Handling

⚠ Caution

❶ **Please control the cylinder within the allowable speed range**:

If the cylinder is not using the speed control valve, it may occur beyond the speed range of the piston. If it is used outside the allowable speed range, it will cause cylinder damage or reduce product life. Therefore, please install the speed control valve and adjust the speed within the allowable range. The product allowable speed is shown in Table 1.

❷ **Please note the speed control during vertical installation**:

When the cylinder is used vertically, if the load rate is large, it will cause the speed control valve to exceed the upper limit and could cause sudden unintended acceleration which will affect the product life. Therefore, it is recommended to use a dual speed controller.

❸ **The lateral load of the cylinder during the operation must be within the allowable range**:

Exceeding the allowable value will prevent the cylinder from operating properly and affect the life of the product.

❹ **Do not scratch the mounting surface of the cylinder body and end plate to avoid affecting the flatness**:

If the flatness of the mounting surface is poor, the cylinder will malfunction. The mounting surface of the cylinder body and the end plate should have a flatness of less than 0.05 mm.

❺ **Do not cause surface damage or impact marks on the operating parts of the piston rod and the guide rod**:

Damage to the appearance will result in damage to the seal ring which could cause leakage or malfunction of the cylinder.

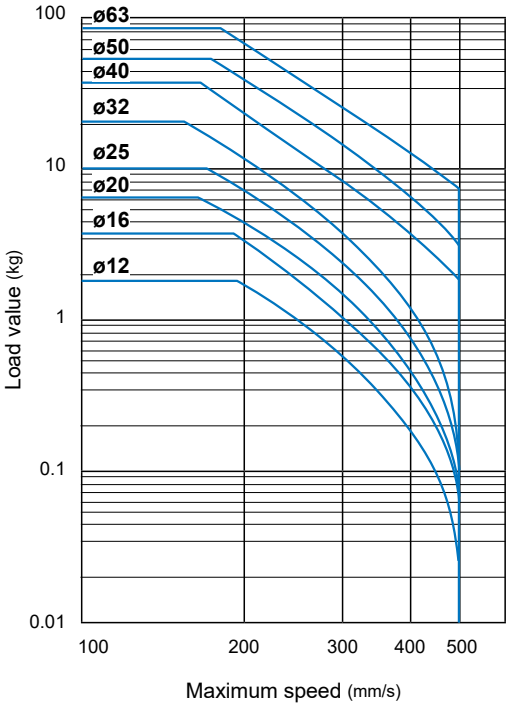


Table 1

MCGS series ø6, ø10

TWIN-GUIDE CYLINDER

mindman

ø12~ø63

Applications

Technical data

Caution for safety
(Read beforeinstalling)

Features

- Multi-ports as standard enabling both direction mounting.
- Embedding type sensors.
- The sensor cable will be in the same direction as the piping tube if vertical type sensor switch (Angle cable) is used.
- Magnetic as standard.

Specification

Model	MCGS	
Acting type	Double acting	
Tube I.D. (mm)	6	10
Stroke (mm)	5, 10, 15	5, 10, 15, 20
Port size	M3×0.5	
Medium	Air	
Max. operating perssure	0.7 MPa	
Min. operating perssure	0.15 MPa	
Proof pressure	1 MPa	
Lubrication	Not required	
Ambient temperature	-5~+60°C (No freezing)	
Available speed range	50~400 mm/sec	
Sensor switch	RDGV	

* This product is not applicable for stopper purpose.

Order example

MCGS — 6 — 10

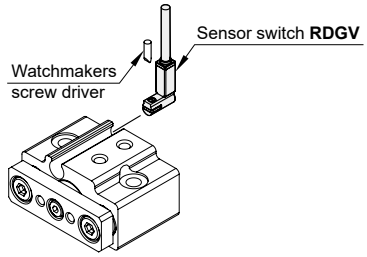
MODEL TUBE I.D. STROKE

Cylinder weight

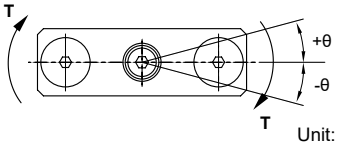
Unit: g

Tube I.D.	Stroke (mm)			
	5	10	15	20
ø6	29	34	39	—
ø10	41	49	57	65

Installation of sensor switch



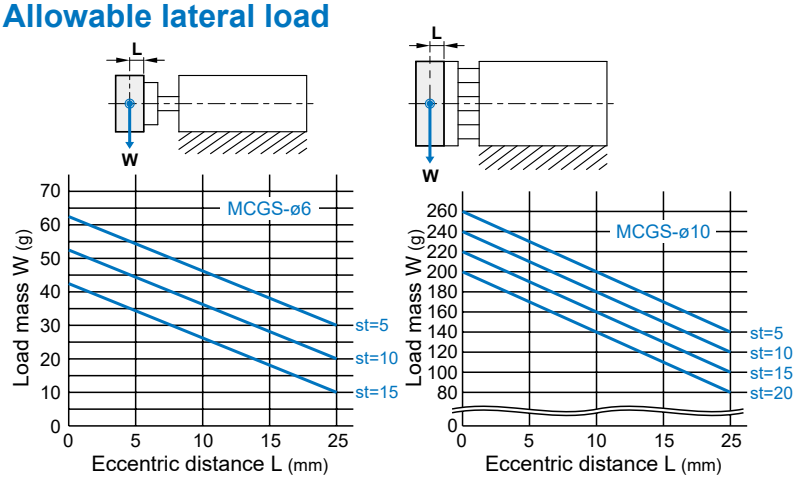
Allowable rotational torque & Non-rotating accuracy



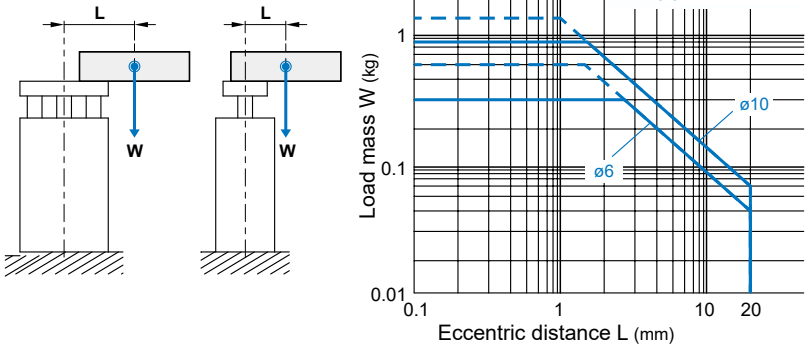
Unit: N.m

Tube I.D.	Stroke (mm)				Non-rotating accuracy θ
	5	10	15	20	
ø6	0.9	0.7	0.6	—	±0.15°
ø10	4.7	3.9	3.3	2.8	

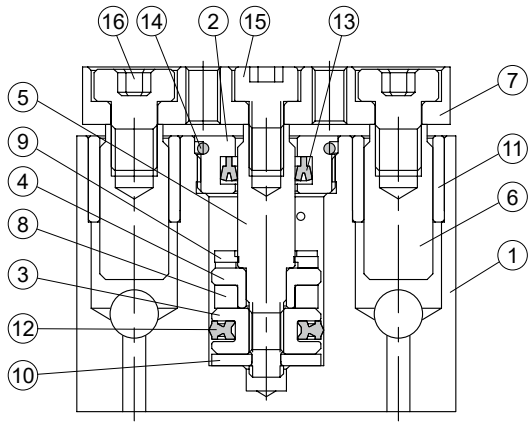
Allowable lateral load



Allowable eccentric load



Inside structure & Parts list



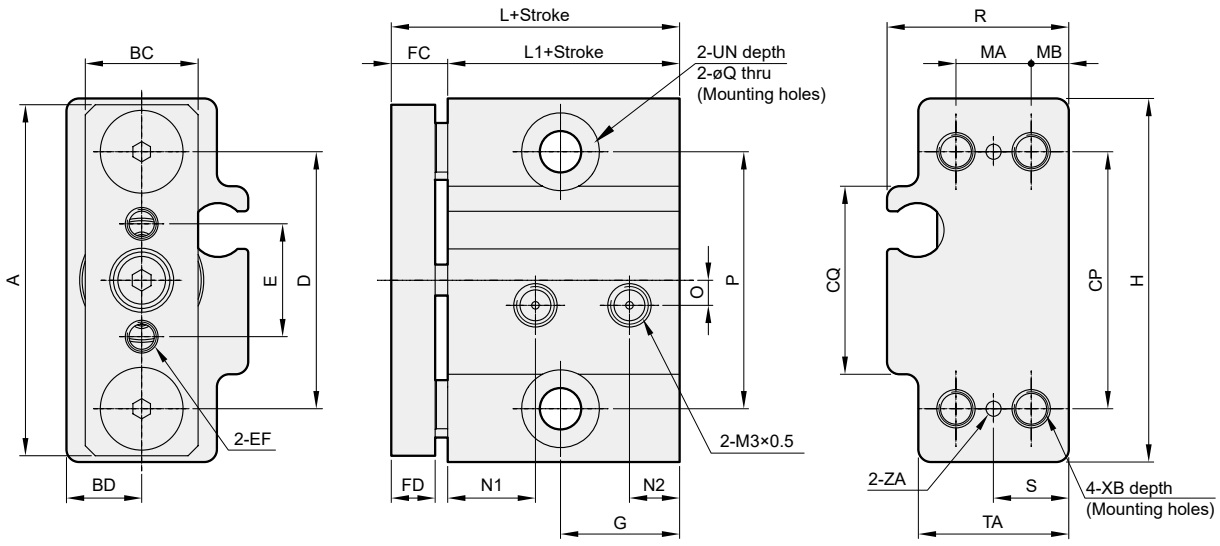
Material

No.	Part name	Material	Q'y	Repair kits (inclusion)
1	Body	Aluminum alloy	1	
2	Rod cover	Aluminum alloy	1	
3	Piston-H	Aluminum alloy	1	
4	Piston-R	Aluminum alloy	1	
5	Piston rod	Stainless steel	1	
6	Guide rod	Carbon steel	2	
7	Plate	Aluminum alloy	1	
8	Magnet ring	Magnet material	1	
9	Cushion	NBR	1	●
10	Cushion	NBR	1	●
11	Bush	Copper	2	
12	Piston seal	NBR	1	●
13	Rod seal	NBR	1	●
14	O-ring	NBR	1	●
15	Screw	Carbon steel	1	
16	Screw	Carbon steel	2	

Order example of repair kits

Tube I.D.	Repair kits
ø6	**PS-MCGS-6**
ø10	**PS-MCGS-10**

Dimensions



Code / Tube I.D.	A	BC	BD	CP	CQ	D	E	EF	FC	FD	G	H	L	L1	MA	MB	N1	N2
6	28	9	6	20.5	15	20.5	9	M2.5×0.45 thru	4.5	3.5	9.5	29	23	18.5	6	3	7	4
10	32	10	7.5	23	17.5	23	11	M3×0.5 thru	6	5	8.5	33	25	19	8	3.5	7	4.5

Code / Tube I.D.	O	P	Q	R	S	TA	UN	XB	ZA
6	2	20.5	3.3	14.5	6	12	ø6.2×0.5	M3×0.5×5	ø1.2
10	3	23	4.3	17	7.5	15	ø8×0.5	M4×0.7×5	ø2