



# 400 Series Regulators

# 425 SERIES

The 425 Series regulators are intended for secondary pressure control of ultra-high purity and corrosive gases or as point-of-use pressure control in ultra-high purity gas distribution systems.

- Single Stage
- 316L Stainless Steel Barstock Body
- Four Port Configuration
- 316L Stainless Steel Diaphragm



425 2021-000 shown

## Typical Applications

- Bulk gas distribution systems
- Gas and liquid chromatography
- Ultra-high purity carrier gases
- Zero, span, and calibration gases
- High purity chamber pressurization
- Liquefied hydrocarbon gas control
- Control of cryogenic gases
- Corrosive gases

## Features

- Metal-to-Metal Diaphragm Seal**  
No possibility of gas contamination
- CAPSULE® Seat**  
Increased serviceability and life
- 316L Stainless Steel Barstock Body**  
Increased corrosion resistance
- Front and Rear Panel-Mountable**  
Versatile system configuration
- Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR)**  
Broad range of applications
- 3000 PSIG (210 BAR) Inlet Pressure Rating**  
Safe use with high pressure cylinders
- Pipe Away Relief Valve**  
Safely vents exhaust gases

## Materials

- Body**  
316L stainless steel barstock
- Bonnet**  
Chrome-plated brass barstock
- Seat**  
PTFE
- Filter**  
Patented 10 micron 316 mesh
- Diaphragm**  
316L stainless steel
- Internal Seals**  
PTFE

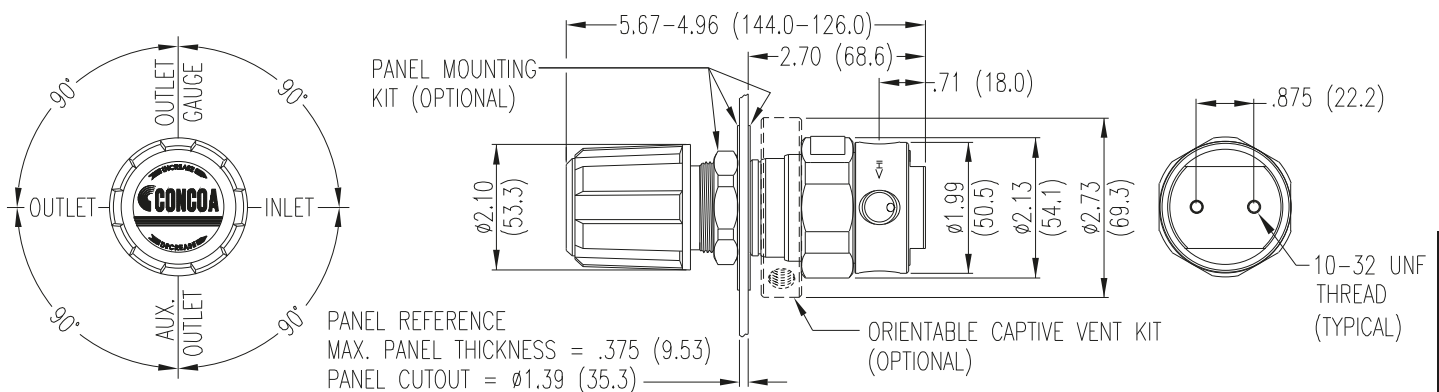
## Specifications

- Maximum Inlet Pressure**  
3000 PSIG (210 BAR)
- Temperature Range**  
-40°F to 140°F (-40°C to 60°C)
- Gauges**  
2" (53mm) diameter stainless steel
- Ports**  
1/4" FPT
- Helium Leak Integrity**  
1 x 10<sup>-9</sup> scc/sec
- Cv**  
0.1 (Max outlet 50 PSIG/1 BAR or below)  
0.2 (Max outlet above 50 PSIG/3.5 BAR)  
*See page 203 for flow curves*
- Weight (425 2021-TF4)**  
2.58 lbs. (1.17 kg)

# 400 Series Regulators



## Installation Dimensions



REGULATORS

## Ordering Information

425	A	B	C	D	-CON	Options	
Series	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/ Gauges	Inlet Connections	Installed Options
425	1: 0-15 PSIG (0-1 BAR)	30"-0-30 PSIG/ -1-0-2 BAR	0: None	0: 1/4" FPT Port	0: Bare body	000: 1/4" FPT	M: Protocol station
	2: 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR		1: 1/4" MPT	1: Cleanroom Assembly (PSIG/kPa Gauges)	TF2: 1/8" tube	Q: Protocol purge 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	S: Stainless steel bonnet
	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" MPT	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" MPT			
	*Standard assembly does not include relief valve			6: 1/8" tube fitting			
				7: 3/8" tube fitting			
				8: Diaphragm valve 1/8" tube fitting			
				9: Diaphragm valve 1/4" FPT			
				M: 6mm tube fitting			
				S: Diaphragm valve 6mm tube fitting			

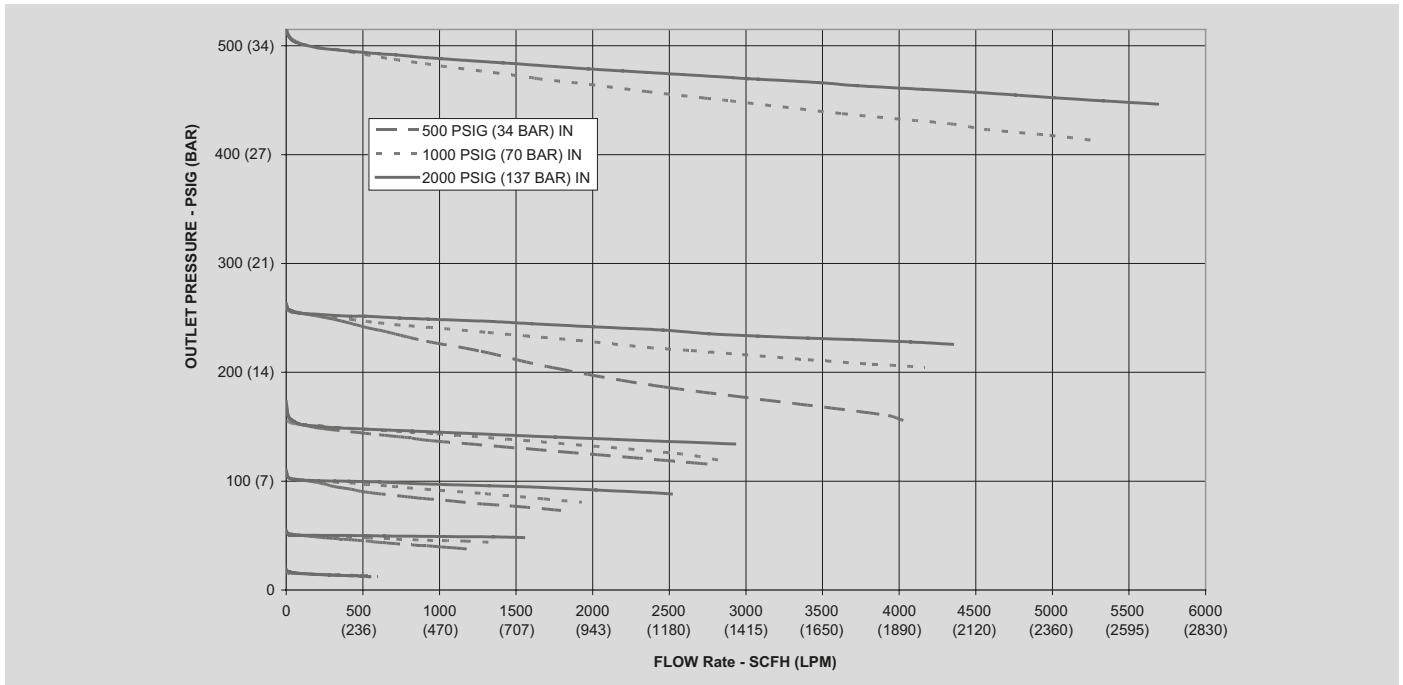
## Related Options

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

# Regulator Flow Curves



## Flow Curves for 403, 405, 425, 435, 445 Series



## Flow Curves for 492, 493 Series

