

402 SERIES REGULATORS



The 402 Series pressure reducing regulators are intended for primary pressure control of non-corrosive, liquefied, or ultra-high purity inert gases. Because of the pressure rise associated with the depletion of high-pressure cylinders, CONCOA recommends the 402 Series single stage regulators for applications that can tolerate minor fluctuations in outlet pressure due to diminishing inlet supply or where inlet pressure is constant or under 500 PSIG (34 BAR).

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
- Liquefied Hydrocarbon Gas Control



402 3331-01-580 shown

Features

Metal-to-Metal Diaphragm Seal prevents gas contamination

Bare Brass Barstock Body eliminates chromium or nickel contamination

Cleanroom Assembly mitigates contamination at installation

Pipe Away Relief Valve vents exhaust gases safely

CAPSULE® Seat Design features integral 360° filtration in both stages

Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR) accommodates a broad range of applications

Materials and Specifications

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

Body: Brass barstock

Bonnet: Brass barstock

Gauges: 2 in (50 mm) diameter plated case

Seat: PTFE; PCTFE with 3500 PSIG (240 BAR) or 4500 PSIG (310 BAR) inlet option

Filter: 10-micron sintered bronze

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: 1×10^{-9} scc/sec

Internal Seals: PTFE

Ports (bare body): 1/4 in FNPT

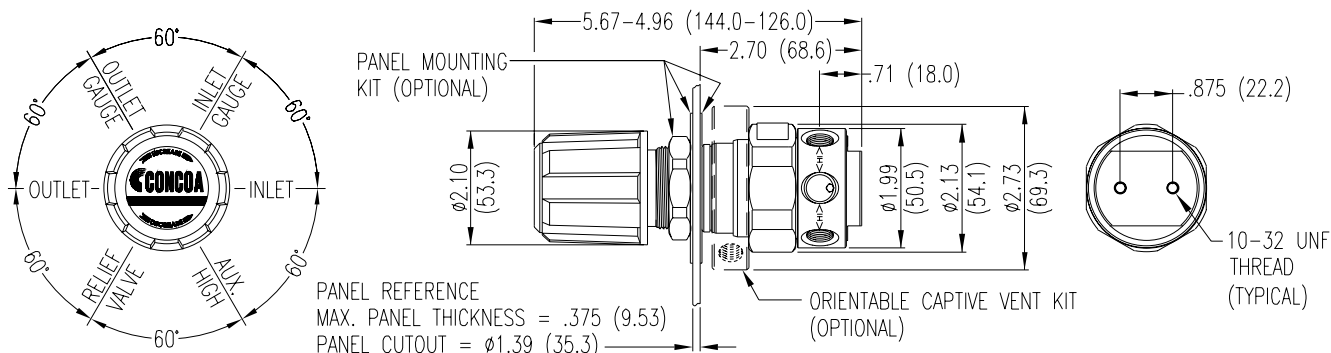
Weight (402 3331-580): 3.99 lbs. (1.81 kg)

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

| 402 | A | B | C | D | -CON | Options | |
|------------|-----------------------------------|-----------------------------|-----------------------------------|---|--|---|---|
| Series 402 | Outlet Pressure | Outlet Gauge | Inlet Gauge | Outlet Assemblies | Assembly/Gauges | Inlet Connections | Installed Options |
| | 1: 0-15 PSIG (0-1 BAR)* | 30"-0-30 PSIG/ -1-0-2 BAR | 0: None | 0: 1/4" FNPT port | 0: Bare body | 000: 1/4" FNPT | B: Protocol alarm station with pressure switch gauges |
| | 2: 0-50 PSIG (0-3.5 BAR) | 30"-0-100 PSIG/ -1-0-7 BAR | 3: 0-4000 PSIG/ 0-275 BAR | 1: 1/4" MNPT | 1: Cleanroom assembly (PSIG/kPa gauges) | TF2: 1/8" tube | C: Protocol switchover station |
| | 3: 0-100 PSIG (0-7 BAR) | 30"-0-200 PSIG/ -1-0-14 BAR | 5: 0-1000 PSIG/ 0-70 BAR | 2: 1/4" tube fitting | 2: Cleanroom assembly (BAR/PSIG gauges) | TF4: 1/4" tube | D: Deep purge* |
| | 4: 0-250 PSIG (0-17 BAR) | 0-400 PSIG/ 0-27 BAR | 6: 0-300 PSIG/ 0-21 BAR | 3: Diaphragm valve 1/4" tube fitting | 6: Mirror image (PSIG/kPa gauges) | TF6: 3/8" tube | E: Protocol alarm station with intrinsically safe transducer for hazardous environments |
| | 5: 0-500 PSIG (0-34 BAR)** | 0-1000 PSIG/ 0-70 BAR | 7: 0-400 PSIG/ 0-27 BAR | 4: Diaphragm valve 1/4" MNPT | 7: Mirror image (BAR/PSIG gauges) | M06: 6mm tube | H: Protocol switchover alarm station with pressure switch gauges |
| | 7: 0-150 PSIG (0-10 BAR) | 30"-0-200 PSIG/ -1-0-14 BAR | 8: 0-6000 PSIG/ 0-400 BAR* | 5: Needle valve 1/4" MNPT | | CGA DIN 477 BS 341 and others available. | J: Protocol alarm station with standard transducer for non-hazardous environments |
| | A: 0-15 PSIG (0-1 BAR)* | 0-30 PSIG / 0-2 BAR*** | G: 0-4000 PSIG/ 0-275 BAR† | 6: 1/8" tube fitting | | | K: Protocol switchover alarm station with standard transducer for non-hazardous environments |
| | | | | 7: 3/8" tube fitting | | | M: Protocol station |
| | | | | 8: Diaphragm valve 1/8" tube fitting | | | Q: Protocol purge station* |
| | | | | 9: Diaphragm valve 1/4" FNPT | | | X: Protocol switchover alarm station with intrinsically safe transducer for hazardous environments |
| | | | | A: 3/8" BSP RH fitting | | | <i>*Not available with 4500 PSIG (310 BAR) max inlet pressure.</i> |
| | | | | B: Diaphragm valve 3/8" fitting | | | |
| | | | | C: 3/8" BSP LH fitting | | | |
| | | | | D: 6mm brass hose barb (not available if A=4 or 5) | | | |
| | | | | G: 1/8" stainless steel tube fitting | | | |
| | | | | H: 1/4" stainless steel tube fitting | | | |
| | | | | M: 6mm tube fitting | | | |
| | | | | S: Diaphragm valve 6mm tube fitting | | | |

*Not available with 4500 PSIG (310 BAR) maximum inlet pressure.

**Standard assembly does not include relief valve.

*** With redline for acetylene use.

*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE seat CAPSULE®.

†Maximum inlet pressure 3500 PSIG (240 BAR) with PCTFE seat CAPSULE.

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 402 Series

