

BALL VALVE of carbon steel with welded ends / threaded ends / flanges **34000 - 34500 series**

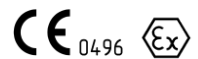


Operation

Edition 05-07-2016

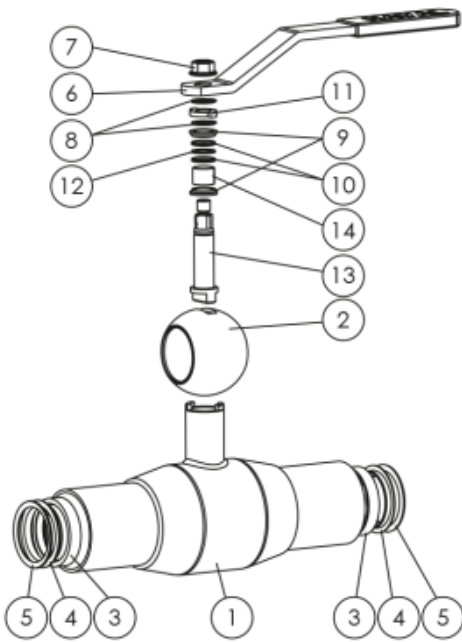
Ball valve series 34000 - 34500 is a tight on-off valve and suitable for liquid and air pipe systems. This valve is suitable for District Heating (CHP) installations, Heat Transfer piping, oil lines and oxygen-free water lines.

| | |
|--------------------------------------|---|
| Nominal dimensions: | 34000TR-N – DN 10 - 800, |
| | 34200TR-N, 34300TR-N – DN 10 - 50, |
| | 34500TR-N – DN 15 - 600 |
| Nominal pressure | 34000TR-N, DN 10 - 50 – PN 40 bar, DN 65 - 800 – PN 25 bar, DN 125 - 250 – PN 16 bar |
| | 34200TR-N, DN 10 - 50 – PN 40 bar |
| | 34300TR-N, DN 10 - 50 – PN 40 bar |
| | 34500TR-N, DN 15 - 50 – PN 40 bar, DN 65 - 600 – PN 16 or PN 25 bar according to flanges drilling (Available PN 10,16,25,40) |
| Connection | 34000TR-N series – welded ends, 34200TR-N series – threaded socket / welded end, 34300TR-N series – threaded ends, 34500TR-N series – flanges: EN1092-1 |
| Tightness class ISO 5208, EN 12266-1 | RATE A |
| Working temperature of liquid media | -20°C... +200°C - standard -40°C... +200°C - option |
| Safety | Conform to the requirements of the Council Directive 97/23/EC on Pressure Equipment, marking: Class: gas, group 1. Explosion-proof design is available as per special order. |

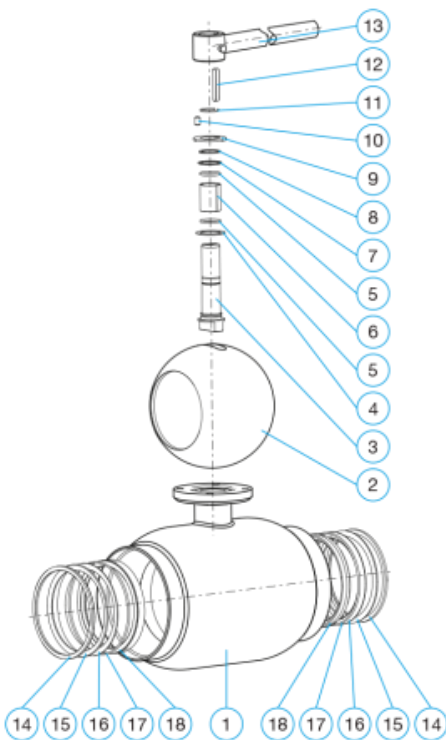




Exploded view, parts list

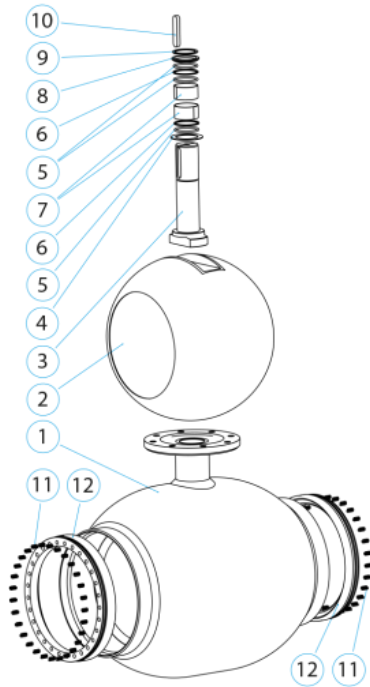


| DN 10-150 | |
|-------------|----------------|
| Part number | Part |
| 1 | Valve body |
| 2 | Ball |
| 3 | Ball seal |
| 4 | Support ring |
| 5 | Spring plate |
| 6 | Handle |
| 7 | Nut |
| 8 | Retaining ring |
| 9 | Bush |
| 10 | O-ring |
| 11 | Block stop |
| 12 | Distance plate |
| 13 | Stem |
| 14 | Bush |

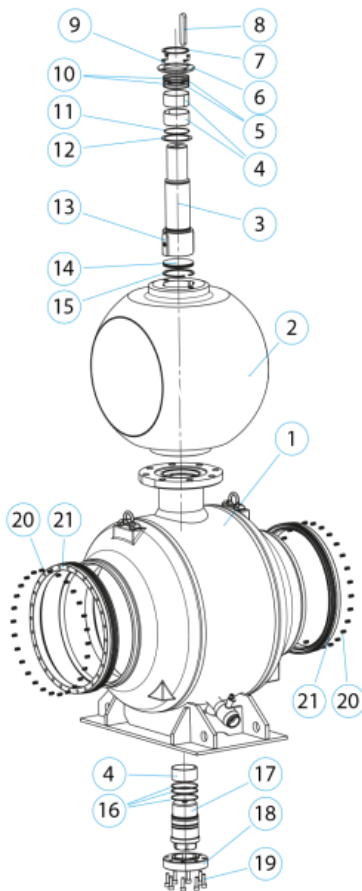


| DN 200-300 | | |
|-------------|--------------------|-----|
| Part number | Part | Qty |
| 1 | Valve body | 1 |
| 2 | Ball | 1 |
| 3 | Stem | 1 |
| 4 | Sliding plate | 1 |
| 5 | O-ring | 2 |
| 6 | Sliding bearing | 1 |
| 7 | Top distance plate | 1 |
| 8 | Retaining ring | 1 |
| 9 | Block stop | 1 |
| 10 | Dowel pin | 1 |
| 11 | Retaining ring | 1 |
| 12 | Key | 1 |
| 13 | Handle * | 1 |
| 14 | Retaining ring | 2 |
| 15 | Spring plate | 2 |
| 16 | Support plate | 2 |
| 17 | O-ring | 2 |
| 18 | Ball seal | 2 |

* DN300 without handle



| DN 350-500 | | |
|------------------------|-------------------|-----|
| Part number | Part | Qty |
| 1 | Valve body | 1 |
| 2 | Ball | 1 |
| 3 | Stem | 1 |
| 4 | Sliding plate | 1 |
| 5 | O-ring | 3 |
| 6 | Distance plate | 2 |
| 7 | Sliding bearing | 2 |
| 8 | Stem sealing bush | 1 |
| 9 | Retaining ring | 1 |
| 10 | Key | 1 |
| 11 | Spring | n* |
| 12 | Ball seat | 2 |
| *Depends on valve size | | |



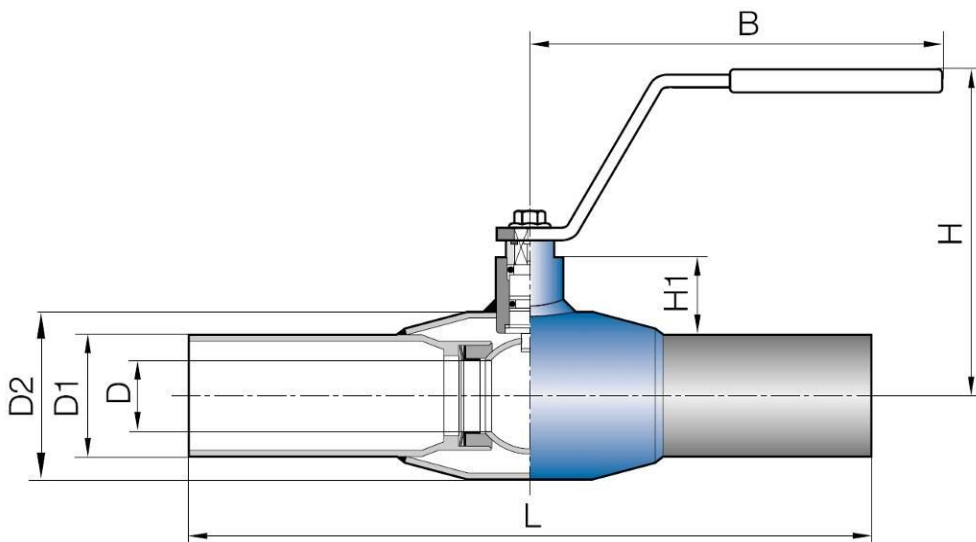
| DN 600-800 | | |
|------------------------|-------------------------------|-----|
| Part number | Part | Qty |
| 1 | Valve body | 1 |
| 2 | Ball | 1 |
| 3 | Operating stem | 1 |
| 4 | Sliding bearing | 3 |
| 5 | Distance plate | 2 |
| 6 | Stem sealing bush | 1 |
| 7 | Retaining ring | 1 |
| 8 | Key | 1 |
| 9 | Socket countersunk head screw | n* |
| 10 | O-ring | 2 |
| 11 | O-ring | 1 |
| 12 | Sliding plate | 1 |
| 13 | Key | 2 |
| 14 | Support plate | 1 |
| 15 | Retaining ring | 1 |
| 16 | O-ring | n* |
| 17 | Bearing stem | 1 |
| 18 | Blind flange | 1 |
| 19 | Hex socket head screw | n* |
| 20 | Spring | n* |
| 21 | Ball seat | 2 |
| *Depends on valve size | | |



Materials

| | DN 15-500 | DN 600-800 |
|------------|---|--------------------------|
| Body | Steel P235GH | Steel P355 NL1 / GP240GH |
| Ball | Stainless steel 1.4301 | Steel ASTM A350 LF2 + Ni |
| Stem | Stainless steel 1.4305 | Stainless steel 1.4305 |
| Stem seals | FPM | FPM |
| Ball seals | PTFE+C | PTFE+C |
| Operation | DN 10 - 250 with galvanized steel handle. We recommend manual gear operation for sizes DN 125 and larger. DN 250 and larger without handle. Valves are available with manual gear, electric actuator or hydraulic actuator. | |

Dimensions. 34000TR-N series valve



| DN | L | D | D1 | D2 | H | B | H1 | Weight kg |
|----|-----|----|------|-------|-----|-------|----|-----------|
| 10 | 230 | 10 | 17.2 | 33.7 | 98 | 145 | 22 | 0.6 |
| 15 | 230 | 10 | 21.3 | 33.7 | 98 | 145 | 22 | 0.6 |
| 20 | 230 | 15 | 26.9 | 42.4 | 103 | 145 | 23 | 0.8 |
| 25 | 230 | 20 | 33.7 | 48.3 | 118 | 145 | 34 | 1.0 |
| 32 | 260 | 25 | 42.4 | 60.3 | 121 | 145 | 33 | 1.4 |
| 40 | 260 | 32 | 48.3 | 70.0 | 120 | 188 | 43 | 1.8 |
| 50 | 300 | 40 | 60.3 | 88.9 | 127 | 188 | 44 | 2.6 |
| 65 | 300 | 50 | 76.1 | 101.6 | 159 | 277.5 | 62 | 4.0 |



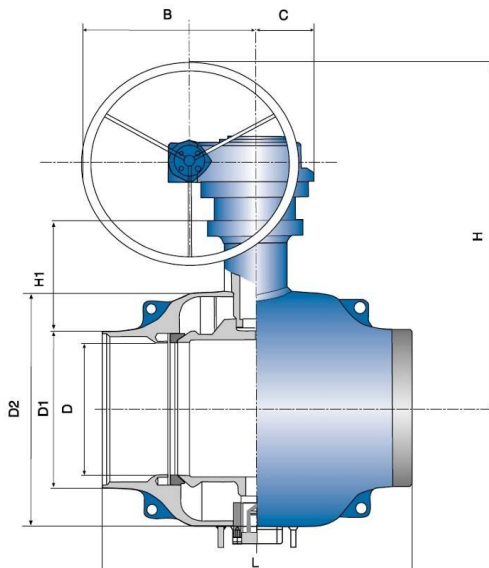
| | | | | | | | | |
|-----|-----|-----|-------|-------|-----|-------|-----|------|
| 80 | 300 | 65 | 88.9 | 121.0 | 171 | 277.5 | 68 | 5.3 |
| 100 | 325 | 80 | 114.3 | 146.0 | 218 | 278.5 | 101 | 8.3 |
| 125 | 325 | 100 | 139.7 | 177.8 | 252 | 400 | 101 | 13.4 |
| 150 | 350 | 125 | 168.3 | 219.1 | 272 | 600 | 107 | 18.0 |
| 200 | 400 | 150 | 219.1 | 273.0 | 280 | 870 | 92 | 39.0 |
| 250 | 530 | 200 | 273.0 | 355.6 | 350 | 1200 | 108 | 74.0 |

Sizes, DN 25 - 250 can be operated with handlever. We recommend to use a manual gear from the size DN125 and larger.

The opening and closing of valves is stepless.

The valve is open when the handlever is in line with pipe.

Manual gear, 34000 TR-N



| DN | L | D | D1 | | D2 | H | B | C | H1 | Weight, kg |
|-----|------|-----|-------|-------|-------|-------|-------|-----|-----|------------|
| | | | DIN | GOST | | | | | | |
| 100 | 325 | 80 | 114,3 | - | 146 | 258,5 | 115,5 | 53 | 105 | 18 |
| 125 | 325 | 100 | 139.7 | - | 177,8 | 316 | 153 | 53 | 112 | 20 |
| 150 | 350 | 125 | 168.3 | - | 219,1 | 336 | 153 | 53 | 118 | 25 |
| 200 | 400 | 150 | 219.1 | 273 | 273 | 369 | 194 | 69 | 92 | 49 |
| 250 | 530 | 200 | 273.0 | 355,6 | 355.6 | 444 | 247 | 97 | 108 | 94 |
| 300 | 550 | 250 | 323.9 | 457 | 457 | 593 | 367 | 117 | 132 | 152 |
| 350 | 686 | 290 | 355.6 | 508 | 508 | 668 | 367 | 117 | 192 | 212 |
| 400 | 762 | 340 | 406.4 | 610 | 610 | 750 | 388 | 138 | 242 | 293 |
| 500 | 914 | 390 | 508 | 660 | 660 | 827 | 430 | 180 | 259 | 467 |
| 600 | 1065 | 489 | 610 | 813 | 813 | 894 | 430 | 180 | 274 | 1025 |
| 700 | 1205 | 589 | 711 | 720 | 965 | 1128 | 603 | 222 | 336 | 2700 |
| 800 | 1330 | 684 | 813 | 820 | 1125 | 1208 | 603 | 222 | 365 | 4050 |

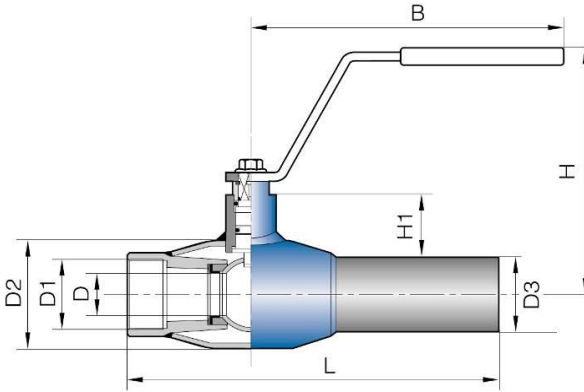
Opening and closing of the valves from the hand wheel.

The position of ball can be seen on a position indicator on top of the gear.



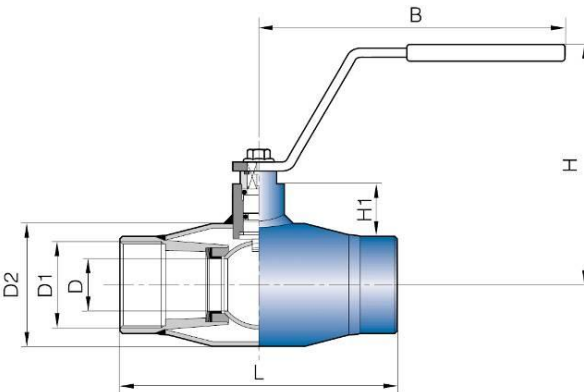
Dimensions. 34200TR-N and 34300TR-N series valves

34200TR-N



| DN | PN | L | D | D1 | D2 | D3 | H | B | H1 | kg |
|----|----|-----|----|--------|------|------|-----|-----|----|-----|
| 10 | 40 | 153 | 10 | R 3/8 | 33.7 | 17.2 | 98 | 145 | 22 | 0.6 |
| 15 | 40 | 158 | 10 | R 1/2 | 33.7 | 21.3 | 98 | 145 | 22 | 0.6 |
| 20 | 40 | 168 | 15 | R 3/4 | 42.4 | 26.9 | 103 | 145 | 23 | 0.8 |
| 25 | 40 | 172 | 20 | R 1 | 48.3 | 33.7 | 118 | 145 | 34 | 1,1 |
| 32 | 40 | 195 | 25 | R1 1/4 | 60.3 | 42.4 | 121 | 145 | 33 | 1.4 |
| 40 | 40 | 205 | 32 | R1 1/2 | 70.0 | 48.3 | 120 | 188 | 43 | 1.9 |
| 50 | 40 | 240 | 40 | R 2 | 88.9 | 60.3 | 127 | 188 | 44 | 2.7 |

34300TR-N



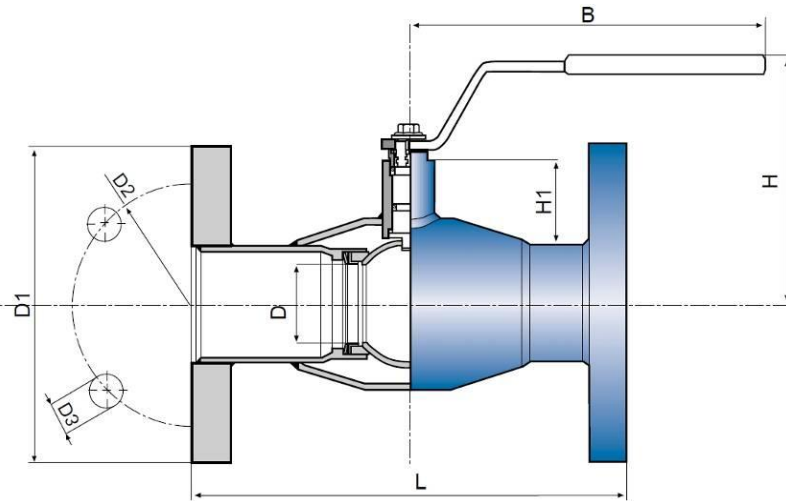
| DN | PN | L | D | D1 | D2 | H | B | H1 | kg |
|----|----|-----|----|--------|------|-----|-----|----|-----|
| 10 | 40 | 75 | 10 | R 3/8 | 33.7 | 98 | 145 | 22 | 0.5 |
| 15 | 40 | 85 | 10 | R 1/2 | 33.7 | 98 | 145 | 22 | 0.5 |
| 20 | 40 | 100 | 15 | R 3/4 | 42.4 | 103 | 145 | 23 | 0.6 |
| 25 | 40 | 115 | 20 | R 1 | 48.3 | 118 | 145 | 34 | 1 |
| 32 | 40 | 130 | 25 | R1 1/4 | 60.3 | 121 | 145 | 33 | 1,2 |
| 40 | 40 | 150 | 32 | R1 1/2 | 70.0 | 120 | 188 | 43 | 1.8 |
| 50 | 40 | 180 | 40 | R 2 | 88.9 | 127 | 188 | 44 | 2.6 |

The opening and closing of valves is stepless.

The valve is open when the handlever is in line with pipe.



Dimensions. 34500TR-N series valve



| DN | L | D | D1 | | D2 | | D3 | | H | B | H1 | | Weight, kg | |
|----|-----|----|-------|-------|-------|-------|-------|-------|-----|---|-------|--|------------|--|
| | | | PN 40 | PN 40 | PN 40 | PN 40 | PN 40 | PN 40 | | | PN 40 | | | |
| 15 | 130 | 10 | 95 | 65 | 14 | 98 | 145 | 22 | 1.8 | | | | | |
| 20 | 150 | 15 | 105 | 75 | 14 | 103 | 145 | 23 | 2.5 | | | | | |
| 25 | 160 | 20 | 115 | 85 | 14 | 118 | 145 | 34 | 3.3 | | | | | |
| 32 | 180 | 25 | 140 | 100 | 18 | 121 | 145 | 33 | 5.0 | | | | | |
| 40 | 200 | 32 | 150 | 110 | 18 | 120 | 188 | 43 | 5.8 | | | | | |
| 50 | 230 | 40 | 165 | 125 | 18 | 127 | 188 | 44 | 7.8 | | | | | |

| DN | L | D | D1 | | D2 | | D3 | | H | B | H1 | | Weight, kg | |
|-----|-----|-----|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|------------|-------|
| | | | PN 16 | PN 25 | PN 16 | PN 25 | PN 16 | PN 25 | | | PN 16 | PN 25 | PN 16 | PN 25 |
| 65 | 270 | 50 | 185 | 185 | 145 | 145 | 18 | 18 | 159 | 277.5 | 62 | 62 | 10.5 | 11.3 |
| 80 | 280 | 65 | 200 | 200 | 160 | 160 | 18 | 18 | 171 | 277.5 | 68 | 68 | 12.5 | 14.9 |
| 100 | 300 | 80 | 220 | 235 | 180 | 190 | 18 | 22 | 218 | 278.5 | 101 | 101 | 17.0 | 19 |
| 125 | 325 | 100 | 250 | 270 | 210 | 220 | 18 | 26 | 252 | 400 | 101 | 101 | 25.0 | 29 |
| 150 | 350 | 125 | 285 | 300 | 240 | 250 | 22 | 26 | 272 | 600 | 107 | 107 | 33 | 37 |
| 200 | 400 | 150 | 340 | 360 | 295 | 310 | 22 | 26 | 280 | 870 | 92 | 92 | 58 | 67 |
| 250 | 500 | 200 | 405 | 425 | 355 | 370 | 26 | 30 | 350 | 1200 | 108 | 108 | 102 | 114 |

Sizes DN 25 - 250 can be operated with handlever. We recommend to use a manual gear from the size DN125 and larger.

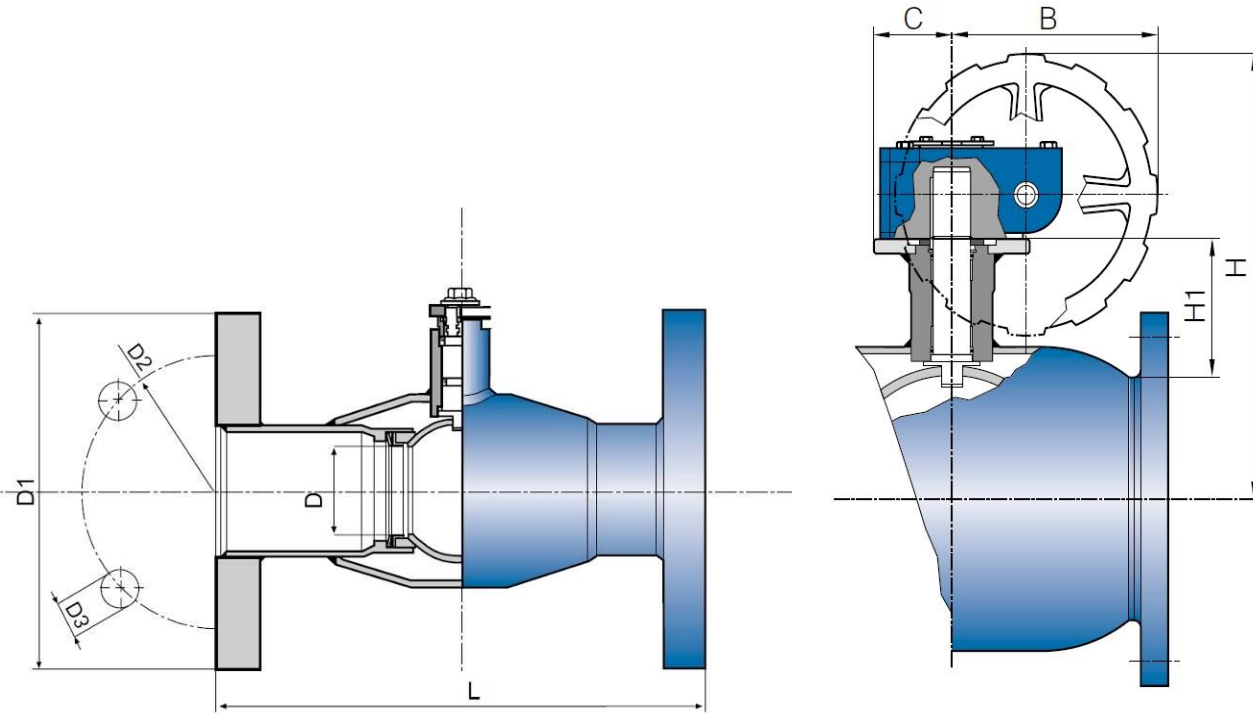
The opening and closing of valves is stepless.
The valve is open when the handlever is in line with pipe.

Flanges:
DIN 2501, ISO 2084, SFS 2123, SS 335, EN 1092-1.

Face to face dimensions according to: EN 588-1



Manual gear, 34500 TR-N



| DN | L | D | D1 | | D2 | | D3 | | H | B | C | H1 | Weight kg | |
|-----|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----------|-------|
| | | | PN 16 | PN 25 | PN 16 | PN 25 | PN 16 | PN 25 | | | | | PN 16 | PN 25 |
| 100 | 300 | 80 | 220 | 235 | 180 | 190 | 18 | 22 | 268,5 | 115,5 | 53 | 114 | 23 | 26 |
| 125 | 325 | 100 | 250 | 270 | 210 | 220 | 18 | 26 | 316 | 153 | 53 | 112 | 30 | 35 |
| 150 | 350 | 125 | 285 | 300 | 240 | 250 | 22 | 26 | 336 | 153 | 53 | 118 | 37 | 44 |
| 200 | 400 | 150 | 340 | 360 | 295 | 310 | 22 | 26 | 393 | 194 | 69 | 92 | 68 | 78 |
| 250 | 500 | 200 | 405 | 425 | 355 | 370 | 26 | 30 | 451 | 247 | 97 | 108 | 122 | 134 |
| 300 | 500 | 250 | 460 | 485 | 410 | 430 | 26 | 30 | 613 | 368 | 138 | 115 | 190 | 205 |
| 350 | 706 | 290 | 520 | 555 | 470 | 490 | 26 | 33 | 668 | 368 | 138 | 192 | 268 | 295 |
| 400 | 810 | 340 | 580 | 620 | 525 | 550 | 30 | 36 | 750 | 388 | 138 | 242 | 365 | 408 |
| 500 | 978 | 390 | 715 | 730 | 650 | 660 | 33 | 36 | 827 | 430 | 180 | 259 | 595 | 640 |
| 600 | 1130 | 489 | 840 | 845 | 770 | 770 | 36 | 39 | 894 | 430 | 180 | 274 | 1230 | 1280 |
| 700 | 1245 | 589 | 910 | 960 | 840 | 875 | 36 | 42 | 1128 | 603 | 222 | 325 | 2900 | 3100 |
| 800 | 1385 | 684 | 1025 | 1085 | 950 | 990 | 39 | 48 | 1208 | 603 | 222 | 358 | 4200 | 4400 |

Opening and closing of the valves from the hand wheel.

The position of ball can be seen on a position indicator on top of the gear.

Flanges:

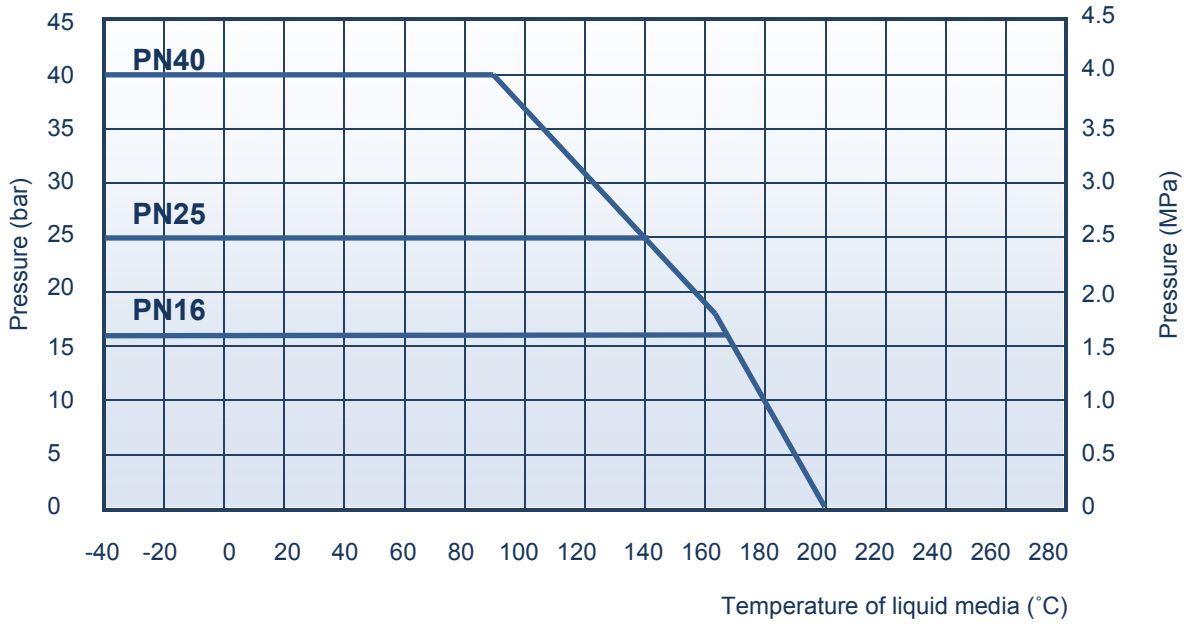
DIN 2501, ISO 2084, SFS 2123, SS 335, EN 1092-1.

Face to face dimensions according to: EN 588-1



Pressure / Temperature Rating

The max pressure difference depends on the working temperature.



If working temperature below -20°C, it must be mentioned in order.



Operation torque, Nm

| DN | PN 16 | PN 25 | PN 40 |
|--------|-------|-------|-------|
| 10, 15 | 12 | 13 | 15 |
| 20 | 15 | 16 | 18 |
| 25 | 19 | 21 | 24 |
| 32 | 25 | 27 | 30 |
| 40 | 39 | 43 | 43 |
| 50 | 50 | 55 | 60 |
| 65 | 68 | 75 | - |
| 80 | 98 | 110 | - |
| 100 | 150 | 250 | - |
| 125 | 270 | 390 | - |
| 150 | 520 | 750 | - |
| 200 | 900 | 1200 | - |
| 250 | 1900 | 2500 | - |
| 300 | 3000 | 4000 | - |
| 350 | 2800 | 4000 | - |
| 400 | 4500 | 12000 | - |
| 500 | 9000 | 12000 | - |
| 600 | 9000 | 15000 | 18000 |
| 700 | 11250 | 23350 | 28000 |
| 800 | 17500 | 31250 | 37500 |

Operation

According to customer's needs the butterfly valve is delivered with:

- bare shaft (not recommended),
- manual gear,
- hand lever,
- electric actuator,
- pneumatic or hydraulic actuator.



BLUE LINE

BALL VALVE
of carbon steel



Valves

34000TR-N / 34200TR-N / 34300TR-N / 34500TR-N series

05-07-2016

How to order

| | | 3 | 4 | 000 | M |
|----------------|--|---|---|-----|---|
| Body material: | 3 - Carbon steel | | | | |
| Valve type: | 4 - ball valve | | | | |
| Connection: | 000 - welded end 200 - welded end / threaded 300 - threaded 500 - flanged | | | | |
| Actuation: | (_) - handlever, (Z) - bare shaft, (M) - manual gear | | | | |

Product codes

| | |
|-------------|-------------------------------|
| | Ball valve series 34000-34500 |
| Handlever | 34000TR-N __ |
| Bare shaft | 34000TR-N __ Z |
| Manual gear | 34000TR-N __ M |