



# Air Cylinder: Single Rod

# Series MB

ø32, ø40, ø50, ø63, ø80, ø100, ø125

## How to Order

**MB L 32 - 50 -**

**With auto switch** **MDB L 32 - 50 - M9BW**

**With auto switch**  
(Built-in magnet)

**Mounting**

<b>B</b>	Basic/Without bracket
<b>L</b>	Axial foot
<b>F</b>	Rod side flange
<b>G</b>	Head side flange
<b>C</b>	Single clevis
<b>D</b>	Double clevis
<b>T</b>	Center trunnion

**Bore size**

<b>32</b>	32 mm
<b>40</b>	40 mm
<b>50</b>	50 mm
<b>63</b>	63 mm
<b>80</b>	80 mm
<b>100</b>	100 mm
<b>125</b>	125 mm

**Port thread type**

<b>Nil</b>	Rc
<b>TN</b>	NPT
<b>TF</b>	G

**Cylinder stroke (mm)**  
Refer to page 291 for standard strokes.

**Auto switch**

<b>Nil</b>	Without auto switch
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\* For applicable auto switches, refer to the table below.

**Number of auto switches**

<b>Nil</b>	2
<b>S</b>	1
<b>3</b>	3
<b>n</b>	n

**Rod boot/Cushion**

Rod boot	<b>Nil</b>	None
	<b>J</b>	Nylon tarpaulin
	<b>K</b>	Heat resistant tarpaulin
Cushion	<b>Nil</b>	Both ends
	<b>N*</b>	None

\* Model without air cushion is designed to include rubber bumpers. The overall length is longer than the cylinder with air cushions because the bumpers are attached to the both sides of the piston as follows.  
ø32, ø40: +6 mm, ø50, ø63: +8 mm, ø80, ø100: +10 mm, ø125: +12 mm

**Made to Order**  
For details, refer to page 291.

### 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) MDBB40-100

### Applicable Auto Switch/Refer to pages 1263 to 1371 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	Tie-rod mounting	Band mounting	0.5 (Nil)	1 (M)	3 (L)	5 (Z)									
Solid state switch	—	Grommet	—	3-wire (NPN)	24 V	5 V, 12 V	—	<b>M9N</b>	—	●	●	●	○	○	IC circuit	Relay, PLC					
				3-wire (PNP)				<b>M9P</b>	—	●	●	●	○	○							
		2-wire		—	—	100 V, 200 V	<b>M9B</b>	—	●	●	●	○	○								
		—		—	—	<b>J51</b>	—	●	—	●	○	—									
	Terminal conduit	3-wire (NPN)	24 V	5 V, 12 V	—	—	<b>G39</b>	—	—	—	—	—	—	—							
		2-wire				—	<b>K39</b>	—	—	—	—	—									
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	<b>M9NW</b>	—	●	●	●	○	○	IC circuit						
								3-wire (PNP)	<b>M9PW</b>	—	●	●	●	○			○				
	Water resistant (2-color indication)	Grommet	—	3-wire (NPN)	24 V	5 V, 12 V	—	<b>M9BW</b>	—	●	●	●	○	○	—						
								3-wire (PNP)	<b>M9NA</b>	—	○	○	●	○			○				
Diagnostic output (2-color indication)	Grommet	—	2-wire	24 V	12 V	—	<b>M9PA</b>	—	○	○	●	○	○	—							
							2-wire	<b>M9BA</b>	—	○	○	●	○		○						
Magnetic field resistant (2-color indication)	Grommet	—	4-wire (NPN)	24 V	5 V, 12 V	—	<b>F59F</b>	—	●	—	●	○	○	IC circuit							
							2-wire (Non-polar)	<b>P4DW</b>	—	—	—	●	●		○	—					
Reed switch	—	Grommet	Yes	3-wire (Equiv. to NPN)	24 V	5 V	—	<b>A96</b>	—	●	—	●	—	—	IC circuit						
								No	2-wire	24 V	12 V	—	100 V	<b>A93</b>		—	●	—	●	—	—
													100 V or less	<b>A90</b>		—	●	—	●	—	
													100 V, 200 V	<b>A54</b>		—	●	—	●	●	
		Yes	2-wire	24 V	12 V	—	200 V or less	<b>A64</b>	—	●	—	●	—	—							
							—	<b>A33</b>	—	—	—	—	—								
		DIN terminal	Yes	2-wire	24 V	12 V	—	100 V, 200 V	<b>A34</b>	—	—	—	—	—	—						
								—	<b>A44</b>	—	—	—	—	—							
Diagnostic indication (2-color indication)	Grommet	—	—	24 V	—	—	<b>A59W</b>	—	●	—	●	—	—	—							

\* 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 a "○" are produced upon receipt of order.

\* Besides the above models, there are some other auto switches that are applicable. For detailed information, please refer to page 327.

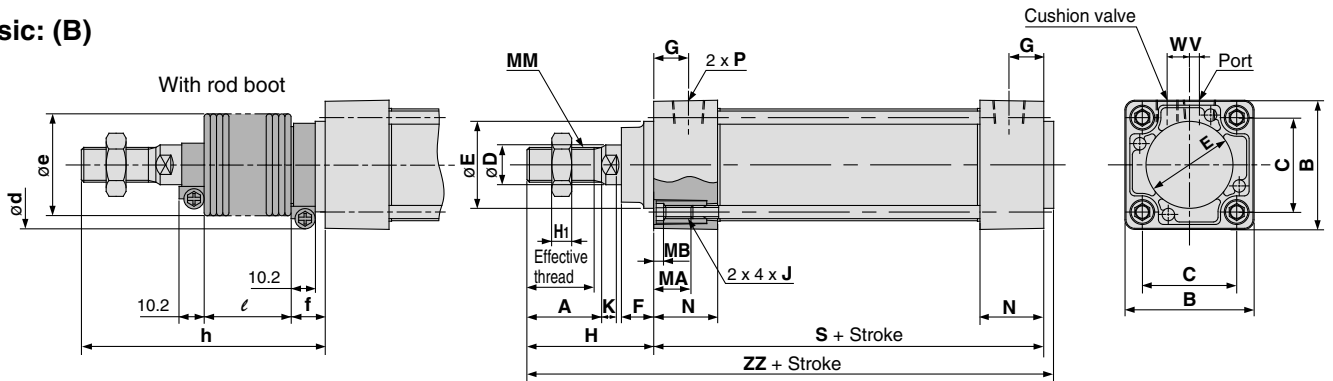
\* Solid state auto switches are also available with a pre-wired connector. Refer to pages 1328 and 1329 for details.

\* D-A9□/M9□/M9□W/M9□AL auto switches are shipped together (not assembled). (However, auto switch mounting brackets are assembled when being shipped.)

# Series MB

## Without Mounting Bracket

### Basic: (B)



Bore size (mm)	Stroke range (mm)	Effective thread length	Width across flats	A	B	C	D	Ee11	F	G	H1	H	MA	MB	J	K	MM	N	P	S*	V	W	ZZ*
32	to 500	19.5	10	22	46	32.5	12	30	13	13	6	47	16	4	M6 x 1	6	M10 x 1.25	27	1/8	84	4	6.5	135
40	to 500	27	14	30	52	38	16	35	13	14	8	51	16	4	M6 x 1	6	M14 x 1.5	27	1/4	84	4	9	139
50	to 600	32	18	35	65	46.5	20	40	14	15.5	11	58	16	5	M8 x 1.25	7	M18 x 1.5	31.5	1/4	94	5	10.5	156
63	to 600	32	18	35	75	56.5	20	45	14	16.5	11	58	16	5	M8 x 1.25	7	M18 x 1.5	31.5	3/8	94	9	12	156
80	to 800	37	22	40	95	72	25	45	20	19	13	72	16	5	M10 x 1.5	10	M22 x 1.5	38	3/8	114	11.5	14	190
100	to 800	37	26	40	114	89	30	55	20	19	16	72	16	5	M10 x 1.5	10	M26 x 1.5	38	1/2	114	17	15	190
125	to 1000	50	27	54	136	110	32	60	27	19	16	97	20	6	M12 x 1.75	13	M27 x 2	38	1/2	120	17	15	223

### With Rod Boot

Bore size (mm)	d	e	f	l																			
				1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 to 600	601 to 700	701 to 800	801 to 900	901 to 1000								
32	54	36	23	12.5	25	37.5	50	75	100	125	—	—	—	—	—	—	—	—	—	—	—	—	—
40	56	41	23	12.5	25	37.5	50	75	100	125	—	—	—	—	—	—	—	—	—	—	—	—	—
50	64	51	25	12.5	25	37.5	50	75	100	125	150	—	—	—	—	—	—	—	—	—	—	—	—
63	64	51	25	12.5	25	37.5	50	75	100	125	150	—	—	—	—	—	—	—	—	—	—	—	—
80	68	56	29	12.5	25	37.5	50	75	100	125	150	175	200	—	—	—	—	—	—	—	—	—	—
100	76	61	29	12.5	25	37.5	50	75	100	125	150	175	200	—	—	—	—	—	—	—	—	—	—
125	82	75	27	10	20	30	40	60	80	100	120	140	160	180	200	—	—	—	—	—	—	—	—

Bore size (mm)	h											
	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	501 to 600	601 to 700	701 to 800	801 to 900	901 to 1000
32	73	86	98	111	136	161	186	—	—	—	—	—
40	81	94	106	119	144	169	194	—	—	—	—	—
50	89	102	114	127	152	177	202	227	—	—	—	—
63	89	102	114	127	152	177	202	227	—	—	—	—
80	101	114	126	139	164	189	214	239	264	289	—	—
100	101	114	126	139	164	189	214	239	264	289	—	—
125	120	130	140	150	170	190	210	230	250	270	290	310

### Without Air Cushion

Bore size (mm)	S	ZZ
32	90	141
40	90	145
50	102	164
63	102	164
80	124	200
100	124	200
125	132	235

\* Model without air cushion is designed to include rubber bumpers. The overall length is longer than the cylinder with air cushion as follows because the bumpers are attached to the both sides of the piston;  
 ø32, ø40: +6 mm, ø50, ø63: +8 mm, ø80, ø100: +10 mm, ø125: +12 mm