

# Rotary Actuator Rack & Pinion Style Series CRA1

**ANSSION**  
PNEUMATIC & HYDRAULIC

◆ How to Order

C D RA1 B S 50 90

**Air cushion**

Nil	None	<b>C</b>	With air cushion
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Note): size 30 is not available for "C" type.

**Rotating angle**

Standard	90	90°
	180	180°
Option	100	100°
	190	190°

**Size (mm)**

30	50	63	80	100
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**Shaft type**

Standard	<b>S</b>	Single shaft
	<b>W</b>	Double shaft
Option	<b>X</b>	Single shaft with four chamfers
	<b>Y</b>	Double shaft key
	<b>Z</b>	Double shaft with four chamfers

Note): size 30 is only available for double shaft.

**Mounting style**

<b>B</b>	Basic style	<b>L</b>	Foot style	<b>F*</b>	Flange style
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**Magnet**

Nil	Without magnet	<b>D</b>	Built-in magnet
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◆ Specifications

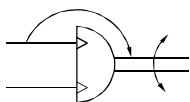
Bore size (mm)	30	50	63	80	100
Fluid	Filtered compressed air				
Proof pressure	1.5 MPa				
Operating pressure range	0.1~1.0 MPa				
Ambient and fluid temperature	0~60°C (No freezing)				
Port size	M5×0.8	Rc1/8		Rc1/4	Rc3/8
Cushion	None	Not attached, Air cushion			
Output (N · m) <sup>(1)</sup>	1.9	9.3	17	32	74
Mounting style*	Basic style, Foot style, Flange style				

◆ Allowable Kinetic Energy/Safe Range of Rotation Time

Model	Allowable kinetic energy			Adjustable range of rotation time Safe in operation Rotation time (s/90°)
	Allowable kinetic energy (mJ)		Cushion angle	
	Without cushion	With cushion		
CRA1□W30	10	-	-	0.2 to 1
CRA1□□50	50	980	35°	0.2 to 2
CRA1□□63	120	1500	35°	0.2 to 3
CRA1□□80	160	2000	35°	0.2 to 4
CRA1□□100	540	2900	35°	0.2 to 5

Note): Allowable kinetic energy of the bumpers equipped model  
The maximum absorbed energy under proper adjustment of the cushion needle.

Symbol



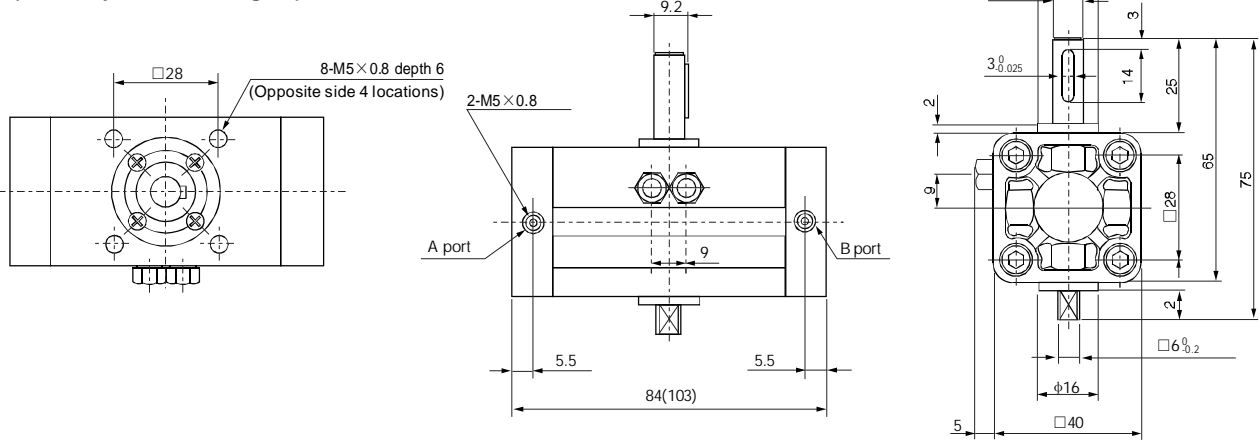
- I
- CJP
- CJ1
- DNC
- DNCB
- DNG
- C95
- SI
- CS1
- MB
- SU
- SC
- DSNU
- C85
- CJ2
- CM2
- MA
- MAL
- ADVU
- CQ2
- CQS
- SDA
- CU
- DPZ
- CXS
- TN
- ADVUL
- CQM
- MGP
- MGG
- CRA1**
- CY1B
- CS  
Auto switch
- D  
Auto switch
- AC,AD
- HR
- RB
- RBQ

# Rotary Actuator Rack & Pinion Style Series CRA1

◆ **Dimensions**

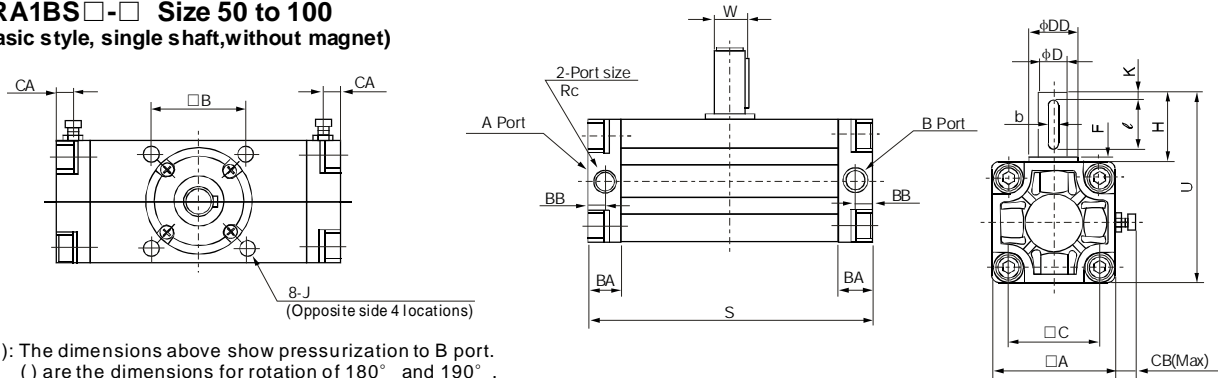
This drawing is for 90° Specifications.

**CRA1BW□-□ Size 30**  
(Basic style, without magnet)



Note: ( ) are the dimensions for rotation of 180° and 190° .

**CRA1BS□-□ Size 50 to 100**  
(Basic style, single shaft, without magnet)



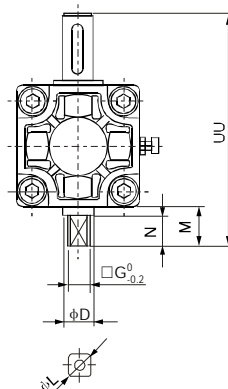
Note): The dimensions above show pressurization to B port.  
( ) are the dimensions for rotation of 180° and 190° .  
\* For model with air cushion.

Model	Port size Rc	A	B	C	D (g6)	DD (h9)	F	H	J	K	S	U	W	BA	BB	CA	CB	Keyway dimensions	
																		b	ℓ
CRA1BS50	1/8	62	48	46	15	25	2.5	36	M8 x 1.25 Depth 8	5	144 (177)	98	17	17	8.5	8.5	13	5 <sup>0</sup> <sub>-0.030</sub>	25
CRA1BS63	1/8	76	60	57	17	30	2.5	41	M10 x 1.5 Depth 12	5	163 (201.5)	117	19.5	20	10	10	14	6 <sup>0</sup> <sub>-0.030</sub>	30
CRA1BS80	1/4	92	72	70	20	35	3	50	M12 x 1.75 Depth 13	5	186 (230)	142	22.5	23.5	12	12	18	6 <sup>0</sup> <sub>-0.030</sub>	40
CRA1BS100	3/8	112	85	85	25	40	4	60	M12 x 1.75 Depth 14	5	245 (311)	172	28	25	12.5	12.5	18	8 <sup>0</sup> <sub>-0.036</sub>	45

**CRA1BW□-□ Size 50 to 100**  
(Basic style, double shaft, without magnet)

Model	D(g6)	G	M	N	UU	L
CRA1BW50	15	11	20	15	118	14
CRA1BW63	17	13	22	17	139	16
CRA1BW80	20	15	25	20	167	19
CRA1BW100	25	19	30	25	202	24

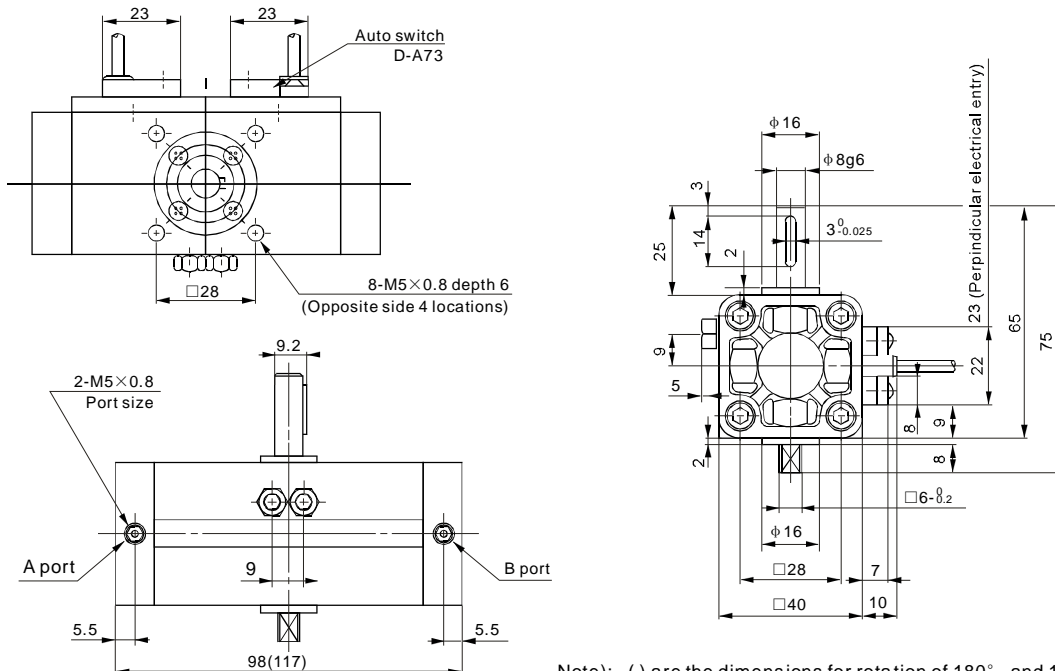
Note): Other dimensions are the same as the single shaft.



# Rotary Actuator Rack & Pinion Style Series CRA1

**ANSSION**  
PNEUMATIC & HYDRAULIC

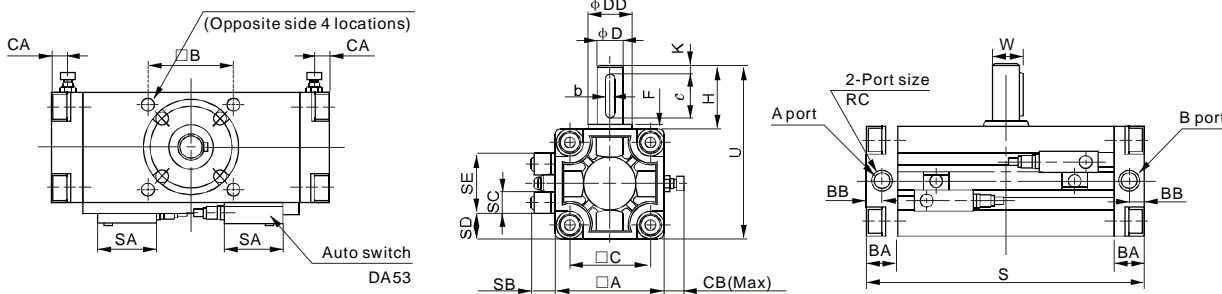
## CDRA1BW□-□ Size 30 (Basic style, without magnet)



Note: ( ) are the dimensions for rotation of 180° and 190° .

## CDRA1BS□-□ Size 50 to 100 (Basic style, single shaft, built-in magnet)

Note: The dimensions above show pressurization to B port.  
( ) are the dimensions for rotation of 180° and 190° .  
\* For model with air cushion.



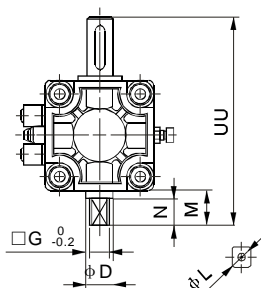
### Single shaft type

Model	Port size Rc	A	B	C	D (g6)	DD (h9)	F	H	J	K	S	U	W	BA	BB	CA	CB	SA	SB	SC	SD	SE	Keyway dimensions	
																							b	e
CDRA1BS50	1/8	62	48	46	15	25	2.5	36	M8×1.25 depth 8	5	156(189)	98	17	17	8.5	8.5	13	33	13.5	12	14	34	5 <sup>0</sup> <sub>-0.030</sub>	34
CDRA1BS63	1/8	76	60	57	17	30	2.5	41	M10×1.5 depth 12	5	175(213.5)	117	19.5	20	10	10	14	33	14.5	12	21	34	6 <sup>0</sup> <sub>-0.030</sub>	34
CDRA1BS80	1/4	92	72	70	20	35	3	50	M12×1.75 depth 13	5	199(243)	142	22.5	23.5	12	12	18	33	15.5	12	29	34	6 <sup>0</sup> <sub>-0.030</sub>	34
CDRA1BS100	3/8	112	85	85	25	40	4	60	M12×1.75 depth 14	5	259(325)	172	28	25	12.5	12.5	18	33	16	12	39	34	8 <sup>0</sup> <sub>-0.036</sub>	34

## CDRA1BW□-□ Size 50 to 100 (Basic style, double shaft, built-in magnet)

### Double shaft type:

Size	D(g6)	G	M	N	UU	L
50	15	11	20	15	118	14
63	17	13	22	17	139	16
80	20	15	25	20	167	19
100	25	19	30	25	202	24



Note: Other dimensions are the same as the single shaft.

I
CJP
CJ1
DNC
DNCB
DNG
C95
SI
CS1
MB
SU
SC
DSNU
C85
CJ2
CM2
MA
MAL
ADVU
CQ2
CQS
SDA
CU
DPZ
CXS
TN
ADVUL
CQM
MGP
MGG
<b>CRA1</b>
CY1B
CS Auto switch
D Auto switch
AC,AD
HR
RB
RBQ