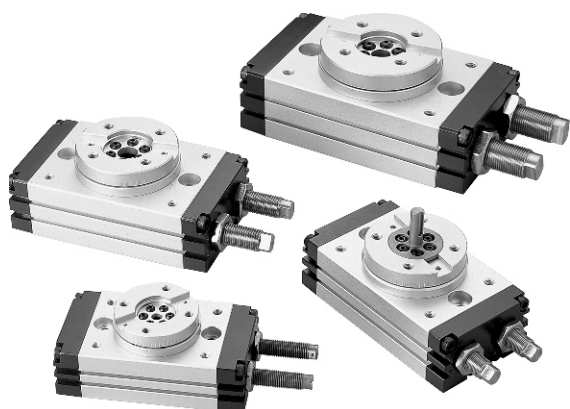


# MCRB series

## ROTARY ACTUATOR



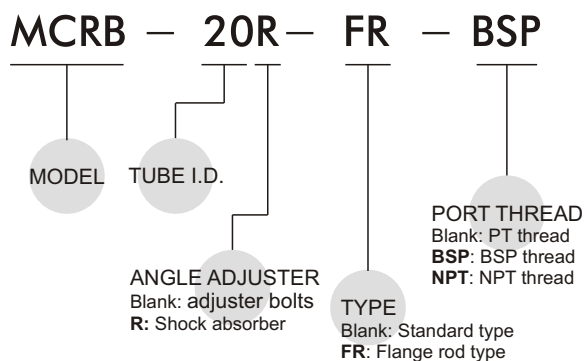
### Features:

- The swing motion with twin-piston and rack-pinion driving.
- Adjustable swing angle(0° ~190° ), three Body mounting mode .
- Rail type mounting allows switch position to be adjusted very easily.

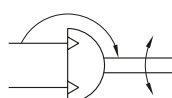
### Specification:

Model	MCRB			
Acting type	Double acting			
Tube I.D. (mm)	φ 16	φ 20	φ 25	φ 32
Port size Rc(PT)	PT 1/8			
Medium	Air			
Operating pressure range	1~9.9 kgf/cm <sup>2</sup>			
Proof pressure	15 kgf/cm <sup>2</sup>			
Ambient temperature	- 5~ + 60°C (No freezing)			
Lubrication	Not required			
Cushion	NBR spacer			
Stable rotation time regulation range	0.2~1.0 s/90°			
Sensor switch	RCD			
Weight (kg)	0.7	1.16	1.57	3.07

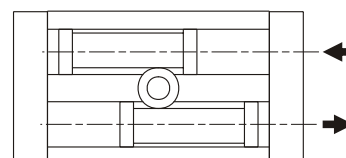
### Order example:



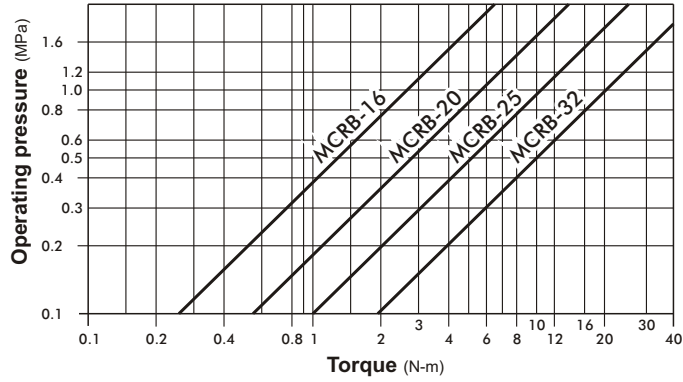
### Symbol:



### Action profile:



### Torque diagram:



### Theoretic force

unit: N · m (kgf · m)

Type	MCRB				
Bore	16	20	25	32	
Operating pressure (Mpa)	0.1	0.24(0.02)	0.50(0.05)	0.98(0.1)	1.94(0.2)
	0.2	0.48(0.05)	1.01(0.1)	1.96(0.2)	3.86(0.39)
	0.3	0.72(0.07)	1.51(0.15)	2.95(0.3)	5.80(0.59)
	0.4	0.96(0.1)	2.01(0.2)	3.93(0.4)	7.72(0.79)
	0.5	1.21(0.12)	2.51(0.25)	4.91(0.5)	9.86(1.0)
	0.6	1.45(0.15)	3.02(0.3)	5.89(0.6)	11.58(1.18)
	0.7	1.69(0.17)	3.52(0.35)	6.87(0.7)	13.52(1.38)

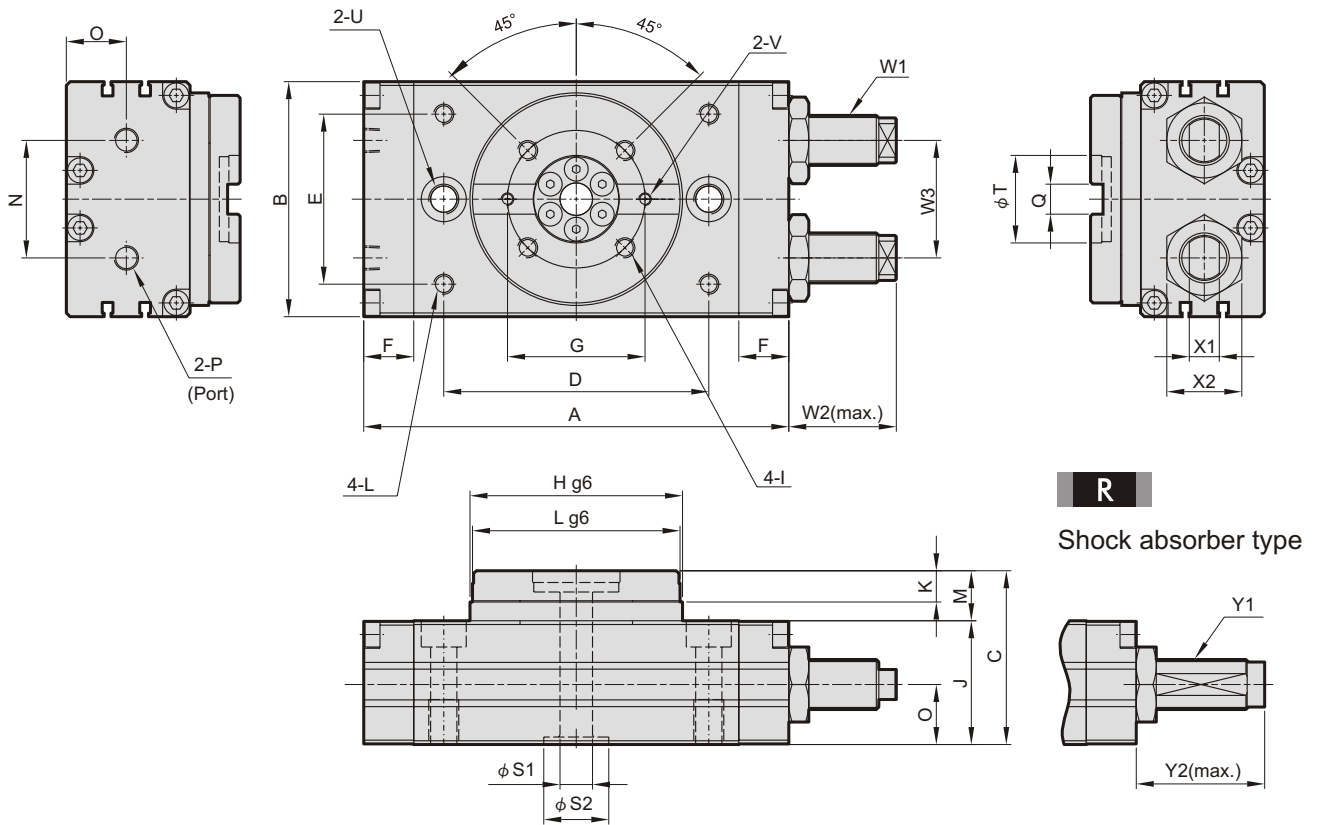
### Allowable Load

Set the load and moment to be applied to the table within the allowable values shown in the table below. (Values outside of limitations will cause excessive play, deteriorate accuracy, and shorten service life.)

Bore	Allowable radial load (N)	Allowable thrust load (N)		Allowable moment (Nm)
		(a)	(b)	
16	78	74	78	2.4
20	147	137	137	4.0
25	196	197	363	5.3
32	314	296	451	9.7

# MCRB $\phi 16 \sim \phi 20$

## ROTARY ACTUATOR



**R**  
Shock absorber type

Code Tubnr I.D.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
16	108	58	47	62	38	15	38	50	M5×7dp,P.C.D38	33	8	M5×8dp	14	26	15.5	PT 1/8
20	128	68	55	78	47	15	46	62.5	M6×7dp,P.C.D46	38	10	M6×8dp	17	27	18.5	PT 1/8
25	135.5	77	58.5	84	55	15.5	48	67	M6×9dp,P.C.D48	41.5	10	M6×8dp	17	37	20	PT 1/8
32	170	94	69.5	106	68	20	55	85	M8×10dp,P.C.D55	49.5	12.5	M8×8.5dp	20	47	24	PT 1/8

Code Tubnr I.D.	Q	S1	S2	T	U	V
16	8 <sup>+0.03</sup> <sub>-0</sub> (wide)×3.3dp	6	17 (H7)×2.5dp	24 (H7)×3dp	2-φ 6.8 thru, φ 11×6.5dp, M8×12dp(sink)	M3×4dp
20	10 <sup>+0.03</sup> <sub>-0</sub> (wide)×3.5dp	10	22 (H7)×2.5dp	32 (H7)×3dp	2-φ 8.6 thru, φ 14×8.5dp, M10×15dp(sink)	M4×6dp
25	12 <sup>+0.03</sup> <sub>-0</sub> (wide)×4dp	13	22 (H7)×3dp	35 (H7)×3.7dp	2-φ 8.6 thru, φ 14×8.5dp, M10×15dp(sink)	M4×5dp
32	12 <sup>+0.03</sup> <sub>-0</sub> (wide)×5dp	13	26 (H7)×3dp	35 (H7)×4.5dp	2-φ 10.5 thru, φ 18×10.5dp, M12×18dp(sink)	M5×5dp

Code Tubnr I.D.	W1	W2	W3	X1	X2	Y1	Y2
16	M10×1.0	27	26	7	17	MAC1007-SN	31
20	M12×1.0	23	32	8	19	MAC1210-SN	36
25	M14×1.5	36	37	8	22	MAC1412-SN(opposite sides 12)	50
32	M20×1.5	43	47	12	30	MAC2015-SN(opposite sides 18)	51

# MCRB Dimension Flange rod type

## ROTARY ACTUATOR



Order example:

**MCRB — 20R — FR — BSP**

MODEL

TUBE I.D.

ANGLE ADJUSTER

Blank: adjuster bolts  
R: Shock absorber

TYPE

Blank: Standard type  
FR: Flange rod type

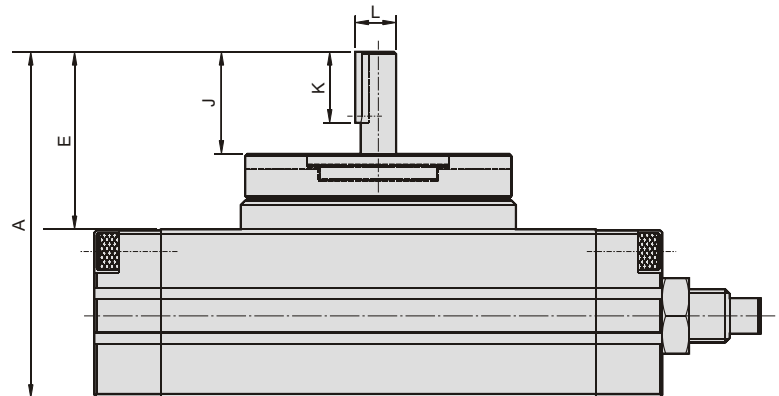
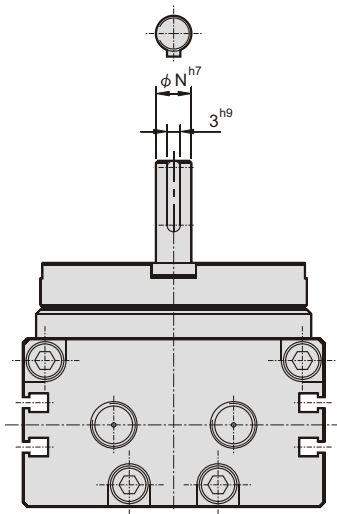
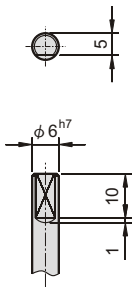
PORT THREAD

Blank: PT thread  
**BSP**: BSP thread  
**NPT**: NPT thread

### Flange rod type

$\phi 16$

$\phi 20 \sim \phi 32$



Code Tube I.D.	A	E	J	K	L	N
<b>16</b>	64.5	31.5	17.5	-	-	-
<b>20</b>	78	40	23	16	9.2	8
<b>25</b>	81.5	40	23	20	11.2	10
<b>32</b>	109.5	60	40	20	13.2	12

※ Other dimensions are the same as standard type.