Low Profile Slide Table
MXF Series

How to Order

MXF 12 – 50 – M9BW [ ] – [ ]

- **Made to Order**
- **Number of auto switches**

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

- **Bore size/ Stroke (mm)**

ø8	10, 20, 30
ø12	20, 30, 50
ø16	30, 50, 75
ø20	30, 50, 75, 100

- **Auto switch**

Nil	Without auto switch (Built-in magnet)

∗ For the applicable auto switch model, refer to the table below.

How to Order Adjusting Bolt Assembly (Accessory)

MXF – A 16 27 – X11

- **Applicable bore size**

8	ø8
12	ø12
16	ø16
20	ø20

- **Adjustment range**

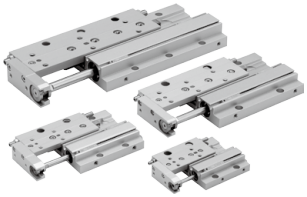
Nil	5 mm	Standard
X11	15 mm	Option
X12	25 mm	

∗ -X12 (adjustable range 25 mm) is not available in the MXF8/MXF12 series.

Applicable Auto Switches

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load	
					DC		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)			
Solid state auto switch	——	Grommet	Yes	3-wire (NPN)	24V	5V,12V	—	**M9NV**	**M9N**	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				**M9PV**	**M9P**	●	●	●	○	○		
				2-wire		12V		**M9BV**	**M9B**	●	●	●	○	○	—	
	Diagnostic indication (2-color indicator)			3-wire (NPN)		5V,12V		**M9NWV**	**M9NW**	●	●	●	○	○	IC circuit	
				3-wire (PNP)				**M9PWV**	**M9PW**	●	●	●	○	○		
				2-wire		12V		**M9BWV**	**M9BW**	●	●	●	○	○	—	
	Water resistant (2-color indicator)			3-wire (NPN)		5V,12V		**M9NAV**	**M9NA**	○	○	●	○	○	IC circuit	
				3-wire (PNP)				**M9PAV**	**M9PA**	○	○	●	○	○		
				2-wire		12V		**M9BAV**	**M9BA**	○	○	●	○	○	—	
Reed auto switch	——	Grommet	Yes	3-wire (Equiv. to NPN)	—	5V	—	**A96V**	**A96**	●	—	●	—	—	IC circuit	—
			None	2-wire	24V	12V	100V	**A93V**	**A93**	●	●	●	●	—	—	Relay, PLC
							100V or less	**A90V**	**A90**	●	—	●	—	—	IC circuit	

Low Profile Slide Table *MXF Series*

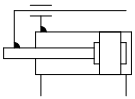


Specifications

Bore size (mm)	8	12	16	20
Piping port size	M3 x 0.5	M5 x 0.8		
Fluid	Air			
Action	Double acting			
Operating pressure	0.15 to 0.7 MPa			
Proof pressure	1.05 MPa			
Ambient and fluid temperature	–10 to 60°C			
Operating speed range (Average operating speed) Note)	50 to 500 mm/s			
Cushion	Rubber bumper on both sides			
Lubrication	Non-lube			
Auto switch (Option)	Reed auto switch Solid state auto switch (2-wire, 3-wire) 2-color indicator solid state auto switch (2-wire, 3-wire)			
Stroke length tolerance	$^{+1}_{0}$ mm			
Stroke adjustment range	Extension end 5 mm/Retraction end 5 mm			

Note) Average operating speed: Speed that the stroke is divided by a period of time from starting the operation to reaching the end.

Symbol
Rubber bumper



Theoretical Output

(N)

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa)					
				0.2	0.3	0.4	0.5	0.6	0.7
8	4	OUT	50	10	15	20	25	30	35
		IN	38	8	11	15	19	23	27
12	6	OUT	113	23	34	45	57	68	79
		IN	85	17	26	34	43	51	60
16	8	OUT	201	40	60	80	101	121	141
		IN	151	30	45	60	76	91	106
20	10	OUT	314	63	94	126	157	188	220
		IN	236	47	71	94	118	142	165

Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm^2)

Standard Stroke

Model	Standard stroke (mm)
MXF8	10, 20, 30
MXF12	20, 30, 50
MXF16	30, 50,7 5
MXF20	30, 50, 75, 100

Weight

(g)

Model	Standard stroke (mm)					
	10	20	30	50	75	100
MXF8	120	130	170	—	—	—
MXF12	—	210	250	360	—	—
MXF16	—	—	360	500	690	—
MXF20	—	—	600	750	1060	1370

MXF Series

Table Deflection (Reference Values)

Table displacement due to pitch moment load

Table displacement when loads are applied to the section marked with the arrow at the full stroke.

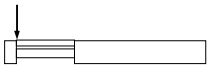


Table displacement due to yaw moment load

Table displacement when loads are applied to the section marked with the arrow at the full stroke.

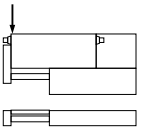
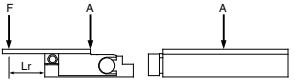
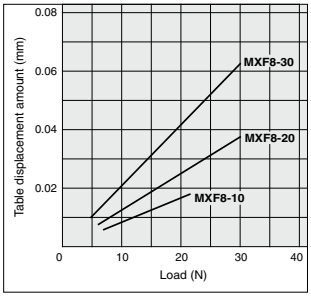


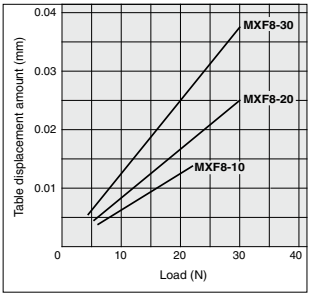
Table displacement due to roll moment load

Table displacement of section A when loads are applied to the section F with the slide table retracted.

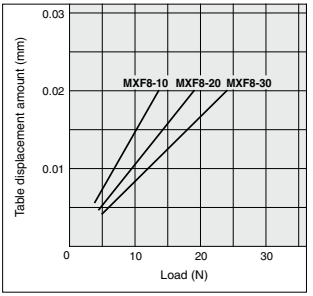


MXF8

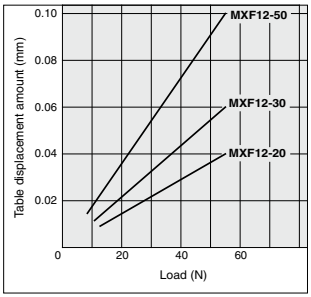


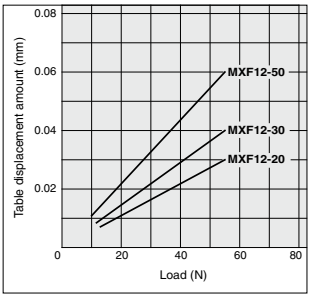


Lr = 20 mm

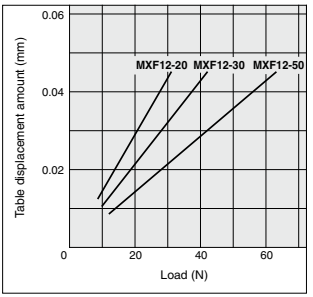


MXF12





Lr = 30 mm



Low Profile Slide Table *MXF Series*

The graphs below show the table displacement when the static moment load is applied to the table. The graphs do not show the loadable mass. Refer to the Model Selection for the loadable mass.

Table displacement due to pitch moment load

Table displacement when loads are applied to the section marked with the arrow at the full stroke.

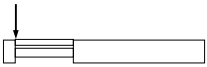


Table displacement due to yaw moment load

Table displacement when loads are applied to the section marked with the arrow at the full stroke.

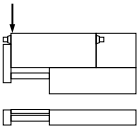
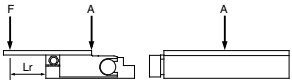
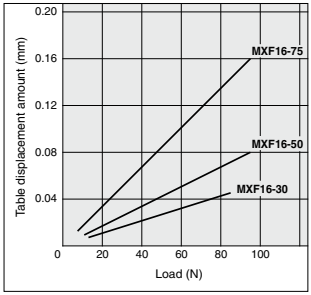


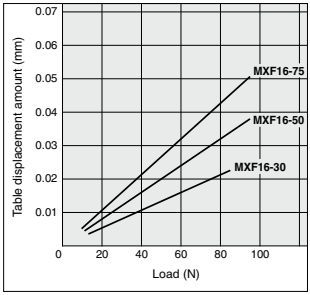
Table displacement due to roll moment load

Table displacement of section A when loads are applied to the section F with the slide table retracted.

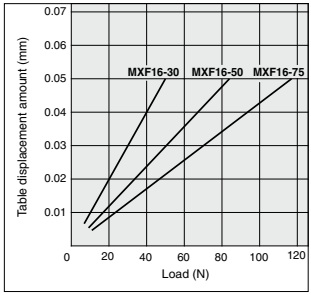


MXF16

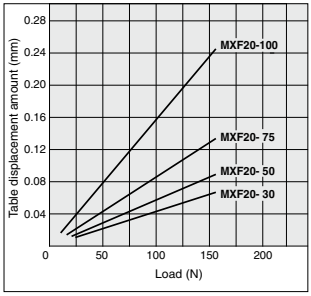


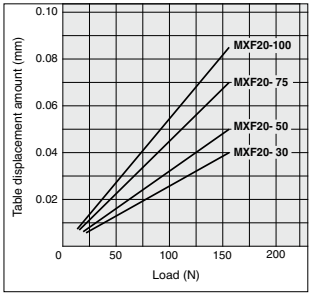


Lr = 40 mm

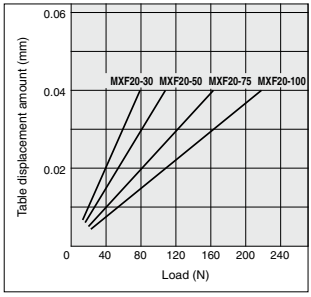


MXF20



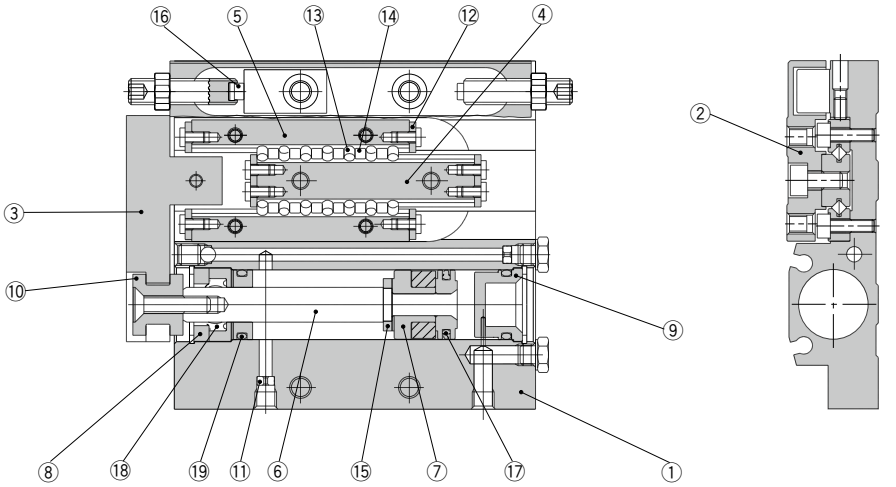


Lr = 50 mm



Construction

MXF Series



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Hard anodized
2	**Table**	Aluminum alloy	Hard anodized
3	**End plate**	Aluminum alloy	Hard anodized
4	**Rail**	Hardening steel	Heat treated
5	**Guide**	Hardening steel	Heat treated
6	**Rod**	Stainless steel	
7	**Piston assembly**	—	With magnet
8	**Seal support**	Brass	Electroless nickel plated
9	**Head cap**	Resin	
10	**Floating bushing**	Stainless steel	
11	**Orifice**	Brass	Electroless nickel plated
12	**Roller stopper**	Stainless steel	
13	**Cylindrical roller**	High carbon chrome bearing steel	
14	**Roller spacer**	Resin	
15	**Rod bumper**	Polyurethane	

Component Parts

No.	Description	Material	Note
16	**Adjust bumper**	Polyurethane	
17	**Piston seal**	NBR	
18	**Rod seal**	NBR	
19	**O-ring**	NBR	

Replacement Parts: Seal Kit

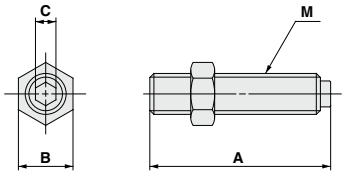
Bore size (mm)	Kit no.	Contents
8	MXF8-PS	Set of nos. above ⑰ to ⑲
12	MXF12-PS	
16	MXF16-PS	
20	MXF20-PS	

∗ Seal kit includes ⑰, ⑱, ⑲. Order the seal kit, based on each bore size.

Replacement Part: Grease Pack

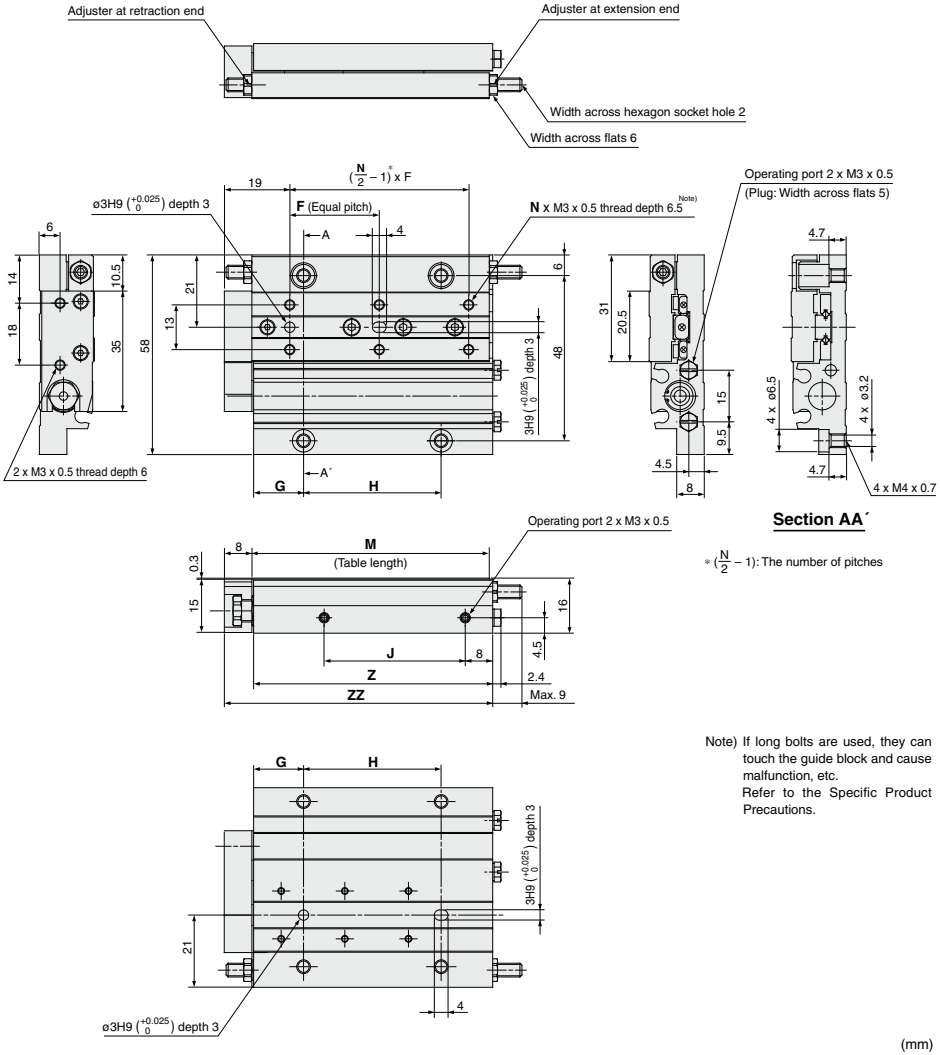
Applied part	Grease pack part no.
Guide	GR-S-010 (10g) GR-S-020 (20g)
Cylinder	GR-L-005 (5g) GR-L-010 (10g)

Dimensions: Adjusting Bolt Assembly



Applicable size	Model	Stroke adjustment range (mm)	A	B	C	M
MXF8	MXF-A827	5	17	6	2	M4 x 0.7
	MXF-A827-X11	15	27			
MXF12	MXF-A1227	5	23.5	7	2.5	M5 x 0.8
	MXF-A1227-X11	15	33.5			
MXF16	MXF-A1627	5	26.5	8	3	M6 x 1
	MXF-A1627-X11	15	36.5			
	MXF-A1627-X12	25	46.5			
MXF20	MXF-A2027	5	30	12	4	M8 x 1
	MXF-A2027-X11	15	40			
	MXF-A2027-X12	25	50			

Dimensions: MXF8



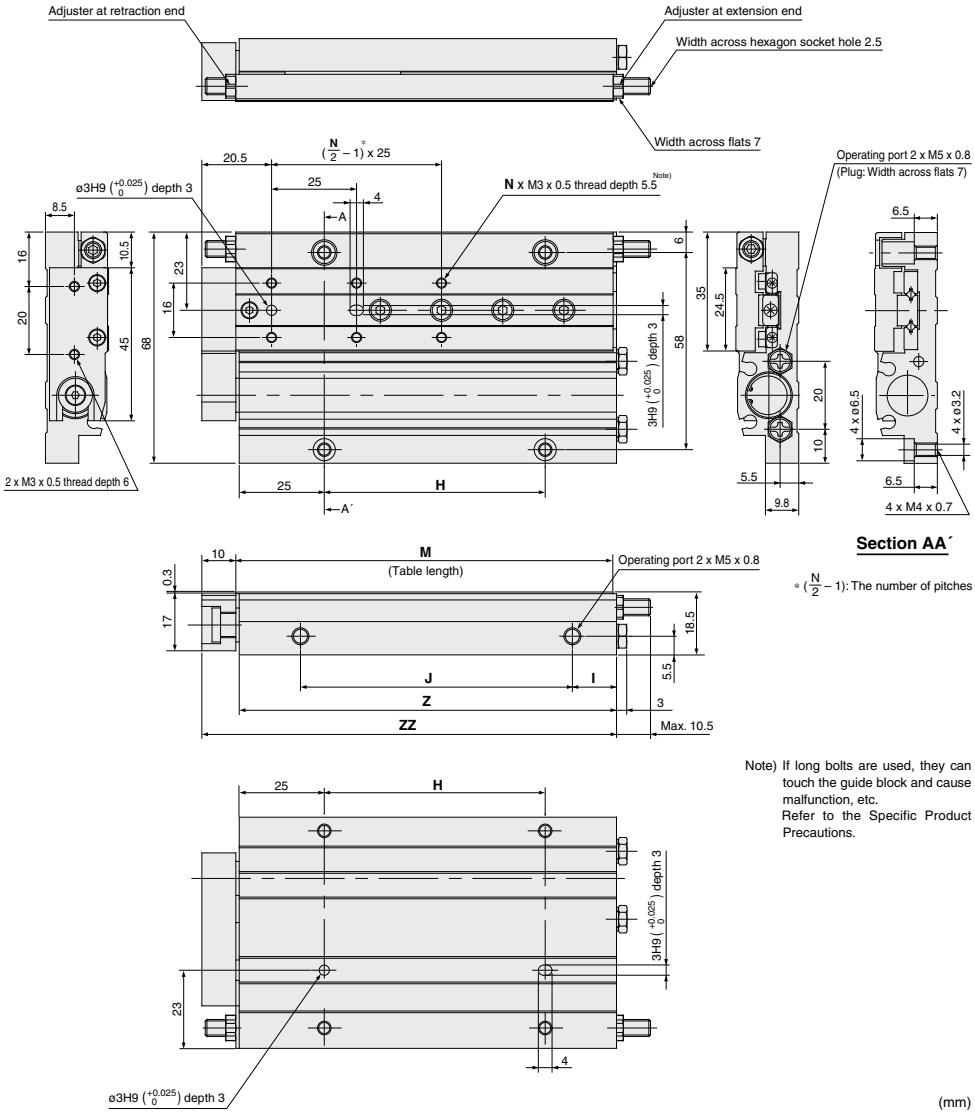
∗ $(\frac{N}{2} - 1)$: The number of pitches

Note) If long bolts are used, they can touch the guide block and cause malfunction, etc.
Refer to the Specific Product Precautions.

(mm)

Model	F	N	G	H	J	M	Z	ZZ
MXF8-10	20	4	13.5	22	21	49	49.5	58
MXF8-20	26	4	14.5	26	26	54	54.5	63
MXF8-30	26	6	14.5	40	41	69	69.5	78

Dimensions: MXF12



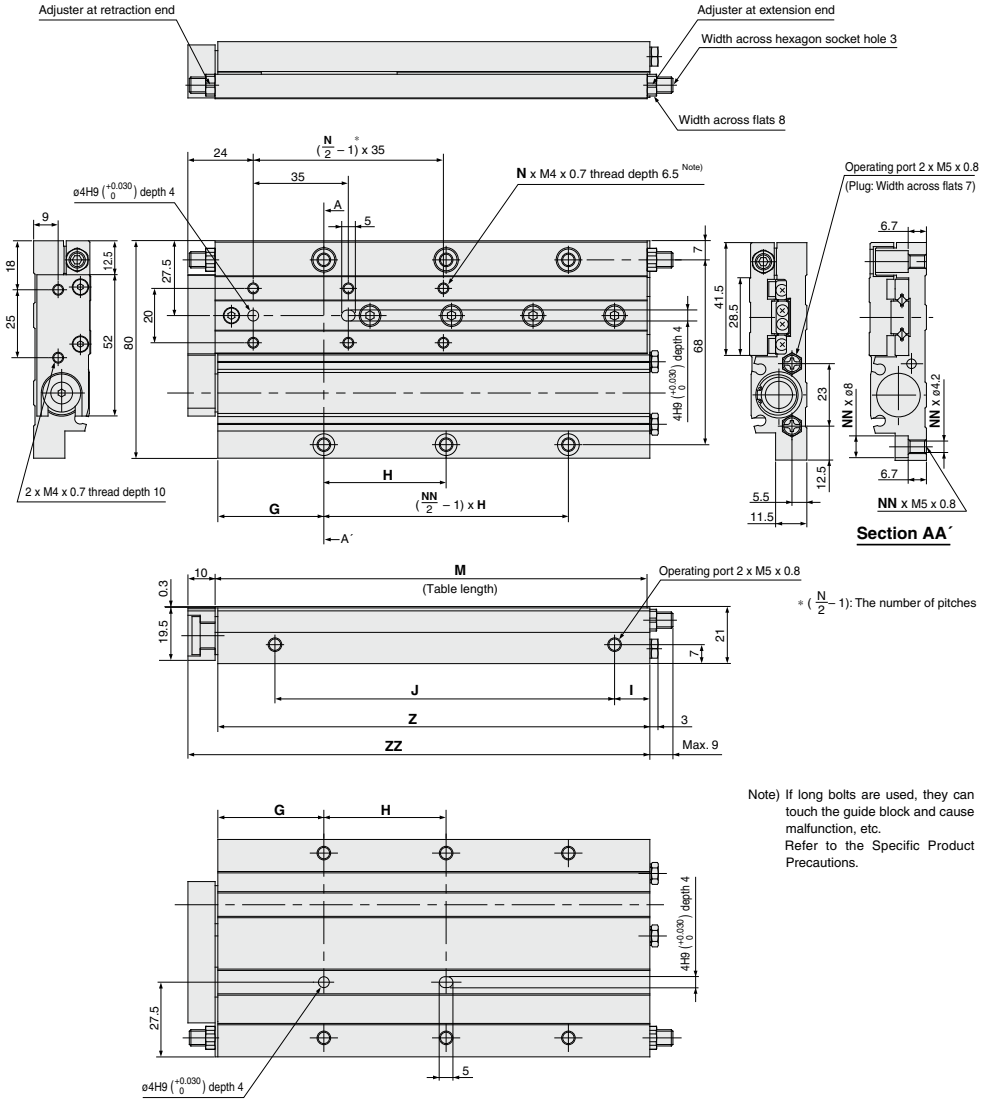
∗ $(\frac{N}{2} - 1)$: The number of pitches

Note) If long bolts are used, they can touch the guide block and cause malfunction, etc.
Refer to the Specific Product Precautions.

(mm)

Model	N	H	I	J	M	Z	ZZ
MXF12-20	4	22	11	36	65	65	76
MXF12-30	4	30	12	45	75	75	86
MXF12-50	6	65	13	80	111	111	122

Dimensions: MXF16

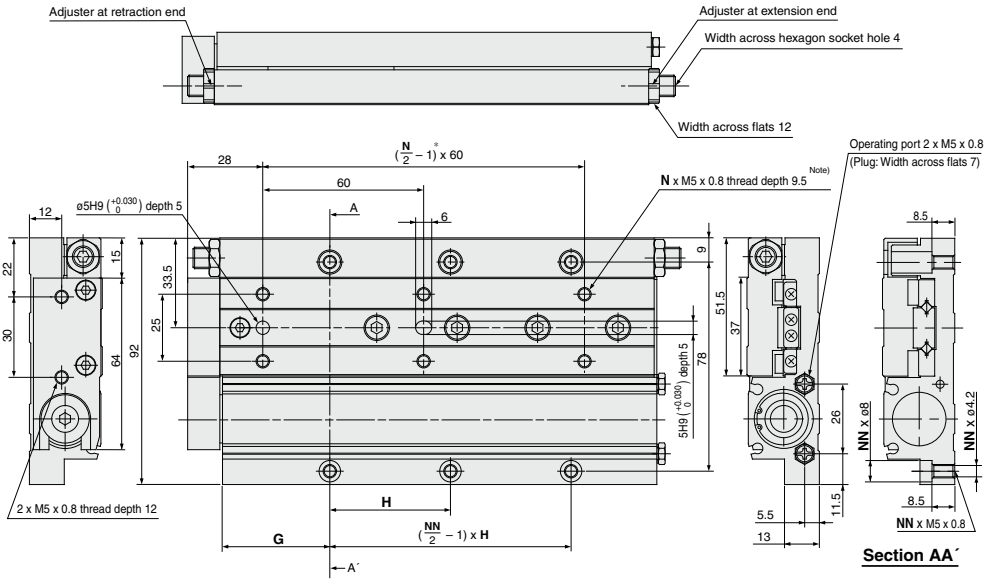


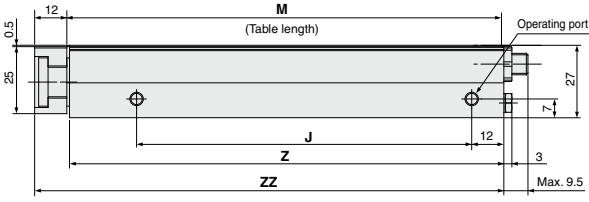
Note) If long bolts are used, they can touch the guide block and cause malfunction, etc.
Refer to the Specific Product Precautions.

(mm)

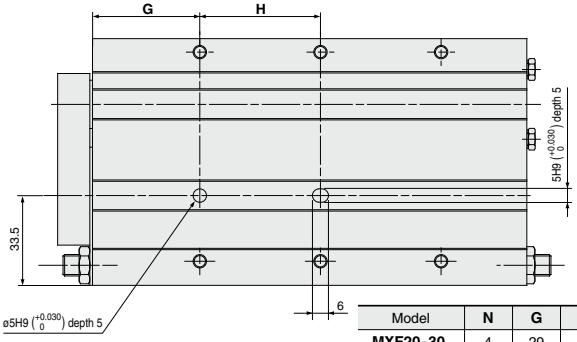
Model	N	G	H	NN	I	J	M	Z	ZZ
MXF16-30	4	29	25	4	12	50	83	83	94
MXF16-50	6	29	55	4	12	80	113	113	124
MXF16-75	6	39	45	6	13	125	159	159	170

Dimensions: MXF20





* (N/2 − 1): The number of pitches



Note) If long bolts are used, they can touch the guide block and cause malfunction, etc.
Refer to the Specific Product Precautions.

(mm)

Model	N	G	H	NN	J	M	Z	ZZ
MXF20-30	4	29	30	4	57	91	91	104
MXF20-50	4	36	45	4	77	113	113	126
MXF20-75	6	40	45	6	125	162	162	175
MXF20-100	6	59	60	6	175	211	211	224