

Innovation | Commitment

Vinco
VALVES



SANITARY BALL VALVES

FLOWING YOUR ENERGY

COMPANY



Vinco has been supplying some of the most demanding end customers for more than 30 years

Alcatel-Lucent
Enterprise



FUJIFILM
Value from Innovation



Baxter

AGFA
Agfa



LFB
ETHICAL COMMITMENT



Qualiphar



GW
pharmaceuticals

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- Certifications and Approvals

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MULTI-PORT



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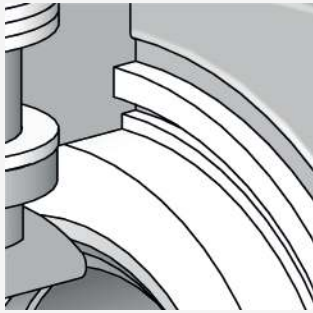
QP SERIES 16

3 OPTIONS

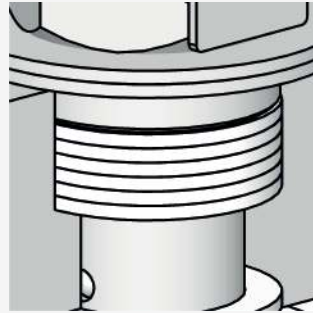
18-19

- Lockable handle
- Stem Extension
- Oval Handle
- Bracket
- Actuator
- Tank Bottom
- CIP/ SIP Purge Port
- Steam trap
- Double Block and Bleed
- Fire Fail Safe

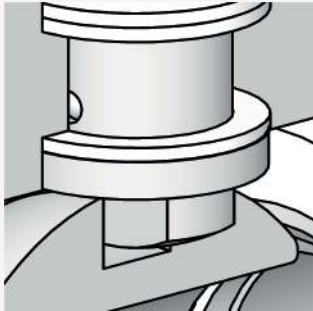
GENERAL FEATURES



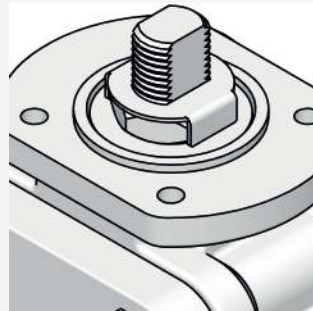
Double encapsulated body seals for extra resistance and tightness performance



Self-adjust live loaded packing system ensures longer service without maintenance and spare parts replacement

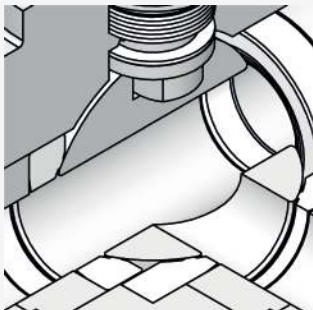


Anti-static device ensures the electrical conductivity between body, end, ball and stem according to european directive 2014/34/EU (ATEX)

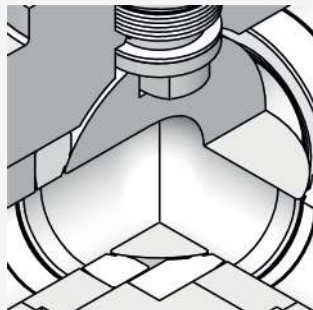


Top flange fitted with ISO 5211 providing universal connection for automation

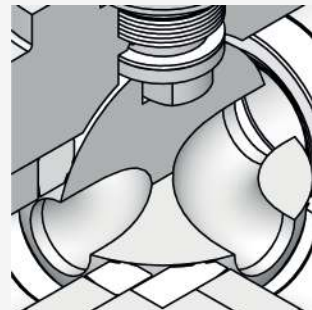
MULTIPORT CONFIGURATION



T Port



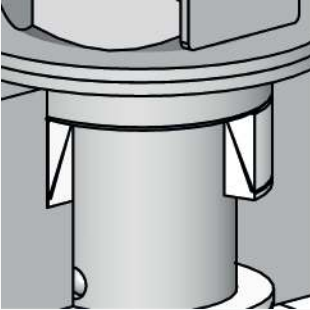
L Port



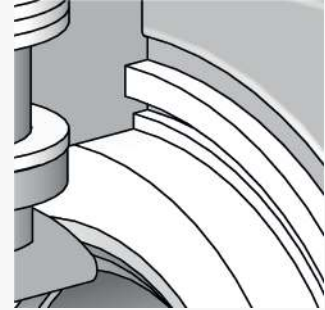
X Port

The multiport design is equipped with four seats to support the ball in any port configuration and provide sealing capabilities to each port independently. This design permits that each multiport valve replaces two or more 2-way valves reducing the number of valves and fittings required.

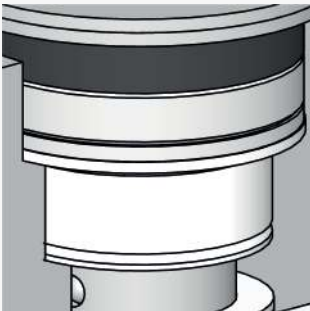
OPTIONAL FUGITIVE EMISSION DESIGN



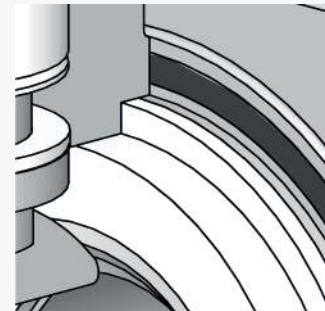
Optional fugitive emissions design according to ISO 15848 and TA LUFT / VDI 2440 reducing the potentially harmful emission to the environment. The upgrade to a "V" shape packing increases the performance of the packing as well as increases the life cycle time. This design is also suitable for vacuum service up to 10^{-6} mm Hg.



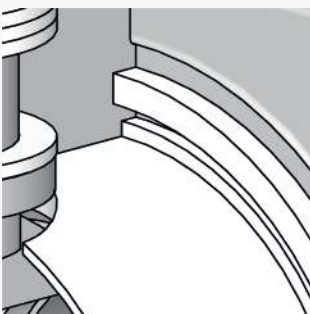
OPTIONAL FIRESAFE DESIGN



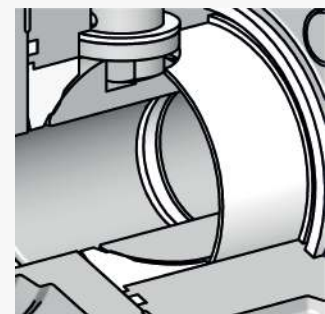
Optional firesafe design according to ISO 10497 and API 607 for critical services. Primary layer of TFE prevents graphite contamination into the media assuring the cleanliness and high purity of the processes.



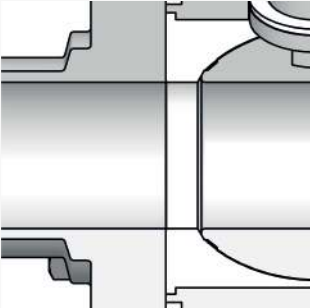
OPTIONAL CAVITY FILLER DESIGN



Optional cavity filler design is available to fill in the dead space between the body and the ball. This prevents the media from being trapped reducing the contamination or the solidification of the media enhancing a smooth operation for longer time.

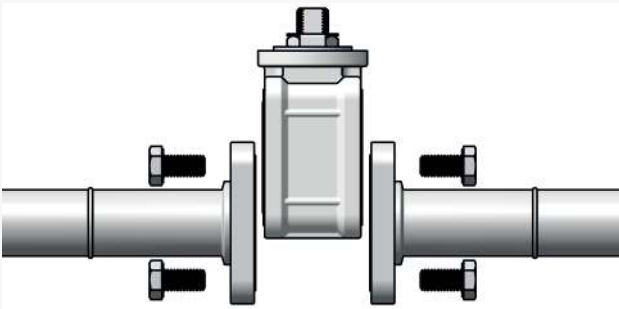


DRAINABILITY



Tube bore version is designed to allow the media to self-drain smoothly due to its unobstructed construction. This improves the flow capacity of the valve and reduces the formation of inlays, pooling effect, dead legs and trapped media in the piping. To achieve this condition, it is important to install the valves assuring the correct slope to benefit from the gravity impulse. It is the cheapest and most effective way to maintain the installations cleaned and drained. The valves can also be equipped with the CIP / SIP design to enhance the cleaning and maintenance program as shown in the options chapter.

INLINE SERVICEABLE



All valves are constructed to allow the inline service which reduces the maintenance costs and the time needed for any intervention.

SUITABILITY FOR CONTACT WITH FOOD STUFF

European Directives:

1935/2004/CE
1895/2005/CE
10/2011/UE

American Regulations:

FDA, Food and Drug Administration, Department of Health and Human Services, Code of Federal Regulations 21 CFR Ch. 1
USA regulations sections 177.1550 (a) (1) and (b)
- Perfluorocarbon Resins

HAZARDOUS SUBSTANCES FOR HEALTH

European Directives:

76/769/EC
2011/65/EU (ROHS)
Directive 2003/11/EC
Directive 2003/53/EC
Directive 2006/122/EC
Directives 2009/251/EC

European Regulations:

EC 1005/2009

Others:

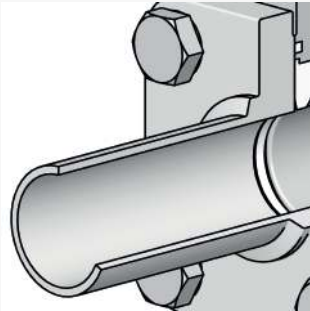
GADSL 2015
BSE / TSE / ADI free

SUITABILITY FOR MEDICAL DEVICES

Directive 93/42/EEC - USP Class VI

TECHNICAL INFORMATION

WELDING PROPERTIES



Welding connection material with controlled sulphur content between 0.005 and 0.017% to improve weldability.
 Ferrite content below 3% for investment cast and 0.5% for barstock / forging preventing corrosion formation.
 Butt-weld length adapted to allow direct orbital welding process without disassembling the valves.



CLEANLINESS AND PACKING



All valves are degreased, pickled, passivated and cleaned to achieve high levels of cleanliness.
 Afterwards this the valves are packed and sealed in individual protective plastic bags with silica to prevent contamination and humidity problems.
 Optional degreased for applications as oxygen service available upon request.

| CERTIFICATION | CONSTRUCTION STANDARDS | TEST STANDARDS |
|--|------------------------|--|
| Company Quality System Certified acc. to ISO 9001 | ASME BPE | Test applied: |
| CE PED Certification acc. to 2014/68/EU | DIN 11850 R2 | Hydrostatic shell and seat test |
| ATEX Certification acc. to 2014/34/EU | ISO 1127 | Pneumatic shell and seat test |
| Fugitive Emission Class BH acc. to ISO 15848 and TA-LUFT (VDI2440) CO1 (-46°C to 200°) | ISO 5211 | Buoscopic inspection |
| FDA & USP Class VI certificate of compliance for nonmetllic parts | | Ra measurement |
| | | EN10204 type 3.1 certificate is available for each valve |
| | | EN10204 type 3.2 certificate is available upon request |

SANITARY BALL VALVES

RP Series

2 Way Floating
Barstock / Forging

The RP Series is a sanitary floating ball valve designed for Pharmaceutical and Food & Beverage applications where high purity, drainability and cleanability are extremely important to ensure high levels of process quality and performance.

Welding connections are provided as standard in A479 316L with controlled sulphur and ferrite content below 0.5% to improve weldability and avoid corrosion.

Non-metallic parts comply with FDA, USP cI VI, ROHS, BSE/TSE and others to guarantee the suitability of the valves to the processes. External and internal mechanical polishing matching SF3 and SF1, provided as standard, makes this high-tech mirror polished series the best solution for maximum cleanliness requirements of the clean room applications.

A better internal mechanical polishing and electropolishing matching SF4 finishing is available upon request.

ASME BPE TUBE (O.D)

Tube Bore: ½" to 6"

DIN 11850 R2 TUBE

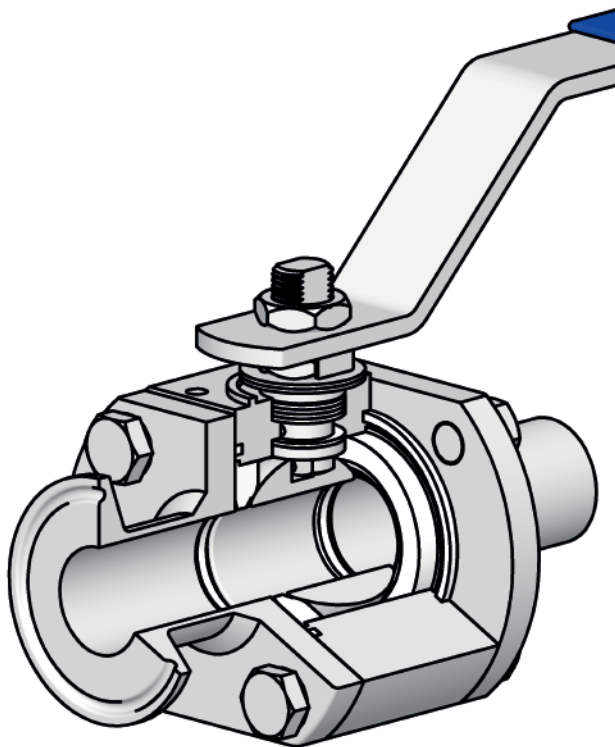
Tube Bore: 10 to 50
Full Bore: 65 to 150

ISO 1127 TUBE

Tube Bore: 8 to 50
Full Bore: 10 to 100

DESIGN TEMPERATURE

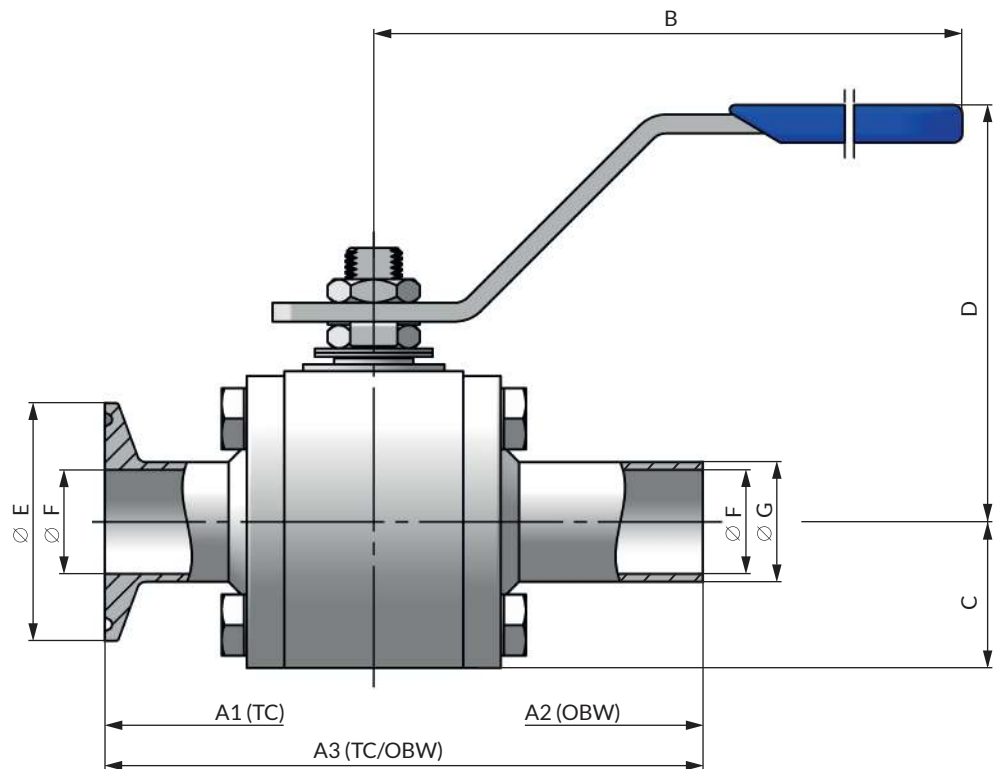
-50°C to 200°C



| PART | | STANDARD STAINLESS STEEL | OPTIONAL* ALLOY STEEL |
|---|------|---|---------------------------|
| Body / Ends | | A479 316/L | B574 N06022 (Alloy 22) |
| TRIM | Ball | A479 316/L | B574 N06022 (Alloy 22) |
| | Stem | A479 316/L | B574 N06022 (Alloy 22) |
| Seats | | TFM1600 | |
| Packing & Seals | | TFM1600 & PTFE | |
| Bolting | | A2 cl. 70 (304) | A4 cl. 70 (316) |
| SURFACE FINISH | | | |
| STANDARD | | OPTIONAL | |
| INTERNAL FINISH 0.51 µm / 20 µin (SF1) | | INTERNAL FINISH 0.38 µm / 15 µin (SF4) | |
| EXTERNAL FINISH 0.76 µm / 30 µin (SF3) | | | |

*Others available upon request

SANITARY BALL VALVES



| ASME | CLASS | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|------|-------|-------|-------|-------|-------|-----|------|-----|-------|-------|-------|-----|----------|
| ½" | 600 | 9.4 | 88.9 | 114.3 | 101.6 | 140 | 22 | 64 | 25 | 9.4 | 12.7 | 0.8 | F03 |
| ¾" | 600 | 15.8 | 101.6 | 127 | 114.3 | 140 | 24.5 | 68 | 25 | 15.8 | 19.1 | 1 | F03 |
| 1" | 600 | 22.1 | 114.3 | 139.7 | 127 | 170 | 31 | 87 | 50.4 | 22.1 | 25.4 | 2 | F04 |
| 1½" | 400 | 34.8 | 139.7 | 165.1 | 152.4 | 200 | 44 | 112 | 50.4 | 34.8 | 38.1 | 5 | F05 |
| 2" | 400 | 47.5 | 165.1 | 190.5 | 177.8 | 230 | 53 | 122 | 63.9 | 47.5 | 50.8 | 8.5 | F05 |
| 2½" | 400 | 60.2 | 190.5 | 215.9 | 203.2 | 350 | 71.5 | 169 | 77.4 | 60.2 | 63.5 | 16 | F07 |
| 3" | 400 | 72.9 | 215.9 | 241.3 | 228.6 | 350 | 82.5 | 179 | 90.9 | 72.9 | 76.2 | 22 | F07 |
| 4" | 300 | 97.4 | 254 | 279.4 | 266.7 | 450 | 101 | 198 | 118.9 | 97.4 | 101.6 | 40 | F10 |
| 6" | 150 | 146.9 | 355.6 | 381 | 368.3 | 500 | 144 | 260 | 166.9 | 146.9 | 152.4 | 100 | F14 |

| DIN | PN | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|-----|-----|------|-----|-----|-------|-----|------|-----|------|-----|-----|-----|----------|
| 10 | 100 | 10 | 90 | 115 | 102.5 | 140 | 22 | 64 | 34 | 10 | 13 | 0.8 | F03 |
| 15 | 100 | 16 | 100 | 125 | 112.5 | 140 | 24.5 | 68 | 34 | 16 | 19 | 1 | F03 |
| 20 | 100 | 20 | 115 | 140 | 127.5 | 170 | 31 | 87 | 34 | 20 | 23 | 2 | F04 |
| 25 | 64 | 26 | 125 | 150 | 137.5 | 170 | 36 | 92 | 50.5 | 26 | 29 | 3 | F04 |
| 32 | 64 | 32 | 140 | 165 | 152.5 | 200 | 44 | 112 | 50.5 | 32 | 35 | 5 | F05 |
| 40 | 64 | 38 | 150 | 175 | 162.5 | 200 | 47 | 117 | 50.5 | 38 | 41 | 6 | F05 |
| 50 | 64 | 50 | 165 | 190 | 177.5 | 230 | 53 | 122 | 64 | 50 | 53 | 8.5 | F05 |
| 65 | 64 | 62 | 190 | 215 | 202.5 | 350 | 71.5 | 169 | 91 | 66 | 70 | 16 | F07 |
| 80 | 64 | 75 | 215 | 240 | 227.5 | 350 | 82.5 | 179 | 106 | 81 | 85 | 22 | F07 |
| 100 | 40 | 97 | 255 | 280 | 267.5 | 450 | 101 | 198 | 119 | 100 | 104 | 40 | F10 |
| 150 | 16 | 147 | 355 | 380 | 367.5 | 500 | 144 | 260 | 183 | 150 | 154 | 100 | F14 |

ISO 1127 TUBE dimensions available upon request

SANITARY BALL VALVES

XP Series

2 Way Floating
Investment Cast

The XP Series is a sanitary floating ball valve designed for Pharmaceutical and Food & Beverage applications where high purity, drainability and cleanability are extremely important to ensure high levels of process quality and performance.

Welding connections are provided as standard in A351 CF3M with controlled sulphur and ferrite content below 3% to improve weldability and avoid corrosion.

Non-metallic parts comply with FDA, USP cI VI, ROHS, BSE/TSE and others to guarantee the suitability of the valves to the processes.

External mill finishing and internal mechanical polishing matching SF0 and SF1, provided as standard, makes this high-tech investment cast series the best solution to meet the requirements of the technical room applications.

A better internal mechanical polishing and electropolishing matching SF4 finishing is available upon request.

ASME BPE TUBE (O.D.)

Tube Bore: ½" to 6"

DIN 11850 R2 TUBE

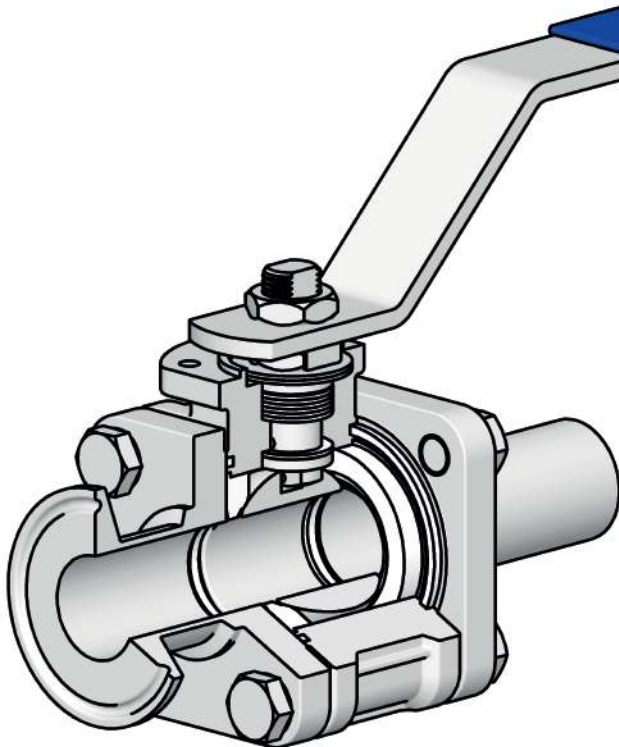
Tube Bore: 10 to 50
Full Bore: 65 to 150

ISO 1127 TUBE

Tube Bore: 8 to 50
Full Bore: 10 to 100

DESIGN TEMPERATURE

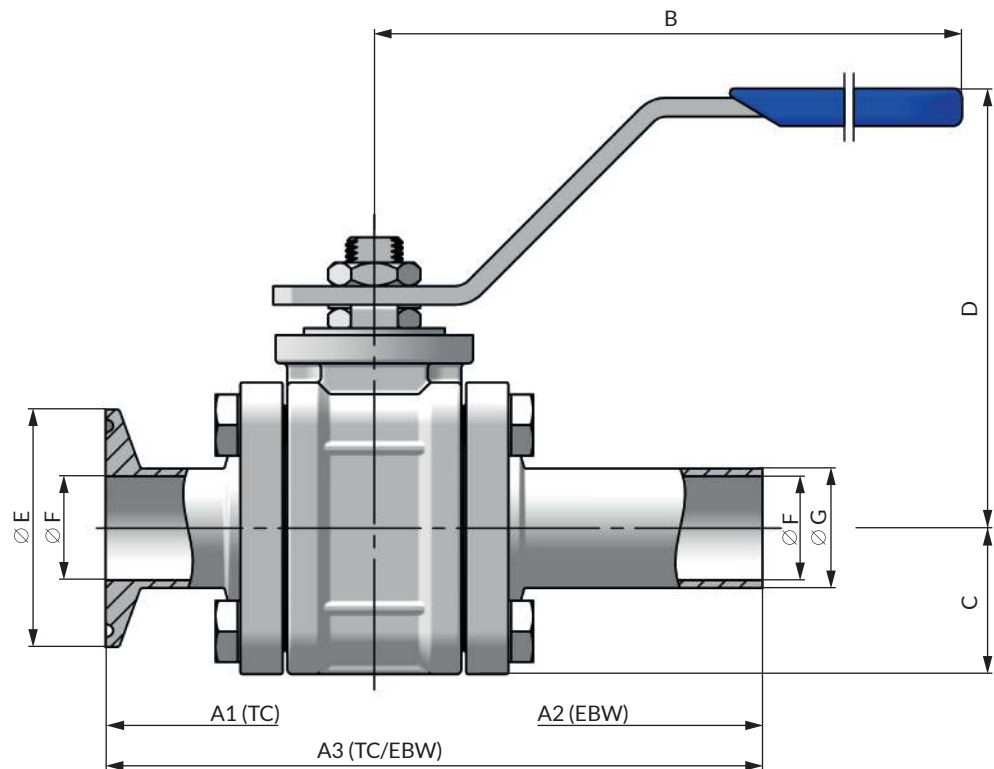
-50°C to 200°C



| PART | | STANDARD STAINLESS STEEL | OPTIONAL* ALLOY STEEL |
|---|------|---|-----------------------------|
| Body / Ends | | A351 CF3M (316L) | A494 CW-12MW (Alloy 276) |
| TRIM | Ball | A351 CF3M (316L) | B574 N10276 (Alloy 276) |
| | Stem | A479 316/L | B574 N10276 (Alloy 276) |
| Seats | | TFM1600 | |
| Packing & Seals | | TFM1600 & PTFE | |
| Bolting | | A2 cl. 70 (304) | A4 cl. 70 (316) |
| SURFACE FINISH | | | |
| STANDARD | | OPTIONAL | |
| INTERNAL FINISH 0.51 µm / 20 µin (SF1) | | INTERNAL FINISH 0.38 µm / 15 µin (SF4) | |
| EXTERNAL FINISH mill finish (SF0) | | | |

*Others available upon request

SANITARY BALL VALVES



| ASME | CLASS | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-------|-------|------|----------|
| ½" | 600 | 9.4 | 88.9 | 139.7 | 114.3 | 140 | 22.5 | 64 | 25 | 9.4 | 12.7 | 0.7 | F03 |
| ¾" | 600 | 15.8 | 101.6 | 152.4 | 127 | 140 | 25.5 | 68 | 25 | 15.8 | 19.1 | 1 | F03 |
| 1" | 600 | 22.1 | 114.3 | 165.1 | 139.7 | 170 | 31.5 | 87 | 50.4 | 22.1 | 25.4 | 2 | F04 |
| 1½" | 400 | 34.8 | 139.7 | 190.5 | 165.1 | 200 | 42.5 | 112 | 50.4 | 34.8 | 38.1 | 4 | F05 |
| 2" | 400 | 47.5 | 165.1 | 215.9 | 190.5 | 230 | 53.5 | 122 | 63.9 | 47.5 | 50.8 | 7.5 | F05 |
| 2½" | 400 | 60.2 | 190.5 | 241.3 | 215.9 | 350 | 73 | 169 | 77.4 | 60.2 | 63.5 | 13.5 | F07 |
| 3" | 400 | 72.9 | 215.9 | 266.7 | 241.3 | 350 | 83.5 | 179 | 90.9 | 72.9 | 76.2 | 18.5 | F07 |
| 4" | 300 | 97.4 | 254 | 304.8 | 279.4 | 500 | 101.5 | 209 | 118.9 | 97.4 | 101.6 | 31 | F10 |
| 6" | 150 | 146.9 | 368.3 | 419.1 | 393.7 | 500 | 153 | 308 | 166.9 | 146.9 | 152.4 | 88.5 | F14 |

| DIN | PN | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|-----|-----|------|-----|-----|-----|-----|-------|-----|------|-----|-----|------|----------|
| 10 | 100 | 10 | 90 | 140 | 115 | 140 | 22.5 | 64 | 34 | 10 | 13 | 0.7 | F03 |
| 15 | 100 | 16 | 100 | 150 | 125 | 140 | 25.5 | 68 | 34 | 16 | 19 | 1 | F03 |
| 20 | 100 | 20 | 115 | 165 | 140 | 170 | 31.5 | 87 | 34 | 20 | 23 | 2 | F04 |
| 25 | 64 | 26 | 125 | 175 | 150 | 170 | 36.5 | 92 | 50.5 | 26 | 29 | 2.5 | F04 |
| 32 | 64 | 32 | 140 | 190 | 165 | 200 | 42.5 | 112 | 50.5 | 32 | 35 | 4 | F05 |
| 40 | 64 | 38 | 150 | 200 | 175 | 200 | 47.5 | 117 | 50.5 | 38 | 41 | 5.5 | F05 |
| 50 | 64 | 50 | 165 | 215 | 190 | 230 | 53.5 | 122 | 64 | 50 | 53 | 7.5 | F05 |
| 65 | 64 | 62 | 190 | 240 | 215 | 350 | 73 | 169 | 91 | 66 | 70 | 13.5 | F07 |
| 80 | 64 | 75 | 215 | 265 | 240 | 350 | 83.5 | 179 | 106 | 81 | 85 | 18.5 | F07 |
| 100 | 40 | 97 | 255 | 305 | 280 | 500 | 101.5 | 209 | 119 | 100 | 104 | 31 | F10 |
| 150 | 16 | 147 | 370 | 420 | 395 | 500 | 153 | 308 | 183 | 150 | 154 | 88.5 | F14 |

ISO 1127 TUBE dimensions available upon request

SANITARY BALL VALVES

LP Series

2 Way Floating
Investment Cast

The LP Series is a sanitary floating ball valve designed for Pharmaceutical and Food & Beverage applications where high purity, drainability and cleanability are extremely important to ensure high levels of process quality and performance.

Welding connections are provided as standard in A351 CF3M with controlled sulphur and ferrite content below 3% to improve weldability and avoid corrosion.

Non-metallic parts comply with FDA, USP cI VI, ROHS, BSE/TSE and others to guarantee the suitability of the valves to the processes.

External mill finishing and internal mechanical polishing matching SF0 and SF3, provided as standard, makes this standard investment cast series the most economic solution to meet the requirements of the technical room applications.

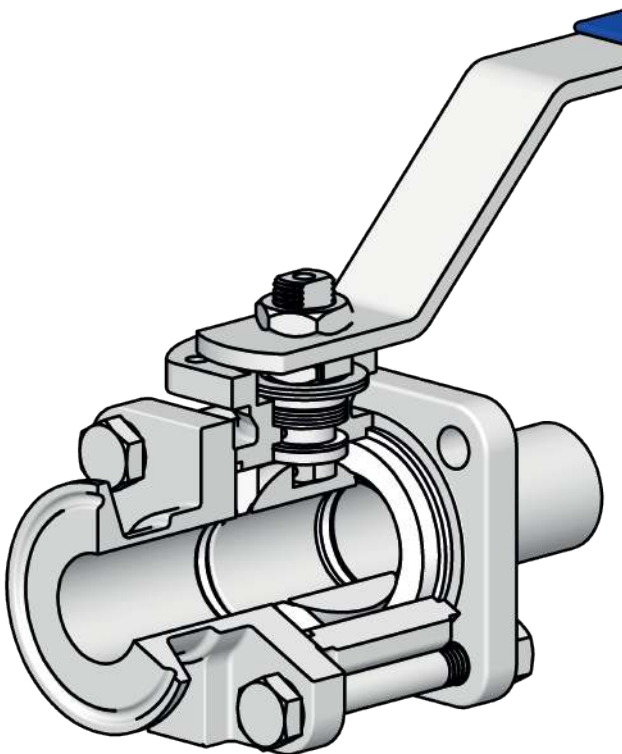
A better internal mechanical polishing and electropolishing matching SF5 finishing is available upon request.

ASME BPE TUBE (O.D)

Tube Bore: ½" to 2"

DESIGN TEMPERATURE

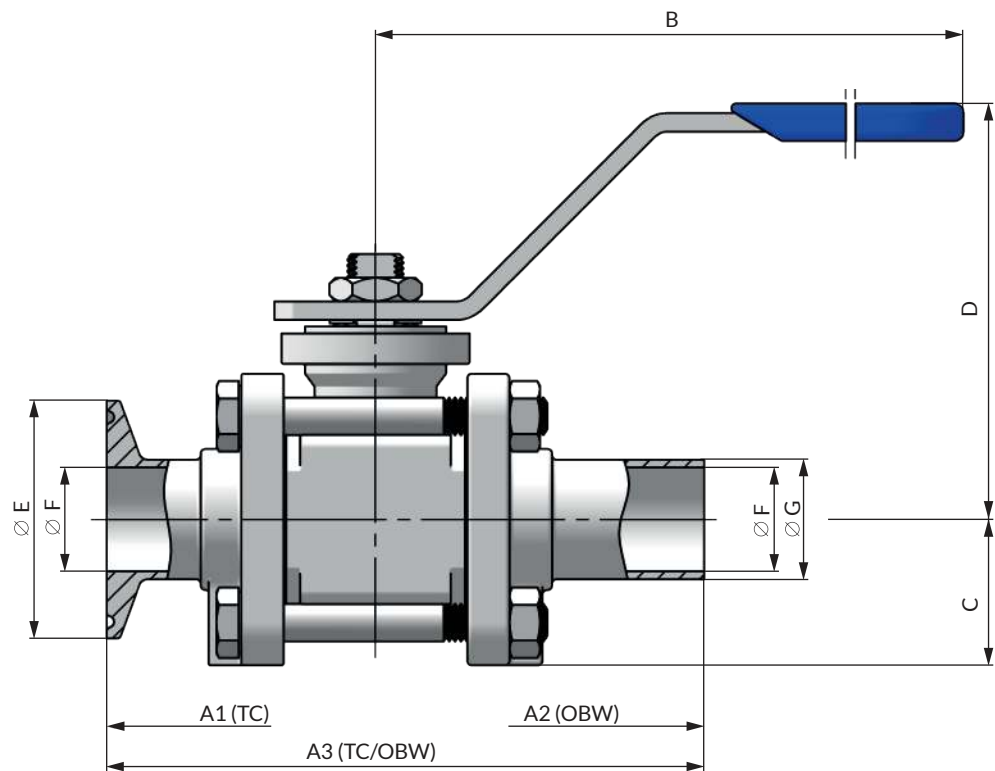
-50°C to 200°C



| PART | | STANDARD STAINLESS STEEL |
|---|------|---|
| Body / Ends | | A351 CF3M (316L) |
| TRIM | Ball | A351 CF3M (316L) |
| | Stem | A479 316/L |
| Seats | | PTFE |
| Packing & Seals | | TFM1600 & PTFE |
| Bolting | | A2 cl. 70 (304) |
| SURFACE FINISH | | |
| STANDARD | | OPTIONAL |
| INTERNAL FINISH 0.76 µm / 30 µin (SF3) | | INTERNAL FINISH 0.51 µm / 20 µin (SF5) |
| EXTERNAL FINISH mill finish (SF0) | | |

*Others available upon request

SANITARY BALL VALVES



| ASME | CLASS | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|------|-------|------|-------|-------|-------|-----|----|-----|------|------|------|-----|----------|
| ½" | 600 | 9.4 | 88.9 | 114.3 | 101.6 | 140 | 21 | 64 | 25 | 9.4 | 12.7 | 0.6 | F03 |
| ¾" | 600 | 15.8 | 101.6 | 127 | 114.3 | 140 | 25 | 68 | 25 | 15.8 | 19.1 | 0.8 | F03 |
| 1" | 600 | 22.1 | 114.3 | 139.7 | 127 | 170 | 31 | 87 | 50.4 | 22.1 | 25.4 | 1.5 | F04 |
| 1½" | 400 | 34.8 | 139.7 | 165.1 | 152.4 | 200 | 42 | 112 | 50.4 | 34.8 | 38.1 | 3.5 | F05 |
| 2" | 400 | 47.5 | 165.1 | 190.5 | 177.8 | 230 | 53 | 122 | 63.9 | 47.5 | 50.8 | 6.5 | F05 |

SANITARY BALL VALVES

MP Series

Multiport Floating
Barstock / Forging

The MP Series is a sanitary floating ball valve designed for Pharmaceutical and Food & Beverage applications where high purity, drainability and cleanability are extremely important to ensure high levels of process quality and performance.

Welding connections are provided as standard in A479 316L with controlled sulphur and ferrite content below 0.5% to improve weldability and avoid corrosion.

Non-metallic parts comply with FDA, USP cI VI, ROHS, BSE/TSE and others to guarantee the suitability of the valves to the processes. External and internal mechanical polishing matching SF3 and SF1, provided as standard, makes this high-tech mirror polished series the best solution for maximum cleanliness requirements of the clean room applications.

A better internal mechanical polishing and electropolishing matching SF4 finishing is available upon request.

ASME BPE TUBE (O.D)

Tube Bore: ½" to 2"

DIN 11850 R2 TUBE

Tube Bore: 10 to 50

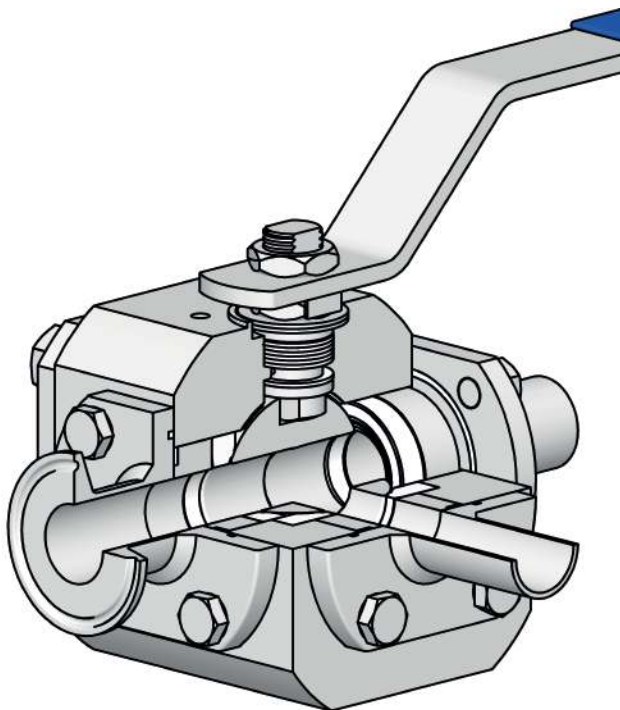
ISO 1127 TUBE

Tube Bore: 8 to 40

Full Bore: 10 to 50

DESIGN TEMPERATURE

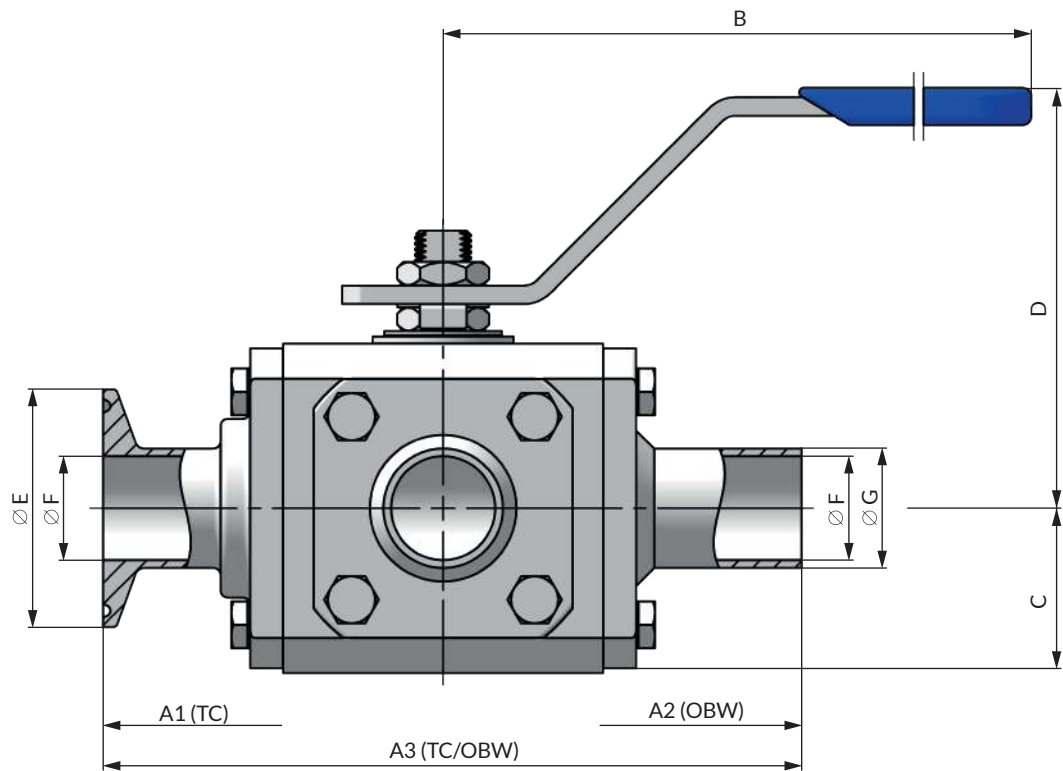
-50°C to 200°C



| PART | | STANDARD STAINLESS STEEL | OPTIONAL* ALLOY STEEL |
|---|------|---|---------------------------|
| Body / Ends | | A479 316/L | B574 N06022 (Alloy 22) |
| TRIM | Ball | A479 316/L | B574 N06022 (Alloy 22) |
| | Stem | A479 316/L | B574 N06022 (Alloy 22) |
| Seats | | TFM1600 | |
| Packing & Seals | | TFM1600 & PTFE | |
| Bolting | | A2 cl. 70 (304) | A4 cl. 70 (316) |
| SURFACE FINISH | | | |
| STANDARD | | OPTIONAL | |
| INTERNAL FINISH 0.51 µm / 20 µin (SF1) | | INTERNAL FINISH 0.38 µm / 15 µin (SF4) | |
| EXTERNAL FINISH 0.76 µm / 30 µin (SF3) | | | |

*Others available upon request

SANITARY BALL VALVES



| ASME | CLASS | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|------|-------|------|-------|-------|-------|-----|----|-----|------|------|------|------|----------|
| ½" | 600 | 9.4 | 133.4 | 158.8 | 146.1 | 170 | 35 | 90 | 25 | 9.4 | 12.7 | 3.6 | F04 |
| ¾" | 600 | 15.8 | 139.7 | 165.1 | 152.4 | 170 | 35 | 90 | 25 | 15.8 | 19.1 | 4 | F04 |
| 1" | 600 | 22.1 | 165.1 | 190.5 | 177.8 | 200 | 46 | 110 | 50.4 | 22.1 | 25.4 | 7.5 | F05 |
| 1½" | 400 | 34.8 | 203.2 | 228.6 | 215.9 | 230 | 59 | 130 | 50.4 | 34.8 | 38.1 | 15.5 | F05 |
| 2" | 400 | 47.5 | 266.7 | 292.1 | 279.4 | 350 | 85 | 170 | 63.9 | 47.5 | 50.8 | 40.5 | F07 |

| DIN | PN | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|-----|-----|------|-----|-----|-------|-----|----|-----|------|----|----|------|----------|
| 10 | 100 | 10 | 135 | 160 | 147.5 | 170 | 35 | 90 | 34 | 10 | 13 | 3.6 | F04 |
| 15 | 100 | 16 | 140 | 165 | 152.5 | 170 | 35 | 90 | 34 | 16 | 19 | 4 | F04 |
| 20 | 100 | 20 | 165 | 195 | 180 | 200 | 46 | 110 | 34 | 20 | 23 | 7.5 | F05 |
| 25 | 64 | 26 | 170 | 195 | 182.5 | 200 | 46 | 110 | 50.5 | 26 | 29 | 8 | F05 |
| 32 | 64 | 32 | 205 | 230 | 217.5 | 230 | 59 | 130 | 50.5 | 32 | 35 | 15.5 | F05 |
| 40 | 64 | 38 | 205 | 230 | 217.5 | 230 | 59 | 130 | 50.5 | 38 | 41 | 16 | F05 |
| 50 | 64 | 50 | 265 | 290 | 277.5 | 350 | 85 | 170 | 64 | 50 | 53 | 40.5 | F07 |

ISO 1127 TUBE dimensions available upon request

SANITARY BALL VALVES

QP Series

Multiport Floating
Investment Cast

The QP Series is a sanitary floating ball valve designed for Pharmaceutical and Food & Beverage applications where high purity, drainability and cleanability are extremely important to ensure high levels of process quality and performance.

Welding connections are provided as standard in A351 CF3M with controlled sulphur and ferrite content below 3% to improve weldability and avoid corrosion.

Non-metallic parts comply with FDA, USP cI VI, ROHS, BSE/TSE and others to guarantee the suitability of the valves to the processes.

External mill finishing and internal mechanical polishing matching SF0 and SF1, provided as standard, makes this high-tech investment cast series the best solution to meet the requirements of the technical room applications.

A better internal mechanical polishing and electropolishing matching SF4 finishing is available upon request.

ASME BPE TUBE (O.D)

Tube Bore: ½" to 2"

DIN 11850 R2 TUBE

Tube Bore: 10 to 50

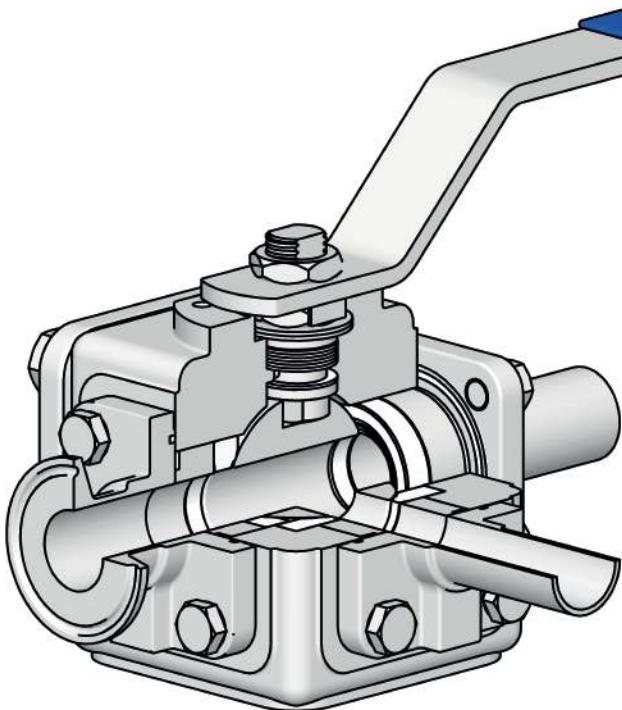
ISO 1127 TUBE

Tube Bore: 8 to 40

Full Bore: 10 to 50

DESIGN TEMPERATURE

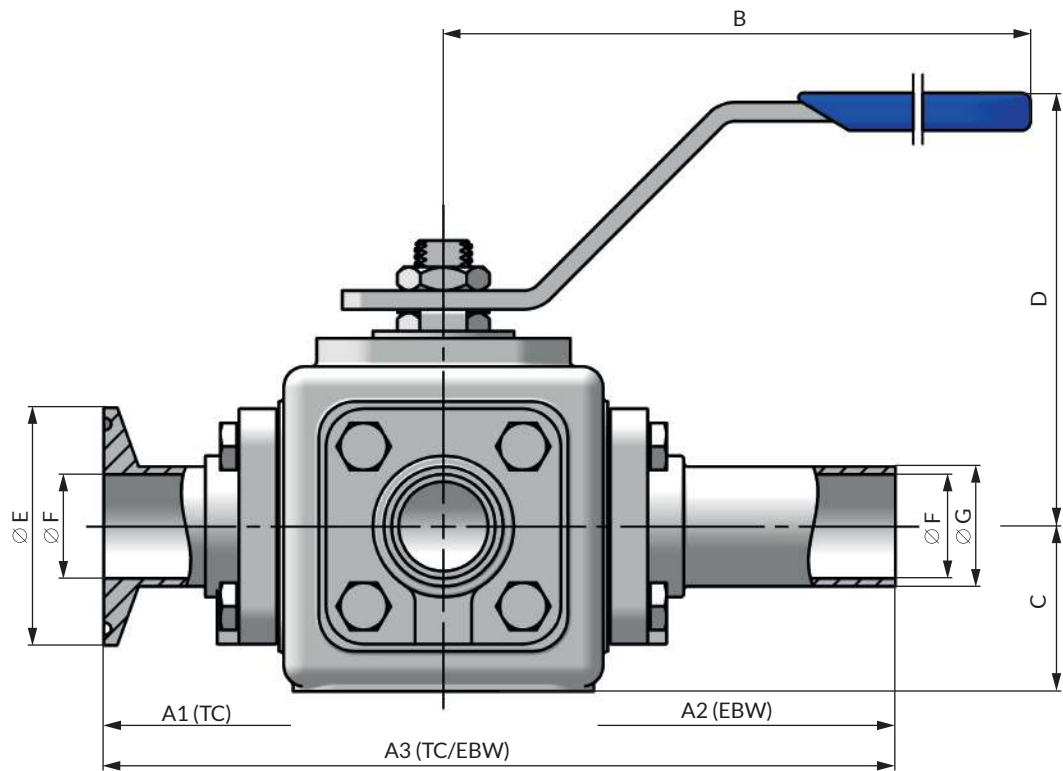
-50°C to 200°C



| PART | | STANDARD STAINLESS STEEL | OPTIONAL* ALLOY STEEL |
|---|------|---|-----------------------------|
| Body / Ends | | A351 CF3M (316L) | A494 CW-12MW (Alloy 276) |
| TRIM | Ball | A351 CF3M (316L) | B574 N10276 (Alloy 276) |
| | Stem | A479 316/L | B574 N10276 (Alloy 276) |
| Seats | | TFM1600 | |
| Packing & Seals | | TFM1600 & PTFE | |
| Bolting | | A2 cl. 70 (304) | A4 cl. 70 (316) |
| SURFACE FINISH | | | |
| STANDARD | | OPTIONAL | |
| INTERNAL FINISH 0.51 µm / 20 µin (SF1) | | INTERNAL FINISH 0.38 µm / 15 µin (SF4) | |
| EXTERNAL FINISH mill finish (SF0) | | | |

*Others available upon request

SANITARY BALL VALVES

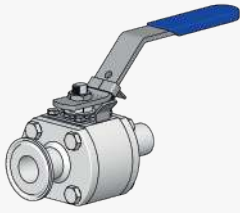


| ASME | CLASS | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|------|-------|------|-------|-------|-------|-----|----|-----|------|------|------|------|----------|
| ½" | 600 | 9.4 | 133.4 | 184.2 | 158.8 | 170 | 35 | 90 | 25 | 9.4 | 12.7 | 3.3 | F04 |
| ¾" | 600 | 15.8 | 139.7 | 190.5 | 165.1 | 170 | 35 | 90 | 25 | 15.8 | 19.1 | 3.5 | F04 |
| 1" | 600 | 22.1 | 165.1 | 215.9 | 190.5 | 200 | 46 | 110 | 50.4 | 22.1 | 25.4 | 7.2 | F05 |
| 1½" | 400 | 34.8 | 203.2 | 254 | 228.6 | 230 | 59 | 130 | 50.4 | 34.8 | 38.1 | 14.5 | F05 |
| 2" | 400 | 47.5 | 266.7 | 317.5 | 292.1 | 350 | 85 | 170 | 63.9 | 47.5 | 50.8 | 40 | F07 |

| DIN | PN | BORE | A1 | A2 | A3 | B | C | D | E | F | G | kg | ISO 5211 |
|-----|-----|------|-----|-----|-----|-----|----|-----|------|----|----|------|----------|
| 10 | 100 | 10 | 135 | 185 | 160 | 170 | 35 | 90 | 34 | 10 | 13 | 3.3 | F04 |
| 15 | 100 | 16 | 140 | 190 | 165 | 170 | 35 | 90 | 34 | 16 | 19 | 3.5 | F04 |
| 20 | 100 | 20 | 165 | 215 | 190 | 200 | 46 | 110 | 34 | 20 | 23 | 7.2 | F05 |
| 25 | 64 | 26 | 170 | 220 | 195 | 200 | 46 | 110 | 50.5 | 26 | 29 | 7.5 | F05 |
| 32 | 64 | 32 | 205 | 255 | 230 | 230 | 59 | 130 | 50.5 | 32 | 35 | 14.5 | F05 |
| 40 | 64 | 38 | 205 | 255 | 230 | 230 | 59 | 130 | 50.5 | 38 | 41 | 15 | F05 |
| 50 | 64 | 50 | 265 | 315 | 290 | 350 | 85 | 170 | 64 | 50 | 53 | 40 | F07 |

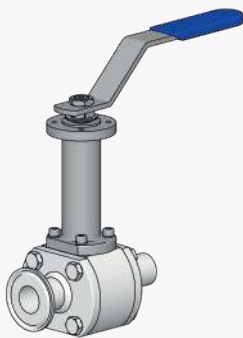
ISO 1127 TUBE dimensions available upon request

MANUAL OPERATION



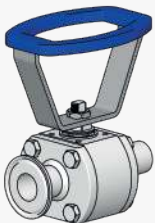
Lockable Handle

The lockable handle is a safety device that prevents the unintended rotation of the obturator due to vibrations, turbulent flows or unauthorized actions leading to potentially severe malfunctions in the process. This occurrence can be prevented by the application of a lockable mechanism to prevent the valve from closing or opening. Small sizes are equipped with a trigger that allows to lock the position of the handle in closed or open position without the need of a padlock. Nevertheless, all sizes can be equipped with a padlock.



Stem Extension

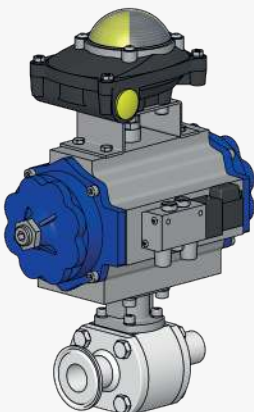
Inaccessible locations, insulation of the piping, extreme temperatures and others are usually conditions found in several processes where easier operation solutions are required. In these kind of applications, a stem extension can be the solution to decrease the restrictions and insure the safe operation of the processes. The standard stem extension is equipped with a secondary stem packing system containing eventual emissions to the atmosphere. Other options are also available upon request.



Oval Handle

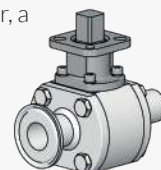
The standard handle is sometimes too long to fit in tiny spaces that are available for the valves in a process. An oval handle could be the best way to reduce the size of the valve without losing the operation capabilities. This solution strongly decreases the surrounding space needed for each valve improving the compactness of the installation.

AUTOMATIC OPERATION



Bracket and Actuator

Automation of the processes is a growing and necessary investment to reduce the manual interventions, which will prevent the eventual mistakes by a manual operation and enhance the processes to better performances. Following these requirements, the valves can also be fully automated. For instance, the valve can be equipped with a pneumatic actuator, a solenoid valve and a limit switch. These accessories will allow the remote actuation of the valve and the control of its position.



SPECIFIC APPLICATIONS



Tank Bottom

Pressure vessels are used in several processes and need, time to time, to be drained or cleaned. The best solution for this kind of operation is the application of a tank bottom valve, also called as flush bottom valve, which can be easily installed at the bottom of the vessels and allows a fast drainage of the tank.



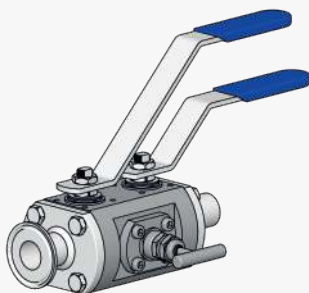
CIP/ SIP Purge Port

High purity processes demand reliable solutions to guarantee the quality of the media. Sterilization (CIP/SIP) of the valves is normally performed to meet these requirements. The valves used for this application can be equipped with additional connections, allowing the cleaning of all interior surfaces without removing it from the installation. This allows more systematic preventive maintenance with minimum downtime, enhancing the cost savings.



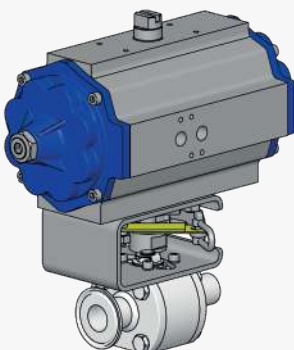
Steam Trap

Steam is used in processes as a heating or mechanical inducer due to its high latent energy capacity. As the steam delivers its energy to the process, it condensates losing the ability to transfer energy as efficiently as in the steam condition. At this point it is important to drain the condensates to maximize the performance of the line. The installation of steam trap valves may be the solution as they will permit to drain the condensates without releasing the steam, reducing the cost of the process.



Double Block and Bleed

Some processes require repetitive sampling for analysis to guarantee high quality levels of the process products. The best way to achieve this is the installation of a DBB valves. This kind of valves consists of two ball valves used to trap the fluid and a middle valve used to extract the sample. With this kind of valves, usually applied as a forked section, it is possible to trap and remove a sample from the system without stopping the process. This valve type is also frequently used for instrumentation protection.



Fire Fail Safe

Flammable gases and chemicals are often used in processes across several industries. To prevent the widespread of a fire event in these facilities, a fire fail safe valve may be used as a safety device, which will trigger an automatic emergency shutoff. The fire fail safe valve is designed to be activated at the set temperature of the system by the fusible link breakage. This breakage will lead to the line shutoff.

Rua do Progresso, lote 15
4760-841 Vilarinho das Cambas
V.N. Famalicão- Portugal



Tel: +351 252 303 210
www.vincovalves.com
comercial@vincovalves.com