Data Sheet
DS-PR-8601-eng
March, 2008

Pressure Regulators
Model 8601

DESCRIPTION

Brooks® 8601 Pressure Regulators are high precision supply pressure regulators which are direct-acting, non-relieving units that provide bubble-tight shut-off on helium at 100 psi.

Compact and economical, these units are assembled in a “clean room” environment and are tested under simulated operating conditions.

DESIGN FEATURES

- Compact design
- Suitable for line or panel mounting
- Pressure gauge connection
- Bubble-tight shut-off to 100 psi
- Replaceable stainless steel inlet filter element
- UL listed (Aluminum body only) as compressed gas regulator for use with the following gases: air, argon, helium, hydrogen, krypton, neon, nitrogen, oxygen or xenon.

Model 8601
Pressure Regulator

SPECIFICATIONS

Capacity

The pressure regulator is ideal for use at flow up to a maximum of 1,000 sccm air.

Ratings

Maximum Inlet Supply Pressure - 250 psi (1,724 kPa)
Maximum Working Temperature - Standard: 140°F (60°C), Optional - 350°F (177°C)

Typical Characteristics

(Helium 60 psig supply, 50 psig output)

Drift - Less than 1% in first fifteen minutes to total of no more than 1.5% long term

Supply Pressure Effect - 10 psi increase in supply will not change output more than 0.07 psi.

Flow Regulation - From 3 sccm to 70 sccm helium, output pressure will not decrease more than 0.08 psig (0-10, 0-30 psi Regulators), 0.10 psig (0-60 psi Regulators), 0.125 psig (0-100 psi Regulators), 0.15 psig (0-150 psi Regulators), 0.175 psig (0-200 psi Regulators)

Ambient Temperature Effect - Standard 60 psi range, 0.020 psi/°F.

Base Line Oscillation - .0025 psi

Valve Adjustment & Operating Ranges - fifteen turns for 0-10, 0-30, 0-60, 0-100, 0-150 or 0-200 psig output range

Total Pressure Drop

Minimum - 10 psi; Maximum - 250 psi

Materials of Construction

BODY - Standard: aluminum; Optional: 316 Stainless Steel
BONNET - Aluminum
VALVE SEAT - Standard: Brass; Optional: 316 Stainless Steel
VALVE STEM - 316 Stainless Steel
DIAPHRAGM - Reinforced Buna-N, Viton-A® fluoroelastomers
RANGE SPRING - Music wire, zinc plated
FILTER - 40 micron, 316L Sintered Stainless Steel with Viton® fluoroelastomers or Buna retainer sleeve

Connections

Type - Standard: 1/8" NPT; Optional: 1/4" NPT, 1/8" or 1/4" compression fitting, 1/4" ID hose adaptors
Dimensions - See Figure 1

Compatible Brooks Equipment

Model 1390 Filter and Model 1391 Filter

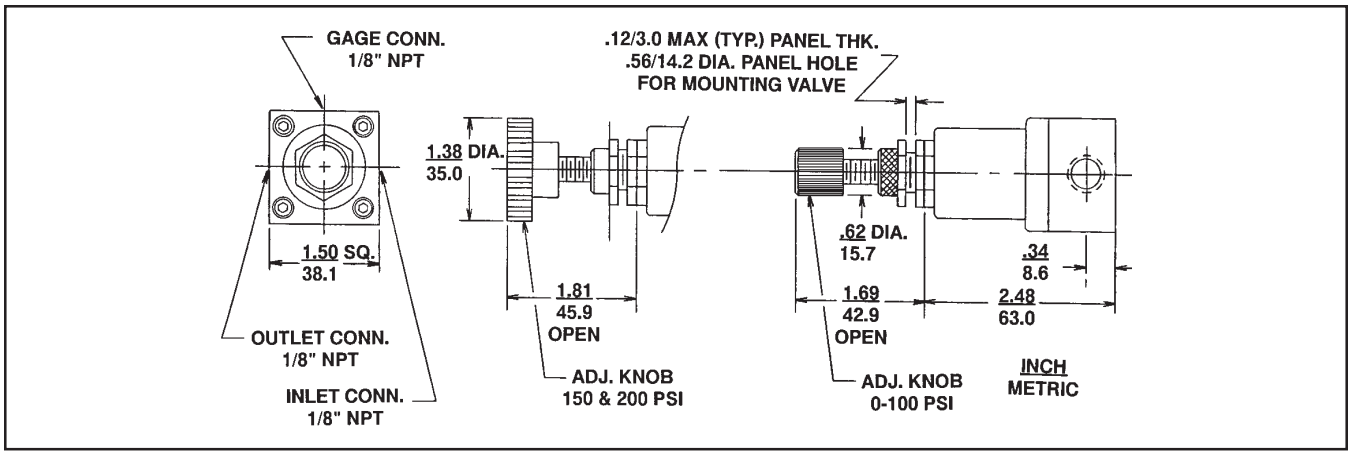

Figure 1 Dimensions

TRADEMARKS
Brooks ..... Brooks Instrument, LLC
Viton-A ..... DuPont Performance Elastomers

ORDERING INFORMATION

To order, please specify
1. Model number
2. Materials of construction
3. Output range
4. Connection type & size
5. Options, if desired

Table 1 8600 Series ELF Pressure Regulators

BASE MODEL NUMBER	PRESSURE REGULATOR
8601D	SIDE CONNECTIONS
	BODY MATERIAL - WETTED
1	ALUMINUM*
2	316 STAINLESS STEEL*
	DIAPHRAGM AND VALVE SEAT MATERIALS
A	BUNA-N AND BRASS/BUNA-N (ALUMINUM ONLY)*
B	VITON AND BRASS/VITON (ALUMINUM ONLY)
C	BUNA-N AND STAINLESS STEEL/BUNA-N*
D	VITON AND STAINLESS STEEL/VITON
	RANGE
1	0-10 PSI*
2	0-30 PSI*
3	0-60 PSI*
4	0-100 PSI*
5	0-150 PSI*
6	0-200 PSI*
	CONNECTION SIZE AND TYPE
A	1/8" NPT INTEGRAL*
B	1/4" NPT
C	1/8" COMPRESSION TUBE
D	1/4" COMPRESSION TUBE
E	1/4" I.D. HOSE
	ACCESSORIES (UP TO 3 DIGIT CODE)
A	NONE*
B	PANEL MOUNTING*
C	DEGREASE FOR OXYGEN SERVICE*
D	NO VALVE KNOB
E	NO BROOKS LOGO
F	GAGE PORT PLUGGED
Example: 8601D1A1AA	

* ANY COMBINATION OF THESE SELECTIONS WILL CARRY UL APPROVAL

ISO 9001 QUALITY SYSTEM

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