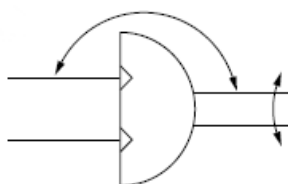


## CRQ2 Series Compact Rotary Actuator Rack&Pinion Type:



### 1.Ordering Code :



<b>C</b>	<input type="checkbox"/>	<b>RQ2</b>	<b>B</b>	<b>S</b>	<b>20</b>	-	<b>90</b>	<input type="checkbox"/>
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**With or without magnet**

Blank: Without magnet inside  
D: With Magnet inside

**Mounting type:**

B: Standard type

**Shaft type**

S: Single shaft  
W: Double shaft

**Bore of rotary actuator**

10:  $\Phi$ 10mm    15:  $\Phi$ 15mm    20:  $\Phi$ 20mm  
30:  $\Phi$ 30mm    40:  $\Phi$ 40mm

**Rotating angle range**

90: 90 degree  
180: 180 degree

**Cushion**

Blank: With air cushion  
C: With air cushion

\*Note: without air cushion for  $\Phi$ 10,  $\Phi$ 15 actuator

## 2.Characteristics:

- 1) Compact, lightweight
- 2) Flexible mounting: Top, bottom, or side mounting is possible.
- 3) Front or side ported is selectable.
- 4) With air cushion, Easy adjustment of cushion valve
- 5) With auto switch (CRQ2 series: M9N, M9P,M9B etc)

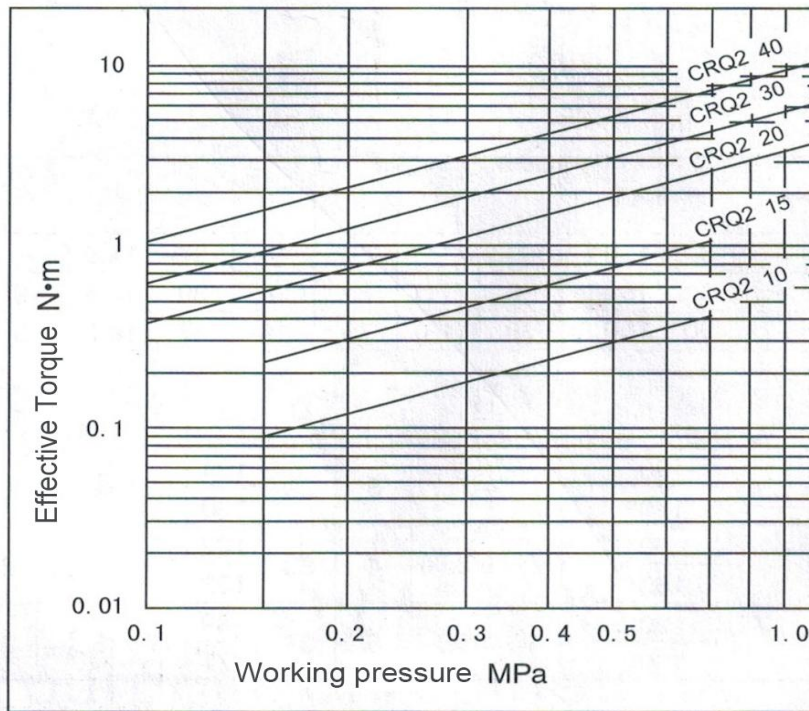
## 3. Reed switches type:

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length [m]				Pre-wired connector	Applicable load			
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)					
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	IC circuit	Relay, PLC	
				3-wire (PNP)				M9PV	M9P	●	●	●	○	○			
				2-wire				M9BV	M9B	●	●	●	○	○			
	Diagnosis indication (2-color indicator)			3-wire (NPN)	24 V	5 V, 12 V	—	M9NWV	M9NW	●	●	●	○	○	○		IC circuit
				3-wire (PNP)				M9PWV	M9PW	●	●	●	○	○			
				2-wire				M9BWV	M9BW	●	●	●	○	○			
	Water resistant (2-color indicator)			3-wire (NPN)	24 V	5 V, 12 V	—	M9NAV*1	M9NA*1	○	○	●	○	○	○		IC circuit
				3-wire (PNP)				M9PAV*1	M9PA*1	○	○	●	○	○			
				2-wire				M9BAV*1	M9BA*1	○	○	●	○	○			
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	IC circuit	—	
				No	2-wire	24 V	12 V	100 V 100 V or less	A93V*2	A93	●	●	●	●	—	—	—

## 4.Specification:

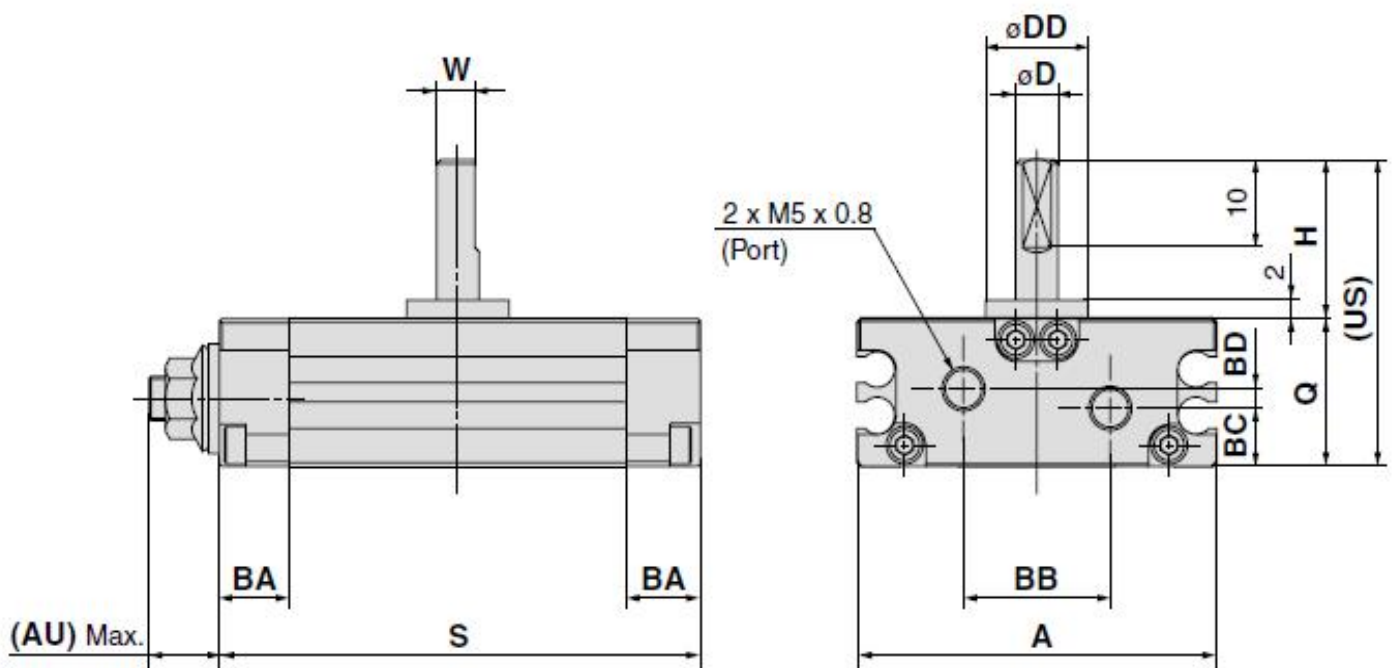
Bore(mm) of rotary actuator	10	15	20	30	40	
Fluid	Compressed air					
Action type	Double acting					
Max.operating pressure	0.7 MPa		1.0 MPa			
Min. operating pressure	0.15 MPa		0.1 MPa			
Ambient and fluid temperature	0°C~60°C (no freezing)					
Cushion	Pad cushion		Not attached, Air cushion			
Tolerance in rotating angle	-5 ° to + 5 °					
Lubrication	Not need (or ISOVG32)					
Effective Torque(N.m)	0.3	0.75	1.8	3.1	5.3	
Allowable kinetic energy(J)	None	-	-	0.025	0.048	0.081
	Pad cushion	0.25x10 <sup>-3</sup>	0.25x10 <sup>-3</sup>	-	-	-
	Air cushion	-	-	0.12	0.25	0.40
Rotating time range (s)	0.2~0.7		0.2~1.0			
Port size	M5x0.8		1/8"PT			

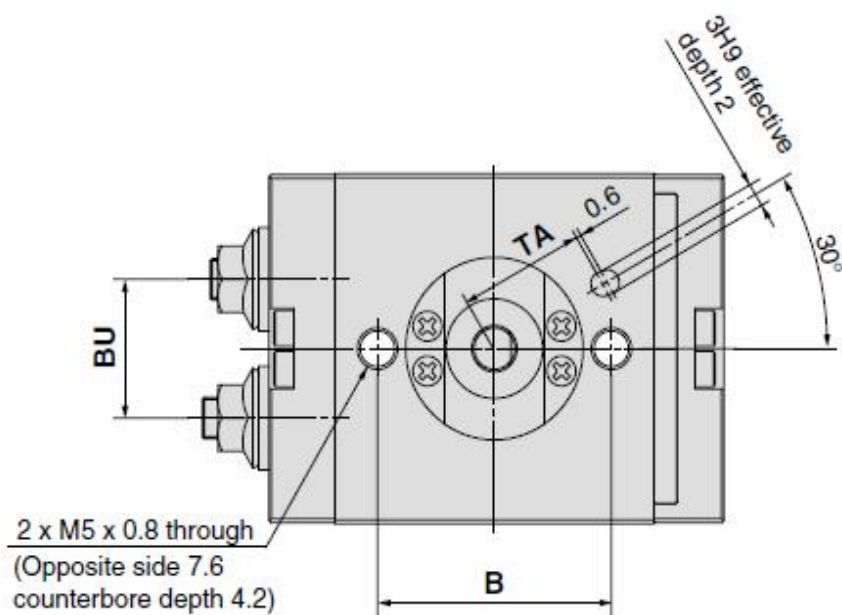
## 5. Effective Torque(N.m):



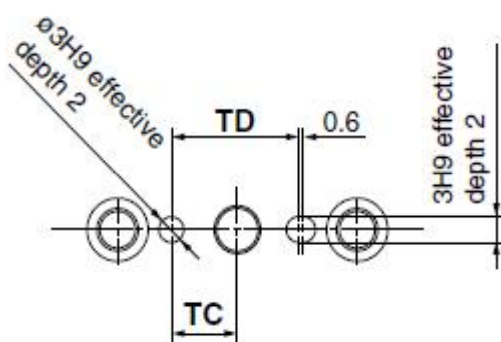
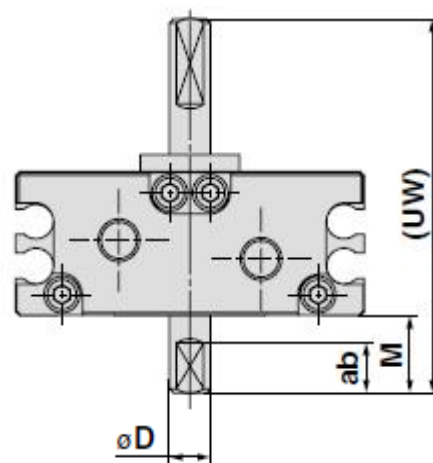
## 6. Overall and Dimension Sheet:

Bore:  $\Phi 10, \Phi 15$





With double shaft



(mm)

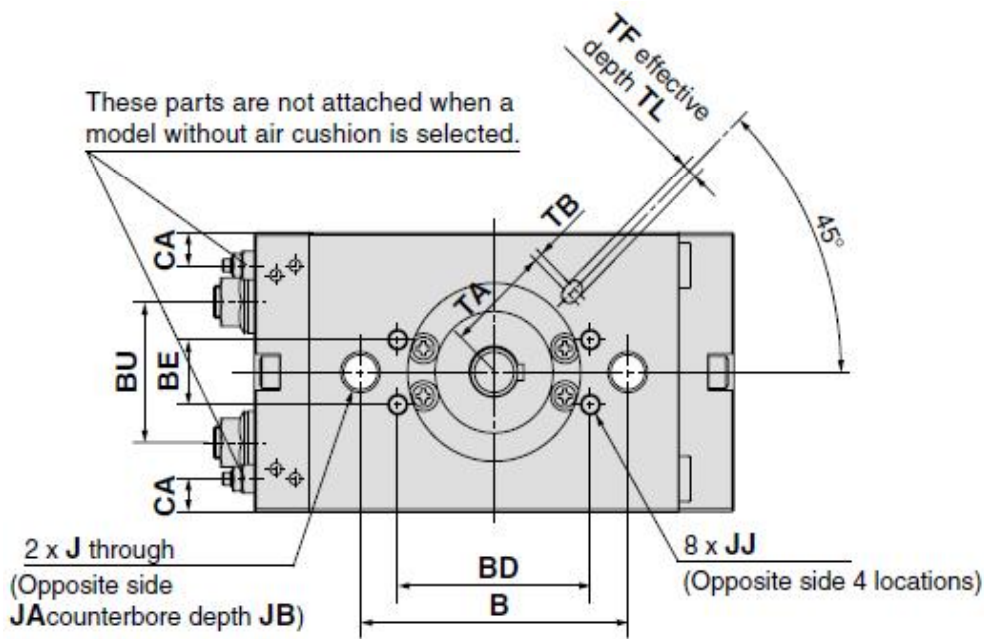
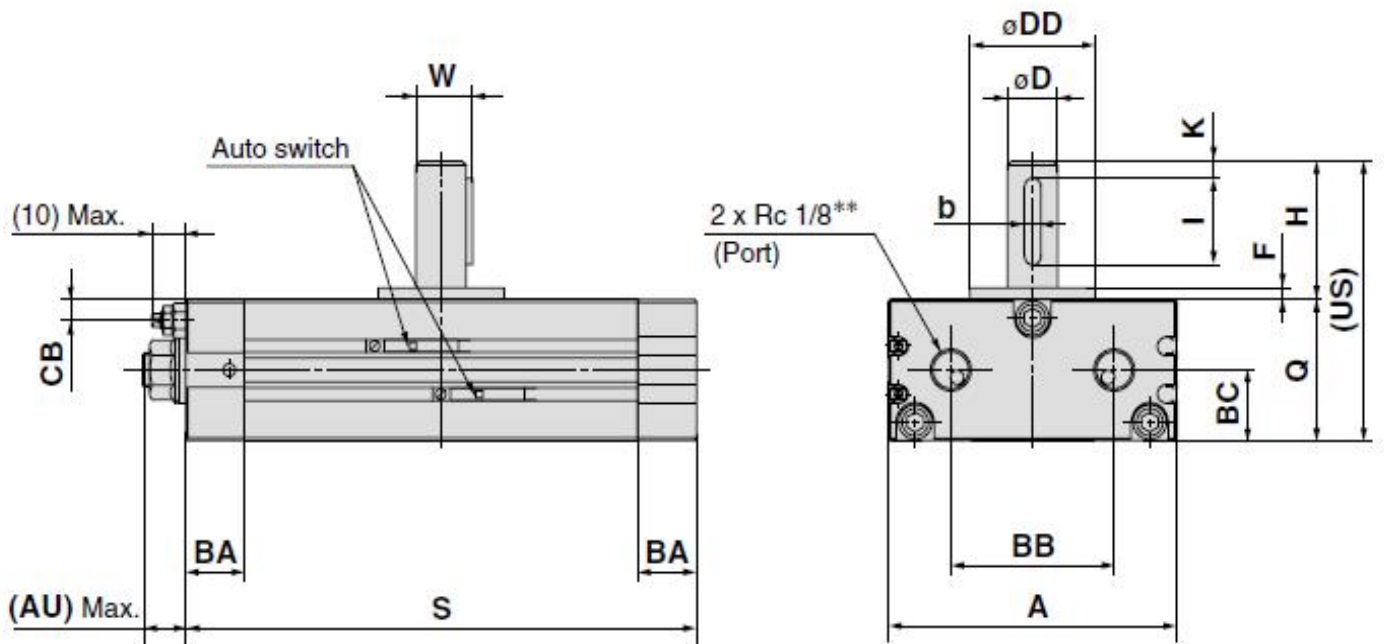
Size	Rotating angle	A	AU*	B	BA	BB	BC	BD	BU	D (g6)	DD (h9)	H
10	90°, 180°, 360°	42	(8.5)	29	8.5	17	6.7	2.2	16.7	5	12	18
15	90°, 180°, 360°	53	(9.5)	31	9	26.4	10.6	—	23.1	6	14	20

Size	Rotating angle	W	Q	S	US	UW	ab	M	TA	TC	TD
10	90°	4.5	17	56	35	44	6	9	15.5	8	15.4
	180°			69							
	360°			97							
15	90°	5.5	20	65	40	50	7	10	16	9	17.6
	180°			82							
	360°			116							

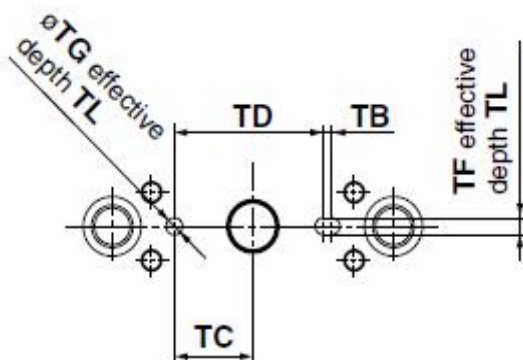
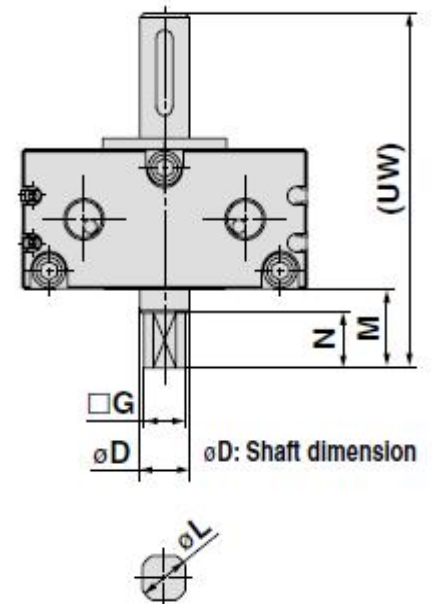
\* AU dimension is not the dimension at the time of shipment, since its dimension is for adjustment parts.

S: Upper 90°, Middle 180°, Lower 360°

Bore :  $\Phi 20, \Phi 30, \Phi 40$



## With double shaft



(mm)

Size	Rotating angle	A	AU*	B	BA	BB	BC	BD	BE	BU	CA	CB	D (g6)	DD (h9)	F	H	J	JA	JB
20	90°, 180°, 360°	63	(11)	50	14	34	14.5	—	—	30.4	7	4.7	10	25	2.5	30	M 8 x 1.25	11	6.5
30	90°, 180°, 360°	69	(11)	68	14	39	16.5	49	16	34.7	8.1	4.9	12	30	3	32	M10 x 1.5	14	8.5
40	90°, 180°, 360°	78	(13)	76	16	47	18.5	55	16	40.4	8.3	5.2	15	32	3	36	M10 x 1.5	14	8.6

Size	Rotating angle	JJ	K	Q	S	W	Key dimensions		US	TA	TB	TC	TD	TF (H9)	TG (H9)	TL	UW	G	M	N	L
							b	I													
20	90°	—	3	29	104	11.5	4 <sup>0</sup> <sub>-0.03</sub>	20	59	24.5	1	13.5	27	4	4	2.5	74	8 <sup>0</sup> <sub>-0.1</sub>	15	11	9.6 <sup>0</sup> <sub>-0.1</sub>
	180°				130																
	360°				180																
30	90°	M5 x 0.8 depth 6	4	33	122	13.5	4 <sup>0</sup> <sub>-0.03</sub>	20	65	27	2	19	36	4	4	2.5	83	10 <sup>0</sup> <sub>-0.1</sub>	18	13	11.4 <sup>0</sup> <sub>-0.1</sub>
	180°				153																
	360°				216																
40	90°	M6 x 1 depth 7	5	37	139	17	5 <sup>0</sup> <sub>-0.03</sub>	25	73	32.5	2	20	39.5	5	5	3.5	93	11 <sup>0</sup> <sub>-0.1</sub>	20	15	14 <sup>0</sup> <sub>-0.1</sub>
	180°				177																
	360°				253																

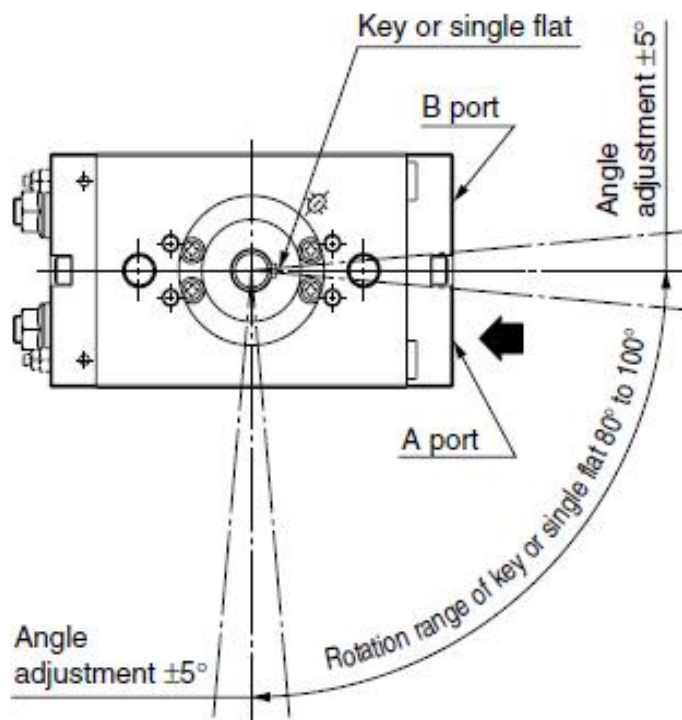
\* AU dimension is not the dimension at the time of shipment, since its dimension is for adjustment parts.

S: Upper 90°, Middle 180°, Lower 360°

\*\* In addition to Rc 1/8, G 1/8, NPT 1/8, NPTF 1/8 are also available.

## 7. Rotation range:

### Rotating angle: 90°



Rotating angle: 180°

