

# 420 SERIES LINE REGULATORS



The 420 Series SilcoNert® treated, four-port line regulators are intended for primary or secondary pressure regulation of reactive or corrosive calibration mixtures or pure gases in applications requiring an extremely inert wetted finish and stable delivery pressure regardless of inlet pressure. 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 four-port configuration, the 420 Series regulator is suitable for secondary pressure control of ultra-high purity, inert gases, or point-of-use pressure control in high purity gas distribution systems.

## Typical Applications

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



420 303B-01-000

## 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

## Materials and Specifications

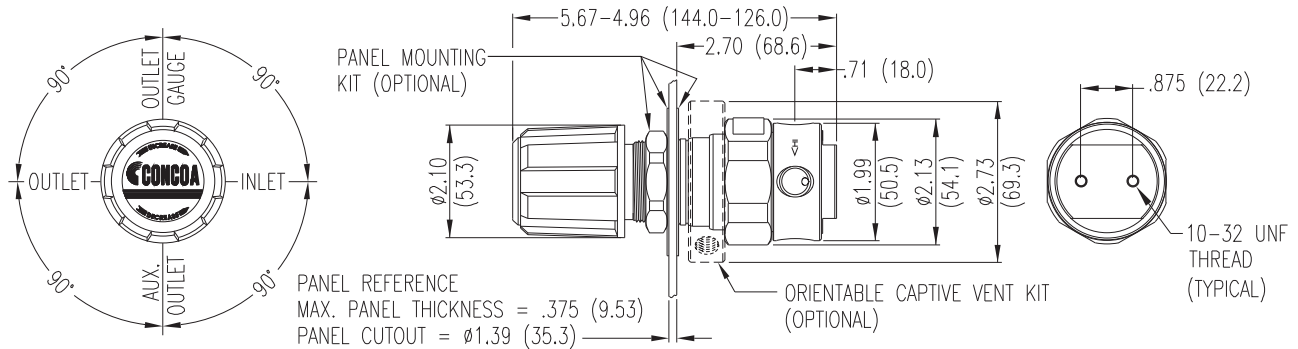
- Maximum Inlet Pressure (bare body):** 3000 PSIG (210 BAR); or 4500 PSIG (310 BAR) options
- Body:** SilcoNert 2000 treated barstock
- Bonnet:** SilcoNert 2000 treated barstock
- Gauge:** 2 in (50 mm) diameter stainless steel
- Seat:** PTFE
- Filter:** 10-micron SilcoNert 2000 treated mesh
- Temperature Range:** -40°F to 140°F (-40°C to 60°C)
- Diaphragm:** SilcoNert 2000
- Cv:** 0.1 See flow curves attached
- Helium Leak Integrity:**  $1 \times 10^{-9}$  scc/sec
- Internal Seals:** PTFE
- Ports (bare body):** 1/4 in FNPT
- Weight (420 303B-000):** 3.8 lbs. (1.73 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

### Four Port Configuration



## Ordering Information

420	A	B	C	D	-CON	Options	
Series 420	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/Gauges	Inlet Connections	Installed Options
	<b>1:</b> 0-15 PSIG (0-1 BAR)*	30"-0-30 PSIG/ -1-0-2 BAR)	<b>0:</b> None	<b>0:</b> 1/4" FNPT port	<b>0:</b> Six-port bare body	<b>000:</b> 1/4" FNPT	<b>B:</b> Protocol alarm station with pressure switch gauges
	<b>2:</b> 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR)	<b>3:</b> 0-4000 PSIG/ 0-275 BAR	<b>2:</b> 1/4" tube fitting	<b>1:</b> Six-port cleanroom assembly (PSIG/kPa gauges)	<b>TF2:</b> 1/8" tube	<b>C:</b> Protocol switchover station*
	<b>3:</b> 0-100 PSIG (0-7 BAR)	30"-0-200 PSIG/ -1-0-14 BAR)	<b>5:</b> 0-1000 PSIG/ 0-70 BAR	<b>3:</b> Diaphragm valve 1/4" tube fitting	<b>2:</b> Six-port cleanroom assembly (BAR/PSIG gauges)	<b>TF4:</b> 1/4" tube	<b>E:</b> Protocol alarm station with intrinsically safe transducer for hazardous environments
	<b>4:</b> 0-250 PSIG (0-17 BAR)	0-400 PSIG/ 0-27 BAR)	<b>6:</b> 0-300 PSIG/ 0-21 BAR	<b>6:</b> 1/8" tube fitting	<b>6:</b> Six-port mirror image (PSIG/kPa gauges)	<b>M06:</b> 6mm tube	<b>H:</b> Protocol switchover alarm station with pressure switch gauges
	<b>5:</b> 0-500 PSIG (0-34 BAR)	0-1000 PSIG/ 0-70 BAR	<b>7:</b> 0-400 PSIG/ 0-27 BAR	<b>8:</b> Diaphragm valve 1/8" FNPT	<b>7:</b> Six-port mirror image (BAR/PSIG gauges)	<b>CGA DIN 477 BS 341 and others available.</b>	<b>J:</b> Protocol alarm station with standard transducer for non-hazardous environments
	<b>7:</b> 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR)	<b>8:</b> 0-6000 PSIG/ 0-415 BAR*	<b>9:</b> Diaphragm valve 1/4" FNPT	<b>A:</b> Four-port bare body		<b>K:</b> Protocol switchover alarm station with standard transducer for non-hazardous environments
	<i>*Not available with 4500 PSIG (310 BAR) maximum inlet pressure.</i>	<i>*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE Seat CAPSULE®.</i>		<b>M:</b> 6mm tube fitting	<b>B:</b> Four-port cleanroom assembly (PSIG/kPa gauges)		<b>M:</b> Protocol station
				<b>S:</b> Diaphragm valve 6mm tube fitting	<b>C:</b> Four-port cleanroom assembly (BAR/PSIG)		<b>Q:</b> Protocol purge station*
					<b>D:</b> Four-port mirror image (PSIG/kPa gauges)		<b>X:</b> Protocol switchover alarm station with intrinsically safe transducer for hazardous environments
					<b>E:</b> Four-port mirror image (BAR/PSIG gauges)		<i>*Not available with 4500 PSIG (310 BAR) max inlet pressure.</i>

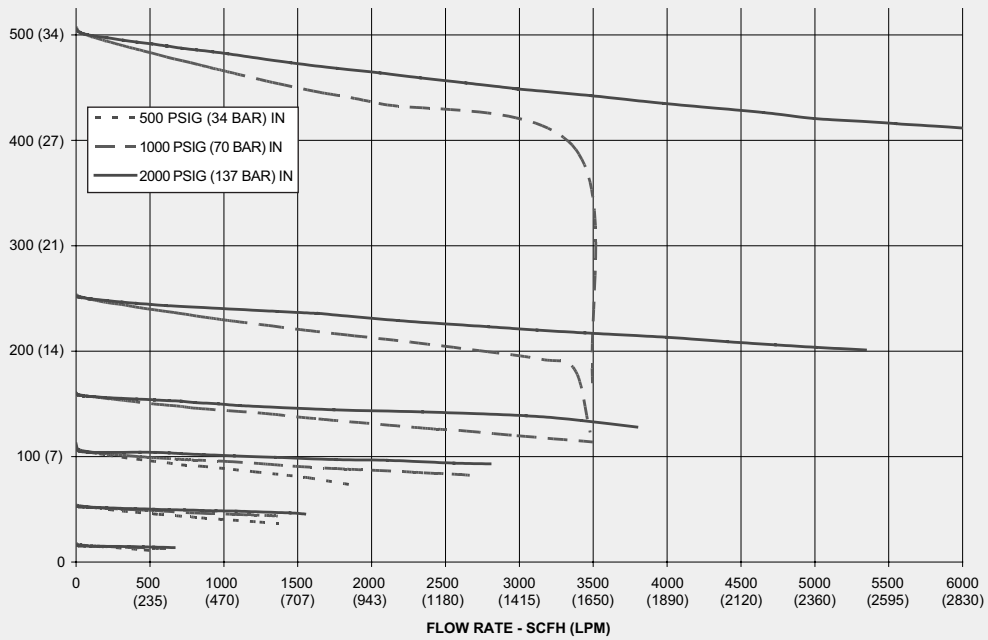
## Related Options

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 420 Series



*SilcoNert is a registered trademark of SilcoTek Corporation.*