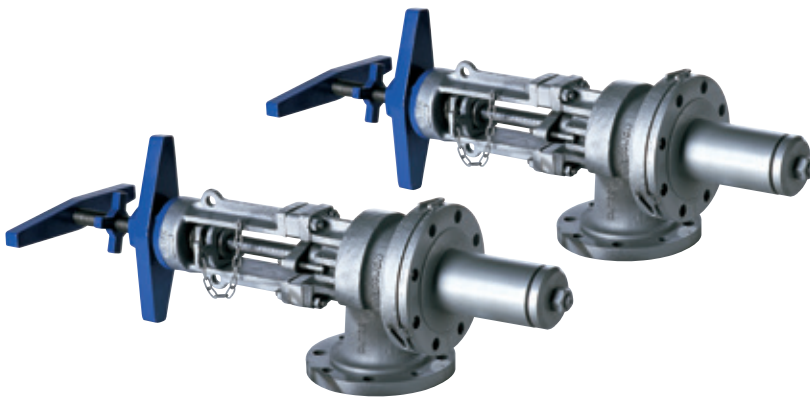




LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600

The F604 is a bayonet isolation valve specifically designed for severe service in alumina and mining applications where scale and erosion are present



GENERAL APPLICATION

Designed and engineered specifically for the mining and mineral processing industry, or other applications where scale or settled slurries need to be cleared to allow flow of media.

TECHNICAL DATA

Size range: DN 50 - 600 (NPS 2 - 24)
Temperature rating: Up to 345°C (650°F)
Pressure rating: ASME Class 150 to 600

FEATURES

- Valves can be reground in-line.
- Designed to ASME B16.34
- Heavy duty wall and flange thickness well in excess of ASME B16.34 and ASME B16.5
- Pads for fitting drain ports.
- Tested to API 598.
- Large stem diameters for strength and stiffness.
- Stellite 6 hardfacing as standard on disc and seat surfaces.
- Hard facing available on stem.
- Roller or plain bearings fitted to yoke bush - depending upon size.
- Manufactured under quality system ISO 9001:2008, Certificate No. MEL 0929678/A
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409). Material certification for pressure containing components.

Options

- Range of internal linings available to combat the effects of erosion or corrosion.
- High performance erosion resistant discs and seats.
- Custom face to face dimensions.
- Custom designs for specific applications.

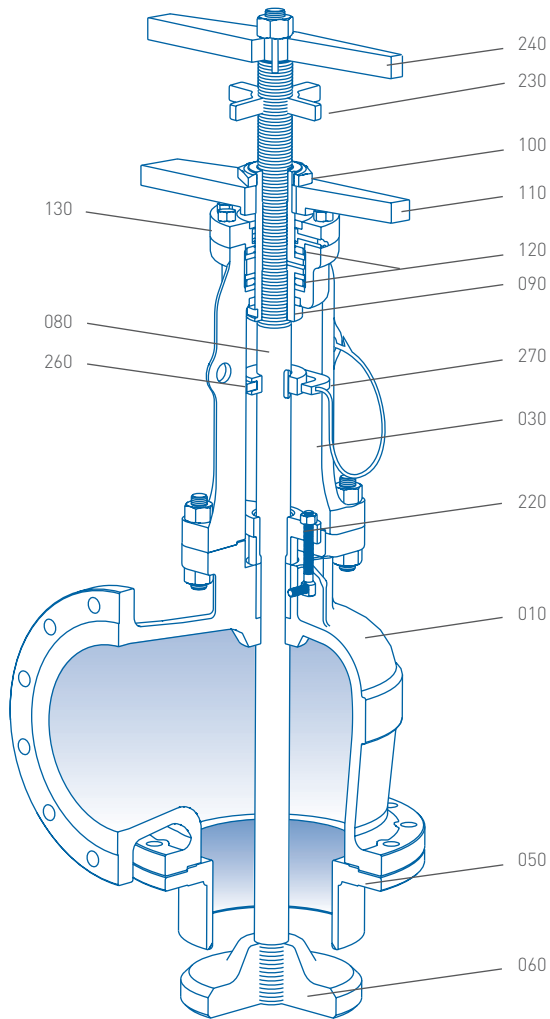
Actuation options

- Spur gear operation standard on larger sizes.
- Bevel gear operators.
- Patented stem clutch design for easy grind set-up.
- Drive adaptations for pneumatic guns.
- Customized actuation design.
- Range of standard or custom actuation available including:
 - Electric
 - Pneumatic
 - Hydraulic
 - All with regrinding where required



LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 300 (NPS 2 - 12) ASME CLASS 150



PARTS LIST

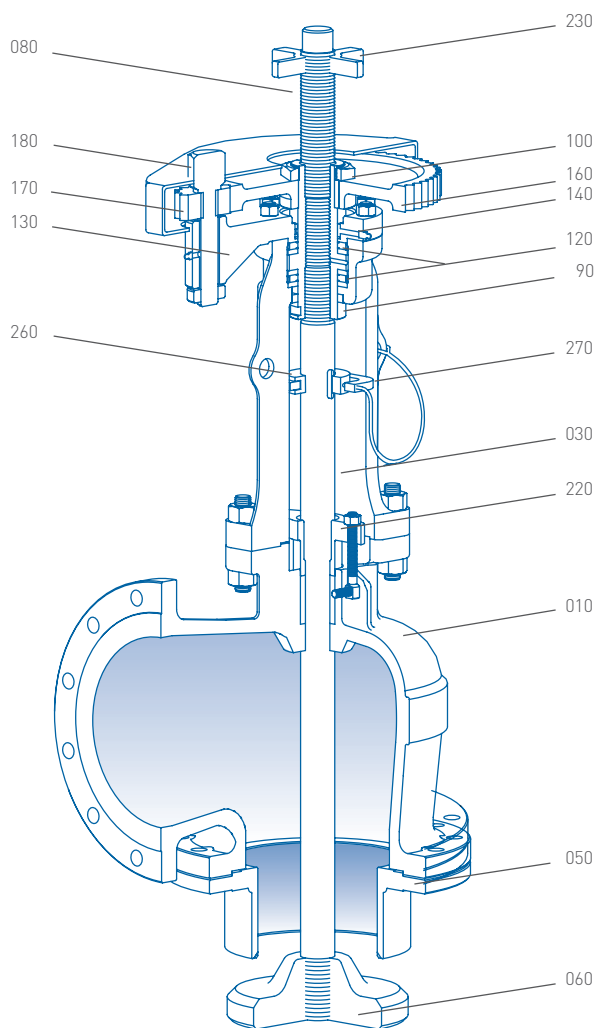
| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216-WCB |
| 030 | Yoke | ASTM A216-WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 120 | Bearing - yoke bush | Bronze |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



PARTS LIST

| No. | Description | Material standards |
|-----|-------------------------|--|
| 010 | Body | ASTM A216-WCB |
| 030 | Yoke | ASTM A216-WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 1020 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Steel roller |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 140 | Bearing - retaining cap | Bronze |
| 160 | Gear | ASTM A29 - 1020 |
| 170 | Pinion gear | ASTM A29 - 1020 |
| 180 | Pinion shaft | AISI 4140 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

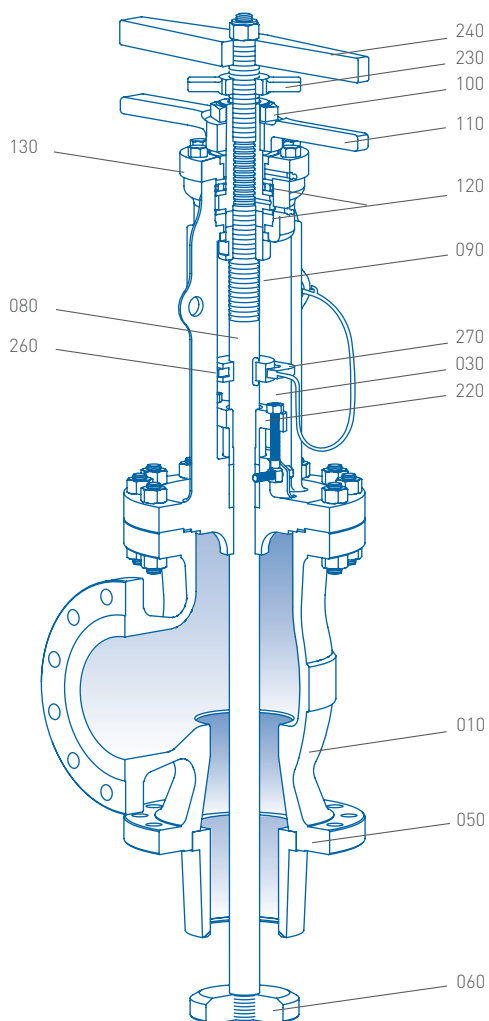
NOTES

No bolts, washers, gaskets or pins included in parts list.

Bevel gear operation option available.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 300 AND 600



PARTS LIST

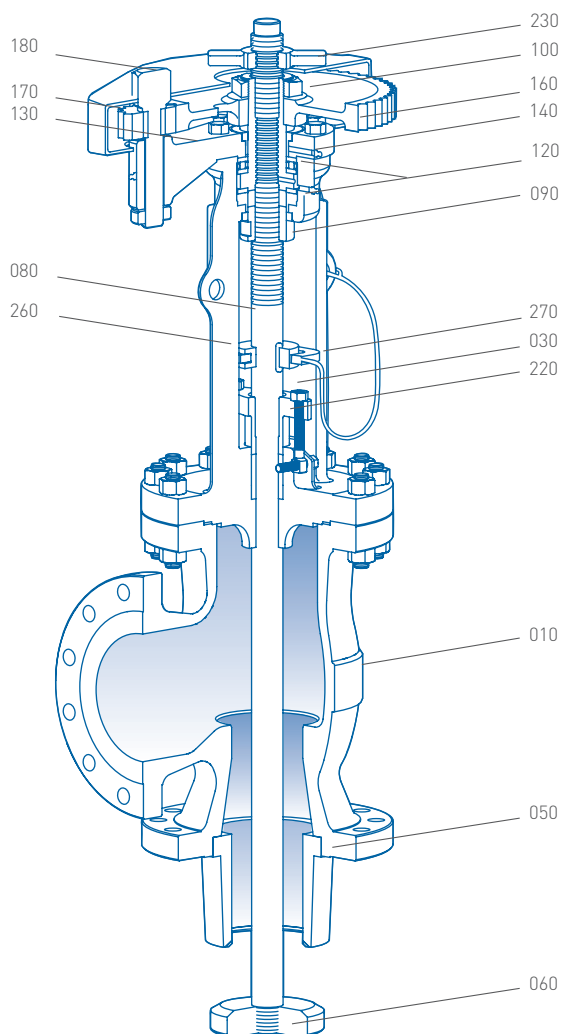
| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216-WCB |
| 030 | Yoke | ASTM A216-WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Bronze |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 220 | Gland follower | AISI C1020 or ASTM A216 - WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 150 - 500 (NPS 6 - 20) ASME CLASS 300 AND 600



PARTS LIST

| No. | Description | Material standards |
|-----|-------------------------|---|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | AISI C1020 - Stellite coated on seat face |
| 060 | Disc | AISI C1020 - Stellite coated on seat face |
| 080 | Stem | AISI - 4140 |
| 090 | Yoke bush | Carbon steel |
| 100 | Yoke bush locknut | Carbon steel |
| 120 | Bearing - yoke bush | Steel roller |
| 130 | Retaining cap | Carbon steel |
| 140 | Bearing - retaining cap | Bronze |
| 160 | Gear | Carbon steel |
| 170 | Pinion gear | Carbon steel |
| 180 | Pinion shaft | AISI - 4140 |
| 220 | Gland follower | AISI C1020 - ASTM A216 - WCB |
| 230 | Stem jam nut | AISI C1020 |
| 260 | Torque reactor hub | Carbon steel |
| 270 | Torque reactor pin | Carbon steel |

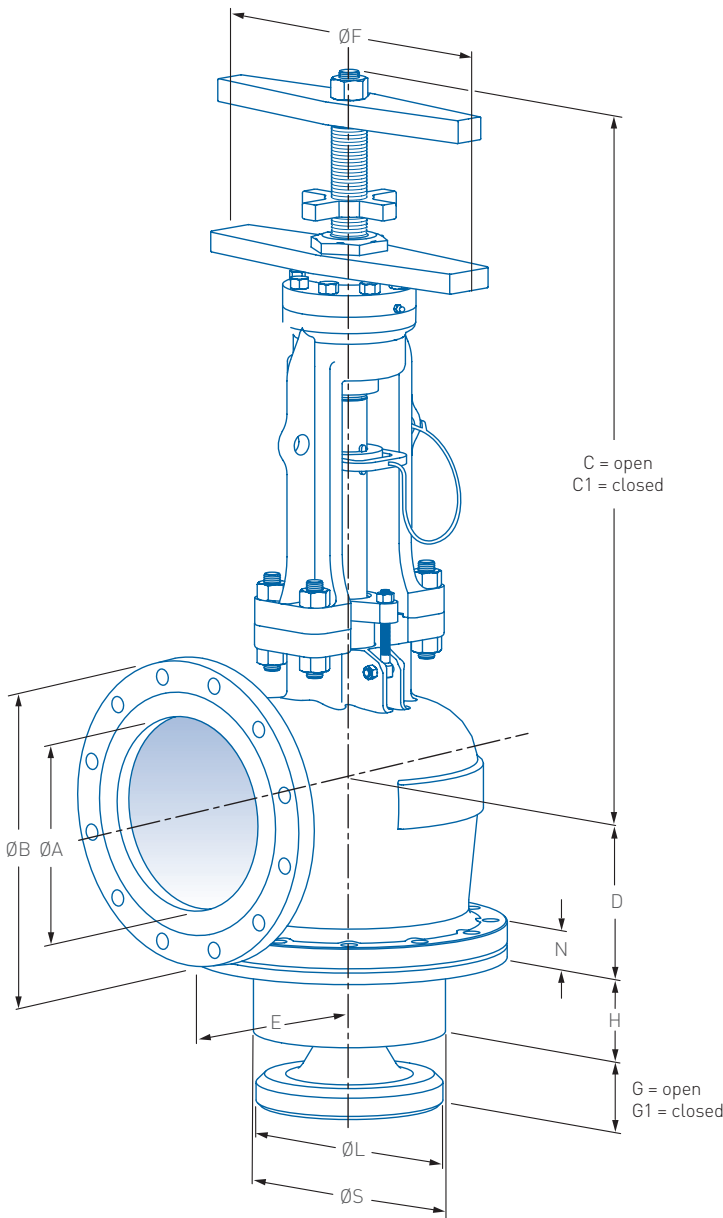
NOTES

No bolts, washers, gaskets or pins included in parts list.

Bevel gear operation option available.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 300 (NPS 2 - 12) ASME CLASS 150



DIMENSIONS mm (inches)

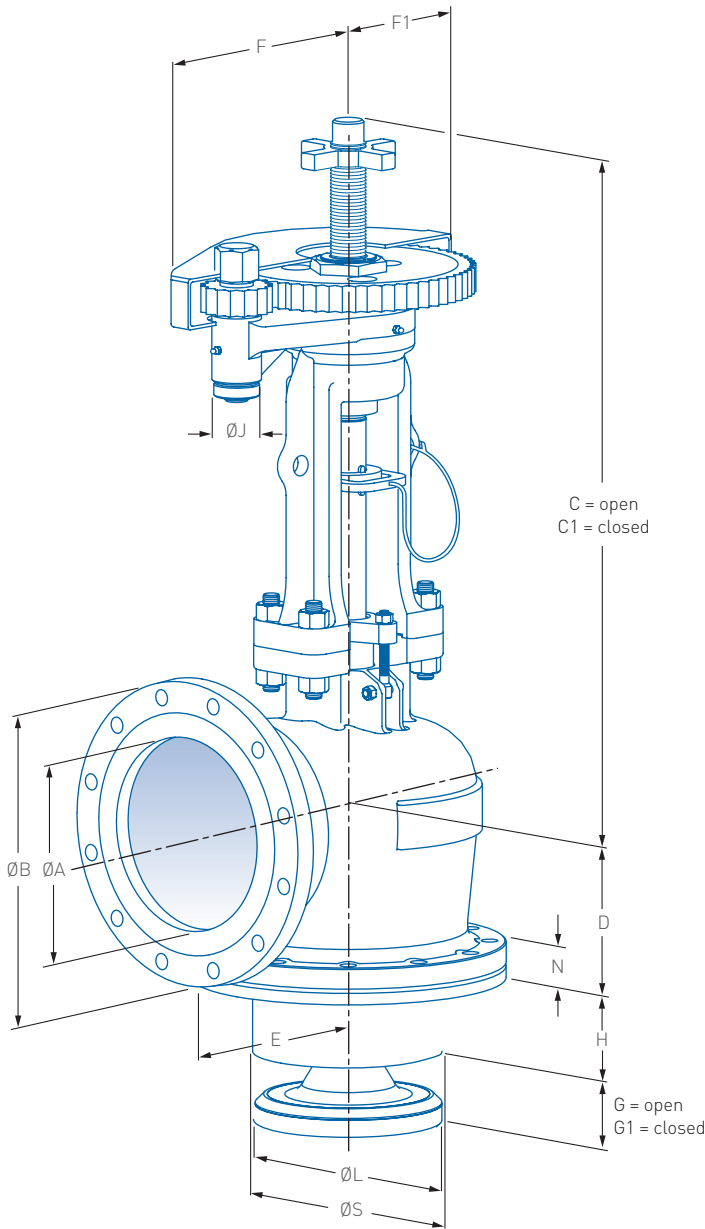
| Valve size | | | C | C1 | | | G | G1 | | | | | |
|------------|----------------------|-----------------|-------------|--------------|-------------|-------------|-----------------|-------------|-----------|------------|-----------------|-------------|-----------------|
| DN (NPS) | $\varnothing A$ bore | $\varnothing B$ | open | closed | D | E | $\varnothing F$ | open | closed | H | $\varnothing L$ | N min | $\varnothing S$ |
| 50 (2) | 51 (2.00) | 152 (6.00) | 355 (13.98) | 393 (15.47) | 60 (2.36) | 114 (4.49) | 205 (8.07) | 57 (2.24) | 19 (0.75) | 95 (3.74) | 43 (1.69) | 33.5 (1.32) | 45 (1.77) |
| 80 (3) | 76 (3.00) | 191 (7.50) | 364 (14.33) | 412 (16.22) | 79 (3.11) | 140 (5.51) | 205 (8.07) | 72 (2.83) | 24 (0.94) | 102 (4.02) | 67 (2.64) | 43.0 (1.69) | 70 (2.76) |
| 100 (4) | 102 (4.00) | 229 (9.00) | 530 (20.87) | 657 (25.87) | 125 (4.92) | 165 (6.50) | 305 (12.01) | 150 (5.91) | 23 (0.91) | 102 (4.02) | 92 (3.62) | 46.5 (1.83) | 95 (3.74) |
| 150 (6) | 152 (6.00) | 279 (11.00) | 676 (26.61) | 828 (32.60) | 159 (6.26) | 203 (7.99) | 410 (16.14) | 182 (7.17) | 30 (1.18) | 114 (4.49) | 135 (5.31) | 50.0 (1.97) | 142 (5.59) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 735 (28.94) | 913 (35.94) | 197 (7.76) | 248 (9.76) | 410 (16.14) | 214 (8.43) | 36 (1.42) | 114 (4.49) | 181 (7.13) | 53.5 (2.11) | 187 (7.36) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 914 (35.98) | 1118 (44.02) | 241 (9.49) | 292 (11.50) | 520 (20.47) | 245 (9.65) | 42 (1.65) | 114 (4.49) | 235 (9.25) | 57.5 (2.26) | 248 (9.76) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 972 (38.27) | 1213 (47.76) | 276 (10.87) | 349 (13.74) | 520 (20.47) | 270 (10.63) | 41 (1.61) | 114 (4.49) | 286 (11.26) | 59.5 (2.34) | 299 (11.77) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



DIMENSIONS mm (inches)

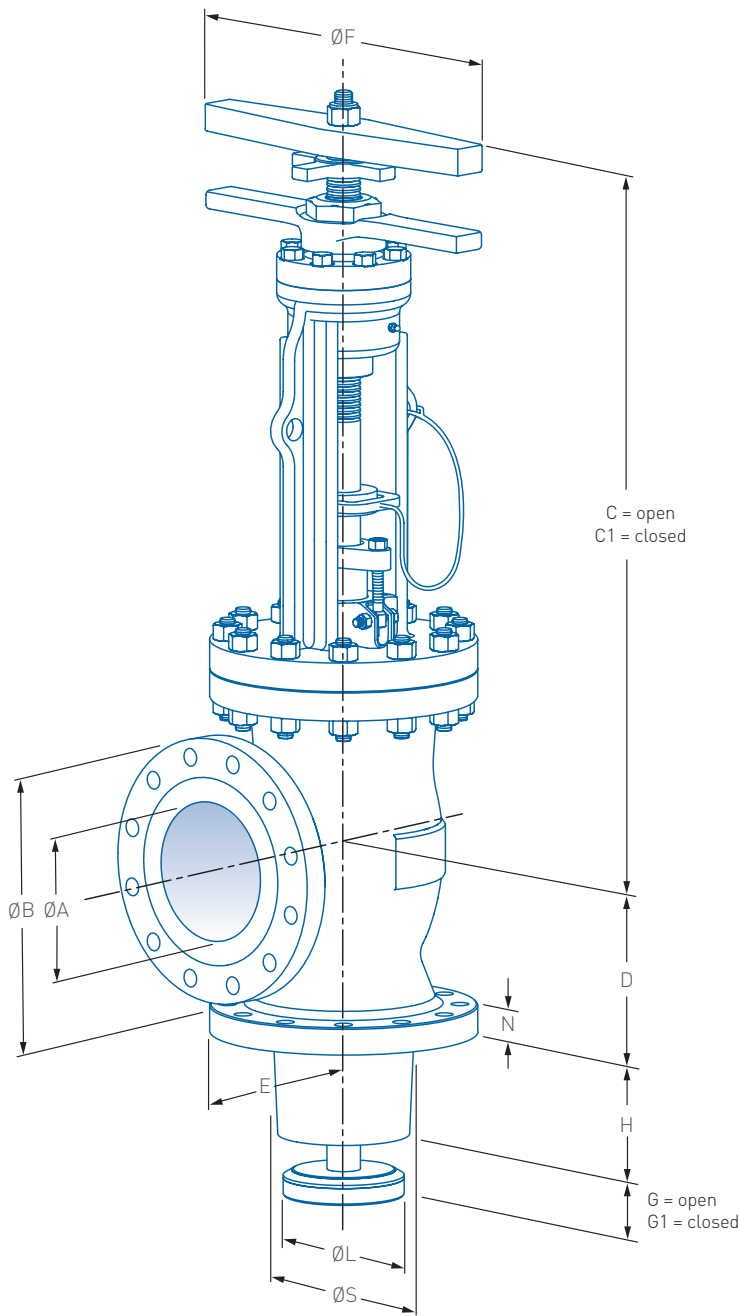
| Valve size | ØA | | C | C1 | | | | | G | G1 | | | | | | |
|------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-----------|------------|-----------|-------------|-------------|-------------|--|
| DN (NPS) | bore | ØB | open | closed | D | E | F | F1 | open | closed | H | ØJ | ØL | N min | ØS | |
| 150 (6) | 152 (6.00) | 279 (11.00) | 667 (26.26) | 819 (32.24) | 159 (6.26) | 203 (7.99) | 295 (11.61) | 195 (7.68) | 185 (7.28) | 33 (1.30) | 114 (4.49) | 60 (2.36) | 137 (5.39) | 50.0 (1.97) | 141 (5.55) | |
| 200 (8) | 203 (8.00) | 343 (13.50) | 735 (28.94) | 913 (35.94) | 197 (7.76) | 248 (9.76) | 295 (11.61) | 195 (7.68) | 215 (8.46) | 37 (1.46) | 114 (4.49) | 60 (2.36) | 181 (7.13) | 53.5 (2.11) | 187 (7.36) | |
| 250 (10) | 254 (10.00) | 406 (16.00) | 922 (36.30) | 1125 (44.29) | 241 (9.49) | 292 (11.50) | 295 (11.61) | 195 (7.68) | 245 (9.65) | 42 (1.65) | 114 (4.49) | 60 (2.36) | 235 (9.25) | 57.5 (2.26) | 248 (9.76) | |
| 300 (12) | 305 (12.00) | 483 (19.00) | 946 (37.24) | 1175 (46.26) | 276 (10.87) | 349 (13.74) | 330 (12.99) | 230 (9.06) | 270 (10.63) | 41 (1.61) | 114 (4.49) | 60 (2.36) | 286 (11.26) | 59.5 (2.34) | 299 (11.77) | |
| 350 (14) | 349 (13.75) | 533 (21.00) | 1216 (47.87) | 1470 (57.87) | 305 (12.01) | 368 (14.49) | 330 (12.99) | 230 (9.06) | 300 (11.81) | 46 (1.81) | 127 (5.00) | 60 (2.36) | 318 (12.52) | 67.5 (2.66) | 324 (12.76) | |
| 400 (16) | 387 (15.25) | 597 (23.50) | 1284 (50.55) | 1564 (61.57) | 340 (13.39) | 381 (15.00) | 330 (12.99) | 230 (9.06) | 347 (13.66) | 67 (2.64) | 127 (5.00) | 60 (2.36) | 365 (14.37) | 71.0 (2.80) | 375 (14.76) | |
| 450 (18) | 438 (17.25) | 635 (25.00) | 1345 (52.95) | 1650 (64.96) | 356 (14.02) | 406 (15.98) | 330 (12.99) | 230 (9.06) | 381 (15.00) | 76 (2.99) | 127 (5.00) | 60 (2.36) | 413 (16.26) | 77.2 (3.04) | 425 (16.73) | |
| 500 (20) | 489 (19.25) | 699 (27.50) | 1468 (57.80) | 1773 (69.80) | 394 (15.51) | 457 (17.99) | 395 (15.55) | 305 (12.01) | 381 (15.00) | 76 (2.99) | 140 (5.51) | 60 (2.36) | 443 (17.44) | 82.5 (3.25) | 476 (18.74) | |
| 600 (24) | 590 (23.25) | 813 (32.00) | 1567 (61.69) | 1948 (76.69) | 451 (17.76) | 508 (20.00) | 395 (15.55) | 305 (12.01) | 472 (18.58) | 91 (3.58) | 140 (5.51) | 60 (2.36) | 546 (21.50) | 92.7 (3.65) | 578 (22.76) | |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 300



DIMENSIONS mm (inches)

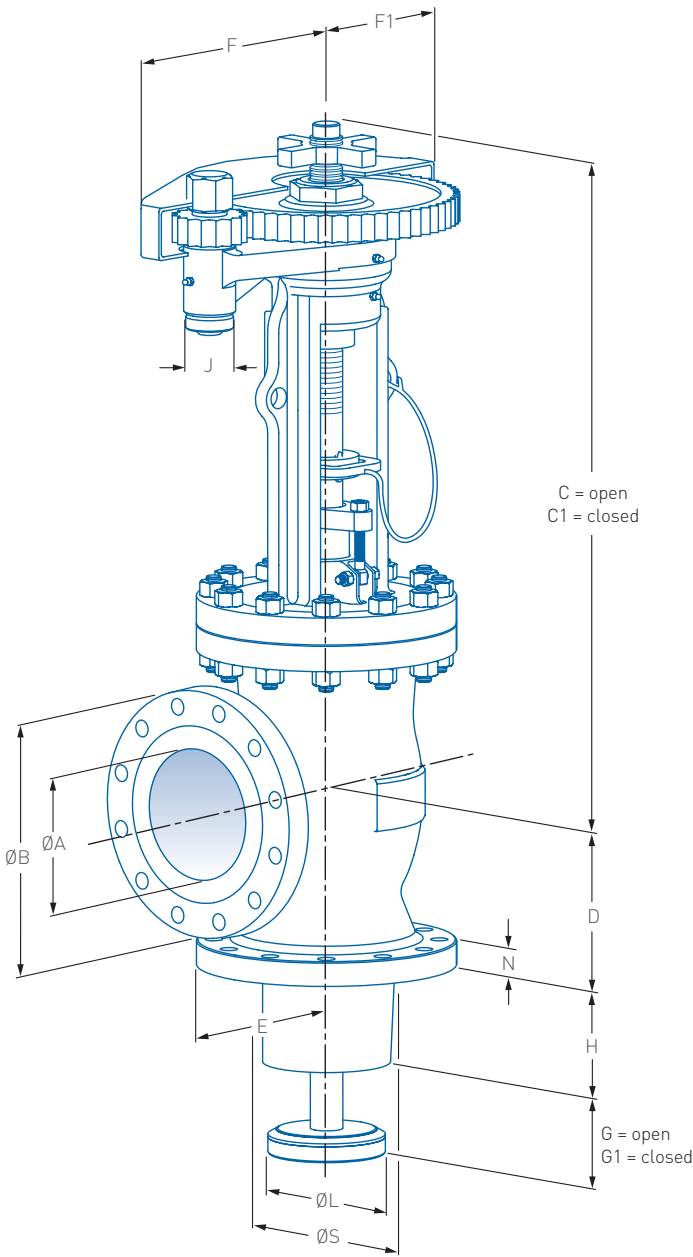
| Valve size | | | C | C1 | | | G | G1 | | | | | | |
|------------|----------------------|-----------------|-------------|--------------|------------|------------|-----------------|------------|-----------|------------|-----------------|-------------|-----------------|--|
| DN (NPS) | $\varnothing A$ bore | $\varnothing B$ | open | closed | D | E | $\varnothing F$ | open | closed | H | $\varnothing L$ | N min | $\varnothing S$ | |
| 50 (2) | 51 (2.00) | 165 (6.50) | 445 (17.52) | 502 (19.76) | 127 (5.00) | 165 (6.50) | 203 (7.99) | 78 (3.07) | 21 (0.83) | 81 (3.19) | 46 (1.81) | 22.7 (0.89) | 48 (1.89) | |
| 80 (3) | 76 (3.00) | 210 (8.25) | 445 (17.52) | 502 (19.76) | 152 (5.98) | 165 (6.50) | 203 (7.99) | 76 (2.99) | 19 (0.75) | 102 (4.02) | 71 (2.80) | 29.0 (1.14) | 73 (2.87) | |
| 100 (4) | 102 (4.00) | 254 (10.00) | 765 (30.12) | 889 (35.00) | 178 (7.01) | 178 (7.01) | 406 (15.98) | 156 (6.14) | 32 (1.26) | 121 (4.76) | 84 (3.31) | 34.0 (1.34) | 95 (3.74) | |
| 150 (6) | 152 (6.00) | 318 (12.50) | 857 (33.74) | 1010 (39.76) | 216 (8.50) | 216 (8.50) | 406 (15.98) | 185 (7.28) | 32 (1.26) | 114 (4.49) | 147 (5.79) | 39.0 (1.54) | 141 (5.55) | |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 150 - 500 (NPS 6 - 20) ASME CLASS 300



DIMENSIONS mm (inches)

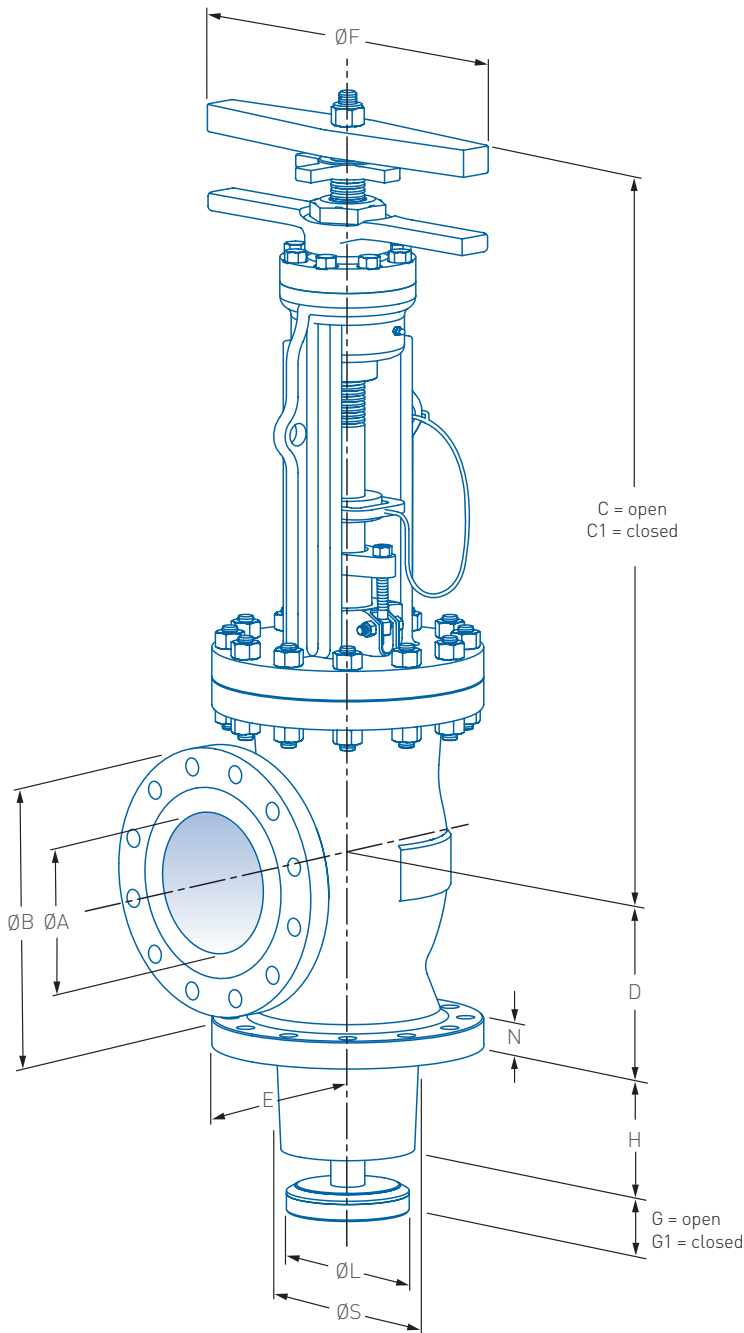
| Valve size | C | | C1 | | D | | E | | F | | G | | G1 | | J | | | |
|------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-----------|------------|-----------|-------------|-------------|-------------|----|-------|----|
| DN (NPS) | ØA bore | ØB | open | closed | | | | | | | | open | closed | H | (A/F) | ØL | N min | ØS |
| 150 (6) | 152 (6.00) | 318 (12.50) | 1010 (39.76) | 1857 (73.11) | 216 (8.50) | 216 (8.50) | 285 (11.22) | 180 (7.09) | 185 (7.28) | 32 (1.26) | 114 (4.49) | 60 (2.36) | 147 (5.79) | 39.0 (1.54) | 149 (5.87) | | | |
| 200 (8) | 200 (7.85) | 381 (15.00) | 1294 (50.94) | 1144 (45.04) | 267 (10.51) | 267 (10.51) | 285 (11.22) | 180 (7.09) | 215 (8.46) | 37 (1.46) | 114 (4.49) | 60 (2.36) | 180 (7.09) | 42.0 (1.65) | 187 (7.36) | | | |
| 250 (10) | 254 (10.00) | 445 (17.50) | 1378 (54.25) | 1175 (46.26) | 305 (12.01) | 305 (12.01) | 335 (13.19) | 225 (8.86) | 246 (9.69) | 43 (1.69) | 127 (5.00) | 60 (2.36) | 241 (9.49) | 48.6 (1.91) | 246 (9.69) | | | |
| 300 (12) | 302 (11.90) | 521 (20.50) | 1715 (67.52) | 1448 (57.01) | 343 (13.50) | 343 (13.50) | 335 (13.19) | 225 (8.86) | 310 (12.20) | 43 (1.69) | 127 (5.00) | 60 (2.36) | 293 (11.54) | 52.0 (2.05) | 299 (11.77) | | | |
| 350 (14) | 336 (13.25) | 584 (23.00) | 1854 (72.99) | 1588 (62.52) | 381 (15.00) | 381 (15.00) | 335 (13.19) | 225 (8.86) | 309 (12.17) | 43 (1.69) | 127 (5.00) | 60 (2.36) | 319 (12.56) | 58.0 (2.28) | 324 (12.76) | | | |
| 400 (16) | 387 (15.25) | 648 (25.50) | 1664 (65.51) | 1943 (76.50) | 419 (16.50) | 432 (17.01) | 415 (16.34) | 315 (12.40) | 335 (13.19) | 56 (2.20) | 127 (5.00) | 60 (2.36) | 370 (14.57) | 61.0 (2.40) | 375 (14.76) | | | |
| 450 (18) | 419 (16.50) | 711 (28.00) | 1689 (66.50) | 1669 (65.71) | 457 (17.99) | 457 (17.99) | 415 (16.34) | 315 (12.40) | 336 (13.23) | 56 (2.20) | 127 (5.00) | 60 (2.36) | 421 (16.57) | 63.0 (2.48) | 425 (16.73) | | | |
| 500 (20) | 483 (19.00) | 775 (30.50) | 1816 (71.50) | 2108 (82.99) | 495 (19.49) | 495 (19.49) | 480 (18.90) | 385 (15.16) | 363 (14.29) | 71 (2.80) | 140 (5.51) | 60 (2.36) | 463 (18.23) | 66.0 (2.60) | 476 (18.74) | | | |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 600



DIMENSIONS mm (inches)

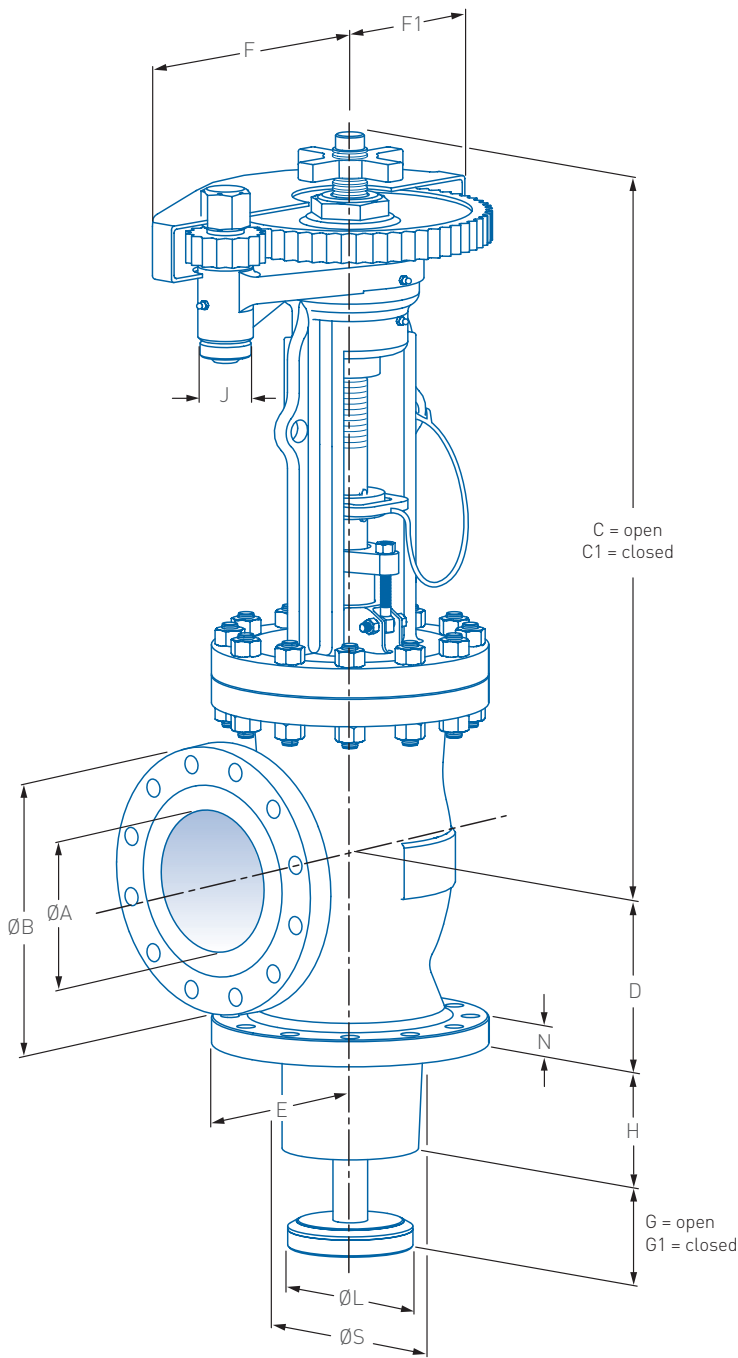
| Valve size | C | | C1 | | G | | G1 | | | | | | |
|------------|----------------------|-----------------|-------------|--------------|------------|-------------|-----------------|------------|-----------|------------|-----------------|-------------|-----------------|
| DN (NPS) | $\varnothing A$ bore | $\varnothing B$ | open | closed | D | E | $\varnothing F$ | open | closed | H | $\varnothing L$ | N min | $\varnothing S$ |
| 50 (2) | 51 (2.00) | 165 (6.50) | 556 (21.89) | 600 (23.62) | 133 (5.24) | 133 (5.24) | 305 (12.01) | 63 (2.48) | 19 (0.75) | 127 (5.00) | 43 (1.69) | 27.4 (1.08) | 34 (1.34) |
| 80 (3) | 76 (3.00) | 210 (8.25) | 556 (21.89) | 600 (23.62) | 184 (7.24) | 184 (7.24) | 305 (12.01) | 63 (2.48) | 19 (0.75) | 105 (4.13) | 70 (2.76) | 33.8 (1.33) | 49 (1.93) |
| 100 (4) | 102 (4.00) | 273 (10.75) | 699 (27.52) | 762 (30.00) | 216 (8.50) | 216 (8.50) | 406 (15.98) | 95 (3.74) | 32 (1.26) | 127 (5.00) | 90 (3.54) | 41.0 (1.61) | 46 (1.81) |
| 150 (6) | 152 (6.00) | 355 (14.00) | 900 (35.43) | 1050 (41.34) | 251 (9.88) | 264 (10.39) | 406 (15.98) | 195 (7.68) | 45 (1.77) | 155 (6.10) | 141 (5.55) | 49.7 (1.96) | 56 (2.20) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 150 - 250 (NPS 6 - 10) ASME CLASS 600



DIMENSIONS mm (inches)

| Valve size | | C | | C1 | | G | | G1 | | | | | | | |
|------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-----------|------------|-----------|------------|-------------|------------|
| DN (NPS) | ØA bore | ØB | open | closed | D | E | F | F1 | open | closed | H | J (A/F) | ØL | N min | ØS |
| 150 (6) | 152 (6.00) | 355 (14.00) | 900 (35.43) | 1050 (41.34) | 251 (9.88) | 264 (10.39) | 285 (11.22) | 180 (7.09) | 178 (7.01) | 27 (1.06) | 155 (6.10) | 60 (2.36) | 114 (4.49) | 49.7 (1.96) | 141 (5.55) |
| 200 (8) | 200 (7.85) | 419 (16.50) | 1099 (43.27) | 1213 (47.76) | 330 (12.99) | 324 (12.76) | 345 (13.58) | 225 (8.86) | 178 (7.01) | 37 (1.46) | 178 (7.01) | 60 (2.36) | 180 (7.09) | 58.1 (2.29) | 187 (7.36) |
| 250 (10) | 254 (10.00) | 508 (20.00) | 1449 (57.05) | 1635 (64.37) | 394 (15.51) | 394 (15.51) | 415 (16.34) | 315 (12.40) | 229 (9.02) | 43 (1.69) | 142 (5.59) | 60 (2.36) | 235 (9.25) | 68.0 (2.68) | 239 (9.41) |

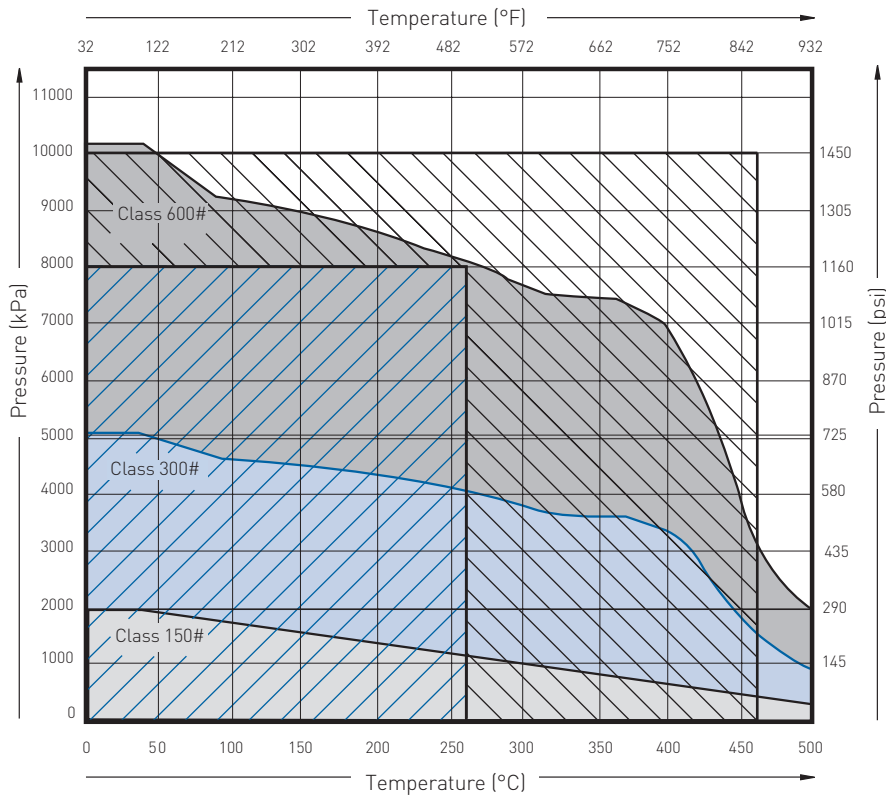
NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 604 BAYONET ISOLATION VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600



PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

NOTES

1. The pressure temperature ratings displayed are for carbon steel ASTM A 216 Gr WCB according to ASME B16.5 Table 2.
2. Upper temperature is set by standard gland packing.
3. Customer requested changes to gland packing may affect the temperature ratings of the valve.

-  PTFE braided packing
-  Reinforced graphite packing

TYPICAL SPECIFYING SEQUENCE - CLASS 150, 300 AND 600

| | | | | | | | | | | |
|------------|------------|---------------|---------------|---------------|-----------|-----------|-----------|--------------------|---------------|-----------------|
| 100 (4) | F604 | 3 | 3 | C | 2 | 2 | 3 | 3 | / | 00 |
| Valve size | Figure no. | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim | Certification code | Valve variant | Standard option |

Size range: DN 50 - 600 (NPS 2 - 24)

Figure no: F604 - Bayonet isolation valve Class 150, 300 and 600

| Trim code | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim |
|-----------|---------------|---------------|---------------|------------------|------------------|---|
| 11C224 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |
| 11C253 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Grade ASTM A29 - 4140 |
| 33C223 | Class 300 | Class 300 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 66C224 | Class 600 | Class 600 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |

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LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600

The F603 is an angle isolation valve specifically designed for severe service in alumina and mining applications where scale and erosion are present



FEATURES

- Valves can be reground in-line
- Designed to ASME B16.34
- Heavy duty wall and flange thickness well in excess of ASME B16.34 and ASME B16.5
- Pads for fitting drain ports
- Tested to API 598
- Large stem diameters for strength and stiffness
- Stellite 6 hardfacing as standard on disc and seat surfaces
- Hard facing available on stem
- Roller or plain bearings fitted to yoke bush - depending upon size
- Manufactured under quality system ISO 9001:2008, Certificate No. MEL 0929678/A
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409). Material certification for pressure containing components

Options

- Range of internal linings available to combat the effects of erosion or corrosion
- High performance erosion resistant discs and seats
- Custom face to face dimensions
- Custom designs for specific applications

Actuation options

- Spur gear operation standard on larger sizes
- Bevel gear operators
- Patented stem clutch design for easy grind set-up
- Drive adaptations for pneumatic guns
- Customized actuation design
- Range of actuation available including:
 - Electric
 - Pneumatic
 - Hydraulic
 - All with regrounding where required

GENERAL APPLICATION

Designed and engineered specifically for the mining and process industry, or other applications where built up scale or settled slurries need to be cleared to allow flow.

- Alumina - Bauxite slurries, digestion slurries, flash vessel vapour return, green and spent liquor's, washer underflow/overflow, tertiary and secondary thickeners, press filter isolation, mudline disposal
- Precipitation
- Filtrate underflow
- Hydrate slurry storage

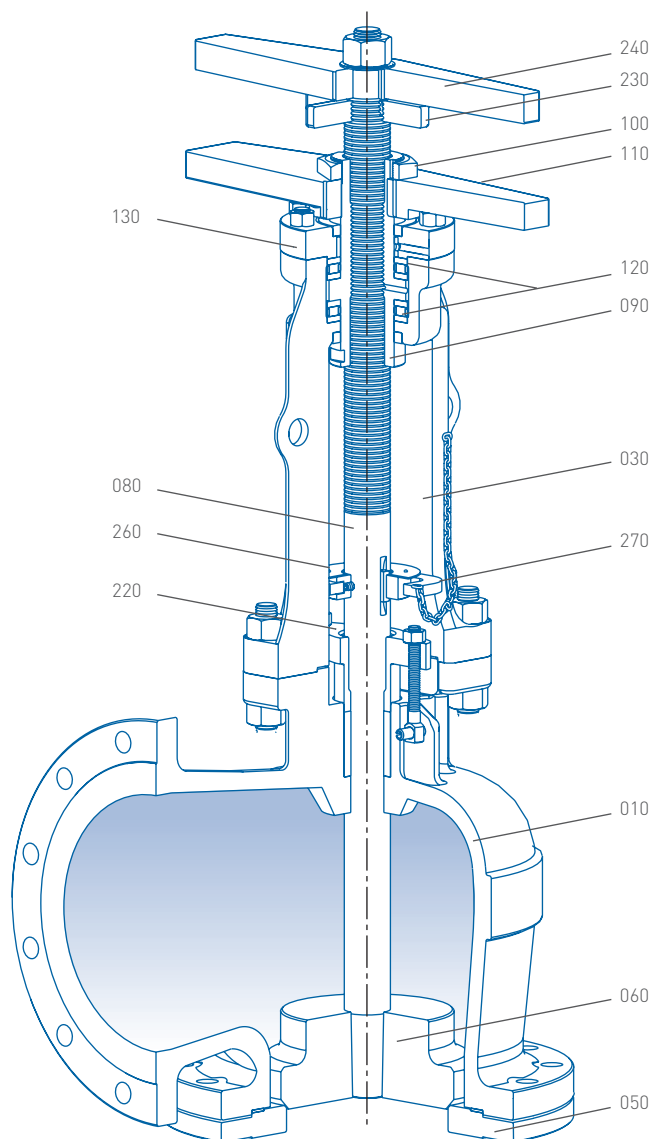
TECHNICAL DATA

Size range: DN 50 - 600 (NPS 2 - 24)
 Temperature rating: Up to 345°C (650°F)
 Pressure rating: ASME Class 150 to 600



LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 300 (NPS 2 - 12) ASME CLASS 150



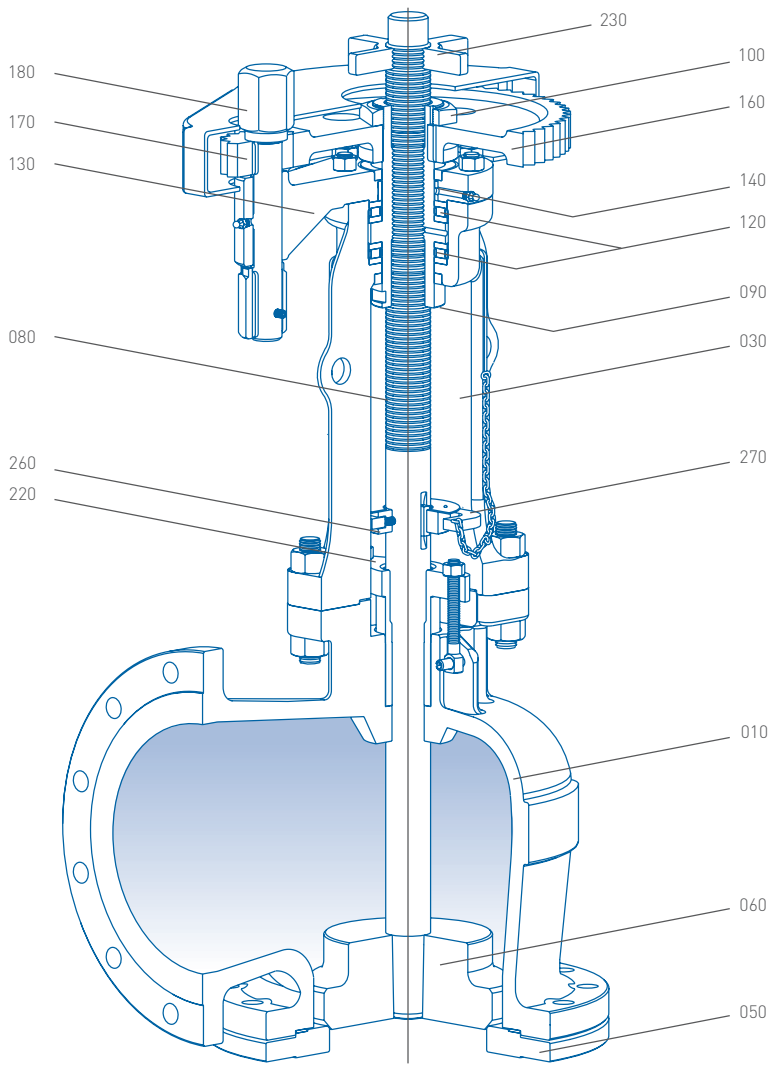
PARTS LIST

| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 120 | Bearing - yoke bush | Bronze |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE
 DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



PARTS LIST

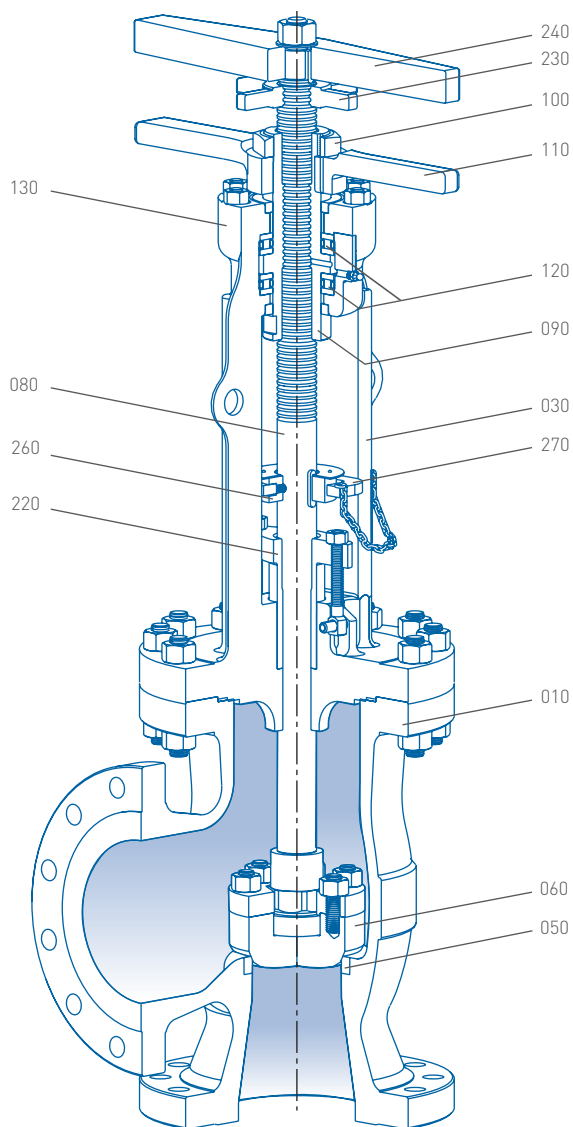
| No. | Description | Material Standards |
|-----|-------------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 1020 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Steel Roller |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 140 | Bearing - retaining cap | Bronze |
| 160 | Gear | ASTM A29 - 1020 |
| 170 | Pinion gear | ASTM A29 - 1020 |
| 180 | Pinion Shaft | AISI 4140 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTES

No bolts, washers, gaskets or pins included in parts list.
 Bevel gear operation option available.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 300 AND 600



PARTS LIST

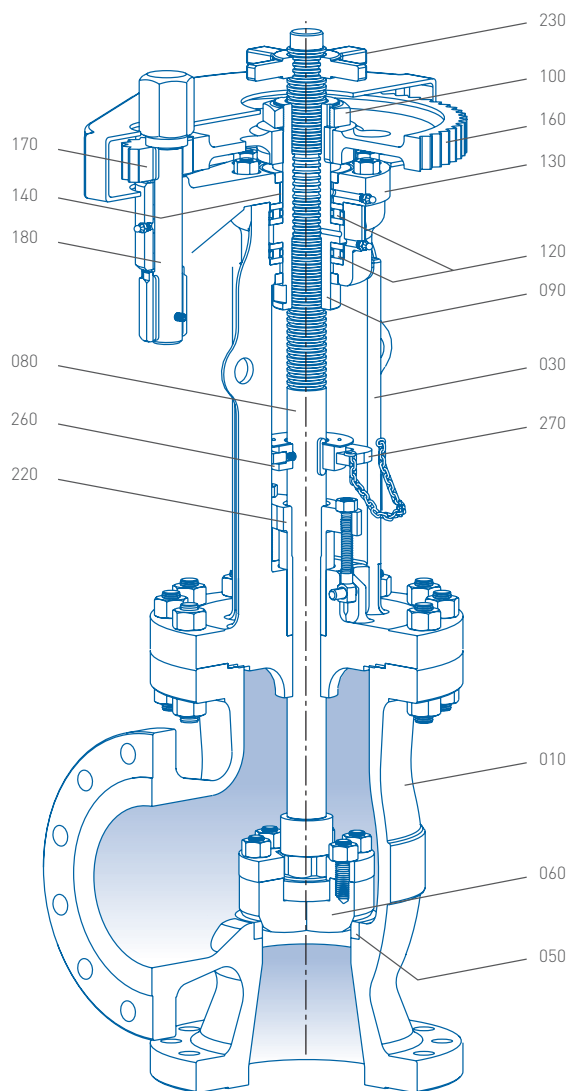
| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Bronze |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 220 | Gland follower | AISI C1020 or ASTM A216 - WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 300 AND 600



PARTS LIST

| No. | Description | Material Standards |
|-----|-------------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Steel Roller |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 140 | Bearing - retaining cap | Bronze |
| 160 | Gear | ASTM A29 - 1020 |
| 170 | Pinion gear | ASTM A29 - 1020 |
| 180 | Pinion shaft | ASTM A29 - 4140 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

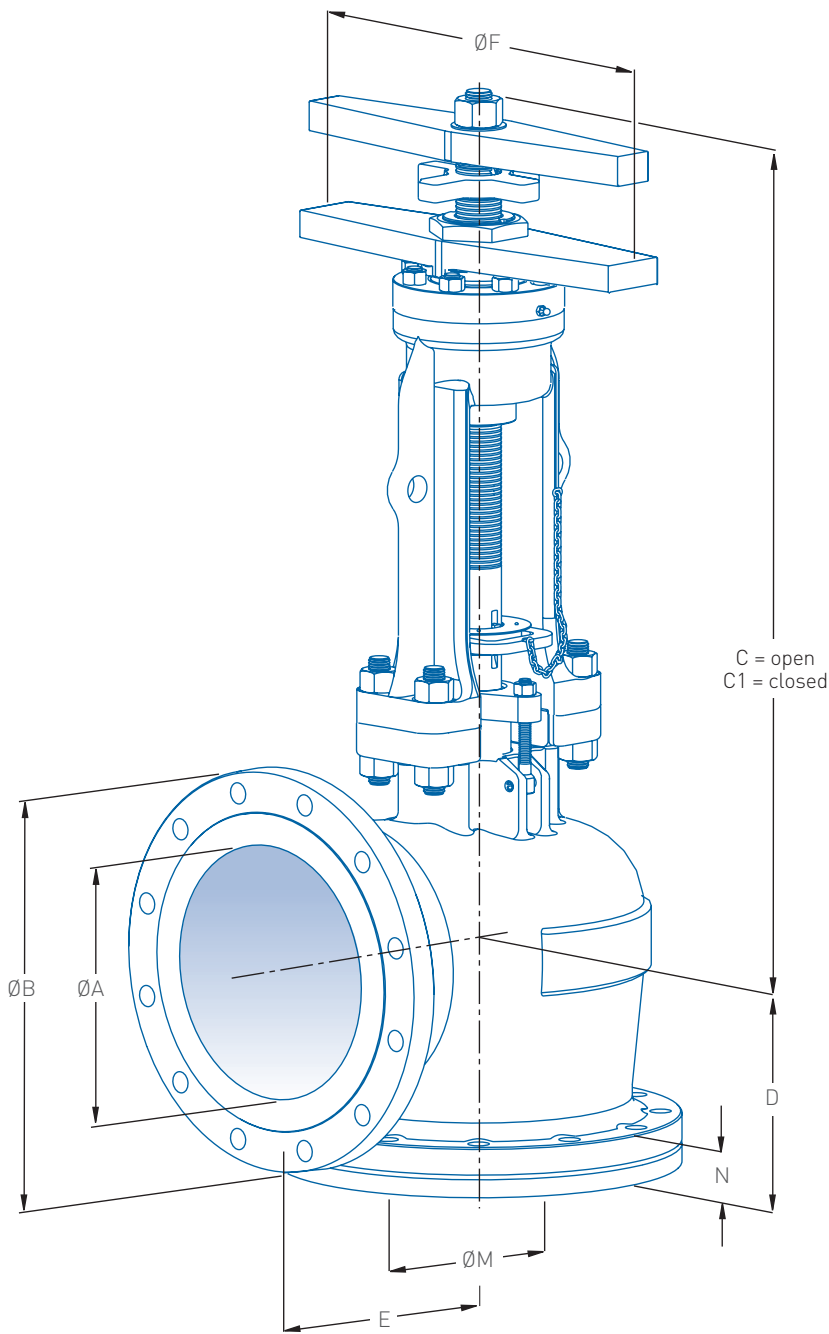
NOTES

No bolts, washers, gaskets or pins included in parts list.

Bevel gear operation option available.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 300 (NPS 2 - 12) ASME CLASS 150



DIMENSIONS mm (inches)

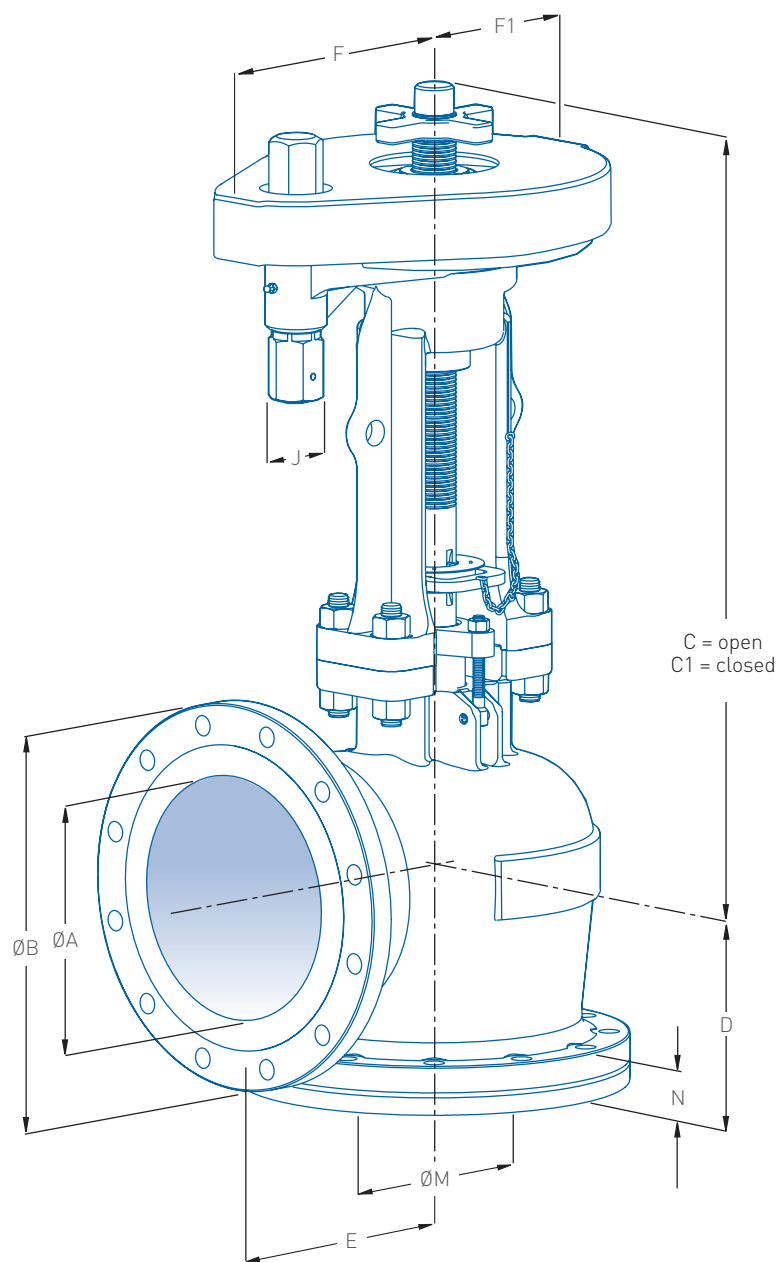
| Valve size DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | ØF | ØM bore | N min |
|---------------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| 50 (2) | 51 (2.00) | 152 (6.00) | 405 (15.94) | 369 (14.53) | 60 (2.36) | 114 (4.49) | 205 (8.07) | 44 (1.73) | 33.5 (1.32) |
| 80 (3) | 76 (3.00) | 191 (7.50) | 433 (17.05) | 380 (14.96) | 79 (3.11) | 140 (5.51) | 205 (8.07) | 51 (2.01) | 43.0 (1.69) |
| 100 (4) | 102 (4.00) | 229 (9.00) | 614 (24.17) | 517 (20.35) | 125 (4.92) | 165 (6.50) | 305 (12.01) | 76 (2.99) | 46.5 (1.83) |
| 150 (6) | 152 (6.00) | 280 (11.00) | 815 (32.09) | 692 (27.24) | 159 (6.26) | 203 (7.99) | 410 (16.14) | 121 (4.76) | 50.0 (1.97) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 901 (35.47) | 749 (29.49) | 197 (7.76) | 248 (9.76) | 410 (16.14) | 171 (6.73) | 53.5 (2.11) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 1162 (45.75) | 960 (37.80) | 241 (9.49) | 292 (11.50) | 520 (20.47) | 216 (8.50) | 57.5 (2.26) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 1275 (50.20) | 1034 (40.71) | 276 (10.87) | 349 (13.74) | 520 (20.47) | 267 (10.51) | 59.5 (2.34) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



DIMENSIONS mm (inches)

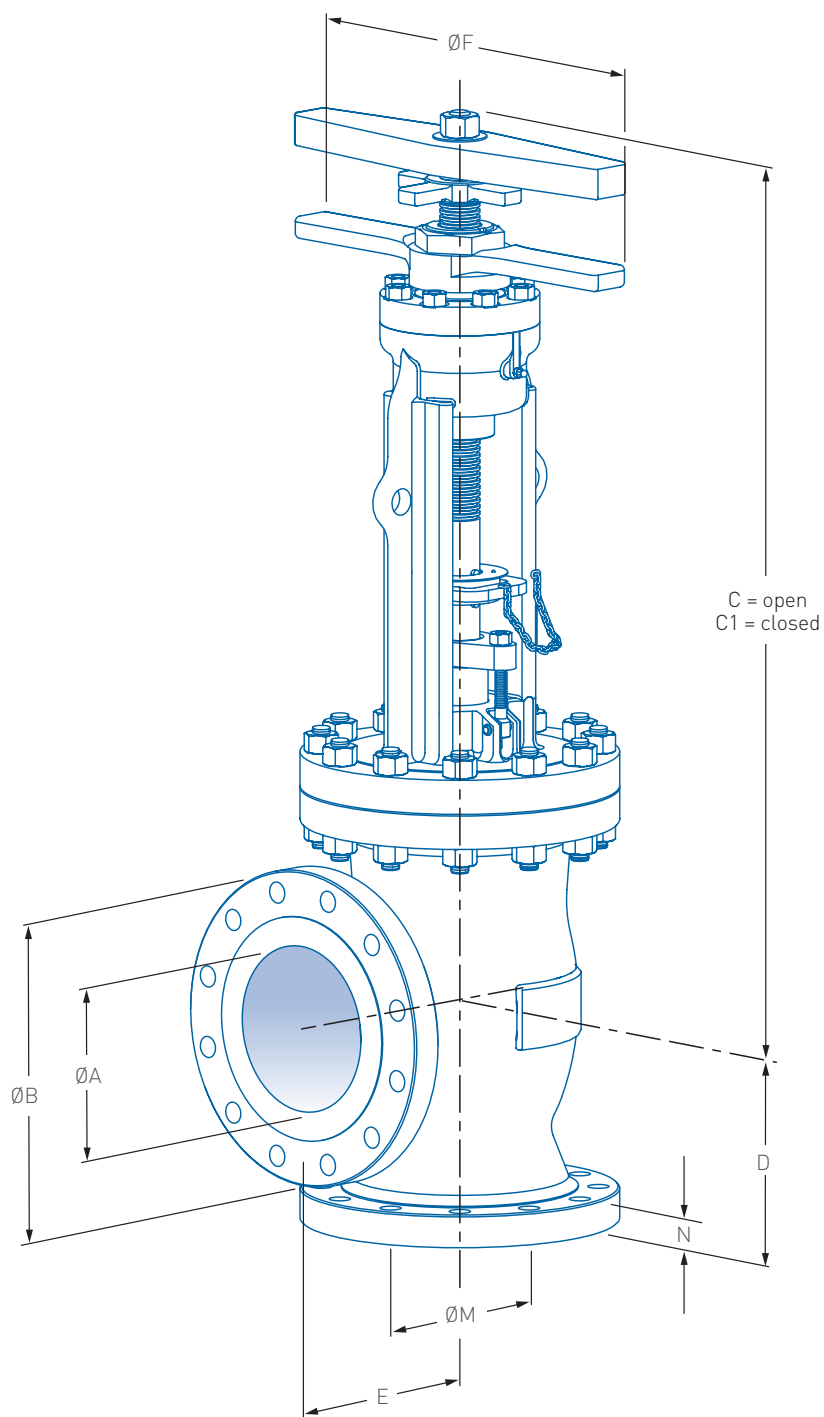
| Valve size DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | F | F1 | J (A/F) | ØM bore | N min |
|---------------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|
| 150 (6) | 152 (6.00) | 280 (11.00) | 810 (31.89) | 683 (26.89) | 159 (6.26) | 203 (7.99) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 121 (4.76) | 51.0 (2.01) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 901 (35.47) | 749 (29.49) | 197 (7.76) | 248 (9.76) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 171 (6.73) | 53.5 (2.11) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 1162 (45.75) | 960 (37.80) | 241 (9.49) | 292 (11.50) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 216 (8.50) | 57.5 (2.26) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 1275 (50.20) | 1034 (40.71) | 276 (10.87) | 349 (13.74) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 267 (10.51) | 59.5 (2.34) |
| 350 (14) | 336 (13.25) | 533 (21.00) | 1484 (58.43) | 1207 (47.52) | 305 (12.01) | 368 (14.49) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 299 (11.77) | 67.5 (2.66) |
| 400 (16) | 387 (15.25) | 597 (23.50) | 1664 (65.51) | 1378 (54.25) | 340 (13.39) | 381 (15.00) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 343 (13.50) | 71.0 (2.80) |
| 450 (18) | 438 (17.25) | 635 (25.00) | 1682 (66.22) | 1389 (54.69) | 356 (14.02) | 406 (15.98) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 387 (15.24) | 77.2 (3.04) |
| 500 (20) | 489 (19.25) | 699 (27.50) | 1823 (71.77) | 1505 (59.25) | 394 (15.51) | 457 (17.99) | 395 (15.55) | 305 (12.01) | 60 (2.36) | 426 (16.77) | 82.5 (3.25) |
| 600 (24) | 590 (23.25) | 813 (32.00) | 1963 (77.28) | 1608 (63.31) | 451 (17.76) | 508 (20.00) | 395 (15.55) | 305 (12.01) | 60 (2.36) | 521 (20.51) | 92.7 (3.65) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 300



DIMENSIONS mm (inches)

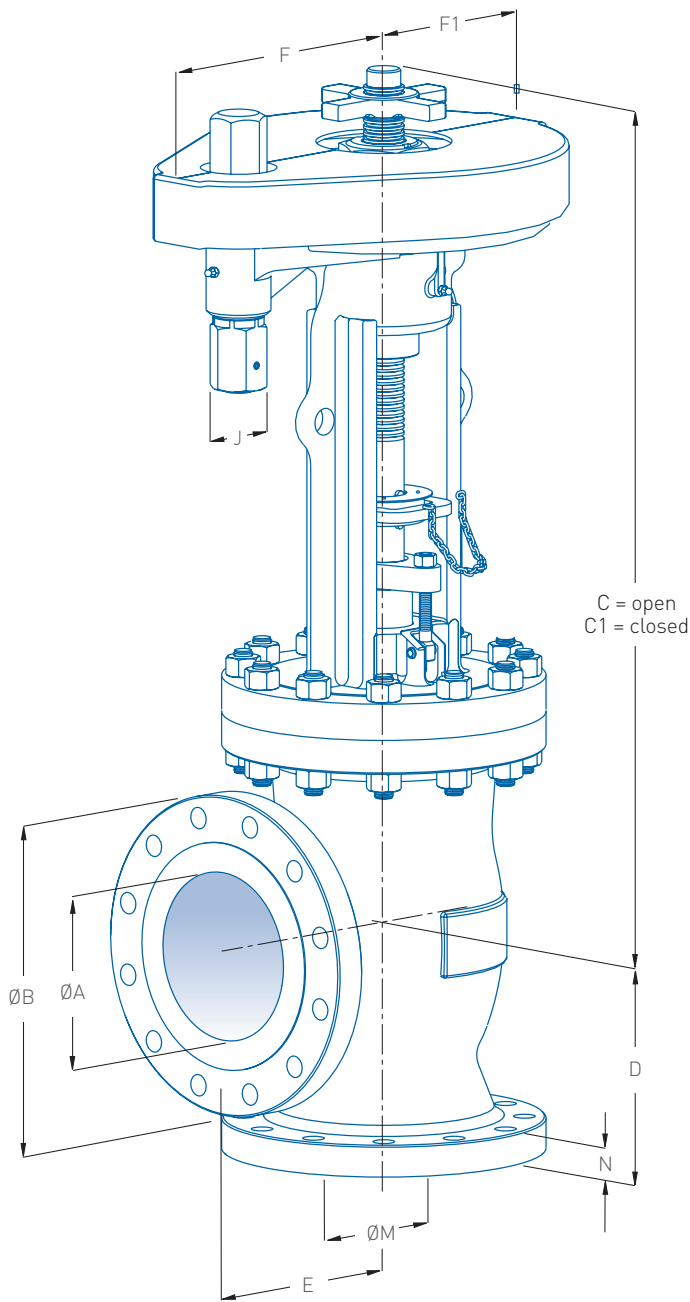
| Valve size DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | ØF | ØM bore | N min |
|---------------------|------------|-------------|-------------|-------------|------------|------------|-------------|------------|-----------|
| 50 (2) | 51 (2.00) | 165 (6.50) | 514 (20.24) | 464 (18.27) | 127 (5.00) | 165 (6.50) | 203 (7.99) | 51 (2.01) | 22 (0.87) |
| 80 (3) | 76 (3.00) | 210 (8.25) | 514 (20.24) | 464 (18.27) | 152 (5.98) | 165 (6.50) | 203 (7.99) | 51 (2.01) | 29 (1.14) |
| 100 (4) | 102 (4.00) | 254 (10.00) | 875 (34.45) | 811 (31.93) | 178 (7.01) | 178 (7.01) | 410 (16.14) | 76 (2.99) | 34 (1.34) |
| 150 (6) | 152 (6.00) | 318 (12.50) | 984 (38.74) | 858 (33.78) | 216 (8.50) | 216 (8.50) | 410 (16.14) | 127 (5.00) | 39 (1.54) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 300



DIMENSIONS mm (inches)

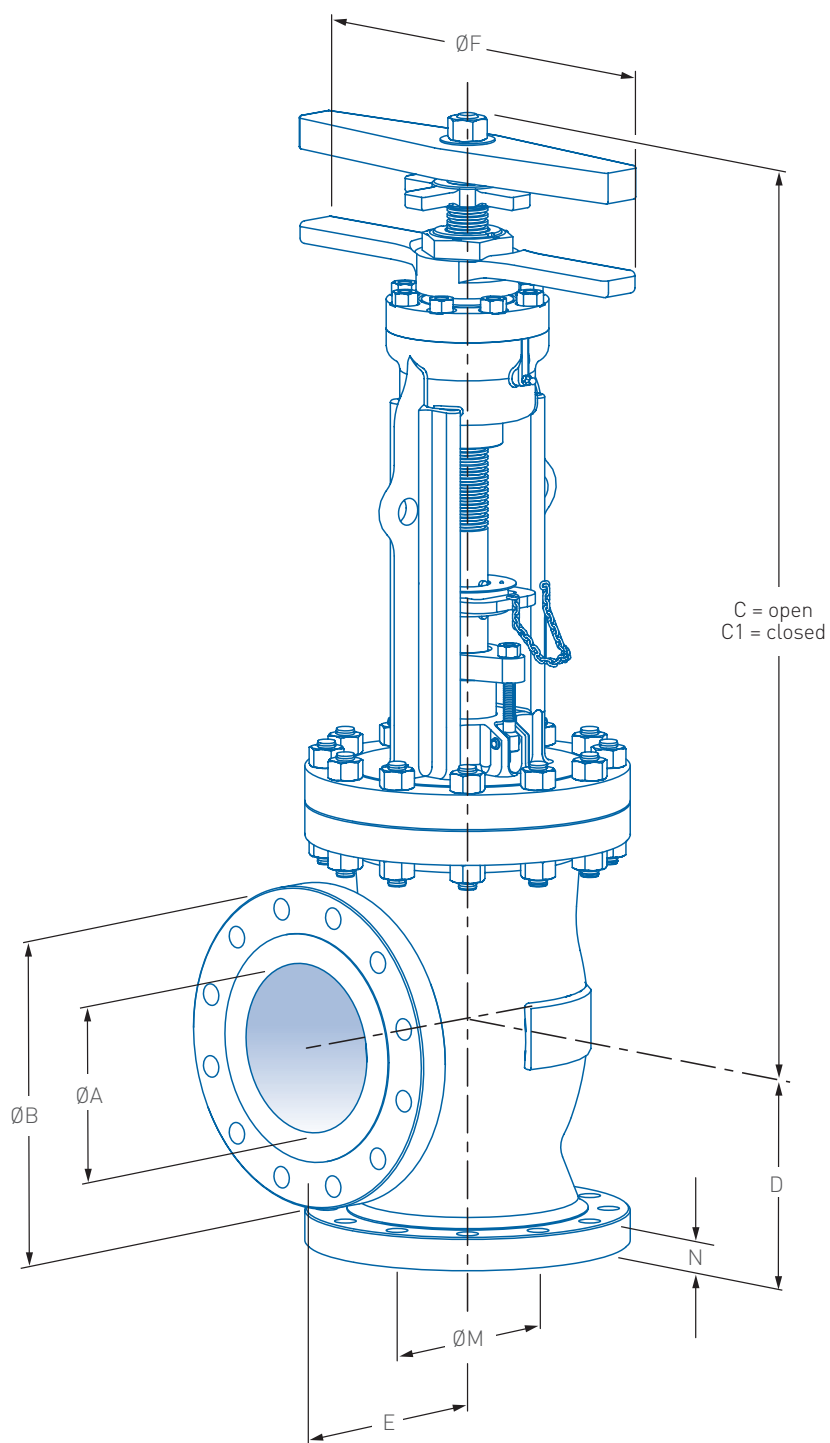
| Valve size DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | F | F1 | J (A/F) | ØM bore | N min |
|---------------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|
| 150 (6) | 152 (6.00) | 318 (12.50) | 984 (38.74) | 858 (33.78) | 216 (8.50) | 216 (8.50) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 127 (5.00) | 39 (1.54) |
| 200 (8) | 200 (7.85) | 381 (15.00) | 1250 (49.21) | 1074 (42.28) | 267 (10.51) | 267 (10.51) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 152 (5.98) | 42 (1.65) |
| 250 (10) | 252 (9.90) | 445 (17.50) | 1378 (54.25) | 1172 (46.14) | 305 (12.01) | 305 (12.01) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 203 (7.99) | 48 (1.89) |
| 300 (12) | 302 (11.90) | 521 (20.50) | 1730 (68.11) | 1465 (57.68) | 343 (13.50) | 343 (13.50) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 254 (10.00) | 52 (2.05) |
| 350 (14) | 337 (13.25) | 584 (23.00) | 1867 (73.50) | 1598 (62.91) | 381 (15.00) | 381 (15.00) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 305 (12.01) | 52 (2.05) |
| 400 (16) | 387 (15.25) | 648 (25.50) | 1909 (75.16) | 1634 (64.33) | 419 (16.50) | 432 (17.01) | 395 (15.55) | 310 (12.20) | 60 (2.36) | 362 (14.25) | 57 (2.24) |
| 450 (18) | 419 (16.50) | 711 (28.00) | 1991 (78.39) | 1713 (67.44) | 457 (17.99) | 457 (17.99) | 395 (15.55) | 310 (12.20) | 60 (2.36) | 400 (15.75) | 60 (2.36) |
| 500 (20) | 483 (19.00) | 775 (30.50) | 2108 (82.99) | 1810 (71.26) | 495 (19.49) | 495 (19.49) | 445 (17.52) | 340 (13.39) | 60 (2.36) | 457 (17.99) | 64 (2.52) |
| 600 (24) | 585 (23.00) | 915 (36.00) | 2483 (97.76) | 2127 (83.74) | 635 (25.00) | 635 (25.00) | 445 (17.52) | 340 (13.39) | 89 (3.50) | 549 (21.61) | 73 (2.87) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 150 (NPS 2 - 6) ASME CLASS 600



DIMENSIONS mm (inches)

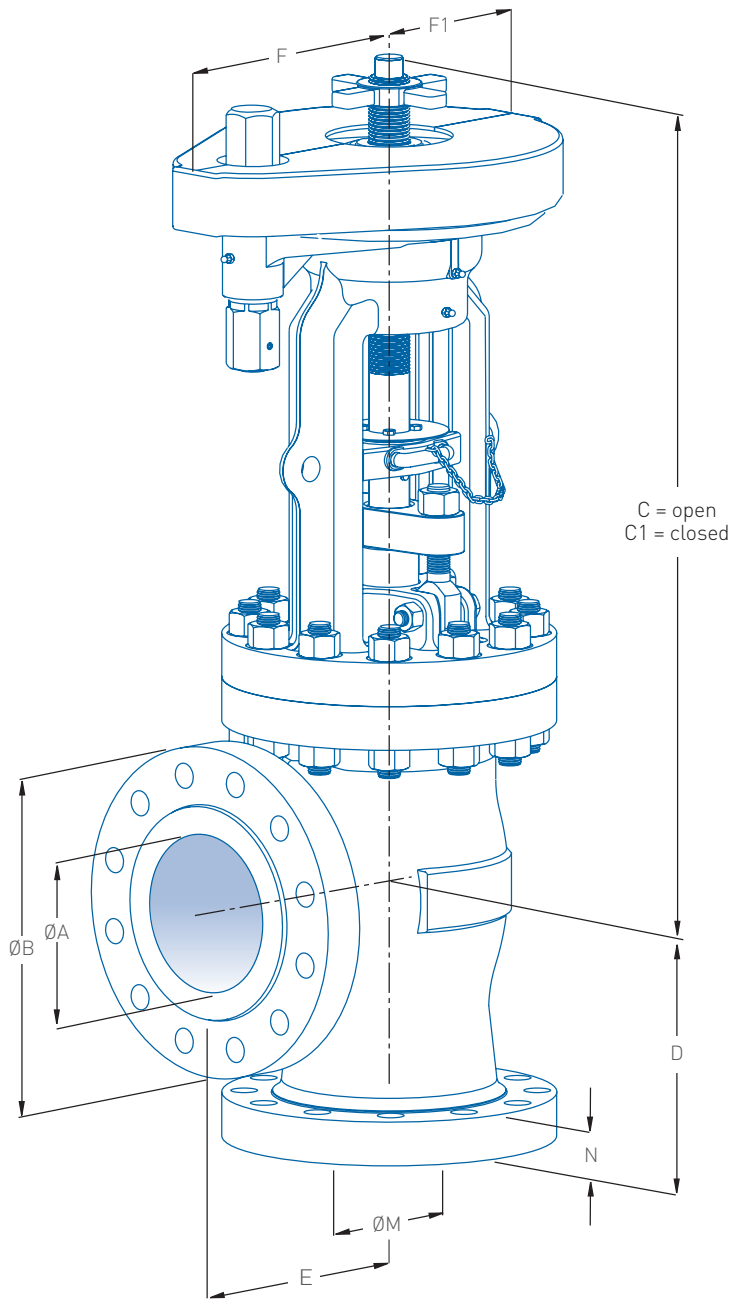
| Valve size DN (NPS) | $\varnothing A$ bore | $\varnothing B$ | C open | C1 closed | D | E | $\varnothing F$ | $\varnothing M$ bore | N min |
|---------------------|----------------------|-----------------|--------------|-------------|------------|-------------|-----------------|----------------------|-----------|
| 50 (2) | 51 (2.00) | 165 (6.50) | 600 (23.62) | 556 (21.89) | 133 (5.24) | 133 (5.24) | 305 (12.01) | 51 (2.01) | 32 (1.26) |
| 80 (3) | 76 (3.00) | 210 (8.25) | 712 (28.03) | 657 (25.87) | 184 (7.24) | 184 (7.24) | 305 (12.01) | 54 (2.13) | 38 (1.50) |
| 100 (4) | 102 (4.00) | 260 (10.25) | 762 (30.00) | 699 (27.52) | 216 (8.50) | 216 (8.50) | 406 (15.98) | 76 (2.99) | 44 (1.73) |
| 150 (6) | 152 (6.00) | 356 (14.00) | 1029 (40.51) | 929 (36.57) | 251 (9.88) | 264 (10.39) | 410 (16.14) | 127 (5.00) | 49 (1.93) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 600



DIMENSIONS mm (inches)

| Valve size DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | F | F1 | J (A/F) | ØM bore | N min |
|---------------------|-------------|-------------|---------------|---------------|-------------|-------------|-------------|-------------|-----------|-------------|------------|
| 150 (6) | 152 (6.00) | 356 (14.00) | 1029 (40.51) | 929 (36.57) | 251 (9.88) | 264 (10.39) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 127 (5.00) | 49 (1.93) |
| 200 (8) | 200 (7.85) | 419 (16.50) | 1029 (40.51) | 929 (36.57) | 330 (12.99) | 324 (12.76) | 295 (11.61) | 195 (7.68) | 60 (2.36) | 152 (5.98) | 58 (2.28) |
| 250 (10) | 254 (10.00) | 508 (20.00) | 1581 (62.24) | 1403 (55.24) | 394 (15.51) | 394 (15.51) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 203 (7.99) | 68 (2.68) |
| 300 (12) | 302 (11.90) | 559 (22.00) | 1818 (71.57) | 1607 (63.27) | 419 (16.50) | 425 (16.73) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 254 (10.00) | 71 (2.80) |
| 350 (14) | 327 (12.85) | 603 (23.75) | 1937 (76.26) | 1670 (65.75) | 445 (17.52) | 445 (17.52) | 330 (12.99) | 230 (9.06) | 60 (2.36) | 305 (12.01) | 76 (2.99) |
| 400 (16) | 363 (14.30) | 689 (27.15) | 2142 (84.33) | 1856 (73.07) | 502 (19.76) | 527 (20.75) | 610 (24.02) | 498 (19.61) | 89 (3.50) | 362 (14.25) | 81 (3.19) |
| 450 (18) | 419 (16.50) | 743 (29.25) | 2179 (85.79) | 1899 (74.76) | 546 (21.50) | 546 (21.50) | 610 (24.02) | 498 (19.61) | 89 (3.50) | 400 (15.75) | 83 (3.27) |
| 500 (20) | 464 (18.25) | 813 (32.00) | 2564 (100.94) | 2231 (87.83) | 597 (23.50) | 597 (23.50) | 795 (31.30) | 415 (16.34) | 89 (3.50) | 464 (18.27) | 90 (3.54) |
| 600 (24) | 550 (21.65) | 940 (37.00) | 3511 (138.23) | 2975 (117.13) | 685 (26.97) | 685 (26.97) | 980 (38.58) | 595 (23.43) | 89 (3.50) | 550 (21.65) | 108 (4.25) |

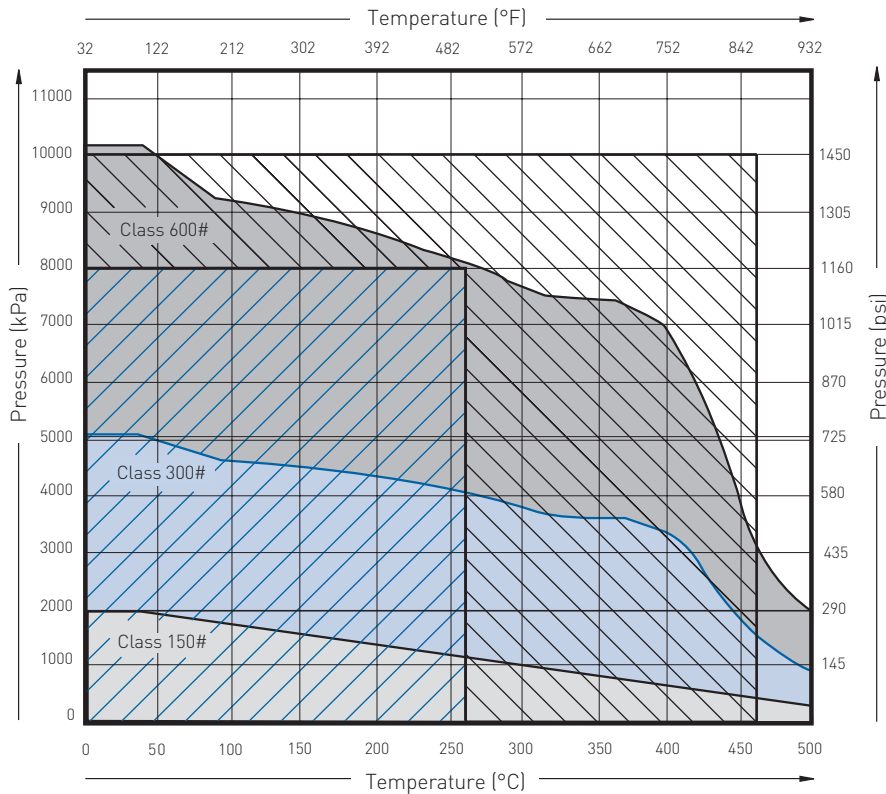
NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 603 ANGLE ISOLATION VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600



PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

NOTES

1. The pressure temperature ratings displayed are for carbon steel ASTM A 216 Gr WCB according to ASME B16.5 Table 2.
2. Upper temperature is set by standard gland packing.
3. Customer requested changes to gland packing may affect the temperature ratings of the valve.

-  PTFE braided packing
-  Reinforced graphite packing

TYPICAL SPECIFYING SEQUENCE - CLASS 150, 300 AND 600

| | | | | | | | | | | |
|----------------|-------------|---------------|---------------|---------------|-----------|-----------|-----------|--------------------|---------------|-----------------|
| 100 (4) | F603 | 3 | 3 | C | 3 | 3 | 4 | 3 | / | 00 |
| Valve size | Figure no. | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim | Certification code | Valve variant | Standard option |

Size range: DN 50 - 600 (NPS 2 - 24)

Figure no.: F603 - Angle Isolation valve Class 150, 300 and 600

| Trim code | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim |
|-----------|---------------|---------------|---------------|------------------|------------------|---|
| 11C334 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |
| 11C353 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Grade ASTM A29 - 4140 |
| 33C333 | Class 300 | Class 300 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 66C334 | Class 600 | Class 600 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |

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LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600

The F607 is a check valve specifically designed for severe service in alumina and mining applications where scale and erosion are present



FEATURES

- Valves can be reground in-line.
- Designed to ASME B16.34
- Heavy duty wall and flange thickness well in excess of ASME B16.34 and ASME B16.5
- Tested to API 598.
- Large stem diameters for strength and stiffness.
- Stellite 6 hardfacing as standard on disc and seat surfaces.
- Hard facing available on stem.
- Roller or plain bearings fitted to yoke bush - depending upon size.
- Manufactured under quality system ISO 9001:2008, Certificate No. MEL 0929678/A
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409). Material certification for pressure containing components.
- Used to prevent the backflow of fluids and slurry media.
- Provides protection of pumps and other equipment to reverse flow conditions.

Options

- Range of internal linings available to combat the effects of erosion or corrosion.
- High performance erosion resistant discs and seats.
- Custom face to face dimensions.
- Custom designs for specific applications.

GENERAL APPLICATION

Designed and engineered specifically for the mining and mineral processing industries.

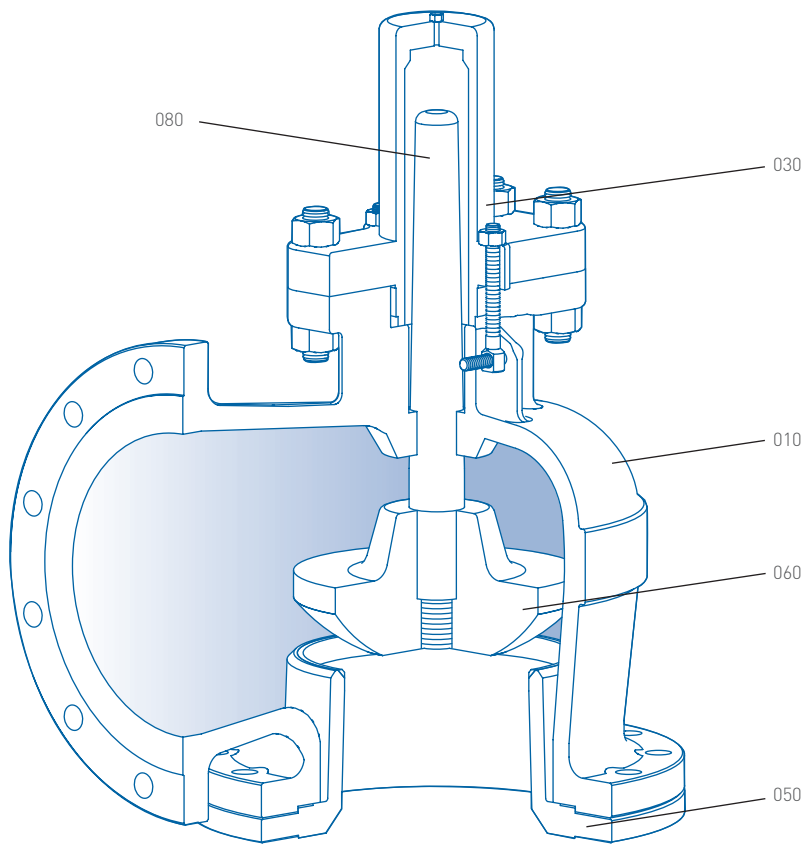
TECHNICAL DATA

Size range: DN 50 - 600 (NPS 2 - 24)
Temperature rating: Up to 345°C (650°F)
Pressure rating: ASME Class 150 to 600



LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150



PARTS LIST

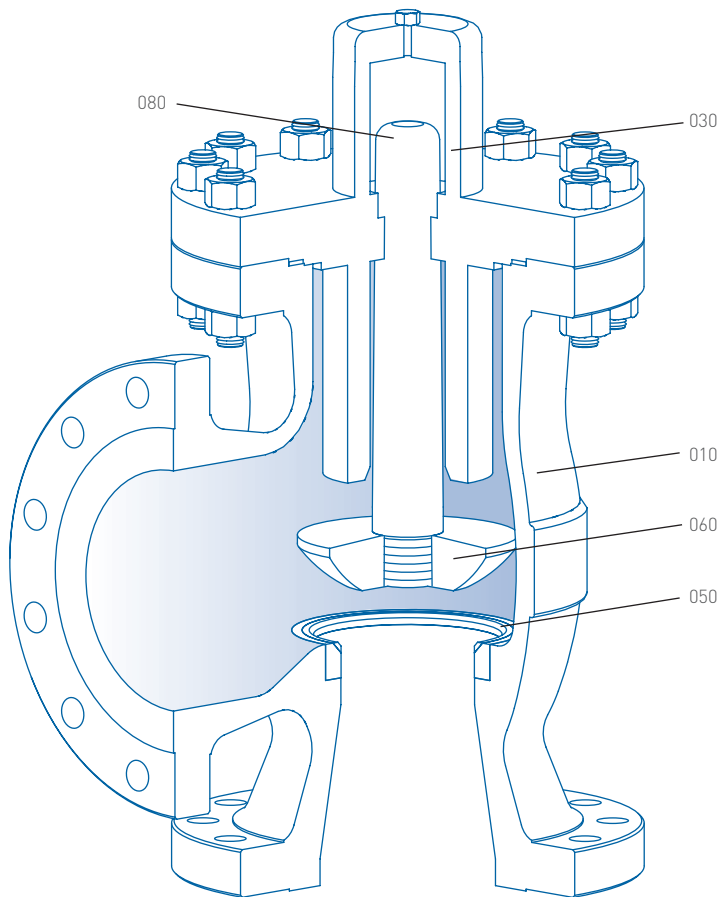
| No. | Description | Material standards |
|-----|-------------|---|
| 010 | Body | ASTM A216 - WCB |
| 030 | Cap | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020,1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020,1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 300 AND 600



PARTS LIST

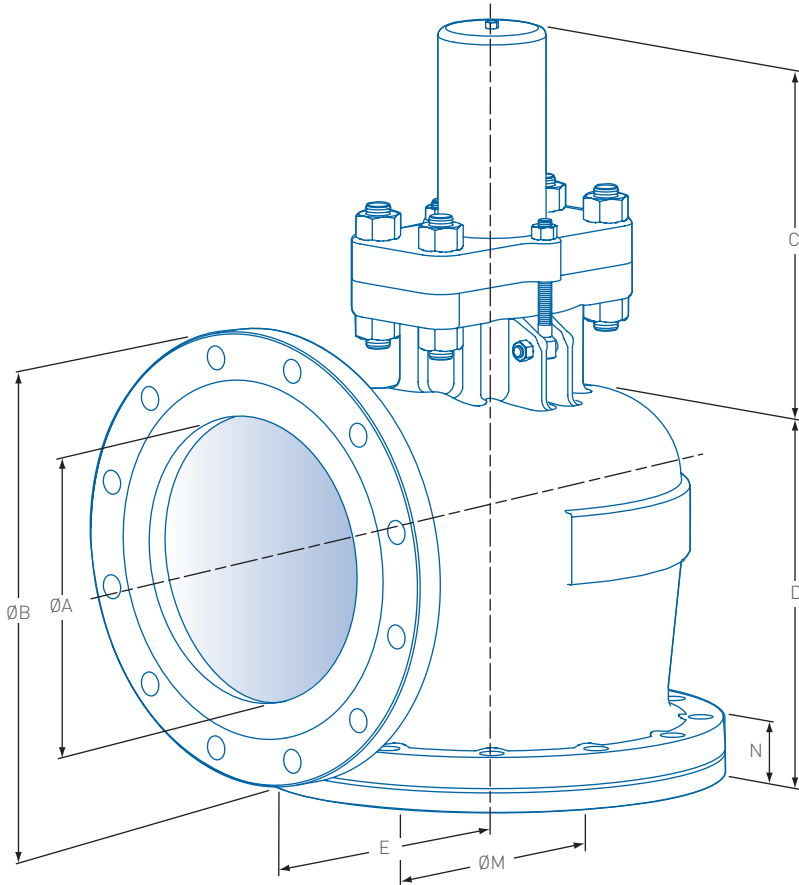
| No. | Description | Material standards |
|-----|-------------|---|
| 010 | Body | ASTM A216 - WCB |
| 030 | Cap | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020,1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020,1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150



DIMENSIONS mm (inches)

| Valve size | | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DN (NPS) | ØA bore | ØB | C | D | E | ØM | N min |
| 50 (2) | 51 (2.00) | 152 (6.00) | 154 (6.06) | 63 (2.48) | 114 (4.49) | 44 (1.73) | 35.0 (1.38) |
| 80 (3) | 76 (3.00) | 191 (7.50) | 162 (6.38) | 82 (3.23) | 140 (5.51) | 51 (2.01) | 42.9 (1.69) |
| 100 (4) | 102 (4.00) | 229 (9.00) | 183 (7.20) | 125 (4.92) | 165 (6.50) | 64 (2.52) | 46.5 (1.83) |
| 150 (6) | 152 (6.00) | 279 (11.00) | 311 (12.24) | 159 (6.26) | 203 (7.99) | 102 (4.02) | 49.5 (1.95) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 378 (14.88) | 197 (7.76) | 248 (9.76) | 152 (5.98) | 53.5 (2.11) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 423 (16.65) | 241 (9.49) | 292 (11.50) | 203 (7.99) | 57.5 (2.26) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 541 (21.30) | 276 (10.87) | 349 (13.74) | 254 (10.00) | 59.5 (2.34) |
| 350 (14) | 337 (13.25) | 533 (21.00) | 604 (23.78) | 305 (12.01) | 368 (14.49) | 286 (11.26) | 65.5 (2.58) |
| 400 (16) | 387 (15.25) | 597 (23.50) | 689 (27.13) | 340 (13.39) | 381 (15.00) | 330 (12.99) | 72.5 (2.85) |
| 450 (18) | 438 (17.25) | 635 (25.00) | 720 (28.35) | 356 (14.02) | 406 (15.98) | 368 (14.49) | 78.8 (3.10) |
| 500 (20) | 489 (19.25) | 699 (27.50) | 816 (32.13) | 394 (15.51) | 457 (17.99) | 419 (16.50) | 84.5 (3.33) |
| 600 (24) | 591 (23.25) | 813 (32.00) | 905 (35.63) | 451 (17.76) | 508 (20.00) | 508 (20.00) | 95.0 (3.74) |

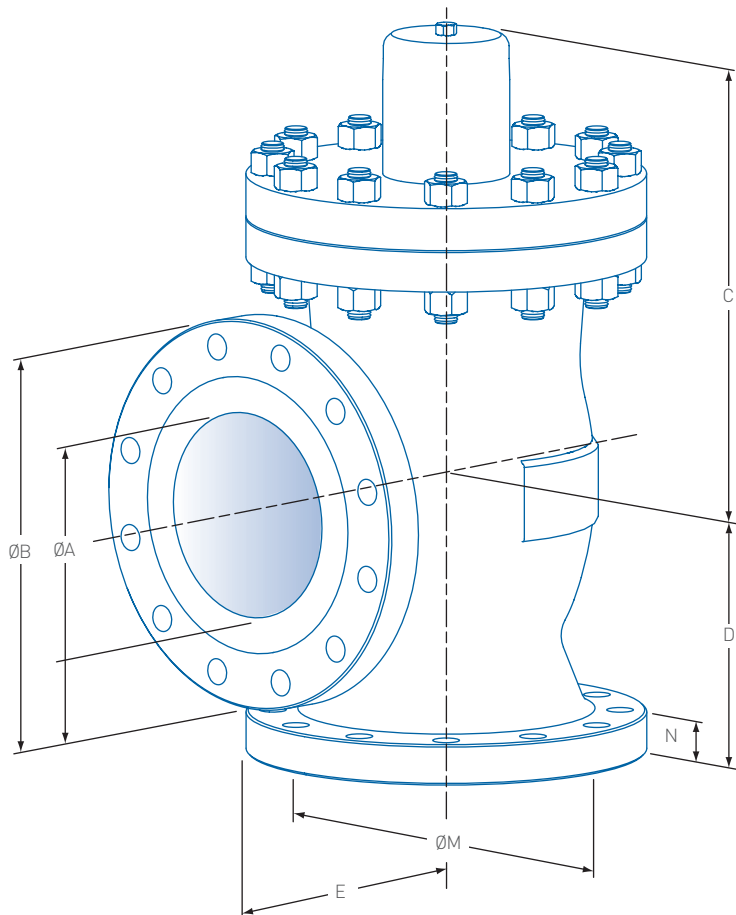
NOTES

Dimension E is from the valve center to the flange raised face.

* ØM is the bore at the internal seat.

LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 300



DIMENSIONS mm (inches)

| Valve size | | | | | | | |
|------------|-------------|-------------|--------------|-------------|-------------|-------------|-----------|
| DN (NPS) | ØA bore | ØB | C | D | E | ØM | N min |
| 50 (2) | 51 (2.00) | 165 (6.50) | 235 (9.25) | 127 (5.00) | 165 (6.50) | 51 (2.01) | 24 (0.94) |
| 80 (3) | 76 (3.00) | 210 (8.25) | 235 (9.25) | 152 (5.98) | 165 (6.50) | 51 (2.01) | 31 (1.22) |
| 100 (4) | 102 (4.00) | 254 (10.00) | 311 (12.24) | 178 (7.01) | 178 (7.01) | 76 (2.99) | 34 (1.34) |
| 150 (6) | 152 (6.00) | 318 (12.50) | 441 (17.36) | 216 (8.50) | 216 (8.50) | 127 (5.00) | 39 (1.54) |
| 200 (8) | 200 (7.85) | 381 (15.00) | 494 (19.45) | 267 (10.51) | 267 (10.51) | 152 (5.98) | 42 (1.65) |
| 250 (10) | 252 (9.90) | 445 (17.50) | 572 (22.52) | 305 (12.01) | 305 (12.01) | 203 (7.99) | 48 (1.89) |
| 300 (12) | 302 (11.90) | 521 (20.50) | 623 (24.53) | 343 (13.50) | 343 (13.50) | 254 (10.00) | 52 (2.05) |
| 350 (14) | 337 (13.25) | 584 (23.00) | 703 (27.68) | 381 (15.00) | 381 (15.00) | 305 (12.01) | 52 (2.05) |
| 400 (16) | 388 (15.25) | 648 (25.50) | 835 (32.87) | 419 (16.50) | 432 (17.01) | 362 (14.25) | 56 (2.20) |
| 450 (18) | 419 (16.50) | 711 (28.00) | 903 (35.55) | 457 (17.99) | 457 (17.99) | 400 (15.75) | 59 (2.32) |
| 500 (20) | 483 (19.00) | 775 (30.50) | 1064 (41.89) | 495 (19.49) | 495 (19.49) | 464 (18.27) | 66 (2.60) |
| 600 (24) | 585 (23.00) | 915 (36.00) | 1064 (41.89) | 635 (25.00) | 635 (25.00) | 550 (21.65) | 73 (2.87) |

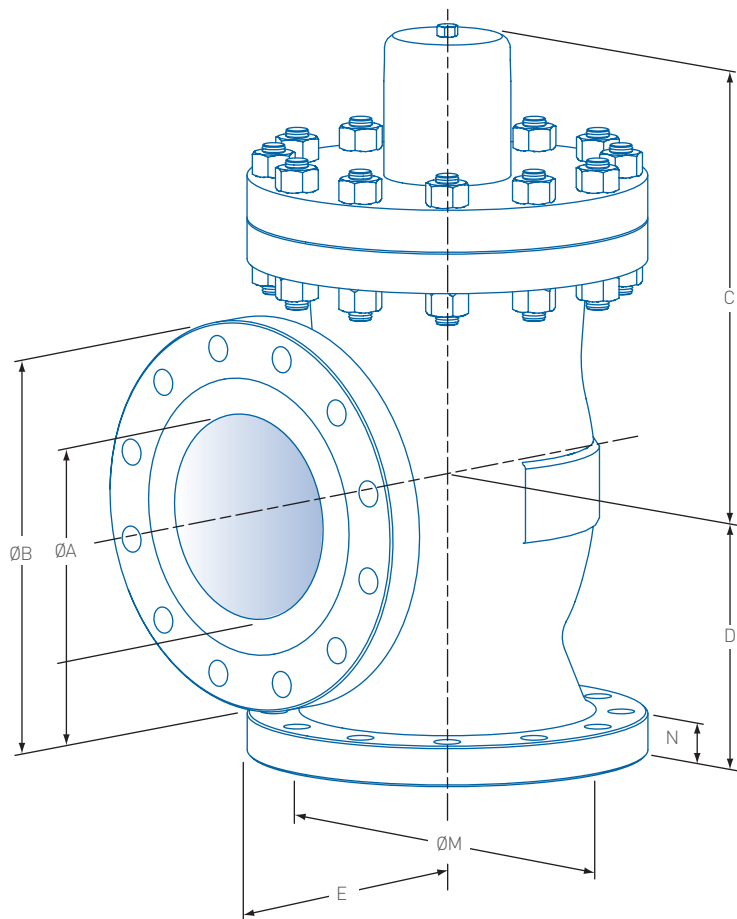
NOTES

Dimension E is from the valve center to the flange raised face.

* ØM is the bore at the internal seat.

LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 600



DIMENSIONS mm (inches)

| Valve size | | | | | | | |
|------------|-------------|-------------|--------------|-------------|-------------|-------------|------------|
| DN (NPS) | ØA bore | ØB | C | D | E | ØM | N min |
| 50 (2) | 51 (2.00) | 165 (6.50) | 240 (9.45) | 133 (5.24) | 133 (5.24) | 51 (2.01) | 34 (1.34) |
| 80 (3) | 76 (3.00) | 210 (8.25) | 297 (11.69) | 184 (7.24) | 184 (7.24) | 54 (2.13) | 34 (1.34) |
| 100 (4) | 102 (4.00) | 273 (10.75) | 311 (12.24) | 216 (8.50) | 216 (8.50) | 76 (2.99) | 46 (1.81) |
| 150 (6) | 152 (6.00) | 356 (14.00) | 389 (15.31) | 251 (9.88) | 264 (10.39) | 127 (5.00) | 56 (2.20) |
| 200 (8) | 200 (7.85) | 419 (16.50) | 438 (17.24) | 330 (12.99) | 324 (12.76) | 152 (5.98) | 65 (2.56) |
| 250 (10) | 248 (9.75) | 508 (20.00) | 514 (20.24) | 394 (15.51) | 394 (15.51) | 203 (7.99) | 68 (2.68) |
| 300 (12) | 302 (11.90) | 559 (22.00) | 594 (23.39) | 419 (16.50) | 425 (16.73) | 254 (10.00) | 71 (2.80) |
| 350 (14) | 327 (12.85) | 603 (23.75) | 702 (27.64) | 445 (17.52) | 445 (17.52) | 305 (12.01) | 74 (2.91) |
| 400 (16) | 375 (14.75) | 686 (27.00) | 839 (33.03) | 502 (19.76) | 527 (20.75) | 362 (14.25) | 81 (3.19) |
| 450 (18) | 419 (16.50) | 743 (29.25) | 924 (36.38) | 546 (21.50) | 546 (21.50) | 400 (15.75) | 83 (3.27) |
| 500 (20) | 467 (18.40) | 813 (32.00) | 950 (37.40) | 597 (23.50) | 597 (23.50) | 464 (18.27) | 90 (3.54) |
| 600 (24) | 550 (21.65) | 940 (37.00) | 1050 (41.34) | 685 (26.97) | 685 (26.97) | 550 (21.65) | 106 (4.17) |

NOTES

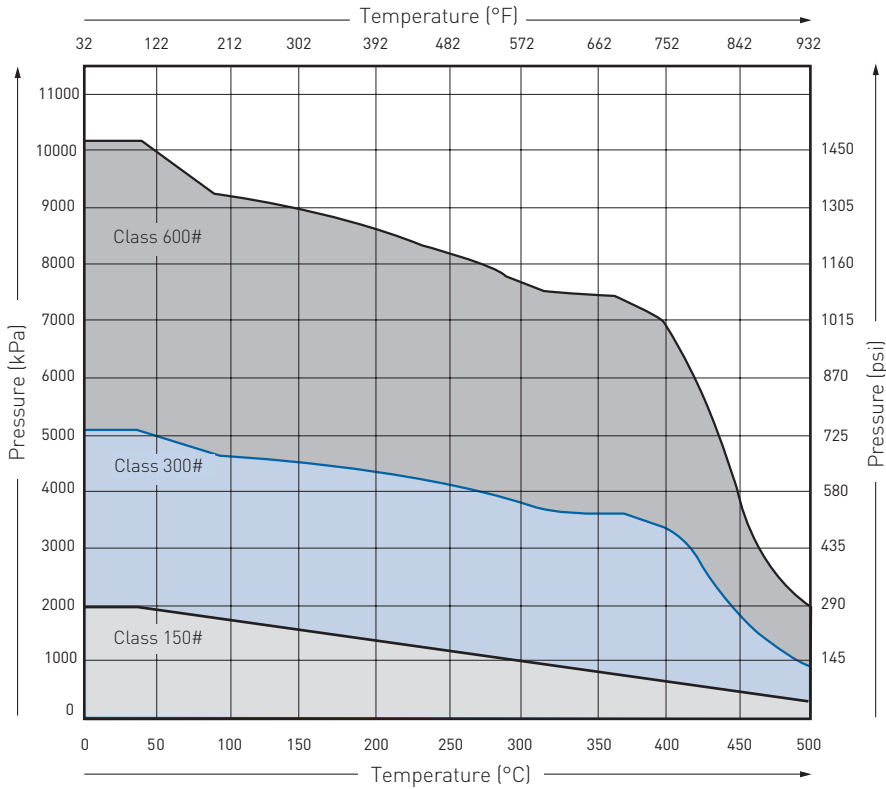
Dimension E is from the valve center to the flange raised face.

* ØM is the bore at the internal seat.

LUNKENHEIMER FIGURE 607 SLURRY CHECK VALVE

DN 50 - 600 (NPS 2 - 24) ASME CLASS 150, 300 AND 600

PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

NOTE

- The pressure temperature ratings displayed are for carbon steel ASTM A 216 Gr WCB according to ASME B16.5 Table 2.

TYPICAL SPECIFYING SEQUENCE - CLASS 150, 300 AND 600

100 (4) F607 3 3 C 2 2 2 3 / 00
 Valve size Figure no. Flange rating Flange rating Body material Seat trim Disc trim Stem trim Certification code Valve variant Standard option

Size range: DN 50 - 600 (NPS 2 - 24)

Figure no: F607 - Check valve ASME Class 150, 300 and 600

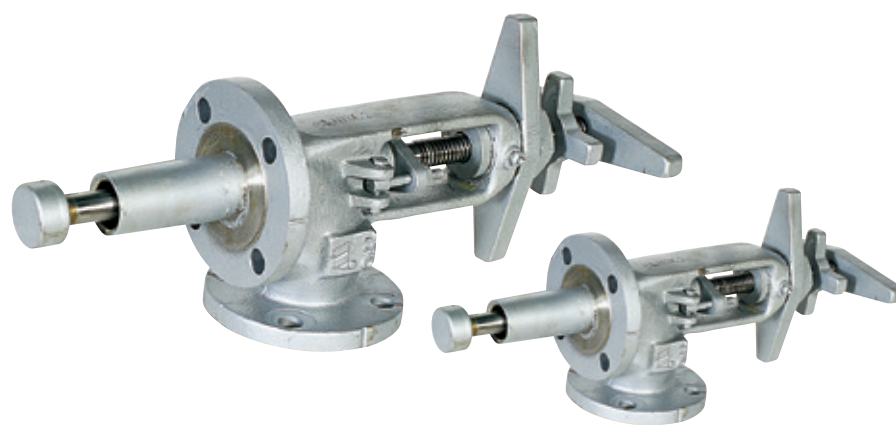
| Trim code | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim |
|-----------|---------------|---------------|---------------|------------------|------------------|-----------------------|
| 11C223 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 11C253 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Grade ASTM A29 - 4140 |
| 33C223 | Class 300 | Class 300 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 66C243 | Class 600 | Class 600 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |



LUNKENHEIMER FIGURE 606 DRAIN ISOLATION VALVE

DN 50 - 150 ASME CLASS 150, 300 AND 600

The F606 is a compact drain isolation valve specifically designed for severe service in alumina and mining applications where scale and erosion are present



FEATURES

- Valves can be reground in-line.
- Designed to ASME B16.34
- Heavy duty wall and flange thickness well in excess of ASME B16.34 and ASME B16.5
- Tested to API 598.
- Large stem diameters for strength and stiffness.
- Stellite 6 hardfacing as standard on disc and seat surfaces.
- Hard facing available on stem.
- Manufactured under quality system ISO 9001:2008, Certificate No. MEL 0929678/A
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409). Material certification for pressure containing components.
- Compact design drain valve used in areas where space is restricted or where height is an issue.
- Used on large diameter angle valves where body cavities require draining.

Options

- Custom face to face dimensions.
- Custom designs for specific applications.

GENERAL APPLICATION

Designed and engineered specifically for the mining, alumina and mineral processing industry, or other applications where scale or settled slurries need to be cleared to allow flow of media.

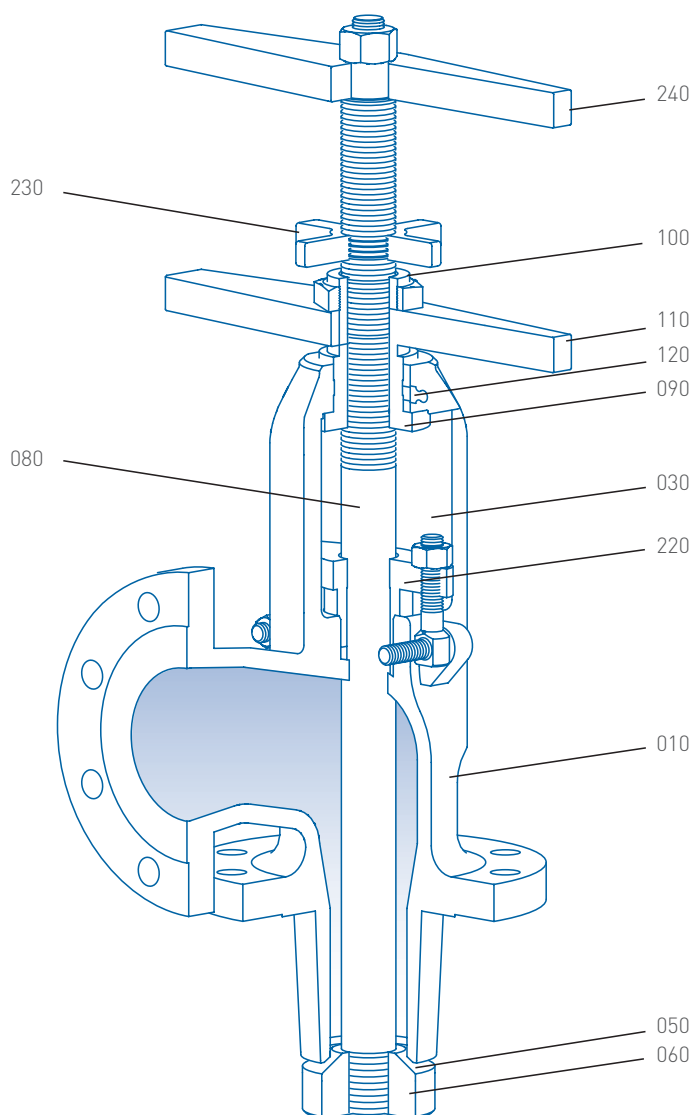
TECHNICAL DATA

Size range: DN 50 - 150 (NPS 2 - 6)
Temperature rating: Up to 345°C (650°F)
Pressure rating: ASME Class 150 to 600



LUNKENHEIMER FIGURE 606 DRAIN ISOLATION VALVE

DN 50 - 150 ASME CLASS 150, 300 AND 600



PARTS LIST

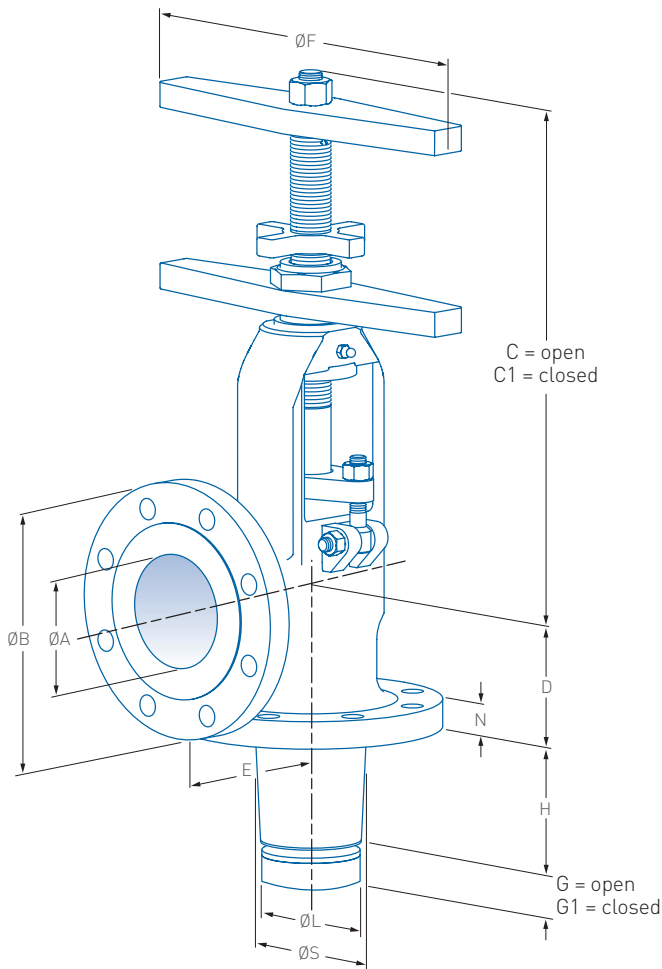
| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 120 | Bearing - yoke bush | Bronze |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |

NOTE

No bolts, washers, gaskets or pins included in parts list.

LUNKENHEIMER FIGURE 606 DRAIN ISOLATION VALVE

DN 50 - 150 ASME CLASS 150, 300 AND 600



NOTE

Dimension E is from the valve center to the flange raised face.

DIMENSIONS mm (inches) CLASS 150

| Valve size | DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | ØF | G open | G1 closed | H | ØL | ØS | N min |
|-------------------|----------|------------|-------------|-------------|-------------|------------|------------|-------------|------------|-----------|------------|------------|------------|-------------|
| 50 x 50 (2 x 2) | 50 | 51 (2.00) | 152 (6.00) | 286 (11.26) | 346 (13.62) | 79 (3.11) | 114 (4.49) | 205 (8.07) | 79 (3.11) | 19 (0.75) | 102 (4.02) | 45 (1.77) | 48 (1.89) | 18.1 (0.71) |
| 80 x 80 (3 x 3) | 80 | 76 (3.00) | 191 (7.50) | 279 (10.98) | 355 (13.98) | 86 (3.39) | 140 (5.51) | 205 (8.07) | 94 (3.70) | 19 (0.75) | 102 (4.02) | 68 (2.68) | 72 (2.83) | 24.1 (0.95) |
| 100 x 100 (4 x 4) | 100 | 102 (4.00) | 229 (9.00) | 382 (15.04) | 483 (19.02) | 125 (4.92) | 165 (6.50) | 305 (12.01) | 131 (5.16) | 30 (1.18) | 102 (4.02) | 84 (3.31) | 97 (3.82) | 24.1 (0.95) |
| 150 x 150 (6 x 6) | 150 | 152 (6.00) | 279 (11.00) | 375 (14.76) | 488 (19.21) | 159 (6.26) | 203 (7.99) | 305 (12.01) | 144 (5.67) | 31 (1.22) | 102 (4.02) | 128 (5.04) | 138 (5.43) | 30.1 (1.19) |

DIMENSIONS mm (inches) CLASS 300

| Valve size | DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | ØF | G open | G1 closed | H | ØL | ØS | N min |
|-------------------|----------|------------|-------------|-------------|-------------|------------|------------|-------------|------------|-----------|------------|------------|------------|-----------|
| 50 x 50 (2 x 2) | 50 | 51 (2.00) | 165 (6.50) | 299 (11.77) | 374 (14.72) | 111 (4.37) | 165 (6.50) | 305 (12.01) | 97 (3.82) | 22 (0.87) | 127 (5.00) | 46 (1.81) | 48 (1.89) | 25 (0.98) |
| 80 x 80 (3 x 3) | 80 | 76 (3.00) | 210 (8.25) | 304 (11.97) | 374 (14.72) | 152 (5.98) | 184 (7.24) | 305 (12.01) | 90 (3.54) | 20 (0.79) | 117 (4.61) | 60 (2.36) | 67 (2.64) | 32 (1.26) |
| 100 x 100 (4 x 4) | 100 | 102 (4.00) | 254 (10.00) | 380 (14.96) | 475 (18.70) | 178 (7.01) | 178 (7.01) | 305 (12.01) | 136 (5.35) | 32 (1.26) | 121 (4.76) | 84 (3.31) | 95 (3.74) | 36 (1.42) |
| 150 x 150 (6 x 6) | 150 | 152 (6.00) | 318 (12.50) | 340 (13.39) | 440 (17.32) | 165 (6.50) | 250 (9.84) | 305 (12.01) | 132 (5.20) | 32 (1.26) | 121 (4.76) | 120 (4.72) | 143 (5.63) | 39 (1.54) |

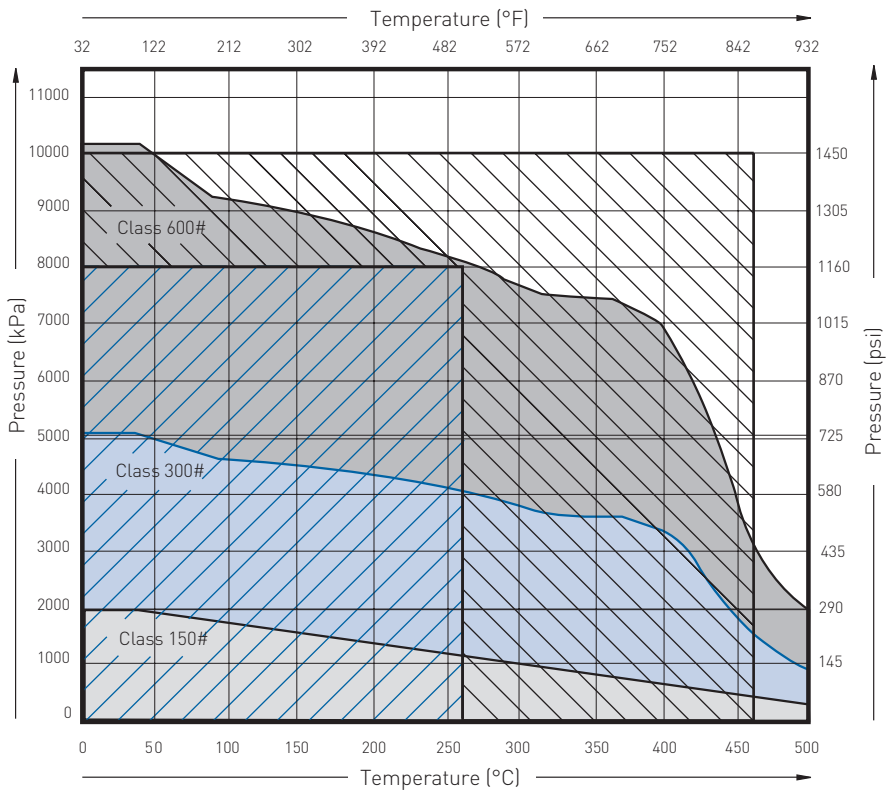
DIMENSIONS mm (inches) CLASS 600

| Valve size | DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | ØF | G open | G1 closed | H | ØL | ØS | N min |
|-------------------|----------|------------|-------------|-------------|-------------|------------|-------------|-------------|------------|-----------|------------|------------|------------|-----------|
| 50 x 50 (2 x 2) | 50 | 51 (2.00) | 165 (6.50) | 312 (12.28) | 380 (14.96) | 111 (4.37) | 165 (6.50) | 305 (12.01) | 90 (3.54) | 22 (0.87) | 127 (5.00) | 46 (1.81) | 48 (1.89) | 33 (1.30) |
| 80 x 80 (3 x 3) | 80 | 76 (3.00) | 210 (8.25) | 314 (12.36) | 382 (15.04) | 111 (4.37) | 184 (7.24) | 305 (12.01) | 87 (3.43) | 19 (0.75) | 117 (4.61) | 60 (2.36) | 67 (2.64) | 38 (1.50) |
| 100 x 100 (4 x 4) | 100 | 102 (4.00) | 273 (10.75) | 381 (15.00) | 468 (18.43) | 216 (8.50) | 216 (8.50) | 305 (12.01) | 119 (4.69) | 32 (1.26) | 117 (4.61) | 85 (3.35) | 95 (3.74) | 46 (1.81) |
| 150 x 150 (6 x 6) | 150 | 152 (6.00) | 356 (14.00) | 379 (14.92) | 493 (19.41) | 251 (9.88) | 264 (10.39) | 406 (15.98) | 146 (5.75) | 32 (1.26) | 117 (4.61) | 129 (5.08) | 140 (5.51) | 56 (2.20) |

LUNKENHEIMER FIGURE 606 DRAIN ISOLATION VALVE

DN 50 - 150 ASME CLASS 150, 300 AND 600



PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

NOTES

1. The pressure temperature ratings displayed are for carbon steel ASTM A 216 Gr WCB according to ASME B16.5 Table 2.
2. Upper temperature is set by standard gland packing.
3. Customer requested changes to gland packing may affect the temperature ratings of the valve.

-  PTFE braided packing
-  Reinforced graphite packing

TYPICAL SPECIFYING SEQUENCE - CLASS 150, 300 AND 600

| | | | | | | | | | | |
|------------|------------|---------------|---------------|---------------|-----------|-----------|-----------|--------------------|---------------|-----------------|
| 100 (4) | F606 | 3 | 3 | C | 3 | 3 | 3 | 3 | / | 00 |
| Valve size | Figure No. | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim | Certification code | Valve variant | Standard option |

Size range: DN 50 - 150 (NPS 2 - 6)

Figure no: F606 - Drain valve ASME Class 150, 300 and 600

| Trim code | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim |
|-----------|---------------|---------------|---------------|------------------|------------------|---|
| 11C334 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |
| 11C353 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Grade ASTM A29 - 4140 |
| 33C333 | Class 300 | Class 300 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 66C334 | Class 600 | Class 600 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |

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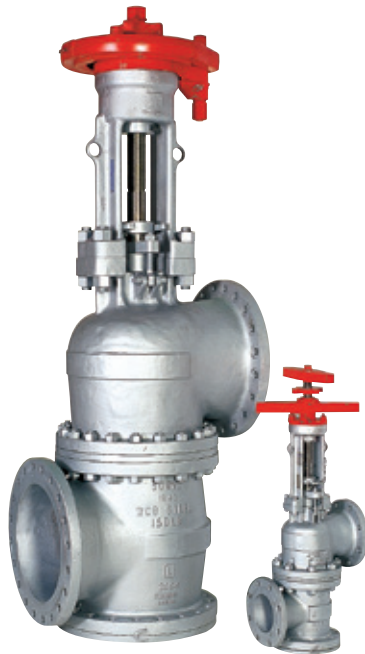
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LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 80 - 600 (NPS 3 - 24) ASME CLASS 150

The F605 combination valve is a three way diverting valve specifically designed for severe service in alumina applications where scale and erosion are present.



GENERAL APPLICATION

Designed and engineered specifically for use in the alumina industry for bypass applications. Services include all slurry and liquor applications.

TECHNICAL DATA

Size range: DN 80 - 600 (NPS 3 - 24)
Temperature rating: Up to 345°C (650°F)
Pressure rating: ASME Class 150

FEATURES

- Valves can be reground in-line.
- Designed to ASME B16.34
- Heavy duty wall and flange thickness well in excess of ASME B16.34 and ASME B16.5
- Pads for fitting drain ports.
- Tested to API 598.
- Large stem diameters for strength and stiffness.
- Stellite 6 hardfacing as standard on disc and seat surfaces.
- Hard facing available on stem.
- Roller or plain bearings fitted to yoke bush - depending upon size.
- Manufactured under quality system ISO 9001:2008, Certificate No. MEL 0929678/A
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409).
Material certification for pressure containing components.

Options

- Range of internal linings available to combat the effects of erosion or corrosion.
- High performance erosion resistant discs and seats.
- Custom face to face dimensions.
- Custom designs for specific applications.

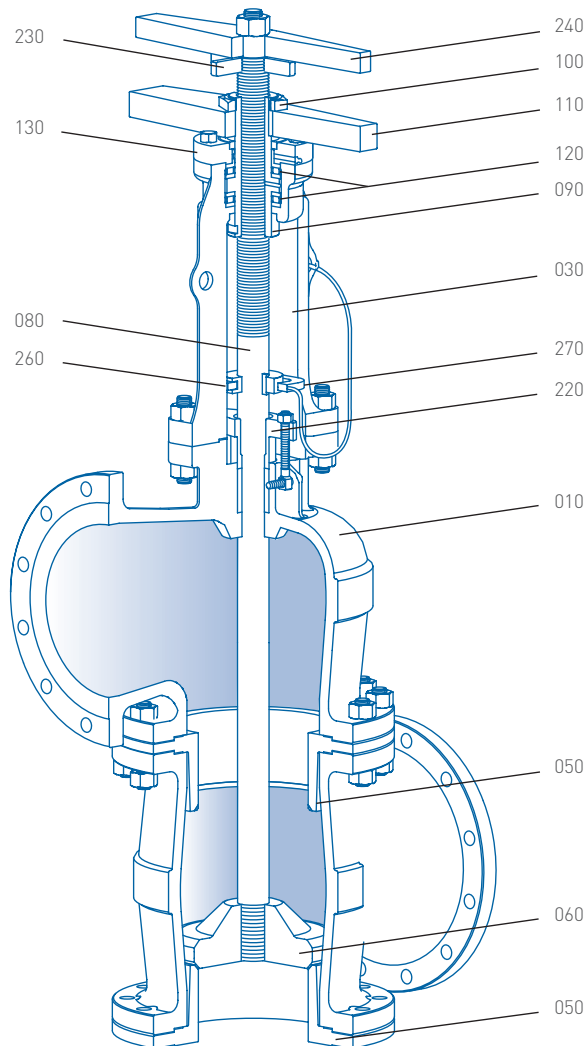
Actuation options

- Spur gear operation standard on larger sizes.
- Bevel gear operators.
- Patented stem clutch design for easy grind set-up.
- Customized actuation design.
- Range of actuation available including:
 - Electric
 - Pneumatic
 - Hydraulic
 - All with regrounding where required.



LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 80 - 350 (NPS 3 - 14) ASME CLASS 150



PARTS LIST

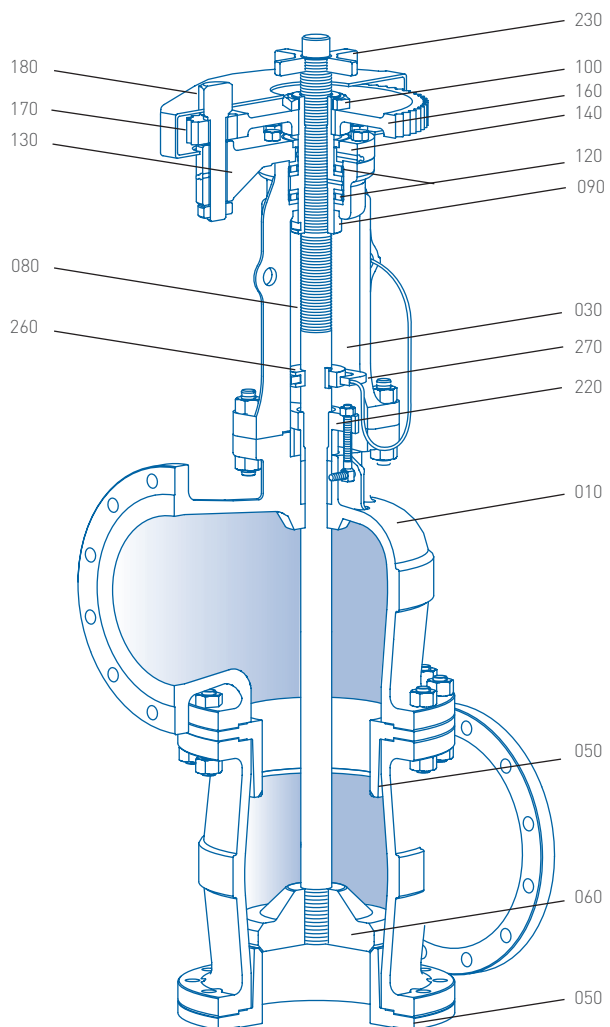
| No. | Description | Material standards |
|-----|---------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 110 | Yoke bush handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 120 | Bearing - yoke bush | Bronze |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 240 | Stem handle | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

NOTE

No bolts, washers or gaskets included in parts list.

LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



PARTS LIST

| No. | Description | Material standards |
|-----|-------------------------|--|
| 010 | Body | ASTM A216 - WCB |
| 030 | Yoke | ASTM A216 - WCB |
| 050 | Seat | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 060 | Disc | ASTM A29 - 1020, 1518 or ASTM A105 - Stellite coated |
| 080 | Stem | ASTM A29 - 4140 |
| 090 | Yoke bush | ASTM A29 - 1020 |
| 100 | Yoke bush locknut | ASTM A29 - 1020 |
| 120 | Bearing - yoke bush | Steel Roller |
| 130 | Retaining cap | ASTM A29 - 1020 |
| 140 | Bearing - retaining cap | Bronze |
| 160 | Gear | ASTM A29 - 1020 |
| 170 | Pinion gear | ASTM A29 - 1020 |
| 180 | Pinion shaft | ASTM A29 - 4140 |
| 220 | Gland follower | ASTM A29 - 1020 or ASTM A216 WCB |
| 230 | Stem jam nut | ASTM A29 - 1020 or ASTM A216 WCB |
| 260 | Torque reactor hub | ASTM A29 - 1020 |
| 270 | Torque reactor pin | ASTM A29 - 1020 |

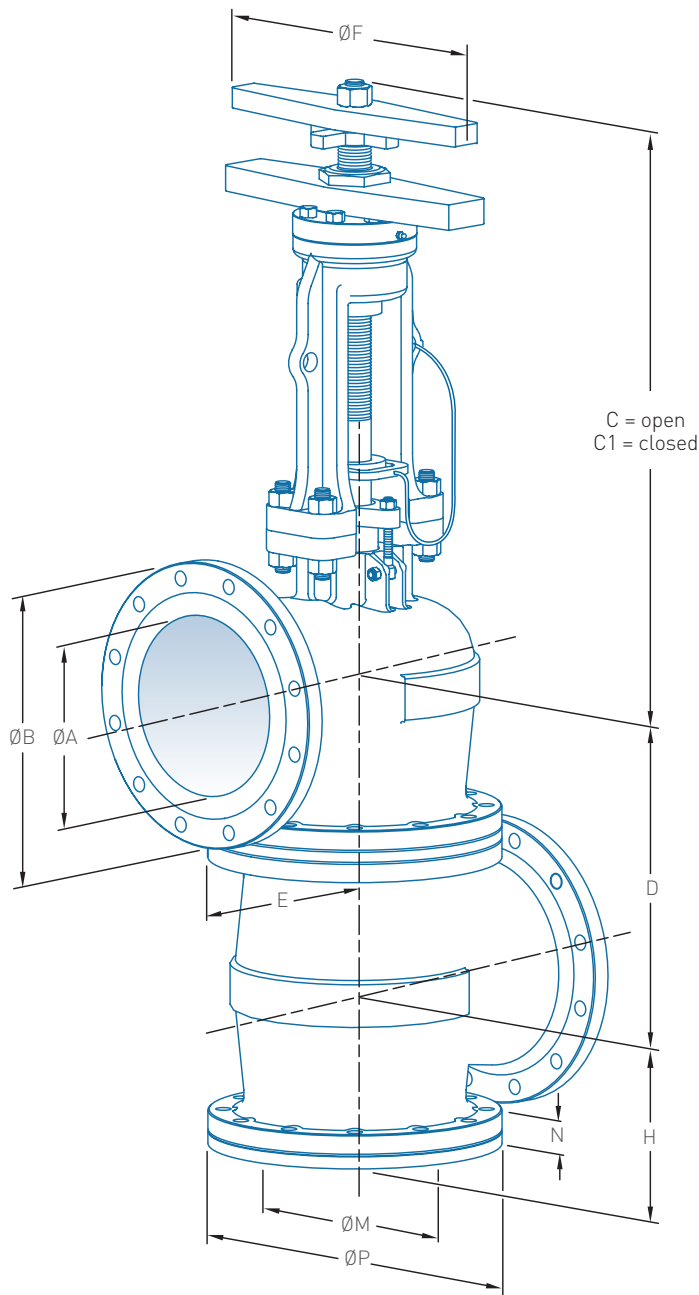
NOTES

No bolts, washers or gaskets included in parts list.

Bevel gear operation option available.

LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 80 - 350 (NPS 3 - 14) ASME CLASS 150



DIMENSIONS mm (inches)

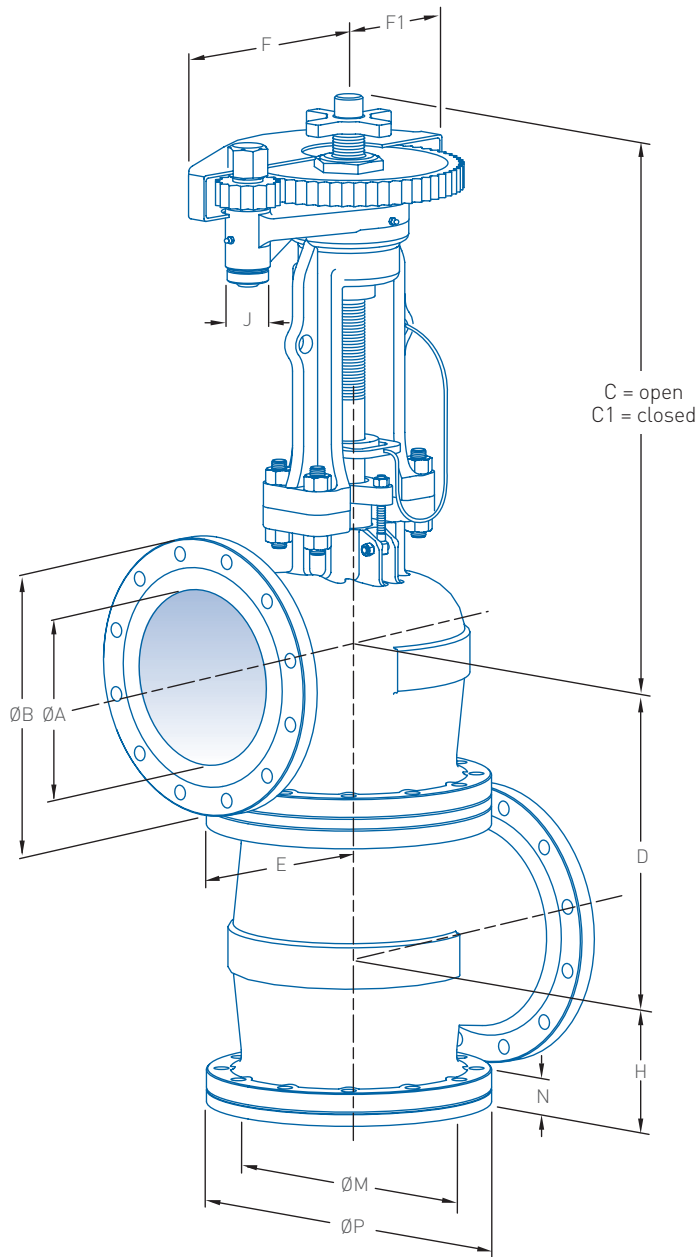
| Valve size | | | | | | | | | | | |
|------------|----------------------|-----------------|--------------|--------------|-------------|-------------|-----------------|-------------|-----------------|-----------------|-----------|
| DN (NPS) | $\varnothing A$ bore | $\varnothing B$ | C open | C1 closed | D | E | $\varnothing F$ | H | $\varnothing M$ | $\varnothing P$ | N |
| 80 (3) | 76 (3.00) | 191 (7.50) | 429 (16.89) | 375 (14.76) | 137 (5.39) | 140 (5.51) | 203 (7.99) | 79 (3.11) | 51 (2.01) | 191 (7.52) | 38 (1.50) |
| 100 (4) | 102 (4.00) | 229 (9.00) | 632 (24.88) | 530 (20.87) | 222 (8.74) | 165 (6.50) | 305 (12.01) | 122 (4.80) | 76 (2.99) | 229 (9.02) | 46 (1.81) |
| 150 (6) | 152 (6.00) | 279 (11.00) | 810 (31.89) | 683 (26.89) | 289 (11.38) | 203 (7.99) | 406 (15.98) | 154 (6.06) | 121 (4.76) | 279 (10.98) | 52 (2.05) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 892 (35.12) | 740 (29.13) | 359 (14.13) | 248 (9.76) | 406 (15.98) | 191 (7.52) | 171 (6.73) | 343 (13.50) | 52 (2.05) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 1156 (45.51) | 953 (37.52) | 452 (17.80) | 292 (11.50) | 508 (20.00) | 240 (9.45) | 216 (8.50) | 406 (15.98) | 57 (2.24) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 1251 (49.25) | 1010 (39.76) | 522 (20.55) | 349 (13.74) | 508 (20.00) | 276 (10.87) | 267 (10.51) | 483 (19.02) | 64 (2.52) |
| 350 (14) | 337 (13.25) | 533 (21.00) | 1510 (59.45) | 1230 (48.43) | 576 (22.68) | 368 (14.49) | 610 (24.02) | 305 (12.01) | 298 (11.73) | 533 (20.98) | 70 (2.76) |

NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 150 - 600 (NPS 6 - 24) ASME CLASS 150



DIMENSIONS mm (inches)

| Valve size | | | | | | | | | | | | | |
|------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-----------|
| DN (NPS) | ØA bore | ØB | C open | C1 closed | D | E | F | F1 | H | J (A/F) | ØM bore | ØP | N |
| 150 (6) | 152 (6.00) | 279 (11.00) | 810 (31.89) | 683 (26.89) | 289 (11.38) | 203 (7.99) | 285 (11.22) | 185 (7.28) | 154 (6.06) | 60 (2.36) | 121 (4.76) | 279 (10.98) | 52 (2.05) |
| 200 (8) | 203 (8.00) | 343 (13.50) | 892 (35.12) | 740 (29.13) | 359 (14.13) | 248 (9.76) | 285 (11.22) | 185 (7.28) | 191 (7.52) | 60 (2.36) | 171 (6.73) | 343 (13.50) | 52 (2.05) |
| 250 (10) | 254 (10.00) | 406 (16.00) | 1156 (45.51) | 953 (37.52) | 452 (17.80) | 292 (11.50) | 285 (11.22) | 185 (7.28) | 240 (9.45) | 60 (2.36) | 216 (8.50) | 406 (15.98) | 57 (2.24) |
| 300 (12) | 305 (12.00) | 483 (19.00) | 1251 (49.25) | 1010 (39.76) | 522 (20.55) | 349 (13.74) | 345 (13.58) | 225 (8.86) | 276 (10.87) | 60 (2.36) | 267 (10.51) | 483 (19.02) | 64 (2.52) |
| 350 (14) | 337 (13.25) | 533 (21.00) | 1510 (59.45) | 1230 (48.43) | 576 (22.68) | 368 (14.49) | 345 (13.58) | 225 (8.86) | 305 (12.01) | 60 (2.36) | 298 (11.73) | 533 (20.98) | 70 (2.76) |
| 400 (16) | 387 (15.25) | 597 (23.50) | 1648 (64.88) | 1356 (53.39) | 638 (25.12) | 381 (15.00) | 345 (13.58) | 225 (8.86) | 340 (13.39) | 60 (2.36) | 343 (13.50) | 597 (23.50) | 73 (2.87) |
| 450 (18) | 438 (17.25) | 635 (25.00) | 1661 (65.39) | 1368 (53.86) | 667 (26.26) | 406 (15.98) | 345 (13.58) | 225 (8.86) | 356 (14.02) | 60 (2.36) | 387 (15.24) | 635 (25.00) | 83 (3.27) |
| 500 (20) | 489 (19.25) | 699 (27.50) | 1835 (72.24) | 1518 (59.76) | 740 (29.13) | 457 (17.99) | 415 (16.34) | 315 (12.40) | 394 (15.51) | 60 (2.36) | 425 (16.73) | 699 (27.52) | 86 (3.39) |
| 600 (24) | 591 (23.25) | 813 (32.00) | 2000 (78.74) | 1626 (64.02) | 864 (34.02) | 508 (20.00) | 415 (16.34) | 315 (12.40) | 451 (17.76) | 60 (2.36) | 521 (20.51) | 813 (32.01) | 95 (3.74) |

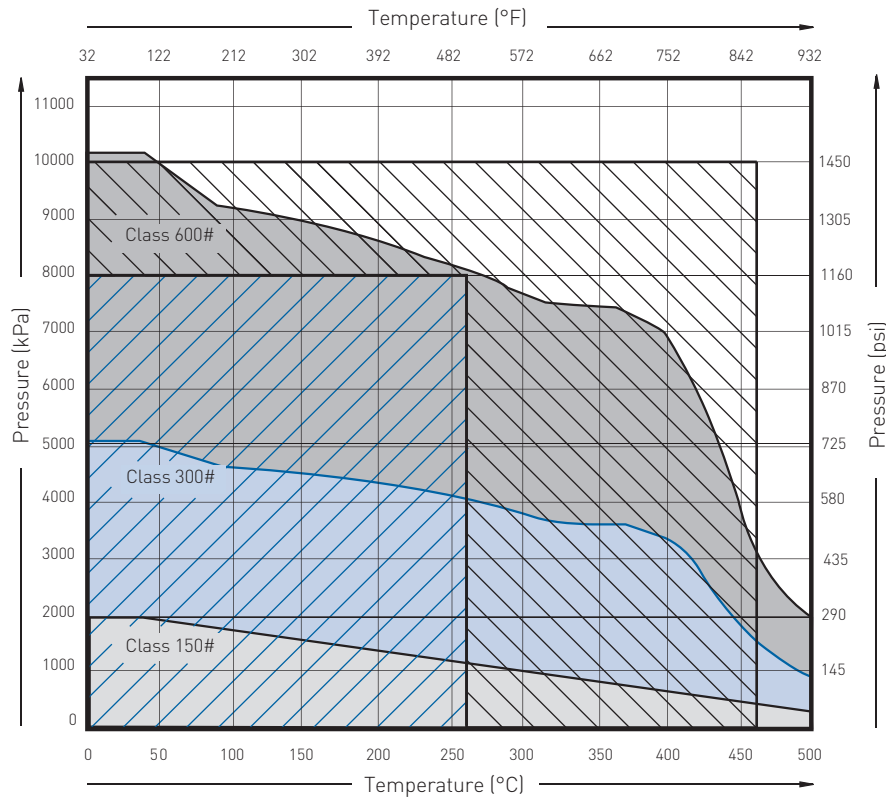
NOTE

Dimension E is from the valve center to the flange raised face.

LUNKENHEIMER FIGURE 605 COMBINATION VALVE

DN 80 - 600 (NPS 3 - 24) ASME CLASS 150



PRESSURE/TEMPERATURE GRAPH



PRESSURE/TEMPERATURE RATINGS

NOTES

1. The pressure temperature ratings displayed are for carbon steel ASTM A 216 Gr WCB according to ASME B16.5 Table 2.
2. Upper temperature is set by standard gland packing.
3. Customer requested changes to gland packing may affect the temperature ratings of the valve.

-  PTFE braided packing
-  Reinforced graphite packing

TYPICAL SPECIFYING SEQUENCE

| | | | | | | | | | | | |
|----------------|-------------|---------------|---------------|---------------|-----------|-----------|-----------|--------------------|---------------|-----------------|-----------|
| 100 (4) | F605 | 3 | 3 | C | 3 | 3 | 3 | 3 | 3 | / | 00 |
| Valve size | Figure no. | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim | Certification code | Valve variant | Standard option | |

Size range: DN 80 - 600 (NPS 3 - 24)

Figure no: F605 - Combination valve ASME Class 150

| Trim code | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Stem trim |
|-----------|---------------|---------------|---------------|------------------|------------------|---|
| 11C334 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |
| 11C353 | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Grade ASTM A29 - 4140 |
| 33C333 | Class 300 | Class 300 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 |
| 66C334 | Class 600 | Class 600 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Grade ASTM A29 - 4140 - Stellite coated |



LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 50 - 500 ASME CLASS 150

The K4050 inline Y-body isolation valve is specially designed for severe service in alumina and mining applications where scale and erosion are present



FEATURES

- The Inline Y-body design allows less flow restriction, reduced pressure drop and easier installation.
- All valves feature venturi style inlet throat design which increases fluid velocity across seating area to reduce scale formation.
- High precision machining results in superior disc to seat interfacing for tight shut-off.
- Split body design allows for easy maintenance.
- Bolted bonnet.
- Carbon steel body, connector and yoke.
- Design offers low torque and easy manual operation.
- Replaceable surface-hardened stellite facing disc and seats allows use in severe applications such as slurries and other abrasive media.
- Larger stem diameter of stainless steel for strength and stiffness.
- Rugged gland packing specially selected considering severe alumina service.
- Design to ASME B16.34
- Tested as per API 598
- Documentation to EN 10424 1999 Type 3.1B (DIN 50409).
Material certification for pressure containing components.

GENERAL APPLICATION

Ideally suited to clean or dirty liquors, high viscosity or scaling liquids, corrosive, erosive, wet slurries, dry slurries, mud slurries, AutoClave isolation, and pump Isolation.

Options

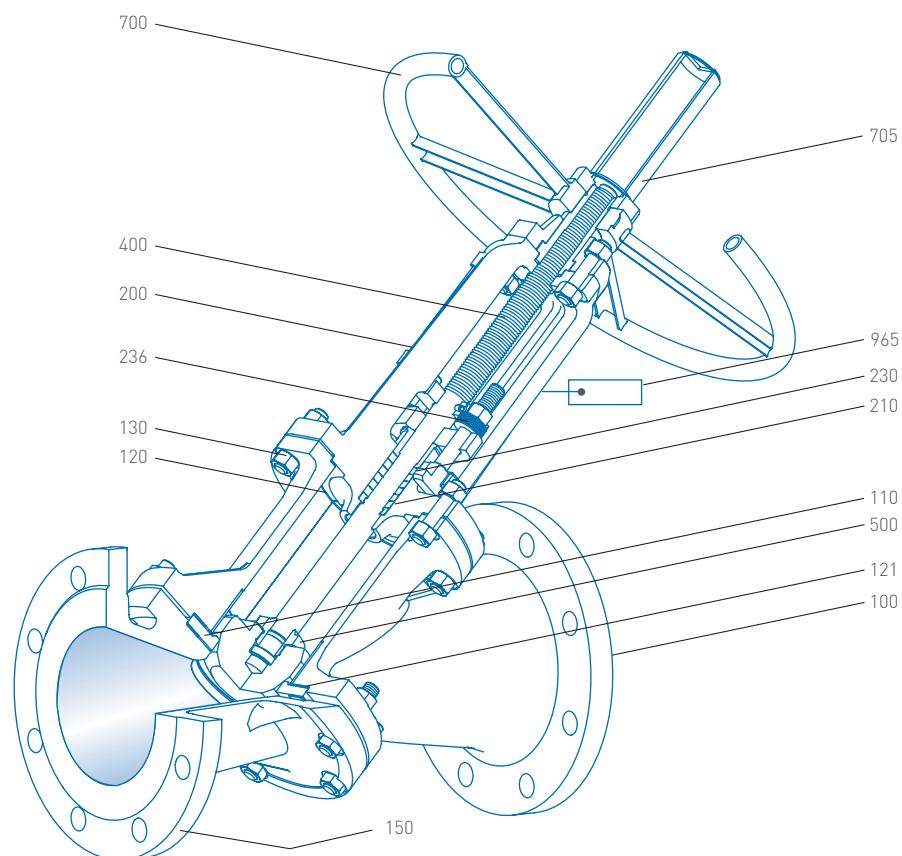
Radiography
Penetrant inspection
Magnetic particle inspection
Special tests

TECHNICAL DATA

Size range: DN 50 - 500
Temperature range: -29°C to +455°C
Pressure rating: ASME Class 150
End connection: Flanged ASME B16.5 Class 150 RF
Flanged PN 10 drillings available on request

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 50 - 150 ASME CLASS 150



PARTS LIST

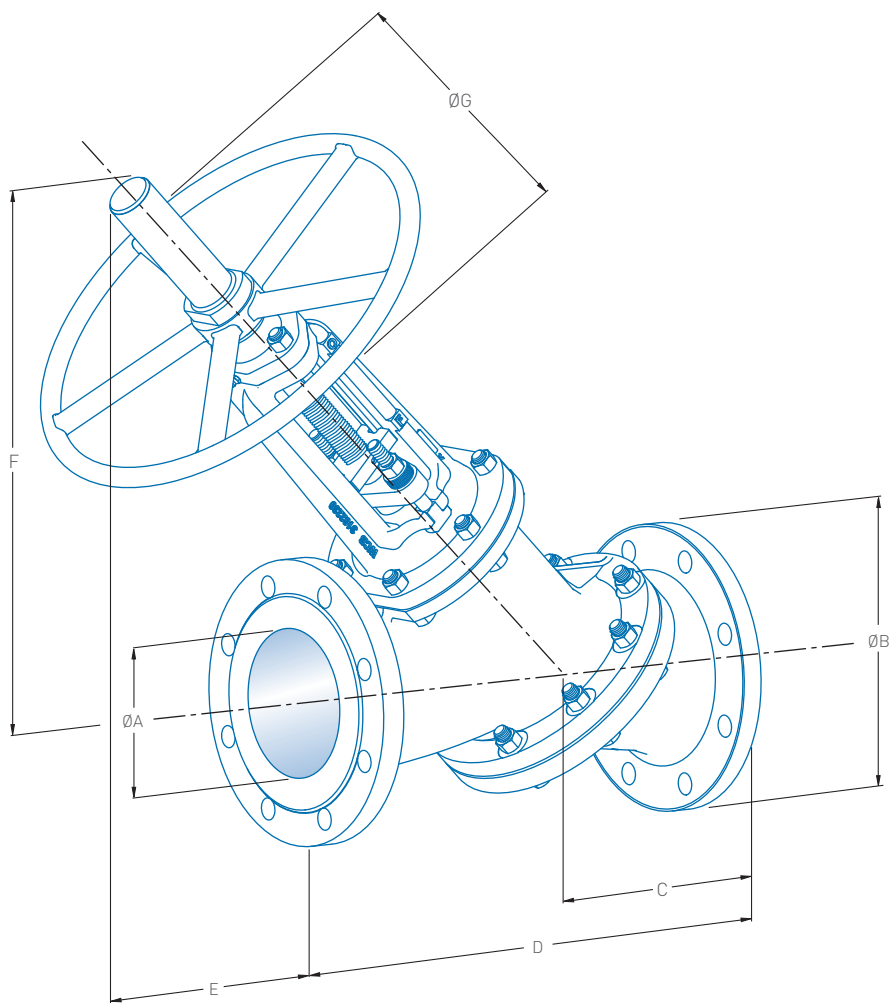
| No. | Description | Material |
|-----|--------------------------|----------------------------|
| 100 | Body | ASTM A216 - WCB |
| 110 | Seat | ASTM A29 1020 + Stellite 6 |
| 120 | Gasket - yoke | S/S Graphite |
| 121 | Gasket - seat | S/S Graphite |
| 130 | Studs/nuts - yoke | ASTM A193/4 - B7/2H |
| 150 | Connector | ASTM A216 - WCB |
| 200 | Yoke | ASTM A216 - WCB |
| 210 | Packing | Reinforced graphite |
| 230 | Gland follower | ASTM A29 1020 |
| 236 | Spring washer - eyebolts | Alloy steel |
| 400 | Stem | ASTM A276 420 |
| 500 | Disc | ASTM A29 1020 + Stellite 6 |
| 700 | Handwheel | Carbon steel |
| 705 | Protection hood | Carbon steel |
| 965 | Tag plate | Stainless steel |

NOTE

No bolts, washers or gaskets included in the parts list.

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 50 - 150 ASME CLASS 150

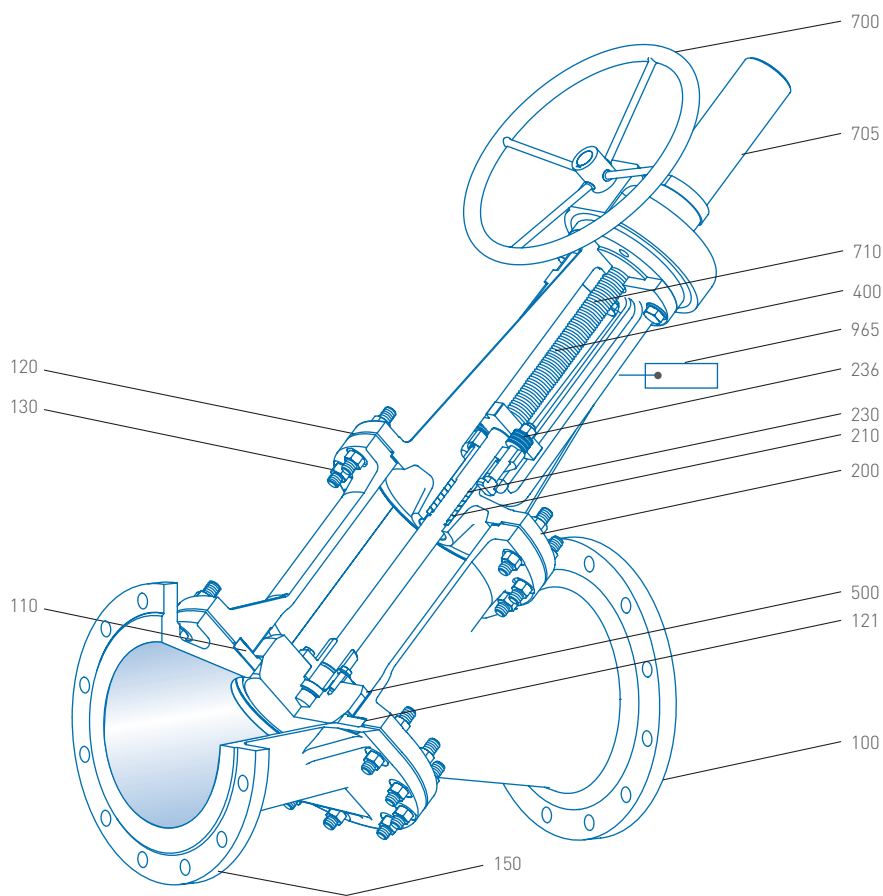


DIMENSIONS (mm)

| Valve size DN | ØA Bore | ØB | C | D | E | F | ØG | Mass (kg) |
|---------------|---------|-----|-----|-----|-----|-----|-----|-----------|
| 50 | 50 | 150 | 75 | 230 | 168 | 321 | 200 | 18 |
| 80 | 80 | 190 | 95 | 310 | 187 | 402 | 300 | 33 |
| 100 | 100 | 230 | 115 | 350 | 178 | 413 | 300 | 38 |
| 125 | 125 | 255 | 130 | 400 | 259 | 528 | 450 | 65 |
| 150 | 150 | 280 | 160 | 480 | 218 | 538 | 450 | 76 |

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 200 - 400 ASME CLASS 150



PARTS LIST

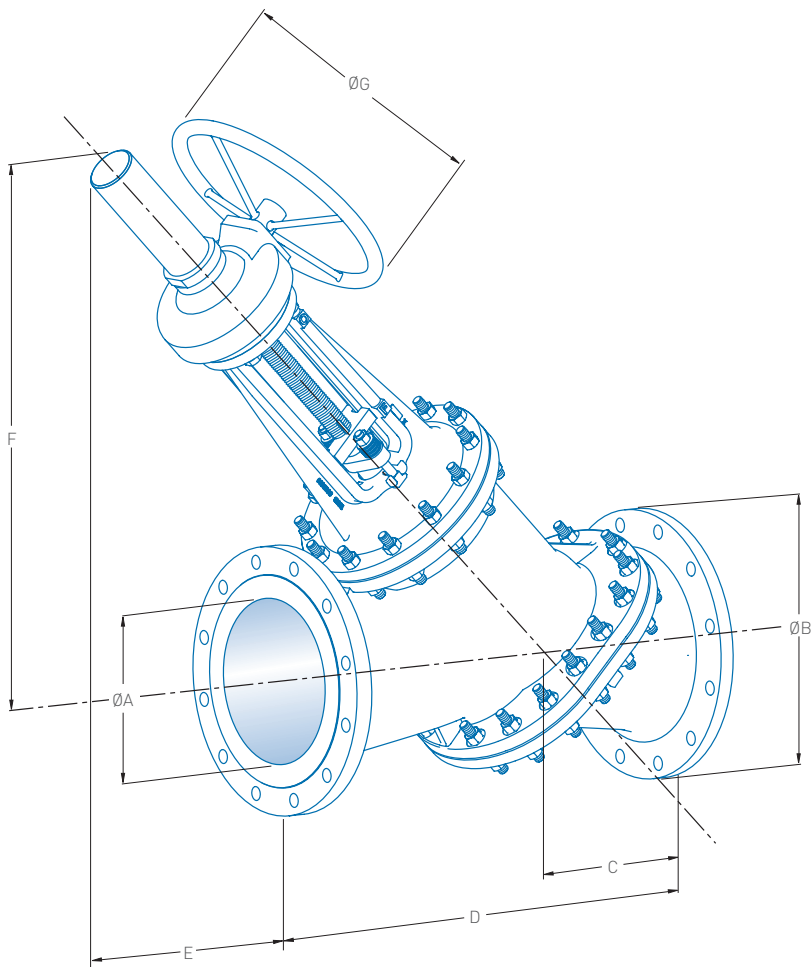
| No. | Description | Material |
|-----|--------------------------|----------------------------|
| 100 | Body | ASTM A216 - WCB |
| 110 | Seat | ASTM A29 1020 + Stellite 6 |
| 120 | Gasket - yoke | S/S Graphite |
| 121 | Gasket - seat | S/S Graphite |
| 130 | Studs/nuts - yoke | ASTM A193/4 - B7/2H |
| 150 | Connector | ASTM A216 - WCB |
| 200 | Yoke | ASTM A216 - WCB |
| 210 | Packing | Reinforced graphite |
| 230 | Gland follower | ASTM A29 1020 |
| 236 | Spring washer - eyebolts | Alloy steel |
| 400 | Stem | ASTM A276 420 |
| 500 | Disc | ASTM A29 1020 + Stellite 6 |
| 700 | Handwheel | Carbon steel |
| 705 | Protection hood | Carbon steel |
| 710 | Bevel gearbox | Commercial |
| 965 | Tag plate | Stainless steel |

NOTE

No bolts, washers or gaskets included in the parts list.

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 200 - 400 ASME CLASS 150

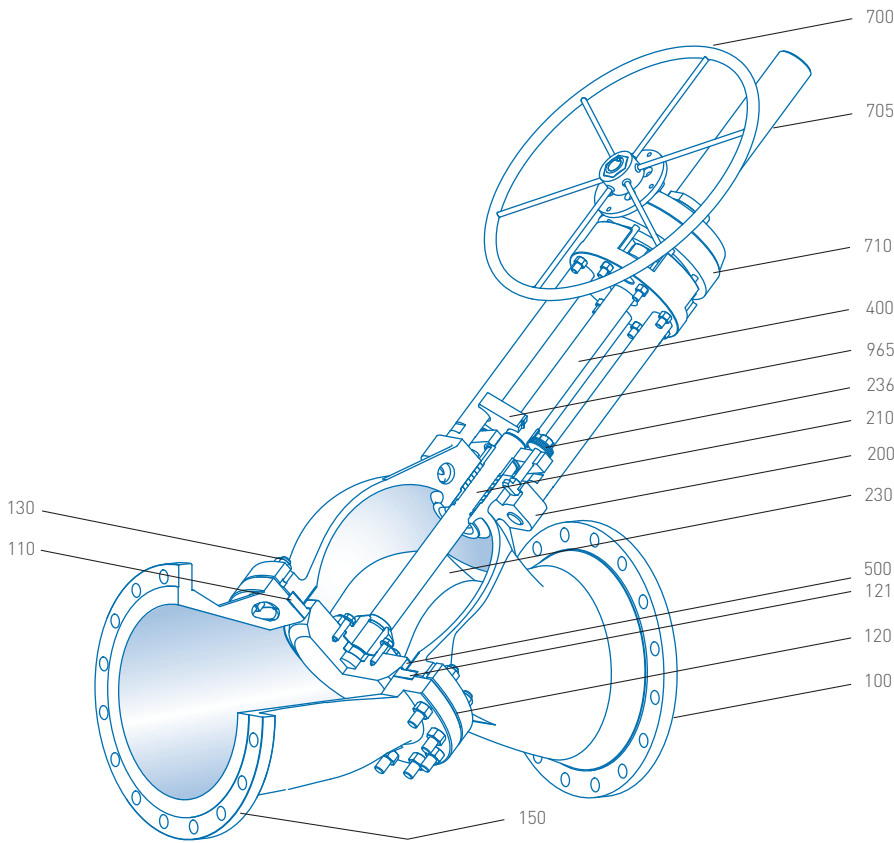


DIMENSIONS (mm)

| Valve size DN | ØA Bore | ØB | C | D | E | F | ØG | Mass (kg) |
|---------------|---------|-----|-----|------|-----|------|-----|-----------|
| 200 | 200 | 345 | 200 | 600 | 350 | 770 | 300 | 187 |
| 250 | 250 | 405 | 230 | 730 | 495 | 995 | 450 | 300 |
| 300 | 300 | 485 | 260 | 850 | 430 | 1029 | 450 | 420 |
| 350 | 350 | 535 | 300 | 980 | 385 | 1050 | 600 | 540 |
| 400 | 400 | 595 | 350 | 1100 | 465 | 1165 | 600 | 760 |

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 450 - 500 ASME CLASS 150



PARTS LIST

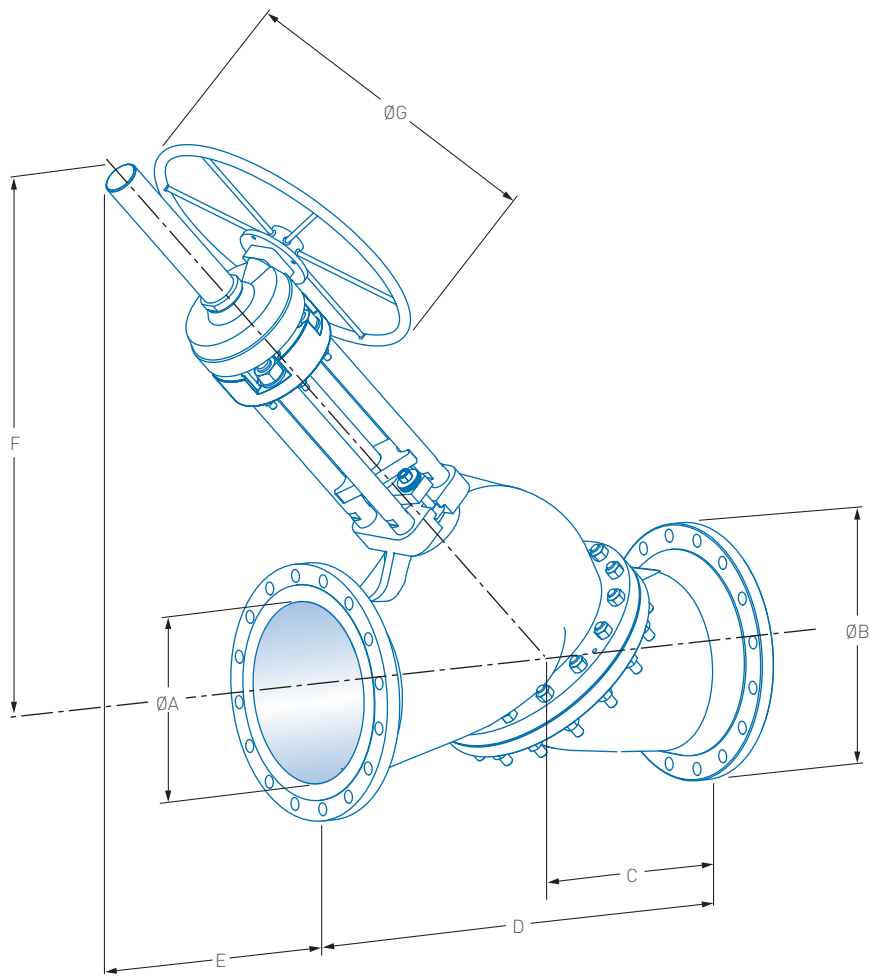
| No. | Description | Material |
|-----|--------------------------|----------------------------|
| 100 | Body | ASTM A216 - WCB |
| 110 | Seat | ASTM A29 1020 + Stellite 6 |
| 120 | Gasket - yoke | S/S Graphite |
| 121 | Gasket - seat | S/S Graphite |
| 130 | Studs/nuts - yoke | ASTM A193/4 - B7/2H |
| 150 | Connector | ASTM A216 - WCB |
| 200 | Yoke | ASTM A216 - WCB |
| 210 | Packing | Reinforced graphite |
| 230 | Gland follower | ASTM A29 1020 |
| 236 | Spring washer - eyebolts | Alloy steel |
| 400 | Stem | ASTM A276 420 |
| 500 | Disc | ASTM A29 1020 + Stellite 6 |
| 700 | Handwheel | Carbon steel |
| 705 | Protection hood | Carbon steel |
| 710 | Bevel gearbox | Commercial |
| 965 | Tag plate | Stainless steel |

NOTE

No bolts, washers or gaskets included in the parts list.

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 450 - 500 ASME CLASS 150



DIMENSIONS (mm)

| Valve size DN | ØA Bore | ØB | C | D | E | F | ØG (A/F) | Mass (kg) |
|---------------|---------|-----|-----|------|-----|------|----------|-----------|
| 450 | 450 | 635 | 450 | 1200 | 616 | 1366 | 600 | 780 |
| 500 | 500 | 700 | 472 | 1250 | 320 | 1100 | 600 | 1135 |

LUNKENHEIMER FIGURE K4050 INLINE Y-BODY

DN 50 - 500 ASME CLASS 150

TYPICAL SPECIFYING SEQUENCE - CLASS 150

| | | | | | | | | | | |
|------------|--------------|---------------|---------------|---------------|-----------|-----------|--------------|--------------------|---------------|-----------|
| 150 | K4050 | 1 | 1 | C | 3 | 3 | B | 3 | / | 0H |
| Valve size | Figure No. | Flange rating | Flange rating | Body material | Seat trim | Disc trim | Spindle trim | Certification code | Valve variant | Actuation |

Size range: DN 50 - DN 500

Figure no.: K4050 - Inline Y-Body ASME Class 150

| Trim code | Flange rating inlet | Flange rating outlet | Body material | Seat trim | Disc trim | Spindle trim |
|-----------|---------------------|----------------------|---------------|------------------|------------------|---------------------|
| 11C33B | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel - stellite | Stainless steel 420 |
| 11C35B | Class 150 | Class 150 | A 216 Gr WCB | Steel - stellite | Steel | Stainless steel 420 |

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