HP series
Forged ball valves

Pressure rating:
3000 WOG

Sizes: NPS ½ – 3
(DN 15 – 80)

Full compliance
to: ASME B16.34

Fire-tested to:
API 607
Rev. 5/
ISO 10497
VELAN’S PROFILE

VELAN AT A GLANCE

History
• Founded in 1950

Sales
• Over $500 million

People
• Over 2,000 employees

Product line
A world-leading range of valves across all major industrial applications:
• Cast steel gate, globe, check, and ball valves
• Forged steel gate, globe, check, and ball valves
• Triple-offset butterfly valves
• Knife gate valves
• Severe service valves
• Bellows seal valves
• Steam traps

Quality
All major certifications and approvals
• ASME N stamp and NPT for nuclear valves (since 1970)
• ISO 9001 (since 1991)
• Currently certified to ISO 9001:2008
• PED
• GOST (TR and RTN)
• API 6A and API 6D
• TA-Luft
• Quality programs fully compliant with ISO-9001, NCA 4000, ASME NQA-1 and 10 CFR 50 Appendix B, surveyed by ASME and audited by NUPIC, Northrop Grumman Newport News, DCMA, utilities, architect/ engineers, and other organizations from around the world

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Fax: +1 514 748 8635

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www.velan.com

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Velan is one of the world’s leading manufacturers of cast and forged steel gate, globe, check, ball, triple-offset, knife gate, highly engineered severe service valves, and steam traps offering superior performance across all major industrial applications including:
• fossil, nuclear, and cogeneration power;
• oil and gas;
• refining and petrochemicals;
• chemicals and pharmaceutical;
• LNG and cryogenics;
• marine;
• subsea;
• HVAC;
• mining;
• water and wastewater; and
• pulp and paper.

The company also supplies actuators and integrated control packages to suit our customer’s needs.

Founded in 1950, Velan has earned a reputation for product excellence and innovation by bringing to the market superior products with special emphasis on quality, safety, ease of operation, and long service life. Velan valves have an extremely broad installation base and are approved by major companies worldwide.

Velan concentrates on one business—the design, manufacture and marketing of steel valves and steam traps in a broad range of types and sizes for high performance service in a wide range of applications. The company’s talented people are focused on Velan’s core values of quality, reliability, innovation, and integrity and mission to be the world’s leading valve brand.
VELAN’S GLOBAL NETWORK

Head office

Montreal, Canada
Velan Inc.

Manufacturing plants

North America

- Montreal, Canada
  Velan Inc., Plant 1

- Montreal, Canada
  Velan Inc., Plant 2 and 7

- Granby, Canada
  Velan Inc., Plant 4 and 6

- Montreal, Canada
  Velan Inc., Plant 5

- Williston, VT, U.S.A.
  Velan Valve Corp., Plant 3

Europe

- Lyon, France
  Velan S.A.S.

- Mennecy, France
  Segault S.A.

- Leicester, UK
  Velan Valves Ltd.

- Lisbon, Portugal
  Velan Válvulas Industriais, Lda.

- Lucca, Italy
  Velan ABV S.p.A., Plant 1

- Lucca, Italy
  Velan ABV S.p.A., Plant 2

Asia

- Ansan City, South Korea
  Velan Ltd., Plant 1

- Ansan City, South Korea
  Velan Ltd., Plant 2

- Ansan City, South Korea
  Velan Ltd., Plant 3

- Taichung, Taiwan
  Velan Valvac Mfg. Co., Ltd.

- Suzhou, China
  Velan Valve (Suzhou) Co., Ltd.

- Coimbatore, India
  Velan Valves India Pvt. Ltd.

Distribution centers

- Granby, Canada
  VelCAN

- Benicia, CA, U.S.A.
  VelCAL

- Marietta, GA, U.S.A.
  VelEAST

- Houston, TX, U.S.A.
  VelTEX

- Willich, Germany
  Velan GmbH

- Velan’s global network

- ASME N-stamp accredited manufacturer

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HP SERIES OVERVIEW

VELAN HIGH PRESSURE FORGED STEEL REGULAR AND FULL PORT BALL VALVE THREADED, SOCKET WELD, AND FLANGED ENDS, 3000 WOG

REGULAR PORT: NPS ¾ – 3 (DN 20 – 80) , FULL PORT: NPS ½ – 2 (DN 15 – 50)

Velan’s HP series forged 3-piece valve is a high pressure ball valve designed for the tough and rugged standards of the oilfield market in a 3000 PSI body configuration. This resilient seated valve has superior sealing characteristics in the seat, stem and body seals.

DESIGN FEATURES

- Full compliance to ASME B16.34
- Fire tested to API 607 Rev. 5/ISO 10497
- Polyoxymethylene (POM) seats
- Graphite packing
- Large robust lockable handle
- Bi-directional
- Canadian registration number (CRN)

STANDARDS

- API 607 Rev. 5/ISO 10497 certified fire test
- ASME B16.34
- API 598
- MSS SP-25
- NACE MR0103

AVAILABLE OPTIONS

- API 6A/6D
**HP SERIES DESIGN FEATURES**

1. **LIVE LOADED BLOWOUT PROOF STEM SEAL**
   - **1. LIVE LOADING WITH ONE SPRING WASHER**
     ensures long service life
   - **2. GRAPHITE PACKING**
     used to pass fire test to API 607
   - **3. PEEK THRUST WASHER**
     prevents deformation under high pressure conditions
   - **4. STEM SHOULDER**
     for blowout proof safety
   - **5. PTFE BODY SEAL WITH SECONDARY METAL-TO-METAL SEAL**
     for ensured tightness

**GRAPHITE PACKING**
Graphite packing used to pass fire test to API 607

**STANDARD LARGE ROBUST LOCKING HANDLE**

**PTFE BODY SEAL**

**SECONDARY METAL-TO-METAL SEAL**

**DIFFERENT END CONNECTIONS**
Available in socket weld, threaded, and flanged end connections.

**FULL COMPLIANCE TO ASME B16.34**

**BLOW-OUT PROOF STEM**

**3-PIECE CONSTRUCTION**
### HP-3000 Regular and Full Port Technical Data

#### Standard Materials

<table>
<thead>
<tr>
<th>Part</th>
<th>Carbon Steel</th>
<th>Low Temp</th>
<th>Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>A105</td>
<td>LF2</td>
<td>F316</td>
</tr>
<tr>
<td>Body end cap</td>
<td>A105</td>
<td>LF2</td>
<td>F316</td>
</tr>
<tr>
<td>Stem</td>
<td>SS 630</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball</td>
<td>SS 630</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrust washer</td>
<td>PEEK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seat</td>
<td>POM(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing rings</td>
<td>Die-formed flexible graphite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handle nut</td>
<td>CS plated</td>
<td></td>
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<tr>
<td>Body seal</td>
<td>PTFE</td>
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</tr>
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<td>Locking device</td>
<td>Malleable iron</td>
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<tr>
<td>Handle</td>
<td>Malleable iron</td>
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<tr>
<td>Belleville washer</td>
<td>17-7ph</td>
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<td>Hex head cap screw</td>
<td>SS 304</td>
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<td></td>
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<tr>
<td>Handle washer</td>
<td>SS 304</td>
<td></td>
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</tr>
<tr>
<td>Packing bushing</td>
<td>SS 316</td>
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<tr>
<td>Packing washer</td>
<td>SS 316</td>
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<tr>
<td>Packing flange</td>
<td>WCB</td>
<td>WCB</td>
<td>CF8M</td>
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<tr>
<td>Antistatic spring</td>
<td>SS 302(2)</td>
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</tbody>
</table>

(1) POM (Polyoxymethylene) is also known as Delrin® or Celcon®.
(2) For 2” (50 mm) and up.

---

#### Pressure Temperature Rating

![Pressure Temperature Rating](image)

Note: For HP-3000 NPS ¾ - 3 (20 - 80) regular port and NPS ½ - 2 (DN 15-50) full port.

---

#### Regular Port Dimensions, CVs and Weights

<table>
<thead>
<tr>
<th>Size (NPS DN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>ØE</th>
<th>NPT</th>
<th>CV</th>
<th>Weight (lb)</th>
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<tr>
<td>½</td>
<td>5.00</td>
<td>3.27</td>
<td>2.19</td>
<td>4.38</td>
<td>5.00</td>
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<td>15</td>
<td>111</td>
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<td>165</td>
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<td>1</td>
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<td>127</td>
<td>165</td>
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<td>50.8</td>
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<tr>
<td>1½</td>
<td>108</td>
<td>127</td>
<td>165</td>
<td>216</td>
<td>216</td>
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<td>530</td>
<td>570</td>
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<td>530</td>
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#### Full Port Dimensions, CVs and Weights

<table>
<thead>
<tr>
<th>Size (NPS DN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>ØE</th>
<th>NPT</th>
<th>CV</th>
<th>Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>½</td>
<td>5.00</td>
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<td>2.19</td>
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<td>216</td>
<td>216</td>
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</tr>
</tbody>
</table>

Note: The indicated weights for both regular and full port apply to NPT valves only.

---

#### Socket Weld Ends

![Socket Weld Ends](image)

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### HOW TO ORDER

VELAN HP SERIES FORGED BALL VALVES

The figure numbers shown on this key cover essential features of Velan HP series valves. Please use these figure numbers to ensure prompt and accurate processing of your order.

<table>
<thead>
<tr>
<th>TYPE OF CONNECTION</th>
<th>SIZE OF CONNECTION</th>
<th>CLASS OR MODEL NUMBER</th>
<th>PORT</th>
<th>TYPE</th>
<th>BODY MATERIAL</th>
<th>TRIM</th>
<th>SEAT MATERIAL</th>
<th>SPECIAL SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>H</td>
<td>I</td>
</tr>
</tbody>
</table>

**Example:** NPS 1 (DN 25), threaded, HP-3000, full port valve in carbon steel body with SS630 ball and stem, POM seats and fire-tested to API-607.

#### A TYPE OF CONNECTION
- C - Combination (socket weld/threaded)
- S - Threaded
- F - Flanged
- W - Socket weld

#### B SIZE OF CONNECTION

Customers have the choice of specifying valve size as part of the valve figure number (B) using the numbers below, or indicating valve size separately. Sizes below are shown in NPS (DN)

**EXAMPLES:**
- S05-V1702-RRLZ (valve size is part of figure number)
- 1 S-V1702RRLZ (valve size is shown separately)

<table>
<thead>
<tr>
<th>03  - ½ (15)</th>
<th>05  - 1 (25)</th>
<th>08  - 2 (50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>04  - ¾ (20)</td>
<td>07  - 1½ (40)</td>
<td>10  - 3 (80)</td>
</tr>
</tbody>
</table>

#### C MODEL NUMBER
- V - HP-3000

#### D PORT
- 0 - Regular
- 1 - Full port

#### E TYPE
- 7 - Three-piece valve (screwed)

#### F BODY MATERIAL
- 02 - A105
- 13 - Stainless steel F316
- 26 - LF2

#### G TRIM

<table>
<thead>
<tr>
<th>CODE</th>
<th>BALL</th>
<th>STEM</th>
</tr>
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<tbody>
<tr>
<td>RR</td>
<td>SS630</td>
<td>SS630</td>
</tr>
</tbody>
</table>

#### H SEAT MATERIAL
- L - POM (Delrin®)

#### I SPECIAL SERVICE
- A - Standard
- Z - Fire-tested to API 607 Rev. 5/ISO 10497

The HP series ball valve line is specifically designed to meet the rugged standards of the oilfield market in the 3000 PSI body configuration and is ideal for high pressure and temperature applications.

Should you have requirements for lower pressure process applications please refer to our Memoryseal® catalog. Our Memoryseal® design is ideally suited for lower pressure process applications due to superior features such as E20 packing chambers, fire test to API 607 / ISO 10497, pre-drilled mounting pads for actuation, and our patented Memoryseal® flexible seats.
The most comprehensive line of industrial forged and cast steel gate, globe, check, ball, butterfly, and knife gate valves and steam traps.

ASME pressure classes 150–4500 in carbon, alloy, and stainless steel

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