

# 433 SERIES REGULATORS



The 433 Series regulators are intended for primary pressure control of ultra-high purity or corrosive gases in applications requiring constant pressure control and delivery regardless of supply pressure variations. The 433 Series regulator is similar to the 432 Series regulator but has a left side inlet and three low pressure and three high pressure ports.

## Typical Applications

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



4333331-01-580 shown

## Features

- CAPSULE® Seat Design** features integral 360° filtration in both stages
- 316L Stainless Steel Diaphragm** prevents inboard diffusion
- Cleanroom Assembly** eliminates contamination at installation
- Front and Rear Panel-Mountable** facilitates a variety of system configurations
- Pipe Away Relief Valve** vents exhaust gas safely
- Metal-to-Metal Diaphragm Seal** prevents gas contamination

## Materials and Specifications

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

**Body:** 316L Stainless steel barstock

**Bonnet:** Chrome-plated brass barstock

**Gauges:** 2 in (50 mm) diameter stainless steel

**Seat:** PCTFE (first stage); PTFE (second stage)

**Filter:** 10-micron 316L stainless steel mesh

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

**Internal Seals:** PTFE

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

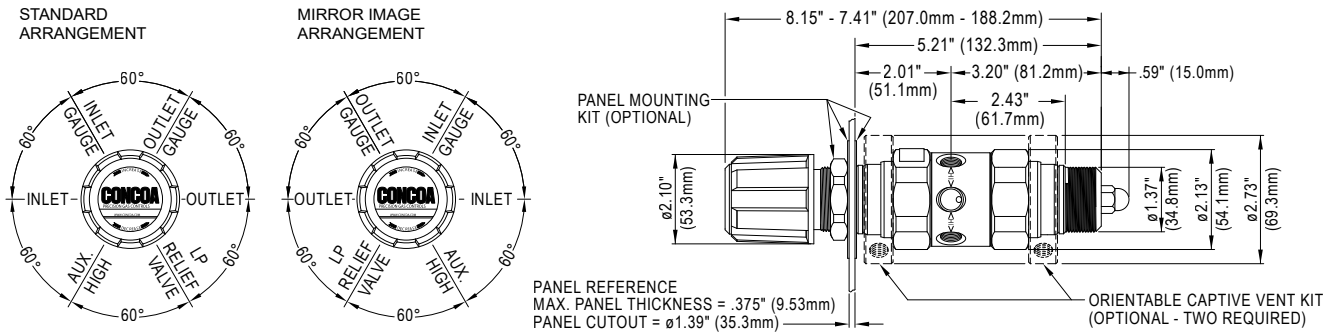
**Weight (4333331-580):** 5.09 lbs. (2.31 kg)

**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

433	A	B	C	D	-CON	Options	
Series 433	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" FPT port	<b>0:</b> Bare body	<b>000:</b> 1/4" FPT	<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>1:</b> 1/4" MPT	<b>1:</b> 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>2:</b> 1/4" tube fitting	<b>2:</b> Cleanroom assembly (BAR/PSIG gauges)	<b>TF4:</b> 1/4" tube	<b>D:</b> Deep purge*
	<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>3:</b> Diaphragm valve 1/4" tube fitting	<b>6:</b> Cleanroom assembly Mirror image (PSIG/kPa gauges)	<b>TF6:</b> 3/8" tube	<b>E:</b> Protocol alarm station with intrinsically safe transducer for hazardous environments
	<b>7:</b> 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR)	<b>7:</b> 0-400 PSIG/ 0-27 BAR)	<b>4:</b> Diaphragm valve 1/4" MPT	<b>7:</b> Cleanroom assembly Mirror image (BAR/PSIG gauges)	<b>M06:</b> 6mm tube	<b>H:</b> Protocol switchover alarm station with pressure switch gauges
	<b>E:</b> 0-350 PSIG (0-24 BAR)	0-400 PSIG/ 0-27 BAR)	<b>8:</b> 0-6000 PSIG/ 0-415 BAR*	<b>5:</b> Needle valve 1/4" MPT		<b>CGA DIN 477 BS 341 and others available</b>	<b>J:</b> Protocol alarm station with standard transducer for non-hazardous environments
		<b>G:</b> 0-4000 PSIG/ 0-275 BAR†	<b>6:</b> 1/8" tube fitting				<b>K:</b> Protocol switchover alarm station with standard transducer for non-hazardous environments
		<i>*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®</i>	<b>7:</b> 3/8" tube fitting				<b>M:</b> Protocol station
		<i>†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE</i>	<b>8:</b> Diaphragm valve 1/8" tube fitting				<b>Q:</b> Protocol purge station*
			<b>9:</b> Diaphragm valve 1/4" FPT				<b>S:</b> Stainless steel bonnet
			<b>M:</b> 6mm tube fitting				<b>X:</b> Protocol switchover alarm station with intrinsically safe transducer for hazardous environments
			<b>S:</b> Diaphragm valve 6mm tube fitting				<i>*Not available with 4500 PSIG (310 BAR) max inlet pressure</i>

## Related Options

Order No.	Description
550 0002	Panel mount kit
550 0001	Captured vent kit (2 required)
476 0002	Helium leak certification

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## Flow Curves for 433 Series

