LOw-PRESSURE REGULATORS

APPLICATIONS
- Designed as a second stage line regulator for laboratory applications such as: gas delivery to inductive plasma spectrometer, protection and support gas for chromatograph, environmental emission monitoring, industrial hygiene or safety monitors and trace impurity analyzers.
- Ideally suited as a NH₃ line regulator (EPDM stainless steel version).

KEY FEATURES
- As a second level of regulation, the SL 10 will supply a precise outlet pressure to the process. It can be used for many applications that need a high flow.
- Flexible wall or panel mounting possible with its compact design, the rear threads and fixing ring.
- Best-in-class pressure control with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. BV-technology delivers an exceptionally stable outlet pressure and flow even with high flow line regulators.
- Longer useful regulator lifetime and lower total ownership cost.

★ Compact design
★ Reduce the ownership cost
★ Front panel mounting
★ O₂ application compatible

Special requirements on request

SERiES S 10 | LiNE REGULATOR

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LOW-PRE

FLOw RATE - nm³/h (nlpm) in nitrogen (N₂)

OUTLET PRESSURE - bar and psi

FLOW CURVES

FLOW CURVE S 10-3 REGULATOR
SET: 3 bar / 43.5 psi
1.5 bar / 21.75 psi
Blue line P₁ = 25 bar / 362.5 psi
Red line P₁ = 12.5 bar / 181 psi
FLOW CURVE S 10-8 REGULATOR
SET: 8 bar / 116 psi
4 bar / 58 psi
2 bar / 29 psi
Blue line P₁ = 25 bar / 362.5 psi
Red line P₁ = 12.5 bar / 181 psi

PRODUCT CONFIGURATOR

<table>
<thead>
<tr>
<th>Body Material</th>
<th>Outlet Pressure</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Gauges</th>
<th>Mounting</th>
<th>Ports Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>L</td>
<td>10</td>
<td>B</td>
<td>G</td>
<td>1</td>
<td>FRO</td>
</tr>
<tr>
<td>Chrome plated brass</td>
<td>3 bar</td>
<td>44 psi</td>
<td>G ¾ - G ¾</td>
<td>NBR - Standard with brass version</td>
<td>Without</td>
<td>FR0 Standard Configuration</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>8 bar</td>
<td>116 psi</td>
<td>¼ NPT - ¼ NPT</td>
<td>FPM - Standard with stainless steel version</td>
<td>With</td>
<td>FR1 Reverse inlet/outlet</td>
</tr>
</tbody>
</table>

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SERIES S 15 | LINE REGULATOR

APPLICATiONS
- Used as a line regulator for high-flow industrial or lab applications.

KEY FEATURES
- As a second level of regulation the S 15 will supply a precise outlet pressure to the process.
- Can be used for wall or panel mounting with its compact design, the rear threads and fixing ring.
- Best-in-class pressure stability with Balanced-Valve Technology (Balanced-Valve Technology): the effect of inlet pressure fluctuations on outlet pressure are minimized. BV-technology delivers an exceptionally stable outlet pressure and flow even with high flow line regulators.
- Longer useful regulator lifetime and lower total ownership cost.

★ Reduce the ownership cost
★ Front panel mounting
★ O₂ application compatible

Special requirements on request

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:
  - 25 bar (360 psi)
- Outlet pressure:
  - 10 bar (145 psi)
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female ports</td>
<td>G 3/8 or 1/4 NPT (inlet/outlet)</td>
</tr>
<tr>
<td>Seat seal</td>
<td>NBR (brass version) FPM (SS version)</td>
</tr>
<tr>
<td>O-ring</td>
<td>NBR (brass version) FPM (SS version)</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>AISI 304 (brass version) Hastelloy® (SS version)</td>
</tr>
<tr>
<td>Weight</td>
<td>± 1.2 kg ± 2.64 lbs</td>
</tr>
<tr>
<td>Leak rate</td>
<td>10⁻⁶ mbar l/s He</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20°C to +60°C -4°F to +140°F</td>
</tr>
<tr>
<td>O-ring Material</td>
<td>EPDM</td>
</tr>
<tr>
<td>Diaphragm Material</td>
<td>AISI 304 (brass version) Hastelloy®</td>
</tr>
<tr>
<td>Inlet pressure</td>
<td>25 bar 360 psi</td>
</tr>
<tr>
<td>Outlet pressure</td>
<td>10 bar 145 psi</td>
</tr>
<tr>
<td>Nominal Flow</td>
<td>50 Nm³/h (N₂)</td>
</tr>
<tr>
<td>Oxygen use</td>
<td>OK for brass and stainless steel</td>
</tr>
</tbody>
</table>

### FLOW CURVES

**FLOW CURVE 5 15-10 REGULATOR**
- SET: 10 bar / 145 psi
- 5 bar / 72.5 psi
- 2.5 bar / 36.25 psi

**FLOW RATE - Nm³/h (Nm³/min) in Nitrogen (N₂)**

### PRODUCT CONFIGURATOR

<table>
<thead>
<tr>
<th>Body Material</th>
<th>Outlet Pressure</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Gauges</th>
<th>Ports Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless steel</td>
<td>1/4 NPT - 1/4 NPT</td>
<td>FPM - Standard with stainless steel version</td>
<td>EPDM</td>
<td>Reverse inlet/outlet</td>
<td>R</td>
</tr>
</tbody>
</table>

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SERIES S 20 | LINE REGULATOR

**APPLICATIONS**
- Used as a line or point of use regulator for specialty gas applications requiring very precise repeatability and a high precision of outlet pressure
- Ideally suited for laboratory applications like: gas delivery to inductive plasma spectrometer, protection and support gas for chromatograph.

**KEY FEATURES**
- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- With its compact design, the rear threads and its fixing ring (option) it can be used for wall or panel mounting.
- Acetylene version available: Series S 20 AD & S 25 AD (See pages 66 and 68)

★ Accurate pressure delivery
★ Compact design
★ 2 inlets / 2 outlet
★ Rear Inlet for panel mounting
★ O₂ application compatible

(see technical data)

Special requirements on request
**SPECIFICATIONS**

- **Female ports**: G ¾ or ¼ NPT (inlet/outlet)
- **Seat seal**: EPDM
- **O-ring**: EPDM - Standard
- **Bellow**: Bronze or AISI 316L (SS version)
- **Weight**: ± 0.5 kg
- **Leak rate**: 10⁻⁶ mbar l/s He
- **Temperature range**: -20°C to +60°C
- **Nominal Flow**: 2/2.5/3.5 Nm³/h (N₂)
- **Outlet pressure**: 1/3/10 bar 14.5/44/145 psi
- **Gauges**: Low pressure (M10 x 1 or ¼ NPT)
- **Oxygen use**: inlet pressure ≤ 30 bar max. for brass and stainless steel

**FLOW CURVES**

**FLOW CURVE S 20-1 REGULATOR**

- **Set**: 1 bar / 14.5 psi
- **5 bar / 72.5 psi
- **2.5 bar / 36.25 psi

**FLOW CURVE S 20-3 REGULATOR**

- **Set**: 3 bar / 43.5 psi
- **1.5 bar / 21.75 psi
- **0.75 bar / 10.88 psi

**FLOW CURVE S 20-10 REGULATOR**

- **Set**: 10 bar / 145 psi
- **5 bar / 72.5 psi
- **2.5 bar / 36.25 psi

**PRODUCT CONFIGURATOR**

<table>
<thead>
<tr>
<th>Body Material</th>
<th>Outlet Pressure</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Gauge</th>
<th>Mounting</th>
<th>Ports Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrome plated brass</td>
<td>1 bar / 14.5 psi</td>
<td>1</td>
<td>G EPDM - Standard</td>
<td>Without</td>
<td>Without Fixing Ring</td>
<td>Standard Configuration</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>3 bar / 44 psi</td>
<td>3</td>
<td>¾ NPT - ¾ NPT</td>
<td>N</td>
<td>With Fixing Ring</td>
<td>Reverse inlet/outlet</td>
</tr>
<tr>
<td></td>
<td>10 bar / 145 psi</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**SERIES S 20-0.1 | LINE REGULATOR**

**APPLICATIONS**

- The Series S 20-0.1 is used as a line regulator for lab applications requiring a low outlet pressure less than 10 mbar (1.45 psi).

**KEY FEATURES**

- With the rear threads, it can be used for wall mounting.

- Very low outlet pressure
- 2 inlets / 2 outlet
- Rear inlet
- Rear threads for panel mounting
- High accuracy due to large diaphragm
- O2 application compatible (see technical data)

Special requirements on request

---

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure: 50 bar (725 psi)
- Outlet pressure: 0.01 - 0.1 bar
  0.14 - 1.45 psi

**Rear inlet view**

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**SPECIFICATIONS**

- **Female ports**: G ¾ or ¼ NPT (inlet/outlet)
- **Seat seal**: EPDM
- **O-ring**: EPDM - Standard, NBR, FPM
- **Diaphragm**: AISI 304
- **Weight**: ± 0.6 kg ± 1.32 lbs
- **Leak rate**: 10⁻⁸ mbar ℓ/s He
- **Temperature range**: -20°C to +60°C (-4°F to +140°F)
- **Gauges**: Low pressure (M10 x 1 or ¼ NPT)
- **Inlet pressure**: 50 bar 725 psi
- **Outlet pressure**: 0.01 - 0.1 bar 0.14 - 1.45 psi
- **Nominal Flow**: 0.5 Nm³/h (N₂)
- **Oxygen use**: inlet pressure ≤ 30 bar max. for brass and stainless steel

**FLOW CURVES**

FLOW CURVE S 20-0.1 REGULATOR

- **SET**: 0.1 bar / 1.45 psi
- **0.05 bar / 0.73 psi**

**PRODUCT CONFIGURATOR**

<table>
<thead>
<tr>
<th>Body Material</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Gauges</th>
<th>Ports Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>L 20 0.1</td>
<td>G</td>
<td>EPDM</td>
<td>T</td>
</tr>
<tr>
<td>Chrome plated</td>
<td>L</td>
<td>G ¾ - G ¾</td>
<td>EPDM - Standard</td>
<td>Without 0 Standard Configuration A</td>
</tr>
<tr>
<td>brass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td>I</td>
<td>¼ NPT - ¼ NPT</td>
<td>NBR</td>
<td>With 1 Reverse inlet/outlet R</td>
</tr>
</tbody>
</table>

FPM
SERIES S 55 | LINE REGULATOR

APPLICATIONS
- Designed for line regulator applications in petrochemical, industrial and laboratory environments.
- Used in calibration gas mixtures for petrochemical industry; environmental emission monitoring, industrial hygiene or safety monitors and trace impurity analyzers.
- Also commonly used to oxygenate fish-breeding tanks.

KEY FEATURES
- With its compact design, the rear threads and its fixing ring it can be used for wall or panel mounting.
- Multiple mounting possibilities due to its inlet/outlet.

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure: 50 bar (725 psi)
- Outlet pressure: 3/8/10/16/35 bar 44/116/145/232/508 psi
- Accurate pressure delivery
- Compact design
- 2 inlets / 2 outlets
- Rear Inlet for panel mounting
- O₂ applications compatible (see technical data)

Special requirements on request
**FLOW CURVES**

**FLOW CURVE S 55-3 REGULATOR**
- Set: 3 bar / 44 psi
- 1 bar / 14.5 psi
- 3 bar / 44 psi

**FLOW CURVE S 55-10 REGULATOR**
- Set: 10 bar / 145 psi
- 5 bar / 72.5 psi
- 2.5 bar / 36.25 psi

**FLOW CURVE S 55-16 REGULATOR**
- Set: 16 bar / 232 psi
- 8 bar / 116 psi
- 4 bar / 58 psi

**FLOW CURVE S 55-35 REGULATOR**
- Set: 35 bar / 508 psi
- 17.5 bar / 253.75 psi
- 8.75 bar / 126.88 psi

**PRODUCT CONFIGURATOR**

<table>
<thead>
<tr>
<th>Body Material</th>
<th>Outlet Pressure</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Gauges</th>
<th>Mounting</th>
<th>Ports Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>L</td>
<td>S</td>
<td>G</td>
<td>EPDM</td>
<td>FR1</td>
<td>A</td>
</tr>
<tr>
<td>Chrome plated brass</td>
<td>3 bar</td>
<td>3</td>
<td>G ⅓ - G ⅔</td>
<td>EPDM - Standard</td>
<td>Without</td>
<td>FR0</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>8 bar</td>
<td>8</td>
<td>⅓ NPT - ⅔ NPT</td>
<td>NBR</td>
<td>With</td>
<td>FR1</td>
</tr>
<tr>
<td></td>
<td>10 bar</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>145 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 bar</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>232 psi</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>35 bar</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>508 psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LOW-PRESSURE REGULATORS

SERIES DC 50 | HIGH FLOW LINE REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 5.0
- Inlet pressure:
  - 50 bar (725 psi)
- Outlet pressure:
  - 8/15/40 bar
  - 116/217/580 psi
- Acetylene version (AD - C₂H₂):
  - P₁ = 20 bar (290 psi)
  - P₂ = 0.8 bar (12 psi)

★ 1 inlet / 1 outlet
★ Rear thread for panel mounting
★ O₂ application compatible
★ High flow

Special requirements on request

APPLICATIONS

- For all applications requiring a low pressure with high flow.
- Ideally suited as line regulator in combination either with MOD supply board or CEN switch over board.

KEY FEATURES

- Low pressure regulator with high flow, without vibration.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure is minimized. BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- Reduced strain on the seat increases regulator life and reduces the ownership cost.
- Acetylene version available:
  - P₁ = 20 bar/P₂ = 0.8 bar/Q = 10 Nm³/h
  - For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.

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FLOW CURVES

FLOW CURVE DC 50-0 REGULATOR
SET: 8 bar / 116 psi
4 bar / 58 psi

FLOW CURVE DC 50-15 REGULATOR
SET: 15 bar / 217.5 psi
7.5 bar / 108.75 psi
3.75 bar / 54.38 psi

FLOW CURVE DC 50-40 REGULATOR
SET: 40 bar / 580 psi
10 bar / 145 psi

FLOW CURVE DC 50-AD REGULATOR
SET: 0.8 bar / 12 psi

PRODUT CONFIGURATOR

<table>
<thead>
<tr>
<th>Outlet Pressure</th>
<th>End Connections</th>
<th>O-ring Material</th>
<th>Body Material</th>
<th>Gauges</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 bar 116 psi</td>
<td>8</td>
<td>EPDM - Standard</td>
<td>Chrome plated brass</td>
<td>Without 0</td>
</tr>
<tr>
<td>15 bar 217 psi</td>
<td>15</td>
<td>NBR</td>
<td>Raw brass</td>
<td>With 1</td>
</tr>
<tr>
<td>40 bar 580 psi</td>
<td>40</td>
<td>FPM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetylene version 0.8 bar (12 psi)</td>
<td>AD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>