

420 Series

single stage, stainless steel barstock regulator

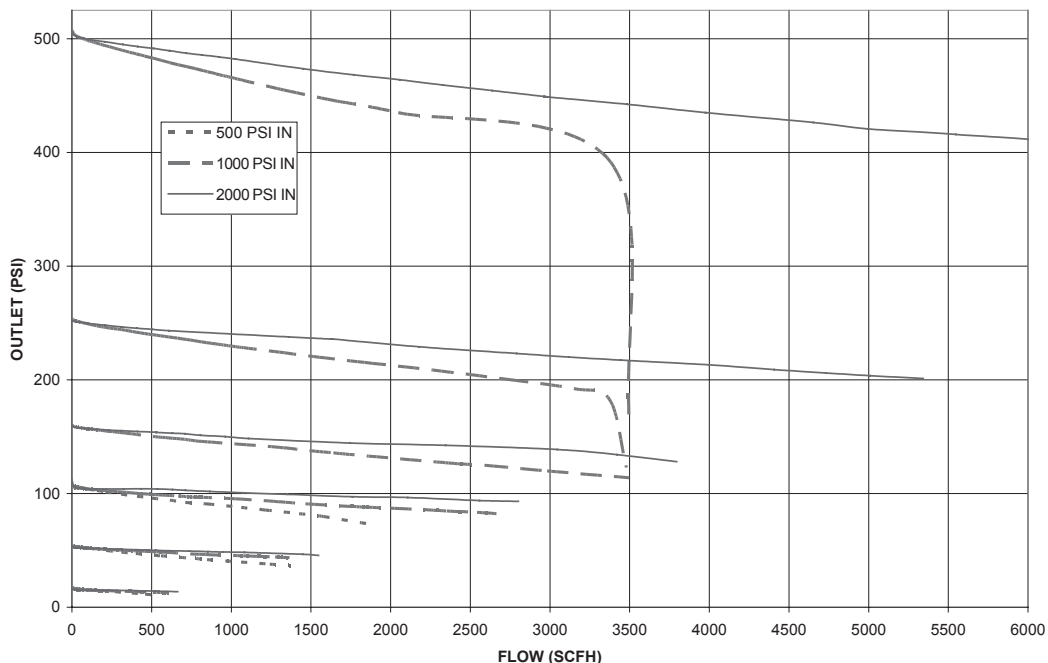


Description	Advanced Features	Typical Applications
<p>The 420 Series SilcoNert 1020 coated regulators are intended for primary pressure control of reactive or corrosive calibration mixtures or pure gases in applications where an extreme inert wetted finish is required. The proprietary non-reactive amorphous silicon finish is desired over standard 316L stainless steel and ideally suited for H₂S, reduced Sulfur, Mercury and PPM to PPB calibration mixtures.</p>	<ul style="list-style-type: none"> • Single Stage • SilcoNert™ 1020 Coated Body, Diaphragm, and Internals • 316L Stainless Steel Barstock Body • Six Port Configuration • Inert Surface Finish and Corrosion Resistance 	<ul style="list-style-type: none"> • Reactive calibration standard • Emissions monitoring • H₂S PPM to PPB standards • Mercury standards • Sulfur mixtures • Corrosive gases

Features	Materials	Specifications
<ul style="list-style-type: none"> • <i>Metal-to-Metal Diaphragm Seal</i> No possibility of gas contamination • <i>Capsule® Seat</i> Increased serviceability and life • <i>Stainless Steel Barstock Body</i> Increased corrosion resistance • <i>Front and Rear Panel-Mountable</i> Versatile system configuration • <i>Pressure Ranges 0-15 to 0-500 PSIG</i> Broad range of applications • <i>Pipe Away Relief Valve</i> Safely vents exhaust gases 	<p><i>Body</i> 316L stainless steel barstock</p> <p><i>Bonnet</i> Chrome-plated brass barstock</p> <p><i>Seat</i> PTFE</p> <p><i>Filter</i> Patented 10 micron 316 mesh</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>Gauge</i> 2" diameter stainless steel (bourdon tube not coated)</p> <p><i>Ports</i> ¼" FPT</p> <p><i>Helium Leak Integrity</i> 1 x 10⁻⁸ scc/sec</p> <p><i>Cv</i> 0.1 (Max outlet 50 PSIG or below) 0.2 (Max outlet above 50 PSIG)</p> <p><i>Weight (445 2021-TF4)</i> 2.57 lbs. (1.17 kg)</p>

Flow Performance

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



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Ordering Information and Configuration Options

420	A	B	C	D	-Inlet	Options	
Series 420	Outlet Pressure 1: 0-15* 2: 0-50 3: 0-100 4: 0-250 5: 0-500 7: 0-150 *Not available with 4500 PSIG maximum inlet pressure	Outlet Gauge 30"-0-30 PSIG 30"-0-100 PSIG 30"-0-200 PSIG 0-400 PSIG 0-1000 PSIG 30"-0-200 PSIG	Inlet Gauge 0: None 3: 0-4000 PSIG 5: 0-1000 PSIG 6: 0-300 PSIG 7: 0-400 PSIG 8: 0-6000 PSIG* *Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE Seat Capsule®	Outlet Assemblies 0: 1/4" FPT port 2: 1/4" tube fitting 3: Diaphragm valve 1/4" tube fitting 6: 1/8" tube fitting 8: Diaphragm valve 1/8" tube fitting 9: Diaphragm valve 1/4" FPT	Assembly/Gauges 0: Bare body 1: Cleanroom assembly (PSIG/kPa gauges) 2: Cleanroom assembly (BAR/PSIG gauges) 6: Mirror image (PSIG/kPa gauges) 7: Mirror image (BAR/PSIG gauges)	Inlet Connections 000: 1/4" FPT TF2: 1/8" tube TF4: 1/4" tube CGA DIN 477 BS 341 and others available upon request	Installed Options 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 Q: Protocol purge station* *Not available with 4500 PSIG max inlet pressure

422 Series

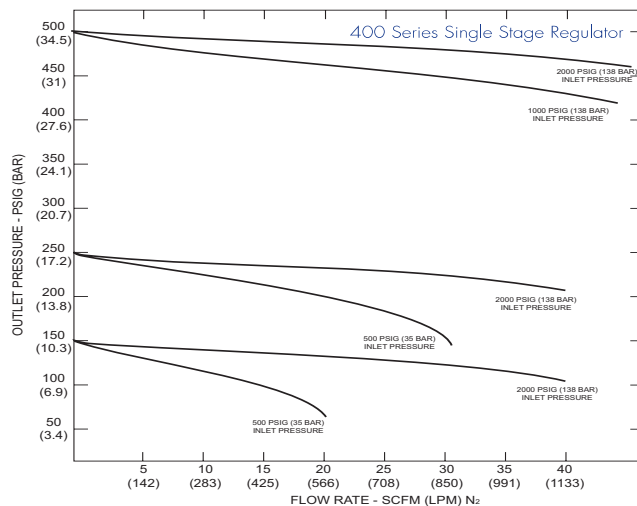
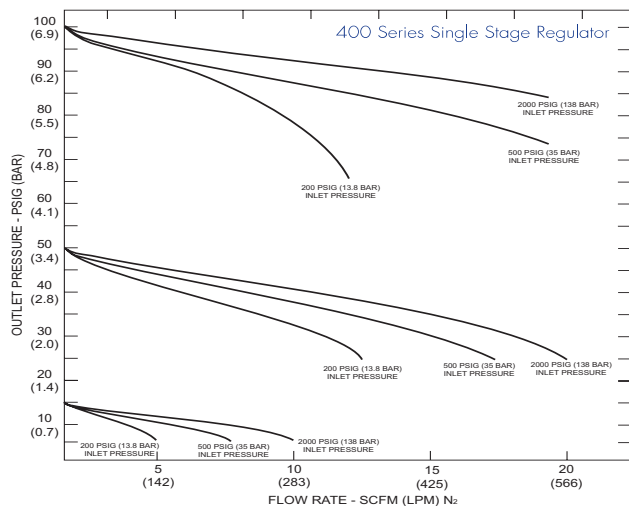
high purity, single stage, stainless steel barstock regulator



Description	Advanced Features	Typical Applications
<p>The 422 Series regulators are intended for primary pressure control of ultra high purity and corrosive gases in applications where minor fluctuations in outlet pressure due to diminishing inlet supply can be tolerated.</p>	<ul style="list-style-type: none"> • 316L stainless steel barstock Increased corrosion resistance • Front and rear panel mountable Versatile system configuration • Pressure ranges 0-15 to 0-500 PSIG Broad range of applications 	<ul style="list-style-type: none"> • 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

400 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> • <i>Metal-to-metal diaphragm seal</i> No possibility of gas contamination • <i>Capsule® seat</i> Increased serviceability and life • <i>316L stainless steel diaphragm</i> No inboard diffusion • <i>Orientable captured vent capable</i> Safety in any installation • <i>Low wetted surface area</i> Minimal purge requirements • <i>Field-adjustable pressure limit</i> Safeguard downstream equipment • <i>Pipe away relief valve</i> Safely vent exhaust gases • <i>Delivery pressure range easily changed</i> Maximum flexibility 	<p><i>Body</i> 316L stainless steel barstock</p> <p><i>Bonnet</i> Chrome-plated brass barstock</p> <p><i>Seat</i> PTFE PCTFE with 4500 PSIG inlet option</p> <p><i>Filter</i> 10 micron stainless steel multi-layer mesh</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 stainless steel</p> <p><i>Ports</i> ¼" FPT</p> <p><i>Helium Leak Integrity</i> 1 x 10⁻⁹ scc/sec</p> <p><i>Cv</i> 0.1</p> <p><i>Weight (422-2331-580)</i> 3.8 lbs. (1.73 kg)</p>

Flow Performance



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Ordering Information and Configuration Options

422	A	B	C	D	-Inlet	Options
Series 422	Outlet Pressure Gauge 1: 0-15* 30"-0-30 PSIG 2: 0-50 30"-0-100 PSIG 3: 0-100 30"-0-200 PSIG 4: 0-250 0-400 PSIG 5: 0-500 0-1000 PSIG 7: 0-150 30"-0-200 PSIG <i>*Not available with 4500 PSIG maximum inlet pressure</i>	Inlet Gauge 0: None 3: 0-4000 PSIG 5: 0-1000 PSIG 6: 0-300 PSIG 7: 0-400 PSIG 8: 0-6000 PSIG* <i>*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE Seat Capsule</i>	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 M: 6mm Tube Fitting S: Diaphragm Valve 6mm Tube Fitting	Assembly/Gauges 0: Bare Body 1: Standard Assembly (PSIG/kPa Gauges) 2: Standard Assembly (BAR/PSIG Gauges) 4: Cleanroom Assembly (PSIG/kPa Gauges) 5: Cleanroom Assembly (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 A: Protocol Alarm Station (110V) B: Protocol Alarm Station (220V) C: Protocol Switchover Station D: Deep Purge G: Protocol Switchover Station with Alarm (110V) H: Protocol Switchover Station with Alarm (220V) M: Protocol Station
Related Options		• Panel Mount Kit (550-0002) • Captured Vent Kit (550-0001)		• Helium Leak Certification (476-0002) • Passivation for Fluorine Service		

430 Series

dual stage, stainless steel barstock regulator



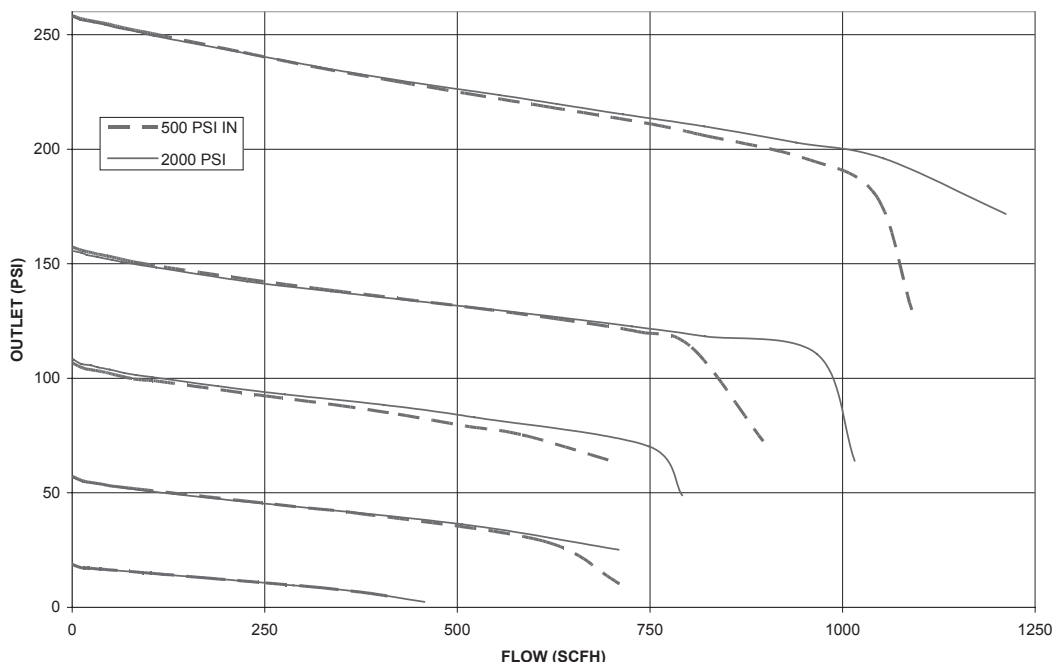
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Description	Advanced Features	Typical Applications
<p>The 430 Series SilcoNert 1020 coated regulators are intended for pressure control of reactive or corrosive calibration mixtures or pure gases in applications where an extreme inert wetted finish is required along with stable delivery pressure regardless of inlet pressure. The proprietary non-reactive amorphous Silicon finish is desired over standard 316L stainless steel and ideally suited for H₂S, reduced Sulfur, Mercury and PPM to PPB calibration mixtures.</p>	<ul style="list-style-type: none"> • Dual Stage • SilcoNert™ 1020 Coated Body, Diaphragm, and Internals • 316L stainless steel Barstock Body • Six Port Configuration • Inert Surface Finish and Corrosion Resistance 	<ul style="list-style-type: none"> • Reactive calibration standard • Emissions monitoring • H₂S PPM to PPB standards • Mercury standards • Sulfur mixtures • Corrosive gases

Features	Materials	Specifications
<ul style="list-style-type: none"> • <i>Metal-to-Metal Diaphragm Seal</i> No possibility of gas contamination • <i>Capsule® Seat</i> Increased serviceability and life • <i>Stainless Steel Barstock Body</i> Increased corrosion resistance • <i>Front and Rear Panel-Mountable</i> Versatile system configuration • <i>Pressure Ranges 0-15 to 0-500 PSIG</i> Broad range of applications • <i>Pipe Away Relief Valve</i> Safely vents exhaust gases 	<p><i>Body</i> 316L stainless steel barstock</p> <p><i>Bonnet</i> Chrome-plated brass barstock</p> <p><i>Seat</i> PTFE PCTFE with 4500 PSIG inlet option</p> <p><i>Filter</i> Patented 10 micron 316 mesh</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>Gauge</i> 2" diameter stainless steel (bourdon tube not coated)</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 (432 2021-580)</i> 5.09 lbs. (2.31 kg)</p>

Flow Performance

Flow Curves for
312, 315, 332, 412, 430 432 Series Regulators



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Ordering Information and Configuration Options

430	A		B	C	D	-CON	Options
Series 430	Outlet Pressure 1: 0-15* 2: 0-50 3: 0-100 4: 0-250 7: 0-150 *Not available with 4500 PSIG maximum inlet pressure	Outlet Gauge 30"-0-30 PSIG 30"-0-100 PSIG 30"-0-200 PSIG 0-400 PSIG 30"-0-200 PSIG	Inlet Gauge 0: None 3: 0-4000 PSIG 5: 0-1000 PSIG 6: 0-300 PSIG 7: 0-400 PSIG 8: 0-4500 PSIG*	Outlet Assemblies 0: 1/4" FPT port 2: 1/4" tube fitting 3: Diaphragm valve 1/4" tube fitting 8: Diaphragm valve 1/8" tube fitting 9: Diaphragm valve 1/4" FPT	Assembly/Gauges 0: Bare body 1: Cleanroom assembly (PSIG/ kPa gauges) 2: Cleanroom assembly (BAR/ PSIG gauges)	Inlet Connections 000: 1/4" FPT TF2: 1/8" tube TF4: 1/4" tube CGA DIN 477 BS 341 and others available upon request	Installed Options 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 Q: Protocol purge station* *Not available with 4500 PSIG max inlet pressure

432 Series

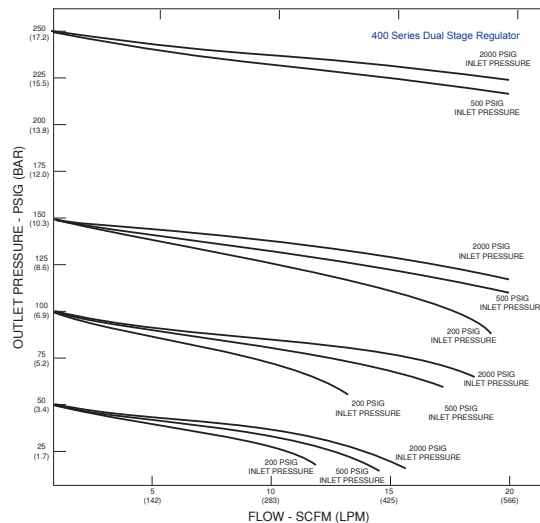
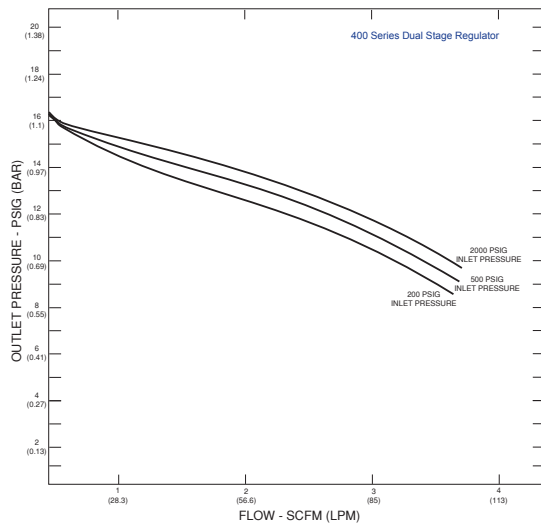
high purity, two stage, stainless steel barstock regulator



Description	Advanced Features	Typical Applications
The 432 Series regulators are intended for primary pressure control of ultra high purity or corrosive gases for applications requiring constant pressure control and delivery regardless of supply pressure variations.	<ul style="list-style-type: none"> • 316L stainless steel barstock body Increased corrosion resistance • Front panel mountable Easy installation • 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 • Corrosive gases

400 Series Advantage	Materials	Specifications
<ul style="list-style-type: none"> • <i>Metal-to-metal diaphragm seal</i> No possibility of gas contamination • <i>Capsule® seat</i> Increased serviceability and life • <i>316L stainless steel diaphragm</i> No inboard diffusion • <i>Orientable captured vent capable</i> Safety in any installation • <i>Low wetted surface area</i> Minimal purge requirements • <i>Field-adjustable pressure limit</i> Safeguard downstream equipment • <i>Pipe away relief valve</i> Safely vent exhaust gases • <i>Delivery pressure range easily changed</i> Maximum flexibility 	<p><i>Body</i> 316L stainless steel barstock</p> <p><i>Bonnet</i> Chrome-plated brass barstock</p> <p><i>Seat</i> PTFE PCTFE with 4500 PSIG inlet option</p> <p><i>Filter</i> 10 micron stainless steel multi-layer mesh</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 stainless steel</p> <p><i>Ports</i> 1/4" FPT</p> <p><i>Helium Leak Integrity</i> 1 x 10⁻⁹ scc/sec</p> <p><i>Cv</i> 0.1</p> <p><i>Weight (432-2021-580)</i> 5.09 lbs. (2.31 kg)</p>

Flow Performance



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Ordering Information and Configuration Options

432	A	B	C	D	-Inlet	Options
Series 432	Outlet Pressure 1: 0-15 2: 0-50 3: 0-100 4: 0-250 7: 0-150 Outlet Gauge 30"-0-30 PSIG 30"-0-100 PSIG 30"-0-200 PSIG 0-400 PSIG 30"-0-200 PSIG	Inlet Gauge 0: None 3: 0-4000 PSIG 5: 0-1000 PSIG 6: 0-300 PSIG 7: 0-400 PSIG 8: 0-6000 PSIG* *Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE Seat Capsule	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 M: 6mm Tube Fitting S: Diaphragm Valve 6mm Tube Fitting	Assembly/Gauges 0: Bare Body 1: Standard Assembly (PSIG/kPa Gauges) 2: Standard Assembly (BAR/PSIG Gauges) 4: Cleanroom Assembly (PSIG/kPa Gauges) 5: Cleanroom Assembly (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 A: Protocol Alarm Station (110V) B: Protocol Alarm Station (220V) C: Protocol Switchover Station D: Deep Purge G: Protocol Switchover Station with Alarm (110V) H: Protocol Switchover Station with Alarm (220V) M: Protocol Station
Related Options		• Panel Mount Kit (550-0002) • Captured Vent Kit (550-0001)		• Helium Leak Certification (476-0002) • Passivation for Fluorine Service		