

EZH and EZHSO Series Pressure Reducing Regulators

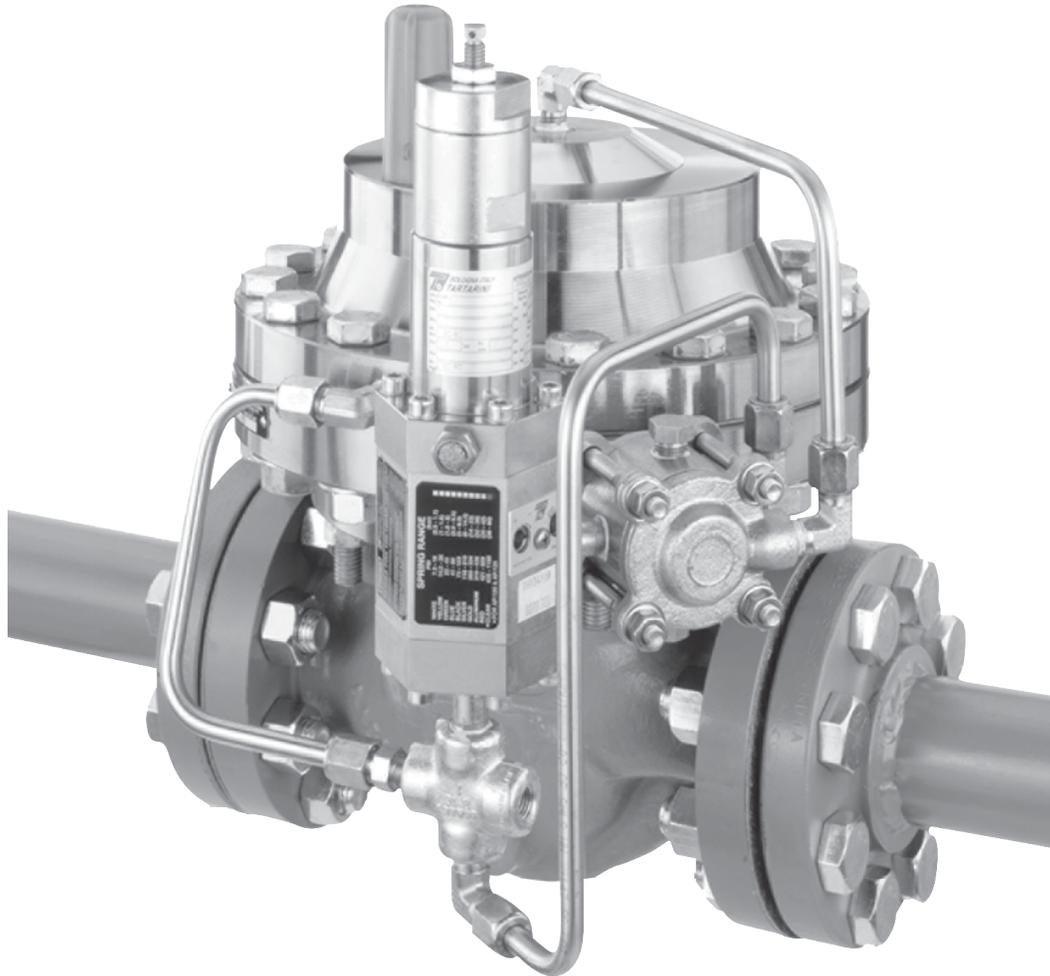


Figure 1. Type EZH Pressure Reducing Regulator

EZH and EZHSO Series

Specifications

The Specifications section lists the specifications for the EZH and EZHSO Series pressure reducing regulators. Factory specification is stamped on the nameplate fastened on the regulator at the factory.

Available Configurations

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

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

Type EZHOSX: Type EZH with a Type OS2 slam-shut device for overpressure (OPSO), overpressure and underpressure (OPSO/UPSO) or dual overpressure (OPSO/OPSO) protection

Body Sizes, End Connection Styles and Pressure Ratings⁽¹⁾

See Table 1

Maximum Allowable Pressures⁽¹⁾

Inlet Pressure: 1500 psig / 103 bar

Outlet (Casing) Pressure: 1500 psig / 103 bar

Emergency Casing Pressure: 1500 psig / 103 bar

Maximum Operating Differential Pressures⁽¹⁾⁽³⁾

Main Valve: 1500 psid / 103 bar d

Pilot: *Between loading pressure in pilot and loading sense pressure:* 1233 psid / 85.0 bar d

Minimum Differential Pressures⁽¹⁾

See Table 3

Outlet Pressure Ranges

See Table 2

Flow and Sizing Coefficients

See Tables 7 through 16

Flow Capacities

See Tables 17 and 18

Pilot and Filter Regulator Flow Coefficients

Type PRX Pilot: C_g : 10.5; C_v : 0.36; C_f : 29

Type SA/2 Filter Regulator: C_g : 4.9

Pressure Registration

External

Pilot Connections

1/4 NPT

Process Temperature Capabilities⁽¹⁾

Nitrile (NBR) Version: -20 to 180°F / -29 to 82°C

Fluorocarbon (FKM) Version: 0 to 180°F / -18 to 82°C⁽²⁾

Process Temperature Capabilities⁽¹⁾(continued)

Polyurethane (PU) Version

NPS 1, 2, 6, 8, 12 X 6 / DN 25, 50, 150, 200,

300 X 150 Sizes: -22 to 180°F / -30 to 82°C

NPS 3 to 4 / DN 80 to 100 Sizes: -4 to 180°F / -20 to 82°C

Options

- Travel Indicator
- Whisper Trim™ Cage
- Relief Size-reduction Trim
- Pressure loaded using the PRX Series pilot

Construction Materials

Main Valve

Main Valve Body

Types EZH and EZHSO: WCC Steel

Type EZHOSX: LCC Steel

Intermediate Flange and Actuator Casings: Steel, ASTM A350 LF2

Diaphragm Plates: Steel, ASTM A105

Diaphragm: Nitrile (NBR) with PVC coating

O-ring: Fluorocarbon (FKM)

Disk: Nitrile (NBR), Fluorocarbon (FKM) or Polyurethane (PU)

PRX Series Pilots

Body: Steel, ASTM 105

Trim: Stainless steel

Elastomers: Nitrile (NBR) or Fluorocarbon (FKM)

Disk: Polyurethane (PU) or Fluorocarbon (FKM)

Type SA/2 Pilot Supply Filter Regulator

Body: Steel

Diaphragm: Nitrile (NBR) with PVC coating

O-ring/Disk: Nitrile (NBR) or Fluorocarbon (FKM)

Type OS2 Slam-Shut Device

Mechanism Box: Aluminum alloy

First and Second Stage Mechanism: WCC Steel

Diaphragm: Nitrile (NBR)

Bellows: 316 Stainless steel

Approximate Weights

See Table 20

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

2. Types PRX and SA/2 Fluorocarbon (FKM) elastomer is limited to 0°F / -18°C.

3. Maximum Operating Differential Pressure is 1400 psid / 96.5 bar d for NPS 1 / DN 25 Type EZHSO.

Features

- **No Gas Emissions**—Eliminates nuisance and wasteful bleed gas to atmosphere by utilizing a self-contained control system, which bleeds 100% of the gas to the downstream system.
- **Bubble-Tight Shutoff**—A knife-edged metal plug and soft seat provide bubble tight shutoff for use in applications where positive shutoff is required such as dead-end systems.
- **Long Life in Severe Service Applications**—The metal plug design deflects particles and debris away from the soft-seat, which gives excellent particle erosion resistance, prolonging service life.
- **Failure Mode Options**—The Type EZHSO spring-to-open design can be utilized to maximize uptime while the Type EZH spring-to-close design can be utilized to protect downstream assets. For many customers, combining the two technologies with a Type EZHSO worker and Type EZH monitor incorporates the best of both worlds.
- **Precise Pressure Control**—Provides stable and accurate downstream pressure control regardless of inlet pressure variations or demand changes.
- **Quiet Operation**—The Whisper Trim™ Cage option reduces noise by up to 8 dBA at the source, eliminating the need for expensive path treatments such as insulation, buried valves and enclosures which only mask noise.
- **Full Pressure Rating**—The equal inlet and outlet pressure rating of 1500 psig / 103 bar, which allows easier selection and requires no special startup or shutdown procedures.
- **Integral Slam Shut Configurations**—Type EZHOSX interrupts gas service during an overpressure or underpressure condition.
- **Easy In-Line Maintenance**—Top entry design enables easier maintenance. Trim parts can be inspected, cleaned and replaced without removing the body from the pipeline. In addition, the NPS 4 / DN 100 and larger sizes are designed for craneless disk maintenance, utilizing an innovative trim removal design.
- **High Turn Down Capability**—The oversized diaphragm and unique piloting system allow for high turn down, which will provide superior pressure control in systems with large variations in downstream flow demand.
- **Travel Indicator**—Simplifies in-service inspection and system troubleshooting.
- **Main Diaphragm**—The main diaphragm is Nitrile (NBR) reinforced with fabric and coated with PVC, which protects and extends the service life in applications with aromatic hydrocarbons.
- **Common Body Platform**—The EZH and EZHSO Series use the same standard Fisher™ E-Body which is also used in the Types EZR and EZL pressure reducing regulators and Types EZ, ES, ED and ET pressure reducing control valves. This allows easy conversion from one product to another without the need to remove the E-Body from the pipeline.
- **Full Usable Capacity**—Fisher brand regulators are laboratory tested. 100% of the published flow capacity can be used with confidence.
- **Disk Design**—The EZH and EZHSO Series offer disks for the main body made from Nitrile (NBR), Fluorocarbon (FKM) and Polyurethane (PU). Polyurethane (PU) provides better abrasion resistance properties and a high durometer rating to extend the working life of the disk in difficult applications such as high pressure drop and low flow.
- **Hydrogen Ready**—Products have been evaluated for material compatibility, potential leakage and permeation and susceptibility to embrittlement for Hydrogen applications. Based on an extensive evaluation and testing program, EZH Series configurations are available for use in Hydrogen applications.

Introduction

Types EZH (Spring-to-Close version) and EZHSO (Spring-to-Open version) 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 shutoff and long life.

For underpressure or overpressure protection, the Type EZHOSX is available with an integral slam-shut device to completely shut off the flow of gas to the downstream system.

EZH and EZHSO Series

Table 1. Main Valve Body Sizes, End Connection Styles and Body Ratings

| MAIN VALVE BODY SIZE | | MAIN VALVE BODY MATERIAL | END CONNECTION STYLE | STRUCTURAL DESIGN RATING | |
|-----------------------------------|---|--------------------------|----------------------|--------------------------|------|
| NPS | DN | | | psig | bar |
| 1 and 2 | 25 and 50 | LCC or WCC Steel | NPT or SWE | 1500 | 103 |
| 1, 2, 3, 4, 6, 12 X 6 and 8 | 25, 50, 80, 100, 150, 300 X 150 and 200 | | CL150 RF | 290 | 20.0 |
| | | | CL300 RF | 750 | 51.7 |
| | | | CL600 RF or BWE | 1500 | 103 |

Table 2. Outlet Pressure Ranges

| TYPE | OUTLET PRESSURE RANGE | | AC (ACCURACY CLASS) | | PILOT CONTROL SPRING INFORMATION | | | | | |
|--|---|---|---------------------|--------------|----------------------------------|--|----------------------------------|------------------------------|----------------------|----------------------|
| | psig | bar | EZH Series | EZHSO Series | Spring Color | Part Number | Wire Diameter | | Free Length | |
| | | | | | | | In. | cm | In. | cm |
| PRX/120 PRX/125 PRX/131 | 14.5 to 26 23 to 44 41 to 80 73 to 123 | 1.00 to 1.8 1.6 to 3.0 2.8 to 5.5 5.0 to 8.5 | 2.5% | 2.5% | Yellow Green Blue Black | M0255240X12 M0255230X12 M0255180X12 M0255220X12 | 0.110 0.126 0.138 0.157 | 0.28 0.32 0.35 0.40 | 2.16 | 5.49 |
| | 116 to 210 203 to 334 319 to 435 | 8.0 to 14.5 14.0 to 23.0 22.0 to 30.0 | 1% | 2.5% | Silver Gold Aluminum | M0255210X12 M0255200X12 M0255860X12 | 0.177 0.197 0.236 | 0.45 0.50 0.60 | 2.16 2.00 2.00 | 5.49 5.10 5.10 |
| PRX/120-AP PRX/125-AP PRX/131-AP | 435 to 1160 | 30.0 to 80.0 | 1% | 2.5% | Clear | M0273790X12 | 0.335 | 0.85 | 3.93 | 10.0 |

Table 3. Minimum Differential Pressures

| TYPE | MAIN VALVE BODY SIZE | | MINIMUM DIFFERENTIAL | | | |
|-------|----------------------|---------------------------|----------------------|-------|--|---|
| | NPS | DN | For 90% Capacity | | For 100% Capacity | |
| | | | psid | bar d | psid | bar d |
| EZH | 1 | 25 | 15.2 | 1.1 | 15.7 | 1.1 |
| | 2 | 50 | 12.0 | 0.83 | 13.8 | 0.95 |
| | 3 | 80 | 10.6 | 0.73 | 12.8 | 0.88 |
| | 4 | 100 | 15.8 | 1.1 | 16.4 | 1.1 |
| | 6, 8 and 12 X 6 | 150, 200 and 300 X 600 | ---- | ---- | 14.0 for standard version 3.0 ⁽¹⁾ for low differential version | 0.98 for standard version 0.21 ⁽¹⁾ for low differential version |
| EZHSO | 1 | 25 | 55 | 3.8 | 55 | 3.8 |
| | 2 | 50 | 55 | 3.8 | 55 | 3.8 |
| | 3 | 80 | 55 | 3.8 | 55 | 3.8 |
| | 4 | 100 | ---- | ---- | 25.6 | 1.8 |
| | 6, 8 and 12 X 6 | 150, 200 and 300 X 600 | ---- | ---- | 14.0 | 0.97 |

1. Low differential version has a maximum inlet pressure rating of 290 psi / 20.0 bar and process temperature limitation of -4 to 180°F / -20 to 82°C.

Pilot Descriptions

The EZH and EZHSO Series pressure reducing regulators include a PRX Series pilot mounted on the main valve.

Type PRX/120: Outlet pressure range of 14.5 to 435 psig / 1.00 to 30.0 bar. The Type PRX/120 can be used as the pilot on single stage pressure reducing regulators, as the monitor or working pilot in wide-open monitor systems or as the working pilots in working monitor systems.

Type PRX/120-AP: Outlet pressure range of 435 to 1160 psig / 30.0 to 80.0 bar. The Type PRX/120-AP can be used as the pilot on single stage pressure reducing regulators, as the monitor or working pilot in wide-open monitor systems or as the working pilots in working monitor systems.

Type PRX/125: Identical to the Type PRX/120 except the restriction screw is removed. The Type PRX/125 can only be used as the monitor override pilot on working monitor applications.

Type PRX/125-AP: Identical to the Type PRX/120-AP except the restriction screw is removed. The Type PRX/125-AP can only be used as the monitor override pilot on working monitor applications.

Type PRX/131: Set pressure range of 14.5 to 435 psig / 1.00 to 30.0 bar. The Type PRX/131 is used as a booster or quick dump pilot to increase main valve closing speed with another PRX Series pilot on a single stage pressure reducing regulator or with the monitor pilot on the monitor regulator in wide-open monitor systems.

Pilot Supply Filter Regulator

The Type SA/2 pilot supply filter regulator provides a constant supply pressure to the PRX Series pilot that is approximately 45 psig / 3.1 bar over set pressure. The Type SA/2 has an integral 5-micron filter.

Principle of Operation

EZH Series - Spring-To-Close Version

The pilot-operated EZH Series (Spring-to-Close version) will fail in close position in the case of main valve diaphragm failure or lack of supply pressure to the pilot (see Table 4 for the Failure Mode Analysis).

The EZH Series (Figure 2) uses inlet pressure which is reduced through pilot operation to load the regulator actuator diaphragm (lower chamber). Outlet pressure is supplied to the regulator actuator diaphragm (upper chamber). This pressure assists the main spring that tends to close the regulator and opposes loading pressure in the actuator. Outlet pressure also opposes the pilot control spring.

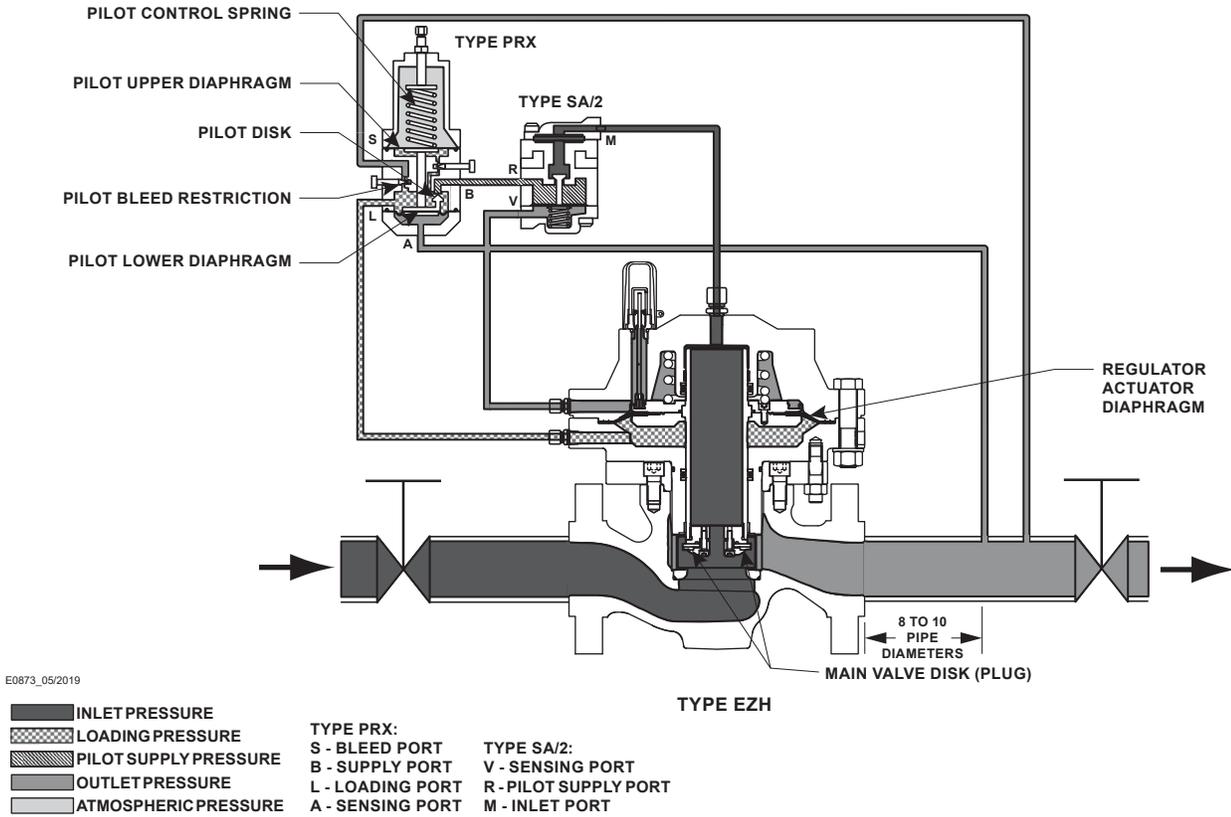
The PRX Series pilot is supplied with pressure coming from pre-regulator Type SA/2, which reduces inlet pressure to the value of outlet pressure plus approximately 45 psi / 3.1 bar.

When outlet pressure drops below the setting of the pilot control spring, pilot control spring force on the pilot lower diaphragm opens the pilot valve disk, providing additional loading pressure to the lower chamber of the regulator actuator diaphragm. This diaphragm loading pressure opens the main valve disk, supplying the required flow to the downstream system. Any excess loading pressure in the lower chamber of the actuator diaphragm and pilot escapes downstream through the bleed restriction in the pilot.

When the gas demand in the downstream system has been satisfied, the outlet pressure increases. When outlet pressure increases over the setting of the pilot spring, the pilot valve disk will be closed, reducing loading pressure to the lower chamber of the regulator actuator diaphragm; the pressure in the upper case and the main spring will force the regulator to close. The excess loading pressure acting under the regulator actuator diaphragm and pilot bleeds to the downstream system through a bleed restriction in the pilot.

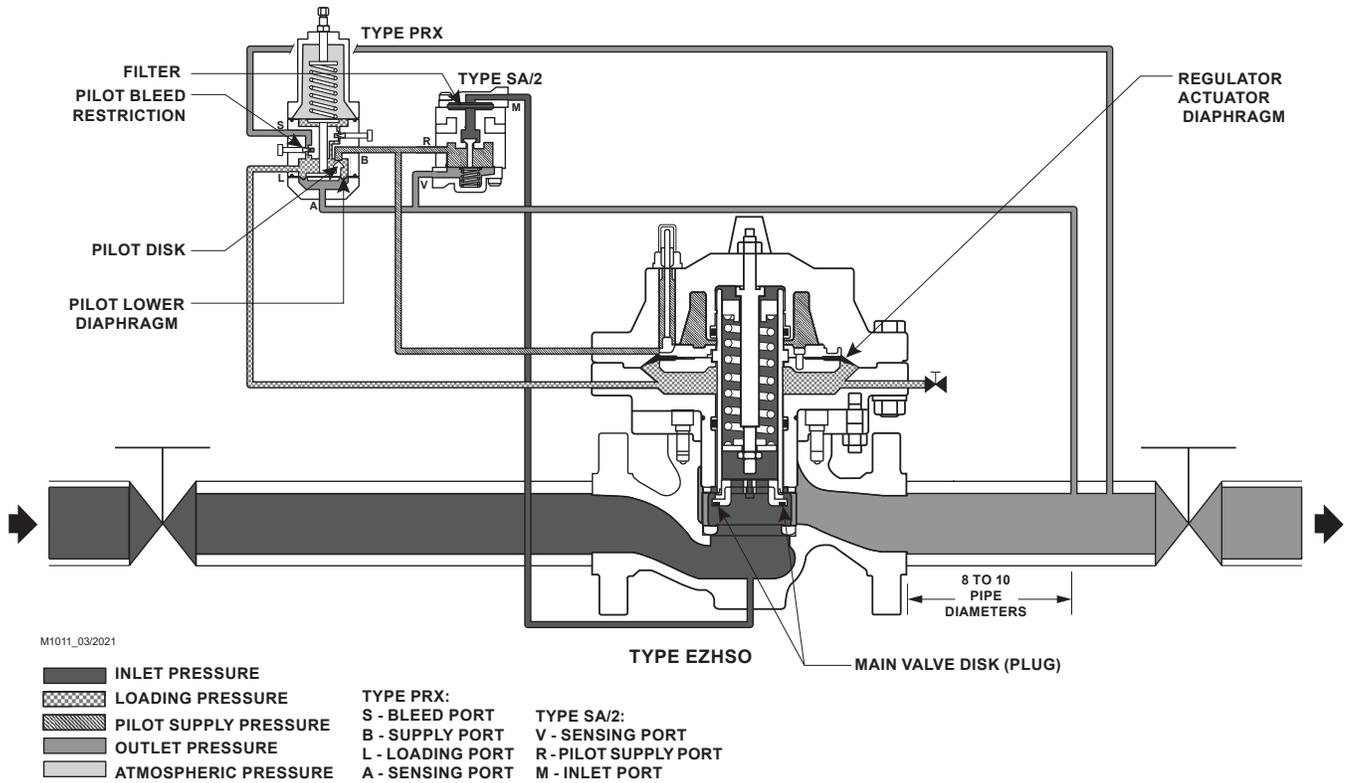
A check valve, set at 75 psi / 5.2 bar, is installed between outlet pressure and loading pressure impulse lines on the NPS 4 / DN 100 and larger sizes; this valve is designed to protect the main valve diaphragm assembly from excessive differential pressure during startup if incorrect start up procedures are used. Do not exceed 75 psi / 5.2 bar differential pressure between the outlet pressure and loading pressure impulse lines.

EZH and EZHSO Series



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Figure 2. Type EZH (Spring-to-Close Version) Operational Schematic



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Figure 3. Type EZHSO (Spring-to-Open Version) Operational Schematic

Table 4. Failure Mode Analysis

| PART NAME | CONDITION | CAUSE | EFFECT | REGULATOR REACTION MODE | |
|-----------------------|--|---|---|-------------------------|------------|
| | | | | Type EZH | Type EZHSO |
| Filter | Filter blocked / Clogged | Debris or aromatics present in the gas | Decrease of supply pressure gives decrease of loading pressure | Close | Open |
| Pilot disk | Pilot cannot be closed | Debris or aromatics present, Sour gas | Increase loading pressure | Open | Open |
| Pilot lower diaphragm | Pilot cannot control | Debris or aromatics present, Sour gas | Decrease loading pressure | Close | Open |
| Pilot upper diaphragm | Pilot cannot feed the regulator | Debris or aromatics present, Sour gas | Decrease loading pressure | Close | Open |
| Regulator diaphragm | Not proper performance of the loading pressure chamber | Debris or aromatics present, Sour gas | Balancing of Pressures and charge or discharge of the loading pressure chamber | Close | Open |
| Pilot | Frozen pilot, Type SA/2 not working | Moisture in the gas, high pressure drop | Type SA/2 loading upper casing of regulator, Pilot not supplying loading pressure to lower casing | Close | Close |

EZHSO Series - Spring-To-Open Version

The pilot-operated EZHSO Series (Spring-to-Open Version) will fail in open position in the case of main valve diaphragm failure or lack of supply pressure to the pilot (see Table 4 for the Failure Mode Analysis).

The EZHSO Series (Figure 3) uses inlet pressure, which is reduced through pilot operation to load the regulator actuator diaphragm (lower chamber). Pilot supply pressure is provided to the regulator actuator diaphragm (upper chamber). This pressure on the upper chamber of the regulator actuator diaphragm opposes the main spring force that tends to open the regulator. Outlet pressure opposes the pilot control spring.

The PRX Series pilot is supplied with pressure coming from pre-regulator Type SA/2, which reduces inlet pressure to the value of outlet pressure plus approximately 45 psi / 3.1 bar.

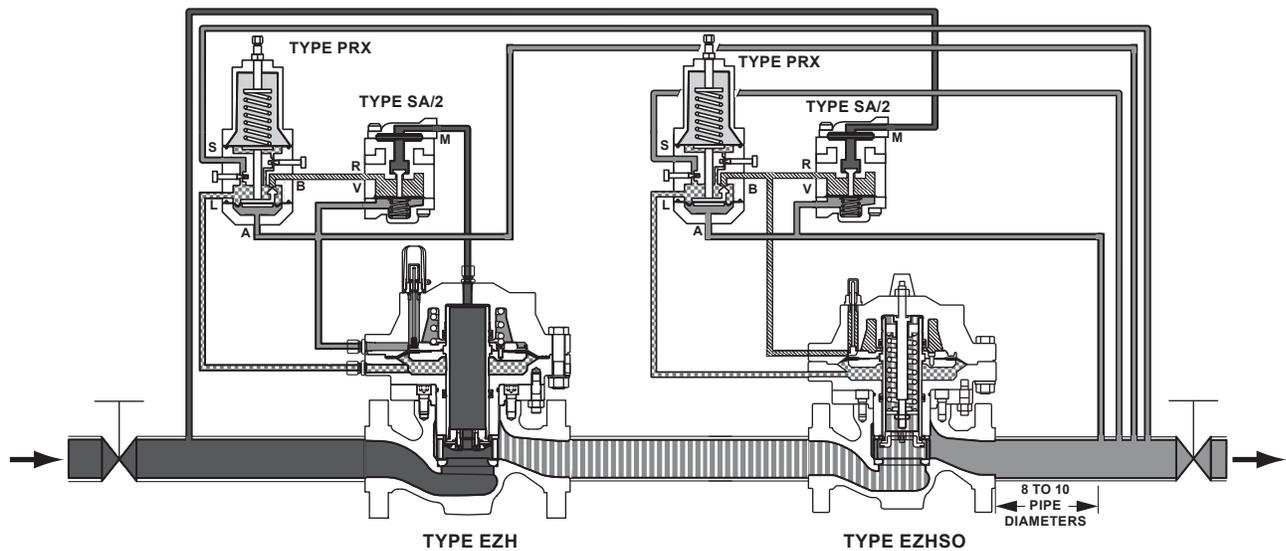
When outlet pressure drops below the setting of the pilot control spring, pilot control spring force on the pilot diaphragm opens the pilot valve disk, providing additional loading pressure to the lower chamber of the regulator actuator diaphragm. This diaphragm

loading pressure opens the main valve disk, supplying the required flow to the downstream system. Any excess loading pressure in the lower chamber of the regulator actuator diaphragm and pilot escapes downstream through the bleed restriction in the pilot.

When the gas demand in the downstream system has been satisfied, the outlet pressure increases. When outlet pressure increases over the setting of the pilot spring, the pilot valve disk will be closed, reducing loading pressure to the lower chamber of the regulator actuator diaphragm; the pressure in the upper chamber will force the regulator to close. The excess loading pressure acting under the regulator actuator diaphragm and pilot bleeds to the downstream system through a bleed restriction in the pilot.

A check valve, set at 75 psi / 5.2 bar, is installed between inlet pressure to upper actuator casing and loading pressure impulse lines on the NPS 4 / DN 100 and larger sizes; this valve is designed to protect the main valve diaphragm assembly from excessive differential pressure during incorrect start-up procedures.

EZH and EZHSO Series



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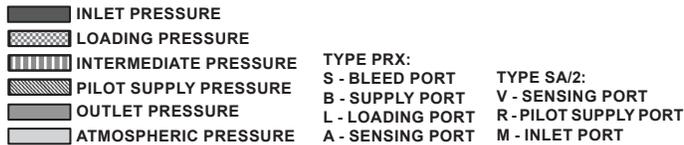


Figure 4. Wide-Open Monitoring System Operational Schematic

Monitoring Systems

Monitoring regulation is overpressure protection by containment, therefore, there is no relief valve to vent to the atmosphere. When the working regulator fails to control the pressure, a monitor regulator installed in series, sensing the downstream pressure, goes into operation to maintain the downstream pressure at a slightly higher value than normal set pressure. During an overpressure situation, monitoring keeps the customer on line. Also, testing is relatively easy. To perform a periodic test on a monitoring regulator, increase the outlet set pressure of the working regulator and watch the outlet pressure gauge to determine if the monitoring regulator takes over at the appropriate outlet pressure.

Wide-Open Monitoring Systems (Figure 4)

There are two types of wide-open monitoring systems: upstream and downstream. The difference between upstream and downstream monitoring is that the functions of the regulators are reversed. Systems can be changed from upstream to downstream monitoring and vice-versa, by simply reversing the setpoints of the two regulators. The decision to use either an upstream or downstream monitoring system is largely a matter of personal preference or company policy.

In normal operation of a wide-open configuration, the working regulator controls the system's outlet pressure. With a higher outlet pressure setting, the monitor regulator senses a pressure lower than its setpoint and tries to increase outlet pressure by going wide-open. If the working regulator fails, the monitoring regulator assumes control and holds the outlet pressure at its outlet pressure setting.

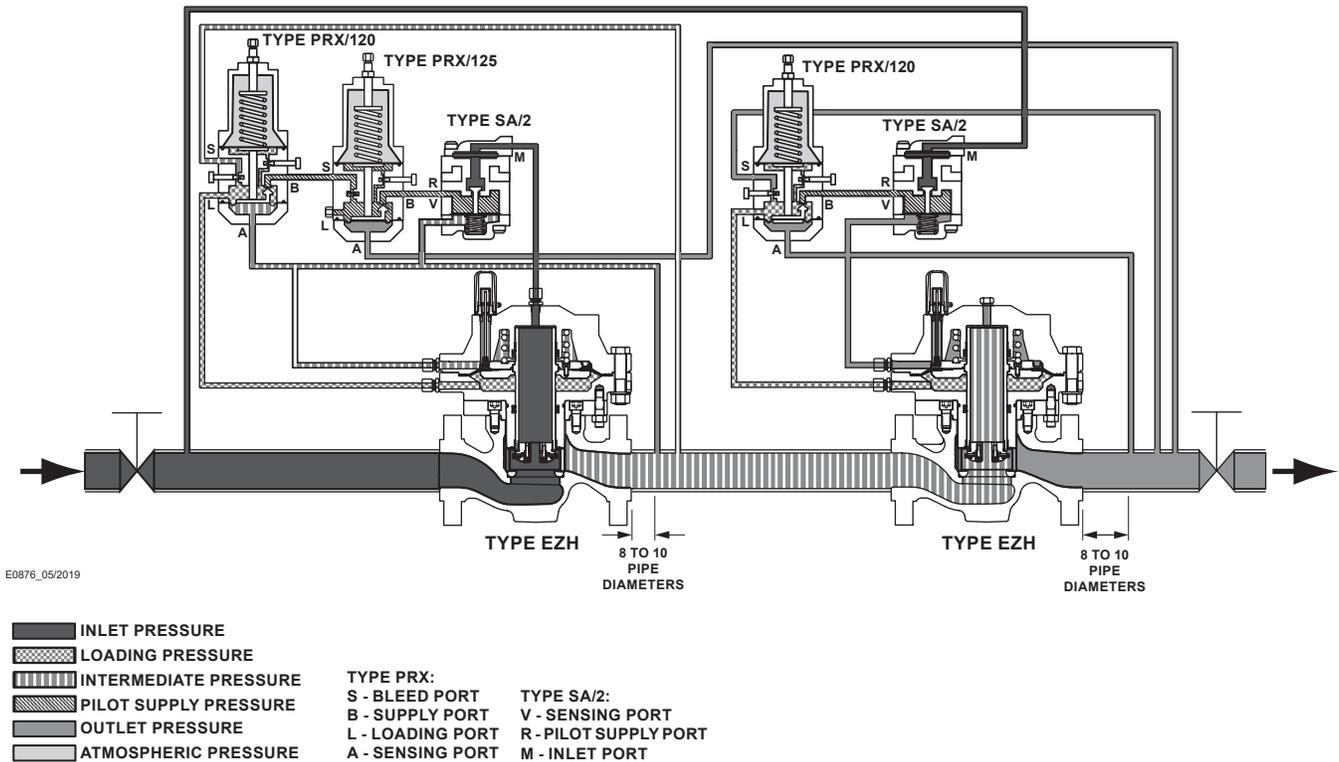


Figure 5. Working Monitoring System Operational Schematic

Figure 4 shows an upstream wide-open monitor Type EZH (fail-to-close) and a downstream active regulator Type EZHSO (fail-to-open). In this installation, if the Type EZHSO regulator no longer controls downstream pressure, it will remain open, letting the Type EZH monitor regulator take control of the downstream pressure. Should the Type EZH fail, the monitor regulator will close and protect the downstream system from overpressure condition.

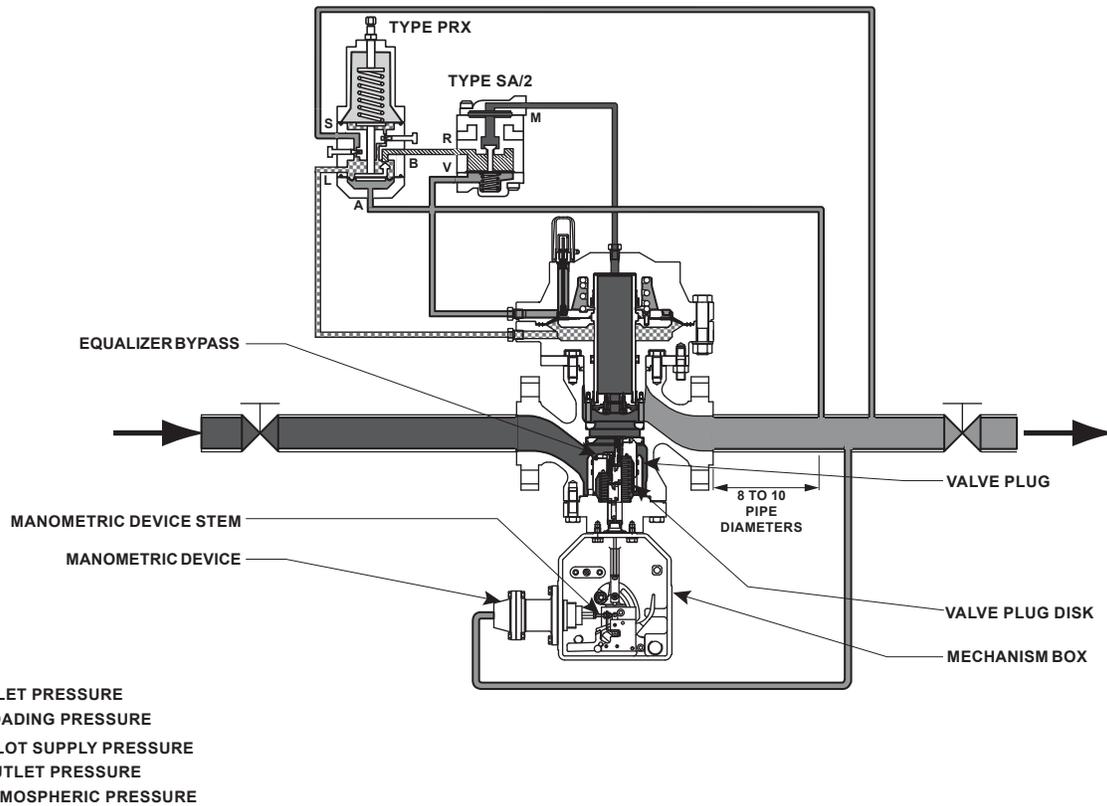
Working Monitoring Regulators (Figure 5)

In a working monitoring system, the upstream regulator requires two pilots and it is always the monitoring regulator. The additional pilot permits the monitoring regulator to act as a series regulator to control an intermediate pressure during normal operation. In this way, both units are always operating and can be easily checked for proper operation.

In normal operation, the working regulator controls the outlet pressure of the system. The monitoring regulator's working pilot controls the intermediate pressure and the monitoring pilot senses the system's outlet pressure. If the working regulator fails, the monitoring pilot will sense the increase in outlet pressure and take control.

Working monitor installations require an EZH or EZHSO Series main valve with a Type PRX/120 or PRX/120-AP working pilot and a Type PRX/125 or PRX/125-AP monitoring pilot for the upstream regulator and an EZH or EZHSO Series with the appropriate Type PRX/120 or PRX/120-AP pilot for the downstream regulator.

EZH and EZHSO Series



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Figure 6. Type EZHOSX Operational Schematic

Overpressure Protection

Overpressuring any portion of a regulator or associated equipment may cause personal injury, leakage or property damage due to bursting of pressure-containing parts or explosion of accumulated gas. Provide appropriate pressure relieving or pressure limiting devices to ensure that the limits in the Specifications section are not exceeded. Regulator operation within ratings does not prevent the possibility of damage from external sources or from debris in the pipeline. Common methods of external overpressure protection include relief valves, monitoring regulators, shutoff devices and series regulation.

The Type EZHOSX (Figure 6) regulator relies on the integrated slam-shut device for overpressure (OPSO), overpressure and underpressure (OPSO/UPS0) or dual overpressure (OPSO/OPSO) protection. In the event that outlet pressure rises above or falls below the pressure setting, slam shut will completely shut off the flow of gas to the downstream system.

Noise Abatement Trim

Whisper Trim™ cage provides effective attenuation of aerodynamic noise in gas applications involving high pressure drop ratios. Aerodynamic noise is generated by the turbulence created in the flow of gas as the fluid passes through the port. To achieve effective noise attenuation, a Whisper Trim cage utilizes multiple orifices of special shape, size and spacing. These orifices break up turbulent fluid streams, reducing noise-producing interactions.

EZH and EZHSO Series regulators offer an optional Whisper Trim Cage to reduce noise by up to 8 dBA.

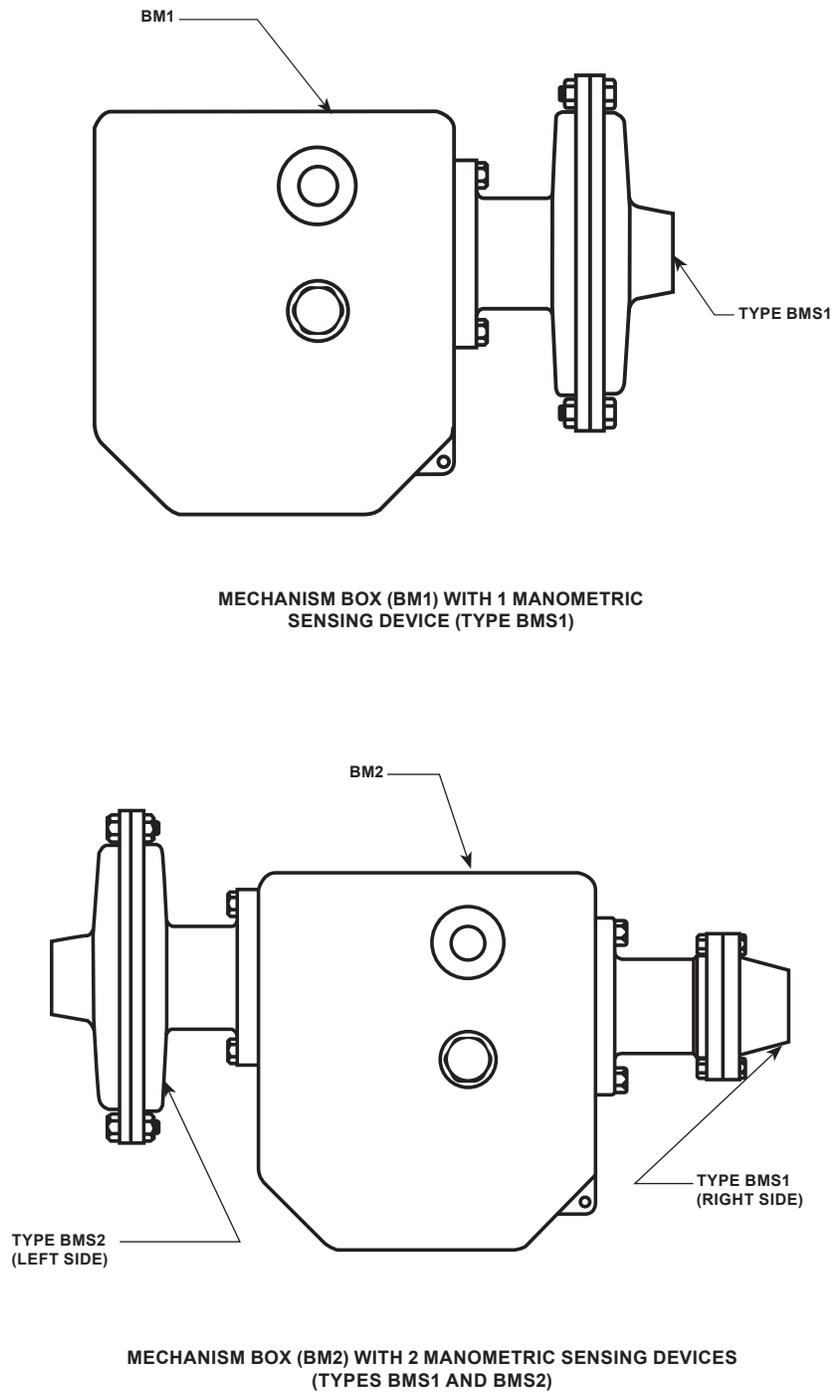


Figure 7. Types of Slam-Shut Installation

EZH and EZHSO Series

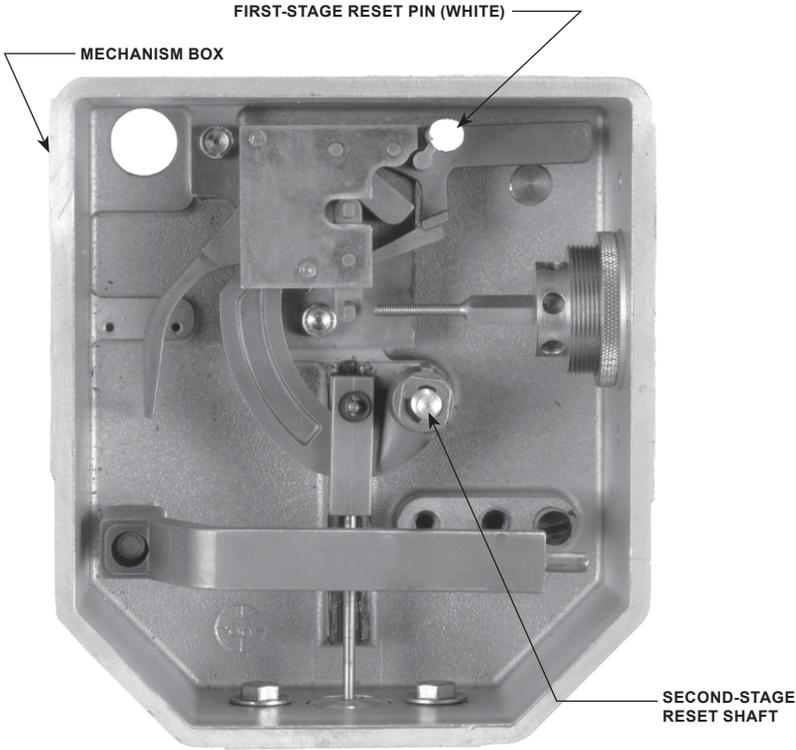


Figure 8. Slam-Shut Device in Open Position

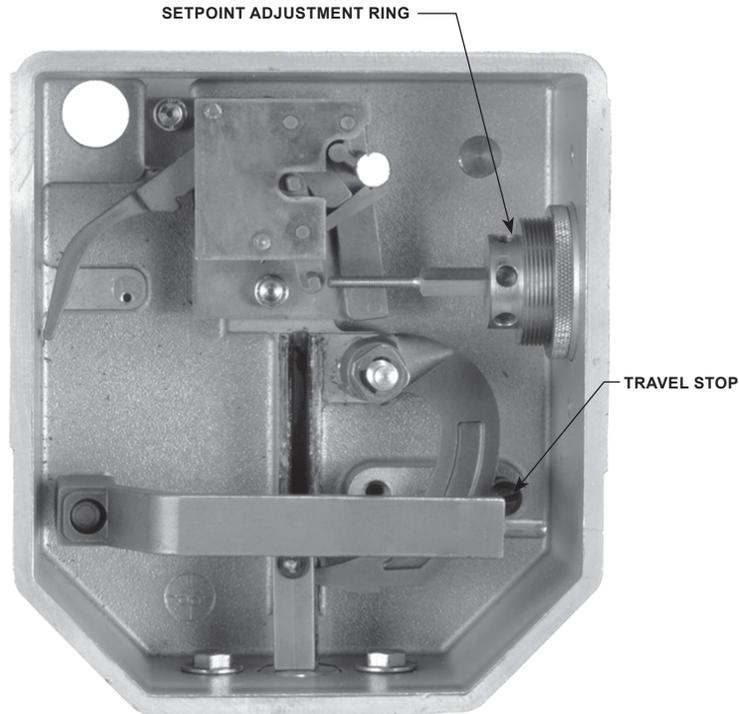


Figure 9. Slam-Shut Device in Closed Position

Slam-Shut Device Principle of Operation

The slam-shut device on the Type EZHOSX (Figure 6) can provide either overpressure (OPSO), overpressure and underpressure (OPSO/UPSO) or dual overpressure (OPSO/OPSO) protection by completely shutting off the flow of gas to the downstream system. Pressure is registered on one side of the diaphragm, piston or bellows and is opposed by the setpoint control spring of the manometric sensing device. The Type OSE slam-shut valve tripping pressure is determined by the setting of the control spring.

Overpressure: when the downstream pressure increases above the setpoint, the pressure on top of the diaphragm overcomes the spring setting and moves the manometric device stem.

Underpressure: when the downstream pressure decreases below the setpoint, the control spring pressure below the diaphragm overcomes the downstream pressure and pushes the diaphragm which moves the manometric device stem.

When the pressure of the downstream line rises above the set pressure (or drops below the set pressure) the manometric device senses the pressure change and triggers the detection stage which activates the second stage, releasing the slam-shut valve plug. Once the slam-shut device has been tripped, it must be manually reset.

See Figures 8 and 9 for the difference between the device in open and closed positions.

Capacity Information

Note

EZH and EZHSO Series flow capacities are laboratory verified; therefore, they may be sized for 100% flow using published capacities as shown. It is not necessary to reduce published capacities.

Tables 17 and 18 show the natural gas regulating capacities of the EZH and EZHSO Series regulators at selected inlet pressures and outlet pressure settings. Flows are in thousands of SCFH at 60°F and 14.7 psia (or in thousands of Nm³/h at 0°C and 1.01325 bar) of 0.6 specific gravity natural gas.

To determine equivalent capacities for air, propane, butane or nitrogen, multiply the capacity by the following appropriate conversion factor: 0.775 for air, 0.628 for propane, 0.548 for butane or 0.789 for nitrogen. For gases of other specific gravities, multiply the given capacity by 0.775 and divide by the square root of the appropriate specific gravity. Then, if capacity is desired in Nm³/h at 0°C and 1.01325 bar, multiply SCFH by 0.0268.

To find approximate regulating capacities at pressure settings not given in Tables 17 and 18 or to find wide-open flow capacities for relief sizing at any inlet pressure, perform one of the following procedures. Then convert using the factors provided above, if necessary.

Critical Pressure Drops

For critical pressure drops (absolute outlet pressure equal to or less than one-half of absolute inlet pressure), use the following formula:

$$Q = (P_1)(C_g)(1.29)$$

Non-Critical Pressure Drops

For pressure drops lower than critical (absolute outlet pressure greater than one-half of absolute inlet pressure).

$$Q = \sqrt{\frac{520}{GT}} C_g P_1 \text{SIN} \left(\frac{3417}{C_1} \sqrt{\frac{\Delta P}{P_1}} \right) \text{DEG}$$

where,

Q = gas flow rate, SCFH

P₁ = absolute inlet pressure, psia (P₁ gauge + 14.7)

C_g = regulating or wide-open gas sizing coefficient

G = gas specific gravity of the gas

T = absolute temperature of gas at inlet, °Rankine

C₁ = flow coefficient

ΔP = pressure drop across the regulator, psi

When sizing a working monitor setup, size each regulator separately using either the capacity tables or the equation method. When sizing a wide-open monitor setup, first use the equation method, solving for the pressure drop across the monitor at the maximum flow condition. Next size the worker using either the capacity tables or equation method while taking into account the monitor's maximum pressure drop.

EZH and EZHSO Series

Table 5. Manometric Device Specifications⁽¹⁾

| SPRING RANGE | | SPRING COLOR | SPRING PART NUMBER | MAXIMUM SENSING INLET PRESSURE | | MANOMETRIC SENSING DEVICE TYPE | MANOMETRIC SENSING DEVICE STYLE | SETPOINT TOLERANCE ⁽¹⁾ | | MAXIMUM DIFFERENCE BETWEEN OVERPRESSURE AND UNDERPRESSURE ⁽²⁾ | |
|-------------------------|---------------------|--------------|--------------------|--------------------------------|------|--------------------------------|---------------------------------|-----------------------------------|-------|--|-------|
| psig | bar | | | psig | bar | | | psig | bar | psid | bar d |
| 4.02 to 14.1 in. w.c. | 10 to 35 mbar | Purple | T14232T0012 | 75 | 5.2 | 162 | Diaphragm | 0.058 | 0.004 | 0.145 | 0.01 |
| 9.97 to 33.2 in. w.c. | 25 to 83 mbar | Orange | T14233T0012 | | | | | 0.073 | 0.005 | 0.363 | 0.03 |
| 18 in. w.c. to 2.0 psig | 45 mbar to 0.14 bar | Red | T14234T0012 | | | | | 0.145 | 0.01 | 0.725 | 0.05 |
| 1.0 to 3.5 | 0.07 to 0.24 | Yellow | T14235T0012 | | | | | 0.203 | 0.014 | 0.870 | 0.06 |
| 1.7 to 5.6 | 0.12 to 0.39 | Green | T14236T0012 | | | | | 0.261 | 0.02 | 2.18 | 0.15 |
| 2 to 11 | 0.14 to 0.80 | Gray | T14238T0012 | | | | | 0.725 | 0.05 | 5.08 | 0.35 |
| 4 to 19 | 0.28 to 1.3 | Brown | T14239T0012 | | | | | 1.16 | 0.08 | 8.70 | 0.60 |
| 7 to 33 | 0.48 to 2.3 | Black | T14240T0012 | | | | | 2.47 | 0.17 | 16.0 | 1.1 |
| 15 to 75 | 1.0 to 5.2 | Blue | T14237T0012 | 235 | 16.2 | 71 | Piston | 5.08 | 0.35 | 36.3 | 2.5 |
| 31 to 161 | 2.1 to 11.1 | Brown | T14239T0012 | | | | | 10.2 | 0.70 | 79.8 | 5.5 |
| 59 to 235 | 4.1 to 16.2 | Black | T14240T0012 | | | | | 23.2 | 1.6 | 145 | 10.0 |
| 235 to 323 | 16.2 to 22.3 | Brown | T14239T0012 | 1470 | 101 | 27 | Bellows | 43.5 | 3.0 | Requires use of Types BMS1 and BMS2 | |
| 323 to 588 | 22.3 to 40.5 | Black | T14240T0012 | | | | | 94.3 | 6.5 | | |
| 588 to 808 | 40.5 to 55.7 | Brown | T14239T0012 | 1470 | 101 | 17 | 102 | 7.0 | | | |
| 808 to 1470 | 55.7 to 101 | Black | T14240T0012 | | | | 174 | 12.0 | | | |
| 81 to 323 | 5.58 to 22.3 | Brown | T14239T0012 | 514 | 35.4 | 236 | Bellows | 14.5 | 1.00 | 145 | 10.0 |
| 122 to 514 | 8.4 to 35.4 | Black | T14240T0012 | | | | | 36.3 | 2.5 | 290 | 20.0 |
| 257 to 1058 | 17.7 to 72.9 | Gray | T14238T0012 | | | | | 1058 | 72.9 | 315 | 72.5 |

1. Minimum suggested difference between slam-shut set pressure and normal operating pressure of the system.
 2. Maximum difference between overpressure and underpressure when using one manometric device (Type BMS1) with tripping hook. For underpressure and overpressure points greater than this maximum number, use a second manometric device (Type BMS2) for underpressure protection.

Table 6. Applications and Construction Guide (See Figure 7)

| APPLICATION | MECHANISM BOX REQUIRED | | MANOMETRIC SENSING DEVICE REQUIRED | |
|--|------------------------|-----|------------------------------------|--------------------|
| | BM1 | BM2 | Type BMS1 | Type BMS2 |
| Overpressure Shutoff (OPSO) | Yes | No | Yes | No |
| Underpressure Shutoff (UPSO) | | | Yes ⁽¹⁾ | |
| Overpressure Shutoff (OPSO) and Underpressure Shutoff (UPSO) | | | Yes ⁽²⁾ | Yes |
| Overpressure Shutoff (OPSO) and Underpressure Shutoff (UPSO) | No | Yes | Yes ⁽²⁾ | Yes ⁽¹⁾ |

1. When using one manometric sensing device (Type BMS1) for both overpressure and underpressure shutoff, make sure that the difference between set pressures falls within the maximum range shown in Table 5.
 2. When using two manometric sensing devices (Types BMS1 and BMS2), the Type BMS1 can only be used for high trip.

EZH and EZHSO Series

Table 7. Types EZH and EZHSO Main Valve with Standard Cage Regulating Flow Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----------|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C _i | C _g | C _v | C _i |
| 1 | 25 | 100 | 564 | 16.3 | 34.6 | 544 | 15.3 | 35.5 |
| | | 80 | 436 | 12.3 | 35.4 | 423 | 10.9 | 38.7 |
| | | 50 | 284 | 8.4 | 33.7 | 249 | 6.3 | 39.7 |
| | | 30 | 172 | 5.3 | 32.5 | 157 | 4.0 | 39.1 |
| 2 | 50 | 100 | 2278 | 58.5 | 38.9 | 2110 | 62.9 | 33.5 |
| | | 80 | 1719 | 47.1 | 36.5 | 1609 | 50.5 | 31.9 |
| | | 50 | 1213 | 31.0 | 39.1 | 1177 | 33.0 | 35.6 |
| | | 30 | 707 | 16.9 | 41.7 | 718 | 18.8 | 38.2 |
| 3 | 80 | 100 | 4960 | 133 | 37.3 | 4396 | 143 | 30.8 |
| | | 80 | 3950 | 109 | 36.2 | 3294 | 97.2 | 33.9 |
| | | 50 | 2550 | 63.6 | 40.1 | 2069 | 54.7 | 37.80 |
| | | 30 | 1530 | 36.7 | 41.7 | 1339 | 39.8 | 33.6 |
| 4 | 100 | 100 | 7250 | 227 | 31.9 | 7170 | 229 | 31.3 |
| | | 80 | 5750 | 165 | 34.8 | 5630 | 165 | 34.1 |
| | | 50 | 3510 | 95.9 | 36.6 | 3460 | 95.5 | 36.2 |
| | | 30 | 2130 | 56.7 | 37.6 | 2080 | 56.2 | 37.0 |
| 6 | 150 | 100 | 14,430 | 462 | 31.2 | 13,600 | 433 | 31.4 |
| | | 80 | 11,270 | 344 | 32.8 | 11,260 | 313 | 35.9 |
| | | 50 | 7150 | 206 | 34.7 | 7120 | 181 | 39.3 |
| | | 30 | 4100 | 132 | 31.1 | 4070 | 132 | 30.8 |
| 8 | 200 | 100 | 26,540 | 720 | 36.9 | 25,270 | 722 | 35.0 |
| | | 50 | 13,990 | 375 | 37.3 | 13,600 | 374 | 36.4 |
| | | 30 | 7720 | 202 | 38.1 | 7860 | 205 | 38.3 |
| 12 X 6 | 300 X 150 | 100 | 30,490 | 815 | 37.4 | 29,270 | 783 | 37.4 |
| | | 50 | 14,040 | 359 | 39.1 | 13,620 | 348 | 39.1 |
| | | 30 | 8050 | 202 | 39.7 | 7890 | 198 | 39.7 |

Table 8. Types EZH and EZHSO with Standard Cage Wide-Open Flow Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----------|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C _i | C _g | C _v | C _i |
| 1 | 25 | 100 | 587 | 16.95 | 34.63 | 566 | 15.94 | 35.51 |
| | | 80 | 453 | 12.79 | 35.42 | 440 | 11.37 | 38.70 |
| | | 50 | 295 | 8.76 | 33.68 | 259 | 6.52 | 39.72 |
| | | 30 | 179 | 5.51 | 32.49 | 163 | 4.16 | 39.18 |
| 2 | 50 | 100 | 2369 | 60.89 | 38.91 | 2194 | 65.44 | 33.53 |
| | | 80 | 1788 | 48.94 | 36.53 | 1673 | 52.52 | 31.85 |
| | | 50 | 1261 | 32.26 | 39.09 | 1224 | 34.35 | 35.63 |
| | | 30 | 735 | 17.62 | 41.71 | 747 | 19.57 | 38.17 |
| 3 | 80 | 100 | 5158 | 138 | 37.29 | 4571 | 149 | 30.77 |
| | | 80 | 4108 | 113 | 36.24 | 3426 | 101 | 33.89 |
| | | 50 | 2652 | 66.14 | 40.10 | 2152 | 56.94 | 37.79 |
| | | 30 | 1591 | 38.17 | 41.68 | 1393 | 41.40 | 33.65 |
| 4 | 100 | 100 | 7470 | 234 | 31.6 | 7390 | 236 | 31.4 |
| | | 80 | 5920 | 170 | 34.8 | 5800 | 170 | 34.2 |
| | | 50 | 3620 | 98.8 | 36.7 | 3560 | 98.4 | 36.3 |
| | | 30 | 2190 | 58.4 | 37.3 | 2140 | 57.9 | 37.3 |
| 6 | 150 | 100 | 14,870 | 476 | 31.2 | 14,010 | 446 | 31.4 |
| | | 80 | 11,610 | 354 | 32.8 | 11,600 | 323 | 35.9 |
| | | 50 | 7370 | 212 | 34.7 | 7340 | 187 | 39.3 |
| | | 30 | 4230 | 136 | 31.1 | 4200 | 136 | 30.8 |
| 8 | 200 | 100 | 27,340 | 742 | 36.9 | 26,040 | 744 | 35.0 |
| | | 50 | 14,410 | 386 | 37.3 | 14,000 | 385 | 36.3 |
| | | 30 | 7950 | 209 | 38.1 | 8100 | 212 | 38.3 |
| 12 X 6 | 300 X 150 | 100 | 31,400 | 839 | 37.4 | 30,160 | 806 | 37.4 |
| | | 50 | 14,460 | 370 | 39.1 | 14,030 | 359 | 39.1 |
| | | 30 | 8290 | 208 | 39.7 | 8130 | 204 | 39.7 |

EZH and EZHSO Series

Table 9. Types EZH and EZHSO Main Valve with Standard Cage IEC Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|
| NPS | DN | | X _T | F _D | F _L | X _T | F _D | F _L |
| 1 | 25 | 100 | 0.61 | 0.61 | 0.89 | 0.80 | 0.59 | 0.89 |
| | | 80 | 0.72 | 0.67 | | 0.95 | 0.63 | |
| | | 50 | 0.69 | 0.80 | | 0.99 | 0.69 | |
| | | 30 | 0.66 | 0.81 | | 0.97 | 0.71 | |
| 2 | 50 | 100 | 0.73 | 0.59 | | 0.69 | 0.61 | |
| | | 80 | 0.84 | 0.68 | | 0.72 | 0.70 | |
| | | 50 | 0.97 | 0.69 | | 0.84 | 0.72 | |
| | | 30 | 0.99 | 0.70 | | 0.92 | 0.74 | |
| 3 | 80 | 100 | 0.88 | 0.58 | | 0.60 | 0.60 | |
| | | 80 | 0.83 | 0.71 | | 0.73 | 0.67 | |
| | | 50 | 0.99 | 0.73 | | 0.90 | 0.68 | |
| | | 30 | 0.99 | 0.72 | | 0.72 | 0.75 | |
| 4 | 100 | 100 | 0.63 | 0.63 | | 0.62 | 0.63 | |
| | | 80 | 0.76 | 0.74 | | 0.74 | 0.74 | |
| | | 50 | 0.85 | 0.77 | | 0.83 | 0.77 | |
| | | 30 | 0.88 | 0.78 | | 0.88 | 0.77 | |
| 6 | 150 | 100 | 0.62 | 0.69 | 0.62 | 0.69 | | |
| | | 80 | 0.68 | 0.78 | 0.82 | 0.78 | | |
| | | 50 | 0.76 | 0.61 | 0.98 | 0.61 | | |
| | | 30 | 0.61 | 0.95 | 0.60 | 0.95 | | |
| 8 | 200 | 100 | 0.86 | 0.69 | 0.77 | 0.69 | | |
| | | 50 | 0.88 | 0.78 | 0.83 | 0.78 | | |
| | | 30 | 0.92 | 0.61 | 0.93 | 0.61 | | |
| | | 12 X 6 | 300 X 150 | 100 | 0.88 | 0.69 | 0.88 | 0.69 |
| | | 50 | 0.96 | 0.78 | 0.96 | 0.78 | | |
| | | 30 | 1.00 | 0.61 | 1.00 | 0.61 | | |

Table 10. Type EZHOSX Main Valve with Standard Cage Regulating Flow Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----|---------------------|----------------------------|--------------------|----------------|-----------------------------------|--------------------|----------------|
| NPS | DN | | C _g | C _v | C ₁ | C _g | C _v | C ₁ |
| 1 | 25 | 100 | 560 | 16.3 | 34.4 | 550 | 17.6 | 31.3 |
| | | 80 | 428 | 12.0 | 35.7 | 408 | 11.9 | 34.3 |
| | | 50 | 282 | 8.3 | 33.9 | 245 | 7.3 | 33.6 |
| | | 30 | 171 | 5.3 | 32.3 | 154 | 4.8 | 32.1 |
| 2 | 50 | 100 | 2259 | 53.5 | 42.3 | 2092 | 54.6 | 38.3 |
| | | 80 | 1837 | 52.0 | 35.4 | 1762 | 50.0 | 35.3 |
| | | 50 | 1297 | 32.9 | 39.4 | 1301 | 33.5 | 38.80 |
| | | 30 | 746 | 17.9 | 41.7 | 746 | 18.3 | 40.80 |
| 3 | 80 | 100 | 4620 | 125 | 37.0 | 4359 | 142 | 30.8 |
| | | 80 | 3920 | 106 | 37.0 | 3266 | 96.4 | 33.9 |
| | | 50 | 2560 | 64.9 | 39.4 | 2052 | 54.3 | 37.80 |
| | | 30 | 1540 | 36.8 | 41.8 | 1328 | 39.5 | 33.6 |
| 4 | 100 | 100 | 7120 | 209 | 34.1 | 6920 | 213 | 32.5 |
| | | 80 | 5920 | 162 | 36.5 | 5760 | 163 | 35.3 |
| | | 50 | 3550 | 93.3 | 38.0 | 3420 | 91.7 | 37.3 |
| | | 30 | 2080 | 56.4 | 36.9 | 2060 | 55.6 | 37.1 |
| 6 | 150 | 100 | 13,930 ⁽¹⁾ | 412 ⁽¹⁾ | 33.8 | 13,280 ⁽¹⁾ | 405 ⁽¹⁾ | 32.8 |
| | | 80 | 11,230 ⁽¹⁾ | 305 ⁽¹⁾ | 36.8 | 10,600 ⁽¹⁾ | 303 ⁽¹⁾ | 35.0 |
| | | 50 | 7150 ⁽¹⁾ | 185 ⁽¹⁾ | 38.7 | 7150 ⁽¹⁾ | 185 ⁽¹⁾ | 38.8 |
| | | 30 | 4020 ⁽¹⁾ | 101 ⁽¹⁾ | 39.8 | 4050 ⁽¹⁾ | 102 ⁽¹⁾ | 39.7 |
| 8 | 200 | 100 | 26,540 | 720 | 36.9 | 24,010 | 722 | 33.3 |
| | | 50 | 13,910 | 375 | 37.1 | 12,670 | 374 | 33.9 |
| | | 30 | 7720 | 202 | 38.1 | 7860 | 205 | 38.3 |

1. To avoid internal parts damage to the slamshut, the maximum recommended pressure drop (in psi) is equal to 1100 minus 0.075 multiplied by the max C_g for the application.
(Max ΔP= 1100-0.075*C_g)

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Table 11. Type EZHOSX with Standard Cage Wide-Open Flow Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C ₁ | C _g | C _v | C ₁ |
| 1 | 25 | 100 | 582 | 16.95 | 34.34 | 572 | 18.3 | 31.26 |
| | | 80 | 445 | 12.48 | 35.66 | 424 | 12.38 | 34.25 |
| | | 50 | 293 | 8.66 | 33.83 | 255 | 7.59 | 33.60 |
| | | 30 | 178 | 5.51 | 32.30 | 160 | 4.99 | 32.06 |
| 2 | 50 | 100 | 2349 | 55.59 | 42.26 | 2176 | 56.75 | 38.34 |
| | | 80 | 1911 | 54.04 | 35.36 | 1832 | 51.97 | 35.25 |
| | | 50 | 1348 | 34.21 | 39.40 | 1352 | 34.87 | 38.77 |
| | | 30 | 776 | 18.62 | 41.68 | 775 | 19.01 | 40.77 |
| 3 | 80 | 100 | 4805 | 130 | 36.96 | 4533 | 147 | 30.77 |
| | | 80 | 4077 | 110 | 36.98 | 3397 | 100 | 33.89 |
| | | 50 | 2662 | 67.50 | 39.44 | 2134 | 56.46 | 37.80 |
| | | 30 | 1602 | 38.27 | 41.86 | 1381 | 41.05 | 33.64 |
| 4 | 100 | 100 | 7330 | 215 | 34.0 | 7130 | 219 | 32.4 |
| | | 80 | 6100 | 167 | 36.5 | 5930 | 168 | 35.2 |
| | | 50 | 3660 | 96.1 | 38.0 | 3520 | 94.5 | 37.4 |
| | | 30 | 2140 | 58.1 | 36.9 | 2120 | 57.3 | 37.1 |
| 6 | 150 | 100 | 14,348 | 424 | 33.8 | 13,678 | 417 | 32.8 |
| | | 80 | 11,567 | 314 | 36.8 | 10,918 | 312 | 35.0 |
| | | 50 | 7365 | 191 | 38.7 | 7365 | 191 | 38.8 |
| | | 30 | 4141 | 104 | 39.8 | 4172 | 105 | 39.7 |
| 8 | 200 | 100 | 29,510 | 778 | 37.9 | 26,040 | 749 | 34.8 |
| | | 50 | 14,410 | 384 | 37.5 | 14,000 | 402 | 34.8 |
| | | 30 | 7950 | 217 | 36.6 | 8100 | 208 | 38.9 |

Table 12. Type EZHOSX Main Valve with Standard Cage IEC Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | |
|----------------------|-----|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|
| NPS | DN | | X _T | F _D | F _L | X _T | F _D | F _L |
| 1 | 25 | 100 | 0.75 | 0.61 | 0.89 | 0.94 | 0.61 | 0.89 |
| | | 80 | 0.81 | 0.66 | | 0.68 | 0.66 | |
| | | 50 | 0.73 | 0.79 | | 0.26 | 0.79 | |
| | | 30 | 0.65 | 0.81 | | 0.87 | 0.81 | |
| 2 | 50 | 100 | 0.78 | 0.56 | | 0.86 | 0.56 | |
| | | 80 | 0.79 | 0.71 | | 0.92 | 0.71 | |
| | | 50 | 0.98 | 0.71 | | 0.95 | 0.71 | |
| | | 30 | 0.99 | 0.72 | | 0.99 | 0.72 | |
| 3 | 80 | 100 | 0.87 | 0.56 | | 0.59 | 0.56 | |
| | | 80 | 0.87 | 0.70 | | 0.72 | 0.70 | |
| | | 50 | 0.98 | 0.74 | | 0.90 | 0.74 | |
| | | 30 | 0.99 | 0.72 | | 0.71 | 0.72 | |
| 4 | 100 | 100 | 0.73 | 0.61 | | 0.66 | 0.61 | |
| | | 80 | 0.84 | 0.73 | | 0.78 | 0.73 | |
| | | 50 | 0.91 | 0.76 | | 0.88 | 0.76 | |
| | | 30 | 0.86 | 0.77 | | 0.87 | 0.77 | |
| 6 | 150 | 100 | 0.72 | 0.69 | 0.68 | 0.69 | | |
| | | 80 | 0.86 | 0.78 | 0.77 | 0.78 | | |
| | | 50 | 0.95 | 0.61 | 0.95 | 0.61 | | |
| | | 30 | 1.00 | 0.95 | 1.00 | 0.95 | | |
| 8 | 200 | 100 | 0.87 | 0.69 | 0.87 | 0.69 | | |
| | | 50 | 0.87 | 0.78 | 0.87 | 0.78 | | |
| | | 30 | 0.92 | 0.61 | 0.92 | 0.61 | | |

EZH and EZHSO Series

Table 13. Types EZH and EZHSO Main Valve with Whisper Trim™ Cage Regulating Flow Coefficients and Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | | IEC SIZING COEFFICIENTS | | | | F _L |
|----------------------|-----------|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|-------------------------|----------------|-----------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C ₁ | C _g | C _v | C ₁ | 1:1 Line to Body Size | | 2:1 Line to Body Size | | |
| | | | | | | | | | X _T | F _D | X _T | F _D | |
| 2 | 50 | 100 | 1627 | 42.5 | 38.3 | 1539 | 45.9 | 33.5 | 0.82 | 0.03 | 0.71 | 0.03 | 0.89 |
| | | 80 | 1466 | 37.6 | 39.0 | 1389 | 40.7 | 34.1 | 0.90 | 0.03 | 0.74 | 0.03 | |
| | | 50 | 1114 | 28.0 | 39.8 | 1099 | 30.8 | 35.7 | 0.99 | 0.02 | 0.81 | 0.02 | |
| | | 30 | 689 | 16.6 | 41.6 | 695 | 18.4 | 37.7 | 0.99 | 0.02 | 0.90 | 0.02 | |
| 3 | 80 | 100 | 3502 | 103 | 34.1 | 3313 | 108 | 30.8 | 0.59 | 0.02 | 0.60 | 0.02 | |
| | | 80 | 2928 | 81.4 | 36.0 | 2774 | 82.6 | 33.6 | 0.72 | 0.02 | 0.71 | 0.02 | |
| | | 50 | 1934 | 49.3 | 39.2 | 1908 | 51.4 | 37.1 | 0.95 | 0.01 | 0.87 | 0.01 | |
| | | 30 | 1355 | 32.9 | 41.2 | 1366 | 35.0 | 39.0 | 0.99 | 0.01 | 0.96 | 0.01 | |
| 4 | 100 | 100 | 5570 | 179 | 31.1 | 5410 | 178 | 30.4 | 0.61 | 0.02 | 0.59 | 0.02 | |
| | | 80 | 4860 | 148 | 32.8 | 4730 | 146 | 32.4 | 0.67 | 0.02 | 0.66 | 0.02 | |
| | | 50 | 3340 | 93.4 | 35.8 | 3320 | 93.0 | 35.7 | 0.80 | 0.01 | 0.79 | 0.01 | |
| | | 30 | 2080 | 54.3 | 38.3 | 2050 | 55.0 | 37.3 | 0.92 | 0.01 | 0.88 | 0.01 | |
| 6 | 150 | 100 | 12,860 | 375 | 34.3 | 12,410 | 373 | 33.3 | 0.74 | 0.01 | 0.70 | 0.01 | |
| | | 80 | 10,610 | 295 | 35.9 | 10,290 | 293 | 35.1 | 0.82 | 0.01 | 0.78 | 0.01 | |
| | | 50 | 7140 | 191 | 37.4 | 7080 | 191 | 37.1 | 0.88 | 0.01 | 0.87 | 0.01 | |
| | | 30 | 4040 | 102 | 39.8 | 4020 | 102 | 39.6 | 1.00 | 0.01 | 0.99 | 0.01 | |
| 8 | 200 | 100 | 20,620 | 518 | 39.8 | 19,570 | 598 | 32.8 | 1.00 | 0.01 | 0.68 | 0.01 | |
| | | 50 | 13,180 | 333 | 39.6 | 12,850 | 327 | 39.3 | 0.99 | 0.01 | 0.98 | 0.01 | |
| | | 30 | 7590 | 193 | 39.4 | 7550 | 191 | 39.6 | 0.98 | 0.01 | 0.99 | 0.01 | |
| 12 X 6 | 300 X 150 | 100 | 20,000 | 648 | 30.9 | 19,200 | 622 | 30.9 | 0.60 | 0.01 | 0.60 | 0.01 | |
| | | 50 | 13,110 | 330 | 39.8 | 12,720 | 320 | 39.8 | 1.00 | 0.01 | 1.00 | 0.01 | |
| | | 30 | 7570 | 190 | 39.8 | 7420 | 186 | 39.8 | 1.00 | 0.01 | 1.00 | 0.01 | |

Table 14. Types EZH and EZHSO Main Valve with Whisper Trim Cage Wide-Open Flow and Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | | IEC SIZING COEFFICIENTS | | | | F _L |
|----------------------|-----------|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|-------------------------|----------------|-----------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C ₁ | C _g | C _v | C ₁ | 1:1 Line to Body Size | | 2:1 Line to Body Size | | |
| | | | | | | | | | X _T | F _D | X _T | F _D | |
| 2 | 50 | 100 | 1692 | 44.2 | 38.2 | 1600 | 47.7 | 33.5 | 0.82 | 0.03 | 0.71 | 0.03 | 0.89 |
| | | 80 | 1524 | 39.1 | 39.0 | 1444 | 42.3 | 34.1 | 0.90 | 0.03 | 0.74 | 0.03 | |
| | | 50 | 1159 | 29.1 | 39.8 | 1143 | 31.9 | 35.8 | 0.99 | 0.02 | 0.81 | 0.02 | |
| | | 30 | 718 | 17.2 | 41.7 | 722 | 19.2 | 37.6 | 0.99 | 0.02 | 0.90 | 0.02 | |
| 3 | 80 | 100 | 3642 | 107 | 34.1 | 3445 | 112 | 30.7 | 0.59 | 0.02 | 0.60 | 0.02 | |
| | | 80 | 3045 | 84.7 | 35.9 | 2885 | 85.8 | 33.6 | 0.72 | 0.02 | 0.71 | 0.02 | |
| | | 50 | 2011 | 51.3 | 39.2 | 1985 | 53.4 | 37.1 | 0.95 | 0.01 | 0.87 | 0.01 | |
| | | 30 | 1409 | 34.2 | 41.2 | 1421 | 36.3 | 39.1 | 0.99 | 0.01 | 0.96 | 0.01 | |
| 4 | 100 | 100 | 5740 | 184 | 31.0 | 5570 | 183 | 30.5 | 0.61 | 0.02 | 0.59 | 0.02 | |
| | | 80 | 5010 | 152 | 32.7 | 4870 | 150 | 32.4 | 0.67 | 0.02 | 0.66 | 0.02 | |
| | | 50 | 3440 | 96.2 | 35.6 | 3420 | 95.8 | 35.3 | 0.80 | 0.01 | 0.79 | 0.01 | |
| | | 30 | 2140 | 55.9 | 38.1 | 2110 | 56.7 | 37.3 | 0.92 | 0.01 | 0.88 | 0.01 | |
| 6 | 150 | 100 | 13,240 | 386 | 34.3 | 12,790 | 384 | 33.3 | 0.74 | 0.01 | 0.70 | 0.01 | |
| | | 80 | 10,930 | 304 | 35.9 | 10,600 | 302 | 35.1 | 0.82 | 0.01 | 0.78 | 0.01 | |
| | | 50 | 7350 | 197 | 37.4 | 7290 | 197 | 37.0 | 0.88 | 0.01 | 0.87 | 0.01 | |
| | | 30 | 4160 | 105 | 39.7 | 4140 | 105 | 39.5 | 1.00 | 0.01 | 0.99 | 0.01 | |
| 8 | 200 | 100 | 21,230 | 534 | 39.8 | 20,160 | 615 | 32.8 | 1.00 | 0.01 | 0.68 | 0.01 | |
| | | 50 | 13,580 | 343 | 39.6 | 13,240 | 337 | 39.3 | 0.99 | 0.01 | 0.98 | 0.01 | |
| | | 30 | 7820 | 198 | 39.4 | 7770 | 196 | 39.6 | 0.98 | 0.01 | 0.99 | 0.01 | |
| 12 X 6 | 300 X 150 | 100 | 20,600 | 668 | 30.9 | 19,780 | 641 | 30.9 | 0.60 | 0.01 | 0.60 | 0.01 | |
| | | 50 | 13,500 | 340 | 39.8 | 13,100 | 329 | 39.8 | 1.00 | 0.01 | 1.00 | 0.01 | |
| | | 30 | 7800 | 196 | 39.8 | 7640 | 192 | 39.8 | 1.00 | 0.01 | 1.00 | 0.01 | |

EZH and EZHSO Series

Table 15. Type EZHOSX Main Valve with Whisper Trim™ Cage Regulating Flow and Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | | IEC SIZING COEFFICIENTS | | | | F _L |
|----------------------|-----|---------------------|----------------------------|--------------------|----------------|-----------------------------------|---------------------|----------------|-------------------------|----------------|-----------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C _i | C _g | C _v | C _i | 1:1 Line to Body Size | | 2:1 Line to Body Size | | |
| | | | | | | | | | X _T | F _D | X _T | F _D | |
| 2 | 50 | 100 | 1494 | 39.9 | 37.4 | 1516 | 41.0 | 37.0 | 0.89 | 0.03 | 0.87 | 0.03 | 0.89 |
| | | 80 | 1473 | 39.3 | 37.5 | 1482 | 39.5 | 37.5 | 0.89 | 0.03 | 0.89 | 0.03 | |
| | | 50 | 1171 | 30.0 | 39.0 | 1169 | 29.6 | 39.5 | 0.96 | 0.02 | 0.99 | 0.02 | |
| | | 30 | 721 | 17.0 | 42.4 | 718 | 18.2 | 39.4 | 0.99 | 0.02 | 0.98 | 0.02 | |
| 3 | 80 | 100 | 3472 | 102 | 34.1 | 3285 | 107 | 30.8 | 0.73 | 0.02 | 0.59 | 0.02 | |
| | | 80 | 2903 | 80.7 | 36.0 | 2751 | 81.9 | 33.6 | 0.82 | 0.02 | 0.71 | 0.02 | |
| | | 50 | 1918 | 48.9 | 39.2 | 1892 | 51.0 | 37.1 | 0.97 | 0.01 | 0.86 | 0.01 | |
| | | 30 | 1344 | 32.6 | 41.2 | 1354 | 34.7 | 39.0 | 0.99 | 0.01 | 0.96 | 0.01 | |
| 4 | 100 | 100 | 5490 | 167 | 32.9 | 5320 | 168 | 31.7 | 0.68 | 0.02 | 0.63 | 0.02 | |
| | | 80 | 4960 | 144 | 34.4 | 4810 | 141 | 34.1 | 0.74 | 0.02 | 0.73 | 0.02 | |
| | | 50 | 3270 | 89.9 | 36.4 | 3190 | 87.7 | 36.4 | 0.83 | 0.01 | 0.86 | 0.01 | |
| | | 30 | 2040 | 54.4 | 37.5 | 2020 | 53.7 | 37.6 | 0.89 | 0.01 | 0.90 | 0.01 | |
| 6 | 150 | 100 | 12,240 ⁽¹⁾ | 353 ⁽¹⁾ | 34.7 | 11,840 ⁽¹⁾ | 348 ⁽¹⁾ | 34.0 | 0.76 | 0.01 | 0.73 | 0.01 | |
| | | 80 | 9970 ⁽¹⁾ | 275 ⁽¹⁾ | 36.3 | 9650 ⁽¹⁾ | 275 ⁽¹⁾ | 35.0 | 0.83 | 0.01 | 0.78 | 0.01 | |
| | | 50 | 6970 ⁽¹⁾ | 181 ⁽¹⁾ | 38.6 | 6780 ⁽¹⁾ | 180 ⁽¹⁾ | 37.6 | 0.94 | 0.01 | 0.89 | 0.01 | |
| | | 30 | 3990 ⁽¹⁾ | 100 ⁽¹⁾ | 39.8 | 3950 ⁽¹⁾ | 99.9 ⁽¹⁾ | 39.6 | 1.00 | 0.01 | 0.99 | 0.01 | |
| 8 | 200 | 100 | 20,620 | 518 | 39.8 | 19,380 | 598 | 32.4 | 1.00 | 0.01 | 0.68 | 0.01 | |
| | | 50 | 13,180 | 333 | 39.6 | 12,460 | 327 | 38.1 | 0.99 | 0.01 | 0.98 | 0.01 | |
| | | 30 | 7590 | 193 | 39.4 | 7550 | 191 | 39.6 | 0.98 | 0.01 | 0.99 | 0.01 | |

1. To avoid internal parts damage to the slamshut, the maximum recommended pressure drop (in psi) is equal to 1100 minus 0.075 multiplied by the max C_g for the application. (Max ΔP= 1100-0.075*C_g)

Table 16. Type EZHOSX Main Valve with Whisper Trim Cage Wide-Open Flow and Sizing Coefficients

| MAIN VALVE BODY SIZE | | TRIM, % OF CAPACITY | LINE SIZE EQUALS BODY SIZE | | | 2:1 LINE SIZE TO BODY SIZE PIPING | | | IEC SIZING COEFFICIENTS | | | | F _L |
|----------------------|-----|---------------------|----------------------------|----------------|----------------|-----------------------------------|----------------|----------------|-------------------------|----------------|-----------------------|----------------|----------------|
| NPS | DN | | C _g | C _v | C _i | C _g | C _v | C _i | 1:1 Line to Body Size | | 2:1 Line to Body Size | | |
| | | | | | | | | | X _T | F _D | X _T | F _D | |
| 2 | 50 | 100 | 1554 | 41.5 | 37.4 | 1577 | 42.6 | 37.1 | 0.89 | 0.03 | 0.87 | 0.03 | 0.89 |
| | | 80 | 1532 | 40.9 | 37.5 | 1542 | 41.1 | 37.5 | 0.89 | 0.03 | 0.89 | 0.03 | |
| | | 50 | 1218 | 31.2 | 39.0 | 1216 | 30.8 | 39.4 | 0.96 | 0.02 | 0.99 | 0.02 | |
| | | 30 | 750 | 17.7 | 42.3 | 747 | 19.0 | 39.3 | 0.99 | 0.02 | 0.98 | 0.02 | |
| 3 | 80 | 100 | 3611 | 106 | 34.1 | 3416 | 111 | 30.7 | 0.73 | 0.03 | 0.59 | 0.03 | |
| | | 80 | 3020 | 84.0 | 35.9 | 2861 | 85.2 | 33.6 | 0.82 | 0.03 | 0.71 | 0.03 | |
| | | 50 | 1994 | 50.9 | 39.1 | 1968 | 53.0 | 37.1 | 0.97 | 0.02 | 0.86 | 0.02 | |
| | | 30 | 1397 | 33.9 | 41.2 | 1409 | 36.1 | 39.0 | 0.99 | 0.02 | 0.96 | 0.02 | |
| 4 | 100 | 100 | 5650 | 172 | 32.9 | 5480 | 173 | 31.6 | 0.68 | 0.02 | 0.63 | 0.02 | |
| | | 80 | 5110 | 148 | 34.2 | 4950 | 145 | 34.1 | 0.74 | 0.02 | 0.73 | 0.02 | |
| | | 50 | 3370 | 92.6 | 36.3 | 3290 | 89.7 | 36.8 | 0.83 | 0.01 | 0.86 | 0.01 | |
| | | 30 | 2100 | 56.0 | 37.6 | 2080 | 55.3 | 37.6 | 0.89 | 0.01 | 0.90 | 0.01 | |
| 6 | 150 | 100 | 12,610 | 363 | 34.7 | 12,200 | 359 | 34.0 | 0.76 | 0.01 | 0.73 | 0.01 | |
| | | 80 | 10,270 | 283 | 36.3 | 9940 | 284 | 35.0 | 0.83 | 0.01 | 0.78 | 0.01 | |
| | | 50 | 7190 | 186 | 38.6 | 6990 | 186 | 37.6 | 0.94 | 0.01 | 0.89 | 0.01 | |
| | | 30 | 4120 | 104 | 39.8 | 4080 | 103 | 39.8 | 1.00 | 0.01 | 0.99 | 0.01 | |
| 8 | 200 | 100 | 22,250 | 559 | 39.8 | 19,960 | 627 | 31.8 | 1.00 | 0.01 | 0.64 | 0.01 | |
| | | 50 | 13,580 | 358 | 37.9 | 12,840 | 332 | 38.7 | 0.91 | 0.01 | 0.95 | 0.01 | |
| | | 30 | 7820 | 209 | 37.4 | 7770 | 204 | 38.1 | 0.89 | 0.01 | 0.92 | 0.01 | |

EZH and EZHSO Series

Table 17. Capacities for Types EZH and EZHSO with PRX Series Pilot and Type SA/2 Pilot Supply Filter Regulator

| INLET PRESSURE | | OUTLET PRESSURE | | CAPACITIES IN THOUSANDS OF SCFH / Nm ³ /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS USING 1:1 LINE SIZE TO BODY SIZE PIPING | | | | | | | | | | | | | |
|----------------|------|-----------------|------|--|--------------------|---------------|--------------------|---------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|---------------------------|--------------------|
| | | | | NPS 1 / DN 25 | | NPS 2 / DN 50 | | NPS 3 / DN 80 | | NPS 4 / DN 100 | | NPS 6 / DN 150 | | NPS 8 / DN 200 | | NPS 12 X 6 / DN 300 X 150 | |
| psig | bar | psig | bar | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h |
| 30 | 2.1 | 15 | 1.0 | 27 | 0.7 | 112 | 3.0 | 229 | 6.1 | 365 | 9.8 | 745 | 19.9 | 1233 | 33.0 | 1403 | 37.6 |
| 40 | 2.8 | 15 | 1.0 | 37 | 0.9 | 149 | 4.0 | 309 | 8.2 | 483 | 13.0 | 980 | 26.2 | 1663 | 44.6 | 1896 | 50.8 |
| | | 25 | 1.7 | 31 | 0.8 | 128 | 3.4 | 260 | 6.9 | 420 | 11.3 | 858 | 23.0 | 1403 | 37.6 | 1596 | 42.7 |
| 50 | 3.4 | 15 | 1.0 | 45 | 1.2 | 183 | 4.9 | 382 | 10.2 | 588 | 15.8 | 1189 | 31.8 | 2056 | 55.1 | 2347 | 62.9 |
| | | 25 | 1.7 | 41 | 1.1 | 169 | 4.5 | 347 | 9.3 | 550 | 14.8 | 1118 | 29.9 | 1870 | 50.1 | 2130 | 57.1 |
| | | 35 | 2.4 | 35 | 0.9 | 142 | 3.8 | 288 | 7.7 | 469 | 12.6 | 959 | 25.7 | 1556 | 41.7 | 1768 | 47.4 |
| 60 | 4.1 | 16 | 1.1 | 53 | 1.4 | 214 | 5.7 | 450 | 12.0 | 687 | 18.4 | 1384 | 37.1 | 2420 | 64.8 | 2765 | 74.1 |
| | | 20 | 1.3 | 52 | 1.3 | 211 | 5.6 | 440 | 11.8 | 678 | 18.2 | 1371 | 36.7 | 2368 | 63.5 | 2703 | 72.4 |
| | | 30 | 2.0 | 48 | 1.3 | 197 | 5.3 | 406 | 10.8 | 641 | 17.2 | 1302 | 34.9 | 2186 | 58.6 | 2490 | 66.7 |
| | | 45 | 3.1 | 38 | 1.0 | 156 | 4.2 | 314 | 8.4 | 513 | 13.8 | 1051 | 28.2 | 1695 | 45.4 | 1926 | 51.6 |
| 75 | 5.2 | 22 | 1.5 | 63 | 1.7 | 257 | 6.9 | 541 | 14.5 | 825 | 22.1 | 1662 | 44.5 | 2908 | 77.9 | 3322 | 89.0 |
| | | 30 | 2.0 | 61 | 1.6 | 250 | 6.7 | 520 | 13.9 | 806 | 21.6 | 1632 | 43.7 | 2798 | 75.0 | 3192 | 85.5 |
| | | 40 | 2.7 | 58 | 1.5 | 235 | 6.3 | 483 | 12.9 | 764 | 20.5 | 1553 | 41.6 | 2601 | 69.7 | 2963 | 79.4 |
| | | 60 | 4.1 | 42 | 1.1 | 174 | 4.6 | 349 | 9.3 | 574 | 15.4 | 1177 | 31.5 | 1886 | 50.5 | 2142 | 57.4 |
| 100 | 6.9 | 32 | 2.2 | 81 | 2.2 | 329 | 8.8 | 692 | 18.5 | 1055 | 28.3 | 2126 | 57.0 | 3722 | 99.7 | 4251 | 114 |
| | | 40 | 2.7 | 79 | 2.1 | 322 | 8.6 | 672 | 18.0 | 1038 | 27.9 | 2099 | 56.2 | 3616 | 96.9 | 4126 | 111 |
| | | 50 | 3.4 | 76 | 2.0 | 309 | 8.3 | 639 | 17.1 | 1003 | 26.9 | 2035 | 54.5 | 3441 | 92.2 | 3921 | 105 |
| | | 85 | 5.8 | 49 | 1.3 | 200 | 5.3 | 401 | 10.7 | 663 | 17.8 | 1362 | 36.5 | 2167 | 58.1 | 2460 | 65.9 |
| 125 | 8.6 | 43 | 2.9 | 99 | 2.7 | 400 | 10.7 | 841 | 22.6 | 1283 | 34.4 | 2588 | 69.3 | 4523 | 121 | 5166 | 138 |
| | | 50 | 3.4 | 97 | 2.6 | 394 | 10.6 | 824 | 22.1 | 1269 | 34.1 | 2565 | 68.7 | 4432 | 119 | 5058 | 136 |
| | | 75 | 5.2 | 88 | 2.4 | 356 | 9.5 | 730 | 19.6 | 1163 | 31.2 | 2368 | 63.4 | 3939 | 106 | 4484 | 120 |
| | | 110 | 7.5 | 55 | 1.4 | 224 | 6.0 | 447 | 12.0 | 742 | 19.9 | 1525 | 40.9 | 2417 | 64.8 | 2743 | 73.5 |
| 150 | 10.3 | 52 | 3.5 | 117 | 3.1 | 473 | 12.7 | 994 | 26.6 | 1515 | 40.7 | 3054 | 81.8 | 5348 | 143 | 6109 | 164 |
| | | 75 | 5.2 | 110 | 2.9 | 449 | 12.0 | 929 | 24.9 | 1453 | 39.0 | 2947 | 79.0 | 5004 | 134 | 5704 | 153 |
| | | 95 | 6.5 | 101 | 2.7 | 411 | 11.0 | 841 | 22.5 | 1345 | 36.1 | 2740 | 73.4 | 4535 | 122 | 5162 | 138 |
| | | 130 | 8.9 | 68 | 1.8 | 278 | 7.5 | 557 | 14.9 | 923 | 24.8 | 1895 | 50.8 | 3011 | 80.7 | 3418 | 91.6 |
| 200 | 13.8 | 73 | 5.0 | 152 | 4.1 | 616 | 16.5 | 1295 | 34.7 | 1974 | 53.0 | 3979 | 107 | 6963 | 187 | 7953 | 213 |
| | | 100 | 6.9 | 145 | 3.9 | 588 | 15.8 | 1219 | 32.7 | 1903 | 51.1 | 3858 | 103 | 6564 | 176 | 7484 | 200 |
| | | 125 | 8.6 | 133 | 3.6 | 544 | 14.6 | 1113 | 29.8 | 1775 | 47.7 | 3616 | 96.9 | 6004 | 161 | 6835 | 183 |
| | | 185 | 12.8 | 69 | 1.8 | 283 | 7.6 | 563 | 15.1 | 940 | 25.2 | 1935 | 51.8 | 3046 | 81.6 | 3456 | 92.6 |
| 300 | 20.7 | 115 | 7.9 | 222 | 6.0 | 902 | 24.2 | 1895 | 50.8 | 2892 | 77.6 | 5830 | 156 | 10,193 | 273 | 11,641 | 312 |
| | | 150 | 10.3 | 213 | 5.7 | 866 | 23.2 | 1798 | 48.2 | 2802 | 75.2 | 5678 | 152 | 9683 | 259 | 11,042 | 296 |
| | | 200 | 13.8 | 190 | 5.1 | 773 | 20.7 | 1579 | 42.3 | 2532 | 67.9 | 5162 | 138 | 8517 | 228 | 9691 | 260 |
| | | 275 | 19.0 | 107 | 2.9 | 440 | 11.8 | 877 | 23.5 | 1462 | 39.2 | 3007 | 80.5 | 4741 | 127 | 5379 | 144 |
| 400 | 27.6 | 155 | 10.7 | 293 | 7.9 | 1189 | 31.9 | 2500 | 67.0 | 3813 | 102 | 7685 | 206 | 13,446 | 360 | 15,357 | 411 |
| | | 200 | 13.8 | 282 | 7.6 | 1145 | 30.7 | 2377 | 63.7 | 3701 | 99.3 | 7497 | 201 | 12,801 | 343 | 14,598 | 391 |
| | | 250 | 17.2 | 261 | 7.0 | 1061 | 28.4 | 2176 | 58.3 | 3463 | 92.9 | 7048 | 189 | 11,733 | 314 | 13,358 | 358 |
| | | 300 | 20.7 | 227 | 6.1 | 926 | 24.8 | 1876 | 50.3 | 3047 | 81.8 | 6230 | 167 | 10,126 | 271 | 11,511 | 308 |
| | | 350 | 24.1 | 171 | 4.6 | 698 | 18.7 | 1399 | 37.5 | 2316 | 62.2 | 4757 | 127 | 7,559 | 202 | 8,580 | 230 |
| 500 | 34.5 | 196 | 13.5 | 364 | 9.8 | 1476 | 39.6 | 3103 | 83.2 | 4732 | 127 | 9538 | 256 | 16,687 | 447 | 19,060 | 511 |
| | | 250 | 17.2 | 350 | 9.4 | 1423 | 38.1 | 2956 | 79.2 | 4600 | 123 | 9315 | 250 | 15,918 | 426 | 18,154 | 486 |
| | | 300 | 20.7 | 330 | 8.8 | 1345 | 36 | 2765 | 74.1 | 4379 | 117 | 8905 | 239 | 14,905 | 399 | 16,977 | 455 |
| | | 400 | 27.6 | 259 | 7 | 1058 | 28.4 | 2134 | 57.2 | 3492 | 93.6 | 7153 | 192 | 11,522 | 309 | 13,091 | 351 |
| 600 | 41.4 | 250 | 17.2 | 432 | 11.6 | 1752 | 47 | 3675 | 98.5 | 5628 | 151 | 11,356 | 304 | 19,771 | 530 | 22,575 | 605 |
| | | 300 | 20.7 | 419 | 11.2 | 1701 | 45.6 | 3535 | 94.7 | 5498 | 147 | 11,134 | 298 | 19,035 | 510 | 21,709 | 582 |
| | | 350 | 24.1 | 400 | 10.7 | 1626 | 43.6 | 3351 | 89.8 | 5289 | 142 | 10,748 | 288 | 18,058 | 484 | 20,572 | 551 |
| | | 450 | 31 | 338 | 9.1 | 1378 | 37 | 2793 | 74.9 | 4535 | 122 | 9273 | 248 | 15,079 | 404 | 17,142 | 459 |
| | | 500 | 34.5 | 288 | 7.7 | 1176 | 31.5 | 2364 | 63.4 | 3889 | 104 | 7976 | 214 | 12,772 | 342 | 14,505 | 389 |
| 700 | 48.3 | 250 | 17.2 | 510 | 13.7 | 2068 | 55.4 | 4366 | 117 | 6607 | 177 | 13,294 | 356 | 23,472 | 629 | 26,824 | 719 |
| | | 300 | 20.7 | 501 | 13.4 | 2032 | 54.5 | 4256 | 114 | 6530 | 175 | 13,181 | 353 | 22,898 | 613 | 26,142 | 700 |
| | | 350 | 24.1 | 487 | 13.1 | 1979 | 53 | 4114 | 110 | 6397 | 171 | 12,952 | 347 | 22,152 | 593 | 25,264 | 677 |
| | | 400 | 27.6 | 469 | 12.6 | 1907 | 51.1 | 3934 | 105 | 6196 | 166 | 12,583 | 337 | 21,200 | 568 | 24,155 | 647 |
| | | 550 | 37.9 | 371 | 10 | 1514 | 40.6 | 3058 | 82 | 4992 | 134 | 10,221 | 274 | 16,513 | 442 | 18,764 | 503 |
| | | 600 | 41.4 | 314 | 8.4 | 1283 | 34.4 | 2575 | 69 | 4251 | 114 | 8725 | 234 | 13,913 | 373 | 15,796 | 423 |

- continued -

EZH and EZHSO Series

Table 17. Capacities for Types EZH and EZHSO with PRX Series Pilot and Type SA/2 Pilot Supply Filter Regulator (continued)

| INLET PRESSURE | | OUTLET PRESSURE | | CAPACITIES IN THOUSANDS OF SCFH / Nm ³ /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS USING 1:1 LINE SIZE TO BODY SIZE PIPING | | | | | | | | | | | | | |
|----------------|------|-----------------|------|--|--------------------|---------------|--------------------|---------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|---------------------------|--------------------|
| | | | | NPS 1 / DN 25 | | NPS 2 / DN 50 | | NPS 3 / DN 80 | | NPS 4 / DN 100 | | NPS 6 / DN 150 | | NPS 8 / DN 200 | | NPS 12 X 6 / DN 300 X 150 | |
| psig | bar | psig | bar | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h |
| 800 | 55.2 | 300 | 20.7 | 579 | 15.5 | 2349 | 63 | 4951 | 133 | 7517 | 202 | 15,135 | 405 | 26,623 | 713 | 30,418 | 815 |
| | | 350 | 24.1 | 569 | 15.2 | 2311 | 62 | 4836 | 130 | 7431 | 199 | 15,005 | 402 | 26,023 | 697 | 29,706 | 796 |
| | | 400 | 27.6 | 556 | 14.9 | 2257 | 60.5 | 4693 | 126 | 7295 | 196 | 14,770 | 396 | 25,268 | 677 | 28,820 | 772 |
| | | 450 | 31 | 538 | 14.4 | 2187 | 58.6 | 4517 | 121 | 7100 | 190 | 14,413 | 386 | 24,334 | 652 | 27,731 | 743 |
| | | 500 | 34.5 | 515 | 13.8 | 2096 | 56.2 | 4301 | 115 | 6835 | 184 | 13,910 | 373 | 23,186 | 621 | 26,401 | 707 |
| | | 609 | 42 | 441 | 11.8 | 1800 | 48.2 | 3644 | 97.7 | 5926 | 159 | 12,121 | 325 | 19,674 | 527 | 22,363 | 599 |
| 650 | 44.8 | 401 | 10.7 | 1639 | 44 | 3302 | 88.5 | 5414 | 145 | 11,094 | 297 | 17,836 | 478 | 20,261 | 543 | | |
| 900 | 62.1 | 350 | 24.1 | 649 | 17.4 | 2630 | 70.5 | 5535 | 148 | 8424 | 226 | 16,972 | 455 | 29,767 | 797 | 34,004 | 911 |
| | | 400 | 27.6 | 638 | 17.1 | 2589 | 69.4 | 5416 | 145 | 8331 | 224 | 16,827 | 451 | 29,145 | 781 | 33,268 | 891 |
| | | 500 | 34.5 | 606 | 16.2 | 2466 | 66.1 | 5098 | 137 | 8003 | 214 | 16,241 | 435 | 27,465 | 736 | 31,302 | 839 |
| | | 600 | 41.4 | 557 | 15 | 2271 | 60.9 | 4641 | 124 | 7428 | 199 | 15,141 | 406 | 25,031 | 671 | 28,487 | 763 |
| | | 800 | 55.2 | 361 | 9.7 | 1475 | 39.5 | 2952 | 79.1 | 4897 | 131 | 10,062 | 270 | 15,955 | 427 | 18,108 | 485 |
| 1000 | 69 | 350 | 24.1 | 726 | 19.5 | 2942 | 79 | 6219 | 167 | 9391 | 252 | 18,886 | 506 | 33,433 | 896 | 38,214 | 1024 |
| | | 400 | 27.6 | 718 | 19.2 | 2910 | 78 | 6118 | 164 | 9330 | 250 | 18,805 | 504 | 32,906 | 882 | 37,584 | 1007 |
| | | 500 | 34.5 | 693 | 18.6 | 2814 | 75.4 | 5851 | 157 | 9092 | 244 | 18,406 | 493 | 31,502 | 844 | 35,930 | 963 |
| | | 600 | 41.4 | 654 | 17.5 | 2662 | 71.3 | 5477 | 147 | 8665 | 232 | 17,615 | 472 | 29,519 | 791 | 33,624 | 901 |
| | | 800 | 55.2 | 514 | 13.8 | 2097 | 56.2 | 4231 | 113 | 6922 | 186 | 14,179 | 380 | 22,851 | 612 | 25,962 | 696 |
| 1100 | 75.8 | 350 | 24.1 | 802 | 21.5 | 3248 | 87 | 6894 | 185 | 10,342 | 277 | 20,766 | 556 | 37,045 | 992 | 42,363 | 1135 |
| | | 450 | 31 | 786 | 21.1 | 3190 | 85.5 | 6700 | 180 | 10,234 | 275 | 20,636 | 553 | 36,041 | 966 | 41,160 | 1103 |
| | | 500 | 34.5 | 775 | 20.8 | 3147 | 84.3 | 6576 | 176 | 10,131 | 272 | 20,470 | 548 | 35,388 | 948 | 40,388 | 1082 |
| | | 600 | 41.4 | 744 | 20 | 3025 | 81.1 | 6259 | 168 | 9807 | 263 | 19,891 | 533 | 33,718 | 903 | 38,435 | 1030 |
| | | 800 | 55.2 | 635 | 17 | 2589 | 69.4 | 5261 | 141 | 8504 | 228 | 17,374 | 465 | 28,390 | 761 | 32,284 | 865 |
| | | 1000 | 68.9 | 402 | 10.8 | 1646 | 44.1 | 3287 | 88.1 | 5469 | 147 | 11,245 | 301 | 17,766 | 476 | 20,159 | 540 |
| 1200 | 82.7 | 350 | 24.1 | 877 | 24 | 3551 | 95.2 | 7562 | 203 | 11,281 | 302 | 22,620 | 606 | 40,621 | 1088 | 46,471 | 1245 |
| | | 500 | 34.5 | 855 | 23 | 3470 | 93 | 7282 | 195 | 11,137 | 298 | 22,465 | 602 | 39,174 | 1049 | 44,733 | 1198 |
| | | 600 | 41.4 | 829 | 22.2 | 3370 | 90.3 | 7008 | 188 | 10,888 | 292 | 22,043 | 591 | 37,735 | 1011 | 43,040 | 1153 |
| | | 800 | 55.2 | 741 | 19.9 | 3020 | 80.9 | 6172 | 165 | 9876 | 265 | 20,129 | 539 | 33,288 | 892 | 37,883 | 1015 |
| | | 1100 | 75.8 | 422 | 11.3 | 1724 | 46.2 | 3442 | 92.2 | 5734 | 154 | 11,792 | 316 | 18,607 | 498 | 21,111 | 566 |
| 1300 | 89.6 | 350 | 24.1 | 952 | 26 | 3852 | 103 | 8224 | 220 | 12,211 | 327 | 24,457 | 655 | 44,169 | 1183 | 50,547 | 1354 |
| | | 500 | 34.5 | 934 | 25 | 3786 | 101 | 7976 | 214 | 12,121 | 325 | 24,412 | 654 | 42,889 | 1149 | 48,999 | 1313 |
| | | 600 | 41.4 | 912 | 24.4 | 3704 | 99.3 | 7735 | 207 | 11,930 | 320 | 24,110 | 646 | 41,627 | 1115 | 47,505 | 1273 |
| | | 800 | 55.2 | 839 | 22.5 | 3414 | 91.5 | 7014 | 188 | 11,125 | 298 | 22,628 | 606 | 37,812 | 1013 | 43,061 | 1154 |
| | | 1160 | 80 | 513 | 13.7 | 2096 | 56.2 | 4193 | 112 | 6958 | 187 | 14,299 | 383 | 22,661 | 607 | 25,718 | 689 |
| 1400 | 96.5 | 350 | 24.1 | 1026 | 27.5 | 4151 | 111 | 8883 | 238 | 13,140 | 352 | 26,280 | 704 | 47,696 | 1278 | 54,601 | 1463 |
| | | 500 | 34.5 | 1011 | 27.1 | 4098 | 110 | 8660 | 232 | 13,088 | 351 | 26,325 | 705 | 46,552 | 1247 | 53,206 | 1425 |
| | | 600 | 41.4 | 993 | 26.6 | 4029 | 108 | 8444 | 226 | 12,942 | 347 | 26,118 | 700 | 45,432 | 1217 | 51,872 | 1390 |
| | | 800 | 55.2 | 930 | 25 | 3785 | 101 | 7812 | 209 | 12,294 | 330 | 24,961 | 669 | 42,094 | 1128 | 47,966 | 1285 |
| | | 1160 | 80 | 674 | 18.1 | 2753 | 73.8 | 5540 | 148 | 9102 | 244 | 18,663 | 500 | 29,923 | 802 | 33,986 | 910 |
| 1480 | 102 | 350 | 24.1 | 1085 | 29.1 | 4388 | 118 | 9408 | 252 | 13,883 | 372 | 27,731 | 743 | 50,507 | 1353 | 57,831 | 1549 |
| | | 500 | 34.5 | 1072 | 28.7 | 4344 | 116 | 9201 | 247 | 13,852 | 371 | 27,837 | 746 | 49,455 | 1325 | 56,539 | 1515 |
| | | 600 | 41.4 | 1056 | 28.3 | 4284 | 115 | 9004 | 241 | 13,737 | 369 | 27,692 | 742 | 48,428 | 1297 | 55,311 | 1482 |
| | | 800 | 55.2 | 1001 | 26.8 | 4070 | 109 | 8428 | 226 | 13,188 | 354 | 26,744 | 716 | 45,396 | 1216 | 51,751 | 1386 |
| | | 1160 | 80 | 782 | 21 | 3191 | 85.5 | 6447 | 173 | 10,518 | 282 | 21,532 | 577 | 34,812 | 933 | 39,561 | 1060 |

EZH and EZHSO Series

Table 18. Capacities for Type EZHOSX with PRX Series Pilot and Type SA/2 Pilot Supply Filter Regulator

| INLET PRESSURE | | OUTLET PRESSURE | | CAPACITIES IN THOUSANDS OF SCFH / Nm ³ /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS USING 1:1 LINE SIZE TO BODY SIZE PIPING | | | | | | | | | | | |
|----------------|------|-----------------|------|--|--------------------|---------------|--------------------|---------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
| | | | | NPS 1 / DN 25 | | NPS 2 / DN 50 | | NPS 3 / DN 80 | | NPS 4 / DN 100 | | NPS 6 / DN 150 | | NPS 8 / DN 200 | |
| psig | bar | psig | bar | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h |
| 30 | 2.1 | 15 | 1.0 | 27 | 0.7 | 108 | 2.9 | 214 | 5.7 | 351 | 9.4 | 686 | 18.4 | 1233 | 33.0 |
| 40 | 2.8 | 15 | 1.0 | 36 | 0.9 | 145 | 3.9 | 289 | 7.7 | 467 | 12.5 | 914 | 24.5 | 1663 | 44.6 |
| | | 25 | 1.7 | 31 | 0.8 | 124 | 3.3 | 244 | 6.5 | 401 | 10.8 | 785 | 21.0 | 1403 | 37.6 |
| 50 | 3.5 | 15 | 1.0 | 45 | 1.2 | 179 | 4.8 | 357 | 9.5 | 572 | 15.4 | 1120 | 30.0 | 2056 | 55.1 |
| | | 25 | 1.7 | 41 | 1.1 | 164 | 4.4 | 325 | 8.7 | 529 | 14.2 | 1035 | 27.7 | 1870 | 50.1 |
| | | 35 | 2.4 | 35 | 0.9 | 138 | 3.6 | 270 | 7.2 | 447 | 12.0 | 873 | 23.4 | 1556 | 41.7 |
| 60 | 4.1 | 16 | 1.1 | 52 | 1.4 | 210 | 5.6 | 421 | 11.2 | 669 | 18.0 | 1312 | 35.1 | 2420 | 64.8 |
| | | 20 | 1.3 | 52 | 1.4 | 206 | 5.5 | 412 | 11.0 | 659 | 17.7 | 1291 | 34.6 | 2368 | 63.5 |
| | | 30 | 2.0 | 48 | 1.2 | 192 | 5.1 | 380 | 10.1 | 617 | 16.6 | 1208 | 32.4 | 2186 | 58.6 |
| | | 45 | 3.1 | 38 | 1.0 | 150 | 4.0 | 294 | 7.9 | 489 | 13.1 | 955 | 25.6 | 1695 | 45.4 |
| 75 | 5.8 | 22 | 1.5 | 63 | 1.7 | 252 | 6.7 | 505 | 13.5 | 804 | 21.6 | 1576 | 42.2 | 2908 | 77.9 |
| | | 30 | 2.0 | 61 | 1.6 | 244 | 6.5 | 486 | 13.0 | 781 | 21.0 | 1530 | 41.0 | 2798 | 75.0 |
| | | 40 | 2.7 | 57 | 1.5 | 228 | 6.1 | 452 | 12.1 | 735 | 19.7 | 1439 | 38.5 | 2601 | 69.7 |
| | | 60 | 4.1 | 42 | 1.1 | 167 | 4.4 | 327 | 8.7 | 545 | 14.6 | 1065 | 28.5 | 1886 | 50.5 |
| 100 | 6.9 | 32 | 2.2 | 81 | 2.2 | 323 | 8.6 | 647 | 17.3 | 1029 | 27.6 | 2016 | 54.0 | 3722 | 99.7 |
| | | 40 | 2.7 | 79 | 2.1 | 315 | 8.4 | 628 | 16.8 | 1008 | 27.0 | 1973 | 52.9 | 3616 | 96.9 |
| | | 50 | 3.4 | 75 | 2.0 | 301 | 8.0 | 598 | 16.0 | 968 | 26.0 | 1895 | 50.8 | 3441 | 92.2 |
| | | 85 | 5.8 | 49 | 1.3 | 193 | 5.1 | 376 | 10.1 | 629 | 16.9 | 1228 | 32.9 | 2167 | 58.1 |
| 125 | 8.6 | 43 | 2.9 | 98 | 2.6 | 392 | 10.5 | 786 | 21.1 | 1251 | 33.5 | 2452 | 65.7 | 4523 | 121.2 |
| | | 50 | 3.4 | 96 | 2.5 | 386 | 10.3 | 770 | 20.6 | 1233 | 33.0 | 2415 | 64.7 | 4432 | 118.7 |
| | | 75 | 5.1 | 87 | 2.3 | 346 | 9.2 | 684 | 18.3 | 1117 | 30.0 | 2186 | 58.5 | 3939 | 105.5 |
| | | 110 | 7.5 | 54 | 1.4 | 215 | 5.7 | 420 | 11.2 | 703 | 18.8 | 1372 | 36.8 | 2417 | 64.8 |
| 150 | 10.3 | 52 | 3.5 | 116 | 3.1 | 464 | 12.4 | 929 | 24.9 | 1478 | 39.6 | 2897 | 77.6 | 5348 | 143.3 |
| | | 75 | 5.1 | 110 | 2.9 | 437 | 11.7 | 869 | 23.3 | 1405 | 37.7 | 2750 | 73.7 | 5004 | 134.0 |
| | | 95 | 6.5 | 100 | 2.7 | 399 | 10.7 | 788 | 21.1 | 1290 | 34.6 | 2522 | 67.6 | 4535 | 121.5 |
| | | 130 | 8.9 | 68 | 1.8 | 268 | 7.2 | 523 | 14.0 | 875 | 23.5 | 1708 | 45.8 | 3011 | 80.7 |
| 200 | 13.8 | 73 | 5.0 | 151 | 4.0 | 604 | 16.2 | 1210 | 32.4 | 1925 | 51.6 | 3773 | 101 | 6963 | 187 |
| | | 100 | 6.9 | 144 | 3.9 | 573 | 15.4 | 1140 | 30.6 | 1841 | 49.3 | 3604 | 96.5 | 6564 | 175.9 |
| | | 125 | 8.6 | 133 | 3.6 | 528 | 14.2 | 1043 | 28.0 | 1705 | 45.7 | 3334 | 89.3 | 6004 | 160.8 |
| | | 185 | 12.8 | 69 | 1.8 | 272 | 7.3 | 529 | 14.1 | 889 | 23.8 | 1735 | 46.5 | 3046 | 81.6 |
| 300 | 20.7 | 115 | 7.9 | 221 | 5.9 | 884 | 23.7 | 1771 | 47.5 | 2819 | 75.7 | 5525 | 148 | 10,193 | 273 |
| | | 150 | 10.3 | 212 | 5.7 | 845 | 22.6 | 1682 | 45.1 | 2712 | 72.8 | 5310 | 142 | 9683 | 259 |
| | | 200 | 13.8 | 188 | 5.0 | 750 | 20.1 | 1479 | 39.6 | 2426 | 65.1 | 4744 | 127 | 8517 | 228 |
| | | 275 | 19.0 | 107 | 2.9 | 422 | 11.3 | 823 | 22.1 | 1383 | 37.1 | 2699 | 72.3 | 4741 | 127.0 |
| 400 | 27.6 | 155 | 10.7 | 291 | 7.8 | 1166 | 31.2 | 2337 | 62.6 | 3718 | 99.8 | 7286 | 195 | 13,446 | 360 |
| | | 200 | 13.8 | 280 | 7.5 | 1117 | 30.0 | 2224 | 59.6 | 3583 | 96.2 | 7016 | 188 | 12,801 | 343 |
| | | 250 | 17.2 | 259 | 6.9 | 1031 | 27.6 | 2038 | 54.6 | 3327 | 89.3 | 6508 | 174 | 11,733 | 314 |
| | | 300 | 20.7 | 225 | 6.0 | 895 | 24.0 | 1758 | 47.1 | 2907 | 78.0 | 5681 | 152 | 10,126 | 271 |
| 500 | 34.5 | 350 | 24.1 | 170 | 4.6 | 672 | 18.0 | 1312 | 35.2 | 2196 | 58.9 | 4287 | 115 | 7559 | 202 |
| | | 196 | 13.5 | 361 | 9.7 | 1447 | 38.8 | 2900 | 77.7 | 4614 | 124 | 9042 | 242 | 16,687 | 447 |
| | | 250 | 17.2 | 348 | 9.3 | 1389 | 37.2 | 2766 | 74.1 | 4454 | 119 | 8721 | 234 | 15,918 | 426 |
| | | 300 | 20.7 | 328 | 8.8 | 1308 | 35.1 | 2589 | 69.4 | 4215 | 113 | 8246 | 221 | 14,905 | 399 |
| 400 | 27.6 | 257 | 6.9 | 1021 | 27.4 | 2001 | 53.6 | 3323 | 89.2 | 6492 | 174 | 11,522 | 309 | | |

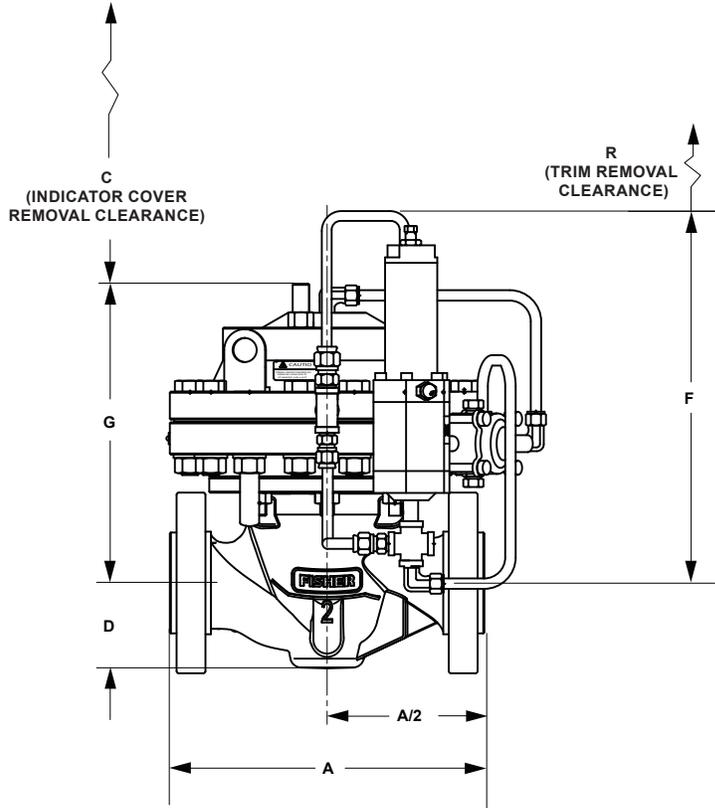
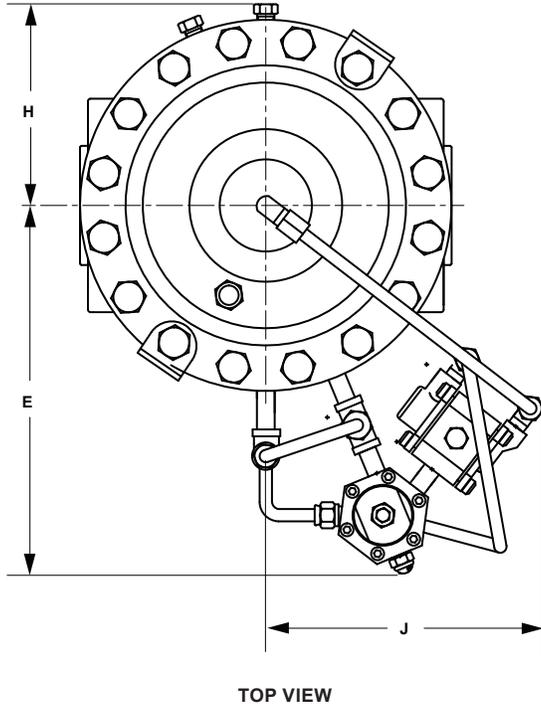
- continued -

EZH and EZHSO Series

Table 18. Capacities for Type EZHOSX with PRX Series Pilot and Type SA/2 Pilot Supply Filter Regulator (continued)

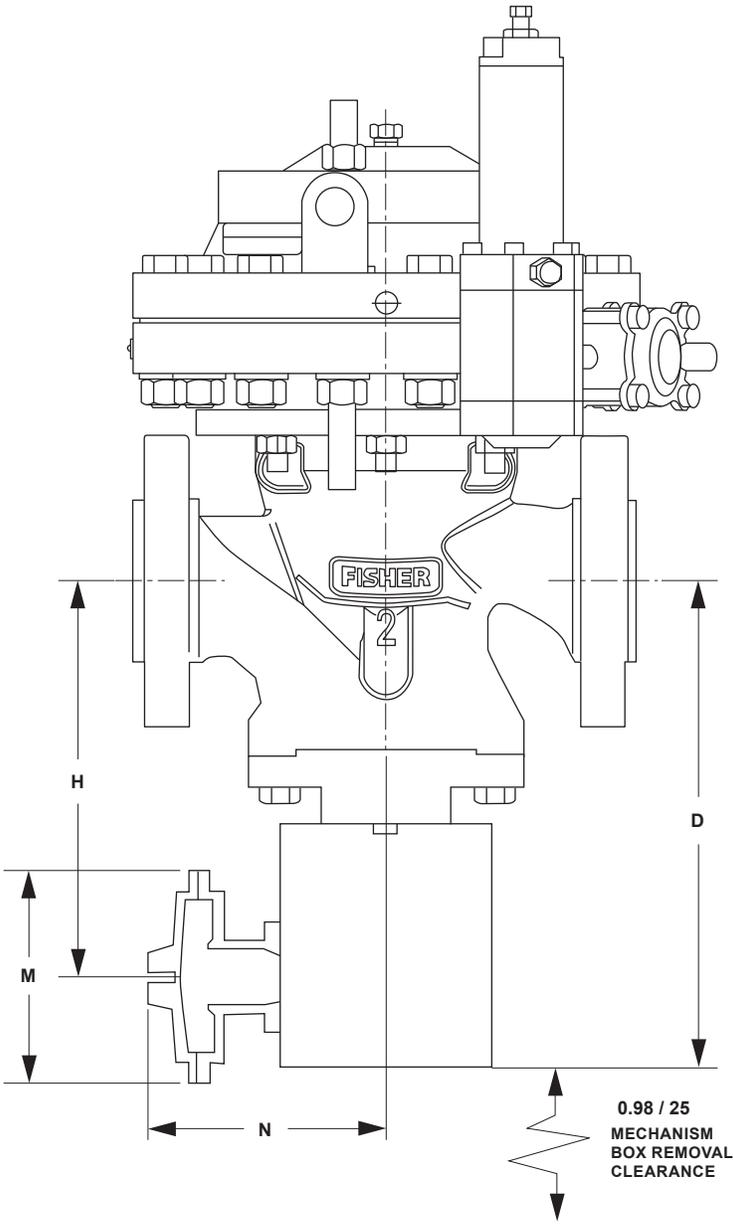
| INLET PRESSURE | | OUTLET PRESSURE | | CAPACITIES IN THOUSANDS OF SCFH / Nm ³ /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS USING 1:1 LINE SIZE TO BODY SIZE PIPING | | | | | | | | | | | |
|----------------|------|-----------------|------|--|--------------------|---------------|--------------------|---------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
| | | | | NPS 1 / DN 25 | | NPS 2 / DN 50 | | NPS 3 / DN 80 | | NPS 4 / DN 100 | | NPS 6 / DN 150 | | NPS 8 / DN 200 | |
| psig | bar | psig | bar | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h | SCFH | Nm ³ /h |
| 600 | 41.4 | 250 | 17.2 | 429 | 11.5 | 1717 | 46 | 3436 | 92.1 | 5480 | 147 | 10,737 | 288 | 19,771 | 530 |
| | | 300 | 20.7 | 416 | 11.1 | 1661 | 44.5 | 3307 | 88.6 | 5325 | 143 | 10,426 | 279 | 19,035 | 510 |
| | | 350 | 24.1 | 397 | 10.6 | 1583 | 42.4 | 3137 | 84.1 | 5097 | 137 | 9973 | 267 | 18,058 | 484 |
| | | 450 | 31 | 335 | 9 | 1333 | 35.7 | 2618 | 70.2 | 4328 | 116 | 8458 | 227 | 15,079 | 404 |
| | | 500 | 34.5 | 286 | 7.7 | 1133 | 30.4 | 2217 | 59.4 | 3695 | 99 | 7217 | 193 | 12,772 | 342 |
| 700 | 48.3 | 250 | 17.2 | 507 | 13.6 | 2031 | 54.4 | 4079 | 109 | 6460 | 173 | 12,664 | 339 | 23,472 | 629 |
| | | 300 | 20.7 | 497 | 13.3 | 1990 | 53.4 | 3979 | 107 | 6354 | 170 | 12,449 | 333 | 22,898 | 613 |
| | | 350 | 24.1 | 484 | 13 | 1933 | 51.8 | 3849 | 103 | 6196 | 166 | 12,131 | 325 | 22,152 | 593 |
| | | 400 | 27.6 | 465 | 12.5 | 1857 | 49.8 | 3683 | 98.7 | 5975 | 160 | 11,692 | 313 | 21,200 | 568 |
| | | 550 | 37.4 | 368 | 9.9 | 1462 | 39.2 | 2867 | 77 | 4755 | 127 | 9291 | 249 | 16,513 | 442 |
| 600 | 41.4 | 312 | 8.4 | 1236 | 33.1 | 2415 | 64.7 | 4034 | 108 | 7877 | 211 | 13,913 | 373 | | |
| 800 | 55.2 | 300 | 20.7 | 575 | 15.4 | 2306 | 61.8 | 4627 | 124 | 7341 | 197 | 14,390 | 385 | 26,623 | 713 |
| | | 350 | 24.1 | 565 | 15.1 | 2262 | 60.6 | 4522 | 121 | 7227 | 194 | 14,158 | 379 | 26,023 | 697 |
| | | 400 | 27.6 | 552 | 14.8 | 2204 | 59.1 | 4390 | 118 | 7066 | 189 | 13,836 | 371 | 25,268 | 677 |
| | | 450 | 31 | 534 | 14.3 | 2130 | 57.1 | 4227 | 113 | 6851 | 184 | 13,408 | 359 | 24,334 | 652 |
| | | 500 | 34.5 | 511 | 13.7 | 2036 | 54.6 | 4027 | 108 | 6571 | 176 | 12,853 | 344 | 23,186 | 621 |
| 609 | 42 | 438 | 11.7 | 1740 | 46.6 | 3416 | 91.5 | 5652 | 151 | 11,045 | 296 | 19,674 | 527 | | |
| 650 | 44.8 | 399 | 10.7 | 1581 | 42.4 | 3097 | 83 | 5149 | 138 | 10,059 | 269 | 17,836 | 478 | | |
| 900 | 62.1 | 350 | 24.1 | 644 | 17.3 | 2580 | 69.1 | 5173 | 139 | 8220 | 220 | 16,111 | 432 | 29,767 | 797 |
| | | 400 | 27.6 | 633 | 17 | 2534 | 68 | 5064 | 136 | 8099 | 217 | 15,867 | 425 | 29,145 | 781 |
| | | 500 | 34.5 | 602 | 16.1 | 2403 | 64.4 | 4771 | 128 | 7726 | 207 | 15,121 | 405 | 27,465 | 736 |
| | | 600 | 41.4 | 553 | 14.8 | 2203 | 59 | 4347 | 117 | 7123 | 191 | 13,930 | 373 | 25,031 | 671 |
| | | 800 | 55.2 | 358 | 9.6 | 1420 | 38.1 | 2770 | 74.2 | 4639 | 124 | 9057 | 243 | 15,955 | 427 |
| 1000 | 69 | 350 | 24.1 | 721 | 19.3 | 2891 | 77.5 | 5811 | 156 | 9189 | 246 | 18,017 | 483 | 33,433 | 896 |
| | | 400 | 27.6 | 712 | 19.1 | 2854 | 76.5 | 5719 | 153 | 9097 | 244 | 17,829 | 478 | 32,906 | 882 |
| | | 500 | 34.5 | 688 | 18.4 | 2748 | 73.6 | 5473 | 146 | 8808 | 236 | 17,246 | 462 | 31,502 | 844 |
| | | 600 | 41.4 | 649 | 17.4 | 2589 | 69.4 | 5128 | 137 | 8343 | 224 | 16,322 | 437 | 29,519 | 791 |
| | | 800 | 55.2 | 510 | 13.7 | 2025 | 54.3 | 3968 | 106 | 6589 | 177 | 12,872 | 345 | 22,851 | 612 |
| 1100 | 75.8 | 350 | 24.1 | 796 | 21.3 | 3197 | 85.7 | 6439 | 173 | 10,142 | 272 | 19,892 | 533 | 37,045 | 992 |
| | | 450 | 31 | 781 | 20.9 | 3127 | 83.8 | 6263 | 168 | 9974 | 267 | 19,545 | 524 | 36,041 | 966 |
| | | 500 | 34.5 | 770 | 20.6 | 3079 | 82.5 | 6149 | 165 | 9844 | 264 | 19,282 | 517 | 35,388 | 948 |
| | | 600 | 41.4 | 739 | 19.8 | 2948 | 79 | 5858 | 157 | 9474 | 254 | 18,543 | 497 | 33,718 | 903 |
| | | 800 | 55.2 | 630 | 16.9 | 2506 | 67.2 | 4930 | 132 | 8128 | 218 | 15,887 | 426 | 28,390 | 761 |
| 1000 | 69 | 400 | 10.7 | 1582 | 42.4 | 3084 | 82.7 | 5176 | 139 | 10,103 | 271 | 17,766 | 476 | | |
| 1200 | 82.7 | 350 | 24.1 | 871 | 23.3 | 3500 | 93.8 | 7061 | 189 | 11,084 | 297 | 21,745 | 583 | 40,621 | 1088 |
| | | 500 | 34.5 | 849 | 22.8 | 3401 | 91.1 | 6807 | 182 | 10,894 | 292 | 21,259 | 570 | 39,174 | 1049 |
| | | 600 | 41.4 | 824 | 22.1 | 3291 | 88.2 | 6556 | 176 | 10,549 | 283 | 20,656 | 553 | 37,735 | 1011 |
| | | 800 | 55.2 | 736 | 19.7 | 2929 | 78.5 | 5781 | 155 | 9472 | 254 | 18,522 | 496 | 33,288 | 892 |
| | | 1100 | 75.8 | 419 | 11.2 | 1658 | 44.4 | 3230 | 86.6 | 5424 | 145 | 10,588 | 284 | 18,607 | 498 |
| 1300 | 89.6 | 350 | 24.1 | 945 | 25.3 | 3800 | 102 | 7678 | 206 | 12,018 | 322 | 23,582 | 632 | 44,169 | 1183 |
| | | 500 | 34.5 | 927 | 24.8 | 3716 | 99.6 | 7454 | 200 | 11,833 | 317 | 23,194 | 621 | 42,889 | 1149 |
| | | 600 | 41.4 | 906 | 24.3 | 3623 | 97.1 | 7233 | 194 | 11,587 | 311 | 22,696 | 608 | 41,627 | 1115 |
| | | 800 | 55.2 | 833 | 22.3 | 3319 | 88.9 | 6568 | 176 | 10,702 | 287 | 20,936 | 561 | 37,812 | 1013 |
| | | 1160 | 80 | 509 | 13.6 | 2017 | 54.1 | 3934 | 105 | 6591 | 177 | 12,868 | 345 | 22,661 | 607 |
| 1400 | 96.5 | 350 | 24.1 | 1019 | 27.3 | 4099 | 110 | 8292 | 222 | 12,946 | 347 | 25,408 | 681 | 47,696 | 1278 |
| | | 500 | 34.5 | 1004 | 26.9 | 4027 | 108 | 8091 | 217 | 12,802 | 343 | 25,099 | 672 | 46,552 | 1247 |
| | | 600 | 41.4 | 986 | 26.4 | 3946 | 106 | 7895 | 212 | 12,598 | 338 | 24,684 | 661 | 45,432 | 1217 |
| | | 800 | 55.2 | 924 | 24.8 | 3686 | 98.8 | 7312 | 196 | 11,858 | 318 | 23,206 | 622 | 42,094 | 1128 |
| | | 1160 | 80 | 669 | 18 | 2655 | 71.2 | 5195 | 139 | 8651 | 232 | 16,897 | 453 | 29,923 | 802 |
| 1480 | 102 | 350 | 24.1 | 1078 | 28.9 | 4337 | 116 | 8781 | 235 | 13,685 | 367 | 26,861 | 720 | 50,507 | 1353 |
| | | 500 | 34.5 | 1065 | 28.5 | 4273 | 115 | 8596 | 230 | 13,568 | 364 | 26,606 | 713 | 49,455 | 1325 |
| | | 600 | 41.4 | 1049 | 28.1 | 4201 | 113 | 8416 | 226 | 13,392 | 359 | 26,246 | 703 | 48,428 | 1297 |
| | | 800 | 55.2 | 994 | 26.6 | 3968 | 106 | 7887 | 211 | 12,746 | 342 | 24,950 | 668 | 45,396 | 1216 |
| | | 1160 | 80 | 776 | 20.8 | 3082 | 82.6 | 6045 | 162 | 10,021 | 269 | 19,579 | 525 | 34,812 | 933 |

EZH and EZHSO Series



GE01592_B

Figure 10. Types EZH and EZHSO Dimensions



GE01592_A

IN. / mm

Figure 11. Type EZHOSX Dimensions

EZH and EZHSO Series

Table 19. Types EZH and EZHSO Dimensions

| BODY SIZE, NPS / DN | DIMENSIONS, In. / mm | | | | | | | | | | | |
|---------------------|----------------------|-------------|-------------|-----------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|------------|
| | A | | | | C | D (maximum) | E | F | G | H | J | R |
| | NPT or SWE | CL150 RF | CL300 RF | CL600 RF or BWE | | | | | | | | |
| 1 / 25 | 8.25 / 210 | 7.25 / 184 | 7.75 / 197 | 8.25 / 210 | 1.50 / 38.1 | 2.10 / 53 | 12.3 / 311 | 13.05 / 331 | 11.10 / 282 | 5.10 / 130 | 8.25 / 210 | 3.5 / 88.9 |
| 2 / 50 | 11.25 / 286 | 10.0 / 254 | 10.50 / 267 | 11.25 / 286 | 1.50 / 38.1 | 3.10 / 79 | 14 / 356 | 14.75 / 375 | 11.30 / 287 | 6.50 / 165 | 7.75 / 197 | 4.5 / 114 |
| 3 / 80 | ---- | 11.75 / 298 | 12.50 / 317 | 13.25 / 337 | 2.00 / 50.8 | 3.81 / 97 | 16 / 406 | 15.36 / 390 | 16.75 / 425 | 8.00 / 203 | 13.25 / 337 | 6.0 / 152 |
| 4 / 100 | ---- | 13.9 / 353 | 14.5 / 368 | 15.5 / 394 | 2.00 / 50.8 | 5.06 / 129 | 18.3 / 464 | 15.85 / 403 | 16.8 / 427 | 10.03 / 255 | 5.5 / 140 | 7.5 / 191 |
| 6 / 150 | ---- | 17.75 / 451 | 18.62 / 473 | 20 / 508 | 2.75 / 70 | 5.31 / 135 | 17 / 432 | 19.25 / 489 | 25 / 635 | 13 / 330 | 18 / 457 | 8.7 / 221 |
| 8 / 200 | ---- | 21.38 / 543 | 22.38 / 568 | 24 / 610 | 2.75 / 70 | 8.25 / 210 | 17 / 432 | 19.25 / 489 | 28.5 / 724 | 13 / 330 | 18 / 457 | 8.7 / 221 |
| 12 X 6 / 300 X 150 | ---- | 29 / 737 | 30.5 / 775 | 32.25 / 819 | 2.75 / 70 | 10 / 254 | 17 / 432 | 19.25 / 489 | 28.5 / 724 | 13 / 330 | 18 / 457 | 8.7 / 221 |

Table 20. Approximate Weights

| BODY SIZE | | FLANGED | | NPT, SWE AND BWE | | FOR TYPE OSX | |
|-----------|-----------|---------|-----|------------------|-----|--------------|--------|
| NPS | DN | lbs | kg | lbs | kg | lbs | kg |
| 1 | 25 | 87 | 39 | 77 | 35 | Add 17 | Add 8 |
| 2 | 50 | 150 | 68 | 136 | 62 | Add 30 | Add 14 |
| 3 | 80 | 410 | 186 | 390 | 177 | Add 41 | Add 19 |
| 4 | 100 | 514 | 234 | 433 | 197 | Add 57 | Add 26 |
| 6 | 150 | 1460 | 662 | 1400 | 635 | Add 74 | Add 34 |
| 8 | 200 | 1875 | 850 | 1805 | 819 | Add 97 | Add 44 |
| 12 X 6 | 300 X 150 | 2050 | 930 | 1970 | 894 | ---- | ---- |

Table 21. Type EZHOSX Dimensions

| BODY SIZE | | DIMENSION WITH SLAM SHUT | | | | | | | | | | | | | |
|-----------|-----|--------------------------|-----|------|-----|------------------|-----|--------|-----|-----------|-----|--------|-----|---------|-----|
| | | D | | H | | M ⁽¹⁾ | | | | N | | | | | |
| | | | | | | Diaphragm | | Piston | | Diaphragm | | Piston | | Bellows | |
| NPS | DN | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm |
| 1 | 25 | 12.0 | 305 | 9.8 | 249 | 6.4 | 163 | 2.8 | 71 | 6.9 | 175 | 8.0 | 203 | 8.8 | 224 |
| 2 | 50 | 13.0 | 330 | 10.4 | 264 | | | | | | | | | | |
| 3 | 80 | 14.4 | 366 | 11.8 | 300 | | | | | | | | | | |
| 4 | 100 | 16.8 | 427 | 13.6 | 346 | | | | | | | | | | |
| 6 | 150 | 15.6 | 359 | 13.0 | 330 | | | | | | | | | | |
| 8 | 200 | 22.8 | 579 | 18.7 | 475 | 8.3 | 211 | 9.2 | 243 | 9.9 | 253 | | | | |

1. Type 71 BMS with a diaphragm has an M dimension of 2.80 in. / 71 mm.

Ordering Information

Use the Specifications section on page 2 and carefully review the description to the right of each specification. Use this information to complete the Ordering Guide

on the following page. Specify the desired selection wherever there is a choice to be made. Then send the Ordering Guide to your local Sales Office.

Ordering Guide

Type and Body Material (Select One)

WCC Steel

- Type EZH (Spring-to-Close Version)***
- Type EZHSO (Spring-to-Open Version)***

LCC Steel

- Type EZHOSX (Spring-to-Close Version with Slam shut)***

Body Size (Select One)

- NPS 1 / DN 25***
- NPS 2 / DN 50***
- NPS 3 / DN 80***
- NPS 4 / DN 100***
- NPS 6 / DN 150***
- NPS 8 / DN 200***
- NPS 12 X 6 / DN 300 X 150***

End Connection Styles (Select One)

Types EZH and EZHSO Only

WCC Steel

- NPT (available for NPS 1 and 2 / DN 25 and 50 Body Sizes only)***
- CL150 RF***
- CL300 RF***
- CL600 RF***
- SWE (Available for NPS 1 and 2 / DN 25 and 50 Body Sizes only)**
- BWE**
- PN 16/40 (For NPS 1 and 2 / DN 25 and 50 Body Sizes only)**
- PN 25/40 (For NPS 3 / DN 80 Body Size only)**

Type EZHOSX Only

LCC Steel

- CL150 RF**
- CL300 RF**
- CL600 RF**

Main Valve Disk Material (Select One)

- Nitrile (NBR) (standard)***
- Fluorocarbon (FKM)***
- Polyurethane (PU)***

Pilot Type (Select One)

- Type PRX/120***
- Type PRX/120-AP***
- Type PRX/125 (monitor override pilot)***
- Type PRX/125-AP (monitor override pilot)***

Outlet Pressure Range (Select One)

Type PRX/120 or PRX/125

- 14.5 to 26 psig / 1.00 to 1.8 bar, Yellow***
- 23 to 44 psig / 1.6 to 3.0 bar, Green***
- 41 to 80 psig / 2.8 to 5.5 bar, Blue***
- 73 to 123 psig / 5.0 to 8.5 bar, Black***
- 116 to 210 psig / 8.0 to 14.5 bar, Silver***
- 203 to 334 psig / 14.0 to 23.0 bar, Gold***
- 319 to 435 psig / 22.0 to 30.0 bar, Aluminum***

Type PRX/120-AP or PRX/125-AP

- 435 to 1160 psig / 30.0 to 80.0 bar, Clear***

Whisper Trim™ Cage Construction (Optional)

[Not available to NPS 1 / DN 25 Body Size]

- Yes***

Type SA/2 Elastomer Material (Select One)

- Nitrile (NBR) (standard)***
- Fluorocarbon (FKM)***

Pilot Elastomer Material (Select One)

- Nitrile (NBR)/Polyurethane (PU) (standard)***
- Fluorocarbon (FKM)***

Travel Indicator (Select One)

- Yes***
- No***

- continued -

EZH and EZHSO Series

Ordering Guide (continued)

Main Valve Spare Parts Kit (Optional)

- Yes, send one disk parts kit to match this order.
- Yes, send one full parts kit to match this order.

Pilot Spare Parts Kit (Optional)

- Yes, send one spare parts kit to match this order.

| Regulators Quick Order Guide | |
|---|--|
| *** | Readily Available for Shipment |
| ** | Allow Additional Time for Shipment |
| * | Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability. |
| Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction. | |

Specification Worksheet

Application:
 Specific Use _____
 Line Size _____
 Gas Type and Specific Gravity _____
 Gas Temperature _____
 Does the Application Require Overpressure Protection?
 Yes No If yes, which is preferred:
 Relief Valve Monitor Regulator Shutoff Device
 Is overpressure protection equipment selection assistance desired? _____

Pressure:
 Maximum Inlet Pressure (P_{1max}) _____
 Minimum Inlet Pressure (P_{1min}) _____
 Downstream Pressure Setting(s) (P_2) _____
 Maximum Flow (Q_{max}) _____
 Minimum Flow (Q_{min}) _____

Performance Required:
 Accuracy Requirements? _____

Other Requirements: _____

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