

# Vane Type Rotary Actuator with Angle Adjuster

## Series CRB2BWU

Sizes: 10, 15, 20, 30, 40

### How to Order

Standard

**CRB2 B WU 10-180 S**

Size: 10, 15, 20, 30, 40

With auto switch  
Sizes: 10, 15

**CDRB2 F WU 10-180 S-90 L**

Size: 10, 15

With auto switch  
Sizes: 20, 30, 40

**CDRB2 B WU 20-180 S-R73 L**

Size: 20, 30, 40

**Mounting:**

<b>B</b>	Basic type
<b>F</b>	Flange type

\* F: except for size 40

**With angle adjuster:**

Vane type	Symbol	Rotation
Single vane	<b>90</b>	90°
	<b>180</b>	180°
	<b>270</b>	270°
Double vane	<b>90</b>	90°
	<b>100</b>	100°

**Vane type:**

<b>S</b>	Single vane
<b>D</b>	Double vane

**Auto switch type:**

<b>Nil</b>	Without auto switch
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\* Select applicable auto switches from the table below.

**Number of auto switches:**

<b>S</b>	1 pc.*
<b>Nil</b>	2 pcs.

\* Right-hand auto switch will be used for actuators with 1 auto switch.

**Electrical entry/Lead wire length:**

<b>Nil</b>	Grommet, Lead wire: 0.5m
<b>L</b>	Grommet, Lead wire: 3m
<b>C</b>	Grommet, Lead wire: 0.5m
<b>CL</b>	Grommet, Lead wire: 3m
<b>CN</b>	Grommet, Without lead wire

Notes) • Connectors are available only for auto switch types D-R73, D-R80, D-T79.  
• Part numbers for lead wires with connectors, and their respective wire length in ( ), are: D-LC05 (0.5m); D-LC30 (3m); D-LC50 (5m)

**Auto switch specifications:** Refer to page 91 for detailed auto switch specifications.

Applicable size	Type	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.	Lead wire type	Lead wire length*				Applicable loads	
					DC	AC			0.5 (Nil)	3 (L)	5 (Z)	None (N)		
For 10 and 15	Reed	Grommet	No	2-wire	24V	5V, 12V	24V or less	<b>90</b>	Parallel cord	●	●	●	—	Relay PLC
						100V or less	<b>90A</b>	Heavy-duty cord	●	●	●	—		
						12V	—	<b>97</b>	Parallel cord	●	●	●	—	
						100V	—	<b>93A</b>	Heavy-duty cord	●	●	—	—	
	Solid state	Grommet	Yes	3-wire (NPN)	24V	—	—	<b>T99</b>	Heavy-duty cord	●	●	—	—	Relay PLC
								<b>T99V</b>	Heavy-duty cord	●	●	—	—	
								<b>S99</b>	Heavy-duty cord	●	●	—	—	
								<b>S99V</b>	Heavy-duty cord	●	●	—	—	
								<b>S9P</b>	Heavy-duty cord	●	●	—	—	
								<b>S9PV</b>	Heavy-duty cord	●	●	—	—	
For 20, 30, and 40	Reed	Grommet	Yes	2-wire	24V	12V	100V	<b>R73</b>	Heavy-duty cord	●	●	—	Relay PLC	
						—	—	<b>R73C</b>	Heavy-duty cord	●	●	●		
						5V, 12V	100V or less	<b>R80</b>	Heavy-duty cord	●	●	—		
						24V or less	24V or less	<b>R80C</b>	Heavy-duty cord	●	●	—		
	Solid state	Grommet	Yes	3-wire (NPN)	24V	—	—	<b>T79</b>	Heavy-duty cord	●	●	—	Relay PLC	
								<b>T79C</b>	Heavy-duty cord	●	●	—		
								<b>S79</b>	Heavy-duty cord	●	●	—		—
								<b>S79C</b>	Heavy-duty cord	●	●	—		—
								<b>S7P</b>	Heavy-duty cord	●	●	—		—
								<b>S7PC</b>	Heavy-duty cord	●	●	—		—

\* Lead wire length symbol

0.5m	..... Nil	(Example) R73C
3m	..... L	(Example) R73CL
5m	..... Z	(Example) R73CZ
None	..... N	(Example) R73CN

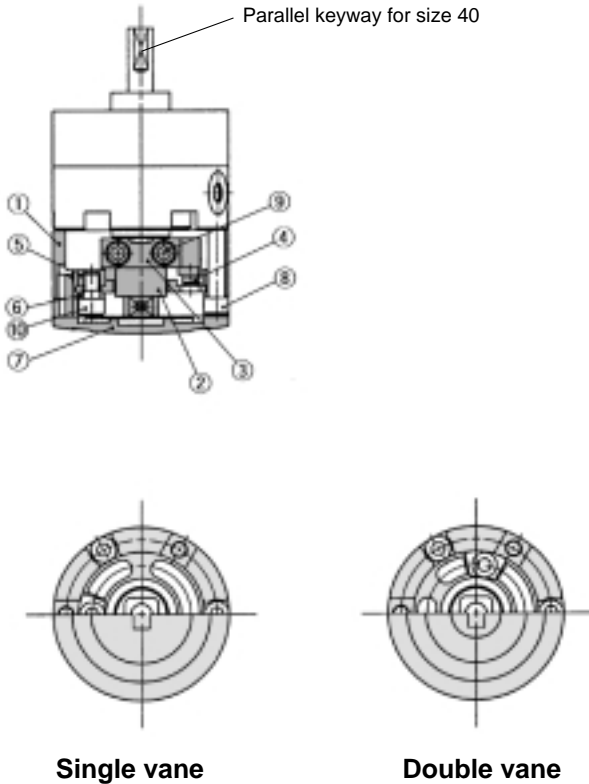
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## Construction

(Same switch units are used for both single and double vane type.)

### With angle adjuster

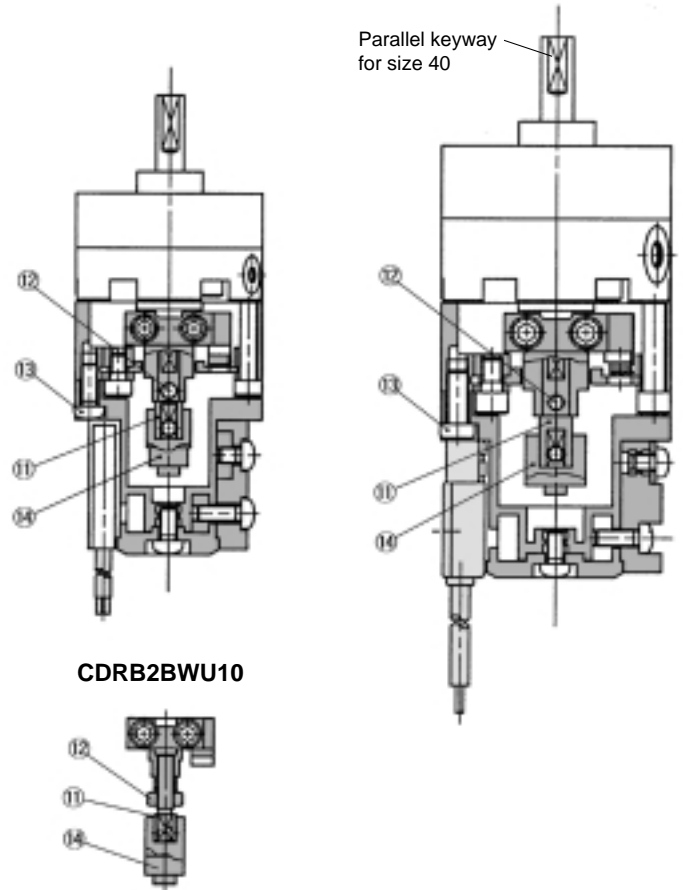
CRB2BWU10, 15, 20, 30, 40-□<sup>S</sup><sub>D</sub>



### With angle adjuster + Auto switch unit

CDRB2BWU10, 15-□<sup>S</sup><sub>D</sub>

CDRB2BWU20, 30, 40-□<sup>S</sup><sub>D</sub>



### Parts list

No.	Description	Material	Note
1	Stopper ring	Die-cast aluminum	
2	Stopper lever	Carbon steel	
3	Lever retainer	Carbon steel	Zinc chromated
4	Rubber bumper	NBR	
5	Stopper block	Carbon steel	Zinc chromated
6	Block retainer	Carbon steel	Zinc chromated
7	Cap	Resin	
8	Hexagon socket head cap screw	Stainless steel	Special screw
9	Hexagon socket head cap screw	Stainless steel	Special screw
10	Hexagon socket head cap screw	Stainless steel	Special screw
11	Joint	Aluminum alloy	See note below.
12	Hexagon socket head set screw	Stainless steel	Hexagon nut will be used for size 10 only.
	Hexagon nut	Stainless steel	
13	Round head Phillips screw	Stainless steel	See note below.
14	Magnet lever	—	See note below.

Note) These items (No. 11, 13, and 14) consist of auto switch unit and angle adjuster. Refer to pages 84 and 85 for detailed specifications.

## ⚠ Specific Product Precautions

Be sure to read before handling.  
Refer to pages 104 through 110 for safety precautions, actuator precautions, and auto switch precautions.

### Angle Adjuster

## ⚠ Caution

1. Since the maximum angle of the rotation adjustment range will be limited by the rotation of the rotary actuator itself, make sure to take this into consideration when ordering.

Rotation of the rotary actuator	Rotation adjustment range
270° <sup>+0</sup>	0° to 230° (Sizes: 10, 40)* 0° to 240° (Sizes: 15, 20, 30)
180° <sup>+0</sup>	0° to 175°
90° <sup>+0</sup>	0° to 85°

\* The maximum adjustment angle of the angle adjuster for size 10 and 40 is 230°.

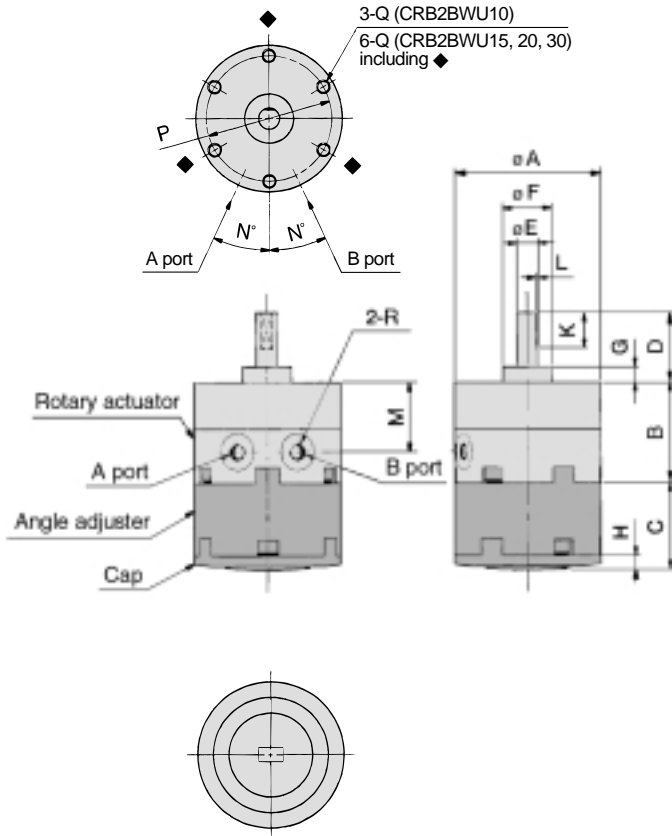
2. Connecting ports are side ports only.
3. The allowable kinetic energy is the same as the specifications of the rotary actuator by itself (i.e., without angle adjuster).
4. Use a 100° rotary actuator if you desire to adjust the angle to 90° using a double vane type.

# Series CRB2BWU

## Dimensions: 10, 15, 20, 30 (with Angle Adjuster)

### Single vane type

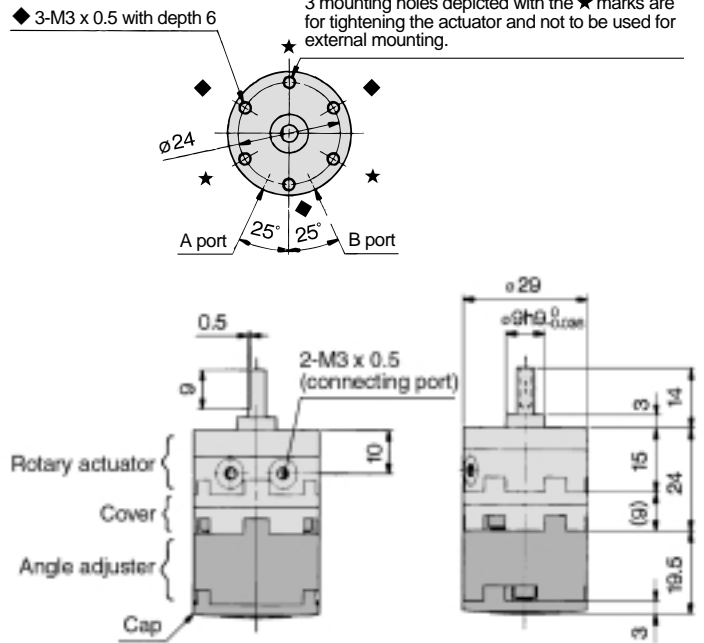
CRB2BWU10, 15, 20, 30-□S • Following illustrations show actuator for 90° when A port is pressurized.



### Double vane type

CRB2BWU10-□D

• Following illustrations show the intermediate rotation position when A or B port is pressurized.



### Double vane type

CRB2BWU15, 20, 30-□D

Dimensions for double vane type sizes 15, 20, and 30 are the same as those of single type.

Model	A	B	C	D	E (g6)	F (h9)	G	H	K	L	M	N	P	Q
CRB2BWU10-□S	29	15	19.5	14	4	9	3	3	9	0.5	10	25	24	M3 x 0.5 with depth 6
CRB2BWU15-□S	34	20	21.2	18	5	12	4	3.2	10	0.5	15	25	29	M3 x 0.5 with depth 5
CRB2BWU15-□D														
CRB2BWU20-□S	42	29	25	20	6	14	4.5	4	10	0.5	20	25	36	M4 x 0.7 with depth 7
CRB2BWU20-□D														
CRB2BWU30-□S	50	40	29	22	8	16	5	4.5	12	1	30	25	43	M5 x 0.8 with depth 10
CRB2BWU30-□D														

Model	R			
	90°	100°	180°	270°
CRB2BWU10-□S	M5 x 0.8	—	M5 x 0.8	M3 x 0.5
CRB2BWU10-□D	M3 x 0.5		—	
CRB2BWU15-□S	M5 x 0.8	—	M5 x 0.8	M3 x 0.5
CRB2BWU15-□D	M3 x 0.5		—	
CRB2BWU20-□S	M5 x 0.8	—	M5 x 0.8	
CRB2BWU20-□D	M5 x 0.8		—	
CRB2BWU30-□S	M5 x 0.8	—	M5 x 0.8	
CRB2BWU30-□D	M5 x 0.8		—	