

Masoneilan* Valves

21000 Series

High-Performance Control Valves

Optimum control performance
for a wide range of automated
process control applications

- Single-ported design configuration
- Advanced digital positioning and control



imagination at work

21000 Series Globe Style Control Valves

Versatile

GE Oil & Gas offers the Masoneilan 21000 Series heavy top-guided globe valve for 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 & Low Flow Trim
- Cryogenic Configuration
- Tight Shutoff
- Environmental Packing
- Advanced Digital Positioning & Control

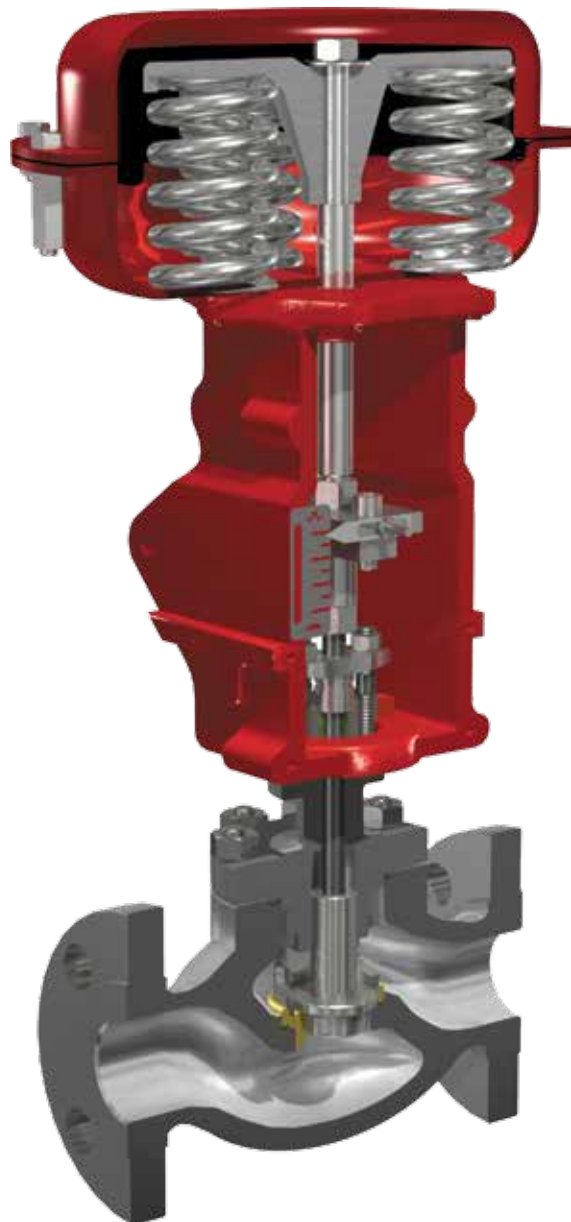
Reliable

Rugged top-guiding of the plug promotes enhanced valve stability under adverse conditions. The inherent ruggedness of the 21000 Series is field-proven, with thousands of units installed in process control plants around the world operating successfully with various fluids under mild and extreme conditions.

The simple construction and flexible design features of the 21000 Series help to lower maintenance costs and extends product life cycles. This versatile product line helps customers to solve a multitude of control valve application problems using a common platform.

High Performance

The combination of trim designs, actuator stability, shutoff capabilities, and precise valve positioning offers optimum control performance. GE's 21000 Series is also available in various materials, pressure ratings, and end connections offering a complete high-performance valve platform.



Key Features

Model 87/88 Spring Diaphragm Actuator

- Compact Multi-Spring Design Reduces Stem-Side Loading
- Field-Reversible Construction
- Rolling Diaphragm Helps to Reduce Friction and Wear
- Constant Effective Area for Smooth Linear Control
- Four Sizes Available Covering Large Thrust Range
- Four Standard Spring Ranges for Wider Application Envelope
- Side-Mounted Handwheel Option

Heavy Top Guiding

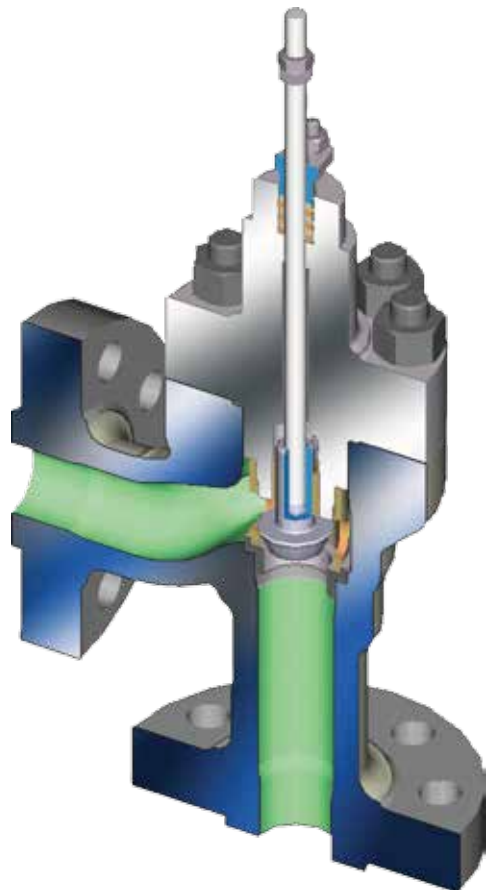
- Larger Post Guide Area for Increased Stability
- Positioned Outside of Direct Fluid Flow Path
- Offers More Reliable Control Performance

Various Trim Options

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

Design Flexibility

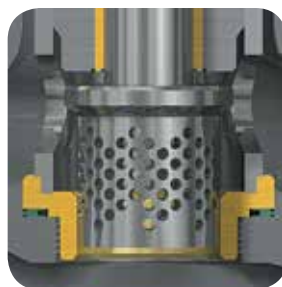
- Multiple End Connections
- Various Materials
- Angle Body Configuration
- Bellows Seal Design
- Piston Actuation Option
- Extension Bonnets
- Cryogenic Configuration
- Low-Emissions Packing
- DIN Version Available



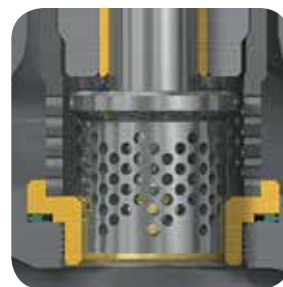
Customer Benefits

Reduced Noise Levels

The optional Lo-dB trim designs offer single-stage and double-stage noise attenuation benefits. Noise reduction levels of up to 25 dBA are possible, depending on the specific operating conditions.



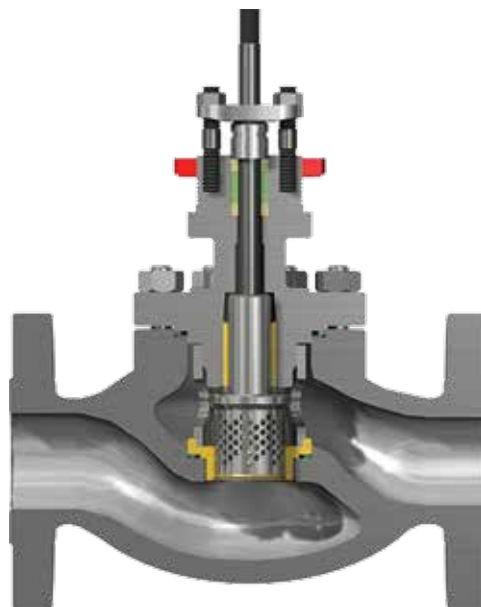
Single-stage trim



Double-stage trim

Extended Life Cycle

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



Lower Costs

Dependable tight shutoff of a control valve helps to reduce the loss of process fluids, and can help 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.



Clean Air Compliance

The optional LE Packing system helps to reduce atmospheric emissions from the stem seal area. This unique feature helps to promote compliance with environmental safety and emissions control requirements.

Hazardous Emissions Control

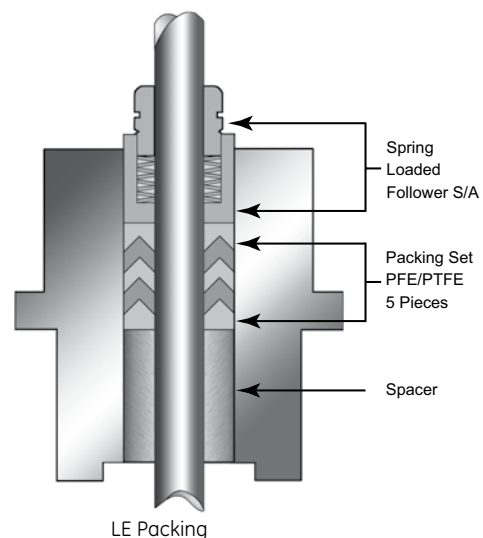
The optional Bellows Seal configuration is well-suited for applications involving highly toxic and dangerous fluids. Positive sealing and extended life-cycle operation combine to promote reliable and safe operation.

Low Temperature Operation

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

Improved Process Yields

The 21000 Series can be equipped with various Masoneilan advanced digital positioners and controllers for enhanced performance and control. This results in improved process yields and real-time diagnostics capabilities to support predictive plant maintenance programs. GE offers the Masoneilan SVI[®] II AP (Advanced Performance) 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 to provide enhanced precision for pneumatically actuated control valves. We also offer the Masoneilan ValVue[®] Software Suite for PC-based communications with these advanced devices.



21000 Series
Globe-style



FVP



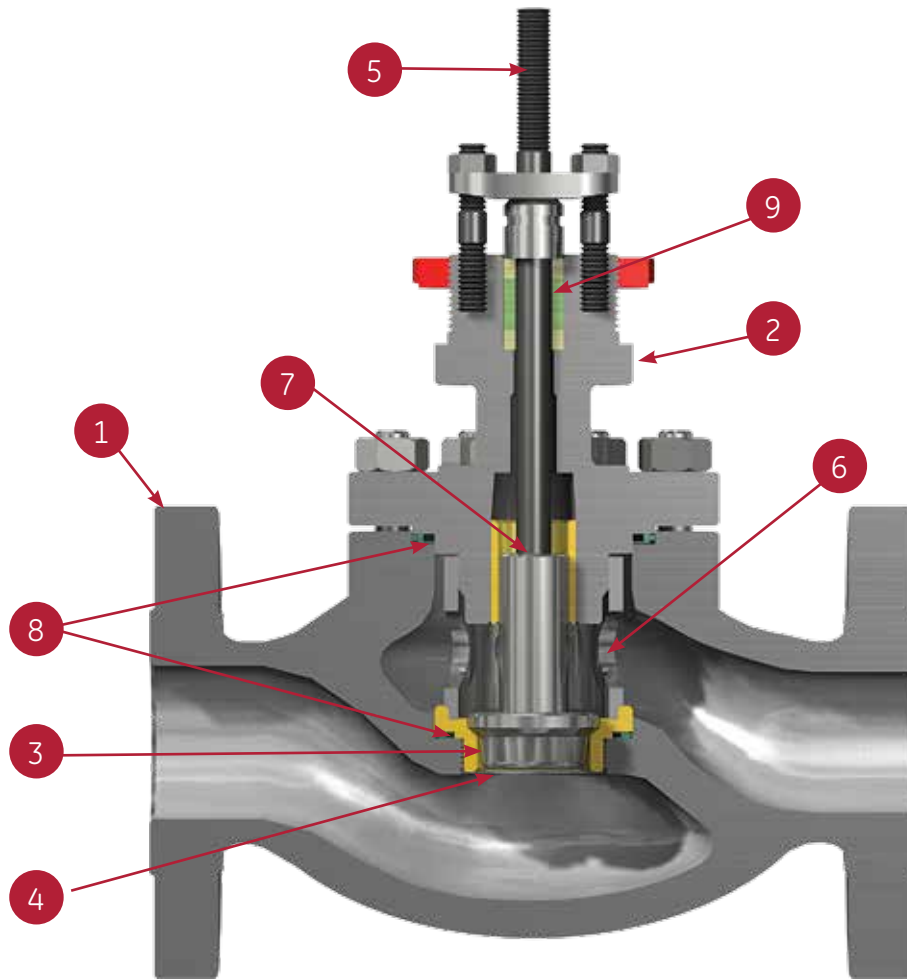
SVI II AP

Product Specifications

Operating Range	
Sizes	3/4" to 8" (20mm to 200mm)
Body Ratings	ASME Class 150 to 2500 (Equivalent PN)
Leakage	ANSI/FCI/IEC Class IV, V and VI
C _v Range	0.1 to 640
Temperature Range	-320°F to +800°F (-196°C to +427°C)

End Connections		
Connections	Valve Sizes	
	3/4" to 2" (20mm to 50mm)	3" to 8" (80mm to 610mm)
RF Flanged	●	●
Socket Weld	●	
Threaded	●	
RT Joint	●	●
Butt Weld	●	●

Materials of Construction



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, Stainless Steel with Hardfacing, Stellite or Equivalent, PTFE Soft Seat
4	Seat Ring	Stainless Steel, Stainless Steel with Hardfacing
5	Stem	Stainless Steel
6	Cage	Stainless Steel
7	Guide Bushing	Stainless Steel
8	Gaskets	Stainless Steel with Flexible Graphite Filler
9	Packing	PTFE, Flexible Graphite, LE Packing

Note: Consult factory for availability of other materials, ratings and connections.

DIRECT SALES OFFICE LOCATIONS

AUSTRALIA

Brisbane
Phone: +61-7-3001-4319
Fax: +61-7-3001-4399

Perth
Phone: +61-8-6595-7018
Fax: +61-8-6595-7299

Melbourne
Phone: +61-3-8807-6002
Fax: +61-3-8807-6577

BELGIUM
Phone: +32-2-344-0970
Fax: +32-2-344-1123

BRAZIL
Phone: +55-11-2146-3600
Fax: +55-11-2146-3610

CHINA
Phone: +86-10-8486-4515
Fax: +86-10-8486-5305

FRANCE
Courbevoie
Phone: +33-1-4904-9000
Fax: +33-1-4904-9010

GERMANY
Ratingen
Phone: +49-2102-108-0
Fax: +49-2102-108-111

INDIA
Mumbai
Phone: +91-22-8354790
Fax: +91-22-8354791

New Delhi
Phone: +91-11-2-6164175
Fax: +91-11-5-1659635

ITALY

Phone: +39-081-7892-111
Fax: +39-081-7892-208

JAPAN

Chiba
Phone: +81-43-297-9222
Fax: +81-43-299-1115

KOREA
Phone: +82-2-2274-0748
Fax: +82-2-2274-0794

MALAYSIA
Phone: +60-3-2161-0322
Fax: +60-3-2163-6312

MEXICO
Phone: +52-5-310-9863
Fax: +52-5-310-5584

THE NETHERLANDS
Phone: +0031-15-3808666
Fax: +0031-18-1641438

RUSSIA
Veliky Novgorod
Phone: +7-8162-55-7898
Fax: +7-8162-55-7921

Moscow
Phone: +7 495-585-1276
Fax: +7 495-585-1279

SAUDI ARABIA
Phone: +966-3-341-0278
Fax: +966-3-341-7624

SINGAPORE
Phone: +65-6861-6100
Fax: +65-6861-7172

SOUTH AFRICA

Phone: +27-11-452-1550
Fax: +27-11-452-6542

SOUTH & CENTRAL
AMERICA AND THE CARIBBEAN
Phone: +55-12-2134-1201
Fax: +55-12-2134-1238

SPAIN
Phone: +34-93-652-6430
Fax: +34-93-652-6444

UNITED ARAB EMIRATES
Phone: +971-4-8991-777
Fax: +971-4-8991-778

UNITED KINGDOM
Wooburn Green
Phone: +44-1628-536300
Fax: +44-1628-536319

UNITED STATES
Massachusetts
Phone: +1-508-586-4600
Fax: +1-508-427-8971

Corpus Christi, Texas
Phone: +1-361-881-8182
Fax: +1-361-881-8246

Deer Park, Texas
Phone: +1-281-884-1000
Fax: +1-281-884-1010

Houston, Texas
Phone: +1-281-671-1640
Fax: +1-281-671-1735



* Masoneilan, SVI, FVP, ValVue, Lod8, MARC, ValSpeQ, ValvKeep and ValScope are registered trademarks of the General Electric Company. Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.

© 2013 General Electric Company. All rights reserved

GEA19532 04/2013
[Formerly Masoneilan BH21000 03/10]