

# 403 SERIES REGULATORS



The 403 Series regulators are intended for secondary pressure control of non-corrosive, ultra-high purity, or liquefied gases in high purity gas distribution systems. This single stage pressure regulator offers point-of-use pressure control in five different pressure delivery ranges, from 0-15 PSIG (0-2 BAR) to 0-500 PSIG (0-34 BAR). Unlike most pipeline equipment, the CONCOA 403 Series regulator is rated to full cylinder pressure to ensure safe use in the event of primary pressure control failure.

## 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



403 2021-000 shown

## Features

**Metal-to-Metal Diaphragm Seal** prevents gas contamination

**Chrome-plated Brass Barstock Body** provides enhanced corrosion resistance

**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 from 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)

**Body:** Chrome-plated brass barstock

**Bonnet:** Chrome-plated barstock

**Gauge:** 2 in (50 mm) diameter plated case

**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:**  $1 \times 10^{-9}$  scc/sec

**Internal Seals:** PTFE

**Ports (bare body):** 1/4 in FNPT

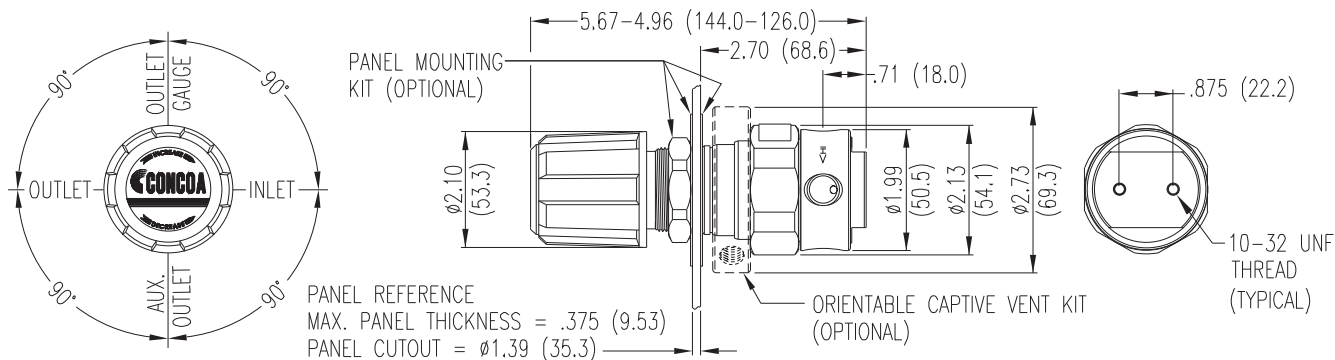
**Weight (403 2021-000):** 3.99 lbs. (1.81 kg)

**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

403	A	B	C	D	-CON	Options	
Series 403	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> Bare body	<b>000:</b> 1/4" FNPT	<b>D:</b> Deep purge
	<b>2:</b> 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR		<b>1:</b> 1/4" MNPT	<b>1:</b> Cleanroom assembly (PSIG/kPa gauges)	<b>TF2:</b> 1/8" tube	<b>M:</b> Protocol station
	<b>3:</b> 0-100 PSIG (0-7 BAR)	30"-0-200 PSIG/ -1-0-14 BAR		<b>2:</b> 1/4" tube fitting	<b>2:</b> Cleanroom assembly (BAR/PSIG gauges)	<b>TF4:</b> 1/4" tube	<b>Q:</b> Protocol purge station
	<b>4:</b> 0-250 PSIG (0-17 BAR)	0-400 PSIG/ 0-27 BAR		<b>3:</b> Diaphragm valve 1/4" tube fitting	<b>6:</b> Mirror image (PSIG/kPa gauges)	<b>TF6:</b> 3/8" tube	
	<b>5:</b> 0-500 PSIG (0-34 BAR)**	0-1000 PSIG/ 0-70 BAR		<b>4:</b> Diaphragm valve 1/4" MNPT	<b>7:</b> Mirror image (BAR/PSIG gauges)	<b>M06:</b> 6mm tube	
	<b>7:</b> 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR		<b>5:</b> Needle valve 1/4" MNPT			
	<b>**Standard assembly does not include relief valve.</b>						
				<b>6:</b> 1/8" tube fitting			
				<b>7:</b> 3/8" tube fitting			
				<b>8:</b> Diaphragm valve 1/8" fitting			
				<b>9:</b> Diaphragm valve 1/4" FNPT			
				<b>A:</b> 3/8" BSP RH fitting			
				<b>B:</b> Diaphragm valve 3/8" tube fitting			
				<b>C:</b> 3/8" BSP LH fitting			
				<b>D:</b> 6mm brass hose barb (Not available if A=4 or 5)			
				<b>G:</b> 1/8" stainless steel tube fitting			
				<b>H:</b> 1/4" stainless steel tube fitting			
				<b>M:</b> 6mm tube fitting			
				<b>S:</b> 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 403 Series

