

TV SERIES 2-PIECE TRUNNION BALL VALVES

Split Body metal seated ball valves for industrial and process applications.



The Jarecki TV Series ball valve is an economical choice for your high temperature and abrasive media valve needs. TV Series valves are used for applications in the Chemical, Power, Pulp and Paper, Petrochemical, Oil and Gas, and Mining Industries.

Standard Applications:

Condensate
Hot Oil
Saturated Steam
Feedwater
Abrasive Media
Natural Gas
Nitrogen

Seat Leakage Class:

RTFE Seats Bubble Tight
RTFE Seats API 598
Metal Seats Class V - **Standard**
Metal Seats Class VI
Metal Seats Zero Leakage
Metal Seats API 598
Metal Seats ISO 5208

Design

Pressure Rating

- 600# Available in Sizes ½" to 12"
- 900# Available in Sizes ½" to 12"
- 1500# Available in Sizes ½" to 12"

Valve Size

- 2" to 12" Full Port
- 3" to 12" Reduced Port

End Connections

- Flanged
- Butt weld Available On Request

Valve Construction

- 2 Piece Valve Design
- Cast Body and Forged
- Split Body
- Trunnion Mounted Ball
- Spiral Wound Body Gasket with Secondary Metal to Metal Seal
- Actuator Mounting Pad
- Live Loaded Stem Packing
- Designed to B16.34
- Blow Out Proof Stem
- Heavy Duty Stem For High Torque

Seat Designs

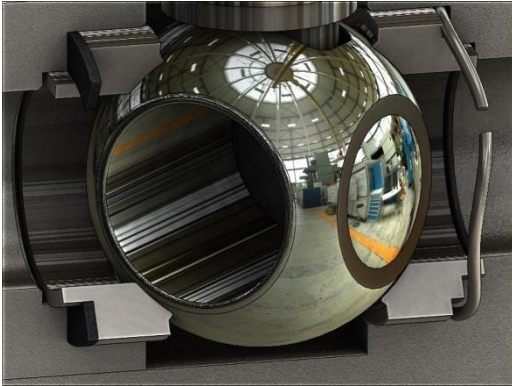
- Bi-Direction RTFE Seats
- Bi-Direction Metal Seats
- Uni-Directional Metal Seats – **Standard**

Service Conditions

- Temperatures Up to 1000 deg F
- Pressures as low as Vacuum Service
- Pressures as High as 740 psi
- For Clean and Abrasive Services

SEAT STYLES

P Seat - Spring Loaded (Standard)



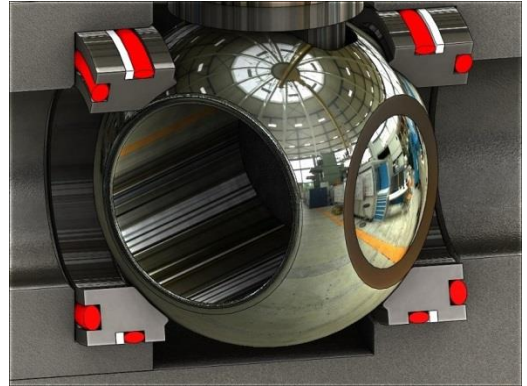
For unidirectional applications. The sealing seat is available as a separate seat ring for reparability, or integral with the tailpiece for high temperature applications. The spring seat OD seal prevents media from building up between the spring and the back of the seat.

Temperature Range: -40 to 1000 deg F

Application: Steam, Hot Air, Gases, Low Pressure Differentials, High Temperatures

Shut-Off: Class IV

O Seal - Graphite Sealed Seat



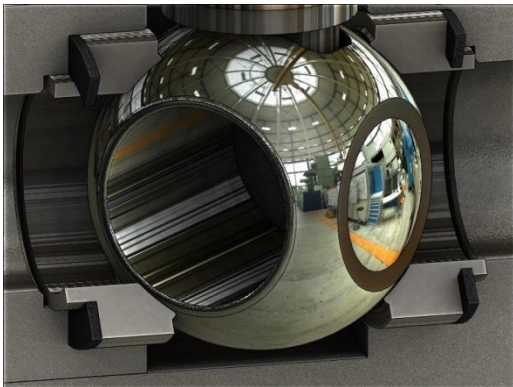
A double seal design providing both spring loading and excellent sealing capabilities. There is no area for media to build up behind the seat, which prevents the valve from locking up.

Temperature Range: --40 to 650 deg F

Application: Steam, Abrasion, Low Pressure Differentials, Fine Solids, Emulsions, Condensation, Natural Gas

Shut-Off: Class V, Class VI, Bubble Tight

G Seal - Graphite Sealed Seat



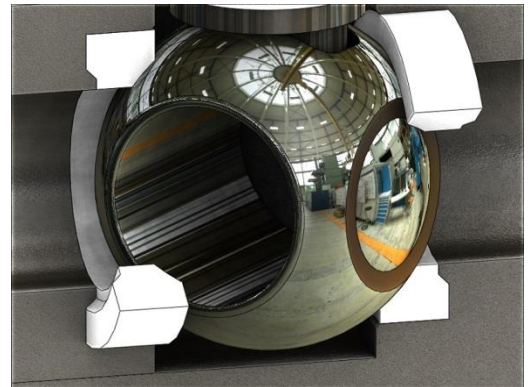
A series of Graphite seal rings behind the metal seat prevents media from building up behind the seat. The rings also allow for expansion of the internal valve components in high temperature applications. This design is great for applications involving fine solids as the graphite prevents the media from building up behind the seats.

Temperature Range: -20 to 1000 deg F

Application: Steam, Abrasion, High Temperatures, Fine Solids, Slurry

Shut-Off: Class IV

T Seat - Reinforced TFE Seat



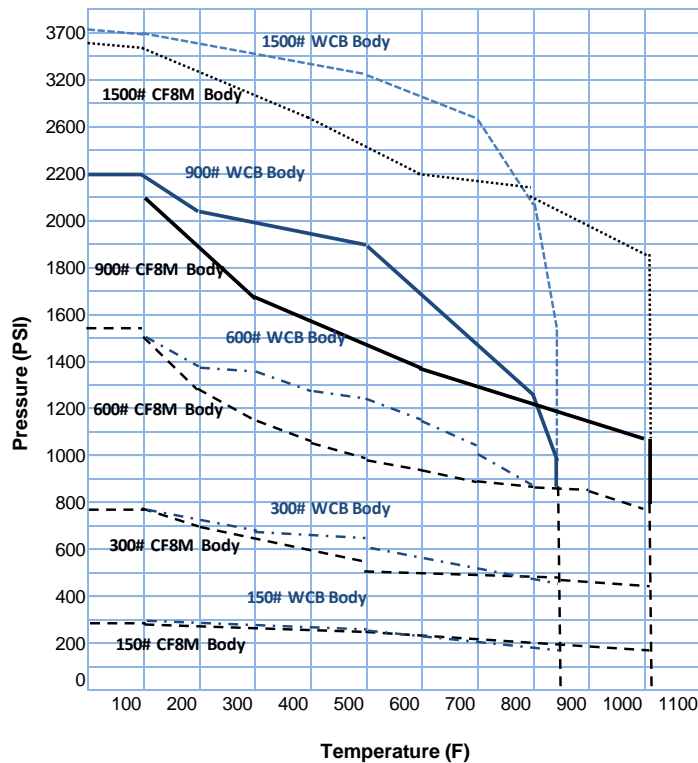
The T Seat Style designates a soft seat material. There are many seat materials available with TFM being the standard option. A metal lip on the body and tailpiece provides fire safety and meets API 607 requirements.

Temperature Range: -20 to 450 deg F

Application: Steam, Low Pressure Differentials, Emulsions, Nonabrasive Media

Shut-Off: Class VI, Bubble Tight

PRESSURE / TEMPERATURE CHART



Live Loaded Packing System

- Blow-Out proof stem design to ensure workman safety.
- Live-Loaded stem packing to compensate for temperature fluctuations and normal wear.
- Care is taken not to over torque the stem packing at the testing facility..

Reliable Body Seal

- The body and end connections are bolted with a metal to metal contact to ensure that proper compression on the body gasket is achieved. This metal to metal contact also guarantees that the dimensions inside the valve are correct. The torque is constant, and both the body and seat seal gaskets will always have the proper compression.

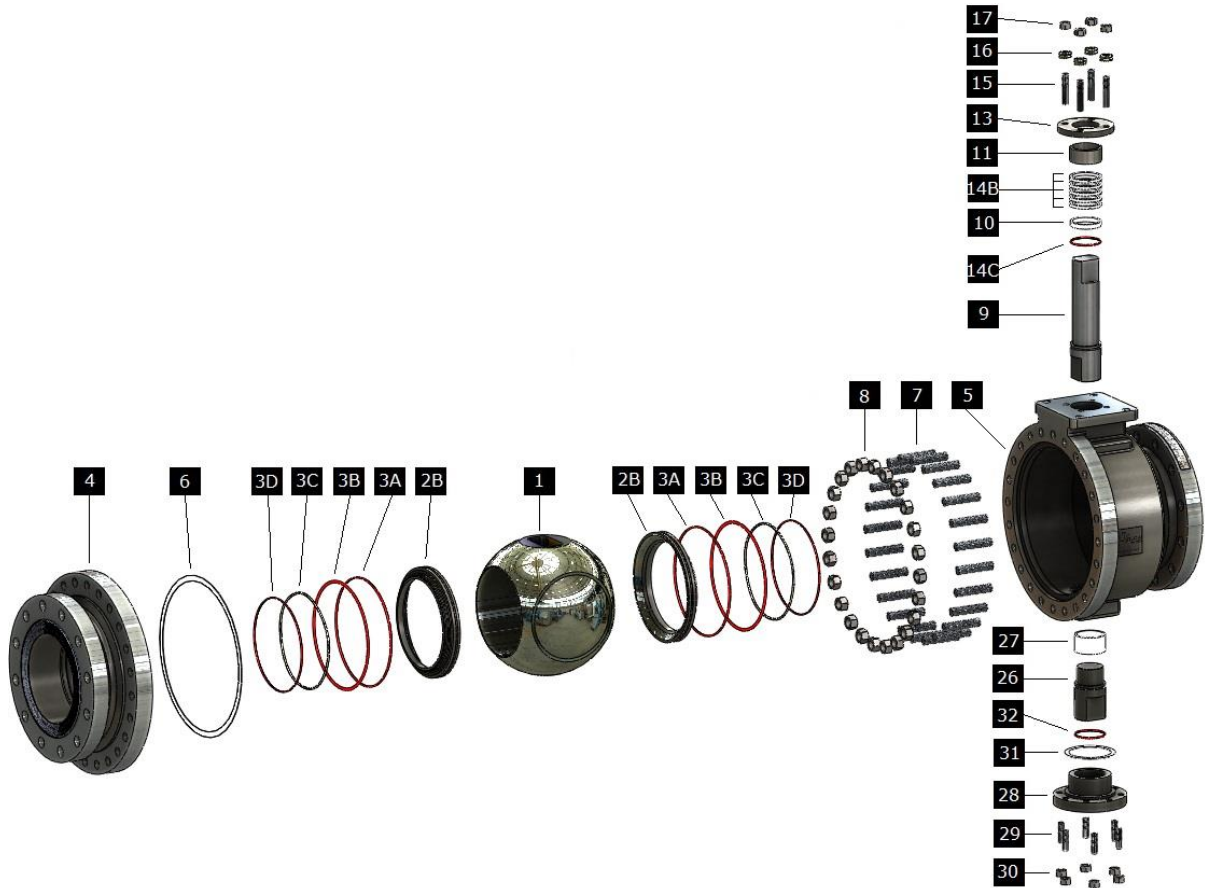
Specifications

Valves covered in this bulletin are available to conform to the following industry standards and specifications

- Flanged Ends meet ANSI B16.10 and B16.5
- Butt Weld end connections meet MSS SP72
- Pressure Testing Of Valves MSS-SP-61
- Standard Marking for Valves MSS-SP-25
- Valves are tested per ANSI FCI 70-2-1976
- Minimum wall thickness meets ANSI B16.34
- Valves are tested per ANSI FCI 70-2-1976 and B16.34
- ASME B31.1 Power Piping
- ASME B31.3 Chemical Plant Piping
- MSS SP-55 Quality Standards For Castings
- MSS SP-6 Standard Finishes for Contact Faces of Pipe Flanges
- API 607 Fire Test For Soft Seated Valves
- NACE MRO175 Sulfide Stress Cracking Resistant Materials For oilfied Equipment*
- API 6D Specifications for Pipeline Valves

* Must specify this as a requirement at time of order

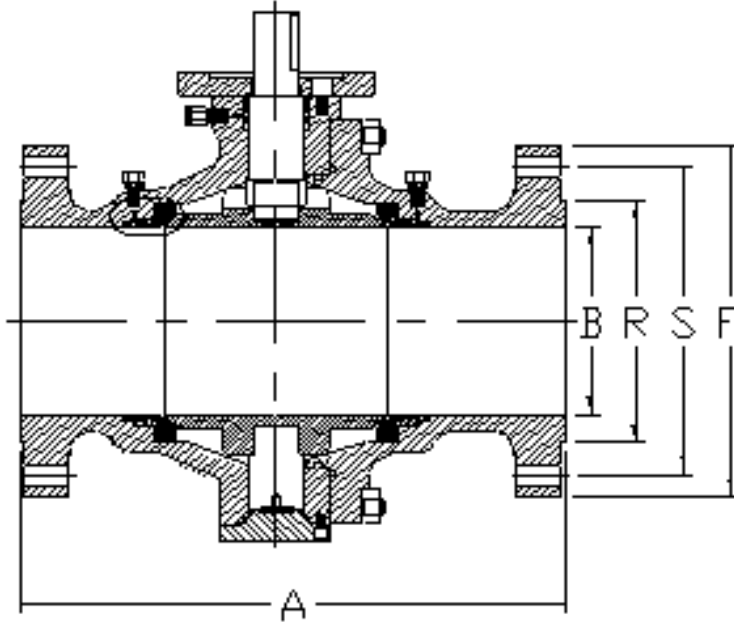
BILL OF MATERIAL



| ITEM NO. | NAME | STAINLESS STEEL | CARBON STEEL | DUPLEX |
|----------|-----------------------------|----------------------------|----------------------------|---------------------------------|
| 1 | BALL | 316 W/ HARD CHROME* | 316 W/ HARD CHROME* | 2205 W/ Tantalum Chrome Oxide * |
| 2 | SEAT | 316 W/ STELLITE HF* | 316 W/ STELLITE HF* | 2205 W/ Tantalum Chrome Oxide * |
| 3a | SEAT FACE SEAL | TFE/Viton/Graphite | TFE/Viton/Graphite | TFE/Viton/Graphite |
| 3b1 | SEAT OD SEAL | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ |
| 3b1 | SEAT OD SEAL | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ |
| 3C | SEAT SPRING (IF APPLICABLE) | 17-7 SST | 17-7 SST | 2205 DUPLEX SST |
| 4 | BODY | A351 CF8M | A216 WCB | A182 F51 |
| 5 | TAILPIECE | A351 CF8M | A216 WCB | A182 F51 |
| 6 | BODY GASKET | 316sst w/ Graphite Filler* | 316sst w/ Graphite Filler* | 2205sst w/ Graphite Filler* |
| 7 | BODY STUD | ASTM A193 B8 | ASTM A193 B8 | ASTM A193 B8 |
| 8 | BODY NUT | ATM A194 Gr. 8 | ATM A194 Gr. 8 | ATM A194 Gr. 8 |
| 9 | STEM | 17-4SST/XM-19* | 17-4SST/XM-19* | 2205 DUPLEX SST* |
| 10 | THRUST WASHER | Nitronic 60/TFE | Nitronic 60/TFE | STELLITE |
| 11 | COMPRESSION RING | 316 SST | 316 SST | 2205 DUPLEX SST* |
| 13 | COMPRESSION PLATE | 316 SST | 316 SST | 2205 DUPLEX SST* |
| 14B | STEM PACKING | TFE/GRAPHITE | TFE/GRAPHITE | TFE/GRAPHITE |
| 14C | STEM SEAL | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ |
| 15 | GLAND STUD | ASTM A193 B8 | ASTM A193 B8 | ASTM A193 B8 |
| 16 | GLAND NUT | ATM A194 Gr. 8 | ATM A194 Gr. 8 | ATM A194 Gr. 8 |
| 17 | BELLEVILLE WASHER | 301 SST | 301 SST | 301 SST |
| 26 | TRUNNION | 316SST | 316SST | 2205 DUPLEX SST |
| 27 | TRUNNION BEARING | Nitronic 60/TFE/STELLITE | Nitronic 60/TFE/STELLITE | Nitronic 60/TFE/STELLITE |
| 29 | TRUNNION STUD | ASTM A193 B8 | ASTM A193 B8 | ASTM A193 B8 |
| 30 | TRUNNION NUT | ATM A194 Gr. 8 | ATM A194 Gr. 8 | ATM A194 Gr. 8 |
| 31 | TRUNNION GASKET | 316sst w/ Graphite Filler* | 316sst w/ Graphite Filler* | 2205sst w/ Graphite Filler* |
| 32 | TRUNNION SEAL | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ | VITON/ TFE/ CHEMRAZ |

* Other materials and coatings available upon request

DIMENSIONS



ANSI 600# FULL PORT

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 11.50 | 14.00 | 17.00 | 22.00 | 28.00 | 31.00 | 33.00 |
| ØB | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 |
| ØR | 3.62 | 5.00 | 6.19 | 8.50 | 10.62 | 12.75 | 15.00 |
| ØS | 5.00 | 6.62 | 8.50 | 11.50 | 13.75 | 17.00 | 19.25 |
| ØF | 6.50 | 8.25 | 10.75 | 14.00 | 16.50 | 20.00 | 22.00 |
| Cv | 400 | 980 | 1700 | 5000 | 9980 | 14750 | 20500 |
| WEIGHT | 65 | 125 | 215 | 455 | 470 | 790 | 1355 |

ANSI 900# FULL PORT

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 14.50 | 15.00 | 18.00 | 24.00 | 29.00 | 33.00 | 38.00 |
| ØB | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 |
| ØR | 3.63 | 5.00 | 6.19 | 8.50 | 10.63 | 12.75 | 15.00 |
| ØS | 6.50 | 7.50 | 9.25 | 12.50 | 15.50 | 18.50 | 21.00 |
| ØF | 8.50 | 9.50 | 11.50 | 15.00 | 18.50 | 21.50 | 24.00 |
| Cv | 385 | 960 | 1675 | 4950 | 9950 | 14720 | 20400 |
| WEIGHT | 115 | 225 | 515 | 935 | 1400 | 2175 | 3550 |

ANSI 1500# FULL PORT

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 14.50 | 18.50 | 21.50 | 27.80 | 32.80 | 39.00 | 44.50 |
| ØB | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 |
| ØR | 3.63 | 5.00 | 6.19 | 8.50 | 10.63 | 12.75 | 15.00 |
| ØS | 6.50 | 7.50 | 9.50 | 12.50 | 15.50 | 19.00 | 22.50 |
| ØF | 8.50 | 10.50 | 12.25 | 15.50 | 19.00 | 23.00 | 26.50 |
| Cv | 370 | 940 | 1650 | 4920 | 9900 | 14680 | 20240 |
| WEIGHT | 130 | 385 | 765 | 15701 | 2350 | 3655 | 4405 |

ANSI 600# REDUCED PORT

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 11.50 | 14.00 | 17.00 | 22.00 | 28.00 | 31.00 | 33.00 |
| ØB | 1.50 | 2.50 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 |
| ØR | 3.62 | 5.00 | 6.19 | 8.50 | 10.62 | 12.75 | 15.00 |
| ØS | 5.00 | 6.62 | 8.50 | 11.50 | 13.75 | 17.00 | 19.25 |
| ØF | 6.50 | 8.25 | 10.75 | 14.00 | 16.50 | 20.00 | 22.00 |
| Cv | 400 | 980 | 1700 | 5000 | 9980 | 14750 | 20500 |
| WEIGHT | 65 | 125 | 215 | 455 | 470 | 790 | 1355 |

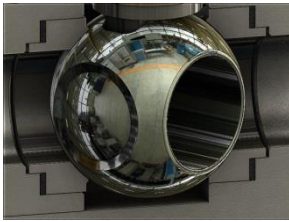
ANSI 900# REDUCED PORT

| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 14.50 | 15.00 | 18.00 | 24.00 | 29.00 | 33.00 | 38.00 |
| ØB | 1.50 | 2.50 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 |
| ØR | 3.63 | 5.00 | 6.19 | 8.50 | 10.63 | 12.75 | 15.00 |
| ØS | 6.50 | 7.50 | 9.25 | 12.50 | 15.50 | 18.50 | 21.00 |
| ØF | 8.50 | 9.50 | 11.50 | 15.00 | 18.50 | 21.50 | 24.00 |
| Cv | 385 | 960 | 1675 | 4950 | 9950 | 14720 | 20400 |
| WEIGHT | 115 | 225 | 515 | 935 | 1400 | 2175 | 3550 |

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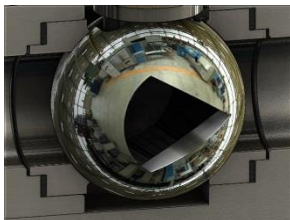
| SIZE | 2 | 3 | 4 | 6 | 8 | 10 | 12 |
|--------|-------|-------|-------|-------|-------|-------|-------|
| A | 14.50 | 18.50 | 21.50 | 27.80 | 32.80 | 39.00 | 44.50 |
| ØB | 1.50 | 2.50 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 |
| ØR | 3.63 | 5.00 | 6.19 | 8.50 | 10.63 | 12.75 | 15.00 |
| ØS | 6.50 | 7.50 | 9.50 | 12.50 | 15.50 | 19.00 | 22.50 |
| ØF | 8.50 | 10.50 | 12.25 | 15.50 | 19.00 | 23.00 | 26.50 |
| Cv | 370 | 940 | 1650 | 4920 | 9900 | 14680 | 20240 |
| WEIGHT | 130 | 385 | 765 | 15701 | 2350 | 3655 | 4405 |

OTHER BALL DESIGNS AVAILABLE



Patented Phantom Port

- Greatly extends valve life in corrosive applications
- Seat sealing area protected from flow media which adheres to the ball diameter
- Proven to last three times longer than a standard ball in difficult services
- 75% less wear on seats
- Excellent choice for Green and Black Liquor



V Port Control Valve

- Accurately Cut V-Port For Excellent Control
- Jarecki's V-Port Design Offers Great Rangeability
- Tight Stem To Ball Contact Provides A Valve With Very Low Hysteresis
- V-Port Ball Design Provides Both Excellent Shut-Off And Control

ORDERING INFORMATION

| SIZE | - | SERIES | PORT SIZE | SEAT | SEAT MATERIAL | BALL | BALL COATING | BODY | - | CLASS | END CONNECTION |
|------|---|--------|-----------|----------------|--------------------|-------------|--------------------|------------|---|----------|----------------|
| 1/2" | | TV | F FULL | 0 No Seat Seal | A AlCrN | A 316SST | A AlCrN | A CF8M | | 01 150# | B RF Flanged |
| TO | | | R REDUCED | 1 O SEAT | B Boronizing | F Hastelloy | B Boronizing | B WCB | | 03 300# | C RTJ Flanged |
| 12" | | | | 2 G SEAL | C COLMONOY | G Incoloy | C CHROME | H Alloy 20 | | 06 600# | D BUTTWELD |
| | | | | | D Devlon | H Alloy 20 | E ENP | X 2205 SST | | 09 900# | |
| | | | | | G Graphite | I Monel | I Ceramic | | | 15 1500# | |
| | | | | | M Tantalum | X 2205 SST | M Tantalum | | | | |
| | | | | | Chrome Oxide | | Chrome Oxide | | | | |
| | | | | | N HARD CARBON | | N HARD CARBON | | | | |
| | | | | | P PEEK | | L Colmonoy | | | | |
| | | | | | Q CERAMIC | | Q CERAMIC | | | | |
| | | | | | R CHROME CARBIDE | | R CHROME CARBIDE | | | | |
| | | | | | S STELLITE | | S STELLITE | | | | |
| | | | | | T TFE | | T TFE | | | | |
| | | | | | U UHMWPE | | U Micro Tuff™ | | | | |
| | | | | | W TUNGSTEN CARBIDE | | w TUNGSTEN CARBIDE | | | | |
| | | | | | | | O no coating | | | | |

Example: 4" TV Series, Full Port, O-Ring Seat Seals, Stellite Seats, 316ss Ball with Tungsten Carbide Coating, WCB body, 900# Flanged RF

2 - TV F 1 W A W B - 09 B