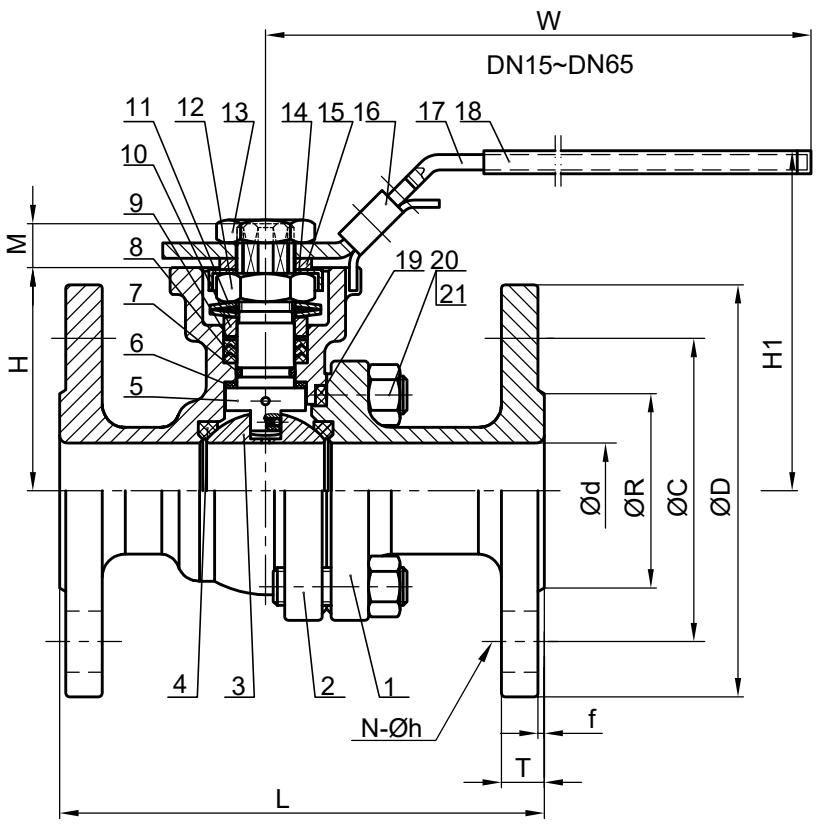
# KV-L6N/PN40, DN15 ÷ DN100 and KV-L6K/PN16, DN65 ÷ DN200 2-PC BALL VALVES, FLANGED TYPE

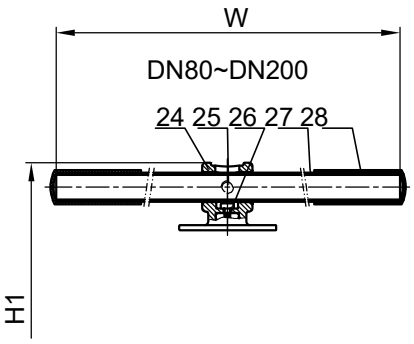
## DESIGN

- according to EN12516-1
- full bore
- split body, floating ball, TFM 1600 seats
- ISO5211 top flange for direct mounting of operating
- locking device
- spindle protected against firing in case of overpressure
- compensating hole preventing of concentration of pressure in the space between ball and body
- fire safe acc. to API 607 5th 2005, ISO10497
- antistatic (ball - spindle - body)
- flanges acc. to EN1092-1
- testing according to EN12266-1 P10, P11, P12 tightness A (water, air)
- production of castings in accordance with technical regulation TUV AD 2000-Merkblatt W0

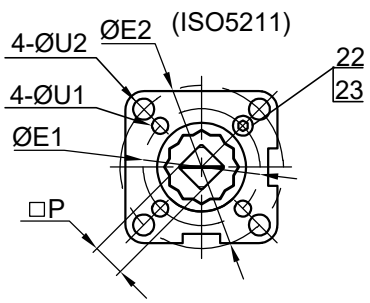
## CERTIFICATION

- PED 2014/68/ EU
- NACE MR-0175
- TA-Luft/ISO15848-1



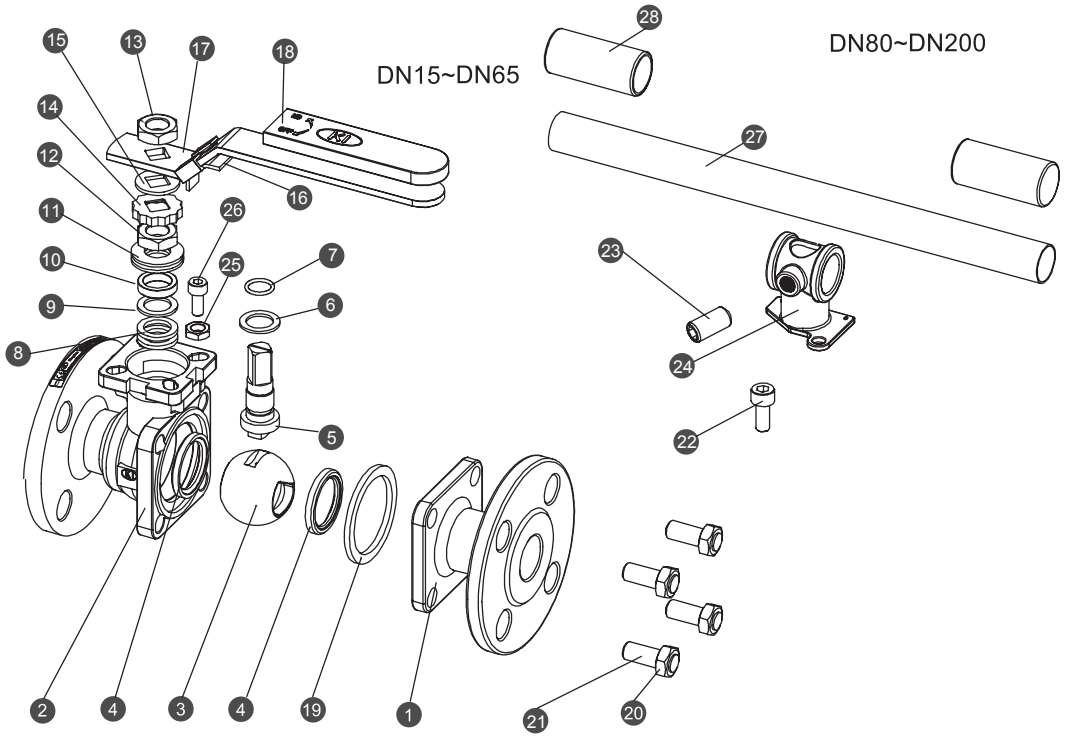

Top flange for mounting of operating



## GENERAL DIMENSIONS AND WEIGHT

Dimensions are in mm.

| DN | PN | d | L | R | D | C | f | T | N | h | H | H1 | W | P | M | E1 | E2 | U1 | U2 | ISO5211 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | | 15 | 115 | 45 | 95 | 65 | 2 | 16 | 4 | 14 | 48 | 78 | 147 | 9 | 8 | 36 | 42 | 6 | 6 | F03~F04 | 2,37 |
| 20 | 10 | 20 | 120 | 58 | 105 | 75 | 2 | 18 | 4 | 14 | 53 | 84 | 147 | 9 | 9 | 36 | 42 | 6 | 6 | F03~F04 | 3,15 |
| 25 | 16 | 25 | 125 | 68 | 115 | 85 | 2 | 18 | 4 | 14 | 59 | 90 | 177 | 11 | 11 | 42 | 50 | 6 | 7 | F04~F05 | 4,09 |
| 32 | 25 | 321 | 30 | 78 | 140 | 100 | 2 | 18 | 4 | 18 | 71 | 102 | 177 | 11 | 11 | 42 | 50 | 6 | 7 | F04~F05 | 5,56 |
| 40 | 40 | 38 | 140 | 88 | 150 | 110 | 3 | 18 | 4 | 18 | 76 | 110 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 | 6,98 |
| 50 | | 50 | 150 | 102 | 165 | 125 | 3 | 20 | 4 | 18 | 85 | 118 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 | 9,67 |
| 65 | 10/16 | 63,5 | 170 | 122 | 185 | 145 | 3 | 18 | 4 | 18 | 102 | 150 | 267 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 | 13,90 |
| | 25/40 | | | | | | | 22 | 8 | | 107 | 155 | | | | | | | | | 14,60 |
| 80 | 10/16 | 76,0 | 180 | 138 | 200 | 160 | 3 | 20 | 8 | 18 | 112 | 176 | 300 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 | 18,10 |
| | 25/40 | | | | | | | 24 | | | 117 | 181 | | | | | | | | | 20,40 |
| 100 | 10/16 | 100 | 190 | 158 | 220 | 180 | 3 | 20 | 8 | 18 | 140 | 211 | 400 | 22 | 22 | - | 102 | | 11 | F10 | 25,30 |
| | 25/40 | | | 162 | 235 | 190 | | 24 | | 22 | | | | | | | | | | | 29,50 |
| 125 | 10/16 | 125 | 325 | 188 | 250 | 210 | 3 | 22 | 8 | 18 | 183 | 263 | 600 | 27 | 27 | 125 | | 14 | | F12 | 51,00 |
| | 25/40 | | | | 270 | 220 | | 26 | | 26 | | | | | | | | | | | 59,50 |
| 150 | 10/16 | 150 | 350 | 212 | 285 | 240 | 3 | 22 | 8 | 22 | 204 | 284 | 800 | 27 | 27 | 125 | | 14 | | F12 | 72,50 |
| | 25/40 | | | 218 | 300 | 250 | | 28 | | 26 | | | | | | | | | | | 84,50 |
| 200 | 16 | 200 | 400 | 268 | 340 | 295 | 3 | 24 | 8 | 22 | 253 | 334 | 800 | 27 | 27 | 125 | 140 | 14 | 18 | F12 | 120,00 |
| | 40 | | | 285 | 375 | 320 | | 34 | 12 | 30 | | | | | | | | | | | 151,00 |




## CONSTRUCTION AND MATERIALS

| Pos. | Component name | Material |
|---|---|---|
| 1 | Bonnet | 1.4408 \| 1.0619 |
| 2 | Body | 1.4408 \| 1.0619 |
| 3 | Ball | CF8M/F316 |
| 4 | Seats | TFM1600 |
| 5 | Spindle | 316 \| 304 |
| 6 | Axial sliding washer | PTFE |
| 7 | O-ring | FKM |
| 8 | Packing | Graphit |
| 9 | Spacer ring | 304 |
| 10 | Packing case | 316 |
| 11 | Disc spring | 301 |
| 12 | Spindle nut | A194-8 |
| 13 | Nut of lever (DN15~DN80) | A194-8 |
| 14 | Lock washer | 304 |

| Pos. | Component name | Material |
|---|---|---|
| 15 | Lever washer | 304 |
| 16 | Locking device (DN15~DN80) | 304 |
| 17 | Hand lever (DN15~DN80) | 304 |
| 18 | Cover of lever (DN15~DN80) | VINYL |
| 19 | Body seal | Spiral wound +Graphite |
| 20 | Screws (DN100~DN150) | A2-70 \| 8 |
| 21 | Stop screw | A2-70 \| 8.8 |
| 22 | Stop nut | A2-70 |
| 23 | Lever adapter (DN80~DN150) | A2-70 |
| 24 | Adjusting screw (DN80~DN150) | CF8 |
| 25 | Nut (DN80~DN150) | A2-70 |
| 26 | Pipe of lever (DN80~DN150) | A2-70 |
| 27 | Cover of lever (DN80~DN150) | A53+Zn |
| 28 | Cover of lever (DN80~DN150) | Vinyl |

## FLOW COEFFICIENT Cv, Kv

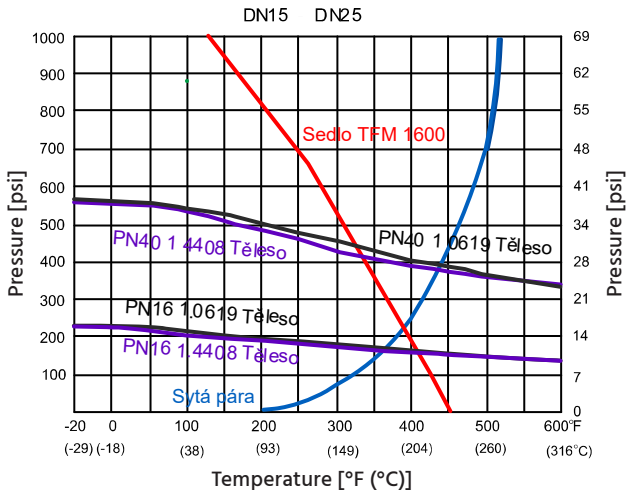
| DN | Cv [US gal.mm-1] | Kv [$m^3$.h-1] |
|---|---|---|
| 15 | 18 | 15,57 |
| 20 | 36 | 31,14 |
| 25 | 48 | 41,52 |
| 32 | 93 | 80,45 |
| 40 | 165 | 142,73 |
| 50 | 207 | 179,06 |
| 65 | 450 | 389,25 |
| 80 | 780 | 674,70 |
| 100 | 1360 | 1176,40 |
| 125 | 1700 | 1470,50 |
| 150 | 2600 | 2249,00 |
| 200 | 4200 | 3633,00 |

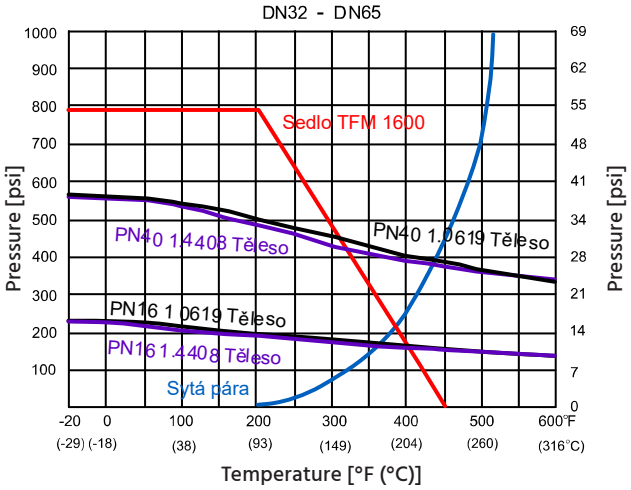
## DEPENDENCE OF TORQUE ON PRESSURE DIFFERENCE ΔP

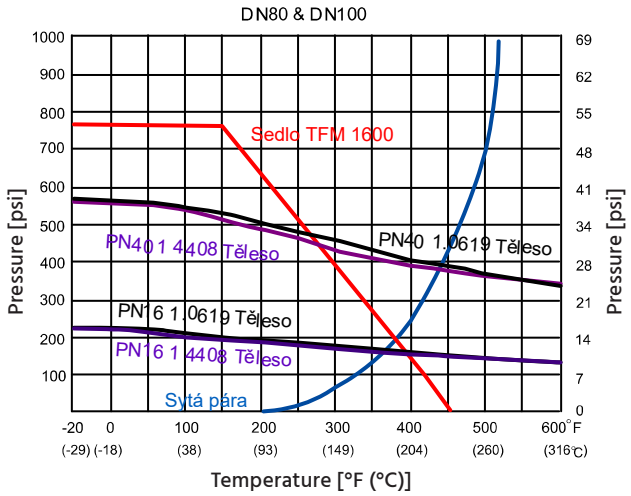
| DN | $\Delta P_1$ | | $\Delta P_2$ | | $\Delta P_3$ | | $\Delta P_4$ | |
|---|---|---|---|---|---|---|---|---|
| | 5 bar | 75 psi | 10 bar | 150 psi | 16 bar | 300 psi | 40 bar | 600 psi |
| | [Nm] | [$lb_f$-in] | [Nm] | [$lb_f$-in] | [Nm] | [$lb_f$-in] | [Nm] | [$lb_f$-in] |
| 15 | 5 | 44 | 5 | 5 | 5 | 44 | 5 | 44 |
| 20 | 6 | 53 | 6 | 6 | 6 | 53 | 6 | 53 |
| 25 | 10 | 88 | 10 | 10 | 11 | 97 | 11 | 97 |
| 32 | 13 | 115 | 13 | 13 | 15 | 133 | 17 | 150 |
| 40 | 19 | 168 | 19 | 19 | 22 | 195 | 24 | 212 |
| 50 | 25 | 221 | 29 | 29 | 32 | 283 | 34 | 301 |
| 65 | 40 | 354 | 45 | 45 | 49 | 434 | 52 | 460 |
| 80 | 65 | 575 | 72 | 72 | 81 | 717 | 88 | 779 |
| 100 | 100 | 885 | 110 | 110 | 122 | 1080 | 132 | 1168 |
| 125 | 190 | 1681 | 210 | 210 | 245 | 2168 | 280 | 2478 |
| 150 | 280 | 2478 | 306 | 306 | 340 | 3009 | 510 | 4514 |
| 200 | 370 | 3274 | 430 | 430 | 487 | 4310 | 730 | 6461 |

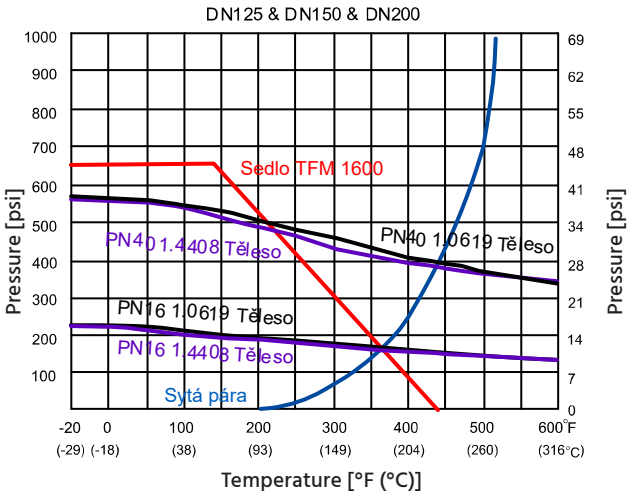
For design of an actuator it is necessary to take into account the safety factor (recommended min. 30%).

## PRESSURE-TEMPERATURE DIAGRAM



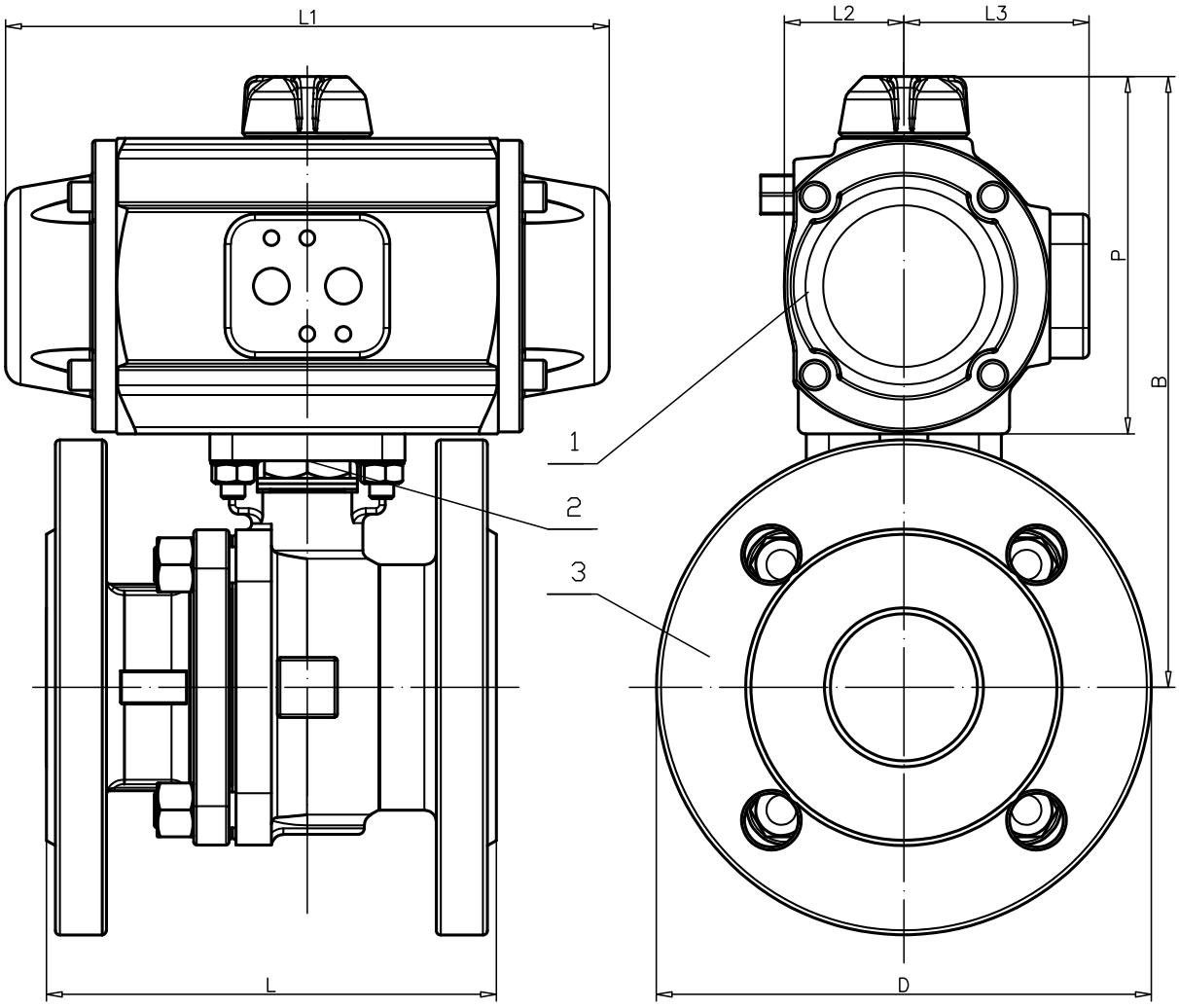




Sedlo = Seat
Těleso = Body
Sytá pára = Saturated steam

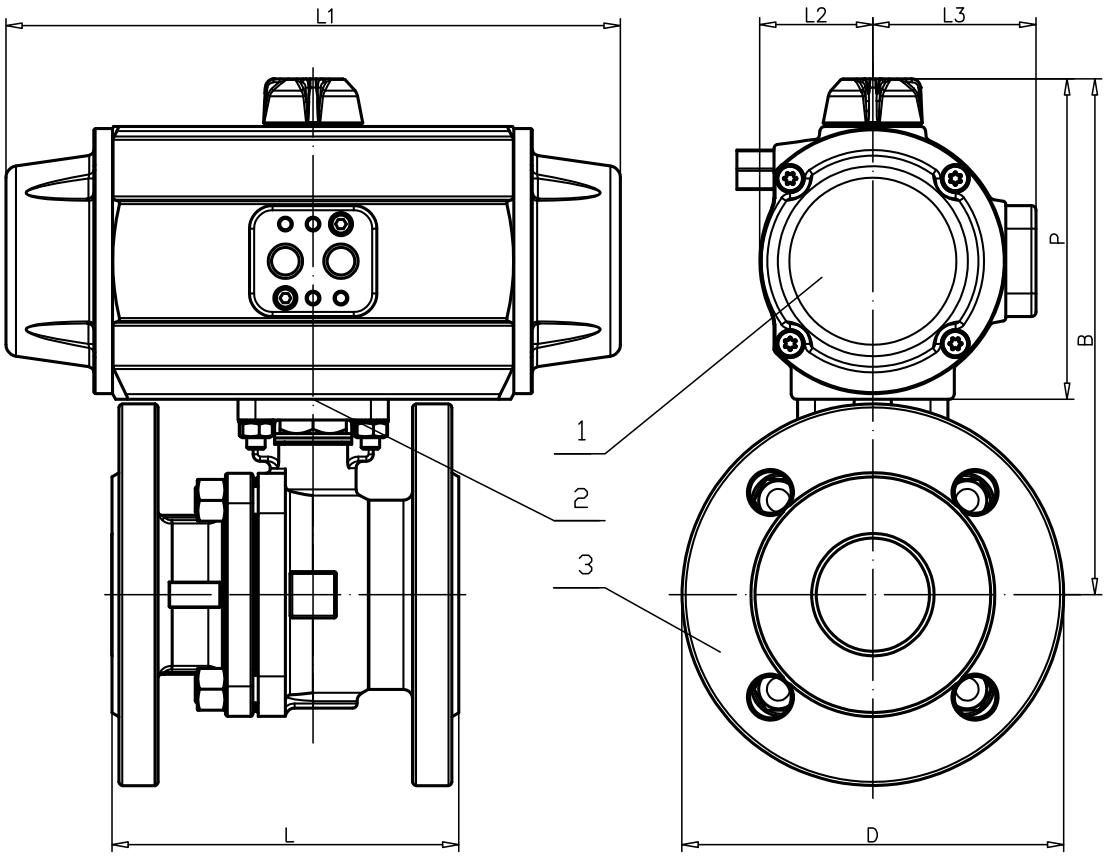
## BALL VALVE KV-L7NF / PN40 DN15–DN50 WIT PRISMA DOUBLE-ACTING PNEUMATIC ACTUATOR




| Position | Name of component |
|---|---|
| 1 | Double-acting pneumatic actuator |
| 2 | Mounting kit |
| 3 | Ball valve |

| Wafer ball valve KV-L7NF with Prisma D/A pneumatic actuator | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | Actuator | D | L | P | L1 | L2 | L3 | B | Kg |
| 15 | 40 | PAW | 95 | 115 | 89 | 141 | 28 | 48 | 137 | 3,6 |
| 20 | 40 | PAW | 105 | 120 | 89 | 141 | 28 | 48 | 142 | 4,4 |
| 25 | 40 | PAW | 115 | 125 | 89 | 141 | 28 | 48 | 148 | 5,2 |
| 32 | 40 | PA00 | 140 | 130 | 102 | 155 | 32 | 52 | 173 | 7,4 |
| 40 | 40 | PA05 | 150 | 140 | 119 | 201 | 40 | 62 | 195 | 10,1 |
| 50 | 40 | PA05 | 165 | 150 | 119 | 201 | 40 | 62 | 204 | 12,8 |
| 65 | 40 | PA10 | 185 | 170 | 123 | 226 | 41 | 63 | 230 | 17,5 |
| 80 | 40 | PA15 | 200 | 180 | 139 | 265 | 48 | 71 | 256 | 25 |
| 100 | 40 | PA25 | 235 | 190 | 175 | 358 | 64 | 89 | 315 | 40 |

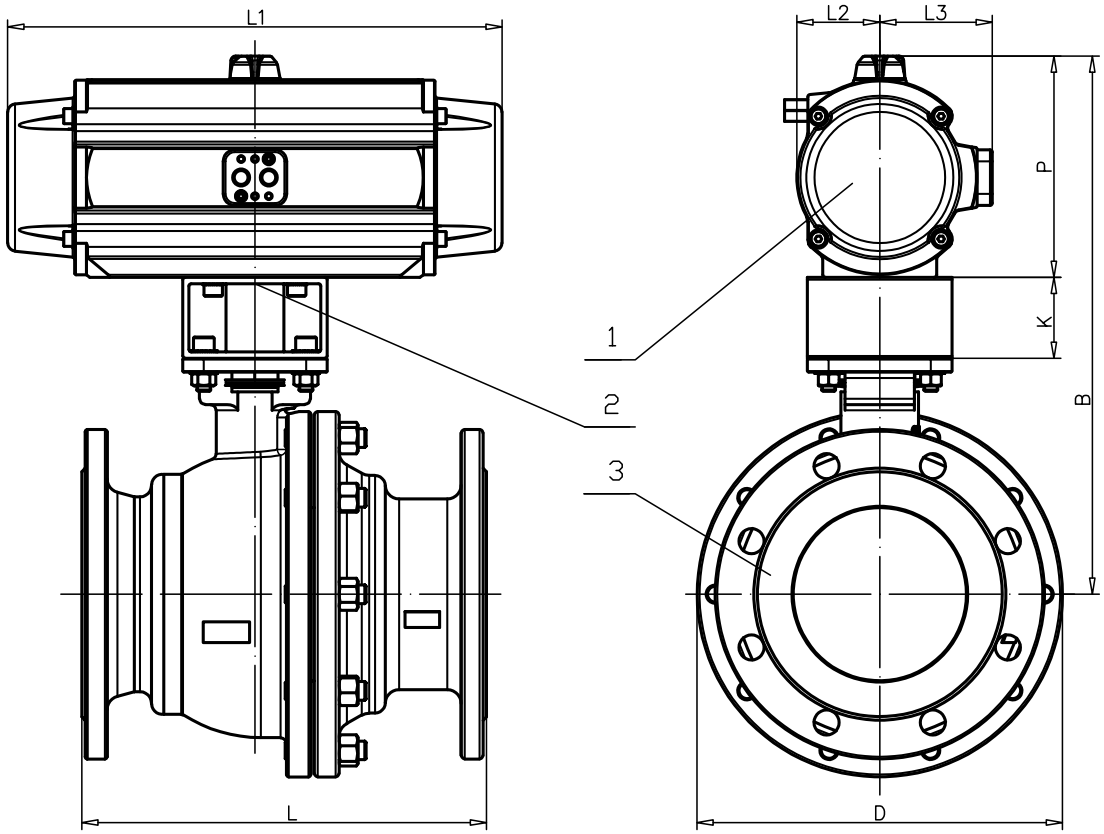
## BALL VALVE KV-L7NF / PN40 DN15–DN50 WIT PRISMA DOUBLE-ACTING PNEUMATIC ACTUATOR




| Position | Name of component |
|---|---|
| 1 | Double-acting pneumatic actuator |
| 2 | Mounting kit |
| 3 | Ball valve |

| Wafer ball valve KV-L7NF with Prisma D/A pneumatic actuator | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | Actuator | D | L | P | L1 | L2 | L3 | B | Kg |
| 15 | 40 | PAWS | 95 | 115 | 89 | 141 | 28 | 48 | 137 | 3,7 |
| 20 | 40 | PA00S | 105 | 120 | 102 | 155 | 32 | 52 | 155 | 5,1 |
| 25 | 40 | PA05S | 115 | 125 | 119 | 201 | 40 | 62 | 178 | 7,3 |
| 32 | 40 | PA10S | 140 | 130 | 119 | 201 | 40 | 62 | 190 | 9,4 |
| 40 | 40 | PA15S | 150 | 140 | 139 | 265 | 48 | 71 | 215 | 12,6 |
| 50 | 40 | PA15S | 165 | 150 | 139 | 265 | 48 | 71 | 224 | 15,3 |
| 65 | 40 | PA25S | 185 | 170 | 175 | 358 | 64 | 89 | 282 | 26,8 |
| 80 | 40 | PA30S | 200 | 180 | 191 | 429 | 72 | 97 | 308 | 37 |
| 100 | 40 | PA30S | 235 | 190 | 191 | 429 | 72 | 97 | 331 | 46 |

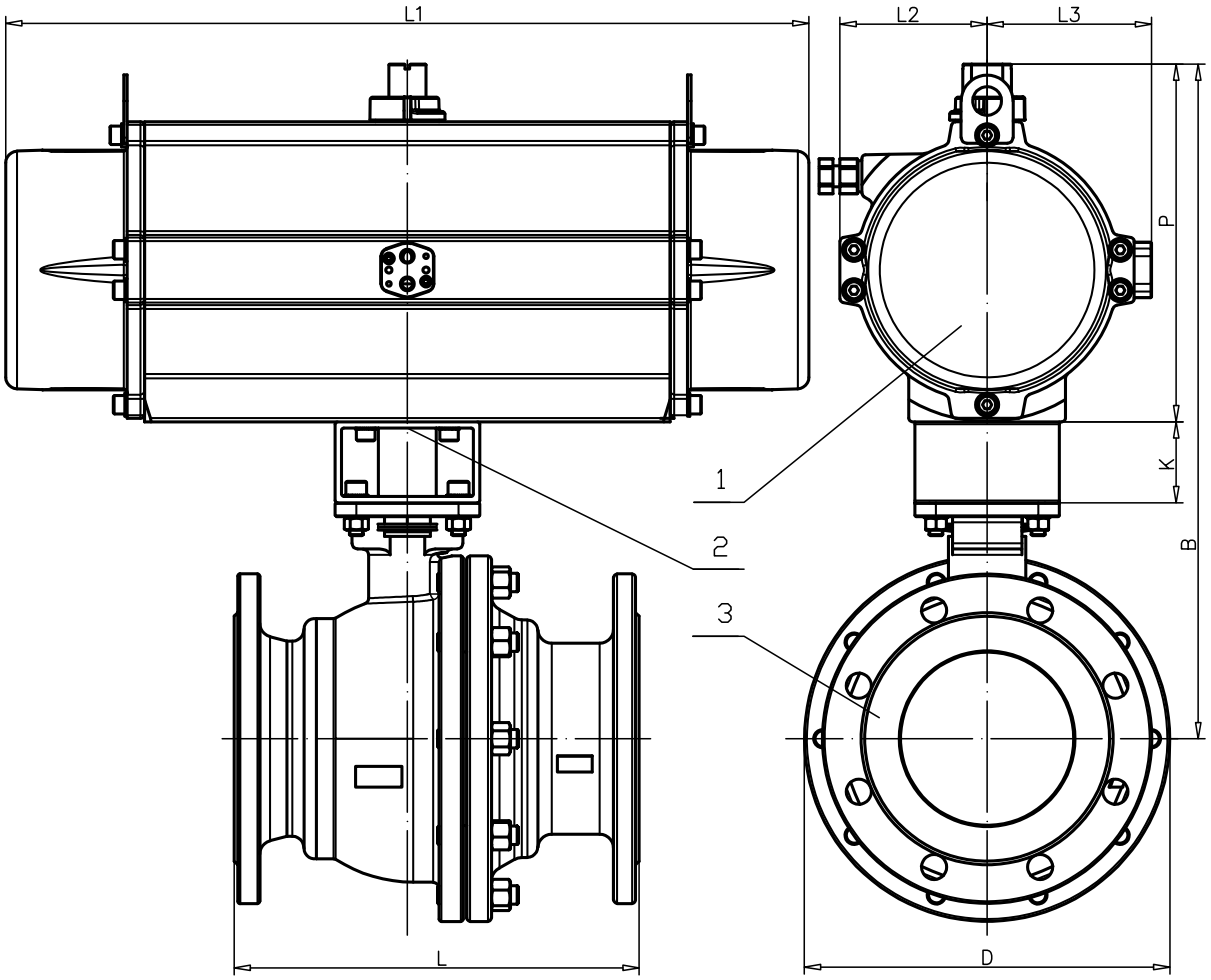
## BALL VALVE KV-L7NF / PN40 DN15–DN50 WITH PRISMA SINGLE-ACTING PNEUMATIC ACTUATOR




| Position | Name of component |
|---|---|
| 1 | Single-acting pneumatic actuator |
| 2 | Mounting kit |
| 3 | Ball valve |

| Wafer ball valve KV-L7NF with Prisma S/A pneumatic actuator | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | Actuator | D | L | K | P | L1 | L2 | L3 | B | Kg |
| 65 | 16 | PA10 | 185 | 170 | - | 123 | 226 | 41 | 63 | 225 | 17,3 |
| 80 | 16 | PA15 | 200 | 180 | - | 139 | 265 | 48 | 71 | 251 | 23,9 |
| 100 | 16 | PA25 | 235 | 190 | - | 175 | 358 | 64 | 89 | 315 | 37 |
| 125 | 16 | PA30 | 250 | 325 | 70 | 191 | 429 | 72 | 97 | 444 | 65 |
| 150 | 16 | PA30 | 285 | 350 | 70 | 191 | 429 | 72 | 97 | 465 | 89 |
| 200 | 16 | P40 | 340 | 400 | - | 272 | 444 | 106 | 120 | 525 | 141 |

## BALL VALVE KV-L7KF / PN16 DN65–DN100 WITH PRISMA DOUBLE-ACTING PNEUMATIC ACTUATOR




| Position | Name of component |
|---|---|
| 1 | Double-acting pneumatic actuator |
| 2 | Mounting kit |
| 3 | Ball valve |

| Wafer ball valve KV-L7KF with Prisma D/A pneumatic actuator | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | Actuator | D | L | K | P | L1 | L2 | L3 | B | Kg |
| 65 | 16 | PA25S | 185 | 170 | - | 175 | 358 | 64 | 89 | 277 | 26 |
| 80 | 16 | PA25S | 200 | 180 | - | 175 | 358 | 64 | 89 | 287 | 30,6 |
| 100 | 16 | PA30S | 235 | 190 | - | 191 | 429 | 72 | 97 | 331 | 42 |
| 125 | 16 | P40S | 250 | 325 | - | 272 | 598 | 106 | 120 | 455 | 89 |
| 150 | 16 | PA50S | 285 | 350 | 70 | 309 | 694 | 128 | 141 | 583 | 136 |
| 200 | 16 | PA50S | 340 | 400 | 70 | 309 | 694 | 128 | 141 | 632 | 184 |

## CERTIFICATES

**ISO 9001**

**ISO 14001**

**OHSAS 18001**

**PED 2014/68/EU**

**AD2000-W0**

**AD2000-HP0**

**AD2000- A4**

**DNV**

**SIL 3**

**TA-Luft**

**ISO 15848-1**

**ATEX 94/9/EC**

**EN 14432**

**API 6D**

**API607 / ISO10497**

**CRN**

**CU-TR**

**CCS**

**TS**

**Lloyd's Register**

**Bureau Veritas**


*The data in the catalog sheet are for information only and the manufacturer reserves the right to make technical changes.*

**INTERMOS VALVES, s.r.o.**
Moskovská 13, 811 08 Bratislava – Staré Mesto
+421 910 933 338, info@intermos.sk
**www.intermos.sk**