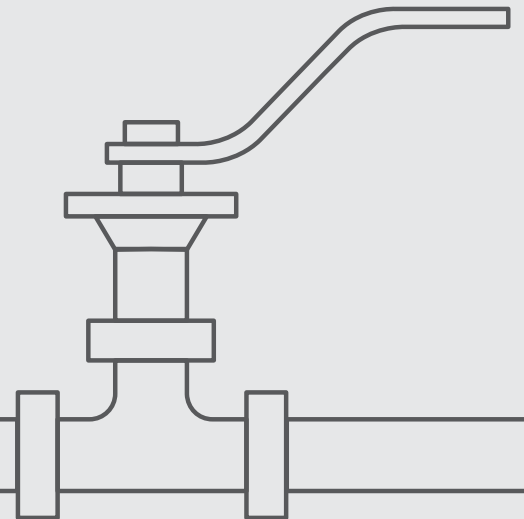




TRUNNIION

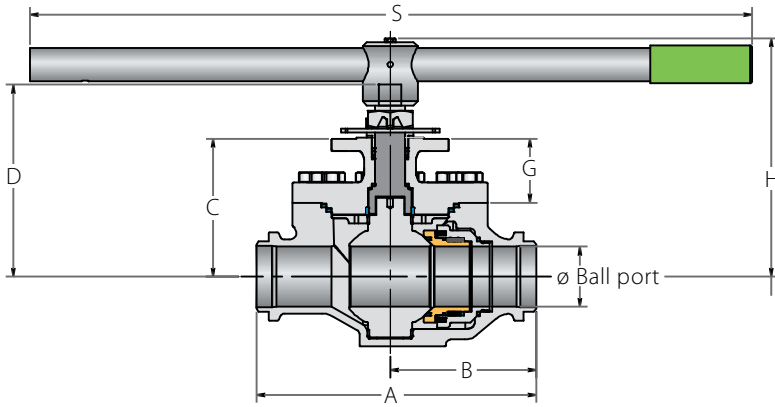
TOP ENTRY



Top Entry Trunnion Mounted Ball Valve

PATENT
PENDING

Valve dimensions



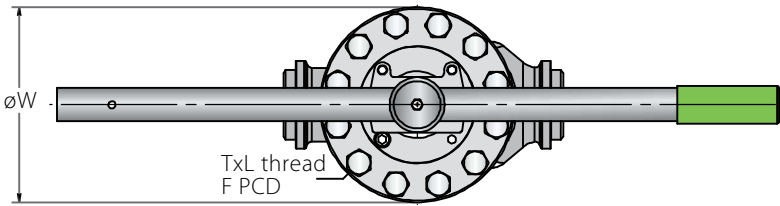
Standard stem tops

DD Type
for sizes 1/2" - 1 1/2"

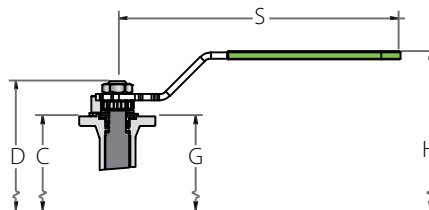
Stem flats
show valve
ball position

Square Type
for sizes 2" - 6"

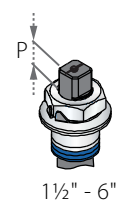
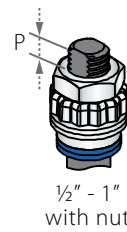
Stem groove
shows valve
ball position



Handle type for
sizes 1/2" - 1"



Preparation for actuation



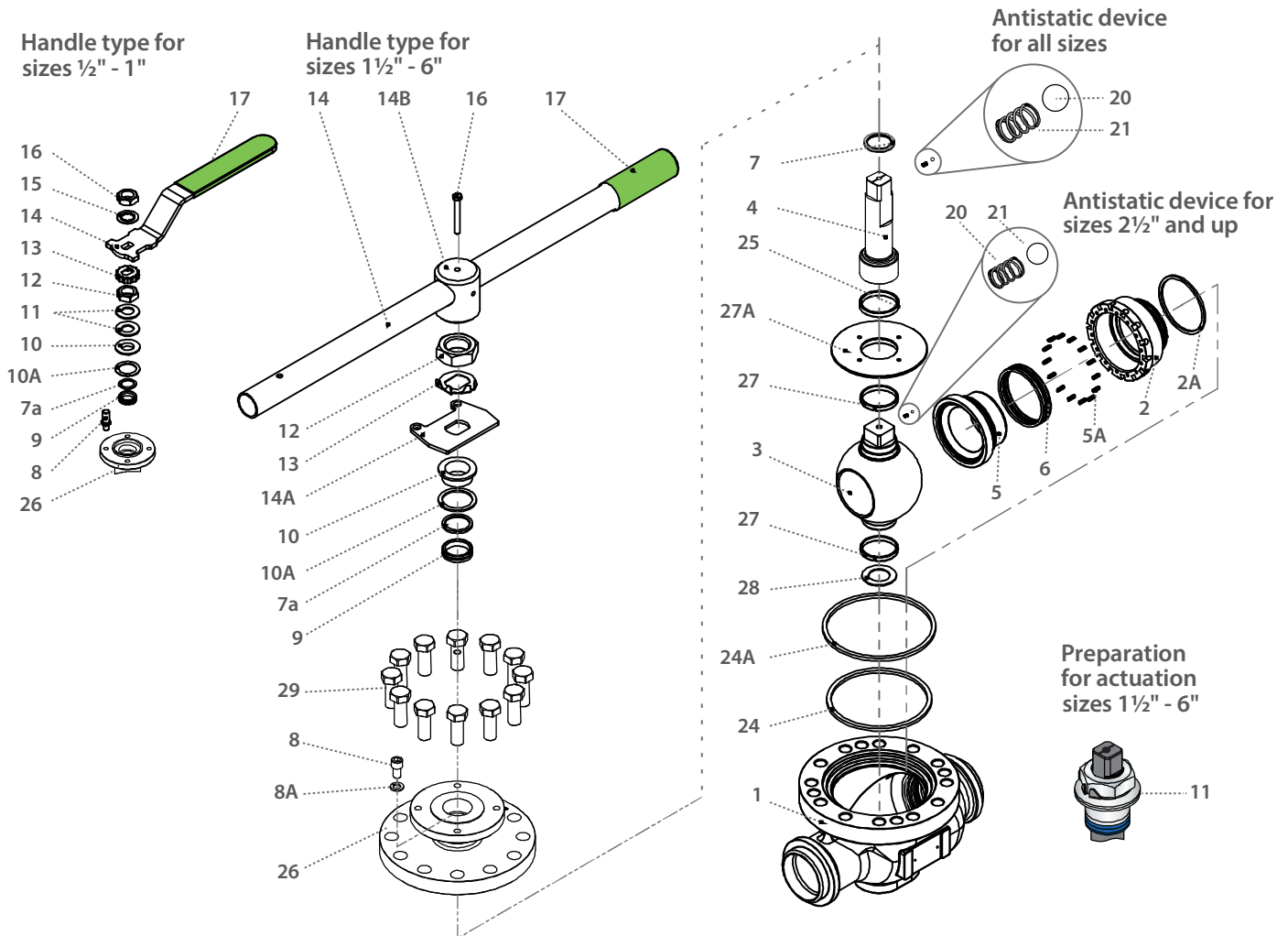
| Full port | Unit | Ball port | A | B | C | D | G | H | S ⁽¹⁾ | W | M | N | P | F | TxL | Weight kg/lb | Kv Cv | |
|-----------|------|-----------|-------|-------|-------|-------|-------|-------|------------------|-------|-------|-----------|------|-----|-------|--------------|-------|--------|
| DN15 | mm | 14.0 | 165.0 | 88.0 | 69.4 | 86.8 | 30.4 | 112.6 | 187.0 | 105.0 | 7.5 | 7/16"-20 | 6.4 | F04 | 42.0 | M5x7 | 4.2 | 20 |
| 1/2" | inch | 0.55 | 6.50 | 3.46 | 2.73 | 3.42 | 1.20 | 4.43 | 7.36 | 4.13 | 0.30 | UNF | 0.25 | | | | 1.65 | 9.35 |
| DN20 | mm | 20.0 | 190.0 | 100.0 | 77.0 | 106.5 | 33.0 | 131.5 | 237.0 | 121.0 | 8.7 | 9/16"-18 | 8.5 | F05 | 50.0 | M6x8 | 6 | 31 |
| 3/4" | inch | 0.79 | 7.48 | 3.94 | 3.03 | 4.19 | 1.30 | 5.18 | 9.33 | 4.76 | 0.34 | UNF | 0.33 | | | | 1.97 | 13.23 |
| DN25 | mm | 25.4 | 216.0 | 113.0 | 82.0 | 111.5 | 33.0 | 136.5 | 237.0 | 131.0 | 8.7 | 9/16"-18 | 8.5 | F05 | 50.0 | M6x8 | 7.2 | 61 |
| 1" | inch | 1.00 | 8.50 | 4.45 | 3.23 | 4.39 | 1.30 | 5.37 | 9.33 | 5.16 | 0.34 | UNF | 0.33 | | | | 1.97 | 15.87 |
| DN40 | mm | 38.2 | 241.0 | 129.0 | 104.6 | 146.2 | 46.0 | 172.2 | 401.0 | 173.0 | 13.9 | M20x2.5 | 15.2 | F07 | 70.0 | M8x9 | 13.6 | 164 |
| 1 1/2" | inch | 1.50 | 9.49 | 5.08 | 4.12 | 5.76 | 1.81 | 6.78 | 15.79 | 6.81 | 0.55 | | 0.60 | | | | 2.76 | 29.98 |
| DN50 | mm | 50.8 | 292.0 | 151.0 | 149.5 | 196.0 | 74.5 | 235.5 | 610.0 | 198.0 | 18.9 | 1"-14 | 16.6 | F10 | 102.0 | M10x15 | 27 | 327 |
| 2" | inch | 2.00 | 11.50 | 5.94 | 5.89 | 7.72 | 2.93 | 9.27 | 24.02 | 7.80 | 0.74 | UNS" | 0.65 | | | | 4.02 | 58.79 |
| DN65 | mm | 65.0 | 330.0 | 166.0 | 156.4 | 225.5 | 75.4 | 284.6 | 916.0 | 207.0 | 28.45 | 1 1/2"-12 | 26.2 | F12 | 125.0 | M12x15 | 41 | 668 |
| 2 1/2" | inch | 2.56 | 12.99 | 6.54 | 6.16 | 8.88 | 2.97 | 11.20 | 36.06 | 8.15 | 1.12 | UNF" | 1.03 | | | | 4.92 | 90.45 |
| DN80 | mm | 76.0 | 356.0 | 186.0 | 175.0 | 244.1 | 81.0 | 303.2 | 916.0 | 248.0 | 28.45 | 1 1/2"-12 | 26.2 | F12 | 125.0 | M12x15 | 50 | 823 |
| 3" | inch | 2.99 | 14.02 | 7.32 | 6.89 | 9.61 | 3.19 | 11.94 | 36.06 | 9.76 | 1.12 | UNF | 1.03 | | | | 4.92 | 109.29 |
| DN100 | mm | 100.0 | 432.0 | 224.0 | 192.4 | 261.5 | 80.4 | 321.3 | 916.0 | 305.0 | 28.45 | 1 1/2"-12 | 26.2 | F12 | 125.0 | M12x15 | 77 | 1678 |
| 4" | inch | 3.94 | 17.01 | 8.82 | 7.57 | 10.30 | 3.17 | 12.65 | 36.06 | 12.01 | 1.12 | UNF | 1.03 | | | | 4.92 | 170.36 |
| DN150 | mm | 150.0 | 559.0 | 285.0 | 264.0 | 376.7 | 115.0 | 440.7 | 916.0 | 392.0 | 35.9 | 2"-8 | 40.0 | F14 | 140.0 | M16x20 | 163 | 4199 |
| 6" | inch | 5.91 | 22.01 | 11.22 | 10.39 | 14.83 | 4.53 | 17.35 | 36.06 | 15.43 | 1.41 | UN | 1.57 | | | | 5.51 | 359.65 |

⁽¹⁾ Manual gear or actuation is recommended, when the operation force on the handle overcomes 360N



Top Entry Trunnion Mounted Ball Valve

Components & materials



| Item | Description | Material specification | Qty. |
|------|--|-------------------------------------|------|
| 1 | Body | Acc. Ordering Code | 1 |
| 2* | Seat Housing | S. Steel | 1 |
| 2A* | Housing Seal | S. Steel | 1 |
| 3 | Ball | Acc. Ordering Code | 1 |
| 4 | Stem | Acc. Ordering Code | 1 |
| 5* | Hybrid seat | A479 316/316L + TFM, CF PTFE, PCTFE | 1 |
| 5A* | Seat spring | Inconel X750 | 6-18 |
| 6* | Lip seal | V-PTFE + UNS R30003 | 2 |
| 7* | Stem thrust seal | PCTFE, TFM | 1 |
| 7A* | Anti-abrasion ring | PCTFE, TFM | 1 |
| 8 | Stop screw | EN 3506-1 A4-80 | 1 |
| 8A | Spring washer | S. Steel | 1 |
| 9* | Stem seal | TFM | 1 |
| 10 | Follower | S. Steel | 1 |
| 10A* | Slide bearing | S. Steel | 1 |
| 11 | Disc spring | S. Steel | 2 |
| 12 | Stem nut | S. Steel | 1 |
| 13 | Locking clip (Tab lock washer for 1.5" and up) | S. Steel | 1 |
| 14** | Handle | S. Steel | 1 |

| Item | Description | Material specification | Qty. |
|------|--|--------------------------|------|
| 14A | Stop plate | S. Steel | 1 |
| 14B | Wrench head | S. Steel | 1 |
| 15 | Serrated washer | S. Steel | 1 |
| 16 | Handle nut (Wrench bolt for 1.5" and up) | S. Steel | 1 |
| 17 | Sleeve | PVC | 1 |
| 20 | Anti static spring | S. Steel | 1-2 |
| 21 | Anti static plunger | S. Steel | 1-2 |
| 23 | Tag (not shown) | S. Steel | 1 |
| 24* | Cover primary seal | TFM | 1 |
| 24A* | Cover secondary seal | Graphite | 1 |
| 25* | Stem bearing | TFM | 1 |
| 26 | Cover | S. Steel | 1 |
| 27* | Ball radial bearing | 316L + PTFE | 2 |
| 27A | Centering plate | S. Steel | 1 |
| 28* | Lower thrust washer | DIN 127 A2 | 1 |
| 29 | Cover bolt | A193 B8M, DIN 3506 A2-70 | 12 |

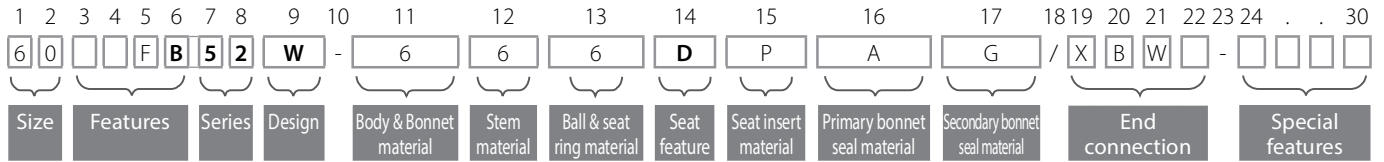
* Repair kit components

** Manual gear or actuation recommended, when the operation force on the handle overcomes 360N



Top Entry Trunnion Mounted Ball Valve - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**



| Size (1-2) | | |
|------------|------|-----|
| Code | inch | mm |
| 05 | ½" | 15 |
| 07 | ¾" | 20 |
| 10 | 1" | 25 |
| 15 | 1½" | 40 |
| 20 | 2" | 50 |
| 25 | 2½" | 65 |
| 30 | 3" | 80 |
| 40 | 4" | 100 |
| 60 | 6" | 150 |

| Features (3-6) | |
|-----------------------------|----------------------------------|
| F | Fire safe |
| B | Full port |
| Series (7-8) | |
| 52 | ASME #300 Top Entry |
| Design (9) | |
| W | Total HermetiX Integrity package |
| Body & Bonnet material (11) | |
| 6 | S.Steel |
| 4 | C. Steel |
| Stem material material (12) | |
| 6 | S. Steel |
| M | High Strength S. Steel |

| Ball & seat ring material (13) | |
|-------------------------------------|----------------------------|
| 6 | S. Steel A182 F316 |
| Seat feature (14) | |
| D | Double Piston Effect (DPE) |
| Seat insert material (15) | |
| P | CF PTFE |
| A | TFM |
| C | PCTFE |
| Primary bonnet seal material (16) | |
| A | TFM |
| Secondary bonnet Seal material (17) | |
| M | Graphite |

| End Connection (19-22) | |
|--------------------------|---|
| Welded ends | |
| XBW10 | Extended butt weld sch 10 |
| XBW | Extended butt weld sch 40 |
| XBW80 | Extended butt weld sch 80 |
| ETI-S | Extended Butt weld ISO 1127, S=wall thickness in mm |
| Special Features (24-30) | |
| EXH | Extended Hub |
| EXS | Semi-Extended Hub |

91

92

93

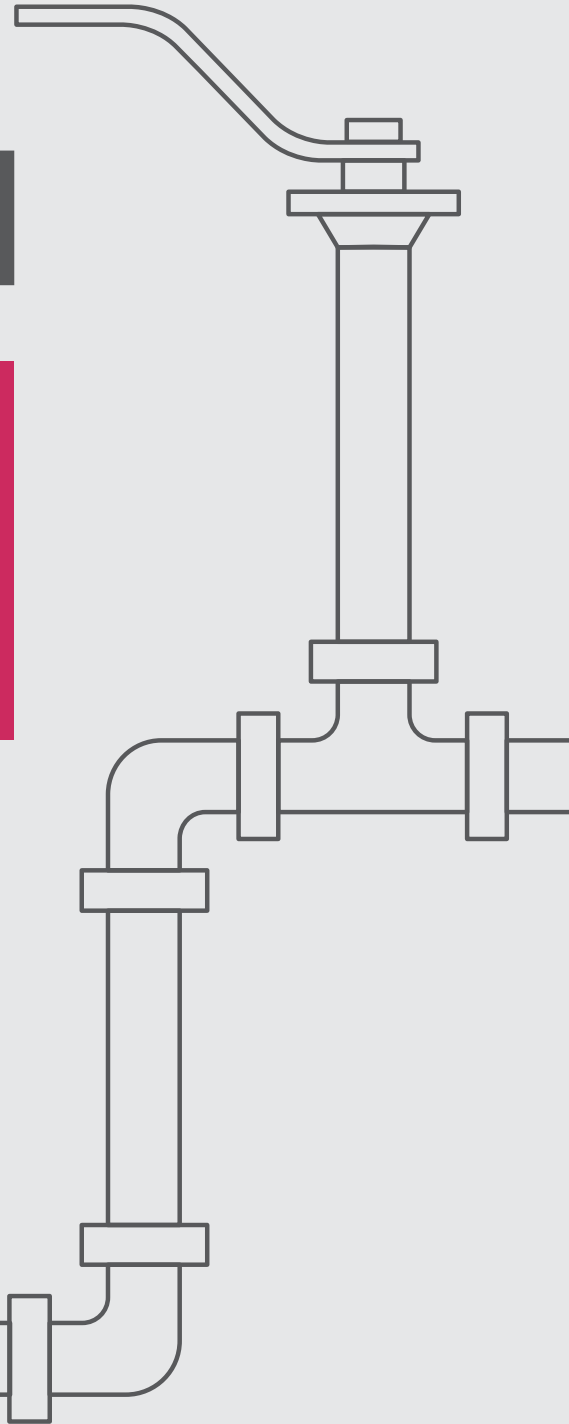
94



General Use Industrial

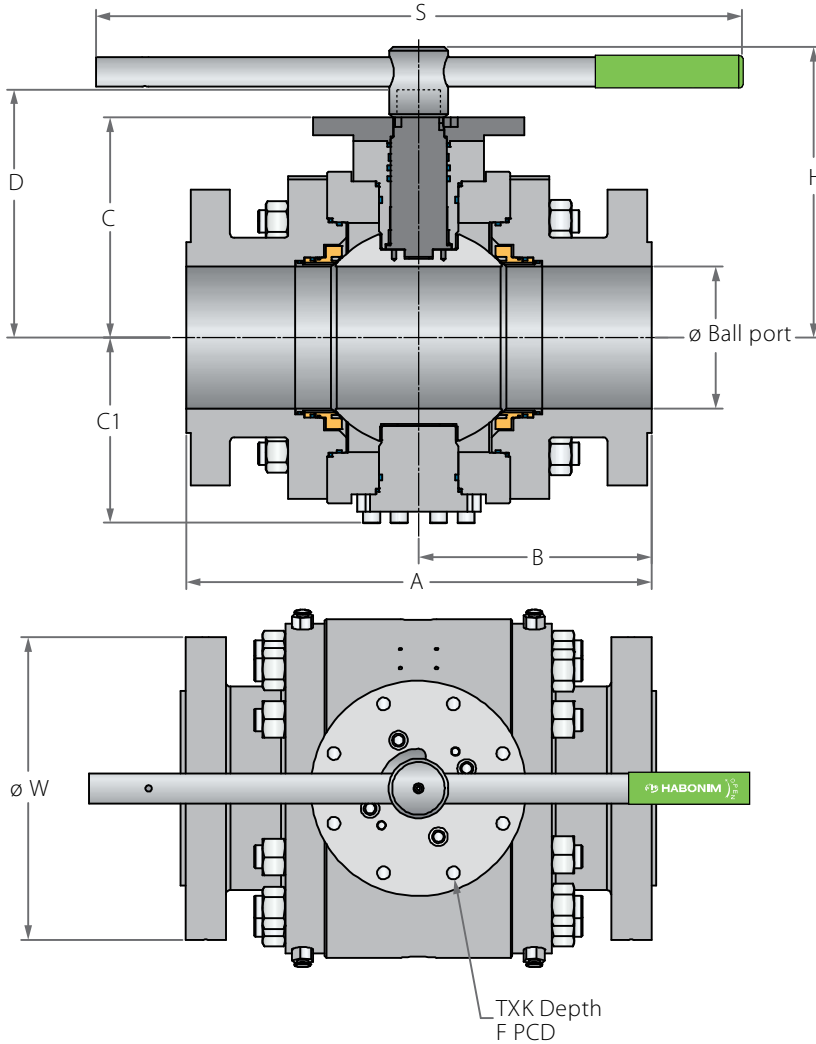
TRUNNIION

3 PIECE

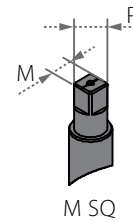


Trunnion Mounted Ball 3 Piece

Valve dimensions



Preparation for actuation

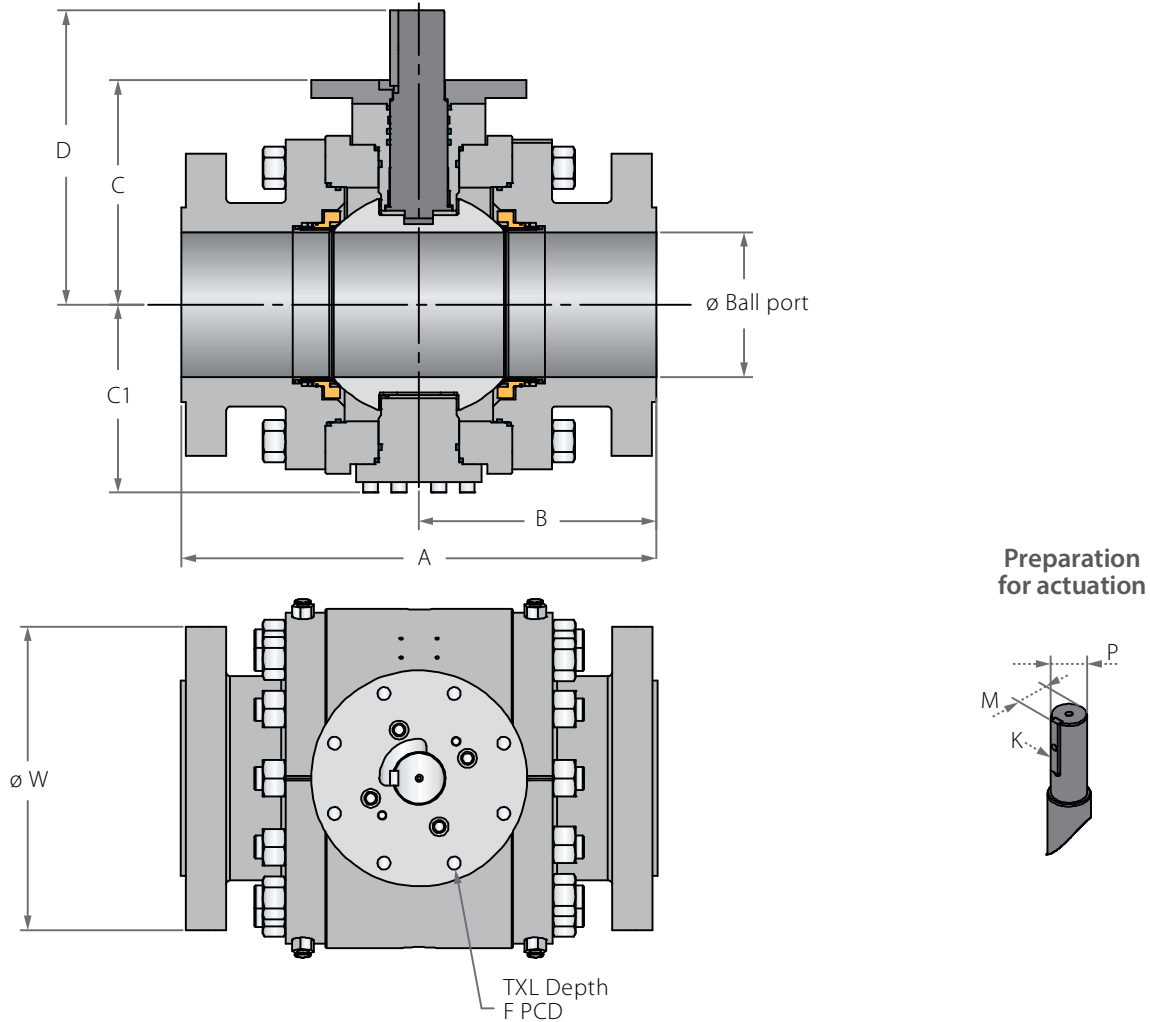


| Std. port | Unit | Ball port | A | | B | | C | C1 | D | W | | Msq | Psq | H | S | F | TxL | Weight kg/lb | | Kv / Cv | | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|-------|-----------|--------------|-----|---------|------|------|
| | | | 150 | 300 | 150 | 300 | | | | 150 | 300 | | | | | | | 150 | 300 | 150 | 300 | |
| DN50 | mm | 49.00 | 178.00 | 216.00 | 89.00 | 108.00 | 127.00 | 91.50 | 144.50 | 150.00 | 165.00 | 17.00 | 22.00 | 196.00 | 401.00 | (F10) | 102.00 | 11 X15 | 27 | 31 | 400 | 363 |
| 2" | inch | 1.93 | 7.01 | 8.50 | 3.50 | 4.25 | 5.00 | 3.60 | 5.69 | 5.91 | 6.50 | 0.67 | 0.87 | 7.72 | 15.79 | 4.02 | (4 holes) | 60 | 68 | 463 | 420 | |
| DN80 | mm | 74.00 | 203.00 | 283.00 | 101.50 | 128.00 | 148.00 | 117.00 | 172.00 | 190.00 | 210.00 | 22.00 | 32.00 | 223.00 | 610.00 | (F12) | 125.00 | 13x15 | 44 | 61 | 1125 | 952 |
| 3" | inch | 2.91 | 7.99 | 11.14 | 4.00 | 5.04 | 5.83 | 4.61 | 6.77 | 7.48 | 8.27 | 0.87 | 1.26 | 8.78 | 24.02 | 4.92 | (4 holes) | 97 | 134 | 1300 | 1100 | |
| DN100 | mm | 100.00 | 229.00 | 305.00 | 114.50 | 140.50 | 171.00 | 139.00 | 198.50 | 230.00 | 255.00 | 27.00 | 35.00 | 247.50 | 610.00 | (F14) | 140.00 | 18x15 | 66 | 100 | 2154 | 1860 |
| 4" | inch | 3.94 | 9.02 | 12.00 | 4.51 | 5.53 | 6.73 | 5.47 | 7.81 | 9.06 | 10.04 | 1.06 | 1.38 | 9.74 | 24.02 | 5.51 | (4 holes) | 146 | 220 | 2490 | 2150 | |
| DN150 | mm | 150.00 | 394.00 | 457.00 | 185.00 | 230.40 | 254.00 | 191.00 | 290.50 | 280.00 | 320.00 | 36.00 | 46.20 | 356.50 | 916.00 | (F16) | 165.00 | 22x25 | 180 | 216 | 4723 | 4628 |
| 6" | inch | 5.91 | 15.51 | 17.99 | 7.28 | 9.07 | 10.00 | 7.52 | 11.44 | 11.02 | 12.60 | 1.42 | 1.82 | 14.04 | 36.06 | 6.50 | (4 holes) | 397 | 476 | 5460 | 5350 | |



Trunnion Mounted Ball 3 Piece

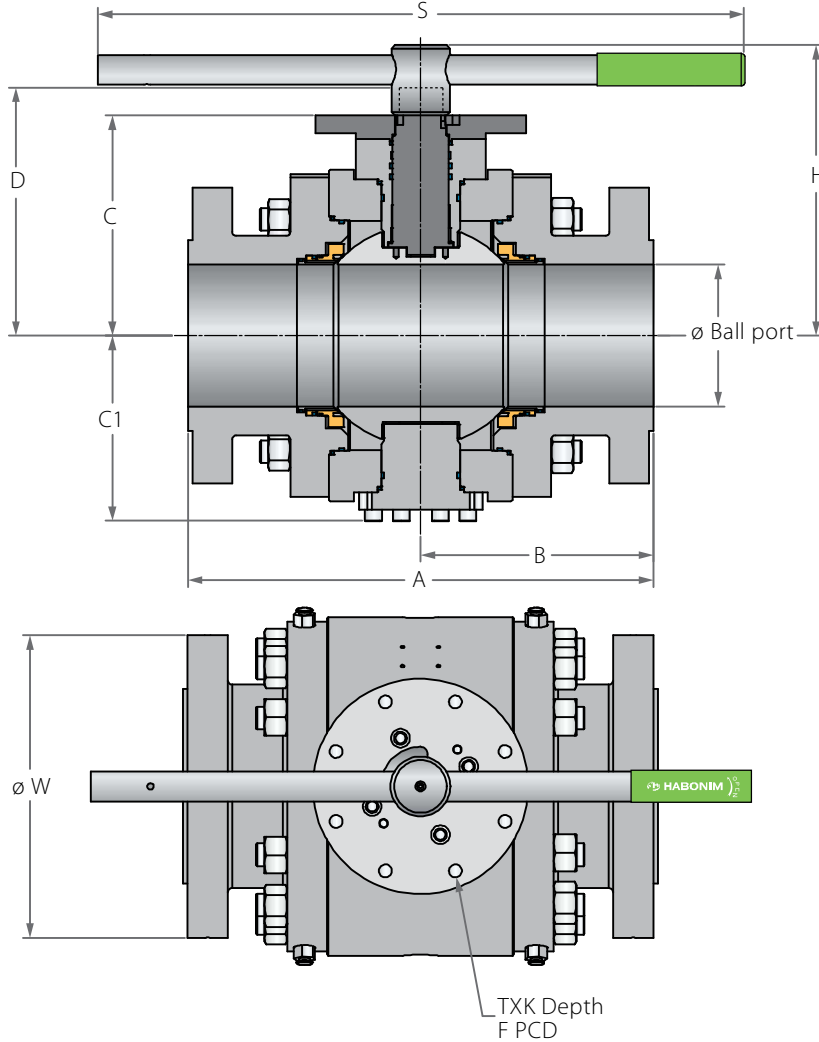
Valve dimensions



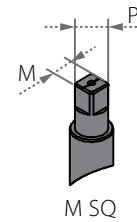
| Std. port | Unit | Ball port | A | | B | | C | | C1 | | D | | W | | P | | M | | K | | F | TxL | Weight kg/ib | | Kv / Cv | | |
|--------------|------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------------------|------|---------|-------|-------|
| | | | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | | | 150 | 300 | 150 | 300 | |
| DN200 8" | mm | 201.00 | 457.00 | 502.00 | 228.50 | 251.00 | 325.00 | 305.00 | 247.00 | 232.00 | 405.50 | 379.50 | 345.00 | 380.00 | 50.00 | 50.00 | 54.00 | 61.00 | 14.00 | 14.00 | (F16) | 165.00 | 22x25 (4 holes) | 346 | 378 | 9273 | 8737 |
| | inch | 7.91 | 17.99 | 19.76 | 9.00 | 9.88 | 12.80 | 12.01 | 9.72 | 9.13 | 15.96 | 14.94 | 13.58 | 14.96 | 1.97 | 1.97 | 2.13 | 2.40 | 0.55 | 0.55 | | 6.50 | | 763 | 833 | 10720 | 10100 |
| DN250 10" | mm | 252.00 | 533.00 | 568.00 | 270.00 | 287.50 | 353.00 | 359.00 | 297.00 | 299.00 | 430.00 | 454.00 | 405.00 | 445.00 | 50.00 | 60.00 | 54.00 | 65.50 | 14.00 | 18.00 | (F25) | 254.00 | 18x25 (8 holes) | 473 | 594 | 15224 | 14792 |
| | inch | 9.92 | 20.98 | 22.36 | 10.63 | 11.32 | 13.90 | 14.13 | 11.69 | 11.77 | 16.93 | 17.87 | 15.94 | 17.52 | 1.97 | 2.36 | 2.13 | 2.58 | 0.55 | 0.71 | | 10.00 | | 1043 | 1310 | 17600 | 17100 |
| DN300 12" | mm | 303.00 | 610.00 | 648.00 | 298.00 | 313.00 | 388.00 | 368.00 | 324.00 | 305.00 | 468.50 | 464.00 | 485.00 | 520.00 | 60.00 | 60.00 | 63.50 | 65.50 | 18.00 | 18.00 | (F25) | 254.00 | 18x25 (8 holes) | 723 | 833 | 23096 | 22404 |
| | inch | 11.93 | 24.02 | 25.51 | 11.73 | 12.32 | 15.28 | 14.49 | 12.76 | 12.01 | 18.44 | 18.27 | 19.09 | 20.47 | 2.36 | 2.36 | 2.50 | 2.58 | 0.71 | 0.71 | | 10.00 | | 1594 | 1836 | 26700 | 25900 |
| DN350 14" | mm | 334.00 | 686.00 | 762.00 | 343.00 | 381.00 | 425.00 | 400.00 | 372.00 | 330.00 | 555.00 | 520.00 | 535.00 | 585.00 | 72.00 | 72.00 | 78.00 | 78.00 | 20.00 | 20.00 | (F30) | 298.00 | 22x30 (8 holes) | 1072 | 1237 | 27940 | 26729 |
| | inch | 13.15 | 27.01 | 30.00 | 13.50 | 15.00 | 16.73 | 15.75 | 14.65 | 12.99 | 21.85 | 20.47 | 21.06 | 23.03 | 2.83 | 2.83 | 3.07 | 3.07 | 0.79 | 0.79 | | 11.73 | | 2363 | 2727 | 32300 | 30900 |
| DN400 16" | mm | 385.00 | 762.00 | 838.00 | 381.00 | 419.00 | 460.50 | 435.00 | 415.50 | 363.00 | 590.50 | 555.00 | 595.00 | 650.00 | 72.00 | 72.00 | 78.00 | 78.00 | 20.00 | 20.00 | (F30) | 298.00 | 22x30 (8 holes) | 1703 | 1949 | 38536 | 36763 |
| | inch | 15.16 | 30.00 | 32.99 | 15.00 | 16.50 | 18.13 | 17.13 | 16.36 | 14.29 | 23.25 | 21.85 | 23.43 | 25.59 | 2.83 | 2.83 | 3.07 | 3.07 | 0.79 | 0.79 | | 11.73 | | 3754 | 4297 | 44550 | 42500 |

Trunnion Mounted Ball 3 Piece

Valve dimensions



Preparation for actuation

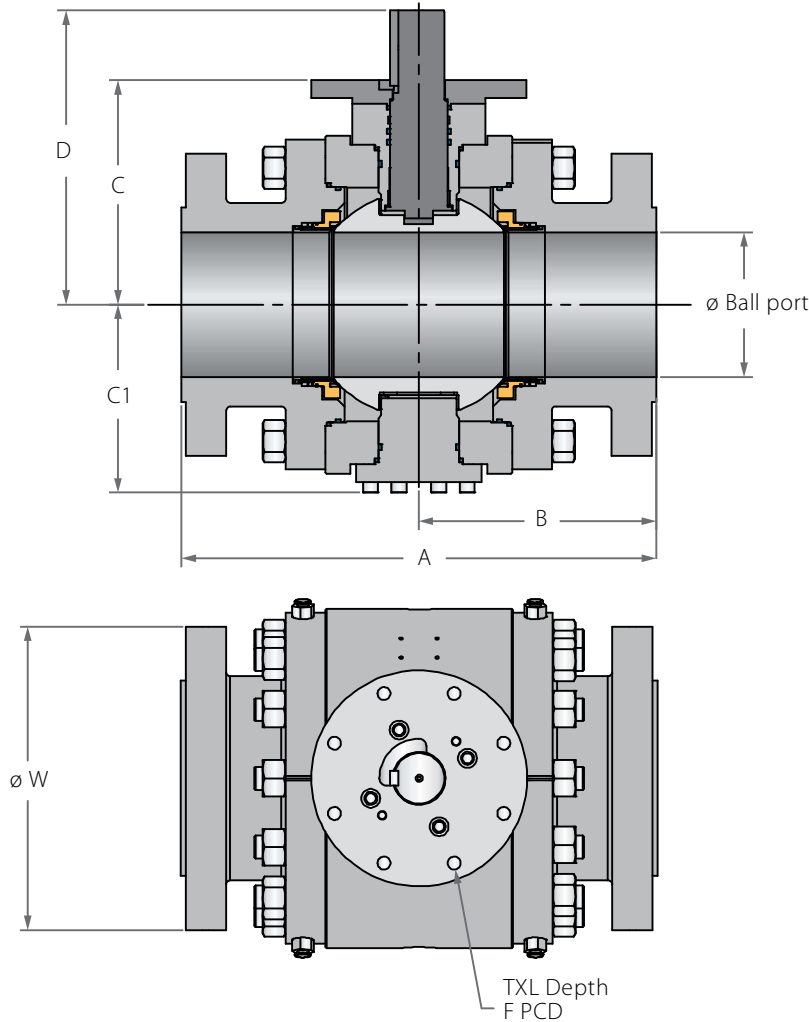


| Std. port | Unit | Ball port | A | | B | | C | | C1 | | D | | W | | Msq | Psq | H | S | F | TxL | Weight kg/lb | | | | Kv / Cv | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|-------|--------|--------------------|-----|------|------|---------|--|
| | | | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | | | | | | | 600 | 900 | 600 | 900 | | |
| DN50 | mm | 49.00 | 292.00 | 368.00 | 131.00 | 184.00 | 144.00 | 148.50 | 119.00 | 263.00 | 168.50 | 182.50 | 165.00 | 215.00 | 22.00 | 28.00 | 219.50 | 401.00 | (F12) | 125.00 | 13X15 (4 holes) | 49 | 72 | 329 | 294 | |
| 2" | inch | 1.93 | 11.50 | 14.49 | 5.16 | 7.24 | 5.67 | 5.85 | 4.69 | 10.35 | 6.63 | 7.19 | 6.50 | 8.46 | 0.87 | 1.10 | 8.64 | 15.79 | | 4.92 | | 108 | 159 | 380 | 340 | |
| DN80 | mm | 74.00 | 356.00 | 381.00 | 161.00 | 190.50 | 191.00 | 214.00 | 160.00 | 152.70 | 215.00 | 237.50 | 210.00 | 240.00 | 22.00 | 28.00 | 266.00 | 610.00 | (F14) | 140.00 | 22x24 (4 holes) | 103 | 146 | 874 | 822 | |
| 3" | inch | 2.91 | 14.02 | 15.00 | 6.34 | 7.50 | 7.52 | 8.43 | 6.30 | 6.01 | 8.46 | 9.35 | 8.27 | 9.45 | 0.87 | 1.10 | 10.47 | 24.02 | | 5.51 | | 227 | 322 | 1010 | 950 | |
| DN100 | mm | 100.00 | 432.00 | 457.00 | 216.00 | 228.50 | 217.00 | 193.00 | 184.00 | 184.00 | 246.50 | 259.00 | 275.00 | 290.00 | 27.00 | 36.00 | 316.50 | 916.00 | (F16) | 165.00 | 22x25 (4 holes) | 166 | 232 | 1557 | 1471 | |
| 4" | inch | 3.94 | 17.01 | 17.99 | 8.50 | 9.00 | 8.54 | 7.60 | 7.24 | 7.24 | 9.70 | 10.20 | 10.83 | 11.42 | 1.06 | 1.42 | 12.46 | 36.06 | | 6.50 | | 366 | 511 | 1800 | 1700 | |
| DN150 | mm | 150.00 | 559.00 | 610.00 | 278.00 | 305.00 | 282.50 | 368.00 | 214.50 | 224.00 | 320.50 | 463.00 | 355.00 | 380.00 | 36.00 | 48.20 | 385.00 | 916.00 | (F16) | 165.00 | 22x25 (8 holes) | 342 | 495 | 3893 | 3823 | |
| 6" | inch | 5.91 | 22.01 | 24.02 | 10.94 | 12.01 | 11.12 | 14.49 | 8.44 | 8.82 | 12.62 | 18.23 | 13.98 | 14.96 | 1.42 | 1.90 | 15.16 | 36.06 | | 6.50 | | 754 | 1091 | 4500 | 4420 | |

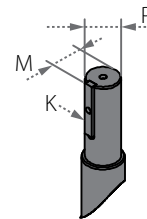


Trunnion Mounted Ball 3 Piece

Valve dimensions



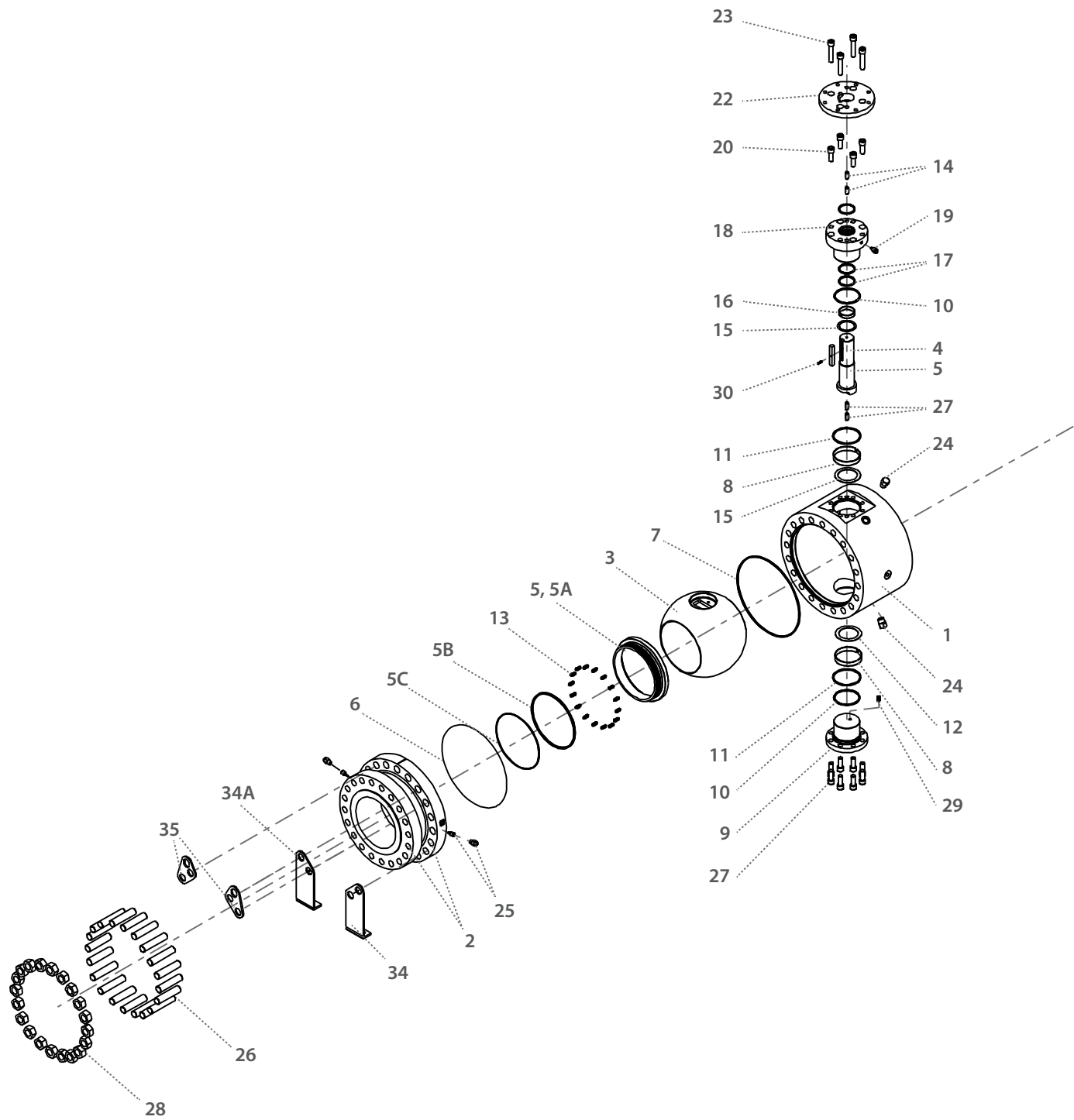
Preparation for actuation



| Std. port | Unit | Ball port | A | | B | | C | | C1 | | D | | W | | P | M | K | F | TxL | Weight kg/lb | | Kv / Cv | | |
|-----------|------|-----------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|-------|--------|--------------|------|---------|-------|-------|
| | | | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | 600 | 900 | | | | | | 600 | 900 | 600 | 900 | |
| DN200 | mm | 201.00 | 660.00 | 737.00 | 330.00 | 368.50 | 312.00 | 307.00 | 263.00 | 263.00 | 409.00 | 403.00 | 420.00 | 470.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x25 | 577 | 836 | 7742 | 7344 |
| 8" | inch | 7.91 | 25.98 | 29.02 | 12.99 | 14.51 | 12.28 | 12.09 | 10.35 | 10.35 | 16.10 | 15.87 | 16.54 | 18.50 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 1272 | 1843 | 8950 | 8490 |
| DN250 | mm | 252.00 | 787.00 | 838.00 | 400.00 | 419.00 | 374.00 | 384.00 | 310.00 | 326.00 | 489.50 | 499.00 | 510.00 | 545.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x25 | 931 | 1301 | 12543 | 12110 |
| 10" | inch | 9.92 | 30.98 | 32.99 | 15.75 | 16.50 | 14.72 | 15.12 | 12.20 | 12.83 | 19.27 | 19.65 | 20.08 | 21.46 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 2052 | 2868 | 14500 | 14000 |
| DN300 | mm | 303.00 | 838.00 | 965.00 | 419.00 | 482.50 | 402.00 | 419.00 | 344.00 | 361.00 | 517.00 | 544.00 | 560.00 | 610.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x35 | 1126 | 1576 | 19809 | 18598 |
| 12" | inch | 11.93 | 32.99 | 37.99 | 16.50 | 19.00 | 15.83 | 16.50 | 13.54 | 14.21 | 20.35 | 21.42 | 22.05 | 24.02 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 2482 | 3474 | 22900 | 21500 |
| DN350 | mm | 334.00 | 889.00 | 1029.00 | 444.50 | 514.50 | 435.00 | 503.00 | 412.00 | 433.00 | 565.00 | 633.00 | 605.00 | 640.00 | 80.00 | 87.00 | 22.00 | (F30) | 298.00 | 22x35 | 1638 | 2293 | 24739 | 23528 |
| 14" | inch | 13.15 | 35.00 | 40.51 | 17.50 | 20.26 | 17.13 | 19.80 | 16.22 | 17.05 | 22.24 | 24.92 | 23.82 | 25.20 | 3.15 | 3.43 | 0.87 | | 11.73 | (8 holes) | 3611 | 5055 | 28600 | 27200 |
| DN400 | mm | 385.00 | 991.00 | 1130.00 | 515.00 | 565.00 | 500.00 | 604.00 | 442.00 | 520.00 | 636.00 | 734.00 | 686.00 | 705.00 | 98.00 | 104.00 | 28.00 | (F30) | 298.00 | 22x350 | 2258 | 3116 | 33735 | 32438 |
| 16" | inch | 15.16 | 39.02 | 44.49 | 20.28 | 22.24 | 19.69 | 23.78 | 17.40 | 20.47 | 25.04 | 28.90 | 27.01 | 27.76 | 3.86 | 11.00 | 1.10 | | 11.73 | (8 holes) | 4978 | 6870 | 39000 | 37500 |

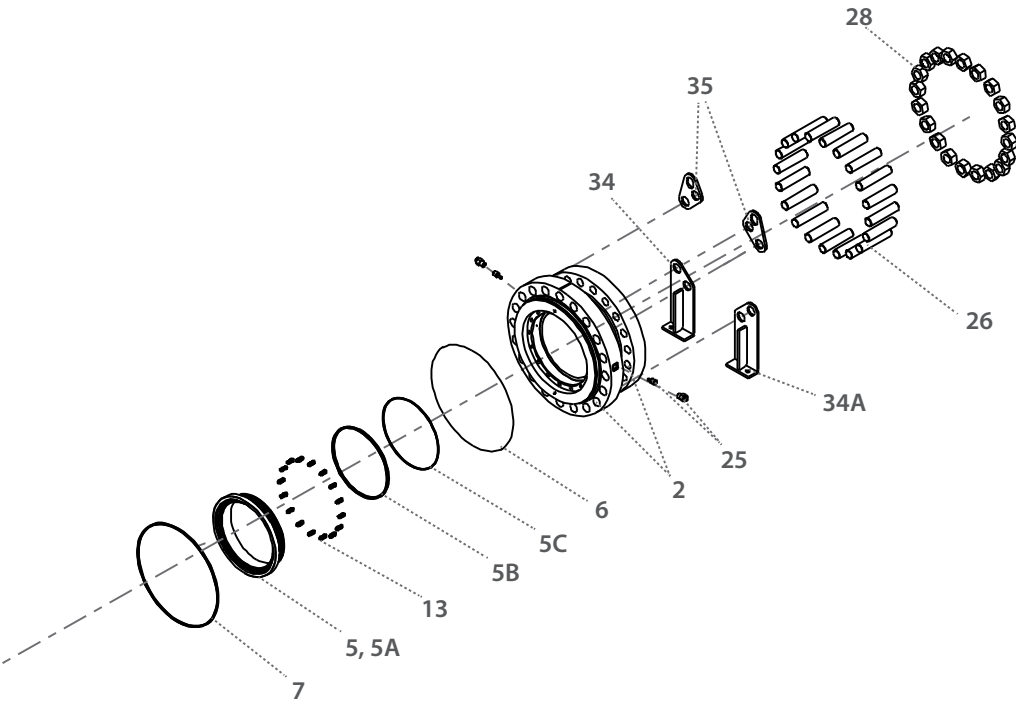
Trunnion Mounted Ball 3 Piece

Components & materials





Trunnion Mounted Ball 3 Piece



| Item | Description | Material specification | Qty. |
|------|--|-------------------------|-------|
| 1 | Body | Acc. Ordering Code | 1 |
| 2 | End | Acc. Ordering Code | 2 |
| 3 | Ball | Acc. Ordering Code | 1 |
| 4 | Stem | Acc. Ordering Code | 1 |
| 5* | Seat | Acc. Ordering Code | 2 |
| 5A | Seat insert | Acc. Ordering Code | 2 |
| 5B | Seat seal | HNBR, VITON | 2-4 |
| 5C | Seat fire safe seal | Graphite | 2 |
| 6* | Body fire safe seal | Graphite | 1 |
| 7* | Body seal | HNBR, VITON | 1 |
| 8 | Ball bearing | 316L+PTFE | 2 |
| 9 | External trunnion | A350 LF2+ENP, A479 316L | 1 |
| 10* | Gland plate & external trunnion fire safe seal | Graphite | 2 |
| 11* | Gland plate & external trunnion seal | HNBR, VITON | 2 |
| 12 | Lower thrust washer | 316L+PTFE | 1 |
| 13 | Seat spring | Inconel X750 | 10-26 |

| Item | Description | Material specification | Qty. |
|------|-----------------------------------|------------------------------------|------|
| 14 | Gland pin | C. Steel, S. Steel | 4 |
| 15 | Stem thrust seal | 316L+PTFE | 1 |
| 16 | Gland plate bearing | 316L+PTFE | 1 |
| 17 | Stem Seal | HNBR, VITON | 2 |
| 18 | Gland plate | A350 LF2+ENP, A479 316L, A105 +ENP | 1 |
| 19 | Stem grease fitting | S. St | 1 |
| 20 | Lower gland bolts | A320 L7, A193 B8M | 2-6 |
| 21* | Stem gasket | Graphite | 1 |
| 22 | Iso plate | A350 LF2, A479 316L, A105 | 1 |
| 23 | Upper gland bolts | A320 L7, A193 B8M | 2-6 |
| 24 | Plug drain valve | S. Steel | 2 |
| 25** | Seat grease fitting + Check valve | S. Steel | 4 |
| 26 | Body stud | A320 L7, A193 B8M | 4-20 |
| 27 | External trunnion bolts | A320 L7, A193 B8M | 4-12 |
| 28 | Body nut | A194 GR-7, A193 GR-8M | 4-20 |
| 29 | Antistatic spring | Inconel X750 | 1 |
| 30 | stem key | ST.37, H1150D 17-4PH, A182 F6A | 1 |

* Repair kit components

** Available from 6" size only



Trunnion Mounted Ball 3 Piece - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|----------|---|---|---|--------|---|--------|----|----------------------|----|---------------|---------------|--------------|----------------------|---------------------|---------------------|----------------|----|----|----|------------------|----|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | . | . | 30 |
| 6 | 0 | | | F | B | 9 | 1 | | - | 4 | 6 | 4 | D | V | V | G | / | 1 | 5 | 0 | | - | | | | |
| Size | | Features | | | | Series | | Design | | Body & ends material | | Stem material | Ball material | Seat feature | Seat insert material | Inner Seal material | Outer Seal material | End connection | | | | Special features | | | | |

| Size (1-2) | | |
|------------|------|-----|
| Code | inch | mm |
| 20 * | 2" | 50 |
| 30 | 3" | 80 |
| 40 | 4" | 100 |
| 60 | 6" | 150 |
| 80 | 8" | 200 |
| A0 | 10" | 250 |
| A2 | 12" | 300 |
| A4 | 14" | 350 |
| A6 | 16" | 400 |

* Full port only

| Features (3-6) | |
|---------------------------|-----------------------------|
| F | Fire safe |
| B | Full port |
| Series - 3 Piece (7-8) | |
| 91 | ASME B16.5 #150 (PN20) |
| 92 | ASME B16.5 #300 (PN50) |
| 93 | ASME B16.5 #600 (PN100) |
| 94 | ASME B16.5 #900 (PN150) |
| Design (9) | |
| Blank | (Stands for future designs) |
| Body & ends material (11) | |
| 4 | C. Steel A105 |
| 6 | S. Steel 316 |
| F | C. Steel A350 LF2 |
| W | Haselloy C-22 |
| D | Duplex |
| K | Super Duplex |
| S | 254SMO |
| Stem material (12) | |
| 6 * | S. Steel A479 316\316L |
| Q ** | S. Steel A182 F6A |
| M *** | High Strength S. Steel |
| Z | Inconel 718 B637 N07718 |
| W | Haselloy C-22 |
| D | Duplex |
| K | Super Duplex |
| S | 254SMO |

* for 91,92 not for 93, 94

** for 93, not for 94

*** for 94

| Ball material (13) | |
|---------------------------|--|
| 6 | S. Steel A182 F316 |
| 4 | C. Steel A105+ENP |
| F | C. Steel A350 LF2+ENP |
| Seat feature (14) | |
| D | Double Piston Effect (DPE) (API 6D DIB-1) |
| S | Single Piston Effect (SPE) (API 6D DBB) |
| C | DPE & SPE combination (API 6D DIB-2) |
| Seat insert material (15) | |
| V | Devlon |
| P | CF PTFE |
| K | CF PEEK |
| Inner Seal material (16) | |
| V | Viton |
| H | HNBR |
| Outer Seal material (17) | |
| G | Graphite |

| End Connection (19-22) | |
|--------------------------|--|
| Welded ends | |
| 150 | ASME B16.5 #150 |
| 300 | ASME B16.5 #300 |
| 600 | ASME B16.5 #600 |
| 900 | ASME B16.5 #900 |
| PN16 | DIN EN 1092-1 PN16 |
| PN40 | DIN EN 1092-1 PN40 |
| PN63 | DIN EN 1092-1 PN63 |
| PN100 | DIN EN 1092-1 PN100 |
| PN160 | DIN EN 1092-1 PN160 |
| Flanged RTJ | |
| 600RTJ | ASME B16.5 #600 RTJ |
| 900RTJ | ASME B16.5 #900 RTJ |
| Welded | |
| XBW | Extended butt weld sch 40 |
| XBW80 | Extended butt weld sch 80 |
| Special Features (24-30) | |
| L * | seat greasing point |
| D | Drain & Vent |
| Blank | Greasing point, Drain & vent is capped |
| PT ** | Basic paint system |
| P1 | Offshore, Temp Ambient up to 93°C (200°F) |
| P2 | Offshore, up to 537°C (1000°F) |

* for 6" and up

** colors RAL 1018 or 7036
(other colors upon request)

81

82

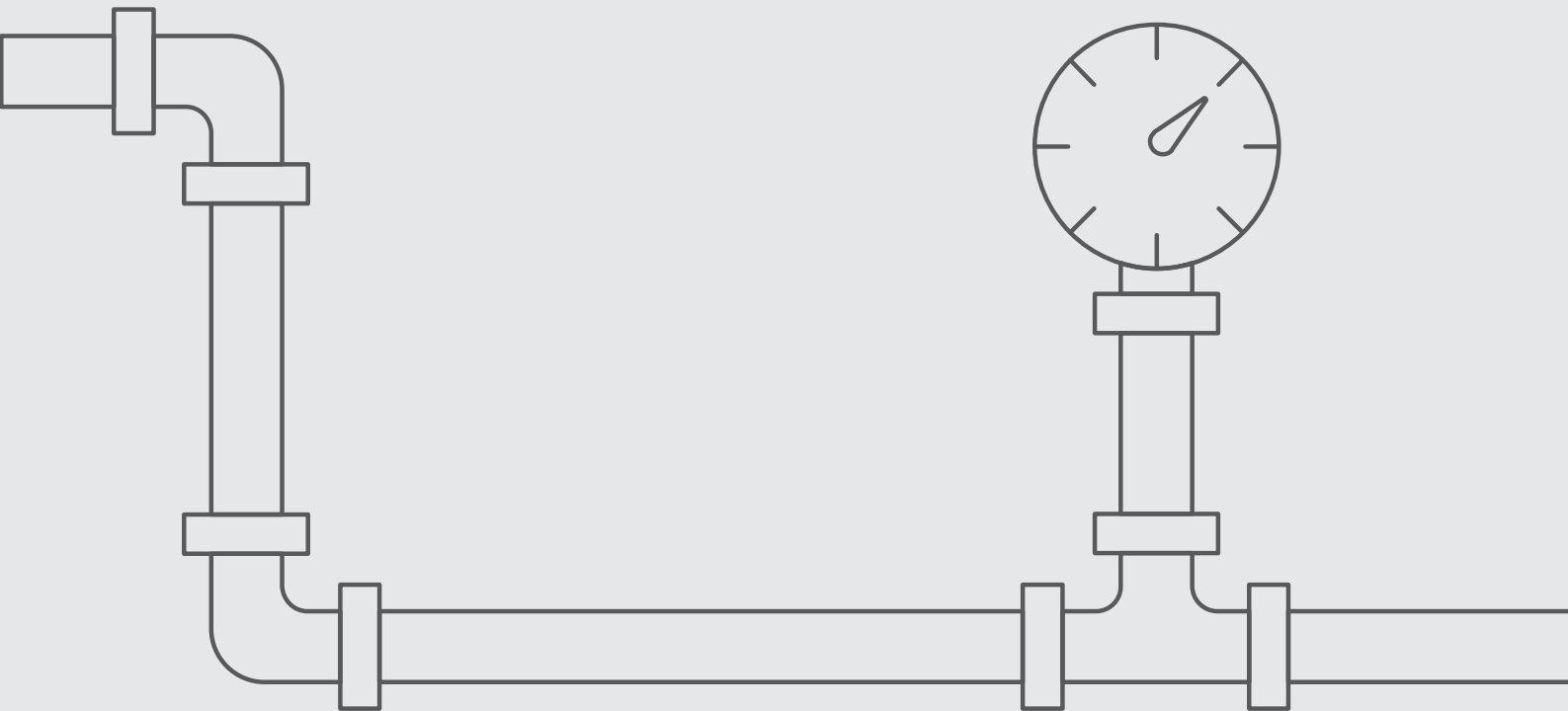
83



General Use Industrial

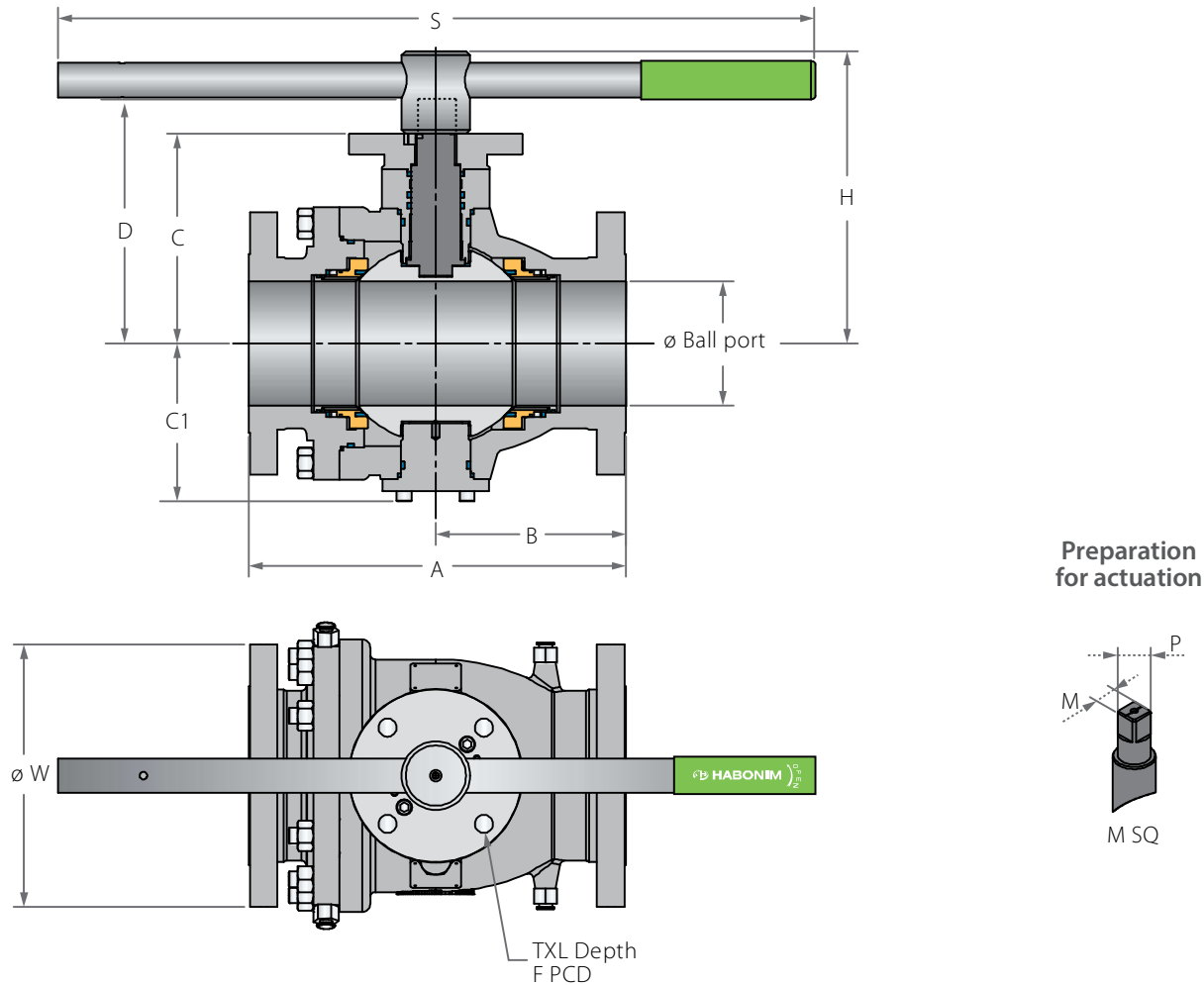
TRUNNIION

2 PIECE



Trunnion Mounted Ball 2 Piece

Valve dimensions

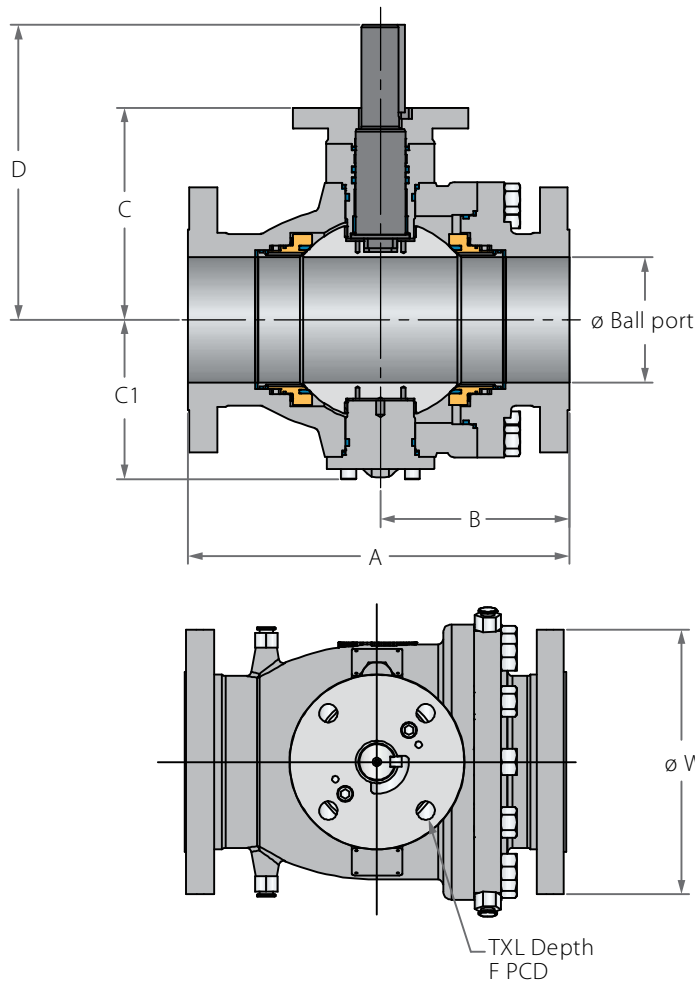


| Std. port | Unit | Ball port | A | | B | | C | C1 | D | W | | MSQ | PSQ | H | S | F | TxL | Weight kg/lb | | Kv / Cv | | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|-------|--------|--------------------|-----|---------|------|------|
| | | | 150 | 300 | 150 | 300 | | | | 150 | 300 | | | | | | | 150 | 300 | 150 | 300 | |
| DN50 | mm | 49.00 | 178.00 | 216.00 | 89.00 | 108.00 | 127.00 | 91.50 | 144.50 | 150.00 | 165.00 | 17.00 | 22.00 | 196.00 | 401.00 | (F10) | 102.00 | 11x15 (4 holes) | 19 | 23 | 400 | 363 |
| 2" | inch | 1.93 | 7.01 | 8.50 | 3.50 | 4.25 | 5.00 | 3.60 | 5.69 | 5.91 | 6.50 | 0.67 | 0.87 | 7.72 | 15.79 | 4.02 | | | 42 | 51 | 463 | 420 |
| DN80 | mm | 74.00 | 203.00 | 283.00 | 101.50 | 128.00 | 148.00 | 117.00 | 172.00 | 190.00 | 210.00 | 22.00 | 32.00 | 223.00 | 610.00 | (F12) | 125.00 | 13x15 (4 holes) | 33 | 44 | 1125 | 952 |
| 3" | inch | 2.91 | 7.99 | 11.14 | 4.00 | 5.04 | 5.83 | 4.61 | 6.77 | 7.48 | 8.27 | 0.87 | 1.26 | 8.78 | 24.02 | 4.92 | | | 73 | 97 | 1300 | 1100 |
| DN100 | mm | 100.00 | 229.00 | 305.00 | 114.50 | 140.50 | 171.00 | 139.00 | 198.50 | 230.00 | 255.00 | 27.00 | 35.00 | 247.50 | 610.00 | (F14) | 140.00 | 18x15 (4 holes) | 49 | 69 | 2154 | 1860 |
| 4" | inch | 3.94 | 9.02 | 12.00 | 4.51 | 5.53 | 6.73 | 5.47 | 7.81 | 9.06 | 10.04 | 1.06 | 1.38 | 9.74 | 24.02 | 5.51 | | | 108 | 152 | 2490 | 2150 |
| DN150 | mm | 150.00 | 394.00 | 403.00 | 185.00 | 230.40 | 254.00 | 191.00 | 290.50 | 280.00 | 320.00 | 36.00 | 46.20 | 356.50 | 916.00 | (F16) | 165.00 | 22x25 (4 holes) | 133 | 166 | 4723 | 4628 |
| 6" | inch | 5.91 | 15.51 | 17.99 | 7.28 | 9.07 | 10.00 | 7.52 | 11.44 | 11.02 | 12.60 | 1.42 | 1.82 | 14.04 | 36.06 | 6.50 | | | 293 | 366 | 5460 | 5350 |

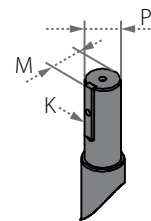


Trunnion Mounted Ball 2 Piece

Valve dimensions



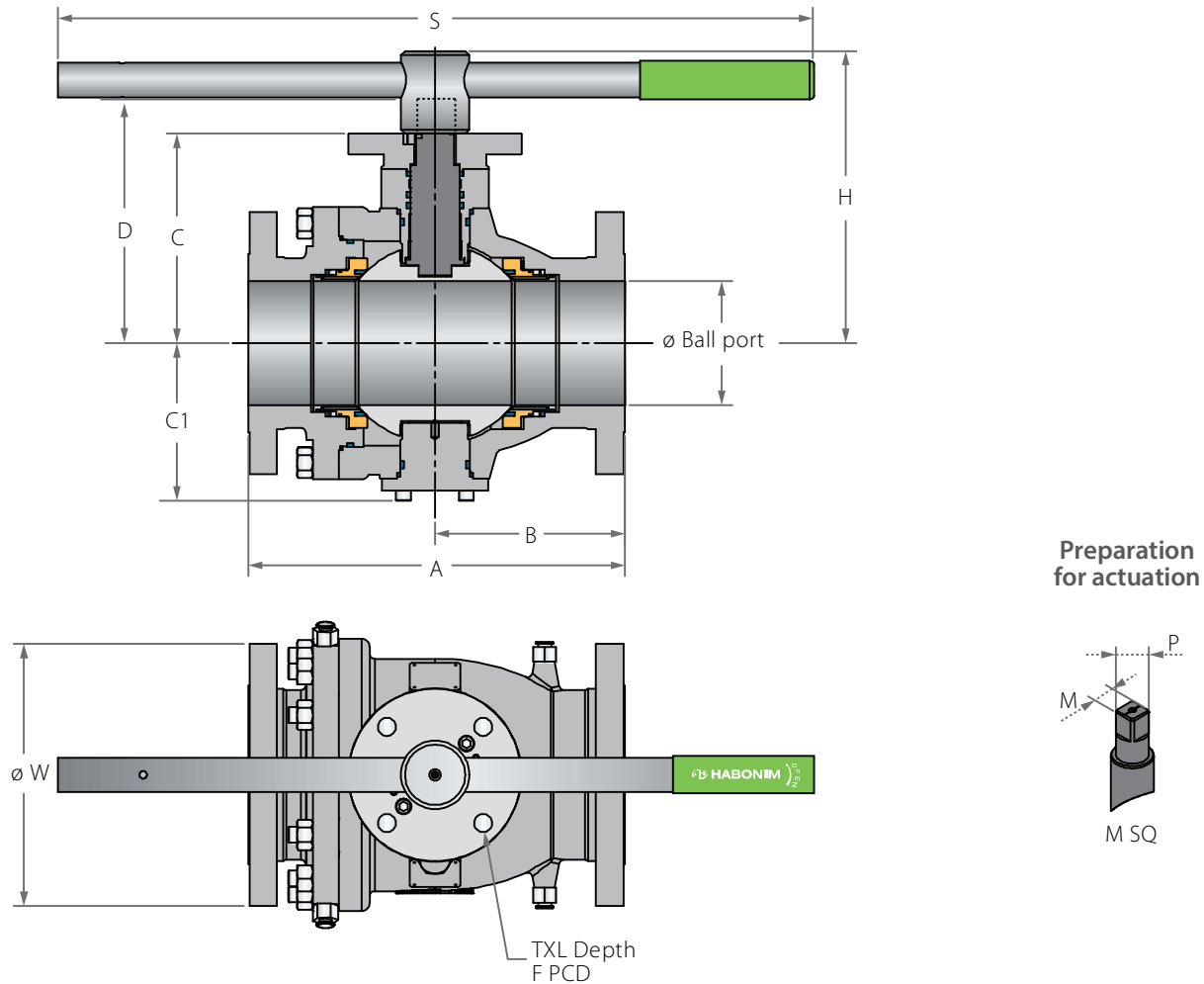
Preparation for actuation



| Std. port | Unit | Ball port | A | | B | | C | C1 | D | W | | P | M | K | F | TxL | Weight kg/lb | | Kv / Cv | | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------------|------|---------|-------|-------|
| | | | 150 | 300 | 150 | 300 | | | | 150 | 300 | | | | | | 150 | 300 | 150 | 300 | |
| DN200 | mm | 201.00 | 457.00 | 502.00 | 228.50 | 251.00 | 325.00 | 247.00 | 405.50 | 345.00 | 380.00 | 50.00 | 54.00 | 14.00 | (F16) | 165.00 | 22x25 | 222 | 262 | 9273 | 8737 |
| 8" | inch | 7.91 | 17.99 | 19.76 | 9.00 | 9.88 | 12.80 | 9.72 | 15.96 | 13.58 | 14.96 | 1.97 | 2.13 | 0.55 | | 6.50 | (4 holes) | 489 | 578 | 10720 | 10100 |
| DN250 | mm | 252.00 | 533.00 | 568.00 | 270.00 | 287.50 | 353.00 | 297.00 | 430.00 | 405.00 | 445.00 | 50.00 | 54.00 | 14.00 | (F25) | 254.00 | 18x25 | 358 | 424 | 15224 | 14792 |
| 10" | inch | 9.92 | 20.98 | 22.36 | 10.63 | 11.32 | 13.90 | 11.69 | 16.93 | 15.94 | 17.52 | 1.97 | 2.13 | 0.55 | | 10.00 | (8 holes) | 789 | 935 | 17600 | 17100 |
| DN300 | mm | 303.00 | 610.00 | 648.00 | 298.00 | 313.00 | 388.00 | 324.00 | 468.50 | 485.00 | 520.00 | 60.00 | 63.50 | 18.00 | (F25) | 254.00 | 18x25 | 527 | 613 | 23096 | 22404 |
| 12" | inch | 11.93 | 24.02 | 25.51 | 11.73 | 12.32 | 15.28 | 12.76 | 18.44 | 19.09 | 20.47 | 2.36 | 2.50 | 0.71 | | 10.00 | (8 holes) | 1162 | 1351 | 26700 | 25900 |
| DN350 | mm | 334.00 | 686.00 | 762.00 | 343.00 | 381.00 | 425.00 | 372.00 | 555.00 | 535.00 | 585.00 | 72.00 | 78.00 | 20.00 | (F30) | 298.00 | 22x30 | 794 | 896 | 27940 | 26729 |
| 14" | inch | 13.15 | 27.01 | 30.00 | 13.50 | 15.00 | 16.73 | 14.65 | 21.85 | 21.06 | 23.03 | 2.83 | 3.07 | 0.79 | | 11.73 | (8 holes) | 1750 | 1975 | 32300 | 30900 |
| DN400 | mm | 385.00 | 762.00 | 838.00 | 381.00 | 419.00 | 460.50 | 415.50 | 590.50 | 595.00 | 650.00 | 72.00 | 78.00 | 20.00 | (F30) | 298.00 | 22x30 | 1215 | 1344 | 38536 | 36763 |
| 16" | inch | 15.16 | 30.00 | 32.99 | 15.00 | 16.50 | 18.13 | 16.36 | 23.25 | 23.43 | 25.59 | 2.83 | 3.07 | 0.79 | | 11.73 | (8 holes) | 2679 | 2963 | 44550 | 42500 |

Trunnion Mounted Ball 2 Piece

Valve dimensions

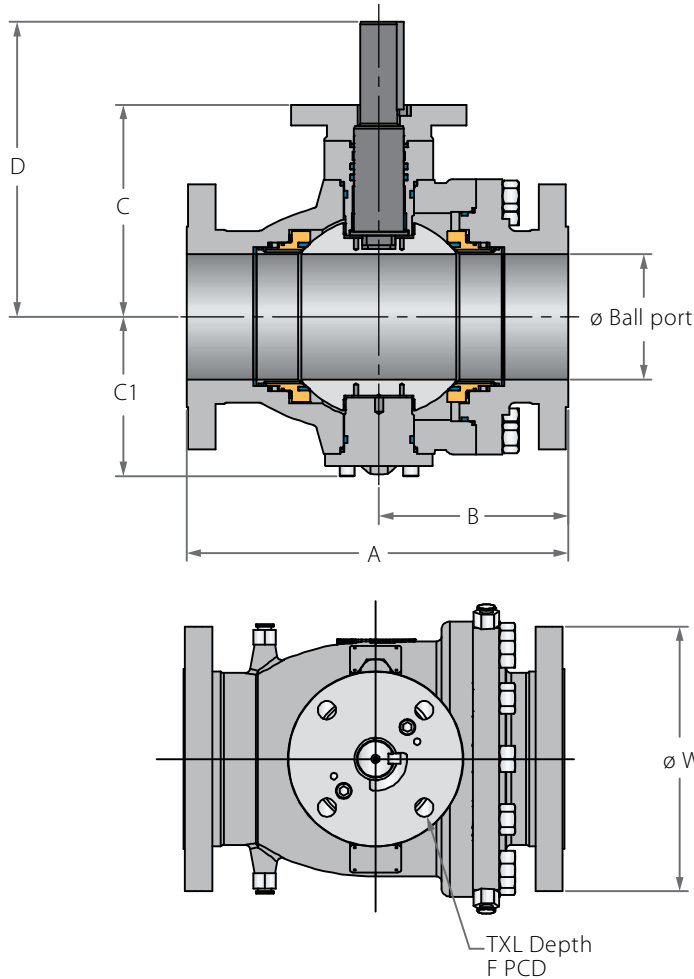


| Std. port | Unit | Ball port | A | B | C | C1 | D | W | MSQ | PSQ | H | S | F | TxL | Weight kg/ib | Kv Cv | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|-------|--------|--------------------|----------|------|
| DN50 | mm | 49.00 | 292.00 | 131.00 | 144.00 | 119.00 | 168.50 | 165.00 | 22.00 | 28.00 | 219.50 | 401.00 | (F12) | 125.00 | 13X15 (4 holes) | 35 | 329 |
| 2" | inch | 1.93 | 11.50 | 5.16 | 5.67 | 4.69 | 6.63 | 6.50 | 0.87 | 1.10 | 8.64 | 15.79 | | 4.92 | | 77 | 380 |
| DN80 | mm | 74.00 | 356.00 | 161.00 | 191.00 | 160.00 | 215.00 | 210.00 | 22.00 | 28.00 | 266.00 | 610.00 | (F14) | 140.00 | 18X24 (4 holes) | 71 | 874 |
| 3" | inch | 2.91 | 14.02 | 6.34 | 7.52 | 6.30 | 8.46 | 8.27 | 0.87 | 1.10 | 10.47 | 24.02 | | 5.51 | | 157 | 1010 |
| DN100 | mm | 100.00 | 432.00 | 216.00 | 217.00 | 184.00 | 246.50 | 275.00 | 27.00 | 36.00 | 316.50 | 916.00 | (F16) | 165.00 | 22X25 (4 holes) | 123 | 1557 |
| 4" | inch | 3.94 | 17.01 | 8.50 | 8.54 | 7.24 | 9.70 | 10.83 | 1.06 | 1.42 | 12.46 | 36.06 | | 6.50 | | 271 | 1800 |
| DN150 | mm | 150.00 | 559.00 | 278.00 | 282.50 | 214.50 | 320.50 | 355.00 | 36.00 | 48.20 | 385.00 | 916.00 | (F16) | 165.00 | 22X25 (4 holes) | 244 | 3893 |
| 6" | inch | 5.91 | 22.01 | 10.94 | 11.12 | 8.44 | 12.62 | 13.98 | 1.42 | 1.90 | 15.16 | 36.06 | | 6.50 | | 538 | 4500 |

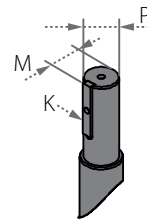


Trunnion Mounted Ball 2 Piece

Valve dimensions



Preparation for actuation



| Std. port | Unit | Ball port | A | B | C | C1 | D | W | P | M | K | F | TxL | Weight kg/lb | Kv Cv | |
|-----------|------|-----------|--------|--------|--------|--------|--------|--------|-------|--------|-------|-------|--------|-----------------|----------|-------|
| DN200 | mm | 201.00 | 660.00 | 330.00 | 312.00 | 263.00 | 409.00 | 420.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x25 | 412 | 7742 |
| 8" | inch | 7.91 | 25.98 | 12.99 | 12.28 | 10.35 | 16.10 | 16.54 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 908 | 8950 |
| DN250 | mm | 252.00 | 787.00 | 400.00 | 374.00 | 310.00 | 489.50 | 510.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x25 | 665 | 12543 |
| 10" | inch | 9.92 | 30.98 | 15.75 | 14.72 | 12.20 | 19.27 | 20.08 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 1466 | 14500 |
| DN300 | mm | 303.00 | 838.00 | 419.00 | 402.00 | 344.00 | 517.00 | 560.00 | 72.00 | 76.50 | 20.00 | (F25) | 254.00 | 18x25 | 804 | 19809 |
| 12" | inch | 11.93 | 32.99 | 16.50 | 15.83 | 13.54 | 20.35 | 22.05 | 2.83 | 3.01 | 0.79 | | 10.00 | (8 holes) | 1772 | 22900 |
| DN350 | mm | 334.00 | 889.00 | 444.50 | 435.00 | 412.00 | 565.00 | 605.00 | 80.00 | 87.00 | 22.00 | (F30) | 298.00 | 22x35 | 1170 | 24739 |
| 14" | inch | 13.15 | 35.00 | 17.50 | 17.13 | 16.22 | 22.24 | 23.82 | 3.15 | 3.43 | 0.87 | | 11.73 | (8 holes) | 2579 | 28600 |
| DN400 | mm | 385.00 | 991.00 | 515.00 | 500.00 | 442.00 | 636.00 | 686.00 | 98.00 | 104.00 | 28.00 | (F30) | 298.00 | 22x35 | 1613 | 33735 |
| 16" | inch | 15.16 | 39.02 | 20.28 | 19.69 | 17.40 | 25.04 | 27.01 | 3.86 | 4.11 | 1.10 | | 11.73 | (8 holes) | 3556 | 39000 |

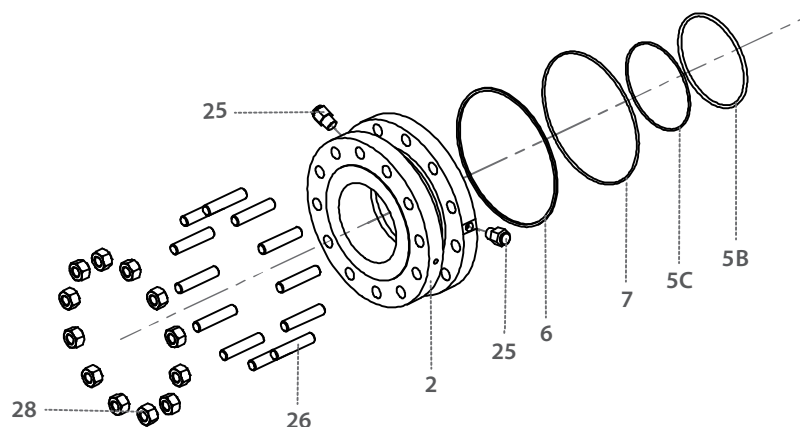
Trunnion Mounted Ball 2 Piece

Components & materials

| Item | Description | Material specification | Qty. |
|------|--|-----------------------------------|-------|
| 1 | Body | Acc. Ordering Code | 1 |
| 2 | End | Acc. Ordering Code | 1 |
| 3 | Ball | Acc. Ordering Code | 1 |
| 4 | Stem | Acc. Ordering Code | 1 |
| 5* | Seat | Acc. Ordering Code | 2 |
| 5A | Seat insert | Acc. Ordering Code | 2 |
| 5B | Seat seal | HNBR, VITON | 2-4 |
| 5C | Seat fire safe seal | Graphite | 2 |
| 6* | Body fire safe seal | Graphite | 1 |
| 7* | Body seal | HNBR, VITON | 1 |
| 8 | Ball bearing | 316L+PTFE | 2 |
| 9 | External trunnion | A350 LF2+ENP, A479 316L, A182 F6A | 1 |
| 10* | Gland plate & External trunnion fire safe seal | Graphite | 2 |
| 11* | Gland plate & External trunnion seal | HNBR, VITON | 2 |
| 12 | Lower thrust washer | 316L+PTFE | 1 |
| 13 | Seat spring | Inconel X750 | 10-26 |
| 14 | Gland pin | C. Steel, S. Steel | 4 |
| 15 | Stem thrust seal | 316L+PTFE | 1 |
| 16 | Gland plate bearing | 316L+PTFE | 1 |
| 17 | Stem seal | HNBR, VITON | 2 |
| 18 | Gland plate | A350 LF2+ENP, A479 316L, A182 F6A | 1 |
| 19 | Stem grease fitting | S. Steel | 1 |
| 20 | Lower gland bolts | A320 L7, A193 B8M | 2-6 |
| 21* | Stem gasket | Graphite | 1 |
| 22 | Iso plate | A350 LF2, A479 316L, A182 F6A | 1 |
| 23 | Upper gland bolts | A320 L7, A193 B8M | 2-6 |
| 24 | Plug drain valve | S. Steel | 2 |
| 25** | Seat grease fitting + check valve | S. Steel | 4 |

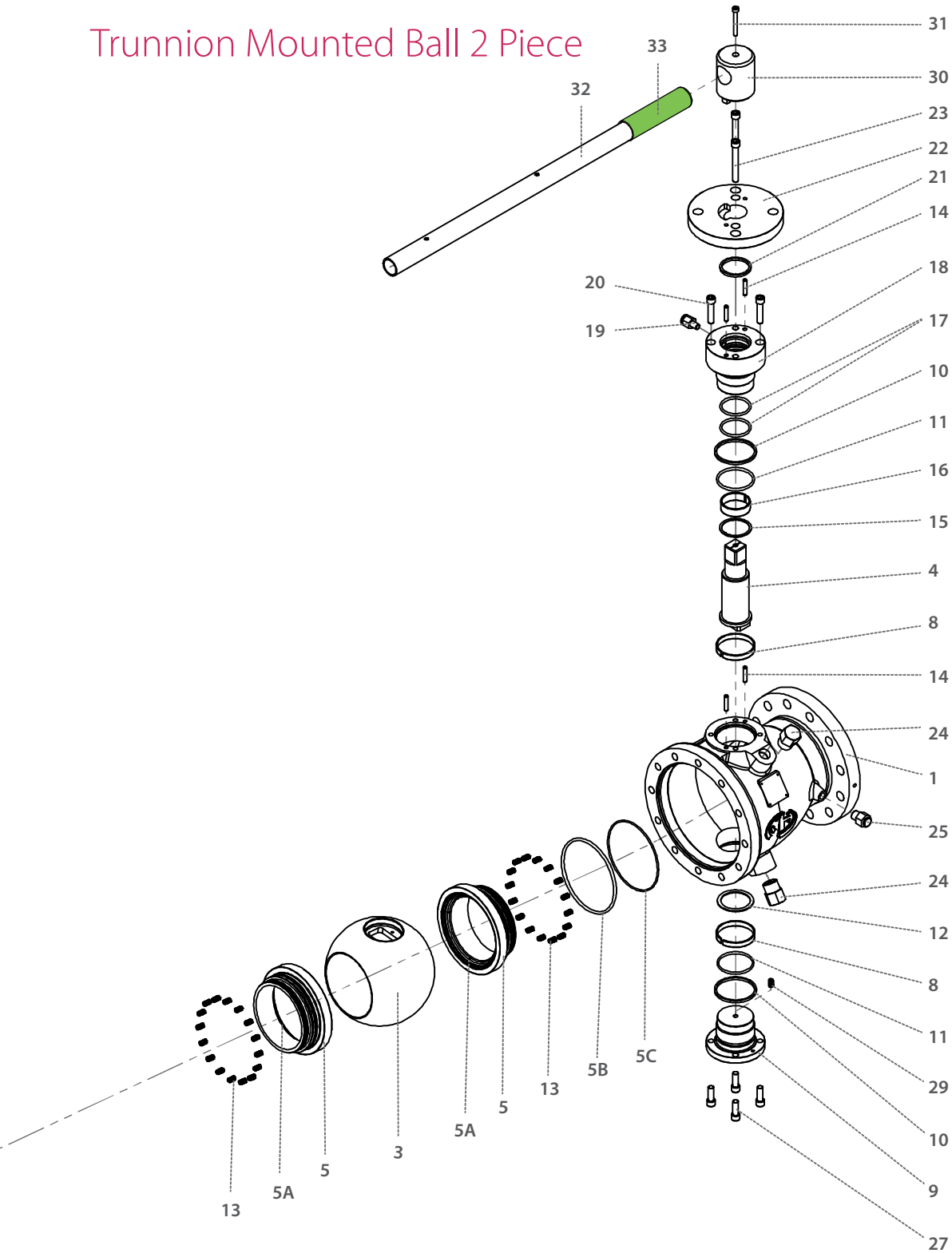
| Item | Description | Material specification | Qty. |
|------|-------------------------|--------------------------|------|
| 26 | Body stud | A320 L7, A193 B8M | 4-20 |
| 27 | External trunnion bolts | A320 L7, A193 B8M | 4-12 |
| 28 | Body nut | A194 GR-7, A193 GR-8M | 4-20 |
| 29 | Anti-static spring | S. Steel | 1 |
| 30 | Wrench head | S. Steel | 1 |
| 31 | Wrench head bolt | A193 B8M, EN3506-1 A4-80 | 1 |
| 32 | Pipe handle | C.St Zink plate, S.St | 1 |
| 33 | Sleeve | PVC | 1 |
| 33 | Sleeve | PVC | 1 |

* Repair kit components
 ** Available from 6" size only





Trunnion Mounted Ball 2 Piece





Trunnion Mounted Ball 2 Piece - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|----------|---|---|---|--------|---|--------|----|----------------------|----|---------------|---------------|--------------|-------------|---------------------|---------------------|----------------|----|----|----|------------------|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | . | . | 30 |
| 6 | 0 | | | F | B | 8 | 1 | | - | 4 | 6 | 6 | D | V | V | G | / | 1 | 5 | 0 | | | | | |
| Size | | Features | | | | Series | | Design | | Body & ends material | | Stem material | Ball material | Seat feature | Seat insert | Inner Seal material | Outer Seal material | End connection | | | | Special features | | | |

| Size (1-2) | | |
|------------|------|-----|
| Code | inch | mm |
| 20 | 2" | 50 |
| 30 | 3" | 80 |
| 40 | 4" | 100 |
| 60 | 6" | 150 |
| 80 | 8" | 200 |
| A0 | 10" | 250 |
| A2 | 12" | 300 |
| A4 | 14" | 350 |

| Features (3-6) | |
|-----------------------------|-----------------------------|
| F | Fire safe |
| B | Full port |
| Series - 2 Piece Cast (7-8) | |
| 81 | ASME B16.5 #150 Flanged RF |
| 82 | ASME B16.5 #300 Flanged RF |
| 83 | ASME B16.5 #600 Flanged RF |
| Design (9) | |
| Blank | (Stands For future designs) |
| Body & ends material (11) | |
| 4 | C. Steel A216 WCB |
| 6 | S. Steel A351 CF8M |
| Stem material (12) | |
| 6 * | S. Steel A479 316\316L |
| Q ** | S. Steel A182 F6A |
| M | High Strength S. Steel |
| Z | Inconel 718 B637 N07718 |
| W | Haselloy C-22 |
| D | Duplex |
| K | Super Duplex |
| S | 254SMO |

* for 81, 82 not for 83

** for 83

| Ball material (13) | |
|--------------------|---|
| 6 | S. Steel A182 F316 |
| 4 | C. Steel A350 LF2+ENP |
| F | C. Steel A105+ENP |
| Seat feature (14) | |
| D | Double Piston Effect (DPE) (API 6D DIB-1) |
| S | Single Piston Effect (SPE) (API 6D DBB) |
| C | DPE & SPE combination |
| Seat insert (15) | |
| V | Devlon |
| P | CF PTFE |
| K | CF PEEK |
| Inner Seal (16) | |
| V | Viton |
| H | HNBR |
| Outer Seal (17) | |
| G | Graphite |

| End Connection (19-22) | | |
|--------------------------|---|--------|
| Flanged | | Series |
| 150 | ASME B16.5 #150 | 81 |
| 300 | ASME B16.5 #300 | 82 |
| 600 | ASME B16.5 #600 | 83 |
| Special Features (23-30) | | |
| L * | seat greasing point | |
| D | Drain & Vent | |
| Blank | Greasing point, Drain & vent is capped | |
| PT ** | Basic paint system | |
| P1 | Offshore, Temp Ambient up to 93°C (200°F) | |
| P2 | Offshore, up to 537°C (1000°F) | |

* for 6" and up

** colors RAL 1018 or 7036 (other colors upon request)