

Rotary Clamp Cylinder: Heavy Duty Type

Series MK2

See MK-Z

ø20, ø25, ø32, ø40, ø50, ø63

How to Order

Example Order Code: MK2 B 20 - 10 R F - M9BW

Rotary clamp cylinder
Heavy duty type

Mounting bracket

B	Through-hole/Both ends tapped common (Standard)
G	Head end flange

* Head end flange is equipped with a boss mounting. Be sure to specify body option "F".
* Mounting bracket is included, (but not assembled).

Bore size

20	20 mm	40	40 mm
25	25 mm	50	50 mm
32	32 mm	63	63 mm

Port thread type

Nil	M thread	ø20, ø25
	Rc	
TN	NPT	ø32 to ø63
TF	G	

Clamp stroke

Symbol	Clamp stroke	Applicable bore size
10	10 mm	ø20 to ø40
20	20 mm	ø20 to ø63
50	50 mm	ø50 to ø63

Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch type

Nil	Without auto switch (Built-in magnet)
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* For applicable auto switch models, refer to the below table.

Body option

Nil	Standard (Female thread)
F	With boss on head end
N	With arm

* Arms are assembled at the time of shipment.

Rotary direction (Unclamp → Clamp)

R	Clockwise
L	Counterclockwise

Applicable Auto Switches

Refer to page 29 through to 39 for further information on auto switches.

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)				None (N)					
								ø20 to ø32	ø40 to ø63													
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	—	M9NV	M9N	●	—	●	○	—	○	IC circuit	Relay, PLC						
		3-wire (PNP)		M9PV			M9P	●	—	●	○	—	○									
	Connector	2-wire		12 V			M9BV	M9B	●	—	●	○	—	○	—							
		J79C		—			●	—	●	●	●	—										
	Diagnostic indication (2-color indication)	Grommet		3-wire (NPN)			5 V,	M9NWV	M9NW	●	●	●	○	—	○		IC circuit					
				3-wire (PNP)			12 V	M9PWV	M9PW	●	●	●	○	—	○							
	2-wire			12 V			M9BWV	M9BW	●	●	●	○	—	○	—							
	3-wire (NPN)			5 V,			M9NAV	M9NA	○	○	●	○	—	○			IC circuit					
	3-wire (PNP)			12 V			M9PAV	M9PA	○	○	●	○	—	○								
	2-wire			12 V			M9BAV	M9BA	○	○	●	○	—	○	—							
	Diagnostic output (2-color indication)	4-wire		5 V, 12 V			—	F79F	●	—	●	○	—	○			IC circuit					
	Magnetic field resistant (2-color indication)	2-wire (No polarity)		—			—	—	P4DW	—	—	●	●	—	○		—					
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—					
								—	200 V	A72	A72H	●	—	●	—			—	—			
		Connector						No	2-wire	24 V	12 V	100 V or less	A93V	A93	●			—	●	—	—	—
											5 V, 12 V	—	A90V	A90	●			—	●	—	—	—
	Diagnostic indication (2-color indication)	Grommet		Yes	2-wire	24 V	12 V	—	A73C	—	●	—	●	●	●	—		IC circuit				
							5 V, 12 V	24 V or less	A80C	—	●	—	●	●	●	—						
		Connector		No	2-wire	24 V	—	—	A79W	—	●	—	●	—	—	—						
							—	—	—	—	●	—	●	—	—							

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWX
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ
None N (Example) J79CN

* Solid state switches marked with "○" are produced upon receipt of order.
* For D-P4DW, ø40 to ø63 are available.
* Only D-P4DW type is assembled at the time of shipment.

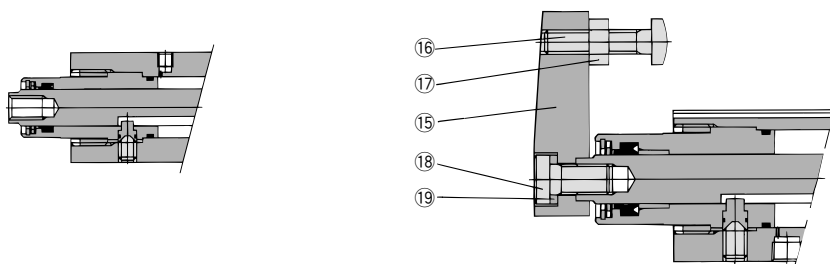
* Since there are other applicable auto switches than listed, refer to page 18 for details.
* For details about auto switches with pre-wired connector, refer to page "Best Pneumatics 2004" catalog.
* When mounting models D-M9□(V), M9□W(V), M9□A(V), and A9□(V) with between ø32 and ø50 on sides other than the port side, please order a switch mounting bracket separately as per the instructions on page 17, and refer to cases CDQP2B32 to 100 in Information (04-E514) "Cylinder with Compact Auto Switch."
* Auto switches are included, (but not assembled).

Series MK2

Construction

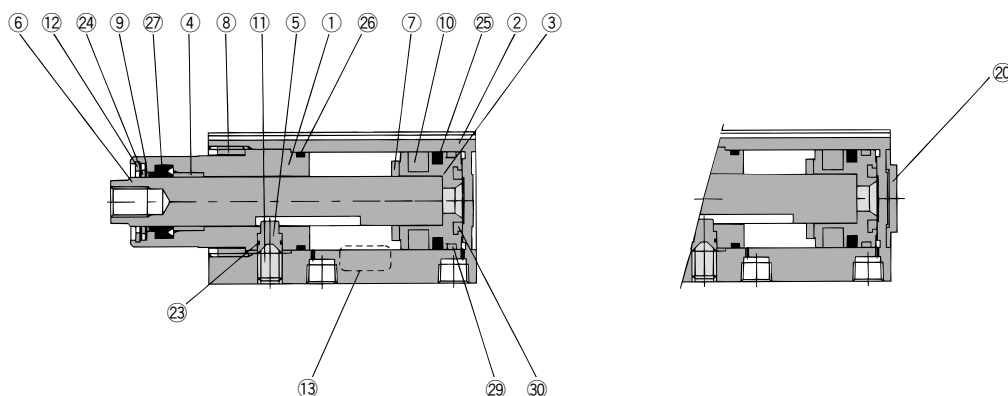
MK2□20, 25

With arm (N)



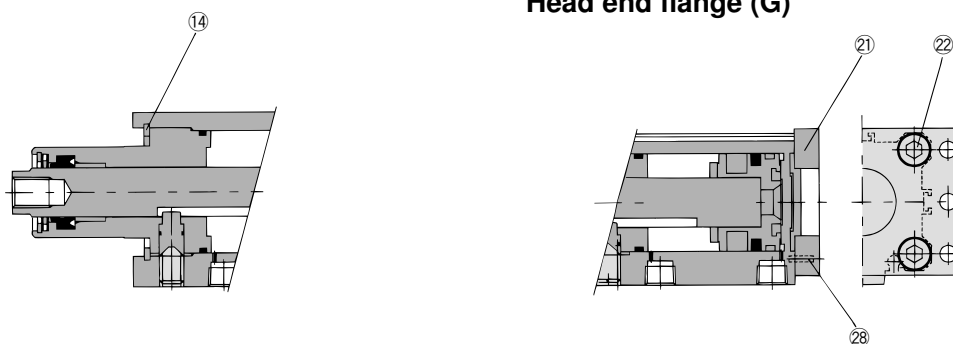
MK2□32

With boss on head end (F)



MK2□40 to 63

Head end flange (G)



Component Parts

No.	Description	Material	Note
1	Rod cover	Aluminum alloy	
2	Cylinder tube	Aluminum alloy	
3	Piston	Aluminum alloy	
4	Bushing	Copper bearing material	ø32 to ø63 only
5	Guide pin	Stainless steel	Nitrided
6	Piston rod	Stainless steel	ø20, ø25 Nitrided
		Carbon steel	ø32 to ø63 Heated, Nickel plated
7	Bumper	Urethane	
8	Ring nut	Copper alloy	ø20 to ø32 only
9	Scraper pressure	Stainless steel	
10	Magnet	—	
11	Hexagon socket head set screw	Chromium molybdenum steel	Sharp end section: 90°
12	Round R-type retaining ring	Spring steel	
13	Name plate	Aluminum	
14	C-type retaining ring	Carbon tool steel	ø40 to ø63 only
15	Arm	Rolled steel	

Component Parts

No.	Description	Material	Note
16	Clamp bolt	Chromium molybdenum steel	
17	Hexagon nut	Rolled steel	
18	Hexagon socket head cap screw	Chromium molybdenum steel	
19	Spring washer	Hard steel	
20	Centering location ring	Aluminum alloy	
21	Flange	Rolled steel	
22	Hexagon socket head cap screw	Chromium molybdenum steel	Qty. ø20, ø25: 2 ø32 to ø63: 4
23	O-ring	NBR	
24	Coil scraper	Phosphor bronze	
25	Piston seal	NBR	
26	Gasket	NBR	
27	Rod seal	NBR	
28	Parallel pin	Stainless steel	
29	Wear ring	Resin	
30	Bumper B	Urethane	

Replacement Parts: Seal Kit

Bore size (mm)	20	25	32	40	50	63
Kit no.	Not able to disassemble			MK2-40-PS	MK2-50-PS	MK2-63-PS
Content	Set of nos. above 23 24 25 26 27					

* Seal kit includes 23 to 27. Order the seal kit, based on each bore size.