



**Range NPS:** 1/2" ~ 56"



**Range Class:** 150 ~ 2500



PED 97/23/EC  
PED 2014/68/EU



TR TS 10/11,  
12/11, 32/11



CERTIFICATE  
EN 12 569



CERTIFICATE  
API 607, 6FA

**Operating temperature:** -196 °C ~ 550 °C

**Connection into piping:** Flanged, welded ends, threaded ends, combined execution



## DESCRIPTION

K84 (floating seats and trunnion mounted ball) valves are controlled shut-off valves. They are designed to stop or allow the flow of the medium by external operation, either manually or via the installed drive. The ball valves allow the medium to flow in both directions. Their construction is designed to prevent the build-up of sediment in the flow channel which would otherwise hinder the valve operation. These ball valves are designed and manufactured to ensure maximum service life and reliability.

## MATERIAL SPECIFICATION

K84 ball valves are made from carbon, alloy and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions.

## APPLICATION

K84 ball valves are suitable for various liquids, gases and steam.

## BASIC STANDARDS FOR DESIGN

### Basic design

API 608, API 6D

### Pressure-temperature rating

ASME B16.34

### Testing

API 598

### Face-to-face dimensions

ANSI B16.10

### Dimensions of the welded ends

ANSI B16.25

### Top Flange dimensions

EN ISO 5211

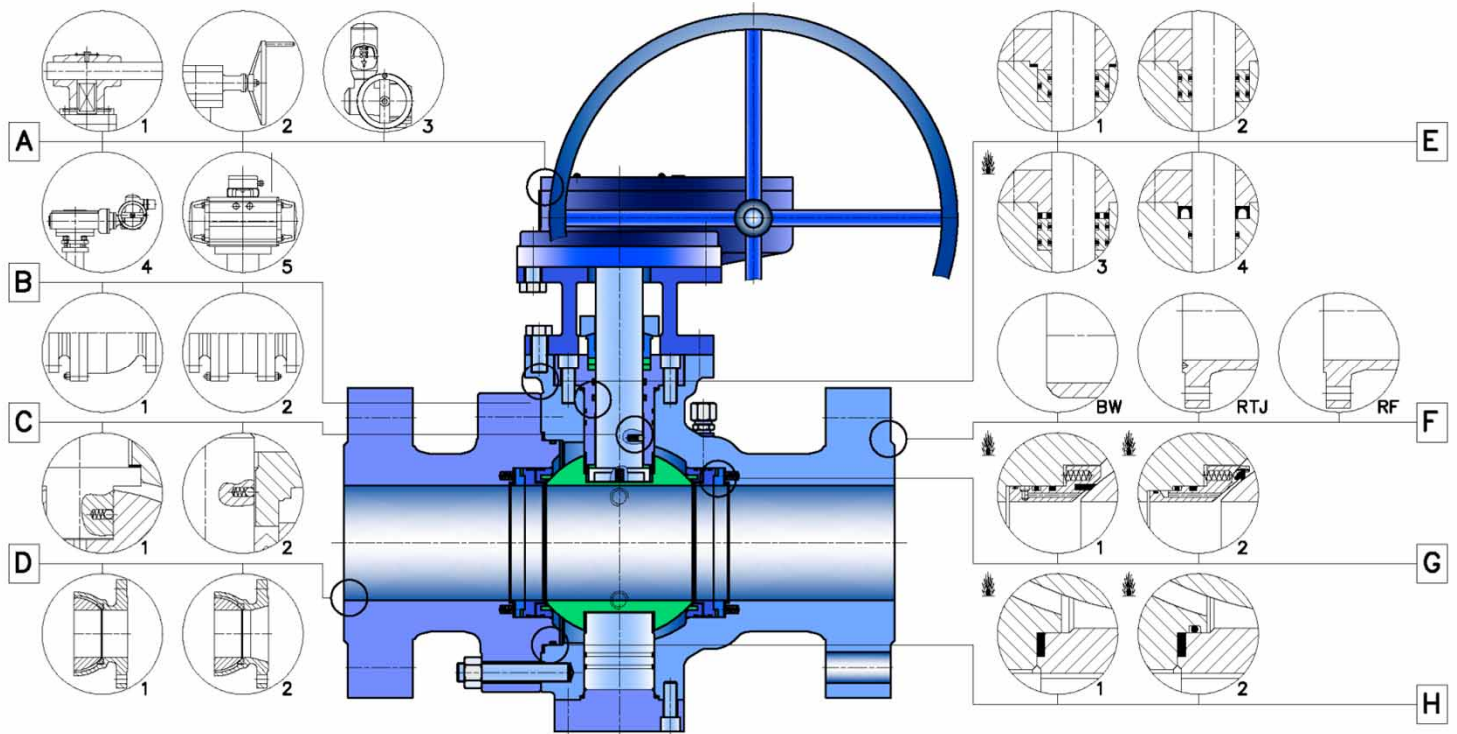
### Flange dimensions

ANSI B 16.5, ANSI B16.47A

### Special

NACE MR-0175

## STRUCTURAL DESIGN



### A - Control

- by hand lever
- gear box+hand wheel
- electric actuator
- electric actuator+gear box
- pneumatic actuator

### B – Body design

- two pieces
- three pieces

### C – Special execution

- antistatic design
- DPE
- LT

### D - Flow direction

- straight, fullbore
- straight, reduced bore

### E – Control stem sealing method

- dynamic – 2 x O-ring, static O-ring + Graphite
- dynamic – 2 x O-ring, static – 2 x O-ring
- dynamic - 2 x O-ring + Graphite (Fire safe design)
- static – 2 x O-ring + graphite (Fire safe design)
- O-ring + V-shaped PTFE ring packing

### F – Connection to piping

- flanged
- threaded
- welded
- welded ends according to customer's requirements

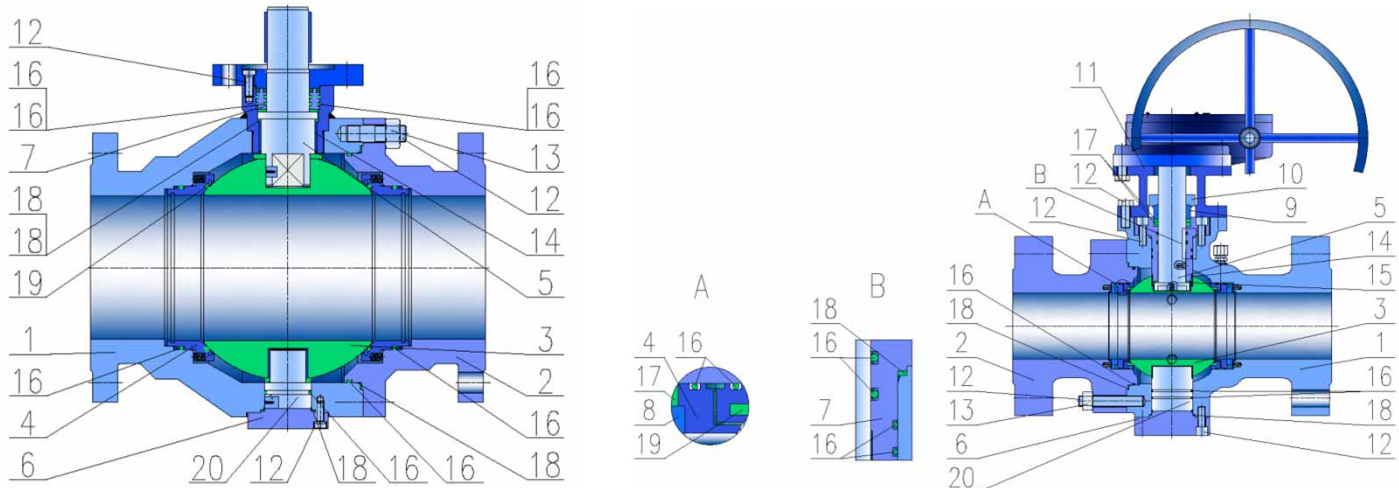
### G - Seats execution

- The seats are made with single or double piston effect, with the option to lubricate and execute in Fire safe design. Also the seats are supplied with "DBB" (double block and bleed) execution. The seats with single piston effect have the option to reduce the pressure in the intermediate space between the ball and body. The seats with double piston effect are pressed to the ball also by the fluid pressure in the intermediate space, which ensures hermetic closure at the inlet and the outlet side of the valve. To limit the pressure in the intermediate space of the body, an overflow device is mounted.

### H – Bonnet sealing

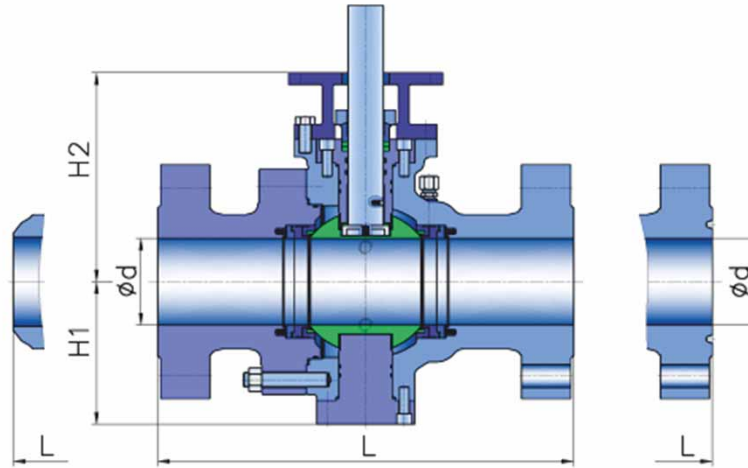
- executed by a sealing ring or a combination of sealing ring and O-ring. To comply with Fire safe design, a graphite seal ring is used; moreover the body and bonnet are sealed by metal to metal

## MATERIAL SPECIFICATION



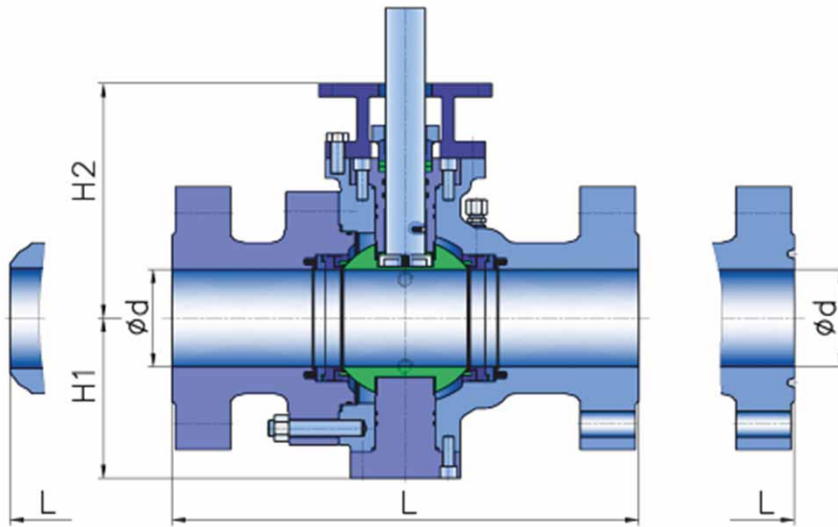
| Pos | Designation             | Foundry execution  |                          |                      |                       |                     |                     | Forged execution    |                 |          |                       |                     |                      |
|-----|-------------------------|--|--------------------------|----------------------|-----------------------|---------------------|---------------------|---------------------|-----------------|----------|-----------------------|---------------------|----------------------|
|     |                         | WCB  | LCB, LCC                 | CF3                  | CF3M                  | CF8                 | CF8M                | LF2                 | A105            | 1.4541   | F316L                 | F304                | F316                 |
| 1   | Body                    | A216 WCB   | A352 LCB, LCC            | A351 F3              | A351 CF3M             | A351 CF8            | A351 CF8M           | A350 LF2            | A105            | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 2   | Bonnet                  | A216 WCB   | A352 LCB, LCC            | A351 CF3             | A351 CF3M             | A351 CF8            | A351 CF8M           | A350 LF2            | A105            | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 3   | Ball                    | A105 + ENP (Cr), A350 LF2 + ENP (Cr)                             | A352 LCB, LCC + ENP (Cr) | A351 CF3, A182 F304L | A351 CF3M, A182 F316L | A351 CF8, A182 F304 | A351CF8M, A182 F316 | A350 LF2 + ENP (Cr) | A105 + ENP (Cr) | 1.4541   | A351 CF3M, A182 F316L | A351 CF8, A182 F304 | A351 CF8M, A182 F316 |
| 4   | Seat                    | A105 + ENP (Cr), A350 LF2 + ENP (Cr)                             | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A350 LF2 + ENP (Cr) | A105 + ENP (Cr) | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 5   | Upper Stem              | A182 F6a   | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A182 F6a            | A182 F6a        | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 6   | Bottom Cover            | A105, A350 LF2   | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A350 LF2            | A105            | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 7   | Top Cover               | A105, A350 LF2   | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A350 LF2            | A105            | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 8   | Thurst Ring of The Seat | A105 + ENP (Cr), A350 LF2 + ENP (Cr)                             | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A350 LF2 + ENP (Cr) | A105 + ENP (Cr) | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 9   | Thurst Ring             | A182 F6a   | A182 F6a                 | A182 F304L           | A182 F316             | A182 F304           | A182 F316           | A182 F6a            | A182 F6a        | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 10  | Gland Flange            | A216 WCB   | A352 LCB, LCC            | A351 CF3             | A351 CF3M             | A351 CF8            | A351 CF8M           | A350 LF2            | A105            | 1.4541   | A182 F316L            | A182 F304           | A182 F316            |
| 11  | Yoke                    | A216 WCB   | A352 LCB, LCC            | A351 CF3             | A351 CF3M             | A351 CF8            | A381 CF8M           | -                   | -               | -        | -                     | -                   | -                    |
| 12  | Bolt                    | A193 B7  | A320 L7                  | A193 B8              | A193 B8M              | A193 B8             | A193 B8M            | 25CrMo4             | A193 B7         | A2 - 70  | A193 B8M              | A193 B8             | A193 B8M             |
| 13  | Nut                     | A194 2H  | A194 4                   | A194 8               | A194 8M               | A194 8              | A194 8M             | A2 - 70             | A194 2H         | A2 - 70  | A194 8M               | A194 8              | A194 8M              |
| 14  | Bushing                 | stainless steel + PTFE, bronze                                   |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 15  | Washer                  | stainless steel + PTFE, bronze                                   |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 16  | O-Ring                  | NITRIL, VITON, NBR, HNBR, EPDM                                   |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 17  | Sealing Ring            | graphite   |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 18  | Gasket                  | graphite, graphite + stainless steel                             |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 19  | Seat Ring               | NYLON, DEVLON, PTFE, RPTFE, PEEK, NITRIL, VITON, NBR, HNBR, EPDM |                          |                      |                       |                     |                     |                     |                 |          |                       |                     |                      |
| 20  | Bottom Stem             | A182 F6a   | A182 F6a                 | A182 F304L           | A182 F316L            | A182 F304           | A182 F316           | A182 F6a            | A182 F6a        | 1.1.4541 | A182 F316L            | A182 F304           | A182 F316            |

## DIMENSIONS



| NPS   | DN   | CLASS 150 |      |      |      |      |             |       |       | CLASS 300 |      |      |      |      |             |       |       |
|-------|------|-----------|------|------|------|------|-------------|-------|-------|-----------|------|------|------|------|-------------|-------|-------|
|       |      | L         |      | d    | H1   | H2   | EN ISO 5211 | (KG)  |       | L         |      | d    | H1   | H2   | EN ISO 5211 | (kg)  |       |
|       |      | 1/RF      | 2    |      |      |      |             | 1/RF  | 2     | 1/RF      | 2    |      |      |      |             | 1/RF  | 2     |
| 1/2   | 15   | 108       | 140  | 13   | 45   | 55   | F03         | 2,5   | 1,8   | 140       | 140  | 15   | 45   | 55   | F03         | 2,5   | 1,8   |
| 1     | 25   | 127       | 165  | 25   | 65   | 70   | F05         | 5,8   | 3,7   | 165       | 165  | 25   | 65   | 70   | F05         | 5,5   | 4,2   |
| 1 1/2 | 40   | 165       | 190  | 38   | 107  | 119  | F05         | 9     | 7,5   | 190       | 190  | 38   | 107  | 119  | F07         | 13    | 9     |
| 2     | 50   | 178       | 216  | 49   | 110  | 170  | F07         | 15    | 12    | 216       | 216  | 49   | 110  | 170  | F10         | 20    | 15    |
| 2 1/2 | 65   | 191       | 241  | 62   | 118  | 215  | F07         | 25    | 19    | 241       | 241  | 62   | 118  | 215  | F12         | 31    | 25    |
| 3     | 80   | 203       | 283  | 74   | 153  | 218  | F10         | 31    | 28    | 283       | 283  | 74   | 153  | 218  | F12         | 42    | 31    |
| 4     | 100  | 229       | 305  | 100  | 170  | 229  | F12         | 47    | 39    | 305       | 305  | 100  | 170  | 229  | F14         | 66    | 52    |
| 6     | 150  | 394       | 457  | 152  | 231  | 245  | F12         | 170   | 145   | 403       | 457  | 152  | 231  | 245  | F16         | 178   | 145   |
| 8     | 200  | 457       | 521  | 203  | 277  | 288  | F14         | 270   | 245   | 502       | 521  | 203  | 277  | 288  | F25         | 293   | 245   |
| 10    | 250  | 533       | 559  | 254  | 310  | 331  | F16         | 354   | 320   | 568       | 559  | 254  | 310  | 331  | F30         | 392   | 320   |
| 12    | 300  | 610       | 635  | 305  | 344  | 368  | F25         | 610   | 560   | 648       | 635  | 305  | 344  | 368  | F30         | 660   | 560   |
| 14    | 350  | 686       | 762  | 337  | 370  | 393  | F30         | 925   | 860   | 762       | 762  | 337  | 370  | 393  | F30         | 990   | 860   |
| 16    | 400  | 762       | 838  | 387  | 415  | 437  | F30         | 1206  | 1036  | 838       | 838  | 387  | 415  | 437  | F35         | 1286  | 1036  |
| 18    | 450  | 864       | 914  | 438  | 453  | 470  | F35         | 1540  | 1320  | 914       | 914  | 438  | 453  | 470  | F35         | 1640  | 1320  |
| 20    | 500  | 914       | 991  | 489  | 491  | 515  | F35         | 1832  | 1758  | 991       | 991  | 489  | 491  | 515  | F35         | 1928  | 1758  |
| 24    | 600  | 1067      | 1143 | 591  | 598  | 605  | F40         | 2970  | 2860  | 1143      | 1143 | 591  | 598  | 605  | F40         | 3060  | 2860  |
| 26    | 650  | 1143      | 1245 | 633  | 628  | 622  | F40         | 4140  | 3450  | 1245      | 1245 | 633  | 750  | 622  | F40         | 3450  | 4140  |
| 28    | 700  | 1245      | 1346 | 686  | 675  | 683  | F35         | 4533  | 4250  | 1346      | 1346 | 686  | 675  | 683  | F40         | 4815  | 4250  |
| 30    | 750  | 1295      | 1397 | 737  | 712  | 721  | F30         | 5307  | 5000  | 1397      | 1397 | 737  | 718  | 721  | F40         | 5595  | 5000  |
| 32    | 800  | 1372      | 1524 | 781  | 763  | 775  | F48         | 6090  | 5640  | 1524      | 1524 | 781  | 763  | 775  | F48         | 6430  | 5640  |
| 36    | 900  | 1524      | 1727 | 876  | 834  | 849  | F48         | 8565  | 8040  | 1727      | 1727 | 876  | 834  | 849  | F48         | 8966  | 8040  |
| 40    | 1000 | 1900      | 1850 | 978  | 928  | 943  | F48         | 10872 | 10260 | 1900      | 1850 | 978  | 928  | 943  | F48         | 10890 | 10260 |
| 44    | 1100 | 1950      | 1900 | 1075 | 950  | 1280 | F48         | 13825 | 12630 | 1950      | 1900 | 1075 | 950  | 1280 | F48         | 15920 | 14340 |
| 48    | 1200 | 2180      | 2100 | 1166 | 1000 | 1350 | F48         | 16915 | 15230 | 2180      | 2100 | 1166 | 1000 | 1350 | F48         | 17916 | 16757 |
| 56    | 1400 | 2300      | 2250 | 1360 | 1150 | 1520 | F48         | 20833 | 18750 | 2300      | 2250 | 1360 | 1150 | 1520 | F48         | 23451 | 21644 |

## DIMENSIONS

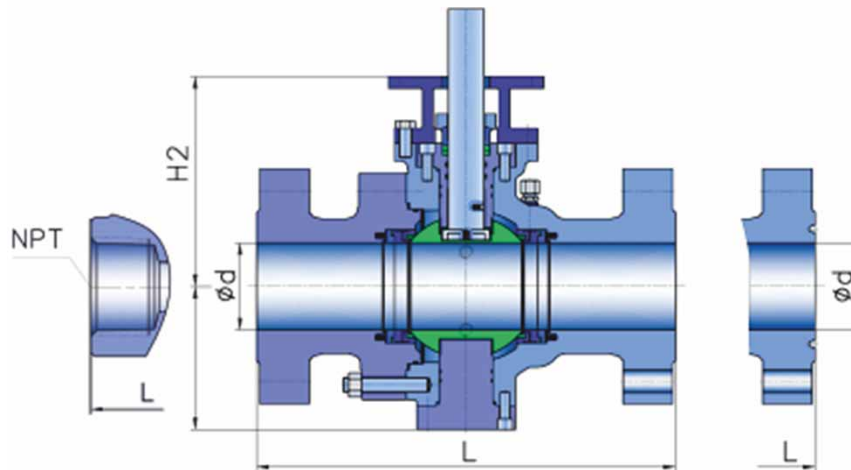


|       |      | CLASS 600 |       |      |      |      |      |             |       |       | CLASS 900 |       |      |     |     |     |             |      |      |
|-------|------|-----------|-------|------|------|------|------|-------------|-------|-------|-----------|-------|------|-----|-----|-----|-------------|------|------|
|       |      | L         |       |      | d    | H1   | H2   | EN ISO 5211 | (KG)  |       | L         |       |      | d   | H1  | H2  | EN ISO 5211 | (KG) |      |
| NPS   | DN   | 1/RF      | 1/RTJ | 2    |      |      |      |             | RF    | BW    | 1/RF      | 1/RTJ | 2    |     |     |     |             | RF   | BW   |
| 1/2   | 15   | 165       | 165   | 165  | 15   | 45   | 55   | F05         | 3,3   | 2,6   | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 1     | 25   | 216       | 216   | 216  | 25   | 65   | 70   | F07         | 7,2   | 4,8   | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 1 1/2 | 32   | 241       | 241   | 241  | 38   | 107  | 119  | F07         | 14    | 9     | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 2     | 50   | 292       | 292   | 295  | 51   | 110  | 170  | F10         | 25    | 19    | 368       | 368   | 371  | 49  | 98  | 118 | F12         | 59   | 35   |
| 2 1/2 | 65   | 330       | 330   | 333  | 64   | 118  | 215  | F12         | 45    | 39    | 419       | 419   | 422  | 62  | 120 | 153 | F14         | 67   | 50   |
| 3     | 80   | 356       | 356   | 359  | 76   | 153  | 218  | F14         | 53    | 48    | 381       | 381   | 384  | 74  | 140 | 170 | F14         | 85   | 71   |
| 4     | 100  | 432       | 432   | 435  | 102  | 170  | 229  | F16         | 84    | 70    | 457       | 457   | 460  | 100 | 162 | 193 | F14         | 177  | 160  |
| 6     | 150  | 559       | 559   | 562  | 152  | 237  | 249  | F25         | 208   | 152   | 610       | 610   | 613  | 152 | 213 | 255 | F16         | 286  | 230  |
| 8     | 200  | 660       | 660   | 664  | 203  | 277  | 297  | F25         | 378   | 295   | 737       | 737   | 740  | 203 | 270 | 295 | F25         | 440  | 345  |
| 10    | 250  | 787       | 787   | 791  | 254  | 314  | 337  | F30         | 560   | 420   | 838       | 838   | 841  | 254 | 322 | 357 | F25         | 720  | 560  |
| 12    | 300  | 838       | 838   | 841  | 305  | 355  | 378  | F30         | 824   | 663   | 965       | 965   | 968  | 305 | 360 | 386 | F30         | 990  | 770  |
| 14    | 350  | 889       | 889   | 892  | 334  | 381  | 400  | F35         | 1080  | 923   | 1029      | 1029  | 1038 | 324 | 400 | 420 | F60         | 1220 | 950  |
| 16    | 400  | 991       | 991   | 994  | 385  | 427  | 448  | F35         | 1714  | 1434  | 1130      | 1130  | 1140 | 375 | 460 | 471 | F30         | 1610 | 1150 |
| 18    | 450  | 1092      | 1092  | 1095 | 436  | 460  | 492  | F40         | 2120  | 1830  | 1219      | 1219  | 1232 | 425 | 486 | 509 | F30         | 2600 | 2140 |
| 20    | 500  | 1194      | 1194  | 1200 | 487  | 500  | 538  | F40         | 2664  | 2250  | 1321      | 1321  | 1334 | 473 | 530 | 547 | F35         | 3480 | 2860 |
| 24    | 600  | 1397      | 1397  | 1407 | 538  | 615  | 615  | F40         | 4092  | 3550  | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 28    | 700  | 1549      | 1549  | 1562 | 636  | 675  | 690  | F48         | 5800  | 5420  | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 30    | 750  | 1651      | 1651  | 1664 | 737  | 733  | 762  | F48         | 7083  | 6450  | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 32    | 800  | 1778      | 1778  | 1794 | 781  | 783  | 815  | F48         | 9137  | 8330  | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 36    | 900  | 2083      | 2083  | 2099 | 876  | 905  | 892  | F48         | 11549 | 10690 | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 40    | 1000 | 2180      | 2100  | -    | 978  | 943  | 955  | F60         | 14355 | 13210 | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 44    | 1100 | 2200      | 2200  | -    | 1075 | 982  | 1013 | F60         | 16595 | 15281 | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 48    | 1200 | 2400      | 2400  | -    | 1166 | 1105 | 1135 | F60         | 25443 | 23102 | -         | -     | -    | -   | -   | -   | -           | -    | -    |
| 56    | 1400 | 2600      | 2600  | -    | 1360 | 1254 | 1290 | F60         | 31414 | 27830 | -         | -     | -    | -   | -   | -   | -           | -    | -    |

## DIMENSIONS

| NPS   | DN  | CLASS 1500 |      |       |     |     |     |             |      |      |      | CLASS 2500 |       |     |     |     |             |      |      |
|-------|-----|------------|------|-------|-----|-----|-----|-------------|------|------|------|------------|-------|-----|-----|-----|-------------|------|------|
|       |     | L          |      |       | d   | H1  | H2  | EN ISO 5211 | (KG) |      | L    |            |       | d   | H1  | H2  | EN ISO 5211 | (KG) |      |
|       |     | 1/RF       | 2    | 1/RTJ |     |     |     |             | 1/RF | 2    | 1/RF | 2          | 1/RTJ |     |     |     |             | 1/RF | 2    |
| 2     | 50  | 368        | 368  | 371   | 49  | 113 | 118 | F12         | 59   | 35   | 451  | 451        | 454   | 49  | 120 | 170 | F14         | 118  | 70   |
| 2 1/2 | 65  | 419        | 419  | 422   | 62  | 125 | 153 | F14         | 94   | 66   | 508  | 508        | 514   | 62  | 130 | 193 | F16         | 135  | 85   |
| 3     | 80  | 470        | 470  | 473   | 74  | 138 | 170 | F14         | 109  | 81   | 578  | 578        | 584   | 74  | 150 | 210 | F16         | 152  | 98   |
| 4     | 100 | 546        | 546  | 549   | 100 | 171 | 193 | F16         | 181  | 161  | 673  | 673        | 683   | 100 | 180 | 270 | F25         | 362  | 322  |
| 6     | 150 | 705        | 705  | 711   | 146 | 222 | 300 | F16         | 400  | 300  | 914  | 914        | 927   | 146 | 230 | 300 | F25         | 750  | 675  |
| 8     | 200 | 832        | 832  | 841   | 194 | 280 | 350 | F25         | 735  | 615  | 1022 | 1022       | 1038  | 194 | 290 | 350 | F30         | 1970 | 1660 |
| 10    | 250 | 991        | 991  | 1000  | 241 | 340 | 427 | F25         | 1120 | 925  | 1270 | 1270       | 1292  | 241 | 350 | 427 | F30         | 2990 | 2490 |
| 12    | 300 | 1130       | 1130 | 1146  | 289 | 370 | 470 | F30         | 1550 | 1300 | 1422 | 1422       | 1445  | 289 | 446 | 470 | F35         | 4130 | 3450 |
| 14    | 350 | 1257       | 1257 | 1276  | 318 | 499 | 522 | F30         | 1915 | 1600 | -    | -          | -     | -   | -   | -   | -           | -    | -    |
| 16    | 400 | 1384       | 1384 | 1407  | 362 | 558 | 598 | F35         | 2350 | 1950 | -    | -          | -     | -   | -   | -   | -           | -    | -    |
| 18    | 450 | -          | -    | -     | -   | -   | -   | -           | -    | -    | -    | -          | -     | -   | -   | -   | -           | -    | -    |
| 20    | 500 | -          | -    | -     | -   | -   | -   | -           | -    | -    | -    | -          | -     | -   | -   | -   | -           | -    | -    |

### DIMENSIONS OF THE THREADED EXECUTION



| NPS    | Thread dimension G | Class 150, 300 |     | Class 600 |     | Class 900 |     |
|--------|--------------------|----------------|-----|-----------|-----|-----------|-----|
|        |                    | Ød             | L   | Ød        | L   | Ød        | L   |
| 1/2"   | 1/2                | 15             | 75  | 15        | 85  | 15        | 130 |
| 3/4"   | 3/4                | 20             | 80  | 20        | 95  | 20        | 130 |
| 1"     | 1"                 | 25             | 90  | 25        | 105 | 25        | 160 |
| 1 1/2" | 1 1/2"             | 40             | 120 | 38        | 130 | 38        | 168 |
| 2"     | 2"                 | 50             | 140 | 49        | 150 | 49        | 185 |
| 2 1/2" | 2 1/2"             | 65             | 185 | 62        | 185 | ---       | --- |
| 3"     | 3"                 | 80             | 205 | 74        | 205 | ---       | --- |
| 4"     | 4"                 | 100            | 240 | 100       | 240 | ---       | --- |
| 6"     | 6"                 | 150            | 270 | ---       | --- | ---       | --- |

## TYPE DESIGNATION

**K84 ABC DEF M Class/S**

### A FACE-TO-FACE DIMENSION

- 1 Short
- 2 Long

### D FLOW DIRECTION

- 1 Straight, full bore
- 2 Straight, reduced bore

### F CONTROL

- 1 By hand lever
- 2 Hand wheel with gearbox
- 3 Electric actuator
- 4 Electric actuator with gearbox
- 5 Pneumatic actuator
- 6 Other actuator
- 9 Without control

### B SEATS EXECUTION

- 1 Polymer
- 2 Polymer + secondary sealing by paste
- 3 Polymer + fire safe
- 4 Polymer + fire safe + secondary sealing by paste
- 5 Metal + O - ring
- 6 Metal + O - ring + secondary sealing by paste
- 7 Metal + O - ring + fire safe

### M BODY MATERIAL

- 0 Stainless steel
- 2 Cast alloy steel
- 3 Forged alloy steel
- 4 Forged carbon steel
- 5 Cast carbon steel

### C CONTROL STEM SEALING METHOD

- 1 O - ring
- 2 O - ring+graphite
- 3 O - ring + graphite packing
- 4 V-shaped PTFE
- 5 Graphite packing

### E CONNECTION INTO PIPE

- 1 Flanged ends
- 2 Welded ends
- 3 Threaded ends
- 8 Combined

### S SPECIAL EXECUTION

- DPE** Seats with double piston effect
- AS** Antistatic design
- LT** Low temperature design

