

405 SERIES REGULATORS



The 405 Series single stage regulators are intended for secondary pressure control of non-corrosive, ultra-high purity, or liquefied gases in high purity gas distribution systems. For applications where gas is piped up to instruments, the 405 Series point-of-use regulator allows the user to tightly monitor and adjust delivery pressure as needed.

Typical Applications

- Bulk Gas Distribution Systems
- High Purity Carrier Gases
- Control of Cryogenic Gases
- Gas and Liquid Chromatography
- Zero, Span, and Calibration Gases
- High Purity Chamber Pressurization
- Liquefied Hydrocarbon Gas Control



405 3031-01-000 shown

Features

Metal-to-Metal Diaphragm Seal prevents gas contamination

Brass Barstock Body provides smooth, durable 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 0-500 PSIG (0-1 to 0-34 BAR) accommodates a broad range of applications

Materials and Specifications

Maximum Inlet Pressure (bare body): 3000 PSIG (210 BAR)

Body: Brass barstock

Bonnet: Brass barstock

Gauge: 2 in (50 mm) diameter brass

Seat: PTFE

Filter: 10-micron sintered bronze

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

Diaphragm: 316L stainless steel

Cv: 0.1 Max outlet 50 PSIG (3.5 BAR) or below; 0.2 Max outlet above 50 PSIG (3.5 BAR) See flow curves attached

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

Internal Seals: PTFE

Ports (bare body): 1/4 in FNPT

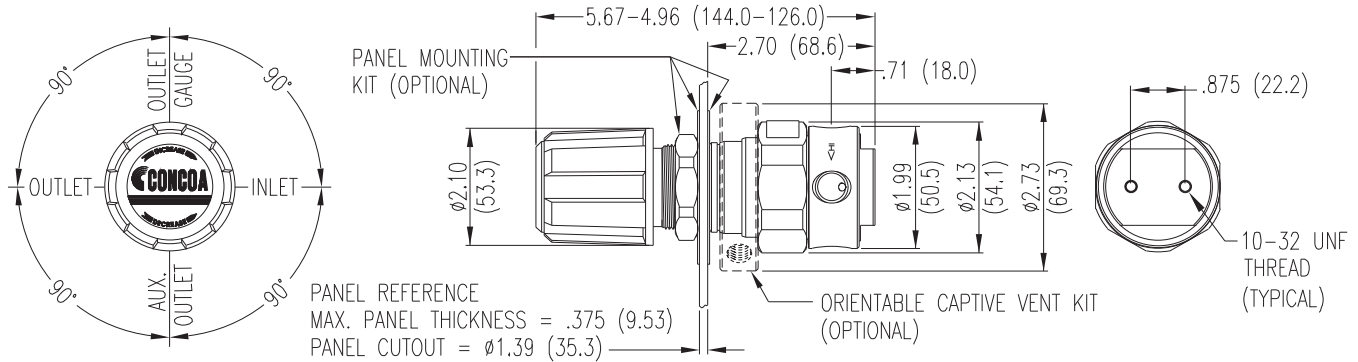
Weight (405 3031-000): 2.71 lbs. (1.23 kg)

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

405	A	B	C	D	-CON	Options	
Series 405	Outlet Pressure	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" FNPT port	0: Bare body	000: 1/4" FNPT	D: Deep purge
	2: 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR		1: 1/4" MNPT	1: Cleanroom assembly (PSIG/kPa gauges)	TF2: 1/8" tube	M: Protocol station
	3: 0-100 PSIG (0-7 BAR)	30"-0-200 PSIG/ -1-0-14 BAR		2: 1/4" tube fitting	2: Cleanroom assembly (BAR/PSIG gauges)	TF4: 1/4" tube	Q: Protocol purge station
	4: 0-250 PSIG (0-17 BAR)	0-400 PSIG/ 0-27 BAR		3: Diaphragm valve 1/4" tube fitting	6: Mirror image (PSIG/kPa gauges)	TF6: 3/8" tube	
	5: 0-500 PSIG (0-34 BAR)**	0-1000 PSIG/ 0-70 BAR		4: Diaphragm valve 1/4" MNPT	7: Mirror image (BAR/PSIG gauges)	M06: 6mm tube	
	7: 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR		5: Needle valve 1/4" MNPT			
				6: 1/8" tube fitting			
				7: 3/8" tube fitting			
				8: Diaphragm valve 1/8" 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			

*Standard assembly does not include relief valve.

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 405 Series

