



# Compact Rotary Actuator Rack & Pinion Style **Series CRQ2**

## Specifications

Size	10	15	20	30	40
<b>Fluid</b>	Air (Non-lube)				
<b>Max. operating pressure</b>	0.7 MPa		1.0 MPa		
<b>Min. operating pressure</b>	0.15 MPa		0.1 MPa		
<b>Ambient and fluid temperature</b>	0° to 60°C (No freezing)				
<b>Cushion</b>	Rubber bumper		Not attached, Air cushion		
<b>Angle adjustment range</b>	Rotation end $\pm 5^\circ$				
<b>Rotation</b>	90°, 180°, 360°				
<b>Port size</b>	M5 x 0.8		Rc 1/8, G 1/8, NPT 1/8, NPTF 1/8		
<b>Output (N·m)*</b>	0.3	0.75	1.8	3.1	5.3

\* Output under the operating pressure at 0.5 MPa. Refer to page 30 for further information.

## Allowable Kinetic Energy and Rotation Time Adjustment Range

Size	Allowable kinetic energy				Stable operational rotation time adjustment range
	Allowable kinetic energy (J)			Cushion angle	
	Without cushion	Rubber bumper	With air cushion*		Rotation time (s/90°)
<b>10</b>	—	0.00025	—	—	0.2 to 0.7
<b>15</b>	—	0.00039	—	—	0.2 to 0.7
<b>20</b>	0.025	—	0.12	40°	0.2 to 1
<b>30</b>	0.048	—	0.25	40°	0.2 to 1
<b>40</b>	0.081	—	0.4	40°	0.2 to 1

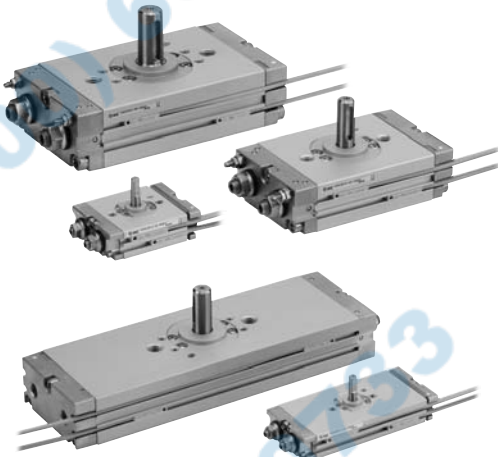
\* Allowable kinetic energy for the bumper equipped type  
Maximum absorbed energy under proper adjustment of the cushion needles.

If operated where the kinetic energy exceeds the allowable value, this may cause damage to the internal parts and result in product failure. Please pay special attention to the kinetic energy levels when designing, adjusting and during operation to avoid exceeding the allowable limit.

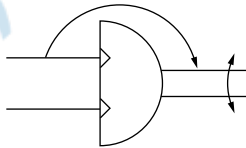
## Mass

Size	Standard mass* (g)		
	90°	180°	360°
<b>10</b>	120	150	200
<b>15</b>	220	270	380
<b>20</b>	600	700	1000
<b>30</b>	900	1100	1510
<b>40</b>	1400	1600	2280

\* Excluding the mass of auto switch.



### JIS Symbol



**Made to order**  
Refer to pages 256 to 270 for details.

Symbol	Specifications/Content	Applicable shaft type
—	Shaft type variation	X, Y, Z, T, J, K
<b>XA1 to XA24</b>	Shaft pattern sequencing I	S, W
<b>XA31 to XA59</b>	Shaft pattern sequencing II	X, Y, Z, T, J, K
<b>XC7</b>	Reversed shaft	S, W, X, T, J
<b>XC8 to XC11</b>	Change of rotating range	S, W, Y X*, Z*, T*, J*, K*
<b>XC12 to XC15</b>	Change of angle adjustable range (0° to 100°)	
<b>XC16, XC17</b>	Change of angle adjustable range (90° to 190°)	
<b>XC18, XC19</b>	Change of rotating range	
<b>XC20, XC21</b>	Change of angle adjustable range (90° to 190°)	
<b>XC22</b>	Without inner rubber bumper	S, W, X, Y, Z, T, J, K
<b>XC30</b>	Fluorine grease	
<b>XC69</b>	Fluororubber seal	
<b>X6</b>	Shaft and parallel key made of stainless steel	

\* Among the symbols XC8 to XC21, only XC12 and XC16 are compatible with shaft types X, Z, T, J and K.

## ⚠ Precautions

**Be sure to read before handling.**  
**Refer to front matters 38 and 39 for Safety Instructions and pages 4 to 13 for Rotary Actuator and Auto Switch Precautions.**

### ⚠ Caution

(1) The angle adjusting screw (angle adjustment bolt) is set at random within the adjustable rotating range. Therefore, it must be readjusted to obtain the angle that suits your application.