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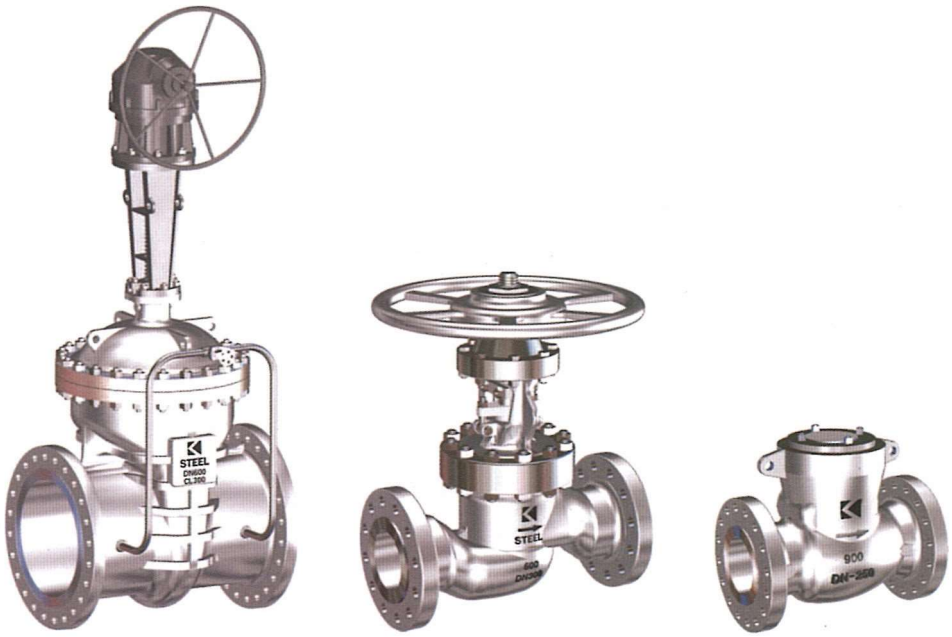
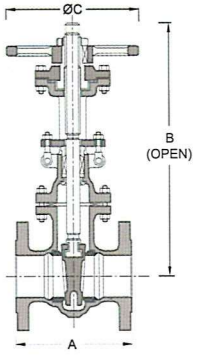


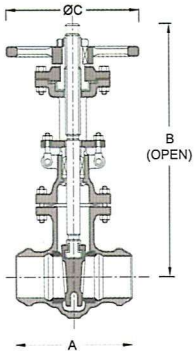

# CAST AND FORGED GATE, GLOBE & CHECK VALVES

KFEL
KHIMJI FLOW EQUIPMENTS PVT. LTD.

# GATE VALVES

## CLASS - 150 - 300 - 600




### Features :

Heavy duty OS & Y type, bolted bonnet, rising stem, non rising hand wheel, renewable seatring for Carbon Steel Valves, integral for Stainless Steel Valves. Valves with most advanced design Features provide the ultimate in dependable, economic flow control.

DESIGN STD :API 6D, API 600 TESTING STD : APL 6D, API 598

| Test Pressure in bar (psi) | | | |
|---|---|---|---|
| Class | 150 | 300 | 600 |
| Hyd. Shell | 30 (435) | 77 (1117) | 155 (2248) |
| Seat /Back Seat | 22 (319) | 57 (827) | 113 (1639) |
| Air Seat | | 6.9 (100) | |

**Dimensions are in mm (inch)**

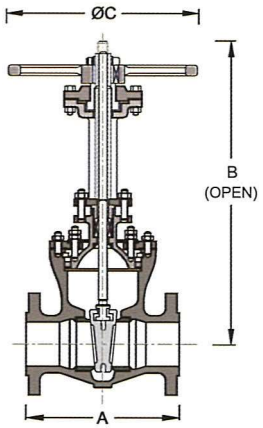
| SIZE | CLASS-150 | | | | CLASS-300 | | | | CLASS-600 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | A | B | ØC | Wt 1) | A | B | ØC | Wt 1) | A | B | ØC | Wt 1) |
| 15 | 108 | 210 | 100 | 4.0 | 140 | 210 | 100 | 4.6 | - | - | - | - |
| (1/2 ) | (4.3) | (8.3) | (3.9) | (9) | (5.5) | (8.3) | (4.0) | (10) | - | - | - | - |
| 20 | 117 | 215 | 100 | 4.5 | 152 | 215 | 100 | 6 | - | - | - | - |
| (3/4) | (4.6) | (8.5) | (3.9) | (10) | (6.0) | (8.5) | (4.0) | (13) | - | - | - | - |
| 25 | 127 | 250 | 150 | 6.2 | 165 | 250 | 150 | 7.5 | - | - | - | - |
| (1) | (5.0) | (9.8) | (5.9) | (14) | (6.5) | (9.8) | (5.9) | (17) | - | - | - | - |
| 40 | 165 | 300 | 200 | 11.2 | 190 | 300 | 200 | 14.2 | - | - | - | - |
| (1 ½ ) | (6.5) | (11.8) | (7.9) | (25) | (7.5) | (11.8) | (7.9) | (31) | - | - | - | - |
| 50 | 178 | 345 | 200 | 16.5 | 216 | 345 | 200 | 19 | 292 | 405 | 250 | 30 |
| (2) | (7.0) | (13.6) | (7.9) | (36) | (8.5) | (13.6) | (7.9) | (42) | (11.5) | (15.9) | (9.8) | (66) |
| 65 | 190 | 410 | 200 | 25 | 241 | 425 | 250 | 28 | 330 | 420 | 250 | 39 |
| (2½) | (7.5) | (16.1) | (7.9) | (55) | (9.5) | (16.7) | (9.8) | (62) | (13.0) | (16.5) | (9.8) | (86) |
| 80 | 203 | 435 | 250 | 27 | 282 | 460 | 250 | 43 | 356 | 460 | 300 | 51 |
| (3) | (8.0) | (17.1) | (9.8) | (60) | (11.1) | (18.1) | (9.8) | (95) | (14.0) | (18.1) | (11.8) | (112) |
| 100 | 229 | 550 | 250 | 43 | 305 | 550 | 300 | 75 | 432 | 595 | 450 | 96 |
| (4) | (9.0) | (21.7) | (9.8) | (95) | (12.0) | (21.7) | (11.8) | (165) | (17.0) | (23.4) | (17.7) | (212) |
| 125 | 254 | 650 | 300 | 55 | 381 | 685 | 450 | 98 | 508 | 690 | 450 | 135 |
| (5) | (10.0) | (25.6) | (11.8) | (121) | (15.0) | (27.0) | (17.7) | (216) | (20.0) | (27.2) | (17.7) | (298) |
| 150 | 267 | 750 | 300 | 78 | 403 | 790 | 450 | 133 | 559 | 825 | 600 | 213 |
| (6) | (10.5) | (29.5) | (11.8) | (172) | (15.9) | (31.1) | (17.7) | (293) | (22.0) | (32.5) | (23.6) | (470) |
| 200 | 292 | 960 | 450 | 125 | 419 | 990 | 450 | 215 | 660 | 1065 | 600 | 355 |
| (8) | (11.5) | (37.8) | (17.7) | (276) | (16.5) | (39.0) | (17.7) | (474) | (26.0) | (41.9) | (23.6) | (783) |
| 250 | 330 | 1155 | 450 | 190 | 457 | 1230 | 600 | 368 | 787 | 1110 | 750 | 598 |
| (10) | (13.0) | (45.5) | (17.7) | (419) | (18.0) | (48.4) | (23.6) | (811) | (31.0) | (43.7) | (29.5) | (1318) |
| 300 | 356 | 1390 | 600 | 288 | 502 | 1475 | 600 | 475 | 838 | 1770 | ★ | 825 |
| (12) | (14.0) | (54.7) | (23.6) | (635) | (19.8) | (58.1) | (23.6) | (1047) | (33.0) | (69.7) | ★ | (1819) |
| 350 | 381 | 1575 | 600 | 315 | 762 | 1310 | 750 | 580 | - | - | - | - |
| (14) | (15.0) | (62.0) | (23.6) | (695) | (30.0) | (51.6) | (29.5) | (1279) | - | - | - | - |
| 400 | 406 | 1710 | 750 | 420 | 838 | 1870 | ★ | 985 | - | - | - | - |
| (16) | (16.0) | (67.3) | (29.5) | (926) | (33.0) | (73.6) | ★ | (2172) | - | - | - | - |
| 450 | 432 | 1950 | 750 | 650 | 914 | 2035 | ★ | 1185 | - | - | - | - |
| (18) | (17.0) | (76.8) | (29.5) | (1433) | (36.0) | (80.1) | ★ | (2613) | - | - | - | - |
| 500 | 457 | 2225 | ★ | 725 | 991 | 2220 | ★ | 1545 | - | - | - | - |
| (20) | (18.0) | (87.6) | ★ | (1598) | (39.0) | (87.4) | ★ | (3406) | - | - | - | - |
| 600 | 508 | 2560 | ★ | 1305 | 1143 | 2550 | ★ | 1805 | - | - | - | - |
| (24) | (20.0) | (100.8) | ★ | (2877) | (45.0) | (100.4) | ★ | (3979) | - | - | - | - |
| 650 | 559 | 2800 | ★ | 1550 | - | - | - | - | - | - | - | - |
| (26) | (22.0) | (110.2) | ★ | (3417) | - | - | - | - | - | - | - | - |
| 700 | 610 | 3050 | ★ | 1880 | - | - | - | - | - | - | - | - |
| (28) | (24.0) | (120.1) | ★ | (4145) | - | - | - | - | - | - | - | - |
| 750 | 610 | 3130 | ★ | 2300 | - | - | - | - | - | - | - | - |
| (30) | (24.0) | (123.2) | ★ | (5071) | - | - | - | - | - | - | - | - |
| 800 | 660 | 3280 | ★ | 2550 | - | - | - | - | - | - | - | - |
| (32) | (26.0) | (129.1) | ★ | (5622) | - | - | - | - | - | - | - | - |
| 900 | 711 | 3720 | ★ | 3390 | - | - | - | - | - | - | - | - |
| (36) | (28.0) | (146.5) | ★ | (7474) | - | - | - | - | - | - | - | - |

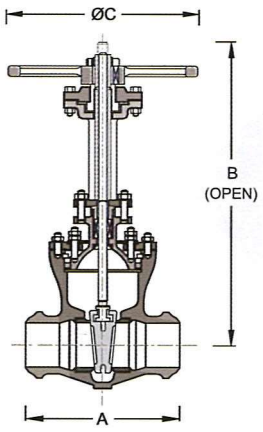
**Materials : Refer Globe Valves materials chart.**

1) Nett in Kg. (lbs) approx. (without obligation) for Flanged Ends. ★Bevel Gear Actuators mandatory. ▸ Butt Weld Ends to ASME B16.25. ▸ End to End dim. for Class 150 Butt Weld Ends as per manufacturer standard. ▸ By-pass arrangement & Pressure Relief device available on request. ▸ Please Specify Working pressure, Temperature & Service conditions. ▸ Valves can be supplied with Electric or Gear Actuators. ▸ Ring Joint, Large or Small Tongue & Groove Flanges are available on request.

# PRESSURE SEAL GATE VALVES

CLASS - 900-1500-2500




## Features :

Heavy duty OS & Y type, Pressure Seal Bonnet, rising stem, non rising hand wheel, renewable seatring. Wall thickness as per ASME B16.34, Valves with most advanced design Features provide the ultimate in dependable, economic flow control.

DESIGN STD :ASME B 16.34 & API 6D

TESTING STD : API 598/API 6D, ASME B16.34

| Test Pressure in bar (psi) | | | |
|---|---|---|---|
| Class | 900 | 1500 | 2500 |
| Hyd. Shell | 230 (3335) | 384 (5568) | 647 (9282) |
| Seat /Back Seat | 169 (2451) | 282 (4089) | 474 (6873) |
| Air Seat | | 6.9 (100) | |

**Dimensions are in mm (inch)**

| SIZE | CLASS-900 | | | | | | CLASS-1500 | | | | | | CLASS-2500 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | ← A → | | B | ØC | ← Wt 1) → | | ← A → | | B | ØC | ← Wt 1) → | | A | B | ØC | Wt1) | | |
| | FE | BWE | | | FE | BWE | FE | BWE | | | FE | BWE | BWE | | | | | |
| 50 | 368 | 216 | 490 | 300 | 58 | 40 | 368 | 216 | 490 | 300 | 58 | 40 | 279 | 480 | 450 | 52 | | |
| (2) | (14.5) | (8.5) | (19.3) | (11.8) | (128) | (88) | (14.5) | (8.5) | (19.3) | (11.8) | (128) | (88) | (11.0) | (18.9) | (17.7) | (115) | | |
| 65 | 419 | 254 | 545 | 450 | 86 | 55 | 419 | 254 | 545 | 450 | 86 | 55 | 330 | 570 | 600 | 79 | | |
| (2 ½ ) | (16.5) | (10.0) | (21.5) | (17.7) | (190) | (121) | (16.5) | (10.0) | (21.5) | (17.7) | (190) | (121) | (13.0) | (22.4) | (23.6) | (174) | | |
| 80 | 381 | 305 | 625 | 450 | 95 | 65 | 470 | 305 | 625 | 600 | 115 | 76 | 368 | 610 | 600 | 105 | | |
| (3) | (15.0) | (12.0) | (24.6) | (17.7) | (209) | (143) | (18.5) | (12.0) | (24.6) | (23.6) | (254) | (168) | (14.5) | (24.0) | (23.6) | (232) | | |
| 100 | 457 | 356 | 680 | 600 | 130 | 87 | 546 | 406 | 680 | 750 | 140 | 120 | 457 | 760 | ★ | 148 | | |
| (4) | (18.0) | (14.0) | (26.8) | (23.6) | (287) | (192) | (21.5) | (16.0) | (26.8) | (29.5) | (309) | (265) | (18.0) | (29.9) | ★ | (326) | | |
| 125 | 559 | 432 | 870 | 600 | 200 | 140 | 673 | 483 | 885 | ★ | 285 | 190 | 533 | 820 | ★ | 450 | | |
| (5) | (22.0) | (17.0) | (34.3) | (23.6) | (441) | (309) | (26.5) | (19.0) | (34.8) | ★ | (628) | (419) | (21.0) | (32.3) | ★ | (992) | | |
| 150 | 610 | 508 | 1050 | ★ | 330 | 205 | 705 | 559 | 1090 | ★ | 440 | 280 | 610 | 1015 | ★ | 870 | | |
| (6) | (24.0) | (20.0) | (41.3) | ★ | (728) | (452) | (27.8) | (22.0) | (42.9) | ★ | (970) | (617) | (24.0) | (40.0) | ★ | (1918) | | |
| 200 | 737 | 660 | 1310 | ★ | 595 | 415 | 832 | 711 | 1495 | ★ | 875 | 560 | 762 | 1505 | ★ | 1050 | | |
| (8) | (29.0) | (26.0) | (51.6) | ★ | (1312) | (915) | (32.8) | (28.0) | (58.9) | ★ | (1929) | (1235) | (30.0) | (59.3) | ★ | (2315) | | |
| 250 | 838 | 787 | 1425 | ★ | 795 | 650 | 991 | 864 | 1595 | ★ | 1325 | 910 | 914 | 1716 | ★ | 1600 | | |
| (10) | (33.0) | (31.0) | (56.1) | ★ | (1753) | (1433) | (39.0) | (34.0) | (62.8) | ★ | (2921) | (2006) | (36.0) | (67.6) | ★ | (3527) | | |
| 300 | 965 | 914 | 1680 | ★ | 1110 | 860 | 1130 | 991 | 1850 | ★ | 2525 | 1950 | 1041 | 2145 | ★ | 1875 | | |
| (12) | (38.0) | (36.0) | (66.1) | ★ | (2447) | (1896) | (44.5) | (39.0) | (72.8) | ★ | (5567) | (4299) | (41.0) | (84.4) | ★ | (4134) | | |

**FE = Flanged End** **BWE = Butt Weld End**

## Materials

| | |
|---|---|
| Body & Bonnet | ASTM A216 Gr. WCB, A217 Gr. WC6/ WC9/C5/C12, A351 Gr. CF8/ CF8M/CF3/CF3M |
| Wedge & Seat Ring | ASTM A216 Gr. WCB A217 Gr. WC6, A351 Gr. CF8/ CF8M/ CF3/ CF3M, Seat faces are satellite |
| Stem & Gland | ASTM A276 TYPE 410 / 304 /316 |
| Yoke Sleeve | Ni-Resist ASTM A439 Gr. D2 |
| Gland Packing | Pre moulded Gratoil rings / Braided + Moulded Grafoil rings.● |
| Pressure Seal Ring | Expanded Graphite |
| Stud / Nut | ASTM A193 Gr. B7/B16/ B8/ B8M/ A194 Gr. 2H/ 7/ 8 / 8M |
| Yoke & Hand Wheel | Carbon Steel, Alloy Steel |
| Surface Protection for Carbon Steel Valves | Prime Coat : Chlorine free with modified alkyd resin unobjectionable in physiological and toxicological respects. Additional external coating : Silver Streak aluminum paint |

1) Nett in Kg. (lbs) approx. (without obligation) ★Bevel Gear Actuators mandatory. ● For Class 2500. ▸ Butt Weld Ends to ASME B16.25. ▸ Class 2500 Valves are with Butt Weld Ends (Short pattern), Flanged Ends available on request. ▸ By-pass arrangement & Pressure Relief device available on request. ▸ Please Specify Working pressure, Temperature & Service conditions. ▸ Valves can be supplied with Electric or Gear Actuators. ▸ Ring Joint, Large or Small Tongue & Groove Flanges are available on request. ▸ Other Materials not mentioned above available on request.

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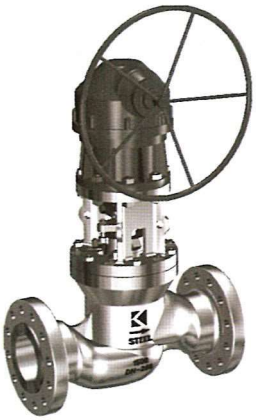
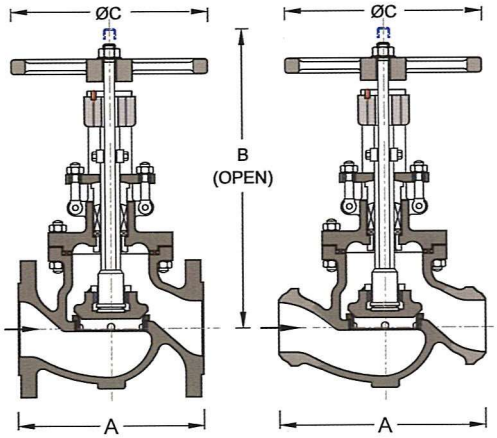
# GLOBE VALVES

CLASS - 150 - 300 - 600






**Features :**

Heavy duty OS & Y type, bolted bonnet, rising or non rising hand wheel, renewable Seatring for Carbon Steel & integral seatring for stainless steel Valves with most advanced design Features provide the ultimate in dependable, economic flow control.

DESIGN STD :BS 1873 TESTING STD : EN 1266-1

| Test Pressure in bar (psi) | | | |
|---|---|---|---|
| Class | 150 | 300 | 600 |
| Hyd. Shell | 30 (435) | 77 (1117) | 155 (2248) |
| Seat /Back Seat | 22 (319) | 57 (827) | 113 (1639) |
| Air Seat | | 6.9 (100) | |

**Dimensions are in mm (inch)**

| SIZE | CLASS-150 | | | | CLASS-300 | | | | CLASS-600 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | A | B | ØC | Wt 1) | A | B | ØC | Wt 1) | A | B | ØC | Wt 1) |
| 15 | 108 | 205 | 100 | 4.1 | 152 | 205 | 100 | 4.5 | - | - | - | - |
| (1/2 ) | (4.3) | (8.1) | (3.9) | (9) | (6.0) | (8.1) | (3.9) | (10) | - | - | - | - |
| 20 | 117 | 210 | 100 | 4.6 | 178 | 210 | 100 | 6.2 | - | - | - | - |
| (3/4) | (4.6) | (8.3) | (3.9) | (10) | (7.0) | (8.3) | (3.9) | (13) | - | - | - | - |
| 25 | 127 | 230 | 150 | 6.1 | 203 | 230 | 150 | 7.2 | - | - | - | - |
| (1) | (5.0) | (9.1) | (5.9) | (13) | (8.0) | (9.1) | (5.9) | (16) | - | - | - | - |
| 40 | 165 | 260 | 200 | 9.2 | 229 | 260 | 200 | 13 | - | - | - | - |
| (1 ½ ) | (6.5) | (10.2) | (7.9) | (20) | (9.0) | (10.2) | (7.9) | (29) | - | - | - | - |
| 50 | 203 | 295 | 200 | 14.5 | 267 | 295 | 200 | 17.2 | 292 | 330 | 250 | 40 |
| (2) | (8.0) | (11.6) | (7.9) | (32.0) | (10.5) | (11.6) | (7.9) | (38) | (11.5) | (13.0) | (9.8) | (88) |
| 65 | 216 | 290 | 200 | 30 | 292 | 351 | 250 | 35 | 330 | 347 | 300 | 55 |
| (2½) | (8.5) | (11.4) | (7.9) | (66) | (11.5) | (13.8) | (9.8) | (77) | (13.0) | (13.7) | (11.8) | (121) |
| 80 | 241 | 345 | 250 | 36 | 318 | 360 | 300 | 46 | 356 | 408 | 450 | 70 |
| (3) | (9.5) | (13.6) | (9.8) | (79) | (12.5) | (14.2) | (11.8) | (101) | (14.0) | (16.1) | (17.7) | (154) |
| 100 | 292 | 349 | 300 | 52 | 356 | 413 | 450 | 73 | 432 | 480 | 600 | 121 |
| (4) | (11.5) | (13.7) | (11.8) | (115) | (14.0) | ( 16.3) | (17.7) | (161) | (17.0) | (18.9) | (23.6) | (267) |
| 125 | 356 | 410 | 300 | 77 | 400 | 471 | 450 | 110 | 508 | 595 | ★ | 270 |
| (5) | (14.0) | (16.1) | (11.8) | (170) | (15.7) | (18.5) | (17.7) | (243) | (20.0) | (23.4) | ★ | (595) |
| 150 | 406 | 450 | 450 | 92 | 444 | 567 | 600 | 166 | 559 | 1030 | ★ | 350 |
| (6) | (16.0) | (17.7) | (17.7) | (203) | (17.5) | (22.3) | (23.6) | (366) | (22.0) | (406) | ★ | (772) |
| 200 | 495 | 535 | ★ | 163 | 559 | 800 | ★ | 205 | 660 | 1150 | ★ | 625 |
| (8) | (19.5) | (21.1) | ★ | (359) | (22.0) | (31.5) | ★ | (452) | (26.0) | (45.3) | ★ | (1378) |
| 250 | 622 | 815 | ★ | 242 | 622 | 1235 | ★ | 450 | 787 | 1255 | ★ | 850 |
| (10) | (24.5) | (32.1) | ★ | (534) | (24.5) | (48.6) | ★ | (992) | (31.0) | (49.4) | ★ | (1874) |
| 300 | 698 | 900 | ★ | 380 | 711 | 1435 | ★ | 735 | 838 | 1330 | ★ | 1030 |
| (12) | (27.5) | (35.4) | ★ | (683) | (28.0) | (56.5) | ★ | (1620) | (33.0) | (52.4) | ★ | (2271) |
| 350 | 787 | 1080 | ★ | 485 | - | - | - | - | - | - | - | - |
| (14) | (31.0) | (42.5) | ★ | (1069) | - | - | - | - | - | - | - | - |

## Materials

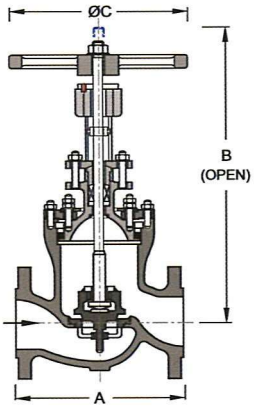
| | |
|---|---|
| Body & Bonnet | ASTMA216, Gr. WCB, A217 6r. WC6/WC9/.C5/.C12, A352 Gr LCB.A351 Gr.CF8, CF8M / CF3 / CF3M |
| Wedge / Disc & Seat Ring | ASTM A217 Gr. Ca15 or WCB + 13% Cr. Facing ● WC6 + Steliited, A351 Gr. CF8. CF8M / CF3 / CF3M |
| Stem, Gland & Bonnet Bush | ASTM A276 TYPE 410/ 304/ 316 |
| Yoke Sleeve | Ni-Resist ASTM A439 Gr. D2 |
| Gland Packing | Pre moulded Grafoil rings / Braided Grafoil rings / PTFE |
| Gasket | Spiral Wound 304 / 316 with CAF / Graphite / PTFE filled |
| Stud / Nut | ASTM A193 Gr. B7/B16/ B8/ B8M/ A194 Gr. 2H/ 7/ 8 / 8M |
| Hand Wheel | Carbon Steel |
| Surface Protection for Carbon Steel Valves | Prime Coat : Chlorine free with modified alkyd resin unobjectionable in physiological and toxicological respects. Additional external coating : Silver Streak aluminum paint |

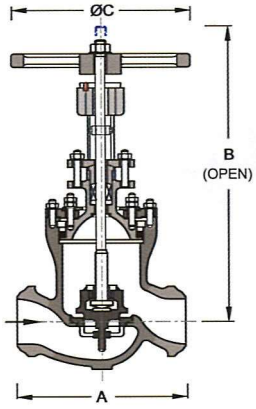
1) Nett in Kg. (lbs) approx. (without obligation) for Flanged Ends. ★Bevel Gear Actuators mandatory. ● Applicable (for size 65 (2'1/2) & above Valves. ▸ Butt Weld Ends to ASME 316.25 ▸ Steliited Seatring & Wedge / Disc available on request ▸ Please Specify Working pressure, Temperature '& Service conditions. ▸ Valves can be supplied with Electric or Gear Actuators. ▸ Ring Joint, Large or Small Tongue & Groove Flanges are available on request. ▸ Other Materials not mentioned above available on request

# PRESSURE SEAL GLOBE VALVES

CLASS - 900-1500-2500

KFEL
KHIMJI FLOW EQUIPMENTS PVT. LTD.




## Features :

Heavy duty OS & Y type. Pressure Seal Bonnet, rising or non rising hand wheel, renewable seatring, wall thickness as per ASME B16.34, Valves with most advanced design Features provide the ultimate in dependable, economic flow control.

DESIGN STD :ASME B 16.34
TESTING STD : API 598, ASME B16.34

| Test Pressure in bar (psi) | | | |
|---|---|---|---|
| Class | 900 | 1500 | 2500 |
| Hyd. Shell | 230 (3335) | 384 (5568) | 647 (9382) |
| Seat /Back Seat | 169 (2451) | 282 (4089) | 474 (6873) |
| Air Seat | | 6.9 (100) | |

**Dimensions are in mm (inch)**

| SIZE | CLASS-900 | | | | | | CLASS-1500 | | | | | | CLASS-2500 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | ← A → | | B | ØC | ← Wt 1) → | | ← A → | | B | ØC | ← Wt 1) → | | A | B | ØC | Wt1) |
| | FE | BWE | | | FE | BWE | FE | BWE | | | FE | BWE | BWE | | | |
| 50 | 368 | 216 | 570 | 600 | 85 | 51 | 368 | 216 | 570 | 600 | 85 | 60 | 279 | 610 | 750 | 75 |
| (2) | (14.5) | (8.5) | (22.4) | (23.6) | (187) | (112) | (14.5) | (8.5) | (22.4) | (23.6) | (157) | (132) | (11.0) | (24.0) | (29.5) | (165) |
| 65 | 419 | 254 | 580 | 600 | 100 | 53 | 419 | 254 | 580 | 600 | 100 | 53 | 330 | 690 | 750 | 102 |
| (2 ½ ) | (16.5) | (10.0) | (22.8) | (23.6) | (220) | (117) | (16.5) | (10.0) | (22.8) | (23.6) | (220) | (117) | (13.0) | (27.2) | (29.5) | (225) |
| 80 | 381 | 305 | 515 | 600 | 105 | 55 | 470 | 305 | 630 | ★ | 110 | 90 | 368 | 650 | ★ | 105 |
| (3) | (15.0) | (12.0) | (20.3) | (23.6) | (231) | (121) | (18.5) | (12.0) | (24.8) | ★ | (243) | (198) | (14.5) | (25.6) | ★ | (231) |
| 100 | 457 | 356 | 715 | ★ | 140 | 125 | 546 | 406 | 715 | ★ | 235 | 110 | 457 | 1210 | ★ | 440 |
| (4) | (18.0) | (14.0) | (28.1) | ★ | (309) | (276) | (21.5) | (16.0) | (28.1) | ★ | (518) | (243) | (18.0) | (47.6) | ★ | (970) |
| 125 | 559 | 432 | 1010 | ★ | 225 | 202 | 673 | 483 | 1025 | ★ | 305 | 227 | 533 | 790 | ★ | 490 |
| (5) | (22.0) | (17.0) | (39.8) | ★ | (496) | (445) | (26.5) | (19.0) | (40.4) | ★ | (672) | (500) | (21.0) | (31.1) | ★ | (1080) |
| 150 | 610 | 508 | 1150 | ★ | 265 | 325 | 705 | 559 | 1115 | ★ | 466 | 355 | 610 | 1390 | ★ | 515 |
| (6) | (24.0) | (20.0) | (45.3) | ★ | (584) | (717) | (27.8) | (22.0) | (43.9) | ★ | (1027) | (783) | (24.0) | (54.7) | ★ | (1135) |
| 200 | 737 | 660 | 1230 | ★ | 680 | 628 | 832 | 711 | 1200 | ★ | 780 | 810 | 762 | 1455 | ★ | 785 |
| (8) | (29.0) | (26.0) | (48.4) | ★ | (1499) | (1385) | (32.8) | (28.0) | (47.2) | ★ | (1720) | (1786) | (30.0) | (57.3) | ★ | (1731) |
| 250 | 838 | 787 | 1370 | ★ | 1300 | 827 | 991 | 864 | 1320 | ★ | 1500 | 1360 | - | - | - | - |
| (10) | (33.0) | (31.0) | (53.9) | ★ | (2866) | (1823) | (39.0) | (34.0) | (52.0) | ★ | (3307) | (2998) | - | - | - | - |
| 300 | 965 | 914 | 1520 | ★ | 1900 | 1720 | 1130 | 991 | 1430 | ★ | 2300 | 1940 | - | - | - | - |
| (12) | (38.0) | (36.0) | (59.8) | ★ | (4189) | (3792) | (44.5) | (39.0) | (56.3) | ★ | (5070) | (4277) | - | - | - | - |

**FE = Flanged End** **BWE = Butt Weld End**

## Materials

| | |
|---|---|
| Body & Bonnet | ASTM A216 Gr. WCB, A217 Gr. WC6 / WC9 / C5 / C12, A351 Gr. CF8 / CF8M / CF3 / CF3M |
| Disc & Seat Ring | ASTM A216 Gr. WCB, A217 Gr. WC6, A351 Gr. CF8 / CF8M / CF3 / CF3M, Seat faces are steliited |
| Stem & Gland | ASTM A276 TYPE 410/304/316 |
| Yoke Sleeve | Ni-Resist ASTM A439 Gr. D2 |
| Gland Packing | Pre moulded Grafoil rings / Braided + Moulded Grafoil rings ● |
| Pressure Seal Ring | Expanded Graphite |
| Stud / Nut | ASTM A193 Gr. B7/B16/B8 / B8M / A194 Gr, 2H / 7 / 8 / 8M |
| Yoke & Hand Wheel | Carbon Steel, Alloy Steel |
| Surface Protection for Carbon Steel Valves | Prime Coat : Chlorine free with modified alkyd resin unobjectionable in physiological and toxicological respects. Additional external coating : Silver Streak aluminum paint |

1) Nett in Kg. (lbs) approx. (without obligation) ★Bevel Gear Actuators mandatory. ● For Class 2500. ▸ Butt Weld Ends to ASME B16.25. ▸ Class 900,1500 & 2500 Valves are with Butt Weld Ends (Short pattern). Flanged Ends available on request. ▸ Please Specify Working pressure, Temperature & Service conditions. ▸ Valves can be supplied with Electric or Gear Actuators. ▸ Ring Joint, Large or Small Tongue & Groove Flanges are available on request. ▸ Other Materials not mentioned above available on request.

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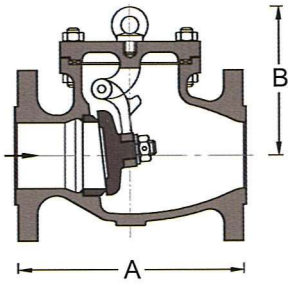
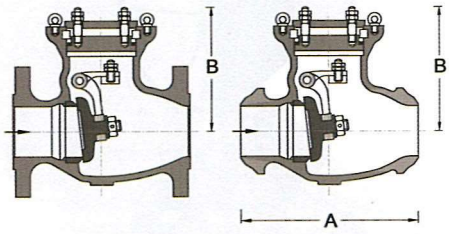
KHIMJI FLOW EQUIPMENTS PVT. LTD.

# BOLTED COVER & PRESSURE SEAL SWING CHECK VALVES

CLASS - 150 - 300 - 600 -900 - 1500 - 2500






**DESIGN STD** : API 60, BS 1868 FOR CLASS 150, 300 & 600
: API 6D, ASME B16.34 FOR CLASS 900, 1500 & 2500

**TESTING STD** : API 6D, EN 12266-1 FOR CLASS 150, 300 & 600
: API 6D, API 598 FOR CLASS 900, 1500 & 2500

### Features :

Heavy duty bolted cover/Pressure seal cover, with renewable seatring for Carbon Steel & integral seatring for stainless steel, Cover mounted/body mounted disc. Vlaves with most advanced design Features provide the ultimate in dependable, economical flow check.

| Test Pressure in bar (psi) | | | | | | |
|---|---|---|---|---|---|---|
| Class | 150 | 300 | 600 | 900 | 1500 | 2500 |
| Hyd. Shell | 30 (435) | 77 (1117) | 155 (2248) | 230 (3335) | 384 (5568) | 647 (9382) |
| Seat | 22 (319) | 57 (827) | 113 (1639) | 169 (2451) | 282 (4089) | 474 (6873) |
| Min. Seat | 5.5 (80) | 14 (203) | 28 (406) | 42 (609) | 70.5 (1022) | 118.5 (17182) |

## Dimensions are in mm (inch)

| BOLTED COVER | | | | | | | | | | PRESSURE SEAL | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | CLASS-150 | | | CLASS-300 | | | CLASS-600 | | | CLASS-900 | | | CLASS-1500 | | | CLASS-2500 | | |
| mm (inch) | A | B | Wt 1) | A | B | Wt 1) | A | B | Wt 1) | A | B | Wt 1 | A | E | Wt 1) | A | B | Wt 1) |
| 40 | 165 | 95 | 6.8 | 241 | 95 | 10.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| (1 ½) | (6.5) | (3.7) | (15) | (9.5) | (3.7) | (23) | - | - | - | - | - | - | - | - | - | - | - | - |
| 50 | 203 | 115 | 11.5 | 267 | 120 | 18 | 292 | 138 | 25 | 216 | 180 | 18 | 216 | 180 | 18 | 279 | 215 | 43 |
| (2) | (8.0) | (4.5) | (25) | (10.5) | (4.7) | (40) | (11.5) | (5.4) | (55) | (8.5) | (7.1) | (40) | (8.5) | (7.1) | (40) | (11.0) | (8.5) | (95) |
| 65 | 216 | 120 | 17 | 292 | 132 | 21 | 330 | 145 | 32 | 254 | 195 | 29 | 254 | 195 | 26 | 330 | 285 | 72 |
| (2 ½) | (8.5) | (4.7) | (38) | (11.5) | (5.2) | (46) | (13.0) | (5.7) | (71) | (10.0) | (7.7) | (64) | (10.0) | (7.7) | (57) | (13.0) | (11.2) | (159) |
| 80 | 241 | 135 | 25 | 318 | 150 | 34 | 356 | 165 | 62 | 305 | 235 | 34 | 305 | 235 | 38 | 368 | 320 | 91 |
| (3) | (9.5) | (5.3) | (55) | (12.5) | (5.9) | (75) | (14.0) | (6.5) | (137) | (12.0) | (9.3) | (75) | (12.0) | (9.3) | (84) | (14.5) | (12.6) | (201) |
| 100 | 292 | 150 | 41 | 356 | 170 | 54 | 432 | 190 | 115 | 356 | 265 | 47 | 406 | 265 | 83 | 457 | 390 | 125 |
| (4) | (11.5) | (5.9) | (90) | (14.0) | (6.7) | (119) | (17.0) | (7.5) | (254) | (14.0) | (10.4) | (104) | (16.0) | (10.4) | (183) | (18.0) | (15.4) | (276) |
| 125 | 330 | 170 | 56 | 400 | 210 | 75 | 508 | 220 | 165 | 432 | 310 | 69 | 483 | 310 | 114 | 533 | 480 | 190 |
| (5) | (13.0) | (6.7) | (124) | (15.7) | (8.3) | (165) | (20.0) | (8.7) | (364) | (17.0) | (12.2) | (152) | (19.0) | (12.2) | (251) | (21.0) | (18.9) | (419) |
| 150 | 356 | 195 | 73 | 444 | 210 | 106 | 559 | 255 | 210 | 508 | 325 | 106 | 559 | 325 | 145 | 610 | 570 | 274 |
| (6) | (14.0) | (7.7) | (161) | (17.5) | (8.3) | (234) | (22.0) | (10.0) | (463) | (20.0) | (12.8) | (234) | (22.0) | (12.8) | (320) | (24.0) | (22.4) | (604) |
| 200 | 495 | 220 | 103 | 533 | 255 | 168 | 660 | 300 | 355 | 660 | 460 | 275 | 711 | 460 | 353 | 762 | 675 | 480 |
| (8) | (19.5) | (8.7) | (227) | (21.0) | (10.0) | (353) | (26.0) | (11.8) | (783) | (26.0) | (18.1) | (606) | (28.0) | (18.1) | (778) | (30.0) | (26.6) | (1058) |
| 250 | 622 | 260 | 106 | 622 | 305 | 254 | 787 | 355 | 580 | 787 | 535 | 470 | 864 | 535 | 602 | - | - | - |
| (10) | (24.5) | (10.2) | (353) | (24.5) | (12.0) | (560) | (31.0) | (13.2) | (1279) | (31.0) | (21.1) | (1036) | (34.0) | (21.1) | (1327) | - | - | - |
| 300 | 698 | 310 | 224 | 711 | 350 | 355 | 838 | 395 | 725 | 914 | 630 | 546 | 991 | 630 | 691 | - | - | - |
| (12) | (27.5) | (12.2) | (494) | (28.0) | (13.8) | (783) | (33.0) | (15.6) | (1598) | (36.0) | (24.8) | (1204) | (39.0) | (24.8) | (1523) | - | - | - |
| 350 | 787 | 365 | 350 | 838 | 390 | 620 | - | - | - | - | - | - | - | - | - | - | - | - |
| (14) | (31.0) | (14.4) | (772) | (33.0) | (15.4) | (1367) | - | - | - | - | - | - | - | - | - | - | - | - |
| 400 | 864 | 505 | 472 | 864 | 530 | 680 | - | - | - | - | - | - | - | - | - | - | - | - |
| (16) | (34.0) | (19.9) | (1041) | (34.0) | (20.9) | (1499) | - | - | - | - | - | - | - | - | - | - | - | - |
| 450 | 978 | 565 | 535 | 978 | 590 | 1250 | - | - | - | - | - | - | - | - | - | - | - | - |
| (18) | (38.5) | (22.2) | (1179) | (38.5) | (23.2) | (2756) | - | - | - | - | - | - | - | - | - | - | - | - |
| 500 | 978 | 610 | 870 | 1016 | 655 | 1460 | - | - | - | - | - | - | - | - | - | - | - | - |
| (20) | (38.5) | (24.0) | (1918) | (40.0) | (25.8) | (3219) | - | - | - | - | - | - | - | - | - | - | - | - |
| 600 | 1295 | 740 | 1090 | 1346 | 790 | 2055 | - | - | - | - | - | - | - | - | - | - | - | - |
| (24) | (51.0) | (29.1) | (2403) | (53.0) | (31.1) | (4531) | - | - | - | - | - | - | - | - | - | - | - | - |

## Materials :

| | |
|---|---|
| Body / Cover / Hinge / Bracket | ASTM A216 Gr. WCB. A217 Gr. WC6 / WC9 / C5 / C12, A352 Gr. LCB, A351 Gr. CF8 /CF8M /CF3 /CF3M |
| Disc / Seat Ring | ASTM A216 Gr. WCB, A351 Gr. CF8 / CF8M / CF3 /CF3M |
| Gasket | Spiral Wound 304 / 316 with CAF / Graphite / PTFE filled (Applicable for bolted cover Valves) |
| Pressure Seal Ring | Expanded Graphite (Applicable for Pressure Seal Check Valves) |
| Stud / Nut | ASTM A193 Gr. B7 / B16 / B8/ B8M /A194 Gr. 2H /7/8/8M |
| Surface Protection for Carbon Steel Valves | Prime Coat : Chlorine free with modified alkyd resin unobjectionable in physiological and toxicological respects. Additional external coating : Silver Streak aluminium paint. |

1) Nett in Kg. (lbs) approx. (without obligation) for Flanged Ends Class. 150,300 & 600, Butt Weld Ends Class 900, 1500 & 2500 (Short Pattern) ▸ Butt Weld Ends to ASME B16.25. ▸ Class 900, 1500 & 2500 Flanged Ends valves available on request, Face to Face Dimensions equal to Globe Valve. ▸ Disc is mounted in cover for sizes 40 (1 ½) to 300 (12) Class 150, 300 & 600 Valves and body mounted for remaining Sizes & Classes. ▸ Seal faces of Disc & Seatring of WCB material are 13% Chrome overlaid for Class 150, 300 & 600 Valve. ▸ Stellited Seated faces for Class 900, 1500 & 2500 Valves ▸ Please Specify Working Pressure, Temperature & Service conditions. ▸ Valves can be supplied with Ring Joint, Large or Small Tongue & Groove. ▸ Other Materials not mentioned above available on request.

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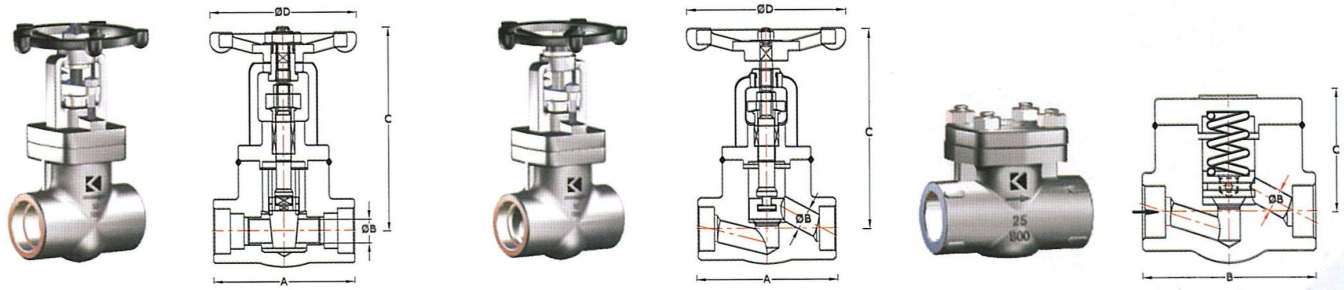
KHIMJI FLOW EQUIPMENTS PVT. LTD.

# FORGED STEEL GATE, GLOBE & CHECK VALVES

CLASS - 800 - 1500 - 2500




DESIGN STD : API 602, BS 5352 FOR GATE VALVES
:BS 5352 FOR GLOBE & CHECK VALVES
TESTING STD : API 598, EN 12266-1

| Test Pressure in bar (psi) | | |
|---|---|---|
| Class | 800 | 1500 |
| Hyd. Shell | 207 (3002) | 384 (5568) |
| Seat/Back Seat | 152 (2205) | 282 (4089) |

## Features :

Heavy duty compact OS & Y type, bolted bonnet/ cover, rising stem, with renewable seatring Valves; Piston Lift Check Valves with spring loaded disc; resulting with most advanced design Features provide the ultimate in dependable, economical flow control.

SE=SCREWED ENDS TO NPT(F) OR BSP (F) OR BSPT(F)

SWE = SOCKET WELD ENDS TO ASME B16.11

BWE = BUTT WELD ENDS TO ASME B16.25

**Dimensions are in mm (inch)** — **SB = Standard bore RB= Reduced bore**

## CLASS-800

| SIZE | GATE | GLOBE & CHECK | | | GATE | | GLOBE | | CHECK | | GATE | | GLOBE | | CHECK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | ← A → | | ØB | | ← C (Open) → | | | | | | ← WT 1) → | | | | | |
| | SB | RB | SB | RB | SB | RB | SB | RB | SB | RB | SB | RB | SB | RB | SB | RB |
| 8 | 82 | 73 | 82 | 73 | 6.4 | 6.4 | 132 | 116 | 126 | 114 | 60 | 50 | 2.50 | 2.20 | 2.68 | 2.26 | 2.00 | 1.46 |
| (1/4) | (3.2) | (2.9) | (3.2) | (2.9) | (0.25) | (0.25) | (5.2) | (4.6) | (5.0) | (4.5) | (2.4) | (2.0) | (5.5) | (4.9) | (5.9) | (5.0 | (4.4) | (3.2) |
| 10 | 82 | 73 | 82 | 73 | 8.0 | 6.4 | 132 | 116 | 126 | 114 | 60 | 50 | 2.50 | 2.20 | 2.68 | 2.26 | 2.00 | 1.46 |
| (3/8) | (3.2) | (2.9) | (3.2) | (2.9) | (0.31) | (0.25) | (5.2) | (4.6) | (5.0) | (4.5) | (2.4) | (2.0) | (5.5) | (4.9) | (5.9) | (5.0) | (4.4) | (3.2) |
| 15 | 82 | 73 | 82 | 73 | 12.0 | 9.0 | 132 | 116 | 126 | 114 | 60 | 50 | 2.50 | 2.20 | 2.68 | 2.26 | 2.00 | 1.46 |
| (1/2) | (3.2) | (2.9) | (3.2) | (2.9) | (0.47) | (0.35) | (5.2) | (4.6) | (5.0) | (4.5) | (2.4) | (2.0) | (5.5) | (4.9) | (5.9) | (5.0) | (44) | (3.2) |
| 20 | 90 | 82 | 108 | 82 | 17.5 | 12.0 | 150 | 132 | 153 | 126 | 65 | 60 | 3.30 | 2.50 | 3.50 | 2.68 | 2.50 | 2.00 |
| (3/4) | (3.5) | (3.2) | (4.3) | (3.2) | (0.68) | (0.47) | (5.9) | (5.2) | (6.0) | (5.0) | (2.6) | (2.4) | (7.3) | (5.5) | (7.7) | (5.9) | (5.5) | (4.4) |
| 25 | 127 | 90 | 152 | 108 | 22.5 | 17.5 | 194 | 150 | 196 | 153 | 90 | 65 | 7.60 | 3.30 | 8.06 | 3.50 | 6.10 | 2.50 |
| (1) | (5.0) | (3.5) | (6.0) | (4.3) | (0.88) | (0.68) | (7.6) | (5.9) | (7.7) | (6.0) | (3.5) | (2.6) | (16.8) | (7.3) | (17.8) | (7.7) | (13.4) | (5.5) |
| 40 | 148 | 127 | 148 | 152 | 35.0 | 29.5 | 234 | 194 | 257 | 196 | 125 | 90 | 9.50 | 7.60 | 10.00 | 8.06 | 8.50 | 6.10 |
| (1 ½) | (5.8) | (5.0) | (5.8) | (6.0) | (1.37) | (1.16) | (9.2) | (7.6) | (10.1) | (7.7) | (4.9) | (3.5) | (20.9) | (16.8) | (22.0) | (17.8) | (18.7) | (13.4) |
| 50 | - | 148 | - | 148 | - | 35.0 | - | 234 | - | 257 | - | 125 | - | 9.50 | - | 10.00 | - | 8.50 |
| (2) | - | (5.8) | - | (5.8) | - | (1.37) | - | (9.2) | - | (10.1) | - | (4.9) | - | (20.9) | - | (22.0) | - | (18.7) |

## Class – 1500

| SIZE | GATE GLOBE CHECK | | | | | GATE GLOBE CHECK | | | |
|---|---|---|---|---|---|---|---|---|---|
| mm (inch) | A | ØB | ← C (Open) → | | | ØD | ← WT 1) → | | |
| 15 | 88 | 9 | 173 | 178 | 54 | 110 | 2.3 | 2.4 | 1.6 |
| (1/2) | (3.5) | (0.3) | (6.8) | (7.0) | (2.1) | (4.3) | (5.0) | (5.3) | (3.5) |
| 20 | 92 | 12 | 180 | 190 | 68 | 110 | 3.3 | 3.4 | 2.4 |
| (3/4) | (3.6) | (0.5) | (7.1) | (7.5) | (2.7) | (4.3) | (7.3) | (7.5) | (5.3) |
| 25 | 106 | 15 | 216 | 222 | 72 | 170 | 4.0 | 4.2 | 2.9 |
| (1) | (4.2) | (0.6) | (8.5) | (8.7) | (2.8) | (6.7) | (8.8) | (9.3) | (6.4) |
| 40 | 128 | 27 | 249 | 250 | 102 | 170 | 12.0 | 13.5 | 9.0 |
| (1 ½) | (5.0) | (1.1) | (9.8) | (9.8) | (4.0) | (6.7) | (26.5) | (29.8) | (19.8) |
| 50 | 140 | 34 | 292 | 296 | 112 | 200 | 13.6 | 14.2 | 9.6 |
| (2) | (5.5) | (1.3) | (11.5) | (11.6) | (4.4) | (7.9) | (30.0) | (31.3) | (21.2) |

## Class - 2500

| GATE GLOBE CHECK | | | | | GATE GLOBE CHECK | | | |
|---|---|---|---|---|---|---|---|---|
| A | ØB | ← C (Open) → | | | ØD | ← WT 1) → | | |
| 106 | 11 | 216 | 217 | 72 | 200 | 4.0 | 4.2 | 2.9 |
| (4.2) | (0.4) | (8.5) | (8.5) | (2.8) | (7.9) | (8.8) | (9.2) | (6.4) |
| 128 | 14 | 225 | 242 | 102 | 200 | 9.8 | 10.3 | 6.7 |
| (5.0) | (0.6) | (8.9) | (9.5) | (4.0) | (7.9) | (21.6) | (22.7) | (14.8) |
| 140 | 19 | 269 | 281 | 112 | 200 | 13.6 | 14.2 | 9.6 |
| (5.5) | (0.7) | (10.6) | (11.1) | (4.4) | (7.9) | (30.0) | (31.3) | (21.2) |
| - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - |

## Materials : Refer Globe Valves materials chart.

| | |
|---|---|
| Body, Bonnet, Gland flange & Cover | ASTM A105 / ASTM A182 Gr. F11, F22, F5, F9, F304 & F316. |
| Wedge / Plug | ASTM A217 Gr. CA15 / ASTM A351 Gr. CF8 /CF8M |
| Disc/Seat Ring / Stem & Gland | ASTM A276 TYPE 410 / 304/ 316 |
| Yoke Sleeve | S.G. Iron EN 1563 NO. EN-JS 1050 /Ni – Resist ASTM A439 Gr. D2 |
| Packing | Pre moulded Grafoil rings /Braided + Moulded Grafoil rings.● |
| Gasket | Spiral Wound 304/316 with CAF/Graphite/PTFE filled |
| Spring | ASTM A312 TYPE 316 |
| Stud/Nut | ASTM A193 Gr. B7/B16/B8/B8M/A914 Gr.2H/7/8/8M |
| Hand Wheel | Malleable *iron* |
| Surface Protection for Carbon Steel Valves | Prime Coat : Chlorine free with modified alkyd resin unobjectionable in physiological and toxicololgical respects. Additional external coating : Silver Streak aluminium paint. |

1) Nett in Kg. (lbs) approx. (without obligation) ● For Class 2500 ▸ For Class 800, Gland Bolting shall be either Eye Bolt or Stud Bolting Design, dimension ØD refer sales drawings. ▸ Welded Flanged ends Valves available on request. ▸ Stellited Seatring & Wedge/Plug/ Disc & Seal Welded Bonnet as standard for Class 1500 & 2500, available on request for Class 800 valves. ▸ When Stellited, Body Seat is integral as standard for Class 800, 1500 & 2500 Globe & Lift Check Valves. ▸ Class 2500 Y-Pattern Globe & Lift Check Valves, Straight Pattern Gate Valves are also available on request. ▸ Please Specify Working pressure. Temperature & Service conditions. ▸ Other Materials not mentioned above available on request.

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# TECHNICAL DATA

## TORQUE VALUES IN Nm (ft. lbs) 100 % ΔP

| SIZE | GATE CLASS | | | | | | GLOBE CLASS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm(inch) | 150 | 300 | 600 | 900 | 1500 | 2500 | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 15 | 2 | 5 | - | - | - | - | 2 | 6 | - | - | - | - |
| (1/2) | (1.5) | (3.7) | - | - | - | - | (1.5) | (4.4) | - | - | - | - |
| 20 | 3 | 6 | - | - | - | - | 3 | 8 | - | - | - | - |
| (3/4) | (2.2) | (4.4) | - | - | - | - | (2.2) | (5.9) | - | - | - | - |
| 25 | 4 | 10 | - | - | - | - | 5 | 15 | - | - | - | - |
| (1) | (3.0) | (7.4) | - | - | - | - | (3.7) | (11.1) | - | - | - | - |
| 40 | 7 | 17 | - | - | - | - | 8 | 22 | - | - | - | - |
| (1 ½ ) | (5.2) | (12.5) | - | - | - | - | (5.9) | (16.2) | - | - | - | - |
| 50 | 80 | 20 | 23 | 54 | 90 | 116 | 9 | 24 | 57 | 127 | 212 | 238 |
| (2) | (5.9) | (14.8) | (17.0) | (39.9) | (66.4) | (85.6) | (6.6) | (17.1) | (42.1) | (93.7) | (156.5) | (175.6) |
| 65 | 9 | 22 | 33 | 77 | 128 | 145 | 13 | 41 | 92 | 181 | 302 | 433 |
| (2 ½ ) | (6.6) | (16.2) | (24.4) | (56.8) | (94.5) | (107.0) | (9.6) | (30.3) | (67.9) | (133.6) | (222.9) | (319.6) |
| 80 | 13 | 35 | 48 | 116 | 188 | 192 | 20 | 61 | 136 | 314 | 495 | 700 |
| (3) | (9.6) | (25.8) | (35.4) | (85.6) | (138.7) | (141.7) | (14.8) | (45.0) | (100.4) | (231.7) | (365.3) | (516.6) |
| 100 | 20 | 60 | 73 | 169 | 269 | 309 | 42 | 111 | 287 | 525 | 795 | 1072 |
| (4) | (14.8) | (44.3) | (53.9) | (124.7) | (198.5) | (228.0) | (31.0) | (81.9) | (211.8) | (387.5) | (586.7) | (791.1) |
| 125 | 28 | 92 | 95 | 287 | 449 | 568 | 62 | 193 | 532 | 825 | 1197 | 2021 |
| (5) | (20.7) | (68.0) | (70.1) | (211.8) | (331.4) | (419.2) | (45.8) | (142.4) | (392.6) | (608.9) | (883.4) | (1491.5) |
| 150 | 40 | 104 | 219 | 427 | 671 | 843 | 101 | 292 | 810 | 1455 | 1840 | 3013 |
| (6) | (29.5) | (76.8) | (161.6) | (315.1) | (495.2) | (622.1) | (74.5) | (215.5) | (597.8) | (1073.8) | (1357.9) | (2223.6) |
| 200 | 41 | 115 | 337 | 825 | 1299 | 2020 | 191 | 616 | 1431 | 2828 | 5829 | 7106 |
| (8) | (30.3) | (84.9) | (248.7) | (608.9) | (958.7) | (1490.8) | (141.0) | (454.6) | (1056.1) | (2087.1) | (4301.8) | (5244.2) |
| 250 | 66 | 186 | 586 | 1034 | 1728 | 2285 | 334 | 1043 | 2454 | 3729 | 11674 | - |
| (10) | (48.7) | (137.3) | (432.5) | (763.1) | (1275.3) | (1686.3) | (246.5) | (769.7) | (1811.1) | (2752.0) | (8615.4) | - |
| 300 | 92 | 349 | 915 | 1598 | 3091 | 6219 | 509 | 1578 | 4014 | 8770 | 16382 | - |
| (12) | (67.9) | (257.6) | (675.3) | (1179.3) | (2281.2) | (4589.6) | (375.6) | (1164.6) | (2962.3) | (6472.3) | (12089.9) | - |
| 350 | 130 | 452 | - | - | - | - | 618 | - | - | - | - | - |
| (14) | (95.9) | (333.6) | - | - | - | - | (456.1) | - | - | - | - | - |
| 400 | 171 | 672 | - | - | - | - | - | - | - | - | - | - |
| (16) | (126.2) | (495.9) | - | - | - | - | - | - | - | - | - | - |
| 450 | 239 | 800 | - | - | - | - | - | - | - | - | - | - |
| (18) | (176.4) | (590.4) | - | - | - | - | - | - | - | - | - | - |
| 500 | 315 | 1151 | - | - | - | - | - | - | - | - | - | - |
| (20) | (232.5) | (849.4) | - | - | - | - | - | - | - | - | - | - |
| 600 | 512 | 1822 | - | - | - | - | - | - | - | - | - | - |
| (24) | (377.9) | (1344.6) | - | - | - | - | - | - | - | - | - | - |
| 650 | 645 | 2005 | - | - | - | - | - | - | - | - | - | - |
| (26) | (476.0) | (1479.7) | - | - | - | - | - | - | - | - | - | - |
| 700 | 820 | 2465 | - | - | - | - | - | - | - | - | - | - |
| (28) | (605.2) | (1819.2) | - | - | - | - | - | - | - | - | - | - |
| 750 | 935 | 3370 | - | - | - | - | - | - | - | - | - | - |
| (30) | (690.0) | (2487.1) | - | - | - | - | - | - | - | - | - | - |
| 800 | 1150 | 4080 | - | - | - | - | - | - | - | - | - | - |
| (32) | (848.7) | (3011.0) | - | - | - | - | - | - | - | - | - | - |
| 900 | 1365 | 4729 | - | - | - | - | - | - | - | - | - | - |
| (36) | (1007.4) | (3490.0) | - | - | - | - | - | - | - | - | - | - |

■ FOR GEAR & ELECTRICAL OPERATOR MULTIPLY THE ABOVE VALUE BY MINIMUM OF 1.2

## APPLICATIONS

1) SATURATED & SUPER HEATED STEAM
2) OIL & GAS
3) HYDRO CARBONS
4) NACE & SOUR SERVICES
5) LNG & NATURAL GAS
6) STEEL & POWER PLANT
7) PETRO CHEMICAL & REFINERIES
8) OFF- SHORE & ON - SHORE PLATFORMS
9) CHEMICAL & PROCESS INDUSTRIES
10) OXYGEN & HYDROGEN SERVICES

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