OVERVIEW

INTEGRAL FLANGED VALVES

1. BODY. The body is forged steel and designed to the basic dimensional requirements of the applicable specifications such as API 602, ASME B16.34, ASME B16.10 and ASME B16.5. The body is available in both the full or standard port design. End flanges are forged integral with the body.

2. BONNET. The bonnet is forged steel, has an integral backseat and incorporates the stuffing box, which has dimensions per the applicable specifications such as API 602.

3. BODY-BONNET JOINT. Two different bonnet joint designs are available. These are either the bolted bonnet or the threaded and seal welded type.

4. GASKET. The bolted bonnet joint design valve uses a contained, controlled compression, spiral wound type gasket.

5. BONNET BOLTING. The bonnet bolting is manufactured of alloy steel in accordance with the requirements of the applicable specifications such as API 602 and ASME B16.34.

6. SEAT RINGS. The seat rings are steel and make up part of the valve trim. They are pressed into the valve body and wedged into place, forming a seal with the body. The seating surfaces are ground and lapped.

7. WEDGE. The wedge, which is a solid design, is forged or investment cast steel and is part of the valve trim. The seating surfaces are ground and lapped.

8. STEM. The stem is forged steel and part of the valve trim. It contains an integral backseat shoulder, which mates with the integral backseat of the bonnet. The stem is designed to the basic dimensional requirements of the applicable specifications such as API 602.

9. GLAND AND FLANGE. The gland, gland flange assembly utilizes a separate, two piece design. This self-aligning design allows the flange to be unevenly tightened while the gland maintains its parallel alignment with the stem and stuffing box.

10. GLAND BOLTS AND NUTS. The steel/stainless steel gland bolt and nut assembly is a stud, double nut arrangement. This design allows complete removal from the valve when service is required. The use of industry standard thread full length studs and nuts also allows easy replacement should these items be lost or in need of replacement.

11. YOKE SLEEVE. The yoke sleeve is of forged stainless steel material having a high melting point and is resistant to wear and corrosion.

12. HANDWHEEL. The handwheel is forged carbon steel of an open spoke design. This robust construction along with appropriate sizing allows for ease of operation.

Typical gate valve shown. Forged steel, outside screw and yoke (OS&Y), rising stem, non-rising handwheel. Full or standard port. Bolted or welded bonnet joint. Integral backseat. Integral end flanges.
INTEGRAL FLANGED VALVES - BALL VALVES - BOLTED BONNET - FULL PORT

150 Lb.
300 Lb.
600 Lb.

Design construction:
API 602 - ASME B16.34 - BS 5352
Testing according to API 598
Marking MSS SP25
Outside Screw and Yoke (OS&Y)
Self aligning two piece packing gland
Spiral wound gasket
Integral backseat
Integral body flanges
Face to face according to ASME B16.10
Flanges according to ASME B16.5
Ratings:
- Carbon steel class 150 285 psig @ 100°F
  20 bar + 38°C
- Carbon steel class 300 740 psig @ 100°F
  51 bar + 38°C

Dimensions (mm):

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INTEGRAL FLANGED VALVES - GATE TYPE - BOLTED BONNET - FULL PORT

1500 Lb.

Design construction:
ASME B16.34 - BS 5352
Full port type
Testing according to API 598
Marking MSS SP25
Outside Screw and Yoke (OS&Y)
Self aligning two piece packing gland
Spiral wound gasket
Integral backseat
Integral body flanges
Face to face according to ASME B16.10
Flanges according to ASME B16.5
Ring joint type gasket available on request
Ratings:
- Carbon steel class 1500 3705 psig @ 100°F
  255 bar + 38°C

Dimensions (mm):

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**INTEGRAL FLANGED VALVES- GATE TYPE- BOLTED BONNET- FULL PORT**

Design construction:
- ASME B16.34 - BS 5352
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Self-aligning two piece packing gland
- Body/Bonnet: Gasket ring joint type
- Integral gasket assembly
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

**Ratings:**
- Carbon steel class 150: 285 psig @ 100°F (20 bar + 38°C)
- Carbon steel class 300: 740 psig @ 100°F (51 bar + 38°C)

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**INTEGRAL FLANGED VALVES- GLOBE TYPE- BOLTED BONNET- FULL & STANDARD PORT**

Design construction:
- ASME B16.34 - BS 5352
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Self-aligning two piece packing gland
- Spiral wound gasket
- Integral backseat
- Integral body flanges
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

**Ratings:**
- Carbon steel class 2500: 6170 psig @ 100°F (425 bar + 38°C)

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**INTEGRAL FLANGED VALVES- GLOBE TYPE- BOLTED BONNET- FULL & STANDARD PORT**

Design construction:
- ASME B16.34 - BS 5352
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Self-aligning two piece packing gland
- Spiral wound gasket
- Integral backseat
- Integral body flanges
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

**Ratings:**
- Carbon steel class 150: 285 psig @ 100°F (20 bar + 38°C)
- Carbon steel class 300: 740 psig @ 100°F (51 bar + 38°C)

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**INTEGRAL FLANGED VALVES- GATE TYPE- BOLTED BONNET- FULL PORT**

Design construction:
- ASME B16.34 - BS 5352
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Self-aligning two piece packing gland
- Body/Bonnet: Gasket ring joint type
- Integral gasket assembly
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

**Ratings:**
- Carbon steel class 150: 285 psig @ 100°F (20 bar + 38°C)
- Carbon steel class 300: 740 psig @ 100°F (51 bar + 38°C)
INTEGRAL FLANGED VALVES - GLOBE TYPE - BOLTED BONNET -
FULL & STANDARD PORT

Design construction:
- ASME B16.34 - BS 5552
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Loose disc stem assembly
- Self aligning two piece packing gland
- Spiral wound gasket
- Integral backseat
- Integral body flanges
- Face to face according to ASME B16.10

Testing according to API 598
Marking MSS SP25
Outside Screw and Yoke (OS&Y)
Loose Disc Stem Assembly
Body Bonnet Gasket ring joint type
Spiral wound type gasket on request
Self aligning two piece packing gland
Integral backseat
Integral body flanges
Face to face according to ASME B16.10
Flanges according to ASME B16.5

Ratings:
- Carbon steel class 150 285 psig @ 100°F
- Carbon steel class 300 740 psig @ 100°F

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2500 LB.

Design construction:
- ASME B16.34 - BS 5552
- Full port type
- Testing according to API 598
- Marking MSS SP25
- Outside Screw and Yoke (OS&Y)
- Loose Disc Stem Assembly
- Body Bonnet Gasket ring joint type
- Spiral wound type gasket on request
- Self aligning two piece packing gland
- Integral backseat
- Integral body flanges
- Face to face according to ASME B16.10

Testing according to API 598
Marking MSS SP25
Outside Screw and Yoke (OS&Y)
Loose Disc Stem Assembly
Body Bonnet Gasket ring joint type
Spiral wound type gasket on request
Self aligning two piece packing gland
Integral backseat
Integral body flanges
Face to face according to ASME B16.10
Flanges according to ASME B16.5

Ratings:
- Carbon steel class 2500 6170 psig @ 100°F

Specifications

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900LB - 1500LB.
INTEGRAL FLANGED VALVES- CHECK TYPE- BOLTED BONNET- FULL & STANDARD PORT

150LB.-600LB.

Design construction:
- ASME B16.34 - BS 535
- Testing according to API 598
- Spring available on request for Piston and Ball Check Valves
- Spiral wound gasket
- Integral body flanges
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

Ratings:
- Carbon steel class 150: 285 psig @ 100°F (20 bar + 38°C)
- Carbon steel class 300: 740 psig @ 100°F (51 bar + 38°C)

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INTEGRAL FLANGED VALVES- CHECK TYPE- BOLTED BONNET- FULL PORT

1500LB.

Design construction:
- ASME B16.34 - BS 535
- Testing according to API 598
- Spring available on request for Piston and Ball Check Valves
- Spiral wound gasket
- Integral body flanges
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5

Ratings:
- Carbon steel class 1500: 3705 psig @ 100°F (255 bar + 38°C)

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<td>kg</td>
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<td>11.2</td>
<td>14.5</td>
<td>26.5</td>
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</tbody>
</table>
**Integral Flanged Valves Self-Sealing Flanged Check Valve**

**2500 Lb.**

Design construction:
- ASME B16.34 - BS 5524
- Full Port Type
- Testing according to API 598
- Marking MSS SP25
- Body Bonnet Gasket, ring joint type
- Spiral wound type gasket on request
- Spring available on request for Piston and Ball Check Valves
- Integral body flanges
- Face to face according to ASME B16.10
- Flanges according to ASME B16.5
- Ratings:
  - Carbon steel class 2500: 6170 psig @ 100°F
  - 425 bar @ 38°C

<table>
<thead>
<tr>
<th>NPS (in)</th>
<th>1/2</th>
<th>3/4</th>
<th>1</th>
<th>1 1/4</th>
<th>1 1/2</th>
<th>2</th>
</tr>
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<tbody>
<tr>
<td><strong>ID</strong></td>
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</tr>
<tr>
<td>D</td>
<td>13</td>
<td>18</td>
<td>24</td>
<td>29</td>
<td>36.5</td>
<td>46.5</td>
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<tr>
<td>L (RF)</td>
<td>276</td>
<td>278</td>
<td>254</td>
<td>279</td>
<td>305</td>
<td>368</td>
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<tr>
<td>H</td>
<td>264</td>
<td>273</td>
<td>306</td>
<td>349</td>
<td>384</td>
<td>451</td>
</tr>
<tr>
<td>kg</td>
<td>178</td>
<td>190</td>
<td>210</td>
<td>230</td>
<td>260</td>
<td>300</td>
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</table>
| **INTEGRAL FLANGED VALVES SEIF-SEALING FLANGED CHECK VALVE**

**2500 Lb.**

<table>
<thead>
<tr>
<th>MPS</th>
<th>1/2</th>
<th>3/4</th>
<th>1</th>
<th>1 1/4</th>
<th>1 1/2</th>
<th>2</th>
</tr>
</thead>
</table>
| **INTEGRAL FLANGED VALVES SEIF-SEALING FLANGED CHECK VALVE**

**Bellows Sealed Valves**
8. STEM. The stem is forged steel and part of the valve trim. It contains an integral back seat shoulder, which mates with the integral backseat of the bonnet. The stem is designed to the basic dimensional requirements of the applicable specifications such as API 602.

9. GLAND AND FLANGE. The gland, gland flange assembly utilizes a separate, two piece design. This self-aligning design allows the flange to be unevenly tightened while the gland maintains its parallel alignment with the stem and stuffing box.

10. GLAND BOLTS AND NUTS. The steel/stainless steel gland bolt and nut assembly is a stud, double nut arrangement. This design allows complete removal from the valve when service is required. The use of industry standard thread full length studs and nuts also allows easy replacement should these items be lost or in need of replacement.

11. YOKE SLEEVE. The yoke sleeve is of forged stainless steel material having a high melting point and is resistant to wear and corrosion.

12. HANDWHEEL. The handwheel is forged carbon steel of an open spoke design. This robust construction along with appropriate sizing allows for ease of operation.

13. GREASE FITTING. The grease fitting is incorporated in the bonnet for stem and yoke sleeve lubrication to ensure smooth operation.

14. THRUST WASHER. The thrust washer is between the bonnet and yoke sleeve to help prevent excessive wear of the yoke bushing and reduce operating torque.