Natural Gas Technologies
Solutions for the Natural Gas Industry
NATURAL GAS PRESSURE REGULATING AND METERING STATIONS. PRESSURE REGULATORS, SLAM-SHUT VALVES, RELIEF VALVES AND ACCESSORIES. REMOTE CONTROL EQUIPMENT. ENGINEERING, ADAPTATION OF EXISTING INSTALLATIONS TO MEET CURRENT STANDARD REQUIREMENTS. THEORETICAL AND PRACTICAL TRAINING.
# Table of Contents

## Pilot-Operated Pressure Reducing Regulators

<table>
<thead>
<tr>
<th>Series</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL Series</td>
<td>6</td>
</tr>
<tr>
<td>FL-BP Series</td>
<td>7</td>
</tr>
<tr>
<td>FL-FR Series (French Market Only)</td>
<td>8</td>
</tr>
<tr>
<td>Cronos Series</td>
<td>9</td>
</tr>
<tr>
<td>Cronos-FR Series (French Market Only)</td>
<td>10</td>
</tr>
<tr>
<td>EZH and EZHSO Series</td>
<td>11</td>
</tr>
<tr>
<td>Type 971</td>
<td>12</td>
</tr>
<tr>
<td>EZR Series</td>
<td>13</td>
</tr>
</tbody>
</table>

## Accessories for Pilot-Operated Pressure Reducing Regulators

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS and RE Series - Regulator Pilots</td>
<td>14</td>
</tr>
<tr>
<td>PRX Series - Regulator Pilots</td>
<td>15</td>
</tr>
<tr>
<td>BSL85 and Compact Pilot Series - Regulator Pilots</td>
<td>16</td>
</tr>
<tr>
<td>V/31-2 - Booster Valve</td>
<td>17</td>
</tr>
<tr>
<td>Type RPE - Electric Pilot Heater</td>
<td>18</td>
</tr>
<tr>
<td>Types SR, SRS, SRII, SRSII, and STP - Silencers</td>
<td>19</td>
</tr>
</tbody>
</table>

## Pneumatic-Loaded Pressure Reducing Regulators

<table>
<thead>
<tr>
<th>Type</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type RP/10</td>
<td>20</td>
</tr>
<tr>
<td>Type RLC/20</td>
<td>21</td>
</tr>
</tbody>
</table>

## Spring-Loaded Pressure Reducing Regulators

<table>
<thead>
<tr>
<th>Series</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF and MN Series</td>
<td>22</td>
</tr>
<tr>
<td>A/100 Series</td>
<td>23</td>
</tr>
<tr>
<td>A/140 Series</td>
<td>24</td>
</tr>
<tr>
<td>B/240 Series</td>
<td>25</td>
</tr>
<tr>
<td>REGAL 3 Series</td>
<td>26</td>
</tr>
<tr>
<td>RP Series</td>
<td>27</td>
</tr>
<tr>
<td>Type CSB400</td>
<td>28</td>
</tr>
<tr>
<td>Type CSB600 / CSB700</td>
<td>29</td>
</tr>
<tr>
<td>Type CS800</td>
<td>30</td>
</tr>
<tr>
<td>R Series</td>
<td>31</td>
</tr>
<tr>
<td>Type R/25</td>
<td>32</td>
</tr>
<tr>
<td>Type B NG</td>
<td>33</td>
</tr>
<tr>
<td>Type B NV</td>
<td>34</td>
</tr>
</tbody>
</table>
# Table of Contents

## Slam-Shut Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>BM5 Series</td>
<td>35</td>
</tr>
<tr>
<td>BM6X Series</td>
<td>36</td>
</tr>
<tr>
<td>Type OSE</td>
<td>37</td>
</tr>
<tr>
<td>BM7 Series</td>
<td>38</td>
</tr>
<tr>
<td>Type VS100</td>
<td>39</td>
</tr>
</tbody>
</table>

## Relief Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS-FL and VS-FL-FR Series (French Market Only)</td>
<td>40</td>
</tr>
<tr>
<td>V Series</td>
<td>41</td>
</tr>
</tbody>
</table>

## Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floating and Trunnion Valves - Ball Valves</td>
<td>42</td>
</tr>
<tr>
<td>VFA Series - Butterfly Valves</td>
<td>43</td>
</tr>
<tr>
<td>CNF, CN, CF and SV Series - Tube Bundle Heat Exchangers</td>
<td>44</td>
</tr>
<tr>
<td>FA, FAG and FG Series - Filters</td>
<td>45</td>
</tr>
<tr>
<td>Types BLE and BLX - Throttle Valve</td>
<td>46</td>
</tr>
<tr>
<td>OL Series - Absorption Odorizing System</td>
<td>47</td>
</tr>
<tr>
<td>Type Dosaodor-D - Odorant Injection System</td>
<td>48</td>
</tr>
</tbody>
</table>

## Skids

<table>
<thead>
<tr>
<th>Modules</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Modules</td>
<td>49</td>
</tr>
<tr>
<td>Integrated Solutions</td>
<td>50</td>
</tr>
</tbody>
</table>

## Services

<table>
<thead>
<tr>
<th>Services</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Sales and Training</td>
<td>52</td>
</tr>
<tr>
<td>Spare Parts</td>
<td>53</td>
</tr>
</tbody>
</table>
Introduction

The FL Series regulators are accurate pilot-operated, pressure balanced, soft seated regulators designed for high-pressure transmission/city gate, large capacity distribution systems, and power plant feeds.

The FL Series provides smooth and quiet operation, tight shutoff, and long life.

The FL Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations

Type FL:
High Pressure Regulator or Monitor

Type MFL:
High Pressure Regulator + Monitor

Type BFL:
High Pressure Regulator + Shutoff

All FL type regulators are available with or without:
Type SR / SRII: Silencer
Type SRS / SRSII: Silencer with widened outlet flange

A widened outlet version without built-in silencer is also available.

Body Sizes

FL Series:
DN 25, 40, 50, 65, 80, 100, 150*, 200*, and 250*
(NPS 1, 1-1/2, 2, 2-1/2, 3, 4, 6*, 8*, and 10*)

FL Series with Type SRS / SRSII Silencer or Widened Outlet:
DN 25 x 100, 40 x 150, 50 x 150, 65 x 200, 80 x 250, 100 x 250, 150 x 300*, and 200 x 400*
(NPS 1 x 4, 1-1/2 x 6, 2 x 6, 2-1/2 x 8, 3 x 10, 4 x 10, 6 x 12*, and 8 x 16*)

* These sizes are not available in MFL and BFL configurations.

End Connection Styles

CL300, and CL600

Inlet Pressure Ranges

Allowable Pressure: Up to 100 bar
Inlet Pressure Range: 1 to 100 bar

Outlet Pressure Range

0.5 to 80 bar

Minimum Operating Differential Pressure

0.5 bar

Accuracy Class

Up to ±1%

Lock-Up Pressure Class

Up to +5%

Class of Lock-Up Pressure Zone

Up to 5%

Built-In Shutoff Valve

Independent Pneumatic Control
Manual Reset
Accuracy Group: Up to ±1%
Response Time: ≤ 1 s

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights (Including Pilot)

31 to 1190 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features

- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
- In-Service Travel Indicator
Introduction
The FL-BP Series regulators are accurate pilot-operated, pressure balanced, soft seated regulators designed for low-pressure transmission/city gate, large capacity distribution systems, and power plant feeds.
The FL-BP Series provides smooth and quiet operation, tight shutoff, and long life.
The FL-BP Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations
Type FL-BP: Low Pressure Regulator or Monitor
Type MFL-BP: Low Pressure Regulator + Monitor
Type BFL-BP: Low Pressure Regulator + Shutoff
All FL-BP type regulators are available with or without:
Type SR: Silencer
Type SRS: Silencer with widened outlet flange
A widened outlet version without built-in silencer is also available.

Body Sizes
FL-BP Series:
DN 25, 40, 50, 65, 80, 100, 150* (NPS 1, 1-1/2, 2, 2-1/2, 3, 4, 6*)
FL-BP Series with Type SRS Silencer or Widened Outlet:
DN 25 x 100, 40 x 150, 50 x 150, 65 x 200, 80 x 250, 100 x 250, and 150 x 300* (NPS 1 x 4, 1-1/2 x 6, 2 x 6, 2-1/2 x 8, 3 x 10, 4 x 10, and 6 x 12*)
* These sizes are not available in MFL and BFL configurations.

End Connection Styles
PN 16, 25 / CL150

Inlet Pressure Ranges
Allowable Pressure: Up to 25 bar
Inlet Pressure Range: 0.2 to 25 bar

Outlet Pressure Range
0.01 to 8 bar

Minimum Operating Differential Pressure
0.2 bar

Accuracy Class
Up to ±1%

Lock-Up Pressure Class
Up to +5%

Class of Lock-Up Pressure Zone
Up to 5%

Built-In Shutoff Valve
Independent Pneumatic Control
Manual Reset
Accuracy Group: Up to ±1%
Response Time: ≤ 1 s

Temperature Capabilities
Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights (Including Pilot)
24 to 380 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features
- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
- In-Service Travel Indicator
Introduction
The FL-FR Series regulators are accurate pilot-operated, pressure balanced, soft seated regulators designed for high-pressure transmission/city gate, large capacity distribution systems, and power plant feeds.
The FL-FR Series provides smooth and quiet operation, tight shutoff, and long life.
The FL-FR Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations
**Type FL-FR-BP:**
Low Pressure Regulator or Monitor

**Type FL-FR-HP:**
High Pressure Regulator or Monitor

**Type MFL-FR-BP:**
Low Pressure Regulator + Monitor

**Type MFL-FR-HP:**
High Pressure Regulator + Monitor

All FL-FR type regulators are available with or without:

- **Type SR / SRII:** Silencer
- **Type SRS / SRSII:** Silencer with widened outlet flange

A widened outlet version without built-in silencer is also available.

Body Sizes
**FL-FR Series:**
DN 25, 50, 80, 100, 150*, 200*, and 250* (NPS 1, 2, 3, 4, 6*, 8*, and 10*)

**FL-FR Series with Type SRS / SRSII Silencer or Widened Outlet:**
DN 25 x 100, 50 x 150, 80 x 250, 100 x 250, 150 x 300*, and 200 x 400* (NPS 1 x 4, 2 x 6, 3 x 10, 4 x 10, 6 x 12*, and 8 x 16*)

* These sizes are not available in MFL-FR configurations. DN 200 BP and DN 250 BP versions are not available.

End Connection Styles
**FL-FR-BP:** PN 16, 25 / CL150
**FL-FR-HP:** CL300, and CL600

Inlet Pressure Ranges
**FL-FR-BP:**
Allowable Pressure: Up to 25 bar
Inlet Pressure Range: 0.2 to 25 bar

**FL-FR-HP:**
Allowable Pressure: Up to 100 bar
Inlet Pressure Range: 1 to 100 bar

Outlet Pressure Range
**FL-FR-BP:** 0.01 to 8 bar
**FL-FR-HP:** 0.5 to 80 bar

Minimum Operating Differential Pressure
**FL-FR-BP:** 0.2 bar
**FL-FR-HP:** 0.5 bar

Accuracy Class
Up to ±1%

Lock-Up Pressure Class
Up to ±5%

Class of Lock-Up Pressure Zone
Up to 5%

Temperature Capabilities
Working: -20° to 60°C

Approximate Weights (Including Pilot)
**FL-FR-BP:** 24 to 380 kg
**FL-FR-HP:** 31 to 1190 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features
- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
Introduction
The Cronos Series regulators are accurate pilot-operated, pressure balanced, soft seated regulators designed for high pressure transmission/city gate stations, large capacity distribution systems, and power plant feeds. They provide smooth and quiet operation, tight shutoff and long life. The regulator utilizes a main valve actuator, a type PRX pressure reducing pilot with a type SA/2 pilot supply regulator or a type PS pressure reducing pilot.

The Cronos Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations
Type C: Regulator
Type CB: Regulator + Shutoff
Type CC: Regulator + Monitor
Type CCB: Regulator + Monitor + Shutoff
Type CBS: 90° Flow Regulator + Shutoff
Type CCS: 90° Flow Regulator + Monitor + Shutoff

All Cronos type regulators are available with or without:
Type SR: Silencer
Type SRS: Silencer with widened outlet flange
A widened outlet version without built-in silencer is also available.

Body Sizes
Cronos Series:
DN 25, 50, and 80 (NPS 1, 2, and 3)
Cronos Series with Type SRS Silencer or Widened Outlet:
DN 25 x 100, 50 x 150, and 80 x 250 (NPS 1 x 4, 2 x 6, and 3 x 10)

End Connection Styles
PN 16, 25, 40 / CL150, CL300, and CL600

Inlet Pressure Ranges
Flange Rating PN 16 / CL150:
Allowable Pressure: Up to 20 bar
Inlet Pressure Range: 0.2 to 20 bar

Outlet Pressure Ranges
Flange Rating PN 16 / CL150:
0.01 to 16 bar
Flange Rating PN 25, 40 / CL300, CL600:
0.5 to 80 bar

Minimum Operating Differential Pressures
Flange Rating PN 16 / CL150:
0.2 bar
Flange Rating PN 25, 40 / CL300, CL600:
0.5 bar

Accuracy Class
Up to ±1%

Lock-Up Pressure Class
Up to +5%

Class of Lock-Up Pressure Zone
Up to 5%

Built-In Shutoff Valve
Independent Pneumatic Control
Manual Reset
Accuracy Group: Up to ±1%
Response Time: ≤1 s

Temperature Capabilities
Standard Version:
Working: -10° to 60°C
Low Temperature Version:
Working: -20° to 60°C

Approximate Weights
(Including Pilot)
36 to 427 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features
- Control Accuracy
- Versatility
- Tight Shutoff
- No Atmospheric Bleed
- High Capacity
- In Service Travel Indicator
- Silencer Options
Introduction

The Cronos-FR Series regulators are accurate pilot-operated, pressure balanced, soft seated regulators designed for high pressure transmission/city gate stations, large capacity distribution systems and power plant feeds.

They provide smooth and quiet operation, tight shutoff and long life.

The regulator utilizes a main valve actuator, and a Compact Pilot system.

The Cronos-FR Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations

Type C-FR: Regulator
Type CB-FR: Regulator + Shutoff
Type CC-FR: Regulator + Monitor

All Cronos-FR type regulators are available with or without:

Type SR: Silencer
Type SRS: Silencer with widened outlet flange

Body Sizes

Cronos-FR Series:
DN 25, 50, and 80
(NPS 1, 2, and 3)

Cronos-FR Series with Type SRS Silencer:
DN 25 x 100, 50 x 150, and 80 x 250
(NPS 1 x 4, 2 x 6, and 3 x 10)

End Connection Style

PN 25

Inlet Pressure
Allowable Pressure: 25 bar
Inlet Pressure Range: 0.8 to 25 bar

Outlet Pressure Range
0.01 to 16 bar

Minimum Operating Differential Pressure
1 bar

Maximum Operating Differential Pressure
24 bar

Accuracy Class
Up to ±1%

Lock-Up Pressure Class
Up to ±5%

Class of Lock-Up Pressure Zone
Up to 5%

Built-In Shutoff Valve
Independent Pneumatic Control
Manual Reset
Accuracy Group: Up to ±2.5%
Response Time: ≤ 1 s

Temperature Capabilities
Working: -20° to 60°C

Approximate Weights
(Including Pilot)
36 to 213 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features

- Control Accuracy
- Versatility
- Tight Shutoff
- No Atmospheric Bleed
- High Capacity
- In Service Travel Indicator
- Silencer Options
Introduction

Type EZH and EZHSO series regulators are accurate pilot-operated, pressure balanced, soft-seated regulators. They are designed for use in high pressure natural gas transmission/city gate stations, large capacity distribution systems, and power plant feeds. They provide smooth and reliable operation, tight shut off and long life.

The EZH and EZHSO Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category IV.

Available Configurations

Type EZH:
Spring-to-Close pilot-operated pressure reducing regulator for low to high outlet pressure

Type EZH-OS2:
Type EZH pressure reducing regulator with an OS2 slam-shut device for overpressure or overpressure and underpressure protection

Type EZHSO:
Spring-to-Open pilot-operated pressure reducing regulator for low to high outlet pressure

Type EZHSO-OS2:
Type EZHSO pressure reducing regulator with an OS2 slam-shut device for overpressure or overpressure and underpressure protection

Body Sizes
DN 25, 50, 80, and 100 (NPS 1, 2, 3, and 4)

End Connection Styles
PN 16 B, 25 B, 40 B
CL150, CL300 and CL600

Inlet Pressure Ranges
Allowable Pressure: Up to 100 bar
Inlet Pressure Range: 1 to 100 bar

Outlet Pressure Range
1 to 80 bar

Minimum Operating Differential Pressures
Type EZH: 1 bar
Type EZHSO: 3.8 bar

Maximum Operating Differential Pressures
Type EZH: 99 bar
Type EZHSO: 96.2 bar

Temperature Capabilities
Working: -20° to 60°C

Approximate Weights (Including Pilot)
36 to 263 kg

For full details consult the documentation available on our website:
www.Fisherregulators.com

Features

- Long Life in Severe Service Applications
- High Resistance to Aromatics and Particle Erosion
- Noise Attenuation Module (optional)
- High Turn Down Capacity for Systems with Large Variations in Downstream Flow Demand
- Absolutely No Bleed to Atmosphere
- Wide Range of Flow Coefficients for each Body Size
- Bubble Tight Shutoff
- Accurate Pressure Control
- Low Temperature Standard Version
- Integral Strength
- Easy Maintenance System for DN 100 Size
- Spring-to-Close and Spring-to-Open Versions
**Introduction**

The type 971 regulators feature simple seat and counterbalanced valve. The “top entry” design allows easy maintenance operations without disassembling the regulator from the line. They assure high accuracy of the regulated pressure even when the inlet pressure is extremely variable.

The 971 type is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category III.

**Available Configurations**

- **Type 971:** Regulator
- **Type 971-E:** Monitor

The type 971 regulator is available with type SR silencer.

**Body Size**

DN 250 (NPS 10)

**End Connection Styles**

CL300, CL600

**Inlet Pressure Ranges**

- Allowable Pressure: Up to 100 bar
- Inlet Pressure Range: 1 to 100 bar

**Outlet Pressure Range**

0.5 to 70 bar

**Minimum Operating Differential Pressure**

0.5 bar

**Accuracy Class**

Up to ±1%

**Lock-Up Pressure Class**

Up to +5%

**Class of Lock-Up Pressure Zone**

Up to 5%

**Temperature Capabilities**

- **Standard Version:** Working: -10° to 60°C
- **Low Temperature Version:** Working: -20° to 60°C

**Approximate Weight**

( Including Pilot )

1700 kg

For full details consult the documentation available on our website: [www.Tartarini-Naturalgas.com](http://www.Tartarini-Naturalgas.com)

**Features**

- **Accuracy Maintained with Variable Inlet Pressure**
- **Easy Set-point Adjustment**
- **High Versatility for Different Applications**
Introduction
The type EZR pilot-operated, pressure reducing regulator designed to give accurate, smooth, quiet operation, tight shut-off, and long life, even in dirty service.
It is also available with a slam-shut device, the type EZR-OS2, which can provide either overpressure protection or overpressure and underpressure protection by completely shutting off the flow of gas to the downstream system.
The EZR Series can be installed in various natural gas applications such as transmission/distribution systems, industrial and commercial facilities.
The EZR Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations
Type EZR (Boot Style):
Pilot-operated pressure reducing regulator for low to high outlet pressure
Type EZR-OS2:
Type EZR with slam-shut device for overpressure (OPSO) or overpressure and underpressure (OPSO/UPSO) protection

Body Sizes
DN 25, 50, 80, 100, and 150 (NPS 1, 2, 3, 4, and 6)

End Connection Styles
PN 16 B, 25 B, 40 B
CL150, CL300, and CL600

Maximum Operating Inlet Pressure
72.4 bar

Maximum Operating Differential Pressure
55.2 bar

Minimum Operating Differential Pressure
3 bar

Outlet Pressure Range
10 mbar to 69 bar

Pressure Registration
External

Temperature Capabilities
-17° to 66°C

Approximate Weights (Including Pilot)
Type EZR:
12 to 161 kg
Type EZR-OS2:
20 to 244 kg

For full details consult the documentation available on our website:
www.Fisherregulators.com

Features
• Tight Shutoff
• Versatility
• Easily Maintained Pilots
• Full Usable Capacity
• Easy Maintenance
• High Accuracy Pressure Control

Temperature Capabilities
-17° to 66°C

Approximate Weights (Including Pilot)
Type EZR:
12 to 161 kg
Type EZR-OS2:
20 to 244 kg

For full details consult the documentation available on our website:
www.Fisherregulators.com
Introduction

The PS Series pilots are mainly used in natural gas applications. All PS Series pilots are supplied with a filter (5μ filtering degree) and built-in pressure stabilizer, with the exception of pilots types PSO/79 and PSO/80.

The PS and RE Series pilots can be installed in the following equipment:

- FL Series
- Cronos Series
- Type 971

Available Configurations

High-Pressure Pilot Range

Type PS/79: Single diaphragm pilot for pressure regulator (active or wide-open monitor)

Type PSO/79: Single diaphragm pilot for setting of first pressure-reducing step (upstream) of pressure regulator (working monitor)

Type REO/79: Single diaphragm pilot for setting of second pressure-reducing step (downstream) of pressure regulator (working monitor)

Type PS/80: Double diaphragm pilot for pressure regulator (active or wide-open monitor)

Type PSO/80: Double diaphragm pilot for setting of first pressure-reducing step (upstream) of pressure regulator (working monitor)

Type REO/80: Double diaphragm pilot for setting of second pressure-reducing step (downstream) of pressure regulator (working monitor)

Low-Pressure Pilot Range

Type PS/79-1: Single diaphragm pilot for pressure regulator (0.01 - 0.5 bar)

Type PS/79-2: Single diaphragm pilot for pressure regulator (0.5 - 3 bar)

Type PSO/79-1: Single diaphragm pilot for setting of first pressure-reducing step (upstream) of pressure regulator (working monitor) (0.01 - 0.5 bar)

Type PSO/79-2: Single diaphragm pilot for setting of first pressure-reducing step (upstream) of pressure regulator (working monitor) (0.5 - 3 bar)

Type REOPS/79-1: Single diaphragm pilot for setting of second pressure-reducing step (downstream) of pressure regulator (working monitor) (0.01 - 0.5 bar)

Type REO/79-2: Single diaphragm pilot for setting of second pressure-reducing step (downstream) of pressure regulator (working monitor) (0.5 - 3 bar)

End Connection Style

1/4" NPT female threaded

Pressure Ratings

Type PS/79, PSO/79, REO/79:
- Allowable Pressure: 100 bar
- Set Range: 0.5 to 40.0 bar

Type PS/80, PSO/80, REO/79:
- Allowable Pressure: 100 bar
- Set Range: 1.5 to 40.0 bar

PS/79-1 - RE/79-1 - PSO/79-1 - REOPS/79-1:
- Allowable Pressure: 25 bar
- Set Range: 0.01 to 0.5 bar

Type PS/79-2, PSO/79-2, REO/79-2:
- Allowable Pressure: 25 bar
- Set Range: 0.5 to 3 bar

Temperature Capabilities

Standard Version:
- Working: -10° to 60°C

Low Temperature Version:
- Working: -20° to 60°C

Weights

PS/79 Series: 8 kg
PS/80 Series: 9 kg

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- High Sensitivity
- Improved Performance
- High Accuracy
Introduction

The PRX Series pilots are mainly used in natural gas applications. They have a double diaphragm which provides increased accuracy and sensitivity, an integral damper adjustment to allow adjustable opening and closing speeds, and a restrictor adjustment to make for inlet pressure variability and loading pressure oscillations.

The type SA/2 stabilizer filter must be used with PRX/120 series pilots when the PRX/120 are installed in FL, Cronos, 971 and EZH series regulators.

The PRX Series pilots can be installed in the following equipment:

- FL Series
- Cronos Series
- EZH Series
- EZR Series
- Type 971
- VS-FL Series
- BM5 Series
- BM6X Series

Available Configurations

Types PRX/120 and PRX-AP/120: Pilots for Regulator or Monitor Control
Types PRX/125 and PRX-AP/125: Pilots for Working Monitor Control
Types PRX/181-PN, PRX-AP/181-PN, PRX/182-PN and PRX-AP/182-PN: Pilots for OS/80X-PN Slam-Shut Device
Types PRX/131 and PRX-AP/131: Pilots for Booster Valve
Type PRX/182 and PRX-AP/182: Pilots for Relief Valve

End Connection Styles
1/4” NPT female threaded

Pressure Ratings

Types PRX/120 and PRX/125:
Allowable Pressure: 100 bar
Set Range: 1 to 40 bar

Types PRX-AP/120 and PRX-AP/125:
Allowable Pressure: 100 bar
Set Range: 30 to 80 bar

Types PRX/131, PRX/182, PRX/181-PN, and PRX/182-PN:
Allowable Pressure: 100 bar
Set Range: 0.5 to 40 bar

Types PRX-AP/131, PRX-AP/182, PRX-AP/181-PN, and PRX-AP/182-PN:
Allowable Pressure: 100 bar
Set Range: 30 to 80 bar

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Weights

PRX Series: 2.3 kg
PRX-AP Series: 2.5 kg
SA/2: 1.5 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- High Sensitivity
- Improved Performance
- High Accuracy
- Easy Setting

EMERSON
Process Management
Introduction

The BSL 85 pilot system is used in natural gas transmission applications. It is composed of a manometric pre-expansion box, a manometric pre-expansion pilot box, and two pilot bodies. The BSL 85 pilot permits all types of failure modes:

- The BMP pilots with one diaphragm are “FO” (Fail-to-Open)
- The BMP pilots with two diaphragms are “FC” (Fail-to-Close)

The BSL 85 series pilots can be installed in the following equipment:

- EZH Series
- EZR Series

The Francel Compact Pilot is used in natural gas distribution applications and is composed of a manometric pre-expansion box, a manometric pre-expansion pilot box, and a pilot body. The compact pilot can be installed in the following equipment:

- FL-FR Series
- Cronos-FR Series
- EZH Series
- EZR Series

Available Configurations

Compact Pilot Series:
Pilots for Regulator or Monitor Control in low pressure applications

BSL 85 Pilot Series:
Pilots for Regulator or Monitor Control in high pressure applications

End Connection Style
1/4" NPT female threaded

Pressure Ratings
Maximum Inlet Pressure: 100 bar
Allowable Inlet Pressure: 85 bar
Outlet Pressure Range: 0.01 to 60 bar

Temperature Capabilities
Working: -20° to 60°C

For full details consult the documentation available on our website:
www.Francel.com
**Introduction**

In monitor-regulator systems the booster valve V/31-2 is installed on the loading pressure circuit, in order to obtain a more rapid action in monitor closing.

La V/31-2 can be installed in the following equipment:

- FL Series
- Cronos Series
- EZH Series

**End Connection Styles**

1/4" NPT female threaded

**Pressure Ratings**

Allowable Pressure: 19 bar
Set Range: 0.015 to 0.55 bar

**Temperature Capabilities**

**Standard Version:**
Working: -10°C to 60°C

**Low Temperature Version:**
Working: -20°C to 60°C

**Weight**

2.5 kg

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For full details consult the documentation available on our website: [www.Tartarini-Naturalgas.com](http://www.Tartarini-Naturalgas.com)

**Features**

- High Sensitivity
- Improved Performance
- High Accuracy

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**TYPE MFL MONITOR AND REGULATOR OPERATIONAL SCHEMATIC**

**LEGEND**

- **RED** INLET PRESSURE
- **GREEN** MONITOR LOADING PRESSURE
- **YELLOW** OUTLET PRESSURE
- **BLUE** REGULATOR LOADING PRESSURE
Introduction

The type RPE electric pilot heater is used for reheating gas supplying pressure reducing regulator pilots.

The type RPE avoids the inconveniences caused by freezing which occur during large pressure drops.

Two versions of the type RPE are available:

**Electrical Pilot Heater**

The type RPE (with a heating element) is installed in a vertical position and is affixed to the actuator bolts of the regulator.

A thermostat and power relay must be installed in a non-explosive risk zone.

**Regulator Bottom Electrical Heater**

This version is normally used for relief lines. The Type RPE is assembled with four screws to the bottom of the regulator.

The type RPE can be installed in a hazardous atmosphere and must be installed between the pilot filter and the pre-expansion relay.

The type RPE is in conformity with the Directive for Equipment or Protective System intended for use in potentially explosive atmospheres 94/9/CE. It is classified under Group II, Category 2.

**Electrical Material for Explosive Atmosphere**

Protection: EEx d IIC T2

Classification: ISSeP 03 ATEX 090

**Maximum Operating Pressure**

Thermometer Pocket with Heating Element: 100 bar

**Temperature Measurement**

Interchangeable Thermic Probe: 10 kΩ

**Heater**

Two Interchangeable Heating Cartridges:

280 W - 230 V

Connected in Series: 140 W

**Temperature Regulation Range**

Thermostat: -30 to 90°C

**Power Supply**

Power Relay: Imax 2 A; U: 250 V~

**Protection**

Thermostat: 2 A

Power Relay: 2 A

**Pneumatic Connections**

Inlet - Outlet: 1/4 NPT - tube 8/10

**Electrical Connections**

Electrical Type RPE Box: Packing gland 3/4 NPT for cable snap-on

Electrical Wiring: Customer

**Weights**

Heater: 1 kg

Heater with Heating Element: 4 kg

For full details consult the documentation available on our website:

[www.Francel.com](http://www.Francel.com)

**Features**

- Robust Design
- Large Range of Utilization
Introduction

Silencers are noise reduction system devices which are commonly installed in a regulator as a remedy for noise pollution.

Available Configurations

Type SR:
This silencer is fitted near the regulator shutter and is highly efficient up to a theoretical speed of 80 m/s calculated at the outlet flange. Higher than this speed, noise may be generated by the expansion cone, usually installed downstream of the regulator, and may require an additional noise reduction solution.

Type SRII:
The SRII silencer is the next generation of type SR and is used in case of extreme service conditions (dirty gas, high pressure drops, and high gas velocities). Noise characteristics are very similar to the standard SR.

Type SRS and SRSII:
The SRS consists of an SR silencer plus a widened outlet flange in which a second silencer is fitted. The SRSII consists of an SRII silencer plus a widened outlet flange in which a second silencer is fitted. In both configurations the second silencer has an initial multi-path section and a second multi-stage section. These silencers are highly efficient under all operating conditions and are not limited by the theoretical speed on the regulator outlet flange.

Type STP:
Usually used downstream of SRS or SRSII silencers but can also be combined with a SR silencer. Overall reduction in noise level is the sum of the reduction produced by SR/SRII or SRS/SRSII plus the STP induced reduction. The type STP silencer consists of one or more porous channels clad with soundproofing material.

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- Various Noise Reduction Solutions
- Excellent Cost / Benefit Ratio

Sound penetrates inside the soundproof layer and is transformed into heat by friction of the gas flow. The silencer is fitted in the pipe and is secured with two flanges. Two types of silencers are available:

- STP10 10 dB (A) attenuation, approximate length of 1 m
- STP10 20 dB (A) attenuation, approximate length of 2 m

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com
Introduction

The type RP/10 regulators are normally employed in pressure reducing stations using high pressure gas compressed in cylinders.

They can also be employed with middle pressure gas in ceramic, chemical, and pharmaceutical factories for small furnaces.

Type RP/10 is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category I.

Body Size and End Connection Style

3/4" x 1" BSP

Inlet Pressure

Body Allowable Pressure: 220 bar
Maximum Operating Pressure: 30 bar
Inlet Pressure Range: 1 to 220 bar

Outlet Pressure Range

0.5 to 30 bar

Accuracy Class

Up to ±5%

Lock-up Pressure Class

Up to 10%

Class of Lock-Up Pressure Zone

Up to 10%

Temperature Capabilities

Working: -10° to 60°C

Orifice Size

1/2"

Approximate Weight

17 kg

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Counterbalanced Valve Disc
- Tight Shutoff
- Built-in Spring Operated Safety Valves
Introduction
The type RLC/20 regulators are pneumatic-loaded, single seated, with counterbalanced valve disc.
They are normally employed in gas distributing stations for automotive use.
They can also be used in industrial installations using high pressure gas compressed in cylinders and cylinder-truck installations normally fed through the pipeline.

Body Size and End Connection Style
1" NPT Threaded
DN 20 PN 350 Flanged

Inlet Pressure
Body Allowable Pressure: 320 bar
Maximum Operating Pressure: 250 bar
Inlet Pressure Range: 30 to 320 bar

Outlet Pressure Range
20 to 250 bar

Minimum Operating Differential Pressure
10 bar

Accuracy Class
Up to ±2.5%

Lock-Up Pressure Class
Up to 5%

Class of Lock-Up Pressure Zone
Up to 10%

Built-In Relief Valve
Setting at +5% of the regulator setting value

Orifice Size
3/4"

Temperature Capabilities
Standard Version:
Working: -10° to 60°C
Low Temperature Version:
Working: -20° to 60°C

Approximate Weight
100 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features
• Counterbalanced Valve Disc
• Welding or Threaded Flange Configurations
• Built-in Relief Valve and Filter
Introduction

The technical and operational features of the M Series, spring-loaded regulators, make them ideal for applications requiring sudden changes in capacity or where gas shutoff is solenoid-controlled as with domestic or industrial burners.

The MF and MN MR Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category IV maximum.

Available Configurations

MN Series (Widened Outlet Flanges)
Types MN, MN-AP, MN-APA, and MN-PST: Regulator
Types MBN, MBN-AP, MBN-APA, and MBN-PST: Regulator + Shutoff
Types MBN-M, MBN-M-AP, MBN-M-APA, and MBN-M-PST: Monitor + Shutoff

MF Series (Same Inlet/Outlet Flanges)
Types MF, MF-AP, MF-APA, and MF-PST: Regulator
Types MBF, MBF-AP, MBF-APA, and MBF-PST: Regulator + Shutoff
Types MBF-M, MBF-M-AP, MBF-M-APA, and MBF-M-PST: Monitor + Shutoff

All MN and MF type regulators, or regulators + shutoff, are available with or without type SR Silencer.

Body Sizes

MN Series:
DN 25 x 65, 40 x 80, 50 x 100, 65 x 100, 80 x 150, and 100 x 200 (NPS 1 x 2-1/2, 1-1/2 x 3, 2 x 4, 2-1/2 x 4, 3 x 6, and 4 x 8)

MF Series:
DN 25, 40, 50, 80, and 100
(NPS 1, 1-1/2, 2, 3, and 4)

End Connection Style
PN 16 / CL150

Inlet Pressure
Body Allowable Pressure: Up to 20 bar
Actuator Allowable Pressure: 4 bar
Maximum Operating Pressure: 3 bar

Permissible Inlet Pressure:
Standard Version
DN 25 to 50 (NPS 1 to 2): 10 bar
DN 65 to 100 (NPS 2-1/2 to 4): 5 bar
PST, AP and APA Versions: 19.6 bar

Outlet Pressure Range
Standard Version: 10 to 500 mbar
PST Version: 0.2 to 0.5 bar
AP Version: 0.5 to 1 bar
APA Version: 1 to 3 bar

Accuracy Class
Up to ±5%

Lock-up Pressure Class
Up to 10%

Class of Lock-up Pressure Zone
Up to 10%

Built-in Slam-Shut Valve
Independent Pneumatic Control
Accuracy Group: ±5%
Response Time: <1 s

Temperature Capabilities
Working: -10° to 60°C
Low temperature version available on request.

Approximate Weights
31 to 140 kg

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Counterbalanced Shutter
- Overpressure and Under-pressure Shutoff Valve
- Wide Pressure Regulation Range
- Manual Reset
Introduction
The A/100 Series regulators ensure precise stable operation even when the requirements of the plant cause exceptionally unfavorable conditions such as rapid fluctuations in demand.
These regulators are commonly used on industrial burners, with starting controlled by solenoid valves (on-off).
The A/100 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category I.

Available Configurations
Type A/102:
Regulator

Type A/102-AP:
High Pressure Regulator

Type A/109:
Regulator + Shutoff

Type A/109-AP:
High Pressure Regulator + Shutoff

Body Size and End Connection Style
2" BSP Threaded

Inlet Pressure
Body Allowable Pressure: Up to 20 bar
Maximum Operating Pressure: 300 mbar
Maximum Inlet Pressure: 8 bar
Inlet Pressure Range: 0.1 to 8 bar

Outlet Pressure Range
10 to 300 mbar

Accuracy Class
Up to ±5%

Lock-Up Pressure Class
Up to 10%

Orifice Size
1/2", 5/8", 3/4", and 1"

Features
• Built-in Relief Valve
• Overpressure and Underpressure Shutoff Valve
• Manual Reset
• Inlet and Outlet In-Line

Built-in Shutoff Valve
Independent Pneumatic Control
Accuracy Group: ±5%
Response Time: <1 s

Temperature Capabilities
Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights
Type A/102, A/102-AP: 11 kg
Type A/109, A/109-AP: 12 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com
Introduction

Construction and performance features make the A/140 Series spring-loaded regulators the ideal choice in applications involving sudden changes in capacity, or where the gas shutoff is solenoid-controlled as with domestic or industrial burners.

The A/140 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV maximum.

Available Configurations

Type A/142:
Regulator

Type A/142-AP:
High Pressure Regulator

Type A/149:
Regulator + Shutoff

Type A/149-AP:
High Pressure Regulator + Shutoff

Body Size and End Style Connection

DN 50 PN 16 (NPS 2)

Inlet Pressure

Body Allowable Pressure: Up to 20 bar
Maximum Operating Pressure: 300 mbar
Maximum Inlet Pressure: 6 bar
Inlet Pressure Range: 0.1 to 6 bar

Outlet Pressure Range

10 to 300 mbar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Orifice Size

13/16”

Features

- Counterbalanced Valve
- Built-in Relief Valve
- Overpressure and Underpressure Shutoff Valve
- Manual Reset
- Inlet and Outlet In-Line

Built-in Shutoff Valve

Independent Pneumatic Control
Accuracy Group: ±5%
Response Time: <1 s

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights

Type A/142, A/142-AP: 19 kg
Type A/149, A/149-AP: 20 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com
Introduction

Construction and performance features make the B/240 Series spring-loaded regulators the ideal choice in applications involving sudden changes in capacity or where the gas shutoff is solenoid-controlled as with domestic or industrial burners.

The B/240 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV maximum.

Available Configurations

Type B/242:
Regulator

Type B/242-AP:
High Pressure Regulator

Type B/249:
Regulator + Shutoff

Type B/249-AP:
High Pressure Regulator + Shutoff

Body Size and End Connection Style

1 1/2" BSP Threaded
DN 40 PN 16 (NPS 1-1/2) Flanged

Inlet Pressure

Body Allowable Pressure: Up to 20 bar
Maximum Operating Pressure: 300 mbar
Maximum Inlet Pressure: 6 bar
Inlet Pressure Range: 0.1 to 6 bar

Outlet Pressure Range

10 to 300 mbar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Orifice Size

13/16"

Built-in Shutoff Valve

Independent Pneumatic Control
Accuracy Group: ±5%
Response Time: <1 s

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights

Type B/242, B/242-AP: 3.5 kg
Type B/242-FS, B/242-AP-FS: 7.5 kg
Type B/249, B/249-AP: 4.5 kg
Type B/249-FS, B/249-AP-FS: 8.5 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features

- Counterbalanced Valve
- Built-in Relief Valve
- Overpressure and Underpressure Shutoff Valve
- Manual Reset
- Inlet and Outlet In-line
Introduction

REGAL 3 Series is a direct-operated, spring set-point pressure regulator used for supplying industries and commercial businesses.

As an option, it can be equipped with a slam-shut Type VSX2 or OS2 which permits the gas flow to be cut off rapidly and totally in the case of under or over outlet pressure.

As a standard feature, for outlet pressure settings inferior or equal to 180 mbar, a relief valve is provided.

The REGAL 3 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category I.

Available Configurations

Type Regal 3:
Regulator

Type Regal 3-VSX2:
Regulator with Integral Slam-Shut VSX2

Type Regal 3-OS2:
Regulator with Integral Slam-Shut OS2

Body Sizes and End Connection Styles

NPS 2 NPT Threaded
PN 10/16, PN 20 or CL150 Flanged

Inlet Pressure

Maximum Inlet Pressure: 10 bar
Maximum Operating Pressure: 1.5 bar

Outlet Pressure Range

0.008 to 1.5 bar

Accuracy Class

Up to ±5%

Pressure Registration

External

Internal Relief Setting

Inlet Pressure +90 mbar

Temperature Capabilities

Working: -30° to 71°C

Approximate Weights

Type Regal 3: 18 kg
Type Regal 3-VSX2: 18.8 kg
Type Regal 3-OS2: 24 kg

For full details consult the documentation available on our website: www.Francel.com

Features

• Integral Slam-Shut
• Ease of Installation
• Precise Flows
• Internal Relief

Temperature Capabilities

Working: -30° to 71°C

Approximate Weights

Type Regal 3: 18 kg
Type Regal 3-VSX2: 18.8 kg
Type Regal 3-OS2: 24 kg

For full details consult the documentation available on our website: www.Francel.com

Features

• Integral Slam-Shut
• Ease of Installation
• Precise Flows
• Internal Relief

Temperature Capabilities

Working: -30° to 71°C

Approximate Weights

Type Regal 3: 18 kg
Type Regal 3-VSX2: 18.8 kg
Type Regal 3-OS2: 24 kg

For full details consult the documentation available on our website: www.Francel.com

Features

• Integral Slam-Shut
• Ease of Installation
• Precise Flows
• Internal Relief

Temperature Capabilities

Working: -30° to 71°C

Approximate Weights

Type Regal 3: 18 kg
Type Regal 3-VSX2: 18.8 kg
Type Regal 3-OS2: 24 kg

For full details consult the documentation available on our website: www.Francel.com

Features

• Integral Slam-Shut
• Ease of Installation
• Precise Flows
• Internal Relief
Introduction

The RP Series regulators are direct-operated with non-balanced trim. Normally they are fitted with a built-in filter. They are produced in the following version: types RP/011, RP/022, and RP/033. All models can be fitted with a shutoff valve.

The RP Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category I maximum.

Available Configurations

Types RP/011, RP/022, and RP/033:
- Regulator

Types RP/011/66, RP/022/66, and RP/033/66:
- Regulator + Shutoff

Body Sizes and End Connection Styles

Type RP/011:
- 1 x 1-1/4" BSP Threaded

Type RP/022:
- 1-1/4 x 2" BSP Threaded

Type RP/033:
- 2 x 3" BSP Threaded

Type RP/011-FS:
- DN 25 x 32 PN 16, 25, 40 / CL150, CL300 Flanged

Type RP/022-FS:
- DN 32 x 50 PN 16, 25, 40 / CL150, CL300 Flanged

Type RP/033-FS:
- DN 50 x 80 PN 16, 25, 40 / CL150, CL300 Flanged

Outlet Pressure Ranges

Types RP/022 and RP/033:
- 0.1 to 4 bar

Type RP/011:
- 0.1 to 2 bar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Built-in Shutoff Valve

Independent Pneumatic Control
- Accuracy Group: ±5%
- Response Time: <1 s

Temperature Capabilities

Standard Version:
- Working: -10° to 60°C

Low Temperature Version:
- Working: -20° to 60°C

Approximate Weights

6 to 25 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- Overpressure and Underpressure Shutoff Valve
- Manual Reset
- Inlet and Outlet In-line
Introduction

The CSB400 Series direct-operated, spring-loaded regulators have been engineered to fit a multitude of pressure-reducing applications including commercial and industrial installations.

This flexibility is provided by the numerous body sizes and end connections, outlet pressure settings, as well as the option for internal, external, or dual pressure registration.

In addition to application flexibility, the CSB400 Series offers multiple overpressure protection options to meet your demands on application requirements.

The CSB400 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC. The base regulator is classified under Category I, the regulator with slam-shut module is classified under Category IV.

Body Sizes and End Connection Styles

**Ductile Cast Iron:**
1, 1-1/4, 1-1/2, or 2 NPT, Rp 1, 1 x 1-1/4, 1-1/4, 1-1/2, or 2, Rp 1 x 2-1/4 GAZ, NPS 1-1/2 (DN 40), PN16, NPS 2 (DN 50), CL125 FF, CL150 FF, or PN 10/16

**Steel:**
1, 1-1/4 or 1-1/2 NPT, Rp 1, 1-1/4 or 1-1/2

Maximum Operating Outlet Pressure

3 bar

Pressure Registration

Internal, external or dual

Temperature Capabilities

According to PED Standards:
-20°C to 60°C

Non-PED:
-30°C to 66°C

Approximate Weights

**Threaded Body:**
Type CSB400: 4 kg
Type CSB403: 9 kg
Type CSB404: 5 kg

**Flanged Body:**
Add 4 kg to weights listed above

Type VSX4 Slam-Shut Module Specifications

Standard Overpressure Shutoff (OPSO) Set Value:
43 to 3400 mbar

Standard Underpressure Shutoff (UPSO) Set Value:
10 to 1500 mbar

Connections

Slam-Shut Vent: 1/4 NPT
External Sensing Line: 1/4 NPT

Casing Material

Aluminum

Pressure Registration

Internal or external

For full details consult the documentation available on our website:

www.Fisherregulators.com

Features

- Slam-shut
- Ductile Cast Iron and WCC Steel Bodies Available
- Wide Variety of Body Sizes and End Connections
- No Special Tools for Pressure Adjustment and Orifice Removal
Introduction

The CSB600 / CSB700 Series direct-operated, spring-loaded regulators have been engineered to fit a multitude of pressure-reducing applications including commercial and industrial installations.

This flexibility is provided by the numerous body sizes and end connections, outlet pressure settings, as well as the option for internal or external pressure registration.

In addition to application flexibility, the CSB600 / CSB700 offer overpressure protection options, which include an integral slam-shut and also token relief to meet your demands on application requirements.

The CSB600 / CSB700 Series are in conformity with the Pressure Equipment Directive PED 97/23/EC. The base regulator is classified under Category I, the regulator with slam-shut module is classified under Category IV.

Body Sizes and End Connection Styles

Ductile Cast Iron:
- 1-1/4 (CSB600 only), 1-1/2 or 2 NPT
- 1-1/4 (CSB600 only), 1-1/2 or 2 Rp
- NPS 2 (DN 50) CL125FF, CL150FF
- NPS 2 (DN 50) PN 10/16
- NPS 1-1/4 (DN 32) (CBS600 only)
- NPS 1-1/2 (DN 40) PN 16 Slip-on

Steel:
- 1-1/4 (CSB600 only), 1-1/2 or 2 NPT
- 1-1/4 (CSB600 only), 1-1/2 or 2 Rp
- NPS 2 (DN 50) CL150RF
- NPS 2 (DN 50) PN 10/16

Maximum Operating Inlet Pressure Differential Strength
5 to 16 bar (depending on type)

Maximum Emergency Inlet Pressure Differential Strength
20 bar

Outlet Pressure Range
8.6 mbar to 4 bar

Maximum Emergency Outlet Pressure (Casing)
5 bar

Maximum Outlet Pressure to avoid Internal Parts Damage
0.34 bar over set-point

Maximum Operating Outlet Pressure
3 bar

Pressure Registration
Internal or external

Temperature Capabilities

According to PED Standards:
-20° to 60°C
Non-PED:
-30° to 66°C

Approximate Weights

Threaded Body:
- Type CSB600/700: 4.1 kg
- Type CSB604/704: 5 kg

Flanged Body:
Add 4.1 kg to weights listed above

Type VSX8 Slam-Shut Module Specifications

Standard Overpressure Shutoff (OPSO) Set Value:
43 to 4400 mbar

Standard Underpressure Shutoff (UPSO) Set Value:
10 to 2000 mbar

Connections

Slam-Shut Vent: 1/4 NPT
External Sensing Line: 1/4 NPT

Casing Material
Aluminum

Pressure Registration
Internal or external

Features

- Slam-shut
- Ductile Cast Iron and WCC Steel Bodies Available
- Wide Variety of Body Sizes and End Connections
- No Special Tools for Pressure Adjustment and Orifice Removal
**Introduction**

The CS800 Series direct-operated, spring-loaded regulators have been engineered to fit a multitude of pressure-reducing applications including commercial and light industrial installations.

This flexibility is provided by the numerous body sizes and end connections, outlet pressure settings, orifice sizes and the option for internal or external pressure registration.

In addition to application flexibility, the CS800 Series offers numerous overpressure protection options which include an Internal Relief, High Capacity Relief and Secondary Seat™ Protection.

The CS800 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC. The base regulator is classified under Category I, the regulator with slam-shut module is classified under Category IV.

**Body Sizes and End Connection Styles**

Ductile Cast Iron and Steel:
- 1-1/4, 1-1/2 or 2 NPT
- 1-1/4, 1-1/2 or 2 Rp
- NPS 2 (DN 50) CL150FF (ductile cast iron only)
- NPS 2 (DN 50) PN 10/16
- NPS 2 (DN 50) CL150RF (steel only)

**Maximum Operating Inlet Pressure Differential Strength**

8.6 bar

**Maximum Emergency Inlet Pressure Differential Strength**

12.1 bar

**Outlet Pressure Range**

9 to 690 mbar

**Maximum Emergency Outlet Pressure (Casing)**

1 bar

**Maximum Outlet Pressure to avoid Internal Parts Damage**

0.21 bar over set-point

**Maximum Operating Outlet Pressure**

690 mbar

**Temperature Capabilities**

According to PED Standards:
- -20° to 60°C

Non-PED:
- -30° to 66°C

**Approximate Weights**

Threaded Body:
- Type CS800/820: 11 kg
- Type CS803/823: 16 kg
- Type CS805/825: 12 kg
- Type CS806/826: 12 kg

High Pressure Types:
For CS85x add 1 kg to types listed above

Flanged Body:
Add 5 kg to weights listed

**Type VSX8 Slam-Shut Module Specifications**

Standard Overpressure Shutoff (OPSO) Set Value:
- 55 to 621 mbar

Standard Underpressure Shutoff (UPSO) Set Value:
- 10 to 248 mbar

**Connections**

Slam-Shut Vent: 1/4 NPT

External Sensing Line: 1/4 NPT

**Casing Material**

Aluminum

**Pressure Registration**

Internal or external

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For full details consult the documentation available on our website:

[www.Fisherregulators.com](http://www.Fisherregulators.com)

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**Features**

- Slam-shut
- Ductile Cast Iron and WCC Steel Bodies Available
- Wide Variety of Body Sizes and End Connections
- No Special Tools for Pressure Adjustment and Orifice Removal
Introduction

The R Series spring-loaded regulators provide pressure reducing control for domestic and industrial use, such as burners, furnaces, boilers and other installations requiring proper regulation and quick response time.

The R Series regulators achieve high accuracy and flow rates even with low inlet pressure and inlet pressure variations.

Available Configurations

Types R/70, R/71, R/72, R/72-FS, R/73, R/74, and R/75: Regulator

Types R/70-AP, R/71-AP, R/72-AP, R/72-FS-AP, R/73-AP, R/74-AP, and R/75-AP: High Pressure Regulator

Body Sizes and End Connection Styles

R/70, R/70-AP:
G ¾” x G 1 ¼” UNI ISO 228/1 right angle (¾” soft seal x 1 ¼” GAS)

R/71, R/71-AP:
G ¾” x G 1 ¼” UNI ISO 228/1 right angle (¾” metallic seal x 1 ¼” GAS)

R/72, R/72-AP:
G 1” UNI ISO 228/1 axial flow (1” GAS)

R/72-FS, R/72-FS-AP:
DN 25 PN 16 - axial flow

R/73, R/73-AP:
G 1 ¼” UNI ISO 228/1 axial flow (1 ¼” GAS)

R/74, R/74-AP:
G ¾” x G 1 ¼” UNI ISO 228/1 axial flow (¾” soft seal x 1 ¼” GAS)

R/75, R/75-AP:
G ¾” x G 1” UNI ISO 228/1 axial flow (¾” soft seal x 1” GAS)

Temperature Capabilities

Working: -20° to 60°C

Inlet Pressures

Types R/70, R/71, R/72, R/72-FS, R/73, R/74, and R/75:
Maximum Inlet Pressure: 6 bar
Inlet Pressure Range: 0.1 to 6 bar

Types R/70-AP, R/71-AP, R/72-AP, R/72-FS-AP, R/73-AP, R/74-AP, and R/75-AP:
Maximum Inlet Pressure: 10 bar
Inlet Pressure Range: 0.1 to 10 bar

Outlet Pressure Ranges

Types R/70, R/71, R/72, R/72-FS, R/73, R/74, and R/75: 15 to 70 mbar

Types R/70-AP, R/71-AP, R/72-AP, R/72-FS-AP, R/73-AP, R/74-AP, and R/75-AP: 70 to 300 mbar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Built-In Shutoff Valve

Accuracy Group: ±5%
Response Time: <1 s

Approximate Weights

2 to 4.5 kg

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Two-Stage Regulation
- Built-In Relief Valve (Optional)
- Overpressure and Underpressure Shutoff Valve
- Manual Reset
- Built-in Filter with 0.5 mm Filtering Capacity
Introduction

The type R/25 two-stage pressure regulator is designed for use in a wide range of both domestic and industrial applications and can also be mounted in individual domestic gas systems and meters.

Their main features include compact size for space saving, high-quality materials, high regulation accuracy, easy setting and maximum reliability of safety devices.

Their trouble-free operation is ensured in all mounting positions.

The type R/25 regulator is suitable for both outdoor and indoor installations as a highly sensitive safety device ensures the release of gas to the atmosphere in case of overpressure.

Body Sizes and End Connection Style

G 3/4” x G 1 1/4” UNI ISO 228/1 right angle (3/4” soft seal x 1 1/4” GAS)

Maximum Inlet Pressure

6 bar

Inlet Pressure Range

0.1 to 6 bar

Outlet Pressure Range

15 to 50 mbar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Built-in Shutoff Valve

Accuracy Group: ±5%
Response Time: ≤1 s

Orifice Size

7/16”

Temperature Capabilities

Working: -20° to 60°C

Approximate Weight

1.4 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com

Features

- Two-Stage Regulation
- Built-In Relief Valve (Optional)
- Overpressure and Under-pressure Shutoff Valve
- Manual Reset
- Built-in Filter with 0.5 mm Filtering Capacity
Type B NG
Spring-Loaded Pressure Reducing Regulators

Introduction
The type B NG residential regulator is a direct-action, spring-loaded regulator, with high performance and reinforced safety features.

It provides pressure reducing control in residential, commercial and industrial applications.

A shutoff valve cuts off the gas flow in the case of excessive flow, or when the outlet pressure drops below the set-point (high gas demand or broken line) or in the case of inlet pressure dropping below the set-point (network pressure drop or pipe damage).

The regulator can be manually reset after the safety function trips.

The regulator is factory preset.

Type B6 NG is interchangeable with the current angle-shaped Type B6 N (same key dimensions).

Body Size
NPS 3/4 x 1/4

Inlet Pressure Range
0.5 to 5 bar
0.1 to 6 bar (on request)

Maximum Inlet Pressure
5 bar

Outlet Pressure Range
9 to 50 mbar

Maximum Outlet Pressure
50 mbar

Pressure Registration
Internal

Temperature Capabilities
Standard Version:
Working: -20°C to 60°C

Low Temperature Version:
Working: -30°C to 60°C (on request)

Approximate Weight
0.9 to 1 kg

For full details consult the documentation available on our website:
www.Fisherregulators.com

Features
- Reinforced Integration
- Two Stages of Reduction for Constant Outlet Pressures
- Compact Design
- Internal Relief
- Inlet Strainer

LEGEND
- INLET PRESSURE
- LOW INTERMEDIATE PRESSURE
- OUTLET PRESSURE
Introduction
The type B NV regulator is a direct-operated, spring-loaded regulator providing economical, pressure reducing control in a variety of residential, commercial, and industrial applications.
This compact regulator can be installed in a pressure reducing cabinet or a pressure reducing and metering cabinet above ground or in underground modules.

Available Configurations
B25 NV:
Minimum Inlet Pressure 500 mbar
B40 NV:
Minimum Inlet Pressure 700 mbar
Bb40 NV:
Battery consisting of two B25
BCH30 NV:
Minimum Inlet Pressure 800 mbar

Body Sizes
NPS 3/4 x 1-1/4

End Connection Styles
Inlet:
Sphero-conical or flat joint connection
Outlet:
Flat meter joint connection

Inlet Pressure
Maximum Inlet Pressure: 4 bar
Inlet Pressure Range: 0,5 to 4 bar

Outlet Pressure
Maximum Outlet Pressure: 400 mbar

Pressure Registration
Internal

Temperature Capabilities
-30° to 60°C

Approximate Weight
2 kg
For full details consult the documentation available on our website:
www.Francel.com

Features
- Integral Slam-Shut Valve
- Compact Design
- Internal Relief
- Two Stages of Reduction for Constant Outlet Pressures
- Inlet Strainer

Type B NV
Spring-Loaded Pressure Reducing Regulators
Introduction

The BM5 Series slam-shut valve is an automatic shutoff appliance suitable for installation as a safety device in regulating stations and gas distribution piping. The BM5 Series slam-shut valve is used in natural gas, air, propane, butane, LPG, city gas, nitrogen, carbon dioxide, hydrogen regulating or distribution installations. The slam-shut valve is designed to shut off the flow of gas in the event of the pressure rising above or falling below the predefined levels. The valve is a sleeve-type, therefore, does not require any external by-pass to facilitate the opening of the valve. The valve can only be reset manually. The BM5 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Body Sizes

DN 25, 40, 50, 65, 80, 100, and 150 (NPS 1, 1-1/2, 2, 2-1/2, 3, 4, and 6)

End Connection Styles

PN 16, 25 / CL150, CL300, and CL600

Allowable Pressure

Up to 100 bar

Underpressure Set Range

0.01 to 80 bar

Overpressure Set Range

0.03 to 80 bar

Accuracy Group

Up to ±1%

Response Time

<1 s

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights

15 to 280 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- Axial Flow
- Sleeve Valve
- Protected Seal Pad
- Push-Button Manual Emergency Release
- Manual Reset by Rotating the Reset Shaft
- Low Temperature Construction Available

TYPE BM5 WITH OS/80X

TYPE BM5 WITH OS/80X-APA-D

TYPE BM5 WITH OS/80X-APA
Introduction

The BM6X Series axial flow slam-shut valve is an automatic shutoff appliance suitable for installation as a safety device in pressure reducing stations and on gas transfer and distribution lines.

BM6X Series slam-shut valves are "wafer" type with an off-center butterfly disk that is mounted eccentrically.

The reduced face-to-face dimension, typical of "wafer" valves, facilitates installation even in existing stations that are not equipped with shutoff devices.

The slam-shut valve is designed to shutoff the flow of gas in the event of the pressure rising above or falling below the predefined levels.

The gas flow causes the slam-shut valve to shutdown and can only be reset manually.

BM6X Series slam-shut valves use gas from the gas line for operation and therefore does not require outside sources to operate.

BM6X Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Body Sizes

DN 80, 100, 150, 200, 250, and 300 (NPS 3, 4, 6, 8, 10, and 12)

End Connection Styles

CL150, CL300, and CL600

Allowable Pressure

Up to 100 bar

Underpressure Set Range

0.01 to 80 bar

Overpressure Set Range

0.03 to 80 bar

Accuracy Group

Up to ±1%

Features

- Axial Flow
- "Wafer" Type Valve
- Off-Center Butterfly Disk
- Pressure Control at One or More Points of the System
- Activation Due to Pressure Increase or Decrease
- Emergency Slam-Shut Push-Button
- Button By-pass with Automatic Return
- Manual Reset by the Sole Rotation of the Reset Shaft
- Easy Maintenance
- Sour Gas Construction Available

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights

10 to 125 kg

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com
Introduction

The type OSE slam-shut valve is used to totally and rapidly cut the gas flow when the pipeline pressure exceeds the set pressure or when the pipeline pressure drops below the set pressure.

The type OSE consists of a valve, a water-tight mechanism box, and a manometric device.

A double stage mechanism detects any pressure variances.

Detection is the first stage and the mechanism will only trip when the pipeline pressure reaches the set pressure.

The second stage is the power stage; once tripped, the closing spring causes the valve plug to slam shut and remain closed until the valve is manually reset.

The OSE is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations

Type OSE:
Slam-Shut Valve DN 25 to DN 150 (NPS 1 to 6) with Internal By-pass

Type OSE LS:
Slam-Shut Valve DN 200 and DN 250 (NPS 8 and 10) with External By-pass Manually Operated

Body Sizes
DN 25, 50, 80, 100, 150, 200, and 250 (NPS 1, 2, 3, 4, 6, 8, and 10)

End Connection Styles
PN 100B2, 50 B1, 20 B
CL150, CL300, CL600

Pressure Ratings
Maximum Inlet Pressure: 100 bar
Maximum Set Pressure or Maximum Body Rating: 100 bar
Minimum Set Pressure: 10 mbar
Maximum Shutoff Pressure Differential: 100 bar

Pressure Registration
External

Pressure Sensing and Vent Connection
1/4"NPT

Manometric Sensing Device Specifications
Spring Ranges: 10 mbar to 72.9 bar
Max Sensing Inlet Pressure: 72.9 bar
Set-point Tolerance: 0.004 bar to 12 bar
Maximum Difference between Overpressure and Underpressure: 33 bar

Temperature Capabilities
-30° to 71°C

Options
• Explosion-proof switch
• Non-explosion proof limit switch
• Solenoid
• Additional manometric device for extra pressure sensing

Approximate Weight
14 to 577 kg

For full details consult the documentation available on our website: www.Francel.com

Features
• Overpressure and Underpressure Protection
• Two-Stage Tripping Mechanism
• High Accuracy
• Easy In-Line Maintenance
• Water-Tight
• Manually Rearmed
Introduction

The BM7 Series slam-shut valves are automatic isolating elements suitable for installation as safety devices in regulating stations.

They assure easy installation and maintenance together with high accuracy.

The BM7 Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Body Sizes and End Connection Styles

DN 1 1/2”, 2” GAS - Threaded Body
DN 40, 50 PN 16 - Flanged Body
DN 50 ANSI 150 - Flanged Body
(on request)

Permissible Inlet Pressure

Up to 14 bar

Pressure Ranges

Version with Type OS/66 Shutoff

Minimum Pressure Set Range: 0.007 to 0.4 bar
Maximum Pressure Set Range: 0.025 to 0.5 bar

Version with Type OS/66-AP Shutoff

Minimum Pressure Set Range: 0.1 to 2.5 bar
Maximum Pressure Set Range: 0.2 to 5 bar

Accuracy Class

Up to ±1%

Response Time

<1 s

Temperature Capabilities

Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Approximate Weights

3 to 13 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- Ease of Installation
- Ease of Maintenance
- High Operation Accuracy
Introduction
The type VS100 slam-shut is designed to shut off the flow of gas to the downstream system in the event of outlet pressure rising above or falling below the predefined levels.
The type VS100 consists of a body with a removable orifice, enclosed by a bonnet, and a type VSX4 slam-shut device.
The type VS100 is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV.

Available Configurations
Types VS111 and VS112:
19 mm / 0.75” orifice size medium capacity application

Body Sizes and End Connection Styles
Medium Capacity Body (MC):
Rp 1, 1-1/4, 1-1/2
1, 1-1/4, 1-1/2 NPT
Rp 1 x 2-1/4 GAZ
DN 40 PN 16 slip-on

Maximum Inlet Pressure
Differential Strength (DS): 16 bar
Integral Strength (IS): 6 bar

Maximum Allowable Pressure
20,0 bar

Temperature Capabilities
According to PED Standards:
-20° to 60°C
Non-PED:
-30° to 66°C

Approximate Weights
3,5 to 3,7 kg

For full details consult the documentation available on our website:
www.Fisherregulators.com

Features
- Quick Response Time
- Ductile Iron and Steel Body Construction
Introduction
Servo-controlled relief valves are used in natural gas transmission applications. They assure accurate setting, perfect closing, and high exhaust flow rate.
VS-FL and VS-FL-FR Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category IV.

Available Configurations
VS-FL Series
Type VS-FL-BP:
Low and Medium Pressure Applications with Pilot Type PRX/182
Type VS-FL:
Medium and High Pressure Applications with Pilot Types PRX/182 or PRX-AP/182

VS-FL-FR Series
Type VS-FL-FR-BP:
Low and Medium Pressure Applications with Pilot Types PRX/182
Type VS-FL-FR-HP:
Medium and High Pressure Applications with Pilot Types PRX/182, PRX-AP/182

All VS-FL and VS-FL-FR type relief valves are available with or without:
Type SR: Silencer

Body Sizes
VS-FL Series:
DN 25, 40, 50, 65, 80, 100, 150, 200*, and 250* (NPS 1, 1-1/2, 2, 2-1/2, 3, 4, 6, 8*, and 10*)
VS-FL-FR Series:
DN 25, 50, 80, 100, 150, 200*, and 250* (NPS 1, 2, 3, 4, 6, 8*, and 10*)
* These sizes are not available in BP version

End Connection Styles
PN 16 / CL150, CL300, and CL600

Inlet Pressure Range
Flange Rating PN 16 / CL150:
Allowable Pressure: Up to 20 bar
Inlet Pressure Range: 0.2 to 20 bar
Flange Rating CL300, CL600:
Allowable Pressure: Up to 100 bar
Inlet Pressure Range: 1 to 100 bar

Set Range
Flange Rating PN 16 / CL150
0.5 to 19.3 bar
Flange Rating CL300, CL600
1 to 80 bar

Temperature Capabilities
VS-FL Series
Standard Version:
Working: -10° to 60°C
Low Temperature Version:
Working: -20° to 60°C
VS-FL-FR Series
Working: -20° to 60°C

Approximate Weights (Including Pilot)
24 to 1190 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features
- Ease of Installation
- Ease of Maintenance
- High Operation Accuracy
Introduction
The V series automatic spring-loaded relief valves are designed to keep line pressure below preset values.

They are mounted downstream of regulators and perform the specific function of releasing small amounts of gas in the event of the regulator not closing properly.

The V Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category I maximum.

Available Configurations
Types V/50 and V/60: Very Low Pressure Applications
Types V/51 and V/61: Low Pressure Applications
Types V/52 and V/62: Medium Pressure Applications
Type V/20-2: High Pressure Applications

Body Sizes and End Connection Styles
V/50 Series: 1 x 1-1/2" BSP Threaded
V/60 Series: 1-1/2 x 2" BSP Threaded
Type V/20-2: 1" NPT Threaded

Inlet Pressure
V/50 Series: 4 bar
V/60 Series: 2.5 bar
Type V/20-2: 100 bar

Set Range
V/50 and V/60 Series: 0.025 to 2 bar
Type V/20-2: 1.5 to 40 bar

Orifice Size
V/50 Series: 1 1/4"
V/60 Series: 1 1/2"
Type V/20-2: 1"

Temperature Capabilities
Standard Version:
Working: -10° to 60°C
Low Temperature Version:
Working: -20° to 60°C

Approximate Weight
V/50 Series: 1.3 kg
V/60 Series: 1.9 kg
Type V/20-2: 1.6 kg

Features
- Easy Installation and Maintenance
- Release Capacity
- Accuracy

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com
Introduction

Floating and Trunnion type valves are full bore type and designed for use in gas distribution and transport lines.

Available Configurations

Floating Type:
Full bore valve with cast steel body. Lever or gear operated.

Trunnion Type:
"Double Block and Bleed" full bore valve with cast steel or forged body. Lever or gear operated.

Body Sizes

Floating Type:
DN 25, 50, 80, 100, and 150 (NPS 1, 2, 3, 4, and 6)

Trunnion Type:
DN 80, 100, 150, 200, 250, 300, 350, 400, 450, 500, and 600 (NPS 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, and 24)

End Connection Styles

CL 150, CL 300, and CL 600

Inlet Pressure

Allowable Pressure: Up to 100 bar

Temperature Capabilities

Working: -20° to 60°C

Approximate Weight

6.5 to 5800 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features

- Antistatic and Fire-Proof Design
- High Versatility for a Wide Range of Different Applications

FLOATING TYPE

TRUNNION TYPE
**Introduction**

The type VFA butterfly valves are "wafer" flangeless type and typically used in gas reducing stations for an on-off service.

The VFA butterfly valves, due to their particular construction features, have very low pressure losses and excellent seal.

This series of butterfly valves is designed basically for natural gas transmission or distribution grids, and for commercial and industrial applications.

Their reduced overall dimensions allow simple installation and easy maintenance.

The VFA Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category III maximum.

**Available Configurations**

- **VFA:** Lever operated
- **VFA-MR:** Gear operated
- **VFA-MRO:** Gear operated for use with absorbing odorizing systems

**Body Sizes**

DN 50, 65, 80, 100, 125, 150, 200, and 250 (NPS 2, 2 1/2, 3, 4, 5, 6, 8, and 10)

**End Connection Styles**

PN 16, CL150

**Inlet Pressure Range**

Allowable Pressure: Up to 19 bar

**Temperature Capabilities**

Working: -10° to 60°C

**Approximate Weight**

11.5 to 103 kg

For full details consult the documentation available on our website:  
www.Tartarini-Naturalgas.com
Introduction

The type CNF, CN, CF, and SV heat exchangers are sized and designed to meet a large range of system requirements, and include all connections for all accessories required.

In the gas pressure reduction process according to the “Joule-Thomson” effect, temperature drops considerably (approximately 0.5°C per reduction bar).

This fall in gas temperature can damage the equipment due to the formation of dangerous ice crystals produced by water vapor in the gas.

Particularly in first stage stations, high pressure changes are usually involved, therefore, the gas must be heated before pressure is reduced.

It is recommended that, after reduction, gas temperature should not be below 5°C.

One of the best established methods of heating gas in reduction stations is to use heat exchangers employing hot water or steam as their thermal carrier fluid.

CNF, CN, CF, and SV Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category IV maximum.

Available Configurations

CNF, CN, and CF Series:
Water as Thermal Carrier Fluid

SV Series:
Steam as Thermal Carrier Fluid

End Connection Styles
Gas Side: CL300, CL600
Water or Steam Side: PN 6

Applications
• Pre-heating of natural gas in first reception and pressure reduction stations, and for all gas heating requirements
• Non-Corrosive Gases

Maximum Water Temperature
CNF, CN, and CF Series: 90°C

Maximum Steam Temperature
SV Series: 120°C

Installation and Assembly
• Heat Exchangers designed for installation with vertical tube bundle
• Different tube bundle configurations available upon request

Approximate Weights
90 to 1350 kg

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features
• Tube Bundle Heat Exchangers using U-Tubes (BEU)
• Tube Bundle with Inspection Facility
• Gas in Tubes Section, Thermal Carrier Fluid in Shell Section
• Axial Connections in Gas Section
• Designed for Automatic Air Escape Installation
• Designed for Relief Valve Installation
Introduction

Filters are intended to screen out larger pieces of foreign particles, often present in the gases or particularly during the initial stages of operation of newly laid pipes, minimizing damage to valves, pressure regulators, meters and other equipment used in regulating and metering stations.

The FA and FAG Series filters can be used with natural and manufactured gases, air, propane and other gases so long as they do not contain high percentages of benzol.

They have threaded connections for the mounting of the drain cock (supplied on request) and other accessories.

Filters for customers’ specific requirements can be made upon request only.

The FA and FAG Series are in conformity with the Pressure Equipment Directive PED 97/23/EC and are classified under Category IV maximum.

Available Configurations

FA Series: High pressure filters

FAG Series: Medium and low pressure filters

Type FG/07: Medium and low pressure filters with threaded connections

End Connection Styles

FA Series Axial Flow Connections
CL150, CL300, and CL600
DN 50, 65, 80, 100, 150, 200, 250, 300, 350 and 400
(NPS 2, 2-1/2, 3, 4, 6, 8, 10, 12, 14, and 16)

FAG Series 90° Flow Connections
PN 16 / CL150

FAG-A Series Axial Flow Connections
PN 16 / CL150
DN 50, 65, 80, 100, 125, 150, 200, 250, 300, and 300
(NPS 2, 2-1/2, 3, 4, 5, 6, 8, 10, and 12)

Type FG/07 Axial Flow Connections
1” Gas

Inlet Pressure

FA Series:
Maximum Allowable Pressure: Up to 90 bar

FAG and FAG-A Series:
Maximum Allowable Pressure: Up to 19 bar

FG/07 Type:
Maximum Allowable Pressure: 16 bar

Filtering Capabilities

FA Series:
Filtering Surface: 0.25 to 8.4 m²
Filtering Degree: 5 μm

FAG and FAG-A Series:
Filtering Surface: 0.06 to 4.2 m²
Filtering Degree: 5 μm

Type FG/07:
Filtering Surface: 0.09 m²
Filtering Degree: 5 μm

Temperature Capabilities

FA Series
Standard Version:
Working: -10° to 100°C

Low Temperature Version:
Working: -20° to 100°C

FAG and FAG-A Series
Standard Version:
Working: -10° to 60°C

Low Temperature Version:
Working: -20° to 60°C

Type FG/07:
Working: -10° to 60°C

Approximate Weights

2,1 a 1205 kg

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Versatility
- Wide Range of Applications
- Easy Maintenance
- Axial and Right-Angle Connections
- Quick Opening Version Available on Request
**Introduction**

The types BLE and BLX throttle valves function as a by-pass on transmission stations reducing pressure.

The type BLX version is equipped with a type OS2 release relay to cut off the gas flow in case of outlet over pressure.

The types BLE and BLX are in conformity with the Pressure Equipment Directive PED 97/23/CE and are classified under Category IV.

**Available Configurations**

**Type BLE:**
Throttle Valve

**Type BLX:**
Throttle Valve with Shutoff Valve

**Body Sizes**
DN 25, 50, and 80 (NPS 1, 2, and 3)

**End Connection Styles**
PN 100 N, PN 50 B, and PN 20 B (CL600, CL300, CL150)

**Maximum Operating Pressure**

**LCC Body:** 100 bar  
**WCC-20 Body:** 96.7 bar

**Temperature Capabilities**

**LCC Body:**  
Working: -30° to 71°C

**WCC-20 Body:**  
Working: -20° to 71°C

**Approximate Weights**

**Type BLE:**
DN 25 (NPS 1): 12 to 14 kg  
DN 50 (NPS 2): 22 to 26 kg  
DN 80 (NPS 3): 43 to 51 kg

**Type BLX:**
DN 25 (NPS 1): 20 to 22 kg  
DN 50 (NPS 2): 36 to 40 kg  
DN 80 (NPS 3): 57 to 65 kg

For full details consult the documentation available on our website: [www.Francel.com](http://www.Francel.com)

**Features**

- Robust Design
- High Precision
- Progressive Opening
Introduction

The OL Series is an absorption-type odorizing system employed in small and large-sized stations. They are used as stand-by and emergency systems in all injection-type odorizing installations.

Differential pressure is necessary to achieve proper operation.

The OL Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category IV maximum.

Available Configurations

Tank and Valves:
- Carbon Steel
- Stainless Steel

Level Indicator:
- Vertical
- Diagonal
- Magnetic for Remote Control

OL-25: Volume 25 l
OL-50: Volume 50 l
OL-100: Volume 100 l
OL-150: Volume 150 l
OL-200: Volume 200 l
OL-250: Volume 250 l
OL-300: Volume 300 l
OL-1000: Volume 1000 l

End Connection Styles
PN 6, PN 16 / CL150, CL600

Maximum Allowable Pressure
Up to 90 bar

Temperature Capabilities
Working: -10° to 60°C

For full details consult the documentation available on our website:
www.Tartarini-Naturalgas.com
Introduction
The type Dosaodor-D is a computerized odorant injection system for natural gas that uses patented solenoid injector technology eliminating the need for plunger pumps.

The solenoid injectors permit odorant injection accuracy to be maintained over the entire range of the system, approaching infinite turn down.

Dosaodor-D is in conformity with the Pressure Equipment Directive PED 97/23/EC and is classified under Category II.

Available Configurations
Pneumatic Panel
Type B1:
Single injector version with one solenoid valve for injection management

Type B2:
Dual injector version with two solenoid valves for injection management

Remote Control Software
DOSALINK

Pneumatic Panel Specifications
Material:
20/10 mm stainless steel plate

Installation:
Wall mounted

Weight:
22 kg (medium complexity configuration)

Overpressure Stainless Steel Relief Valve with the Following Rating Options:
14 bar - 38 bar - 60 bar

Electrical Protection:
Explosion proof and intrinsically safe

Material Electrical Protection:
Available for European and North American standards

Mechanical Connections
Odorant Inlet and Discharge:
DN 1/4” double ferrule fitting for DN 6x1 pipe

Electronic Control Unit Specifications
Construction Material:
10/10 mm steel plate

Finish:
RAL 7032 grey epoxy powder coat

Door:
Lockable with window

Installation:
Wall mounted

Weight:
25 - 45 kg (based on configuration type)

Power Supply Options:
12Vdc +/-15%
115 Vac 60Hz
230 Vac 50Hz

Electromagnetic Interference:
Consistent with 89/336/CE standard

Humidity:
10% – 90% non-condensing

Electrical Protection:
Explosion proof/intrinsically safe

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com

Features
- Consistent Odorization Proportional to Entire Range of Gas Flow Rate
- Significantly Reduced Maintenance
- Variety of Redundancy Options for Odorization
- User-Friendly Configuration Software
- Automatic Calibration During Operation
- Standard and Scalable Hardware Platform
Underground Modules

Introduction

Underground Modules are designed to reduce environmental impact that is not provided by traditional cabinet installations or masonry structures. This solution reduces noise pollution and environmental impact, provides protection against acts of vandalism or accidents.

The module consists of two main parts:

- Metal underground container
- Gas control unit

The metal container is a non-pressurized type with connections suitable for direct welding to inlet and outlet piping.

The gas control unit is contained inside the metal container, consisting of a regulating line complete with by-pass (MIR/ series excluded) assembled with standard equipment.

The gas control unit is easily accessible for maintenance or replacement.

Available Configurations

MIC Series

This series consists of three models MIC/25, MIC/50 and MIC/80, employs type Cronos pilot-operated pressure regulators, offering pressure reduction, monitor and slam-shut functions.

Technical Features

Permissible Inlet Pressure: 6 bar
Design Temperature: -10° to 60°C
Minimum Operating Differential Pressure: 0.3 bar
Accuracy Class: Up to 2.5
Lock-Up Pressure Class: Up to 10

MI/150

The MI/150, employs type FL-BP pilot-operated pressure regulators and type BM5 slam-shut valve.

Technical Features

Permissible Inlet Pressure: 19 bar
Design Temperature: -10° to 60°C
Minimum Operating Differential Pressure: 0.3 bar
Accuracy Class: Up to 2.5
Lock-Up Pressure Class: Up to 10

MIR/65

The MIR/65, employs type MBN spring-loaded pressure regulators and type BM5 slam-shut valve.

Features

- Only Ventilation Ducts Installed Above-Ground
- Environmental Impact Reduction
- Noise Pollution Reduction
- Protection Against Impact and Damage
- Reduced Administrative Installation Procedures

For full details consult the documentation available on our website: www.Tartarini-Naturalgas.com
Introduction

Skids are prefabricated pressure reducing stations designed to the customer’s specifications, then built to order including a range of products from our brands, Tartarini™, Francel™, and Fisher®, such as regulators, manual isolation valves, and piping.

Skids reduce overall costs and include components such as filters, slam-shuts, heaters, and meters.

Emerson has many years of experience designing and assembling regulating and metering stations. We have skid manufacturing sites in China, India, Dubai, France and Italy to respond to local customer specifications in each World area.

Our array of standard and customized installations incorporate the latest in engineering technology for transmission, distribution, and utilization applications.

Emerson pressure-reducing stations can be developed for open air, underground or cabinet/building-protected applications.

Our experience and professionalism acquired over the years enables us to offer our customers a complete product and service offering including:

- Quotations
- Feasibility Studies
- Site Surveying
- Project Management
- Construction
- Revamping
- Commissioning/Start-up
- TurnKey Projects
- Training (field/site)
- Lifecycle Services

Power Plant / Fuel Gas Stations

From the biggest electricity generation sites to the most recent cogeneration technologies, Emerson provides unrivaled solutions for all your energy needs.

Odorization Solutions

The best odorant injection technology that brings the highest safety level in the natural gas distribution grid, Emerson odorization solutions can be engineered to meet customer needs.

Commercial / Industrial Service

Worldwide, natural gas is used for commercial and industrial applications. Commercial applications, such as grocery stores and office buildings, use natural gas for heating.

Customized Stations

Emerson brings together technology and engineering providing a wide range of manufacturing and processing solutions for all natural gas applications.

City Gate / Transmission / Distribution Stations

High-pressure transmission pipelines move the gas from the production company’s cleaning plants to gas distribution companies.
Emerson After-Sales Services

Emerson provides a complete After-Sales Service for all their products including:

- Installation, start-up and commissioning operations
- Scheduled technical and on-call assistance
- Emergency call-out service equipped with back-up regulating units to guarantee the continuity of operation
- Upgrade and revamp of existing equipment
- Under warranty claims
- Certification for all service interventions according to national and international standards, guaranteeing the quality of operations carried out by the Emerson After-Sales Technicians
- A complete range of spare parts and kits stored in our fully automated warehouse to guarantee fast deliveries
- An educational service offering a complete range of training programs for customers of all levels developed and taught by experienced engineers

Emerson Educational Services

With nearly 30 years of training experience, the Emerson Educational Service is committed to providing quality training to over 4,800 individuals, when and where you need it.

Factory Training:

We host factory training courses in our fully equipped training room equipped with regulation stations, compressed air and multimedia tools.

On-Site, Local Training:

We develop on-site local training courses providing tailor training to meet your specific needs.

Here are two examples of the type of training courses we offer our customers:

Natural Gas Products Service and Maintenance Training Course - Level I

This 3-day course is designed primarily for technicians, engineers and other persons involved in the maintenance, installation and operation of pressure reduction products and applications. This course provides a basic understanding of the theories of operation, installation, maintenance and troubleshooting.

Natural Gas Products Service and Maintenance Training Course - Level II

This 3-day course is designed primarily for technicians, administration personnel and other persons with solid knowledge and experience of pressure reduction products and applications. This course focuses on theoretical knowledge and advanced operational procedures for commissioning, calibration and maintenance.

For full details consult our websites:
www.Tartarini-Naturalgas.com
www.Fancel.com
Emerson Spare Parts Services

Spare parts, packaged in blisters for fast delivery, offering the same characteristics as the original parts, guarantee the same performances of the new equipment. In order to satisfy customer requirements, our spare parts warehouse is fully automated optimizing all deliveries.