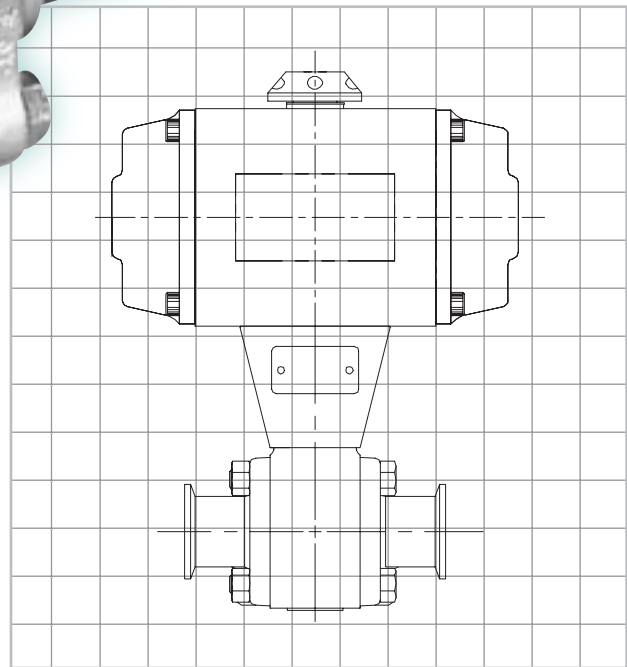


AN ISO 9001 REGISTERED COMPANY



Series WK 74 Tube Bore Clean Valves

*Stainless Steel Ball Valves for
high-purity and aseptic processes*

A Clean Valve to write your specs around:

Tube bore, metallurgy, surface finish, shut-off, cleanability and automation

Series WK 74 clean valves operate dependably in the pharmaceutical, biotech, food, cosmetic, paint, chemical and semi-conductor manufacturing industries where microbes, media deposits, mineral impurities and cross-contamination can threaten the quality of the product. The high-purity design, high vacuum rating, high cycle life and pressure/temperature rating of these valves make them ideal for applications from sterile steam to nutrient inlets to high-purity water. The performance of the WK 74 Tube Bore Clean Valve is based on a combination of high standard specifications.

Tube Bore*

The inside diameter of WK 74 valve components are tube bore dimensions so that the valve precisely matches the tubing it is welded to. This prevents buildup of pyrogens or bacteria.

Low Ferrite Content

WK 74 valves are made of 316L stainless steel with a guaranteed ferrite content of less than 5%. This prevents rouging resulting from minerals and impurities drawn from higher ferrite content metals.

High Integrity Welds

The metallurgy of WK 74 body and extended tube ends assures the integrity of the orbital welding. The tube ends have a verifiable sulfur content between .005% and .016%. Too much sulfur causes a lack of penetration of the orbital welding. With a low sulfur content, comparable to that of the process tubing, the quality of the weld is assured.

CMTR's

Provided standard with all valves.

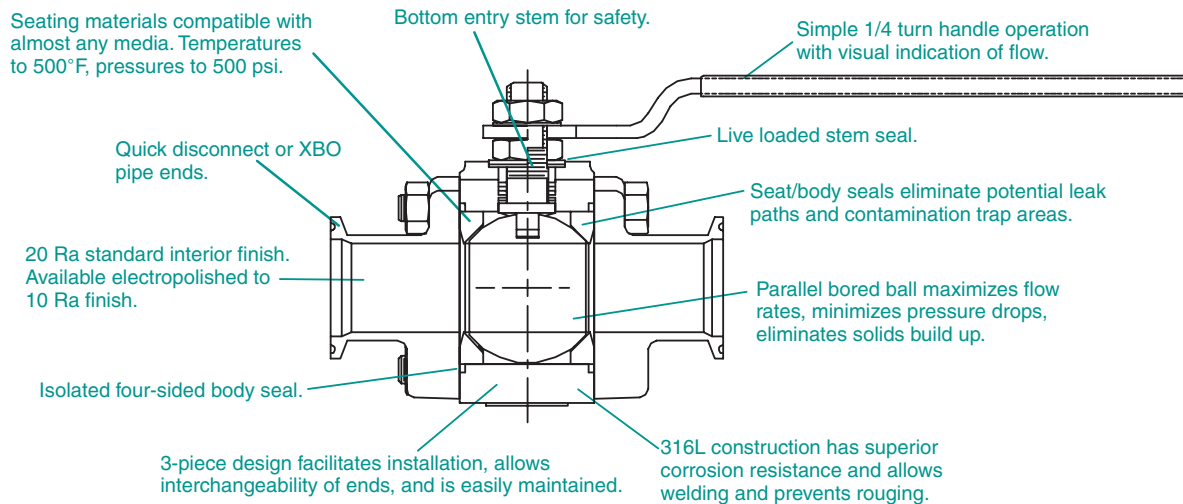
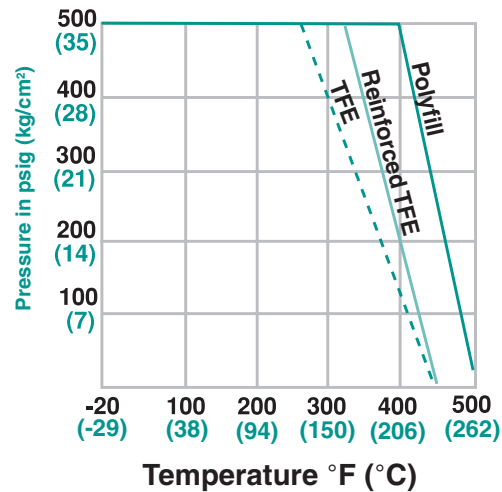
High-Cycle Sealing, Bubble-Tight Shut-off

Seats of TFE, Reinforced TFE and Polyfill® provide bubble-tight shut-off through the valve, even under conditions of high-vacuum and high-cycle operation. High-cycle stem seals assure external sealing when the valve is automated.

Steam Service Capability

Polyfill is a TFM material with carbon and graphite fillers with excellent high temperature properties. These standard seats are capable of up to 275 working steam pressure (WSP) making the WK 74 valve ideal for sterile steam applications.

Seat Pressure/Temp. Ratings



*For standard reduced port clean valves, refer to brochure PB WK 44.

*For applications requiring forged stainless steel parts, refer to brochure PB WK 70.

Specifications

- Valve Size:** 1/2", 3/4", 1", 1 1/2", 2", 3", 4"
- Styles:** 3-piece, tube bore valve, bi-directional flow
- *Pressure Rating:** Quick disconnect - varies according to clamp type and gasket material. XBO - 500 psig.
- Vacuum Rating:** 1x 10⁻³ torr (1 x 10⁻⁵ torr optional)
- Body and Pipe Ends:** Investment cast stainless steel to ASTM A351 CF3M. Ferrite content less than 5%. XBO tube ends have verifiable sulfur content between .005% to .016%.
- Ball:** Solid parallel bore (no vent hole) stainless steel, ASTM A479-316L condition A.
- Seats:** TFE, Reinforced TFE, Polyfill
- Body Seals:** TFE
- Stem:** One-piece, bottom entry stainless steel ASTM A479-316L, condition A.

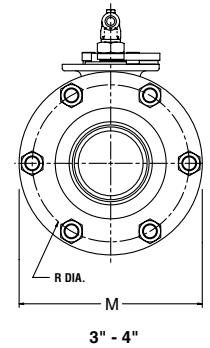
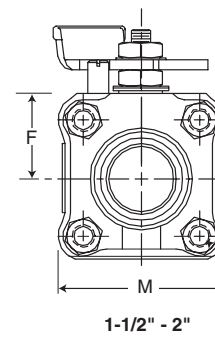
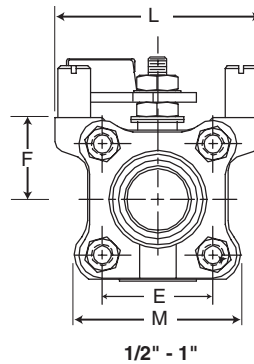
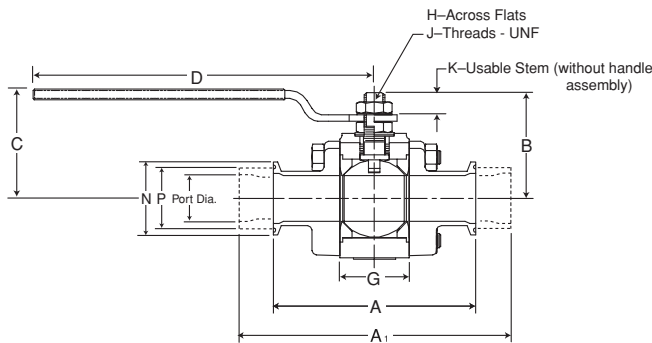
*The final valve pressure and temperature rating is established by the rating of two items; end connections and seat/body seal material. The lowest rating prevails.

- Stem Seals:** Polyfill and PEEK.
- External Parts:** 300 Series stainless steel
- Interior Surface Finish:** 20 Ra Standard, 10 Ra optional (electropolish)
- Seat/Seal Leakage:** Standard valves, less than 1x10⁻⁶ cc He/Sec. inboard and through the valve, bubble-tight (1x10⁻⁴ cc He/Sec.). With vacuum preparation, leakage will be less than 2x10⁻⁹ He/Sec. All valves 100% tested to bubble-tight standards in a class 100 clean room and double bagged.
- Standard and Approvals:** All wetted parts comply with FDA requirements (21 CFR) and are USDA approved.

Cv Values and Equivalent Length of .065 Wall tubing

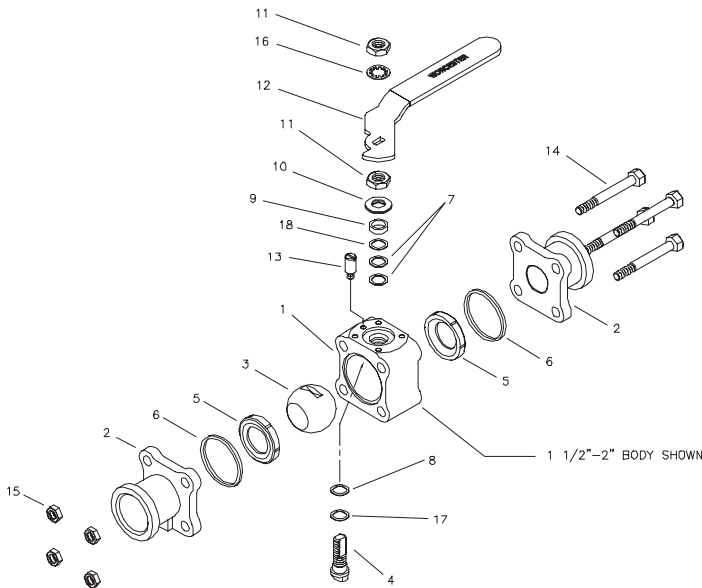
| Valve Size | TC | Cv | Equivalent Length of Tubing-in. (mm) | |
|------------|------|------|--------------------------------------|--------------|
| | | | Quick Disconnect | XBO |
| 1/2" | 8.1 | 6.5 | 3.50" (88.9) | 5.53" (141) |
| 3/4" | 28.6 | 24.3 | 4.00" (102) | 5.57" (147) |
| 1" | 67 | 56.4 | 4.53" (115) | 6.36" (162) |
| 1 1/2" | 192 | 165 | 5.57" (142) | 7.5" (191) |
| 2" | 434 | 402 | 6.69" (170) | 8.04" (204) |
| 3" | 1123 | 1033 | 7.62" (194) | 11.42" (290) |
| 4" | 2054 | 1889 | 10.2" (259) | 11.74" (298) |

Dimensions Inches (mm)



| Valve Size | A Face to Face | | B | C | D | E | F | G | H | J | K | L | M | N | P | Port Dia. | Valve Weight lbs. (kg) |
|------------|----------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|---------|------------|-------------|-------------|--------------|--------------|-------------|------------------------|
| | TC | XBO | | | | | | | | | | | | | | | |
| 1/2" | 3.50 (88.9) | 5.53 (141) | 1.55 (39.4) | 1.76 (44.7) | 5.53 (141) | 1.25 (31.8) | .94 (23.9) | .813 (20.7) | .217 (5.51) | 3/8-24 | .28 (7.11) | 2.33 (59.2) | 1.79 (45.5) | .986 (25) | .50 (12.7) | .37 (9.40) | 1.1 (50) |
| 3/4" | 4.00 (102) | 5.77 (147) | 1.68 (42.7) | 1.90 (48.3) | 5.53 (141) | 1.50 (31.8) | 1.07 (27.2) | .969 (24.6) | .217 (5.51) | 3/8-24 | .28 (7.11) | 2.62 (66.6) | 2.04 (51.8) | .986 (25) | .75 (19.1) | .62 (15.8) | 1.8 (82) |
| 1" | 4.53 (115) | 6.36 (162) | 2.23 (56.6) | 2.32 (58.9) | 6.53 (166) | 1.75 (44.5) | 1.30 (33.0) | 1.28 (32.5) | .296 (7.52) | 7/16-20 | .43 (10.9) | 3.12 (79.3) | 2.45 (62.2) | 1.986 (50.4) | 1.00 (21.4) | .87 (22.1) | 3.1 (1.41) |
| 1 1/2" | 5.57 (142) | 7.50 (191) | 2.96 (75.2) | 2.91 (73.9) | 8.03 (204) | 2.41 (61.2) | 1.80 (45.7) | 1.98 (50.3) | .343 (8.71) | 9/16-18 | .61 (15.5) | - | 3.31 (84.1) | 1.986 (50.4) | 1.50 (38.1) | 1.37 (34.8) | 6.2 (2.82) |
| 2" | 6.69 (170) | 8.04 (204) | 3.33 (84.6) | 3.29 (83.6) | 8.03 (204) | 3.09 (78.5) | 2.18 (55.4) | 2.66 (67.6) | .343 (8.71) | 9/16-18 | .60 (15.2) | - | 4.09 (104) | 2.518 (64) | 2.00 (50.8) | 1.87 (47.5) | 9.5 (4.31) |
| 3" | 7.62 (194) | 11.42 (290) | 5.94 (151) | 7.47 (190) | 24 (610) | 6.72 (171) | 4.22 (107) | 4.03 (102) | .745 (18.9) | 1-14 | .65 (16.5) | - | 7.87 (200) | 3.58 (90.9) | 3.00 (76.2) | 2.87 (72.9) | 42 (1067) |
| 4" | 10.2 (259) | 11.74 (298) | 6.69 (170) | 8.22 (209) | 24 (610) | 7.92 (201) | 5.07 (129) | 4.71 (120) | .745 (18.9) | 1-14 | .65 (16.5) | - | 9.01 (229) | 4.68 (118.9) | 4.00 (101.6) | 3.83 (97.3) | 60 (1524) |

Part Identification and Materials of Construction



| Item No. | Qty. | Description | Material |
|----------|--------|-----------------------|--|
| 1 | 1 | Valve Body | Stainless Steel ASTM A351-CF3M |
| 2 | 2 | Pipe Ends | Stainless Steel ASTM A351-CF3M |
| 3 | 1 | Ball | Stainless Steel A479-316L Cond. A |
| 4 | 1 | Stem | Stainless Steel A479-316L Cond. A |
| 5 | 2 | Seat | TFE-Virgin / Reinforced TFE / PolyFill |
| 6 | 2 | Body Seal | TFE-Virgin |
| 7 | 2 | Stem Seal | PolyFill |
| 8 | 1 | Thrust Bearing | PolyFill |
| 9 | 1 | Follower | Stainless Steel AISI 316L |
| 10 | 2 | Belleville Washers | Stainless Steel AISI 301 |
| 11 | 2 | Handle Nut & Ret. Nut | Stainless Steel AISI 300, Series/Zinc Plated |
| 12 | 1 | Handle Assembly | Stainless Steel ASTM A167 304, Vinyl Coated |
| 13 | 1 or 2 | Stop Pin | Stainless Steel, A276-300 Series |
| 14 | 4 | Body Bolts | Stainless Steel ASTM F593-316 GR.2 |
| 15 | 4 | Body Nuts | Stainless Steel ASTM A194 GR.8 |
| 16 | 1 | Lockwasher | Stainless Steel AISI 300 Series |
| 17 | 1 | Thrust Bearing | PEEK |
| 18 | 1 | Seal Protector | PEEK |

How to Order

| Valve Size | Options | Product Series | Body & Pipe Ends | Ball & Stem | Seats | Body Seals | Ends | Variations |
|------------|--|----------------|------------------------|------------------------|---|------------|---|--|
| 1/2" | Blank-Std. 20 Ra Finish | WK 74 | 6-316L Stainless Steel | 6-316L Stainless Steel | T-TFE R-Reinforced TFE P-Polyfill | T-TFE | TC- Quick Disconnect XBO- Extended Butt Weld O.D. Tube | Blank- No Variations V6- Source Inspection V32- Oval Handle V36- Cert. of Compliance V48- Extended Lever Handle V59- Extended Oval Handle V60- OSHA Lockout V66- Cert. of Comp. for European Valve Orders V72- Cert. of Comp. for European Pressure Equipment Directive Conformance |
| 3/4" | E- No handle valve built for automation | | | | | | | |
| 1" | P- Electropolished (10 Ra) | | | | | | | |
| 1 1/2" | V- Vacuum | | | | | | | |
| 2" | | | | | | | | |
| 3" | | | | | | | | |
| 4" | | | | | | | | |

Ordering Example: A 1" Series WK 74 with a stainless steel body, pipe ends, ball and stem, Polyfill seats, TFE body seals, quick disconnect ends, and electropolished finish.

CAUTION: Ball Valves can retain pressurized media in the body cavity when closed. Use care when disassembling. Always open valve to relieve pressure prior to disassembly. Due to continuous development of our product range, we reserve the right to alter the dimensions and information contained in this leaflet as required.

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