Ultra-High-Flow Regulators
For Noncorrosive Service
Model 500

These pilot dome-loaded regulators are designed for direct installation to cryogenic vaporizer systems to provide ultra-high downstream flows while maintaining constant delivery pressure. This unique unibody design with integral porting eliminates the need for the pilot regulator thus eliminating numerous connections. Model 500 regulators are supplied entirely installed on a stainless steel panel providing for convenient, wall-mounted installation.

An ideal application area is laser delivery either from cryogenic or high-pressure supply. Here, the low pressure drop at high flowrates maximizes throughput in a laser cutting or welding application. The flow vs. pressure drop performance characteristic of the Model 500 as compared to competitive brands can be viewed by the curve below.

Benefits/Features
High-flow capacity allows flows in excess of 12,000 SCFH of nitrogen at 400 psig inlet.
Balanced poppet (stem) minimizes effect of changes in inlet pressure on delivery pressure settings.
Filter traps foreign matter, extends regulator life and reduces maintenance.
Extra inlet port allows connection to a purge regulator, pressure switch, purge valve or inlet pressure gauge.
Overall compact design allows for easy installation in areas where space is a premium.
High-pressure version accepts inlet pressures up to 3000 psig (207 bar) allowing use on high-pressure cylinders.

Specifications
Inlet Pressure: See Table
Filter: 40 micron
Gauge Size: 2" (53 mm) face

Operating Temperature Range:
-40°F to 140°F (-40°C to 60°C)
Flow Coefficient: Cv = 1
Inlet and Outlet Connections:
1/2" NPT Female
Dimensions (with bracket):
10.8" x 5.5" (274 mm x 140 mm)
Weight: 8 lbs. (4 kg)

Materials of Construction
Body and Bonnets: Brass bar stock
Gauge: Brass internals with drawn steel case
Other Metal Parts Exposed to Gas:
316 Stainless Steel
Seats: PCTFE
Sensing Element:
Pilot Regulator: 316 Stainless Steel diaphragm
Dome Regulator: 316 Stainless Steel piston
Seals: Viton®
Wall Bracket: Stainless steel

<table>
<thead>
<tr>
<th>Model 500</th>
<th>Inlet Pressure (maximum)</th>
<th>Delivery Pressure Range (dual scale)</th>
<th>Delivery Pressure Gauge</th>
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<tbody>
<tr>
<td></td>
<td>psig</td>
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<tr>
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<td>Q1-500E3K</td>
<td>3000</td>
<td>207</td>
<td>100 - 500</td>
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