

tissin

Air Filter Regulator

TS300 Series

Instruction Manual



Ver. PM-TS300EN_9/2017

Description

Air filter regulator TS300 series are used to provide pneumatic measuring and control equipment with a constant air supply.

Features

- Removes Oil, Water and Particles from compressed air
- Excellent flow and regulation characteristics
- Filter and Regulator in one compact unit
- Easy Installation Repair and Replacement
- 2 gauge port allows you to select installation direction
- 5 micron filter

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.
- When drain the condensate in filter case by turned drain plug, please shut off supply air pressure or set low pressure, high pressure supply pressure may cause injury to operator.

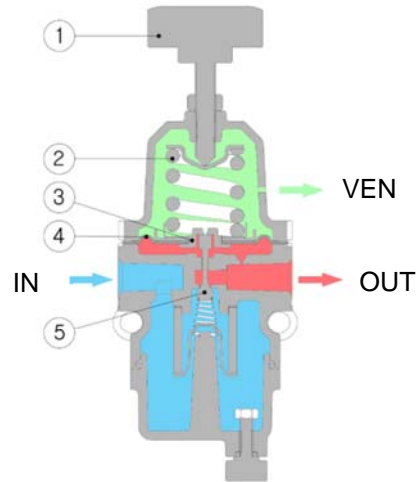
User Environment

- 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)

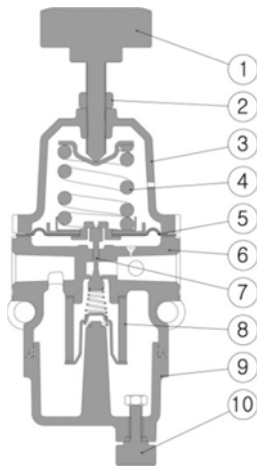
Specifications

| Item.Type | TS300 |
|-----------------------|----------------------------|
| Max supply pressure | 1.7MPa |
| Max output pressure | 0.84MPa |
| Air connection port | NPT1/4, PT1/4 |
| Gauge connection port | NPT1/4, PT1/4 |
| Operating Temp. | 20℃~70℃ (Standard type) |
| Filtering capacity | 5micron |
| Material | Aluminum Die cast |
| Weight | 0.6kg |

Principle of Operation



Materials of Construction



| No. | Title | Material |
|-----|-----------------|---------------|
| 1 | Adjust Handle | Nylon/STS |
| 2 | Nut | STS |
| 3 | Spring Cover | ALDC12 |
| 4 | Adjust Spring | HSW3 |
| 5 | Diaphragm Ass'y | STS/NBR |
| 6 | Body | ALDC12 |
| 7 | Stem | C3604BD/NBR |
| 8 | Filter | Poly Ethylene |
| 9 | Filter Cover | ALDC12 |
| 10 | Drain Plug | Nylon/STS |

Turning the adjustment handle① clockwise, spring② force increases, the diaphragm assembly③ moved downward, at the same time the stem⑤ is moved downward, the air pressure on the IN side is transmitted to the OUT side. When the OUT side pressure rises to the set pressure, the pressure at the bottom of the diaphragm ④ increases, the stem⑤ moves upward with the thrust of the spring at the bottom of the stem⑤, and the seat is closed to block the IN and OUT side passage.

On the contrary, if the air pressure at the OUT side is higher than the set pressure or if the adjustment handle① turned counterclockwise, the diaphragm④ center hole opened, the air pressure at the OUT side transmitted to the spring case chamber and discharged into the atmosphere through the VENT hole to maintain the set pressure.

Product Number

| | | | | |
|-----------------------|------------------|---|---|---|
| Model | TS300 | | | |
| Air connection | PT1/4 | P | | |
| | NPT1/4 | N | | |
| Ambient Temp | -20℃~70℃ | | S | |
| | -20℃~120℃ | | H | |
| | -40℃~70℃ | | L | |
| Pressure gauge | None | | | S |
| | Included(0~1MPa) | | | L |

Product Number

TS300 **AIR FILTER REGULATOR**

MODEL
 LOT No.
 MAX. SUP. PRESSURE 1.7MPa
 ADJUST RANGE 0 ~ 0.84MPa

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 Made in Korea www.tissin.co.kr

MODEL

Indicates the model number.

LOT NO.

Indicates the lot No.

MAX.SUP.PRESS 1.7MPa

Indicates max supply air pressure.

ADJUST RANGE 0~0.84MPa

Indicates adjustable air pressure range.

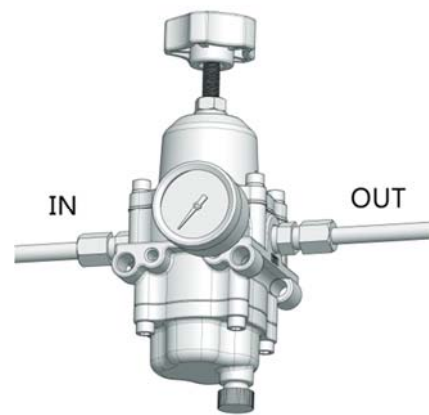
Pneumatic Connection

- ① Connect the field air pressure to the In Port.
- ② OUT port can be connected with various devices such as positioner and actuator.



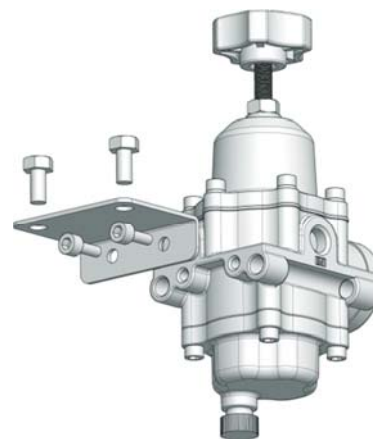
Caution

If the IN and OUT ports are connected in reverse, it may cause malfunction.

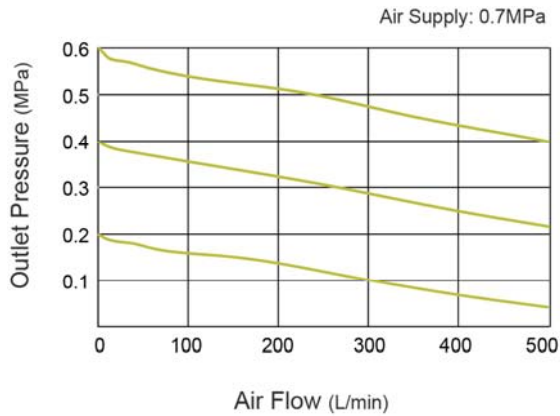


Bracket Installation

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



Flow Characteristics



Maintenance

- To maintain the normal filtering function of the product, periodically drain the condensate in the filter case manually.

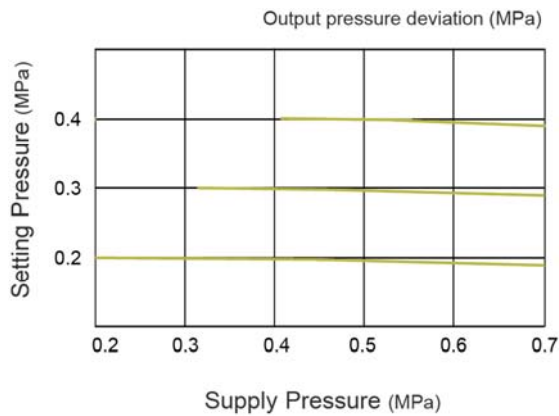


Caution

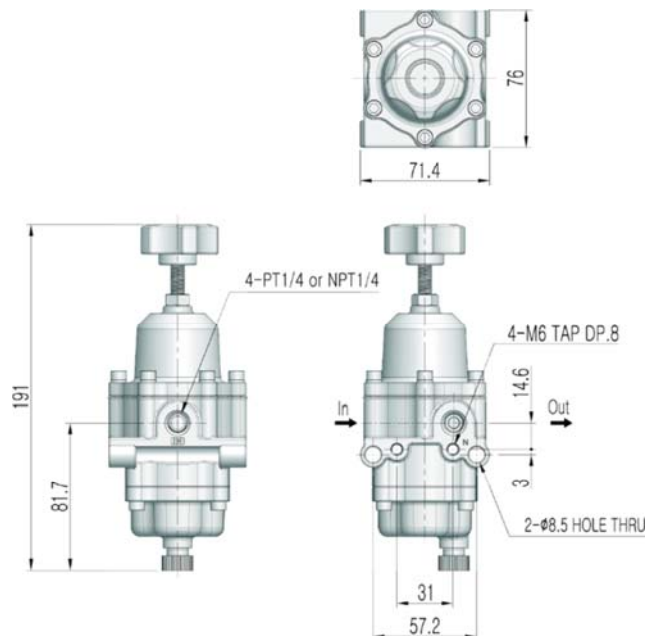
When discharging condensate by turning the drain plug, first shut off the supply pressure or lower the input air pressure to a low pressure of 0.1MPa or less.

- In order to maintain normal air flow capacity, please replace the filter installed inside the filter case periodically

Pressure Characteristics



Dimension (Unit:mm)





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