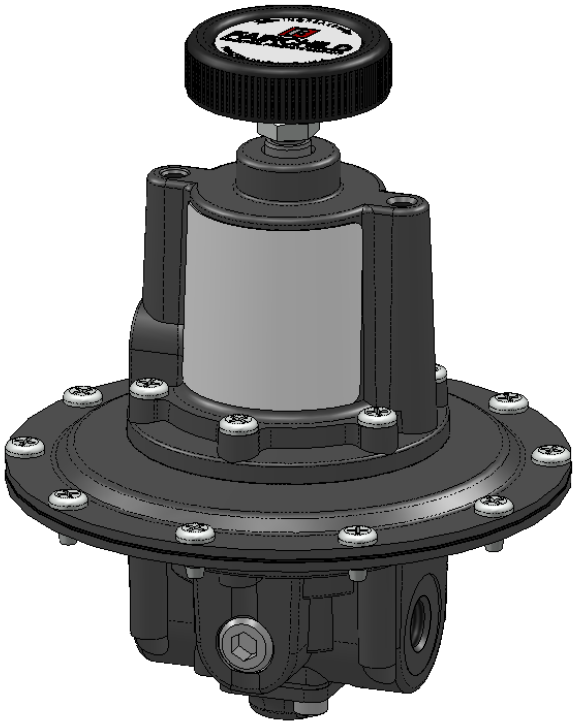
FAIRCHILD MODEL 11
Low Pressure Reducing Regulator
Installation, Operation and Maintenance Instructions



Introduction

The Fairchild Model 11 low pressure regulator is a precision engineered, diaphragm sensing, low pressure, pressure reducing regulator designed to accurately regulate the pressure of air and speciality gases. This single stage, low to medium flow capacity pressure regulator will fulfill pressure control requirements in analytical, laboratory and test instrumentation applications.

Features

- Large sensing diaphragm for accurate sensing of low pressures.
- Balanced supply valve eliminates effects of supply pressure variations.
- Six outlet pressure ranges provide optimum sensitivity
- Relieving and non relieving designs
- Tamperproof adjustment option for security

Table 1. Specifications & Limits

Maximum Supply Pressure	150psig	10 Bar	1000 kPa
Output Pressure Ranges	0-0.5psig 0-2 psig 0-4 psig 0-6 pisg 0-12 psig	0-35 mBar 0-140 mBar 0-280 mBar 0-410 mBar 0-830 mBar	0-3.5 kPa 0-14 kPa 028 kPa 0-41 kPa 0-83 kPa
Forward Flow Capacity Ps@ 100 psig, Po@ 1 psig, 1/2" ports	20 scfm	34 M^3/hr	566 l/m
Exhaust Flow Capacity Po@1 psig, 1/2" ports	1 scfm	1.7 M^3/hr	28 l/m
Ambient Temperature Limits	-40º to +200ºF	-40º to +93ºC	
Supply Pressure Effect	< 2% of supply pressure change		
Connection Sizes	1/4", 3/8", 1/2" pipe		
Connection Thread	NPTF, BSPP, BSPT		
Relief Options	Relieving Relieving, Low Bleed Non relieving		
Weight	2.21 lb 1.002kg		

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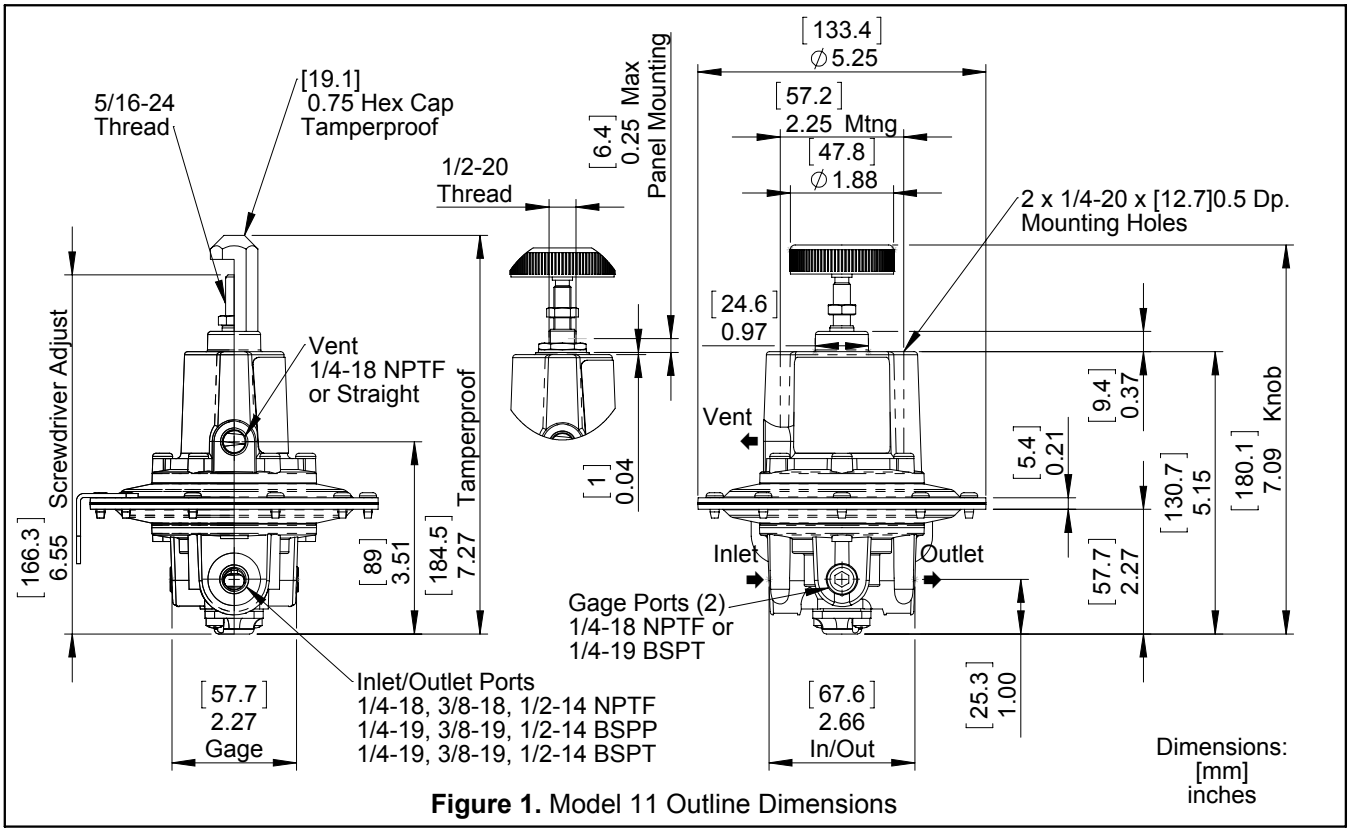

Figure 1. Model 11 Outline Dimensions

Table 2. Material of Construction

Valve Body & Bonnet	Die cast aluminum
Supply & Exhaust Valves	Brass
Supply Seat	Neoprene Fluorocarbon (optional)
Diaphragm	Nitrile/Polyester Fluorocarbon/Polyester (optional)
Trim	Steel/Zinc Plate Nylon bottom cap
Springs Supply Valve Range Spring	 316 Stainless Steel Music Wire
External Finish	Epoxy Powder Coat

Installation

The pressure regulator may be mounted in any position without affecting it's operation.

Clean all pipe fittings to remove contaminates before installation.

Apply a minimum amount of pipe compound or Teflon thread tape to the male threads of the fitting. Start with the second thread back and work away from the end of the fitting to avoid thread tape or compound from contaminating the pressure regulator.

The Inlet and Outlet are labeled "IN" and "OUT". Tighten all connections securely. Avoid undersized fittings that will limit the flow through the pressure regulator

.

For more information, see Figure 1.

CAUTION - Do not rely on the pressure regulator to limit the supply pressure in the downstream piping system. Employ properly sized pressure limiting device to protect the piping system downstream of the pressure regulator from the effects of the supply pressure in the event of a pressure regulator failure.

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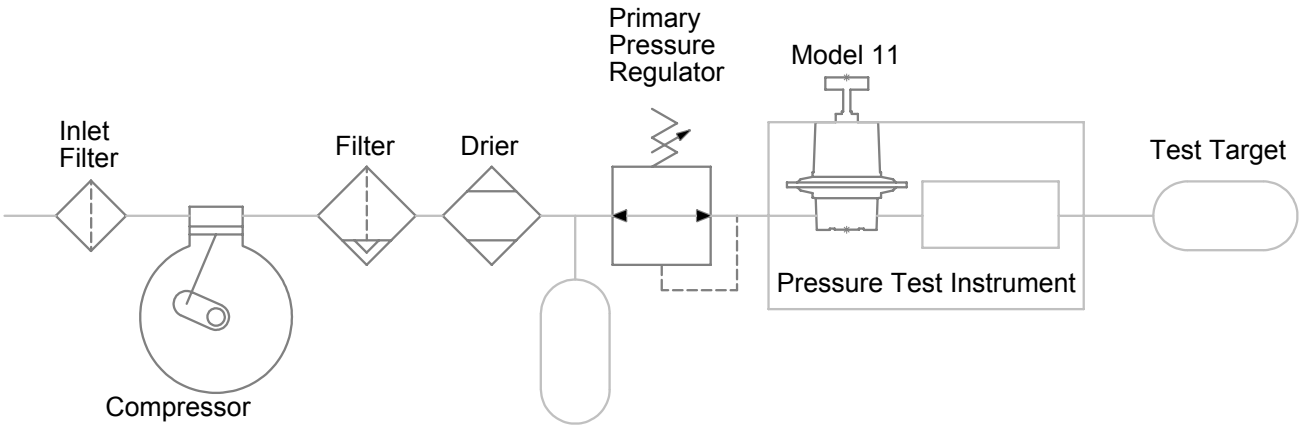


Figure 2. Low Pressure Test Equipment

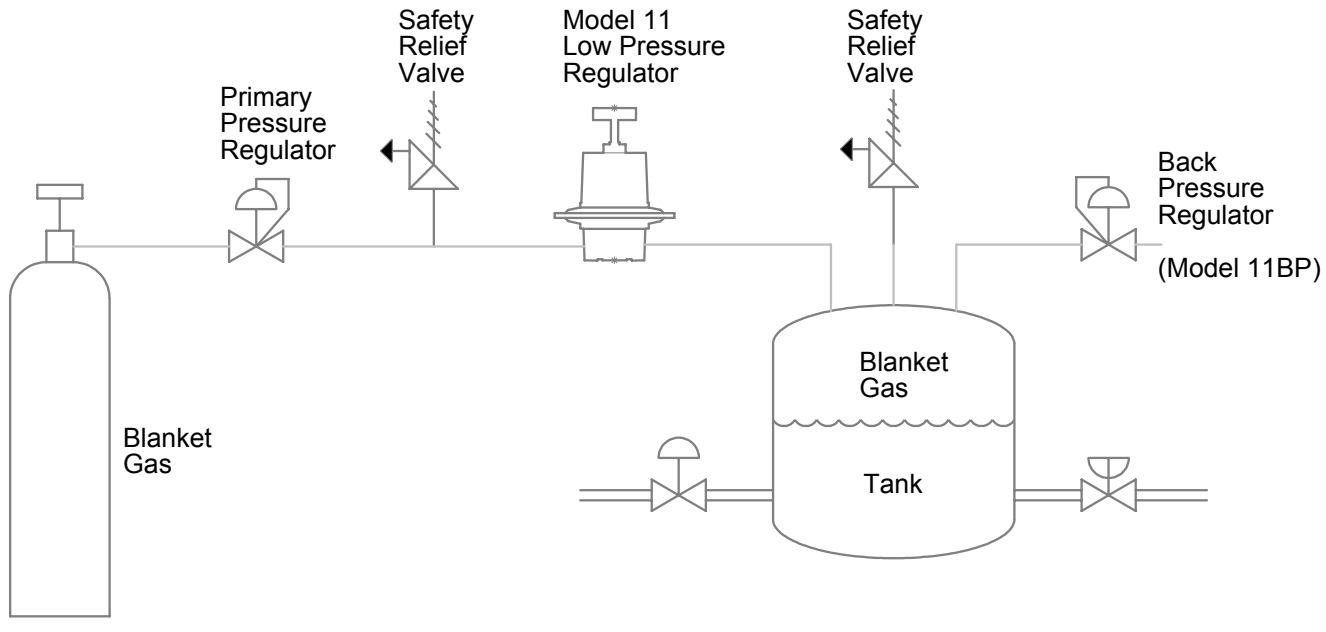


Figure 3. Tank Blanketing Pressure Control

Caution:
The diagragms above are simplified examples of applications for the Model 11 Pressure Regulator. These examples may not show all the required safety devices required for safe operation of such systems. The system designer is responsible for designing required safety equipment in the system.

MAINTENANCE

WARNING Shutting off air supply to the volume booster and adjacent equipment can create dangerous system conditions.

To clean the Model 11, use the following steps:

1. Shut off system pressure to the pressure regulator and carefully relieve the pressure in all connected lines. It is not necessary to remove the pressure regulator from the air line.

2. Remove the two screws from the bottom of the unit. For more information, see Figure 4.

3. Remove the Inner Valve Assembly. For more information, see Figure 4.

4. Wash the Inner Valve Assembly with a solvent. Exercise care to prevent damage to diaphragms and valve facings. **Avoid solvents such as acetone, carbon tetrachloride and trichloroethylene.**

5. Lubricate the o-rings and replace the Valve Assembly carefully. Ensure that the Vent in the exterior part of the Inner Valve Assembly is clear. For more information, see Figure 4.

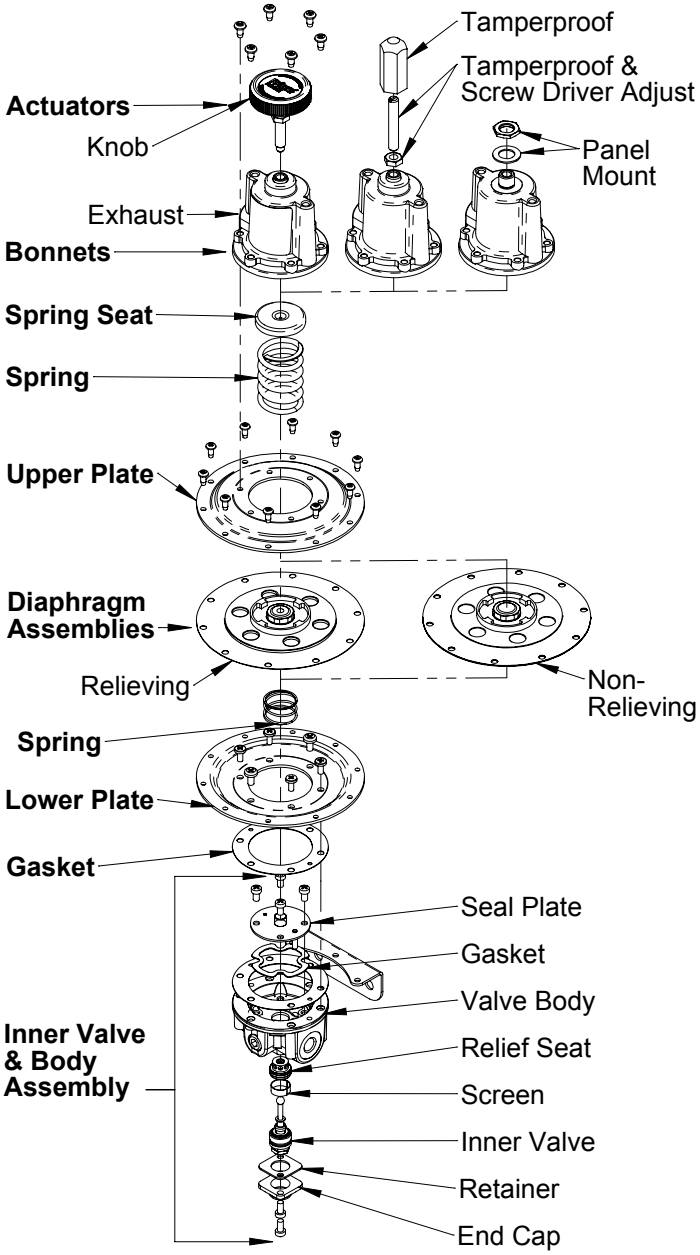
Trouble shooting

Problem	Source	Solution
Leakage	Body Bolts	Tighten the Body Bolts
High Bleed	• Relief Valve • Supply Valve • Supply Seat • Diaphragm Assembly	• If contaminated, clean the source and Body. • If damaged, install the service kit.

NOTE: If the standard maintenance procedure does not correct the problem, install the appropriate service kit.

- **21933-1‡B Low Bleed**
- **21933-1‡N Non-Relieving**
- **21933-1‡R Relieving, Normal Bleed**

‡ = N for Nitrile Elastomer, Zinc/Steel Trim or
J for Fluorocarbon Elastomer, Zinc/Steel Trim



LEGAL NOTICE:

The information set forth in the foregoing Installation, Operation and Maintenance Instructions shall not be modified or amended in any respect without prior written consent of Fairchild Industrial Products Company. In addition, the information set forth herein shall be furnished with each product sold incorporating Fairchild's unit as a component thereof.

FAIRCHILD INDUSTRIAL PRODUCTS CO.
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Fairchild Industrial Products Company
3920 West Point Blvd. • Winston-Salem, NC 27103
phone: (336) 659-3400 • fax: (336) 659-9323
sales@fairchildproducts.com • www.fairchildproducts.com

IS-1000011
Litho in USA
Rev - 12/12