





Masonelan

Field Proven Reliability

Masoneilan has provided world-class automated process control solutions for over one hundred years, such as the highly-reliable Masoneilan 41005 Series Cage-Guided Globe Valve.





Advanced Digital Technology

The Masoneilan SVI and FVP provide high performance digital process control with value-added benefits, such as compatibility with existing analog systems, on-board diagnostics, and improved process yield.

Global Customer Service

Masoneilan provides a network of service and repair facilities around the world to support your every need. Services are available day or night covering on-site support, spare parts, and equipment maintenance programs.



Masoneilan Capabilities

Product Specification & Support

Masoneilan offers a true integrated support and service program starting with involvement early in the design process, using innovative tools and programs to help customers select and implement the right solutions for every application.



Automated Sizing & Selection

Masoneilan has developed user-friendly software programs for sizing and selecting valve solutions. These programs use current industry standards and calculation methods, providing specific recommend-

ations and automated error checking. These tools significantly reduce the time required to accurately specify and configure products.



Project Administration

Masoneilan offers project management support to help you easily implement products and services in a timely and cost effective manner. This service is offered with the unique capability to provide a wide

range of integrated products and solutions.



Resident Engineering

Masoneilan has implemented the Resident Engineer Program in order to facilitate effective up front design support. This program is focused on providing on-site technical assistance early in the

design process, resulting in the reduction or elimination of costly design changes later in the project cycle. Our technical experts physically "reside" with your engineers to ensure design optimization and define requirements right from the start.



Smart Technology

Masoneilan provides microprocessor-based field instrumentation that can help you realize tangible cost savings from initial installation and set-up, through on-going maintenance and support. The Smart Valve

Interface (SVI®) and Fieldbus Valve Positioner (FVP®) digital valve positioners and controllers can help you drastically improve performance and maintenance management.

Customer Benefits



Global Capabilities

Masoneilan's efforts are focused to provide support to our worldwide customers throughout a product's life-cycle. The backbone of this support system is a global infrastructure of sales offices, manufacturing

operations, and technical resources. These services include product maintenance, and loop and process optimization services.



Local Support

Masoneilan provides factory certified support for all products through a customer focused program of establishing local service centers. This global support network consists of Masoneilan Authorized

Repair Centers (MARC®) and field service technicians. All of these factory-authorized resources provide OEM components, experience, knowledge and technology to support all of your MRO needs worldwide, including hands-on training and on-site support.



Maintenance Management Services

Masoneilan also provides integrated programs, such as ValvKeep™II, to help manage the support of your installed equipment. These programs are location specific and include plant surveys, data management,

scheduling and planning of maintenance, repairs, and overhauls. Historical data and trends can be managed using an asset management system to maximize efficiency of overall equipment support.



OEM Parts

Masoneilan fully understands that quick response in obtaining replacement parts and overhaul services is a critical factor in maintaining a smoothly operating plant. As a result, Masoneilan has placed

extremely high importance on this customer need within our global aftermarket program.



Field Support Services

Masoneilan's comprehensive product documentation is designed to address questions regarding installation, start-up and troubleshooting. Masoneilan also provides highly proficient technical field support

whenever necessary to keep your processes tuned to perfection. This includes up front design engineering support, product application assistance, and post installation analysis to ensure maximum performance efficiencies.



Diagnostic Services

Masoneilan has developed advanced diagnostic tools and services designed to optimize process loops. In addition, the tools assist in the prevention of unexpected or unnecessary maintenance, repair,

or overhaul. Available diagnostic tools include the ValScope™ for control valves, and the Smart Valve Interface (SVI®) digital positioner and controller with ValVue® software. Diagnostic services include the on-site application of these highly advanced tools by fully trained technicians.

Control Valve Application

General Service Applications



Rotary Products

Over one million Masoneilan 35002 Series Camflex® valves have been successfully installed in a variety of process industries and applications. Today's Camflex II continues to provide legendary dependability through a field-proven concept that remains the standard of excellence for all eccentric plug rotary control valves. The standard version includes the EF Seal (Emission Free packing) with emissions rated at less than 500 ppm up to 750,000 cycles.



The Masoneilan 30000 Series Varimax control valve provides globe valve type capabilities within a compact rotary style package. Varimax offers a unique flow capacity adjustment feature, which can be externally adjusted in the field to compensate for valve oversizing. This feature can be used to effectively minimize instability in the control loop due to oversizing. Lo-dB trim is available for noise attenuation with higher capacities than equal size globe values.



Reciprocating Products

The Masoneilan® 21000 Series is a single ported, heavy top-guided globe valve designed to handle a wide variety of process control applications. The 21000 Series can be provided with many optional packages, including Bellows Seals and Angle Body Designs. Trim options include low noise, anti-cavitation and soft seat trims to meet various application requirements.



Masoneilan's versatile cage-guided 41005 Series control valve provides solutions for applications such as high pressure drop steam. This includes highly reliable, balanced trim designs for reducing noise and vibration and for containing cavitation. Various balanced seal options are available to meet a wide range of temperature and seat leakage requirements. Lo-dB cartridges or plates can also be provided to maintain low outlet velocities and minimize downstream noise.

Corrosive Service Applications



700 Series

The Masoneilan 700 Series is a PTFE lined globe-style control valve used for corrosive services. It includes a standard bellows seal design which insures packing box tightness, and a safety seal ring with a leak detector to monitor the condition of the bellows.



31000 Series

The Masoneilan 31000 Series is a PFA lined control valve with an eccentric rotary plug, which provides tight shut off, low dynamic forces, and excellent control. This valve provides an excellent solution for aggressive acids that tend to cause bellows permeation problems in reciprocating designs.

Control Valve Application

Severe Service Applications



72000 Series

Masoneilan designed the 72000 Series family of energy management and low noise products for use in compressor anti-surge, gas-to-flare and other venting applications where high noise attenuation and high flow capacity are required. Angle, globe, and fixed restrictor configurations are available to create effective solutions for customers' specific process needs. For addressing your most severe, high expansion ratio applications, custom V-Log trim options are readily available.



73000 Series

The 73000 Series valve is a sweep angle configuration for reliably throttling the most erosive process media. Available with a wide variety of engineered trim and body materials including all available high nickel, duplex, titanium, ceramic and tungsten carbide alloys.



77000 Series

The Masoneilan 77000 Series multi-stage control valve is designed primarily for high-pressure compressible fluid applications. It effectively controls erosion, vibration, and high noise conditions, making it an ideal solution for high-pressure, high temperature, flashing hydrocarbon liquid services. One of the typical applications for this design is as a choke valve.



78200/18200 Series

Axial flow LincolnLog® design utilizes a tortuous path to distribute pressure drop along the axis of the plug. The axial stages throttle in unison as the plug strokes, maintaining staging ratios at all lift points. Velocity and pressure drop are controlled, thus eliminating cavitation and the resulting trim damage. This valve is highly effective in pump recirculation and high-pressure liquid letdown applications.

Technology Solutions

Fugitive Emissions Control

Masoneilan solutions for reduction of Volatile Organic Chemicals (VOCs) and Hazardous Air Pollutants (HAPs)



EF (Emission Free) Seal

The EF Seal is an emission containment feature that is standard on all Masoneilan rotary products. This seal design can be easily field-retrofitted on any existing valve in the field. It is a simple dual O-ring design that has undergone extensive FM testing, including successful completion of 750,000 full stroke cycles without failure. This design offers an extremely cost-effective solution for upgrading processes under the guidelines of the Clean Air Act.



LE® (Low Emission) Packing

Masoneilan reciprocating control valves can be equipped with the LE Packing System option for economic reduction of fugitive emissions to less than 500 ppm. The LE packing system is designed to maintain a constant sealing force within the packing box.



Bellows Seal

Bellows seals are offered for applications as a hermetic metallic seal for valve stem interfaces. Typical applications include handling of flammable, toxic, or explosive fluids, where leakage may cause environmentally unsafe conditions.

Smart Technology



SVI® - Smart Valve Positioner - HART

Masoneilan's SVI and SVI II offer high performance digital process with valuable benefits such as onboard diagnostics, auto-tuning, auto-calibration and a built-in controller. The SVI always provides the option for local or remote communication, even in hazardous environments. Masoneilan ValVue® software provides a user friendly PC-based communication tool for those digital instruments.



FVP - Fieldbus Valve Positioner - Foundation Fieldbus

Dresser Flow Control, a leader in the automated process control industry, introduces the Masoneilan FVP - Fieldbus Valve Positioner, a Digital Valve Positioner and PID process controller. The FVP offers highly advanced control technology for pneumatically actuated valves, providing higher precision and greater flexibility. A Foundation Fieldbus version of ValVue®FF software is available, for local or remote communication.



12300 - DLT Smart Level Transmitter - HART

The Masoneilan 12300 Series Digital Level Transmitter (DLT) is a Smart instrument with HART communication protocol utilizing the fully proven liquid displacement and torque tube technology. LevelVue™ software is available for the DLT. A Foundation Fieldbus version of the DLT and LevelVue™ software will be available in the near future.

Technology Solutions

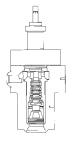
Energy Management Trim

Masoneilan provides a wide range of solutions to handle fluid energy problems.



Drilled-Hole Technology

Masoneilan offers a wide selection of single and multiple stage trims with both balanced and unbalanced globe and angle valve configurations. These designs, based on drilled-hole technology are only recommended for clean service applications. Balanced and unbalanced anti-cavitation options are also available with metal-to-metal seating meeting ANSI Class V shut-off performance. Masoneilan also offers Lo-dB® noise attenuation options utilizing drilled-hole technology in rotary control valves such as the Varimax Lo-dB and T-Ball T3 trim.





Axial Flow Technology

Axial Flow trims offer multi-stage designs for the control of high-pressure liquids without the damaging effects of cavitation, erosion and vibration. The unique flow design of the LincolnLog develops the required resistance for throttling but also affords ample clearance for the passage of large particulate. The optional soft seat was designed specifically for boiler feedwater applications and provides long term Class VI shut-off at the most demanding pressures. The 77000 Series is multi-stage trim designed with expanding areas for high-pressure gaseous applications.





Stacked Plate Technology

VRT®, Variable Resistance Trim, consists of a brazed stack of drilled plates which efficiently channel the flow through multiple turns in a tortuotus path configuration. The design is primarily used in high-pressure drop liquid applications, and remains the standard in the power industry for feedwater regulator service. VRT is typically packaging within standard Masoneilan globe and angle valve bodies. A further development in stacked plate technology, V-Log® trim provides control of high pressure compressible fluids without erosion, vibration, or high noise levels. This design combines right angle turns with intermediate expansions and contractions to achieve efficient pressure reduction within a very compact design. V-Log trim is the most effective energy management trim available in the market today.

Control Valves - Rotary

30000 Series Varimax	31000 Series lined rotary	34005 Series T-Ball	35002 Series Camflex II
Sizes: • 3" through 16" (80 through 400 mm)	Sizes: • 1" through 3" (25 through 80 mm)	Sizes: • 2" through 36" (50 through 900 mm)	Sizes: • 1" through 16" (25 through 400 mm)
Ratings and Connections: • flanged ANSI 150 - 600 UNI-DIN 10 - 64 • wafer for mounting between flanges ANSI 150 - 600 UNI-DIN 10 - 64	Ratings and Connections: • flanged ANSI 150 UNI-DIN 10 - 16	Ratings and Connections: • flanged ANSI 150 - 1500 • welded BW or SW	Ratings and Connections: • flanged ANSI 150, 300, 600 • flangeless for mounting between flanges ANSI 150 - 600 UNI-DIN 10 - 100 • screwed NPT (1" through 2")
Body Materials: • carbon steel • stainless steel	Body Materials: • cast iron PFA lined	Body Materials: • carbon steel • stainless steel	Body Materials: • carbon steel • stainless steel • high nickel alloy
Actuator: • Model 30 adjustable torque, spring-opposed rolling diaphragm	Actuator: • Model 35 spring-opposed rolling diaphragm	Actuator: • Spring opposed scotch yoke	Actuator: • Model 35 spring diaphragm • 70 Series cylinder
Trim: • eccentric rotary plug with adjustable C _V . Lo-dB trim available	Trim: • eccentric rotary plug	Trim: To: monitoring to mild service, no noise attenuation T1: General use, minimal noise attenuation T2: Moderate to severe service, medium noise attenuation T3: Severe service, maximum noise attenuation	Trim: • eccentric rotary plug
Inherent Characteristic: • linear	Inherent Characteristic: • linear	Inherent Characteristic: • modified equal percent	Inherent Characteristic: • linear
The Varimax offers new standards of control while retaining the compactness and stem seal advantages of a rotary globe valve. An adjustable torque actuator provides flexibility and prevents oversizing. Actuator C _V adjustment eliminates the need to replace trim parts when process conditions change.	The 31000 Series is a PFA lined control valve with an eccentric rotary plug, which provides tight shut off, low dynamic forces, and excellent control. This valve is an excellent solution for hydrofluoric and sulfuric acid applications.	The 34005 Series T-Ball Rotary Control Valve is a patented low noise and anti-cavitation rotary control valve designed for both gas and liquid service. T-Ball features a full trunnion mounted ball with integral diffusers. The T-Ball is typically applied in fuel gas control and process applications requiring high capacity/high turndown, non-clogging operation.	As the original eccentric plug rotary valve, the Camflex combines top performance and features with an extremely economical design. The Camflex offers enormous versatility and broad application, and remains the most widely used eccentric plug control valve in the world. Now supplied with the EF seal solution to reduce fugitive emissions.

Control Valves - Rotary



36004 Series Paramax



37002 Series swing-through butterfly



39003 Series high-performance butterfly

Sizes:

• 2" through 12" (50 through 300 mm)

Ratings and Connections:

- flanged ANSI 150 300
- flangeless for mounting between flanges ANSI 150 - 300 UNI-DIN 10 - 40

• 2" through 24" (50 through 600 mm)

Ratings and Connections:

 wafer for mounting between flanges ANSI 150 - 300 UNI-DIN 10 - 40

• 3" through 36" (80 through 900 mm)

Sizes:

Ratings and Connections:

 wafer and lug for mounting between flanges ANSI 150 - 600

Body Materials:

- carbon steel
- stainless steel

Body Materials:

- carbon steel
- stainless steel
- Liners in Buna-N, Viton and Nordel

Body Materials:

- carbon steel
- stainless steel

Actuator:

- Model 33 spring diaphragm
- · Scotch yoke cylinder

Actuator:

- Model 33 spring diaphragm
- Model 37 spring diaphragm

Actuator:

- Model 33 spring diaphragm
- Model 70 double acting cylinder

Trim:

parabolic segmented ball

Trim:

• low torque butterfly

Trim:

eccentric butterfly

Inherent Characteristic:

modified equal percentage

The 36004 is a control ball valve with a parabolic segmented ball design.

It is an excellent solution for high viscosity fluid applications (i.e. pulp and paper industry).

Standard features also include the environmental packing (EF seal).

Inherent Characteristic:

· equal percentage

The 37002 Series is a control valve used on very large flow rates with low pressure drop. It is available with complete PTFE lining (38002 Series)

for corrosive fluids applications.

Inherent Characteristic:

· equal percentage

The 39003 Series is a heavy-duty automatic throttling butterfly control valve with an eccentric disc, ideal for large flow rates and moderate pressure applications.

Control Valves - Reciprocating



10000 Series double seated globe valve



21000 Series globe & angle top-guided valve



28000 Series Varipak micro-trim globe valve



41005 Series globe & angle cage-guided valve

Sizes:

• 2" through 24" (50 through 600 mm)

Sizes:

• 3/4" through 6" (20 through 150 mm)

Sizes:

- 1" (25 mm) standard
- 1/2" through 3/4" (15 through 20 mm) available on request

Sizes:

• 2" through 16" (50 through 400 mm)

Ratings and Connections:

• flanged ANSI 150 - 1500 UNI-DIN 10 - 250 • welded BW or SW

• screwed NPT 3/4" through 2" (20 through 50 mm)

Ratings and Connections:

• flanged ANSI 150 - 2500 UNI-DIN 10 - 400 • welded BW or SW

• screwed NPT 3/4" through 2" (20 through 50 mm)

Ratings and Connections:

• flanged ANSI 150 - 600 • flangeless for mounting between flanges ANSI 150 - 2500

• screwed UNI-DIN 10 - 400 • PT 1/2" through 1" (15 through 25 mm)

Ratings and Connections:

• flanged ANSI 150 - 2500 UNI-DIN 10 - 400

welded BW or SWscrewed NPT 2" (50 mm)

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Body Materials:

- stainless steel
- monel
- hastelloy c
- alloy 20

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuator:

- Model 87/88 multi-spring diaphragm
- Model 84/85/86 cylinder

Actuator:

• Model 87/88 multi-spring diaphragm

Actuator:

· integral spring diaphragm

Actuator:

- Model 87/88 multi-spring diaphragm
- Model 37/38 spring diaphragm
- Model 84/85/86 cylinder

Trim:

- V-port or contoured plug
- top and bottom guided

Trim:

- single seat plug top guided.
- Lo-dB and anti-cavitation trims, single or double stage are available

Trim:

• full stellite needle plug. Multistep trim available

Trim

 balanced cage-guided trim. Lo-dB, anti-cavitation and VRT (Variable Resistance Trim), single and multiple cages are available

Inherent Characteristics:

linear, quick opening or equal percentage

The 10000 Series is a double ported valve with top and bottom stem guiding.

This design is ideal for high-pressure drop applications, where dirty fluid conditions exist.

The 10000 Series is widely used on hydrocarbon processing applications.

Inherent Characteristics:

• linear or equal percentage

cavitation trim options.

The 21000 Series control valve is a heavy top-guided unbalanced design with noise attenuation and anti-

It is well suited to handle a variety of process applications ranging from standard service conditions to more severe applications. Also includes standard bellows seal and soft seat configurations.

Inherent Characteristic:

• linear

The Varipak is a compact globe style valve designed specifically for microflow control.

The Varipak includes an adjustable C_V feature - between 100% and 40% - to meet applications requiring finer control. Available with bellows seal and anti-cavitation trim option.

Inherent Characteristics:

• linear or equal percentage

The 41005 Series is a heavy-duty valve design with balanced trim configurations.

It offers cage guiding for added stability and the versatility to provide effective noise attenuation and anti-cavitation solutions.

Available with various balancing seal options including auxiliary pilot design for unmatched high temperature performance.

Control Valves - Reciprocating



80000 Series 3-way diverting or combining valve



700 Series teflon lined split-body valve



2600 Series split-body valve

Sizes:

• 1" through 10" (25 through 250 mm)

Sizes:

• 1" through 6" (25 through 150 mm)

Sizes:

• 1/2" through 10" (15 through 250 mm)

Ratings and Connections:

 flanged ANSI 150 - 600 UNI-DIN 10 -100 threaded NPT 3/4" through 2" (20 through 50 mm) welded BW or SW

• ANSI 900 - 2500 on request

Ratings and Connections:

 flanged **ANSI 150** UNI-DIN 16

Ratings and Connections: flanged

ANSI 150 - 600 UNI-DIN 10 -100 (integral or separable) threaded NPT 1/2" through 2" (15 through 50 mm)

• welded BW or SW

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Actuator:

Body Materials:

Actuator:

 cast iron or carbon steel teflon lined

Body Materials:

- carbon steel
- stainless steel
- chrome-moly exotic alloys

• Model 87/88 multi-spring diaphragm

Actuator:

- Model 87/88 multi-spring diaphragm
- Model 37/38 spring diaphragm
- Model 84/85/86 cylinder
- 71 domotor piston

Trim:

V-port plug

Trim:

• single seat top guided with teflon bellows seal (contoured plug)

Trim:

• single seat top guided (contoured plug)

Inherent Characteristic:

• Model 87/88 multi-spring diaphragm

• Model 37/38 spring diaphragm

• Model 84/85/86 cylinder

linear

Inherent Characteristics:

linear or equal percentage

Inherent Characteristics:

linear or equal percentage

The 80000 Series is a line of threeway control valves designed for either combining or diverting applications.

Key features include high flow capacities and low pressure recoveries, resulting in a highly efficient flow control performance.

The 700 Series control valve is a split body design with PTFE internal lining for use in highly corrosive services.

This valve includes a standard PTFE bellows seal design and optional trim configurations.

Split-body control valves are widely used in corrosive services, where trim checks and replacements are frequently needed.

The 2600 split-body serves as a building block design offering many body configurations including globe, angle, and three-way valve bodies.

Control Valves - Engineered Products

72000 Series angle valve with Lo-dB trim	77000 Series multistep angle valve	78200 Series LincolnLog®	73000 Series sweep angle valve
Sizes: • 6" x 8" through 24" x 36" (150 x 200 through 600 x 900 mm)	Sizes: • 2" x 3" through 6" x 8" (50 x 80 through 150 x 200 mm)	Sizes: • 1" through 6" (25 through 150 mm)	Sizes: • 1" through 8" (25 through 200 mm)
Ratings and Connections: • flanged ANSI 150 - 600 UNI-DIN 10 - 100 up to 600 mm • welded BW or SW 900 mm available BW only	Ratings and Connections: • flanged inlet ANSI 2500 outlet ANSI 150 - 2500 UNI-DIN 10 - 400 • welded BW or SW	Ratings and Connections: • flanged ANSI 600 - 2500 UNI-DIN 100 - 400 • welded BW or SW	Ratings and Connections: • flanged ANSI 150 - 2500
Body Materials: • carbon steel • stainless steel • chrome-moly	Body Materials: • carbon steel • stainless steel • chrome-moly	Body Materials:	Body Materials:
Actuator: • Model 84/85/86 spring cylinder (spring return or double acting)	Actuator: • Model 37/38 spring-opposed diaphragm • Model 84/85/86 spring cylinder (spring return or double acting)	Actuator: • Model 87/88 multi-spring-opposed diaphragm • Model 84/85/86 spring cylinder (spring return or double acting)	Actuator: • Model 87/88 multi-spring-opposed diaphragm • Model 84/85/86 spring cylinder (spring return or double acting)
Trim: • balanced cage guided trim (single or double cage) • Lo-dB and V-Log trims available	Trim: • multistep trim (expanding labyrinth type) • anti-cavitation	Trim: • multistep trim cage guided anti-cavitation • Class VI available on request	Trim: • high capacity single stage • reduced port Venturi outlet • ceramic and tungsten carbide optional
Inherent Characteristics: • linear or equal percentage	Inherent Characteristic: • linear	Inherent Characteristic: • linear	Inherent Characteristic: • linear
The 72000 Series is designed for precise capacity control, while efficiently minimizing noise and outlet velocities using single or multiple cages or the new V-Log trim. Specific applications: • compressor antisurge • flare to atmosphere	The 77000 Series Lo-dB multistep control valve is designed primarily for high-pressure compressible fluid applications. It effectively controls erosion, vibrations and high noise conditions. Specific applications: • turbine bypass • hot separator letdown	The 78200 valve is used on liquid services to eliminate cavitation. Specific applications: • boiler feed water recirculation • desuperheater spray water	The 73000 Series control valve is especially suited to throttle highly erosive, flashing, and 2 phase flows. Specific applications: • mining • coal slurry • ash handling • hydrocarbon bottoms

Regulators



regulator



525-526 Series regulator



535-535H Series regulator



17 Series regulator

Sizes:

• 1/2" through 2" (15 through 50 mm)

Sizes:

• 1/2" through 4" (15 through 100 mm)

Sizes:

• 3/4" through 2" (15 through 50 mm)

Sizes:

• 1/2" through 2" (15 through 50 mm)

Connections:

ANSI 150 - 600 flanged screwed **FNPT**

Ratings:

 Model 40 C: 4000 psi @ 150°F (276 bar @ 65°C)

(45 bar @ 65°C)

• Model 42 C: 650 psi @ 150°F

Ratings and Connections:

flanged ANSI 150 - 600 UNI-DIN 10 -100

NPT 15 - 50 mm screwed welded BW or SW

Ratings and Connections:

 flanged ANSI 150 - 600 UNI-DIN 10 - 100

screwed NPT welded SW

Ratings and Connections:

 flanged ANSI 150 - 600

• screwed NPT-F SW welded

Body Materials:

carbon steel

• stainless steel

Body Materials:

carbon steel

• stainless steel • chrome-moly

Body Materials:

carbon steel

• stainless steel • chrome-moly

Body Materials: carbon steel

• stainless steel

cast iron

Internal Regulation:

 with spring diaphragm (neoprene, monel or stainless steel)

Actuator:

• Model 10900 with spring-opposed diaphragm

Actuator:

• Model 10900 with spring-opposed diaphragm

Internal Regulation:

• with neoprene or stainless steel diaphragm

Trim:

needle plug

Trim:

· disc plug, double seat

Trim:

• single seat, disc plug (535 Series)

• single seat, needle plug (559 Series)

Trim:

• contoured plug, single seat

Working Range:

• 2 to 600 psi (0.14 to 44.8 bar)

Working Range:

• 0.5 to 330 psi (0.034 to 22.7 bar)

Working Range:

• 0.5 to 330 psi (0.034 to 22.7 bar)

Working Range:

• 2 to 200 psi (0.14 to 14.9 bar)

Pressure reduction (40C Series) and back pressure (42C Series) regulators are used on high pressure applications.

The 525 Series regulators are designed for pressure reduction, and the 526 Series for back pressure applications.

Also available for differential pressure applications in multiple configurations to meet various combinations of capacity, pressure, and temperature requirements.

The 535 and 535H Series are designed in multiple configurations for pressure reduction and differential pressure applications.

The 17 Series regulators are designed for pressure reduction, back pressure, and differential pressure applications.

The stainless steel version is suggested for high temperature and corrosive applications.

Level Transmitters



12800 Series pneumatic level transmitter/controller

Range:

• 14" through 120" (355 through 3048 mm)

Ratings and Connections:

 flanged ANSI 150 - 2500 UNI-DIN 10 - 100 NPT-F (11/2", 2")

screwed welded

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Displacer Materials:

- stainless steel
- other materials on request

Torque Tube Materials:

- Inconel
- stainless steel
- other materials on request

Action:

- proportional
- proportional + reset
- transmitter
- on-off
- duplex

The 12800 pneumatic level controllers are used to control and/or transmit the level in a tank with one or two fluids (interface service).

The 12800 Series operates according to the fully proven liquid displacement and torque tube principle.



12300 Series digital level transmitter/controller

Range:

• 14" through 120" (355 through 3048 mm)

Ratings and Connections:

 flanged ANSI 150 - 2500

UNI-DIN 10 - 100 screwed NPT-F (11/2", 2")

welded

Body Materials:

- carbon steel
- stainless steel
- chrome-moly

Displacer Materials:

- stainless steel
- other materials on request

Torque Tube Materials:

- Inconel
- stainless steel
- · other materials on request

Electronic Instrument:

- HART protocol
- 4 20 mA signal
- Cenelec, FM, and CSA agency approvals

The Masoneilan 12300 Series Instrument is a 2-wire loop powered digital displacement type level Transmitter or Controller* with HART Communication. This high performance instrument is easily set-up and calibrated by use of either a hand-held communicator or local pushbuttons and digital display. This versatility allows the operator to configure, calibrate, and perform other functions either at the instrument or from the control room.

*LevelVue configuration software available.

Instrumentation





digital positioner and PID controller

Communication Platform:

HART



FVP™ digital positioner and PID controller

Communication Platform:

Foundation Fieldbus

Signal - Supply:

- 4-20 mA control signal
- no external power required
- supply pressure: 20 100 psi (1.4 - 7 bar)

Communication Software Interface:

• ValVue® - HART

Input Signal:

- Foundation Fieldbus
- no external power required
- supply pressure: 20 100 psi (1.4 - 7 bar)

Communication Software Interface:

• ValVue®FF - Foundation Fieldbus

Hazardous Area Certifications:

• Cenelec, FM, and CSA agency approvals

Masoneilan's Smart Valve Interface (SVI) is an intelligent digital valve positioner and PID (Proportional Integral Derivative) process controller. SVI offers advanced control technology for pneumatically actuated valves, providing higher precision, greater flexibility and ease of use. ValVue is a communication software tool used to configure. calibrate and perform valve diagnostics with the SVI utilizing HART communications protocol.

Hazardous Area Certifications:

• Cenelec, FM, and CSA agency approvals

Masoneilan, a leader in the automated process control industry, introduces the FVP - Fieldbus Valve Positioner, a digital valve positioner and PID process controller. The FVP offers highly advanced control technology for pneumatically actuated valves, providing higher precision and greater flexibility. A Fieldbus version of ValVue software is available.

Instrumentation



4700 P Series pneumatic positioner

Characteristic:

- linear or equal percentage obtained through the cam setting.
- Options: bypass customized characteristic



4700 E Series electro-pneumatic positioner

Characteristic:

- linear or equal percentage obtained through the relevant cam setting.
- Options: bypass customized characteristic



7000 Series electro-pneumatic transducer

Signals:

• input: 4 - 20 mA (100 mA max) • output: 3 - 15 psig, 6 - 30 psig



496 Series rotary limit switch

Rating:

- 10 amps @ 300 Volts A.C.
- 0.6 amps @ 24/30 Volts D.C.

Certifications:

• explosion proof and intrinsically safe enclosure rating per IP 66

Certifications:

- explosion proof and intrinsically safe
- enclosure rating NEMA 4x, IP 66

Number of Contacts:

- 496-1: 1-SPDT
- 496-2: two contacts 2-SPDT (Both are explosion proof type)
- 496-4 & 496-5 are supplied with inductive proximity sensor

Action:

• Direct and reverse action (reverse action available on pneumatic version only)

Signals:

• 3 - 15 psig, 6 - 30 psig, 3 - 9 psig, 9 - 15 psig

Signals:

• 4 - 20 mA

The Model 4700 P and 4700 E are field proven positioners utilizing a precision feedback cam to provide accurate positioning, very fast response, and customized control characteristics for control valves. These positioners can be used with either rotary or reciprocating actuators. When mounting on reciprocating actuators, a simple, rugged turnbuckle and lever assembly couples stem motion to the cam. On rotary actuators, the cam is mounted directly to the shaft.

The main features of the 4700 E/P Series are:

- multi-lobe cam
- simple zero and span adjustments
- corrosion resistant materials
- · fully enclosed
- FM, CSA, Cenelec approved
- simple design
- easy to maintain
- optional bypass on pneumatic version
- dampening adjustment

The 7000 I/P is manufactured with Reedex™ digital-micro valve technology, which provides fast responses and is not sensitive to vibration.

- Low air consumption
- Adjustable tight shut-off feature

The 496 Series allows for remote reception of one or two predetermined valve positions (generally open and/or close positions).

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