

Delta Industrial™ Class 150

Knife Gate Valves

Technical Specifications



Minerals



- Heavy duty construction ensures long service life
- Guaranteed bi-directional shut-off
- 100% zero leakage
- Pressure fully rated to ANSI B16.34 Class 150
- Full port design reduces pressure drops and minimises turbulence
- Design conforms with MSS-SP135

Designed to reliably perform under the most demanding service conditions

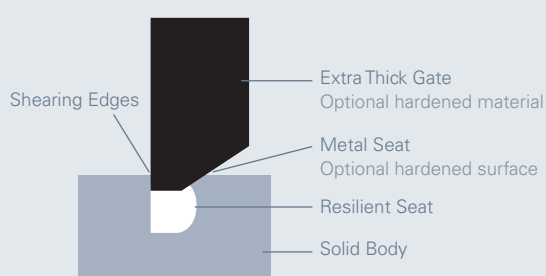
Designed specifically to handle heavy duty slurry applications, its innovative design, industry-leading performance, customisable features and absolute dependability have made our Delta Industrial™ valves the knife gate valve of choice for multiple industries.

The bevelled edge gate design allows the knife gate to crush, cut, sever and expel solids that may be in the fluid stream.

A precisely machined groove positions the elastomeric seat at the edge of the guided gate allowing the valve to seal equally well from either flow direction.

The Delta Industrial™ knife gate valve guarantees 100% zero leakage. On discharge isolation, where the valve must seal tightly from either direction under varying pressure differentials, the Delta Industrial™ performs perfectly.

The Shear-Seal Advantage



Above: Side view of bottom port, gate and dual seat.

Applications

- Mining
- Coal
- Power utilities
- Phosphate
- Pulp and paper
- Soda ash
- General industrial
- Alumina
- General chemical
- Mineral sands
- Cement
- Kaolin
- Sand and gravel

Materials

- **Body:** NR Iron as standard. Other materials available.
- **Gate:** 316 stainless steel as standard. Other materials available.
- **Seals:** Buna N as standard. Other materials available.
- Other materials include CF8M, Hastelloy™ C-276, SAF 2205 and 2507, Ti.

Size Range

- 50mm (2") through 1524mm (60").

Maximum Working Pressure

- All sizes 1965 kPa (285 psi).*

Flanges

- ANSI B16.5 Class 150.
- Other flange options available.

* Dependent on material selections.

The Delta Industrial™ guided shear gate design delivers proven, long-life, cost effective performance.



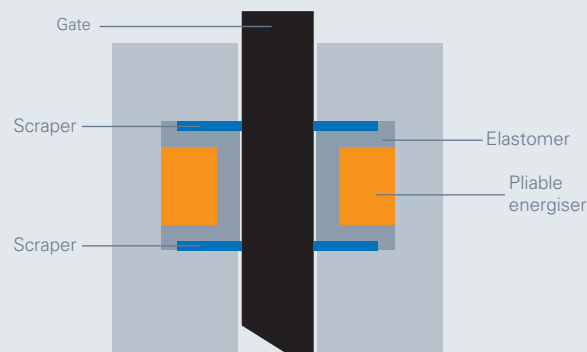
Design Features

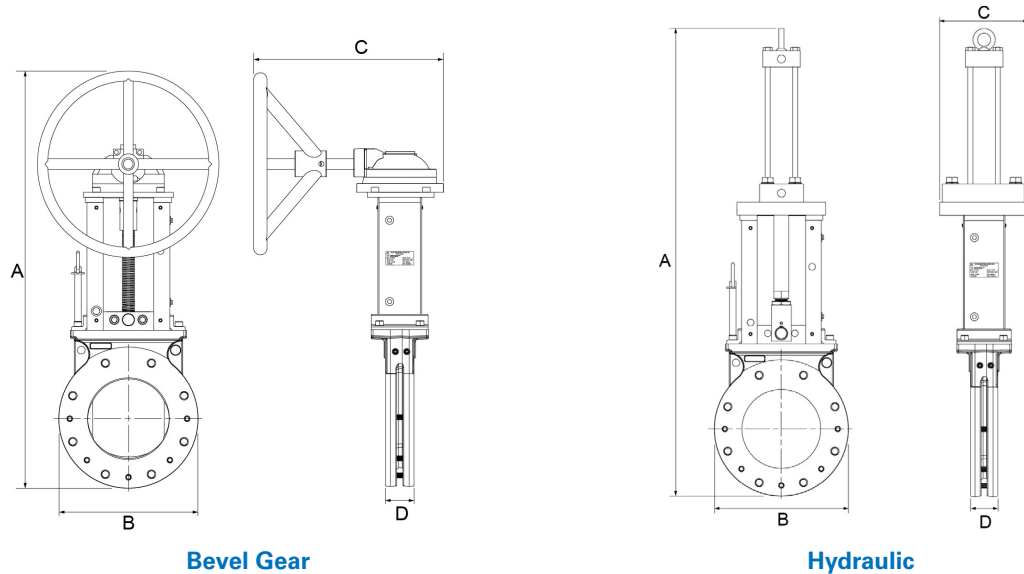
- Bi-directional shut off, 100% bubble-tight shut off, zero leakage.
- Transverse seal has packing to energize the seal.
- Enclosed body ensures no leakage to the environment.
- Seal retained out of the flow stream and flush with the bottom port.
- Full port flow reduces pressure drop and turbulence, thus minimising wear.
- Fully guided, bevelled edge machined gate shears through obstructions in flowing media.
- Elastomer port seal is mechanically retained by machine groove with pinhole anchoring.
- No seat cavities where solids can collect and cause gate interference.
- Will operate under vacuum conditions.
- Lexan (a tough polycarbonate material) enclosed top-works with heavy duty lockout mechanism.
- Yoke design allows fitting for all designed actuators.
- Optional coatings, wear rings and overlays for tough slurry duties available.

Delta Industrial™ Class 150 Product Features

- 1 Solid stainless steel non-rising stem for excellent corrosion resistance and minimum clearance.
- 2 Highly visible fluorescent coloured stem nut to verify position. Threads of nut coated with Xylan to eliminate the need for stem lubrication.
- 3 Heavy duty lockout pin for open and close position.
- 4 Lexan cover protects internal components and eliminates pinch points.
- 5 Unique transverse seal design and scrapers deliver superior sealing even in high cycle applications.
- 6 Bevelled edge gate to cut through tough solids.
- 7 Fully guided gate eliminates gate movement during closing and eliminates gate deformation.
- 8 Flush-out areas ensure product is expelled by the blade closing action.
- 9 Mechanically retained seal prevents shifting during valve operation. Seal location and seat design ensure full bi-directional sealing and zero leakage.

Delta Industrial™ Valve's Transverse Gate Seal





Bevel Gear

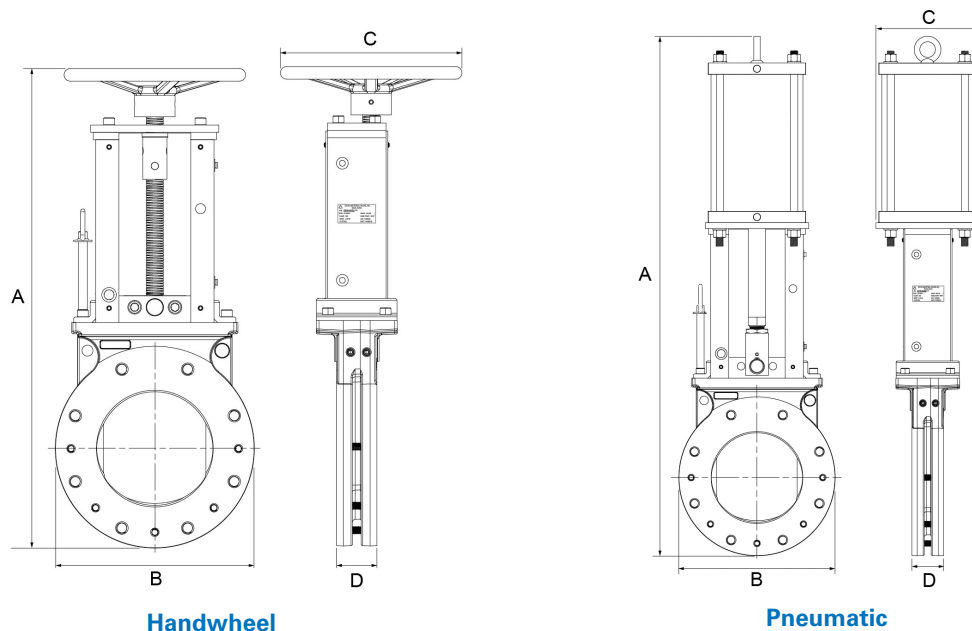
Hydraulic

Bevel Gear Valve Dimensions

| Size | | A | | B | | C | | D | | | | | | MASS | | | | | |
|------|-----|--------|------|-------|------|-------|-----|------|-------|------|-------|------|-------|------|------|------|------|------|------|
| | | | | | | | | 150 | | 15S | | 15L | | 150 | | 15S | | 15L | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb | kg | lb | kg | lb | kg |
| 2 | 50 | - | - | 6.00 | 152 | - | - | 1.88 | 47.8 | 2.00 | 50.8 | 2.75 | 69.9 | - | - | - | - | - | - |
| 3 | 80 | 24.93 | 633 | 7.60 | 193 | 16.97 | 431 | 2.00 | 50.8 | 2.00 | 50.8 | 4.00 | 101.6 | 60 | 27 | 62 | 28 | 97 | 44 |
| 4 | 100 | 28.13 | 715 | 9.00 | 229 | 16.97 | 431 | 2.00 | 50.8 | 2.00 | 50.8 | 4.12 | 104.6 | 76 | 34 | 76 | 34 | 128 | 58 |
| 6 | 150 | 34.14 | 893 | 11.00 | 279 | 17.96 | 456 | 2.25 | 57.2 | 2.25 | 57.2 | 2.50 | 63.5 | 122 | 55 | 122 | 55 | 133 | 60 |
| 8 | 200 | 40.71 | 1034 | 13.60 | 345 | 18.05 | 458 | 2.75 | 69.9 | 2.75 | 69.9 | 2.88 | 73.2 | 177 | 80 | 177 | 80 | 184 | 83 |
| 10 | 250 | 44.16 | 1122 | 16.00 | 406 | 19.95 | 507 | 2.75 | 69.9 | 2.75 | 69.9 | 3.12 | 79.2 | 217 | 98 | 217 | 98 | 243 | 110 |
| 12 | 300 | 52.47 | 1333 | 19.00 | 483 | 18.46 | 469 | 3.00 | 76.2 | 3.00 | 76.2 | 3.25 | 82.6 | 337 | 153 | 337 | 153 | 363 | 165 |
| 14 | 350 | 58.23 | 1479 | 21.00 | 533 | 18.46 | 469 | 3.00 | 76.2 | 3.00 | 76.2 | 3.62 | 91.9 | 428 | 194 | 428 | 194 | 511 | 232 |
| 16 | 400 | 64.21 | 1631 | 23.60 | 599 | 22.61 | 574 | 3.50 | 88.9 | 3.50 | 88.9 | 3.75 | 95.3 | 583 | 264 | 583 | 264 | 619 | 281 |
| 18 | 450 | 68.27 | 1734 | 25.43 | 646 | 22.61 | 574 | 3.50 | 88.9 | 3.50 | 88.9 | 4.12 | 104.6 | 851 | 386 | 851 | 386 | 987 | 448 |
| 20 | 500 | 73.53 | 1868 | 27.50 | 699 | 22.61 | 574 | 4.50 | 114.3 | 4.50 | 114.3 | 4.50 | 114.3 | 1077 | 489 | 1077 | 489 | 1077 | 489 |
| 24 | 600 | 82.61 | 2098 | 32.00 | 813 | 22.61 | 574 | 4.50 | 114.3 | 4.50 | 114.3 | 5.00 | 127.0 | 1724 | 782 | 1724 | 782 | 1906 | 865 |
| 26 | 650 | 90.13 | 2289 | 34.25 | 870 | 22.86 | 581 | 6.00 | 152.4 | 6.75 | 171.5 | 7.09 | 180.1 | 2335 | 1059 | 2617 | 1187 | 2744 | 1245 |
| 28 | 700 | 93.34 | 2371 | 36.50 | 927 | 23.84 | 606 | 7.00 | 177.8 | 7.12 | 180.8 | 7.12 | 180.8 | 2583 | 1172 | 2626 | 1191 | 2626 | 1191 |
| 30 | 750 | 99.35 | 2523 | 38.75 | 984 | 27.32 | 694 | 7.00 | 177.8 | 7.38 | 187.5 | 8.25 | 209.6 | 3062 | 1389 | 3216 | 1459 | 3568 | 1618 |
| 32 | 800 | 106.21 | 2698 | 41.75 | 1060 | 29.44 | 748 | 7.00 | 177.8 | 8.12 | 206.2 | 8.62 | 218.9 | 2594 | 1177 | 2974 | 1349 | 3143 | 1426 |
| 36 | 900 | 119.46 | 3034 | 46.00 | 1168 | 29.44 | 748 | 7.00 | 177.8 | 8.88 | 225.6 | 9.84 | 249.9 | 3844 | 1744 | 4817 | 2185 | 5314 | 2410 |

Hydraulic Valve Dimensions

| Size | | A | | B | | C | | D | | | | | | MASS | | | | | |
|------|-----|--------|------|-------|------|-------|-----|------|-------|------|-------|------|-------|------|------|------|------|------|------|
| | | | | | | | | 150 | | 15S | | 15L | | 150 | | 15S | | 15L | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb | kg | lb | kg | lb | kg |
| 2 | 50 | - | - | 6.00 | 152 | - | - | 1.88 | 47.8 | 2.00 | 50.8 | 2.75 | 69.9 | - | - | - | - | - | - |
| 3 | 80 | 25.58 | 650 | 7.60 | 193 | 5.13 | 130 | 1.88 | 47.8 | 2.00 | 50.8 | 4.00 | 101.6 | 50 | 23 | 52 | 24 | 87 | 39 |
| 4 | 100 | 29.03 | 737 | 9.00 | 229 | 5.13 | 130 | 2.00 | 50.8 | 2.00 | 50.8 | 4.12 | 104.6 | 82 | 37 | 82 | 37 | 135 | 61 |
| 6 | 150 | 36.41 | 925 | 11.00 | 279 | 8.00 | 203 | 2.25 | 57.2 | 2.25 | 57.2 | 2.50 | 63.5 | 146 | 66 | 146 | 66 | 157 | 71 |
| 8 | 200 | 46.17 | 1173 | 13.60 | 345 | 7.50 | 191 | 2.75 | 69.9 | 2.75 | 69.9 | 2.88 | 73.2 | 195 | 88 | 195 | 88 | 202 | 92 |
| 10 | 250 | 52.00 | 1321 | 16.00 | 406 | 5.00 | 127 | 2.75 | 69.9 | 2.75 | 69.9 | 3.12 | 79.2 | 297 | 135 | 297 | 135 | 329 | 149 |
| 12 | 300 | 61.97 | 1574 | 19.00 | 483 | 7.00 | 178 | 3.00 | 76.2 | 3.00 | 76.2 | 3.25 | 82.6 | 516 | 234 | 516 | 234 | 542 | 246 |
| 14 | 350 | 69.18 | 1757 | 21.00 | 533 | 8.00 | 203 | 3.00 | 76.2 | 3.00 | 76.2 | 3.62 | 91.9 | 745 | 338 | 745 | 338 | 827 | 375 |
| 16 | 400 | 77.27 | 1963 | 23.60 | 599 | 8.00 | 203 | 3.50 | 88.9 | 3.50 | 88.9 | 3.75 | 95.3 | 825 | 375 | 825 | 375 | 861 | 391 |
| 18 | 450 | 83.59 | 2123 | 25.43 | 646 | 10.00 | 254 | 3.50 | 88.9 | 3.50 | 88.9 | 4.12 | 104.6 | 1103 | 500 | 1103 | 500 | 1239 | 562 |
| 20 | 500 | 91.22 | 2317 | 27.50 | 699 | 12.00 | 305 | 4.50 | 114.3 | 4.50 | 114.3 | 4.50 | 114.3 | 1494 | 678 | 1494 | 678 | 1494 | 678 |
| 24 | 600 | 103.55 | 2630 | 32.00 | 813 | 12.00 | 305 | 4.50 | 114.3 | 4.50 | 114.3 | 5.00 | 127.0 | 2145 | 973 | 2145 | 973 | 2327 | 1056 |
| 26 | 650 | 113.57 | 2885 | 34.25 | 870 | 12.00 | 305 | 6.00 | 152.4 | 6.75 | 171.5 | 7.09 | 180.1 | 2611 | 1184 | 2893 | 1312 | 3020 | 1370 |
| 28 | 700 | 118.79 | 3017 | 36.50 | 927 | 12.00 | 305 | 7.00 | 177.8 | 7.12 | 180.8 | 7.12 | 180.8 | 2806 | 1273 | 2849 | 1292 | 2849 | 1292 |
| 30 | 750 | 125.00 | 3175 | 38.75 | 984 | 13.00 | 330 | 7.00 | 177.8 | 7.38 | 187.5 | 8.25 | 209.6 | 3137 | 1423 | 3291 | 1493 | 3643 | 1652 |
| 32 | 800 | 135.45 | 3440 | 41.75 | 1060 | 14.00 | 356 | 7.00 | 177.8 | 8.12 | 206.2 | 8.62 | 218.9 | 3094 | 1403 | 3154 | 1431 | 3323 | 1507 |
| 36 | 900 | 149.72 | 3803 | 46.00 | 1168 | 14.00 | 356 | 7.00 | 177.8 | 8.88 | 225.6 | 9.84 | 249.9 | 4142 | 1879 | 5115 | 2320 | 5612 | 2546 |



Handwheel

Pneumatic

Handwheel Valve Dimensions

| Size | | A | | B | | C | | D | | | | | | MASS | | | | | |
|------|-----|-------|------|-------|-----|-------|-----|------|------|------|------|------|-------|------|-----|-----|-----|-----|-----|
| | | | | | | | | 150 | | 15S | | 15L | | 150 | | 15S | | 15L | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb | kg | lb | kg | lb | kg |
| 2 | 50 | 15.13 | 384 | 6.00 | 152 | 6.50 | 165 | 1.88 | 47.8 | 2.00 | 50.8 | 2.75 | 69.9 | 23 | 10 | 24 | 11 | 34 | 15 |
| 3 | 80 | 19.08 | 485 | 7.60 | 193 | 8.00 | 203 | 1.88 | 47.8 | 2.00 | 50.8 | 4.00 | 101.6 | 33 | 15 | 35 | 16 | 70 | 32 |
| 4 | 100 | 21.82 | 554 | 9.00 | 229 | 8.00 | 203 | 2.00 | 50.8 | 2.00 | 50.8 | 4.12 | 104.6 | 49 | 22 | 49 | 22 | 101 | 46 |
| 6 | 150 | 26.31 | 668 | 11.00 | 279 | 12.00 | 305 | 2.25 | 57.2 | 2.25 | 57.2 | 2.50 | 63.5 | 95 | 43 | 95 | 43 | 106 | 48 |
| 8 | 200 | 32.53 | 826 | 13.60 | 345 | 12.50 | 318 | 2.75 | 69.9 | 2.75 | 69.9 | 2.88 | 73.2 | 150 | 68 | 150 | 68 | 157 | 71 |
| 10 | 250 | 36.31 | 922 | 16.00 | 406 | 12.50 | 318 | 2.75 | 69.9 | 2.75 | 69.9 | 3.12 | 79.2 | 190 | 86 | 190 | 86 | 216 | 98 |
| 12 | 300 | 45.10 | 1146 | 19.00 | 483 | 12.50 | 318 | 3.00 | 76.2 | 3.00 | 76.2 | 3.25 | 82.6 | 310 | 141 | 310 | 141 | 336 | 152 |

Pneumatic Valve Dimensions

| Size | | A | | B | | C | | D | | | | | | MASS | | | | | |
|------|-----|-------|------|-------|-----|-------|-----|------|-------|------|-------|------|-------|------|-----|------|-----|------|-----|
| | | | | | | | | 150 | | 15S | | 15L | | 150 | | 15S | | 15L | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb | kg | lb | kg | lb | kg |
| 2 | 50 | 18.65 | 474 | 6.00 | 152 | 3.75 | 95 | 1.88 | 47.8 | 2.00 | 50.8 | 2.75 | 69.9 | 37 | 17 | 38 | 17 | 48 | 22 |
| 3 | 80 | 23.46 | 596 | 7.60 | 193 | 3.75 | 95 | 1.88 | 47.8 | 2.00 | 50.8 | 4.00 | 101.6 | 48 | 22 | 50 | 23 | 85 | 39 |
| 4 | 100 | 26.90 | 683 | 9.00 | 229 | 4.50 | 114 | 2.00 | 50.8 | 2.00 | 50.8 | 4.12 | 104.6 | 85 | 39 | 85 | 39 | 137 | 62 |
| 6 | 150 | 36.22 | 920 | 11.00 | 279 | 7.00 | 178 | 2.25 | 57.2 | 2.25 | 57.2 | 2.50 | 63.5 | 141 | 64 | 141 | 64 | 152 | 69 |
| 8 | 200 | 43.54 | 1106 | 13.60 | 345 | 9.00 | 229 | 2.75 | 69.9 | 2.75 | 69.9 | 2.88 | 73.2 | 214 | 97 | 214 | 97 | 221 | 100 |
| 10 | 250 | 50.24 | 1276 | 16.00 | 406 | 11.00 | 279 | 2.75 | 69.9 | 2.75 | 69.9 | 3.12 | 79.2 | 403 | 183 | 403 | 183 | 429 | 194 |
| 12 | 300 | 60.68 | 1541 | 19.00 | 483 | 13.00 | 330 | 3.00 | 76.2 | 3.00 | 76.2 | 3.25 | 82.6 | 669 | 303 | 669 | 303 | 695 | 315 |
| 14 | 350 | 69.10 | 1755 | 21.00 | 533 | 14.75 | 375 | 3.00 | 76.2 | 3.00 | 76.2 | 3.62 | 91.9 | 958 | 435 | 958 | 435 | 1041 | 472 |
| 16 | 400 | 76.94 | 1954 | 23.60 | 599 | 14.75 | 375 | 3.50 | 88.9 | 3.50 | 88.9 | 3.75 | 95.3 | 1064 | 483 | 1064 | 483 | 1100 | 499 |
| 18 | 450 | 83.59 | 2123 | 25.43 | 646 | 14.75 | 375 | 3.50 | 88.9 | 3.50 | 88.9 | 4.12 | 104.6 | 1345 | 610 | 1345 | 610 | 1481 | 672 |
| 20 | 500 | 90.02 | 2286 | 27.50 | 699 | 14.75 | 375 | 4.50 | 114.3 | 4.50 | 114.3 | 4.50 | 114.3 | 1651 | 749 | 1651 | 749 | 1651 | 749 |