

Compact Guide Cylinder with Lock

Series *MLGP*

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

MLGP **M** **32** **50** **F** **Y7BW**

Compact guide cylinder with lock

Bearing type

M	Slide bearing
L	Ball bushing bearing

Bore size

20	20 mm	50	50 mm
25	25 mm	63	63 mm
32	32 mm	80	80 mm
40	40 mm	100	100 mm

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, (but not assembled).

Locking direction

F	Extension locking
B	Retraction locking

Cylinder stroke (mm)
Refer to "Standard Stroke" on page 9-11-21.

Applicable Auto Switch/Refer to page 9-15-1 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-wire connector	Applicable load	
					DC		AC	Perpendicular	In-line	0.5 (Nil)	3 (L)	5 (Z)			
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	—	Z76	●	●	—	—	IC circuit	—
				2-wire	24 V	12 V	100 V	—	Z73	●	●	●	—	—	Relay, PLC
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V	—	Y69A	Y59A	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)		12 V		Y7PV	Y7P	●	●	○	○		
				2-wire		12 V		Y69B	Y59B	●	●	○	○		
	Diagnostic indication (2-color indication)			3-wire (NPN)	24 V	5 V		Y7NWV	Y7NW	●	●	○	○	IC circuit	
				3-wire (PNP)		12 V		Y7PWV	Y7PW	●	●	○	○		
				2-wire		12 V		Y7BWV	Y7BW	●	●	○	○		
						—		Y7BA	—	●	○	○	—		
						—		P5DW	—	●	●	○			

* Lead wire length symbols: 0.5 m Nil (Example) Y69A
3 m L (Example) Y69AL
5 m Z (Example) Y69AZ

* Solid state switches marked with "○" are produced upon receipt of order.
* P5DW type can only be mounted only on bore sizes ø40 through ø100.

- Since there are applicable auto switches other than the listed above, refer to page 9-11-29.
- For details about auto switches with pre-wire connector, refer to page 9-15-68.

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Cylinder Specifications

Action	Double acting
Fluid	Air
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Minimum operating pressure	0.2 MPa ^(Note)
Ambient and fluid temperature	-10 to 60°C (No freezing)
Piston speed	50 to 400 mm/s
Cushion	Rubber bumper on both ends
Lubrication	Non-lube
Stroke length tolerance	$^{+1.5}_0$ mm

(Note) When the unlocking air and cylinder operating air are not common, the minimum operating pressure is 0.15 MPa. (The minimum operating pressure for the cylinder alone is 0.15 MPa.)

Lock Specifications

Bore size (mm)	20	25	32	40	50	63	80	100
Lock operation	Spring locking (Exhaust locking)							
Unlocking pressure	0.2 MPa or more							
Lock starting pressure	0.05 MPa or less							
Locking direction	One direction (Extension locking, Retraction locking)							
Maximum operating pressure	1.0 MPa							
Unlocking port size	M5 x 0.8		Rc 1/8				Rc 1/4	
Holding force (Maximum static load) (N)	157	245	402	629	982	1559	2513	3927

Standard Stroke

Bore size (mm)	Standard stroke (mm)
20, 25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350
32 to 80	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350
100	50, 75, 100, 125, 150, 175, 200, 250, 300, 350

Manufacture of Intermediate Stroke

Description	Spacer installation type Spacers are installed in the standard stroke cylinders. ø20 to 32: Stroke can be modified by the 1 mm interval. ø40 to 100: Stroke can be modified by the 5 mm interval.	
Part no.	Refer to "How to Order" for the standard model numbers.	
Applicable stroke (mm)	ø20, ø25, ø32	1 to 349
	ø40 to ø80	5 to 345
	ø100	25 to 345
Example	Part no.: MLGPM20-39-F A 1 mm spacer is installed in MLGPM20-40-F. Dimension C is 77 mm.	

Theoretical Output



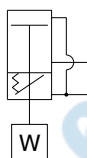
Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)								
				0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
20	10	OUT	314	63	94	126	157	188	220	251	283	314
		IN	236	47	71	94	118	142	165	189	212	236
25	12	OUT	491	98	147	196	246	295	344	393	442	491
		IN	378	76	113	151	189	227	265	302	340	378
32	16	OUT	804	161	241	322	402	482	563	643	724	804
		IN	603	121	181	241	302	362	422	482	543	603
40	16	OUT	1257	251	377	503	629	754	880	1006	1131	1257
		IN	1056	211	317	422	528	634	739	845	950	1056
50	20	OUT	1963	393	589	785	982	1178	1374	1570	1767	1963
		IN	1649	330	495	660	825	990	1154	1319	1484	1649
63	20	OUT	3117	623	935	1247	1559	1870	2182	2494	2805	3117
		IN	2803	561	841	1121	1402	1682	1962	2242	2523	2803
80	25	OUT	5027	1005	1508	2011	2514	3016	3519	4022	4524	5027
		IN	4536	907	1361	1814	2268	2722	3175	3629	4082	4536
100	30	OUT	7854	1571	2356	3142	3927	4712	5498	6283	7069	7854
		IN	7147	1429	2144	2859	3574	4288	5003	5718	6432	7147

(Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm²)

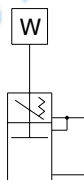


JIS Symbol

Extension locking



Retraction locking



Minimum Stroke for Auto Switch Mounting

(mm)					
No. of auto switches mounted	D-27□ D-Z80 D-Y59□ D-Y7P D-Y7□W	D-Y69□ D-Y7PV	D-Y7□WV	D-Y7BAL	D-P5DWL
1 pc.	15	5	10	20	25
2 pcs.	15	5	15	20	25

(Note) D-P5DWL can only be mounted on bore sizes ø40 through ø100.

Auto Switch Mounting Bracket Part No. for D-P5DW

Bore size (mm)	Mounting bracket part no.	Note
40, 50, 63, 80, 100	BMG1-040	Switch mounting bracket Hexagon socket head cap screw (M2.5 x 0.45 x 8) 2 pcs. Hexagon socket head cap screw (M3 x 0.5 x 16) 2 pcs. Spring washer (Nominal size 3)