



# CXSJ Series

## Specific Product Precautions

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

### Mounting

#### Caution

1. Make sure that the surface on which the cylinder is to be mounted is flat (reference value for flatness: 0.05 or less).

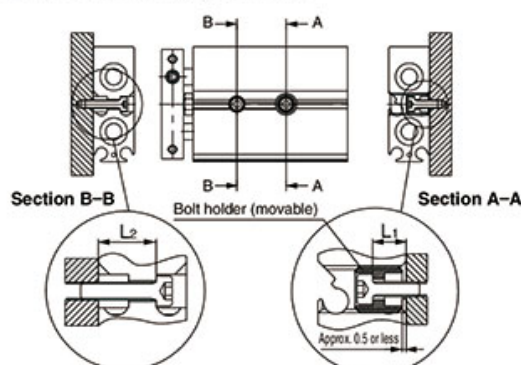
Dual-rod cylinders can be mounted from 3 directions, however, make sure that the surface on which the cylinder is to be mounted is flat (reference value for flatness: 0.05 or less). Otherwise, the accuracy of the piston rod operation is not achieved, and malfunctioning can occur.

2. The piston rod must be retracted when mounting the cylinder.

Scratches or gouges in the piston rod may lead to damaged bearings and seals and cause malfunctions or air leakage.

3. CXSJ (ø6, ø10)

Adjust the bolt holder using a hexagon wrench 3 mm in width across flats so that it does not protrude from the cylinder surface (approx. 0.5 mm depth from the cylinder surface to the top of the holder). If the bolt holder is not properly adjusted, it can interfere with the switch rail, hindering the auto switch mounting. The required length of the mounting bolt for a bolt holder and mounting hole in the rod cover side varies depending on the bearing surface position for the mounting bolt. Refer to dimensions L<sub>1</sub> and L<sub>2</sub> provided below to select the appropriate mounting bolt length.



	L <sub>1</sub> (mm)	L <sub>2</sub> (mm)	Applicable mounting bolt size
CXSJ□6	5	8.4	M3
CXSJ□10	5	9.5	M3

Be sure to mount the cylinder to the bolt holder. If it is operated without using the bolt holder, the bolt holder may drop.

### Piping

#### Caution

1. For axial piping, the side port of the standard cylinder is plugged. However, a plugged port can be switched according to the operating conditions. When switching the plugged port, check the air leakage. If small air leakage is detected, order the below plugs, and reassemble it.

Plug part no.: (ø6) MTS08-08-P6830  
(ø10) CXS10-08-R8601

### Stroke Adjustment

#### Caution

1. After adjusting the stroke, make sure to tighten the hexagon nut to prevent it from loosening.

Dual-rod cylinders have a bolt to adjust 0 to -5 mm strokes on the retracted end (IN).

Loosen the hexagon nut to adjust the stroke; however, make sure to tighten the hexagon nut after making an adjustment.

2. Never operate a cylinder with its bumper bolt removed. Also, do not attempt to tighten the bumper bolt without using a nut.

If the bumper bolt is removed, the piston hits the head cover causing damage to the cylinder. Therefore, do not use a cylinder without a bumper bolt.

Furthermore, if the bumper bolt is tightened without a nut, the piston seal is caught in the leveled part, damaging the seal.

3. A bumper at the end of the bumper bolt is replaceable.

In case of a missing bumper, or a bumper has a permanent settling, use the right part numbers for ordering.

Bore size (mm)	6, 10, 15	20, 25	32
Part no.	CXS10-34A 28747	CXS20-34A 28749	CXS32-34A 28751
Qty.	1		

### Disassembly and Maintenance

#### Caution

1. Never use a cylinder with its plate removed.

When removing the hexagon socket head cap screw on the end plate, the piston rod must be secured to prevent from rotating. However, if the sliding parts of the piston rod are scratched and gouged, a malfunction may occur.

2. When disassembling and reassembling the cylinder, contact SMC or refer to the separate operation manual.

#### Warning

1. Take precautions when your hands are near the plate and housing.

When the cylinder is operated, take extra precautions to avoid getting your hands and fingers caught between the plate and housing, that can cause a bodily injury.

### Operating Environment

#### Caution

1. Do not operate the cylinder in a pressurized environment.  
The pressurized air may flow inside the cylinder due to its construction.
2. Do not use as a stopper. This may cause malfunction.  
When using as a stopper, select a stopper cylinder (RS series) or a compact guide cylinder (MGP series).

### Speed Adjustment

#### Caution

1. When CXSJ□6 is operated at a low speed, adjust the speed with an IN/OUT control by installing two dual speed controllers due to the small cylinder capacity. This can prevent the cylinder from ejecting.

# Dual Rod Cylinder Basic Type **CXS Series** ø6, ø10, ø15, ø20, ø25, ø32

## How to Order

**Thread type**

Symbol	Type	Bore size
Nil	M thread	ø6 to ø20
	Rc 1/8	
TN	NPT 1/8	ø25, ø32
TF	G 1/8	

**CXS M 20 - 100 - Y7BW**

**Bearing type**

Symbol	Type
M	Slide bearing
L	Ball bushing bearing

**Bore size/Stroke (mm)**

Bore size	Standard stroke (mm)
6	10, 20, 30, 40, 50
10	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 75
15, 20, 25, 32	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 75, 80, 90, 100

**Number of auto switches**

Symbol	Type
Nil	2 pcs.
S	1 pc.
n	"n" pcs.

**Auto switch**

Symbol	Type
Nil	Without auto switch (Built-in magnet)

\* For the applicable auto switch model, refer to the table below.

## Applicable Auto Switches/Refer to pages 1119 to 1245 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)	3 (L)	5 (Z)			
Solid state auto switch	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	Y69A	Y59A	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)	12 V		Y7PV	Y7P	●	●	○	○	—	
				2-wire	12 V		Y69B	Y59B	●	●	○	○	—	
				3-wire (NPN)	5 V, 12 V		Y7NWV	Y7NW	●	●	○	○	IC circuit	
	Water resistant (2-color indicator)	Grommet	Yes	3-wire (PNP)	5 V, 12 V	—	Y7PWV	Y7PW	●	●	○	○	—	Relay, PLC
				2-wire	12 V		Y7BWV	Y7BW	●	●	○	○	—	
Reed auto switch	—	Grommet	None	3-wire (NPN equivalent)	5 V	—	—	Z76	●	●	—	—	IC circuit	—
				2-wire	24 V	12 V	—	Z73	●	●	●	—	—	Relay, PLC
				2-wire	24 V	100 V or less	—	Z80	●	●	—	—	IC circuit	—

\*\* Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Consult with SMC regarding water resistant types with the above model numbers.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) Y59A  
3 m ..... L (Example) Y59AL  
5 m ..... Z (Example) Y59AZ

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

- Since there are other applicable auto switches than listed, refer to page 758 for details.
- For details about auto switches with pre-wired connector, refer to pages 1192 and 1193.
- Auto switches are shipped together (not assembled).

CX2

CXW

CXT

CXSJ

CXS

D-□

-X□