

Series 11-CRA1

Rack & Pinion type
Rotary actuator: Size 30, 50

How to Order

● **Clean series**

11	Vacuum suction type
----	---------------------

● **Auto switch**

Nil	No
D	With auto switch

● **Mounting style**

B	Basic style
L	Foot style

● **Shaft type**

S*	Single shaft
W	Double shaft

* Not available for ø30

● **Size**

30
50

● **Rotating angle**

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

* Not available for ø30

● **Cushion**

Nil	Without air cushion
C*	With air cushion on both ends

* Not available for ø30

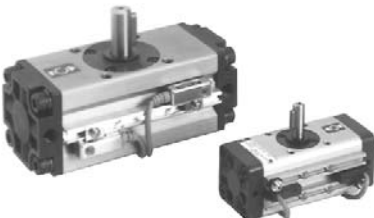
● **Number of auto switches**

Nil	2 pcs.
S	1 pc.

● **Auto switch**

30	A73, J79, F79
50	A54, J59, F59

Ordering Example: 11 - C D R A 1 B S 50 - 90 C - A53



Specifications

Size	30	50
Fluid	Air (Non-lube)	
Max. operating pressure	1MPa	
Min. operating pressure	0.1MPa	
Ambient and fluid temperature	0 to 60°C	
Cushion	With air cushion	Not available
Allowable kinetic energy (mJ)	Without air cushion	10
	With air cushion	—
Cushion angle	—	35°
Adjustable range of rotation time	0.2 to 1 s/90°	0.2 to 2 s/90°
Port size	M5 x 0.8	Rc1/8
Mounting style	Basic style, Flange style	
Grease	Fluorine grease	
Particle generation grade (Refer to front matter pages 13 to 22 for details.)	Grade 2	

* The maximum absorbed energy under proper adjustment of the cushion needle

Suction flow rate of vacuum suction type (Reference values)

Size	Suction flow rate l/min (ANR)
30	1
50	5

Auto switch specifications (Refer to Best Pneumatics catalog for further information on auto switches.)

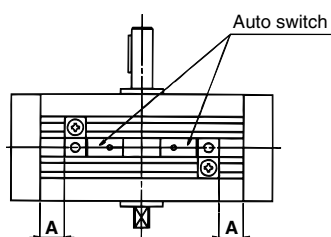
Type		Auto switch model	Load voltage	Load current range	Indicator light	Applicable load
30	Reed switch	D-A73	24 VDC/100 VAC	5 to 40 mA, 5 to 20 mA	Yes	Relay, PLC
	Solid state switch	D-J79	24 VDC (10 to 28 VDC)	5 to 150 mA	Yes	24 VDC relay, PLC
		D-F79	28 VDC or less	150 mA or less	Yes	Relay, PLC, IC circuit
50	Reed switch	D-A54	24 VDC/100 VAC/200 VAC	5 to 50 mA, 5 to 25 mA, 5 to 12.5 mA	Yes	Relay, PLC
	Solid state switch	D-J59	24 VDC (10 to 28 VDC)	5 to 150 mA	Yes	24 VDC relay, PLC
		D-F59	28 VDC or less	150 mA or less	Yes	Relay, PLC, IC circuit

Refer to page 212 for a list of applicable auto switches.

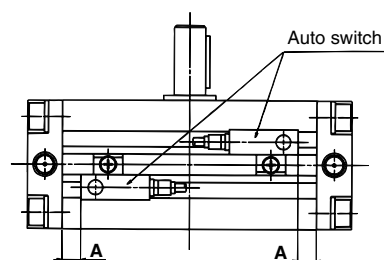
PLC: Programmable Logic Controller

Proper auto switch mounting position

Size 30



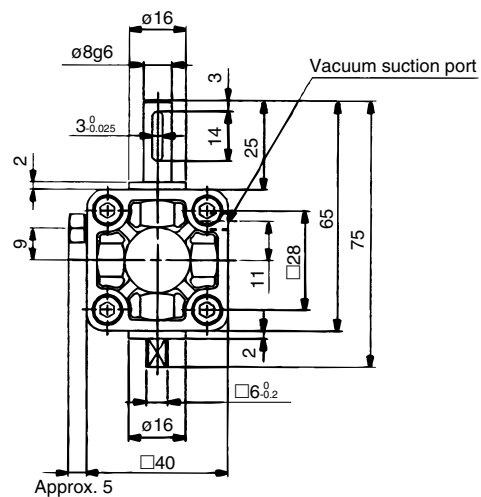
Size 50



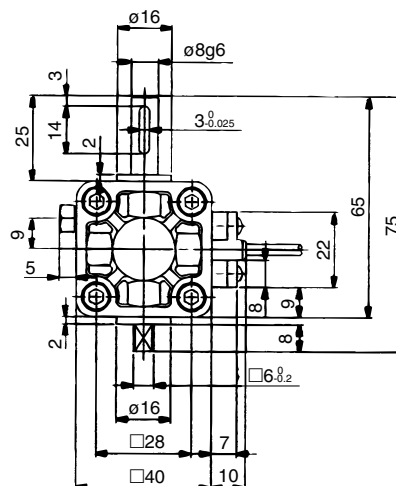
Model	A (mm)	Operating range	Hysteresis range
11-CDRA1□W30-90/180	9 (19)	95°	20°
11-CDRA1□□50-90/180	9 (26)	65°	20°

* The dimensions inside () are for 180°.

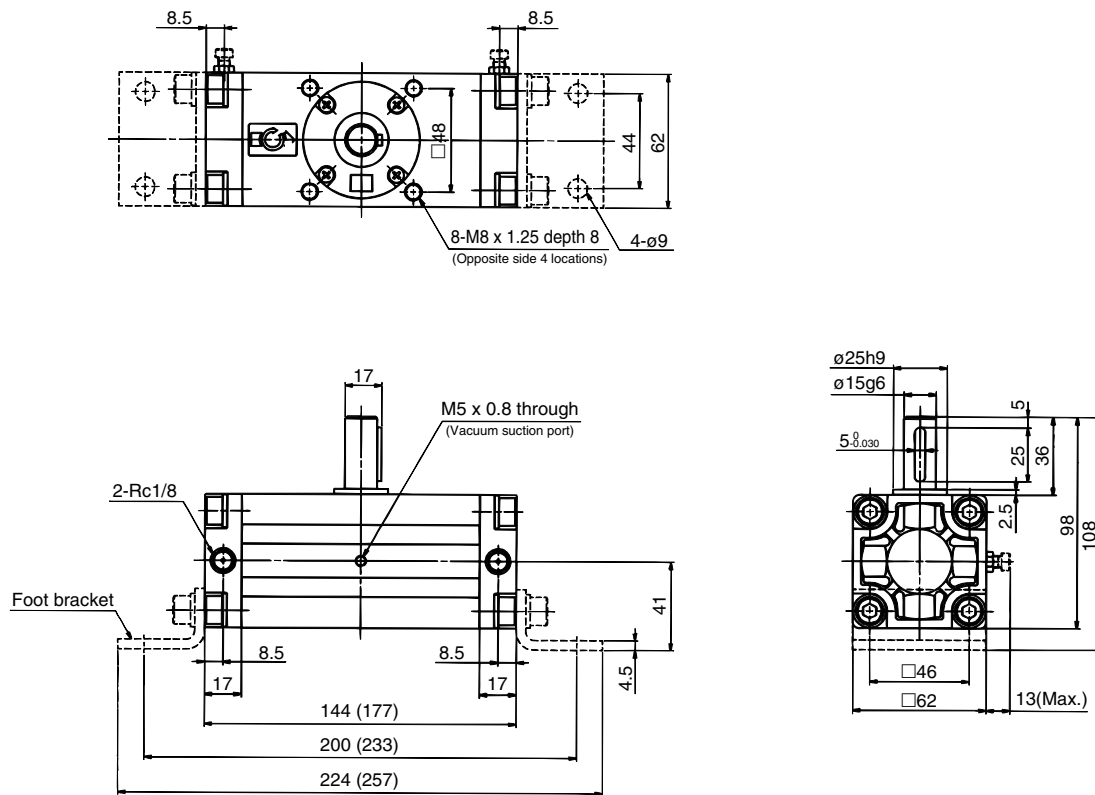
** Up to 2 auto switches can be mounted per actuator.



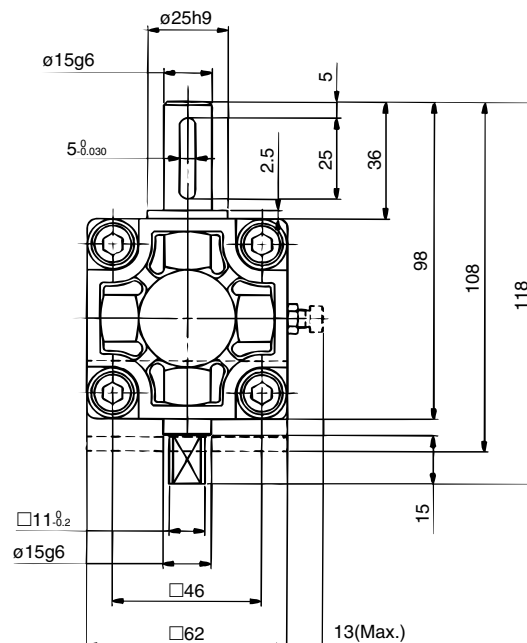
Double shaft (With auto switch) / 11-CDRA1□W30



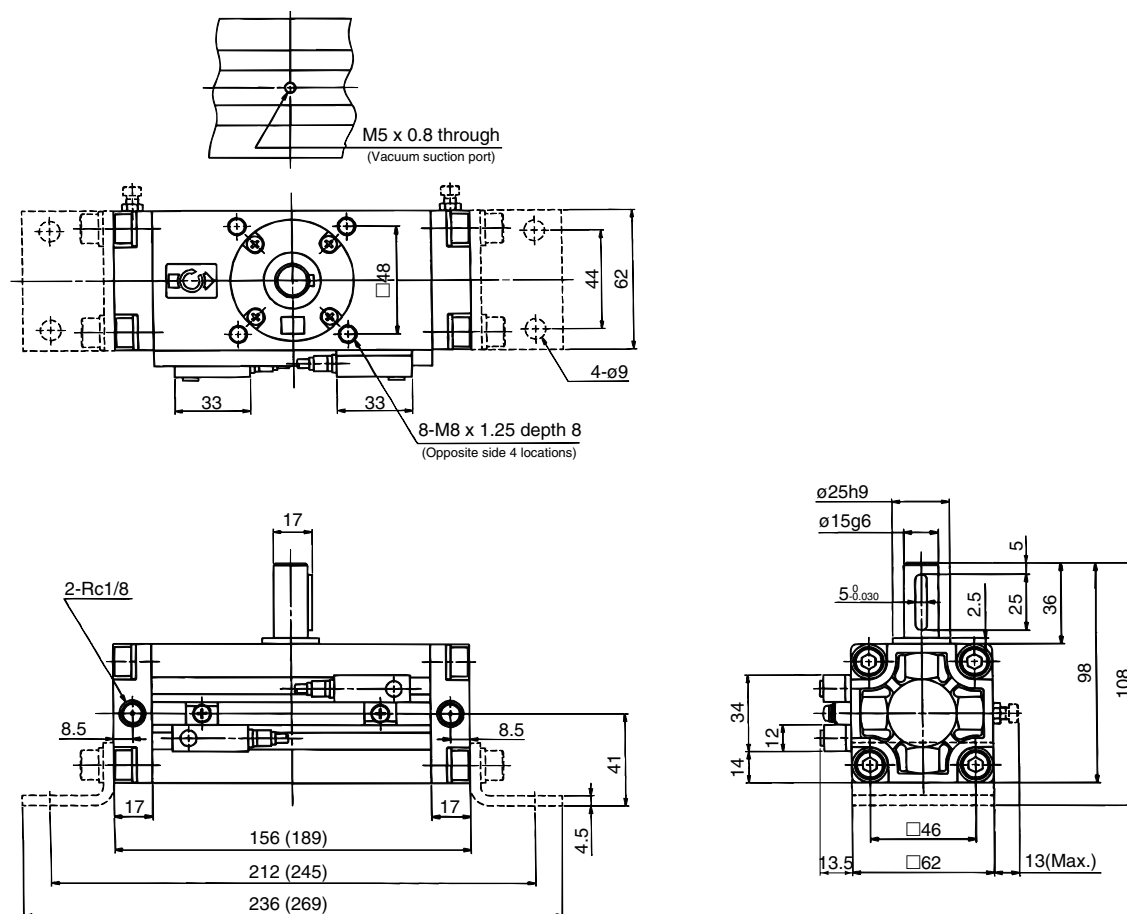
Single shaft (Without auto switch) / 11-CRA1□S50



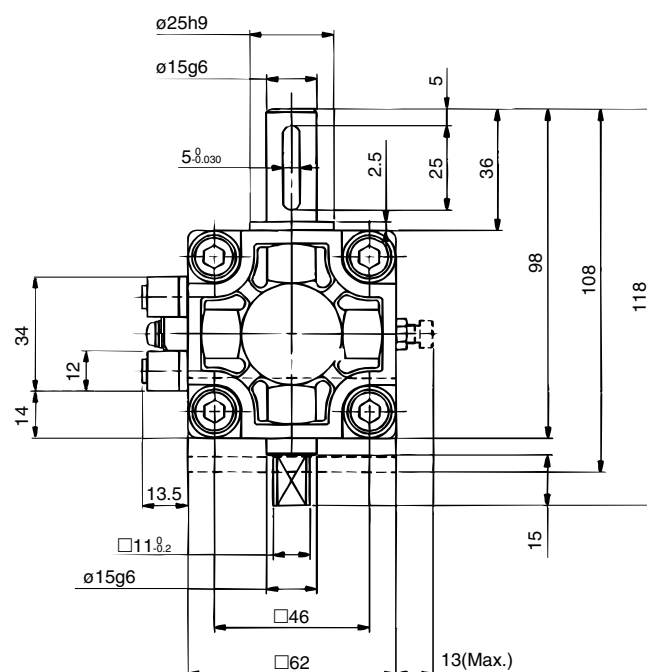
Double shaft (Without auto switch) / 11-CRA1□W50



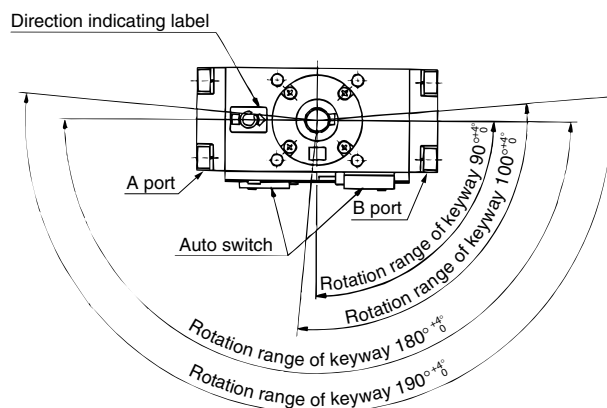
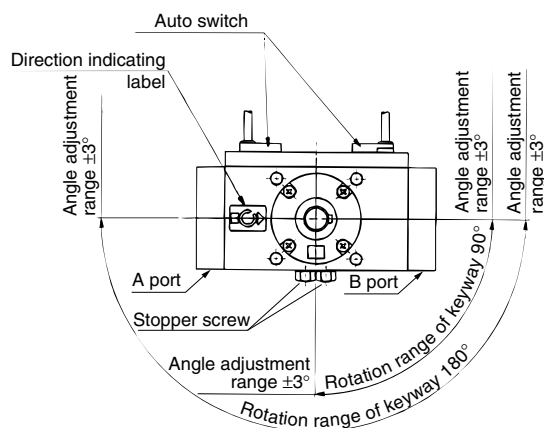
Single shaft (With auto switch) / 11-CDRA1□S50



Double Shaft (With auto switch) / 11-CDRA1□W50

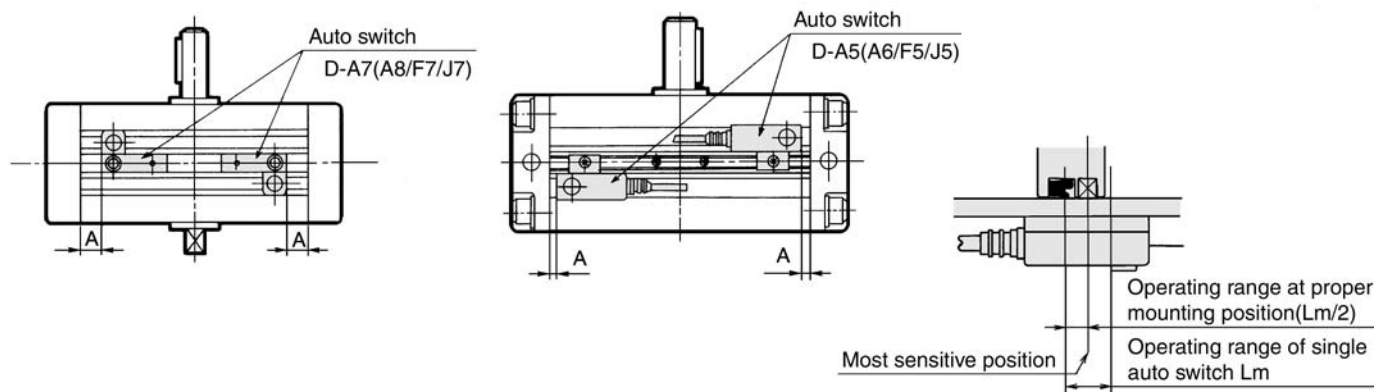


Rotation range of keyway / Switch mounting position

11-CDRA1□W30
11-CDRA1□□50


* If air pressure is applied from the A side of the direction indicating label, the shaft rotates clockwise. If air pressure is applied from the B side, the shaft rotates counterclockwise.

Proper auto switch mounting position at rotation end

11-CDRA1□W30
11-CDRA1□□50


Operating angle θ m: Converts the operating range (Lm) of the auto switch into the rotation angle.
 Angle of hysteresis: The hysteresis of the auto switch is converted to degrees.

Model	A (mm)	Operating angle θ m	Hysteresis angle ^{Note 1)}
11-CDRA1□W 30-90	9 (19)	95°	20°
11-CDRA1□□ 50-90	9 (26)	65°	20°

* The dimensions inside () are for 180. ** Up to 2 auto switches can be mounted per actuator.

The dimensions in the table are the values that represent the most sensitive positions of the auto switches.

Thus, they are not the dimensions that represent the mounting position at the time of shipment.

★ Please consult with SMC concerning the angles for the auto switches other than the models D-A73 and D-A53.