

420 SERIES REGULATORS



The 420 Series SilcoNert® treated, six-port cylinder regulators are intended for pressure control of reactive or corrosive calibration mixtures or pure gases in applications where an extremely inert wetted finish is required. The proprietary non-reactive amorphous silicon finish is significantly more inert than 316L stainless steel and ideally suited for Hydrogen Sulfide, reduced Sulfur, Mercury, and PPM to PPB calibration mixtures. In a six port configuration, the 420 Series regulator is suitable for sole pressure control in applications that can tolerate minor fluctuations in outlet pressure due to diminishing inlet supply or with gases stored at pressures below 500 PSIG (35 BAR).

Typical Applications

- Emissions Monitoring
- Hydrogen Sulfide PPM to PPB Standard
- Mercury Standards
- Reactive Calibration Standard
- Sulfur Mixtures
- Corrosive Service
- Control of Cryogenic Gases



420 3331-01-330 shown

Features

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

SilcoNert 2000 Treated Barstock Body provides increased corrosion resistance

Cleanroom Assembly eliminates contamination at installation

Front and Rear Panel-Mountable facilitates a variety of system configurations

Metal-to-Metal Diaphragm Seal prevents gas contamination

Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR) accommodate a broad range of applications

Materials and Specifications

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

Body: SilcoNert 2000 treated barstock

Bonnet: SilcoNert 2000 treated barstock

Gauges: 2 in (50 mm) diameter stainless steel

Seat: PTFE

Filter: 10-micron SilcoNert 2000 treated mesh

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

Diaphragm: SilcoNert 2000

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 (420 3331-330): 3.8 lbs. (1.73 kg)

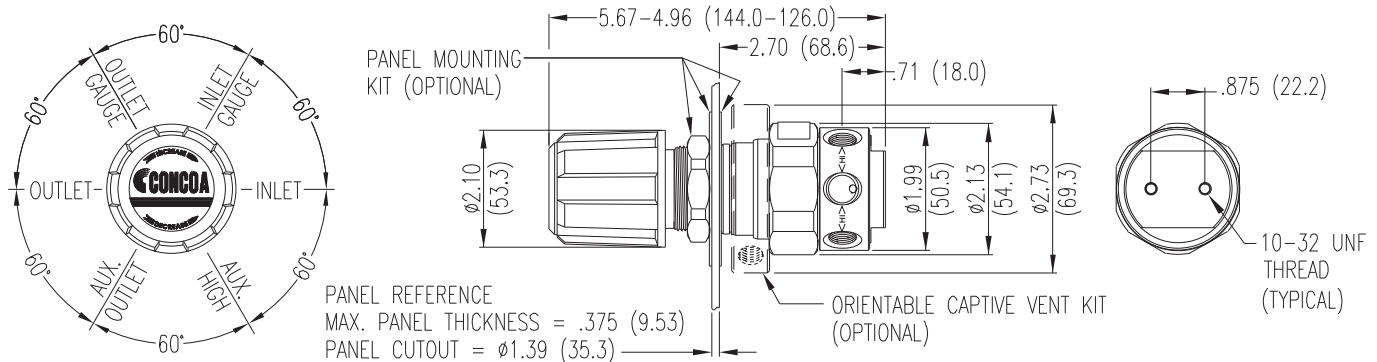
Conformances: Cleanliness meets or exceeds CGA G-4.1; PED 2014/68/EU; ANSI/ASME B40.1; CRNOH5216

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Installation Dimensions

Six Port Configuration



Ordering Information

420	A	B	C	D	-CON	Options	
Series	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/Gauges	Inlet Connections	Installed Options
420	1: 0-15 PSIG (0-1 BAR)*	30"-0-30 PSIG/-1-0-2 BAR)	0: None	0: 1/4" FNPT port	0: Six-port bare body	000: 1/4" FNPT port	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	2: 1/4" tube fitting	1: Six-port cleanroom assembly (PSIG/kPa gauges)	TF2: 1/8" tube fitting	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	3: Diaphragm valve 1/4" tube fitting	2: Six-port cleanroom assembly (BAR/PSIG gauges)	TF4: 1/4" tube fitting	E: Protocol alarm station with intrinsically safe transducer for hazardous environments
	4: 0-250 PSIG (0-17 BAR)	0-400 PSIG/0-27 BAR)	6: 0-300 PSIG/0-21 BAR	6: 1/8" tube fitting	6: Six-port mirror image (PSIG/kPa gauges)	M06: 6mm tube fitting	H: Protocol switchover alarm station with pressure switch gauges
	5: 0-500 PSIG (0-34 BAR)	0-1000 PSIG/0-70 BAR	7: 0-400 PSIG/0-27 BAR	8: Diaphragm valve 1/8" tube fitting	7: Six-port mirror image (BAR/PSIG gauges)	CGA DIN 477 BS 341 and others available.	J: Protocol alarm station with standard transducer for non-hazardous environments
	7: 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/-1-0-14 BAR)	8: 0-6000 PSIG/0-415 BAR*	9: Diaphragm valve 1/4" FNPT	A: Four-port bare body		K: Protocol switchover alarm station with standard transducer for non-hazardous environments
	*Not available with 4500 PSIG (310 BAR) maximum inlet pressure.		*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®.	M: 6mm tube fitting	B: Four-port cleanroom assembly (PSIG/kPa gauges)	M: Protocol station	
				S: Diaphragm valve 6mm tube fitting	C: Four-port cleanroom assembly (BAR/PSIG)		Q: Protocol purge station*
				D: Four-port mirror image (PSIG/kPa gauges)	X: Protocol switchover alarm station with intrinsically safe transducer for hazardous environments		
				E: Four-port mirror image (BAR/PSIG gauges)		*Not available with 4500 PSIG (310 BAR) max inlet pressure.	

Related Options

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

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Flow Curves for 420 Series Regulators

