



400 Series Regulators

411 SERIES

The 411 Series regulators are intended for primary pressure control of non-corrosive, high purity or liquefied gases for applications requiring constant pressure control and delivery regardless of supply pressure variations.

- Dual Stage
- Chrome-plated Brass Barstock
- Six Port Configuration
- 316L Stainless Steel Diaphragm



411 2331-580 shown

Typical Applications

- EPA Protocol gases
- Gas and liquid chromatography
- High purity carrier gases
- Zero, span, and calibration gases
- High purity chamber pressurization

Features

- Metal-to-Metal Diaphragm Seal**
No possibility of gas contamination
- CAPSULE® Seat**
Increased serviceability and life
- Chrome-plated Brass Barstock Body**
Smooth surface finish
- Front Panel-Mountable**
Easy installation
- 10 Micron Filtration in Both Stages**
Fail-safe seat performance
- Pressure Ranges 0-15 to 0-350 PSIG (0-1 to 0-24 BAR)**
Broad range of applications
- Pipe Away Relief Valve**
Safely vents exhaust gases

Materials

- Body**
Chrome-plated brass barstock
- Bonnet**
Chrome-plated brass barstock
- Seat**
PTFE (first stage)
PTFE (second stage)
- Filter**
10 micron sintered bronze
- Diaphragm**
316L stainless steel
- Internal Seals**
PTFE

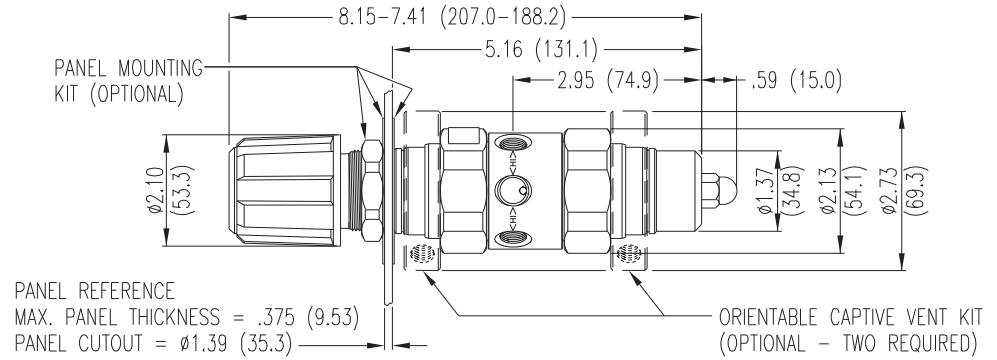
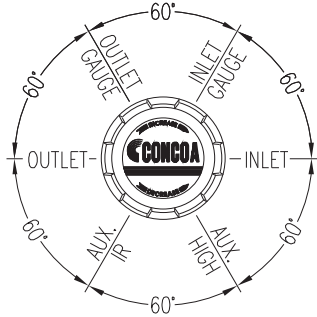
Specifications

- Maximum Inlet Pressure**
3000 PSIG (210 BAR)
3500 PSIG (240 BAR) optional
4500 PSIG (310 BAR) optional
- Temperature Range**
-40°F to 140°F (-40°C to 60°C)
- Gauges**
2" (53mm) diameter chrome-plated
- Ports**
1/4" FPT
- Helium Leak Integrity**
1 x 10⁻⁹ scc/sec
- Cv**
0.1
See page 202 for flow curves
- Weight (411 2331-580)**
5.3 lbs. (2.40 kg)

400 Series Regulators



Installation Dimensions



Ordering Information

411	A	B	C	D	-CON	Options	
Series 411	Max Outlet Pressure	Max Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/ Gauges	Inlet Connections	Installed Options
	1: 0-15 PSIG (0-1 BAR)	30"-0-30 PSIG/ -1-0-2 BAR	0: None	0: 1/4" FPT port	0: Bare body	000: 1/4" FPT	B: Protocol alarm station (110/220 VAC)
	2: 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR	3: 0-4000 PSIG/ 0-275 BAR	1: 1/4" MPT	1: Cleanroom assembly (PSIG/kPa gauges)	TF2: 1/8" tube	C: Protocol switchover station
	3: 0-100 PSIG (0-7 BAR)	30"-0-200 PSIG/ -1-0-14 BAR	5: 0-1000 PSIG/ 0-70 BAR	2: 1/4" tube fitting	2: Cleanroom assembly (BAR/PSIG gauges)	TF4: 1/4" tube	D: Deep purge*
	4: 0-250 PSIG (0-17 BAR)	0-400 PSIG/ 0-27 BAR	6: 0-300 PSIG/ 0-21 BAR	3: Diaphragm valve 1/4" tube fitting		TF6: 3/8" tube	H: Protocol switchover station with alarm (110/220 VAC)
	7: 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR	7: 0-400 PSIG/ 0-27 BAR	4: Diaphragm valve 1/4" MPT		M06: 6mm tube	M: Protocol station
	E: 0-350 PSIG (0-24 BAR)	0-400 PSIG/ 0-27 BAR	8: 0-6000 PSIG/ 0-415 BAR*	5: Needle valve 1/4" MPT		CGA DIN 477 BS 341 and others available	Q: Protocol purge station* *Not available with 4500 PSIG (310 BAR) max inlet pressure
		G: 0-4000 PSIG/ 0-275 BAR†	6: 1/8" tube fitting				
		*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®	7: 3/8" tube fitting				
		†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE®	8: Diaphragm valve 1/8" tube fitting				
			9: Diaphragm valve 1/4" FPT				
			A: 3/8" BSP RH fitting				
			B: Diaphragm valve 3/8" tube fitting				
			C: 3/8" BSP LH fitting				
			D: 6mm brass hose barb (not available if A=4 or 5)				
			G: 1/8" stainless steel tube fitting				
			H: 1/4" stainless steel tube fitting				
			M: 6mm tube fitting				
			S: Diaphragm valve 6mm tube fitting				

Related Options

Order No.	Description
550 0002	Panel mount kit
550 0001	Captured vent kit
476 0002	Helium Leak certification

REGULATORS

