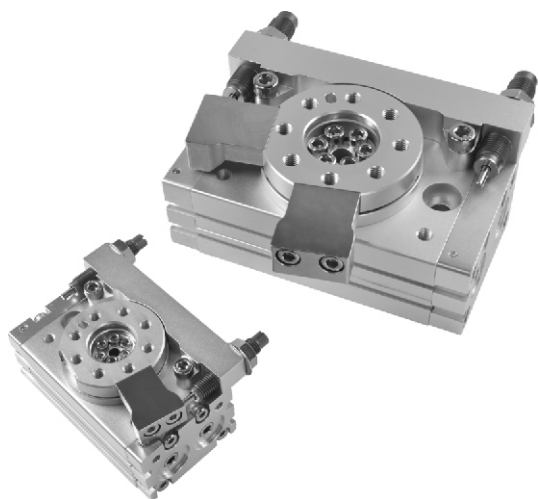


MCRQ-S series

ROTARY ACTUATOR

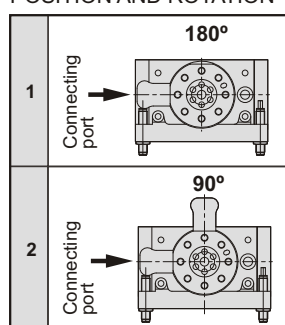


Order example:

MCRQ — S — 20 — 1 — BSP

MODEL EXTERNAL SHOCK ABSORBER TUBE I.D. PORT THREAD
Blank: PT thread
BSP: BSP thread

CONNECTING PORT POSITION AND ROTATION



Auto switch type:

RT × 1

NUMBER of AUTO SWITCH

AUTO SWITCH TYPE

Perpendicular	In-line	Style
RTV	RT	Reed switch
RTNV	RTN	NPN
RTPV	RTP	PNP

Features:

- **4 to 10 times more allowable kinetic energy**
(compared with internal shock absorber type)
- **Total length shortened**
Longitudinal mounting space is reduced because there is no protrusion from adjustment bolts or internal shock absorbers.

Specification:

Model	MCRQ-S			
Acting type	Double acting			
Tube I.D. (mm)	φ 15	φ 20	φ 25	
Port size	M5×0.8	PT 1/8		
Rotation	90°, 180°			
Medium	Air (Non-lube)			
Max. operating pressure	1 MPa (10 kgf/cm ²)			
Min. operating pressure	0.2 MPa (2 kgf/cm ²) (※)			
Ambient temperature	0~+60℃ (No freezing)			
Allowable surge pressure	—	1.5 MPa (15 kgf/cm ²)		
Cushion	Shock absorber			
Shock absorber type	PN0806	PN1008	PN1415	
Angle adjustment range	Each rotation end ± 3°			
Weight (kg)	90°	0.67	1.55	2.52
	180°	0.64	1.48	2.41

※ The maximum operating pressure of the actuator is restricted by the maximum allowable thrust of the shock absorber.

MCRQ-S Capacity $\phi 15, \phi 20, \phi 25$

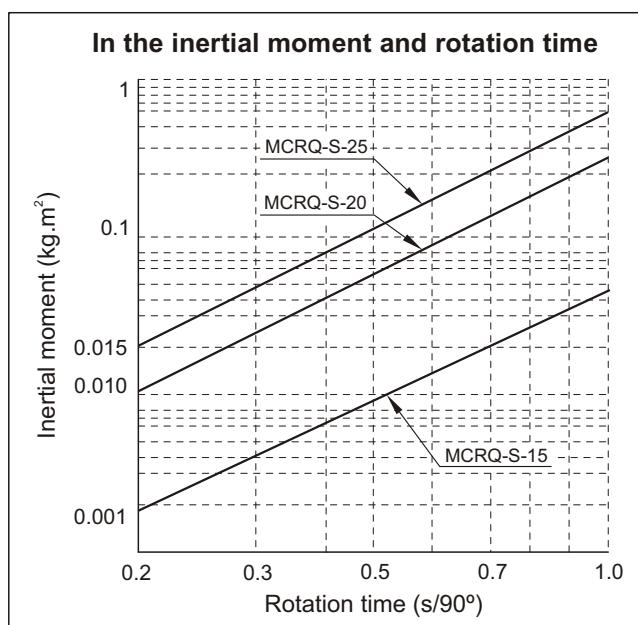
ROTARY ACTUATOR



Allowable kinetic energy and rotation time adjustment range

Model	Allowable kinetic energy (J)	Rotation time adjustment range for stable operation(s/90°)
MCRQ-S-15	0.231	0.2 to 1.0 (※)
MCRQ-S-20	1.21	
MCRQ-S-25	1.82	

※ Values above indicate the time between the start of rotation and the deceleration caused by the shock absorber. The time required for the rotary table to reach the rotation end after deceleration differs depending on the operating conditions (inertial moment of the load, rotation speed, and operating pressure), however, approximately 0.2 to 2 seconds are required. Furthermore, the range of angles within which the shock absorber operates is between the rotation end and the values shown below.



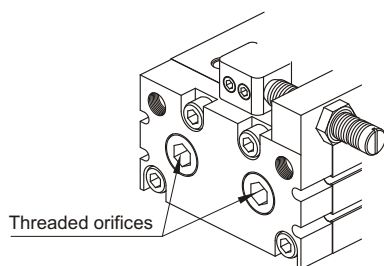
Model	Range of angle
MCRQ-S-15	8.5°
MCRQ-S-20	7.5°
MCRQ-S-25	10.5°

With external shock absorber

Model	Adjustment angle per rotation of angle adjustment screw
MCRQ-S-15	1.4°
MCRQ-S-20	1.1°
MCRQ-S-25	1.3°

External shock absorber

The threaded orifices shown below are not connecting ports. Never remove the plugs as this will cause malfunction.



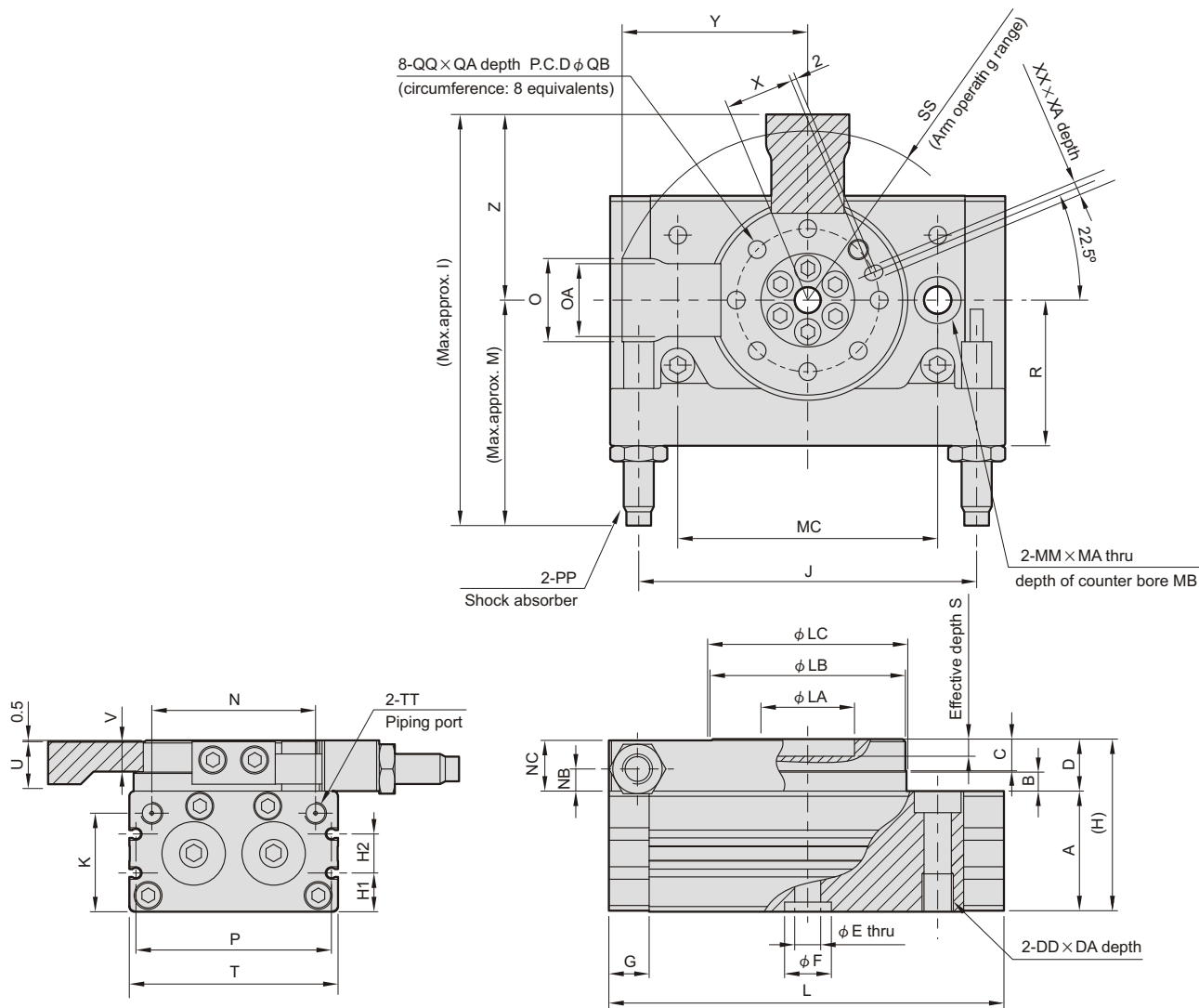
Shock absorber

Never rotate the bottom screw of the shock absorber. (It is not an adjustment screw.) This may cause oil leakage.



MCRQ-S Dimensions $\phi 15$, $\phi 20$, $\phi 25$

ROTARY ACTUATOR



(mm)

Code Tube I.D.	A	B	C	D	DA	DD	E	F	G	H	H1	H2	I	J	K	L	LA	LB	LC	M	MA	MB	MC
15	34	4.5	8	13	12	M8 \times 1.25	5	15H9	9.5	47	9	13	97.2	80	27.8	92	20H9	45h9	46h9	52.9	11	6.5	60
20	40	6.5	10	17	15	M10 \times 1.5	9	22H9	12	57	11.5	14	123.4	110	32	127	32H9	65h9	67h9	63.1	14	8.5	84
25	46	7.5	12	20	18	M12 \times 1.75	10	26H9	15.5	66	14.5	15	158.1	130	37.5	152	35H9	75h9	77h9	86.7	18	10.5	100

Code Tube I.D.	MM	N	NB	NC	O	OA	P	PP	QA	QB	QQ	R	S	SS	T	TT	U	V	X	XA	XX	Y	Z
15	6.8	34.5	5.5	12.5	20	15.6	45	PN-0806	8	32	M5 \times 0.8	33.5	4	45.2	50	M5 \times 0.8	11	7.5	15	3.5	3H9	44.5	44.3
20	8.6	50	8	16.5	27	21.5	65	PN-1007	10	48	M6 \times 1	46	4.5	61.5	70	PT1/8	14	9.5	23	4.5	4H9	60.3	60.3
25	10.5	63	8.5	19.5	32	28	75	PN-1412	12	55	M8 \times 1.25	56	5	72.9	80	PT1/8	18	11.5	26.5	5.5	5H9	71.4	71.4