

414 SERIES REGULATORS



The 414 Series, dual stage regulators with five port configuration are intended for primary pressure control of non-corrosive, ultra-high purity, or liquefied gases for applications. Two stages of pressure regulation minimize inlet pressure variations that arise due to the depletion of the supply cylinder. This makes the 414 Series regulator ideal for applications where constant delivery pressure is critical.

Typical Applications

- EPA Protocol Gases
- High Purity Carrier Gases
- Gas and Liquid Chromatography
- Zero, Span, and Calibration Gases
- High Purity Chamber Pressurization



414 3331-01-580 shown

Features

Metal-to-Metal Diaphragm Seal prevents gas contamination

Brass Barstock Body provides smooth surface finish

Cleanroom Assembly eliminates contamination at installation

Pipe Away Relief Valve vents exhaust gases safely

CAPSULE® Seat Design features integral 360° filtration in both stages

Pressure Ranges 0-15 to 0-350 PSIG (0-1 to 0-24 BAR) accommodates a broad range of applications

Materials and Specifications

Maximum Inlet Pressure (bare body): 3000 PSIG (210 BAR); or 3500 PSIG (240 BAR) or 4500 PSIG (310 BAR) options

Body: Brass barstock

Bonnet: Brass barstock

Gauges: 2 in (50 mm) diameter brass

Seat: PTFE; PCTFE with 3500 PSIG (240 BAR) or 4500 PSIG (310 BAR) inlet option

Filter: 10-micron sintered bronze

Temperature Range: -40°F to 140°F (-40°C to 60°C)

Diaphragm: 316L stainless steel

Cv: 0.1 See flow curves attached

Helium Leak Integrity: 1×10^{-9} scc/sec

Internal Seals: PTFE

Ports (bare body): 1/4 in FNPT

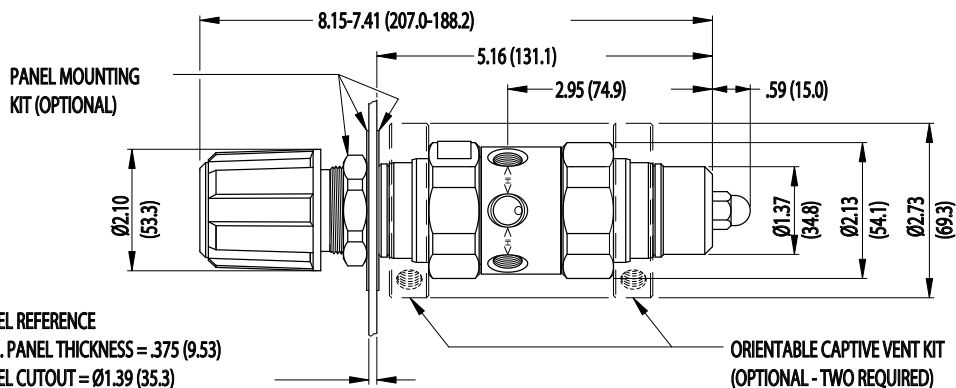
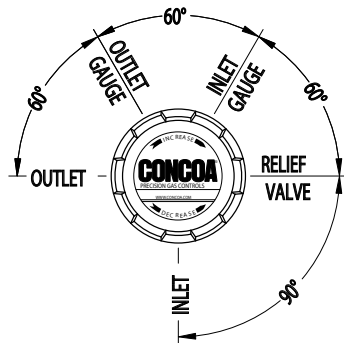
Weight (414 3331-580): 5.3 lbs. (2.4 kg)

Conformances: Cleanliness meets or exceeds CGA G-4.1; PED 2014/68/EU; ANSI/ASME B40.1; CRN OH5216

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Installation Dimensions



Ordering Information

414	A	B	C	D	-CON	
Series 414	Max Outlet Pressure	Max Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/Gauges	Inlet Connections
	1: 0-15 PSIG (0-1 BAR)	30"-0-30 PSIG/-1-0-2 BAR	0: None	0: 1/4" FNPT port	0: Bare body	000: 1/4" FNPT
	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" MNPT	1: Cleanroom assembly (PSIG/kPa gauges)	TF2: 1/8" tube
	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
	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
	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" MNPT		M06: 6mm tube
	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" MNPT		CGA DIN 477 BS 341 and others available.
			G: 0-4000 PSIG/0-275 BAR†	6: 1/8" tube fitting		
			<i>*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®.</i>	7: 3/8" tube fitting		
			<i>†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE.</i>	8: Diaphragm valve 1/8" tube fitting		
				9: Diaphragm valve 1/4" FNPT		
				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

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

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Flow Curves for 414 Series

