

# Center Lock Unit

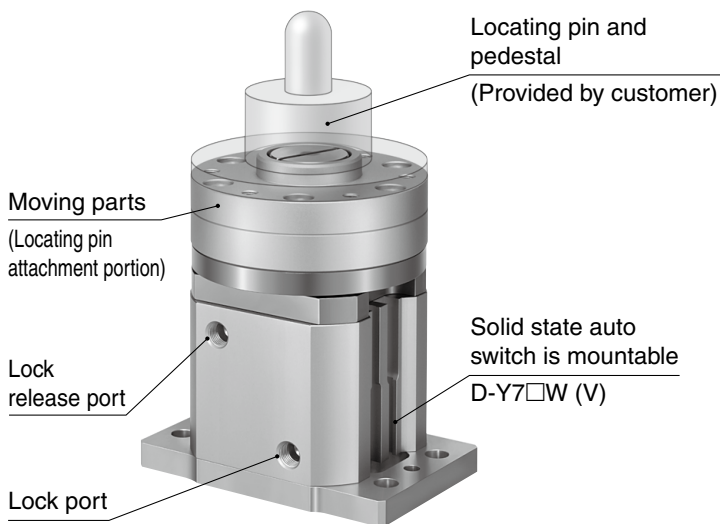
## Locating pin workpiece contact portion can switch from center lock (for locating) to free (for releasing workpiece)

Even when the workpiece is distorted after welding, if the locating pin is set to free, the workpiece can be removed easily from the locating pin.

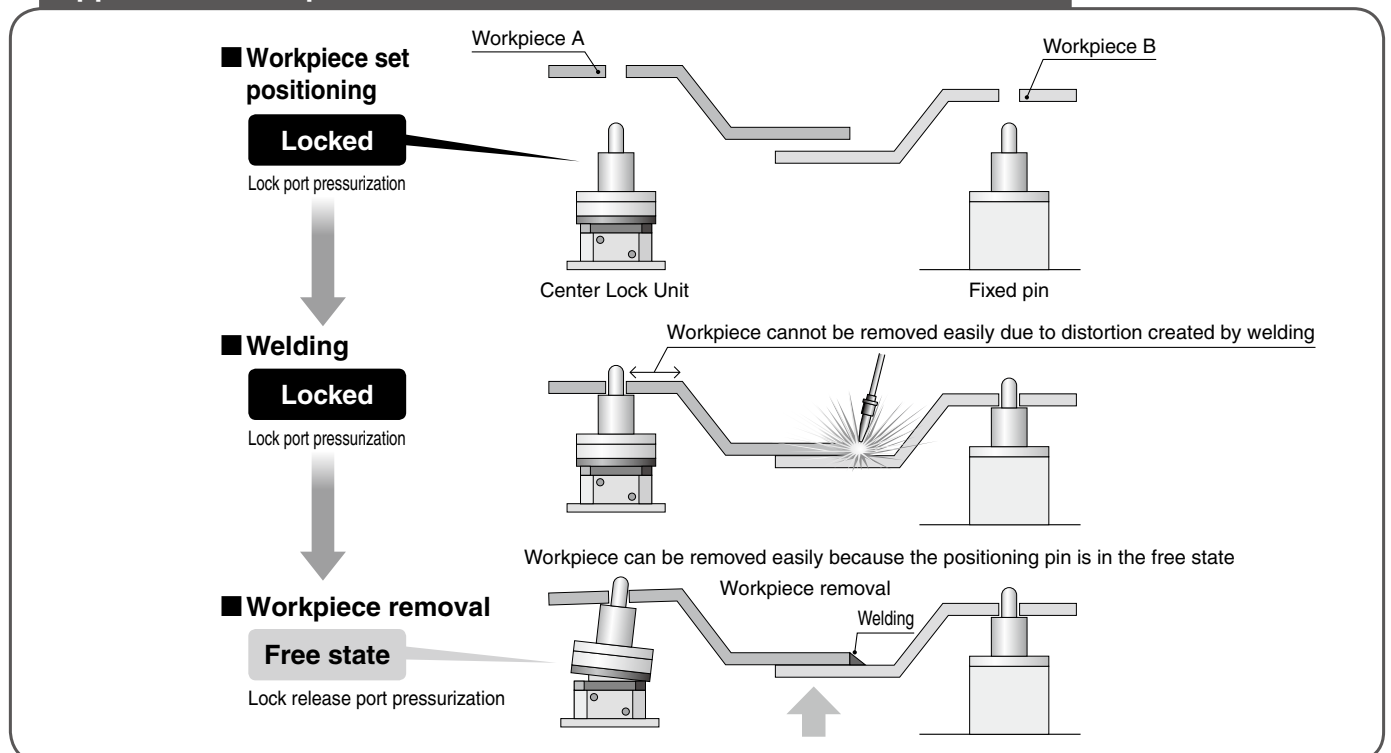
■ The locating pin changes to center lock by pressurization of the lock port, and changes to free by pressurization of the lock release port.

■ Center lock positioning accuracy  $\pm 0.1 \text{ mm}$   
( $\alpha$  direction only)

■ Locating pin swing angle and rotation angle  $\alpha = 3^\circ \pm 1^\circ$   
 $\theta = 3^\circ \pm 1^\circ$



### Application Example Used as a pedestal for the locating pin in the welding process



**MA331-X441**



15-E650

# Center Lock Unit

# MA331-X441



## How to Order

MA331 - F4 - **Y7BW**    - X441

Auto switch

Nil	Without auto switch (Built-in magnet)
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\*: For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

**Applicable Auto Switches:** Refer to the **WEB catalog** for further information on auto switches.

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)		IC circuit	Relay, PLC	
Solid state auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	Y7NWV	Y7NW	●	○	●	●			○
				3-wire (PNP)				Y7PWV	Y7PW	●	○	●	●	○		
	Water resistant (2-color indicator)			2-wire	12 V	—	Y7BWV	Y7BW	●	○	●	●	○	—	—	
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)	—	—	—	Y7BA	—	—	●	●	○			
								Y7DWSC*1	—	—	—	—	○			

\*1: Lead wire length is 0.3 m, wiring (pin numbers used) consists of two wires (3-4).

\*: Solid state auto switches marked with "○" are produced upon receipt of order.

\*: For details about auto switches with pre-wired connectors, refer to the **WEB catalog**.

\*: Auto switches are shipped together, but not assembled.

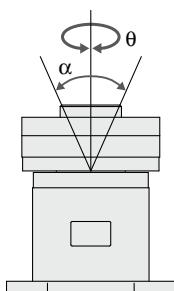
\*: Lead wire length symbols: 0.5 m..... Nil (Example) Y7NW

3 m..... L (Example) Y7NWL

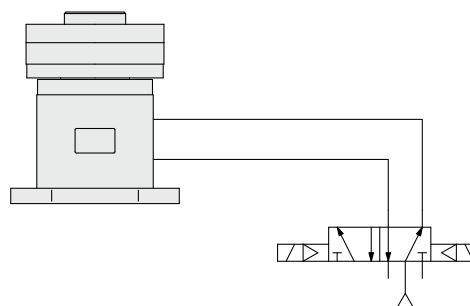
5 m..... Z (Example) Y7NWZ

## Specifications

Maximum load weight	20 kg
Handling	Double acting
Handling air pressure	0.2 to 0.7 MPa
Proof pressure	1.05 MPa
Ambient and fluid temperature	0 to 60°C
Center lock positioning accuracy	±0.1 mm ( $\alpha$ direction)
Moment resistance (Theoretical value)	117 N·m (at 0.5 MPa)
Torque resistance (Theoretical value)	6.3 N·m (at 0.5 MPa)
Swing angle ( $\alpha$ ) (See the figure below.)	3° ±1°
Rotation angle ( $\theta$ ) (See the figure below.)	3° ±1°
Weight	3100 g

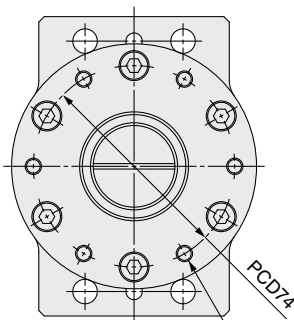
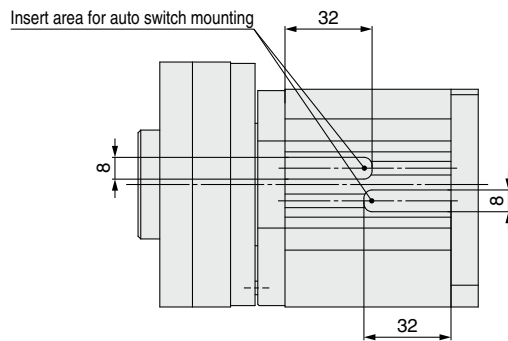


## Circuit Diagram

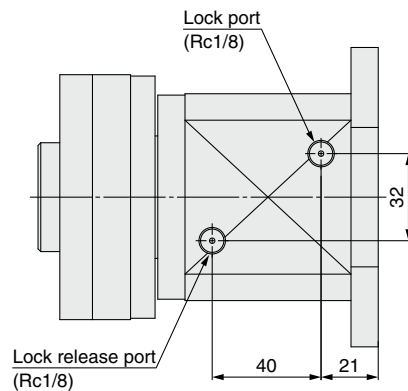
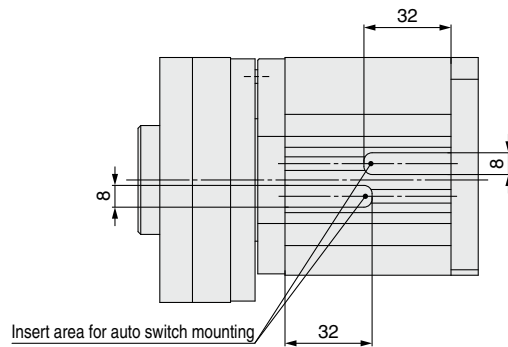
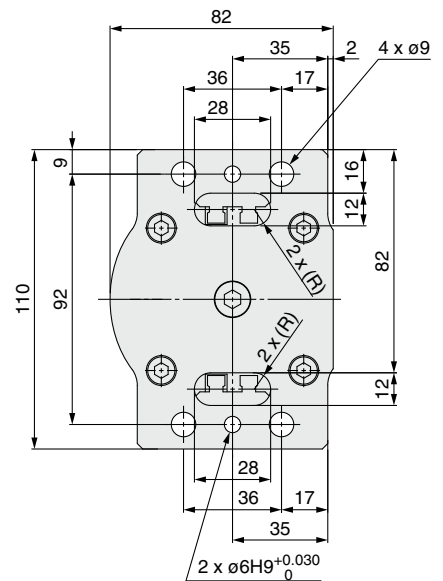
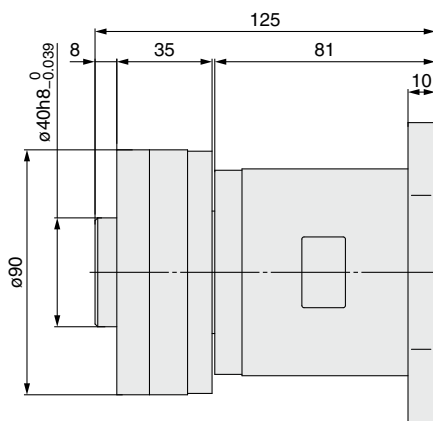



**Dimensions**

**MA331-F4-X441**



6 x M6 x 1 Thread depth 12  
(60° equally spaced)



 **Safety Instructions** Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.