

Plate Cylinder: Double Acting, Single Rod Series MU

ø25, ø32, ø40, ø50, ø63

How to Order

MU **B** **25** - **30** **D** **M** **Z**

With auto switch **MDU** **B** **25** - **30** **D** **M** **Z** - **M9BW** **S**

With auto switch
(Built-in magnet)

Mounting

B	Basic
L	Foot
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis

* Brackets are shipped together,
(but not assembled).

Size

25	Equiv. ø25 piston area
32	Equiv. ø32 piston area
40	Equiv. ø40 piston area
50	Equiv. ø50 piston area
63	Equiv. ø63 piston area

Port thread type

Nil	M thread	ø25
	Rc	
TN	NPT	ø32, ø40
	G	ø50, ø63
TF	G	

Number of auto switches

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

Auto switch

Nil	Without auto switch
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* Refer to the below table for applicable auto switch models.

Rod end configuration

Nil	Rod end female thread
M	Rod end male thread

Action

D	Double acting
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Cylinder stroke (mm)
Refer to "Standard Stroke"
on page 2.

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) MDUL32-30DZ

Applicable Auto Switches/Refer to Best Pneumatics No. 2 for further information on 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)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				M9PV	M9P	●	●	●	○	○		
				2-wire				M9BV	M9B	●	●	●	○	○		
				3-wire (NPN)				M9NVV	M9NV	●	●	●	○	○		
	Diagnostic indication (2-color indication)			3-wire (PNP)	M9PWV	M9PW	●	●	●	○	○	○	○	IC circuit		
				2-wire	M9BWW	M9BW	●	●	●	○	○	○	○	—		
	Water resistant (2-color indication)			3-wire (NPN)	M9NAV**	M9NA**	○	○	●	○	○	○	○	IC circuit		
				3-wire (PNP)	M9PAV**	M9PA**	○	○	●	○	○	○	○	IC circuit		
	Magnetic field resistant (2-color indication)	2-wire	M9BAV**	M9BA**	○	○	●	○	○	○	○	○	—			
		2-wire (Non-polar)	—	P3DW <small>Note 2)</small>	●	—	●	●	○	○	○	○	—			
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	IC circuit	—
				2-wire	24 V	12 V	100 V	A93V	A93	●	—	●	—	—	—	Relay, PLC
							100 V or less	A90V	A90	●	—	●	—	—	—	IC circuit

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

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

* For details about auto switches with pre-wired connector, refer to Best Pneumatics No. 2.

* Auto switches are shipped together, (but not assembled).

** The water resistant auto switch (D-M9□A/M9□AV) can be mounted, but the product itself is not designed to be water resistant.

Note 1) The D-M9□V/M9□WV/M9□AV/A9□V auto switches cannot be mounted on the ported surface with some cylinder strokes and sizes of fittings. This should be checked beforehand.

Note 2) The magnetic field resistant auto switch (D-P3DW□) is available only with ø40 to ø63 of the existing MU series. Refer to page 23 for the how-to-order.

Plate Cylinder: Double Acting, Single Rod *Series MU*

Specifications



Bore size (mm)	25	32	40	50	63
Action	Double acting, Single rod				
Fluid	Air				
Proof pressure	1.05 MPa				
Maximum operating pressure	0.7 MPa				
Minimum operating pressure	0.05 MPa				
Ambient and fluid temperature	-10 to 60°C				
Lubrication	Not required (Non-lube)				
Piston speed	50 to 500 mm/s				
Stroke length tolerance	+1.4 0				
Cushion	Rubber bumper				
Mounting	Foot, Rod flange, Head flange, Single clevis, Double clevis				
Rod end configuration	Rod end male thread, Rod end female thread				
Allowable rotational torque	0.25 N·m		0.55 N·m	1.25 N·m	2.0 N·m
Rod non-rotating accuracy	±1°	±0.8°			±0.5°

Standard Stroke

Size	Standard stroke (mm)	Maximum manufacturable stroke (mm)
25, 32, 40 50, 63	5, 10, 15, 20, 25, 30, 35, 40, 45, 50 75, 100, 125, 150, 175, 200, 250, 300	300

- ☉ * Other intermediate strokes can be manufactured upon receipt of order. Please contact SMC.
 ** Strokes longer than 300 mm are not available.

Mounting Bracket/Part No.

Size	25	32	40	50	63
Mounting bracket					
Foot <small>Note 1)</small>	MU-L02	MU-L03	MU-L04	MU-L05	MU-L06
Flange	MU-F02	MU-F03	MU-F04	MU-F05	MU-F06
Single clevis	MU-C02	MU-C03	MU-C04	MU-C05	MU-C06
Double clevis <small>Note 3)</small>	MU-D02	MU-D03	MU-D04	MU-D05	MU-D06

- ☉ Note 1) When ordering foot bracket, order 2 pieces per cylinder.
 Note 2) Accessories for each mounting bracket are as follows.
 Foot/Flange/Single clevis: Body mounting bolt
 Double clevis: Clevis pin, Type C retaining ring for axis, Body mounting bolt
 Note 3) Clevis pin and retaining ring are shipped together with double clevis.
 Note 4) The tightening torque for body mounting bolts is shown in the below table.
 Note 5) The application of a locking agent (Example: Loctite® 242) to body mounting bolts is recommended.

Recommended Tightening Torque for Mounting Bracket on Body

Bore size	Thread size	Tightening torque (N·m)
MU25	M5 x 0.8	4.9 to 5.9
MU32	M6 x 1	8.28 to 10.12
MU40	M8 x 1.25	19.8 to 24.2
MU50	M10 x 1.5	39.6 to 48.4
MU63	M12 x 1.75	68.4 to 83.6