



1. SAFETY RECOMMENDATION

⚠ 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.

⚠ 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.
- To avoid the inflow of the excessive air to the actuator, it is highly recommended to install an air filter regulator in front of the Volume Booster.

⚠ User Environment

- When used in environments that are higher temperature than the specified temperature range, it may cause low life cycle of the product. So please ensure to use within the specified temperature range.

2. LIMITED WARRANTY AND DISCLAIMER

- 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 unqualified personnel, or making unauthorized alterations releases the manufacturer from liability for any resulting damage. This renders the manufacturer's warranty null and void.

3. DESCRIPTION

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

4. FEATURES

- Remove 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

5. SPECIFICATION

Model	TS300	TS310	TS305	TS315
Max supply pressure			1.7MPa	
Max output pressure			0.84MPa	
Air connection	NPT(PT) 1/4	NPT(PT) 1/2	NPT(PT) 1/4	NPT(PT) 1/2
Gauge connection			NPT1/4, PT1/4	
Operating Temperature			-20°C~70°C (Standard type)	
Filtering capacity			5 micron	
Material	Aluminum Die Cast		Stainless steel 316	
Weight	0.6kg	0.9kg	1.5kg	2.2kg

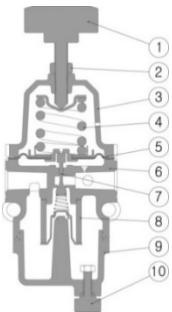
6. PRODUCT

Model	TS3					
In/Output port size	1/4"	0				
	1/2"	1				
Material	Aluminum	0				
	Stainless steel 316	5				
Air connection type	NPT		N			
	PT		P			
Ambient Temperature	-20°C~70°C		S			
	-20°C~120°C		H			
	-40°C~70°C		L			
	-60°C~70°C		U			
Pressure gauge	None		0			
	Included (0~1MPa)		1			
Option	None		0			
	Auto drain		A			

7. LABEL

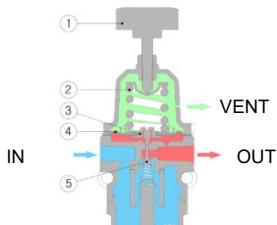


8. MATERIALS OF CONSTRUCTION



No.	Title	Material	
		TS300 / TS310	TS305 / TS315
1	Adjust Handle	Nylon/STS303	Nylon/STS303
2	Nut	STS303	STS303
3	Spring Cover	ALDC12	SCS14
4	Adjust Spring	HSW3	STS316
5	Diaphragm Ass'y	STS304/NBR	STS304/NBR
6	Body	ALDC12	SCS14
7	Stem	C3604BD/NBR	STS303/NBR
8	Filter	Poly Ethylene	Poly Ethylene
9	Filter Cover	ALDC12	SCS14
10	Drain Plug	Nylon/STS303	STS316

9. PRINCIPLE OF OPERATION



<Sectional View >

Turning the adjustment handle clockwise, spring(2) force increases, the diaphragm assembly(3) moved downward, at the same time the stem(5) 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 stem(5) moves upward with the thrust of the spring at the bottom of the stem(5), 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 handle(1) turned counterclockwise, the diaphragm(4) 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.

10. BRACKET INSTALLATION

If you need to install bracket, you can make the bracket by referring to product dimension drawings, and please install it as below.



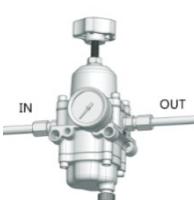
11. PNEUMATIC CONNECTION

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

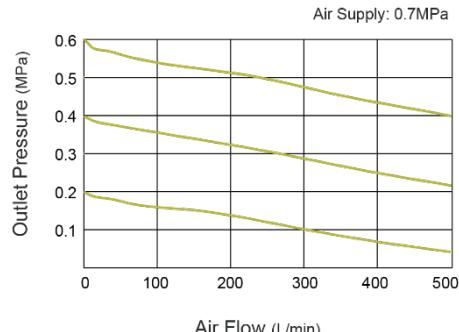


Caution

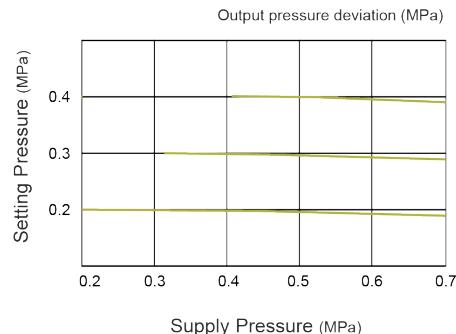
If the IN and OUT ports are connected in reverse, it may cause malfunction.



12. FLOW CHARACTERISTICS



13. PRESSURE CHARACTERISTICS



14. MAINTENANCE

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

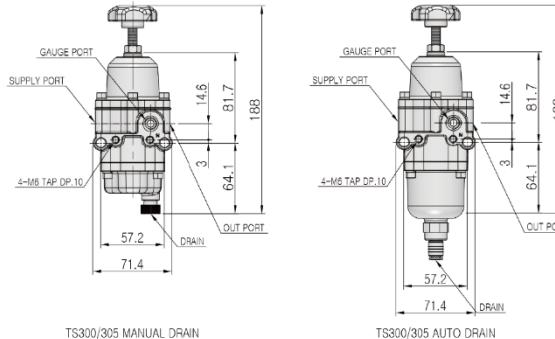


Caution

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.

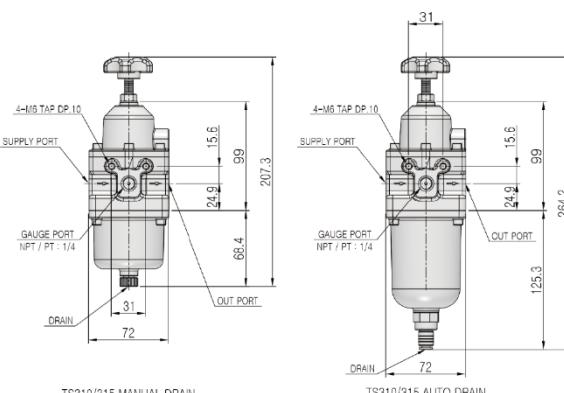
- In order to maintain normal air flow capacity, please replace the filter installed inside the filter case periodically

15. DIMENSION (Unit : mm)



TS300/305 MANUAL DRAIN

TS300/305 AUTO DRAIN



TS310/315 MANUAL DRAIN

TS310/315 AUTO DRAIN

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