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

Typical Applications

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



411 2331-580 shown

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
PCTFE (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

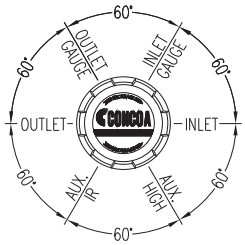
Cv
0.1
See page 202 for flow curves

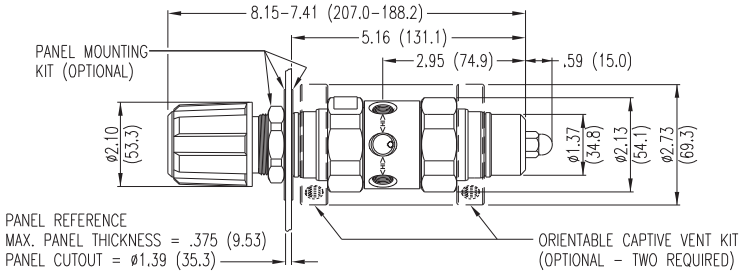
Weight (411 2331-580)
5.3 lbs. (2.40 kg)

CRN 0H15806.5R1

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 with pressure switch gauges
	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	**E:** Protocol alarm station with intrinsically safe transducer for hazardous environments
	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	**H:** Protocol switchover alarm station with pressure switch gauges
	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	**J:** Protocol alarm station with standard transducer for non hazardous environments
			G: 0-4000 PSIG/ 0-275 BAR†	**6:** 1/8" tube fitting			**K:** Protocol switchover alarm station with standard transducer for non hazardous environments
			**Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®* *†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE®*	**7:** 3/8" tube fitting			**M:** Protocol station
				8: Diaphragm valve 1/8" tube fitting			**Q:** Protocol purge station*
				9: Diaphragm valve 1/4" FPT			**X:** Protocol switchover alarm station with intrinsically safe transducer for hazardous environments
				A: 3/8" BSP RH fitting			**Not available with 4500 PSIG (310 BAR) max inlet pressure*
				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

Flow Curves for 312, 315, 332, 411, 412, 414, 415, 430, 432 Series

