

305 Series

single stage, chrome-plated brass barstock regulator

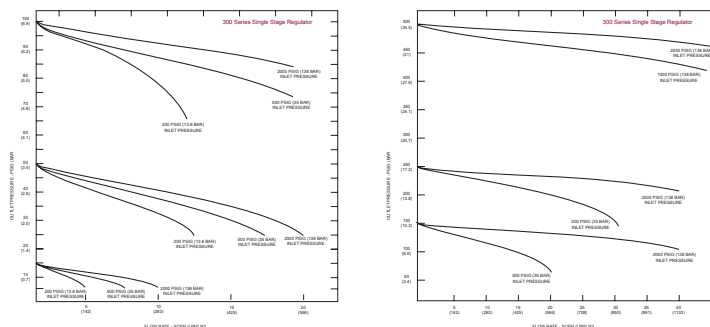


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Description	Advanced Features	Typical Applications
The 305 Series regulators are specifically designed for use in the medical laboratory for blood gases, laser gases, and other clinical gas applications where minor fluctuations in outlet pressure due to diminishing inlet supply pressure can be tolerated.	<ul style="list-style-type: none"> Chrome-Plated Brass Barstock Body 316L Stainless Steel Diaphragm 	<ul style="list-style-type: none"> Blood gases Laser gases Medical research Pharmaceutical manufacturing University laboratories

300 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> Capsule® seat Increased serviceability and life 316L stainless steel diaphragm No inboard diffusion Low wetted surface area Minimal purge requirements Field-adjustable pressure limit Safeguard downstream equipment Convolute diaphragm Smooth pressure changes Compact design Easily transported and integrated 	<ul style="list-style-type: none"> Body Chrome-plated brass barstock Bonnet Chrome-plated die cast zinc Seat PTFE Filter 10 micron sintered bronze Diaphragm 316L stainless steel Internal Seals PTFE 	<ul style="list-style-type: none"> Maximum Inlet Pressure 3000 PSIG (210 BAR) Temperature Range -40°F to 140°F (-40°C to 60°C) Gauges 2" diameter chrome-plated Ports ¼" FPT Helium Leak Integrity 1 x 10⁻⁸ scc/sec Cv 0.1 Weight (305-8381-MIL) 2.8 lbs. (1.29 kg)

Flow Performance



4

Ordering Information and Configuration Options

305	A	B	C	D	-Inlet	
Series 305	Outlet Pressure 1: 0-15 2: 0-30 3: 0-50 5: 0-100 6: 0-200 7: 0-500 8: 2-15 LPM CO ₂ 9: Custom Calibration	Outlet Gauge 0-30 PSIG 0-60 PSIG 0-100 PSIG 0-200 PSIG 0-400 PSIG 0-1000 PSIG 2-15 LPM Flowgauge Custom Flowgauge	Inlet Gauge 0: None 3: 0-4000 PSIG	Outlet Assemblies 0: 1/4" FPT Port 1: 1/4" MPT 2: 1/4" Tube Fitting 3: Diaphragm Valve 1/4" Tube Fitting 4: Diaphragm Valve 1/4" MPT 5: Needle Valve 1/4" MPT 6: 1/8" Tube Fitting 7: 3/8" Tube Fitting 8: Diaphragm Valve 1/8" Tube Fitting 9: Diaphragm Valve 1/4" FPT A: 3/8" BSP Right Hand Fitting	Assembly/ Gauges 0: Bare Body 1: Standard Assembly (PSIG/kPa Gauges) 2: Standard Assembly (BAR/PSIG Gauges)	Inlet Connections See Inlet/Outlet selection chart below (Availability is limited to the combinations shown)

Gas Service	Inlet (Threaded)	Inlet (Yoke)	Outlet (Medical DISS)
Air	CGA 346	CGA 950	1160
Argon	CGA 580	not available	1060 1120
Carbon Dioxide	CGA 320	CGA 940	1080
Carbon Dioxide < 7% and Oxygen	CGA 280	CGA 880	1020 1180 1200
Carbon Dioxide > 7% and Oxygen	CGA 500	CGA 940	1020 1060 1080
Clinical Blood Gas Mixtures	CGA 500	CGA 973	1020 1060 1080
Cyclopropane	not available	CGA 920	1100
Ethylene	not available	CGA 900	1140
Helium	CGA 580	not available	1060 1120
Helium < 80% and Oxygen	CGA 280	CGA 890	1020 1180 1200
Helium > 80% and Oxygen	CGA 500	CGA 930	1020 1060 1080
Krypton	CGA 580	not available	1060 1120
Methylene Fluoride	CGA 320	not available	1080
Neon	CGA 580	not available	1060 1120
Nitrogen	CGA 580	CGA 960	1060 1120
Nitrogen and Oxygen < 23.5%	CGA 280	CGA 890	1020 1180 1200
Nitrous Oxide	CGA 326	CGA 910	1040
Nitrous Oxide 47.5% - 52.5% and Oxygen	CGA 280	CGA 965	1020 1180 1200
Oxygen	CGA 540	CGA 870	1240
Tetrafluoromethane	CGA 580	not available	1060 1120
Xenon	CGA 580	not available	1060 1120
Xenon and Oxygen < 20%	CGA 280	CGA 890	1020 1180 1200

312 Series

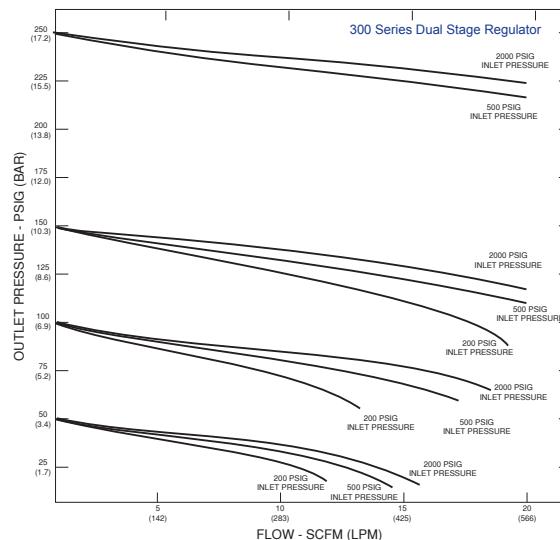
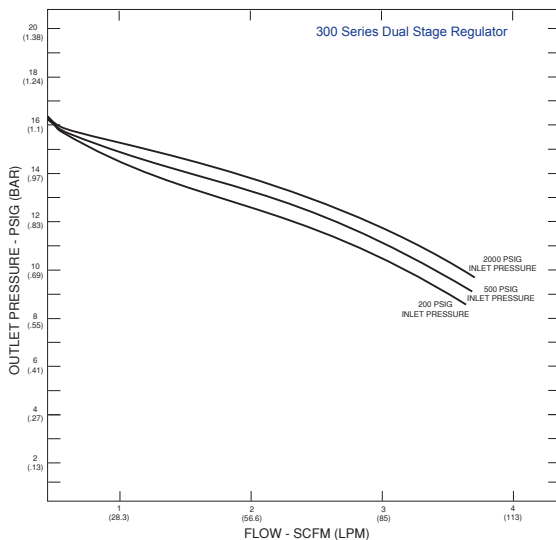
high purity, two stage, brass barstock regulator



Description	Advanced Features	Typical Applications
<p>The 312 Series regulators are intended for primary pressure control of noncorrosive, high purity or liquefied gases for applications requiring constant pressure control and delivery regardless of supply pressure variations.</p>	<ul style="list-style-type: none"> • Chrome-plated brass barstock body Smooth surface finish • 10 micron filtration in both stages Fail-safe seat performance • Pressure ranges 0-15 to 0-250 PSIG Broad range of applications 	<ul style="list-style-type: none"> • EPA Protocol gases • Gas and liquid chromatography • High purity carrier gases • Zero, span, and calibration gases • High purity chamber pressurization

300 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> • <i>Capsule® seat</i> Increased serviceability and life • <i>316L stainless steel diaphragm</i> No inboard diffusion • <i>Low wetted surface area</i> Minimal purge requirements • <i>Field-adjustable pressure limit</i> Safeguard downstream equipment • <i>Convolute diaphragm</i> Smooth pressure changes • <i>Compact design</i> Easily transported and integrated 	<p><i>Body</i> Chrome-plated brass barstock</p> <p><i>Bonnet</i> Chrome-plated die cast zinc</p> <p><i>Seat</i> PTFE PCTFE with 4500 PSIG inlet option</p> <p><i>Filter</i> 10 micron sintered bronze</p> <p><i>Diaphragm</i> 316L stainless steel</p> <p><i>Internal Seals</i> PTFE</p>	<p><i>Maximum Inlet Pressure</i> 3000 PSIG (210 BAR) 4500 PSIG (310 BAR) optional</p> <p><i>Temperature Range</i> -40°F to 140°F (-40°C to 60°C)</p> <p><i>Gauges</i> 2" diameter chrome-plated</p> <p><i>Ports</i> 1/4" FPT</p> <p><i>Helium Leak Integrity</i> 1 x 10⁻⁸ scc/sec</p> <p><i>Cv</i> 0.1</p> <p><i>Weight (312-2331-58)</i> 4.4 lbs. (1.98 kg)</p>

Flow Performance



4

Ordering Information and Configuration Options

312	A		B	C	D	-Inlet	Options
Series 312	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/ Gauges	Inlet Connections	Installed Options
	1: 0-15 2: 0-50 3: 0-100 4: 0-250 7: 0-150	30"-0-30 PSIG 30"-0-100 PSIG 30"-0-200 PSIG 0-400 PSIG 30"-0-200 PSIG	0: None 3: 0-4000 PSIG 5: 0-1000 PSIG 6: 0-300 PSIG 7: 0-400 PSIG 8: 0-6000 PSIG	0: 1/4" FPT Port 1: 1/4" MPT 2: 1/4" Tube Fitting 3: Diaphragm Valve 1/4" Tube Fitting 4: Diaphragm Valve 1/4" MPT 5: Needle Valve 1/4" MPT 6: 1/8" Tube Fitting 7: 3/8" Tube Fitting 8: Diaphragm Valve 1/8" Tube Fitting 9: Diaphragm Valve 1/4" FPT A: 3/8" BSP Right Hand Fitting M: 6mm Tube Fitting S: Diaphragm Valve 6mm Tube Fitting	0: Bare Body 1: Standard Assembly (PSIG/kPa Gauges) 2: Standard Assembly (BAR/PSIG Gauges)	000: 1/4" FPT TF2: 1/8" Tube TF4: 1/4" Tube TF6: 3/8" Tube M06: 6mm Tube CGA DIN 477 BS 341 and others available	A: Protocol Alarm Station (110V) B: Protocol Alarm Station (220V) C: Protocol Switchover Station G: Protocol Switchover Station with Alarm (110V) H: Protocol Switchover Station with Alarm (220V) M: Protocol Station T: Tee Purge*

*Not available with 4500 PSIG max inlet pressure

315 Series

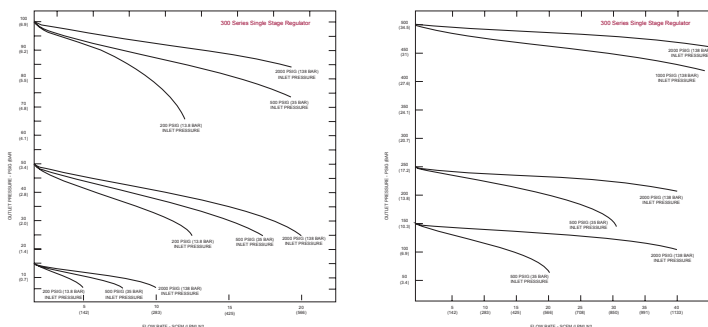
dual stage, chrome-plated brass barstock regulator



Description	Advanced Features	Typical Applications
The 315 Series regulators are specifically designed for use in the medical laboratory for blood gases, laser gases, and other clinical gas applications requiring constant pressure control and delivery regardless of supply pressure variations.	<ul style="list-style-type: none"> Chrome-Plated Brass Barstock Body 316L Stainless Steel Diaphragm 	<ul style="list-style-type: none"> Blood gases Laser gases Medical research Pharmaceutical manufacturing University laboratories

300 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> Capsule® seat Increased serviceability and life 316L stainless steel diaphragm No inboard diffusion Low wetted surface area Minimal purge requirements Field-adjustable pressure limit Safeguard downstream equipment Convolute diaphragm Smooth pressure changes Compact design Easily transported and integrated 	<ul style="list-style-type: none"> Body Chrome-plated brass barstock Bonnet Chrome-plated die cast zinc Seat PTFE Filter 10 micron sintered bronze Diaphragm 316L stainless steel Internal Seals PTFE 	<ul style="list-style-type: none"> Maximum Inlet Pressure 3000 PSIG (210 BAR) Temperature Range -40°F to 140°F (-40°C to 60°C) Gauges 2" diameter chrome-plated Ports ¼" FPT Helium Leak Integrity 1 x 10⁻⁸ scc/sec Cv 0.1 Weight (315-8381-MIL) 4.2 lbs. (1.90 kg)

Flow Performance



Ordering Information and Configuration Options

315	A	B	C	D	-Inlet	
Series 315	Outlet Pressure 1: 0-15 2: 0-30 3: 0-50 5: 0-100 6: 0-200 7: 0-500 8: 2-15 LPM CO ₂ 9: Custom Calibration	Outlet Gauge 0-30 PSIG 0-60 PSIG 0-100 PSIG 0-200 PSIG 0-400 PSIG 0-1000 PSIG 2-15 LPM Flowgauge Custom Flowgauge	Inlet Gauge 0: None 3: 0-4000 PSIG	Outlet Assemblies 0: 1/4" FPT Port 1: 1/4" MPT 2: 1/4" Tube Fitting 3: Diaphragm Valve 1/4" Tube Fitting 4: Diaphragm Valve 1/4" MPT 5: Needle Valve 1/4" MPT 6: 1/8" Tube Fitting 7: 3/8" Tube Fitting 8: Diaphragm Valve 1/8" Tube Fitting 9: Diaphragm Valve 1/4" FPT A: 3/8" BSP Right Hand Fitting	Assembly/Gauges 0: Bare Body 1: Standard Assembly (PSIG/kPa Gauges) 2: Standard Assembly (BAR/PSIG Gauges)	Inlet Connections See Inlet/Outlet selection chart below (Availability is limited to the combinations shown)

Gas Service	Inlet (Threaded)	Inlet (Yoke)	Outlet (Medical DISS)
Air	CGA 346	CGA 950	1160
Argon	CGA 580	not available	1060 1120
Carbon Dioxide	CGA 320	CGA 940	1080
Carbon Dioxide < 7% and Oxygen	CGA 280	CGA 880	1020 1180 1200
Carbon Dioxide > 7% and Oxygen	CGA 500	CGA 940	1020 1060 1080
Clinical Blood Gas Mixtures	CGA 500	CGA 973	1020 1060 1080
Cyclopropane	not available	CGA 920	1100
Ethylene	not available	CGA 900	1140
Helium	CGA 580	not available	1060 1120
Helium < 80% and Oxygen	CGA 280	CGA 890	1020 1180 1200
Helium > 80% and Oxygen	CGA 500	CGA 930	1020 1060 1080
Krypton	CGA 580	not available	1060 1120
Methylene Fluoride	CGA 320	not available	1080
Neon	CGA 580	not available	1060 1120
Nitrogen	CGA 580	CGA 960	1060 1120
Nitrogen and Oxygen < 23.5%	CGA 280	CGA 890	1020 1180 1200
Nitrous Oxide	CGA 326	CGA 910	1040
Nitrous Oxide 47.5% - 52.5% and Oxygen	CGA 280	CGA 965	1020 1180 1200
Oxygen	CGA 540	CGA 870	1240
Tetrafluoromethane	CGA 580	not available	1060 1120
Xenon	CGA 580	not available	1060 1120
Xenon and Oxygen < 20%	CGA 280	CGA 890	1020 1180 1200

308 Series

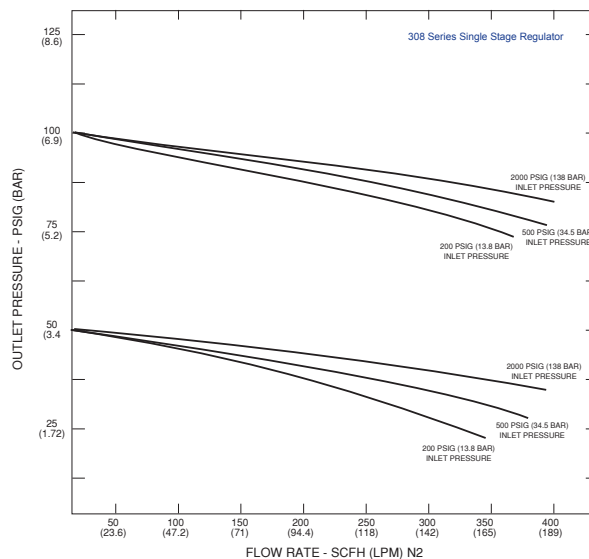
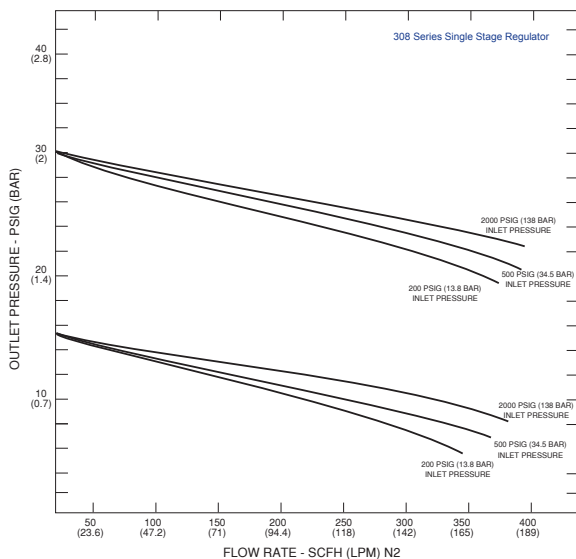
heated, single stage, brass barstock regulator



Description	Advanced Features	Typical Applications
<p>The 308 Series regulators are specifically designed to prevent freeze-up problems associated with high flows of carbon dioxide and nitrous oxide. As CO₂ or N₂O passes through a regulator seat, dry ice can form if the flow is too high, causing the regulator to freeze up.</p>	<ul style="list-style-type: none"> • Chrome-plated brass barstock body Smooth surface finish • Three 50 watt heaters Maintain gas flow up to 350 scfh • 316L stainless steel diaphragm Unaffected by low temperatures 	<ul style="list-style-type: none"> • Chemical storage blanketing • Anaerobic chambers • Inert gas purging • Atomic absorption oxidizer gas • Semiconductor reactor furnace • Inductively coupled plasma systems • Ph control

300 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> • <i>Capsule® seat</i> Increased serviceability and life • <i>316L stainless steel diaphragm</i> No inboard diffusion • <i>Low wetted surface area</i> Minimal purge requirements • <i>Field-adjustable pressure limit</i> Safeguard downstream equipment • <i>Convolute diaphragm</i> Smooth pressure changes • <i>Compact design</i> Easily transported and integrated 	<p><i>Body</i> Chrome-plated brass barstock</p> <p><i>Bonnet</i> Chrome-plated die cast zinc</p> <p><i>Seat</i> PTFE</p> <p><i>Filter</i> 10 micron sintered bronze</p> <p><i>Diaphragm</i> 316L stainless steel</p> <p><i>Internal Seals</i> PTFE</p>	<p><i>Maximum Inlet Pressure</i> 3000 PSIG (210 BAR)</p> <p><i>Temperature Range (Thermostat)</i> 95°F to 120°F (35°C to 49°C)</p> <p><i>Heaters</i> 3 @ 50 watts each (110 or 220 VAC)</p> <p><i>Gauges</i> 2" diameter chrome-plated</p> <p><i>Ports</i> 1/4" FPT</p> <p><i>Helium Leak Integrity</i> 1 x 10⁻⁸ scc/sec</p> <p><i>Cv</i> 0.1</p> <p><i>Weight (308-3031-320)</i> 5.4 lbs. (2.45 kg)</p>

Flow Performance



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Ordering Information and Configuration Options

308	A		B	C	D	-Inlet	Options
Series 308	Outlet Pressure 1: 0-15 2: 0-30 3: 0-50 5: 0-100	Outlet Gauge 0-30 PSIG 0-60 PSIG 0-100 PSIG 0-200 PSIG	Inlet Gauge 0: None 3: 0-4000 PSIG	Outlet Assemblies 0: 1/4" FPT Port 1: 1/4" MPT 2: 1/4" Tube Fitting 3: Diaphragm Valve 1/4" Tube Fitting 4: Diaphragm Valve 1/4" MPT 5: Needle Valve 1/4" MPT 6: 1/8" Tube Fitting 7: 3/8" Tube Fitting 8: Diaphragm Valve 1/8" Tube Fitting 9: Diaphragm Valve 1/4" FPT A: 3/8" BSP Right Hand Fitting M: 6mm Tube Fitting S: Diaphragm Valve 6mm Tube Fitting	Assembly/ Gauges 0: Bare Body 110 VAC 1: Standard Assembly 110 VAC (PSIG/kPa Gauges) 2: Bare Body 220 VAC 3: Standard Assembly 220 VAC (PSIG/kPa Gauges) 4: Standard Assembly 110 VAC (BAR/PSIG Gauges) 5: Standard Assembly 220 VAC (BAR/PSIG Gauges)	Inlet Connections 000: 1/4" FPT TF2: 1/8" Tube TF4: 1/4" Tube TF6: 3/8" Tube M06: 6mm Tube CGA DIN 477 BS 341 and others available	Installed Options M: Protocol Station