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Type 1367 High-Pressure Instrument Supply System with Overpressure Protection

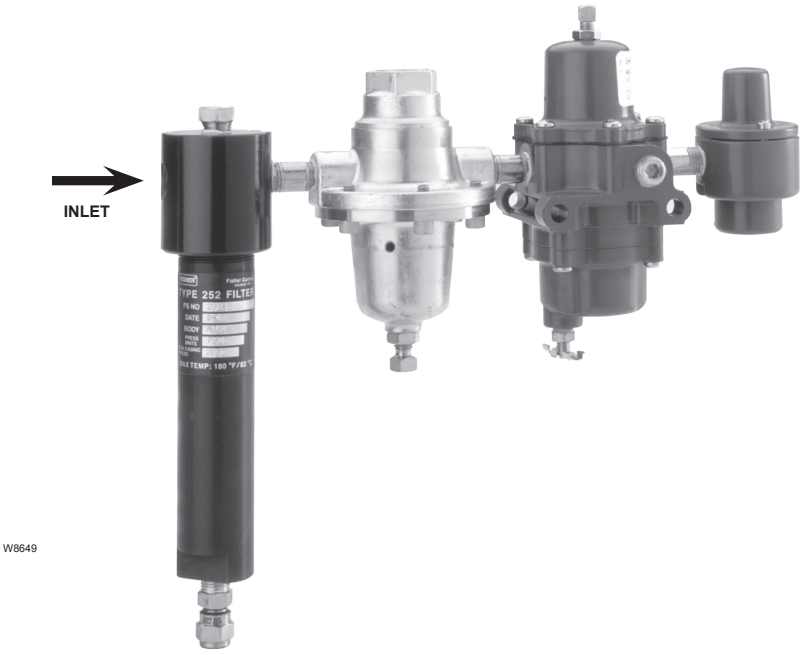


Figure 1. *Type 1367 High-Pressure Instrument Supply System*

Introduction

The Type 1367 high-pressure instrument supply system takes a pressure of up to 2000 psig / 138 bar and reduces it to a controlled pressure to be used for supplying a pneumatic instrument. This system consists of the following filters, regulators and relief valves:

- A Type 252 extended body filter with drain valve.
- A first-stage Type 1301F regulator with mounting bracket for an actuator yoke or casing.
- A Type H120 relief valve mounted in the side outlet of the Type 1301F regulator.
- A second-stage Type 67CF filter-style regulator, mounted on the Type 1301F regulator.
- A Type H800 or H120 relief valve nipple-mounted in the outlet of the Type 67CF regulator.

Features

- **Regulation and Overpressure Protection in One Complete Package** — This system provides two-stage pressure reduction with a non-adjustable relief valve matched to each regulator.
- **Installation Flexibility** — The Type 1367 system can be ordered for mounting on either the yoke or casing of an actuator.
- **NACE Capabilities** — For sour gas applications, the Type 1367 system is available in materials that comply with the recommendations of NACE International standard MR0175.
- **Capability for Continuous Moisture Removal** — The drain valves can be removed from both the Type 252 filter and the Type 67CF filter-style regulator, and tubing installed to provide continuous drains.

Specifications

The Specifications section on this page provides the ratings and other specifications for the Type 1367. Factory specifications are stamped on the nameplate fastened on the regulator at the factory.

Connection Size
Inlet and Outlet: 1/4 NPT
Type H800 Vent: 1/2 NPT with removable screen

Maximum Inlet Pressure(1)
2000 psig / 138 bar

Fixed Relief Setting of Type H120 Relief Valve
150 psig / 10.3 bar

Outlet (Supply) Pressure Range
5 to 90 psig / 0.34 to 6.2 bar

Maximum Outlet (Supply) Pressure with Type 67CF Regulator Failed Wide-Open with:
Type H800 Relief Valve Relieving: 50 psig / 3.4 bar
Type H120 (Second Stage) Relief Valve Relieving: 5 psig / 0.34 bar over Type H120 setpoint

Construction Materials
Type 252 Filter
Body Material: Aluminum or Stainless steel
Filter Cartridge: Polyethylene
O-rings: Nitrile (NBR)
Drain Valve: 316 Stainless steel

Type 1301F Regulator
Body and Spring Case: Brass or Stainless steel
Disk: Polytetrafluoroethylene (PTFE)
Gaskets: Neoprene (CR) and Fluorocarbon (FKM)
All Other Parts: Brass and Stainless steel

Construction Materials (continued)
Type H120 Relief Valve
Disk: Nitrile (NBR)
Spring and Pin: Stainless steel
All Other Parts: Brass or Stainless steel

Type 67CF Regulator
Body and Spring Case: Aluminum or Stainless steel
Diaphragm and Plug: Nitrile (NBR) or Fluorocarbon (FKM)
Stem: Brass, Aluminum, or Stainless steel
Filter: Polyethylene
All Other Parts: Steel and Stainless steel

Type H800 Relief Valve
Body and Spring Case: Aluminum
Diaphragm: Nitrile (NBR)
All Other Parts: Steel and Stainless steel

Temperature Capabilities(1)
-20 to 150°F / -29 to 66°C (standard materials)

Approximate Weight
12 lbs / 5.4 kg

Dimensions
See Figure 3

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

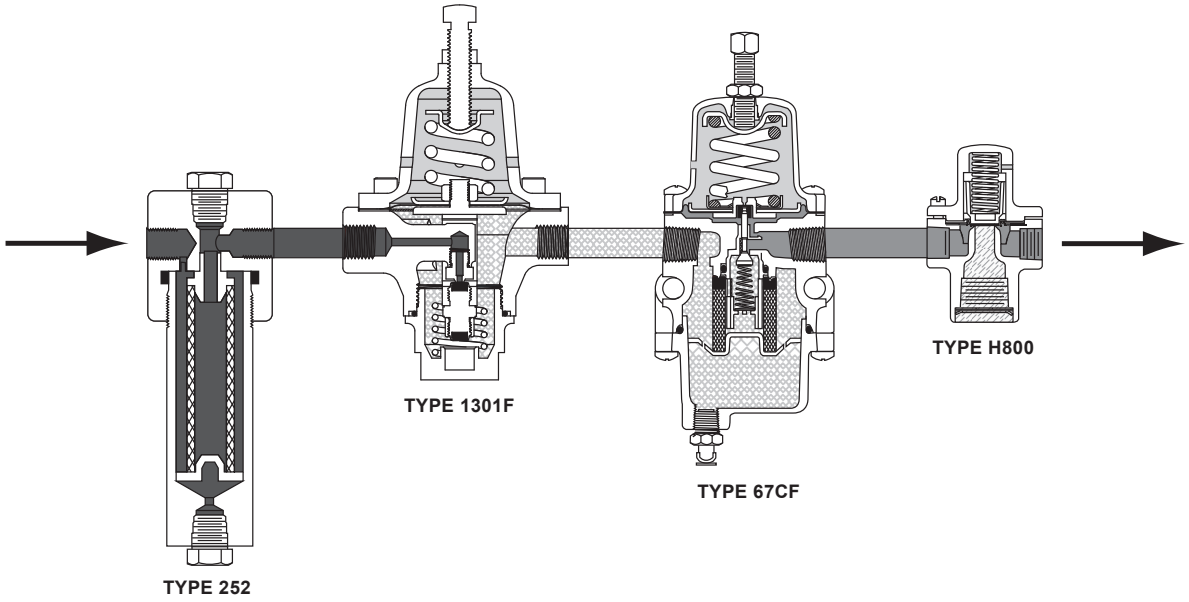
Principle of Operation

The Type 252 filter helps remove dirt, rust, chips, scale and moisture from the incoming high-pressure supply before it enters the Type 1301F regulator. The Type 1301F regulator is set to reduce the incoming high-pressure to 100 psig / 6.9 bar. The reduced pressure from the Type 1301F regulator is then further reduced to the required outlet (supply) pressure. The Type 67CF regulator is normally set between 20 to 90 psig / 1.4 to 6.2 bar.

The first stage Type H120 relief valve helps protect the Type 67CF regulator by relieving if the reduced pressure from the Type 1301F regulator exceeds 150 psig / 10.3 bar. The Type H800 or H120 relief valve helps protect downstream equipment from overpressure by starting to relieve if the reduced pressure from the Type 67CF regulator exceeds the relief valve setpoint. Air or gas flowing from one or both of the relief valves indicates that one or both of the regulators are worn or damaged and must be repaired or replaced immediately.

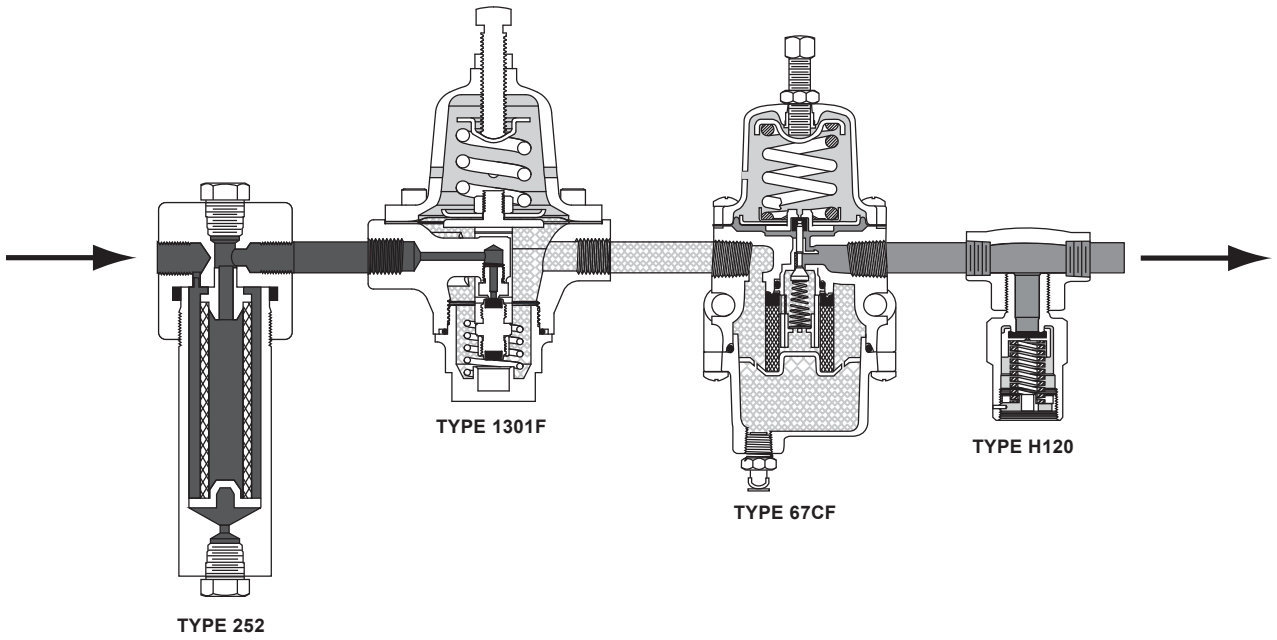
Ordering Information

When ordering a Type 1367 high-pressure instrument supply system, specify the type number, the pressure setting required, any construction material variations desired, and whether yoke or casing mounting is required.



TYPE H120 RELIEF VALVE NOT SHOWN

HIGH INLET PRESSURE
ATMOSPHERIC PRESSURE
INITIAL STEP-DOWN PRESSURE, 100 psig / 6.9 bar
FINAL OUTLET PRESSURE, 5 TO 90 psig / 0.34 TO 6.2 bar
RELIEF PRESSURE



FIRST STAGE TYPE H120 RELIEF VALVE NOT SHOWN

HIGH INLET PRESSURE
ATMOSPHERIC PRESSURE
INITIAL STEP-DOWN PRESSURE, 100 psig / 6.9 bar
FINAL OUTLET PRESSURE, 5 TO 90 psig / 0.34 TO 6.2 bar
RELIEF PRESSURE

Figure 2. *Type 1367 Operational Schematic*

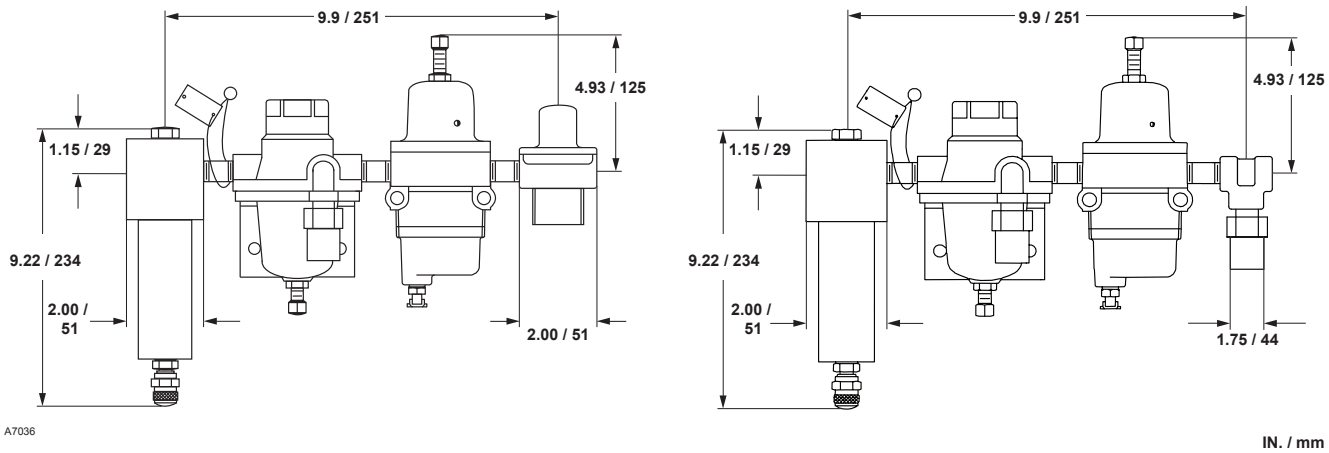


Figure 3. *Dimensions*

Webadmin.Regulators@emerson.com
Fisher.com
Facebook.com/EmersonAutomationSolutions
LinkedIn.com/company/emerson-automation-solutions
Twitter.com/emr_automation

Emerson Automation Solutions

Americas
McKinney, Texas 75070 USA
T +1 800 558 5853
+1 972 548 3574

Asia Pacific
Singapore 128461, Singapore
T +65 6770 8337

Europe
Bologna 40013, Italy
T +39 051 419 0611

Middle East and Africa
Dubai, United Arab Emirates
T +971 4 811 8100