



# 400 Series Regulators

# 402 SERIES

The 402 Series regulators are intended for primary pressure control of non-corrosive, high purity or liquefied gases, or for applications where minor fluctuations in outlet pressure due to diminishing inlet supply can be tolerated.

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

## Typical Applications

Bulk gas distribution systems

Gas and liquid chromatography

High purity carrier gases

Zero, span, and calibration gases

High purity chamber pressurization

Liquefied hydrocarbon gas control

Control of cryogenic gases

EPA protocol standards



402 1331-580 shown

## Features

### Metal-to-Metal Diaphragm Seal

No possibility of gas contamination

### CAPSULE® Seat

Increased serviceability and life

### Brass Barstock Body

Smooth surface finish

### Front Panel-Mountable

Easy installation

### 10 Micron Filtration in Both Stages

Fail-safe seat performance

### Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR)

Broad range of applications

### Pipe Away Relief Valve

Safely vents exhaust gases

## Materials

### Body

Brass barstock

### Bonnet

Brass barstock

### Seat

PTFE

PCTFE with 3500 PSIG (240 BAR) or 4500 PSIG (310 BAR) inlet option

### Filter

10 micron sintered bronze

### Diaphragm

316L stainless steel

### Internal Seals

PTFE

## Specifications

### Maximum Inlet Pressure

3000 PSIG (210 BAR)  
3500 PSIG (240 BAR) optional  
4500 PSIG (310 BAR) optional

### Temperature Range

-40°F to 140°F (-40°C to 60°C)

### Gauges

2" (53mm) diameter brass

### Ports

1/4" FPT

### Helium Leak Integrity

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

### Cv

0.1

See page 202 for flow curves

### Weight (402 1331-580)

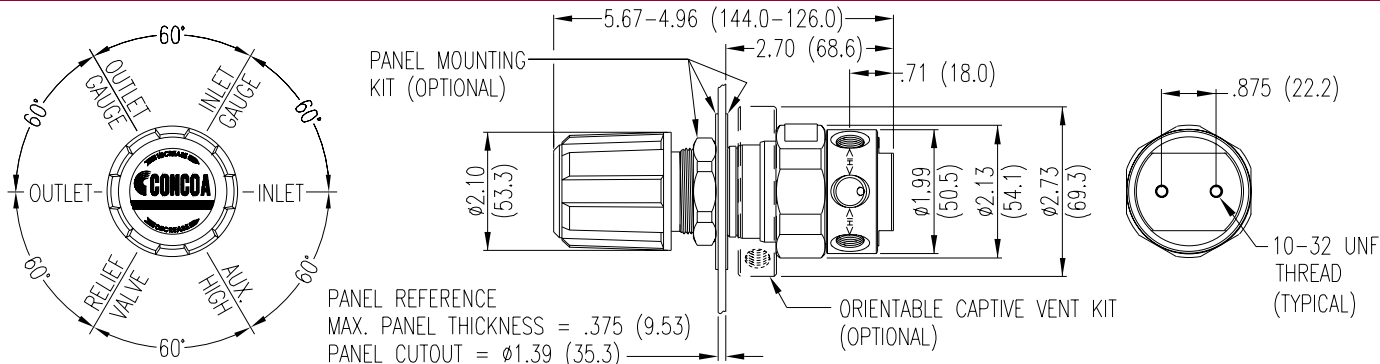
3.99 lbs. (1.81 kg)

CRN 0H15806.5R1

# 400 Series Regulators



## Installation Dimensions



## Ordering Information

402	A	B	C	D	-CON	Options	
Series 402	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> 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>5:</b> 0-500 PSIG (0-34 BAR)**	0-1000 PSIG/ 0-70 BAR	<b>7:</b> 0-400 PSIG/ 0-27 BAR	<b>4:</b> Diaphragm valve 1/4" MPT	<b>7:</b> Mirror image (BAR/PSIG gauges)	<b>M06:</b> 6mm tube	<b>H:</b> Protocol switchover alarm station with pressure switch gauges
	<b>7:</b> 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR	<b>8:</b> 0-6000 PSIG/ 0-400 BAR*	<b>5:</b> Needle valve 1/4" MPT		CGA DIN 477 BS 341 and others available	<b>J:</b> Protocol alarm station with standard transducer for non hazardous environments
	<b>A:</b> 0-15 PSIG (0-1 BAR)*	0-30 PSIG / 0-2 BAR***	<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>*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>7:</b> 3/8" tube fitting			<b>M:</b> Protocol station
	<i>**Standard assembly does not include relief valve</i>			<b>8:</b> Diaphragm valve 1/8" tube fitting			<b>Q:</b> Protocol purge station*
	<i>*** With redline for acetylene use.</i>	<i>†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE</i>		<b>9:</b> Diaphragm valve 1/4" FPT			<b>X:</b> Protocol switchover alarm station with intrinsically safe transducer for hazardous environments
				<b>A:</b> 3/8" BSP RH fitting			<i>*Not available with 4500 PSIG (310 BAR) max inlet pressure</i>
				<b>B:</b> Diaphragm valve 3/8" 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

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

REGULATORS



# Regulator Flow Curves

## Flow Curves for 302, 304, 305, 307, 322, 324, 327, 401, 402, 408, 420, 422, 426, 427, 428, 429 Series

