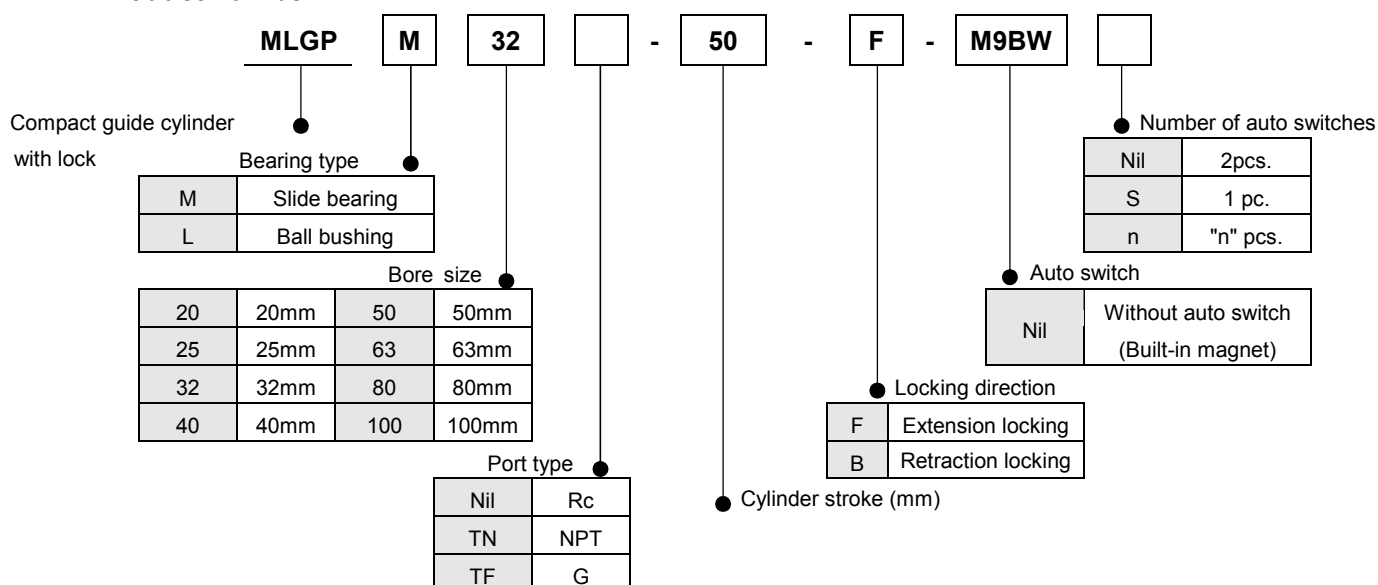


1. Product number



2. Specification

2-1. Cylinder specifications

Bore size (mm)	20	25	32	40	50	63	80	100
Action	Double acting							
Fluid	Air							
Proof pressure	1.5MPa							
Maximum operating pressure	1.0MPa							
Minimum operating pressure	0.2MPa *							
Ambient and fluid temperature	-10 to 60°C (No freezing)							
Piston speed	50 to 400mm/s							
Cushion	Rubber bumper on both ends							
Lubrication	Not required (non-lube)							
Stroke length tolerance	$^{+1.5}_0$ mm							
Port size (Rc, NPT, G)	1/8				1/4		3/8	

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

2-2. 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	1.0MPa							
Unlocking port size (Rc, NPT, G)	M5 x 0.8				1/8			1/4
Holding force (Maximum static load)(N)*	157	245	402	629	982	1559	2513	3927

* The holding force (max. static load) shows the maximum capability and does not show the normal holding capability.

3. Standard stroke

3-1. Standard stroke table

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

3-2. 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 1mm interval. ø40 to 100: Stroke can be modified by the 5mm interval.	
Part no.	Refer to "Product number" for 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 1mm spacer is installed in MLGPM20-40-F. Dimension C is 77mm.	

4. Allowable kinetic energy

Bore size (mm)	20	25	32	40	50	63	80	100
Allowable kinetic energy (J)	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54

1J= 0.102kgf·m



Caution

The cylinder will be damaged if kinetic energy exceeds the allowable kinetic energy. Select an appropriate cylinder while referring to the table above. The kinetic energy of the load is calculated by the formula below.

$$E_k = \frac{M + m}{2} V^2 \quad V = V_a \times 1.4$$

E_k : Kinetic energy (J) M : Mass of object being transported (kg)

m : Mass of moving parts of cylinder (kg) V : Maximum speed (m/s)

V_a : Average speed (m/s)

Mass of moving parts of cylinder

(kg)

Bore size (mm)	model	Standard stroke (mm)													
		20	25	30	40	50	75	100	125	150	175	200	250	300	350
20	MLGPM20	0.40	-	0.42	0.45	0.47	0.59	0.65	0.71	0.77	0.83	0.89	1.08	1.20	1.31
	MLGPL20	0.36	-	0.38	0.42	0.44	0.49	0.53	0.61	0.65	0.70	0.75	0.85	0.95	1.05
25	MLGPM25	0.65	-	0.69	0.73	0.77	0.97	1.08	1.18	1.28	1.38	1.48	1.80	2.00	2.20
	MLGPL25	0.58	-	0.61	0.67	0.70	0.78	0.85	0.97	1.04	1.11	1.19	1.37	1.52	1.67
32	MLGPM32	-	1.28	-	-	1.44	1.63	1.79	1.95	2.12	2.28	2.44	2.95	3.28	3.61
	MLGPL32	-	0.97	-	-	1.09	1.26	1.38	1.56	1.68	1.80	1.92	2.22	2.46	2.70
40	MLGPM40	-	1.36	-	-	1.52	1.71	1.87	2.03	2.20	2.36	2.52	3.04	3.36	3.69
	MLGPL40	-	1.05	-	-	1.17	1.34	1.46	1.64	1.76	1.88	1.99	2.30	2.54	2.77
50	MLGPM50	-	2.51	-	-	2.76	3.11	3.36	3.62	3.87	4.12	4.38	5.22	5.73	6.24
	MLGPL50	-	2.03	-	-	2.21	2.50	2.69	2.97	3.15	3.34	3.53	4.03	4.40	4.77
63	MLGPM63	-	2.89	-	-	3.14	3.48	3.74	3.99	4.25	4.50	4.75	5.59	6.10	6.61
	MLGPL63	-	2.39	-	-	2.58	2.87	3.05	3.33	3.52	3.70	3.89	4.39	4.76	5.13
80	MLGPM80	-	4.91	-	-	5.29	5.96	6.33	6.71	7.08	7.46	7.83	9.14	9.89	10.7
	MLGPL80	-	4.33	-	-	4.78	5.30	5.59	5.88	6.17	6.46	6.75	7.58	8.16	8.73
100	MLGPM100	-	-	-	-	8.65	9.58	10.1	10.7	11.2	11.7	12.3	14.0	15.1	16.2
	MLGPL100	-	-	-	-	7.72	8.51	8.92	9.34	9.75	10.2	10.6	11.7	12.6	13.4