

a Baker Hughes business

# Masoneilan<sup>™</sup> Engineered Control Valves

Valve Solutions and Services for the World's Toughest Applications

# Integrated Smart Engineered Solutions



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## **Smart Severe-Service Technology**





49000 Series Globe and Angle Style with Lo-dB or V-LOG Trim

Sizes: 4" through 36" (100 through 900 mm)

#### Ratings and Connections: • Flanged: ANSI 150-2500

- UNI-DIN 10 400
- Welded: BW

#### Body Materials:

- Carbon steel
- Stainless steel
- Chrome-moly

#### Actuators:

- Model 37/38 spring-opposed diaphragm
- Model 87/88 multi-spring opposed diaphragm
- Cylinder actuators

#### Trims:

- Single or double stage Lo-dB and V-LOG energy management trim
- Available in low noise flow-toopen designs or anti-cavitation flow-to-close
- Variety of balanced trim options for Class IV and V shutoff

Inherent Characteristic:

Linear or equal percentage

The **49000 Series valves** are designed with enlarged body galleries to accommodate large stroke lengths and up to 36 stages of pressure reduction. Specific applications: boiler feed water start up and control, steam letdown, pump discharge, water reinjection, gas recycle and vent applications.



79003 Series Angle Style with *VRT*<sup>™</sup> Trim

Sizes: 1" through 6" (25 through 150 mm)

#### Ratings and Connections: • Flanged: ANSI 600 - 2500 UNI-DIN 100 - 400

• Welded: BW

#### Body Materials:

- Carbon steel
- Stainless steel
- · Chrome-moly

#### Actuators:

- Model 87/88 multi-spring diaphragm
- Model 37/38 spring diaphragm
- Cylinder actuators

#### Trim:

• Multi-stage VRT trim design and VRT partial stack design for control over a wide range of applications

Inherent Characteristic:

• Linear

The **79003 Series valves** are designed for anti-cavitation service with control over a wide range of operating conditions, such as the ramp-up transition of a normal feedwater pump.

#### Specific applications:

- Feedwater control
- Feedwater pump start-up valve



### 84003 Series SteamForm<sup>™</sup> Valve

Trim Sizes: 3" through 24" (80 through 600 mm) Pipe Sizes: 3" through 48" (80 through 1200 mm)

Ratings and Connections:

- Flanged: ANSI 150 2500
- UNI-DIN 10 400 • Welded: BW

#### Body Materials:

- Carbon steel
- Chrome-moly

#### Actuators:

- Model 87/88 multi-spring diaphragm
- Model 37/38 spring diaphragm
- Cylinder actuators

#### Trims:

- Single or double stage Lo-dB with optional diffuser, and V-LOG energy management trim
- Available with thermally compensated high temperature trim options for long life in high-cycling environments
- Variety of balanced trim options for Class IV and V shutoff

#### Inherent Characteristic:

• Linear or equal percentage

The **84003 Series SteamForm valve** is designed with a wide range of features, including a patented water injection system for best performance in steam conditioning applications.

#### Specific applications:

- Turbine bypass
- Process steam conditioning



71000 Series Streamlined Angle Valve

Sizes: 1" to 12" (expanding outlets available) (DN 25 to 300)

Ratings and Connections:

 Flanged: RF/RTJ (ASME B16.5, JIS, PN) ANSI 150 - 2500

#### Body Materials:

- Carbon steel
- Stainless steel
- Chrome-moly

#### Actuator:

- Model 87/88 spring-opposed diaphragm
- Cylinder actuators

#### Trims:

• Heavy top plug guiding coupled with a threaded seat ring design to form an outlet Venturi flow path for outlet area protection

Inherent Characteristic:

Equal percentage

#### The 71000 Series valve is a

streamlined angle valve designed to minimize fluid impingement through the body. This design includes very heavy guiding and durable trim

#### Specific applications:

 visbreaker, hot hydrocarbon fluid and coking applications

## 73000 Series Sweep Angle Valve

Sizes: 1" x 1" through 10" x 12" (25 x 25 mm through 250 x 300 mm)

Ratings and Connections: • Flanged: ANSI 150 - 2500

#### Body Materials:

- Carbon steel
- Stainless steel
- Titanium
- Hastelloy
- Others

#### Actuators:

- Model 87/88 spring-opposed diaphragm
- Cylinder actuators

#### Trims:

- High-capacity single stage
- Reduced port Venturi outlet
- Ceramic and tungsten carbide
  optional

Inherent Characteristic:

• Linear

The **73000 Series valves** control valve is especially suited to throttle highly erosive, flashing, and two phase flows.

#### Specific applications:

- mining
- coal slurry
- ash handling
- hydrocarbon bottoms



### 74000 Series High Pressure Erosive Flow Control

Sizes: 1" x 1" through 10" x 12" (25 x 25 mm through 250 x 300 mm)

#### Ratings and Connections:

• Flanged or Hub: ANSI 600-2500

#### Body Materials:

- Stainless steel
- Titanium
- Hastelloy
- Others

Actuators:

Cylinder actuators

#### Trims:

• Single-piece stem and plug design with both top and bottom guiding to eliminate trim vibration at high pressure drops

Inherent Characteristic:

Modified Linear

The 74000 Series erosion resistant valves are designed for special applications such as hydrocarbon service involving severe operating conditions where high temperatures and/or high pressures, high pressure drops, severe coking conditions, erosive fluid particles, and flashing liquids are encountered.

#### Specific applications:

- Residual Hydroprocessing
- Extremely Erosive Hydrocarbons

75000 Series Tank-Drain Valve
Sizes: 1" x 1" through 10" x 12" (25 x 25 mm through 250 x 300 mm)
Ratings and Connections: • Flanged: ANSI 150 - 1500
Body Materials: • Stainless steel • Titanium • Hastelloy • Others
Actuators: • Cylinder actuators
Trims: • Single-piece stem and plug design with both top and bottom guiding to eliminate trim vibration at high pressure drops

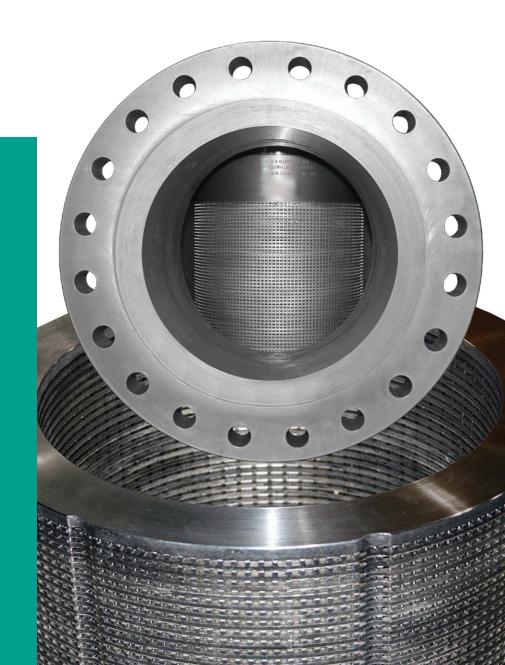
Inherent Characteristic: • Linear or contoured

The **75000 Series** tank-drain valves includes a full sweep-angle design and heavy-duty plug design to minimize erosion impact from solids or debris found in tank bottoms. Valves are available in 90°, 120°, 135° sweep angle configurations for ease of piping hook-up in tight spaces.

#### Specific applications:

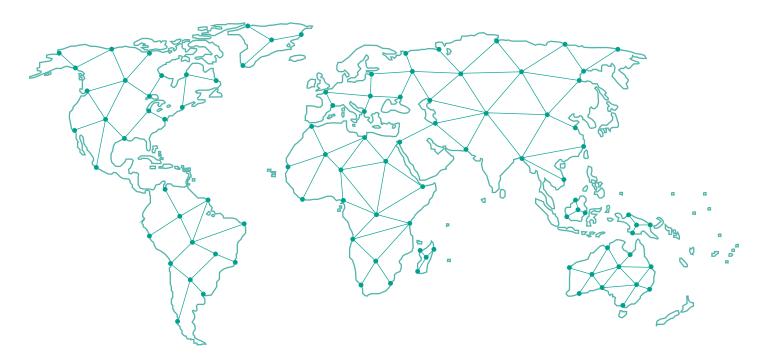
 tank level control and pressure letdown applications commonly found in reactor or crystallizer tanks

# Valve Solutions and Services for the World's Toughest Applications



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