Moving towards tomorrow

MECAPION

www.mecapion.com

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Industrial Development Zone Jiangsu, China
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Industrial Robot System

New name of **metronix** in korea

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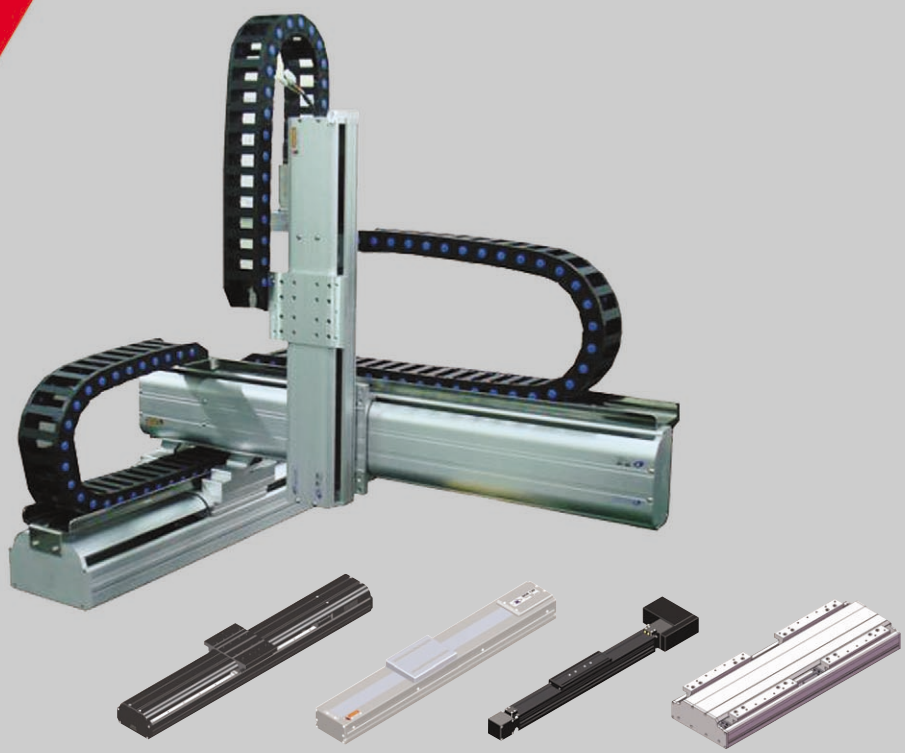

Industrial Robot System

Moving Towards Tomorrow ..... MECAPION

Change Up History

The leader in "High Precision, Digital Control"

2010 System Engineering

2008 Industrial Robot System

2005 Motion System & ASIC

2001 AC Servo System

1995 Rotary Encoder

Total Solution of Digital Mechatronics

History

- Sep. 1995 MECAPION was established and started Sensor business
- Jun. 1996 FA and OA encoder series were developed
- Mar. 1997 Rotary encoder for Servo Motor was developed
- May. 1997 Rotary encoder for elevator was developed and provided
- Nov. 1999 Robot encoder was developed
  Achieved CE mark for Rotary encoder
  Be selected as Venture Enterprise
- Jan. 2000 Moved and expanded company (Seongseo Industrial Complex)
- May. 2000 Started Servo business
- Aug. 2000 Changed into corporation
- Dec. 2000 Authorized by Small and Medium Business Corporation Authority
- Feb. 2001 Servo Motor was developed
- Jun. 2001 Expanded and relocated the plant (Seongseo 3rd Industrial Complex)
- Aug. 2001 Servo Drive(VS, VP) was developed
- Sep. 2001 R&D Center was established
- Feb. 2002 Be awarded the prize of the 1st Venture Enterprise of Daegu City
- Apr. 2002 Established Kyungin Center
- May. 2002 Be qualified on participation of industry-university cooperation consortium
  Be selected as a special technical company for component and material
  (By ministry of Commerce, Industry and Energy)
- Jun. 2002 Be qualified by ISO 9001
  Spinner motor for semiconductor was developed
- Jul. 2002 Be selected as the best enterprise of grade valuation for Venture enterprises(By the Federation of Korean Industries)
- Nov. 2002 Be awarded the prize of the 2nd Venture Enterprise of Daegu City
- Dec. 2002 Be selected as INNO-BIZ Company
- May. 2003 Achieved CE mark for Servo Motor
- Jun. 2004 Be selected as prospective export company
  (By the Small and Medium Industry Promotion Corporation)
- Aug. 2004 Economy Servo Drive(VK) was developed
- Sep. 2004 Be awarded a Gold Prize of 5th Inno Tech Show
  (By The Prime Minister)
- Oct. 2004 Achieved CE mark for Servo Drive
  Be awarded the chairman prize of Special Committee on Small and
  Medium Enterprise in 2004 Venture Show
- Nov. 2004 Be awarded a memorial tablet for export of 1 million
- Jan. 2005 Be selected as Daegu 5 Star Enterprises
  (By Ministry of Commerce, Industry and Energy)
  Started Motion system business
- Feb. 2005 Established China factory in Wuxi, China
- Jun. 2005 Be attracted the 3rd investment and issued of new share by Korea Development Bank
- Nov. 2005 Registered 2 kind of patens
- Dec. 2005 Invested to ASIC design and development company(30%)
- Dec. 2006 Be awarded a memorial tablet for export of 3 millions
- Mar. 2007 Be selected as Star Enterprises
- Oct. 2007 Win Grand Enterprise prise by Daegu City
- Nov. 2007 Open Guangdong Center in China
- Jan. 2008 Start Robot business

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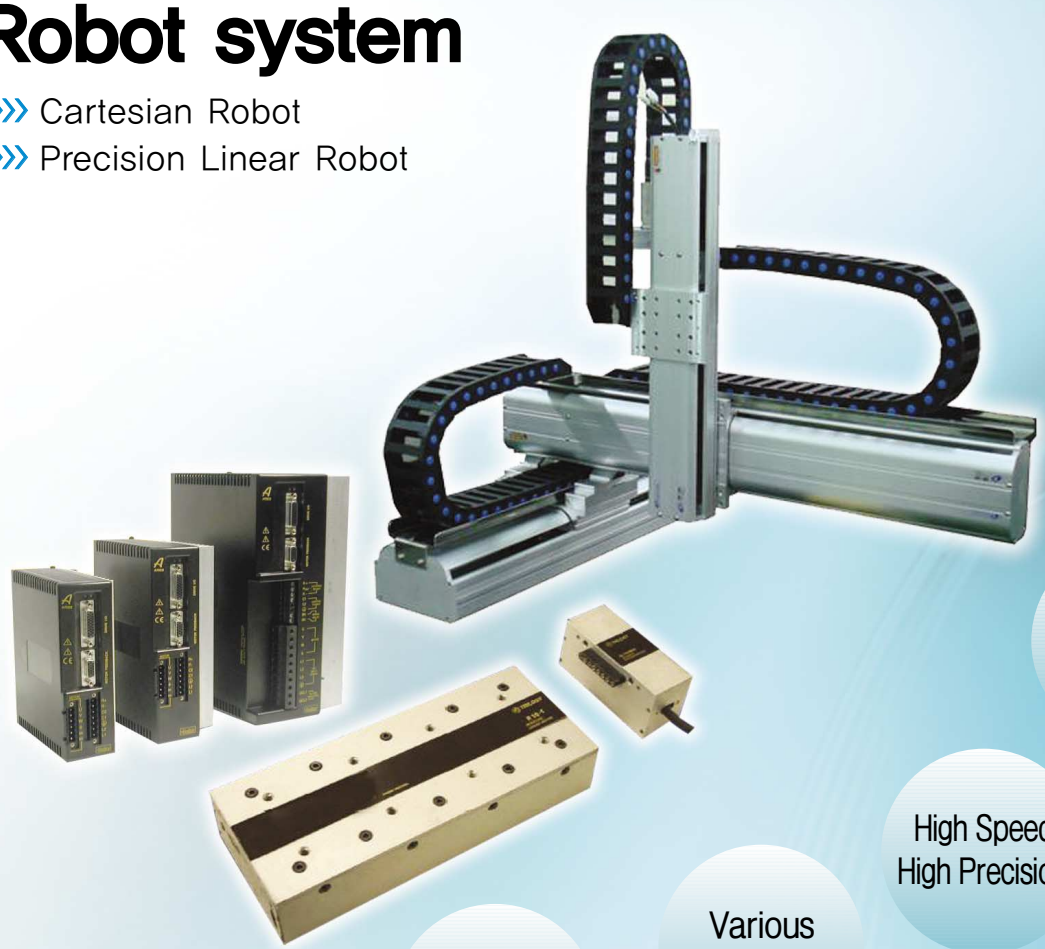
Global FA Leading Company MECAPION

Robot Series

Robot system

- Cartesian Robot
- Precision Linear Robot



Best System by Design Analysis

Reasonable Price

High Speed High Precision

Various Application

Easy Maintenance

C • O • N • T • E • N • T • S

Cartesian Robots

1. Cartesian Robots

■ MS052 Series ..... 18 Page

A 

B 

C 

D 

■ MS064 Series ..... 20 Page

A 

B 

C 

D 

E 

F 

G 

■ MS092 Series ..... 23 Page

A(100W) 

A(200W) 

B 

C 

D 

E 

F 

G 

H 

I 

J 

A

B

C

D

E

F

G

A

B

C

D

A

B

C

D

2. Clean Robots

■ MC160 ..... 37 Page

S-Standard

C-Stainless Steel Cover

3. Belt Type Robots

■ MB126, 160 Series ..... 41 Page

B

C

D

E

F

G

4. Motion Robots

■ MM080, 120 - Main Unit ..... 49 Page

A

B

C

D

E

F

■ MM080, 120 - Idle Unit ..... 55 Page

G

H

I

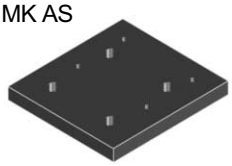
J

5. Robot Brackets

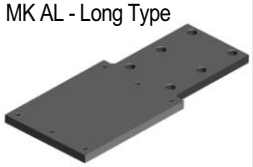
62 Page

■ Flat Type

MK AS



MK AL - Long Type



■ Standard

MK BS

MK BL - Long Type

■ Eccentric Type

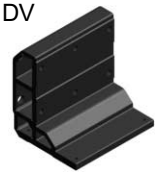
MK DS

MK DL - Long Type

■ Vertical Type

MK AV

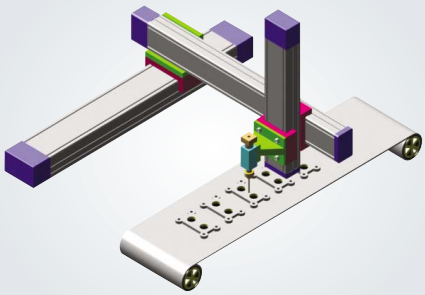
MK DV



Application of Linear Axes Unit

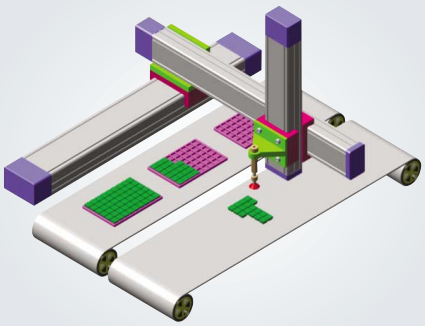
– Linear axes unit is used for various field for example moving, auto loader, inspection, line up, dispensing, carving etc with advantage of convenience, simple construction and chief investment compare with other type.

Dispensing



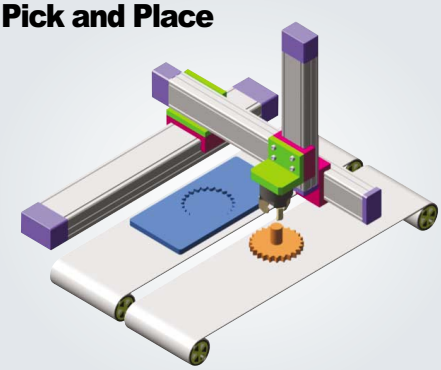
➔ Dispensing Unit
Grease gun will input fixed volume or q'ty with required speed to certain place by conveyer.

Palletizing



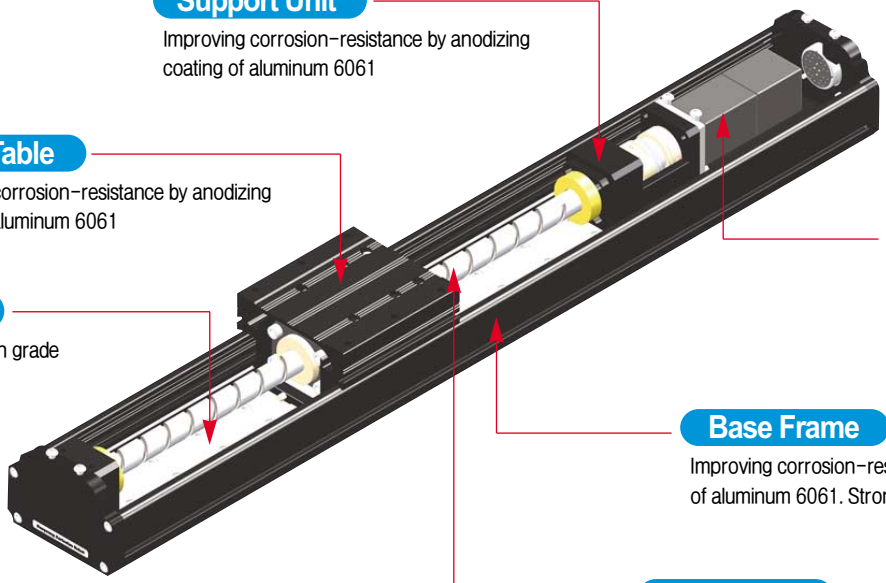
➔ Palletizing Unit
Place certain items into pallet with several spaces as programming order

Pick and Place



➔ Pick and Place Unit
Move several parts to assembly line by pick and place

Construction of Linear Axes Unit



Support Unit
Improving corrosion-resistance by anodizing coating of aluminum 6061

Slide Table
Improving corrosion-resistance by anodizing coating of aluminum 6061

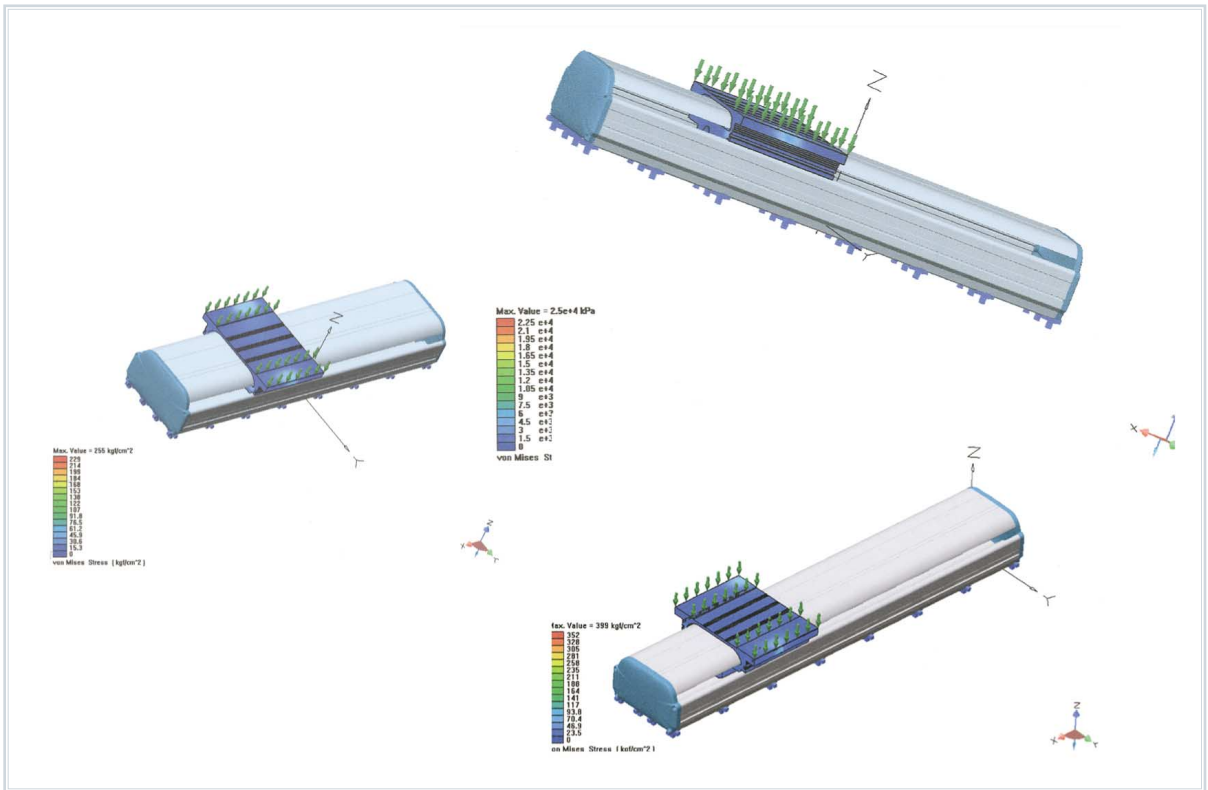
Servo Motor

LM Guide
Adopt high precision grade

Base Frame
Improving corrosion-resistance by anodizing coating of aluminum 6061. Strong construction design

Ball Screw

Strong construction design by analysis



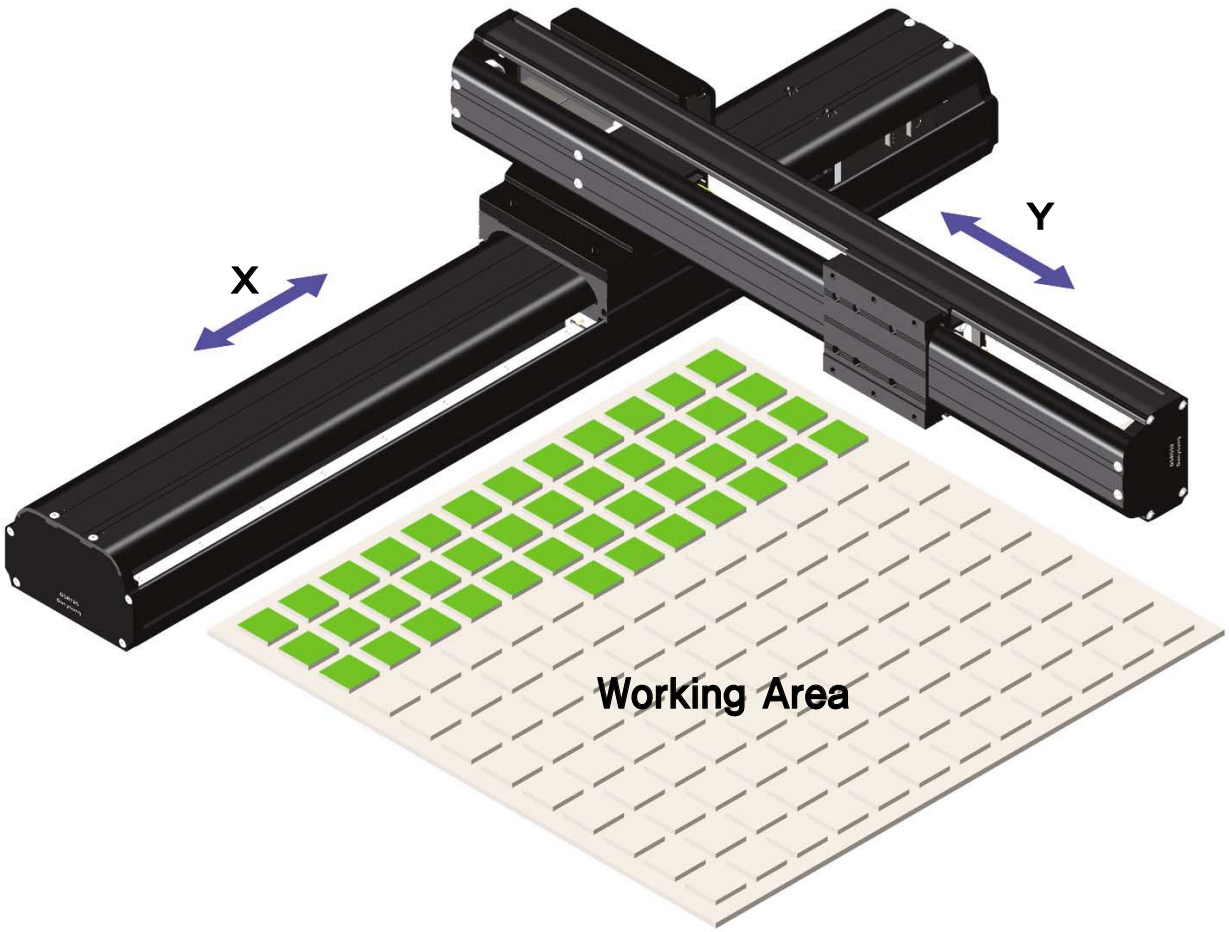
Caution on setting

Setting Place

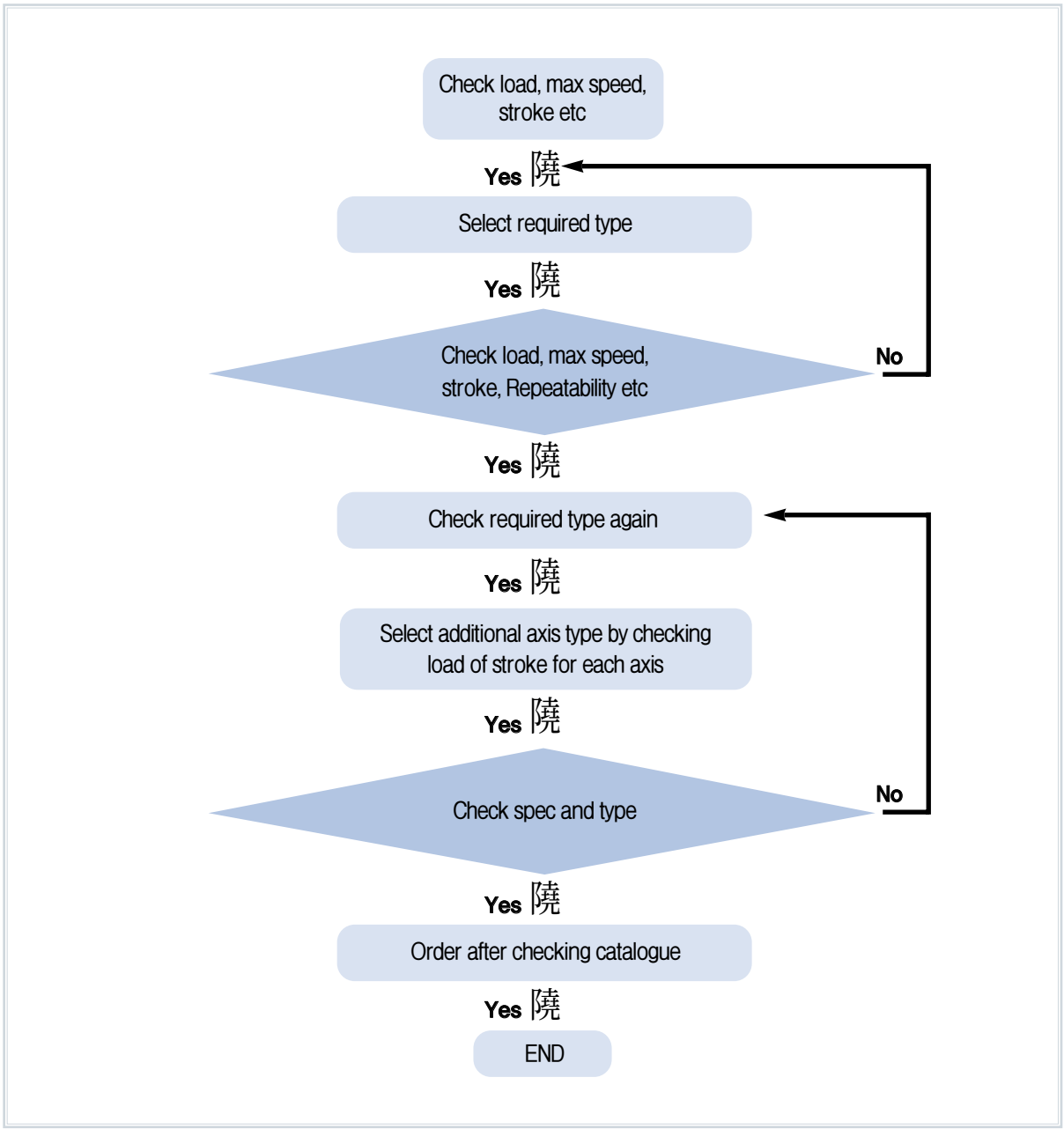
- Consider maintenance.
- Temperature : -5℃ ~ 40℃
- Humidity : Less than 80%
- Not exposure to direct ray of light, corrosive gas, inflammable gas, oil, dust, salt, excessive vibration or shock.

Setting Plane

- Linear axes unit must be fixed on center of gravity.
- Precision of 1st stage should be less than 0.05mm
- Linear axes unit must be fixed not to be moved on operation..
- Space between unit and face is not allowed.
  => If there is space between unit and face, make correction and set again.



Model selection



Example

1. Select load, max speed, operating type, stroke, motor spec etc.
2. Select bracket when mixing stage.
3. Check selected model for type and use.
4. Order after checking catalogue.

▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Terminology of linear axes unit

Payload

▶ Max load on setting condition for example speed up and down of speed.

Running type

▶ AC Servo system is popular because of high easy control and confidence in position and speed control in Cartesian Robot.

Mixing axes

▶ Mixing linear robot and bracket and make 2axes(X,Y) or 3axes(X,Y,Z).

Serial type & Parallel type

▶ Serial type : Body and operating parts are connected in serial type.

▶ Parallel type : Body and operating pasts are connected in parallel type(Connect with belt).

Repeatability

▶ Average position of repeat operation on same condition.

▶ Robot ability of moving to fixed position.

Max. Speed

▶ Max speed of operating axis on certain condition.

Stroke

▶ Repeated distance between limit sensors (- Limit Sensor ~ + Limit Sensor)

※ Fixing power of setting bolt

■ Unit : Kgf · cm

Article	M3	M4	M5	M6	M8	M10	M12	M14	M16
Aluminum	10	21	45	70	150	340	600	10	10
Steel	13	28	60	94	205	460	800	13	13
Casting Metal	20	42	90	140	310	690	1200	20	20

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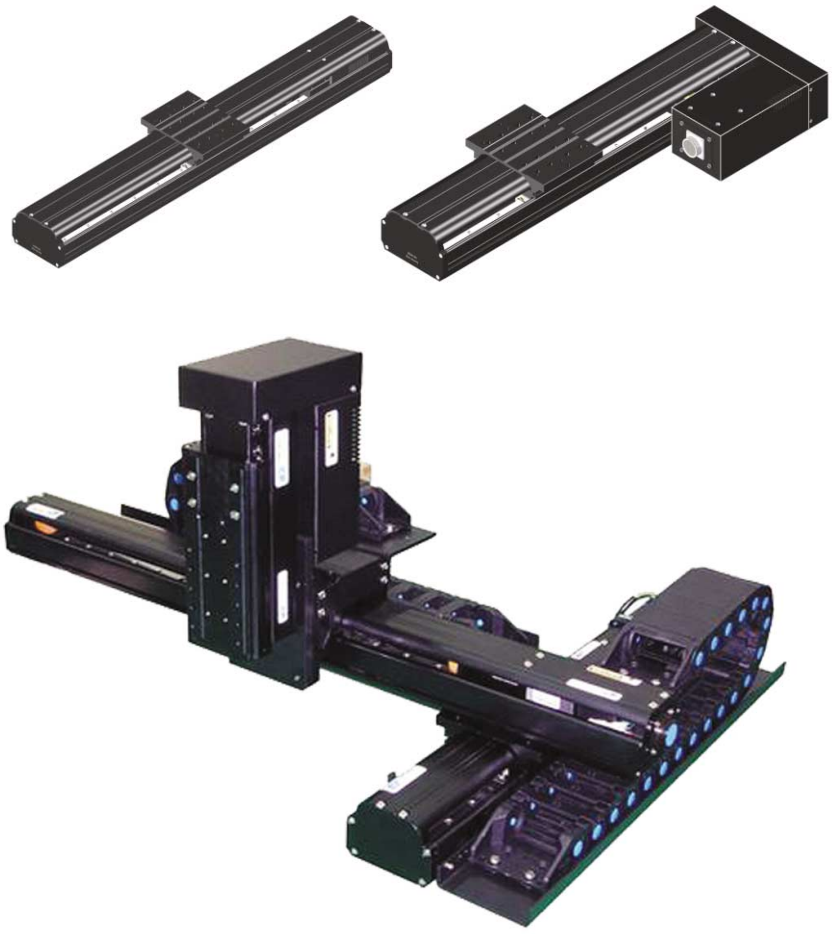
MS series

Cartesian Robots



Character

- With strong aluminum box type extrusion construction, light and strong
- Various product range for each load
- Simple construction and easy application
- High speed, high precision, compact design
- By using AC servo motor, easy maintenance, high confidence, easy control
- Various application for example semiconductor inspection M/C, Sealing, Screw, Moving etc automation facilities
- Registration of design for all items(Some models - New design for practical use, Patent)
- Reliable products checked by 3-Dimension measuring machine

1 axis spec and performance

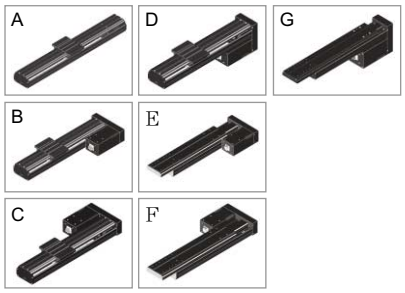
Series	Model	Stroke(mm)	Max. Speed (mm/s)	Payload (kgf)	Motor (W)	Sensor	Page
MS052	MS052-A10-N□□□□-E10	100~1000	500(1000)	24	100	In, Out	18
	MS052-B10-N□□□□-E10	100~1000	500(1000)	24	100	In, Out	19
	MS052-C10-N□□□□-E10	100~1000	500(1000)	24	100	In, Out	19
	MS052-D10-N□□□□-E10	100~1000	500(1000)	24	100	In, Out	19
MS064	MS064-A10-N□□□□-N10	100~400	500	16	100	In, Out	20
	MS064-B10-N□□□□-N10	100~400	500	16	100	In, Out	21
	MS064-C10-N□□□□-N10	100~400	500	16	100	In, Out	21
	MS064-D10-N□□□□-N10	100~400	500	16	100	In, Out	21
	MS064-E(F)10-N□□□□-N10	100~400	500	6	100	Out	22
	MS064-G10-N□□□□-N10	100~400	500	6	100	Out	22
MS092	MS092-A10-N□□□□-N10	100~1000(800)	500(1000)	23	100	In, Out	23
	MS092-A20-N□□□□-N10	100~1000(800)	500(1000)	29	200	In, Out	24
	MS092-B10-N□□□□-N10	100~1000(800)	500(1000)	23,28	100, 200	In, Out	24
	MS092-C10-N□□□□-N10	100~1000(800)	500(1000)	23,28	100, 200	In, Out	24
	MS092-D10-N□□□□-N10	100~1000(800)	500(1000)	23,28	100, 200	In, Out	25
	MS092-E(F)10-N□□□□-N10	100~600	500(1000)	7, 12	100, 200	In, Out	25
	MS092-G10-N□□□□-N10	100~600	500(1000)	7, 12	100, 200	In, Out	26
	MS092-H(I)10-N□□□□-N10	100~600	500(1000)	8, 16	100, 200	In, Out	26
	MS092-J10-N□□□□-N10	100~600	500(1000)	8, 16	100, 200	In, Out	27
MS126	MS126-A10-N□□□□-N10	100~1000(800)	500(1000)	50	200, 400	In, Out	28
	MS126-B10-N□□□□-N10	100~1000(800)	500(1000)	50	200, 400	In, Out	29
	MS126-C10-N□□□□-N10	100~1000(800)	500(1000)	50	200, 400	In, Out	29
	MS126-D10-N□□□□-N10	100~1000(800)	500(1000)	50	200, 400	In, Out	29
	MS126-E(F)10-N□□□□-N10	100~600(800)	500(1000)	50	200, 400	In, Out	30
	MS126-G10-N□□□□-N10	100~600(800)	500(1000)	50	200, 400	In, Out	30
MS160	MS160-A10-N□□□□-N10	200~1500(1000)	500(1000)	80, -, 86	400, 600, 750	In, Out	31
	MS160-B10-N□□□□-N10	200~1500(1000)	500(1000)	80, -, 86	400, 600, 750	In, Out	32
	MS160-C10-N□□□□-N10	200~1500(1000)	500(1000)	80, -, 86	400, 600, 750	In, Out	32
	MS160-D10-N□□□□-N10	200~1500(1000)	500(1000)	80, -, 86	400, 600, 750	In, Out	32
MS200	MS200-A10-N□□□□-N10	200~1700(1200)	500(1000)	-, 120, -	600, 750, 800	In, Out	33
	MS200-B10-N□□□□-N10	200~1700(1200)	500(1000)	-, 120, -	600, 750, 800	In, Out	34
	MS200-C10-N□□□□-N10	200~1700(1200)	500(1000)	-, 120, -	600, 750, 800	In, Out	34
	MS200-D10-N□□□□-N10	200~1700(1200)	500(1000)	-, 120, -	600, 750, 800	In, Out	34

We customize products what user wants. (Servo Motor, Raydent, Body Harness)

MS selection guide

Motor Direction

A	Motor – Series attach
B	Motor – Left parallel attach
C	Motor – Right parallel attach
D	Motor – Under attach
E(H)	Motor – Left parallel attach (2Block)
F(I)	Motor – Right parallel attach (2Block)
G(J)	Motor – Under attach (2Block)

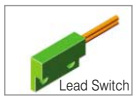


Sensor

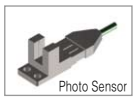
※※Applied sensor

N	Inside Sensor
E	Outside Sensor(Both)
R	Outside Sensor(Right)
L	Outside Sensor(Left)
X	No Sensor

1) Inside Sensor

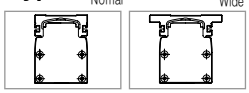


2) Outside Sensor



Slide Table Type

N	Nomal
W	Wide



MS 052 - A 10 - N 0100 - N 05

Model Name

MS	Metronix Cartesian Robot

Body Size

052	Body Width : 52mm
064	Body Width : 64mm
092	Body Width : 92mm
126	Body Width : 126mm
160	Body Width : 160mm
200	Body Width : 200mm

Motor Capacity

10	Motor : 100W, 3000rpm
20	Motor : 200W, 3000rpm
40	Motor : 400W, 3000rpm
60	Motor : 600W, 3000rpm
70	Motor : 750W, 3000rpm
1B	Motor : 100W Brake, 3000rpm
2B	Motor : 200W Brake, 3000rpm
4B	Motor : 400W Brake, 3000rpm
6B	Motor : 600W Brake, 3000rpm
7B	Motor : 750W Brake, 3000rpm

Stroke

0100	Stroke : 100mm~

Available Max 1700mm (Refer to Spec)
Lead 5mm : Ask manufacture

Ball Screw Lead

05	Lead : 5mm → Max. Speed : 250mm/sec
10	Lead : 10mm → Max. Speed : 500mm/sec
20	Lead : 20mm → Max. Speed : 1000mm/sec

MS052 Specifications

Model		MS052 - A / B / C / D
Base Width	mm	52
Payload	kgf	Vertical : 6 (3) Horizontal : 24 (4)
Max. Speed	mm/sec	500 (1000)
Servo Motor	W	100W, 3000 rpm
Stroke	mm	100 ~ 1000 (800)
Repeatability	mm	±0.02
LM Guide	-	1 Rail 2 Block
Ball Screw	-	ϕ15, Lead 10mm (20mm), C7
Body	-	Aluminum Profile, White(Standard color) & Black Anodizing

■ ( ) Set max speed at1000mm/sec

Weight		※Tolerance : 100g							
Model	Stroke / Unit	100	200	300	400	500	600	700	Offset(100mm)
MS052 - A10	kg	4.9	5.3	5.7	6.1	6.5	6.9	7.3	0.4
MS052 - A1B		5.4	5.8	6.2	6.6	7.0	7.4	7.8	
MS052 - B(C, D)10		4.9	5.3	5.7	6.1	6.5	6.9	7.3	
MS052 - B(C, D)1B		5.4	5.8	6.2	6.6	7.0	7.4	7.8	

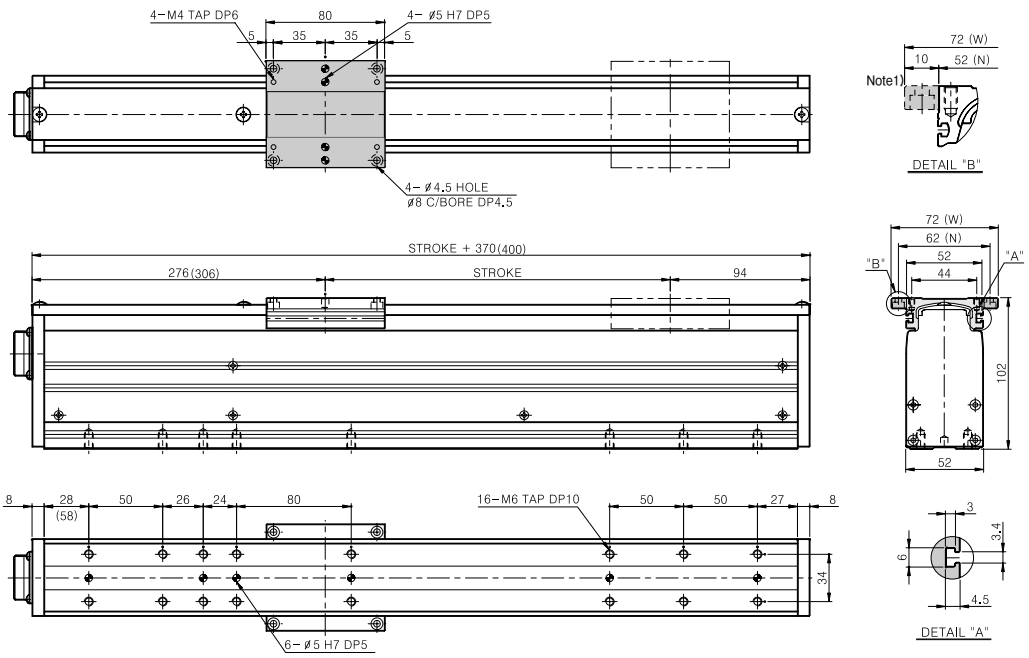
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS052 - A□□ - W

※( ) : Brake Motor Dimension



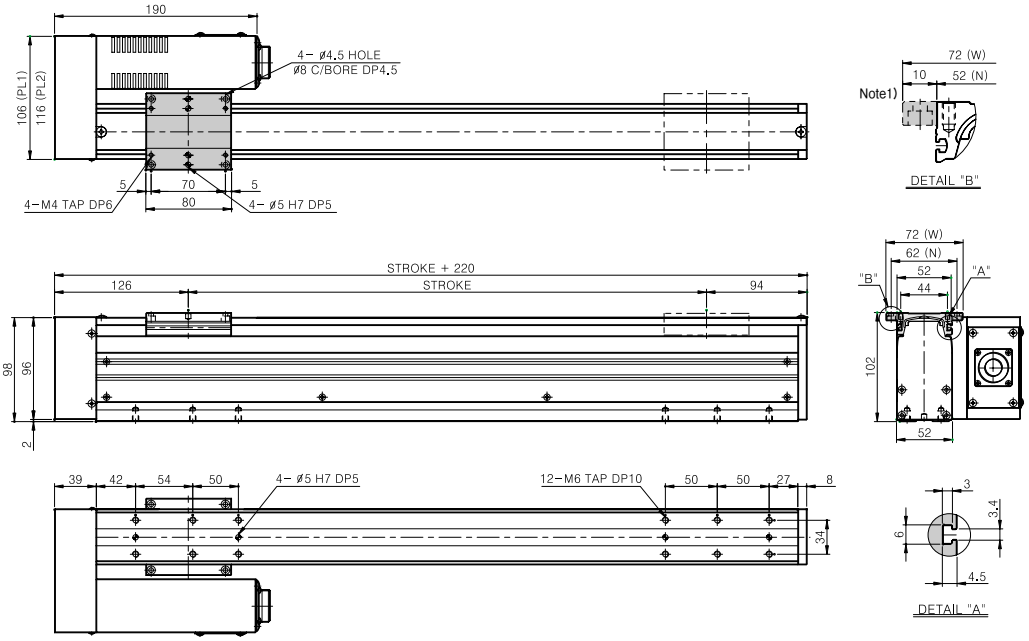
※ Note1) □□-W:With 10mm part, N : Without 10mm part

Dimensions

■ Dimensions in "mm"

MS052 - B(C)□□ - W

※( ) : Brake Motor Dimension

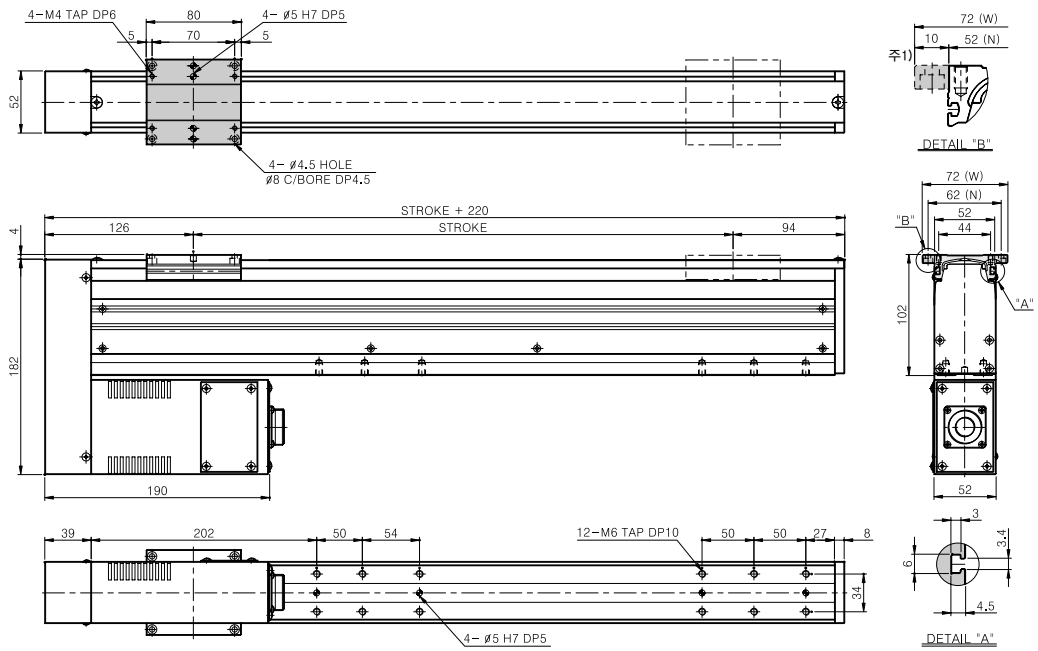


Dimensions

■ Dimensions in "mm"

MS052 - D□□ - W

※( ) : Brake Motor Dimension



※ Note1) □□ - W : With 10mm part, N : Without 10mm part ※ B type : Symmetric with C type drawing, measurements are the same

MS064 Specifications

Model		MS064 - A / B / C / D	MS064 - E / F / G
Base Width	mm	64	64
Payload	kgf	Vertical : 7 Horizontal : 16	Vertical : 4 Horizontal : 6
Max. Speed	mm/sec	500	500
Servo Motor	W	100W, 3000 rpm	100W, 3000 rpm
Stroke	mm	100 ~ 400	100 ~ 400
Repeatability	mm	±0.02	±0.02
LM Guide	-	1 Rail 2 Block	No 12, 1 Rail 2 Block
Ball Screw	-	ϕ12, Lead 10mm, C7	ϕ12, Lead 10mm, C7
Body	-	Aluminum Profile, White(Standard Color) & Black Anodizing	

Weight		※Tolerance : 100g				
Model	Unit / Stroke	100	200	300	400	Offset(100mm)
MS064 - A10	kg	4.2	4.7	5.2	5.7	0.5
MS064 - A1B		4.8	5.3	5.8	6.3	
MS064 - B(C, D)10		3.4	3.9	4.4	4.9	
MS064 - B(C, D)1B		3.9	4.4	4.9	5.4	
MS064 - E(F, G)10		3.8	4.5	5.2	5.9	0.7
MS064 - E(F, G)1B		4.3	5.0	5.7	6.4	

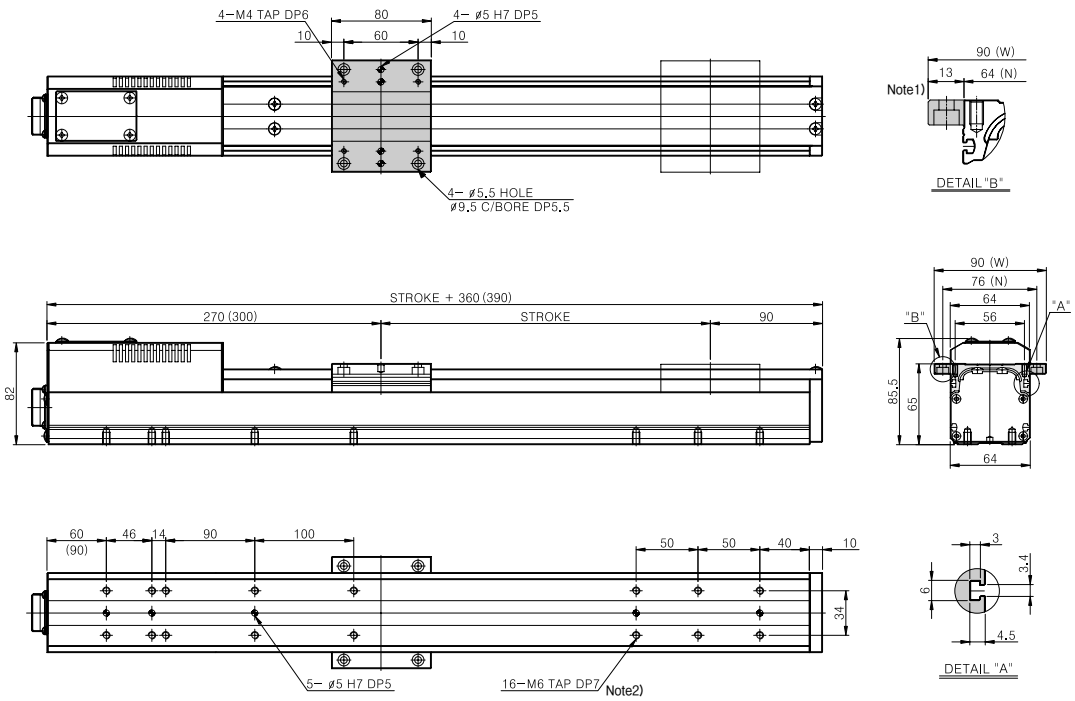
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS064 - A□□ - W

※( ) : Brake Motor Dimension

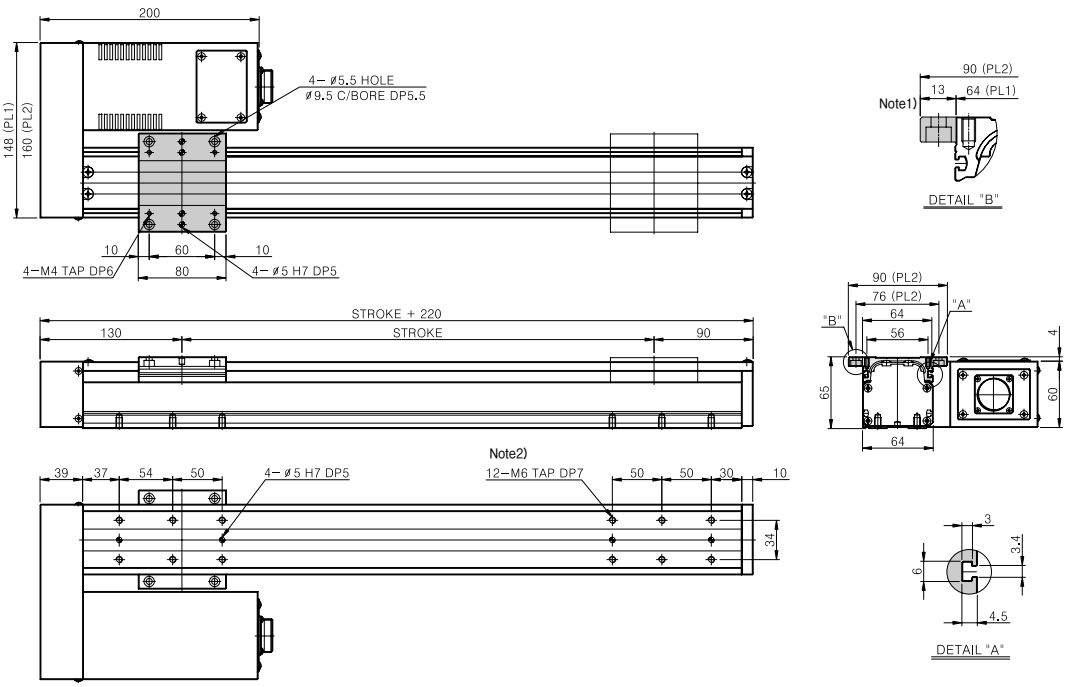


※ Note1) □□ - W : With 13mm part, N : Without 13mm part Note2). Bolt depth : Max 7mm

Dimensions

■ Dimensions in "mm"

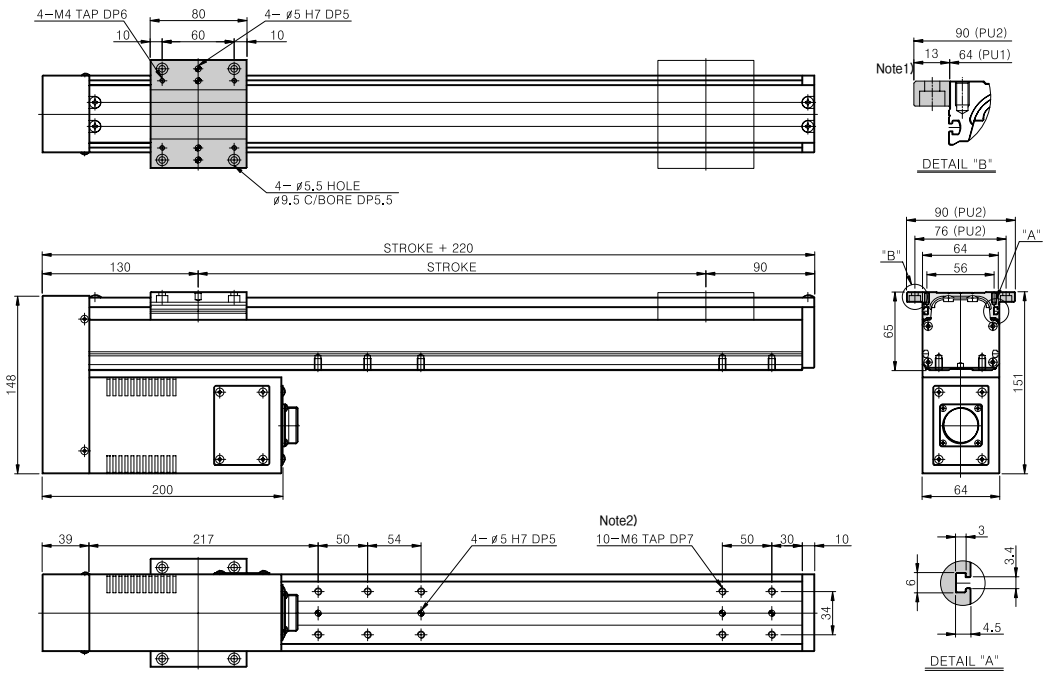
MS064 - B(C)□□ - W



Dimensions

■ Dimensions in "mm"

MS064 - D□□ - W

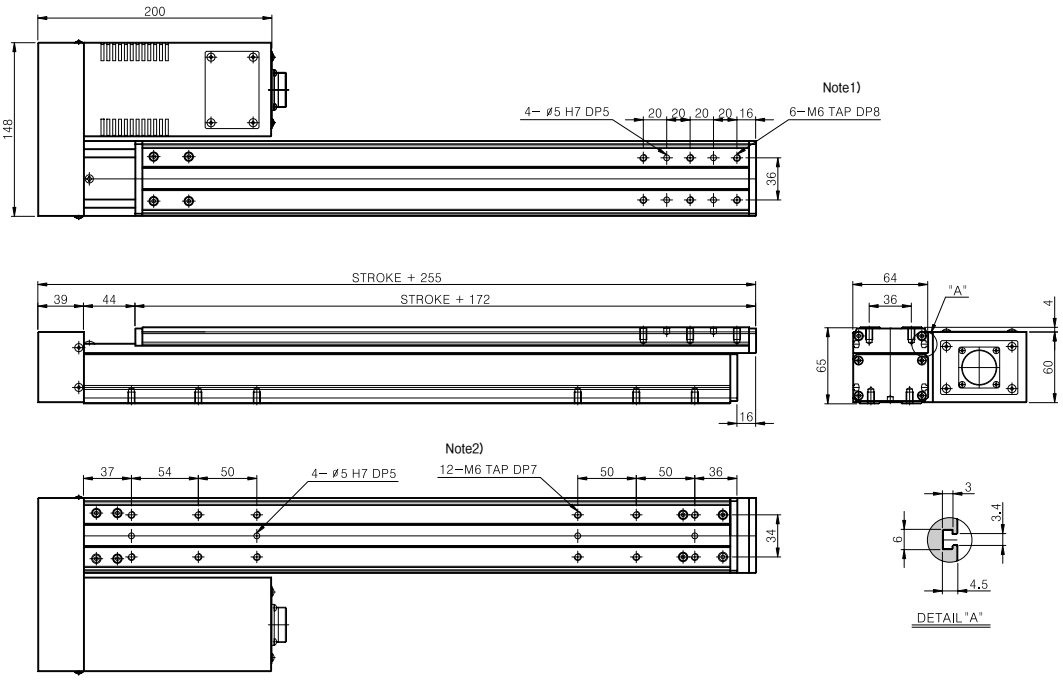


※ Note1) □□-W : With 13mm part, N : Without 13mm part ※ C type : Symmetric with B type drawing, measurements are the same
※ Note2) Bolt depth : Max 7mm

Dimensions

■ Dimensions in "mm"

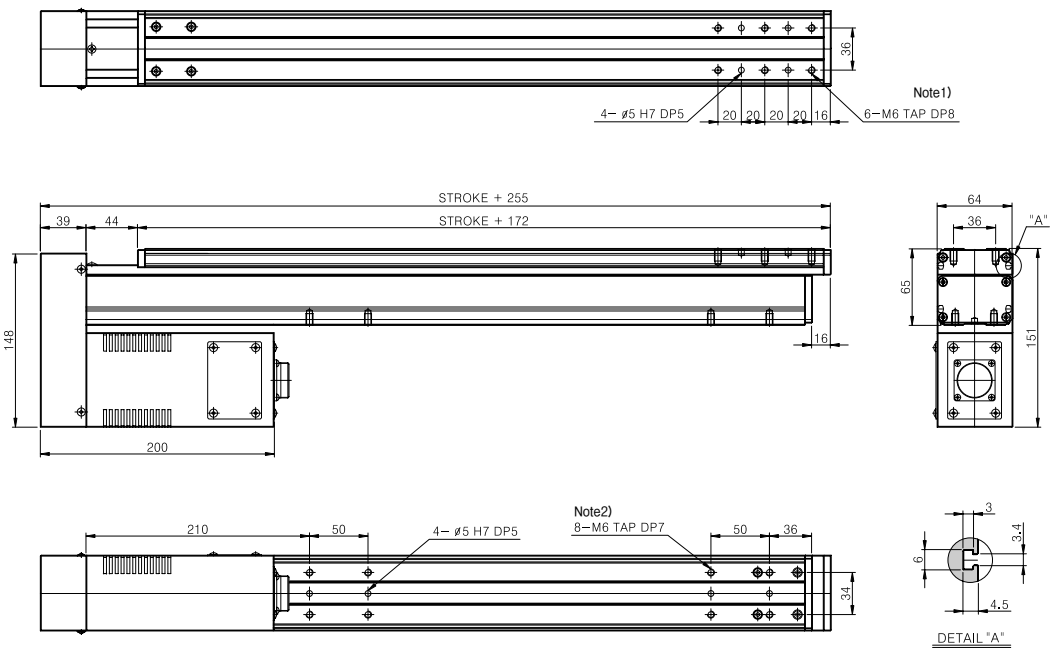
MS064 - E(F)□□- N



Dimensions

■ Dimensions in "mm"

MS064 - G□□- N



※ Note1) Bolt depth : Max 8mm. ※ F type : Symmetric with E type drawing, measurements are the same
※ Note2) Bolt depth : Max 7mm. ※ Standard sensor : External type. Interior type - Ask to manufacturer

MS092 Specifications

Registration of designs

Model		MS092 - A		MS092 - B / C / D		MS092 - E / F / G		MS092 - H / I / J	
Base Width	mm	92				92			
Payload	kgf V : Vertical H : Horizontal	V : 7(3) H : 23(4)	V : 15(8) H : 29(26)	V : 7(3) H : 23(4)	V : 15(7) H : 28(26)	V : 4 H : 7	V : 8 H : 12	V : 6 H : 8	V : 12 H : 16
Max. Speed	mm/sec	500(1000)				500(1000)			
Servo Motor	W	100W 3000rpm	200W 3000rpm	100W 3000rpm	200W 3000rpm	100W 3000rpm	200W 3000rpm	100W 3000rpm	200W 3000rpm
Stroke	mm	100 ~ 1000(800)				100 ~ 600			
Repeatability	mm	±0.02				±0.02			
LM Guide	-	1 Rail 2 Block				1 Rail 1 Block		1 Rail 2 Block	
Ball Screw	-	ϕ15, Lead 10mm(20mm), C7				ϕ15, Lead 10mm, C7			
Body	-	Aluminum Profile, White(Standard color) & Black Anodizing							

■ ( ) Set max speed as 1000mm/sec

Weight		Tolerance :100g							
Model	Unit / Stroke	100	200	300	400	500	600	700	Offset(100mm)
MS092 - A10	kg	5.2	6	6.8	7.6	8.4	9.2	10	0.8
MS092 - A1B		5.8	6.6	7.4	8.2	9.0	9.8	10.6	
MS092 - A20		5.3	6.1	6.9	7.7	8.5	9.3	10.1	
MS092 - A2B		6.0	6.8	7.6	8.4	9.2	10	10.8	
MS092 - B(C, D)10		5.1	6	6.9	7.8	8.7	9.6	10.5	0.9
MS092 - B(C, D)1B		5.7	6.6	7.5	8.4	9.3	10.2	11.1	
MS092 - E(F, G)1B		6.1	6.8	7.6	8.4	9.2	10	-	0.8
MS092 - E(F, G)2B		6.9	7.6	8.4	9.2	10	10.8	-	
MS092 - H(I, J)1B		6.9	7.6	8.4	9.2	10	10.8	-	
MS092 - H(I, J)2B		7.7	8.4	9.2	10	10.8	11.6	-	

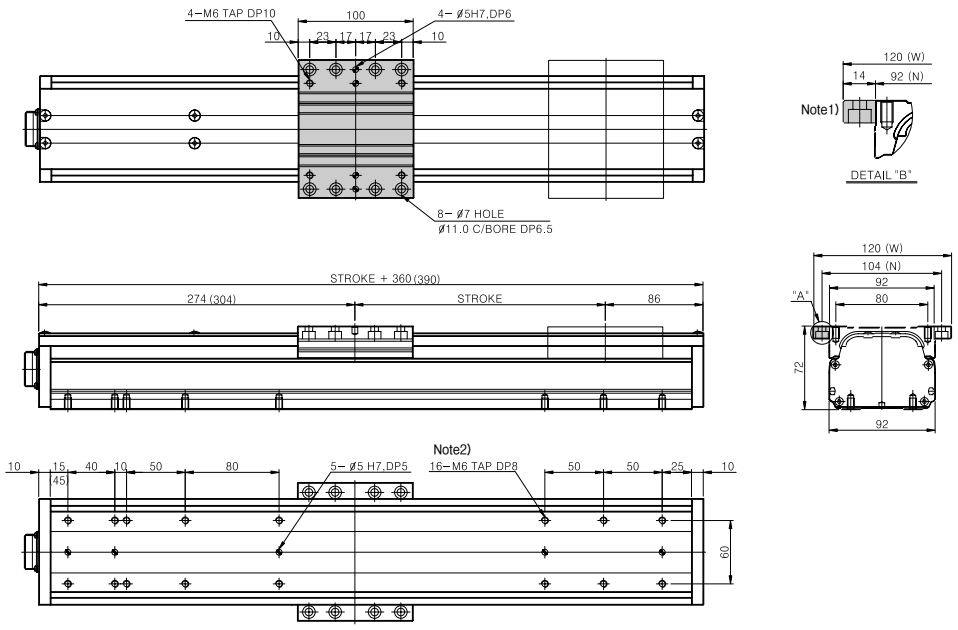
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS092 - A10 - W

※( ) : 100W Brake Motor Dimension



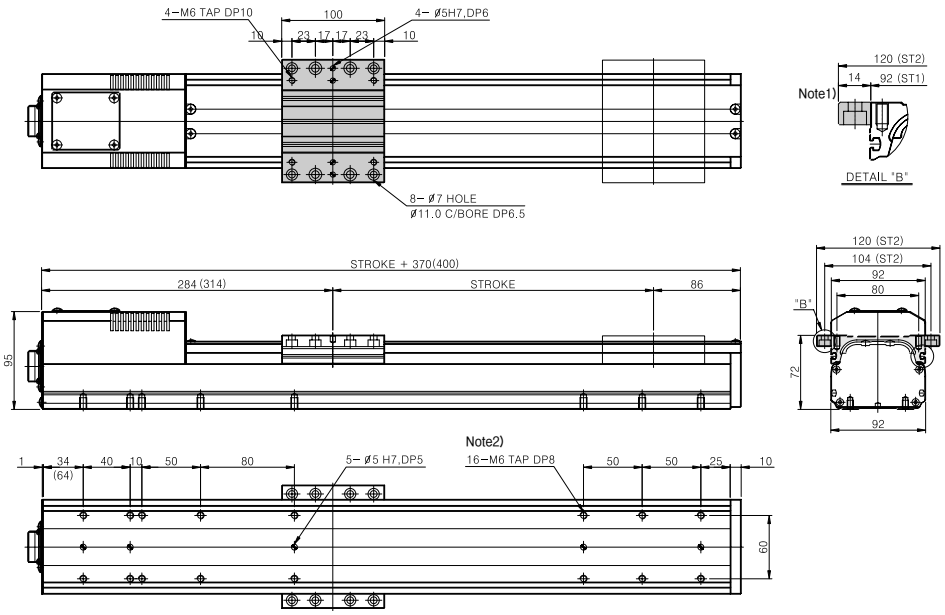
※ Note1) □□-W: With 14mm part, N : Without 14mm part. ※ Note2) Max bolt depth : 8mm

Dimensions

■ Dimensions in "mm"

MS092 - A20 - W

※( ) : 200W Brake Motor Dimension

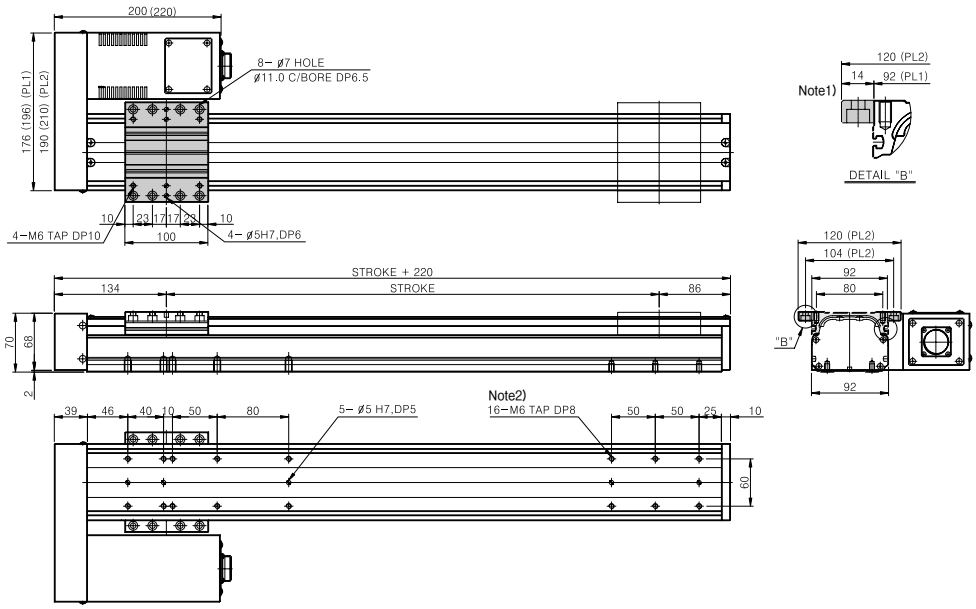


Dimensions

■ Dimensions in "mm"

MS092 - B(C)□□ - W

※( ) : 200W Motor & Brake Motor Dimension



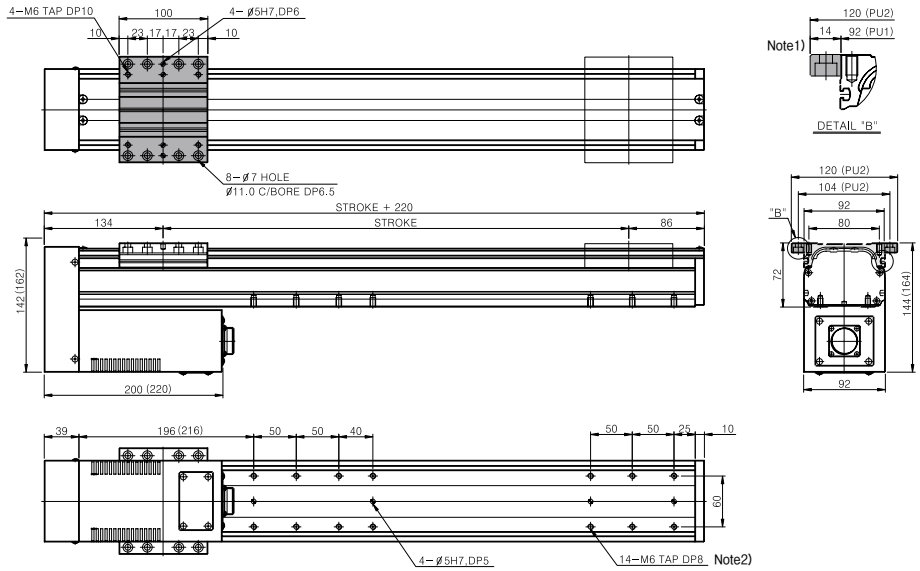
※ Note1) □□-W:With 14mm part, N : Without 14mm part ※ C type : Symmetric with B type drawing, measurements are the same
※ Note2) Bolt depth : Max 8mm

Dimensions

■ Dimensions in “mm”

MS092 - D□□- W

※( ) : 200W Motor & Brake Motor Dimension

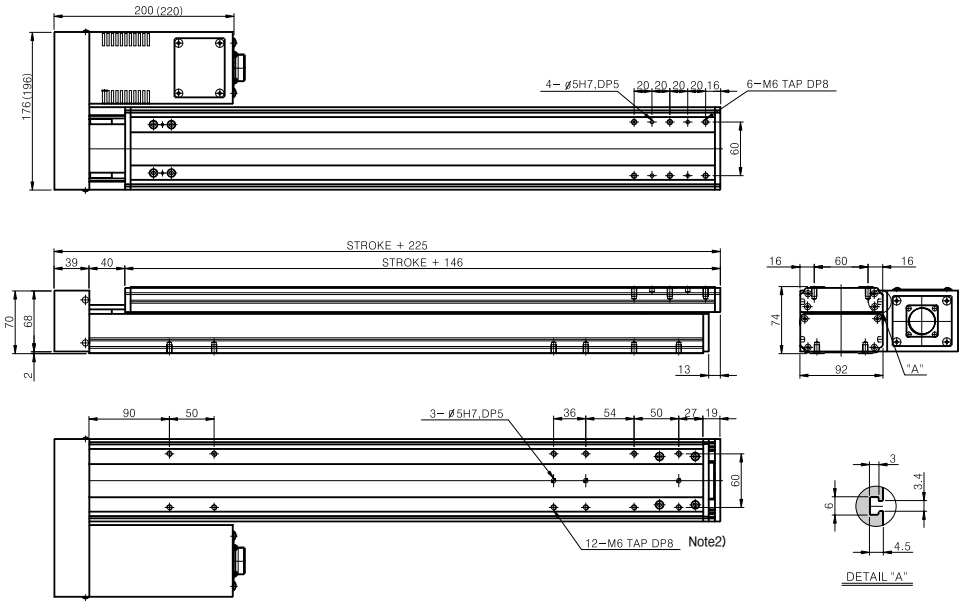


Dimensions

■ Dimensions in “mm”

MS092 - E(F)□□- N

※( ) : 200W Motor & Brake Motor Dimension



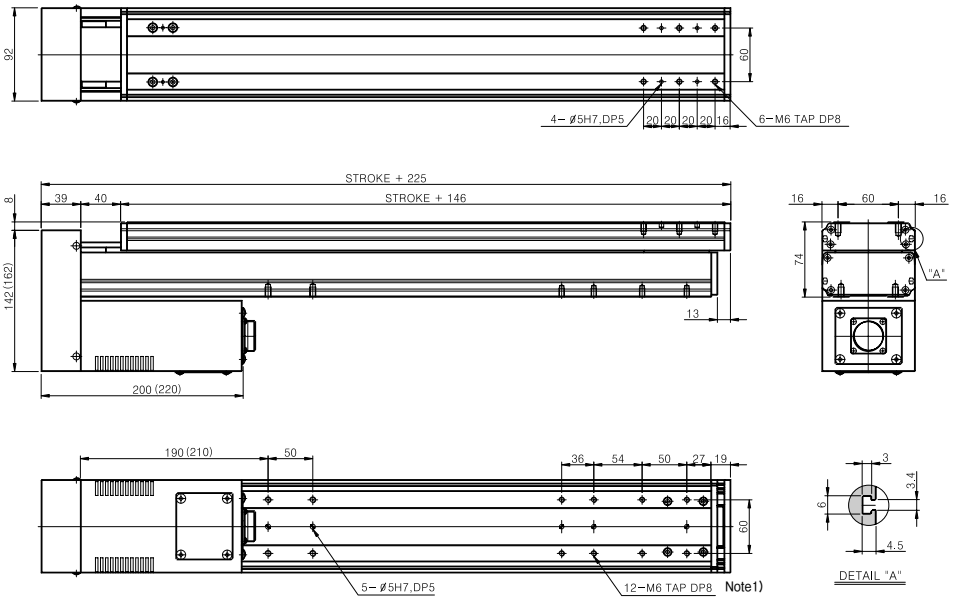
※ Note1) □□-W:With 14mm part, N : Without 14mm part ※ F type : Symmetric with E type drawing, measurements are the same
※ Note2) Bolt depth : Max 8mm

Dimensions

■ Dimensions in "mm"

MS092 - G□□ - N

※( ) : 200W Motor & 200W Brake Motor Dimension

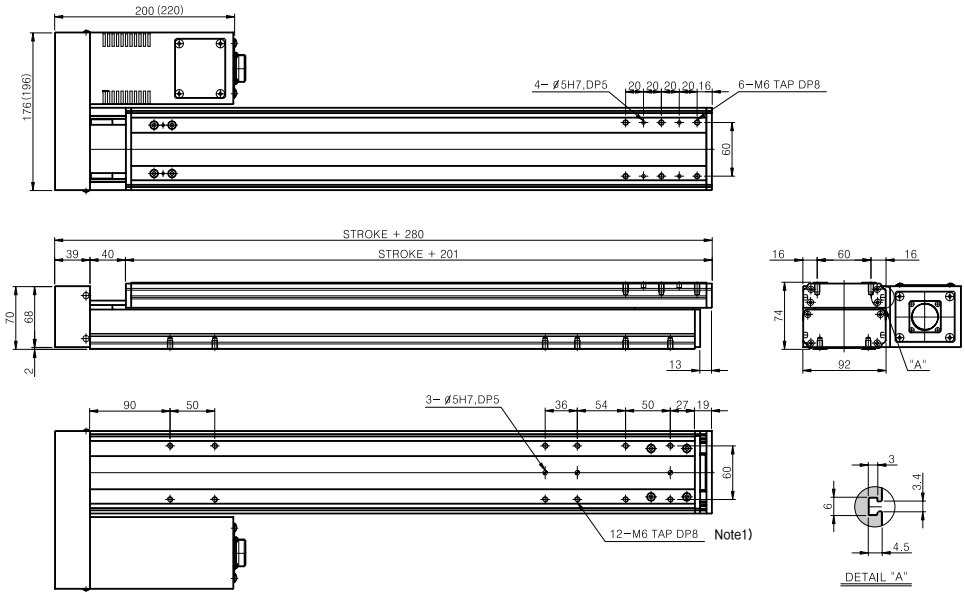


Dimensions

■ Dimensions in "mm"

MS092 - H(I)□□ - N

※( ) : 200W Motor & 200W Brake Motor Dimension



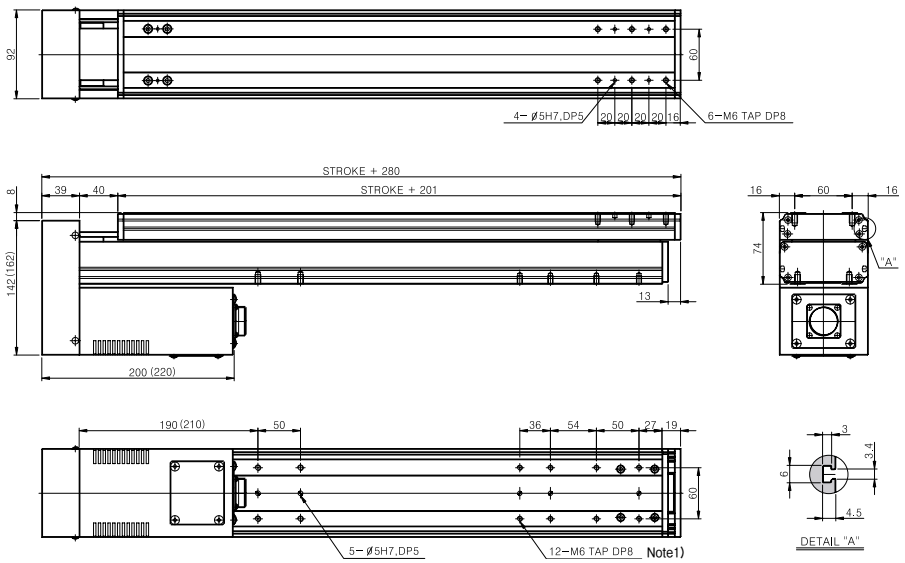
※ Note1) depth : Max 8mm ※ I type : Symmetric with H type drawing, measurements are the same.

Dimensions

■ Dimensions in “mm”

MS092 - J□□ - N

※( ) : 200W Motor & 200W Brake Motor Dimension



※ Note1) Depth : Max 8mm

MS126 Specifications

Registration of designs

Model		MS126 - A / B / C / D		MS126 - E / F / G	
Base Width	mm	126		126	
Payload	kgf V : Vertical H : Horizontal	Vertical : 21(9) Horizontal : 50(30)	Vertical : 40(20) Horizontal : 50(40)	Vertical : 21(9) Horizontal : 50(30)	Vertical : 40(20) Horizontal : 50(40)
Max. Speed	mm/sec	500(1000)		500(1000)	
Servo Motor	AC (W)	200W, 3000rpm	400W, 3000rpm	200W, 3000rpm	400W, 3000rpm
Stroke	mm	100 ~ 1000(800) 주1)		100 ~ 600(800)	
Repeatability	mm	±0.02		±0.02	
LM Guide	-	2 Rail 4 Block		2 Rail 4 Block	
Ball Screw	-	ø15, Lead 10mm(20mm), C7		ø15, Lead 10mm(20mm), C7	
Body	-	Aluminum Profile, Standard color) & Black Anodizing			

■ ( ) Set max speed as 1000mm/sec ※Note1). Over than Stroke 1000 : Total length will be changed.

Weight		※Tolerance : 100g							
Model	Unit / Stroke	100	200	300	400	500	600	700	Offset(100mm)
MS126 - A20	kg	7.6	8.7	9.8	10.9	12	13.1	14.2	1.1
MS126 - A40		8.2	9.3	10.4	11.5	12.6	13.7	14.8	
MS126 - B(C, D)20		7.5	8.6	9.7	10.8	11.9	13	14.1	
MS126 - B(C, D)40		8.1	9.2	10.3	11.4	12.5	13.6	14.7	
MS126 - E(F, G)20		7.9	9.1	10.3	11.5	12.7	13.9	-	1.2
MS126 - E(F, G)40		8.5	9.7	10.9	12.1	13.3	14.5	-	

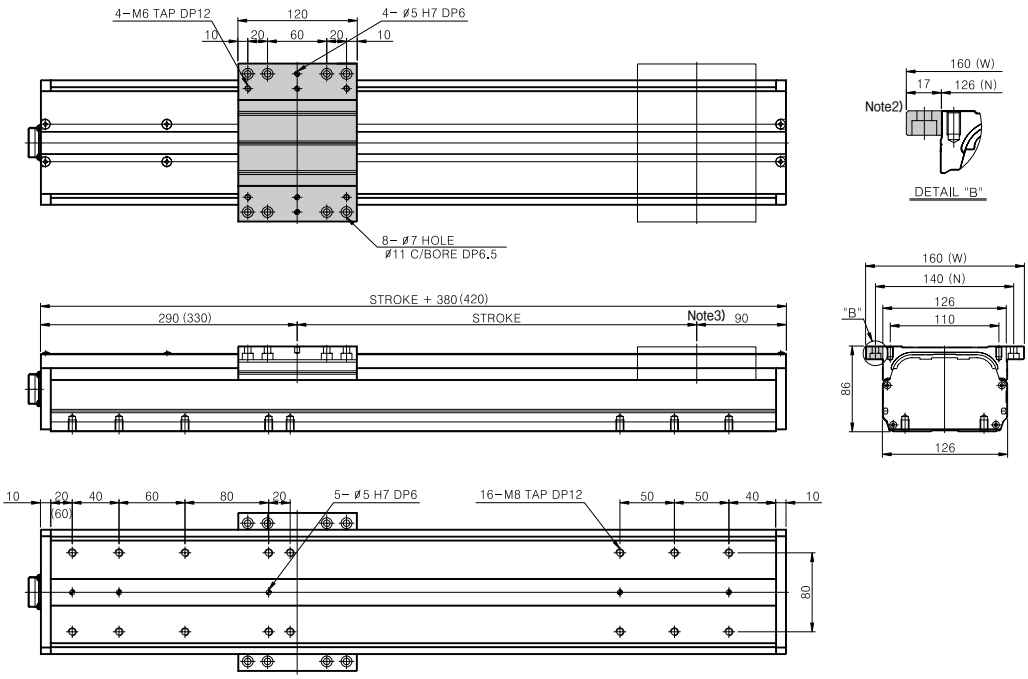
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS126 - A□□ - W

※( ) : 400W Motor & 400W Brake Motor Dimension



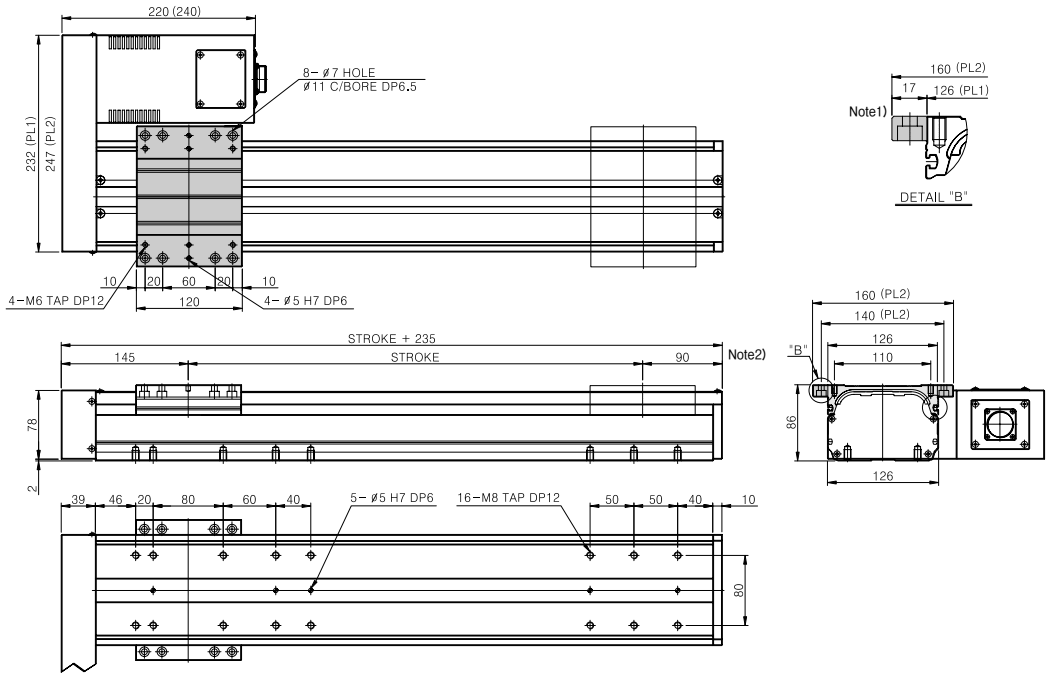
※ Note2) □□-WW : With 17mm part, N : Without 17mm part Note3). Over than Stroke 1000mm : Will be changed from 90mm to 120mm

Dimensions

■ Dimensions in "mm"

MS126 - B(C)□□-W

※( ) : 400W Motor & 400W Brake Motor Dimension

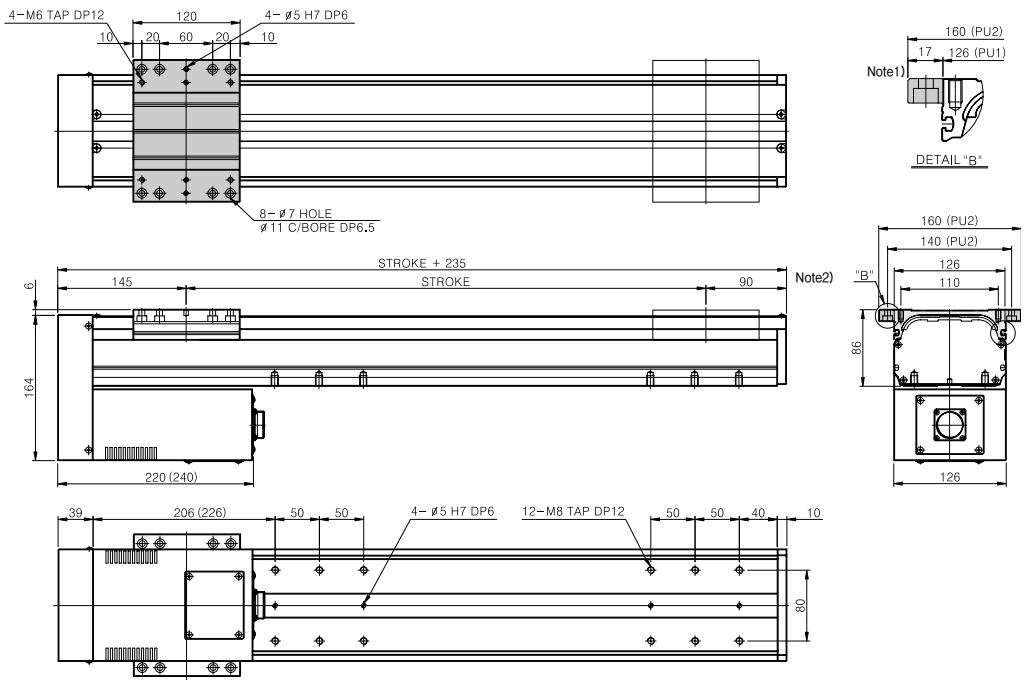


Dimensions

■ Dimensions in "mm"

MS126 - D□□-W

※( ) : 400W Motor & Brake Motor Dimension



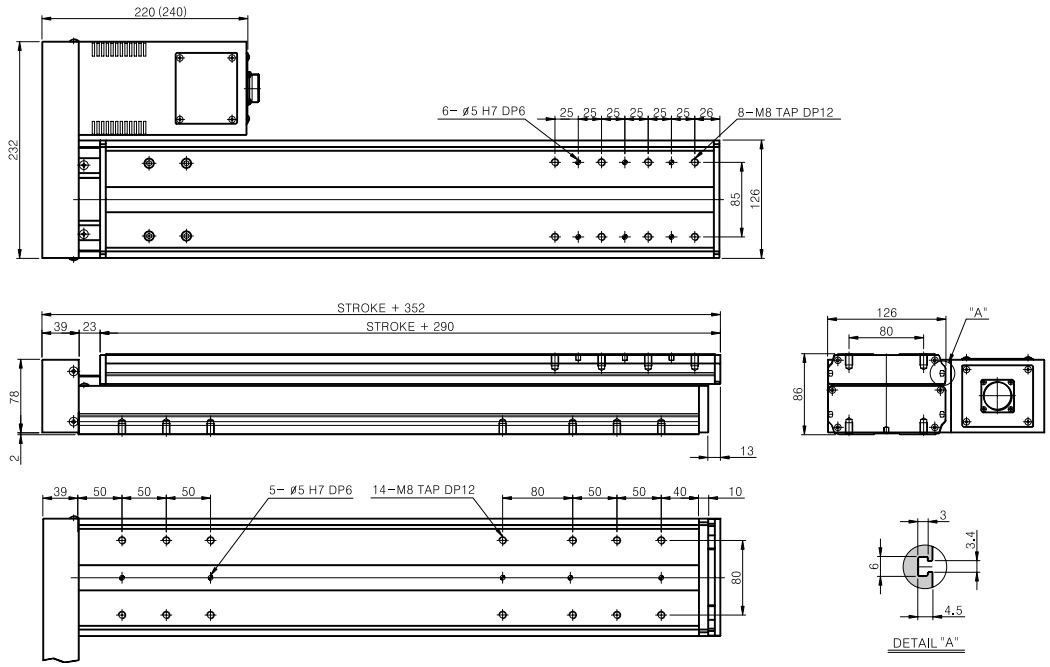
※ Note1) □□-W : With 17mm part, N : Without 17mm part ※ C type : Symmetric with B type drawing, measurements are the same.
※ Note2) Over than stroke 1000mm Will be changed from 90mm to 120mm.

Dimensions

■ Dimensions in "mm"

MS126 - E(F)□□ - N

※( ) : 400W Motor & Brake Motor Dimension

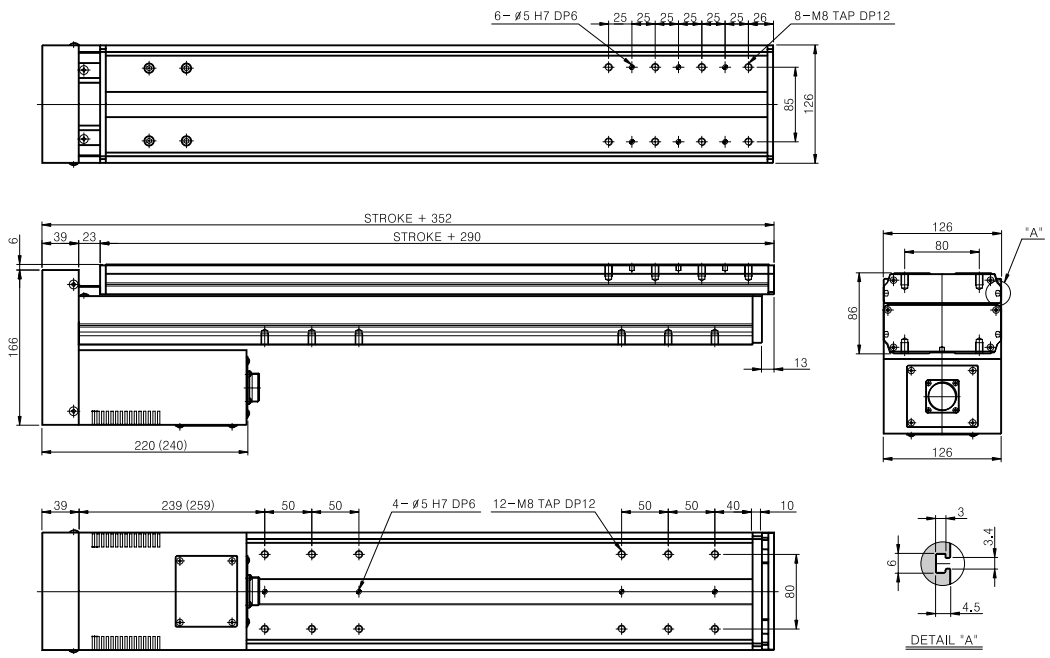


Dimensions

■ Dimensions in "mm"

MS126 - G□□ - N

※( ) : 400W Brake Motor Dimension



※ F type : Symmetric with E type drawing, measurements are the same

MS160 Specifications

Registration of designs

Model		MS160 - A / B / C / D	
Base Width	mm	160	
Payload	kgf	Vertical : 32(18) Horizontal : 80(50)	Vertical : 48(28) Horizontal : 86(65)
Max. Speed	mm/sec	500(1000)	
Servo Motor	W	400W, 3000rpm	750W, 3000rpm
Stroke	mm	200 ~ 1500(1000)	
Repeatability	mm	±0.02	
LM Guide	-	2 Rail 4 Block	
Ball Screw	-	ϕ15, Lead 10mm(20mm), C7 & ϕ20, Lead 10mm(20mm), C7	
Body	-	Aluminum Profile, White(Standard color) & Black Anodizing	

■ ( ) Set max speed as 1000mm/sec

Weight		※Tolerance : 100g							
Model	Unit \ Stroke	-	200	300	400	500	600	700	Offset(100mm)
MS160 - A40	kg	-	18.3	20	21.7	23.4	25.1	26.8	1.7
MS160 - A70		-	19.2	20.9	22.6	24.3	26	27.7	
MS160 - B(C, D)40		-	17.5	19.2	20.9	22.6	24.8	26	
MS126 - B(C, D)70		-	18.8	20.5	22.2	23.9	25.6	27.3	

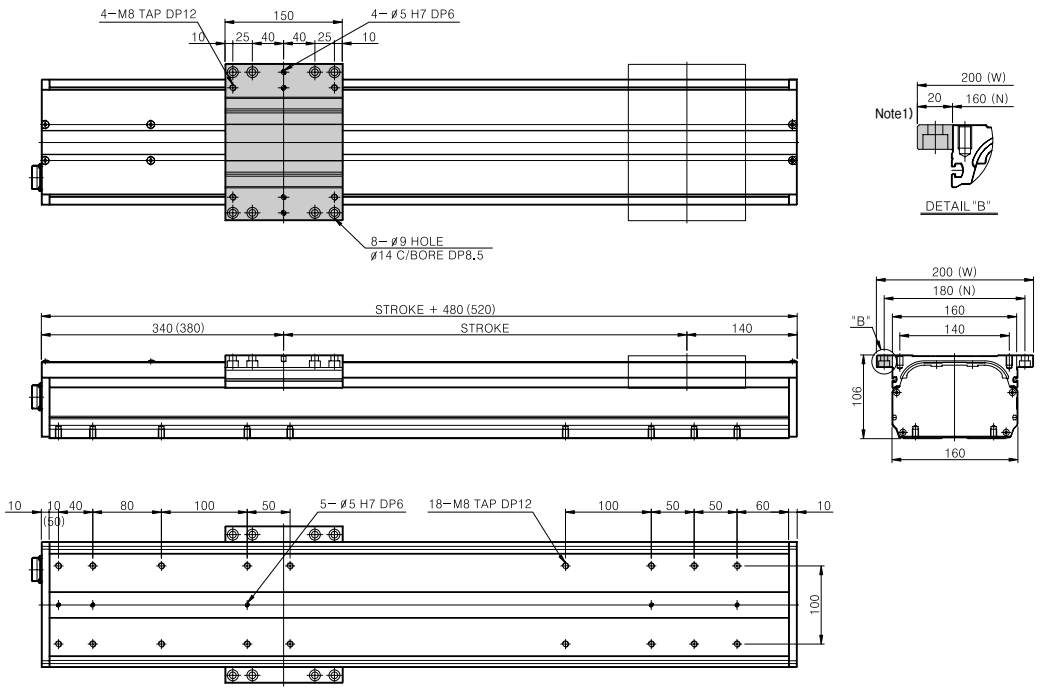
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS160 - A□□ - W

※( ) : 400W, 750W Brake Motor Dimension

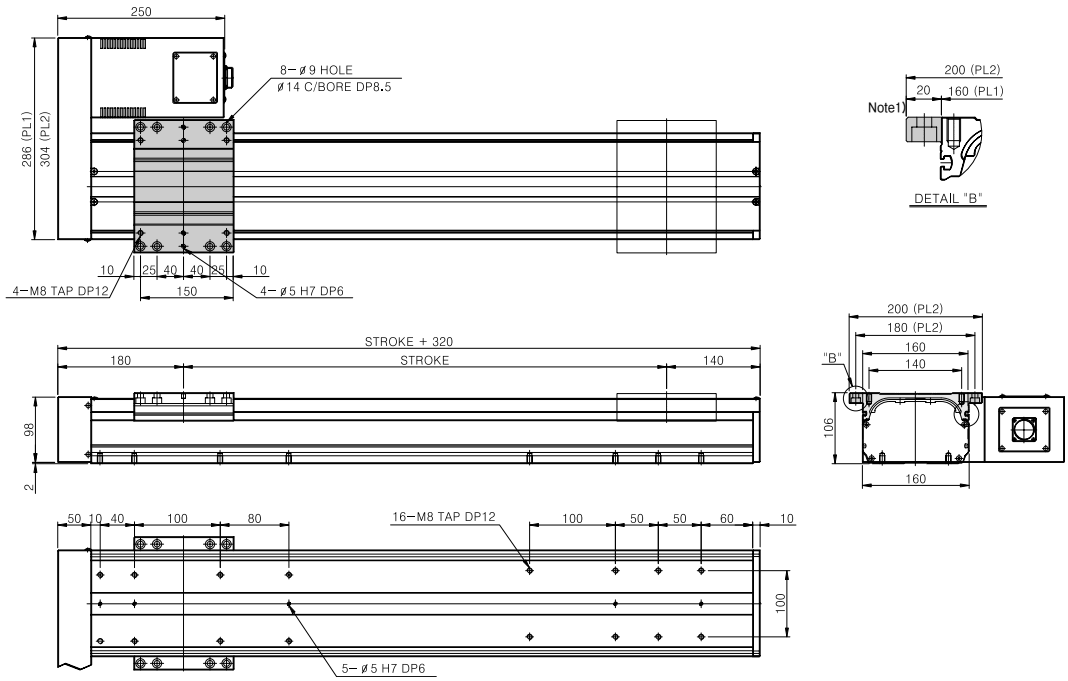


※ Note1) □□-W: With 20mm part, N : Without 20mm part

Dimensions

■ Dimensions in "mm"

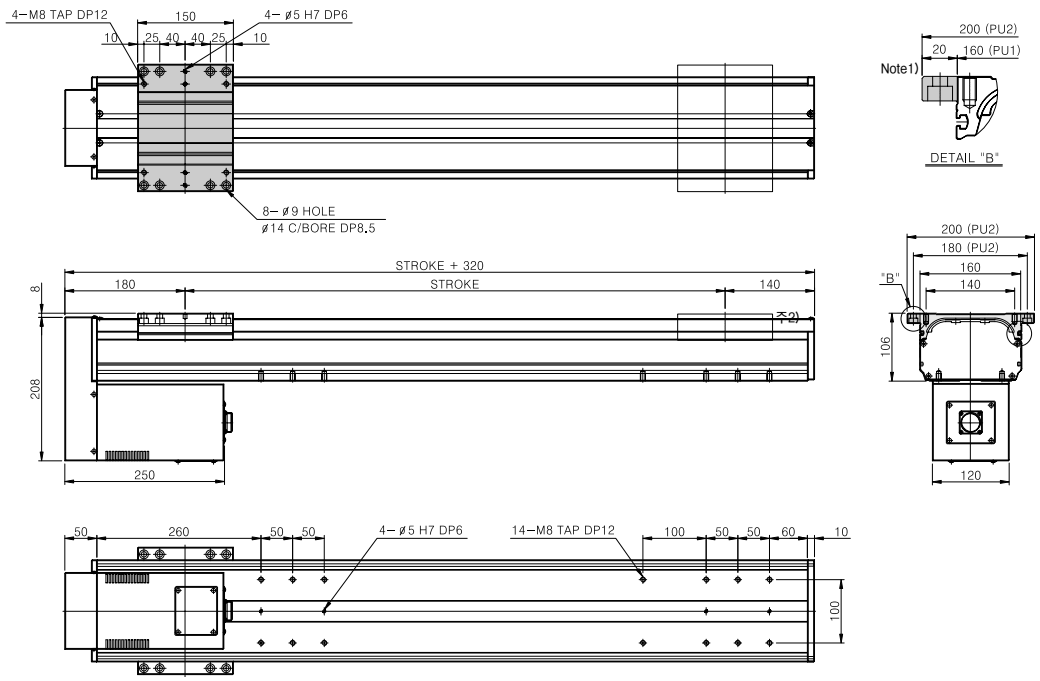
MS160 - B(C)□□ - W



Dimensions

■ Dimensions in "mm"

MS160 - D□□ - W



※ Note1) □□-W : With20mm part, N : Without 20mm part ※ C type : Symmetric with B type drawing, measurements are the same

MS200 Specifications

Registration of designs

Model		MS200 - A / B / C / D
Base Width	mm	200
Payload	kgf	Vertical : 52(30) Horizontal : 120(100)
Max. Speed	mm/sec	500(1000)
Servo Motor	W	750W, 3000rpm
Stroke	mm	200 ~ 1700(1200)
Repeatability	mm	±0.02
LM Guide	-	2 Rail 4 Block
Ball Screw	-	φ20, Lead 10mm(20mm), C7
Body	-	Aluminum Profile, White(Standard color) & Black Anodizing

■ ( ) Set max speed as 1000mm/sec

Weight		※Tolerance : 100g							
Model	Stroke / Unit	-	200	300	400	500	600	700	Offset(100mm)
MS200 - A70	kg	-	28.7	31.1	33.5	35.9	38.3	40.7	2.4
MS200 - A7B		-	29.7	32.1	34.5	36.9	39.3	41.7	
MS200 - B(C, D)70		-	25.2	27.6	30	32.4	34.8	37.2	
MS200 - B(C, D)7B		-	26.2	28.6	31	33.4	35.8	38.2	

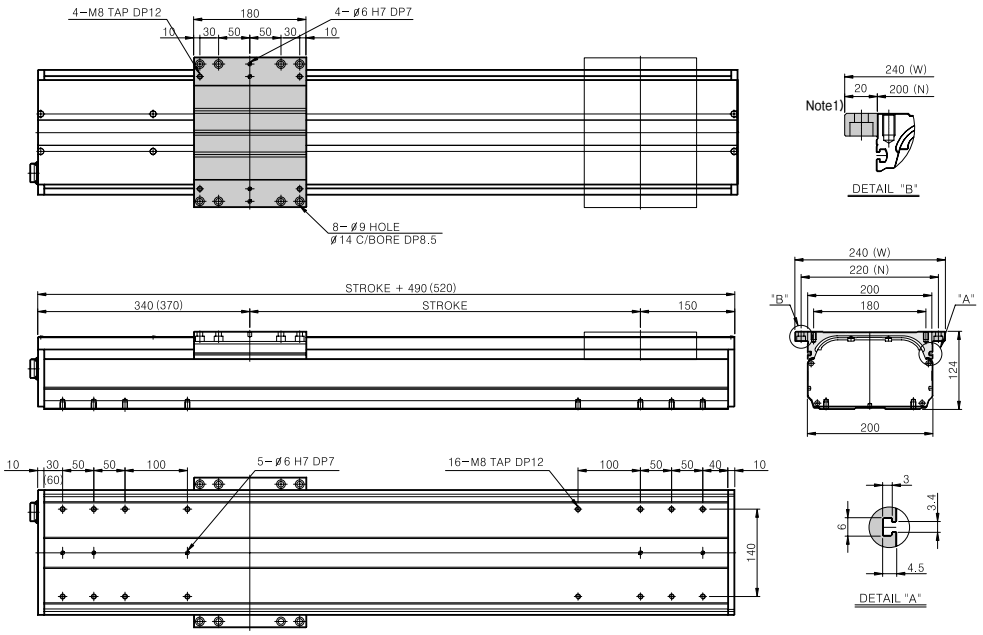
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MS200 - A□□ - W

※( ) : 750W Brake Motor Dimension

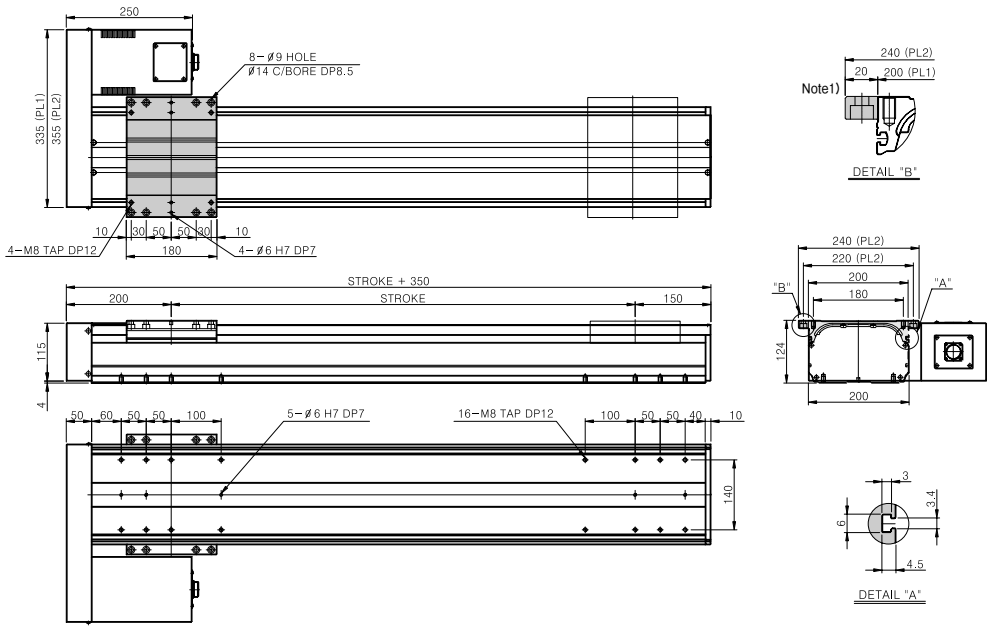


※ Note1) □□-W: With 20mm part, N : Without 20mm part

Dimensions

■ Dimensions in "mm"

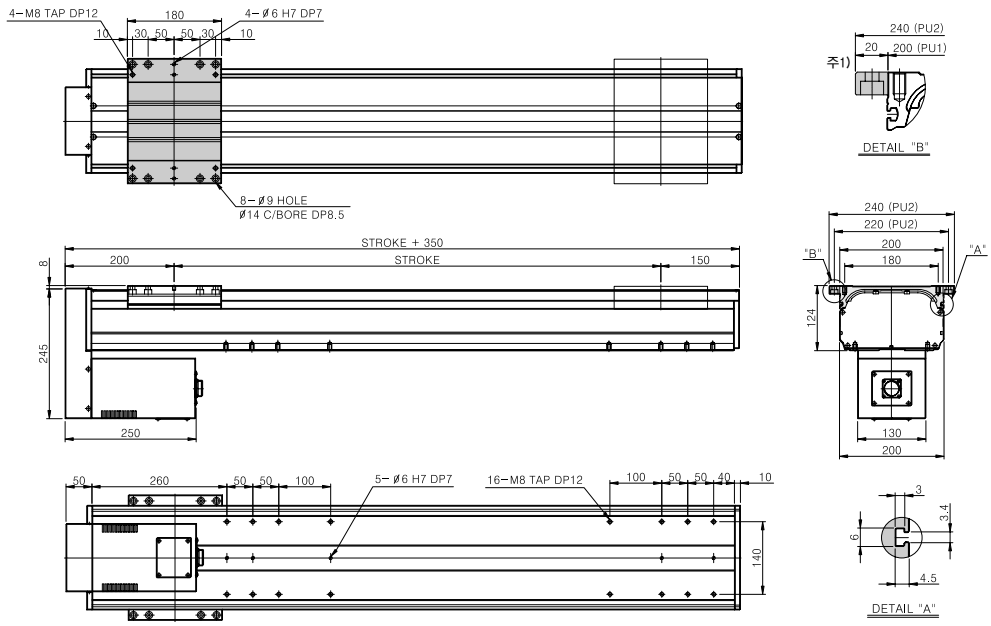
MS200 - B(C)□□- W



Dimensions

■ Dimensions in "mm"

MS200 - D□□- W



※ Note1) □□-W : With 20mm part, N : Without 20mm part ※ C type : Symmetric with B type drawing, measurements are the same

Moving towards tomorrow
MECAPION

MC series

Clean Robots

MC Series Clean Robots

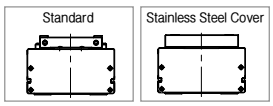
Character

- With strong aluminum box type extrusion construction, light and strong
- With vacuum adsorption type(Option) protect scatter and exhaust corpuscle.
- Realize high clean class almost 10.
- Simple construction and easy application.
- By using AC servo motor, easy maintenance, high confidence, easy control
- Realize high speed, high precision operation by optimum control. Repeat precision ± 0.02mm.
- Various application for example semiconductor inspection M/C, LED production line, Sealing, Screw etc.
- High rust protection, clean and beautiful face
- Reliable products checked by 3-Dimension measuring machine

MC Selection Guide

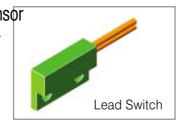
Slide Table Type
- S Standard
- C Stainless Steel Cover

※Table Type



Sensor
- N Inside Sensor
- X No Sensor

※Applied Sensor
Inside Sensor



MC 160 - 40 - S 0100 - N 10

Model Name
- MC Metronix Clean Robot

Body Size
- 160 Body Width : 160mm

Motor Capacity
- 40 Motor : 400W
- 70 Motor : 750W

Stroke
- 0100 Stroke : 100mm~
- MAX Stroke : 1000mm

Ball Screw Lead
- 10 Lead : 10mm → Max. Speed : 500mm/sec
- 20 Lead : 20mm → Max. Speed : 1000mm/sec

Specifications

Model		MC160 - S / C	
Base Width	mm	160	
Payload	kgf	Horizontal : 80(45)	Horizontal : 100(70)
Max. Speed	mm/sec	500(1000)	
Servo Motor	W	400W, 3000rpm	750W, 3000rpm
Stroke	mm	200 ~ 1200	
Repeatability	mm	±0.02	
LM Guide	-	Two Way 20W, 2UU	
Ball Screw	-	ϕ15(ϕ20), Lead 10mm(20mm), C7	
Body	-	Aluminum Profile, White Anodizing	

■ ( ) : Set max speed as 1000mm/sec

Weight		Tolerance : 100g							
Model	Stroke / Unit	100	200	300	400	500	600	700	Offset(100mm)
MC160-S-40	kg	15.2	16.9	18.6	20.3	22	23.7	25.4	1.7
MC160-S-4B, 70		16	17.7	19.4	21.1	22.8	24.5	26.2	
MC160-S-7B		17.5	19.2	20.9	22.6	24.3	26	27.7	
MC160-C-40		15.5	17.2	18.9	20.6	22.3	24	25.7	
MC160-C-4B		16.3	18	19.7	21.4	23.1	24.8	26.5	

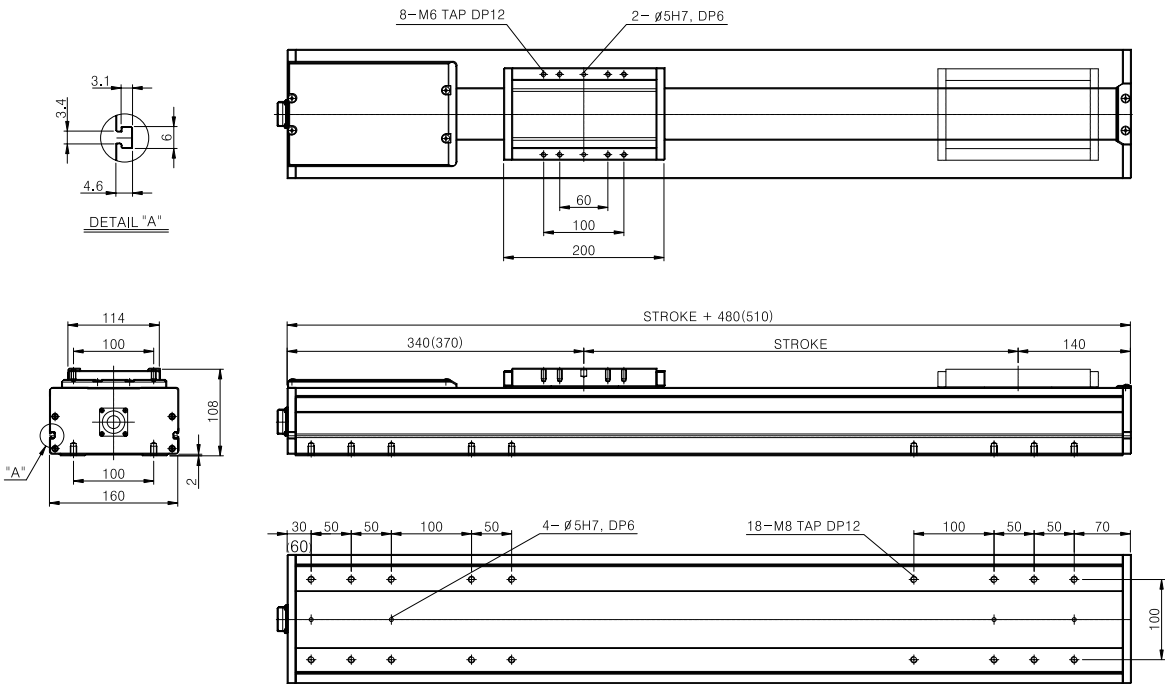
▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

MC160 - □□ - S

※( ) : 400W Brake Motor Dimension

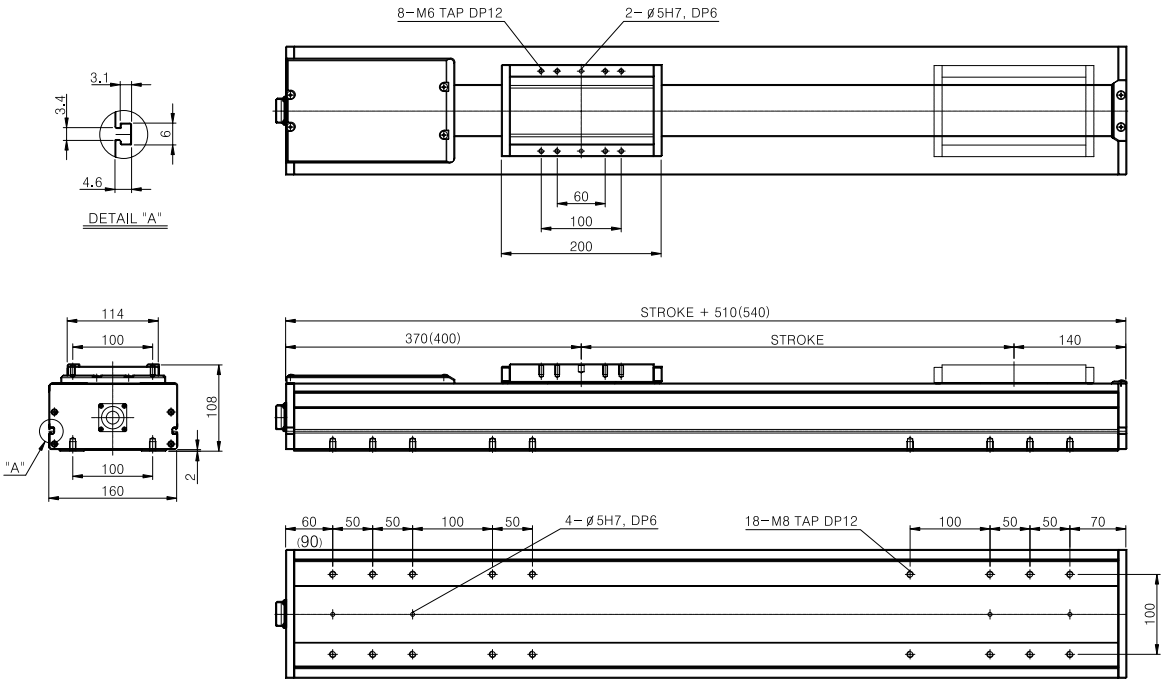


Dimensions

■ Dimensions in "mm"

MC160 - □□ - S

※( ) : 750W Brake Motor Dimension

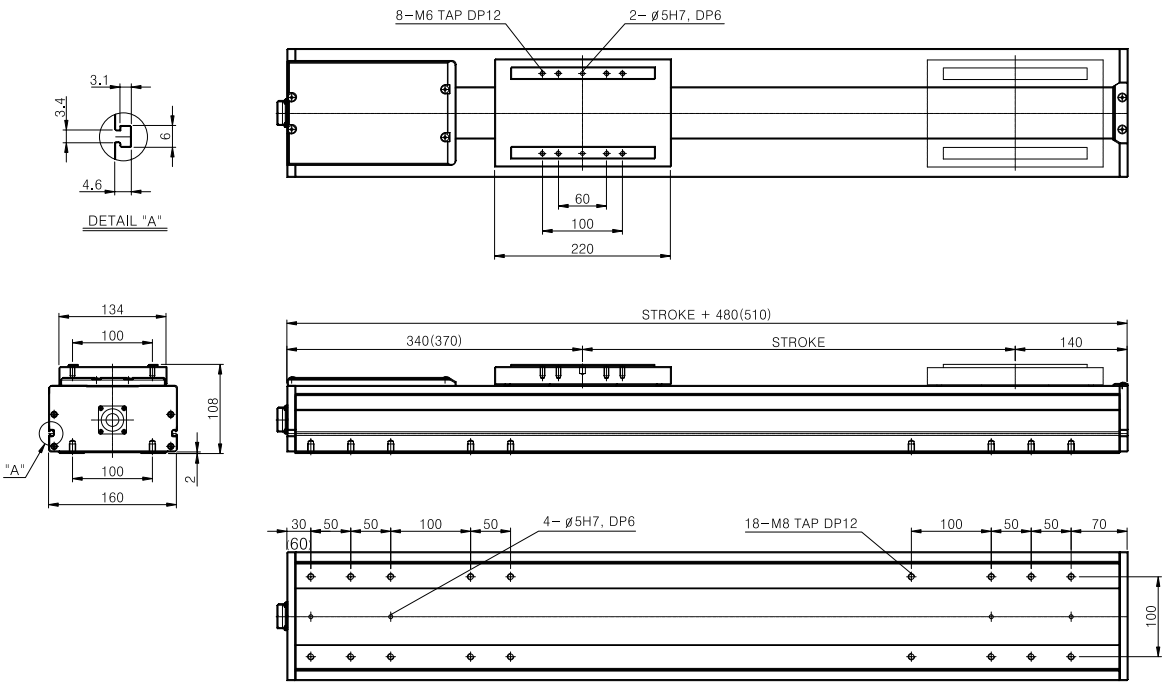


Dimensions

■ Dimensions in "mm"

MC160 - □□ - C

※( ) : 400W Brake Motor Dimension



Moving towards tomorrow
MECAPION

MB series

Belt Type Robots

MB Series Belt Type Robots

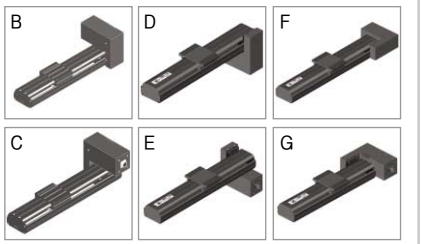
Character

- With strong aluminum box type extrusion construction, light and strong
- Simple construction and easy application.
- High speed, high precision, compact design.
- By using AC servo motor, easy maintenance, high confidence, easy control.
- Various application for example semiconductor inspection M/C, Sealing, Screw, Moving etc automation facilities
- Anodizing coating made beautiful face and high rust protection.
- Reliable products checked by 3-Dimension measuring machine

MB Selection Guide

Motor Direction

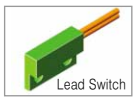
B	Motor - Up & Left
C	Motor - Up & Right
D	Motor - Down & Left
E	Motor - Down & Right
F	Motor - Rear & Left
G	Motor - Rear & Right



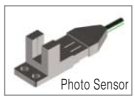
Sensor

N	Inside Sensor
E	Outside Sensor(Both)
R	Outside Sensor(Right)
L	Outside Sensor(Left)
X	No Sensor

※Applied Sensors
1) Inside Sensor

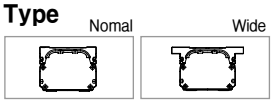


2) Outside Sensor



Slide Table Type

N	Nomal
W	Wide



MB 126 - B 20 - N 0500 - N B

Model Name

MB	Metronix Belt Type Robot

Body Size

126	Body Width : 126mm
160	Body Width : 160mm

Motor Capacity

20	Motor : 200W, 3000rpm
40	Motor : 400W, 3000rpm
70	Motor : 750W, 3000rpm

Stroke

0500	Stroke : 500mm

Max 2000mm

Color ※ Standard : White.

No	White	B	Black

Specifications

Model		MB126 - B, C / D, E / F, G	MB160 - B, C / D, E / F, G
Base Width	mm	126	160
Payload	kgf	Horizontal : 50	Horizontal : 50
Max. Speed	mm/sec	2000	2000
Servo Motor	W	400W, 3000rpm	750W, 3000rpm
Stroke	mm	500 ~ 2000	500 ~ 2500
Repeatability	mm	±0.08	±0.08
LM Guide	-	Two Way 15W, 2UU	Two Way 20W, 2UU
Drive Belt	-	S5M Type, 25W	S5M Type, 25W
Body	-	Aluminum Profile, (Standard color) & Black Anodizing	

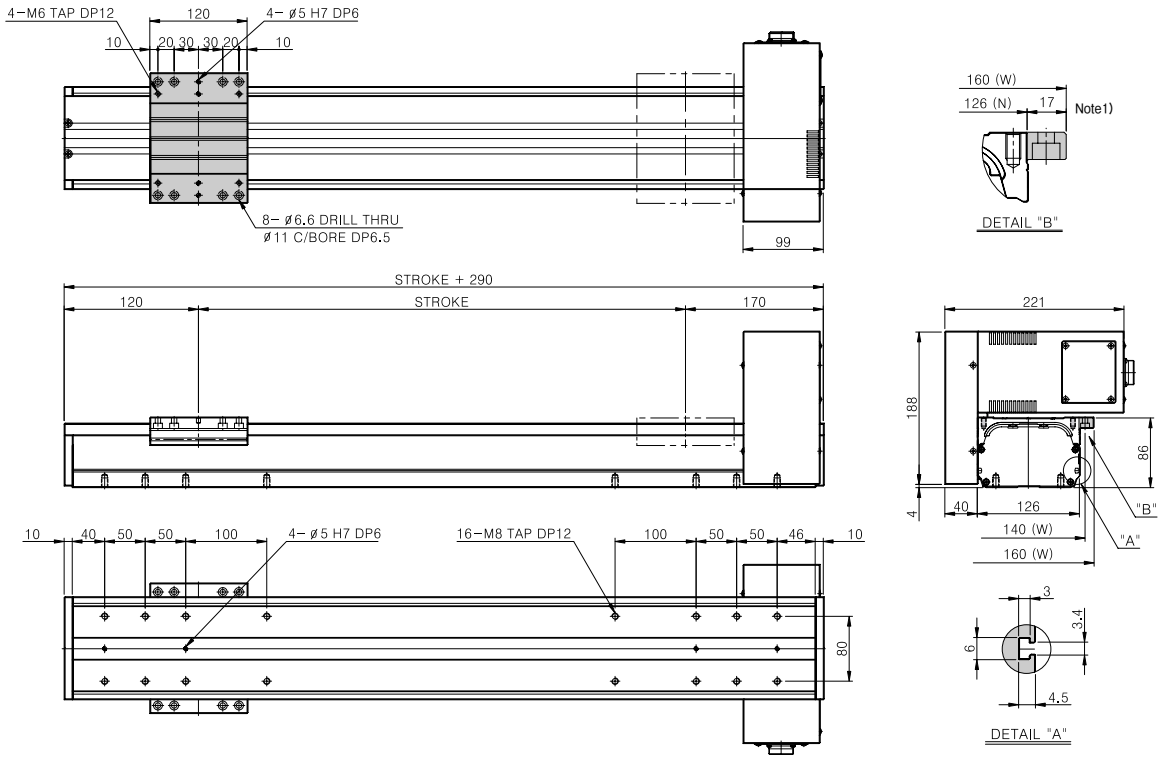
Weight		Tolerance : 100g							
Model	Unit \ Stroke	-	200	300	400	500	600	700	Offset(100mm)
MB126-B, C	kg	-	13	13.9	14.8	15.7	16.6	17.5	0.9
MB126-D, E		-	13	13.9	14.8	15.7	16.6	17.5	
MB126-F, G		-	13	13.9	14.8	15.7	16.6	17.5	
MB160-B, C		-	22.4	23.9	25.4	26.9	28.4	29.9	1.5
MB160-D, E		-	22.4	23.9	25.4	26.9	28.4	29.9	
MB160-F, G		-	22.4	23.9	25.4	26.9	28.4	29.9	

▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Dimensions

■ Dimensions in "mm"

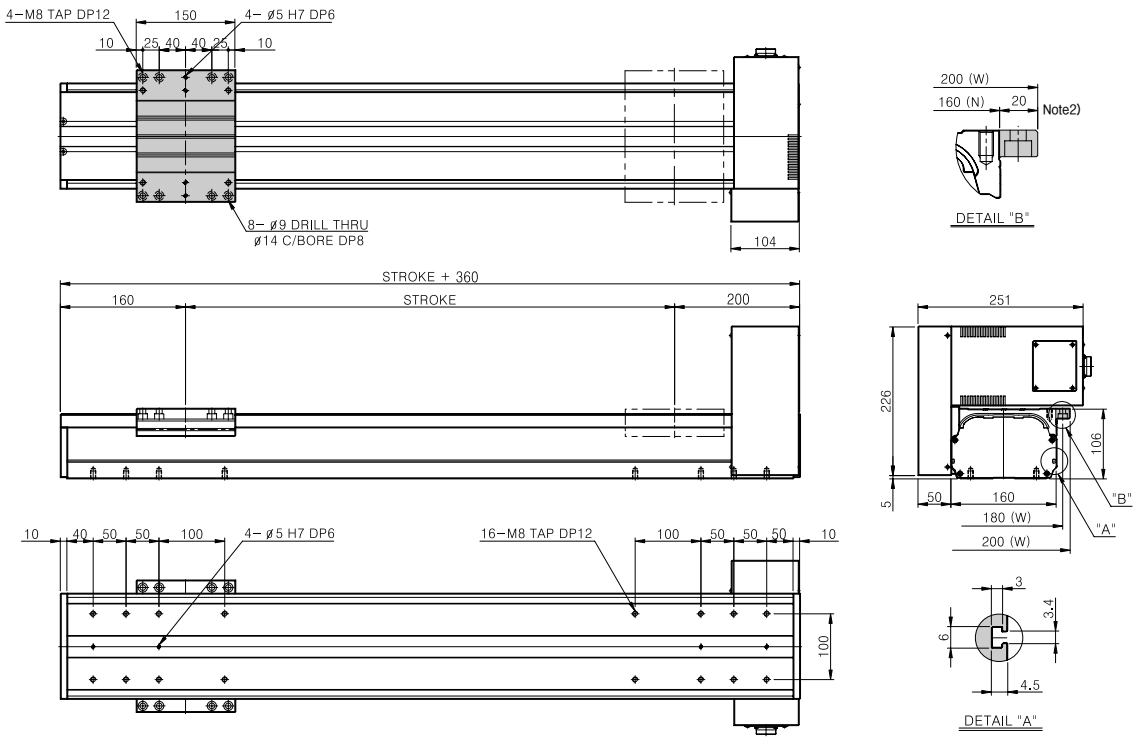
MB126 - B(C)□□ - W



Dimensions

■ Dimensions in "mm"

MB160 - B(C)□□ - W

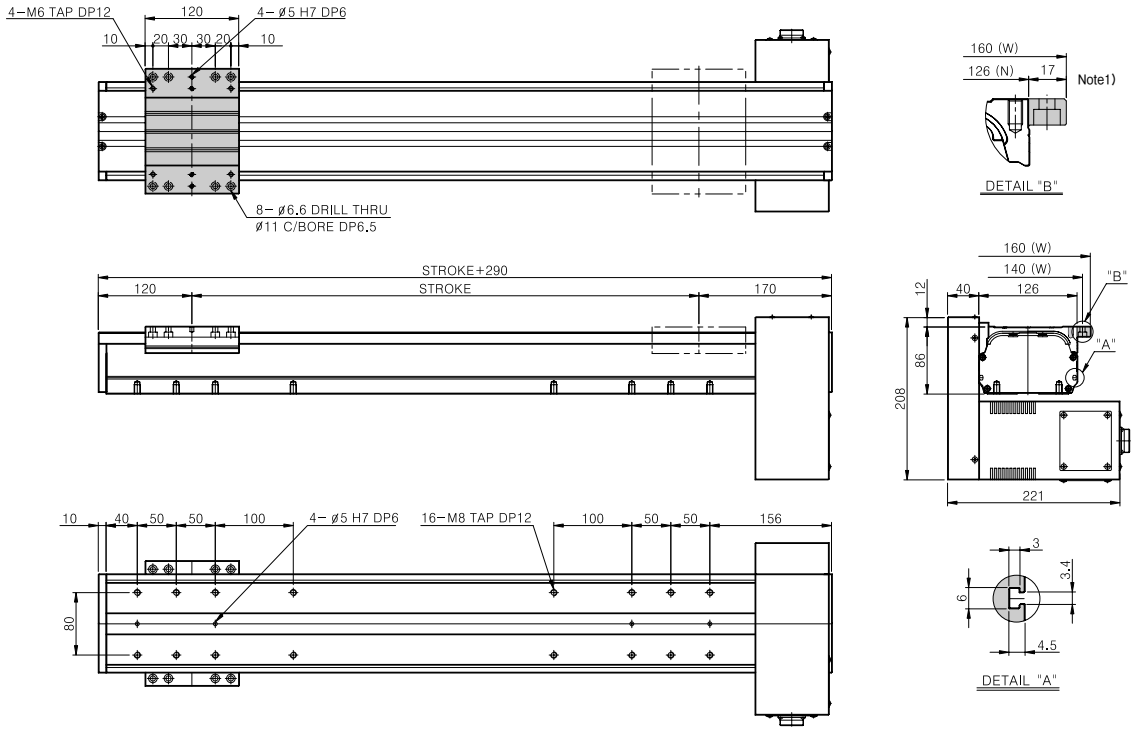


※ Note1). □□ - W : With 17mm part, N : Without 17mm part ※ C type : Symmetric with B type drawing, measurements are the same.
※ Note2). □□ - W : With 20mm part, N : Without 20mm part

Dimensions

■ Dimensions in "mm"

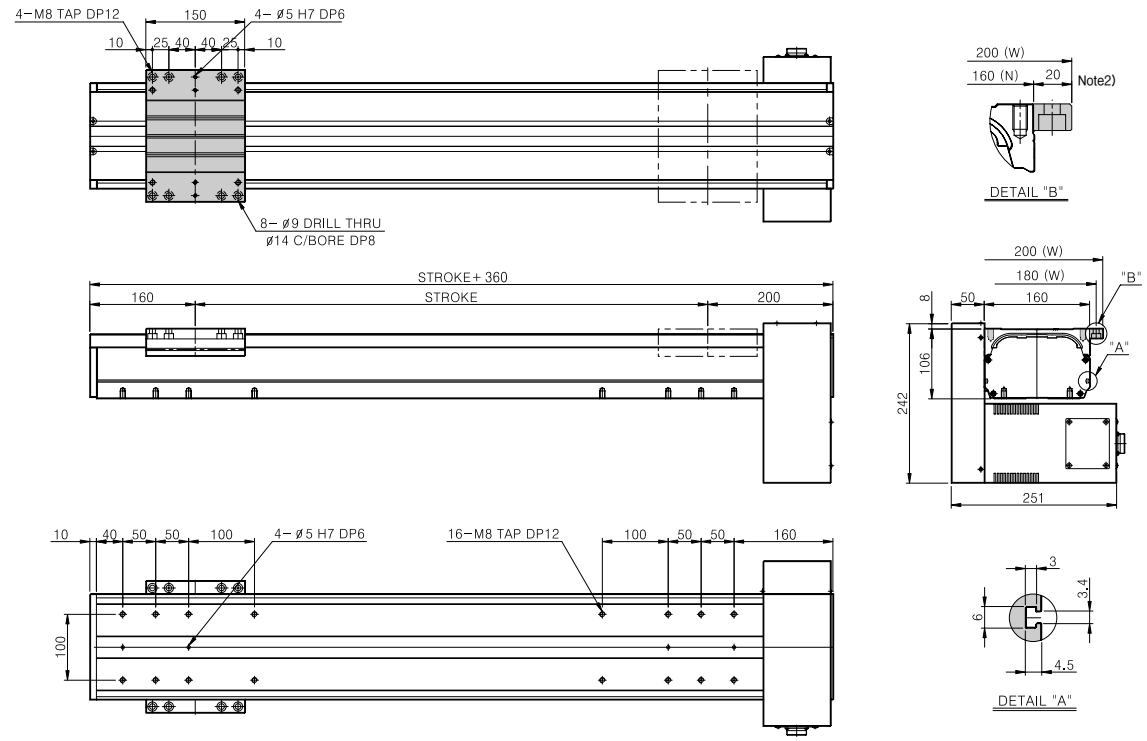
MB126 - D(E)□□ - W



Dimensions

■ Dimensions in "mm"

MB160 - D(E)□□ - W

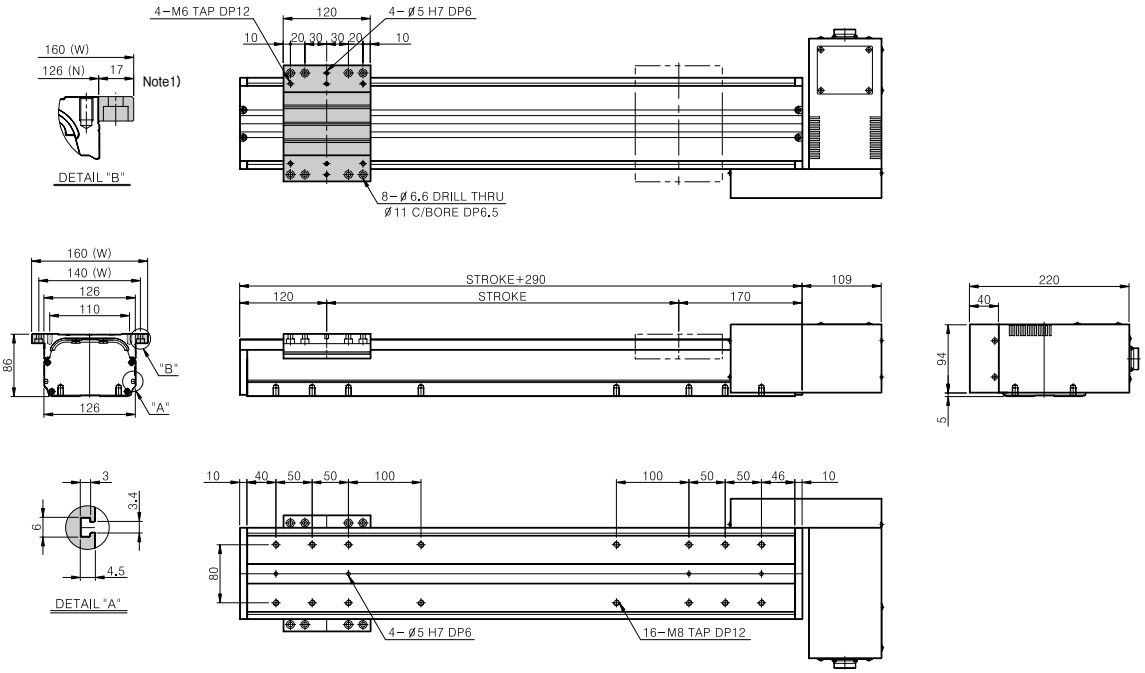


※ Note1). □□ - W : With 17mm part, N : Without 17mm part ※ E type : Symmetric with D type drawing, measurements are the same.
※ Note2). □□ - W : With 20mm part, N : Without 20mm part

Dimensions

■ Dimensions in "mm"

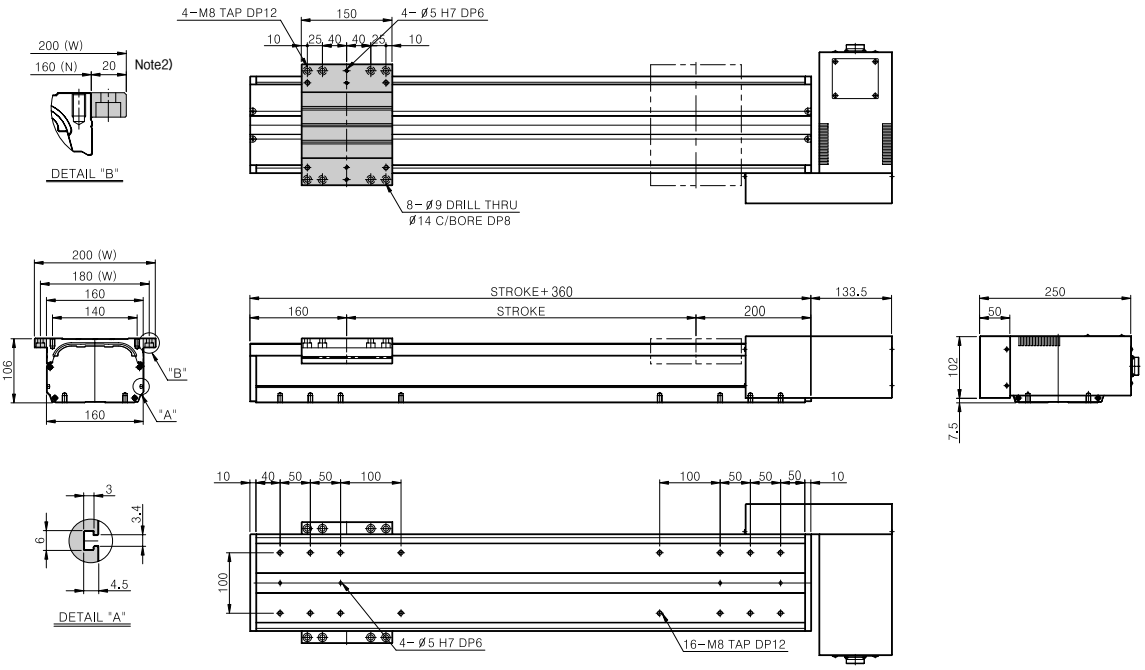
MB126 - F(G)□□ - W



Dimensions

■ Dimensions in "mm"

MB160 - F(G)□□ - W



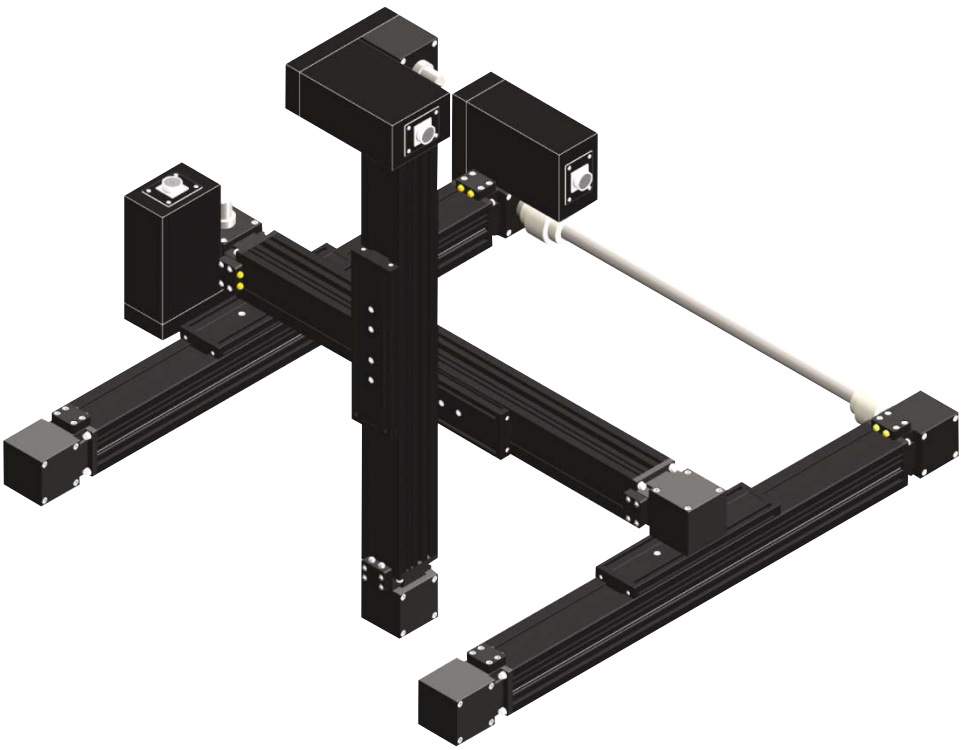
※ Note1). □□ - W : With 17mm part, N : Without 17mm part ※ G type : Symmetric with F type drawing, measurements are the same.
※ Note2). □□ - W : With 20mm part, N : Without 20mm part

Moving towards tomorrow

MECAPION

MM series

Motion Robots

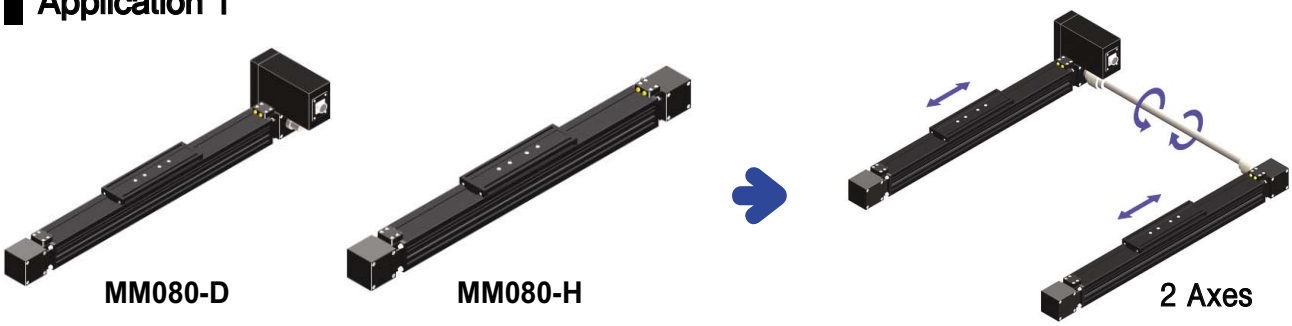


MM Series Motion Robots

Character

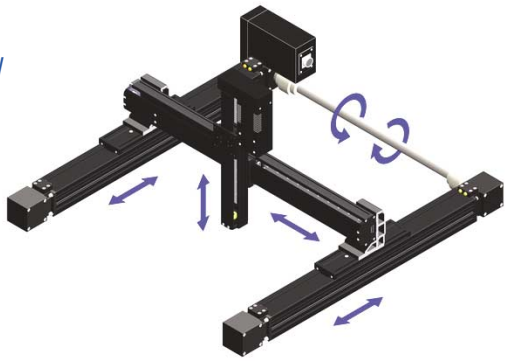
- With strong aluminum box type extrusion construction, light and strong
- Various operations filed of 400mm ~ 4500mm.
- Simple construction for various application.
- Easy control of Belt tension.
- By using AC servo motor, easy maintenance, high confidence, easy control.
- Various application for example semiconductor inspection M/C, Sealing, Screw, Moving etc automation facilities
- Black Anodizing coating made beautiful face and high rust protection.
- Reliable products checked by 3-Dimension measuring machine

Application 1

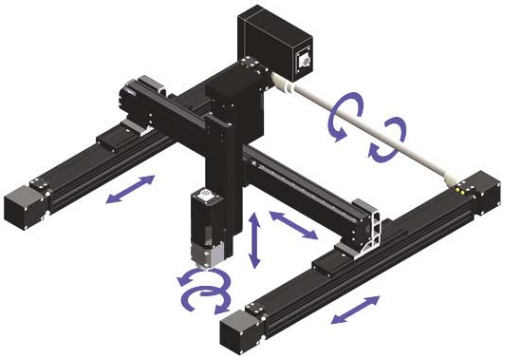


Application 2

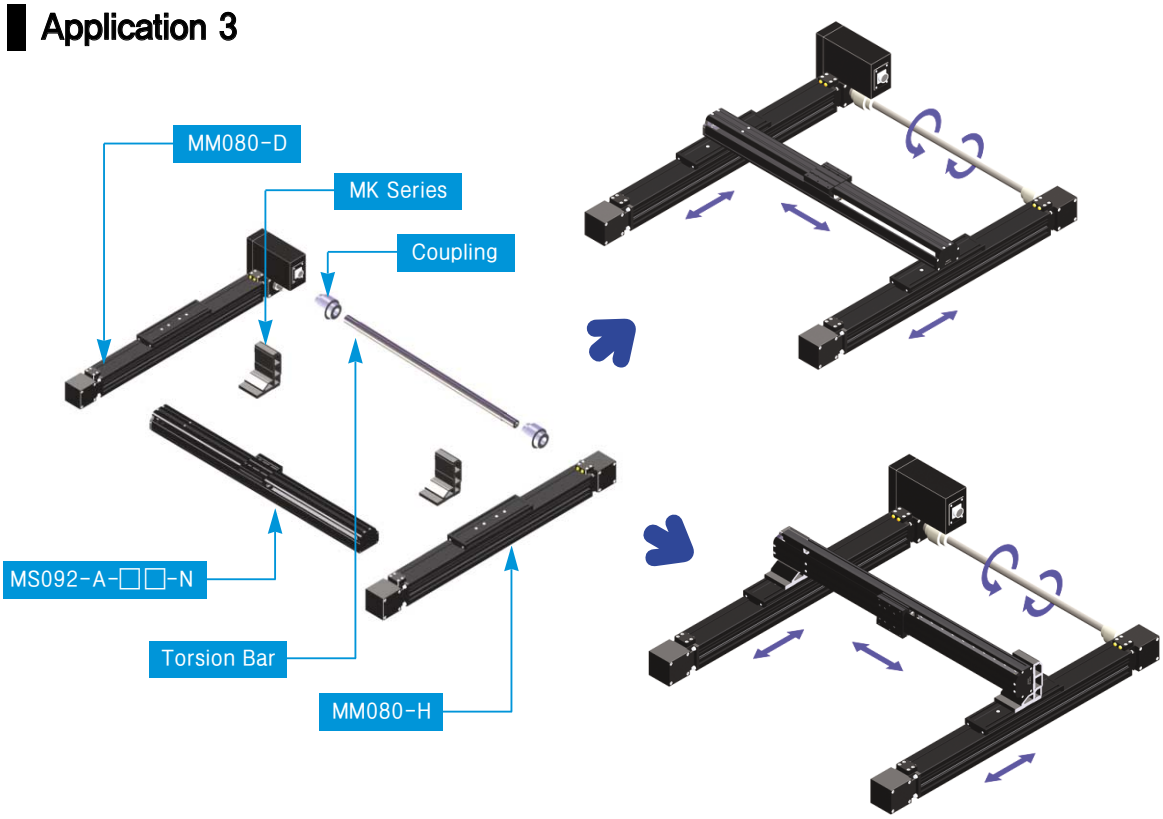
■ Assemble MM 080 Series & MS 064-B-□□-W



■ Assemble MM 080 Series & MS 092-G



Application 3



MM Selection Guide

MM 080 - A 40 - 1000 - E

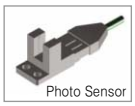
Model Name
MM Metronix Motion Robot

Body Size
080 Body Width : 80mm
120 Body Width : 120mm

Motor Capacity
40 Motor : 400W, 3000rpm
60 Motor : 600W, 3000rpm
70 Motor : 750W, 3000rpm
80 Motor : 800W, 3000rpm

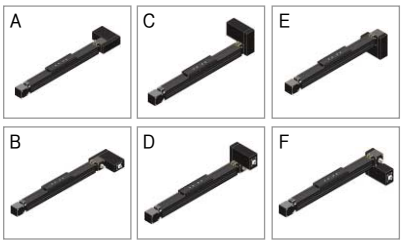
Sensor
E Outside Sensor(Both)
R Outside Sensor(Right)
L Outside Sensor(Left)
X No Sensor

※ Applied Sensor
1) Outside Sensor

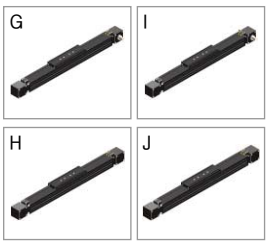


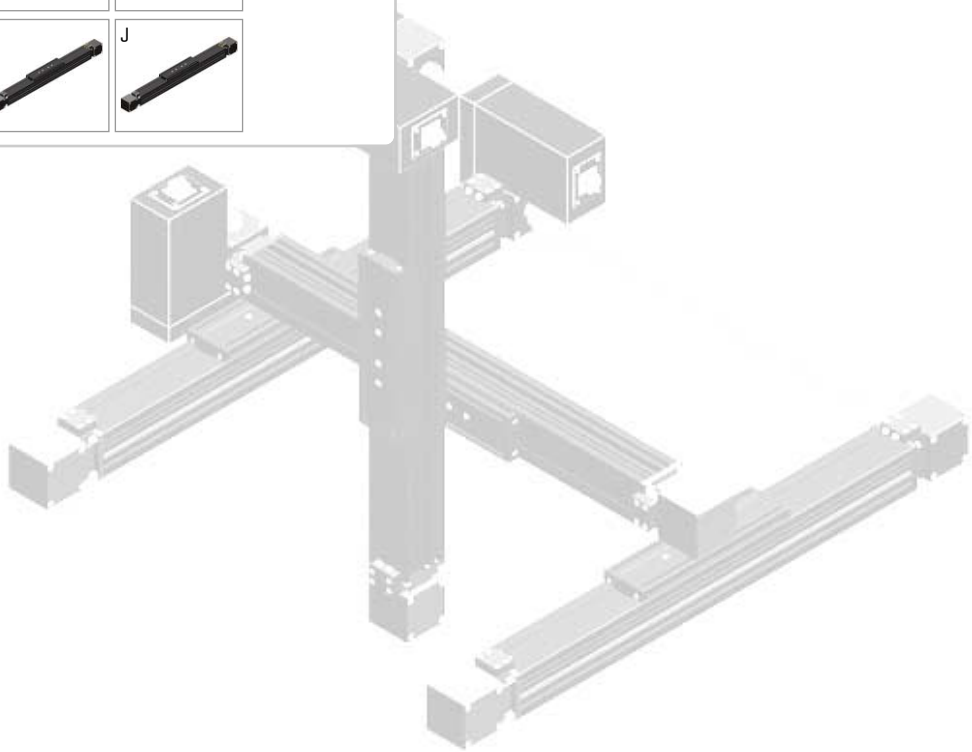
Stroke
1000 Stroke : 400~4500mm

Motor Direction(Main Unit)
A Motor - Rear Left
B Motor - Rear Right
C Motor - Upper Left
D Motor - Upper Right
E Motor - Lower Left
F Motor - Lower Right



Shaft Direction(Idle Unit)
G Shaft Left
H Shaft Right
I Shaft Left & Right
J Shaft - No shaft





Specifications

Model		MM080 - A, B / C, D / E, F				MM120 - A, B / C, D / E, F			
Base Width	mm	80				120			
Payload	kgf	71(10)	90(14)	100(18)	110(20)	85(10)	100(14)	110(18)	120(20)
Max. Speed	mm/sec	2000(5000)				2000(5000)			
Servo Motor	W	400W 3000rpm	600W 3000rpm	750W 3000rpm	800W 3000rpm	400W 3000rpm	600W 3000rpm	750W 3000rpm	800W 3000rpm
Stroke	mm	400~2000	400~3000	400~3000	400~4000	400~2000	400~3000	400~3000	400~4000
Repeatability	mm	±0.08				±0.08			
LM Guide	-	One Way 25W, 2UU				Two Way 15W, 2UU			
Drive Belt	-	S5M Type				S5M Type			
Body	-	Aluminum Profile, Black Anodizing							

■ ( ) : Set max speed as 5000mm/sec

Weight		Tolerance : 100g				
Model	Unit \ Stroke	400	600	800	1000	Offset(100mm)
MM080-A, B-40	kg	19.5	21.5	23.5	25.5	2
MM080-A, B-60		20.6	22.6	24.6	26.6	
MM080-A, B-70		21	23	25	27	
MM080-A, B-80		21.2	23.2	25.2	27.2	
MM080-C, D-40	kg	19.5	21.5	23.5	25.5	2
MM080-C, D-60		20.6	22.6	24.6	26.6	
MM080-C, D-70		21	23	25	27	
MM080-C, D-80		21.2	23.2	25.2	27.2	
MM080-E, F-40	kg	19.5	21.5	23.5	25.5	2
MM080-E, F-60		20.6	22.6	24.6	26.6	
MM080-E, F-70		21	23	25	27	
MM080-E, F-80		21.2	23.2	25.2	27.2	
MM120-A, B-40	kg	26.5	28.5	30.5	32.5	2
MM120-A, B-60		27.6	29.6	31.6	33.6	
MM120-A, B-70		28	30	32	34	
MM120-A, B-80		28.2	30.2	32.2	34.2	
MM120-C, D-40	kg	26.5	28.5	30.5	32.5	2
MM120-C, D-60		27.6	29.6	31.6	33.6	
MM120-C, D-70		28	30	32	34	
MM120-C, D-80		28.2	30.2	32.2	34.2	
MM120-E, F-40	kg	26.5	28.5	30.5	32.5	2
MM120-E, F-60		27.6	29.6	31.6	33.6	
MM120-E, F-70		28	30	32	34	
MM120-E, F-80		28.2	30.2	32.2	34.2	

▶ ***We customize products what user wants. (Servo Motor, Raydent, Body Harness)***

Model		MM080 - G,H,I, J	MM120 - G,H,I, J
Base Width	mm	80	120
Max. Speed	mm/sec	2000(5000)	2000(5000)
Stroke	mm	400~4000	400~4000
Payload	kgf	110(20)	120(20)
LM Guide	-	One Way 25W, 2UU	Two Way 15W, 2UU
Body	-	Aluminum Profile, Black Anodizing	

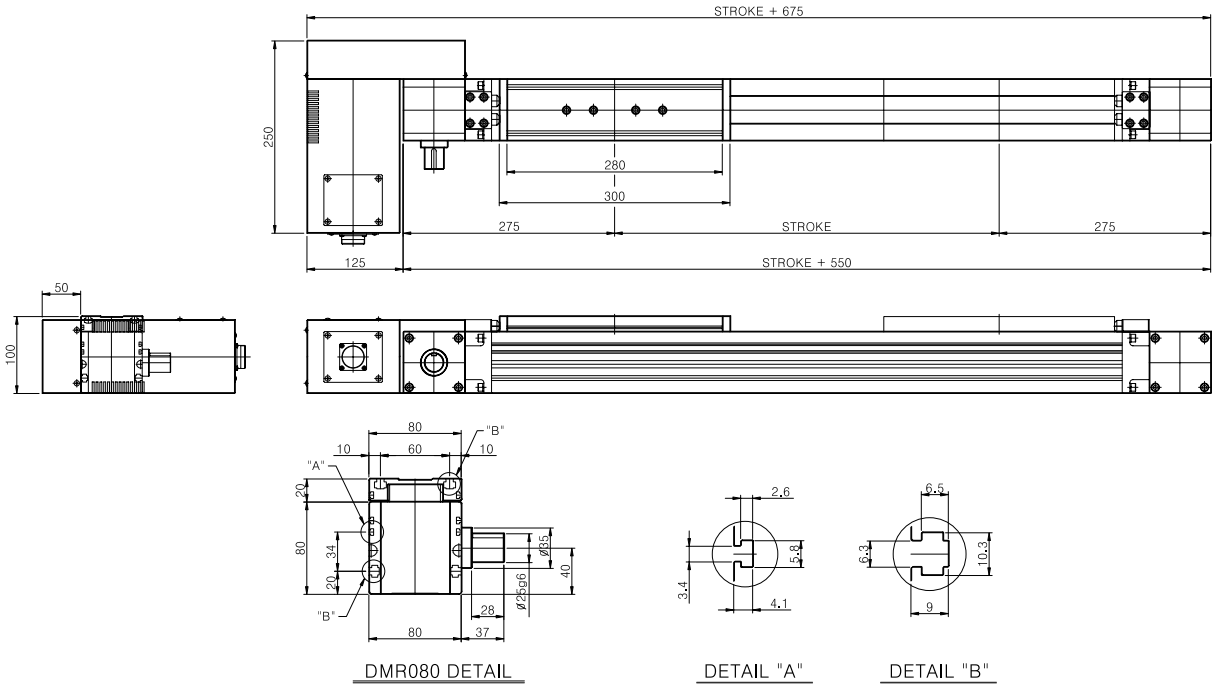
■ ( ) : Set max speed as 5000mm/sec

Weight		Tolerance : 100g				
Model	Unit \ Stroke	400	600	800	1000	Offset(100mm)
MM080-G, H, I, J	kg	18	20	22	24	2
MM120-G, H, I, J		25	27	29	31	

Dimensions

■ Dimensions in "mm"

MM080 - A(B)

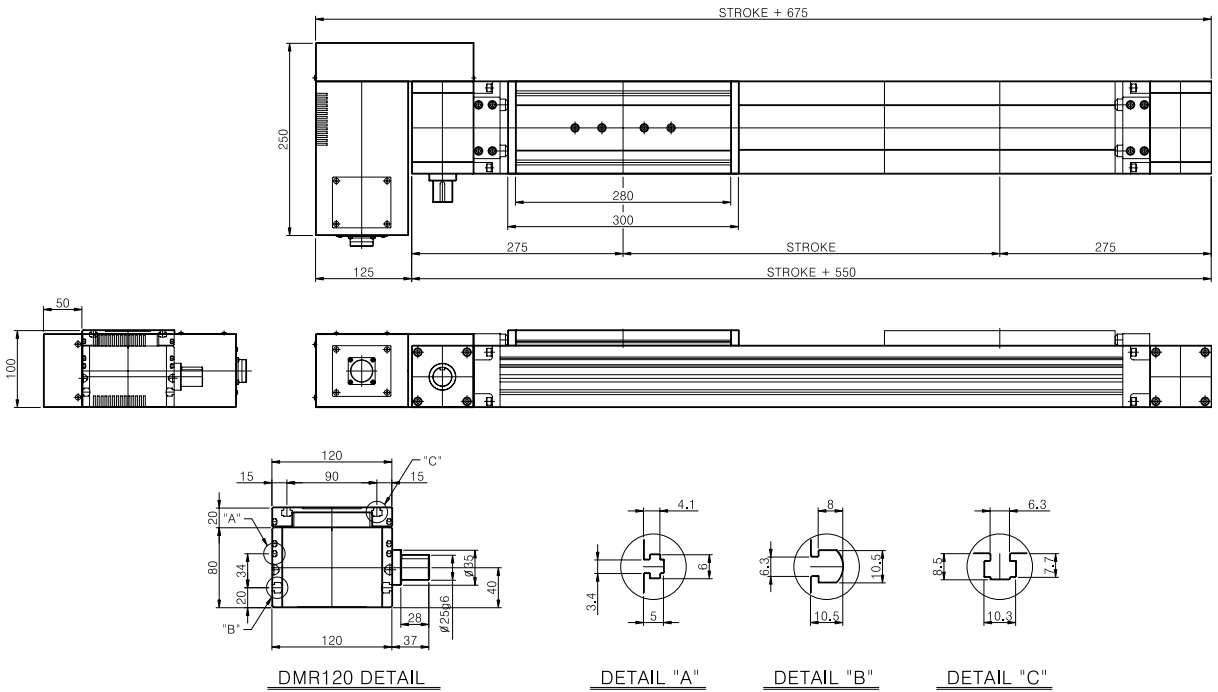


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in "mm"

MM120 - A(B)



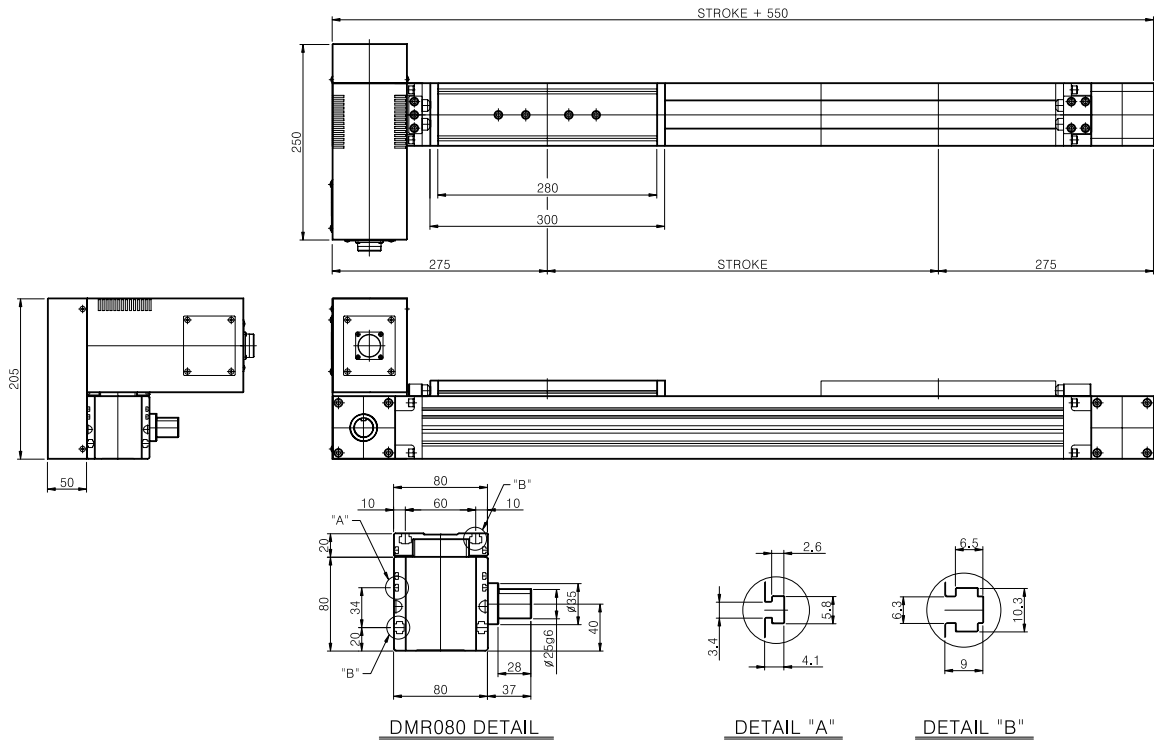
DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

※ B type : Symmetric with A type drawing, measurements are the same.

Dimensions

■ Dimensions in “mm”

MM080 - C(D)

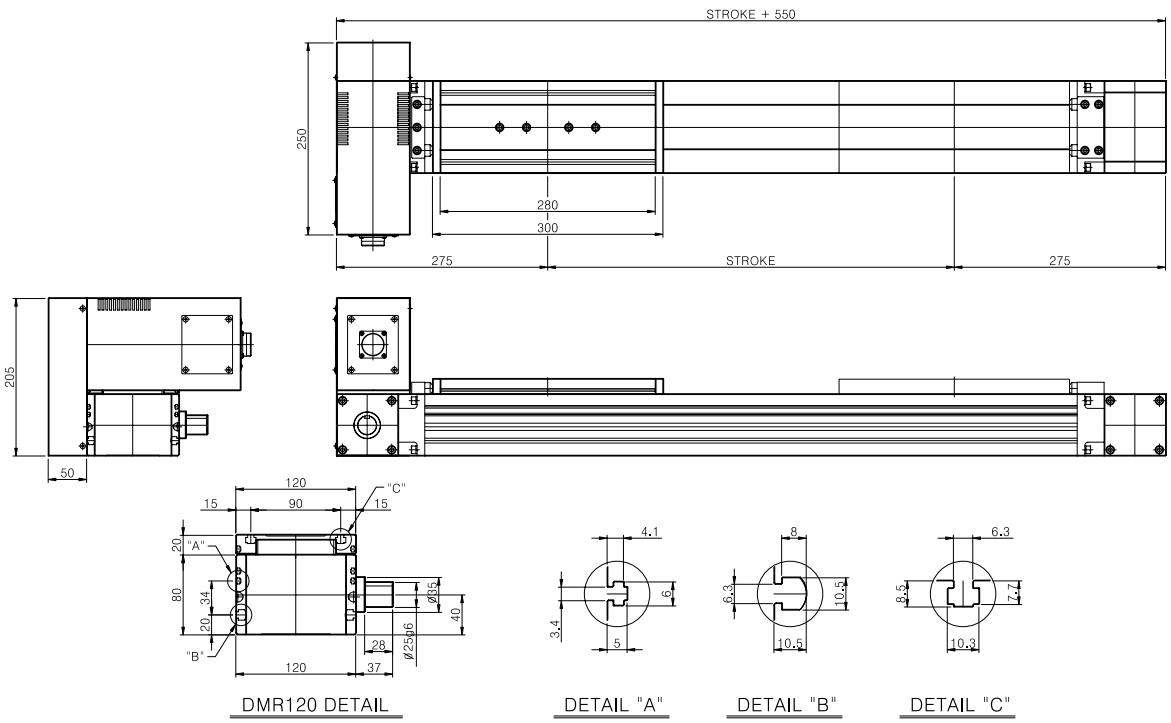


DMR080 DETAIL　DETAIL "A"　DETAIL "B"

Dimensions

■ Dimensions in “mm”

MM120 - C(D)



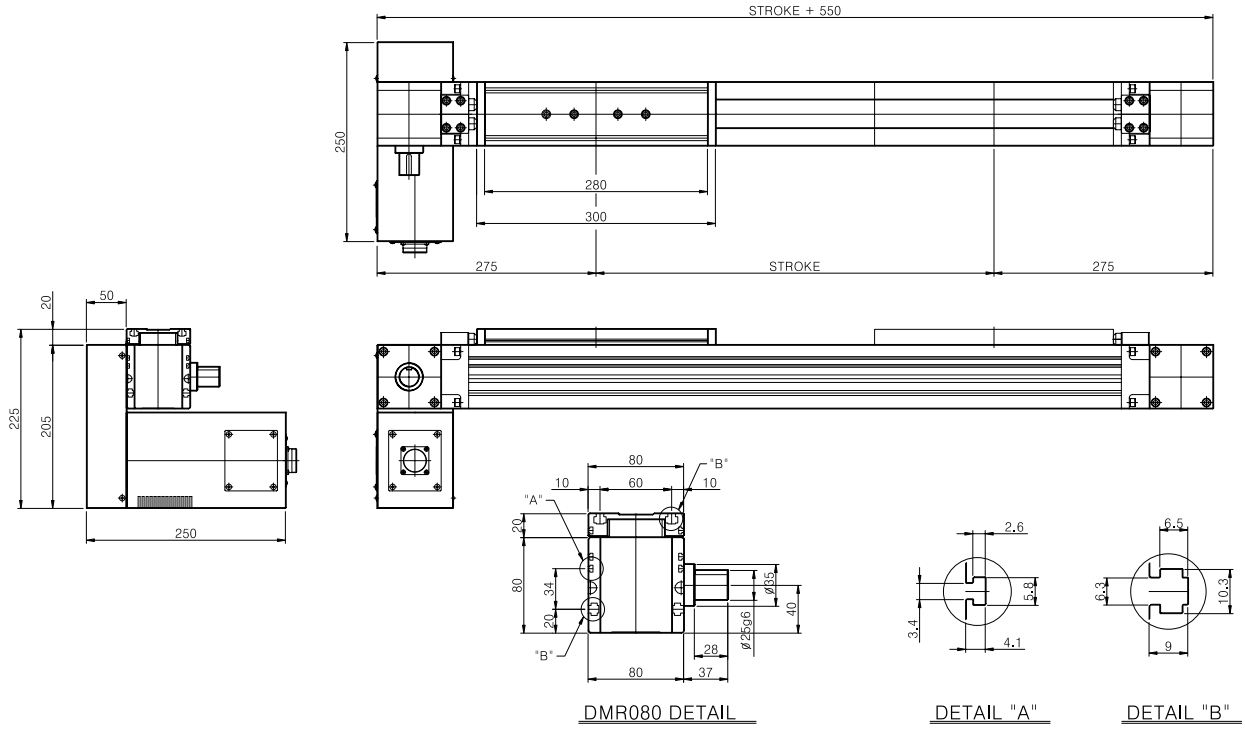
DMR120 DETAIL　DETAIL "A"　DETAIL "B"　DETAIL "C"

※ D type : Symmetric with C type drawing, measurements are the same.

Dimensions

■ Dimensions in "mm"

MM080 - E(F)

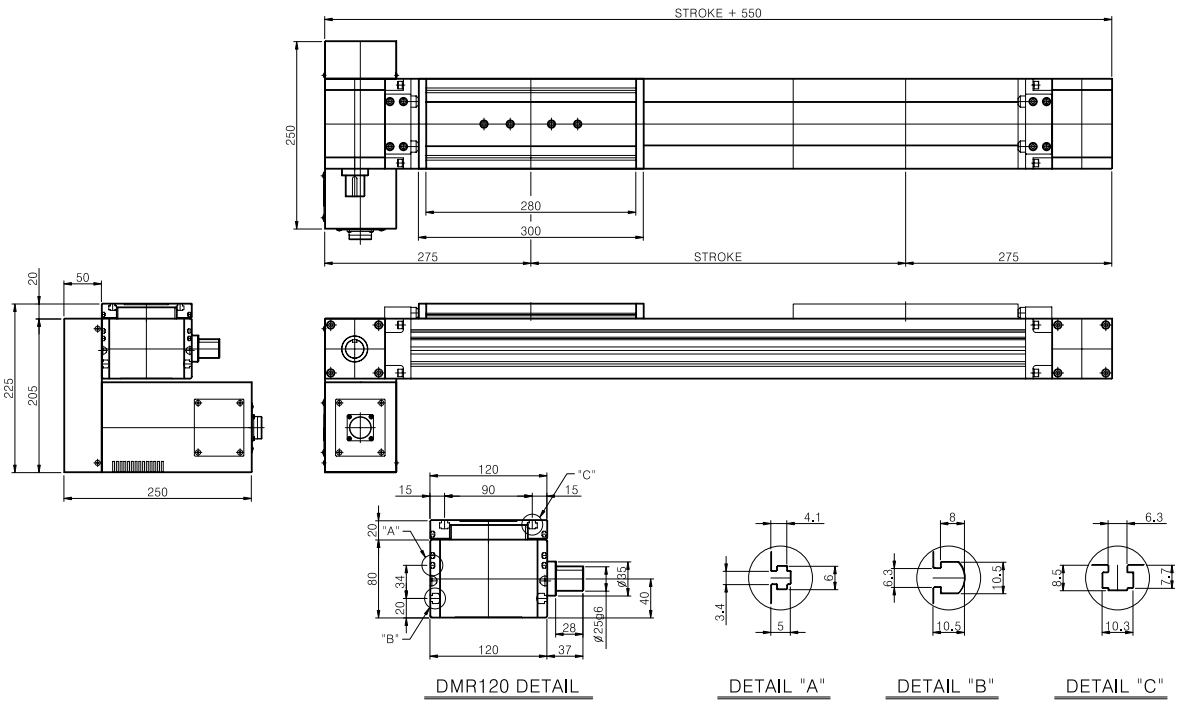


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in "mm"

MM120 - E(F)



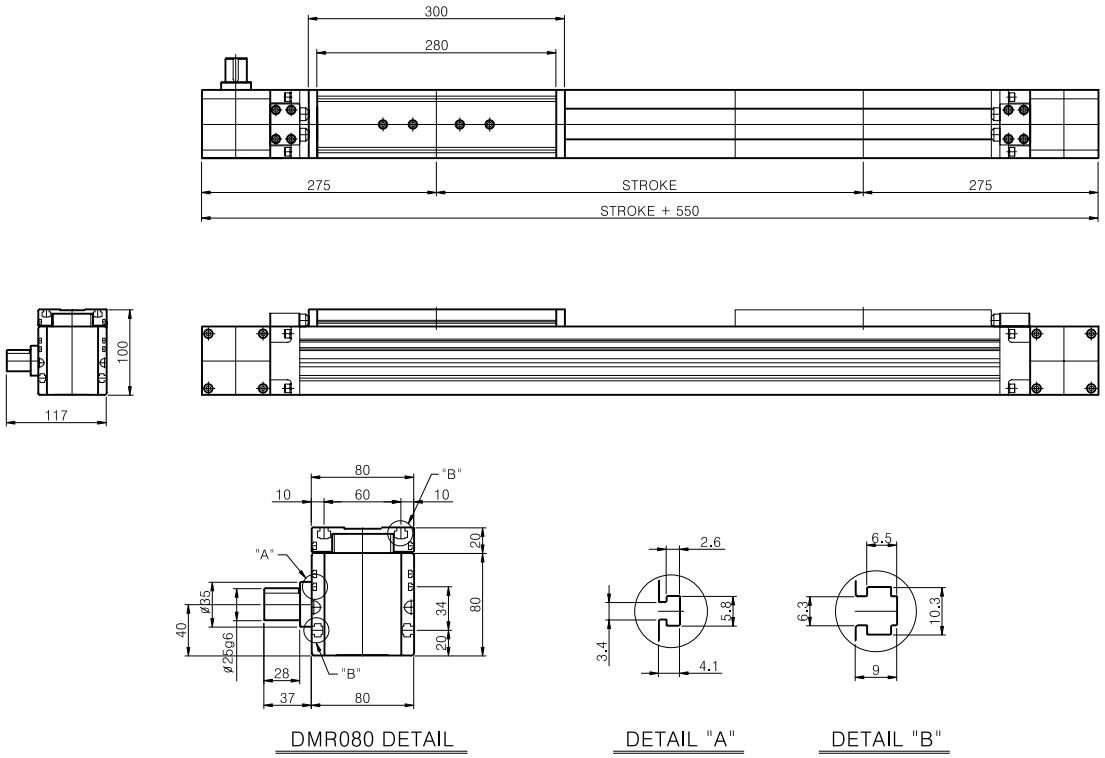
DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

※ F type : Symmetric with E type drawing, measurements are the same.

Dimensions

■ Dimensions in “mm”

MM080 - G

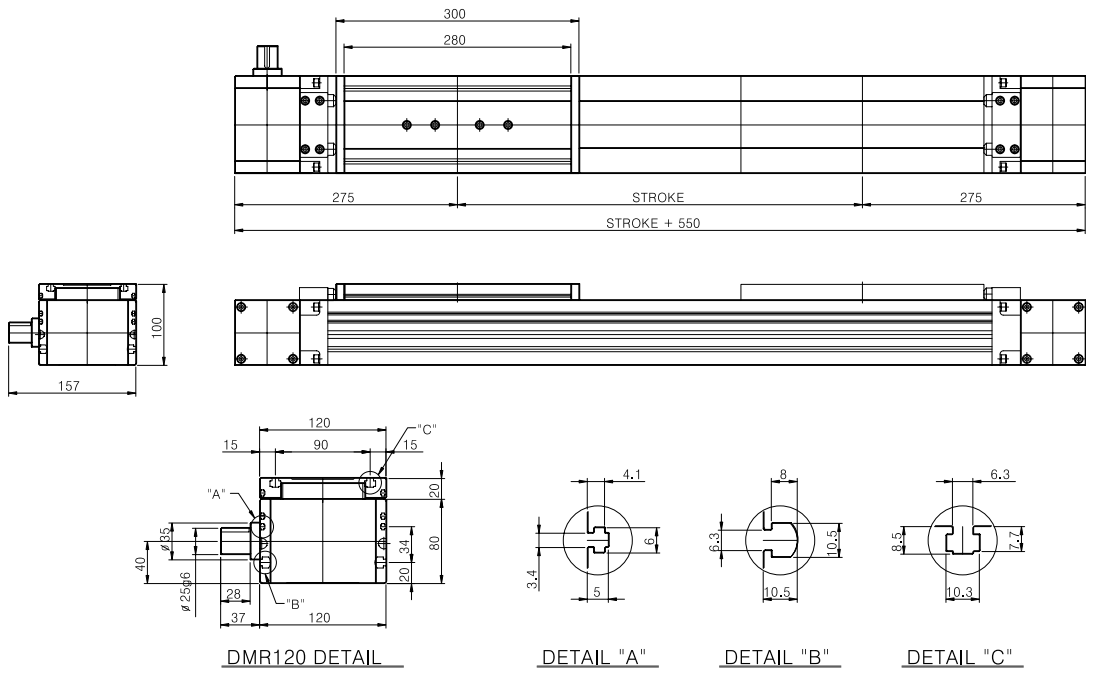


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in “mm”

MM120 - G

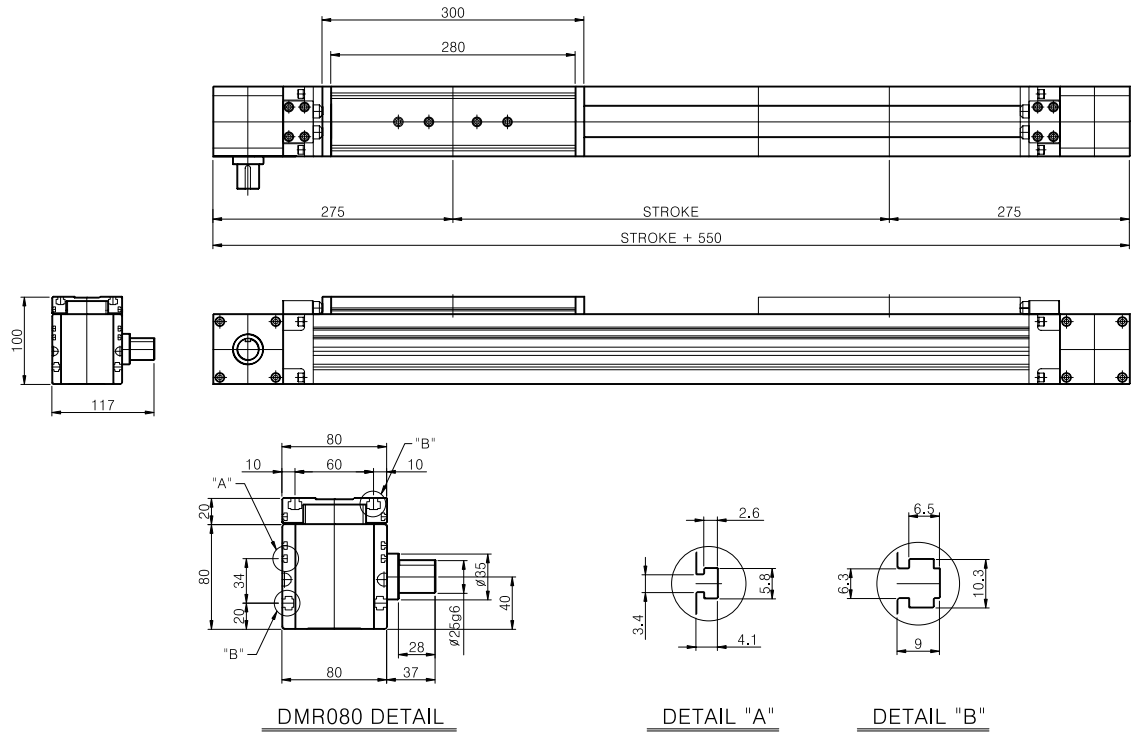


DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

Dimensions

■ Dimensions in "mm"

MM080 - H

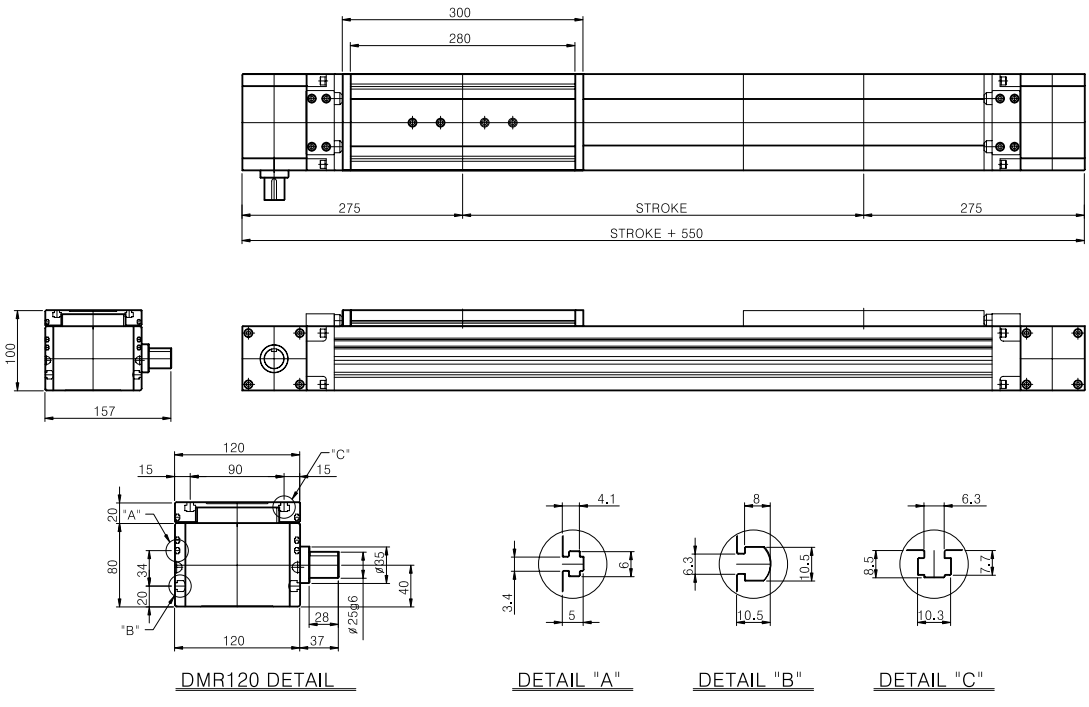


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in "mm"

MM120 - H

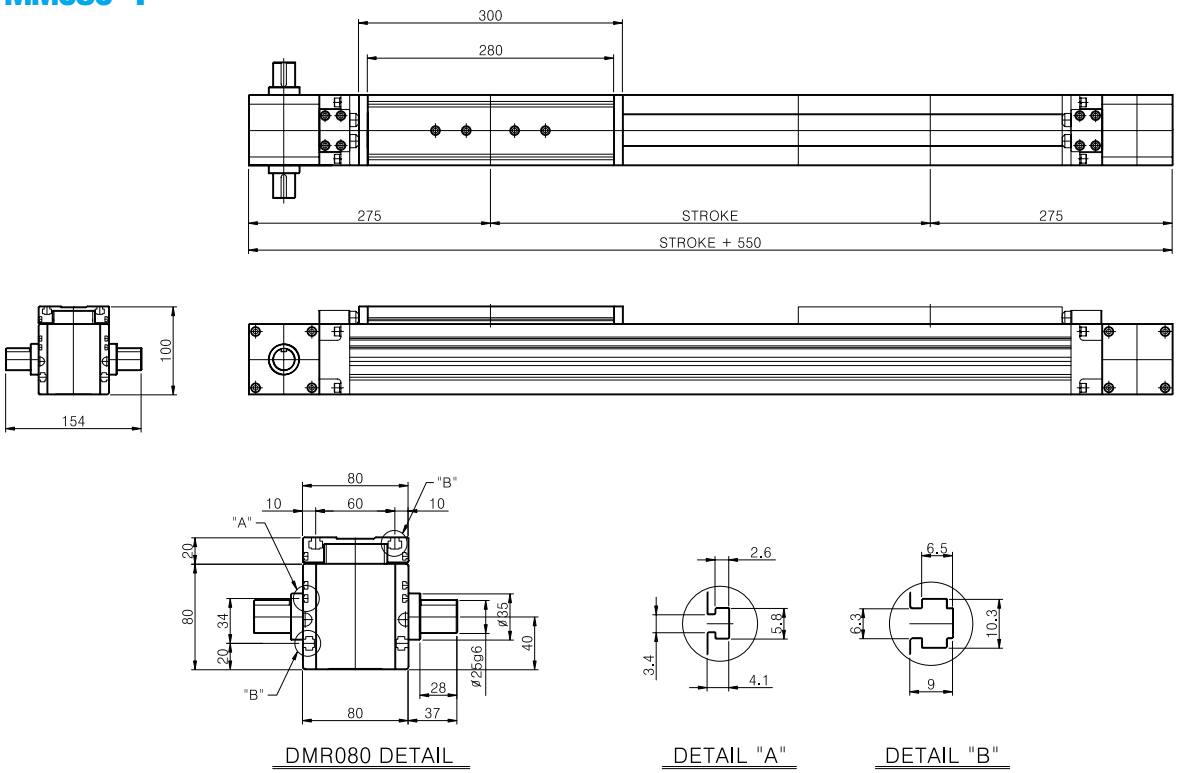


DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

Dimensions

■ Dimensions in “mm”

MM080 - I

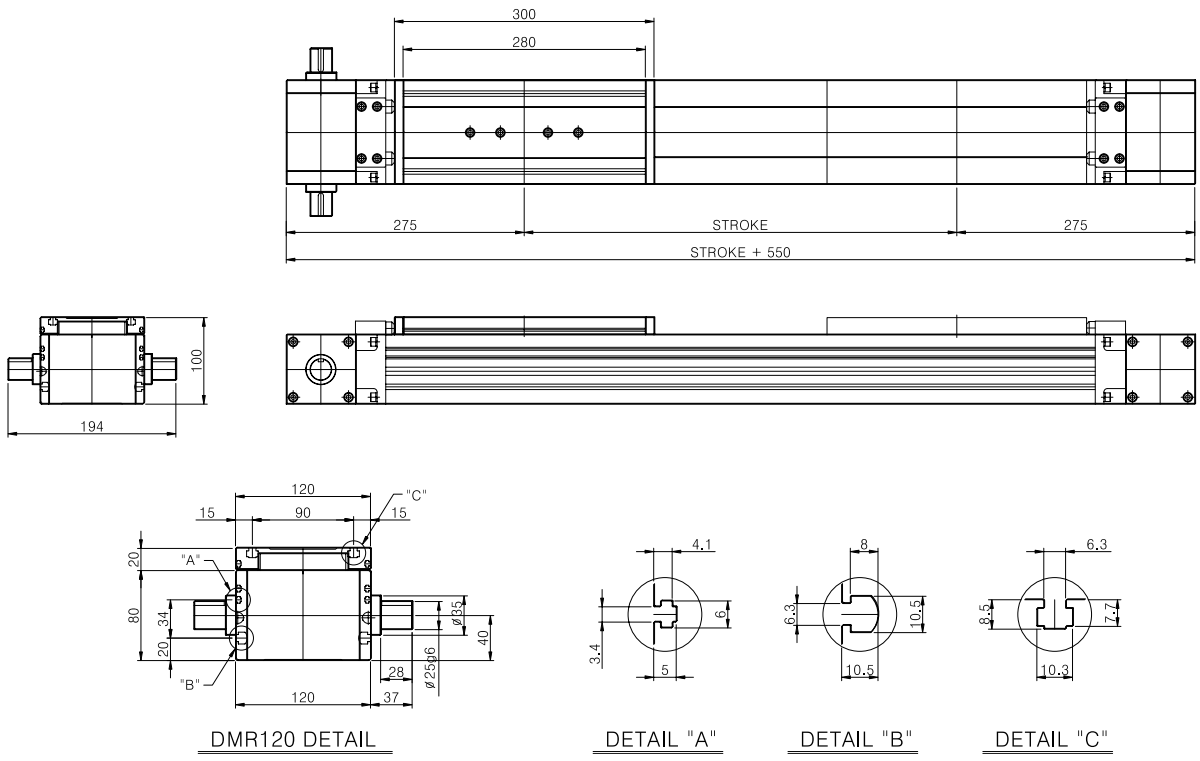


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in “mm”

MM120 - I

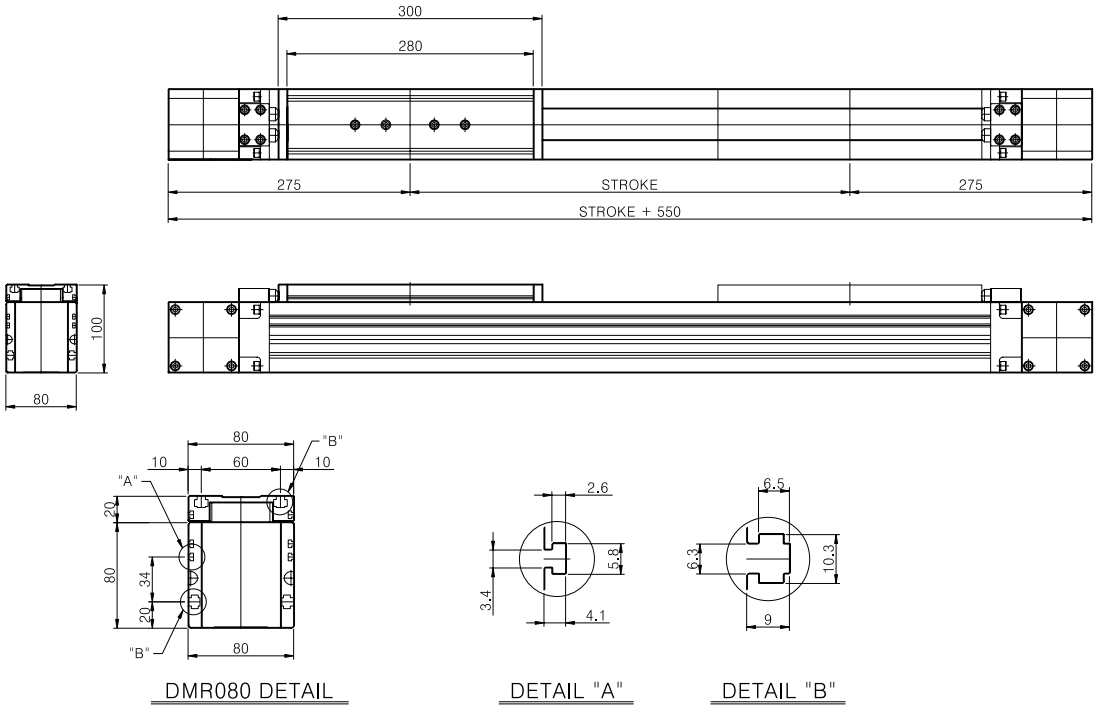


DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

Dimensions

■ Dimensions in "mm"

MM080 - J

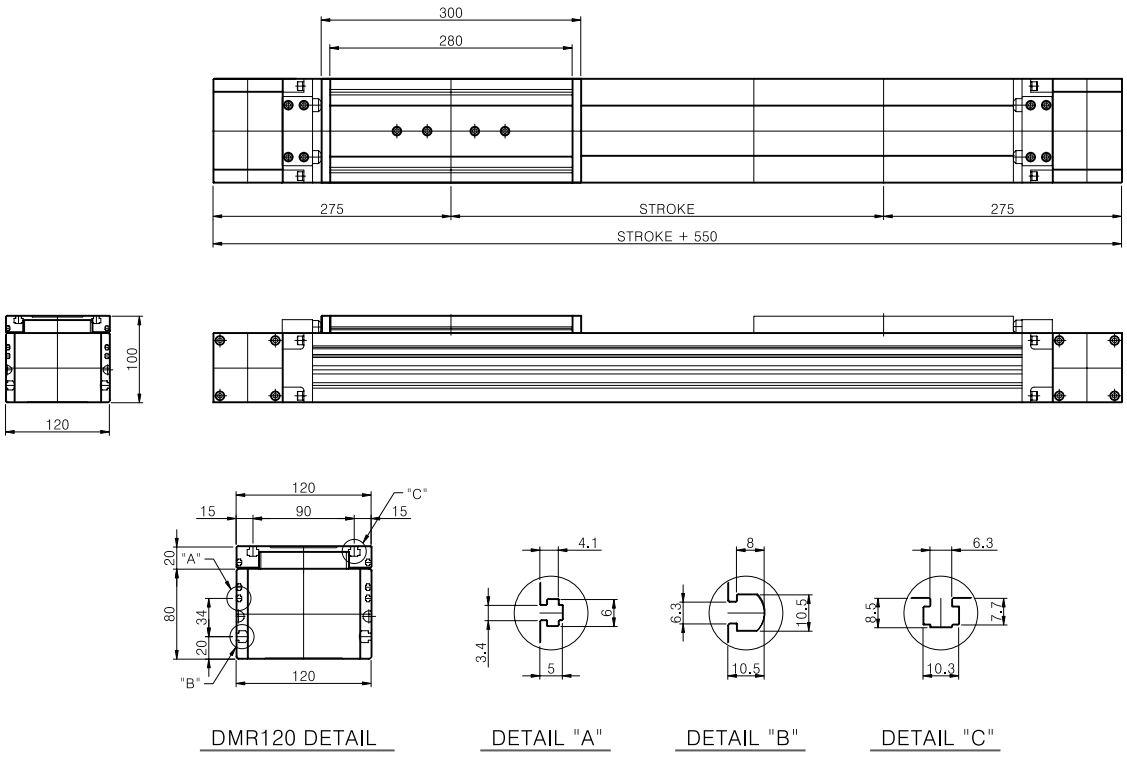


DMR080 DETAIL　　DETAIL "A"　　DETAIL "B"

Dimensions

■ Dimensions in "mm"

MM120 - J



DMR120 DETAIL　　DETAIL "A"　　DETAIL "B"　　DETAIL "C"

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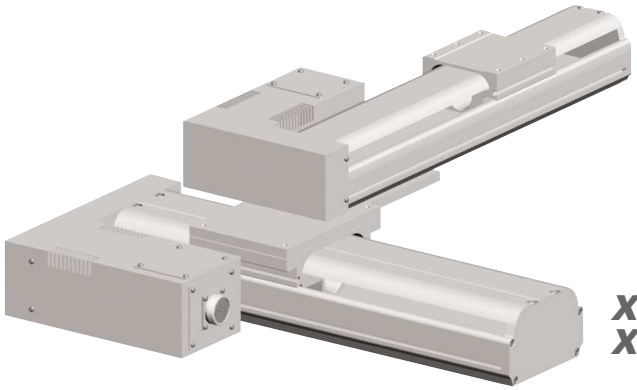
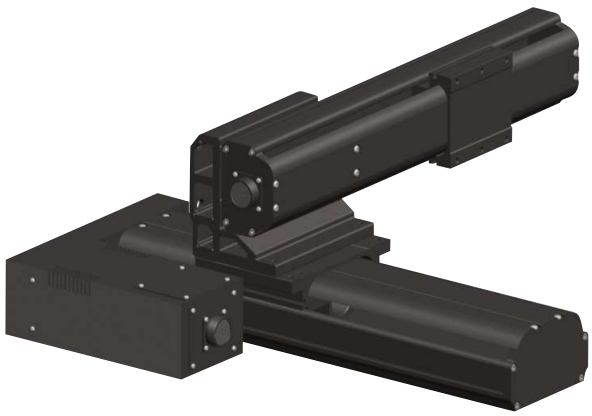
ROBOT Combinations

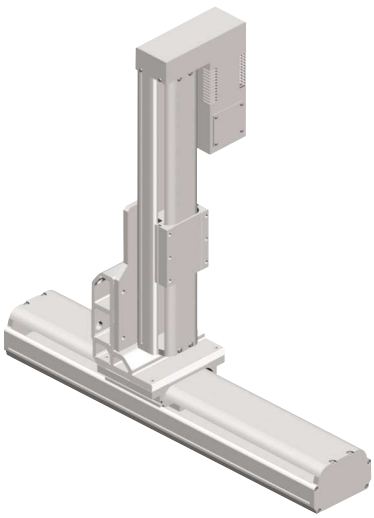
Cartesian Robots



XD-N
XD-AL

XH-BS
XH-BL
XH-DS
XH-DL





XV-AV
XV-DV

Robot Combinations

Linear Axes Assemblage Guide

XD - N - ST - 09 05

Assemble type

XD	X, Y Table : Horizontal assemblage
XH	X, Y Table : Right angle assemblage
XV	X, Y Table : Vertical assemblage

Bracket

N	No Bracket
AS	Flat Standard Bracket
AL	Flat Long Bracket
BS	Standard Bracket
BL	Long Standard Bracket
DS	Eccentric Bracket
DL	Long Eccentric Bracket
AV	Flat Vertical Bracket
DV	Eccentric Vertical Bracket

X-Axis Model

09	MS092
12	MS126
16	MS160
20	MS200

Y-Axis Model

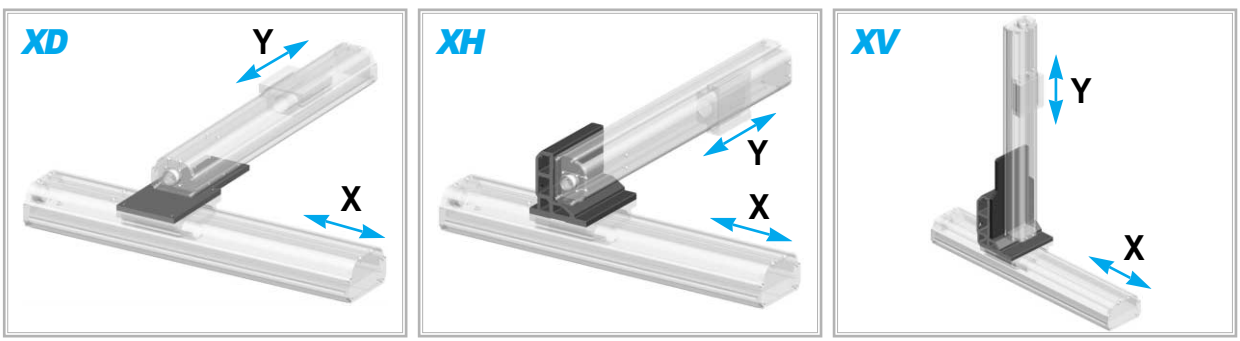
05	MS052
06	MS064
09	MS092
12	MS126
16	MS160

X, Y-Axis Type

ST	Straight Type(X) + Straight Type(Y)
SP	Straight Type(X) + Parallel Type(Y)
PS	Parallel Type(X) + Straight Type(Y)
PP	Parallel Type(X) + Parallel Type(Y)

1. Assemblage Type

▶ There are three types by Brackets : XD, XH, XV



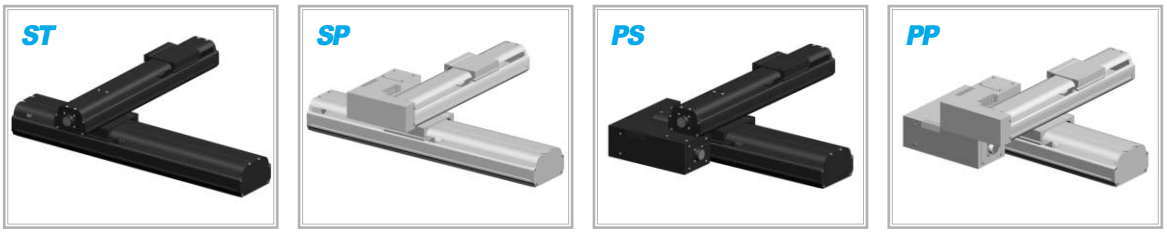
2. Applicable Models

2-1. XD Type

▶ XD type : N type and AL type by two axes application

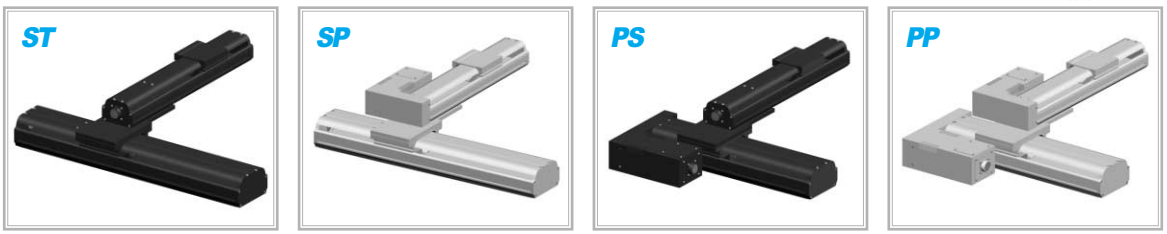
1) XD-N-□□

a. Slide Table– Horizontal and upward b. Bracket - Without c. Connection – Direct connection



2) XD-AL-□□

a. Slide Table– Horizontal and upward b. Bracket - Flat AL Bracket



2-2. XH Type

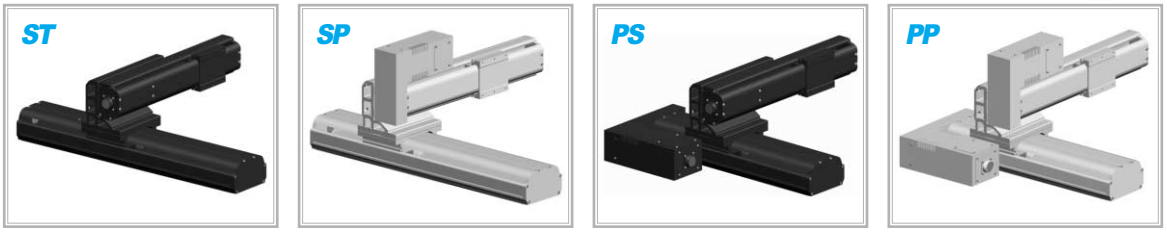
▶ XH type : B type and D type according to axes assemblage

1) XH-BS-□□

a. Slide Table– Right angle b. Bracket - Standard BS Bracket

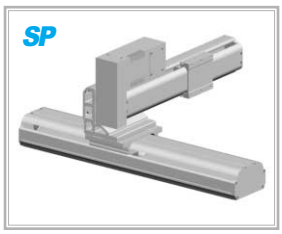
2) XH-BL-□□

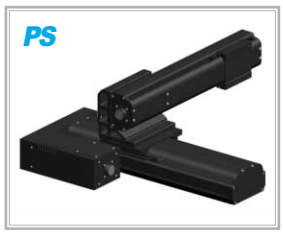
a. Slide Table– Right angle b. Bracket - Long standard BL Bracket c. For long stroke model

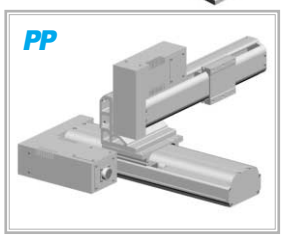


3) XH-DS-□□

a. The center of Y axis is located on slide table center b. Bracket - Eccentric DS Bracket

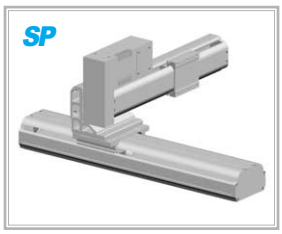


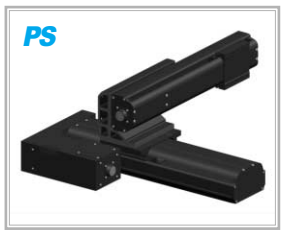


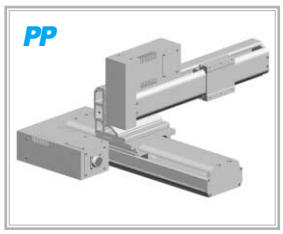


4) XH-DL-□□

a. The center of Y axis is located on slide table center b. Bracket - Long Eccentric DS Bracket
c. For long stroke model



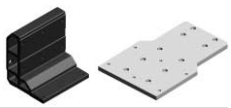




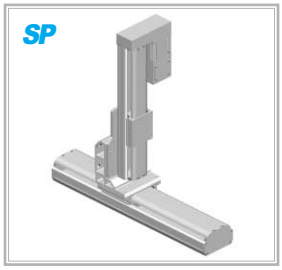
2-3. XV Type

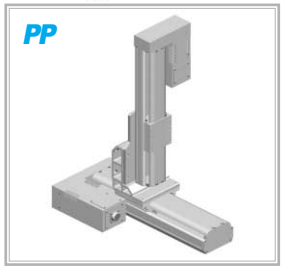
▶ XV type : AV type and DV type according to axes assemblage

1) XV-AV-□□



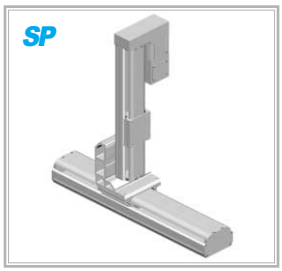
a. Slide Table– Vertical angle b. Bracket - Eccentric Vertical CV Bracket & Flat Vertical AV Bracket

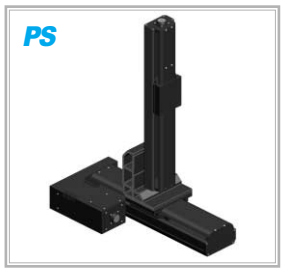


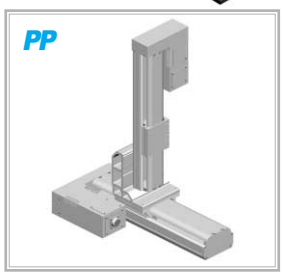


1) XV-DV-□□

a. Slide Table– Vertical angle b. Bracket - Eccentric Vertical CV Bracket







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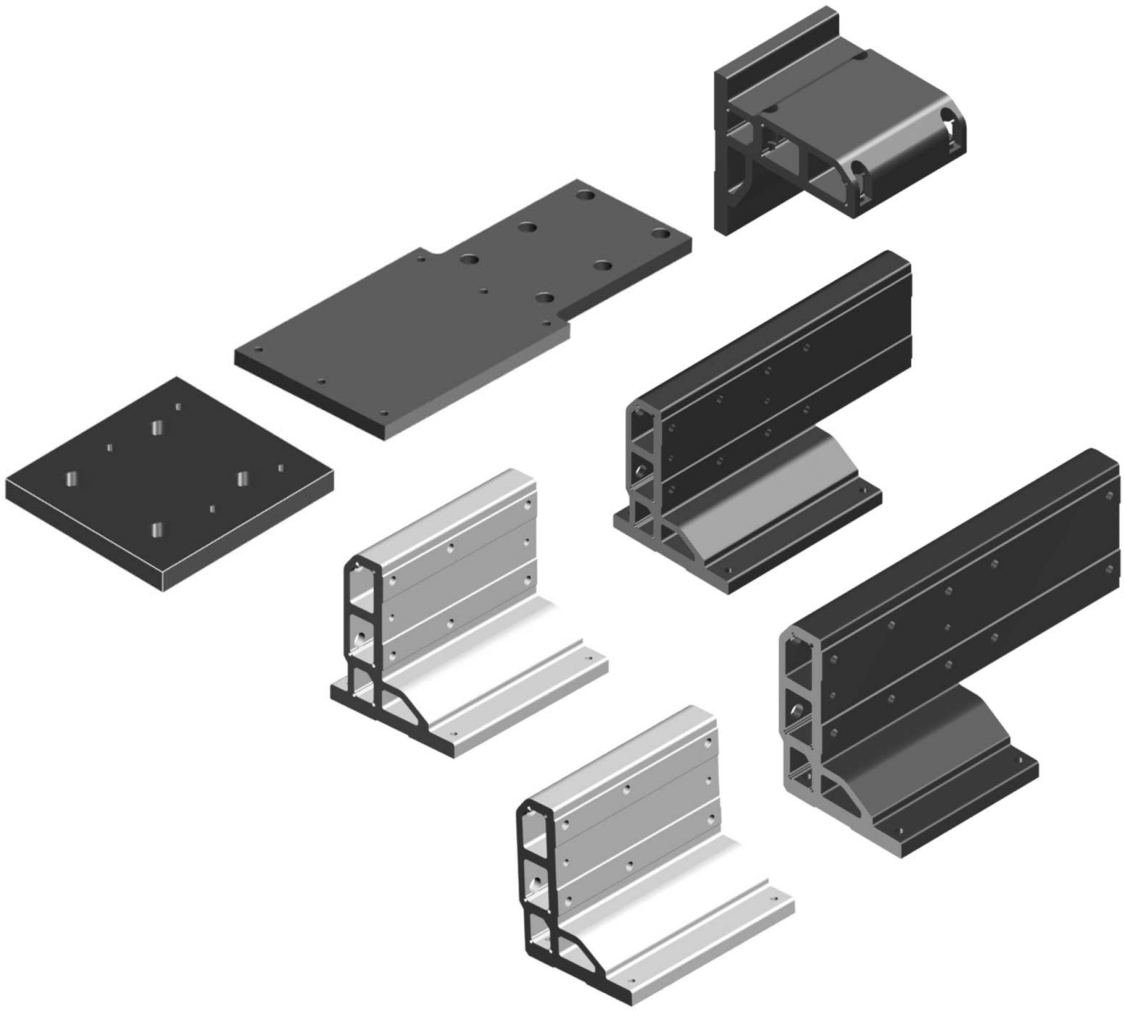
MK series

Robot Brackets



MK Series Robot Brackets

MK Selection Guide

MK 10 AS - X H - 09 06

Model Name
- MK: Combination Bracket

Assemble Bracket Size
- 10: 100
- 12: 120
- 15: 150
- 18: 180

Bracket Type
- AS: Flat Standard Bracket
- AL: Flat Long Bracket
- BS: Standard Bracket
- BL: Long Standard Bracket
- DS: Eccentric Bracket
- DL: Long Eccentric Bracket
- AV: Flat Vertical Bracket
- DV: Eccentric Vertical Bracket

Bracket Axis
- X: X Axis
- Y: Y Axis

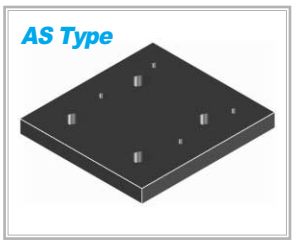
Bracket Model
- H: Horizontal Type
- V: Vertical Type

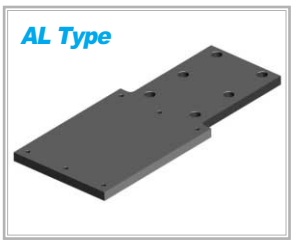
XY - Axis Model
- 09: MS092
- 12: MS126 / MB126
- 16: MS160 / MB160
- 20: MS200

YZ - Axis Model
- 05: MS052
- 06: MS064
- 09: MS092
- 12: MS126 / MB126
- 16: MS160 / MB160

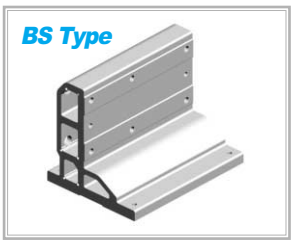
Bracket

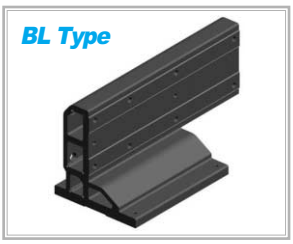
1. Flat Type - AS, AL
Horizontal assemblage of X,Y



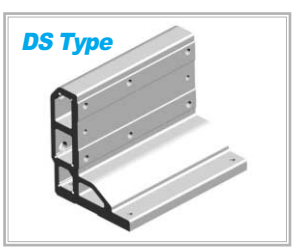


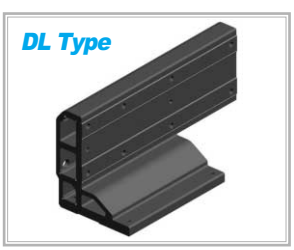
2. Standard - BS, BL
Orthogonal assemblage of X,Y



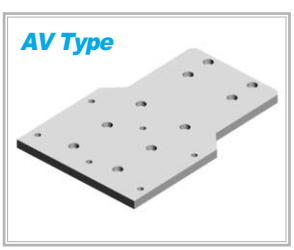


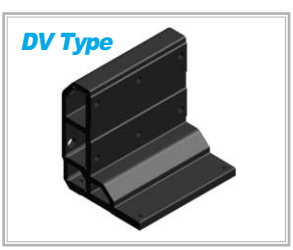
3. Eccentric Type - DS, DL
Orthogonal assemblage of X,Y





4. Vertical Type - AV, DV
Vertical assemblage of X,Y





※ Customerized types are available

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