

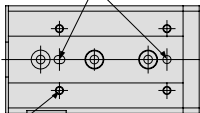
# Air Slide Table Series *MXS*

ø6, ø8, ø12, ø16, ø20, ø25

**Work table and air cylinder are integrated compactly.  
Air slide table is ideal for precise assembly.**

### Repeatability of work mounting

Pin holes for positioning



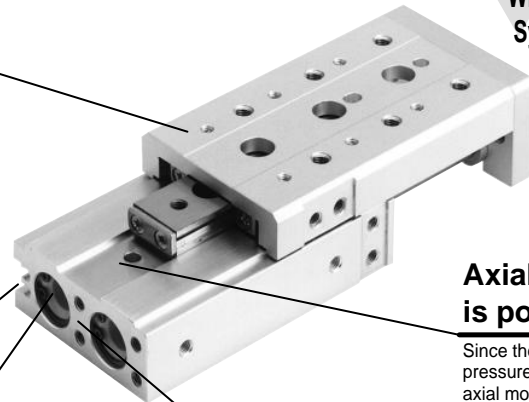
Thread for work mounting  
Helisert is used for improved strength.

### Flush mountable auto switches

An installed auto switch in the housing groove of the body is flush with the surface.

### Dual piston rod

The dual piston rod ensures twice the thrust of the current cylinder.



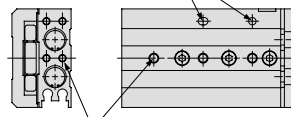
With shock absorber and  
Symmetric styles are released.

### Axial mounting is possible

Since there is suitable setting pre-pressure for the unused cross roller guide, axial mounting is possible.

### Body mounting

Pin holes for positioning

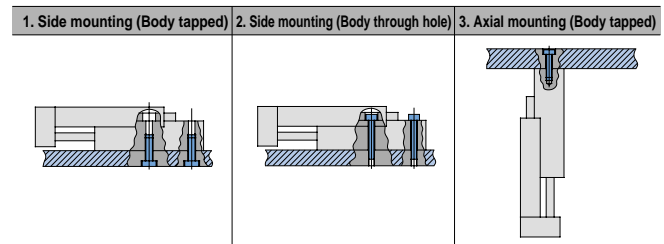


Threaded for body mounting

### Various options

- Adjuster options
  - With stroke adjuster, With shock absorber
- Functional options
  - With buffer mechanism, With end lock
  - Axial piping

### Mounting is possible in three directions.



### Variations

Model	Bore (mm)	Standard stroke (mm)							Adjuster		Functional option	Auto switch		
		10	20	30	40	50	75	100	125	150			Stroke adjuster	Shock absorber (Except ø6)
MXS 6	6	•	•	•	•	•	•	•	•	•	•	•	•	•
MXS 8	8	•	•	•	•	•	•	•	•	•	•	•	•	•
MXS12	12	•	•	•	•	•	•	•	•	•	•	•	•	•
MXS16	16	•	•	•	•	•	•	•	•	•	•	•	•	•
MXS20	20	•	•	•	•	•	•	•	•	•	•	•	•	•
MXS25	25	•	•	•	•	•	•	•	•	•	•	•	•	•

Adjuster	Functional option	Auto switch
Extension end	With buffer	Reed switch • D-A9□ • D-A9□V
Retraction end	With end lock (Except ø6)	Solid state switch • D-F9□ • D-F9□V
Both ends	Axial piping	2 color solid state switch • D-F9□W • D-F9□WV

- CL
- MLGC
- CNA
- CB
- CV/MVG
- CXW
- CXS
- CXT
- MX
- MXU
- MXS**
- MXQ
- MXF
- MXW
- MXP
- MG
- MGP
- MGQ
- MGG
- MGC
- MGF
- CY1
- MY1

# Air Slide Table Series *MXS*

## How to Order

Air slide table

**MXS 12 50 [ ] [ ] F9N S**

### Bore size (Stroke mm)

6	10, 20, 30, 40, 50
8	10, 20, 30, 40, 50, 75
12	10, 20, 30, 40, 50, 75, 100
16	10, 20, 30, 40, 50, 75, 100, 125
20	10, 20, 30, 40, 50, 75, 100, 125, 150
25	10, 20, 30, 40, 50, 75, 100, 125, 150

### Stroke adjuster option

—	Without adjuster
AS	Adjuster at extension end
AT	Adjuster at retraction end
A	Adjuster at both ends
BS <sup>(1)</sup>	Absorber at extension end
BT <sup>(1)</sup>	Absorber at retraction end
B <sup>(1)</sup>	Absorber at both ends

Note 1) Shock absorber is not available for series MXS6.

### Number of auto switches

—	2
S	1
n	n

### Auto switch

—	Without auto switch
---	---------------------

\* Refer to below table for parts No. of auto switch.

### Functional option

—	Standard
F	With buffer
R <sup>(2)</sup>	With end lock
P	Axial piping
FR <sup>(2)</sup>	With buffer, end lock
FP	With buffer, axial piping

Note 2) End lock option is not available for series MXS6.

### Combination of Options

○: Possible X: Not possible

Adjuster option	Functional option					
	—	F	R	P	FR	FP
—	○	○	○	○	○	○
AS	○	○ <sup>(3)</sup>	○	○	○ <sup>(3)</sup>	○ <sup>(3)</sup>
AT	○	○	X	X	X	X
A	○	○ <sup>(3)</sup>	X	X	X	X
BS	○	X	○	○	X	X
BT	○	○	X	X	X	X
B	○	X	X	X	X	X

Note 3) For combination of buffer mechanism style and stroke adjuster at extension end style, the buffer stroke is shortened by the adjusted length with the stroke adjuster at extension end.

### Applicable Auto Switches / Refer to p.5.3-2 for further information on auto switch.

Style	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage			Auto switch model		Lead wire (m) <sup>(1)</sup>		Load		Specification details	
					DC	AC	Electrical entry		0.5 (-)	3 (L)	IC circuit	Relay, PLC			
							Perpendicular	In-line							
Reed switch	—	Grommet	No	2 wire	24V	5V, 12V	≤100V	A90V	A90	●	●	—	Relay, PLC	P.5.3-19	
			Yes					A93V	A93	●	●				
			—	3 wire (NPN)	—	5V	—	A96V	A96	●	●	IC circuit	—		
Solid state switch	Diagnostic indication (2 color)	Grommet	No	3 wire (NPN)	24V	12V	—	F9NV	F9N	●	●	—	Relay, PLC	P.5.3-39	
			Yes					F9PV	F9P	●	●				
			—	3 wire (PNP)				—	F9BV	F9B	●				●
			—	2 wire				—	F9NWV	F9NW	●				●
			—	3 wire (NPN)				—	F9PWV	F9PW	●				●
			—	3 wire (PNP)				—	F9BWV	F9BW	●				●
—	2 wire	—	—	—	—	—	—	—	—	—	P.5.3-66				

Note 1) Lead wire length 0.5m..... — (Ex.) A93  
3m..... L A93L

PLC: Programmable Logic Controller

# Air Slide Table *Series MXS*

## Specifications



Bore size (mm)	6	8	12	16	20	25
Port size	M3 X 0.5	M5 X 0.8		Rc(PT)1/8		
Fluid	Air					
Action	Double acting					
Operating pressure	0.15 to 0.7MPa					
Proof pressure	1.05MPa					
Ambient and fluid temperature	-10 to 60°C					
Piston speed	50 to 500mm/s					
Cushion	Rubber bumper (Standard, With stroke adjuster) Shock absorber (Option)					
Lubrication	Not required					
Auto switch (Option)	Reed switch (2 wire, 3 wire) Solid state switch (2 wire, 3 wire) 2 color solid state switch (2 wire, 3 wire)					
Stroke length tolerance	+1 0 mm					

CL

MLGC

CNA

CB

CV/MVG

CXW

CXS

CXT

MX

MXU

MXS

MXQ

MXF

MXW

MXP

MG

MGP

MGQ

MGG

MGC

MGF

CY1

MY1

## Option

Stroke adjuster option	With stroke adjuster	Adjuster at extension end (AS)	Adjustable stroke range 0 to 5mm	
		Adjuster at retraction end (AT)		
		Adjuster at both ends (A)		
	With shock absorber	Absorber at extension end (BS)		Shock absorber is not available for MXS6.
		Absorber at retraction end (BT)		
		Absorber at both ends (B)		
Functional option	With buffer (F)		End lock is not available for MXS6.	
	With end lock (R)			
	Axial piping (P)			



## Made to Order Specifications

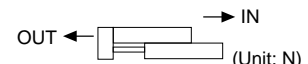
Refer to p.5.4-89 for "Made to Order Specifications" of series MXS.



\* For details of adjuster and functional options, please refer to "Optional specifications" on p.3.11-24 to 3.11-26.

## Theoretical Force

The dual rod ensures an output twice that of existing cylinders.



Bore size (mm)	Rod diameter (mm)	Operating direction	Piston area (mm <sup>2</sup> )	Operating pressure (MPa)					
				0.2	0.3	0.4	0.5	0.6	0.7
6	3	OUT	57	11	17	23	29	34	40
		IN	42	8	13	17	21	25	29
8	4	OUT	101	20	30	40	51	61	71
		IN	75	15	23	30	38	45	53
12	6	OUT	226	45	68	90	113	136	158
		IN	170	34	51	68	85	102	119
16	8	OUT	402	80	121	161	201	241	281
		IN	302	60	91	121	151	181	211
20	10	OUT	628	126	188	251	314	377	440
		IN	471	94	141	188	236	283	330
25	12	OUT	982	196	295	393	491	589	687
		IN	756	151	227	302	378	454	529

Note) Theoretical force (N)=Pressure (MPa) X Piston area (mm<sup>2</sup>)

## Standard Stroke

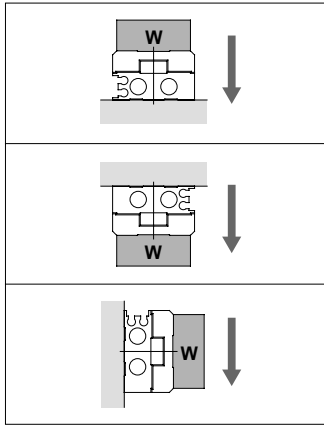
Model	Standard stroke (mm)
MXS 6	10, 20, 30, 40, 50
MXS 8	10, 20, 30, 40, 50, 75
MXS12	10, 20, 30, 40, 50, 75, 100
MXS16	10, 20, 30, 40, 50, 75, 100, 125
MXS20	10, 20, 30, 40, 50, 75, 100, 125, 150
MXS25	10, 20, 30, 40, 50, 75, 100, 125, 150

## Weight

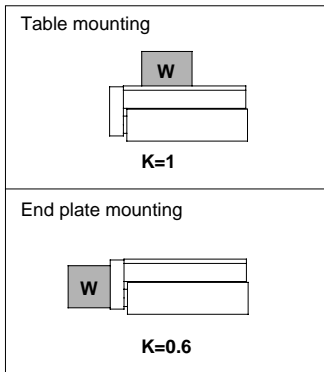
(Unit: g)

Model	Standard stroke (mm)										Extra for options					
	10	20	30	40	50	75	100	125	150	Extension adjuster	Retraction adjuster	Extension shock absorber	Retraction shock absorber	Buffer	End lock	Axial piping S: Stroke (mm)
MXS 6	80	100	115	155	180	—	—	—	—	10	5	—	—	30	—	13+0.15S
MXS 8	150	160	190	235	285	415	—	—	—	15	9	35	45	40	40	26+0.17S
MXS12	340	340	340	400	500	690	930	—	—	30	20	50	60	80	90	43+0.21S
MXS16	600	600	610	670	800	1150	1450	1800	—	50	30	80	105	120	160	55+0.21S
MXS20	1000	1020	1050	1150	1300	1700	2250	2800	3350	100	71	170	205	140	310	166+0.45S
MXS25	1720	1740	1750	1900	2160	2750	3400	4300	4900	150	125	215	300	240	540	240+0.45S

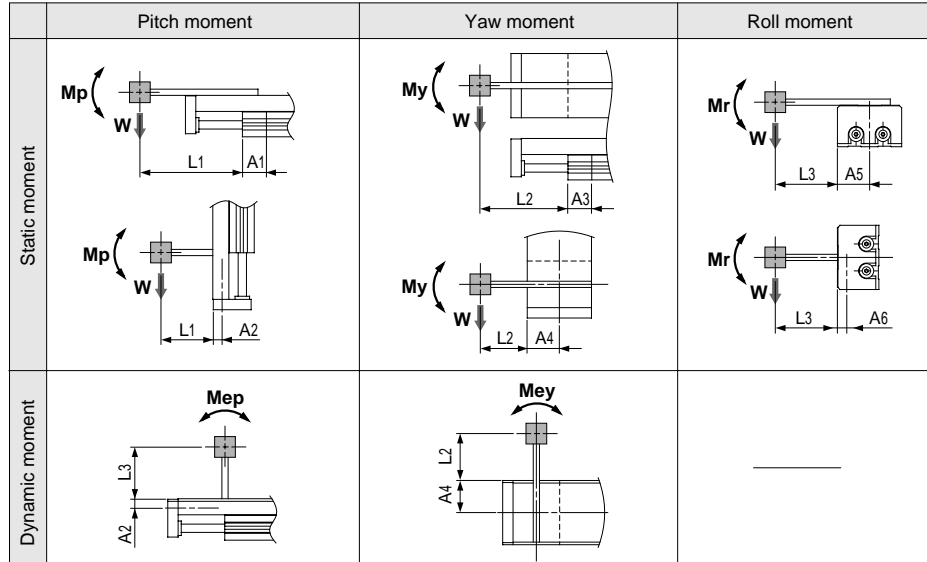
**Fig.1** Allowable load:  $W$  (N)



**Fig.3** Work mounting coefficient:  $K$



**Fig.2** Overhang:  $L_n$  (mm), Correction value for moment center distance  $A_n$  (mm)

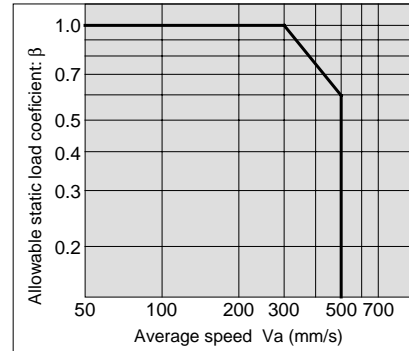


Note) Static moment: Moment by gravity  
Kinetic moment: Moment by stopper collision

**Table 1** Max. allowable kinetic energy:  $E_{max}$  (J)

Model	Allowable kinetic energy	
	Rubber bumper	Shock absorber
<b>MXS 6</b>	0.018	—
<b>MXS 8</b>	0.027	0.045
<b>MXS12</b>	0.055	0.11
<b>MXS16</b>	0.11	0.22
<b>MXS20</b>	0.16	0.32
<b>MXS25</b>	0.24	0.48

**Graph 1** Allowable static load coefficient:  $\beta$



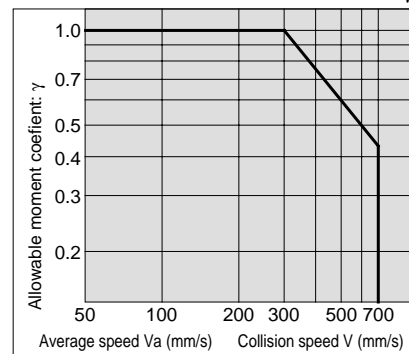
**Table 2** Max. allowable static load:  $W_{max}$  (kg)

Model	Max. allowable static load
<b>MXS 6</b>	0.6
<b>MXS 8</b>	1
<b>MXS12</b>	2
<b>MXS16</b>	4
<b>MXS20</b>	6
<b>MXS25</b>	9

**Table 3** Correction value for moment center distance  $A_n$  (mm)

Model	Correction value for moment center distance (Refer to Fig.2)					
	A1	A2	A3	A4	A5	A6
<b>MXS 6</b>	11	6	13	16	16	6
<b>MXS 8</b>	11	7.5	13	20	20	7.5
<b>MXS12</b>	24	8.5	26	25	25	8.5
<b>MXS16</b>	27	10	30	31	31	10
<b>MXS20</b>	34	14.5	36	38	38	14.5
<b>MXS25</b>	42	19	44	46	46	19

**Graph 2** Allowable moment coefficient:  $\gamma$



Note) Average speed for static moment  
Collision speed for kinetic moment

**Table 4** Max. allowable moment:  $M_{max}$  (Nm)

Model	Stroke (mm)								
	10	20	30	40	50	75	100	125	150
<b>MXS 6</b>	0.7	1.0	1.2	1.2	1.2	—	—	—	—
<b>MXS 8</b>	2.0	2.0	2.8	3.6	4.2	4.2	—	—	—
<b>MXS12</b>	4.2	4.2	4.2	5.8	7.0	10.0	10.0	—	—
<b>MXS16</b>	11.3	11.3	11.3	11.3	15.9	25.0	34.1	34.1	—
<b>MXS20</b>	19.4	19.4	19.4	19.4	27.2	35.0	50.5	50.5	50.5
<b>MXS25</b>	30.6	30.6	30.6	30.6	42.8	55.1	67.3	67.3	67.3

## Symbol

Symbol	Definition	Unit	Symbol	Definition	Unit
<b>An (n=1 to 6)</b>	Correction value for moment center distance	mm	<b>Va</b>	Average speed	mm/s
<b>E</b>	kinetic energy	J	<b>W</b>	Static load	kg
<b>Ea</b>	Allowable kinetic energy	J	<b>Wa</b>	Allowable static load	kg
<b>Emax</b>	Max. allowable kinetic energy	J	<b>We</b>	Load equivalent to collision	kg
<b>Ln (n=1 to 3)</b>	Over hung	mm	<b>Wmax</b>	Max. allowable static load	kg
<b>M (Mp, My, Mr)</b>	Static moment (Pitch, Yaw, Roll)	Nm	$\alpha$	Load rate	—
<b>Ma (Map, May, Mar)</b>	Allowable static moment (Pitch, Yaw, Roll)	Nm	$\beta$	Allowable static load coefficient	—
<b>Me (Mep, Mey)</b>	Kinetic moment (Pitch, Yaw)	Nm	$\gamma$	Allowable moment coefficient	—
<b>Mea (Meap, Meay)</b>	Allowable kinetic moment (Pitch, Yaw)	Nm	$\delta$	Damper coefficient	—
<b>Mmax (Mpmx, Mymax, Mrmax)</b>	Max. allowable kinetic moment (Pitch, Yaw, Roll)	Nm	<b>K</b>	Work mounting coefficient	—
<b>v</b>	Collision speed	mm/s			

CL

MLGC

CNA

CB

CV/MVG

CXW

CXS

CXT

MX

MXU

**MXS**

MXQ

MXF

MXW

MXP

MG

MGP

MGQ

MGG

MGC

MGF

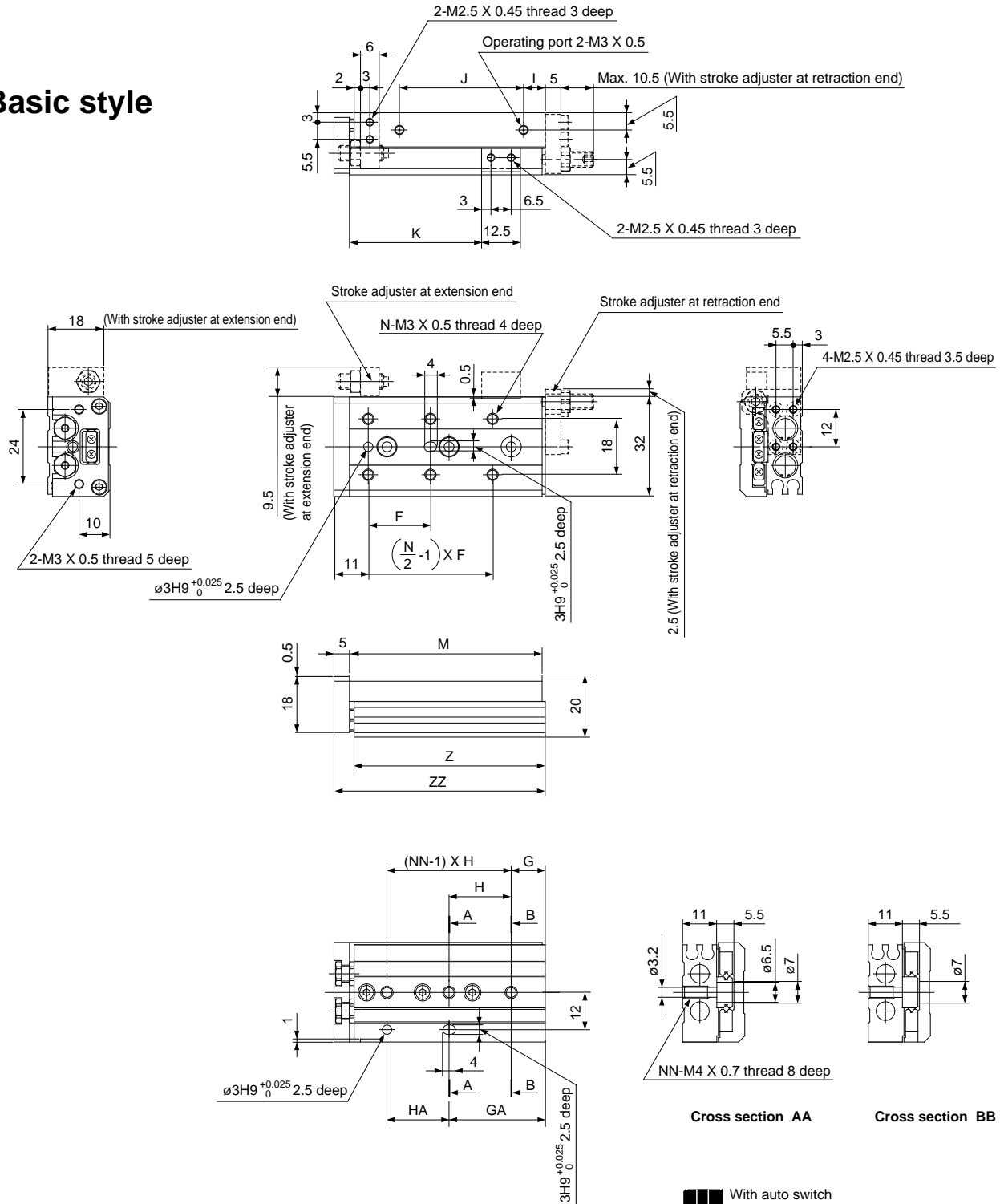
CY1

MY1


# Series MXS

## Dimensions MXS 6

### Basic style



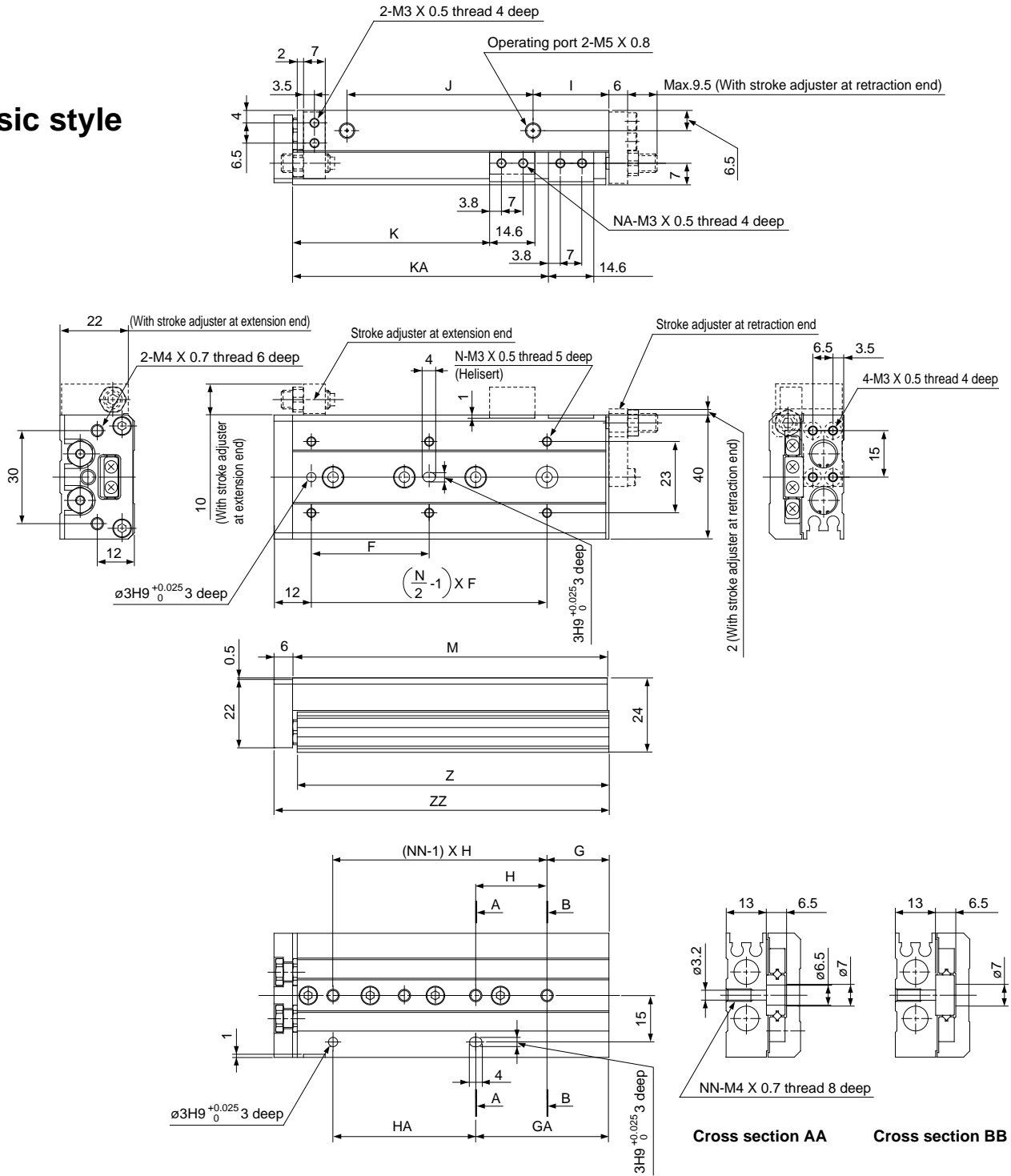
Model	F	N	G	H	NN	GA	HA	I	J	K	M	Z	ZZ
<b>MXS6-10</b>	20	4	6	25	2	11	20	10	17	22.5	42	41.5	48
<b>MXS6-20</b>	30	4	6	35	2	21	20	10	27	32.5	52	51.5	58
<b>MXS6-30</b>	20	6	11	20	3	31	20	7	40	42.5	62	61.5	68
<b>MXS6-40</b>	28	6	13	30	3	43	30	19	50	52.5	84	83.5	90
<b>MXS6-50</b>	38	6	17	24	4	41	48	25	60	62.5	100	99.5	106

-  With auto switch
- Basic style
- MXS6-10 ..... SMXS6N, #1
  - MXS6-20 ..... SMXS6N, #2
  - MXS6-30 ..... SMXS6N, #3
  - MXS6-50 ..... SMXS6, #1(#1+#5)
- With stroke adjuster
- MXS6-10AS ..... SMXS6N, #4(#1+#4)
  - MXS6-20AS ..... SMXS6N, #5(#2+#5)
  - MXS6-30AS ..... SMXS6N, #6(#3+#6+#7)
  - MXS6-50AS ..... SMXS6, #2(#1+#2+#5)

# Series MXS

Dimensions MXS **8** 

## Basic style



Cross section AA      Cross section BB

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
<b>MXS8-10</b>	25	4	9	28	2	17	20	13	19.5	23.5	—	2	49	48.5	56
<b>MXS8-20</b>	25	4	12	30	2	12	30	8.5	29	33.5	—	2	54	53.5	61
<b>MXS8-30</b>	40	4	13	20	3	33	20	9.5	39	43.5	—	2	65	64.5	72
<b>MXS8-40</b>	50	4	15	28	3	43	28	10.5	56	53.5	—	2	83	82.5	90
<b>MXS8-50</b>	38	6	20	23	4	43	46	24.5	60	63.5	82.5	4	101	100.5	108
<b>MXS8-75</b>	50	6	27	28	5	83	56	38.5	96	88.5	132.5	4	151	150.5	158



With auto switch

Basic style

- MXS8-10 ..... SMXS8A, #1
- MXS8-20 ..... SMXS8A, #2
- MXS8-30 ..... SMXS8A, #3(#3+#7)
- MXS8-40 ..... SMXS8B, #1
- MXS8-50 ..... SMXS8B, #2(#2+#5)

●With stroke adjuster

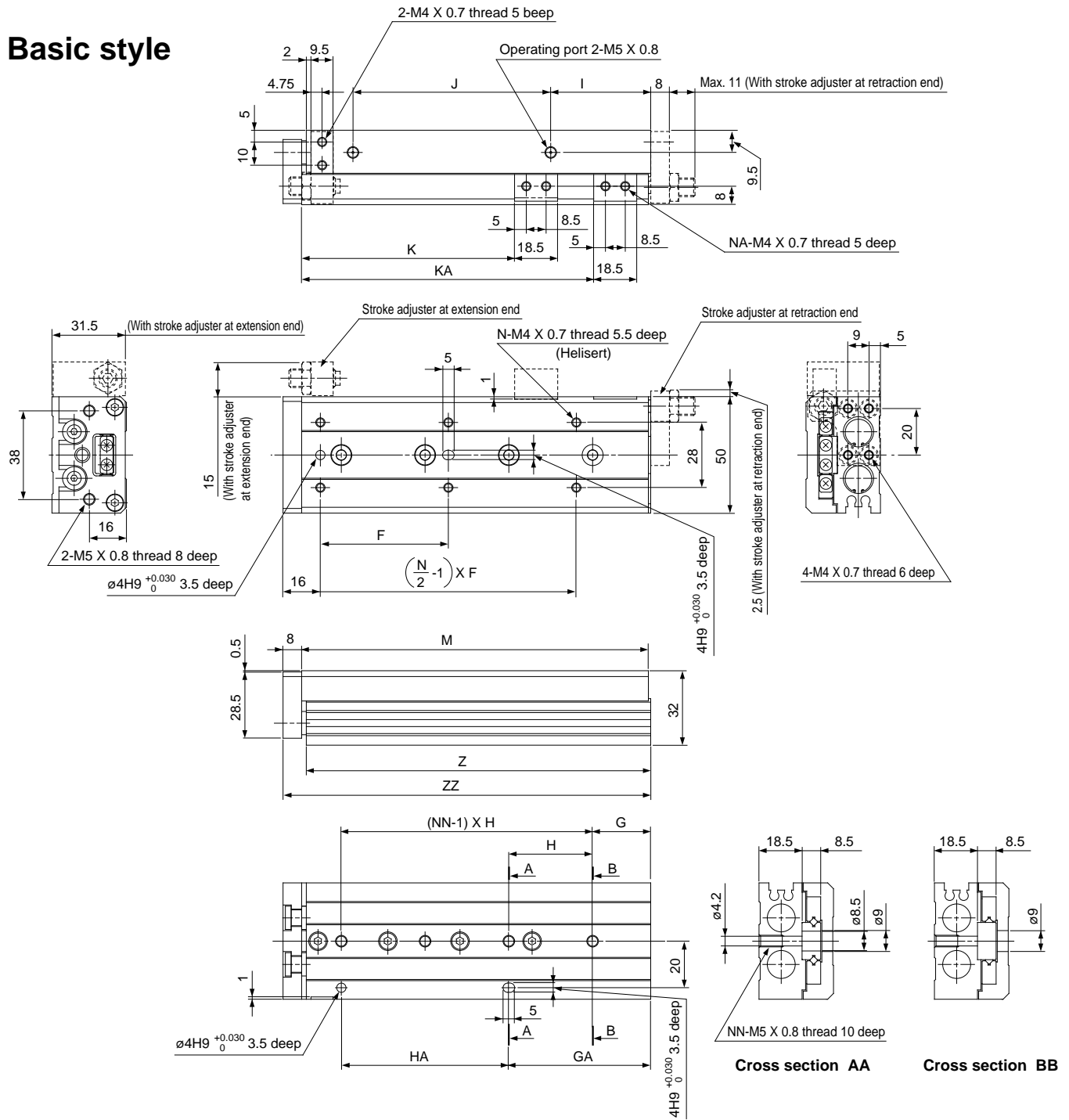
- MXS8-10AS ..... SMXS8A, #4(#1+#4)
- MXS8-20AS ..... SMXS8A, #5(#2+#5)
- MXS8-30AS ..... SMXS8A, #6(#3+#6+#7)
- MXS8-40AS ..... SMXS8B, #3(#1+#3)
- MXS8-50AS ..... SMXS8B, #4(#2+#4+#5)

# Series MXS

## Dimensions MXS 12



### Basic style



- With auto switch  
 Basic style  
 MXS12-10 ..... SMXS12A, #1  
 MXS12-20 ..... SMXS12A, #2  
 MXS12-30 ..... SMXS12A, #3(#3+#7)  
 MXS12-40 ..... SMXS12B, #1  
 MXS12-50 ..... SMXS12B, #2(#2+#5)  
 MXS12-75 ..... SMXS12B, #3(#3+#7)  
 ● With stroke adjuster  
 MXS12-10AS ..... SMXS12A, #4(#1+#4)  
 MXS12-20AS ..... SMXS12A, #5(#2+#5)  
 MXS12-30AS ..... SMXS12A, #6(#3+#6+#7)  
 MXS12-40AS ..... SMXS12B, #4(#1+#4)  
 MXS12-50AS ..... SMXS12B, #5(#2+#5)

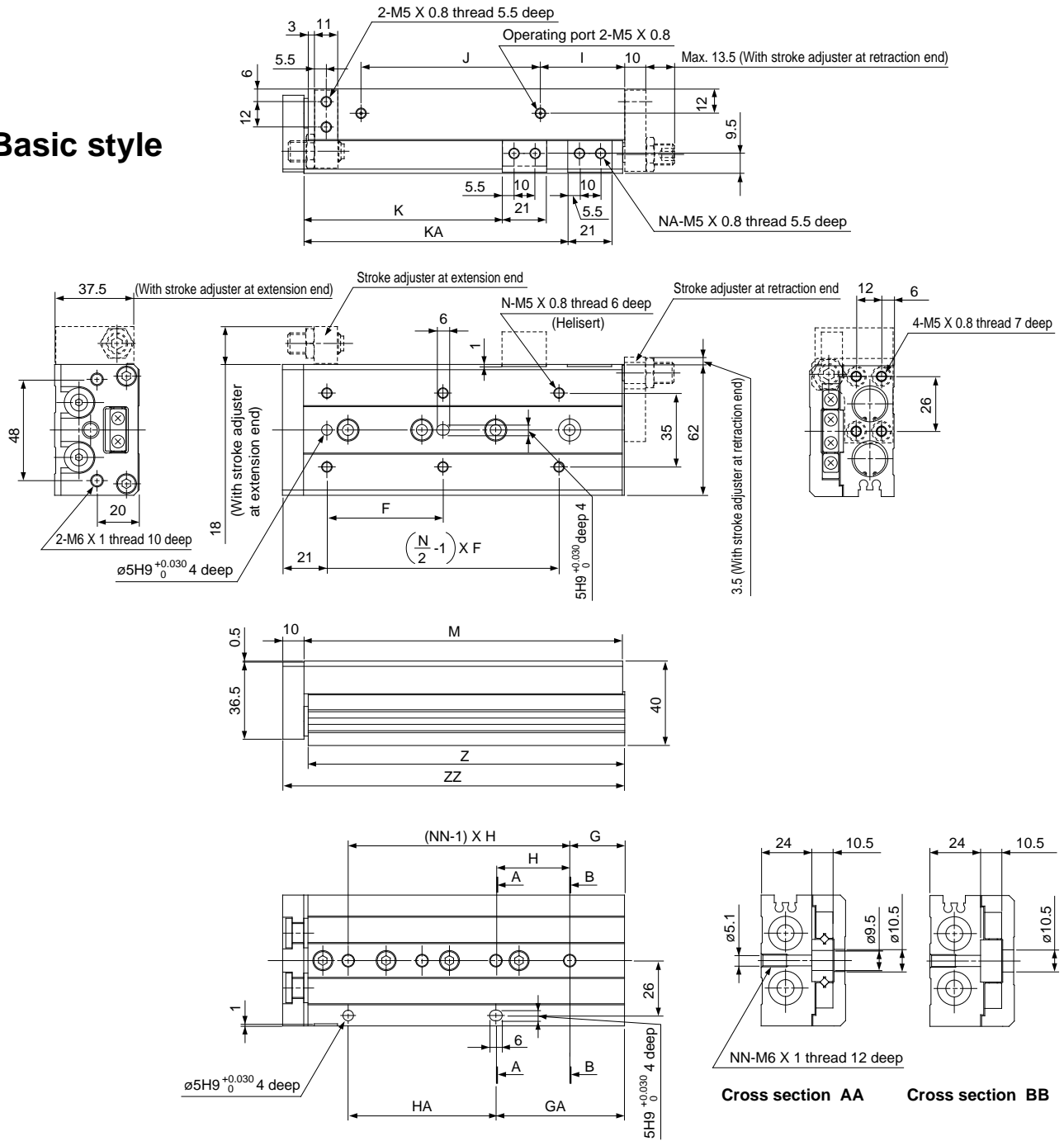
Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ	(mm)
<b>MXS12-10</b>	35	4	15	40	2	15	40	10	40	26.5	—	2	71	70	80	
<b>MXS12-20</b>	35	4	15	40	2	15	40	10	40	36.5	—	2	71	70	80	
<b>MXS12-30</b>	35	4	15	40	2	15	40	10	40	46.5	—	2	71	70	80	
<b>MXS12-40</b>	50	4	17	25	3	42	25	10	52	56.5	—	2	83	82	92	
<b>MXS12-50</b>	35	6	15	36	3	51	36	22	60	66.5	—	2	103	102	112	
<b>MXS12-75</b>	55	6	25	36	4	61	72	43	85	91.5	125.5	4	149	148	158	
<b>MXS12-100</b>	65	6	35	38	5	111	76	52	130	116.5	179.5	4	203	202	212	

# Series MXS

## Dimensions MXS 16



### Basic style



With auto switch

Basic style

- MXS16-10 ..... SMXS16A, #1
- MXS16-20 ..... SMXS16A, #2
- MXS16-30 ..... SMXS16A, #3
- MXS16-40 ..... SMXS16A, #4(#4+#9)
- MXS16-50 ..... SMXS16B, #1
- MXS16-75 ..... SMXS16B, #2
- MXS16-100 ..... SMXS16B, #3(#3+#7)

● With stroke adjuster

- MXS16-10AS ..... SMXS16A, #5(#1+#5)
- MXS16-20AS ..... SMXS16A, #6(#2+#6)
- MXS16-30AS ..... SMXS16A, #7(#3+#7)
- MXS16-40AS ..... SMXS16A, #8(#4+#8+#9)
- MXS16-50AS ..... SMXS16B, #4(#1+#4)
- MXS16-75AS ..... SMXS16B, #5(#2+#5)
- MXS16-100AS ... SMXS16B, #6(#3+#6+#7)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ	(mm)
MXS16-10	35	4	16	40	2	16	40	10	40	29	—	2	76	75	87	
MXS16-20	35	4	16	40	2	16	40	10	40	39	—	2	76	75	87	
MXS16-30	35	4	16	40	2	16	40	10	40	49	—	2	76	75	87	
MXS16-40	40	4	16	50	2	16	50	10	50	59	—	2	86	85	97	
MXS16-50	30	6	21	30	3	51	30	15	60	69	—	2	101	100	112	
MXS16-75	55	6	26	35	4	61	70	40	85	94	125	4	151	150	162	
MXS16-100	65	6	39	35	5	109	70	55	118	119	173	4	199	198	210	
MXS16-125	70	8	19	35	7	159	70	68	155	144	223	4	249	248	260	

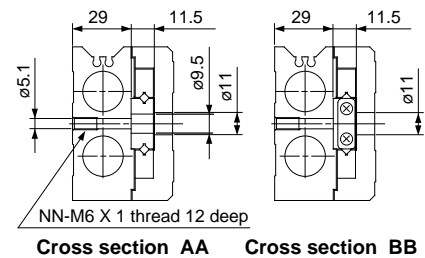
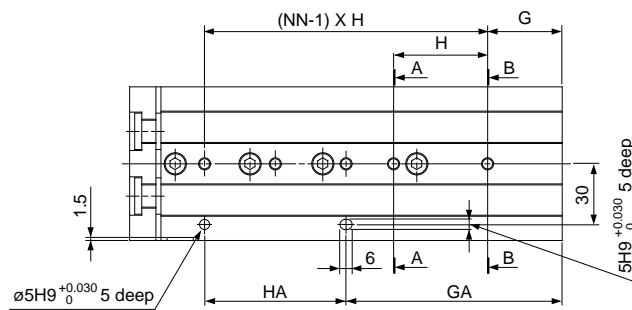
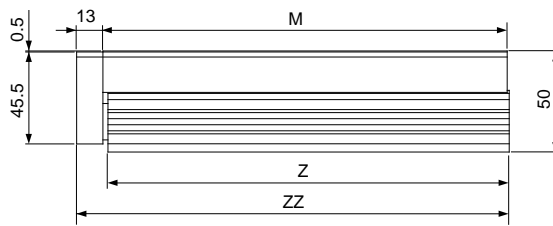
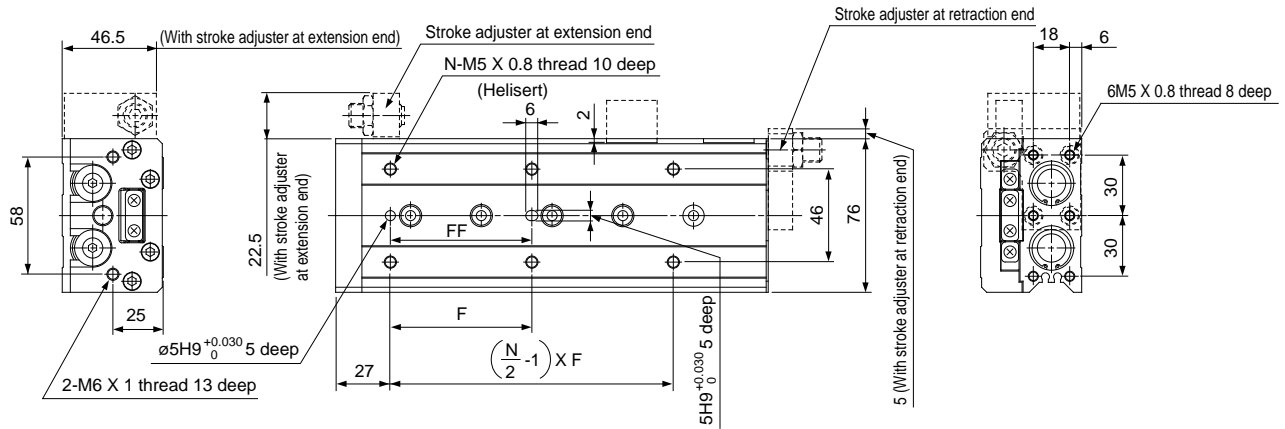
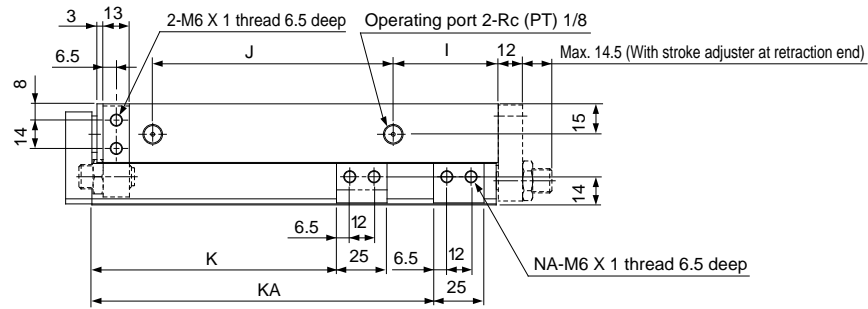


# Series MXS

## Dimensions MXS 20



### Basic style



With auto switch

Basic style

MXS20-10 ..... SMXS20A, #1

MXS20-20 ..... SMXS20A, #2

MXS20-30 ..... SMXS20A, #3

MXS20-40 ..... SMXS20A, #4(#4+#9)

MXS20-50 ..... SMXS20B, #1

MXS20-75 ..... SMXS20B, #2

MXS20-100 ..... SMXS20B, #3(#3+#7)

●With stroke adjuster

MXS20-10AS ..... SMXS20A, #5(#1+#5)

MXS20-20AS ..... SMXS20A, #6(#2+#6)

MXS20-30AS ..... SMXS20A, #7(#3+#7)

MXS20-40AS ..... SMXS20A, #8(#4+#8+#9)

MXS20-50AS ..... SMXS20B, #4(#1+#4)

MXS20-75AS ..... SMXS20B, #5(#2+#5)

MXS20-100AS ... SMXS20B, #6(#3+#6+#7)

Model	F	FF	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
MXS20-10	50	40	4	15	45	2	25	35	10	44	31	—	2	83	81.5	97
MXS20-20	50	40	4	15	45	2	25	35	10	44	41	—	2	83	81.5	97
MXS20-30	50	40	4	15	45	2	25	35	10	44	51	—	2	83	81.5	97
MXS20-40	60	50	4	15	55	2	35	35	10	54	61	—	2	93	91.5	107
MXS20-50	35	35	6	15	35	3	50	35	10	69	71	—	2	108	106.5	122
MXS20-75	60	60	6	19	35	4	54	70	10	108	96	—	2	147	145.5	161
MXS20-100	70	70	6	37	35	5	107	70	58	113	121	169	4	200	198.5	214
MXS20-125	70	70	8	41	38	6	155	76	70	155	146	223	4	254	252.5	268
MXS20-150	80	80	8	19	44	7	195	88	87	190	171	275	4	306	304.5	320

## Shock Absorber Specifications

Shock absorber part No.	RB0805	RB0806	RB1007	RB1411	RB1412	
Applicable slide table	MXS8	MXS12	MXS16	MXS20	MXS25	
Max. absorbing energy (J)	0.98	2.94	5.88	14.7	19.6	
Absorbing stroke (mm)	5	6	7	11	12	
Max. collision speed (mm/s)	50 to 500					
Max. operating frequency (cycle/min)	80	80	70	45	45	
Max. allowable thrust (N)	245	245	422	814	814	
Ambient and fluid temperature (°C)	-10 to 60					
Spring force (N)	Extended	1.96	1.96	4.22	6.86	6.86
	Retracted	3.83	4.22	6.86	15.30	15.98
Weight (g)	15	15	25	65	65	

## End Lock Specifications

Model	MXS8	MXS12	MXS16	MXS20	MXS25
Bore size (mm)	8	12	16	20	25
Operating speed range	50 to 500mm/s				
Holding force (N)	25	60	110	160	250

Note) Refer to p.3.11-5 for cautions on end lock.

## Buffer Specifications

Model	MXS6	MXS8	MXS12	MXS16	MXS20	MXS25	
Bore size (mm)	6	8	12	16	20	25	
Piston speed	50 to 500mm/s (Horizontal mounting 50 to 300mm/s)						
Buffer stroke (mm)	5		10				
Buffer stroke load (N)	At 0mm stroke	3	5	10	13	17	21
	At max. stroke	6	8	13	17	25	29

Note) Refer to p.3.11-5 for cautions on buffer.

Note) If stroke is adjusted with the stroke adjuster at extension end, the buffer stroke is shortened by the adjusted length.

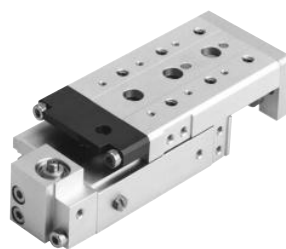
## Applicable Auto Switches to Buffer

Style	Part No.	Specifications	Electrical entry
Solid state switch	D-F9BV	With light, 2 wire	Perpendicular
	D-F9NV	With light, 3 wire, Output: NPN	
	D-F9PV	With light, 3 wire, Output: PNP	

\* The auto switch for buffer must be ordered separately.

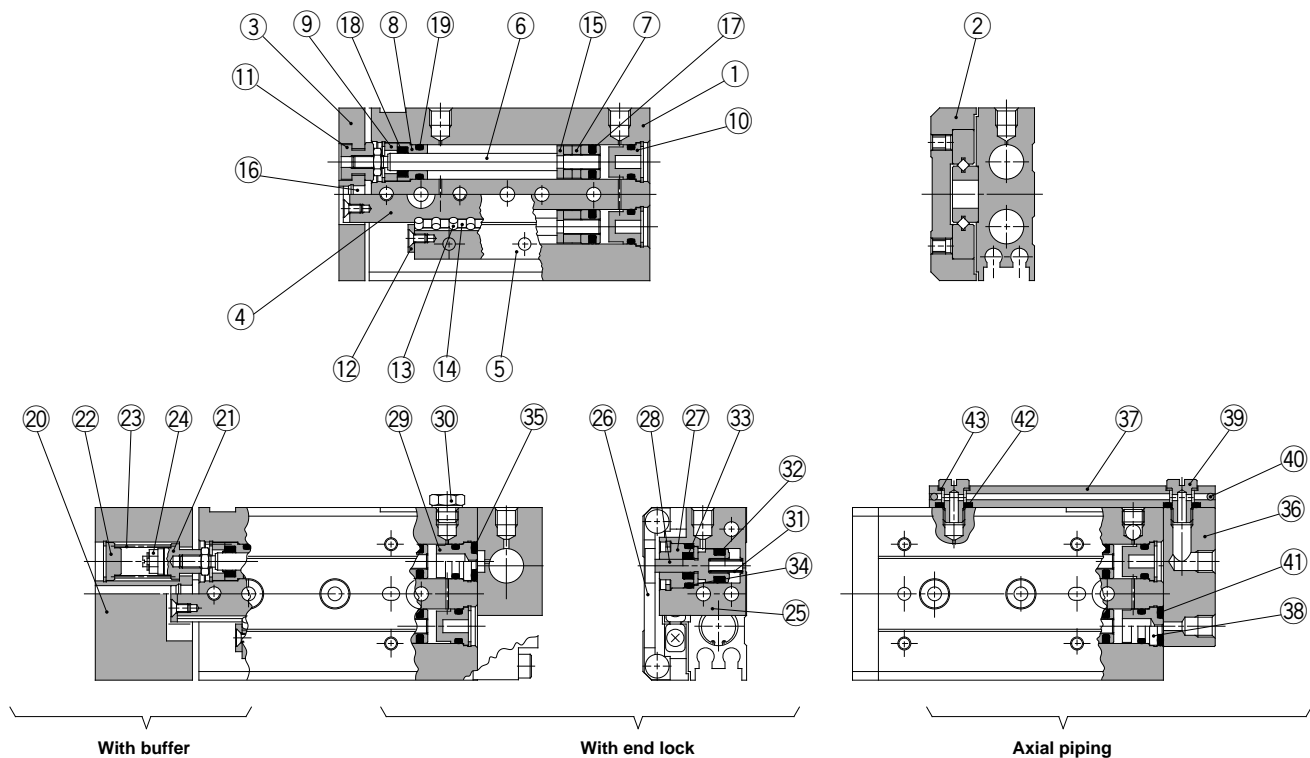


With buffer



With end lock

## Construction



- CL
- MLGC
- CNA
- CB
- CV/MVG
- CXW
- CXS
- CXT
- MX
- MXU
- MXS**
- MXQ
- MXF
- MXW
- MXP
- MG
- MGP
- MGQ
- MGG
- MGC
- MGF
- CY1
- MY1

### 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	Carbon tool steel	Heat treatment
⑤	Guide	Carbon tool steel	Heat treatment
⑥	Rod	Stainless steel	
⑦	Piston assembly		With one side magnet
⑧	Rod cover	Aluminum alloy	Anodized
⑨	Seal support	Brass	Electroless nickel plated
⑩	Head cap	Resin	
⑪	Floating bushing	Stainless steel	
⑫	Roller stopper	Stainless steel	
⑬	Cylindrical roller	High carbon chromium bearing steel	
⑭	Roller spacer	Resin	
⑮	Rod bumper	Polyurethane	
⑯	End bumper	Polyurethane	
⑰	Piston seal	NBR	
⑱	Rod seal	NBR	
⑲	O ring	NBR	

### Component Parts/With buffer

No.	Description	Material	Note
⑳	End plate	Aluminum alloy	Hard anodized
㉑	Spring collar	Stainless steel	
㉒	Head cap	Stainless steel	
㉓	Spring	Stainless steel	
㉔	Magnet	Rare earth	

### Component Parts/With end lock

No.	Description	Material	Note
㉕	Body for lock	Aluminum alloy	Hard anodized
㉖	Table support	Carbon steel	Anticorrosive treatment
㉗	Rod cover	Aluminum alloy	
㉘	Piston rod	Stainless steel	
㉙	Bushing	Aluminum alloy	Chromated
㉚	Blanking plug	Brass	Electroless nickel plated
㉛	Return spring	Stainless steel	
㉜	Piston seal	NBR	
㉝	Rod seal	NBR	
㉞	O ring	NBR	
㉟	O ring	NBR	

### Component Parts/Axial piping

No.	Description	Material	Note
㉞	Axial side piping plate	Aluminum alloy	Hard anodized
㉟	Pipe	Aluminum alloy	Hard anodized
㊱	Bushing	Aluminum alloy	Chromated
㊲	Stud	Brass	Electroless nickel plated
㊳	Steel ball	Stainless steel	
㊴	O ring	NBR	
㊵	O ring	NBR	
㊶	Gasket		

⦿ \* The parts indicated with the numbers in the list below are included in a seal kit. Specify the order numbers in compliance with respective cylinder bore size.

### Replacement Parts: Seal Kits

Bore (mm)	Kit No.	Contents
6	MXS6-PS	1 set including ⑰ to ⑲
8	MXS8-PS	
12	MXS12-PS	
16	MXS16-PS	
20	MXS20-PS	
25	MXS25-PS	

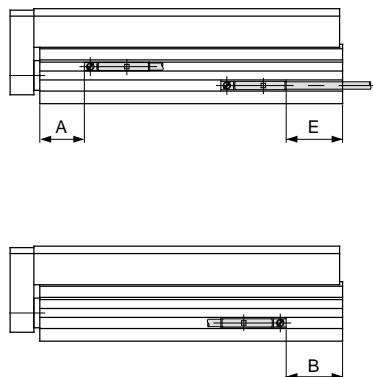
### Replacement Parts: Seal Kits for End Lock Model

Bore (mm)	Kit No.	Contents
8	MXS8R-PS	1 set including ⑰ to ⑲ & ㉔ to ㉞
12	MXS12R-PS	
16	MXS16R-PS	
20	MXS20R-PS	
25	MXS25R-PS	

### Replacement Parts: Seal kits for Axial Piping Model

Bore (mm)	Kit No.	Contents
6	MXS6P-PS	1 set including ⑰ to ⑲ & ㉛ to ㉝
8	MXS8P-PS	
12	MXS12P-PS	
16	MXS16P-PS	
20	MXS20P-PS	
25	MXS25P-PS	

## Auto Switch Mounting Position for Stroke End Detection



### Reed switch: D-A90, D-A93, D-A96, D-A90V, D-A93V, D-A96V

Model	A	B										E										Operating range	
		Stroke										Stroke											
		10	20	30	40	50	75	100	125	150	10	20	30	40	50	75	100	125	150				
<b>MXS6</b>	5.9	5.6	5.6	5.6	17.6	23.6	—	—	—	3.6 (1.1)	3.6 (1.1)	3.6 (1.1)	15.6 (13.1)	21.6 (19.1)	—	—	—	—	—	4.5			
<b>MXS8</b>	7.6	10.9	5.9	6.9	14.9	22.9	47.9	—	—	—	8.9 (6.4)	3.9 (1.4)	4.9 (2.4)	12.9 (10.4)	20.9 (18.4)	45.9 (43.4)	—	—	—	—	5		
<b>MXS12</b>	11.6	28.4	18.4	8.4	10.4	20.4	41.4	70.4	—	—	—	26.4 (23.9)	16.4 (13.9)	6.4 (3.9)	8.4 (5.9)	18.4 (15.9)	39.4 (36.9)	68.4 (65.9)	—	—	—	—	6
<b>MXS16</b>	16.3	28.7	18.7	8.7	8.7	13.7	38.7	61.7	86.7	—	—	—	26.7 (24.2)	16.7 (14.2)	6.7 (4.2)	6.7 (4.2)	11.7 (9.2)	36.7 (34.2)	59.7 (57.2)	84.7 (82.2)	—	—	7
<b>MXS20</b>	18.9	32.6	22.6	12.6	12.6	17.6	31.6	59.6	88.6	115.6	30.6 (28.1)	20.6 (18.1)	10.6 (8.1)	10.6 (8.1)	15.6 (13.1)	29.6 (27.1)	57.6 (55.1)	86.6 (84.1)	113.6 (111.1)	—	—	8	
<b>MXS25</b>	23	37.5	27.5	17.5	17.5	20.5	36.5	52.5	85.5	100.5	35.5 (33)	25.5 (23)	15.5 (13)	15.5 (13)	18.5 (16)	24.5 (22)	50.5 (48)	83.5 (81)	98.5 (96)	—	—	8	

( ) : D-F9N

### Solid state switch: D-F9B, D-F9N, D-F9P, D-F9BW, D-F9NW, D-F9PW

Model	A	B										E										Operating range	
		Stroke										Stroke											
		10	20	30	40	50	75	100	125	150	10	20	30	40	50	75	100	125	150				
<b>MXS6</b>	10	9.6	9.6	9.6	21.6	27.6	—	—	—	—	-0.4	-0.4	-0.4	11.6	17.6	—	—	—	—	—	2		
<b>MXS8</b>	11.6	14.9	9.9	10.9	18.9	26.9	51.9	—	—	—	4.9	-0.1	0.9	8.9	16.9	41.9	—	—	—	—	—	2.5	
<b>MXS12</b>	15.6	32.4	22.4	12.4	14.4	24.4	45.4	74.4	—	—	—	22.4	12.4	2.4	4.4	14.4	35.4	64.4	—	—	—	—	3
<b>MXS16</b>	20.3	32.7	22.7	12.7	12.7	17.7	42.7	65.7	90.7	—	—	—	22.7	12.7	2.7	2.7	7.7	32.7	55.7	80.7	—	—	4
<b>MXS20</b>	22.9	36.6	26.6	16.6	16.6	21.6	35.6	63.6	92.6	119.6	26.6	16.6	6.6	6.6	11.6	25.6	53.6	82.6	109.6	—	—	6	
<b>MXS25</b>	27	41.5	31.5	21.5	21.5	24.5	40.5	56.5	89.5	104.5	31.5	21.5	11.5	11.5	14.5	30.5	46.5	79.5	94.5	—	—	6	

### Solid state switch: D-F9BV, D-F9NV, D-F9PV, D-F9BWV, D-F9NWV, D-F9PWV

Model	A	B										E										Operating range	
		Stroke										Stroke											
		10	20	30	40	50	75	100	125	150	10	20	30	40	50	75	100	125	150				
<b>MXS6</b>	10	9.6	9.6	9.6	21.6	27.6	—	—	—	—	1.6	1.6	1.6	13.6	19.6	—	—	—	—	—	2		
<b>MXS8</b>	11.6	14.9	9.9	10.9	18.9	26.9	51.9	—	—	—	6.9	1.9	2.9	10.9	18.9	43.9	—	—	—	—	—	2.5	
<b>MXS12</b>	15.6	32.4	22.4	12.4	14.4	24.4	45.4	74.4	—	—	—	24.4	14.4	4.4	6.4	16.4	37.4	66.4	—	—	—	—	3
<b>MXS16</b>	20.3	32.7	22.7	12.7	12.7	17.7	42.7	65.7	90.7	—	—	—	24.7	14.7	4.7	4.7	9.7	34.7	57.7	82.7	—	—	4
<b>MXS20</b>	22.9	36.6	26.6	16.6	16.6	21.6	35.6	63.6	92.6	119.6	28.6	18.6	8.6	8.6	13.6	27.6	55.6	84.6	111.6	—	—	6	
<b>MXS25</b>	27	41.5	31.5	21.5	21.5	24.5	40.5	56.5	89.5	104.5	33.5	23.5	13.5	13.5	16.5	32.5	48.5	81.5	96.5	—	—	6	

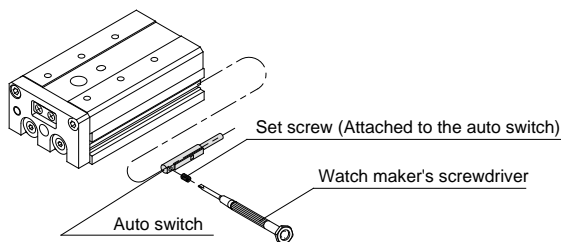
## How to Install an Auto Switch

### **⚠ Caution** Auto switch mounting tool

- To tighten the set screw (attached to the auto switch), use a watch maker's screwdriver with a grip diameter of 5 to 6mm.

### Clamping torque

- Clamping torque is approx. 0.05 to 0.1Nm. Rotate about 90° from when you feel the fitting tightness.



CL

MLGC

CNA

CB

CV/MVG

CXW

CXS

CXT

MX

MXU

**MXS**

MXQ

MXF

MXW

MXP

MG

MGP

MGQ

MGG

MGC

MGF

CY1

MY1