


1. Introduction

1.1. General Information

This instruction and operating manual contains important notices the user should observe for personal safety as well as prevention against damage to property. Notices concerning personal safety are highlighted by a safety symbol ().

1.2. General Safety Instructions

In order to ensure safe operation of this product, the user must read all safety instructions described in this manual and observe safety information and symbols without exception.

1.3. Correct Usage

This product can be used only for purposes specified in these instructions. If any purpose is not stated in these instructions, the user is fully responsible for all charges and replacements to this product.

1.4. Range and Responsibilities of Personnel

- Qualified personnel should be trained, instructed or authorized in operating and maintaining products and systems according to the safety regulations for electrical circuits, high pressures and hazardous atmosphere.
- They should be trained or instructed in maintenance and use of proper safety equipment according to the safety instructions.
- They should have good experience to identify risks and avoid potential hazards when working with these products and systems.

1.5. Transportation and Storage

Ensure damages during delivery are prevented through proper packing. Products and replacement parts should be returned in their original packing. If the original packing is no longer available, please ensure the products and replacement parts are packaged to provide protection during transport.

2. Overview

Use of the air filter regulator is to maintain certain air pressure and protect the main equipment from the inflow of debris. Rugged aluminum or 316SS body material helps resist corrosion.

3. Specifications

Model	FR-10	FR-12	FR-13	FR-20	FR-22	FR-23
Port Size	1/4" NPT	1/2" NPT	3/4" NPT	1/4" NPT	1/2" NPT	3/4" NPT
Housing Material	Aluminum Die-cast			Stainless Steel 316		
Fluid	Air					
Max. Output Pressure Range	120 psi (8 bar)					
Max. Supply Pressure	225 psi (15 bar)					
Operating and Fluid Temperature (standard)	-4°F to 160°F (-20°C to 70°C)					
Supply Air	Filtered compressed, dry and non-oiled air (up to 5 micron)					
Gauge Port Size	1/8"					
Filtration	5 micron					
Pressure Gauge Material	Stainless Steel					
Weight	1.1 lbs	3.52 lbs		2.2 lbs	7.48 lbs	

4. Principle of Operation

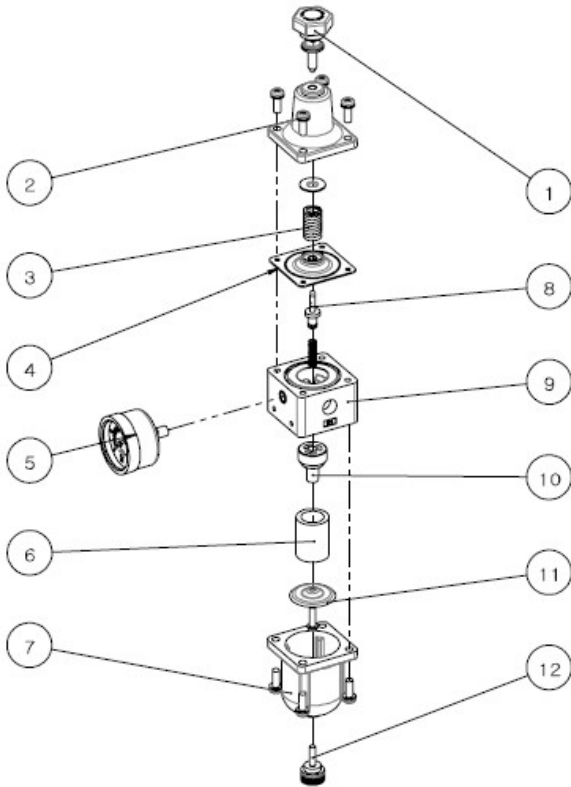
- Attach gauge or 1/8" plug to gauge port.
- Connect air supply to "In" port. Connect regulated air to "Out" port. Output air pressure from the filter regulator will supply connected equipment when connected.
- After all connections are made, use "Adjust Screw" to adjust to the desired air pressure. Turn clockwise to increase the air pressure. Turn counter-clockwise to decrease the air pressure.
- When output air pressure is at the desired value, tighten the "Locking Nut" to hold the position of the "Adjust Screw" to maintain adjusted air pressure.



- Supplying air with a lot of moisture and oil may cause equipment to fail. It may be necessary to open the "Drain Plug" to discharge the moisture and oil occasionally.
- Make sure input and output connections are correct. Reversing the connection may cause air to exit the "Spring Case" and cause the filter regulator to work improperly.

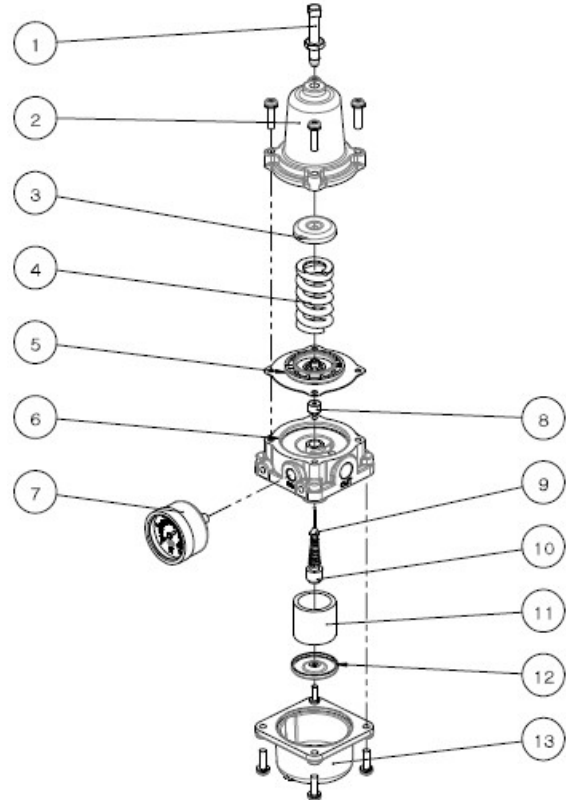
5. Spare Parts

FR-10, FR-12, FR-13



No.	Description	No.	Description
1	Adjust Screw	7	Filter Case
2	Spring Case	8	Nozzle
3	Adjust Spring	9	Regulator Body
4	Diaphragm	10	Nozzle Holder
5	Gauge	11	Filter Holder
6	Filter	12	Drain Plug

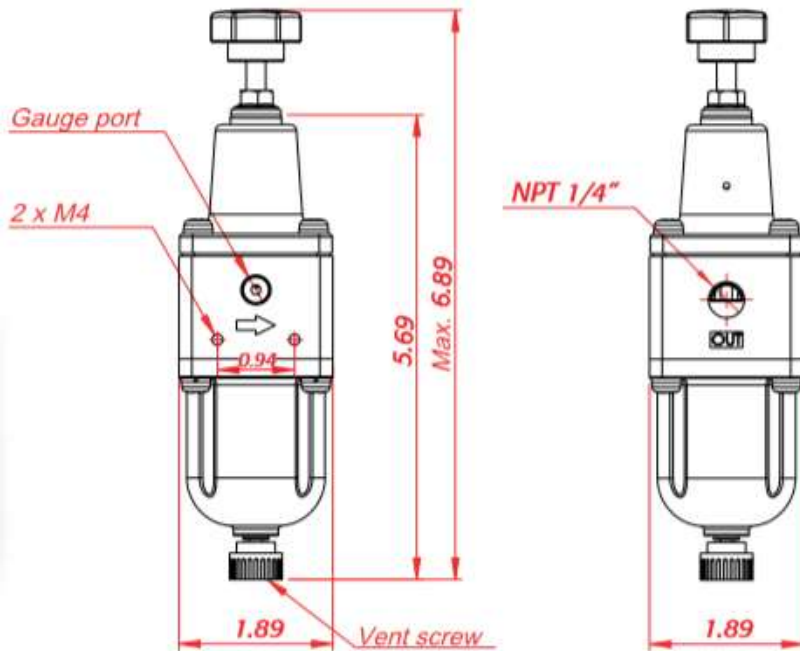
FR-20, FR-22, FR-23



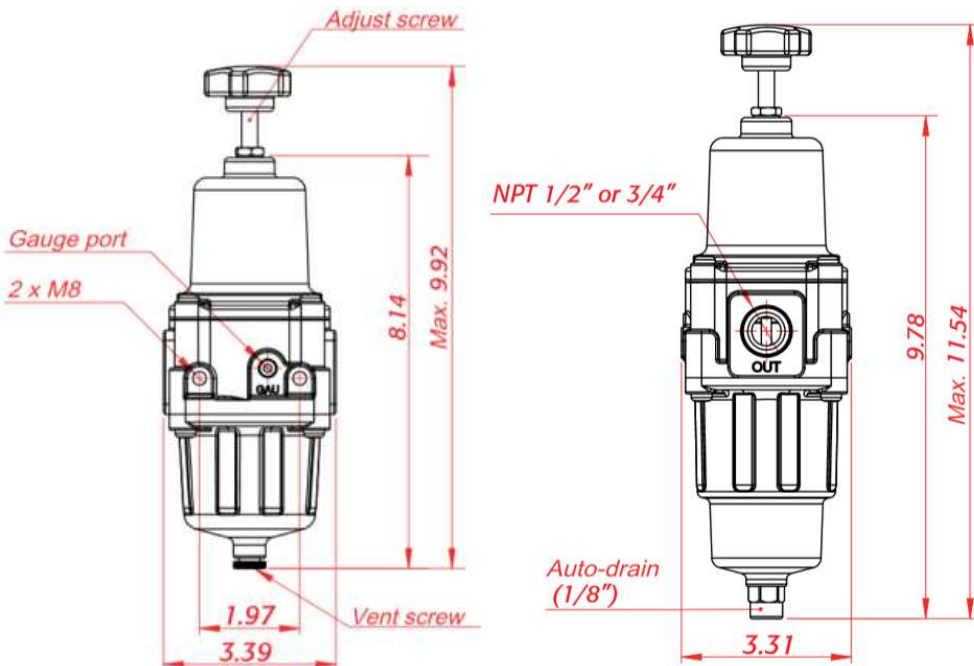
No.	Description	No.	Description
1	Adjust Screw	8	Nozzle Seat
2	Spring Case	9	Nozzle
3	Adjust Spring Holder	10	Nozzle Holder
4	Adjust Spring	11	Filter
5	Diaphragm	12	Filter Holder
6	Regulator Body	13	Filter Case
7	Gauge		

6. Dimensions

FR-10, FR-20



FR-12, FR13, FR22, FR23



A-T Controls product, when properly selected, is designed to perform its intended function safely during its useful life. However, the purchaser or user of A-T Controls products should be aware that A-T Controls products might be used in numerous applications under a wide variety of industrial service conditions. Although A-T Controls can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser / user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of A-T Controls products. The user should read and understand the installation operation maintenance (IOM) instructions included with the product and train its employees and contractors in the safe use of A-T Controls products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only. Because A-T Controls is continually improving and upgrading its product design, the specifications, dimensions and information contained in this literature are subject to change without notice. Should any question arise concerning these specifications, the purchaser/user should contact A-T Controls.

For product specifications go to <http://download.a-tcontrols.com/>

A-T Controls, Inc. • 9955 International Boulevard, Cincinnati, OH 45246 • Phone: (513) 530-5175 • Fax: (513) 247-5462 • www.atcontrols.com