tissin

Lock Up Valve

TS200Series

Instruction Manual

Ver. PM-TS200EN_11/2018

Description

The pneumatic lock up valve TS200 Series shuts off the signal pressure line either when the air supply falls below an adjusted value or upon complete air supply failure. This causes the actuator to remain in its last position.

Features

- Quick Response and High Precision.
- Easy set-up of lock up air pressure.
- When the signal pressure is more than the set pressure, it opens the air pressure line automatically.
- Small size and light weight allow the Lock Up Valve to be installed in the direct pipe fitting line without bracket.
- Options available (High & Low Temperature).

Warranty

- This product has been fully inspected and shipped through a thorough quality inspection procedure. The manufacturer warranty period of the product is 18 months after the product is shipped from Tissin in Korea.
- For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
- Using the device in a manner that does not fall within the scope of its intended use, disregarding this manual, using under qualified personnel, or making unauthorized alterations releases the manufacturer from liability for any resulting damage. This renders the manufacturer's warranty null and void.

Precautions

General Information

- Please ensure to read and understand the manual before installation and maintenance of the products.
- The manual should be passed to the End User.
- When the product is not used within its description range, it may cause the product to malfunction so please follow the product manual instructions.
- The manual may be modified by us without any prior notice. When you require the latest information, please visit our website. http://www.tissin.co.kr .

Handling Precautions

- Do not install, operate or maintain without being fully trained and qualified in Valve and accessory installation.
- When exceeding the permitted air pressure range, it may cause injury or property damage due to compressed air explosion. So it is very important to carefully read, understand and follow all of the contents of the relevant product manual.

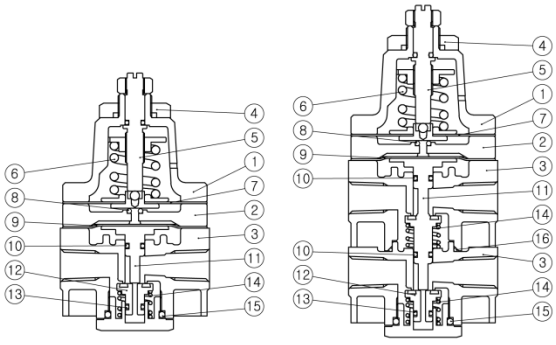
User Environment

- Do not use in corrosive environments.
- When used in environments that are a higher temperature than the specified temperature range, it may cause a lower life cycle of the product. So please ensure to use within the specified temperature range. (Refer to Page 3)

Specifications

Item.Type	TS200
Signal Pressure	0.14~0.7MPa
Max Supply Pressure	1MPa
Max Lock Up Pressure	0.7MPa
Differential Pressure	Below 0.01MPa
Flow Capacity(CV)	0.9
Signal Connection	PT(NPT)1/4
Supply/Output Connection	PT(NPT)1/4
Operating Temp.	-20℃~70℃ (Standard type)
Material	Aluminum Die casting
Weight	1.3kg

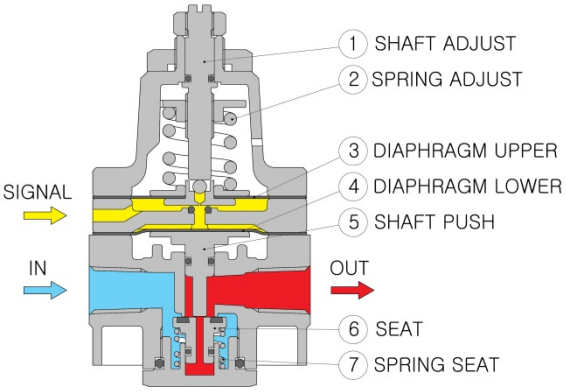
Materials of Construction



TS200S **TS200D**

NO.	TITLE	MATERIAL
1	COVER	ALDC12
2	RING	ALDC12
3	BODY	ALDC12
4	MOUNTING NUT	STS
5	SHAFT ADJUST	STS
6	SPRING ADJUST	HSW3
7	ASS'Y DIAPHRAGM	STS / NBR
8	O-RING	NBR
9	DIAPHRAGM LOWER	NBR
10	O-RING	NBR
11	SHAFT PUSH	C3604BD
12	SEAT	STS
13	O-RING	NBR
14	SPRING SEAT	STS
15	O-RING	NBR
16	O-RING	NBR

Principle of Operation



When signal pressure is greater than setting pressure level, upper diaphragm(3) moves upward, the exhaust valve is closed, the signal pressure pushes the lower diaphragm(4), lower diaphragm(4) pushes shaft push(5) and shaft push(5) pushes seat(6), and the flow can go from IN to OUT. When signal pressure is less than setting pressure level, upper diaphragm(3) is being pushed downward and the pressure of lower pressure diaphragm is exhausted from the exhaust valve. Therefore, the valve is closed by spring force and air circuit is shut down.

The spring(2) force can be adjusted by shaft adjust(1)

Signal Pressure Setting

① Through the regulator equipped with the pressure gauge, supply the 0.14~0.7MPa air pressure that you want to set to the signal port.

② When supply 0.14~0.7MPa air pressure to IN port, it is released to OUT port. So please regulate Shaft Adjust, then stop regulation at the point when OUT port air discharge stops.

Note: The factory setting signal pressure is 0.3Mpa.

Product Number

Model	TS200			
Acting Type	Single	S		
	Double	D		
Air connection	PT1/4		P	
	NPT1/4		N	
Ambient Temp	-20℃~70℃			S
	-20℃~120℃			H
	-40℃~70℃			L
	-60℃~70℃			U

Product Number

MODEL

Indicates the model number.

SERIAL NO.

Indicates the serial No.

MAX.SIG.PRESS 1.0MPa

Indicates max signal air pressure.

SET.PRESS 0.14~0.7MPa

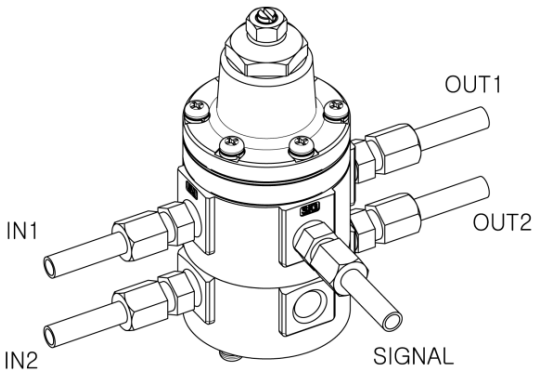
Indicates settable air pressure range.

Pneumatic Connection

① Connect the Positioner's Output Port with the Lock Up Valve's In Port.

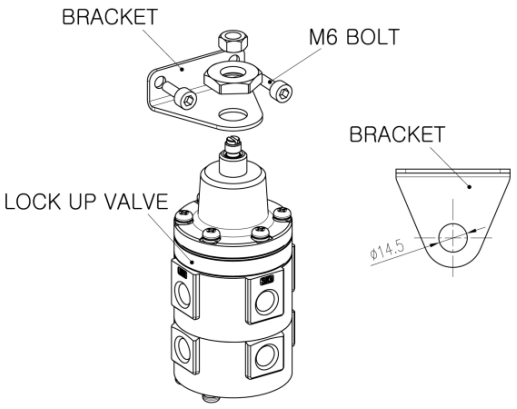
② Connect the Lock Up Valve's Output port with the Actuator.

③ Connect Lock Up Valve's Signal with the signal port that want to detect.

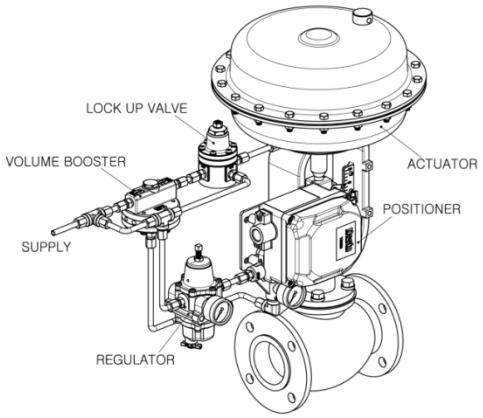


Bracket Installation

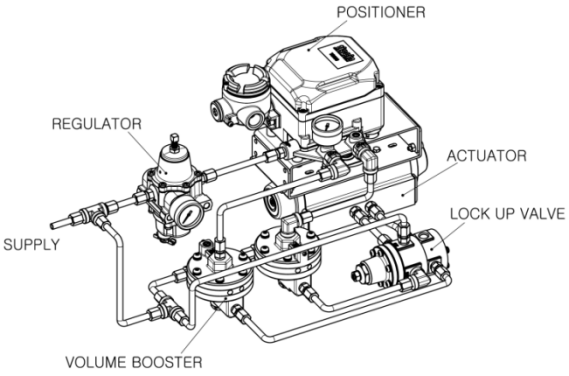
If you need to install brackets, you can referring to product dimension drawing make the bracket, and install it as below.



Installation Example

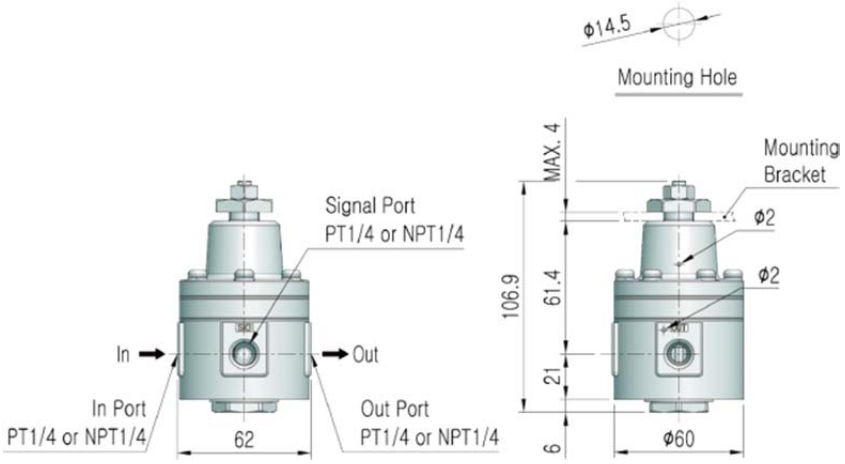


<Single acting linear type actuator>

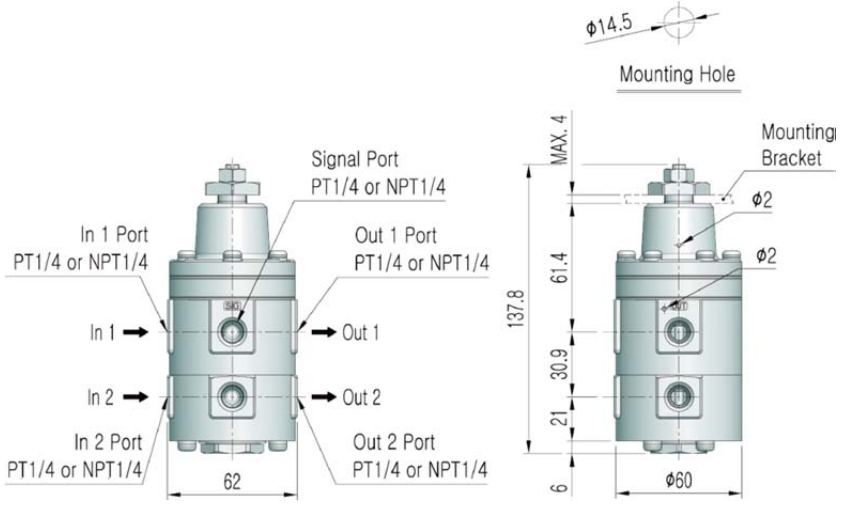


<Double acting rotary type actuator>

Dimensions (Unit:mm)



TS200S



TS200D

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Solutions for Control Valve System

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