

603 SERIES LINE REGULATOR



The 603 Series regulators are intended for secondary pressure control in laser pipeline applications. With a high flow capacity of up to 250 PSIG (17 BAR), it is suitable for demanding applications requiring precise pressure control and high purity, such as laser welding, microbulk or bulk supply systems, and membrane systems

Typical Applications

- Laser Assist Gases: Air, Nitrogen, Oxygen
- Microbulk or Bulk Supply Systems
- Membrane Systems: Assist or Beam Purge
- Nitrogen and Clean Dry Air with Requirements Greater than 1000 CFH
- Laser Welding Pipeline Shielding Gases:
Carbon Dioxide
Argon
Helium



6033011-01-000 shown

Features

- ISOFLOW™ Seat Design** provides high flow delivery
- 40-Micron Internal Filter** limits possibility of gas contamination
- Balanced Stem Seat** eliminates decaying inlet pressure fluctuation
- Stainless Steel Diaphragm** supports ultra-high purity design

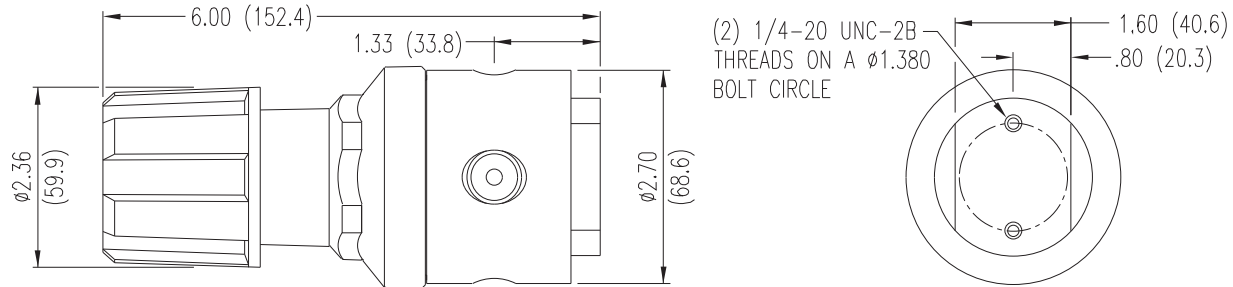
Materials and Specifications

- Maximum Inlet Pressure:** 3000 PSIG (210 BAR)
- Body:** Brass barstock
- Bonnet:** Chrome-plated, die cast zinc
- Temperature Range:** -40°F to 140°F (-40°C to 60°C)
- Gauges:** 2 in (50 mm) diameter brass
- Ports:** 1/2 in FNPT (inlet/outlet); 1/4 in FNPT (gauges)
- Cv:** 1.0
- Seat:** PCTFE
- Filter:** 40-micron 316L stainless steel mesh
- Helium Leak Integrity:** 1×10^{-8} scc/sec
- Internal Seals:** PTFE
- Diaphragm:** 316L Stainless steel
- Weight:** 4.4 lbs (2 kgs)
- Conformances:** Cleanliness meets or exceeds CGA G-4.1; ANSI/ASME B40.1; CRN OH5216.5R2

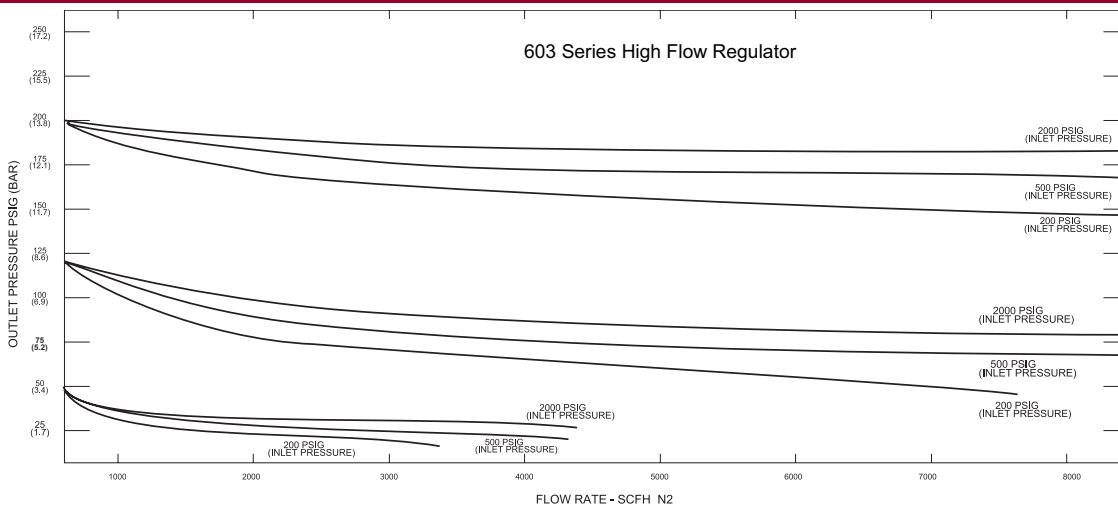
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Installation Dimensions



Flow Performance Curves



Ordering Information

603	A	B	C	D	-CON	
Series 603	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/Gauges	Inlet Connections
	1: 0-15 PSIG (0-1 BAR)	0-30 PSIG (0-2 BAR)	0: None	0: 1/2" FPT port	1: Right hand inlet (PSIG/kPA gauges)	000: 1/2" FPT
	2: 0-40 PSIG (0-2.8 BAR)	0-60 PSIG (0-4 BAR)		1: 1/2" stainless steel compression tube fitting	2: Right hand inlet (BAR/PSIG gauges)	M12: 12 mm stainless steel compression tube fitting
	3: 0-120 PSIG (0-8 BAR)	0-200 PSIG (0-14 BAR)		P: 12 mm stainless steel compression tube fitting	6: Left hand inlet (PSIG/kPA gauges)	TF8: 1/2" stainless steel compression tube fitting
	4: 0-200 PSIG (0-14 BAR)	0-400 PSIG (0-27 BAR)			7: Left hand inlet (BAR/PSIG gauges)	
	5: 0-250 PSIG (0-17 BAR)	0-400 PSIG (0-27 BAR)				

Related Options

Part No.	Option	Description
580 6000 Series	Filter Assembly	2-micron or 40-micron In-line and Tee Filter, configurations to satisfy all requirements,
830 9400 Series	Relief Valves	Gas Phase Relief Valves, suitable for various applications and system requirements
8350204	Mounting Bracket	Rear Panel Mounting Kit
908 6000 Series	Assist Gas Tubing	Assist Gas Hose for laser applications, available in 25 ft (7.5 m) to 100 ft (30.5 m) lengths