

21000 Series



Versatile
Reliable

*High Performance
Globe Style Valves*

Masoneilan®

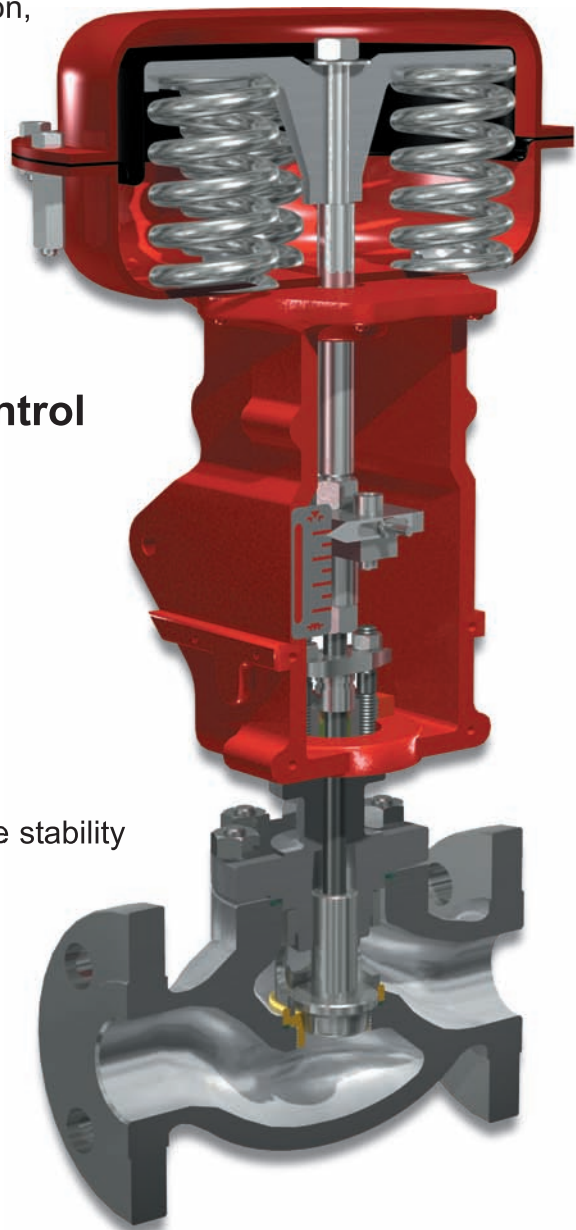
DRESSER

21000 Series

VERSATILE

Masoneilan® offers the 21000 Series heavy top-guided globe valve to meet a wide range of automated process control applications. The 21000 Series product line features a single-ported design configuration, which permits numerous trim, actuation, and instrumentation solutions including:

- **Lo-dB® Noise Attenuation**
- **Anti-Cavitation**
- **Reduced Capacity**
- **Advanced Digital Positioning & Control**
- **Tight Shutoff**
- **Environmental Packing**



RELIABLE

Rugged top-guiding of the plug ensures maximum valve stability under the most adverse conditions. The inherent ruggedness of the 21000 Series has been field-proven over many years of continuous operation in plants around the world.

HIGH PERFORMANCE

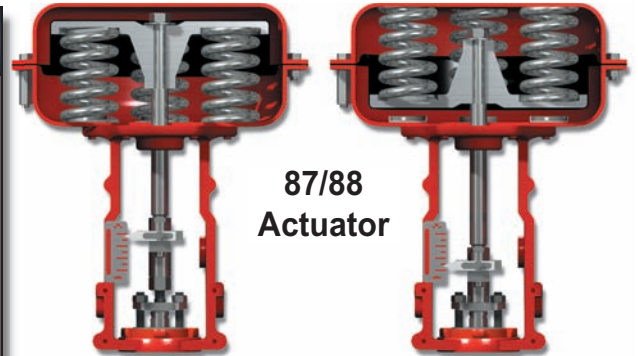
Optimum control performance is provided through the combination of trim designs, actuator stability and shutoff capabilities, and superior valve positioning. The 21000 Series is also available in various materials, pressure ratings, and end connections offering a complete high performance valve platform.

Control Valves

Key Features

Spring Diaphragm Actuator

- Compact Multi-Spring Design Minimizes Stem Side Loading
- Field Reversible Without Additional Parts
- Rolling Diaphragm Minimizes Wear
- Constant Effective Area for Smooth Linear Control
- 5 Sizes Available to Suit Your Application Requirements
- 4 Standard Spring Ranges for Wider Application Envelope
- Side Mounted Handwheel Option

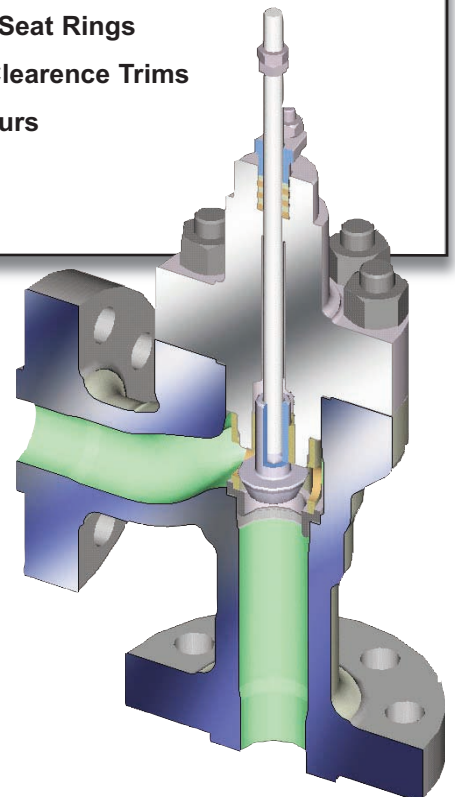


Heavy Top Guiding

- Larger Post Guide Area vs. Other Globe Valve Designs
- Located Away from Flowstream
- Provides Better Stability and Control

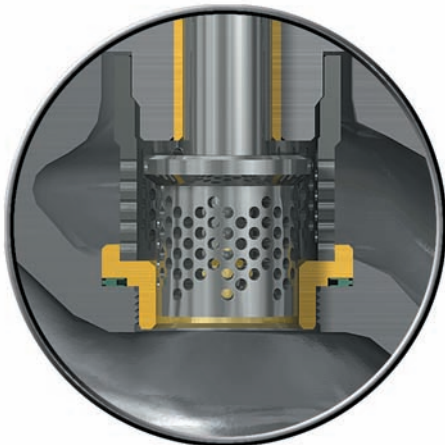
Various Trim Options

- Single & Double-Stage Low Noise and Anti-Cavitation Trim
- Hardened Trim Standard (Stellited Trim)
- Quick Change or Threaded Seat Rings
- Reduced Capacities & Close Clearance Trims
- Equal Percentage & Linear Contours
- UOP Lockhopper Trim
- Soft Seat Design



Design Flexibility

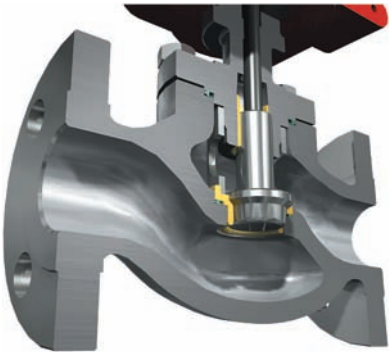
- Multiple End Connections
- Various Materials
- Angle Body Configuration
- Bellows Seal Design
- Piston Actuation Option
- Extension Bonnet
- Cryogenic Configuration
- Low Emission Packing
- DIN Version Available



21000 Series

Customer Benefits

Trouble Free Operation

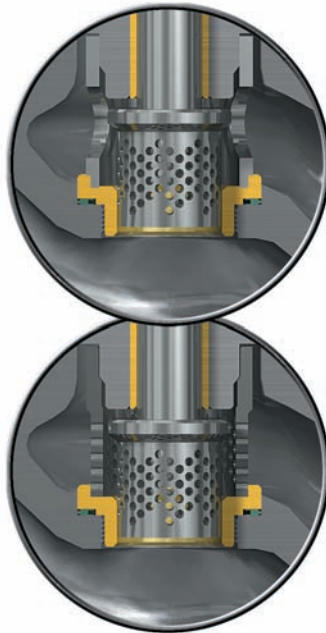


Heavy top-guiding ensures stable and optimized operation of the 21000 Series throughout the entire stroking range. The effects of unexpected system upsets or heavy vibration are minimized with this construction.

Reduced Noise Levels

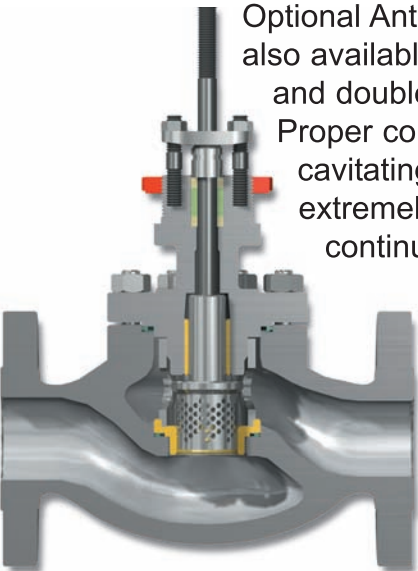
The optional Lo-dB® trim designs provide single-stage and double-stage noise attenuation benefits.

Potential noise reduction levels of up to 25 dBA are possible, depending on the specific operating conditions.



Long Life-Cycle

Optional Anti-Cavitation trim is also available in single-stage and double-stage configurations. Proper control of dynamic cavitating conditions is extremely important for continuous high performance and operation of control valves.



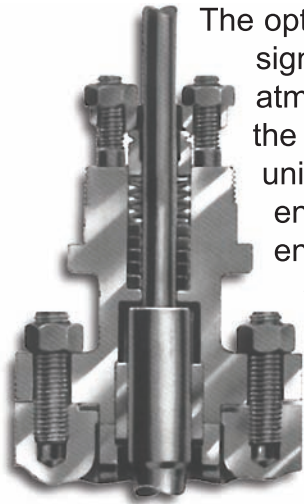
Lower Costs

Dependable tight shutoff of a control valve minimizes loss of process fluids, and can potentially eliminate the need for separate isolation valves. The optional soft-seat design, provides bubble-tight shutoff capabilities in accordance with ANSI/FCI and IEC requirements.



Control Valves

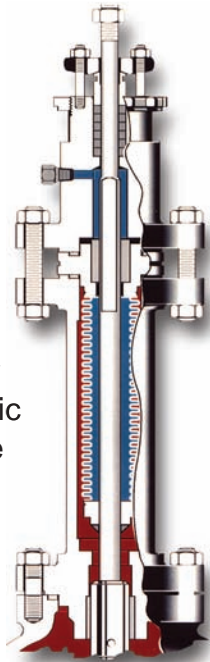
Clean Air Compliance



The optional LE® Packing system significantly minimizes atmospheric emissions from the stem seal area. This unique feature helps to ensure compliance with any environmental safety and emissions control requirement.

Hazardous Emissions Control

The optional Bellows Seal configuration can ensure zero leakage to atmosphere for any application involving highly toxic and dangerous fluids. Positive sealing and high life-cycle operation are combined for reliable and safe operation.

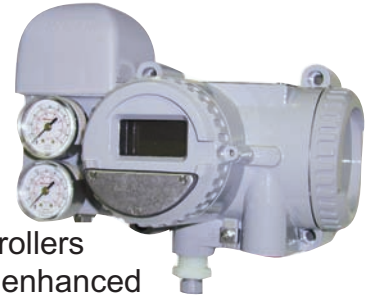


Low Temperature Operation

The 21000 Series is also available in a cryogenic configuration for effective and proven process control performance at extremely low temperature conditions. This is accomplished by using a combination of extended bonnets and appropriate materials.

High Process Yields

The 21000 Series can be equipped with various Masoneilan advanced digital positioners and controllers



for enhanced performance and control. This results in higher process yields and real-time diagnostics capabilities to support predictive plant maintenance programs.



Masoneilan offers the Smart Valve Interface (SVI®) with HART®

communications and the Masoneilan FVP® for Foundation Fieldbus applications. Both instruments are available in single or double-acting configurations and offer advanced control technology, providing higher precision for pneumatically actuated control valves. Masoneilan also offers the ValVue® software program for PC-based communications with these advanced devices.



Reduced Operating Costs

The simple construction and flexible design features of the 21000 Series, result in lower maintenance costs and longer product life-



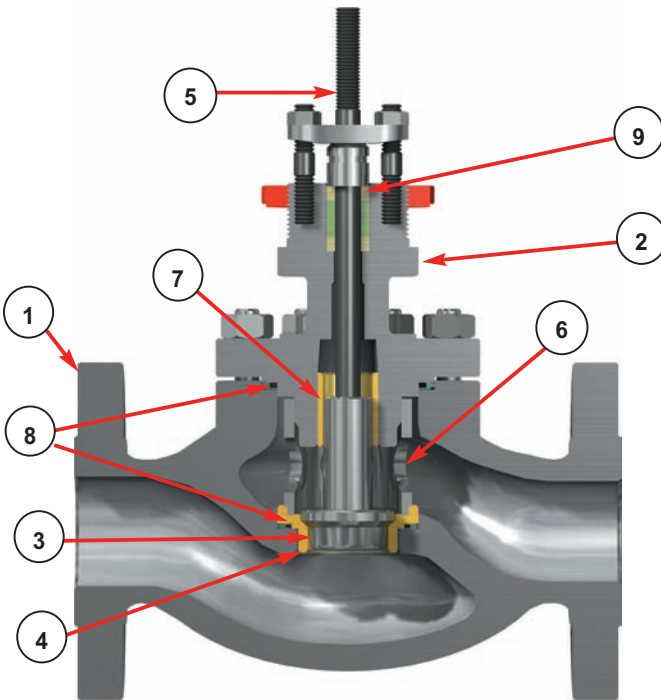
cycles. This versatile product line allows customers to solve a multitude of control valve applications using a common platform.

21000 Series

Product Specifications



Operating Range	
Sizes	3/4" to 6" (20mm to 150mm)
Body Ratings	ANSI Class 150 to Class 2500 (PN 10 to PN 420)
Leakage	ANSI/FCI & IEC Class IV, V, and VI
C_v Range	0.1 to 400
Temperature Range	-320°F to +1050°F (-196°C to +566°C)



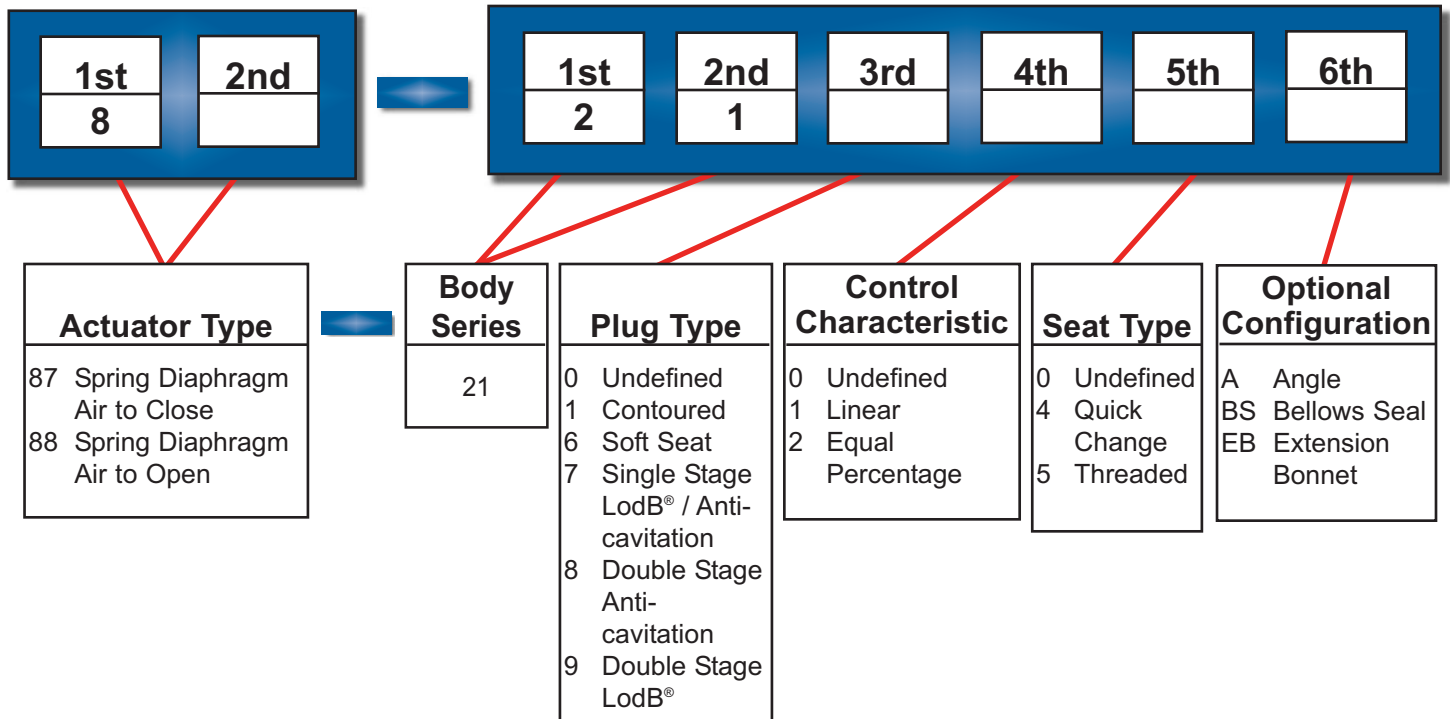
Materials of Construction		
1	Body	Carbon Steel, Stainless Steel, Chrome-Moly, Other Alloys
2	Bonnet	Carbon Steel, Stainless Steel, Chrome-Moly, Other Alloys
3	Plug	Stainless Steel, SS with Hardfacing, Stellite, Teflon Soft Seat
4	Seat Ring	Stainless Steel, Stainless Steel with Hardfacing
5	Stem	Stainless Steel
6	Cage	Stainless Steel
7	Guide Bushing	Stainless Steel, Nitronic 60
8	Gaskets	Stainless Steel with Flexible Graphite Filler
9	Packing	PTFE, Flexible Graphite, LE® Packing

Consult factory for other materials, ratings, and connections available

End Connections		
ANSI Class 150 to 2500 (PN 10 to 420)		
Connections	Valve Size	
	3/4" to 2" (20 to 50 mm)	3" to 6" (80 to 150 mm)
RF Flanged	•	•
Socket Weld	•	
Threaded	•	
RT Joint	•	•
Butt Weld	•	•

Control Valves

Numbering System



General Information

<ul style="list-style-type: none"> ● Flow Direction contoured: flow-to-open Lo-dB®: flow-to-open anti-cavitation: flow-to-close ● Body¹ type: high capacity globe or angle ● Bonnet type: bolted: standard extension ● Body and Bonnet materials: carbon steel 316 stainless steel chrome-molybdenum steel others 	<ul style="list-style-type: none"> ● Trim plug type: contoured soft-seat Lo-dB® (1 or 2 stages) Anti-Cavitation (1 or 2 stages) seat ring: threaded quick change heavy top guided guide: full area capacity: reduced capacity in all sizes C_v ratio: 50:1 flow: linear characteristic: equal percentage ● Actuator type: spring diaphragm handwheel: optional
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¹ External shape of body will vary as depicted based on different type of casting processes used. Form, fit and function are identical.

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