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The company

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TECHNICAL FEATURES
JC Fábrica de Válvulas S.A., established in 1968, is a multinational company specialised in the manufacture and sale of high quality industrial valves.

The expertise and know how acquired over the years coupled with the continued investments in the design of valves, has made JC a world renowned company in the field of valve applications.

**Market sectors**

JC develops and designs valves for all applications, but the main focus is in Oil & Gas, Chemical, Petrochemical, Pulp & Paper and Energy sectors.

"We make valves since 1968"

**JC World Wide**

JC Valves provides world wide coverage thanks to the strategic locations of its factories and offices:
JC Fábrica de Válvulas S.A. offers its customers a world wide service, from technical advice to choose the right valve up to the design and manufacture of custom built valves to meet special service requirements.

Our R+D department is always ready to find solutions for severe applications and our global distribution network offers quick availability of JC valves and an efficient after sales service.

» Quality assurance

JC Valves are designed and produced to meet the major international standards and we take great care and put a lot of emphasis on QUALITY, which provides our customers with a total guarantee and trouble free operation of their process. And in addition, we take great care to make our facilities and our products Environment friendly.

» Global services

JC Fábrica de Válvulas S.A. offers its customers a world wide service, from technical advice to choose the right valve up to the design and manufacture of custom built valves to meet special service requirements.

Our R+D department is always ready to find solutions for severe applications and our global distribution network offers quick availability of JC valves and an efficient after sales service.

JC Quality Assurance System

- ISO 9001 : 2000 certified by BVQI
- API Q1 certified by the AMERICAN PETROLEUM INSTITUTE
- PED 97 / 23 / EC certified by BVQI

Manufacturing Program

- API 6D certified by the AMERICAN PETROLEUM INSTITUTE
- CE Marking (Module H, Category III) in accordance with PED 97 / 23 / EC certified by BVQI
- Fire Safe ISO 10947 : 2004
- API 607 3rd., 4th. and 5th. Edition
- BS 6755 Part 2 certified by Lloyd’s Register and SGS
- GOST “R” certified for Russian market
- SIL 3 (Safety integrity level)
- ATEX

Environmental Certifications

- ISO 14001 : 2004 certified by BVQI
- ISO-EN 15848-1 certified by SGS
Gate valves serve as efficient on-off valves with flow in either direction. In such a design, a wedge slides cross a general passageway in order to control fluid flow (like a sliding gate - hence, the name). One of the most significant characteristics of this type of valves is its straight-through, unobstructed passageway when set in the “full open” position. This is made possible by the wedge lifting entirely out of the passageway. As a result, gate valves are characterized by a minimum of turbulence and pressure drop in operation.

While gate valves are good for applications requiring these two factors, they are not recommended for installations in which throttling would be a function. They are designed for on/off service.

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**BILoF MATERIALS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<th>TRIM 9</th>
<th>TRIM 10</th>
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<td>1</td>
<td>Body</td>
<td>A 216 Gr. WCB</td>
<td>A 352 Gr. LCB</td>
<td>A 217 Gr. C5</td>
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<td>Bonnet</td>
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<td>A 217 Gr. C5</td>
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<td>3</td>
<td>Wedge</td>
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<td>A 352 Gr. LCB + ER308</td>
<td>A 217 Gr. C5 + ER410</td>
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<td>Stem</td>
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<td>A 182 Graph. F304</td>
<td>A 182 Gr. F6a</td>
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<td>6</td>
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<td>9</td>
<td>Gland</td>
<td>A 105</td>
<td>A 105</td>
<td>A 182 Gr. F6a</td>
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<td>Gland Flange</td>
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<td>Graphite</td>
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<td>RJ SS304</td>
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<td>RJ SS304</td>
<td>RJ SS304</td>
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<td>15</td>
<td>Handwheel</td>
<td>Carbon Steel</td>
<td>Carbon Steel</td>
<td>Carbon Steel</td>
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</tbody>
</table>

* Standard construction with trim 8,2 and 10. Others constructions are available. (1) Zinc coating.
Body and Bonnet
Bodies and bonnets are high quality cast and afterwards precisely machined, directing the attention to prevent stress concentration. The bodies of gate valves consist of a straight through port that guarantees minimal turbulence and resistance to flow. In both designs, bolted bonnet and pressure seal, the bodies consist of guide slots to accommodate the wedge during opening or closing of the valve. Bonnets are made either of one piece only –the yoke then being an integral part of it– or have two pieces, depending on the size of the valve. This ensures the perfect alignment with the body what leads to an accurate opening and closing.

Backseat
All JC gate and globe valves have backseat threaded in the bonnet, or for the pressure seal valves, welded to the bonnet. Into pressure seal the hard facing is stellite 6 or equivalent.

Stem
The stems of JC gate valves are forged from one piece and ACME threaded, then mechanized and finally provided with a smooth finishing in order to minimize friction.

In gate valves, the union of stem and wedge shall be in T form, designed to prevent the stem disengaging itself from the wedge while being in service. This design includes a conical raised surface that presses the seat against the bonnet backseat in the fully open position.

Body and Bonnet Gaskets
The design of the body-bonnet/gaskets varies depending on the class of the valve.
Class 150 gate valves consist of a square joint in 2” and an oval one for all other sizes. Depending on the valve service it can be supplied flat-face gasket with graphite or PTFE.
Class 300 and 600 valves consist of a circular spiral wound gasket.
Class 900 and above gate valves consist of a ring type joint.
In pressure seal designs the sealing is achieved through a gasket that takes advantage of the internal pressure of the line. The material most commonly used is high-purity graphite being located between the body and the body retainer ring.

Flexible Wedge
All JC gate valves 3” and above valves feature a flexible wedge unless otherwise specified by the customer. The flexible wedge shifts along the body of the valve during opening and closing, being held in position by a guide slot that minimizes the friction between body seat and wedge. This design is especially suited to compensate slight thermal deformations produced by the pipe or the valve itself safeguarding a better sealing between body and wedge seats.
**GATE, GLOBE & CHECK VALVES**

**GATE VALVES**

**Class 150**

**(VC150BB)**

---

**API 600 / BS1414 BOLTED BONNET**

**General dimensions**

<table>
<thead>
<tr>
<th>DN (&quot;&quot;&quot;)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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</thead>
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<tr>
<td>50 (2&quot;)</td>
<td>178</td>
<td>216</td>
<td>386</td>
<td>200</td>
<td>17</td>
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<tr>
<td>65 (2½&quot;)</td>
<td>190</td>
<td>241</td>
<td>435</td>
<td>200</td>
<td>27</td>
</tr>
<tr>
<td>80 (3&quot;)</td>
<td>203</td>
<td>282.5</td>
<td>483</td>
<td>250</td>
<td>33</td>
</tr>
<tr>
<td>100 (4&quot;)</td>
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<td>305</td>
<td>587</td>
<td>250</td>
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<tr>
<td>125 (5&quot;)</td>
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<td>381</td>
<td>673</td>
<td>300</td>
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</tr>
<tr>
<td>150 (6&quot;)</td>
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<td>403</td>
<td>767</td>
<td>300</td>
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</tr>
<tr>
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<td>955</td>
<td>350</td>
<td>120</td>
</tr>
<tr>
<td>250 (10&quot;)</td>
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<td>457</td>
<td>1146</td>
<td>450</td>
<td>176</td>
</tr>
<tr>
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<td>502</td>
<td>1328</td>
<td>500</td>
<td>260</td>
</tr>
<tr>
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<td>381</td>
<td>572</td>
<td>1519</td>
<td>460</td>
<td>380</td>
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<td>1721</td>
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<td>1900</td>
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<td>620</td>
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<td>711</td>
<td>2116</td>
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<td>810</td>
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<td>762</td>
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<td>-</td>
<td>3668</td>
<td>710</td>
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(*) With Gear Operator.
(‡) With flanges.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.

---

**TRIM**

<table>
<thead>
<tr>
<th>API 600 TRIM N</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface Body / Wedge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
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<tr>
<td>2</td>
<td>304</td>
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<td>18Cr-8Ni</td>
</tr>
<tr>
<td>3</td>
<td>F310</td>
<td>250-20Ni</td>
<td>250-20Ni</td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
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<td>Hardfaced</td>
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<td>Ni-Cr</td>
</tr>
<tr>
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<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
</tr>
<tr>
<td>7</td>
<td>F6 and Hard F6</td>
<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
</tr>
<tr>
<td>8</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
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<tr>
<td>8A</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
</tr>
<tr>
<td>9</td>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
</tr>
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<td>10</td>
<td>316</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
</tr>
<tr>
<td>11</td>
<td>Monel and Hardfaced</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
</tr>
<tr>
<td>12</td>
<td>316 and Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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<td>190-29Ni</td>
<td>190-29Ni</td>
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<td>Alloy 20 and Hardfaced</td>
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<td>190-29Ni and Trim 5 or 5A</td>
</tr>
<tr>
<td>15</td>
<td>Hardfaced</td>
<td>18Cr-8Ni</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>16</td>
<td>Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>17</td>
<td>Hardfaced</td>
<td>18Cr-10Ni-Co</td>
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</tr>
<tr>
<td>18</td>
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<td>190-29Ni</td>
<td>Co-Cr A</td>
</tr>
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</table>

HF: Hard Facing using CoCr welding alloy (Stellite)

---

**Materials**

ACC. / ASME B16.34
DI, WC, WC, WC1, WC6, WCN, CS, C12, LCC, CF8, CF8C, CF8M, CF3, CF3M,
DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

---

**Sizes 2" to 36"**

Carbon steel and alloy steel construction
Stainless steel construction
API 600 / BS1414 BOLTED BONNET

Sizes 2” to 24”

TRIM

| API 600 Trim No. | Nominal TRIM | Stem / Backseat | Sealing Surface
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
</tr>
<tr>
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<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
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<td>3</td>
<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
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<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
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<td>Ni-Cr</td>
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<td>F6 and Cu-Ni</td>
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<td>8</td>
<td>F6 and Hardfaced</td>
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<td>13Cr and Ni-Cr</td>
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<td>18Cr-8Ni-Mo</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>12</td>
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<td>18</td>
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</table>

HF: Hard Facing using CoCr welding alloy (Stellite)

Materials

ACC. / ASME B16.34
DI, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF8, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF / BW)</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 (2”)</td>
<td>216</td>
<td>417</td>
<td>200</td>
<td>24</td>
</tr>
<tr>
<td>65 (2½”)</td>
<td>241</td>
<td>460</td>
<td>250</td>
<td>35</td>
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<tr>
<td>80 (3”)</td>
<td>282,5</td>
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<td>460 (*)</td>
<td>1010 (**)</td>
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<td>450 (18”)</td>
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<td>1942</td>
<td>610 (*)</td>
<td>1205 (**)</td>
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<td>1720 (**)</td>
</tr>
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<td>2340</td>
<td>610 (*)</td>
<td>1920 (**)</td>
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<td>600 (24”)</td>
<td>1143</td>
<td>2526</td>
<td>610 (*)</td>
<td>2580 (**)</td>
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(*) With Gear Operator.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
Sizes 2” to 24”

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF/BW)</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
</tr>
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(*) With Gear Operator.

Dimensions in mm and weight in kg. Weights and dimensions can be changed without notice. Bigger sizes available under customer request.

Materials

ACC. / ASME B16.34
DI, WC6, WC9, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF8, CF3, CF3M, DUPSLEX, SUPERDUPLEX, EXOTIC MATERIALS.

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<th>Sealing Surface Body / Wedge</th>
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HF: Hard Facing using CoCr welding alloy (Stellite)
**API 600 / BS1414 BOLTED BONNET**  
**Class 900**  
**VC900BB**

**Sizes 2” to 20”**

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<th>ØC</th>
<th>WEIGHT (App.)</th>
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<td>547</td>
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**TRIM**

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<td>304</td>
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**Materials**

ACC. / ASME B16.34  
DI, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

**General dimensions**

- Carbon and alloy steel construction
- Stainless steel construction

*HF:* Hard Facing using CoCr welding alloy (Stellite)

*Weight and dimensions can be changed without notice. Bigger sizes available under customer request.*
**TRIM**

<table>
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<tr>
<th>API 600 TRIM Nº</th>
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*HF: Hard Facing using CoCr welding alloy (Stellite)*

**Materials**

ACC. / ASME B16.34
DI, WCB, WOC, WC1, WC6, WCC, C5, C12, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

**General dimensions**

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<th>ØC</th>
<th>WEIGHT (App.)</th>
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(1) With Gear Operator.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
Sizes 2” to 14”

Carbon and alloy steel construction

Stainless steel construction

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**HF**: Hard Facing using CoCr welding alloy (Stellite)

### Materials

ACC. / ASME B16.34
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### General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF/BW)</th>
<th>B</th>
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<th>WEIGHT (App.)</th>
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<td>1010</td>
<td>610</td>
<td>715</td>
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<td>150 (6”)</td>
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<tr>
<td>200 (8”)</td>
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<td>1346</td>
<td>610</td>
<td>1700 (*)</td>
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<tr>
<td>250 (10”)</td>
<td>1270</td>
<td>1500</td>
<td>760</td>
<td>2950 (*)</td>
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<tr>
<td>300 (12”)</td>
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<td>1700</td>
<td>760</td>
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<td>1575</td>
<td>1950</td>
<td>760</td>
<td>5790 (*)</td>
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(*) With Gear Operator.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
GATE VALVES
PRESSURE SEAL
2” - 20” I Class 900 - Class 2500
**General dimensions**

<table>
<thead>
<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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<td>570</td>
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* Long pattern available with flanges.

**TRIM**

<table>
<thead>
<tr>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface</th>
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<tbody>
<tr>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
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<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
</tr>
<tr>
<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
</tr>
<tr>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>5A</td>
<td>13Cr</td>
<td>Ni-Cr</td>
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<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
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<tr>
<td>F6 and Hard F6</td>
<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
</tr>
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<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
</tr>
<tr>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
</tr>
<tr>
<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<tr>
<td>316</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<tr>
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<td>18Cr-8Ni-Mo-Mo</td>
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<tr>
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<td>18Cr-8Ni</td>
<td>18Cr-8Ni and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
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<td>Ni-Cu Alloy</td>
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<td>316 and Hardfaced</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<tr>
<td>316 and Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
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<tr>
<td>316 and Hardfaced</td>
<td>19Cr-29Ni</td>
<td>19Cr-29Ni</td>
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<tr>
<td>316 and Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
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**Materials**

ACC, / ASME B16.34

DL, WCB, WC1, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

*HF: Hard Facing using CoCr welding alloy (Stellite)*

With Gear Operator.

 Dimensions in mm and weight in kg.

Weights and dimensions can be changed without notice.

Bigger sizes available under customer request.
## ASME B16.34 PRESSURE SEAL

### GATE, GLOBE & CHECK VALVES

#### Class 1500

**VC1500PS**

---

### Sizes 2” to 18”

#### TRIM

<table>
<thead>
<tr>
<th>API 600 TRIM Nº</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Seating Surface Body / Wedge</th>
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<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
</tr>
<tr>
<td>2</td>
<td>304</td>
<td>180-8Ni</td>
<td>180-8Ni</td>
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<td>3</td>
<td>F310</td>
<td>250-20Ni</td>
<td>250-20Ni</td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
</tr>
<tr>
<td>6</td>
<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
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<tr>
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<td>F6 and Hard F6</td>
<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
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<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
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<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<td>180-8Ni-Mo</td>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>180-8Ni-Mo</td>
<td>180-8Ni-Mo and Trim 5 or 5A</td>
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<td>Alloys 20</td>
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<td>190-29Ni</td>
<td>190-29Ni and Trim 5 or 5A</td>
</tr>
<tr>
<td>15</td>
<td>Hardfaced</td>
<td>180-8Ni-Mo</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>16</td>
<td>Hardfaced</td>
<td>180-8Ni-Mo</td>
<td>Co-Cr A</td>
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<tr>
<td>17</td>
<td>Hardfaced</td>
<td>180-10Ni-Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>18</td>
<td>Hardfaced</td>
<td>190-29Ni</td>
<td>Co-Cr A</td>
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</table>

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### Materials

ACC / ASME B16.34
DI, WCB, WC1, WC6, WCC, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

---

### General dimensions

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<th>ØD</th>
<th>WEIGHT (App.)</th>
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<tbody>
<tr>
<td>50 (2”)</td>
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<td>368</td>
<td>574</td>
<td>250</td>
<td>67</td>
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<td>419</td>
<td>700</td>
<td>350</td>
<td>95</td>
</tr>
<tr>
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<td>470</td>
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<td>119</td>
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<td>546</td>
<td>887</td>
<td>400</td>
<td>280</td>
</tr>
<tr>
<td>125 (5”)</td>
<td>483</td>
<td>673</td>
<td>990</td>
<td>460</td>
<td>370</td>
</tr>
<tr>
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<td>705</td>
<td>1079</td>
<td>460</td>
<td>475</td>
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<td>710</td>
<td>855</td>
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<td>863</td>
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<td>1520</td>
<td>710</td>
<td>1222</td>
</tr>
<tr>
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<td>1650</td>
<td>710</td>
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<td>1257</td>
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<td>1384</td>
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<td>1537</td>
<td>2180</td>
<td>760</td>
<td>3905</td>
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* With Gear Operator.
** BW ends, short pattern.

Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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<td>710</td>
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<td>820</td>
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<td>895</td>
<td>400</td>
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<td>125 (5&quot;)</td>
<td>533</td>
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<td>980</td>
<td>500</td>
<td>395</td>
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<tr>
<td>150 (6&quot;)</td>
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<td>1060</td>
<td>500 (**)</td>
<td>525 (**)</td>
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<tr>
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<td>1022</td>
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<td>710 (**)</td>
<td>980 (**)</td>
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<td>1270</td>
<td>1480</td>
<td>710 (**)</td>
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<td>1422</td>
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<td>760 (**)</td>
<td>1,850 (**)</td>
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TRIM

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<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface / Wedge</th>
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<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
</tr>
<tr>
<td>2</td>
<td>304</td>
<td>18Cr-8Ni</td>
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<tr>
<td>3</td>
<td>F310</td>
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<td>25Cr-20Ni</td>
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<tr>
<td>4</td>
<td>Hard F6</td>
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<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
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<td>Hardfaced</td>
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<td>Ni-Cr</td>
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<td>F6 and Cu-Ni</td>
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<td>13Cr and Cu-Ni</td>
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<td>13Cr and Ni-Cr</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>Co-Cr A</td>
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HF: Hard Facing using CoCr welding alloy (Stellite)

Materials

ACC / ASME B16.34
D1, WCB, WCC, WC1, WCG, WCG9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

* Long pattern available with flanges.
GLOBE VALVES

2” - 16” | Class 150 - Class 2500

All globe valves utilize the “port closure” concept of valves. By this it meant that fluid passes through a specific opening (rather than a general passageway, as in the case of gate valves), and the fluid is controlled by means of a stem-mounted disc or inserted plug in that area.

Despite of lacking the straight through, unobstructed passageway of the gate valve, these globe types are superior in two key aspects - throttling and service-ability under frequent use. They are better at the throttling function because they permit fluid to exit uniformly around the circumference of a seat, rather than “slicing” down to limit passage through a narrowly restricted area.

---

### BILL OF MATERIALS

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>TRIM 8</th>
<th>TRIM 2</th>
<th>TRIM B</th>
<th>TRIM 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>A 216 Gr. WCB</td>
<td>A 352 Gr. LCB</td>
<td>A 217 Gr. C5</td>
<td>A 351 Gr. CF8M</td>
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<td>A 352 Gr. LCB</td>
<td>A 217 Gr. C5</td>
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<td>Disc</td>
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<td>A 182 Gr. F304</td>
<td>A 182 Gr. F304 + Stellite</td>
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<td>Seat Ring</td>
<td>A 105 + Stellite</td>
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* Standard construction with trim 8, 2 and 10. Others constructions are available.

(1) Zinc coating.
**Stem**
The stems of JC globe valves are forged from one piece and ACME threaded, then mechanized and finally provided with a smooth finishing in order to minimize friction.

**Body and Bonnet Gasket**
The design of the body-bonnet gasket varies depending on the class of the valve.
Class 150 to 600 globe valves consist of a circular male-female connection with a graphite or spiral wound gasket.
Class 900 and above globe valves consist of a ring type joint.
In pressure seal designs the sealing is achieved through a gasket that takes advantage of the internal pressure of the line. The material most commonly used is high-purity graphite being located between the body and the body retainer ring.

**Body and Bonnet**
Bodies and bonnets are high quality cast and afterwards precisely machined, directing the attention to prevent stress concentration.
Bonnets are made either of one piece only—the yoke then being an integral part of it—or have two pieces, depending on the size of the valve. This ensures the perfect alignment with the body what leads to an accurate opening and closing.
Bodies of globe valves are designed considering the same characteristics as gate valves, which in this case means that the disc is guided in bigger valve sizes or high pressure service in order to avoid vibrations and better seat.

**Backseat**
All JC gate and globe valves have backseat threaded in the bonnet, or for the pressure seal valves, welded to the bonnet. The hard facing is stellite 6 or equivalent.

---

**DESIGN STANDARDS**

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<thead>
<tr>
<th>COMPONENT</th>
<th>STANDARD</th>
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<tbody>
<tr>
<td>Bolted Bonnet Globe Valve</td>
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<tr>
<td>Bolted Bonnet Globe Valve</td>
<td>BS 1873 &amp; ASME B16.34</td>
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<td>Pressure Seal Globe Valve (Long &amp; Short pattern)</td>
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<td>Valve inspection &amp; testing</td>
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<td>Pressure - Temperature rating</td>
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**TEST / INSPECTION METHODS & ACCEPTANCE CRITERIA**

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## BS1873 BOLTED BONNET

### Class 150  VG150BB

**Sizes 2” to 16”**

![Diagram of globe valve](image)

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<tr>
<th>DN</th>
<th>A (RF / BW)</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
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<td>50 (2”)</td>
<td>203</td>
<td>341</td>
<td>200</td>
<td>22</td>
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<tr>
<td>65 (2½”)</td>
<td>216</td>
<td>367</td>
<td>250</td>
<td>29</td>
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<tr>
<td>80 (3”)</td>
<td>241</td>
<td>375</td>
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<td>40</td>
</tr>
<tr>
<td>100 (4”)</td>
<td>292</td>
<td>483</td>
<td>300</td>
<td>64</td>
</tr>
<tr>
<td>125 (5”)</td>
<td>356</td>
<td>537</td>
<td>300</td>
<td>77</td>
</tr>
<tr>
<td>150 (6”)</td>
<td>406</td>
<td>517</td>
<td>350</td>
<td>105</td>
</tr>
<tr>
<td>200 (8”)</td>
<td>495</td>
<td>590</td>
<td>400</td>
<td>154</td>
</tr>
<tr>
<td>250 (10”)</td>
<td>622</td>
<td>754</td>
<td>450</td>
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</tr>
<tr>
<td>300 (12”)</td>
<td>698</td>
<td>941</td>
<td>640</td>
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<td>350 (14”)</td>
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<td>914</td>
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<td>460 (**)</td>
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**API 600 TRIM N°**

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<th>TRIM Nº</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface Body / Wedge</th>
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<tr>
<td>2</td>
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<td>18Cr-8Ni</td>
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<tr>
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<td>F310</td>
<td>250-20Ni</td>
<td>250-20Ni</td>
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<tr>
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<td>13Cr</td>
<td>Co-Cr A</td>
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<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
</tr>
<tr>
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<td>13Cr and Cu-Ni</td>
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<td>13Cr and Hard 13Cr</td>
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<td>9</td>
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<td>Ni-Cu Alloy</td>
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HF: Hard Facing using CoCr welding alloy (Stellite)

**Materials**

ACC. / ASME B16.34
DI, WCB, WC6, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

**General dimensions**

<table>
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<tr>
<th>DN</th>
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<th>ØC</th>
<th>WEIGHT (App.)</th>
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<tr>
<td>50 (2”)</td>
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<td>483</td>
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<td>914</td>
<td>1250</td>
<td>460 (**)</td>
<td>810 (***)</td>
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**With Gear Operator.**

Dimensions in mm and weight in kg.

Weights and dimensions can be changed without notice.

Bigger sizes available under customer request.
BS1873 BOLTED BONNET

Class 300

VG300BB

Sizes 2” to 12”

General dimensions

<table>
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(*) With Gear Operator.

Dimensions in mm and weight in kg.

Weights and dimensions can be changed without notice.

Bigger sizes available under customer request.

Materials

ACC. / ASME B16.34
D1, WCB, WC1, WC9, C5, C12, LCB, LCC, CFB, CFB6, CF8, CF8M, CF3, CF3M, DUPERLUX, SUPERDUPLEX, EXOTIC MATERIALS.

TRIM

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<td>Co-Cr A</td>
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HF: Hard Facing using CoCr welding alloy (Stellite)
BS1873 BOLTED BONNET

Class 600

VG600BB

Sizes 2" to 12"

TRIM

<table>
<thead>
<tr>
<th>API 600 TRIM N.</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface Body / Wedge</th>
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<td>Co-Cr A</td>
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<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Co</td>
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<tr>
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<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
</tr>
<tr>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
</tr>
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Materials

ACC / ASME B16.34
D1, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, Duplex, Superduplex, exotic materials.

General dimensions

<table>
<thead>
<tr>
<th>DN</th>
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<th>ØC</th>
<th>WEIGHT (App.)</th>
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<td>48</td>
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<td>80 (3&quot;)</td>
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<td>350</td>
<td>73</td>
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<tr>
<td>100 (4&quot;)</td>
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<td>620</td>
<td>450</td>
<td>117</td>
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<td>125 (5&quot;)</td>
<td>508</td>
<td>756</td>
<td>500</td>
<td>245</td>
</tr>
<tr>
<td>150 (6&quot;)</td>
<td>559</td>
<td>886</td>
<td>560</td>
<td>327</td>
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<tr>
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<td>932</td>
<td>460</td>
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(*) With Gear Operator.

Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.

HF: Hard Facing using CoCr welding alloy (Stellite)
BS1873 BOLTED BONNET

Class 900  VG900BB

Sizes 2” to 8”

TRIM

<table>
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<tr>
<th>DN (2”)</th>
<th>A (RF / BW)</th>
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<th>ØC</th>
<th>WEIGHT (App.)</th>
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<td>50</td>
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<td>478</td>
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<tr>
<td>65 (2½”)</td>
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</tr>
<tr>
<td>80 (3”)</td>
<td>381</td>
<td>614</td>
<td>560</td>
<td>218</td>
</tr>
<tr>
<td>100 (4”)</td>
<td>457</td>
<td>789</td>
<td>560</td>
<td>235</td>
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<tr>
<td>125 (5”)</td>
<td>559</td>
<td>825</td>
<td>460</td>
<td>452</td>
</tr>
<tr>
<td>150 (6”)</td>
<td>610</td>
<td>886</td>
<td>460</td>
<td>452</td>
</tr>
<tr>
<td>200 (8”)</td>
<td>737</td>
<td>932</td>
<td>610</td>
<td>710</td>
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With Gear Operator.

Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.

Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.

Materials

ACC. / ASME B16.34
DI, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M,
DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

HF: Hard Facing using CoCr welding alloy (Stellite)
BS1873 BOLTED BONNET

Sizes 2” to 8”

TRIM

<table>
<thead>
<tr>
<th>TRIM NO. TRIM N.</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Seating Surface Body / Wedge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>13Cr</td>
<td>13Cr</td>
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<td>2</td>
<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
</tr>
<tr>
<td>3</td>
<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
</tr>
<tr>
<td>6</td>
<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
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<tr>
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<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
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<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
</tr>
<tr>
<td>8A</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
</tr>
<tr>
<td>9</td>
<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<tr>
<td>10</td>
<td>316</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
</tr>
<tr>
<td>11</td>
<td>Monel and Hardfaced</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
</tr>
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<td>12</td>
<td>316 and Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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<td>19Cr-29Ni</td>
<td>19Cr-29Ni</td>
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<td>14</td>
<td>Alloy 20 and Hardfaced</td>
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<td>18Cr-8Ni-Mo</td>
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<td>17</td>
<td>Hardfaced</td>
<td>18Cr-10Ni-Cb</td>
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<td>19Cr-29Ni</td>
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Materials

ACC. / ASME B16.34
DI, WCB, WC6, WC1, WC9, WCC, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF / BW)</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
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</thead>
<tbody>
<tr>
<td>50 (2”)</td>
<td>368</td>
<td>592</td>
<td>350</td>
<td>112</td>
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<td>65 (2½”)</td>
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<td>1145</td>
<td>610 (*)</td>
<td>960 (*)</td>
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(*) With Gear Operator.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
BS1873 BOLTED BONNET

Sizes 2” to 8”

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF / BW)</th>
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(*) With Gear Operator.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.

TRIM

<table>
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<th>TRIM Nº</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface</th>
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<td>F310</td>
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<td>Hard F6</td>
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<td>Co-Cr A</td>
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<td>13Cr and Cu-Ni</td>
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ACC. / ASME B16.34
DI, WC6, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

Materials

HF: Hard Facing using CoCr welding alloy (Stellite)
# GLOBE VALVES

## PRESSURE SEAL

2” - 16” | Class 900 - Class 2500

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<th>Trim 8</th>
<th>Trim 10</th>
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(1) Zinc coating
Sizes 2” to 16”

**General dimensions**

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<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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<tr>
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<td>216</td>
<td>368</td>
<td>460</td>
<td>350</td>
<td>90</td>
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<tr>
<td>65 (2½”)</td>
<td>254</td>
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<td>80 (3”)</td>
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<td>381</td>
<td>605</td>
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<td>100 (4”)</td>
<td>356</td>
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<tr>
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<td>815</td>
<td>450</td>
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<td>150 (6”)</td>
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<td>610</td>
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<td>335</td>
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<td>200 (8”)</td>
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<td>737</td>
<td>930</td>
<td>500</td>
<td>630</td>
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<td>250 (10”)</td>
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<td>1029</td>
<td>1310</td>
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<tr>
<td>400 (16”)</td>
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<td>1130</td>
<td>1425</td>
<td>710</td>
<td>2295</td>
</tr>
</tbody>
</table>

(*) With Gear Operator.
(**) BW ends, short pattern.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under costumer request.

**TRIM**

<table>
<thead>
<tr>
<th>Nº</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
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<tr>
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<td>304</td>
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</tr>
<tr>
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<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
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<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
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<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
</tr>
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<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
</tr>
<tr>
<td>7</td>
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<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
</tr>
<tr>
<td>8</td>
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<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
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<tr>
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<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
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<tr>
<td>9</td>
<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<tr>
<td>10</td>
<td>316</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
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<tr>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
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<tr>
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<td>19Cr-29Ni</td>
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<tr>
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**Materials**

ACO / ASME B16.34
DI, WC6, WC9, WC12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

HF: Hard Facing using Co-Cr welding alloy (Stellite)

GATE, GLOBE & CHECK VALVES | GLOBE VALVES
ASME B16.34 PRESSURE SEAL

Sizes 2" to 16"

TRIM

<table>
<thead>
<tr>
<th>DN (app.)</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface</th>
<th>Body / Wedge</th>
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<td>18Cr-8Ni</td>
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<tr>
<td>4&quot;</td>
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<td>Hard 13Cr</td>
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<td>Co-Cr A</td>
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<td>13Cr and Co-Cr A</td>
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<tr>
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<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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Materials

ACC / ASME B16.34
DI, WCB, WOC, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, Duplex, Superduplex, Exotic Materials.

General dimensions

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<thead>
<tr>
<th>DN (app.)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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<tbody>
<tr>
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<td>592</td>
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<td>907</td>
<td>500</td>
<td>307</td>
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<td>960</td>
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<td>485</td>
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<td>1015</td>
<td>640</td>
<td>659</td>
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<tr>
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<td>1150</td>
<td>640</td>
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</tr>
<tr>
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<td>1350</td>
<td>710</td>
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<tr>
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* Long pattern available with flanges.
### General dimensions

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<tr>
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<th>C</th>
<th>ØD</th>
<th>WEIGHT (App.)</th>
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* **Long pattern available with flanges.**

### TRIM

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<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface</th>
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<td>13Cr</td>
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<tr>
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<td>304</td>
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<td>18Cr-8Ni</td>
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<tr>
<td>3</td>
<td>F310</td>
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<td>250Cr-20Ni</td>
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<tr>
<td>4</td>
<td>Hard F6</td>
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<td>Hard 13Cr</td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
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<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
</tr>
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<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
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<td>13Cr and Hard 13Cr</td>
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<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
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<tr>
<td>8A</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
</tr>
<tr>
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<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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<td>10</td>
<td>316</td>
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<td>18Cr-8Ni-Mo</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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<td>18Cr-10Ni-Cr</td>
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<tr>
<td>18</td>
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<td>19Cr-29Ni</td>
<td>Co-Cr A</td>
</tr>
</tbody>
</table>

HF: Hard Facing using CoCr welding alloy (Stellite)

### Materials

ACC / ASME B16.34
DI, WCB, WCC, WC1, WCB, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

* With Gear Operator.
** BW ends, short pattern.

Weights and dimensions can be changed without notice. Bigger sizes available under customer request.
While not a valve in the traditional sense, check valves serve an important application—namely to prevent flow in one direction while allowing it in the other. A check valve is self-actuated and designed to prevent fluid from flowing back into the system (prevent reverse flow). Real-life applications include preventing backflow into an injection line or into a pump. The fluid flow opens the valve by forcing a disk or ball in one direction. When the flow stops, the disk or ball is seated and closes the valve. They can be installed in horizontal or vertical upward flow piping.

### BILL OF MATERIALS

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>TRIM 8</th>
<th>TRIM 2</th>
<th>TRIM 3</th>
<th>TRIM 4</th>
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<tr>
<td>1</td>
<td>Body</td>
<td>A 216 Gr. WCB</td>
<td>A 350 Gr. LCB</td>
<td>A 217 Gr. C5</td>
<td>A 351 Gr. CF8M</td>
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<td>Disc</td>
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<td>A 182 Gr. F304</td>
<td>A 182 Gr. F6a</td>
<td>A 182 Gr. F316</td>
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<td>A 105 + Stellite</td>
<td>A 182 Gr. F304</td>
<td>A 182 Gr. F6a + Stellite</td>
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<td>Cover</td>
<td>A 216 Gr. WCB</td>
<td>A 515 Gr. 70</td>
<td>A 350 LCB / A 182 Gr. F304</td>
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<td>20</td>
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<td>A 193 Gr. B7 / A 194 Gr. 2H</td>
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<td>AISI 304</td>
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(1) Zinc coating.
**Body and Cover**

Bodies and covers are high-quality cast and afterwards precisely machined, directing the attention to prevent stress concentration.

**Design Characteristic of Check Valves**

The design characteristic of check valves is the unobstructed passageway.

**Body and Cover Gasket**

In pressure seal designs, the sealing is achieved through a gasket that takes advantage of the internal pressure of the line. The material most commonly used is high-purity graphite being located between the body and the body retainer ring.

**Class 150 to 600 Check Valves**

Class 150 to 600 check valves consist of a male-female connection with a graphite or spiral wound gasket.

**Class 900 and Above Check Valves**

Class 900 and above check valves consist of a ring type joint.

**Gas Supply**

Gates and covers are high-quality cast and afterwards precisely machined, directing the attention to prevent stress concentration.

**Design Characteristic of Check Valves**

The design characteristic of check valves is the unobstructed passageway.

**Gasket Material Selection**

In pressure seal designs, the sealing is achieved through a gasket that takes advantage of the internal pressure of the line. The material most commonly used is high-purity graphite being located between the body and the body retainer ring.
API 6D / BS 1868 BOLTED COVER

**Class 150**

**VR150BC**

Sizes 2" to 36"

![Diagram of a check valve]

**TRIM**

<table>
<thead>
<tr>
<th>API 600 TRIM N.</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface Body / Wedge</th>
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<tbody>
<tr>
<td>1</td>
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<td>13Cr</td>
<td>13Cr</td>
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<tr>
<td>2</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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**Materials**

ACC. / ASME B16.34

DI, WC6, WC9, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

**General dimensions**

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<th>A (RF / BW)</th>
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<th>WEIGHT (App.)</th>
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Dimensions in mm and weight in kg. Weights and dimensions can be changed without notice. Bigger sizes available under customer request.
API 6D / BS 1868 BOLTED COVER

Sizes 2” to 20”

Class 300

VR300BC

TRIM

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Dimensions in mm and weight in kg.
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Materials

ACC. / ASME B16.34
DI, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M,
DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

HF: Hard Facing using CoCr welding alloy (Stellite)
API 6D / BS 1868 BOLTED COVER

Class 600

VR600BC

Sizes 2” to 16”

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<th>Sealing Surface Body / Wedge</th>
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<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
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<tr>
<td>2</td>
<td>304</td>
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<td>18Cr-8Ni</td>
</tr>
<tr>
<td>3</td>
<td>F310</td>
<td>250-20Ni</td>
<td>250-20Ni</td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
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<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
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<td>Ni-Co</td>
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<td>13Cr and Cu-Ni</td>
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<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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Materials

ACC / ASME B16.34
DI, WCB, W6C, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M,
DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A (RF / BW)</th>
<th>B</th>
<th>WEIGHT (App.)</th>
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<tbody>
<tr>
<td>50 (2”)</td>
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<td>26</td>
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<tr>
<td>65 (2½”)</td>
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<tr>
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<td>356</td>
<td>231</td>
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<tr>
<td>100 (4”)</td>
<td>432</td>
<td>281</td>
<td>90</td>
</tr>
<tr>
<td>125 (5”)</td>
<td>508</td>
<td>319</td>
<td>140</td>
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<tr>
<td>150 (6”)</td>
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<td>200 (8”)</td>
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Dimensions in mm and weight in kg.
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## General dimensions

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Dimensions in mm and weight in kg. Weights and dimensions can be changed without notice. Bigger sizes available under customer request.

## TRIM

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<th>Body / Wedge</th>
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HF: Hard Facing using CoCr welding alloy (Stellite)

## Materials

ACC. / ASME B16.34
DI, WCB, WCC, WC1, WCG, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.
API 6D / BS 1868 BOLTED COVER

TRIM

<table>
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1 HF: Hard Facing using CoCr welding alloy (Stellite)

Materials

ACC. / ASME B16.34
DI, WCB, WC6, WC1, WC6, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M,
DUPLEx, SUPERDUPLEx, EXOTIC MATERIALS.

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<tr>
<td>150 (6&quot;)</td>
<td>705</td>
<td>470</td>
<td>490</td>
</tr>
<tr>
<td>200 (8&quot;)</td>
<td>832</td>
<td>625</td>
<td>990</td>
</tr>
</tbody>
</table>

Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
**API 6D / BS 1868 BOLTED COVER**

**Class 2500**

**VR2500BC**

**Sizes 2" to 8"**

---

**TRIM**

<table>
<thead>
<tr>
<th>DN (In.)</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Seating Surface</th>
<th>Body / Wedge</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 (2&quot;)</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
<td></td>
</tr>
<tr>
<td>65 (2½&quot;)</td>
<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
<td></td>
</tr>
<tr>
<td>80 (3&quot;)</td>
<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
<td></td>
</tr>
<tr>
<td>100 (4&quot;)</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
<td></td>
</tr>
<tr>
<td>125 (5&quot;)</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
<td></td>
</tr>
<tr>
<td>150 (6&quot;)</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
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</tr>
<tr>
<td>200 (8&quot;)</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
<td></td>
</tr>
</tbody>
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**Materials**

- ACC / ASME B16.34
- DI, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

---

**General dimensions**

<table>
<thead>
<tr>
<th>DN (In.)</th>
<th>A (RF / BW)</th>
<th>B</th>
<th>WEIGHT (App.)</th>
</tr>
</thead>
<tbody>
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<td>50 (2&quot;)</td>
<td>451</td>
<td>315</td>
<td>100</td>
</tr>
<tr>
<td>65 (2½&quot;)</td>
<td>508</td>
<td>345</td>
<td>185</td>
</tr>
<tr>
<td>80 (3&quot;)</td>
<td>578</td>
<td>380</td>
<td>225</td>
</tr>
<tr>
<td>100 (4&quot;)</td>
<td>673</td>
<td>410</td>
<td>370</td>
</tr>
<tr>
<td>125 (5&quot;)</td>
<td>794</td>
<td>495</td>
<td>595</td>
</tr>
<tr>
<td>150 (6&quot;)</td>
<td>914</td>
<td>560</td>
<td>805</td>
</tr>
<tr>
<td>200 (8&quot;)</td>
<td>1022</td>
<td>695</td>
<td>1320</td>
</tr>
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</table>

*Dimensions in mm and weight in kg. Weights and dimensions can be changed without notice. Bigger sizes available under customer request.*
CHECK VALVES
PRESSURE SEAL
2” - 20” | Class 900 - Class 2500

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>TRIM 8</th>
<th>TRIM 2</th>
<th>TRIM 8</th>
<th>TRIM 10</th>
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<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>A 216 Gr. WCB</td>
<td>A 352 Gr. LCB</td>
<td>A 217 Gr. FS</td>
<td>A 351 Gr. CF8M</td>
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<tr>
<td>4</td>
<td>Disc</td>
<td>A105 + ER 410</td>
<td>A 182 Gr. F304</td>
<td>A 182 Gr. FS</td>
<td>A 182 Gr. F316</td>
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<tr>
<td>5</td>
<td>Seat Ring</td>
<td>A105 + Stellite</td>
<td>A 182 Gr. F304</td>
<td>A 182 Gr. FS + Stellite</td>
<td>---</td>
</tr>
<tr>
<td>13</td>
<td>Cover</td>
<td>A 216 Gr. WCB / A 515 Gr. 70</td>
<td>A 352 Gr. LCB / A 182 Gr. F304</td>
<td>A 217 Gr. CS</td>
<td>A 351 Gr. CF8M</td>
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<tr>
<td>20</td>
<td>Cover Bolt &amp; Nut</td>
<td>A 193 Gr. B7 / A 194 Gr. 2H</td>
<td>A 320 Gr. L7 / A 194 Gr. 7</td>
<td>A 193 Gr. B7 / A 194 Gr. 2H</td>
<td>A 193 Gr. B7 / A 194 Gr. 2H</td>
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<tr>
<td>27</td>
<td>Bracket Stud &amp; Nut</td>
<td>A 193 Gr. B8 / A 194 Gr. 8</td>
<td>A 193 Gr. B8 / A 194 Gr. 8</td>
<td>A 193 Gr. B8M / A 194 Gr. 8M</td>
<td>A 193 Gr. B8M / A 194 Gr. 8M</td>
</tr>
<tr>
<td>28</td>
<td>Gasket</td>
<td>S5304L or Graphite</td>
<td>S5304L or Graphite</td>
<td>S5304L or Graphite</td>
<td>S5304L or Graphite</td>
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<td>38</td>
<td>Washer</td>
<td>AISI 410</td>
<td>AISI 304</td>
<td>AISI 410</td>
<td>AISI 316</td>
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<tr>
<td>40</td>
<td>Disc Nut</td>
<td>AISI 304</td>
<td>AISI 304</td>
<td>AISI 304</td>
<td>AISI 316</td>
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<td>44</td>
<td>Hinge Pin *</td>
<td>A182 Gr. FS</td>
<td>A182 Gr. FS</td>
<td>A182 Gr. FS</td>
<td>A182 Gr. F316</td>
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<tr>
<td>50</td>
<td>Split Pin</td>
<td>AISI 304</td>
<td>AISI 304</td>
<td>AISI 304</td>
<td>AISI 316</td>
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<tr>
<td>57</td>
<td>Hinges</td>
<td>A 216 Gr. WCB / A 515 Gr. 70</td>
<td>A 352 Gr. LCB</td>
<td>A 217 Gr. CS</td>
<td>A 351 Gr. CF8M</td>
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<tr>
<td>58</td>
<td>Hinge Bracket</td>
<td>A 216 Gr. WCB / A 515 Gr. 70</td>
<td>A 352 Gr. LCB</td>
<td>A 217 Gr. CS</td>
<td>A 351 Gr. CF8M</td>
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<td>59</td>
<td>Lifting Hook</td>
<td>A105</td>
<td>A105</td>
<td>A105</td>
<td>A105</td>
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</tbody>
</table>

* It’s also manufactured with Hinge Pin Passing through Body with Plug.
** Zinc coating.
**ASME B16.34 PRESSURE SEAL**

**Class 900**

**VR900PS**

**Sizes 2” to 16”**

---

**General dimensions**

<table>
<thead>
<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 (2”)</td>
<td>216</td>
<td>368</td>
<td>255</td>
<td>40</td>
</tr>
<tr>
<td>65 (2½”)</td>
<td>254</td>
<td>419</td>
<td>275</td>
<td>55</td>
</tr>
<tr>
<td>80 (3”)</td>
<td>305</td>
<td>381</td>
<td>295</td>
<td>70</td>
</tr>
<tr>
<td>100 (4”)</td>
<td>356</td>
<td>457</td>
<td>335</td>
<td>95</td>
</tr>
<tr>
<td>125 (5”)</td>
<td>432</td>
<td>559</td>
<td>395</td>
<td>125</td>
</tr>
<tr>
<td>150 (6”)</td>
<td>508</td>
<td>610</td>
<td>435</td>
<td>195</td>
</tr>
<tr>
<td>200 (8”)</td>
<td>660</td>
<td>737</td>
<td>530</td>
<td>290</td>
</tr>
<tr>
<td>250 (10”)</td>
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<td>838</td>
<td>605</td>
<td>425</td>
</tr>
<tr>
<td>300 (12”)</td>
<td>914</td>
<td>965</td>
<td>700</td>
<td>680</td>
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<tr>
<td>350 (14”)</td>
<td>991</td>
<td>1029</td>
<td>805</td>
<td>975</td>
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<td>400 (16”)</td>
<td>1092</td>
<td>1130</td>
<td>925</td>
<td>1405</td>
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**TRIM**

<table>
<thead>
<tr>
<th>No.</th>
<th>Trim No.</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface / Wedge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F310</td>
<td>25Cr-20Ni</td>
<td>25Cr-20Ni</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
<td></td>
</tr>
<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Cr</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>F6 and Cu-Ni</td>
<td>13Cr</td>
<td>13Cr and Cu-Ni</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>F6 and Hard F6</td>
<td>13Cr</td>
<td>13Cr and Hard 13Cr</td>
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<tr>
<td>8</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Co-Cr A</td>
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</tr>
<tr>
<td>8A</td>
<td>F6 and Hardfaced</td>
<td>13Cr</td>
<td>13Cr and Ni-Cr</td>
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</tr>
<tr>
<td>9</td>
<td>Monel</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy</td>
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</tr>
<tr>
<td>10</td>
<td>316</td>
<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo</td>
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<td>11</td>
<td>Monel and Hardfaced</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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<tr>
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<td>19Cr-29Ni</td>
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<td>19Cr-29Ni and Trim 5 or 5A</td>
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<td>15</td>
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<td>18Cr-8Ni</td>
<td>Co-Cr A</td>
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<tr>
<td>16</td>
<td>Hardfaced</td>
<td>18Cr-8Ni-Mo</td>
<td>Co-Cr A</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Hardfaced</td>
<td>18Cr-10Ni-Cb</td>
<td>Co-Cr A</td>
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<tr>
<td>18</td>
<td>Hardfaced</td>
<td>19Cr-29Ni</td>
<td>Co-Cr A</td>
<td></td>
</tr>
</tbody>
</table>

**Materials**

ACC. / ASME B16.34
DI, WCB, WC1, WC6, WCC, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

---

*Long pattern available with flanges.*
ASME B16.34 PRESSURE SEAL

Sizes 2” to 16”

TRIM

<table>
<thead>
<tr>
<th>TRIM N.</th>
<th>Nominal TRIM</th>
<th>Stem / Backseat</th>
<th>Sealing Surface Body / Wedge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F6</td>
<td>13Cr</td>
<td>13Cr</td>
</tr>
<tr>
<td>2</td>
<td>304</td>
<td>18Cr-8Ni</td>
<td>18Cr-8Ni</td>
</tr>
<tr>
<td>3</td>
<td>F310</td>
<td>250-20Ni</td>
<td>250-20Ni</td>
</tr>
<tr>
<td>4</td>
<td>Hard F6</td>
<td>13Cr</td>
<td>Hard 13Cr</td>
</tr>
<tr>
<td>5</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Co-Cr A</td>
</tr>
<tr>
<td>5A</td>
<td>Hardfaced</td>
<td>13Cr</td>
<td>Ni-Co</td>
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<td>F6 and Cu-Ni</td>
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<td>13Cr and Cu-Ni</td>
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<td>F6 and Hard F6</td>
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<td>13Cr and Hard 13Cr</td>
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<td>13Cr and Co-Cr A</td>
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<td>8A</td>
<td>F6 and Hardfaced</td>
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<td>Ni-Cu Alloy</td>
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<td>316</td>
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<td>18Cr-8Ni-Mo</td>
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<td>Monel and Hardfaced</td>
<td>Ni-Cu Alloy</td>
<td>Ni-Cu Alloy and Trim 5 or 5A</td>
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<td>18Cr-8Ni-Mo</td>
<td>18Cr-8Ni-Mo and Trim 5 or 5A</td>
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<td>18Cr-8Ni</td>
<td>18Cr-29Ni</td>
<td>19Cr-29Ni</td>
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<td>19Cr-29Ni and Trim 5 or 5A</td>
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<td>15</td>
<td>Hardfaced</td>
<td>18Cr-8Ni</td>
<td>Co-Cr A</td>
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<td>18</td>
<td>Hardfaced</td>
<td>19Cr-29Ni</td>
<td>Co-Cr A</td>
</tr>
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</table>

Materials

ACC. / ASME B16.34
DI, WCB, W0C, WC1, WC9, CS, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPEX, SUPERAPEX, EXOTIC MATERIALS.

General dimensions

<table>
<thead>
<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
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<td>310</td>
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<td>65</td>
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<td>1194</td>
<td>1384</td>
<td>915</td>
<td>2520</td>
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(*) BW ends, short pattern.
Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
Sizes 2" to 12"

**TRIM**

<table>
<thead>
<tr>
<th>DN</th>
<th>A</th>
<th>B</th>
<th>ØC</th>
<th>WEIGHT (App.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 (2&quot;)</td>
<td>279</td>
<td>451</td>
<td>335</td>
<td>75</td>
</tr>
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<td>65 (2½&quot;)</td>
<td>330</td>
<td>508</td>
<td>350</td>
<td>95</td>
</tr>
<tr>
<td>80 (3&quot;)</td>
<td>368</td>
<td>578</td>
<td>390</td>
<td>120</td>
</tr>
<tr>
<td>100 (4&quot;)</td>
<td>457</td>
<td>673</td>
<td>425</td>
<td>165</td>
</tr>
<tr>
<td>125 (5&quot;)</td>
<td>533</td>
<td>794</td>
<td>505</td>
<td>245</td>
</tr>
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<td>150 (6&quot;)</td>
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<td>570</td>
<td>425</td>
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<td>1422</td>
<td>1015</td>
<td>1555</td>
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</tbody>
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**General dimensions**

* Long pattern available with flanges.

---

**Materials**

ACC / ASME B16.34

Di, WCB, WCC, WC1, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8C, CF8M, CF3, CF3M, DUPLEX, SUPERDUPLEX, EXOTIC MATERIALS.

---

**API 600**

TRIM Nº | Nominal TRIM | Stem / Backseat | Seating Surface Body / Wedge
---|---|---|---
1 | F6 | 13Cr | 13Cr
2 | 304 | 18Cr-8Ni | 18Cr-8Ni
3 | F310 | 25Cr-20Ni | 25Cr-20Ni
4 | Hard F6 | 13Cr | Hard 13Cr
5 | Hardfaced | 13Cr | Co-Cr A
5A | Hardfaced | 13Cr | Ni-Cr
6 | F6 and Cu-Ni | 13Cr | 13Cr and Cu-Ni
7 | F6 and Hard F6 | 13Cr | 13Cr and Hard 13Cr
8 | F6 and Hardfaced | 13Cr | 13Cr and Co-Cr A
8A | F6 and Hardfaced | 13Cr | 13Cr and Ni-Cr
9 | Monel | Ni-Cu Alloy | Ni-Cu Alloy
10 | 316 | 18Cr-8Ni-Mo | 18Cr-8Ni-Mo
11 | Monel and Hardfaced | Ni-Cu Alloy | Ni-Cu Alloy and Trim 5 or 5A
12 | 316 and Hardfaced | 18Cr-8Ni-Mo | 18Cr-8Ni-Mo and Trim 5 or 5A
13 | Alloy 20 | 19Cr-29Ni | 19Cr-29Ni
14 | Alloy 20 and Hardfaced | 19Cr-29Ni | 19Cr-29Ni and Trim 5 or 5A
15 | Hardfaced | 18Cr-8Ni | Co-Cr A
16 | Hardfaced | 18Cr-8Ni-Mo | Co-Cr A
17 | Hardfaced | 18Cr-10Ni-Cb | Co-Cr A
18 | Hardfaced | 19Cr-29Ni | Co-Cr A

HF: Hard Facing using CoCr welding alloy (Stellite)

---

**Dimensions**

Dimensions in mm and weight in kg.
Weights and dimensions can be changed without notice.
Bigger sizes available under customer request.
### END FLANGE DIMENSIONS (Raised Face)

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ID</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>N° of Holes</th>
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<td>inch</td>
<td>mm</td>
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<td>mm</td>
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<td>12.75</td>
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<td>469.9</td>
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</table>

**FLANGE STANDARDS**

- According to ASME B16.5
- According to ASME B16.47 Serie A (MSS SP-44)
- According to ASME B16.47 Serie B (API 605)
### BUTTWELDING END DIMENSIONS ACCORDING TO ASME B16.25

**Welding End Detail for Joint Without Backing Ring**

#### WELD BEVEL DETAIL FOR WALL THICKNESS NOT OVER 22mm. (0.88in.)

![Weld Bevel Detail Diagram](image)

#### WELD BEVEL DETAIL FOR WALL THICKNESS OVER 22mm. (0.88in.)

![Weld Bevel Detail Diagram](image)

**Note:** Internal surface may be as-formed or mechaned for dimension B at root face. Contour within the envelope is manufacturer’s option, unless otherwise specifically purchase order for.

---

### Technical Features

**Pipe Size**

<table>
<thead>
<tr>
<th>Nominal Pipe Size (NPS)</th>
<th>BUTTWELDING END DIMENSIONS ACCORDING TO ASME B16.25</th>
<th>Welding End Detail for Joint Without Backing Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; (80)</td>
<td>3,59 91,2</td>
<td>3,068 77,9</td>
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<tr>
<td>4&quot; (100)</td>
<td>4,62 117,3</td>
<td>4,026 102,3</td>
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<tr>
<td>6&quot; (150)</td>
<td>6,78 172,2</td>
<td>6,065 154,1</td>
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<tr>
<td>8&quot; (200)</td>
<td>8,78 223,0</td>
<td>7,981 202,7</td>
</tr>
<tr>
<td>10&quot; (250)</td>
<td>10,94 277,9</td>
<td>10,020 254,5</td>
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<tr>
<td>12&quot; (300)</td>
<td>12,97 329,4</td>
<td>12,000 304,8</td>
</tr>
<tr>
<td>14&quot; (350)</td>
<td>14,25 362,0</td>
<td>14,250 336,6</td>
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<tr>
<td>16&quot; (400)</td>
<td>16,25 412,8</td>
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<td>18&quot; (450)</td>
<td>18,28 464,3</td>
<td>18,750 428,7</td>
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<td>20&quot; (500)</td>
<td>20,31 515,9</td>
<td>20,000 477,8</td>
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<td>24&quot; (600)</td>
<td>24,38 619,3</td>
<td>24,875 574,6</td>
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<td>30&quot; (750)</td>
<td>30,38 771,7</td>
<td>30,375 876,3</td>
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<td>36&quot; (900)</td>
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#### Nominal Pipe Size (NPS)

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<th>Pipe Size</th>
<th>10</th>
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<th>30</th>
<th>STD</th>
<th>XS</th>
<th>40</th>
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<td>10&quot; (250)</td>
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<td>12&quot; (300)</td>
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<td>18&quot; (450)</td>
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<tr>
<td>20&quot; (500)</td>
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<td>22&quot; (600)</td>
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</tbody>
</table>

---

### Butt Welding End Dimensions

- **Welding End Detail for Joint Without Backing Ring**
- **Welding End Detail for Joint Over 22mm. (0.88in.)**

---

**Note:** Internal surface may be as-formed or mechaned for dimension B at root face. Contour within the envelope is manufacturer’s option, unless otherwise specifically purchase order for.

---

**Diagrams:**

- **Weld Bevel Detail Diagrams**
- **Joint Without Backing Ring Diagram**
- **Joint Over 22mm. (0.88in.) Diagram**

---

**Technical Features:**

- **Pipe Size:** Various sizes indicated in inches.
- **Nominal Dimensions:** Provided in both inches and millimeters.
- **Butt Welding End Dimensions:** Specifications for NPS and relevant dimensions for welding.
### PRESSURE TEMPERATURE RATINGS

#### PRESSURE TEMPERATURE RATINGS FOR CARBON STEEL ASTM A216 WCB (According to ASME B16.34)

<table>
<thead>
<tr>
<th>TEMPERATURE</th>
<th>WORKING PRESSURE - STANDARD CLASS VALVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F</td>
<td>PSig</td>
</tr>
<tr>
<td>-20 to 100</td>
<td>250</td>
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<td>-29 to 38</td>
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#### PRESSURE TEMPERATURE RATINGS FOR CARBON STEEL ASTM A352 LC (According to ASME B16.34)

<table>
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<th>WORKING PRESSURE - STANDARD CLASS VALVES</th>
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<td>-20 to 100</td>
<td>250</td>
</tr>
<tr>
<td>-29 to 38</td>
<td>250</td>
</tr>
</tbody>
</table>

**NOTE:** Permissible, but not recommended for prolonged use above 800°F (425°C).
## PRESSURE TEMPERATURE RATINGS

### PRESSURE TEMPERATURE RATINGS FOR ALLOY STEEL ASTM A217 C5 (According to ASME B16.34)

<table>
<thead>
<tr>
<th>TEMPERATURE</th>
<th>WORKING PRESSURE - STANDARD CLASS VALVES</th>
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<tbody>
<tr>
<td>°F</td>
<td>°C</td>
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<tr>
<td>-20 to 100</td>
<td>-29 to 38</td>
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<td>290</td>
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<td>95</td>
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<td>2800</td>
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### TECHNICAL FEATURES

- **GATE, GLOBE & CHECK VALVES**

For welding end valves only. Flanged end ratings terminate at 1000°F.
# Pressure Temperature Ratings

## Technical Features

### Pressure Temperature Ratings for Stainless Steel ASTM A351 CFBM (According to ASME B16.34)

#### Temperature vs. Working Pressure - Standard Class Valves

<table>
<thead>
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<tbody>
<tr>
<td>°F</td>
<td>150 PSig</td>
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<tr>
<td>Kpcm</td>
<td>Kg/cm</td>
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<tr>
<td>-20 to 100</td>
<td>20 to 120</td>
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### Pressure Temperature Ratings for Stainless Steel ASTM A351 CFBM (According to ASME B16.34)

#### Temperature vs. Working Pressure - Special Class Valves

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<th>Working Pressure - Special Class Valves</th>
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</thead>
<tbody>
<tr>
<td>°F</td>
<td>150 PN20</td>
</tr>
<tr>
<td>Kpcm</td>
<td>Kg/cm</td>
</tr>
<tr>
<td>-20 to 100</td>
<td>20 to 120</td>
</tr>
</tbody>
</table>

### Note

- At temperature over 1000°F, use only when the carbon content is 0.04% or higher.
- For welding end valves only. Flanged end ratings terminate at 1000°F.
# ASTM Material List

## Valve Materials Selection

<table>
<thead>
<tr>
<th>VALVE TYPE</th>
<th>TYPE</th>
<th>CLASS</th>
<th>END CONNECTION</th>
<th>MATERIAL</th>
<th>OPERATION</th>
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<tbody>
<tr>
<td>GATE VALVE</td>
<td>BOLTED BONNET</td>
<td>150 300 600 900 1500 2500</td>
<td>FLAT FACE</td>
<td>ASTM A216 WC8 &lt;br&gt; ASTM A216 WCC &lt;br&gt; ASTM A352 LCB &lt;br&gt; ASTM A352 LCC &lt;br&gt; ASTM A352 LC1 &lt;br&gt; ASTM A352 LC2 &lt;br&gt; ASTM A352 LC3 &lt;br&gt; ASTM A217 WC1 &lt;br&gt; ASTM A217 WC6 &lt;br&gt; ASTM A217 WC9 &lt;br&gt; ASTM A217 C5</td>
<td>F6 a &lt;br&gt; 304 &amp; 304L &lt;br&gt; 316 &amp; 316L &lt;br&gt; 321</td>
</tr>
<tr>
<td>GLOBE VALVE</td>
<td>BOLTED BONNET</td>
<td>150 300 600 900 1500 2500</td>
<td>RING JOINT</td>
<td>ASTM A351 CKMCuN &lt;br&gt; ASTM A351 CF3M</td>
<td>F55</td>
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<td>PRESSURE SEAL</td>
<td>900 1500 2500</td>
<td>BUTTWELDED ENDS</td>
<td>ASTM A351 CKMCuN &lt;br&gt; ASTM A351 CF3M</td>
<td>MONEL</td>
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<td>BOLTED COVER</td>
<td>150 300 600 900 1500 2500</td>
<td></td>
<td>ASTM A351 CKMCuN &lt;br&gt; ASTM A351 CF3M</td>
<td>ASTM A351 CKMCuN</td>
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## ASTM Materials List

<table>
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<th>Chemical Requirements</th>
<th>Mechanical Requirements</th>
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</tr>
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<td>A352 LCB</td>
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<td>1.00</td>
</tr>
<tr>
<td>A217 C5</td>
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<td>0.40 / 0.70</td>
</tr>
<tr>
<td>A351 CF8M</td>
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<td>1.50</td>
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<tr>
<td>A217 OA15</td>
<td>0.15</td>
<td>1.00</td>
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<tr>
<td>A105</td>
<td>0.35</td>
<td>0.60 / 1.05</td>
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<td>A182 F6A</td>
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<td>1.00</td>
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<td>A182 F304</td>
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<td>A182 F316</td>
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<td>A182 F347</td>
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<td>2.00</td>
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<td>A191 B7</td>
<td>0.37 / 0.49</td>
<td>0.65 / 1.10</td>
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<tr>
<td>A194 2H</td>
<td>0.40 min.</td>
<td>1.00</td>
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<tr>
<td>A439 D2 (Ni-Resist)</td>
<td>2.9</td>
<td>1.80 / 2.40</td>
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## CV Flow Coefficients

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### SHELL, BACKSEAT & CLOSURE TEST PRESSURE in Kg/cm² (psig) STANDARD API 598/ISO 5208 (STANDARD CLASS)

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* LOW-PRESSURE CLOSURE (Air) 4,2 – 7kg/cm² (70-100psig). Other standards as EN 17266, API 6D y MSS SP-61, could be used at costumer request.

### NOTES
MORE PRODUCTS

BALL VALVES & STRAINERS

ACCESSORIES

CHAIN WHEELS - GEAR OPERATORS - ELECTRIC ACTUATOR - POSITION INDICATOR
LOCKING DEVICES - LANTERN RING - LIMIT SWITCH - BYPASS - DAMPER