,304 x 5	10,000 x 5	4,194,304 x 10
Repetition positioning precision [°]	±0.042	±0.042	±0.042
Thrust load limit [N]	compression: 833/ Tension: 166	compression: 833/ Tension: 166	compression: 1940/ Tension: 388
Input table wobble [mm]	±0.06	±0.06	±0.08
Weight (motor not included) [kg]	1.3	1.3	4

Series	KRA150-ST	KRA250-SV	KRA250-ST
Motor	EDCI-60V24/L, Step Motor	750W-80, Servo Motor	EDCI-86V48/L, Step Motor
Input table support bearing	Crossed Roller Bearing(7013)	Crossed Roller Bearing(12025)	Crossed Roller Bearing(12025)
Table torque limit [N.m]	5.6	28.8	12.6
Table rotation speed limit [rpm]	100	200	100
Gear ratio	1:10	1:12	1:12
Backlash(lost Motion) [°]	0.16~0.33	0.16~0.33	0.16~0.33
Resolving power [ppr]	10,000 x 10	4,194,304 x 12	10,000 x 12
Repetition positioning precision [°]	±0.042	±0.042	±0.042
Thrust load limit [N]	compression: 1940/ Tension: 388	compression: 4460/ Tension: 890	compression: 4460/ Tension: 890
Input table wobble [mm]	±0.08	±0.10	±0.10
Weight (motor not included) [kg]	4	16	16

TEF series–Electric gripper

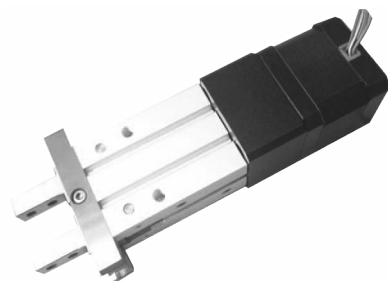
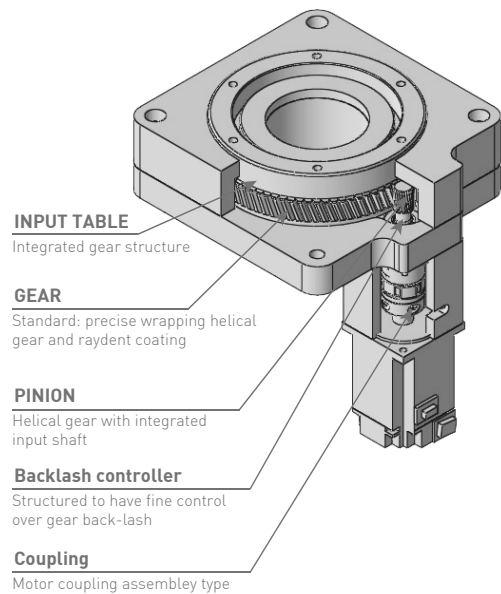
- Step motor or servo motor option available
Step motor for small capacity and low speed (TEF 10,16,20,25)
Servo motor(40) for large capacity and high speed (TEF 20,25)
- Applies specially processed ball screw and nut
Durability increased with special steel and special coating
Improved gripping force
- Long stroke and various mountings
Rear flange type

► Customization available

- Servo/step motor can be easily attached to the rotary actuator with coupling
- Compact and simple design
- Precise helical gear and cross roller bearing offers maximum efficiency
- Motor capacity 50W(40)~750W(80) with planetary gear.

► Customization available

Features



Series	Size	Open/closing stroke (mm)	Gripping force (N)	Opening/closing speed (mm/s)
TEF	10	4	10	3~60
	16	6	34	3~60
	20	10	42	3~80
	25	14	62	3~80

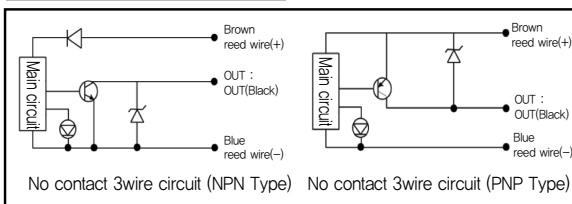
Magnetic auto switch



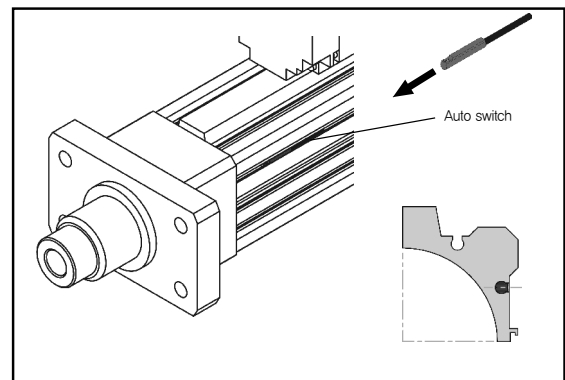
Specifications

Specification	N/O (D-F9N-AP)	N/C (D-F9N-(N/C)AP)	NPN (D-F9N-AP)
Wire & Output	No contact 3 wire	No contact 3 wire (PNP)	No contact 3 wire (NPN)
SIZE	DIA. 4		
Application	Robot limit sensor	Relay, sequence controller	
Voltage Load	DC 24V		
Current Load	<100mA		
Circuit protection against contact	Built-in		
Direction of reed wire	Horizontal		
Indicator lamp	Green LED	Red LED	
Mounting	Fixed screw in S/W groove		
Inner voltage dip	<1.5V		
Current leakage	<100mA		
Current consumption	<5mA		
Action time	<1.2ms		
Reed wire	Oil resistant vinyl cabtyre		
Shock resistance	30G		
Insulation resistance	over 50MΩ in DC500V		
Voltage resistance	1minute in AC1500V		
Environment temperature	-10 ~ 60°C		

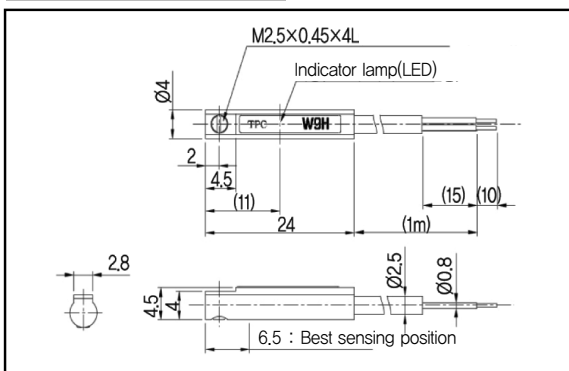
Inner circuit



How to mount



Size



Linear Robot

Compact Linear stage





LSI Series Linear Robot Module

- Variety of base width (150, 175, 200, 280 mm)
- Long stroke (over 4,000mm) and multi mover available
- High speed option available – Max 2,000 mm/sec
- Competitive pricing with TPC linear motor
- Can be used with other linear motor brands
- Built-in precise linear encoder
- Customization available
 - Mounting type and position of limit sensor and other accessories
- Detachable side cover for easy maintenance
- Quick delivery time

How to order

LSI 150 – 120 N – 0000 S1 – 10 H – B – P140012-0

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Series

LSI(standard single base)

② Model(width of base:mm)

Width of base
 ☞ 150, 175, 200, 280

③ Linear Motor (unit : newton)

Base	120N	180N	370N	500N	550N	750N	1200N	2400N
150	•	•						
175			•	•				
200					•	•		
280							•	•

④ Manufacturer of linear motor

N : NMT(TPC subsidiary)

⑤ Moving Stroke

Stroke of moving slide
 ☞ 100mm ~ 2,000 mm

⑥ Moving slide count

Moving slide count

⑦ Linear encoder resolving power

10 : 1.0 μm (square wave signal)

⑧ Manufacturer of encoder

H : Heidenhain

⑨ Color

Color of anodized surface

☞ N : None

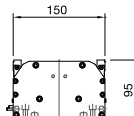
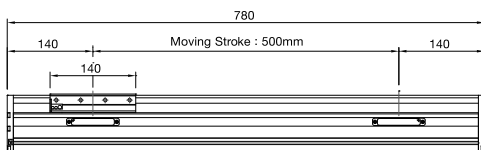
☞ B : Black

☞ W : White

⑩ Customization code

Linear robot order(example)

▶ LSI150-120N-500S1-10H-B



- Aluminum profile base with 150mm width
- 120N linear motor
- Moving stroke(limit to limit):500mm/single slide
- 1μm resolving power encoder (TTL output)
- Color surface : black anodized
- Length of robot: 780mm length
 - ※ Stroke (500mm) + Slide (140mm) + Stopper (140mm)
 - ※ For more details, please refer to 198-199 page

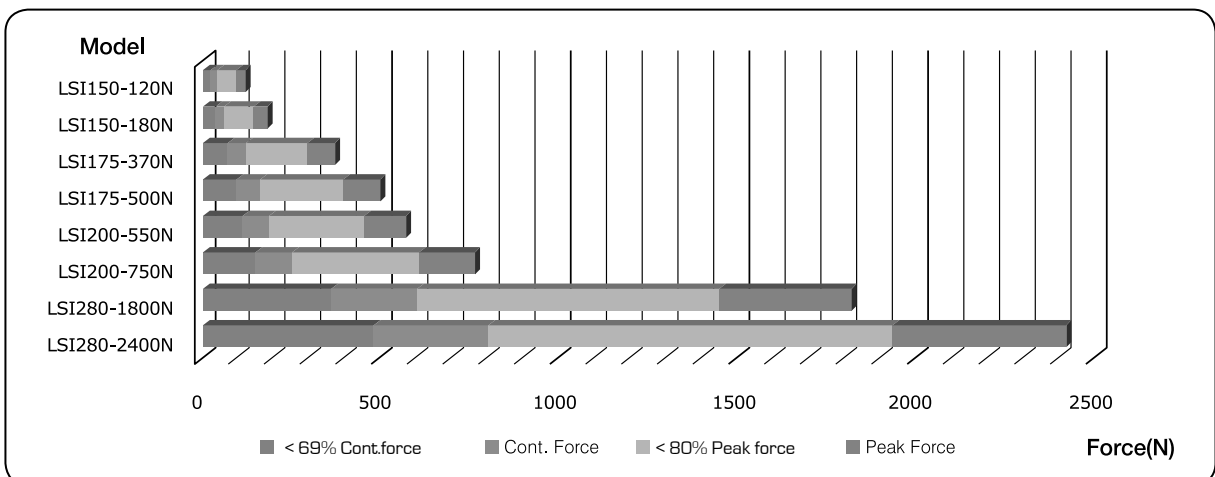
Linear Robot Specifications

Linear Robot	LSI 150 Series		LSI 175 Series		LSI 200 Series		LSI 280 Series	
Linear Motor	120N	180N	370N	500N	550N	750N	1800N	2400N
Continuous Force (F _{cn})	40 N	61 N	124 N	166 N	190 N	254 N	605 N	806 N
Peak Force (F _{pk})	122 N	183 N	373 N	498 N	572 N	763 N	1,815 N	2,420 N
Maximum Stroke (1)	4,000 mm (Please contact us for over 4,000mm stroke)							
Position Repeatability	± 3.0 μm (@ Linear Encoder Resolution : 1.0 μm)							
Accuracy (2)	± 10 μm / 300 mm							
Flatness/ Straightness	± 10 μm / 300 mm							
Maximum Velocity	2,000 mm/sec (Without Payload)							
Maximum Acceleration	1.0 G							

※ The max customizable moving stroke is 10,000mm

Linear Motor Specifications

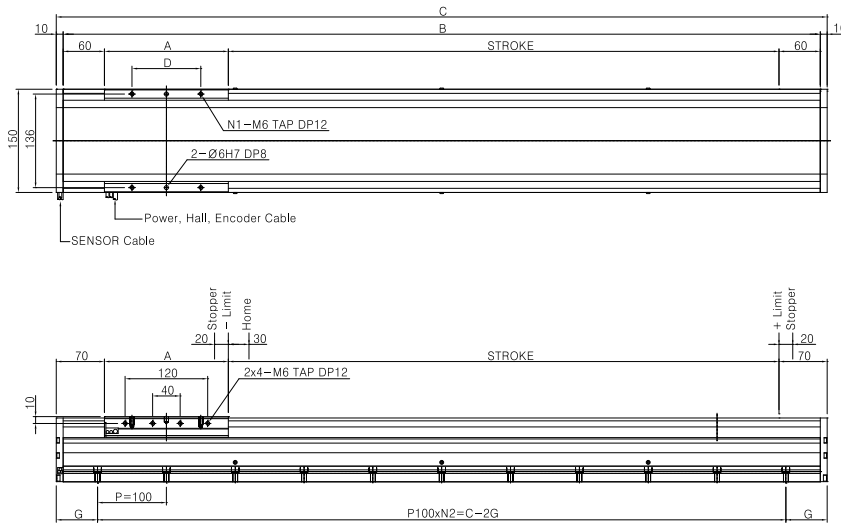
Linear Robot		LSI 150 Series		LSI 175 Series		LSI 200 Series		LSI 280 Series	
Linear Motor		120N	180N	370N	500N	550N	750N	1800N	2400N
Continuous Current (I _{cn})	Arms	1.3	1.3	2.0	2.0	3.8	3.8	6.4	6.4
Peak Current (I _{pk})	Arms	3.9	3.9	6.0	6.0	11.4	11.4	19.2	19.2
Coil Force Constant (K _f)	N/Arms	31.3	47.0	62.3	83.0	50.3	66.9	94.6	126.1
B-EMF Constant (K _e)	V/(m/s)	15.9	23.8	32.3	43.0	21.0	28.0	48.9	65.3
Coil Resistance (R ₂₅)	Ω (p-p)	5.4	8.1	6.7	8.9	2.7	3.6	2.9	3.8
Inductance	mH(p-p)	10.7	16.0	18.9	25.2	9.9	13.1	22.5	29.9
Normal Force (F _m)	mH(p-p)	203.7	305.6	622.8	830.4	954.5	1272.6	3025.4	4033.9



Linear Robot

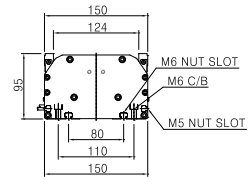
LSI 150 Model Dimensions

(unit : mm)



Weight		
Standard weight	End plate, stopper base, slide and cable not included	2,00 kg
Weight of base	Weight per 100mm base	1,67 kg

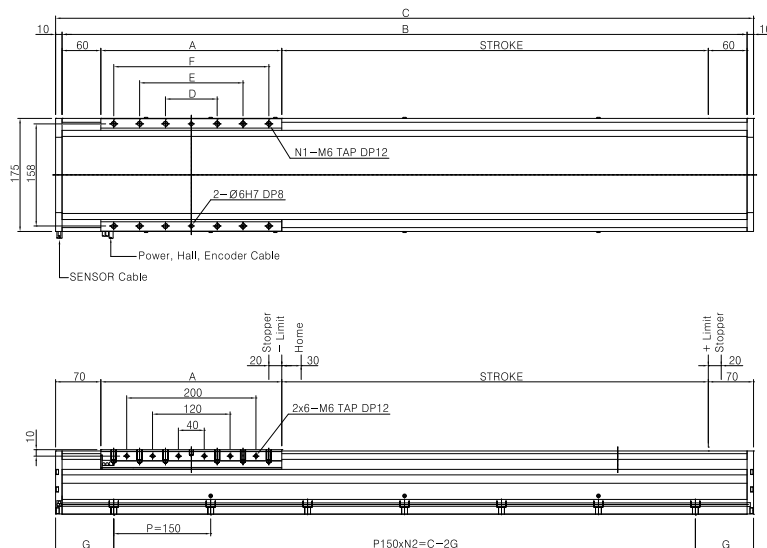
Total weight
=standard weight +(weight per base × length of rail/100) + slide weight + options



Model	A	B	C	D	E	F	N1	Slide Weight
LSI 150-120N	140 mm	ST + 260 mm	ST + 280 mm	80 mm	-	-	4 ea	3,2 kg
LSI 150-180N	180 mm	ST + 300 mm	ST + 320 mm	100 mm	-	-	4 ea	3,6 kg

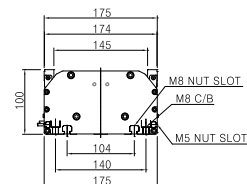
LSI 175 Model Dimensions

(unit : mm)



Weight		
Standard weight	End plate, stopper base, slide and cable not included	2,50 kg
Weight of base	Weight per 100mm base	2,15 kg

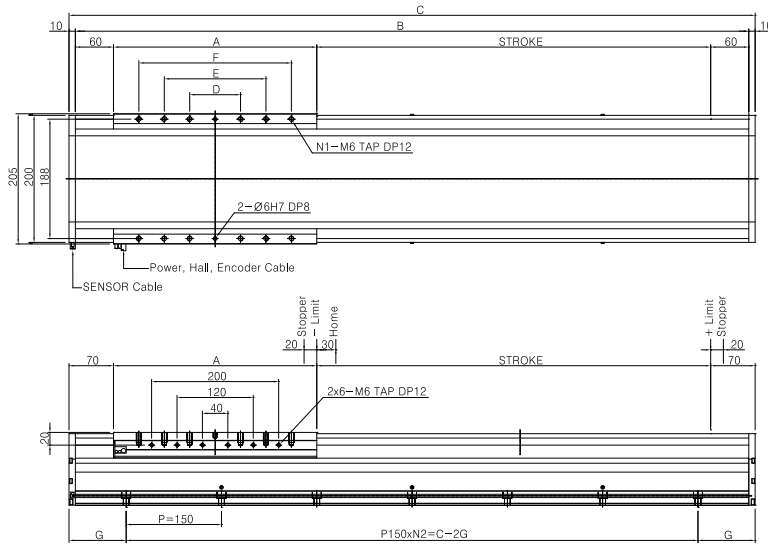
Total weight
=standard weight +(weight per base × length of rail/100) + slide weight + options



Model	A	B	C	D	E	F	N1	Slide Weight
LSI 175-370N	220 mm	ST + 340 mm	ST + 360 mm	80 mm	160 mm	-	8 ea	5,2 kg
LSI 175-500N	280 mm	ST + 400 mm	ST + 420 mm	80 mm	160 mm	240 mm	12 ea	6,1 kg

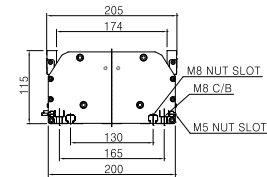
LSI 200 Model Dimensions

(unit : mm)



Weight		
Standard weight	End plate, stopper base, slide and cable not included	3,60 kg
Weight of base	Weight per 100mm base	2,71 kg

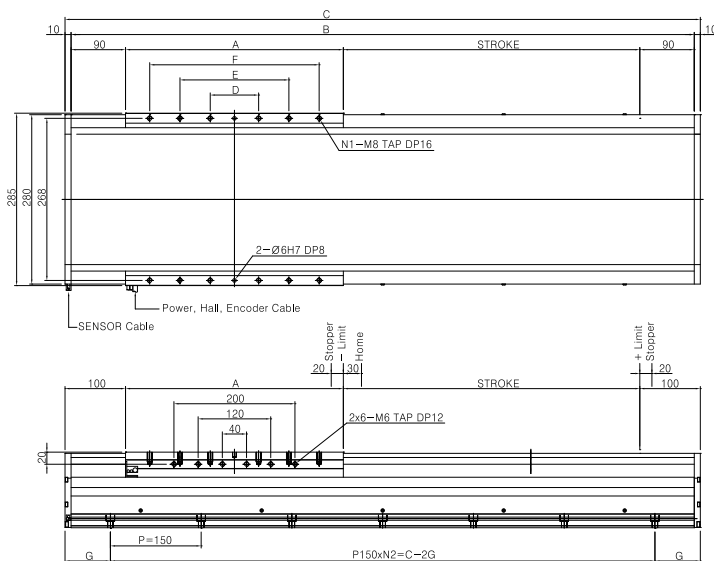
Total weight
 =standard weight +(weight per base × length of rail/100) + slide weight + options



Model	A	B	C	D	E	F	N1	Slide Weight
LSI 200-550N	280 mm	ST + 400 mm	ST + 420 mm	80 mm	160 mm	240 mm	12 ea	9,7 kg
LSI 200-750N	320 mm	ST + 440 mm	ST + 460 mm	80 mm	160 mm	240 mm	12 ea	10,8 kg

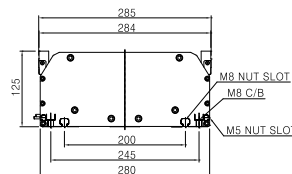
LSI 280 Model Dimensions

(unit : mm)



Weight		
Standard weight	End plate, stopper base, slide and cable not included	5,50 kg
Weight of base	Weight per 100mm base	3,92 kg

Total weight
 =standard weight +(weight per base × length of rail/100) + slide weight + options



Model	A	B	C	D	E	F	N1	Slide Weight
LSI 280-1800N	360 mm	ST + 540 mm	ST + 580 mm	80 mm	180 mm	280 mm	12 ea	20,8 kg
LSI 280-2400N	460 mm	ST + 640 mm	ST + 680 mm	80 mm	240 mm	400 mm	12 ea	27,5 kg

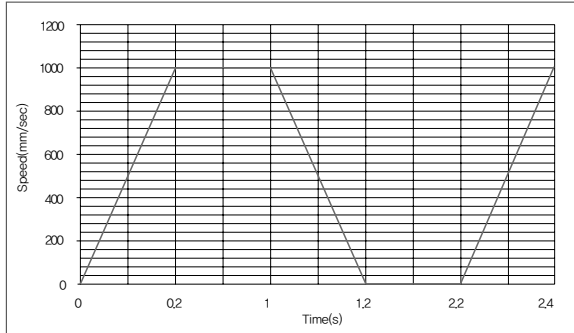
Linear Robot

How to select linear motor(example)

Pay Load, M_p : 20 kg
 Stroke, S : 1,000 mm
 Velocity, V : 1,000 mm/ sec

Acceleration, A : 0.5 G ($1G=10m/s^2$)
 T_w : 1 sec

(1) Speed profile



- Acceleration time (T_a) = Deceleration time (T_d)
 $T_a = V / A = 1000 / 5000 = 0.2$ sec
- Constant time (T_c)
 $T_c = [S - V \{(T_a + T_d) / 2\}] / V$
 $= [1000 - 1000 \{(0.2 + 0.2) / 2\}] / 1000 = 0.8$ sec
- Cycle Time (T)
 $T = T_a + T_c + T_d + T_w = 0.2 + 0.8 + 0.2 + 1 = 2.2$ sec

(2) Linear robot selection procedure

- 1) Calculate thrust force along with acceleration time and payload and then select appropriate model
 $F = M_p \times A = 20 \text{ kg} \times 0.5 \text{ G} \times 10 \text{ m/s}^2 = 100 \text{ N}$ (For linear robots with over 100N constant thrust force, select linear robot with linear motor)
- 2) Selected model of linear robot : LSI175-370N

Continuous Force (F_{cn})	124.5 N	Coil Resistance (R_{25})	6.7 ohm
Continuous Current (I_{cn})	2 Arms	Coil Force Constant (K_f)	62.2 N/Arms
Peak Force (F_{pk})	373.7 N	B-EMF constant (K_e)	32.2 V/(m/s)
Peak Current (I_{pk})	6 Arms	Inductance ($p-p$)	18.9 mH
Normal Force (F_m)	622.8 N	Moving Slide Weight (M_s)	5.2 kg
Bearing friction coefficient (μ)	0.05 (depends on bearing)	Bearing frictional force (F_e)	20 N (depends on bearing)

3) Calculation of each factor

Factor	Symbol	Calculation formula	Calculation
Total payload	M_t	$M_p + M_s$	$= 20 + 5.2 = 25.2 \text{ kg}$
Inertial force	F_i	$M_t \times A \times 10$	$= 25.2 \times 0.5 \times 10 = 126 \text{ N}$
Payload frictional force	F_f	$\mu \times M_t \times 10$	$= 0.05 \times 25.2 \times 10 = 12.6 \text{ N}$
Attracting frictional force	F_n	$\mu \times F_m$	$= 0.05 \times 622.8 = 31.1 \text{ N}$
Total frictional force	F_t	$F_f + F_n + F_e$	$= 12.6 + 31.1 + 20 = 63.7 \text{ N}$
Accelerating thrust force	F_a	$F_t + F_i$	$= 63.7 + 126 = 189.7 \text{ N}$
Constant thrust force	F_c	F_t	$= 63.7 \text{ N}$
Decelerating thrust force	F_d	$F_t - F_i$	$= 63.7 - 126 = -62.3 \text{ N}$
Max thrust force rate	F_p	F_a (biggest value out of F_a, F_c and F_d)	$= 189.7 \text{ N} \times \text{Thrust force under payload}$
Constant thrust force rate	F_{rms}	$\sqrt{\{(F_a^2 \times T_a + F_c^2 \times T_c + F_d^2 \times T_d) / T\}}$	$= \sqrt{\{(189.7^2 \times 0.2 + 63.7^2 \times 0.8 + (-62.3)^2 \times 0.2) / 2.2\}} = 71.4 \text{ N}$
Max current rate	I_p	F_p / K_f	$= 189.7 / 62.2 = 3.1 \text{ Arms} \times \text{Current under payload}$
Constant current rate	I_c	F_{rms} / K_f	$= 71.4 / 62.2 = 1.2 \text{ Arms}$
Bus Voltage	V_{bus}	$I_{pk} \times R_{25} + K_e \times V$	$= 6 \times 6.7 + 32.2 \times 1 = 72.4 \text{ Vdc}$

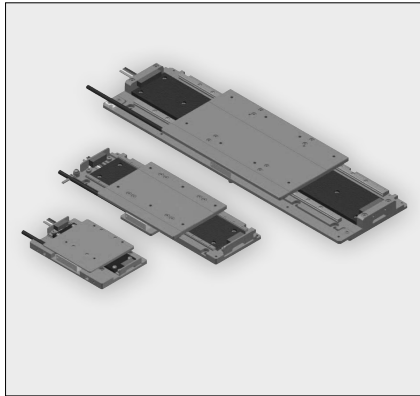
4) Final selection

- The appropriate model (LSI175-370N) meets working conditions. If not, please recheck the payload and speed or consider another models.

Max payload rate	%	Max thrust force rate/Max thrust force (F_p / F_{pk})	$= 189.7 / 373.7 \times 100 = 50.8 \%$	<80% recommended
Rated payload rate	%	Constant thrust force rate/Constant thrust force	$= 71.4 / 124.5 \times 100 = 57.3 \%$	<60% recommended

- Linear driver selection

- Max driver current >3.1 Arms(I_p , rated max current)
- Constant driver current >1.2Arms(I_c ,rated constant current)
- Bus voltage value: >80% of max applied voltage (ex. If applied voltage is 311Vdc(220Vac),voltage within 248Vdc is sufficient)



Features

- Ultra thin design to save space
- Thin linear motor with high thrust force
- Superior constant and high speed
- Space saving

How to order

PLS 54 - 6N - 30 S1 - 05H - B - P140012-0

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series
PLS

② Model(unit:mm)
54 : width of base 54mm
64 : width of base 64mm
82 : width of base 82mm

③ Linear motor

Model	5N	25N	40N
PLS54	●		
PLS64		●	
PLS82			●

④ Moving Stroke
15 : 15mm
30 : 30mm
70 : 70mm
120 : 120mm

Stroke	PLS54-5N	PLS64-25N	PLS82-40N
15	●		
30	●	●	●
70		●	●
120			●

⑤ Moving slide count
S1 : slider 1pc

⑥ Linear encoder resolving power
05H : 0.5μm(Square wave signal)

⑦ Color
Color of anodized surface
N : None
B : Black
W : White

⑧ Customization code

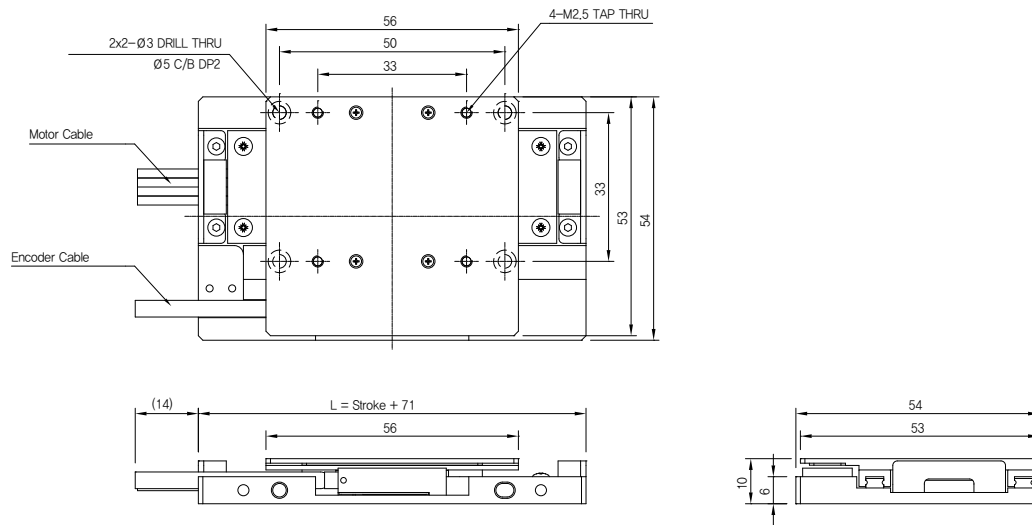
PLS Series Specification

Model	Item number												
	PLS54N15		PLS54N30		PLS64N30		PLS64N70		PLS82N30		PLS82N70		PLS82N120
Size													
Max thrust force	N	4				25				40			
Thrust force rate	N	0.8	1	7	7	10	10	10	10	10	10	10	10
Max payload	kg	0.5	0.5	5	5	5	5	5	5	5	5	5	5
Stroke	mm	15	30	30	70	30	70	30	70	30	70	120	120
Repetition accuracy	μm	±0.5				±0.5				±0.5			
Resolving power	μm	0.5				0.5				0.5			
Max speed	mm/s	200	300	300	500	300	500	300	500	300	500	1000	1000

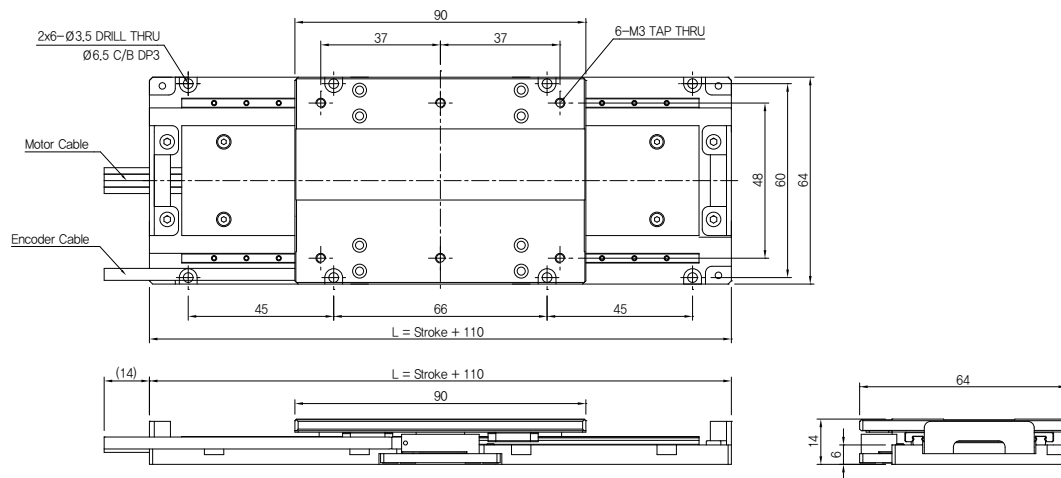
Ultra thin linear stage

PLS Series Dimension

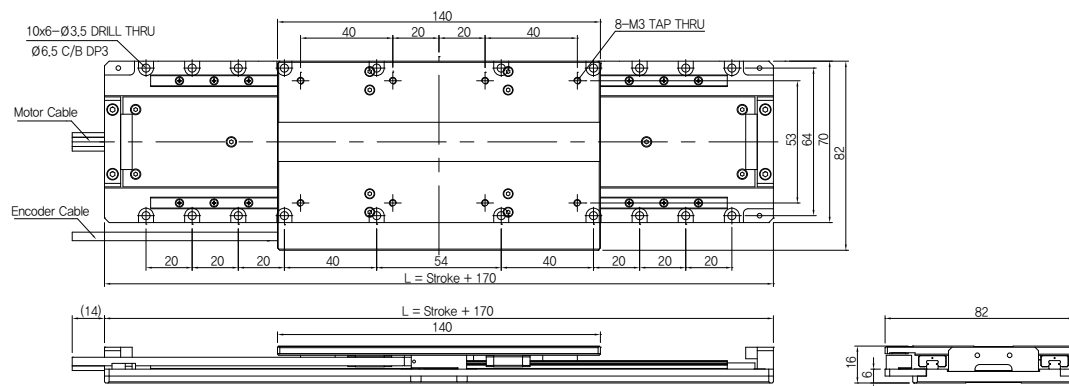
PLS54 Series



PLS64 Series



PLS82 Series





Features

- Saves space
- Optimize for customization
- Stroke (mm) : 45, 120, 200, 275
- Repetition accuracy : under 1μm
- LM guide type
- One side motor option available

How to order

TLR **50NI** – **404** – **A0G** **B** – **P140012-0**

① ② ③ ④ ⑤ ⑥

① **Series**
TLR

② **Linear motor**
50NI : one side motor with max thrust force 50N
25NI : one side motor with max thrust force 25N

Model	5N	25N	40N
PLS54	•		
PLS64		•	
PLS82			•

③ **Total length(unit : mm)**
404 : 404mm
300 : 300mm
240 : 240mm
120 : 120mm

④ **Linear encoder resolving power**
A0G : 1vpp(sinusoidal voltage signal)
05H : 0.5μm(square wave signal)

⑤ **Color**
B : Black

⑥ **Customization code**

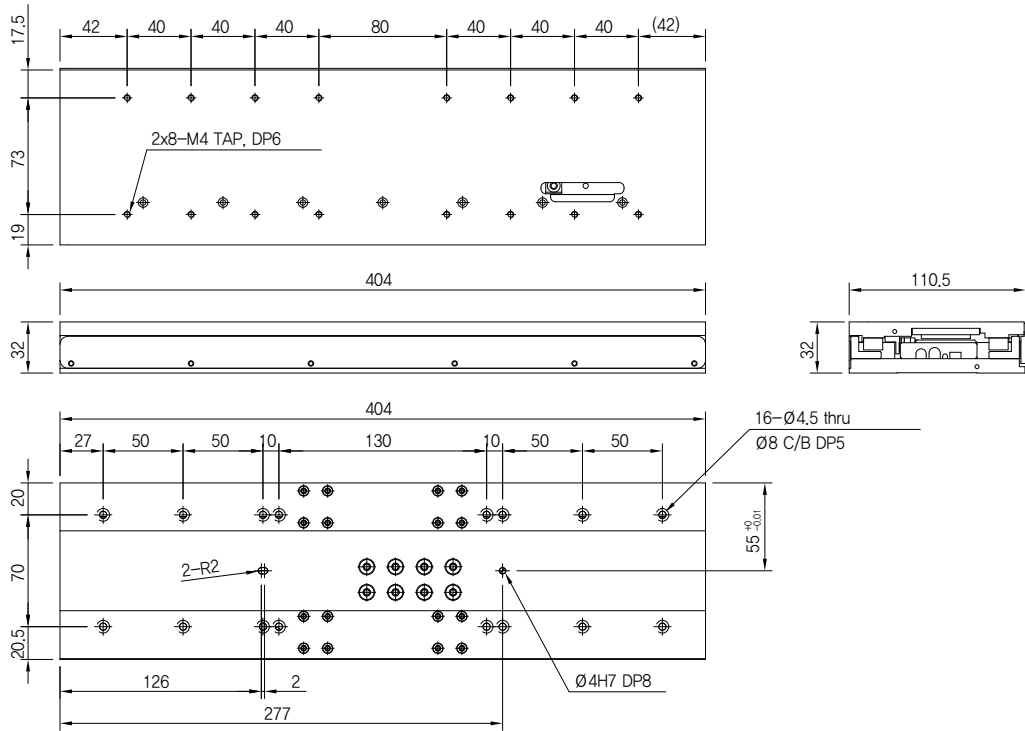
TLR Series Specification

Model	TLR-50NI-404	TLR-25NI-300	TLR-25NI-240	TLR-25NI-120
Pay Load	4.2 kg @ Slide	3.0 kg @ Slide	2.3 kg @ Slide	1.5 kg @ Slide
Moving Travel	275 mm	200 mm	120 mm	45 mm
Motor Peak Force	50 N	25 N	25 N	25 N
Resolution	10 nano meter / count			
Mean Position Accuracy (1)	± 2.0 μm / Full Travel (After "error mapping" Condition)			
Repeatability	± 1.0 μm			
Flatness / Straightness	20 um / Full Travel			
Maximum Velocity	500 mm/ sec	400 mm/ sec		
Maximum Acceleration	0.4 G			
Cleaness	Class 100			

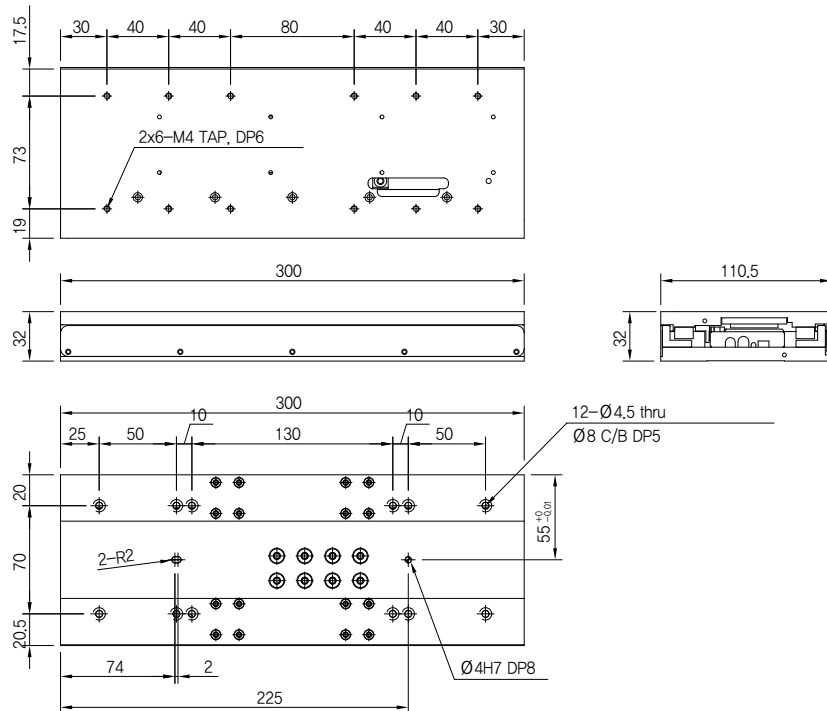
Compact linear stage

TLR Series Dimension

TLR-50NI-404 Series

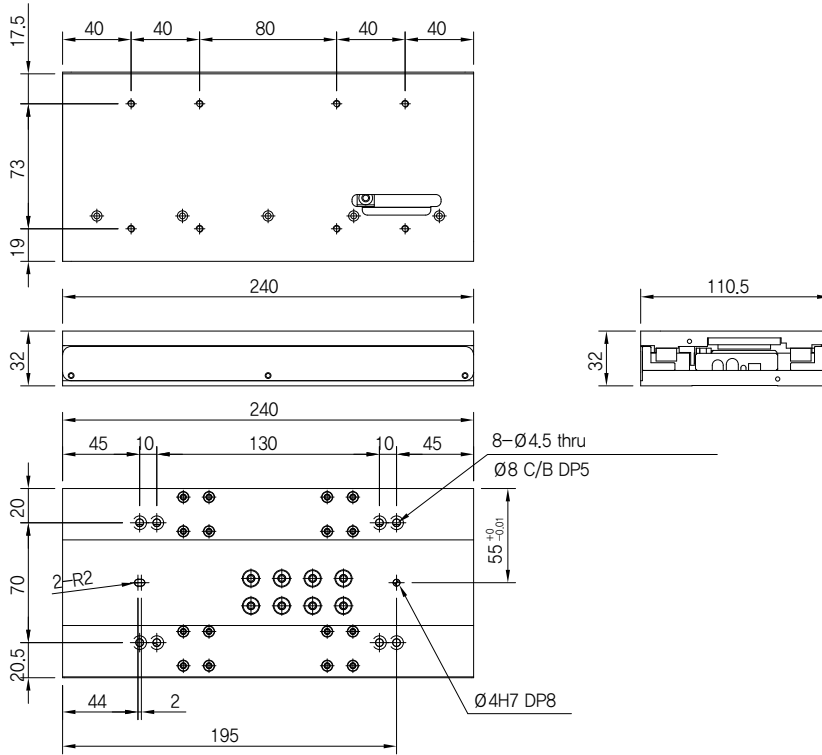


TLR-25NI-300 Series

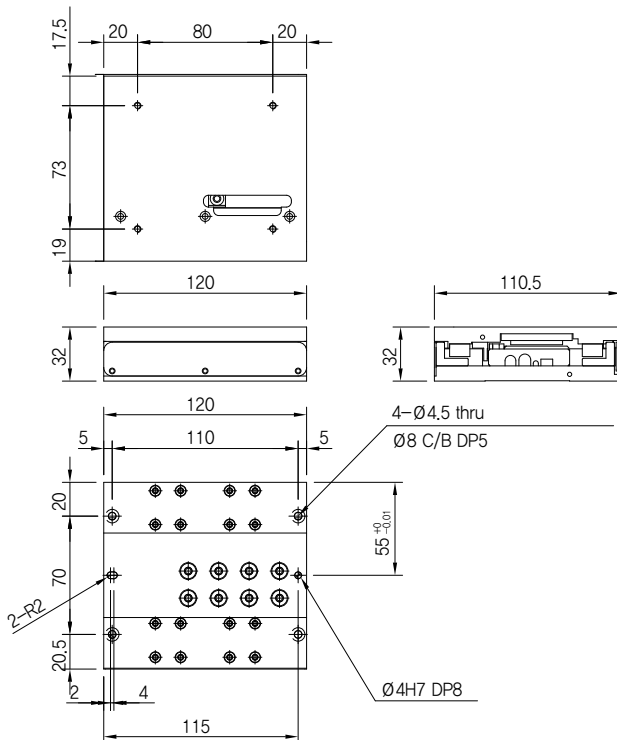


PLS Series Dimension

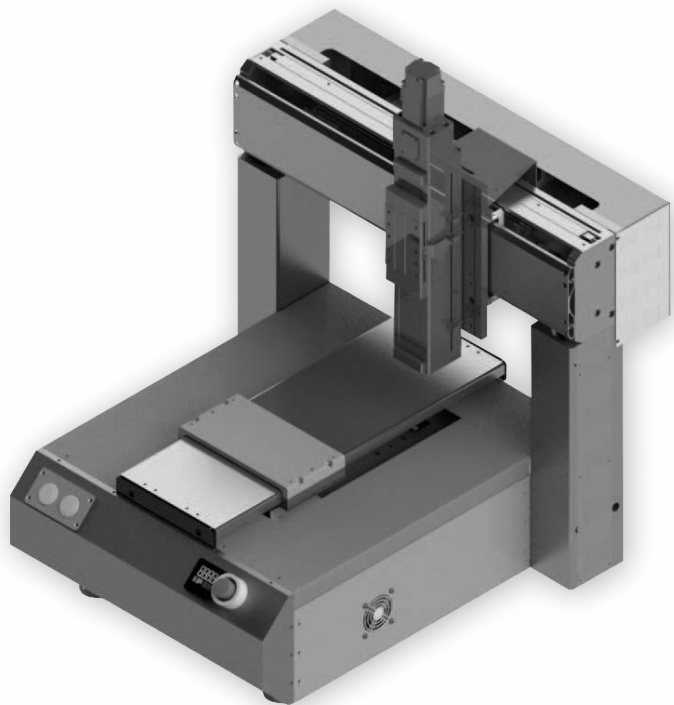
TLR-25NI-240 Series

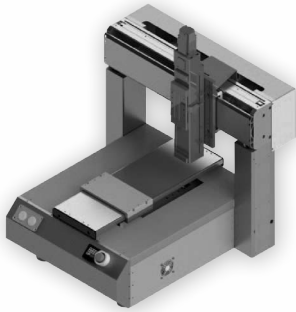


2) TLR-25NI-120 Series



Desktop Robot

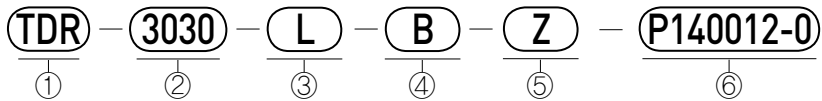




Features

- Built-in linear motor
- Optimal for high speed and high precision work
- Linear motor driver equipped with silencer
- Superior ripple with high speed
- Strong body structure for durability
- Easy maintenance

How to order



① **Series**
TDR (Desktop Robot)

② **X, Y axis moving stroke (unit : mm)**
Stroke of X and Y axis
2020 : 200mm x 200mm
3030 : 300mm x 300mm
4040 : 400mm x 400mm

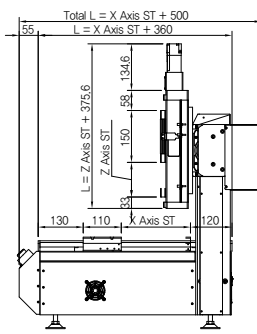
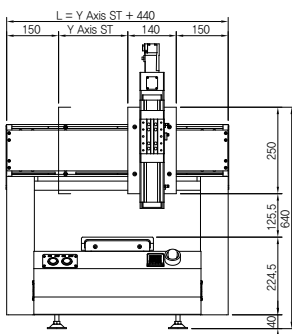
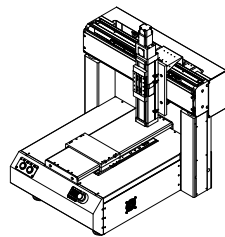
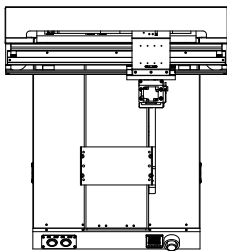
③ **Movement**
L : Linear motor

④ **Color**
Color of surface
N : None
B : Black
W : White

⑤ **Option**
Z axis
Z : Z axis included (QS70 Series/Stroke : 100mm)
N : Z axis not included

⑥ **Customization code**

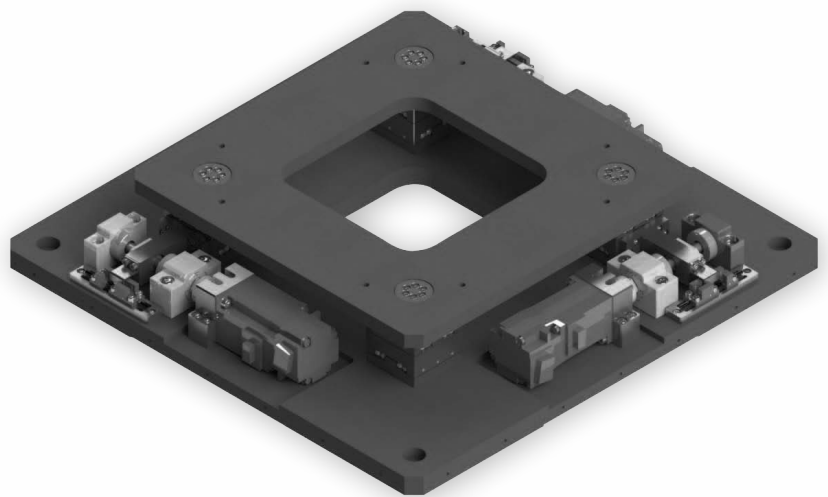
TDR Dimensions (unit : mm)

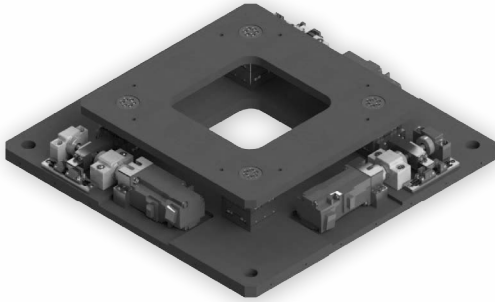


TDR Specifications

Model	TDR-2020L		TDR-3030L		TDR-4040L		Option
Axis	X	Y	X	Y	X	Y	Z
Stroke	200mm	200mm	300mm	300mm	400mm	400mm	100mm
Movement	Linear motor						Stepping Motor
Max payload	15kg Less						5kg
Repetition accuracy	$\pm 3.0\mu\text{m}$ (@Linear Encoder Resolution : $1.0\mu\text{m}$)						$\pm 10\mu\text{m}$
Flatness/squareness	$\pm 10\mu\text{m}$ / Full Stroke						$\pm 5\mu\text{m}$
Max speed	1,000mm/s						200mm/s
Program loading	PC(Ethernet)						
Voltage	Single phase AC220V						

Alignment stage





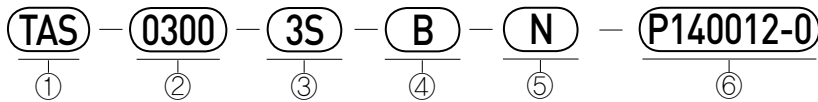
Features

- Compact alignment stage allows rectilinear movement and rotary motion
- High precision and rigid structure
- Equipped with rigid cross roller bearing and LM guide
- Equipped with AC servo motor and servo amplifier for fast response time
- Available in various sizes

Applications

- Manufacturing and inspection equipment for semiconductor
- Manufacturing and inspection equipment for print circuit board
- Manufacturing and inspection equipment for LCD panel

How to order



① **TYPE**
TAS (UVW Alignment Stage)

② **Table size (unit : mm)**
0200 : 200mm x 200mm
0300 : 300mm x 300mm
0400 : 400mm x 400mm
0500 : 500mm x 500mm
0600 : 600mm x 600mm
0700 : 700mm x 700mm

③ **Number of axis**
3S : 3axis movement
4S : 4axis movement

④ **Color**
Color of surface
N : None
B : Black
W : White

⑤ **Motor option**
N : Mitsubishi motor & driver & extention cable
MS : Mitsubishi servo motor& driver & 5m extension cable

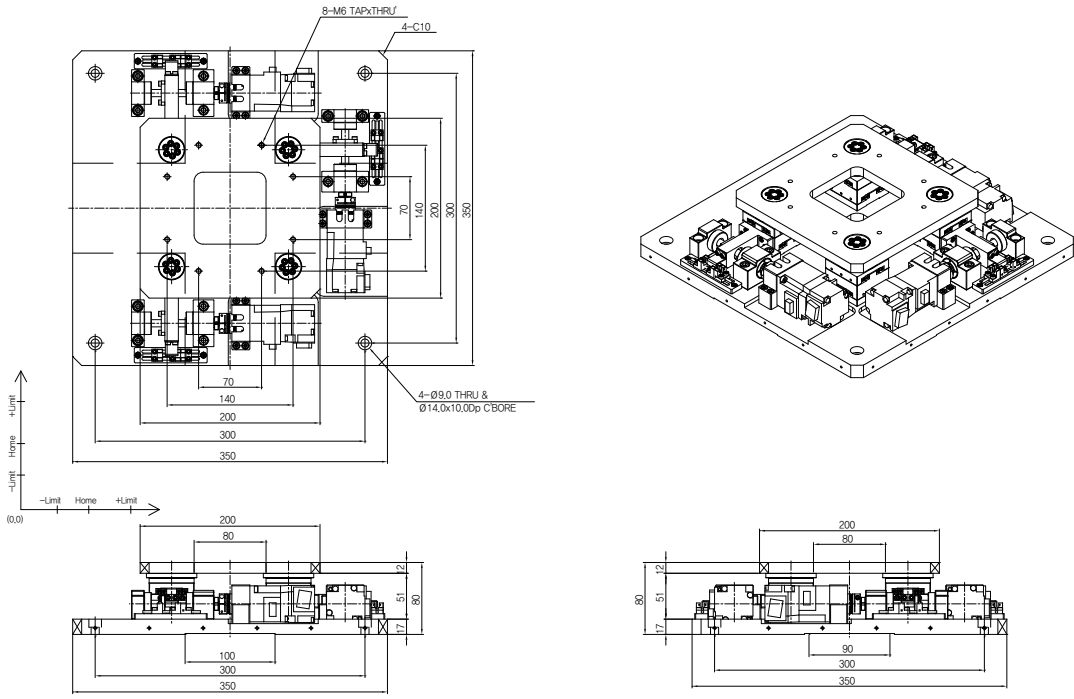
Class	Servo motor capacity	Model
0200	100W	HF-KP13
0300	100W	HF-KP13
0400	100W	HF-KP13
0500	200W	HF-KP23
0600	200W	HF-KP23
0700	400W	HF-KP43

⑥ **Customization code**

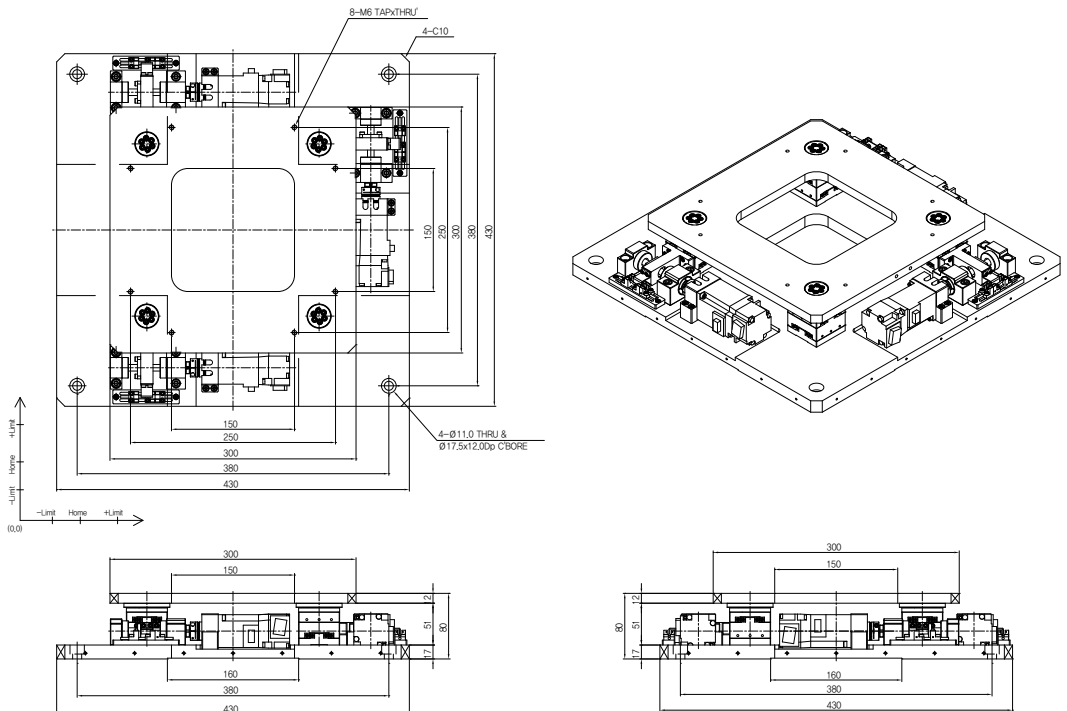
TAS Specification

Model	TAS-0200	TAS-0300	TAS-0400	TAS-0500	TAS-0600	TAS-0700
Repetition accuracy	± 3μm					
Degree of drive parallelization	3μm					
Flatness	30μm	40μm	50μm	80μm	100μm	150μm
Stroke	10X10X5°	10X10X5°	20X20X5°	20X20X5°	20X20X5°	30X30X5°
Motor	50W	100W	100W	200W	200W	400W
Payload	20kg	20kg	50kg	50kg	80kg	80kg
Weight	20kg	28kg	40kg	50kg	65kg	75kg

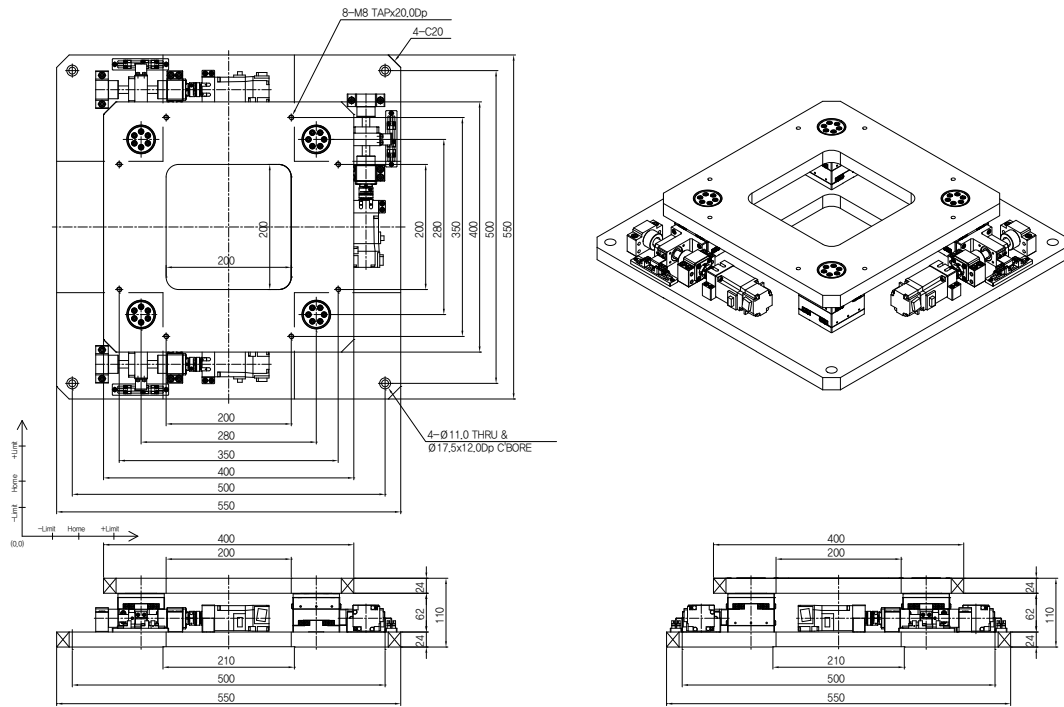
TAS-0200 Dimensions



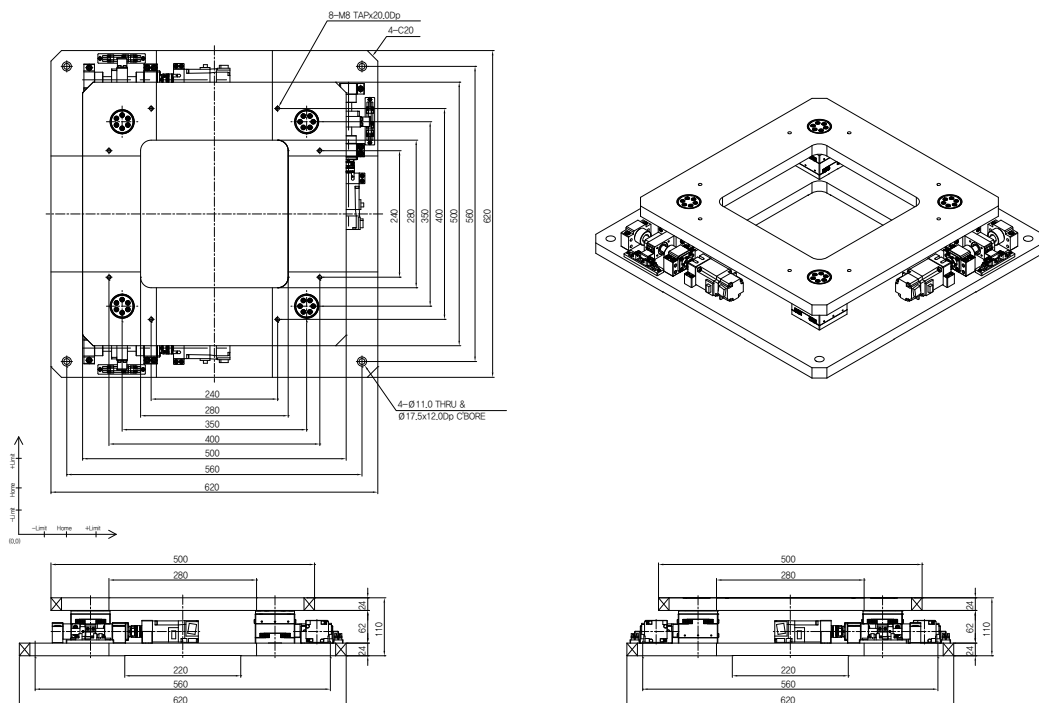
TAS-0300 Dimensions



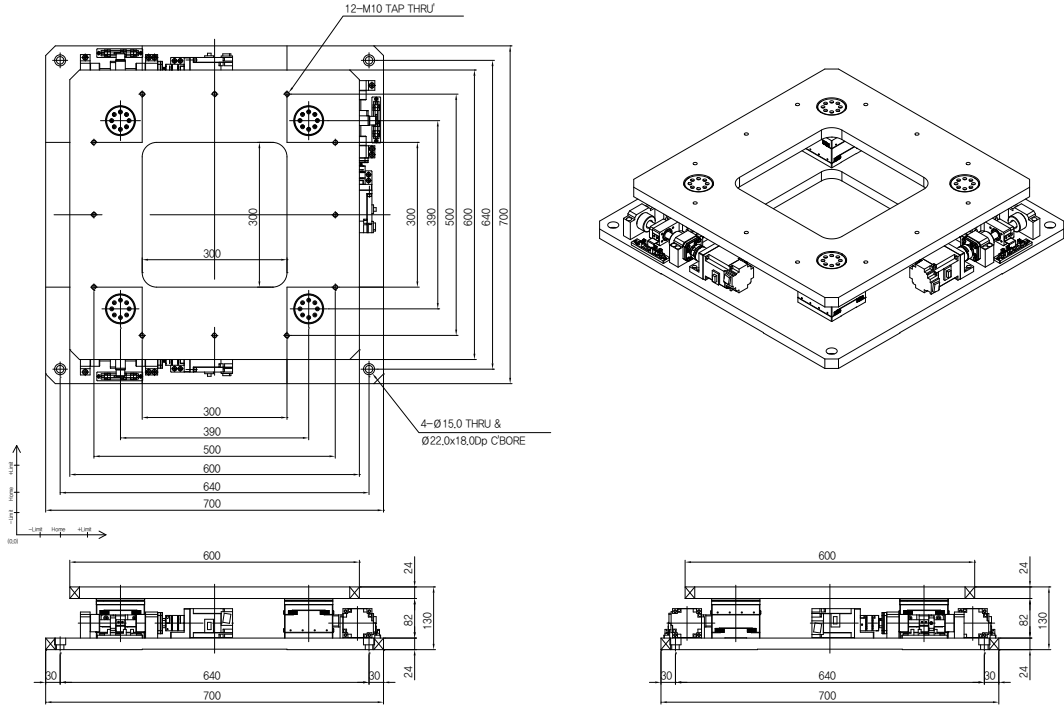
TAS-0400 Dimensions



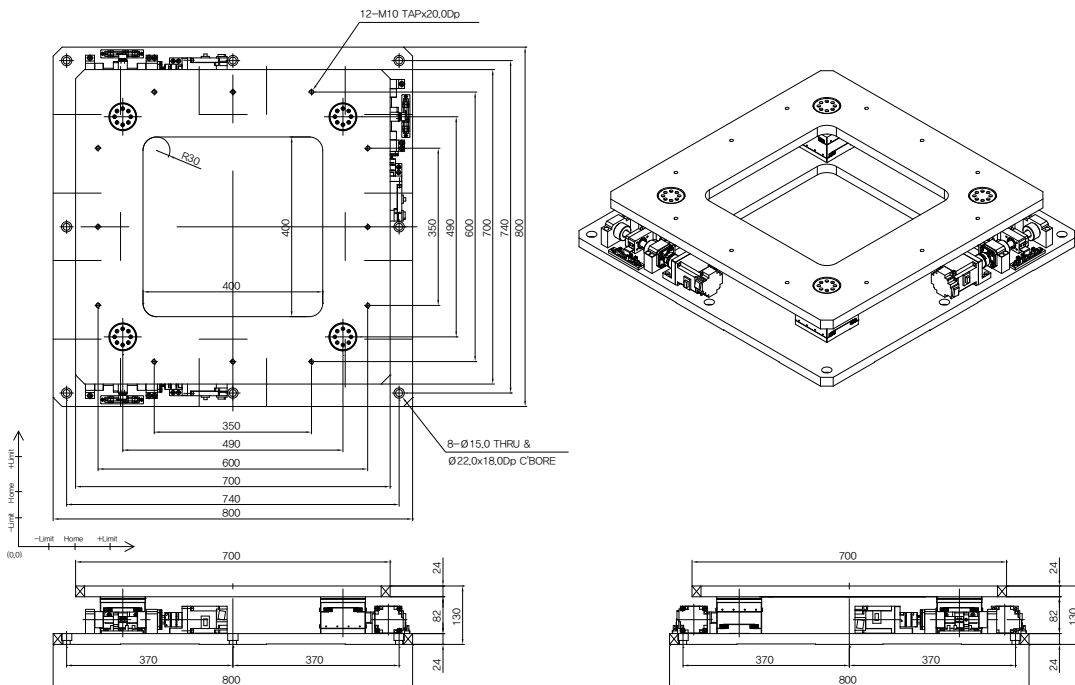
TAS-0500 Dimensions



TAS-0600 Dimensions

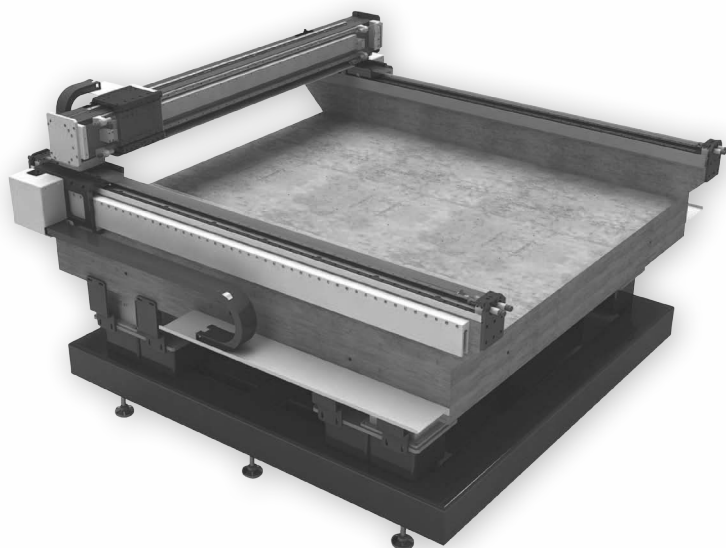


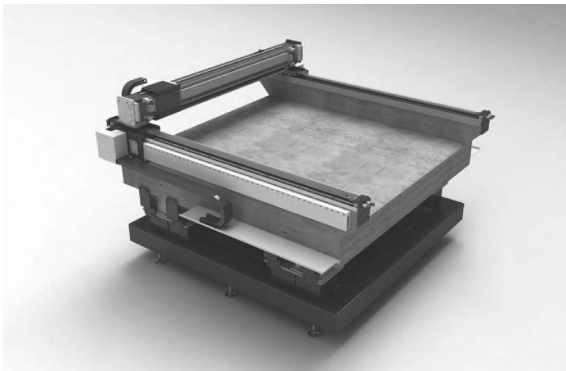
TAS-0700 Dimensions



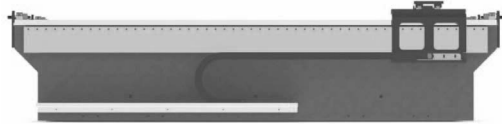
Gantry Stage

[TPC coreless motor used]





Specification



6G GANTRY AXIS SIDE CONCEPT



6G GANTRY AXIS FRONT CONCEPT



6G GANTRY AXIS REAR CONCEPT

Applications

Laser making & repair system

Laser scribing system

Vision inspection system

Laser cutting system

R & D system

Edge exposure system

Dispense system

Gantry Axis (Y1,Y2-Axis)

- Directly attached to edge
- TPC coreless type motor used
- Rigid LM guide
- Optional linear encoder
- Silencer and clean type of cable chain,
- Photo sensor

Gantry Axis (Y1,Y2-Axis)

- 6 generation rigid beam base
- TPC coreless type motor used
- Rigid LM guide
- Optical linear encoder
- Silencer and clean type of cable chain,
- Photo sensor

Precision granite plate

- Precision granite plate— "oo" degree

Frame

- Rigid welding structure
- Passive isolator(VCB-B level)
- Leveling foot and caster for high load

► Specification

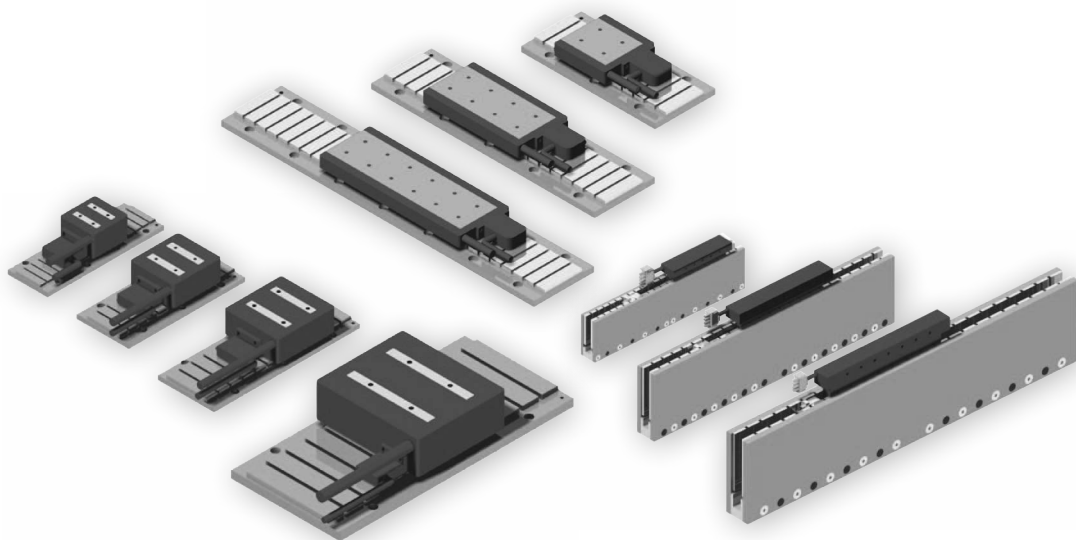
Axis	Y1, Y2-Axis (Gantry axis)	X-Axis (Cross axis)
Pay load	50kg @ X slide	
Moving travel	2,000mm	1,600mm
Resolution	5 nano meter / count	
Mean position accuracy	± 5.0 μm / full travel (After "error mapping" condition)	
Speed ripple : 100mm/s	0.3 % _ Sample 100Hz	
Bi-directional repeatability	± 2.0 μm	
Flatness / Straightness	± 10 μm / full travel	
Pitch / Yaw	± 15 arc-sec. / full travel	
Maximum velocity	1,600 mm/ sec.	
Maximum acceleration	0.25 G	
Orthogonality	± 7 second of Arc (X to Y)	
Cleanness	Class 1,000	

Linear Servo Motor

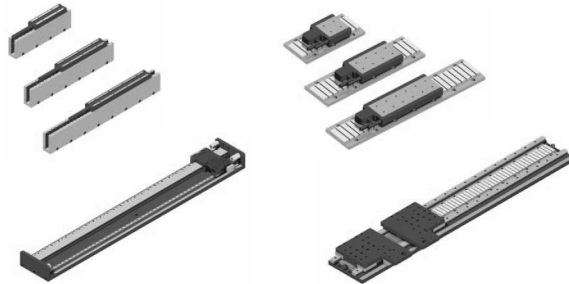
Linear Motor Iron Core Type F Series

Linear Motor Coreless Type G Series

Linear Motor Slotless Type S Series

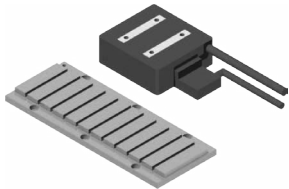


Features

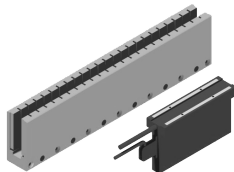


▣ Models

Iron core Type



Coreless Type



Slotless Type



❖ High speed/ high acceleration

Direct drive movement with high speed and high acceleration

❖ High efficiency

Less energy loss with no contact movement

❖ High precision

No backlash and little lost motion

❖ Fast response time

Fast response time and dynamic motion

❖ High degree of freedom

Smooth and precise movement

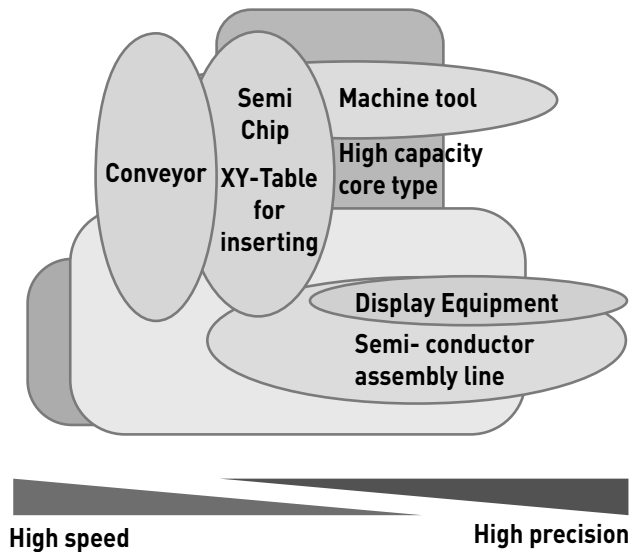
❖ Stable movement

High durability with movement by electromagnetic force

❖ Easy maintenance

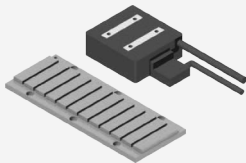
Easy maintenance with simple structure

Applications



Models

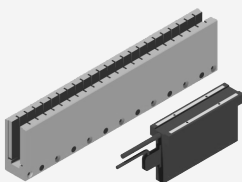
Core type



❖ Coil inserted type in core slot

- Strong molding structure
- Space saving
- High stiffness
- Simple motion

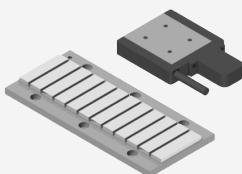
Coreless type



❖ Coil molding type without core

- Smooth movement with non-cogging
- Less thrust ripple, noise and vibration
- Less inertia moment
- Fast response time
- Less armature inductance
- High output

Slotless type

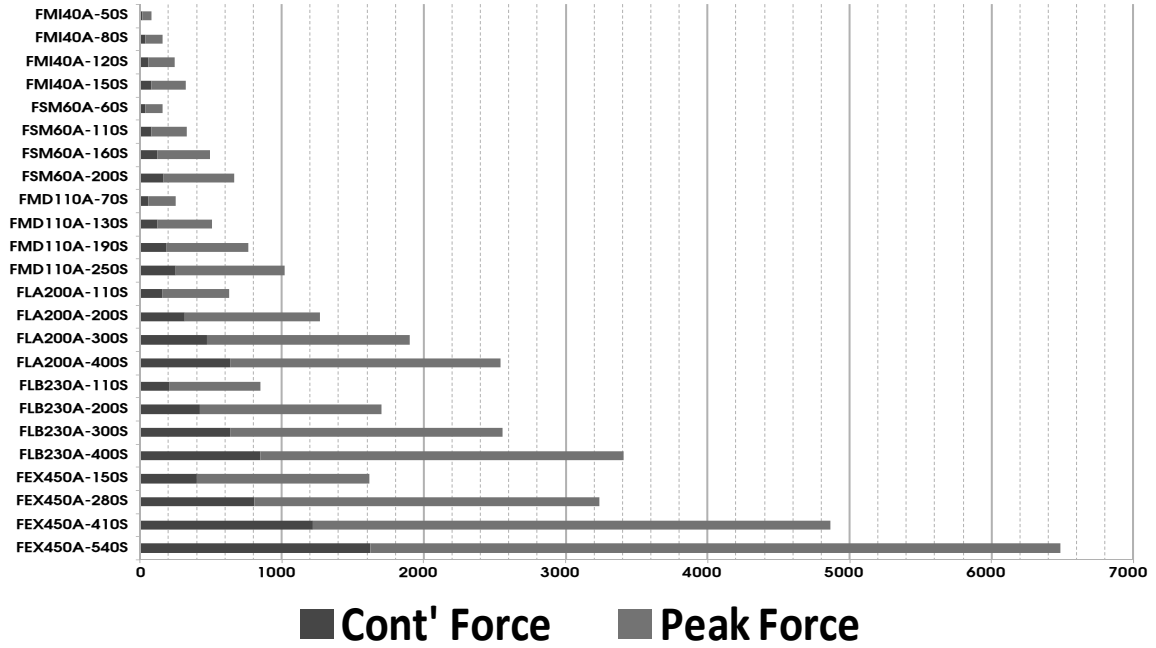


❖ No slot type

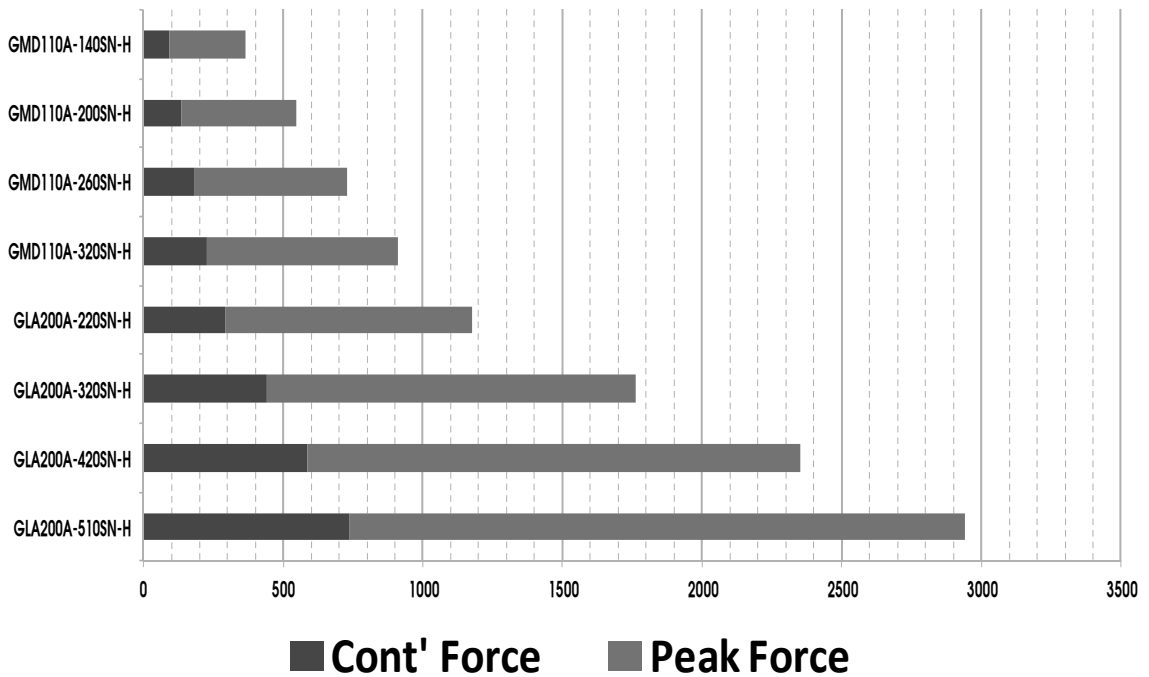
- Less thrust force ripple
- Smooth movement with non-cogging
- Stable constant thrust force
- Stable high thrust force
- Compact size
- Various customized options
- Long stroke and multi-slide available

Performance

IRON CORE LINEAR MOTOR FORCE

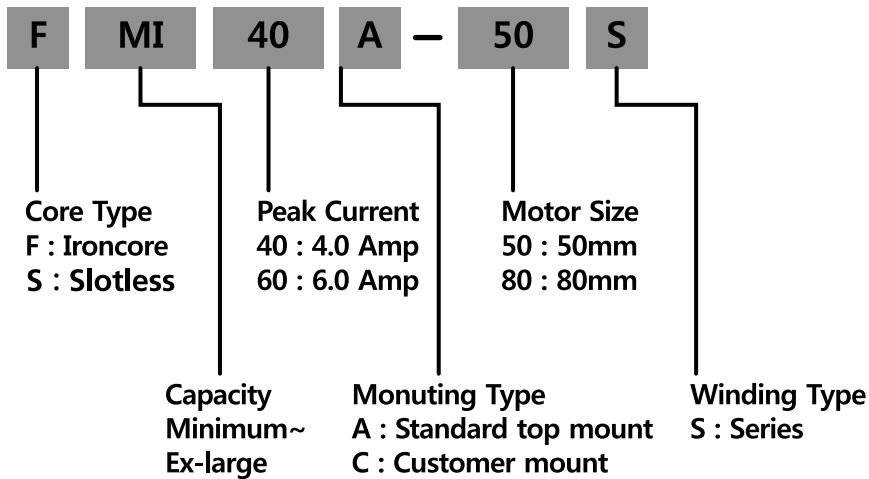


CORELESS LINEAR MOTOR FORCE

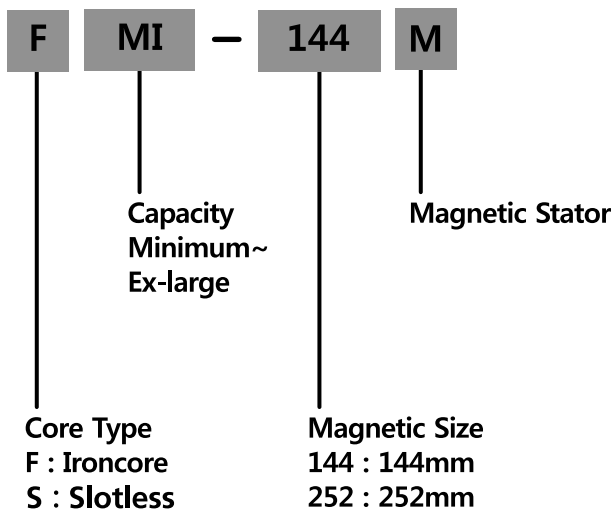


How to order

LINEAR MOTOR Model Selection

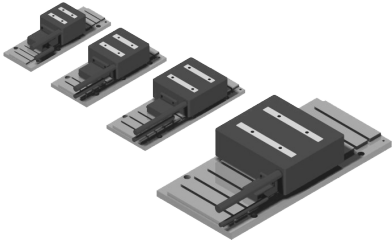


LINEAR STATOR Model Selection



Specifications

IRON CORE TYPE - FMI40A Series



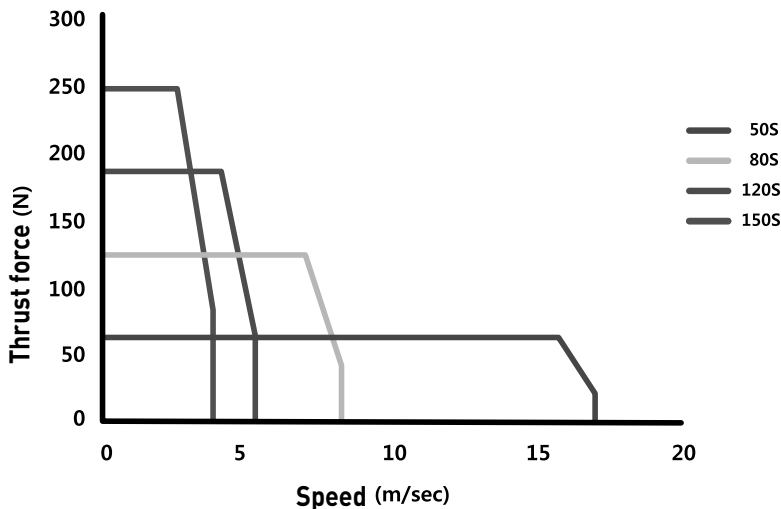
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155℃
- Protection : natural cooling
- Environment : 0-40℃
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FMI	Unit	40A			
		50S	80S	120S	150S
Continuous Force	N	20.37	40.75	61.12	81.49
Continuous Current	Arms	1.30	1.30	1.30	1.30
Peak Force	N	61.12	122.24	183.36	244.48
Peak Current	Arms	3.90	3.90	3.90	3.90
Resistance	Ω (p-p)	2.71	5.42	8.13	10.84
Inductance	mH(P-P)	5.34	10.69	16.03	21.38
Force Constant	N/Arms	15.67	31.34	47.02	62.69
B-EMP Constant	Vrms/(m/s)	7.94	15.88	23.82	31.76
Motor Constant	N/√W	7.77	10.99	13.46	15.55
Electrical Time Constant	ms	1.97	1.97	1.97	1.97
Normal Force	N	101.87	203.73	305.60	407.47
Power Loss	W	6.87	13.74	20.61	27.48
Mover Weight	kg	0.23	0.45	0.67	0.89

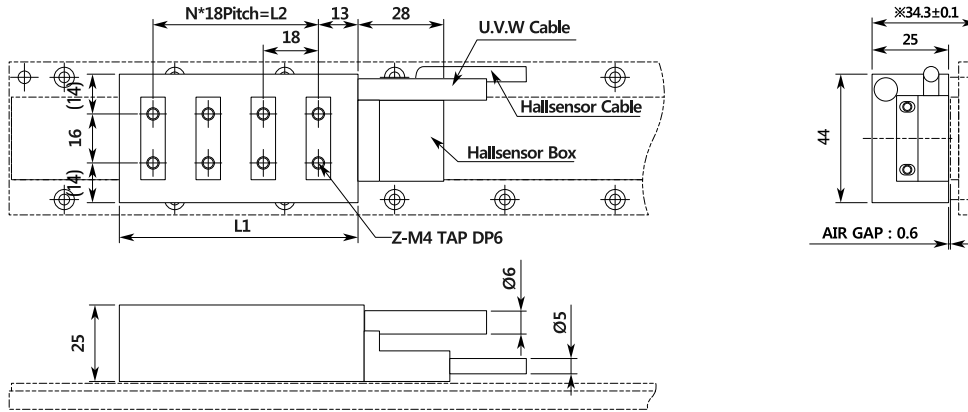
Thrust force VS Speed FMI40A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

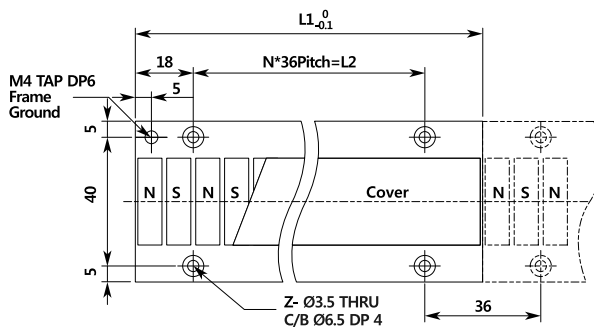
■ **Motor (FMI40A-□□□S)**



Linear Motor FMI40A	L1	L2	N	Z	Weight (kg)
50S	44	18	1	4	0.23
80S	80	54	3	8	0.45
120S	116	90	5	12	0.67
150S	152	126	7	16	0.89

●Motor Cable		●Hallsensor Cable	
Title	Color	Title	Color
U	Orange	5V	Red
V	Yellow	0V	Black
W	Black	HA	Yellow
G	Green	HB	White
		HC	Blue
		Shield	

■ **Stator (FMI-□□□M)**

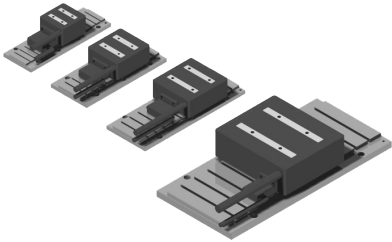


Linear Stator FMI	L1	L2	N	Z	Weight (kg)
144M	144	108	3	8	0.41
252M	252	216	6	14	0.71
324M	324	288	8	18	0.92

◎ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE - FSM60A Series



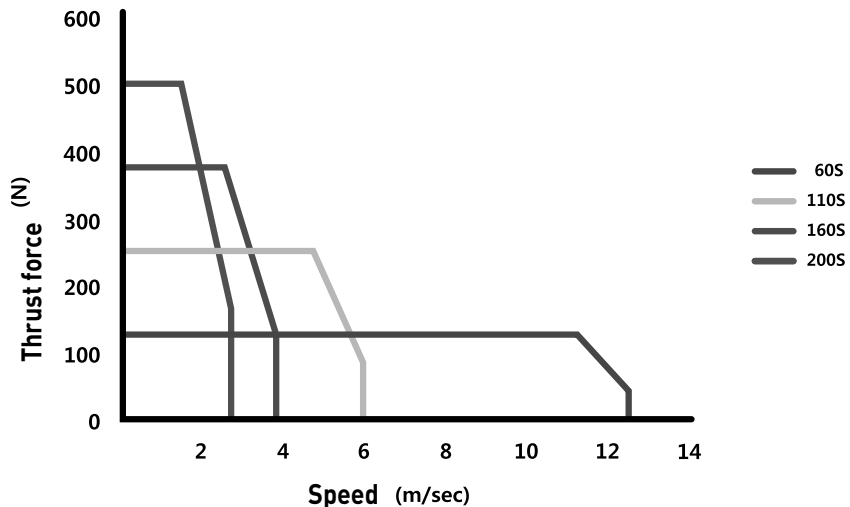
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155℃
- Protection : natural cooling
- Environment : 0-40℃
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FSM	Unit	60A			
		60S	110S	160S	200S
Continuous Force	N	41.52	83.05	124.57	166.09
Continuous Current	Arms	2.00	2.00	2.00	2.00
Peak Force	N	124.57	249.14	373.71	498.28
Peak Current	Arms	6.00	6.00	6.00	6.00
Resistance	Ω (p-p)	2.24	4.48	6.72	8.96
Inductance	mH(P-P)	6.30	12.61	18.91	25.22
Force Constant	N/Arms	20.76	41.52	62.29	83.05
B-EMP Constant	Vrms/(m/s)	10.75	21.50	32.25	43.00
Motor Constant	N/ \sqrt{W}	11.33	16.02	19.62	22.65
Electrical Time Constant	ms	2.81	2.81	2.81	2.81
Normal Force	N	207.62	415.23	622.85	830.47
Power Loss	W	13.44	26.88	40.32	53.76
Mover Weight	kg	0.44	0.84	1.06	1.42

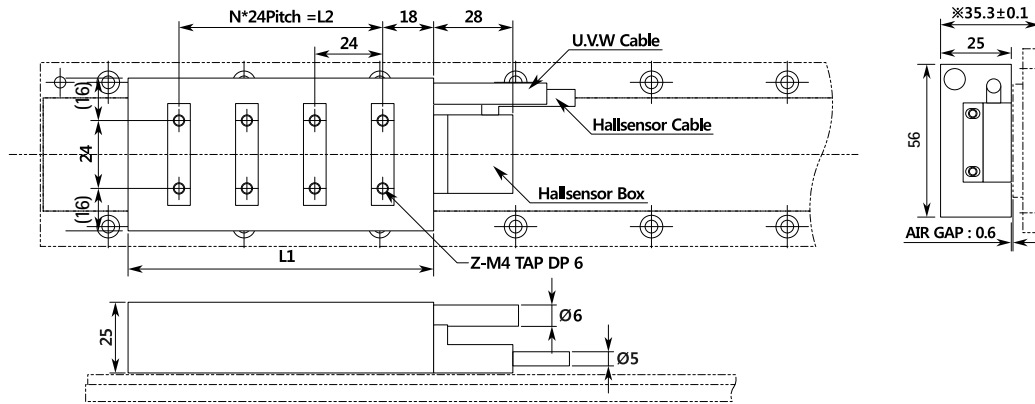
Thrust force VS Speed FSM60A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

Motor (FSM60A-□□□S)



Linear Motor FSM60A	L1	L2	N	Z	Weight (kg)
60S	60	24	1	4	0.44
110S	108	72	3	8	0.84
160S	156	120	5	12	1.06
200S	204	168	7	16	1.42

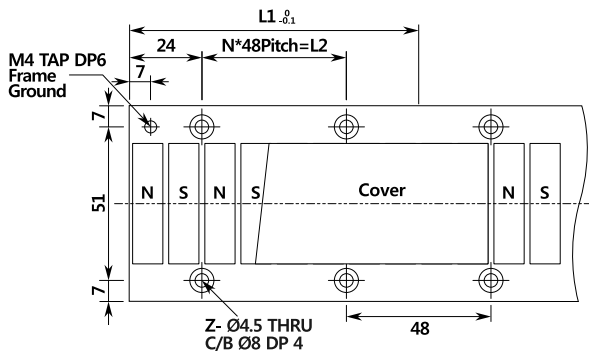
•Motor Cable

Title	Color
U	Orange
V	Yellow
W	Black
G	Green

•Hallsensor Cable

Title	Color
5V	Red
0V	Black
HA	Yellow
HB	White
HC	Blue
Shield	

Stator (FSM-□□□M)

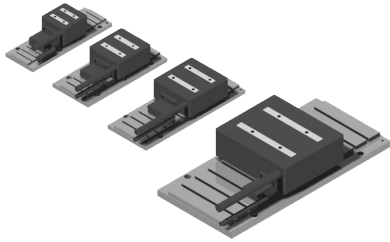


Linear Stator NMTL-FSM	L1	L2	N	Z	Weight (kg)
144M	144	96	2	6	0.57
240M	240	192	4	10	0.95
336M	336	288	6	14	1.33

◎ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE FMD110A Series



Basic specifications

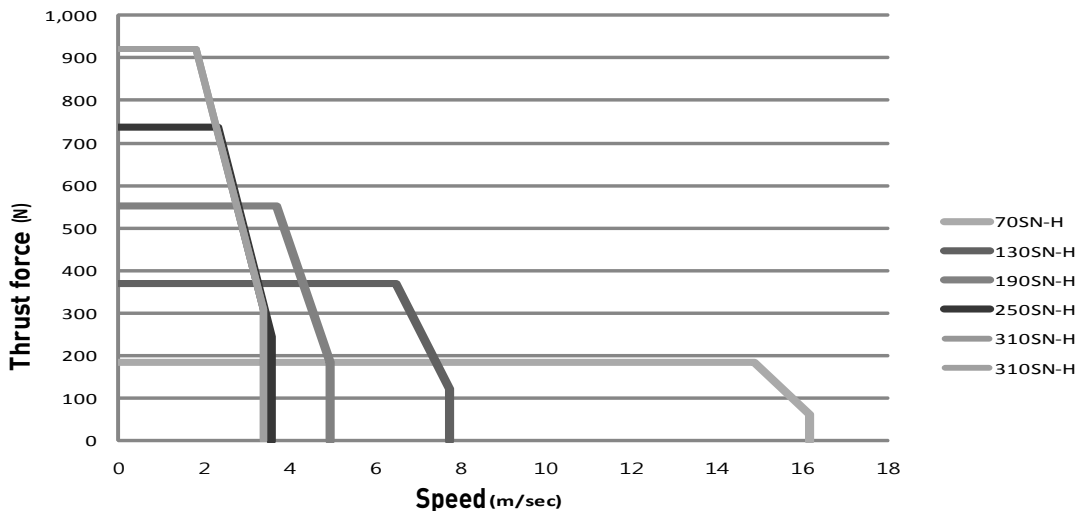
- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FMD		110A				
		70SN-H	130SN-H	190SN-H	250SN-H	310SN-H
Continuous Force	N	61.33	122.67	184.00	245.33	306.66
Continuous Current	Arms	3.80	3.80	3.80	3.80	3.80
Peak Force	N	184.00	368.00	552.00	736.00	920.00
Peak Current	Arms	11.40	11.40	11.40	11.40	11.40
Resistance	$\Omega(p-p)$	0.92	1.84	2.76	3.68	4.60
Inductance	mH(p-p)	3.95	7.90	11.84	15.79	19.74
Force Constant	N/Arms	16.14	32.28	48.42	64.56	80.70
B-Emp Constant	Vrms/(m/s)	8.35	16.70	25.05	33.40	41.75
Motor Constant	N/ \sqrt{W}	13.74	19.43	23.80	27.48	30.82
Electrical Time Constant	Ms	4.29	4.29	4.29	4.29	4.29
Normal Force	N	306.67	613.33	920.00	1226.67	1533.34
Power Loss	W	19.93	39.85	59.78	79.71	99.64
Mover Weight	Kg	0.82	1.37	1.91	2.48	3.03

Thrust force VS Speed

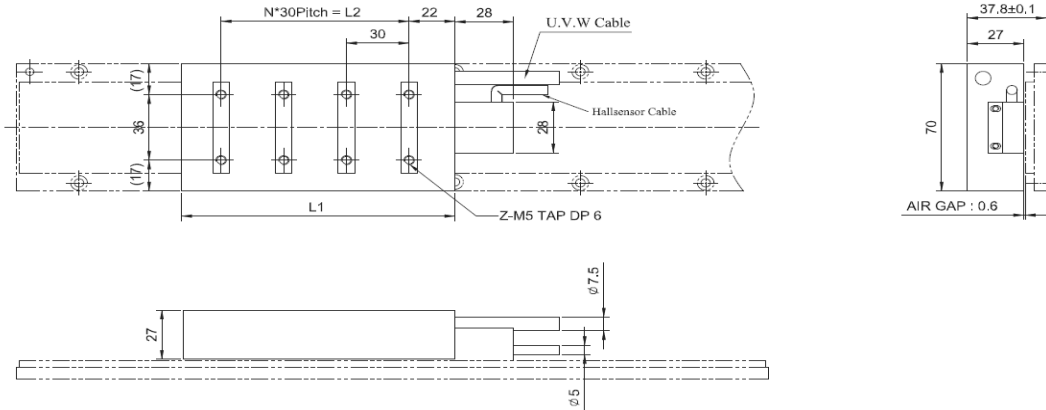
FMD110A-□□□SN-H



MECHANICAL DIMENSIONS

(UNIT : mm)

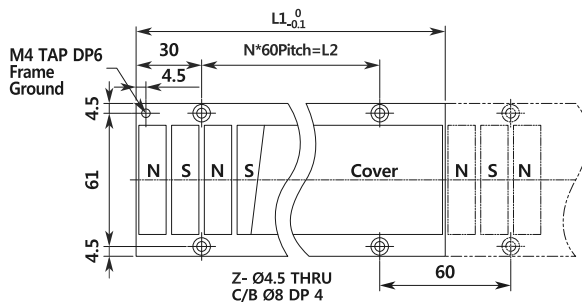
■ **Motor (FMD110A-□□□SN-H)**



Linear Motor FMD110A	L1	L2	N	Z	Weight (kg)
70SN-H	71	30	1	4	0.65
130SN-H	131	90	3	8	1.17
190SN-H	191	150	5	12	1.71
250SN-H	251	210	7	16	2.28

●Motor Cable		●Hall sensor Cable	
Title	Color	Title	Color
U	Orange	5V	Red
V	Yellow	0V	Black
W	Black	HA	Yellow
G	Green	HB	White
		HC	Blue
		Shield	

■ **Stator (FMD-□□□M)**

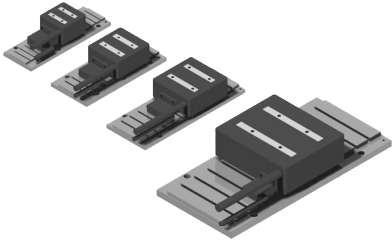


Linear Stator FMD	L1	L2	N	Z	Weight (kg)
180M	180	120	2	6	0.82
240M	240	180	3	8	1.09
360M	360	300	5	10	1.64

◎ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE - FLA200A Series



Basic specifications

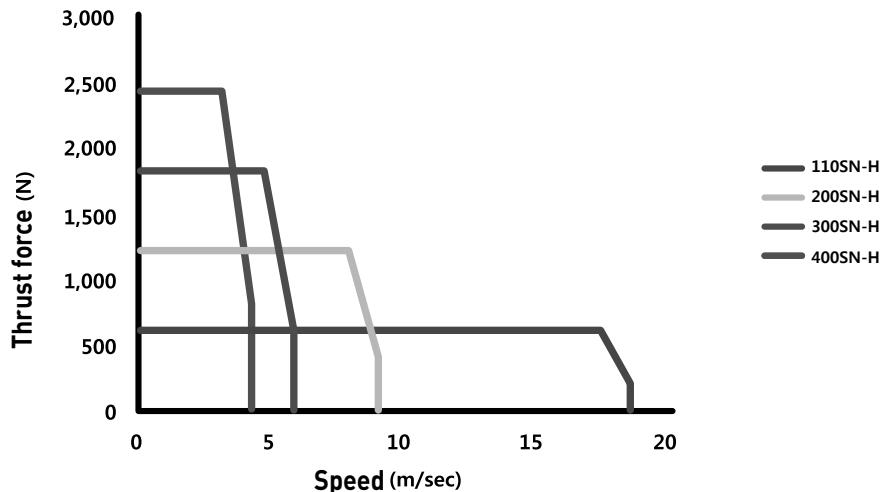
- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FLA		200A			
		110SN-H	200SN-H	300SN-H	400SN-H
Continuous Force	N	158.82	317.65	476.47	635.29
Continuous Current	Arms	6.4	6.4	6.4	6.4
Peak Force	N	476.47	952.94	1429.41	1905.88
Peak Current	Arms	19.20	19.20	19.20	19.20
Resistance	$\Omega(p-p)$	0.81	1.63	2.44	3.25
Inductance	mH(p-p)	6.70	13.39	20.09	26.78
Force Constant	N/Arms	24.82	49.63	74.45	99.26
B-EMF Constant	Vrms/(m/s)	19.74	39.48	59.22	78.96
Motor Constant	N/ \sqrt{W}	22.46	31.77	38.91	44.93
Electrical Time Constant	ms	8.23	8.23	8.23	8.23
Normal Force	N	794.12	1588.23	2382.35	3176.46
Power Loss	W	49.99	99.97	149.96	199.95
Mover Weight	kg	2.10	4.20	6.30	8.40

Thrust force VS Speed

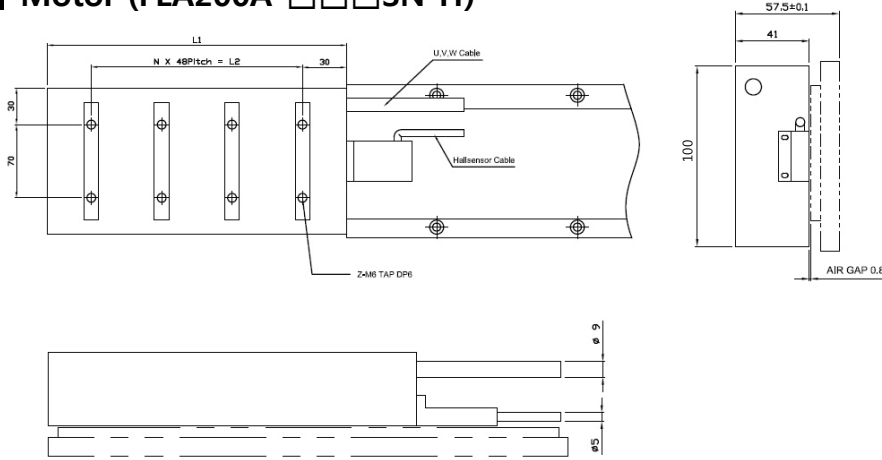
FLA200A-□□□SN-H



MECHANICAL DIMENSIONS

(UNIT : mm)

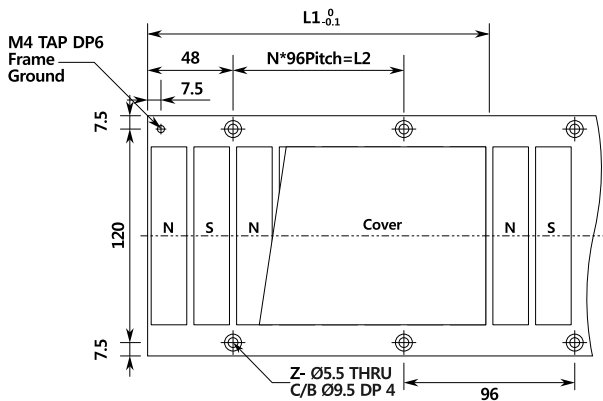
■ **Motor (FLA200A-□□□SN-H)**



Linear Motor FLA200A	L1	L2	N	Z	Weight (kg)
110S	108	48	1	4	2.86
200S	204	144	3	8	5.46
300S	300	240	5	12	8.14
400S	396	336	7	16	10.67

●Motor Cable		●Hallsensor Cable	
Title	Color	Title	Color
U	Orange	5V	Red
V	Yellow	0V	Black
W	Black	HA	Yellow
G	Green	HB	White
		HC	Blue
		Shield	

■ **Stator (FLA-□□□M)**

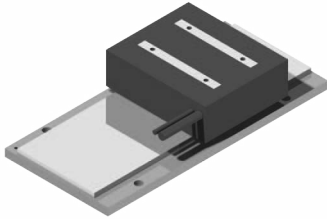


Linear Stator FLA	L1	L2	N	Z	Weight (kg)
192M	192	96	1	4	2.10
288M	288	192	2	6	3.10
384M	384	288	3	8	4.20

⊙ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE FLB230A Series



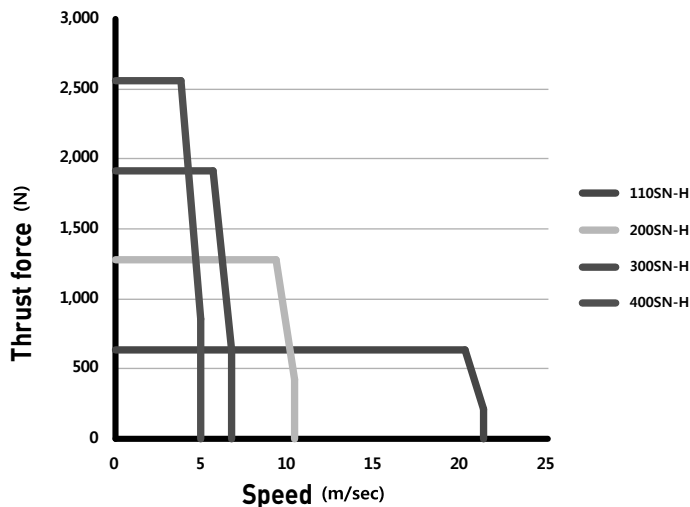
Basic specifications

- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Environment : 0~40°C
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FLB		230A			
		110SN-H	200SN-H	300SN-H	400SN-H
Continuous Force	N	213.00	426.00	639.00	852.00
Continuous Current	Arms	7.80	7.80	7.80	7.80
Peak Force	N	639.00	1278.00	1917.00	2556.00
Peak Current	Arms	23.40	23.40	23.40	23.40
Resistance	$\Omega(p-p)$	0.66	1.32	1.98	2.65
Inductance	mH(p-p)	5.70	11.40	17.09	22.79
Force Constant	N/Arms	27.31	54.62	81.92	109.23
B-EMP Constant	Vrms/(m/s)	14.21	28.42	42.63	56.84
Motor Constant	N/ \sqrt{W}	27.42	38.77	47.49	54.83
Electrical Time Constant	ms	8.62	8.62	8.62	8.62
Normal Force	N	1065.00	2130.00	3195.00	4260.00
Power Loss	W	60.36	120.72	181.08	241.43
Mover Weight	kg	3.10	6.20	9.30	12.40

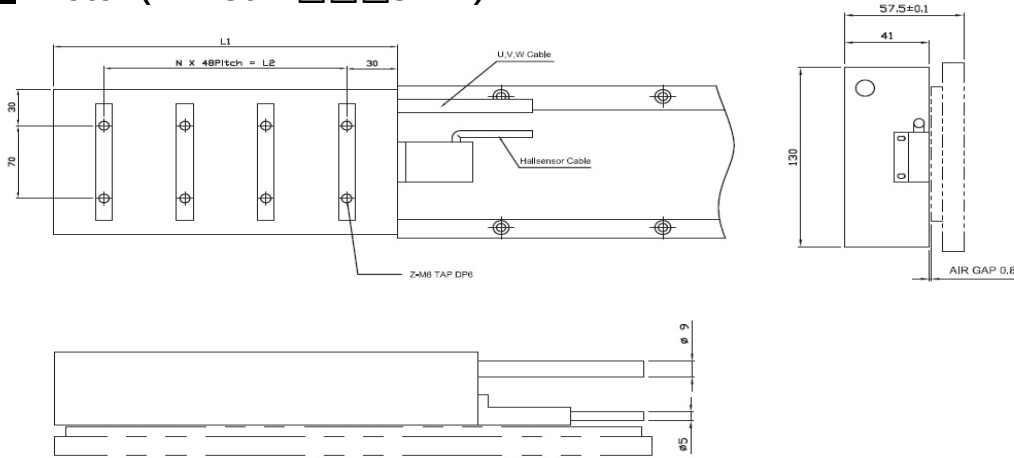
Thrust force VS Speed FLB230A-□□□SN-H



MECHANICAL DIMENSIONS

(UNIT : mm)

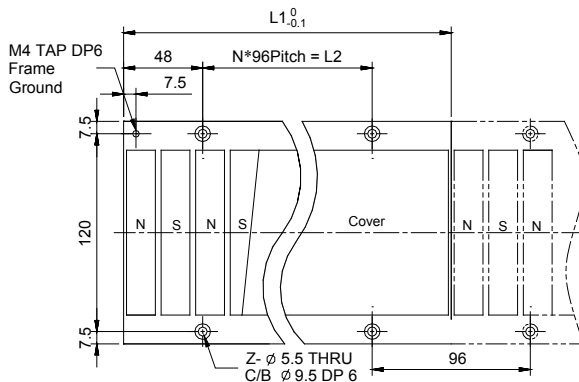
Motor (FLB230A-□□□SN-H)



Linear Motor FLB230A	L1	L2	N	Z	Weight (kg)
110SN-H	108	48	1	4	3.10
200SN-H	204	144	3	8	6.20
300SN-H	300	240	5	12	9.30
400SN-H	396	336	7	16	12.40

•Motor Cable		•Hall sensor Cable	
Title	Color	Title	Color
U	Orange	+5V	Red
V	Yellow	0V	Black
W	Blue	HA	Yellow
FG	Green	HB	White
		HC	Blue
		Shield	

Stator (FLB-□□□M)

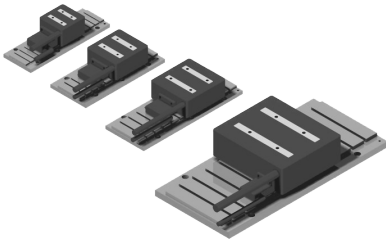


Linear Stator FLB	L1	L2	N	Z	Weight (kg)
192M	192	96	1	4	2.10
288M	288	192	2	6	3.10
384M	384	288	3	8	4.20

⊙ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE - FEX450A Series



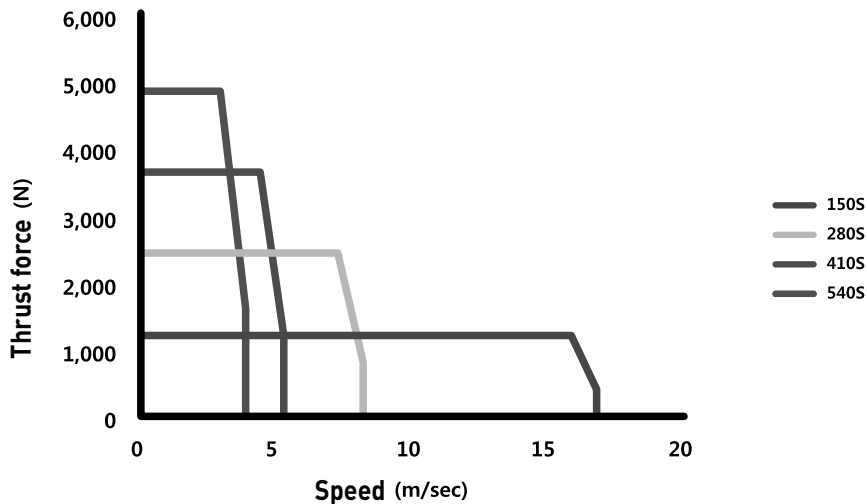
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155℃
- Protection : natural cooling
- Environment : 0~40℃
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FEX	Unit	450A			
		150S	280S	410S	540S
Continuous Force	N	405.33	810.67	1216.00	1621.33
Continuous Current	Arms	15.00	15.00	15.00	15.00
Peak Force	N	1216.00	2432.00	3648.00	4864.00
Peak Current	Arms	45.00	45.00	45.00	45.00
Resistance	$\Omega(p-p)$	0.37	0.74	1.11	1.48
Inductance	mH(P-P)	5.61	11.23	16.84	22.46
Force Constant	N/Arms	27.02	54.04	81.07	108.09
B-EMP Constant	Vrms/(m/s)	17.90	35.80	53.70	71.60
Motor Constant	N/√W	36.27	51.30	62.83	72.54
Electrical Time Constant	ms	15.17	15.17	15.17	15.17
Normal Force	N	2026.67	4053.00	6080.00	8107.00
Power Loss	W	124.88	249.75	374.63	499.50
Mover Weight	kg	5.46	10.61	15.88	21.85

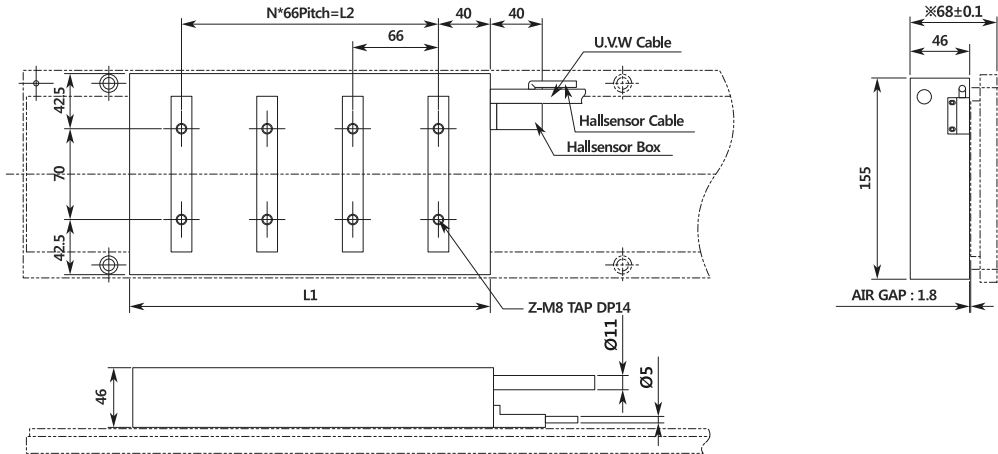
Thrust force VS Speed FEX450A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

■ **Motor (FEX450A-□□□S)**



Linear Motor FEX450A	L1	L2	N	Z	Weight (kg)
150S	146	66	1	4	5.46
280S	278	198	3	8	10.61
410S	410	330	5	12	15.88
540S	542	462	7	16	21.85

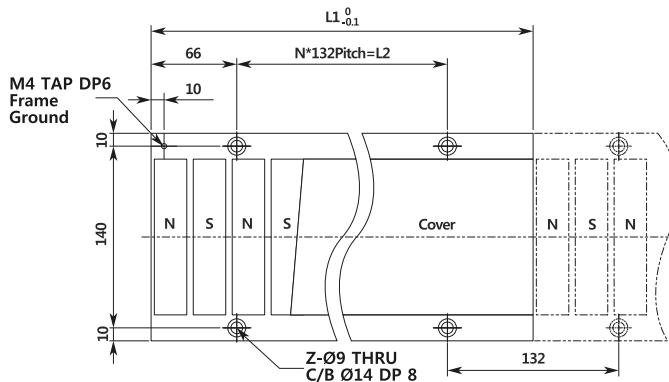
● Motor Cable

Title	Color
U	Orange
V	Yellow
W	Black
G	Green

● Hall sensor Cable

Title	Color
SV	Red
OV	Black
HA	Yellow
HB	White
HC	Blue
Shield	

■ **Stator (FEX-□□□M)**

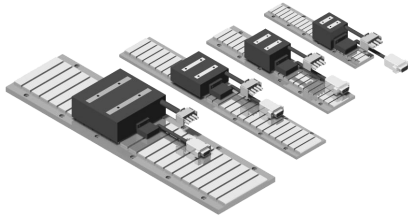


Linear Stator FEX	L1	L2	N	Z	Weight (kg)
264M	264	132	1	4	5.70
396M	396	264	2	6	8.50
528M	528	396	3	8	11.40

◎ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE FMIC40A Series(Compact type)



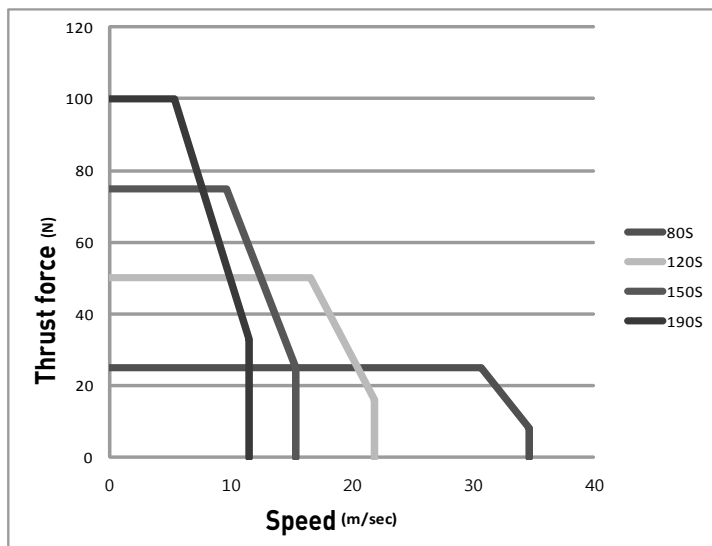
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FMIC		40A			
		50S	80S	120S	150S
Continuous Force	N	8.35	16.70	25.05	33.40
Continuous Current	Arms	1.30	1.30	1.30	1.30
Peak Force	N	25.05	50.10	75.15	100.20
Peak Current	Arms	3.90	3.90	3.90	3.90
Resistance	$\Omega(p-p)$	1.15	2.30	3.45	4.60
Inductance	mH(P-P)	1.00	2.00	3.00	4.00
Force Constant	N/Arms	6.42	12.85	19.26	25.68
B-EMP Constant	Vrms/(m/s)	5.57	11.14	16.71	22.28
Motor Constant	N/W	4.89	6.91	9.78	13.82
Electrical Time Constant	ms	0.87	0.87	0.87	0.87
Normal Force	N	41.75	83.50	125.25	167.00
Power Loss	W	2.92	5.84	8.76	11.68
Mover Weight	kg	0.15	0.29	0.69	0.89

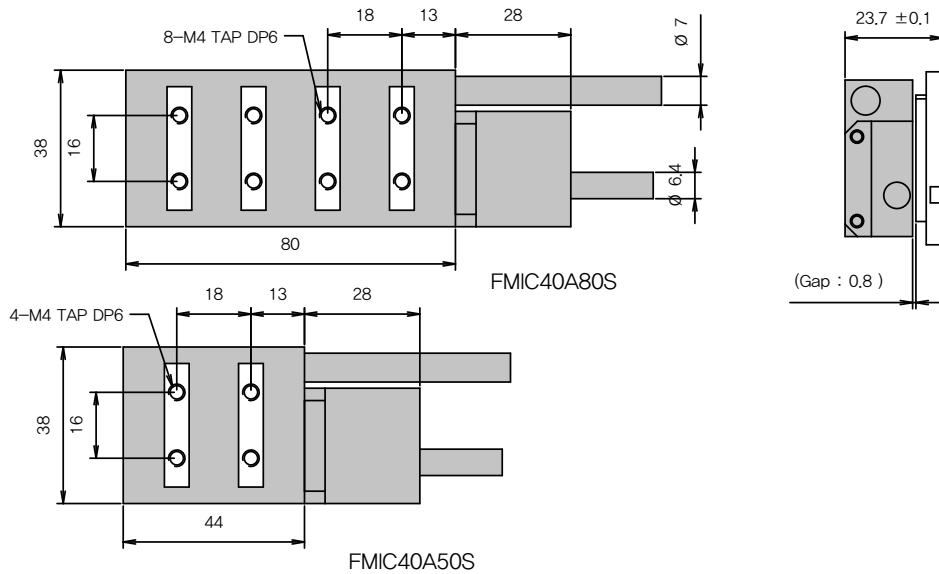
Thrust force VS Speed FMIC40A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

■ **Motor (FMIC40A-□□□S)**



Linear Motor FMIC 40A	L1	L2	N	Z	Weight (Kg)
50S	44	18	1	4	0.23
80S	80	54	3	8	0.45
120S	116	90	5	12	0.67
150S	152	126	7	16	0.89

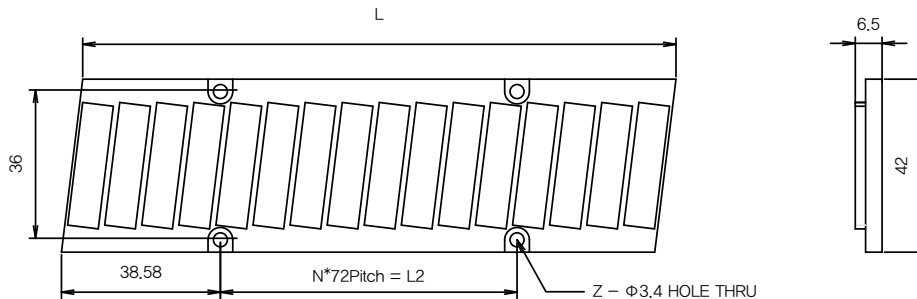
●Motor Cable

Title	Color
U	Orange
V	Yellow
W	Black
G	Green

●Hallsensor Cable

Title	Color
5V	Red
0V	Black
HA	Yellow
HB	White
HC	Blue
Shield	

■ **Stator (FMIC-□□□M)**

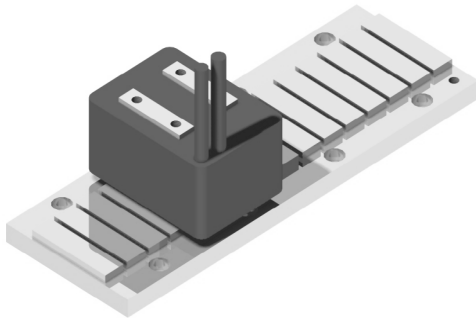


Linear Stator FMIC	L	L2	N	Z	Weight(kg)
144M	144	72	1	4	0.25
216M	216	144	2	6	0.37
288M	288	216	3	8	0.51

Specifications

(order made)

IRON CORE TYPE FMI35S (Ultra compact type)



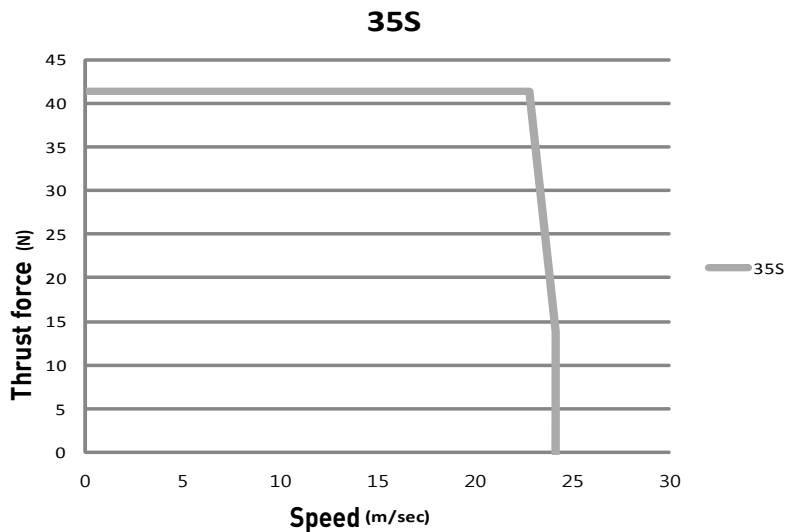
Basic specifications

- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Environment : 0~40°C
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FMI		40A
		35S
Continuous Force	N	13.8
Continuous Current	Arms	1.30
Peak Force	N	41.4
Peak Current	Arms	3.90
Resistance	$\Omega(p-p)$	1.84
Inductance	mH(P-P)	3.26
Force Constant	N/Arms	10.62
B-EMP Constant	Vrms/(m/s)	5.64
Motor Constant	N/ \sqrt{W}	6.4
Electrical Time Constant	ms	1.78
Normal Force	N	69
Power Loss	W	4.65
Mover Weight	kg	0.20

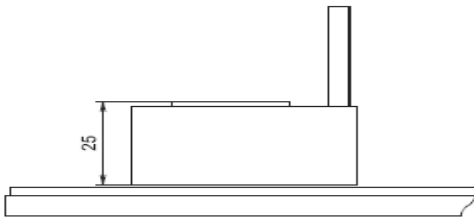
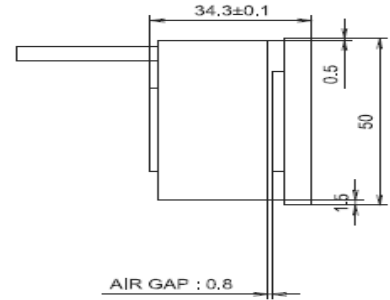
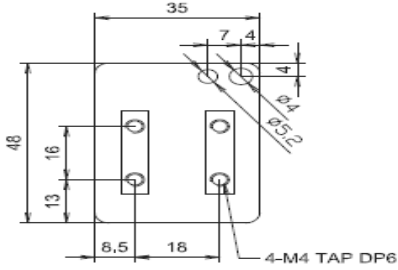
Thrust force VS Speed FMI40A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

Motor (FMI40A-35S)



Linear Motor	L1	L2	N	Z	Weight (kg)
FMI40A					
35S	35	18	1	4	0.20

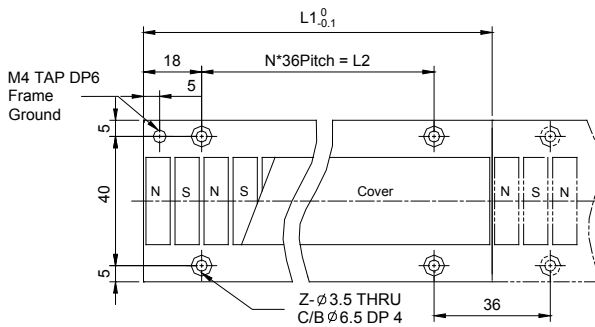
●Motor Cable

Title	Color
U	Orange
V	Yellow
W	Blue
G	Green

●Hallsensor Cable

Title	Color
5V	Red
0V	Black
HA	Yellow
HB	White
HC	Blue
Shield	

Stator (FMI-□□□M)



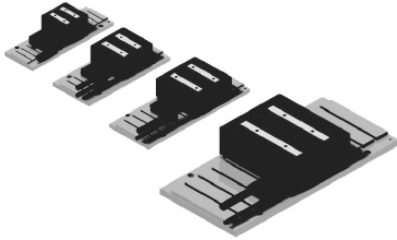
Linear Stator	L1	L2	N	Z	Weight (kg)
FMI					
144M	144	108	3	8	0.41
252M	252	216	6	14	0.71
324M	324	288	8	18	0.92

◎ M4 TAP is starting position of stator

Specifications

(order made)

IRON CORE TYPE-FMD110A Series



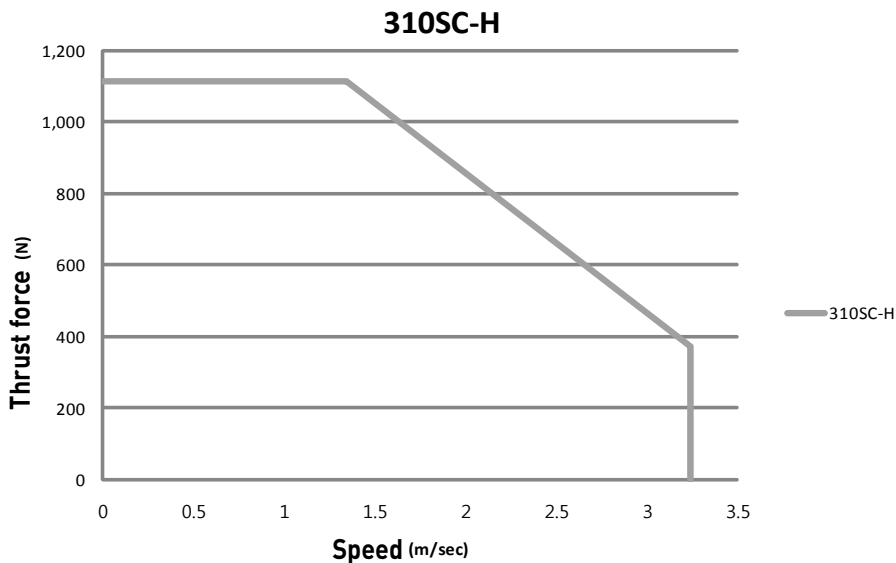
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor FMD		110A
		310SC-H
Continuous Force	N	371.00
Continuous Current	Arms	3.80
Peak Force	N	1113.00
Peak Current	Arms	11.40
Resistance	Ω (p-p)	4.60
Inductance	mH(p-p)	19.74
Force Constant	N/Arms	97.87
B-EMP Constant	Vrms/(m/s)	53.25
Motor Constant	N/ \sqrt{W}	37.79
Electrical Time Constant	ms	4.29
Normal Force	N	2169.45
Power Loss	W	96.40

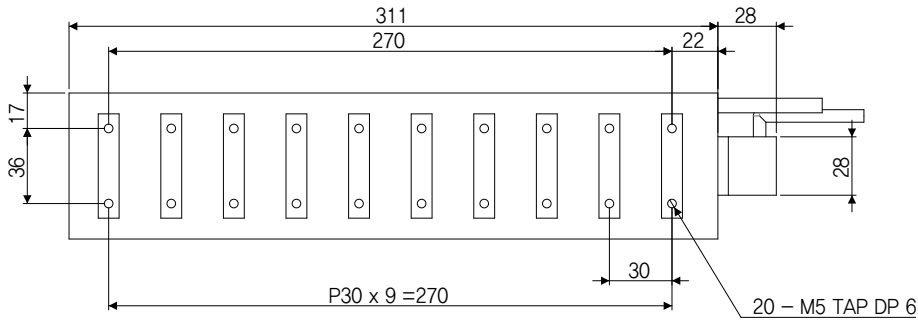
Thrust force VS Speed FMD110A-□□□SC-H



MECHANICAL DIMENSIONS

(UNIT : mm)

Motor (FMD110A-310SC-H)



Linear Motor FMD110A	L1	L2	N	Z	Weight (kg)
310SC-H	311	270	9	20	

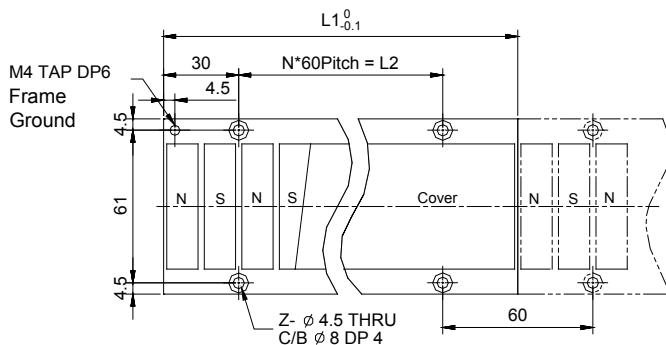
●Motor Cable

Title	Color
U	Orange
V	Yellow
W	Blue
G	Green

●Hallsensor Cable

Title	Color
5V	Red
0V	Black
HA	Yellow
HB	White
HC	Blue
Shield	

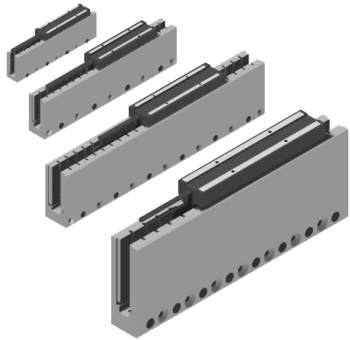
Stator (FMD-□□□M)



Linear Stator FMD	L1	L2	N	Z	Weight (kg)
180M	180	120	2	6	0.82
240M	240	180	3	8	1.09
360M	360	300	5	12	1.64

⊙ M4 TAP is starting position of stator

Specifications



CORELESS TYPE GMD110A Series

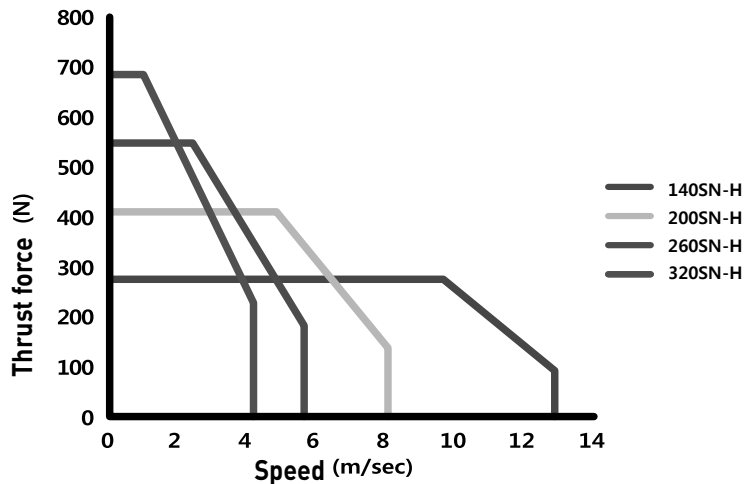
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor GMD	Unit	110A			
		140SN-H	200SN-H	260SN-H	320SN-H
Continuous Force	N	91.33	137.00	182.67	228.33
Continuous Current	Arms	3.80	3.80	3.80	3.80
Peak Force	N	274.00	411.00	548.00	685.00
Peak Current	Arms	11.40	11.40	11.40	11.40
Resistance	Ω (p-p)	2.73	4.10	5.46	6.83
Inductance	mH(P-P)	4.18	6.27	8.35	10.44
Force Constant	N/Arms	24.04	36.05	48.07	60.09
B-EMP Constant	Vrms/(m/s)	11.22	16.83	22.44	28.05
Motor Constant	N/ \sqrt{W}	11.24	13.76	15.89	17.77
Electrical Time Constant	ms	1.53	1.53	1.53	1.53
Normal Force	N	0.00	0.00	0.00	0.00
Power Loss	W	66.08	99.11	132.15	165.19
Mover Weight	kg	0.83	1.24	1.65	2.06

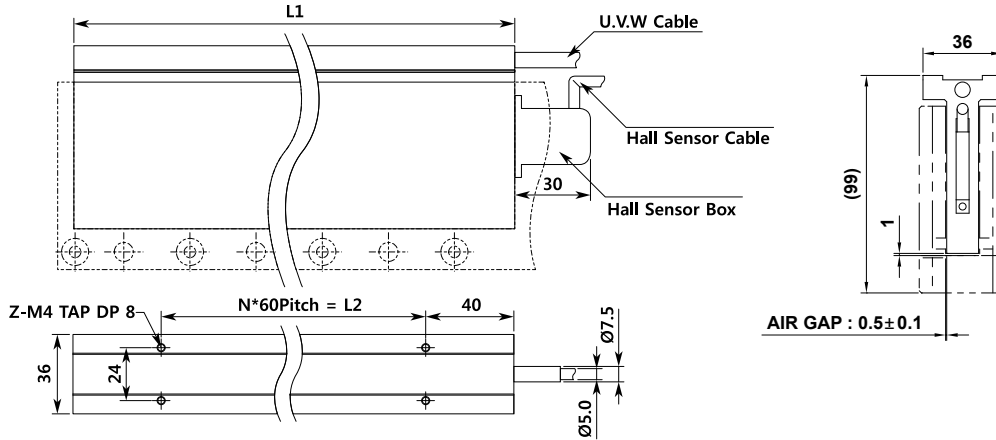
Thrust force VS Speed GMD110A-□□□SN-H



MECHANICAL DIMENSIONS

(UNIT : mm)

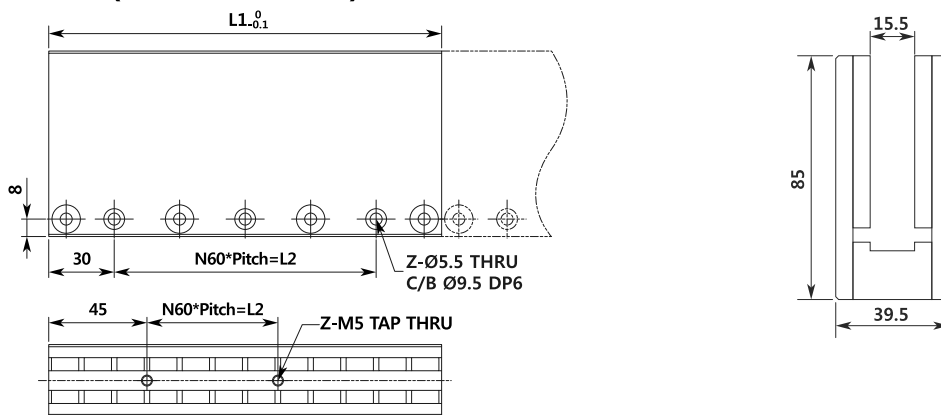
■ **Motor (GMD110A-□□□SN-H)**



Linear Motor GMD110A	L1	L2	N	Z	Weight (kg)
140SN-H	140	60	1	4	0.83
200SN-H	200	120	2	6	1.24
260SN-H	260	180	3	8	1.65
320SN-H	320	240	4	10	2.06

● Motor Cable		● Hallsensor Cable	
Title	Color	Title	Color
U	Orange	5V	Red
V	Yellow	0V	Black
W	Black	HA	Yellow
G	Green	HB	White
		HC	Blue
		Shield	

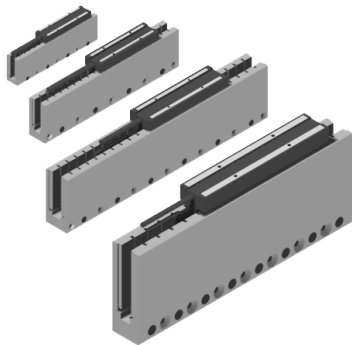
■ **Stator (GMD-□□□M)**



Linear Stator GMD	L1	L2	N	Z	Weight (kg)
180M	180	120	2	3	2.40
240M	240	180	3	4	3.22
360M	360	300	5	6	4.75

⊙ M4 TAP is starting position of stator

Specifications



CORELESS TYPE GLA200A Series

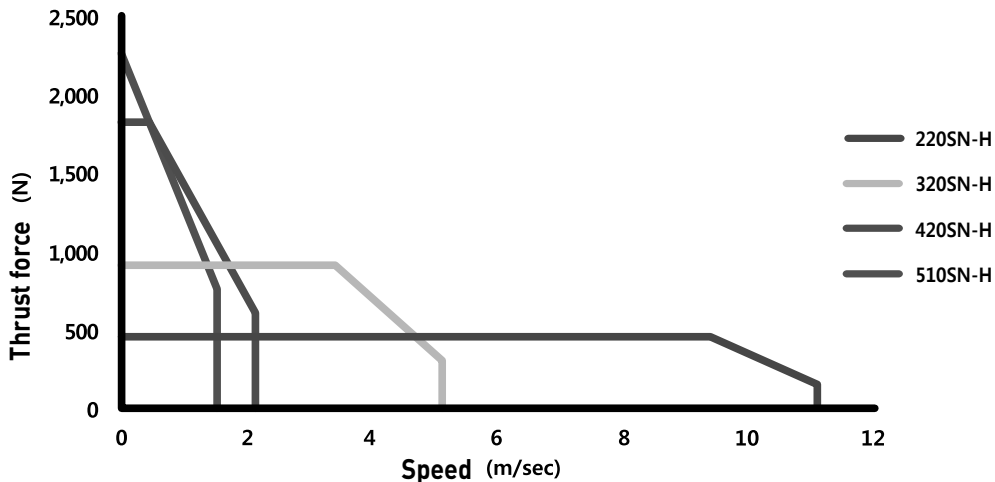
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155°C
- Protection : natural cooling
- Environment : 0~40°C
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor GLA		200A			
		220SN-H	320SN-H	420SN-H	510SN-H
Continuous Force	N	294.00	441.00	588.00	735.00
Continuous Current	Arms	6.40	6.40	6.40	6.40
Peak Force	N	882.00	1323.00	1764.00	2205.00
Peak Current	Arms	19.20	19.20	19.20	19.20
Resistance	$\Omega(p-p)$	2.66	3.99	5.32	6.65
Inductance	mH(p-p)	11.34	17.01	22.68	28.35
Force Constant	N/Arms	45.94	68.91	91.88	114.84
B-EMP Constant	Vrms/(m/s)	23.50	35.25	47.00	58.74
Motor Constant	N/ \sqrt{W}	21.80	26.70	30.83	34.46
Electrical Time Constant	ms	4.26	4.26	4.26	4.26
Normal Force	N	0	0	0	0
Power Loss	W	181.94	272.90	363.87	454.84
Mover Weight	kg	2.35	3.33	4.31	5.30

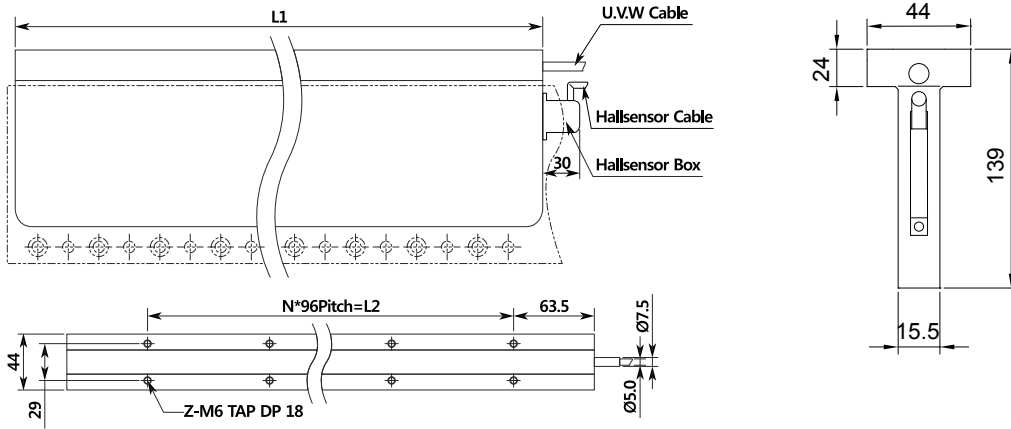
Thrust force VS Speed GLA200A-□□□SN-H



MECHANICAL DIMENSIONS

(UNIT : mm)

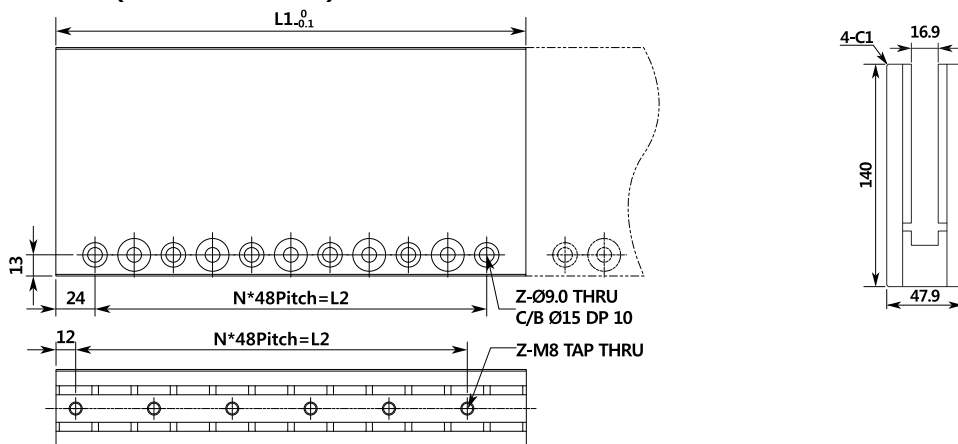
Motor (GLA120A-□□□SN-H)



Linear Motor GLA120A	L1	L2	N	Z	Weight (kg)
220SN-H	223	192	1	4	2.35
320SN-H	319	288	2	6	3.33
420SN-H	415	384	3	8	4.31
510SN-H	511	480	4	10	5.30

●Motor Cable		●Hallsensor Cable	
Title	Color	Title	Color
U	Orange	5V	Red
V	Yellow	0V	Black
W	Black	HA	Yellow
G	Green	HB	White
		HC	Blue
		Shield	

Stator (GLA-□□□M)

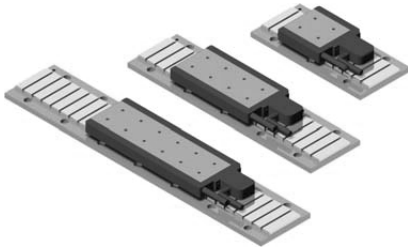


Linear Stator GLA	L1	L2	N	Z	Weight (kg)
192M	192	144	3	4	5.75
288M	288	240	5	6	8.62
384M	384	336	7	8	11.48

◎ M4 TAP is starting position of stator

Specifications

IRON CORE TYPE SSM60A Series



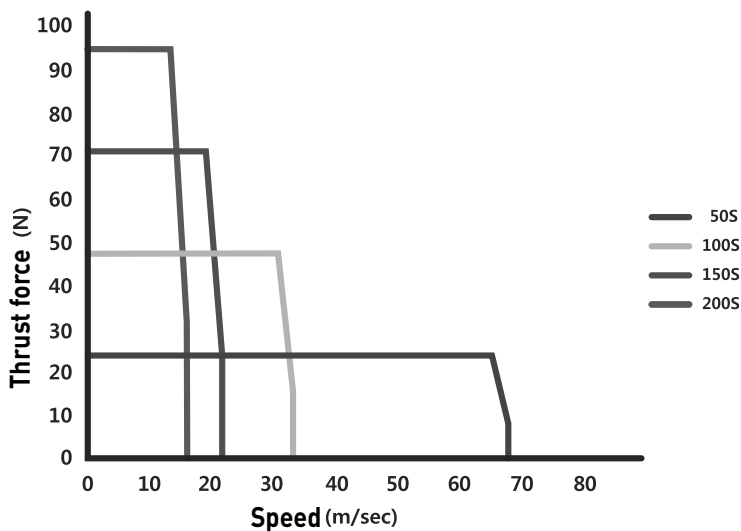
Basic specifications

- Rated condition : constant
- Insulation withstand voltage : AC1500v,1Min.
- Coil insulation degree :F degree, 155℃
- Protection : natural cooling
- Environment : 0~40℃
- Hall sensor : option
- Insulation resistance : DC500V, 10M Ohm
- Power option : square-wave or sine wave, 3 phase
- Connector : option
- Cable : 600mm

Performance

Linear Motor SSM	Unit	60A			
		50S	100S	150S	200S
Continuous Force	N	8.00	15.73	23.60	31.47
Continuous Current	Arms	2.00	2.00	2.00	2.00
Peak Force	N	24.00	47.20	70.80	94.40
Peak Current	Arms	6.00	6.00	6.00	6.00
Resistance	Ω (p-p)	0.88	1.75	2.63	3.50
Inductance	mH(P-P)	0.27	0.54	0.81	1.09
Force Constant	N/Arms	4.00	7.87	11.80	15.73
B-EMP Constant	Vrms/(m/s)	2.03	4.06	6.09	8.12
Motor Constant	N/ \sqrt{W}	3.00	4.69	5.74	6.63
Electrical Time Constant	ms	0.31	0.31	0.31	0.31
Normal Force	N	1.00	2.40	3.60	4.80
Power Loss	W	6.00	11.25	16.88	22.51
Mover Weight	kg	0.18	0.36	0.54	0.72

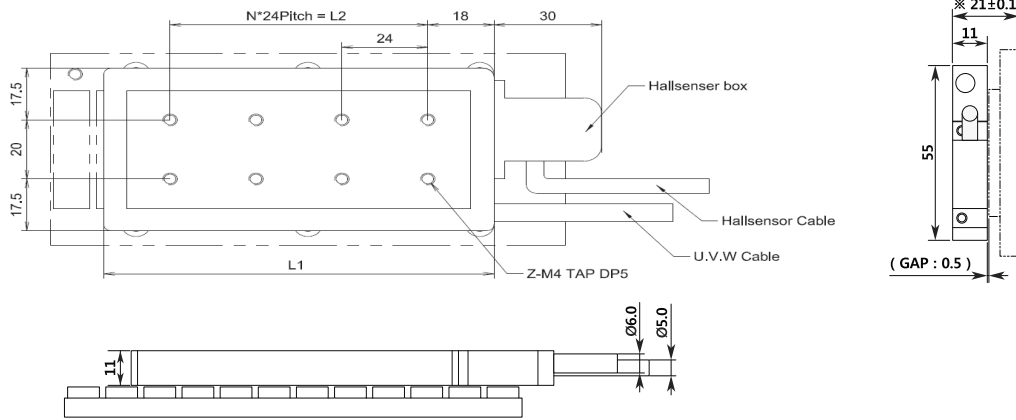
Thrust force VS Speed SSM60A-□□□S



MECHANICAL DIMENSIONS

(UNIT : mm)

Motor (SSM60A-□□□S)



Linear Motor SSM60A	L1	L2	N	Z	Weight (kg)
60SN	60	24	1	4	0.18
110SN	108	72	3	8	0.36
160SN	156	120	5	12	0.54
200SN	204	168	7	16	0.72

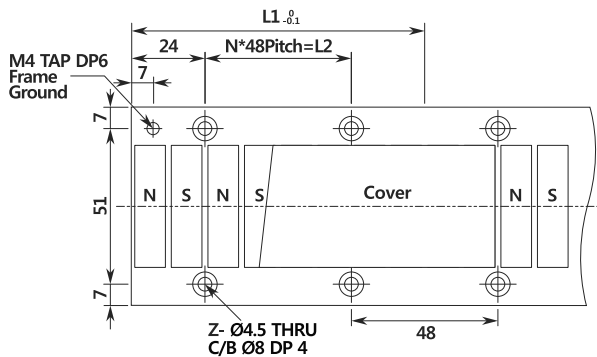
●Motor Cable

Title	Color
U	Orange
V	Yellow
W	Blue
G	Green

●Hallsensor Cable

Title	Color
5V	Red
0V	Black
HA	Yellow
HB	White
HC	Blue
Shield	

Stator (SSM-□□□M)



Linear Stator NMTL-SSM	L1	L2	N	Z	Weight (kg)
144M	144	96	2	6	0.57
240M	240	192	4	10	0.95
336M	336	288	6	14	1.33

■ M4 TAP is starting position of stator

How to select motor

■ Calculate max thrust force and continuous thrust force and then select motor

- V : Velocity(m/s)
- Aa : Acceleration(m/s²)
- Ad : Deceleration(m/s²)
- X : Stroke(m)
- u : Bearing friction coefficient
- Fe : Other resistance(N)
- Ef : Frictional force(N)
- Fa : Accelerating force(N)
- Fd : Decelerating force(N)
- Ft : Continuous thrust force(N)
- M : Total weight(Kg)

$$t_a = \frac{V}{A_a} \quad t_d = \frac{V}{A_d} \quad t_f = \frac{1}{V} \left(X - \frac{V(t_a+t_d)}{2} \right)$$

$$t = t_a + t_f + t_d + t_{dwell} \quad t_{dwell} = 0.2$$

$$F_f = u \times M \times (9.81 + A_a \times 5) + F_e$$

$$F_a = M \times A_a + F_f$$

$$F_d = F_f - M \times A_d$$

$$F_t = \sqrt{\frac{F_a^2 \times t_a + F_f^2 \times t_f + F_d^2 \times t_d}{t}}$$

- Continuous force on catalog should be bigger than (Ft/Efficiency)and peak force should be bigger than(Fa× safety factor)
- Safety factor : standard safty factor 1.2 applied
- Efficiency : standard efficiency 0.6 applied

Example

- V : 3 m/s
- Aa : 19.6 m/s²
- Ad : 9.8 m/s²
- M : Load3Kg + Mover[table]2Kg + Mover 1Kg
- X : 1.5 m
- u : 0.005
- Fe : 20 N

$$t_a = \frac{V}{A_a} = 0.153s$$

$$t_d = \frac{V}{A_d} = 0.306s$$

$$t_{dwell} = 0.2$$

$$t_f = \frac{1}{V} \left(X - \frac{V(t_a+t_d)}{2} \right) = 0.270s$$

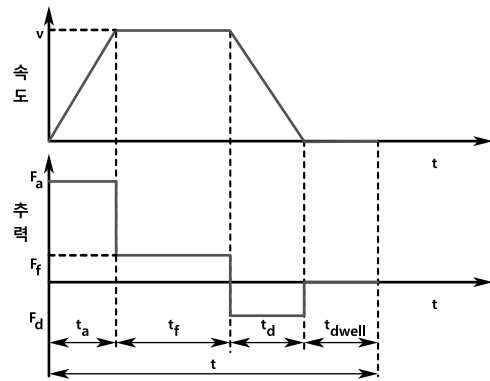
$$t = t_a + t_f + t_d + t_{dwell} = 0.929s$$

$$F_t = u \times M \times (9.81 + A_a \times 5) + F_e = 23.23N$$

$$F_a = M \times A_a + F_f = 140.83N$$

$$F_d = F_f - M \times A_d = -35.57N$$

$$F_t = \sqrt{\frac{F_a^2 \times t_a + F_f^2 \times t_f + F_d^2 \times t_d}{t}} = 61.96N$$



- FSM60A-160S Continuous Force 124.57N > (Ft / 0.6 = 103.27N)
Peak Force 373.71N > (Fa * 1.2 = 169.00N)
- Recheck it with the weight of selected motor
FSM60A-160S Continuous Force 124.57N > (Ft / 0.6 = 104.20N)
Peak Force 373.71N > (Fa * 1.2 = 170.45N)
- Finally, FSM0A -160S is selected.

