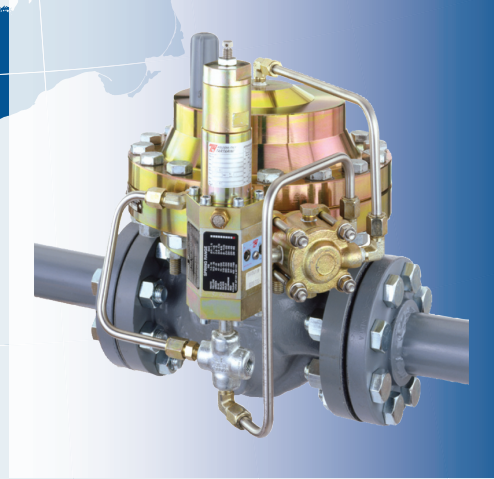
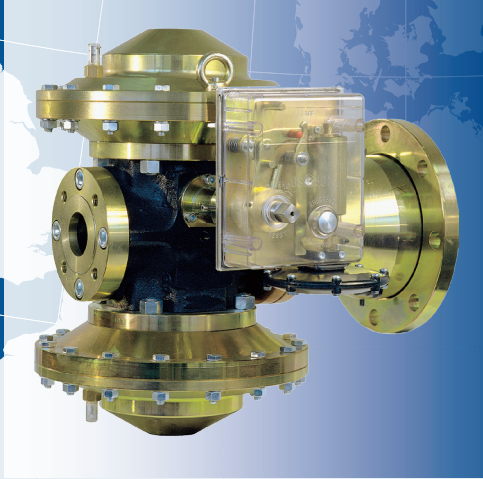


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NATURAL GAS PRESSURE REGULATING AND METERING STATIONS. PRESSURE REGULATORS, SLAM-SHUT VALVES, RELIEF VALVES AND ACCESSORIES. REMOTE CONTROL EQUIPMENT. ENGINEERING, ADAPTION OF EXISTING INSTALLATIONS TO MEET CURRENT STANDARD REQUIREMENTS. THEORETICAL AND PRACTICAL TRAINING.

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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 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 $\pm 1\%$

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 class: Up to $\pm 1\%$

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)

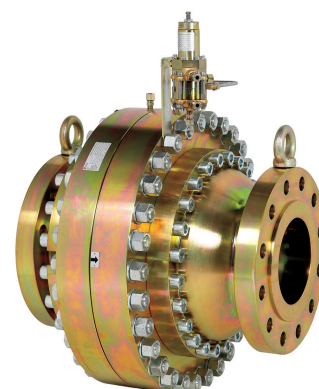
31 to 900 kg

For full details consult the FL documentation available on our website:

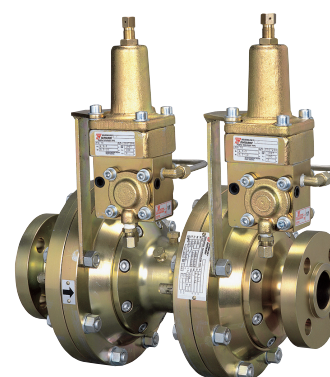
www.Tartarini-Naturalgas.com

Features

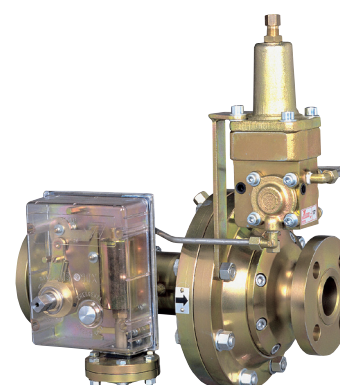
- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
- In-Service Travel Indicator



TYPE FL REGULATOR



TYPE MFL REGULATOR AND MONITOR



TYPE BFL REGULATOR WITH SHUTOFF VALVE

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 $\pm 1\%$

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 class: Up to $\pm 1\%$

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)

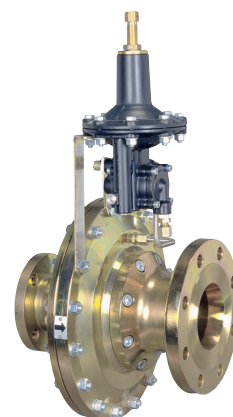
24 to 380 kg

For full details consult the FL-BP documentation available on our website:

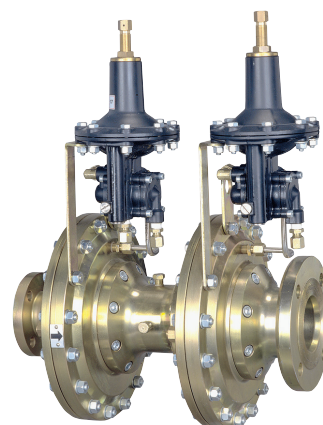
www.Tartarini-Naturalgas.com

Features

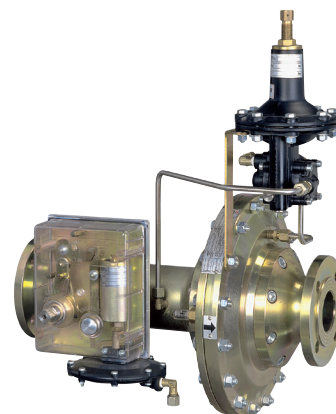
- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
- In-Service Travel Indicator



TYPE FL-BP REGULATOR



TYPE MFL-BP REGULATOR AND MONITOR



TYPE BFL-BP REGULATOR WITH SHUTOFF VALVE

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-HP:

High Pressure Regulator or 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-HP Series:

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

FL-FR-HP Series with Type SRS 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-HP 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 $\pm 1\%$

Lock-Up Pressure Class

Up to +5%

Class of Lock-Up Pressure Zone

Up to 5%

Temperature Capabilities

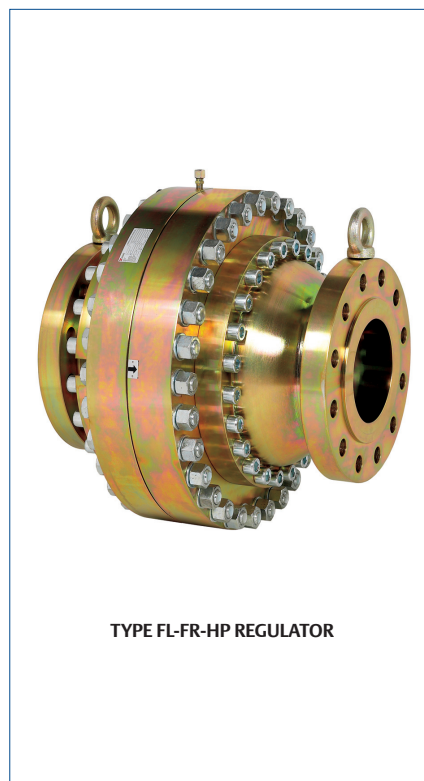
Working: -20° to 60°C

Approximate Weights (Including Pilot)

31 to 900 kg

For full details consult the FL-FR documentation available on our website:

www.Tartarini-Naturalgas.com



TYPE FL-FR-HP REGULATOR

Features

- No Atmospheric Bleed
- Quiet Operation
- Control Accuracy
- Versatility
- Easy In-Line Maintenance
- Tight Shutoff
- High Capacity
- In-Service Travel Indicator

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
- Type CCBS:** 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 / 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

Flange Rating CL300, CL600:

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

Outlet Pressure Ranges

Flange Rating PN 16, 25 / CL150:

0.01 to 8 bar

Flange Rating CL300, CL600:

0.5 to 80 bar

Minimum Operating Differential Pressures

Flange Rating PN 16, 25 / CL150:

0.2 bar

Flange Rating CL300, CL600:

0.5 bar

Accuracy Class

Up to $\pm 1\%$

Lock-Up Pressure Class

Up to $\pm 5\%$

Class of Lock-Up Pressure Zone

Up to 5%

Built-In Shutoff Valve

Independent pneumatic control

Manual reset

Accuracy class: Up to $\pm 1\%$

Response time: ≤ 1 s

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

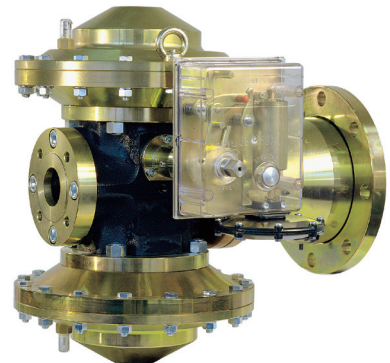
Working: -20° to 60°C

Approximate Weights (Including Pilot)

36 to 427 kg

For full details consult the Cronos documentation available on our website:

www.Tartarini-Naturalgas.com



TYPE CCB-SRS



TYPE CCBS

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 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 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 $\pm 1\%$

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 class: Up to $\pm 2,5\%$

Response time: ≤ 1 s

Temperature Capabilities

Working: -20° to 60°C

Approximate Weights (Including Pilot)

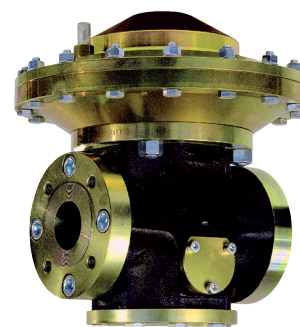
36 to 213 kg

For full details consult the Cronos-FR documentation available on our website:

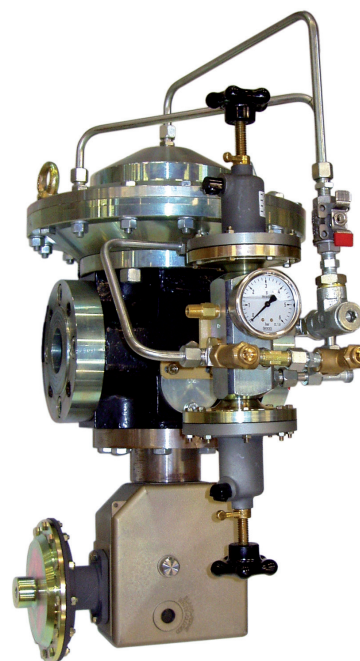
www.Tartarini-Naturalgas.com

Features

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



TYPE C-FR



TYPE CB-FR

Type 971

Pilot-Operated Pressure Reducing Regulators



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 Series 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

All type 971 regulators are available with or without:

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 $\pm 1\%$

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 971 documentation available on our website:

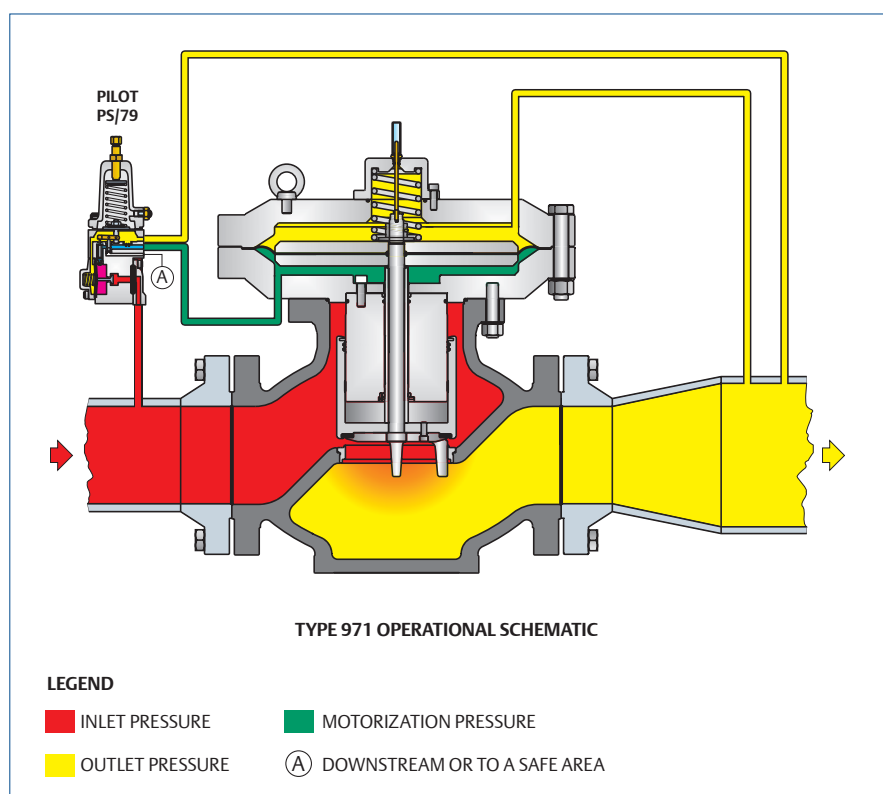
www.Tartarini-Naturalgas.com



TYPE 971 REGULATOR

Features

- Accuracy Maintained with Variable Inlet Pressure
- Easy Set-point Adjustment
- High Versatility for Different Applications



Introduction

The PS Series pilots are mainly used in natural gas, air, or other non-corrosive gas applications.

All PS Series pilots are supplied with a filter (5 μ 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
- 971 Series

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 REO/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

Type PS/79-1, PSO/79-1, REO/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

For full details consult the PS and RE documentation available on our website:

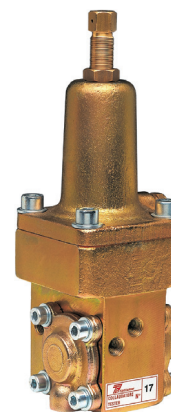
www.Tartarini-Naturalgas.com

Features

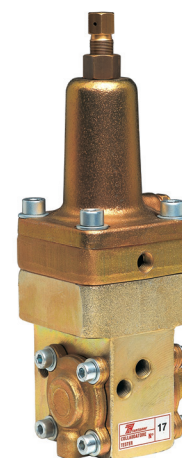
- High Sensitivity
- Improved Performance
- High Accuracy



TYPE PS/79-1 OR PS/79-2



TYPE PS/79



TYPE PS/80

Introduction

The PRX Series pilots are mainly used in natural gas, air, or other non-corrosive 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 allow adjustments 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
- 971 Series
- 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 Operating Monitor Control

Types PRX/181, PRX-AP/181, PRX/182 and PRX-AP/182:

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/181, and PRX/182:

Allowable Pressure: 100 bar

Set Range: 0.5 to 40 bar

Types PRX-AP/131, PRX-AP/181, and PRX-AP/182:

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

For full details consult the PRX documentation available on our website:

www.Tartarini-Naturalgas.com

Features

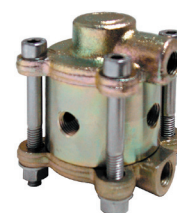
- High Sensitivity
- Improved Performance
- High Accuracy
- Easy setting



TYPE PRX



TYPE PRX-AP



TYPE SA/2

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
- EZR

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
- Cronos-FR
- EZH
- EZR

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 pilot documentation available on our website:

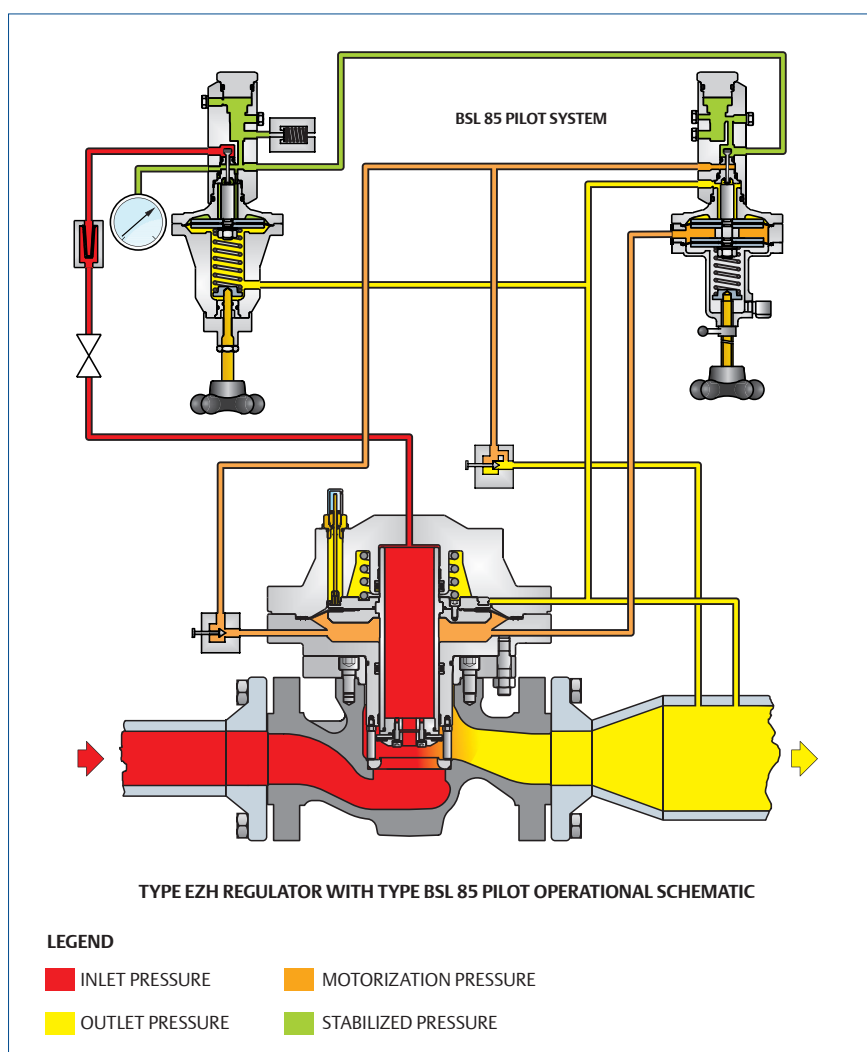
www.Francel.com

Features

- Ease of Maintenance
- Very Low Outlet Pressure Capability
- High Accuracy



COMPACT PILOT



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 with a thermometer 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: I_{max}: 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 RPE documentation available on our website:

www.Francel.com



TYPE RPE ELECTRIC PILOT HEATER

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.

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

Features

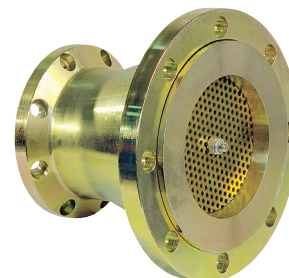
- Various Noise Reduction Solutions
- Excellent Cost / Benefit Ratio



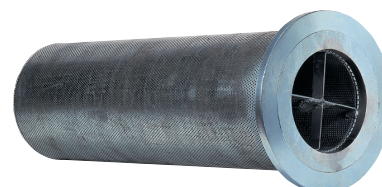
TYPE SR



TYPE SRII



TYPE SRS AND SRSII



TYPE STP

Type RP/10

Pneumatic-Loaded Pressure Reducing Regulators



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 $\pm 5\%$

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"

For full details consult the RP/10 documentation available on our website:

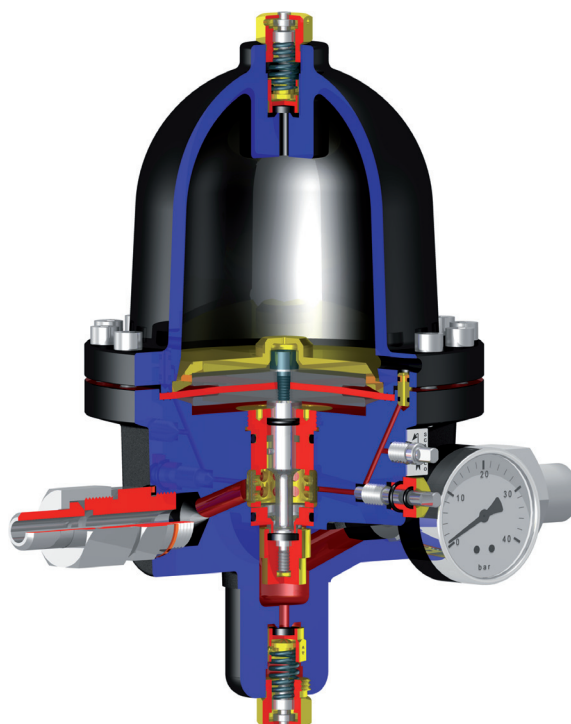
www.Tartarini-Naturalgas.com

Features

- Counterbalanced Valve Disc
- Tight Shutoff
- Built-in Spring Operated Safety Valves



TYPE RP/10



INTERNAL VIEW OF THE TYPE RP/10

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

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 $\pm 2.5\%$

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"

For full details consult the RLC/20 documentation available on our website:

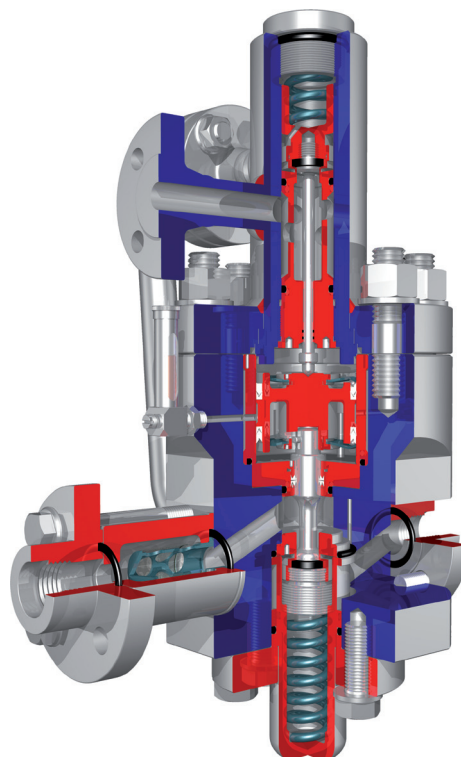
www.Tartarini-Naturalgas.com

Features

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



TYPE RLC/20



INTERNAL VIEW OF THE TYPE RLC/20

MF, MN, and MR Series

Spring-Loaded Pressure Reducing Regulators



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.

These regulators can be used with natural, manufactured, propane, air, and other gases, as long as the gas is filtered and does not contain high percentages of benzol.

The MF, MN, and 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

MR Series (Same Inlet/Outlet Flanges)

Types MR, MR-AP, MR-APA, and MR-PST: Regulator

Types MBR, MBR-AP, MBR-APA, and MBR-PST: Regulator + Shutoff

Types MBR-M, MBR-M-AP, MBR-M-APA, and MBR-M-PST: Monitor + Shutoff

All MN, MF, and MR 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)

MR Series: DN 50 (NPS 2)

End Connection Style

PN 16 / CL150

Inlet Pressure

MN and MF Series:

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

MR Series:

Body Allowable Pressure: Up to 12 bar
Actuator Allowable Pressure: Up to 12 bar
Maximum Operating Pressure: 3 bar

Permissible Inlet Pressure

Standard Version: 10 bar
PST, AP and APA Versions: 12 bar

Outlet Pressure Range

Standard Version: 10 to 500 mbar
PST Version: 0.25 to 0.5 bar
AP Version: 0.5 to 1 bar
APA Version: 1 to 3 bar

Accuracy Class

Up to $\pm 5\%$

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 class: $\pm 5\%$
Response time: <1 second

Temperature Capabilities

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



TYPE MBN



TYPE MBR

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Counterbalanced Shutter
- Overpressure and Underpressure
- Shutoff Valve
- Full Seal at Zero Flow
- 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 Inlet Pressure: 8 bar

Inlet Pressure Range: 0.1 to 8 bar

Outlet Pressure

Maximum Operating Pressure: 300 mbar

Outlet Pressure Range: 10 to 300 mbar

Accuracy Class

Up to $\pm 5\%$

Lock-Up Pressure Class

Up to 10%

Orifice Size

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

Built-in Shutoff Valve

Independent pneumatic control

Accuracy Class: $\pm 5\%$

Response Time: <1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

Working: -20° to 60°C

For full details consult the A/100 documentation available on our website:

www.Tartarini-Naturalgas.com

Features

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



TYPE A/102



TYPE A/109



TYPE A/109-AP

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.

These regulators can be employed with natural, manufactured, and propane gas as well as air as long as they are adequately filtered and do not contain high percentages of aromatics.

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 Inlet Pressure: 6 bar

Inlet Pressure Range: 0.1 to 6 bar

Outlet Pressure

Maximum Operating Pressure: 300 mbar

Outlet Pressure Range: 10 to 300 mbar

Accuracy Class

Up to $\pm 5\%$

Lock-Up Pressure Class

Up to 10%

Built-in Shutoff Valve

Independent Pneumatic Control

Accuracy Class: $\pm 5\%$

Response Time: <1 second

Orifice Size

13/16"

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

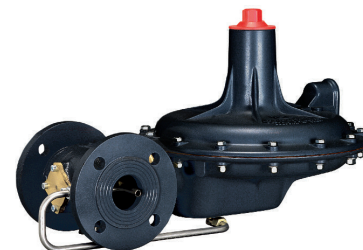
Working: -20° to 60°C

For full details consult the A/140 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



TYPE A/142



TYPE A/149



TYPE A/149-AP

B/240 Series

Spring-Loaded Pressure Reducing Regulators



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

DN 40 PN 16 (NPS 1-1/2)

Inlet Pressure

Body Allowable Pressure: Up to 20 bar

Maximum Inlet Pressure: 6 bar

Inlet Pressure Range: 0.1 to 6 bar

Outlet Pressure

Maximum Operating Pressure: 300 mbar

Outlet Pressure Range: 10 to 300 mbar

Accuracy Class

Up to $\pm 5\%$

Lock-Up Pressure Class

Up to 10%

Orifice Size

13/16"

Built-in Shutoff Valve

Independent Pneumatic Control

Accuracy Class: $\pm 5\%$

Response Time: < 1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

Working: -20° to 60°C

For full details consult the B/240 documentation available on our website:

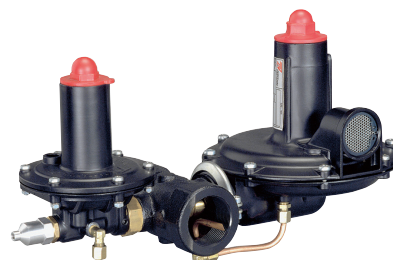
www.Tartarini-Naturalgas.com.

Features

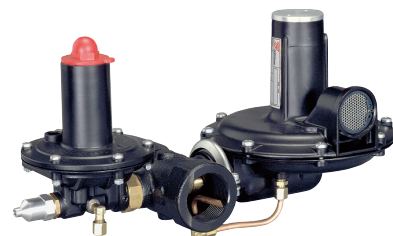
- Counterbalanced Valve
- Built-in Relief Valve
- Overpressure and Underpressure Shutoff Valve
- Manual Reset
- Inlet and Outlet In-line



TYPE B/242



TYPE B/249



TYPE B/249-AP

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

Inlet Pressure

Body Allowable Pressure: Up to 20 bar

Actuator Allowable Pressure: 4 bar

Maximum Inlet Pressure: 20 bar

Inlet Pressure Range: 0.2 to 20 bar

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 $\pm 5\%$

Lock-Up Pressure Class

Up to 10%

Built-in Shutoff Valve

Independent Pneumatic Control

Accuracy Class: $\pm 5\%$

Response Time: <1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

Working: -20° to 60°C

For full details consult the RP documentation available on our website:

www.Tartarini-Naturalgas.com

Features

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



TYPE RP/022



TYPE RP/033/66-FS

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.

These regulators can be used with non-corrosive gases, such as natural gas, compressed air and nitrogen.

The R Series regulators achieve high accuracy and flow rates even with low inlet pressure and strong 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 3/4" x G 1 1/4" UNI ISO 228/1 right angle (3/4" soft seal x 1 1/4" GAS)

R/71, R/71-AP:

G 3/4" x G 1 1/4" UNI ISO 228/1 right angle (3/4" metallic seal x 1 1/4" 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 1/4" UNI ISO 228/1 axial flow (1 1/4" GAS)

R/74, R/74-AP:

G 3/4" x G 1 1/4" UNI ISO 228/1 axial flow (3/4" soft seal x 1 1/4" GAS)

R/75, R/75-AP:

G 3/4" x G 1" UNI ISO 228/1 axial flow (3/4" 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:

Outlet Pressure Range: 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:

Outlet Pressure Range: 70 to 300 mbar

Accuracy Class

Up to ±5%

Lock-Up Pressure Class

Up to 10%

Built-In Shutoff Valve

Accuracy Class: ±5%

Response Time: <1 second

For full details consult the R 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



TYPE R/70



TYPE R/72



TYPE R/72-FS

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.

This regulator can be used with non-corrosive gases, such as natural gas, compressed air and nitrogen.

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 $\pm 5\%$

Lock-Up Pressure Class

Up to 10%

Built-in Shutoff Valve

Accuracy Class: $\pm 5\%$

Response Time: ≤ 1 second

Orifice Size

7/16"

Temperature Capabilities

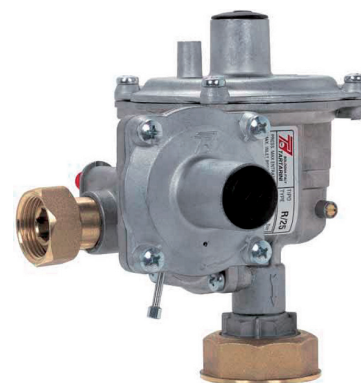
Working: -20° to 60°C

For full details consult the R/25 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



TYPE R/25

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 shutoff 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 bypass 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

Overpressure Set Range

0.03 to 80 bar

Underpressure Set Range

0.01 to 80 bar

Maximum Capacity

258 000 Nm³/h

Accuracy Class

Up to ±1%

Response Time

< 1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low-Temperature Version:

Working: -20° to 60°C

For full details consult the BM5 documentation available on our website:

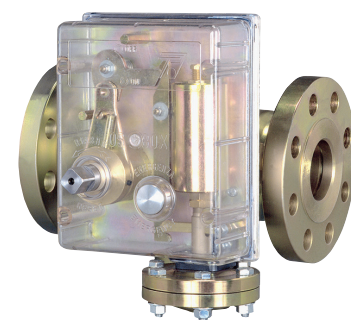
www.Tartarini-Naturalgas.com

Features

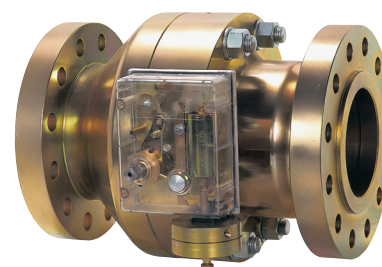
- Axial Flow
- Sleeve Valve
- Protected Seal Pad
- Push-Button Manual Emergency Release
- Manual Reset by Rotating the Reset Shaft
- Sour Gas Construction Available
- Low Temperature Construction Available



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

Overpressure Set Range

0.03 to 80 bar

Underpressure Set Range

0.01 to 80 bar

Maximum Capacity

1 700 000 Nm³/h

Accuracy Class

Up to $\pm 1\%$

Response Time

< 1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low-Temperature Version:

Working: -20° to 60°C

For full details consult the BM6X documentation available on our website:

www.Tartarini-Naturalgas.com

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



TYPE BM6X WITH OS/80X



TYPE BM6X WITH OS/84

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

Flanged:

DN 40, 50 (NPS 1-1/2, 2) PN 16

Threaded:

1-1/2", 2" GAS

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

Maximum Capacity

970 Nm³/h

Accuracy Class

Up to ±5%

Response Time

< 1 second

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low-Temperature Version:

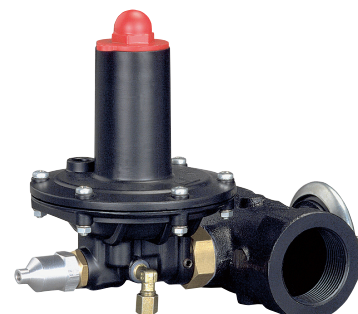
Working: -20° to 60°C

For full details consult the BM7 documentation available on our website:

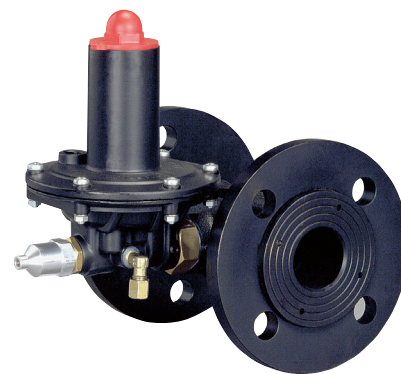
www.Tartarini-Naturalgas.com

Features

- Ease of Installation
- Ease of Maintenance
- High Operation Accuracy



TYPE BM7



TYPE BM7-FS

Introduction

Servo-controlled relief valves are suitable for installation with non-corrosive gas.

They assure accurate setting, perfect closing, and high exhaust flow rate.

VS-FL Series is in conformity with the Pressure Equipment Directive PED 97/23/EC and is 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 or RJGI

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

Accuracy Class

Up to $\pm 1\%$

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

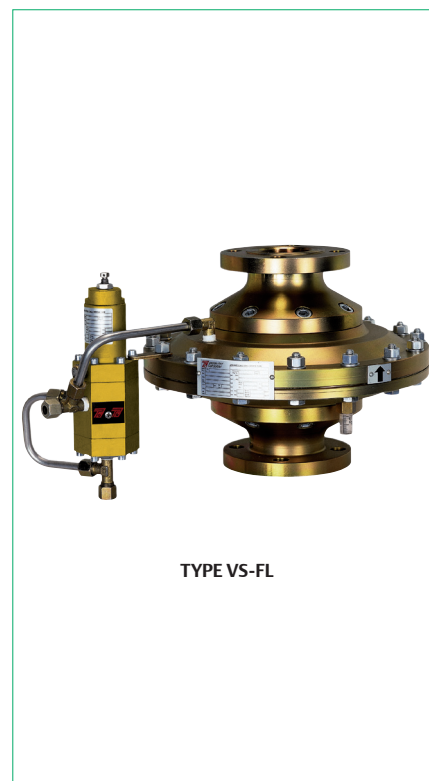
Approximate Weights (Including Pilot)

VS-FL Series

24 to 620 kg

For full details consult the VS-FL documentation available on our website:

www.Tartarini-Naturalgas.com



TYPE VS-FL

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

V/20-2 Series:

1" NPT Threaded

Inlet Pressure

V/50 Series: 4 bar

V/60 Series: 2.5 bar

V/20-2 Series: 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"

V/20-2 Series: 1"

Temperature Capabilities

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

Working: -20° to 60°C

For full details consult the V documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Easy Installation and Maintenance
- Release Capacity
- Accuracy



TYPE V/50



TYPE V/60



TYPE V/20-2

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

Permissible inlet pressure: 100 bar

Temperature Capabilities

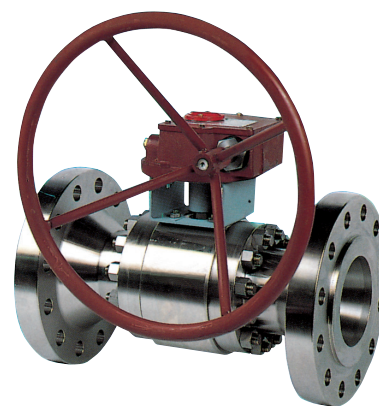
Working: -20° to 60°C

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

Standard Version:

Working: -10° to 60°C

Low Temperature Version:

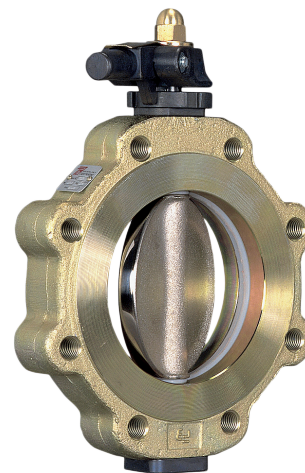
Working: -20° to 60°C

For full details consult the VFA documentation available on our website:

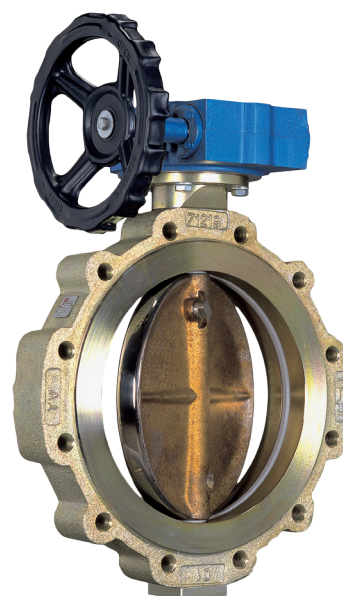
www.Tartarini-Naturalgas.com

Features

- **Tight Shutoff**
- **Compact Design**
- **Easy Installation in All Positions**
- **Easy Maintenance**
- **Very Low Pressure Loss**



TYPE VFA



TYPE VFA-MR

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

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



TYPE CF

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.

The series is available in several versions to meet all application requirements. 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 Axial Flow Connections

PN 16 / CL150

FAG-A Series 90° Flow Connections

PN 16 / CL150
DN 50, 65, 80, 100, 125, 150, 200, 250, 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:

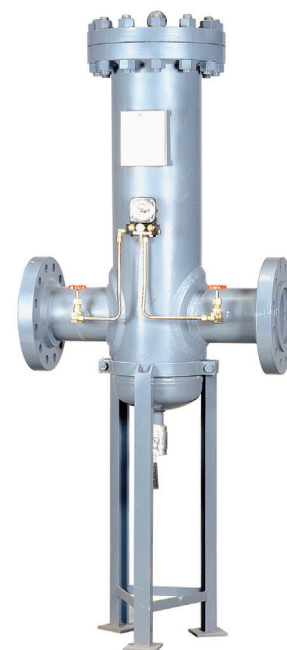
Working: -10° to 60° C

For full details consult the filters documentation available on our website:

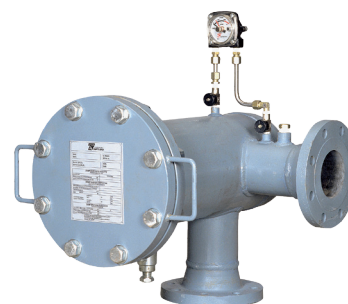
www.Tartarini-Naturalgas.com

Features

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



TYPE FA



TYPE FAG



TYPE FAG-A

Introduction

The OL Series is an absorption-type odorizing system employed in small and large-sized stations with flow rates up to 100000 Stm³/h.

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.

For full details consult the OL documentation available on our website:

www.Tartarini-Naturalgas.com

Features

- Direct Reading Level Gauge
- Regulating, Shutoff and Filling Valves



Available Configurations

Tank and Valves:

Carbon Steel or Stainless Steel

Magnetic Level Indicator Suitable 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

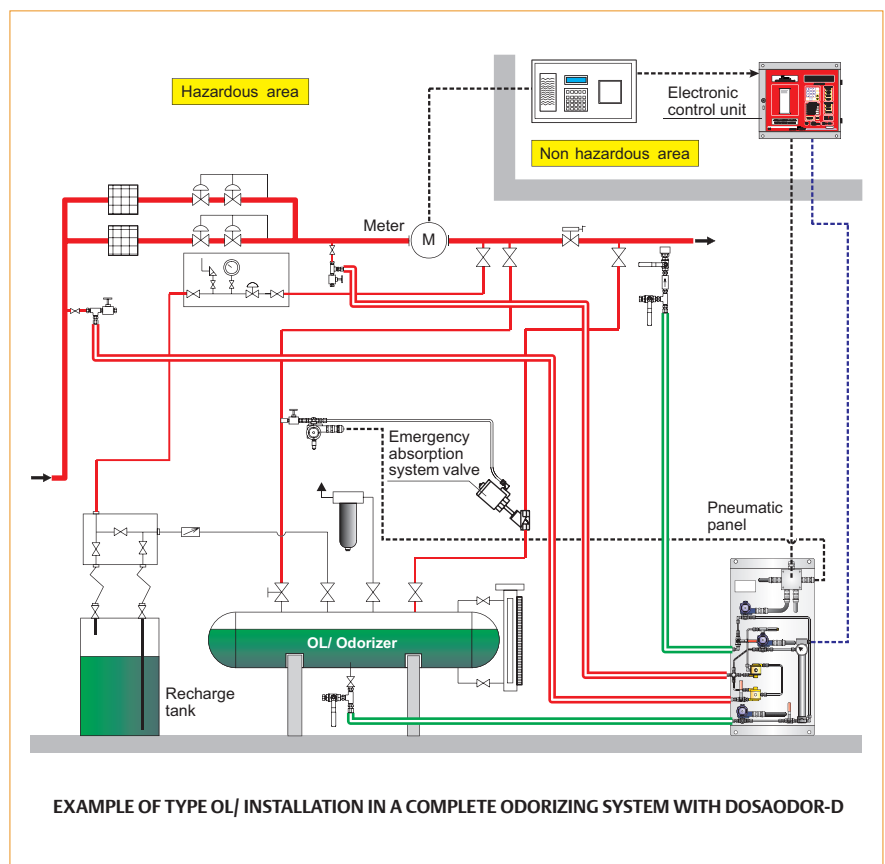
PN 16 / CL150, CL600

Inlet Pressure

Maximum Allowable Pressure:
Up to 90 bar

Temperature Capabilities

Working: -10° to 60°C



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:

25 - 45 kg (based on configuration type)

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

Gas Inlet and Discharge:

DN 1/4" single ferrule fitting for DN 8x1 pipe

Maximum Working Pressure:

Supply: 100 bar

Injection: 14 - 38 - 60 bar

Odorant Flow Rate:

0.5 - 14 l/h

Temperature Capabilities:

Working: -10° to 60°C

Electronic Control Unit Specifications

Construction Material:

10/10 mm steel plate

Finish:

RAL 7032 grey epoxy powder coat

Door:

Lockable with window

Cabinet Protection Class:

IP 55

Installation:

Wall mounted

Weight:

22 kg (medium complexity configuration)

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 Dosaodor-D documentation available on our website:

www.Tartarini-Naturalgas.com



PNEUMATIC PANEL



ELECTRONIC CONTROL UNIT

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

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

MIF Series

This series consists of two models, MI-F/40 and MI-F/65, employs type MLF-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

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

MIR/65

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

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

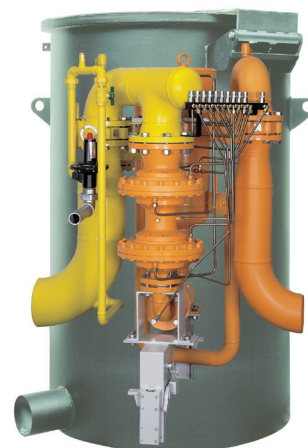
Lock-Up Pressure Class: Up to 10

For full details consult the documentation available on our website:

www.Tartarini-Naturalgas.com

Features

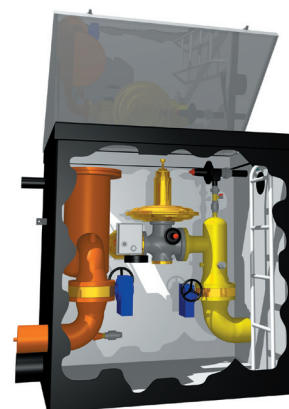
- Only Ventilation Ducts Installed Above-Ground
- Environmental Impact Reduction
- Noise Pollution Reduction
- Protection Against Impact and Damage
- Reduced Administrative Installation Procedures



TYPE MIF



TYPE MIC



TYPE MIR

Introduction

The type Gabbiano 2000 station consists of a movable building constructed with vibrated reinforced concrete, containing a regulating and metering station, electrical installation, and prearranged connections for water, telephone and electricity supplies.

The Gabbiano 2000 station is developed to satisfy a market demand for turnkey installations with short delivery time while meeting high and reliable quality standards.

The Gabbiano 2000 station range covers different domestic and industrial installations, and can also be used in applications requiring large flow rates.

If required, a gas preheating system complete with thermal unit can be installed.

The realization of a pre-assembled regulating and metering station inside a standardized building completely changes the traditional approach to the implementation of similar installations. More than forty different types of stations have been designed, and installed in three different models of building.

In Emerson we continue to bring our customers solutions, this station is entirely assembled in our workshop, regardless of its future geographical location, meeting our customers set-up delay while conserving high and reliable quality standards of all components installed.

Regulating Room

The regulation equipment is installed in this room and usually includes the following:

- Two regulating lines
- Metering line complete with meter and accessories
- Pressure and temperature recorder
- Gas odorizing device (if required)
- Intrinsic safety system to connect pressure and temperature transmitters to the corrector

- Lighting devices and relevant explosion-proof safety raceways

Thermal Unit Room

- Boilers and relevant chimneys for fumes exhaust
- Pumps for hot water circulation through heat exchangers (in case of forced circulation)
- Pressure and temperature corrector for flow rate remote reading
- Lighting devices, control panel, and relevant raceways
- Prearranged connections for external services (water, telephone, electricity)

Lighting Installation

The building lighting installation foresees both external lighting controlled by a twilight switch and internal lighting.

Technical Features

Inlet pressure range: 3 to 80 bar

Maximum Capacity: up to 13000 Stm³/h

Design temperature: -10 °C +60 °C



Regulating and Metering Installations

Skids

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 Brazil, China, Singapore, 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:

- Financial Analysis
- Capabilities Study
- Site Surveying
- Project Management
- Construction
- Startup
- Training (field/site)
- Maintenance

City Gate / Transmission / Distribution Stations

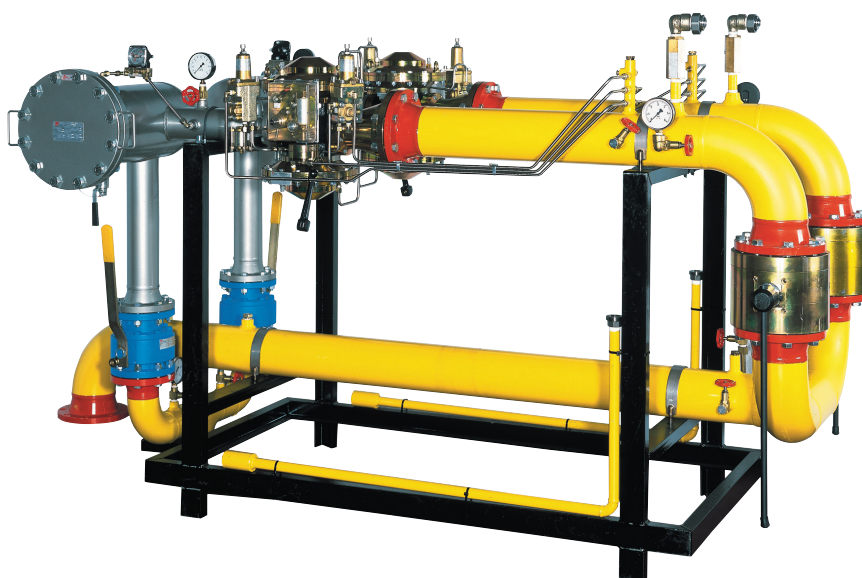
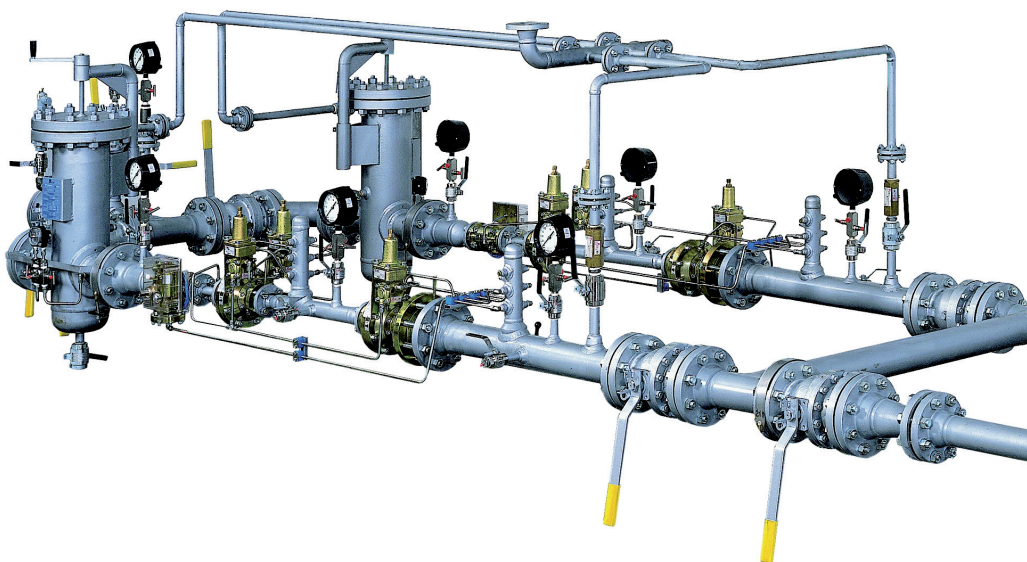
High-pressure transmission pipelines move the gas from the production company's cleaning plants to gas distribution companies for sale to consumers.

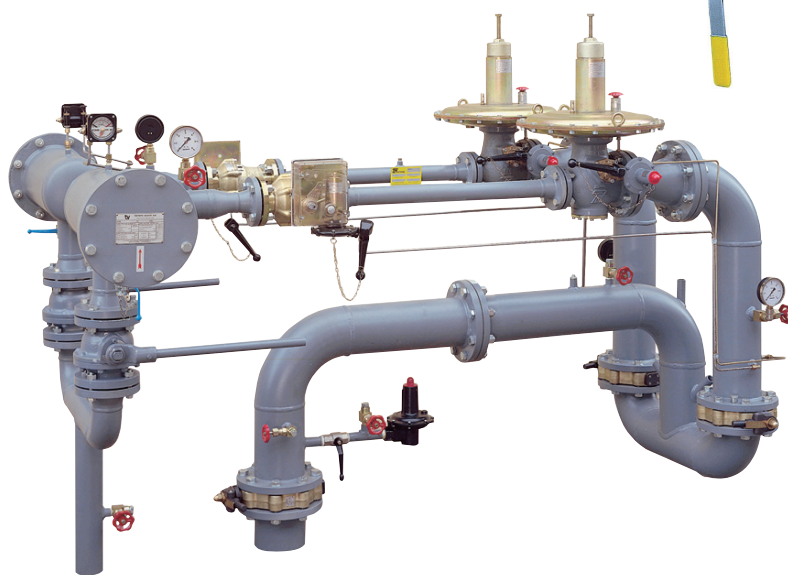
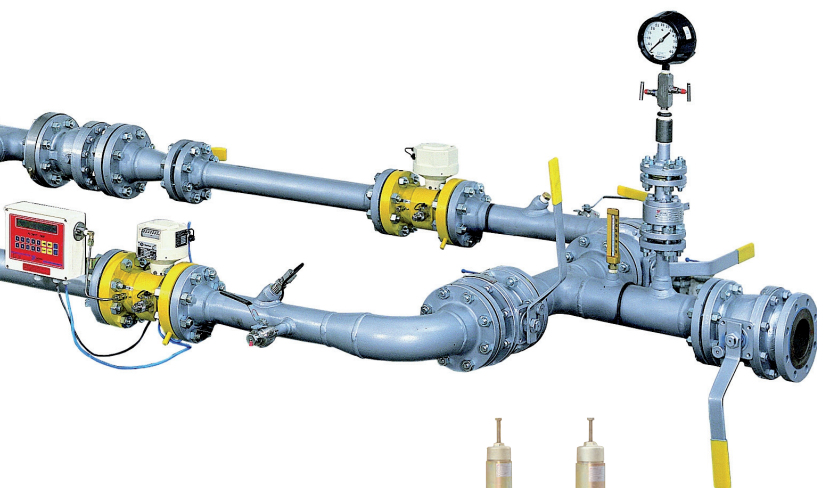
Commercial / Industrial Service

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

Customized Stations

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





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,

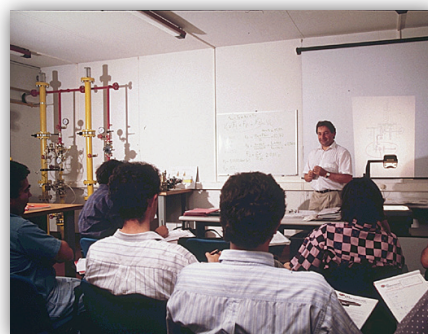
installation and operation of pressure reduction products and applications.

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

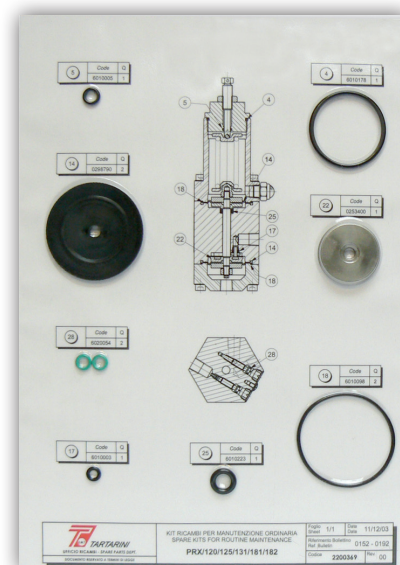
www.Francel.com



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 optimising all deliveries.



Natural Gas Technologies

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