

Mechanically Jointed Hy-rodless Cylinder with Brake

ML1C Series

ø25, ø32, ø40

How to Order

Hy-rodless cylinder
(With brake)

ML1C 25 G - 300 H - M5BW

Bore size (mm)

25	25 mm
32	32 mm
40	40 mm

Cylinder stroke

Bore size (mm)	Standard stroke (mm)*	Maximum manufacturable stroke (mm)
25	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000	2000
32	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000	2000
40	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000	2000

* When stroke is required, which is longer than the standard stroke, refer to the "Made to Order Specifications" for long stroke type (XB11).

Made to Order
Refer to page 1109 for details.

Number of auto switches

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

Auto switch

Nil	Without auto switch (Built-in magnet)
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* For the applicable auto switch model, refer to the table below.
* Auto switches are shipped together (not assembled).

Stroke adjustment unit symbol

Refer to page 1109 for stroke adjustment unit.

Applicable Auto Switches/Refer to pages 1119 to 1245 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		0.5 (Nil)	3 (L)	5 (Z)		IC circuit	Relay, PLC	
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M5N	●	●	●			○
				3-wire (PNP)				M5P	●	●	●	○		
	2-wire			M5B	●	●	●	○	—					
	3-wire (NPN)			M5NW	●	●	●	○	IC circuit					
	2-wire			M5PW	●	●	●	○	—					
	3-wire (PNP)			M5BW	●	●	●	○	—					
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	5 V	—	E76A	●	●	—	—	IC circuit	—
				2-wire				E73A	●	●	—	—	—	Relay, PLC
				NO	—	—	—	—	—	—	—	—	—	
														3-wire (PNP)

* Lead wire length symbols: 0.5 m.....Nil (Example) M5BW
3 m.....L (Example) M5BWL
5 m.....Z (Example) M5BWZ

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

* For details about auto switches with pre-wired connector, refer to pages 1192 and 1193.

* Auto switches are shipped together (not assembled). (For details about auto switch mounting, etc., refer to page 1116.)



Made to Order Specifications
[Click here for details](#)

Symbol	Specifications
-XB11	Long stroke type

Cylinder Specifications

Bore size (mm)	25	32	40
Guide type	Cam follower guide type		
Fluid	Air		
Action	Double acting		
Operating pressure range (MPa)	0.1 to 0.8		
Proof pressure (MPa)	1.2		
Ambient and fluid temperature	5 to 60°C (No freezing)		
Piston speed (mm/s)	100 to 1000		
Cushion	Air cushion		
Lubrication	Not required (Non-lube)		
Stroke length tolerance (mm)	+1.8 0		
Port size Rc	Front port, Side port, Bottom port		1/4
	1/8		

Brake Specifications

Lock operation	Spring locking (Exhaust lock)
Fluid	Air
Maximum operating pressure (MPa)	0.5
Brake releasing pressure (MPa)	0.25
Brake activating pressure (MPa)	0.18
Braking direction	Both directions

CLJ2

CLM2

CLG1

CL1

MLGC

CNG

MNB

CNA2

CNS

CLS

CLQ

RLQ

MLU

MLGP

ML1C

Stroke Adjustment Unit Specifications

Applicable cylinder size (mm)		25	32	40
Unit symbol		H	H	H
Configuration Shock absorber model		RB1412 + with adjustment bolt	RB2015 + with adjustment bolt	RB2015 + with adjustment bolt
Stroke adjustment range by intermediate fixing spacer (mm)	Without spacer	0 to -11.5	0 to -12	0 to -16
	With short spacer	-11.5 to -23	-12 to -24	-16 to -32
	With long spacer	-23 to -34.5	-24 to -36	-32 to -48

* Stroke adjustment range is applicable for one side when mounted on a cylinder.

* The shock absorber service life is different from that of the ML1C cylinder depending on the operating conditions. Refer to the Specific Product Precautions for the replacement period.

Stroke Adjustment Unit Symbol

		Right side stroke adjustment unit				
		Without unit	H: With high load shock absorber + Adjustment bolt			
Left side stroke adjustment unit	Without unit	Nil	SH	SH6	SH7	
	H: With high load shock absorber + Adjustment bolt	HS	H	HH6	HH7	
		With short spacer	H6S	H6H	H6	H6H7
		With long spacer	H7S	H7H	H7H6	H7

* Spacers are used to fix the stroke adjustment unit at an intermediate stroke position.

Stroke Adjustment Unit Shock Absorber Model

ø25	ø32	ø40
RB1412	RB2015	RB2015

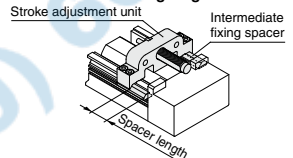
Shock Absorber Specifications

Applicable cylinder size (mm)		25	32	40
Shock absorber model		RB1412	RB2015	RB2015
Max. energy absorption (J)		19.6	58.8	58.8
Stroke absorption (mm)		12	15	15
Max. collision speed (mm/s)		1000	1000	1000
Max. operating frequency (cycle/min)		45	25	25
Spring force (N)	Extended	6.85	8.34	8.34
	Retracted	15.98	20.50	20.50
Operating temperature range (°C)		5 to 60		

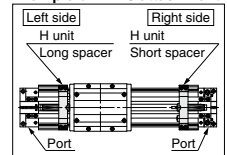
* Stroke adjustment range is applicable for one side when mounted on a cylinder.

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Stroke adjustment unit mounting diagram



Example of H7H6 attachment



D-□

-X□