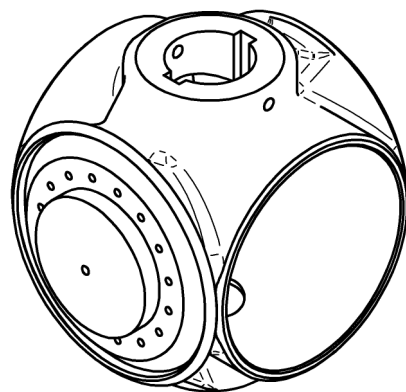
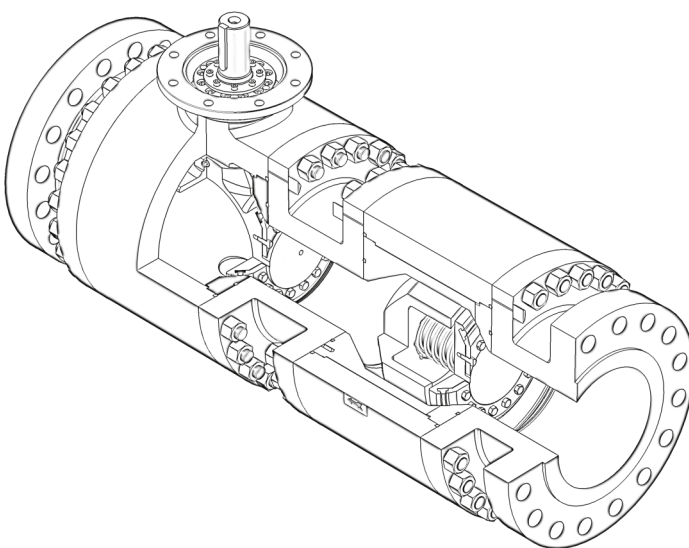
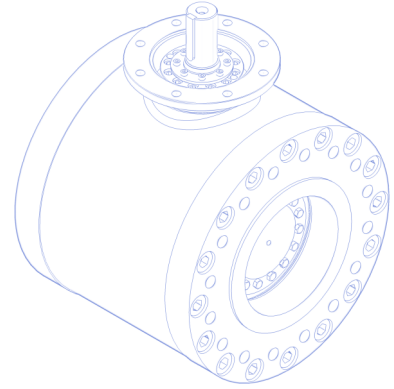


Reliaball

Forged 3 Piece Trunnion Mounted Ball Valves

Forged 3 Piece Concentric Check Valves

- * The Reliaball has built up a distinguished record in harsh high pressure isolation applications.
- * Its unique trim design sets this valve design apart from any other spherical ball design which has been the determining factor for its success in the mining and utilities industries.
- * The valve is constructed using forgings for the 3 piece body parts which proved to be the best choice in the harsh operating conditions.
- * The “Oddball ” due to its shape is a cast unit.
- * The Reliaball can be adapted to replace not only ball valves with standard face-to-face dimensions but also gate valves which requires reduced face-to-face dimensions.
- * Replace standard ASME B16.10 face-to-face dimensioned valves as well as gate valves with the wafer type construction

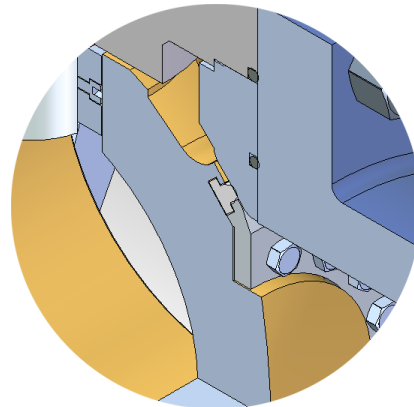
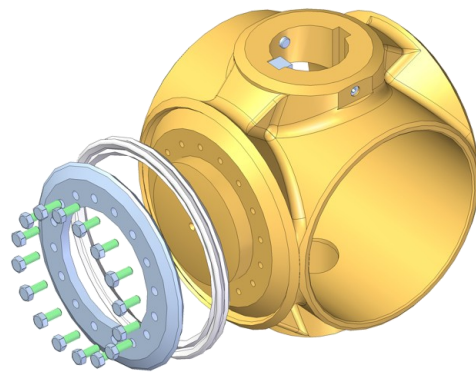


Mining & Utilities Industries



Design Features

- Non spherical “Oddball ”
- The “Oddball ” does not require any grinding or polishing to achieve tightness
- “ Oddball ” acts as the carrier of the soft seats, which are located and locked into grooves in “ Oddball ” by a Duplex SS flange
- * Duplex SS metal seats are located and locked between body segments



The Reliaball is radically different to conventional ball valves and was specifically developed to operate under harsh conditions such as abrasive fluids and high differential isolation.

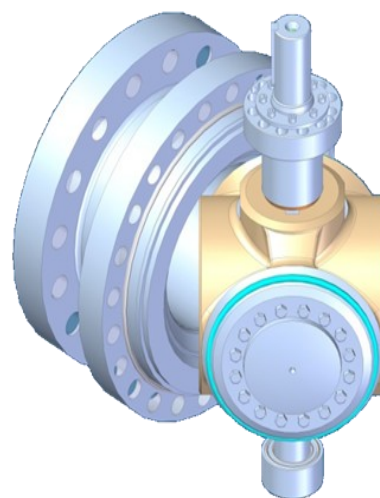
The non-spherical ball which acts only as a carrier of the soft seats, eliminates problems encountered with conventional ball valves such as the seals being in constant contact with the polished sphere which tends to cause leakage due to scouring and erosion.

Sealing occurs between the ball mounted seats and the single piece body seat rings with their unique profile.

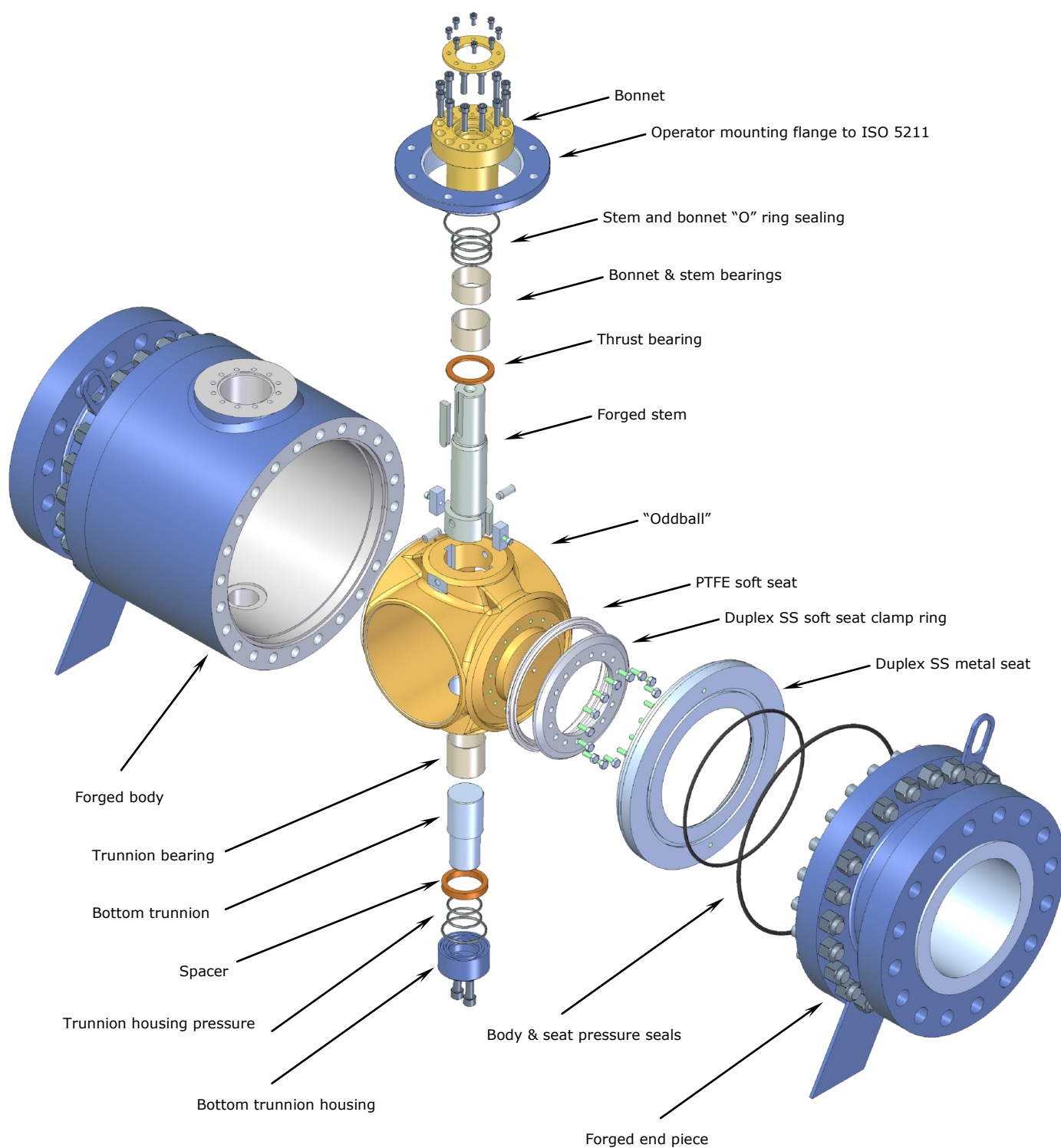
As the valve closes, the seals wipe the seat rings clean, reducing possible damage by entrained substances, thus avoiding an increase in the torque requirements.

Full contact between the seal and seat only occurs after the final few degrees of rotation.

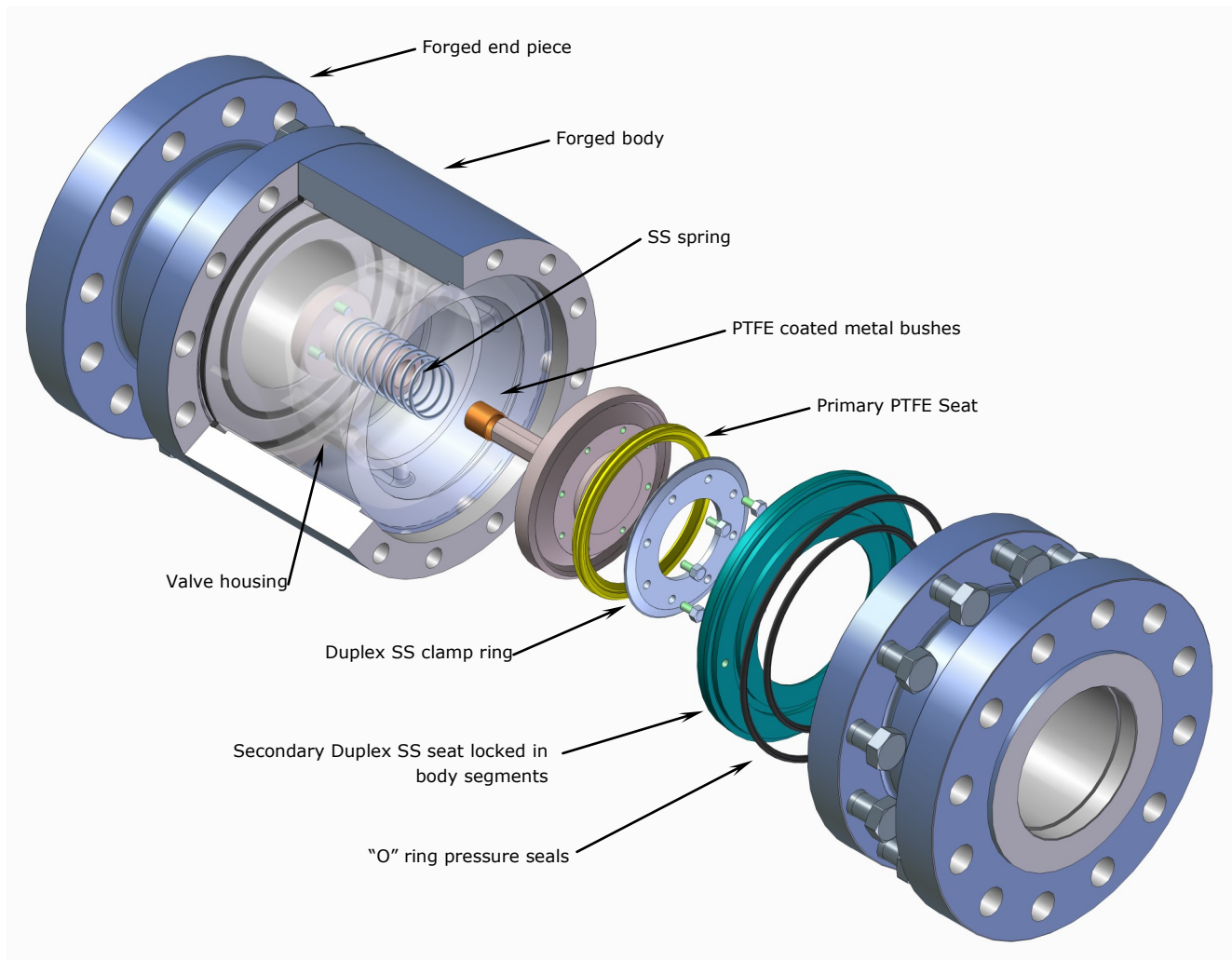
In the open position, the seals are protected within the body cavities from direct flow, ensuring less wear and damage from entrained substances, stimulating rinsing and cleaning action of the body cavity.



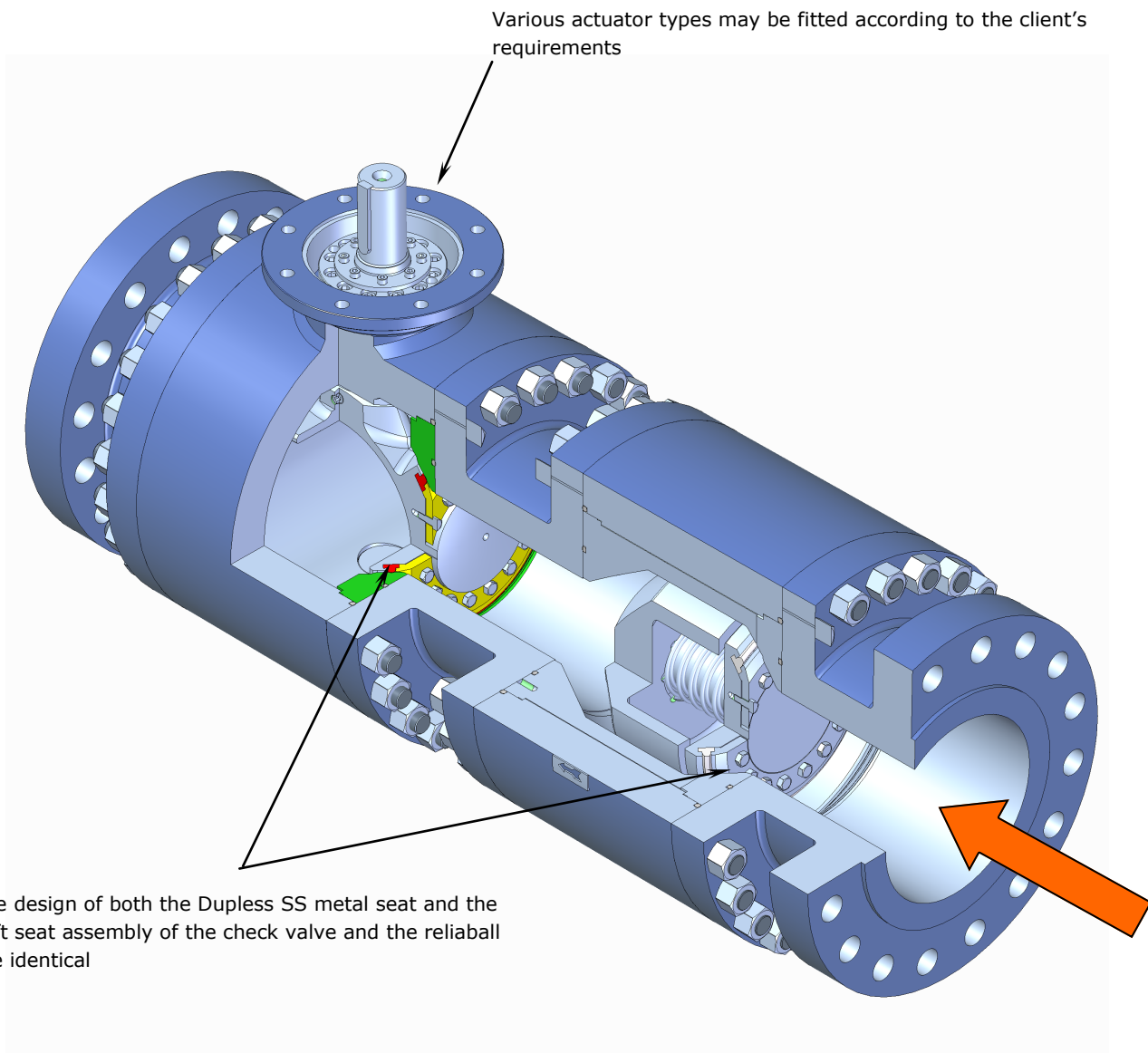
Series Reliaball - 2" - 24"



Series C1 - Concentric check Valves 2" - 24"



Reliaball & Concentric Check Valve Combination 2" - 24"



Design Features - Series Reliaball

Ball valves are designed to fully open or close the bore in the piping system.

| | |
|-----------------------------------|--|
| <i>Service</i> | <ul style="list-style-type: none">: Pump IsolationShaft column isolationFire hydrant serviceStope reticulation service |
| <i>Fluids</i> | <ul style="list-style-type: none">: Liquids with or without impurities and abrasive particles |
| <i>Process pressure</i> | <ul style="list-style-type: none">: From 0 bar to the specified pressure class for the relevant body material and sealing elements used |
| <i>Process temperature</i> | <ul style="list-style-type: none">: -45°C to +120°C |
| <i>Ambient temperature</i> | <ul style="list-style-type: none">: -45°C to +60°C |
| <i>Installation</i> | <ul style="list-style-type: none">: Into any piping (horizontal, vertical, inclined), but taking into account the instructions applicable to installation of the actuator. Ball valves >Ø150 can be equipped with stands. |
| <i>Testing</i> | <ul style="list-style-type: none">: Every ball valve is tested in accordance with ISO 5208 or AP598. Alternative test standards and procedures are readily accommodated as well |
| <i>Test report</i> | <ul style="list-style-type: none">: EN 10204/3.1 as a standard |

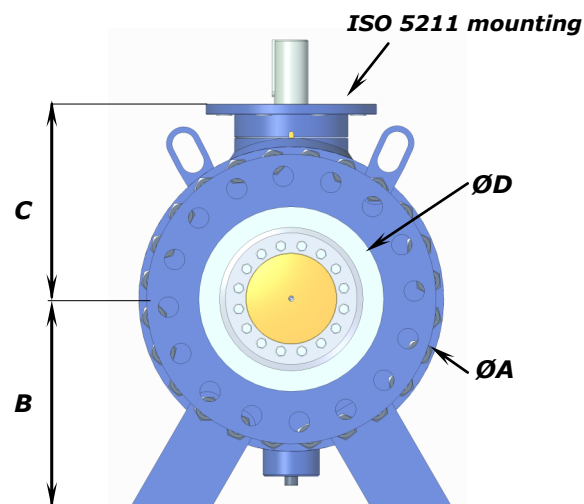
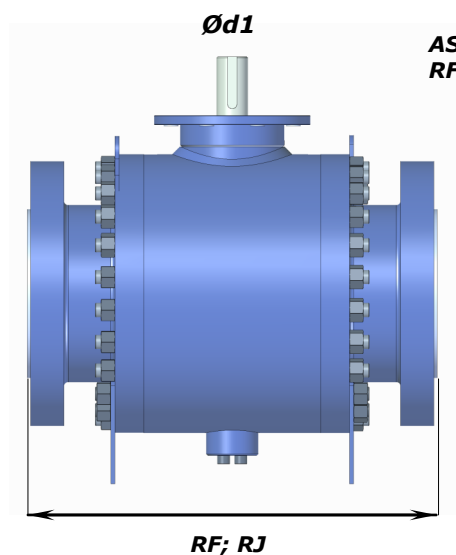
DESIGN

Basic characteristic features

| | |
|---------------------------------|---|
| <i>Bore</i> | <ul style="list-style-type: none">: Full or reduced bore (ASME B16.34) |
| <i>Connection</i> | <ul style="list-style-type: none">: Flanged ends or clamp ends. |
| <i>Body</i> | <ul style="list-style-type: none">: Split body, three-piece - NPS 2" to NPS 24" |
| <i>Seats</i> | <ul style="list-style-type: none">: PTFE Soft seated |
| <i>Stem mounting</i> | <ul style="list-style-type: none">: ABO = ANTI BLOW OUT – the stem is secured from being blown out of the ball valve body by the mechanical design of the stem and the bolted bonnet. |
| <i>Actuator mounting</i> | <ul style="list-style-type: none">: ISO 5211 |
| <i>Fire Safe</i> | <ul style="list-style-type: none">: Non fire safe |
| <i>Anti Static</i> | <ul style="list-style-type: none">: Yes, on request |

DIMENSIONS – ASME B16.5 (RF, RJ)

- full bore
- 3-piece split body, side entry

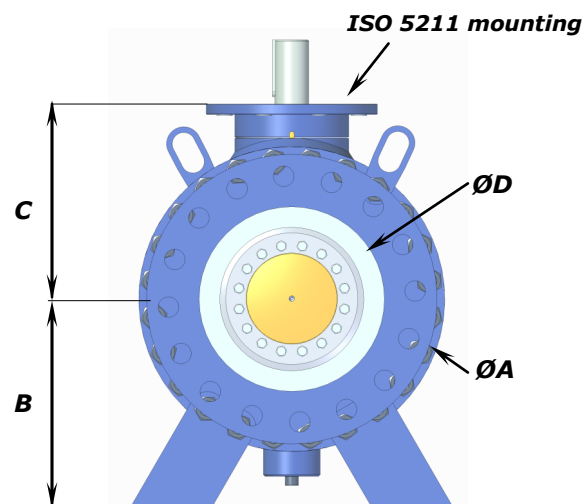
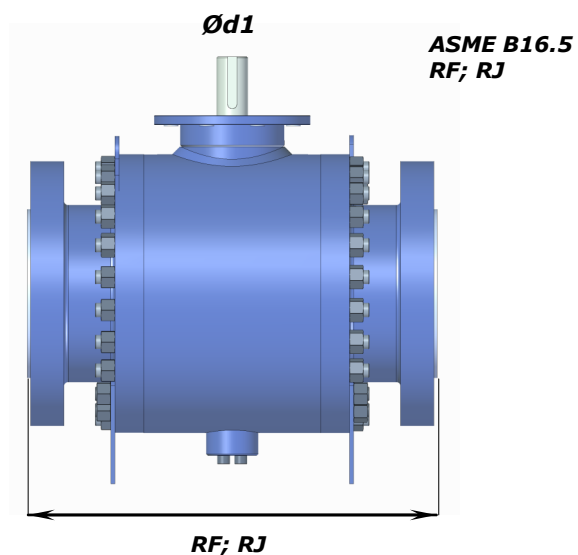


| Class 150 | | | | | | | | | | Weight [kg] | |
|-----------|-----------------|-----------------|-----------------|-----------------|-----|-----|-----|-----|-----|----------------|-------------|
| NPS | Dimensions [mm] | | | | | | | | | | ISO 5211 |
| | ØD | L _{RF} | L _{BW} | L _{RJ} | ØA | B | C | E | Ød1 | | |
| 2 " | 50 | 178 | 216 | 191 | 160 | 84 | 122 | 56 | 25 | F07 | 24 |
| 3 " | 80 | 203 | 283 | 216 | 220 | 110 | 176 | 65 | 35 | F10 | 39 |
| 4 " | 100 | 229 | 305 | 241 | 250 | 125 | 197 | 75 | 40 | F12 | 81 |
| 6 " | 150 | 394 | 457 | 406 | 324 | 220 | 240 | 85 | 45 | F14 | 165 |
| 8 " | 201 | 457 | 521 | 470 | 405 | 260 | 285 | 95 | 55 | F16 | 326 |
| 10 " | 252 | 533 | 559 | 546 | 470 | 295 | 330 | 100 | 65 | F25 | 600 |
| 12 " | 303 | 610 | 635 | 622 | 560 | 330 | 378 | 105 | 70 | F25 | 715 |
| 14 " | 334 | 686 | 762 | 699 | 620 | 370 | 415 | 120 | 75 | F30 | 1298 |
| 16 " | 385 | 762 | 838 | 775 | 690 | 410 | 450 | 140 | 75 | F30 | 1936 |
| 18" | 436 | 864 | 914 | 876 | 759 | 450 | 475 | 140 | 90 | F30 | 2332 |
| 20 " | 487 | 914 | 991 | 927 | 845 | 485 | 510 | 140 | 90 | F35 | 2662 |
| 22" | 540 | | | | 921 | 632 | 537 | 155 | 120 | F35 | 3674 |
| 24" | 591 | 1067 | 1143 | 1080 | 988 | 670 | 572 | 155 | 120 | F35 | 4950 |

Note : For End Flange Connectors, Drilled and Tapped Holes are required. Alternatively, Non Standard Face to Face Lengths can be provided.

DIMENSIONS – ASME B16.5 (RF, RJ)

- full bore
- 3-piece split body, side entry

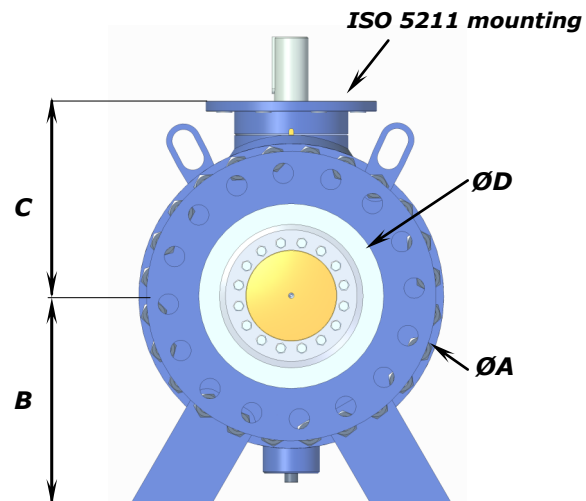
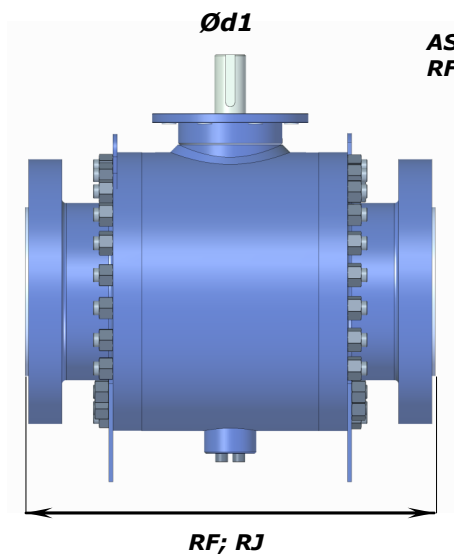


| Class 300 | | | | | | | | | | | Weight [kg] |
|-----------|-----------------|-----------------|-----------------|-----------------|------|-----|-----|-----|-----|-------------|----------------|
| NPS | Dimensions [mm] | | | | | | | | | ISO 5211 | |
| | ØD | L _{RF} | L _{BW} | L _{RJ} | ØA | B | C | E | Ød1 | | RF |
| 2 " | 50 | 216 | 216 | 232 | 156 | 84 | 122 | 56 | 25 | F07 | 26 |
| 3 " | 75 | 283 | 283 | 298 | 210 | 110 | 176 | 65 | 35 | F10 | 49 |
| 4 " | 100 | 305 | 305 | 321 | 235 | 125 | 197 | 75 | 40 | F12 | 95 |
| 6 " | 150 | 403 | 403 | 419 | 334 | 220 | 240 | 85 | 45 | F14 | 193 |
| 8 " | 201 | 502 | 521 | 518 | 420 | 260 | 285 | 95 | 55 | F16 | 348 |
| 10 " | 252 | 568 | 559 | 584 | 535 | 295 | 330 | 100 | 65 | F25 | 660 |
| 12 " | 303 | 648 | 635 | 664 | 620 | 330 | 378 | 105 | 70 | F25 | 890 |
| 14 " | 334 | 762 | 762 | 778 | 690 | 370 | 415 | 120 | 75 | F30 | 1450 |
| 16 " | 385 | 838 | 838 | 854 | 800 | 410 | 450 | 140 | 75 | F30 | 2060 |
| 18" | 438 | 914 | 914 | 930 | 875 | 450 | 455 | 140 | 90 | F30 | 2530 |
| 20 " | 487 | 991 | 991 | 1010 | 920 | 587 | 510 | 140 | 90 | F35 | 2900 |
| 22" | 540 | 1092 | 1092 | 1114 | 1035 | 632 | 537 | 155 | 120 | F35 | 4020 |
| 24" | 591 | 1143 | 1143 | 1165 | 1130 | 670 | 572 | 155 | 120 | F35 | 4950 |

Note : For End Flange Connectors, Drilled and Tapped Holes are required. Alternatively, Non Standard Face to Face Lengths can be provided.

DIMENSIONS – ASME B16.5 (RF, RJ)

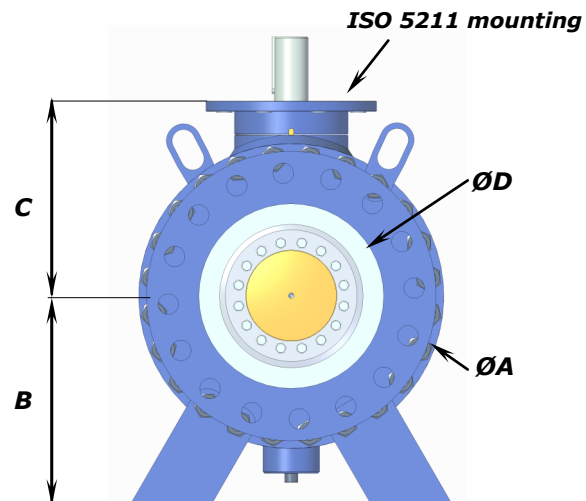
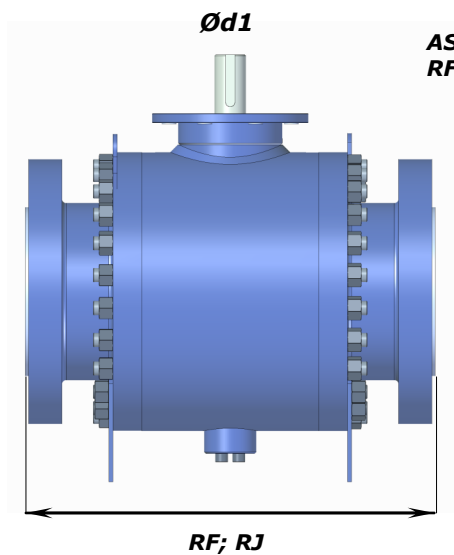
- full bore
- 3-piece split body, side entry



| Class 600 | | | | | | | | | | | Weight [kg] |
|-----------|-----------------|-----------------|-----------------|-----------------|------|-----|-----|-----|-----|-------------|----------------|
| NPS | Dimensions [mm] | | | | | | | | | ISO 5211 | |
| | ØD | L _{RF} | L _{BW} | L _{RJ} | ØA | B | C | E | Ød1 | | |
| 2 " | 50 | 292 | 292 | 295 | 156 | 93 | 131 | 56 | 25 | F07 | 32 |
| 3 " | 75 | 356 | 356 | 359 | 210 | 119 | 191 | 65 | 35 | F10 | 57 |
| 4 " | 100 | 432 | 432 | 435 | 270 | 130 | 209 | 75 | 40 | F12 | 116 |
| 6 " | 150 | 559 | 559 | 562 | 334 | 230 | 265 | 85 | 45 | F14 | 250 |
| 8 " | 201 | 660 | 660 | 664 | 420 | 280 | 310 | 95 | 55 | F16 | 460 |
| 10 " | 252 | 787 | 787 | 791 | 535 | 300 | 350 | 100 | 65 | F25 | 840 |
| 12 " | 303 | 838 | 838 | 841 | 620 | 340 | 390 | 105 | 70 | F25 | 1010 |
| 14 " | 334 | 889 | 889 | 892 | 690 | 380 | 425 | 120 | 75 | F30 | 1540 |
| 16 " | 385 | 991 | 991 | 994 | 800 | 420 | 460 | 140 | 75 | F30 | 2200 |
| 18" | 438 | 1092 | 1092 | 1095 | 875 | 562 | 480 | 140 | 90 | F30 | 2800 |
| 20 " | 487 | 1194 | 1194 | 1200 | 920 | 460 | 520 | 140 | 90 | F35 | 3340 |
| 22" | 540 | 1295 | 1295 | 1305 | 1035 | 651 | 537 | 155 | 120 | F35 | 4500 |
| 24" | 591 | 1397 | 1397 | 1407 | 1130 | 689 | 572 | 155 | 120 | F35 | 6600 |

DIMENSIONS – ASME B16.5 (RF, RJ)

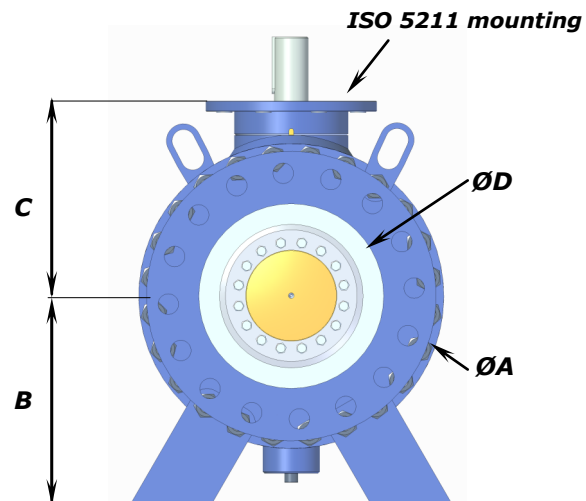
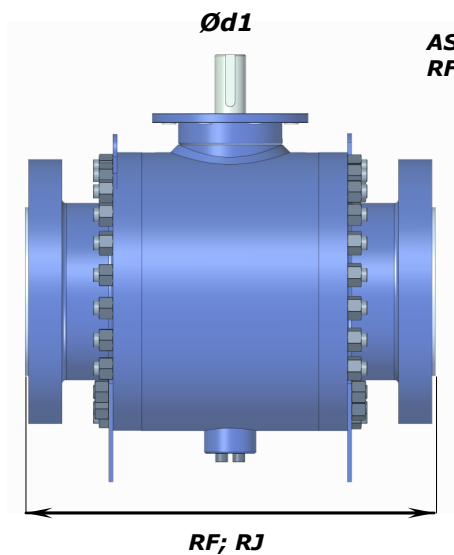
- full bore
- 3-piece split body, side entry



| Class 900 | | | | | | | | | | | Weight [kg] |
|-----------|-----------------|-----------------|-----------------|-----------------|------|-----|-----|-----|-----|-------------|----------------|
| NPS | Dimensions [mm] | | | | | | | | | ISO 5211 | |
| | ØD | L _{RF} | L _{BW} | L _{RJ} | ØA | B | C | E | Ød1 | | RF |
| 2 " | 50 | 368 | 368 | 371 | 175 | 93 | 131 | 56 | 25 | F10 | 50 |
| 3 " | 80 | 381 | 381 | 384 | 238 | 119 | 191 | 65 | 35 | F12 | 75 |
| 4 " | 100 | 457 | 457 | 460 | 265 | 130 | 209 | 75 | 40 | F14 | 132 |
| 6 " | 150 | 610 | 610 | 613 | 336 | 230 | 265 | 85 | 50 | F16 | 297 |
| 8 " | 201 | 737 | 737 | 740 | 425 | 280 | 310 | 95 | 60 | F25 | 570 |
| 10 " | 252 | 838 | 838 | 841 | 490 | 300 | 350 | 100 | 75 | F25 | 1050 |
| 12 " | 303 | 965 | 965 | 968 | 580 | 340 | 390 | 115 | 80 | F30 | 1230 |
| 14 " | 322 | 1029 | 1029 | 1038 | 630 | 380 | 425 | 140 | 80 | F30 | 2220 |
| 16 " | 373 | 1130 | 1130 | 1140 | 710 | 420 | 460 | 140 | 80 | F35 | 2860 |
| 18" | 423 | 1219 | 1219 | 1232 | 784 | 562 | 480 | 140 | 90 | F35 | 4110 |
| 20 " | 471 | 1321 | 1321 | 1334 | 860 | 460 | 520 | 140 | 90 | F35 | 5480 |
| 22" | | | | | | | | | | | |
| 24" | 570 | 1549 | 1549 | 1568 | 1019 | 689 | 572 | 155 | 120 | F40 | |

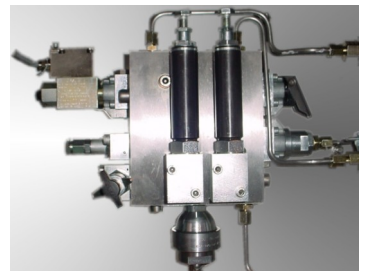
DIMENSIONS – ASME B16.5 (RF, RJ)

- full bore
- 3-piece split body, side entry



| Class 1500 | | | | | | | | | | | Weight [kg] |
|------------|-----------------|-----------------|-----------------|-----------------|------|-----|-----|-----|-----|-------------|----------------|
| NPS | Dimensions [mm] | | | | | | | | | ISO 5211 | RF |
| | ØD | L _{RF} | L _{BW} | L _{RJ} | ØA | B | C | E | Ød1 | | |
| 2 " | 50 | 368 | 368 | 371 | 156 | 93 | 131 | 60 | 30 | F12 | 55 |
| 3 " | 80 | 470 | 470 | 473 | 210 | 119 | 191 | 70 | 40 | F14 | 99 |
| 4 " | 100 | 546 | 546 | 549 | 270 | 130 | 209 | 85 | 45 | F14 | 198 |
| 6 " | 150 | 705 | 705 | 711 | 370 | 230 | 265 | 95 | 55 | F16 | 424 |
| 8 " | 201 | 832 | 832 | 841 | 510 | 280 | 310 | 100 | 65 | F25 | 810 |
| 10 " | 252 | 991 | 991 | 1000 | 670 | 300 | 350 | 115 | 80 | F30 | 1590 |
| 12 " | 303 | 1130 | 1130 | 1146 | 820 | 340 | 390 | 140 | 85 | F30 | 2150 |
| 14 " | 322 | 1257 | 1257 | 1276 | 880 | 380 | 425 | 140 | 85 | F35 | 3770 |
| 16 " | 373 | 1384 | 1384 | 1407 | 1000 | 420 | 460 | 150 | 90 | F35 | 5450 |
| 18" | 423 | 1537 | 1537 | 1559 | 1050 | 562 | 480 | 150 | 100 | F40 | 6900 |
| 20 " | 471 | 1664 | 1664 | 1686 | 1170 | 460 | 520 | 150 | 110 | F40 | 10000 |

Photo Gallery



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