

FIRE SAFE BALL VALVE ISO PN16/40 FLANGED



Size : DN 15 to 300 mm
Ends : ISO PN16/40 Flanges
Min Temperature : -50°C in SS and -20°C in carbon steel
Max Temperature : + 230°C
Max Pressure : 40 Bars up to DN50, 16 Bars over
Specifications : ISO 5211 mounting pad
Fire safe according to ISO 10497 : 2004
Fugitive emissions according to EN 15848-1 : 2006
Atex

Materials : Carbon steel or stainless steel

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SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- Pure PTFE TFM1600 seat (PMD FF)
- Locking device
- ISO 5211 mounting pad
- 2 pieces type (Split body)
- ISO PN40 Flanges R.F. up to DN50, ISO PN16 over
- Antistatic device
- Fire safe ISO 10497 : 2004
- Fugitive emissions EN 15848-1 : 2006
- Graphite packing + FKM O ring on stem
- With exhaust hole in the ball (located in the top of the ball to avoid overpressure in it)
- Black painting colour RAL 9004 , 5-15 microns thickness for carbon steel type (Ref. 752)

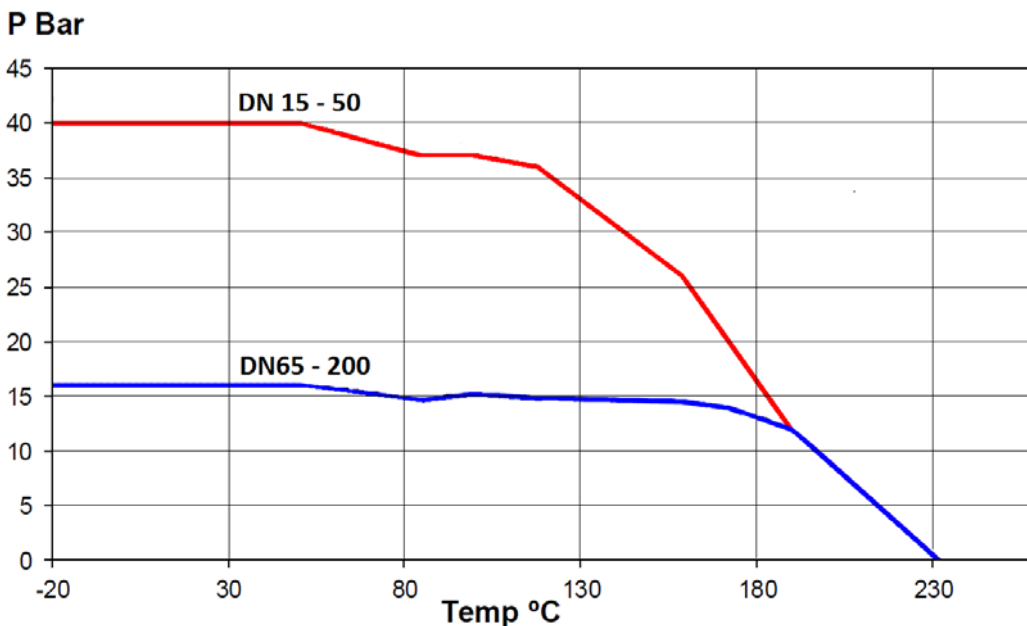
USE :

- Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air
- Min and max Temperature Ts : -50°C to + 230°C for stainless steel type **Ref. 753**
- Min and max Temperature Ts : -20°C to + 230°C for carbon steel type **Ref. 752**
- Max Pressure Ps : 40 bars up to DN50, 16 bars over (see graph)
- Vacuum 10^{-2} torr
- Compressed air (ambient temperature) : 8 bars maximum
- Steam : 12 bars maximum

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) FOR CARBON STEEL TYPE REF.752 :

PRESSURE

REF. 752

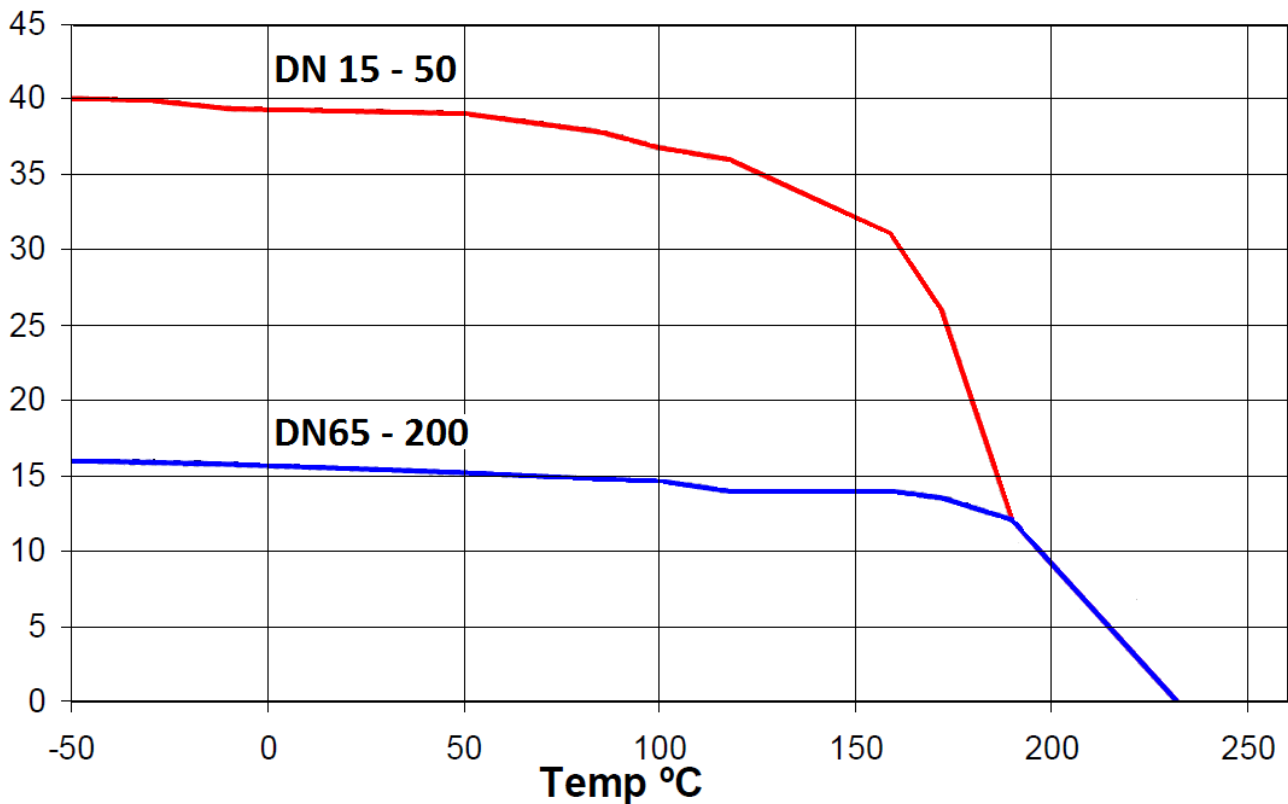


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PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) FOR STAINLESS STEEL TYPE REF.753 :

**PRESSURE
P Bar**

REF. 753



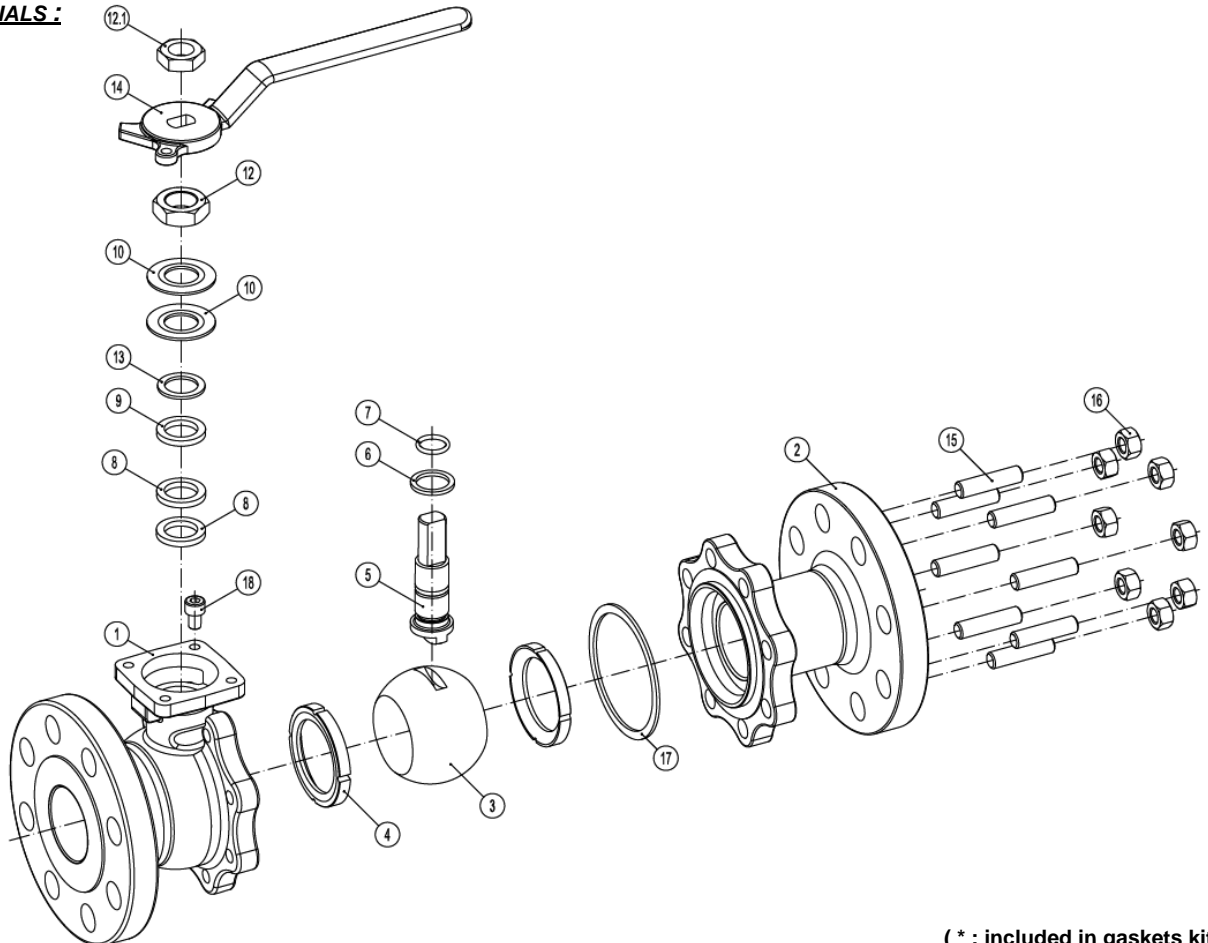
RANGE :

- Carbon steel body ball valve **Ref. 752** DN 15 to DN 200
- Stainless steel body ball valve **Ref. 753** DN 15 to DN 200
- Possible with gearbox **Ref. 9830221-9830222 and 9830266-267** from DN 100 to DN 200
- ASTM A351 CF8M handle **Ref. 9812090-9812097** from DN 15 to DN 200
- Carbon steel body ball valve with gearbox **Ref. 752** DN 250 to DN 300
- Stainless steel body ball valve with gearbox **Ref. 753** DN 250 to DN 300

ENDS:

- ISO PN40 Flanges R.F. up to DN50, ISO PN16 over

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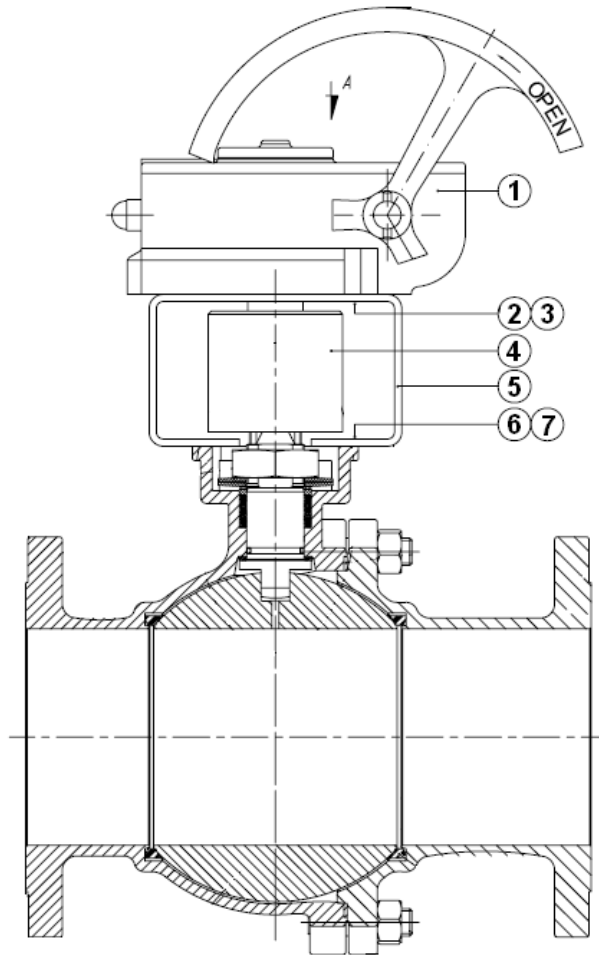
VALVE MATERIALS :


(* : included in gaskets kit)

| Item | Designation | Materials 752 | Materials 753 |
|------|----------------------|-------------------------------|-------------------|
| 1 | Body | Carbon steel ASTM A216WCB | SS ASTM A351 CF8M |
| 2 | Ends | Carbon steel ASTM A216WCB | SS ASTM A351 CF8M |
| 3 | Ball | SS ASTM A351 CF8M | |
| 4* | Seat | Pure PTFE TFM 1600 (PMD FF) | |
| 5 | Stem | ASTM A479 type 316 | |
| 6* | Stem thrust seal | PTFE filled with 25% glass | |
| 7* | Stem O ring | FKM | |
| 8* | Gland Packing | Graphite | |
| 9 | Gland | SS 303 | |
| 10 | Elastic ring | SS 303 | |
| 12 | Gland nut | SS 303 | |
| 12.1 | Handle nut | SS 303 | |
| 13* | Antifriction washer | PTFE filled with 25% glass | |
| 14 | Handle | Nodular iron | |
| 15 | Stud | A 193 Gr. B7M | A 193 Gr. B8M |
| 16 | Nut | A 194 Gr. 2HM | A 194 Gr. 8M |
| 17* | Spiralwound gasket | SS 316L + PTFE + Graphite | |
| 18 | Bolt | A2 | |
| 19 | Identification plate | Stainless steel | |

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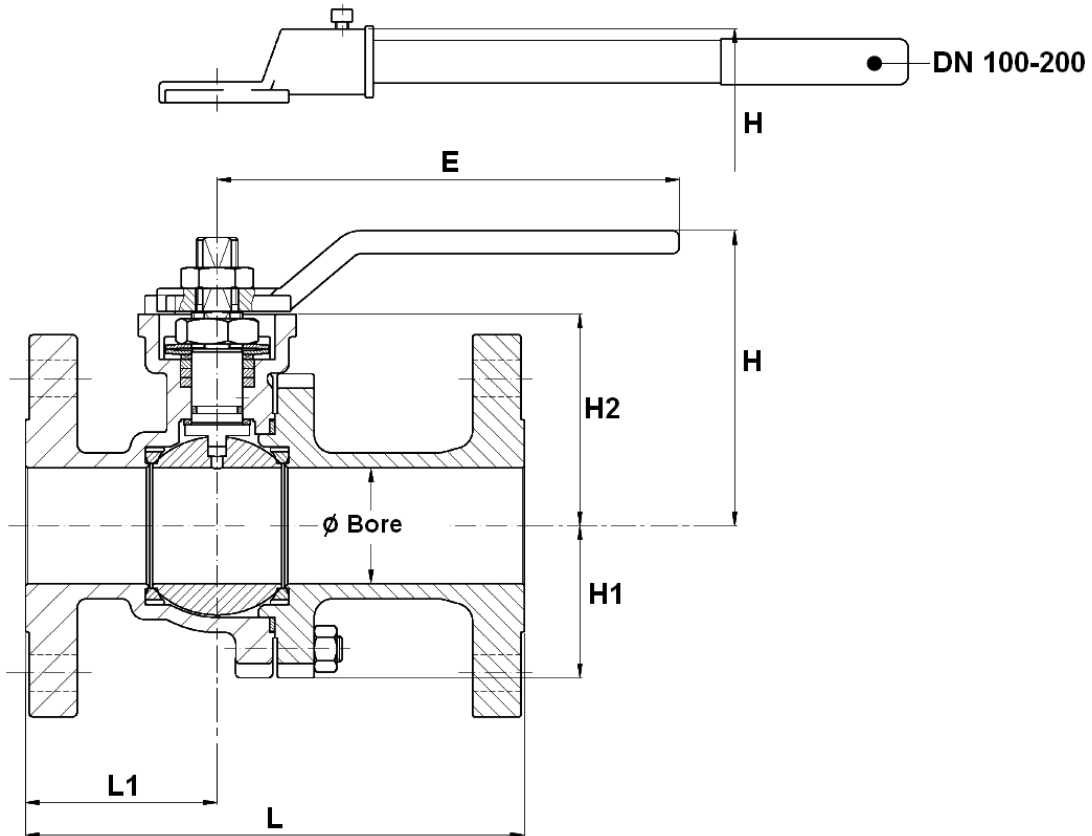
GEARBOX MATERIALS :



| Item | Designation | Materials |
|------|------------------|-----------------|
| 1 | Gearbox | Painted steel |
| 2 | Screw | DIN 912 A2 |
| 3 | Washer | DIN 912 A2 |
| 4 | Coupling | Stainless steel |
| 5 | Mounting bracket | Stainless steel |
| 6 | Screw | DIN 912 A2 |
| 7 | Washer | DIN 912 A2 |

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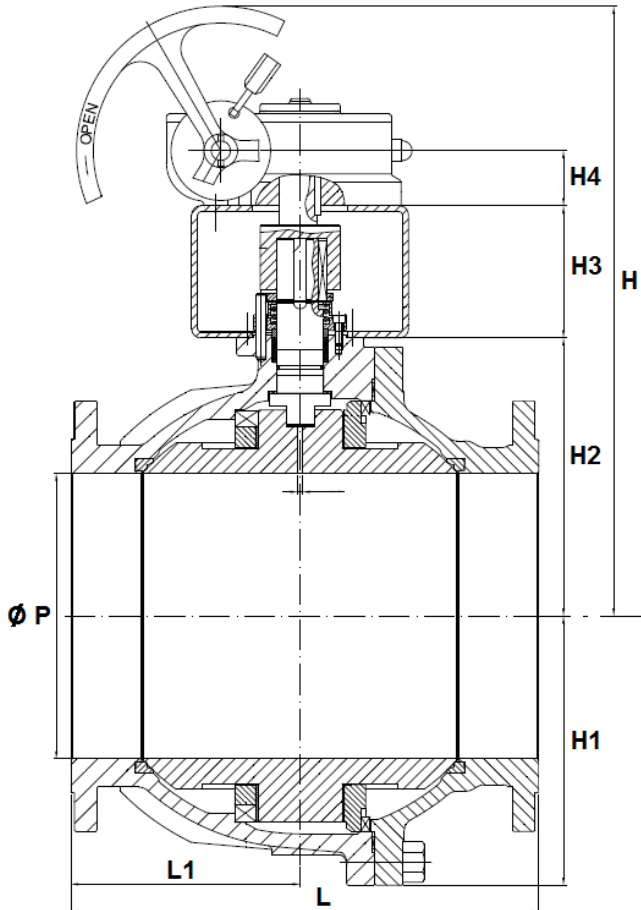
VALVE SIZE DN 15 - 200 (in mm) :



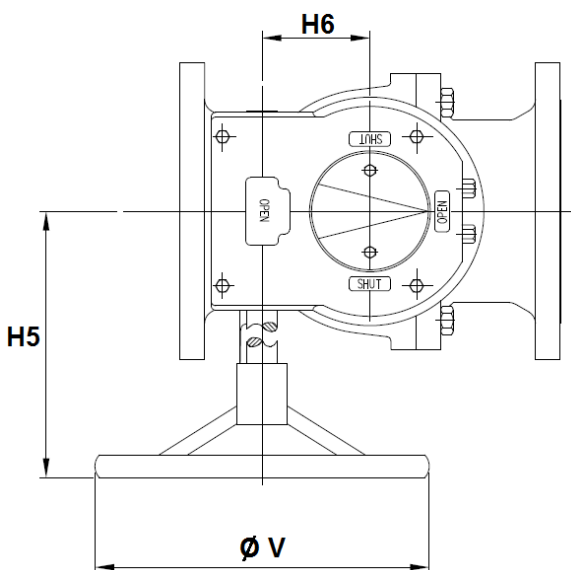
| Ref. | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|-----------|---------------|-----|-----|------|------|-------|-------|------|-------|-------|------|------|-------|
| 752 / 753 | Ø Bore | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 78 | 100 | 125 | 151 | 203 |
| | L | 115 | 120 | 125 | 130 | 140 | 150 | 170 | 180 | 190 | 325 | 350 | 400 |
| | L1 | 53 | 52 | 52 | 54 | 55 | 61 | 72 | 73 | 83 | 120 | 135 | 200 |
| | E | 170 | 170 | 170 | 170 | 215 | 215 | 335 | 430 | 466 | 680 | 680 | 845 |
| | H | 68 | 70 | 86 | 89.5 | 122.5 | 127.5 | 140 | 190 | 192.5 | 240 | 259 | 319 |
| | H1 | 31 | 33 | 39 | 43 | 48 | 63 | 78 | 87 | 108 | 134 | 152 | 202 |
| | H2 | 41 | 43 | 58.5 | 63.5 | 86.5 | 91.5 | 104 | 118.5 | 144 | 184 | 203 | 250 |
| | Weight (Kg) | 2.4 | 3.2 | 4.1 | 5.8 | 8.1 | 10.6 | 13.3 | 19.1 | 25.6 | 47.6 | 63.5 | 115.3 |

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VALVE WITH GEARBOX SIZE DN250-300 (in mm) :

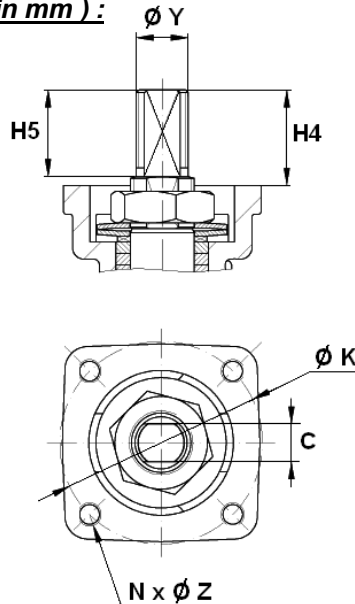


| DN | 250 | 300 |
|-------------|-----|-------|
| Ø P | 254 | 305 |
| L | 450 | 500 |
| L1 | 225 | 245 |
| H | 716 | 757 |
| H1 | 239 | 287.5 |
| H2 | 256 | 297 |
| H3 | 150 | 150 |
| H4 | 60 | 60 |
| H5 | 358 | 358 |
| H6 | 53 | 53 |
| Ø V | 500 | 500 |
| Weight (Kg) | 274 | 350 |



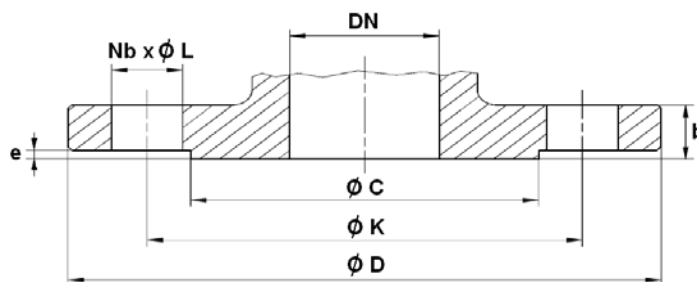
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ISO MOUNTING PAD AND STEM SIZE (in mm) :



| Ref. | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|-----------|--------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 752 / 753 | H4 | 18 | 18 | 22 | 22 | 33 | 33 | 34 | 34 | 45 | 56 | 56 | 69 |
| | H5 | 11 | 11 | 21 | 21 | 32 | 32 | 33 | 33 | 43.5 | 54.5 | 54.5 | 67 |
| | C | 7 | 7 | 8 | 8 | 12 | 12 | 15 | 15 | 19 | 24 | 24 | 32 |
| | ϕY | M10 | M10 | M12 | M12 | M18 | M18 | M22 | M22 | M28 | M36 | M36 | M48 |
| | ϕK | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 102 | 102 | 125 | 125 | 140 |
| | ISO | F05 | F05 | F05 | F05 | F07 | F07 | F07 | F10 | F10 | F12 | F12 | F14 |
| | N x ϕZ | 4 x M6 | 4 x M6 | 4 x M6 | 4 x M6 | 4 x M8 | 4 x M8 | 4 x M8 | 4 x M10 | 4 x M10 | 4 x M12 | 4 x M12 | 4 x M16 |

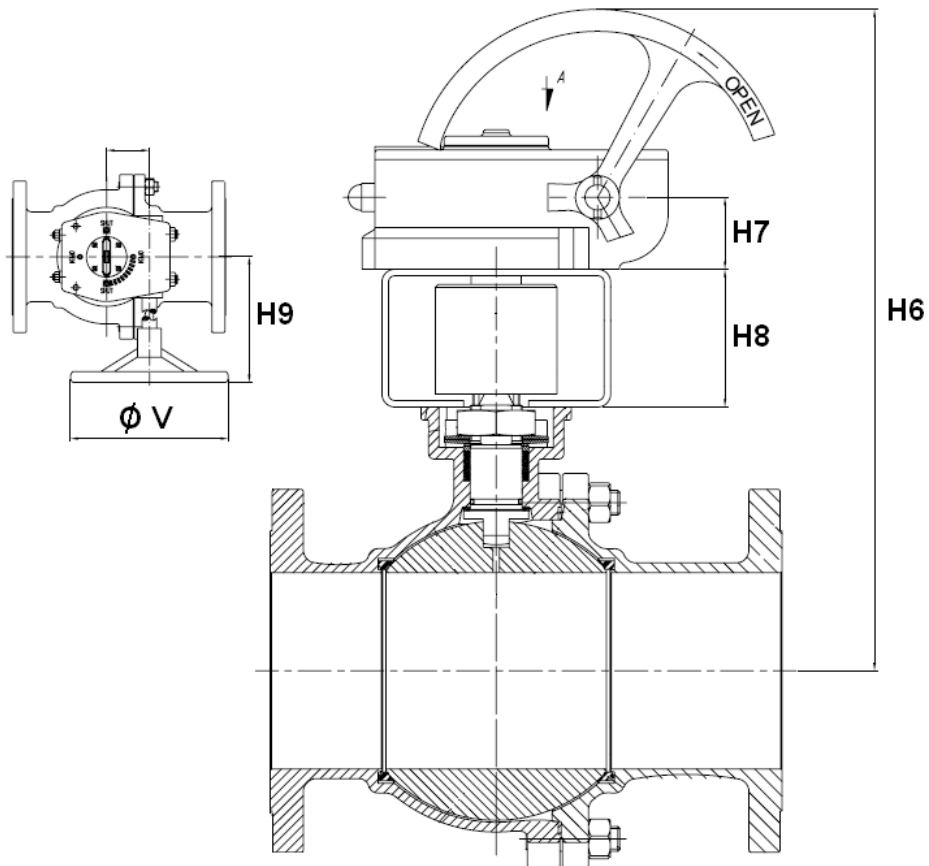
FLANGES SIZE (in mm) :



| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| ϕC | 45 | 58 | 68 | 78 | 88 | 102 | 122 | 138 | 158 | 188 | 212 | 268 | 320 | 378 |
| ϕD | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 | 250 | 285 | 340 | 405 | 460 |
| ϕK | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 180 | 210 | 240 | 295 | 355 | 410 |
| Nb x ϕL | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 18 | 8 x 22 | 12 x 22 | 12 x 28 | 12 x 28 |
| b | 16 | 18 | 18 | 18 | 18 | 20 | 18 | 20 | 20 | 22 | 22 | 23 | 26 | 28 |
| e | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 4 |

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GEARBOX SIZE (in mm) :

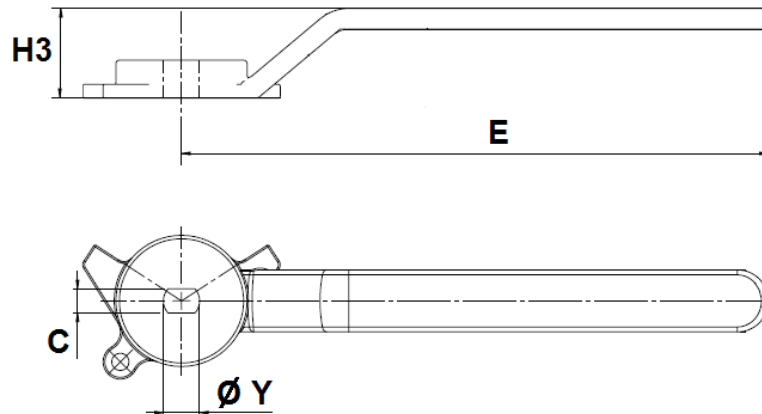


| DN | 100 | 125 | 150 | 200 |
|-----------------------------|---------|---------|---------|---------|
| H6 | 521.5 | 561.5 | 596.5 | 643.5 |
| H7 | 55 | 55 | 55 | 55 |
| H8 | 90 | 90 | 107 | 107 |
| H9 | 229 | 229 | 229 | 229 |
| Ø V | 465 | 465 | 465 | 465 |
| Ref. gearbox | 9830221 | 9830222 | 9830266 | 9830267 |
| Weight gearbox (Kg) | 17.8 | 17.8 | 19.5 | 19.7 |
| Weight gearbox + valve (Kg) | 43.4 | 65.4 | 83 | 135 |

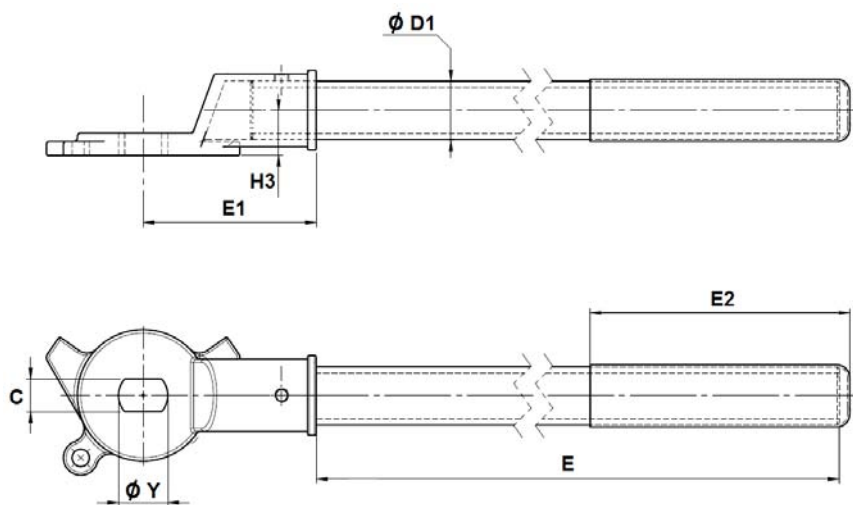
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STAINLESS STEEL HANDLE SIZE (in mm) :

DN 15 - 80



DN 100 - 200



| DN | 15-20 | 25-32 | 40-50 | 65 | 80 | 100 | 125-150 | 200 |
|------|---------|---------|---------|---------|---------|---------|---------|---------|
| E | 170 | 170 | 215 | 335 | 430 | 375 | 578 | 730 |
| E1 | - | - | - | - | - | 100 | 115 | 140 |
| E2 | - | - | - | - | - | 120 | 200 | 200 |
| H3 | 26 | 26 | 35 | 35 | 71 | 26 | 30 | 36 |
| Ø D1 | - | - | - | - | - | 26.8 | 33 | 42 |
| C | 7 | 8 | 12 | 15 | 15 | 19 | 24 | 32 |
| Ø Y | 10.5 | 12.5 | 18.5 | 22.5 | 22.5 | 28.5 | 36.5 | 48.5 |
| Ref. | 9812090 | 9812091 | 9812092 | 9812093 | 9812094 | 9812095 | 9812096 | 9812097 |

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FLOW COEFFICIENT Kvs (in m³ / h) :

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|----------------------------|----|----|----|-----|-----|-----|-----|------|------|------|------|------|
| Kvs (m ³ / h) | 20 | 40 | 75 | 130 | 170 | 270 | 550 | 1000 | 1650 | 3000 | 4200 | 9000 |

TORQUE VALUE (in Nm without safety coefficient) :

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|---------------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| Torque (Nm) | 8 | 12 | 14 | 22 | 27 | 50 | 51 | 77 | 116 | 159 | 215 | 493 |

STANDARDS :

- Fabrication according to ISO 9001:2008
- DIRECTIVE 97/23/CE : CE N° 0056
Risk Category IV module H1
- Valve designing according to EN 1983 – ISO 17292
- Pressure Tests according to EN 12266-1, range A
- Marking according to EN 19
- Fire safe according to ISO 10497 : 2004
- Fugitive Emissions according to EN 15848-1 : 2006
- Approval certificate Russian **GOST-R**
- Flanges R.F. according to EN 1092-1 PN16/40
- ISO 5211 mounting pad and stem size according to EN 15081
- Length according to EN 558 series 27 (DIN 3202 F4/F5)
- ATEX Group II Category 2 G/2Dc Zone 1 & 21 Zone 2 & 22 (optional marking)

ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages. The customer must check the right choice of the products with the real service conditions.

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INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength to be able to support the capacity of their usage.
- **Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).**

INSTALLATION INSTRUCTIONS :

- **Before installing the valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned (if they're not, the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match, the valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the valve and can even cause a rupture.** To be sure, place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the valve.**
- Tighten the bolts in cross.
- It's recommended to operate the valve (open and close) 1 to 2 times per year