

**KM 9108.X-03.1 pro teploty / for temperatures up to + 400°C**

**KM 9108.X-03.2 pro teploty / for temperatures up to + 230°C**



### Použití :

Rozsah použití kulových kohoutů je přímo závislý na použitých materiálech a jejich vlastnostech a vlastnostech pracovní látky. Standardní materiály jsou uvedeny v tabulce. Kulové kohouty jsou určeny například pro zemní plyn, propan butan, bioplyn, koksárenský plyn, kyslík, vodu, páru a neagresivní i agresivní kapaliny. Materiály použité na kulovém kohoutu mohou být pro media v rozmezí teplot varianta X-03.2 -50°C až +230°C, varianta X-03.1 -50°C až +400°C.

### Applications :

The scope of application of the ball valves depends directly on their materials and temperature of the service fluid. The standard materials are specified in the table. By agreement and based on service conditions, also other materials than those specified in the table may be used.

The ball valve are intended to be used with for instance, heating gases (natural gas, propane-butane mixture, biogas, coke-oven gas) water, steam, oxygen, and both corrosive and non corrosive liquids and gases in general.

**Service temperatures and pressures :**

Ball valves are designed for the following temperature of :

KM 9108.X-03.1 for temperatures -50°C to + 400°C

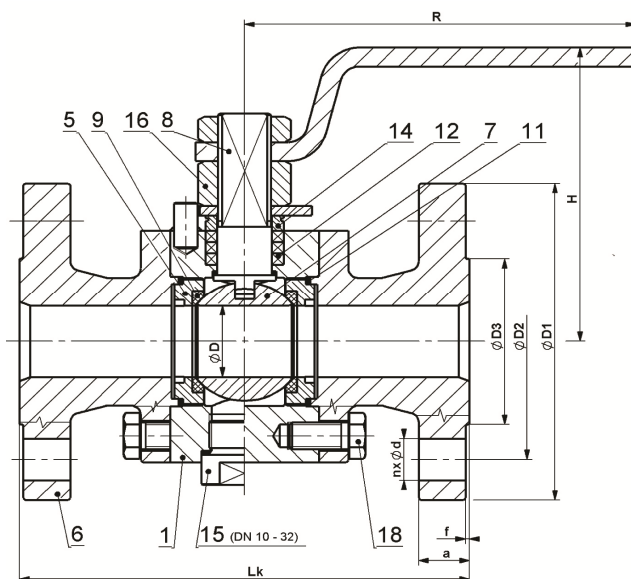
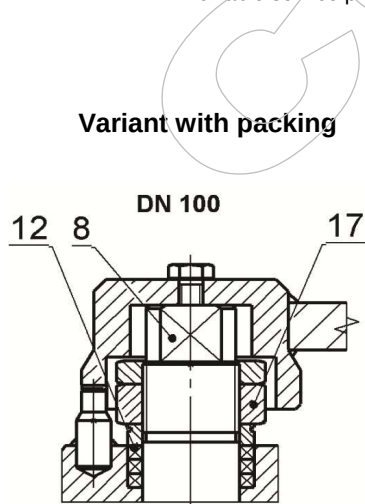
KM 9108.X-03.2 for temperatures -50°C to + 230°C

Temperature is limited on material body :

X=1 1.0577 (-20°C to + 300°C), X=3 1.4541 (-50 °C to +400°C)

X=4 1.4541 (-50°C to + 400°C), X=5 1.0565 (-46 °C to +345°C)

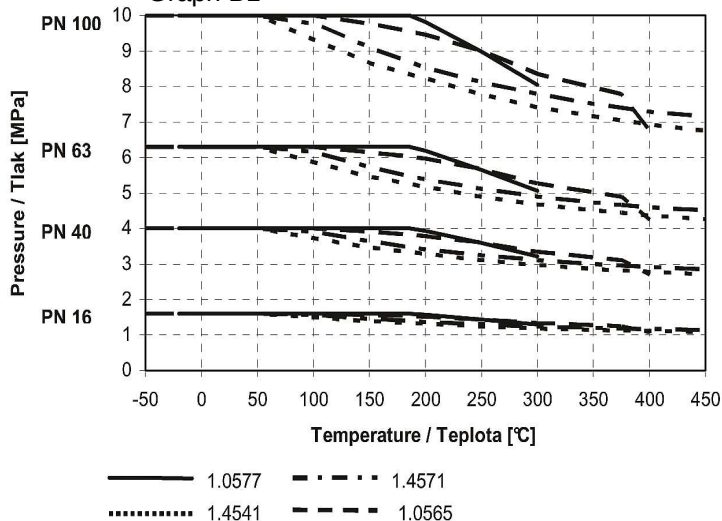
Allowable service pressure are in compliance with the pressure-temperature ratings (Graph B1)



## Tabulka materiálu / Table of materials

| KM 9108.X-03.1<br>KM 9108.X-03.2 |                    | x=1                           | x=3    | x=4    | x=5    |
|----------------------------------|--------------------|-------------------------------|--------|--------|--------|
| poz.                             | část / part        | norma materiálu / material EN |        |        |        |
| 1                                | těleso / body      | 1.0570                        | 1.4541 | 1.4571 | 1.0565 |
| 5                                | sedlo / seat body  |                               |        |        |        |
| 6                                | víko / cover       |                               |        |        |        |
| 7                                | koule / ball       | 1.4006                        | 1.4571 | 1.4571 | 1.4006 |
| 8                                | vřeteno / stem     | 1.4006                        | 1.4571 | 1.4571 | 1.4541 |
| 9                                | sedlo /seat (03.2) | PTFE + 25% carbon             |        |        |        |
|                                  | sedlo /seat (03.1) | Carbon + Sb                   |        |        |        |
| 11                               | těsnění / gasket   | Graphite                      |        |        |        |
| 12                               | ucpávka / packing  | Graphite                      |        |        |        |
| 14                               | víko / gland cover | 1.4006                        |        |        |        |
| 15                               | šroub / srew plug  | 1.0577                        | 1.4541 | 1.4571 | 1.0565 |
| 16                               | nut up to 350°C    | EN ISO 8673/8.8               |        |        |        |
|                                  | mátice / nut       | ČSN EN ISO 4017/A2-70         |        |        |        |
| 17                               | mátice / nut       | 1.4006                        |        |        |        |
| 18                               | screw up to 350°C  | EN ISO 4017/8.8               |        |        |        |
|                                  | šroub / srew       | ČSN EN ISO 4017/A2-70         |        |        |        |

Graph B1



**Rozměrová tabulka / Table of dimensions :**

| PN            | DN  | D   | D1  | D2  | D3  | f | a  | n  | d  | Lk-02 | Lk-F1 | Lk-F4 | H   | R   | HM(kg) |
|---------------|-----|-----|-----|-----|-----|---|----|----|----|-------|-------|-------|-----|-----|--------|
| PN 16, 25, 40 | 10  | 9,5 | 90  | 60  | 40  | 2 | 16 | 4  | 14 |       | 130   | 110   | 77  | 100 | 2,2    |
|               | 15  | 14  | 95  | 65  | 45  | 2 | 16 | 4  | 14 |       | 130   | 115   | 84  | 100 | 2,3    |
|               | 20  | 20  | 105 | 75  | 58  | 2 | 18 | 4  | 14 |       | 150   | 120   | 93  | 100 | 4,4    |
|               | 25  | 25  | 115 | 85  | 68  | 2 | 18 | 4  | 14 |       | 160   | 125   | 101 | 150 | 6,8    |
|               | 32  | 30  | 140 | 100 | 78  | 2 | 18 | 4  | 18 |       | 180   | 130   | 105 | 150 | 8,8    |
|               | 40  | 38  | 150 | 110 | 88  | 2 | 18 | 4  | 18 | 170   | 20    | 140   | 122 | 250 | 9,8    |
|               | 50  | 47  | 165 | 125 | 102 | 2 | 20 | 4  | 18 | 180   | 230   | 150   | 131 | 250 | 13,5   |
|               | 65  | 62  | 185 | 145 | 122 | 2 | 22 | 8  | 18 | 200   | 290   | 170   | 141 | 250 | 20,5   |
|               | 80  | 76  | 200 | 160 | 138 | 2 | 24 | 8  | 18 | 210   | 310   | 180   | 162 | 350 | 29,7   |
| PN 16         | 100 | 95  | 220 | 180 | 158 | 2 | 20 | 8  | 18 | 230   | 350   | 190   | 178 | 350 | 47,3   |
|               | 125 | 125 | 250 | 210 | 188 | 2 | 22 | 8  | 18 |       | 400   |       | 202 | 550 | 72     |
|               | 150 | 150 | 285 | 240 | 212 | 2 | 22 | 8  | 22 |       | 480   |       | 232 | 550 | 115    |
|               | 200 | 200 | 340 | 295 | 268 | 2 | 24 | 12 | 22 |       | 600   |       | 278 | 550 | 196    |
|               | 250 | 250 | 405 | 355 | 320 | 2 | 26 | 12 | 26 |       | 730   |       |     |     | 279    |
|               | 300 | 300 | 460 | 410 | 378 | 2 | 28 | 12 | 26 |       | 850   |       |     |     | 290    |
| PN 25, 40     | 100 | 95  | 235 | 190 | 162 | 2 | 24 | 8  | 22 | 230   | 350   | 190   |     |     | 51,7   |
|               | 125 | 125 | 270 | 220 | 188 | 2 | 26 | 8  | 26 |       | 400   |       | 325 |     | 83     |
|               | 150 | 150 | 300 | 250 | 218 | 2 | 28 | 8  | 26 |       | 480   |       | 350 | 450 | 145    |
| PN 25         | 200 | 200 | 360 | 312 | 278 | 2 | 30 | 12 | 26 |       | 600   |       | 400 | 550 | 196    |
|               | 250 | 250 | 425 | 370 | 335 | 2 | 32 | 12 | 30 |       | 730   |       | 450 | 650 | 285    |
|               | 300 | 300 | 480 | 430 | 395 | 2 | 34 | 16 | 30 |       | 850   |       | 500 | 750 | 315    |
| PN 40         | 200 | 200 | 375 | 320 | 285 | 2 | 34 | 12 | 30 |       | 600   |       | 400 | 550 | 202    |
|               | 250 | 250 | 450 | 385 | 345 | 2 | 38 | 12 | 33 |       | 730   |       | 450 | 650 | 292    |
|               | 300 | 300 | 515 | 450 | 410 | 2 | 42 | 16 | 33 |       | 850   |       | 500 | 750 | 327    |
| PN 63, 100    | 10  | 9,5 | 100 | 70  | 40  | 2 | 20 | 4  | 14 |       | 130   |       |     |     | 2,8    |
|               | 15  | 14  | 105 | 75  | 45  | 2 | 20 | 4  | 14 |       | 130   |       |     |     | 3,5    |
|               | 25  | 25  | 140 | 100 | 68  | 2 | 24 | 4  | 18 |       | 160   |       |     |     | 8,6    |
|               | 32  | 30  | 155 | 110 | 78  | 2 | 24 | 4  | 22 |       | 180   |       |     |     | 11,3   |
|               | 40  | 38  | 170 | 125 | 88  | 2 | 26 | 4  | 22 |       | 200   |       |     |     | 12,9   |
| PN 63         | 50  | 47  | 180 | 135 | 102 | 2 | 26 | 4  | 22 |       | 230   |       |     |     | 16,1   |
|               | 65  | 62  | 205 | 160 | 122 | 2 | 26 | 8  | 22 |       | 290   |       |     |     | 28,6   |
|               | 80  | 76  | 215 | 170 | 138 | 2 | 28 | 8  | 22 |       | 310   |       |     |     | 44,6   |
|               | 100 | 95  | 250 | 200 | 162 | 2 | 30 | 8  | 26 |       | 350   |       |     |     | 68     |
|               | 125 | 119 | 295 | 240 | 188 | 2 | 34 | 8  | 30 |       | 400   |       |     | 400 | 92     |
|               | 150 | 142 | 345 | 280 | 218 | 2 | 36 | 8  | 33 |       | 480   |       | 350 | 450 | 156    |
|               | 200 | 195 | 415 | 345 | 285 | 2 | 42 | 12 | 36 |       | 600   |       |     | 550 | 230    |
| PN 100        | 50  | 47  | 195 | 145 | 102 | 2 | 28 | 4  | 26 |       | 230   |       |     |     | 20,3   |
|               | 65  | 62  | 220 | 170 | 122 | 2 | 30 | 8  | 26 |       | 290   |       |     |     | 32,1   |
|               | 80  | 76  | 230 | 180 | 138 | 2 | 32 | 8  | 26 |       | 310   |       |     |     | 49     |
|               | 100 | 95  | 265 | 210 | 162 | 2 | 36 | 8  | 30 |       | 350   |       |     |     | 76     |
|               | 125 | 119 | 315 | 250 | 184 | 2 | 40 | 8  | 33 |       | 400   |       |     | 400 | 98     |
|               | 150 | 142 | 355 | 290 | 212 | 2 | 44 | 12 | 33 |       | 480   |       |     | 450 | 187    |

**Ovládání :**

Kulové kohouty jsou standardně ovládány pákou, kdy uzavření / otevření kohoutu provedeme otočením páky o 90°. Koncové polohy kohouty jsou jistěny dorazy. V otevřené poloze je páka kulového kohoutu rovnoběžně s potrubím. V poloze uzavření je páka kolmo na potrubí. Kulové kohouty lze opatřit elektrickým servopohonem nebo pneumatickým válcem. Připojení pohonu se provádí přes standardizovanou přírubu ISO 5211. Velikost pohonu je závislá na tlakové diferenci kohoutu.

**Operation :**

The ball valves are operated manually as a standard, by turning their lever through an angle 90°. The end positions are limited by stops. In open position, the ball valve lever goes parallel to the piping axis. It is possible to operate ball valves also by means of electric or pneumatic actuators. Dimension of flanges for actuator installation are in accordance with ISO 5211. The actuator size depends on the maximum service pressure drop through the ball.

**Testing :**

According to EN 12266-1 as a standard, i.e. shell test P10, shell tightness test P11 and seat tightness test P12.