

# Escapements

# Series MIW/MIS

ø8, ø12, ø20, ø25, ø32

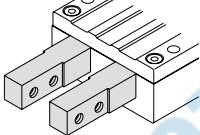
## How to Order

**Double finger type** MIW 12 [ ] - 12 D 1 A S - M9BW [ ] - [ ]

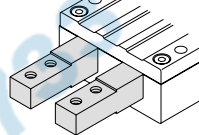
**Single finger type** MIS 32 [ ] - 50 D 1 A S - M9BW [ ] - [ ]

**Finger options**

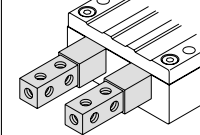
**Nil:** Basic type (Standard type)



**1:** Tapped on upper and lower faces



**2:** Tapped on all faces (5 surfaces including end surface)



**Cylinder bore**

8	8 mm
12	12 mm
20	20 mm
25	25 mm
32	32 mm

**Port thread type**

Symbol	Type	Bore size
Nil	M thread	ø8, ø12
	Rc	ø20, ø25
TN	NPT	ø32
TF	G	

**Stroke**

\* Refer to the next page for standard stroke table.

**Scraper**

Nil	No
S	Yes

**Stroke adjuster**

Nil	No
A	Yes

**Number of auto switches**

Nil	2 pcs.
S	1 pc.

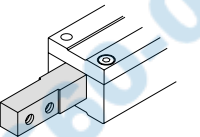
**Type of auto switch**

Nil	Without auto switch (built-in magnet)
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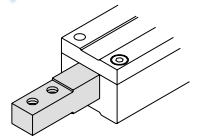
\* Refer to the table below for auto switch part numbers.

**Finger options**

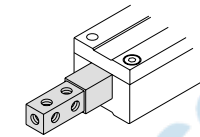
**Nil:** Basic type (Standard type)



**1:** Tapped on upper and lower faces



**2:** Tapped on all faces (5 surfaces including end surface)



**Applicable auto switches**/Refer to pages 1719 to 1827 for detailed specifications of auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch models		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 switch	Diagnostic indication (2-color display)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	-	M9NV	M9N	●	●	●	○	○	-	IC circuit	Relay, PLC
				3-wire (PNP)			M9PV	M9P	●	●	●	○				
				2-wire	M9BV		M9B	●	●	●	○	○				
				3-wire (NPN)	M9NWV		M9NW	●	●	●	○					
				3-wire (PNP)	M9PWV		M9PW	●	●	●	○					
				2-wire	M9BWV		M9BW	●	●	●	○					

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
 1 m ..... M (Example) M9NWM  
 3 m ..... L (Example) M9NWL  
 5 m ..... Z (Example) M9NWZ

\* Solid state auto switches marked with "O" are produced upon receipt of order.

\* Refer to pages 1784 and 1785 for the details of auto switches with a pre-wired connector.  
 \* Auto switches are shipped together (not assembled).

## Specifications



Series	<b>MIW</b> (Double finger)	<b>MIS</b> (Single finger)
Fluid	Air	
Operating pressure	0.2 to 0.7 MPa	
Ambient temperature and fluid temperature	-10 to 60°C (No freezing)	
Lubrication	Non-lube	
Action	Double acting	
Auto switch (optional) <sup>Note)</sup>	Solid state auto switch (3-wire, 2-wire)	
Stroke tolerance	+1 0 mm	

## Option

Finger options	Standard, Tapped on upper and lower faces, Tapped on all faces (5 surfaces including end surface)
Stroke adjuster (Rear end stroke only)	<b>MI□8</b> : Arrangement range 4 mm
	<b>MI□12</b> : Arrangement range 6 mm
	<b>MI□20</b> : Arrangement range 12 mm
	<b>MI□25</b> : Arrangement range 15 mm
	<b>MI□32</b> : Arrangement range 20 mm
Scraper	Can be mounted on standard products

## Theoretical Output

Unit: N

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm <sup>2</sup> )	Operating pressure MPa					
				0.2	0.3	0.4	0.5	0.6	0.7
8	4	OUT	50	10	15	20	26	31	36
		IN	38	7	11	15	19	23	26
12	6	OUT	113	23	34	45	57	68	79
		IN	85	17	26	34	43	51	60
20	10	OUT	314	63	94	126	157	188	220
		IN	236	47	71	94	118	142	165
25	10	OUT	491	98	147	196	245	295	344
		IN	412	82	124	165	206	247	288
32	12	OUT	804	161	241	322	402	482	563
		IN	691	138	207	276	346	415	484

## Standard Stroke

### Double finger type/MIW (mm)

Bore size	Stroke
8	8 mm
12	12 mm
20	20 mm
25	25 mm
32	32 mm

\* For MIW, same stroke as bore size

### Single finger type/MIS (mm)

Bore size	Stroke
8	10, 20 mm
12	10, 20, 30 mm
20	10, 20, 30 mm
25	30, 50 mm
32	30, 50 mm



**Made to Order**  
(For details, refer to page 2020.)

Symbol	Specifications
-X4	Heat resistant (-10 to 100°C)
-X5	Fluororubber seal
-X63	Fluorine grease
-X79	Grease for food

## Mass

Model	Model	Stroke (mm)	Mass (g)	Increase by stroke adjuster (g)	Increase by scraper (g)
MIW	<b>MIW8-8D</b>	8	110	6	3
	<b>MIW12-12D</b>	12	240	10	5
	<b>MIW20-20D</b>	20	650	30	10
	<b>MIW25-25D</b>	25	1550	30	20
	<b>MIW32-32D</b>	32	2650	100	35
MIS	<b>MIS8-10D</b>	10	62	3	2
	<b>MIS8-20D</b>	20	80		
	<b>MIS12-10D</b>	10	130	5	3
	<b>MIS12-20D</b>	20	160		
	<b>MIS12-30D</b>	30	190		
	<b>MIS20-10D</b>	10	300	15	5
	<b>MIS20-20D</b>	20	355		
	<b>MIS20-30D</b>	30	410		
	<b>MIS25-30D</b>	30	800	15	10
	<b>MIS25-50D</b>	50	1000		
	<b>MIS32-30D</b>	30	1350		
	<b>MIS32-50D</b>	50	1650	50	18