

Jamesbury™ Value-Line™ series 6FRF full-bore flanged by threaded-end ball valves (AAR no. E182105)

The 6FRF ball valve is a member of the Jamesbury Value-Line Series which offers the benefits of proven quality and design performance with exceptional economy not previously available in high-performance ball valves. Its full-bore configuration and high-pressure rating (285 psi for carbon steel and 275 psi for stainless steel bodies) make it an ideal choice for the majority of applications where tight shut-off is required.



Features

Tight shut-off

- The Jamesbury proven self-relieving seat design incorporates a flexible lip that automatically compensates for fluctuations in pressure and temperature.

Design

- Body cap tack-welded to body for superior integrity.
- Body cap end is NPT threaded per ANSI B1.20.1 and body end is ANSI B16.5, Class 150 raised face flange.

High flow capacity

- Full-bore design for maximum flow.

Anti-blow-out stem

- Internal entry stem provides positive stem retention.

Fire-Tite™ design

- All Jamesbury tank car ball valves are available with Fire-Tite design. In the event of a fire with resultant destruction of the PTFE seats, a secondary metal seating surface provides for continuing effective shutoff of flow through the valve.

Excellent corrosion resistance

- Available in all stainless steel construction.

Specifications

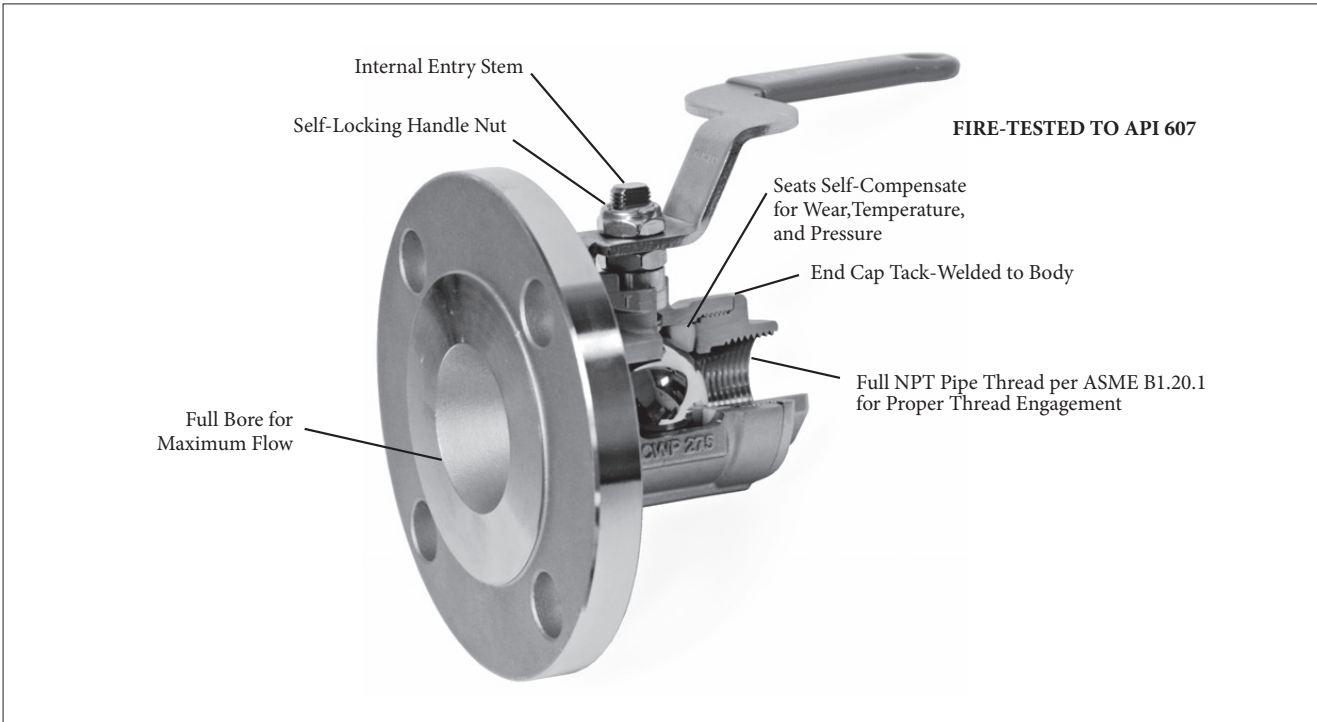
Valve body ratings

- These are the maximum working pressure ratings of the valve body only. The seat ratings on page 2 determine the practical pressure limitation in actual service. Working pressure rating is 285 PSI at -20°F to +100°F (-29°C to +38°C) for carbon steel and 275 PSI -60°F to +100°F (-51°C to +38°C) for stainless steel body materials.

Flow data

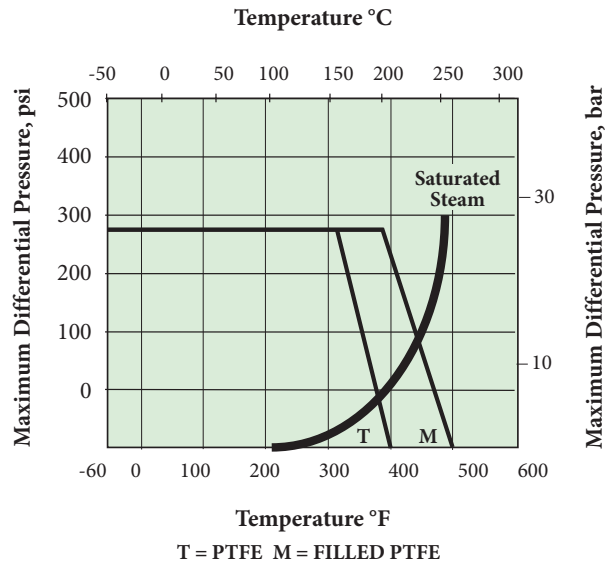
The table below provides flow coefficients for Series 6FRF valves. The C_v values represent the flow of water at +60°F (+17°C) through the valve in U.S. Gallons per minute at a pressure drop of 1 psi (bar).

| Valve size | | C_v |
|------------|----|-------|
| Inches | DN | |
| 1 | 25 | 65 |
| 2 | 50 | 251 |
| 3 | 80 | 1160 |

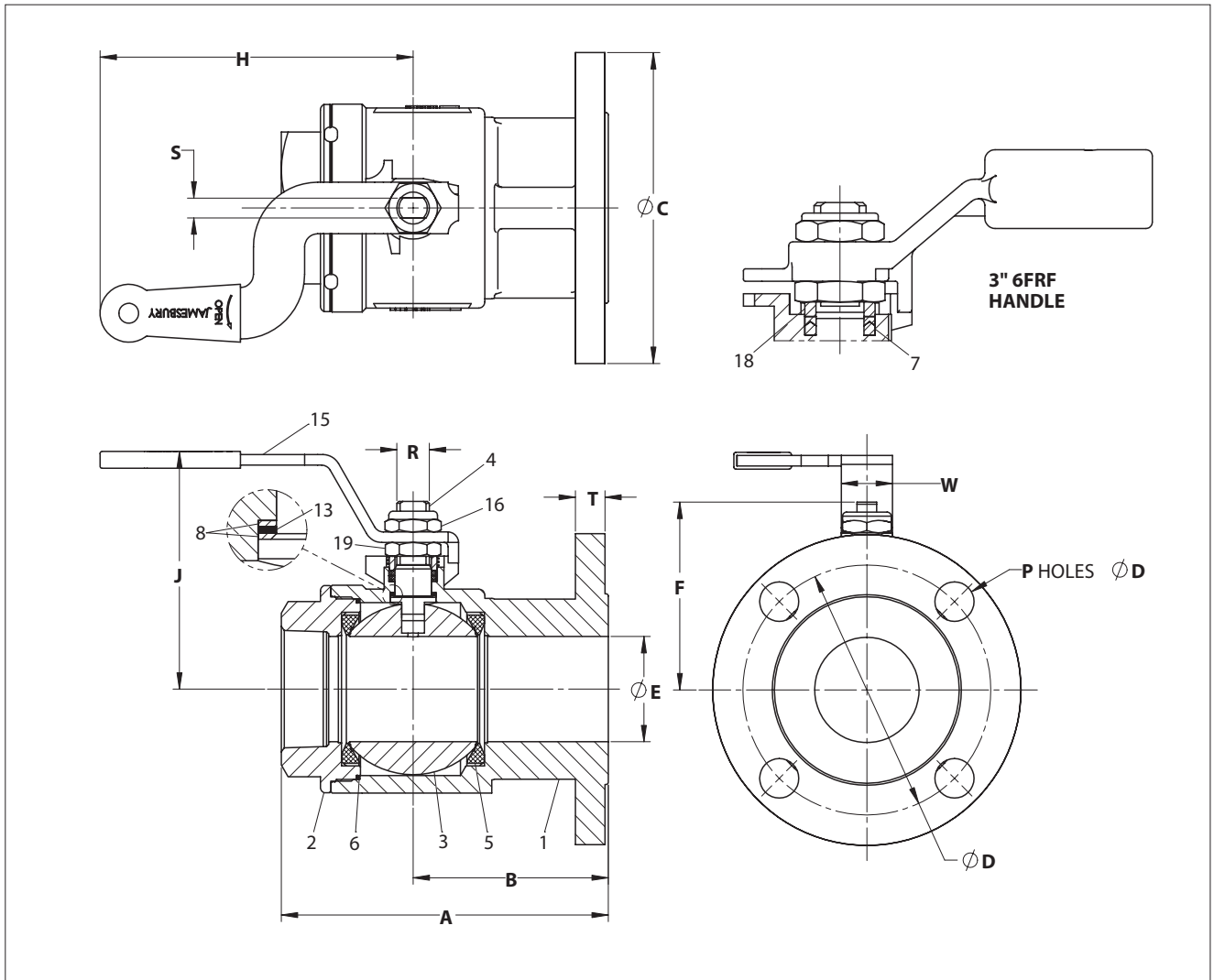


Valve seat ratings

These ratings, shown in the graph at right, are based on differential pressure with the valve ball in the fully closed position and refer to seats only. Valves in carbon steel are suitable for service to -20°F (-29°C); valves in stainless steel to -60°F (-51°C).



Dimensions



| Valve size inches | Dimensions - inches | | | | | | | | | | | | | | Approx. weight lb |
|-------------------|---------------------|------|------|------|------|------|------|------|------|---|------|------|------|------|-------------------|
| | A | B | ØC | ØD | E | F | J | H | ØN | P | R | S | T | W | |
| 1 | 4.09 | 2.15 | 5.91 | 4.75 | 1.00 | 2.63 | 3.25 | 6.00 | 0.75 | 4 | 0.50 | 0.31 | 0.56 | 0.88 | 7.0 |
| 2 | 6.26 | 3.74 | 5.91 | 4.75 | 2.00 | 3.56 | 4.52 | 6.00 | 0.75 | 4 | 0.63 | 0.37 | 0.56 | 0.98 | 13.5 |
| 3 | 8.27 | 4.59 | 7.48 | 6.00 | 3.00 | 5.68 | 6.54 | 5.98 | 0.75 | 4 | 1.00 | 0.67 | 0.69 | 1.05 | 35.0 |

| Valve size DN | Dimensions - mm | | | | | | | | | | | | | | Approx. weight kg |
|---------------|-----------------|-----|-----|-------|----|-----|-----|-----|----|---|----|----|------|----|-------------------|
| | A | B | ØC | ØD | E | F | J | H | ØN | P | R | S | T | W | |
| 25 | 104 | 55 | 150 | 120.7 | 25 | 67 | 83 | 154 | 19 | 4 | 13 | 8 | 14.3 | 22 | 3.2 |
| 50 | 159 | 95 | 150 | 120.7 | 50 | 90 | 115 | 154 | 19 | 4 | 16 | 9 | 14.3 | 25 | 6.1 |
| 80 | 210 | 117 | 190 | 152.4 | 76 | 144 | 166 | 152 | 19 | 4 | 25 | 17 | 17.5 | 27 | 15.9 |

ØC = flange O.D.
 ØD = bolt circle
 ØN = bolt hole dia.
 P = No. of holes
 T = flange thickness

Bill of materials and parts list

| Part number | Quantity | Part name | Carbon Steel | 316 Stainless Steel |
|-------------|----------|-----------------------|-------------------------|-----------------------------|
| 1 | 1 | Body | A216-WCB - Carbon steel | A351-CF8M - Stainless steel |
| 2 | 1 | Body Cap | A216-WCB - Carbon steel | A351-CF8M - Stainless steel |
| 3 | 1 | Ball | | 316 Stainless steel |
| 4 | 1 | Stem | | 316 Stainless steel |
| 5 | 2 | Seal | | PTFE/Filled PTFE |
| 6 | 1 | Body Seal | | Graphite |
| 7 | 2 | Stem Seal | | PTFE |
| 8 | 2 | Stem Bearing | | PTFE/Filled PTFE |
| 13 | 1 | Secondary Stem Seal | | Graphite |
| 15 | 1 | Handle | Carbon steel | 304 Stainless steel |
| 16 | 1 | Self Locking Stem Nut | | 304 Stainless steel |
| 18 | 1 | Compression Ring | | 304 Stainless steel |
| 19 | 1 | Packing Nut | | 304 Stainless steel |

WARNING:

As the use of the valve is application specific, a number of factors should be taken into account when selecting a valve for a given application. Therefore, some of the situations in which the valves are used are outside the scope of this manual. If you have any questions concerning the use, application or compatibility of the valve with the intended service, contact Valmet for more information.

How to order series 6FRF ball valves

To specify Series 6FRF ball valves, choose the appropriate code from each of the boxes shown at right.

EXAMPLE: The valve specified is a 2" Series 6FRF Full-bore flanged by-threaded ball valve constructed of carbon steel body, 316 stainless steel ball and stem, and PTFE seats and seal.

| | | | | |
|----|------|------|----|---|
| 1 | 2 | 3 | 4 | 5 |
| 2" | 6FRF | 2236 | TT | C |

| 1 | Size |
|-------|-------------------------------|
| 1 X 2 | 1" (DN 25) Thread & 2" Flange |
| 2 | 2" (DN 50) Thread & 2" Flange |
| 3 | 3" (DN 80) Thread & 3" Flange |

| 4 | Seat / Seal material |
|----|----------------------|
| TT | PTFE / PTFE* |
| MT | Filled PTFE / PTFE* |

* With graphite secondary stem and body seal

| 2 | Series |
|------|----------------------------------|
| 6FRF | Series 6FRF Full-bore Ball Valve |

| 5 | Model code |
|---|---------------------|
| C | Series 6FRF Model C |

| 3 | Body / Trim material |
|------|--|
| 2236 | Carbon Steel Body / 316 Stainless Steel Trim |
| 3600 | 316 Stainless Steel Body / Trim |

Subject to change without prior notice.

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