Miniature Guide Rod Cylinder
Series MGJ
ø6, ø10

How to Order

Miniature Guide Rod Cylinder

MGJ 6 – 10 – F8N

Miniature Guide Rod Cylinder

Bore size

6	6 mm
10	10 mm

Cylinder stroke (mm)
Refer to the following table ① and ②.

Auto switch type

Nil	Without auto switch (Built-in magnet)

∗ Select the applicable auto switch from the table below.

Number of auto switches

Nil	2 pcs.
S	1 pc.

Table ① Standard Strokes

Bore size (mm)	Standard stroke (mm)
6	5, 10, 15
10	5, 10, 15, 20

Table ② Intermediate Stroke (by the 1 mm stroke)

Bore size (mm)	Applicable stroke (mm)
6	1 to 15 (Spacer type)
10	1 to 20 (Spacer type)
Example	Model no.: MGJ6-9 Installing a 1 mm width spacer for MGJ6-10 External size: same as MGJ6-10

∗ The minimum auto switch mounting stroke with 2 auto switches is 4 mm.

Applicable Auto Switches/Refer to pages 1719 to 1827 for detailed auto switch specifications.

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.				Applicable load	
					DC		Direct mounting	Lead wire length (m) 0.5 (Nil)	3 (L)	5 (Z)		
Solid state switch	–	Grommet (Perpendicular)	Yes	3-wire (NPN)	24 V	5 V, 12 V	**F8N**	●	●	○	IC circuit	Relay, PLC
				3-wire (PNP)			**F8P**	●	●	○		
				2-wire		12 V	**F8B**	●	●	○	–	

∗ Lead wire length symbols: 0.5 m ..... Nil (Example) F8N
3 m ..... L (Example) F8NL
5 m ..... Z (Example) F8NZ

∗ Auto switches marked with ○ are produced upon receipt of order.
∗ When using non-applicable auto switches, please consult with SMC.
∗ Auto switch is shipped together (not assembled).

⚠ Caution

This product should not be used as a stopper.

Specifications

Bore size (mm)	6	10
Action	Double acting	
Fluid	Air	
Proof pressure	1.05 MPa	
Maximum operating pressure	0.7 MPa	
Minimum operating pressure	0.15 MPa	
Ambient and fluid temperature	–10 to 60°C (No freezing)	
Cushion	Rubber bumper at both ends	
Lubrication	Non-lube	
Piston speed	50 to 500 mm/s Note)	
Stroke length tolerance	$^{+1.0}_{0}$ mm	
Port size	M3 x 0.5	
Guide size	ø5	ø6

Note) Within allowable kinetic energy use only

Theoretical Output

Unit: N

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa)			
				0.15	0.3	0.5	0.7
6	3	OUT	28.3	4.24	8.48	14.15	19.81
		IN	21.2	3.18	6.36	10.60	14.84
10	5	OUT	78.5	11.77	23.55	39.25	54.95
		IN	58.9	8.83	17.67	29.45	41.23

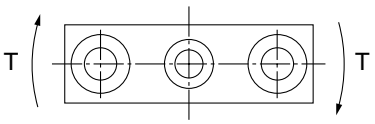
Mass

Unit: g

Bore size (mm)	Standard stroke (mm)			
	5	10	15	20
6	27.3	33.0	38.4	—
10	40.6	48.0	55.6	63.2

Allowable Rotational Torque of Plate

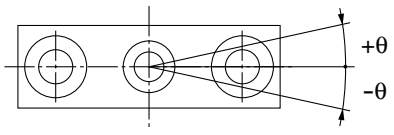
For the rotational torque (T) added to the plate (rod end), use a value no more than the values in the table. Operation outside of this range may cause excessive impact, which may result in the damage to the devices.



Unit: cN·m

Bore size (mm)	Stroke (mm)			
	5	10	15	20
6	0.92	0.73	0.61	—
10	4.75	3.96	3.36	2.87

Plate Non-rotating Accuracy



Bore size (mm)	Non-rotating accuracy θ
6	±0.1°
10	

∗ When extending the cylinder (initial value), non-rotating accuracy θ, without loads and deflection of guide rods, it should be a value no more than the value in the table as a guide.