

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE



ISO 9001 : 2015



TÜVRheinland
PED/2014/68/UE



Certificate 3.1

Size : DN 15 to 150 mm (NPS 1/2" to 6")
Ends : Flanges Class 150 (PN20) R.F.
Min Temperature : - 10°C
Max Temperature : + 180°C
Max Pressure : 20 Bars
Specifications : ISO 5211 mounting pad
PTFE filled with glass seat
Anti blow-out stem
Double antistatic device

Materials : Carbon steel ASTM A216 WCB

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- Double antistatic device
- PTFE filled with glass seat
- Handle with locking device up to DN50 (NPS 2")
- ISO 5211 mounting pad
- 2 pieces type (Split body)
- Hollow ball for DN150 (NPS 6")
- Black anti-corrosive finish, 3-5µ thickness

USE :

- Chemical industries, petrochemical industries, hydraulic installation, heating and water distribution
- Min and max Temperature Ts : -10°C to + 180°C
- Max pressure Ps : 20 bars

RANGE :

- Ball valve with carbon steel body **Ref. 793** from DN 15 to DN 150 (NPS 1/2" to 6")

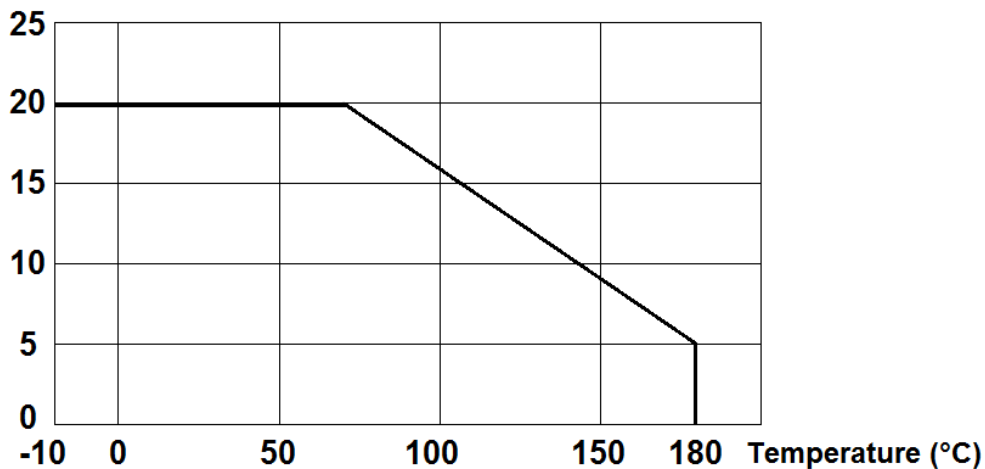
ENDS :

- R.F. flanges Class 150 PN20

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :

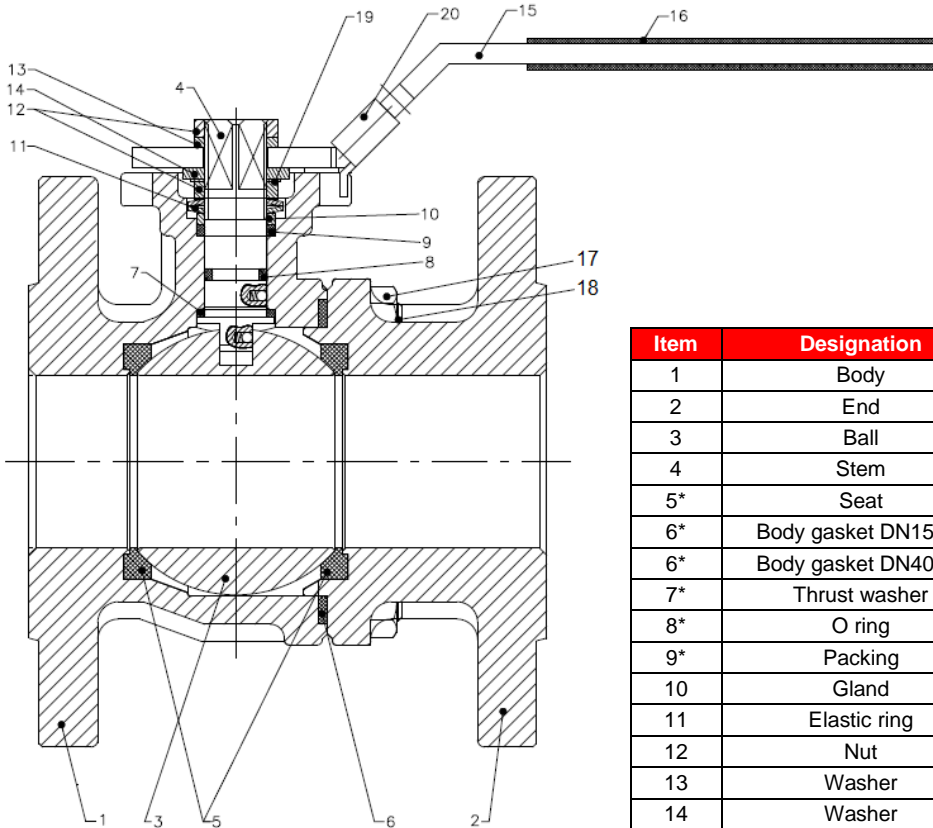
Pressure

(Bar)



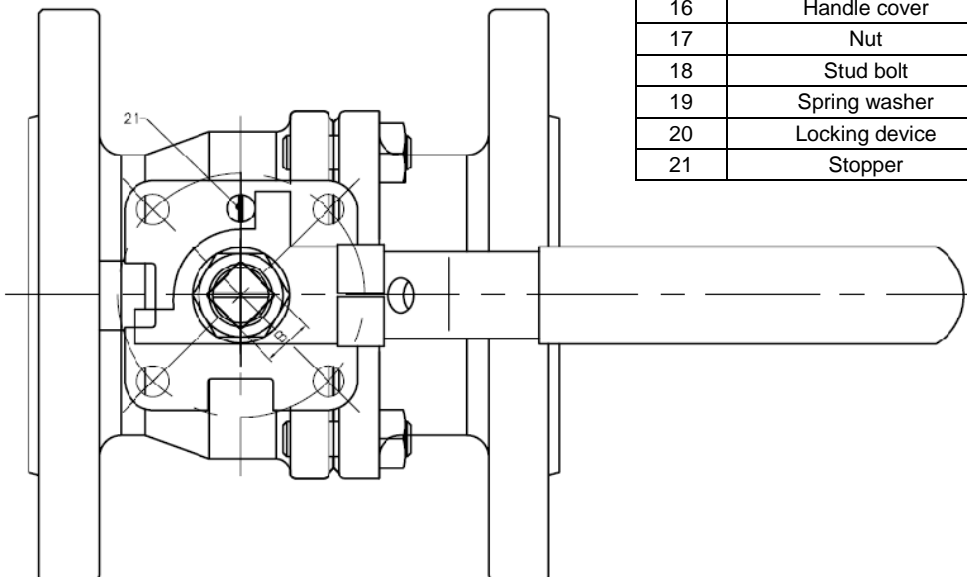
2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

MATERIALS DN 15 – 50 (NPS 1/2" to 2") :



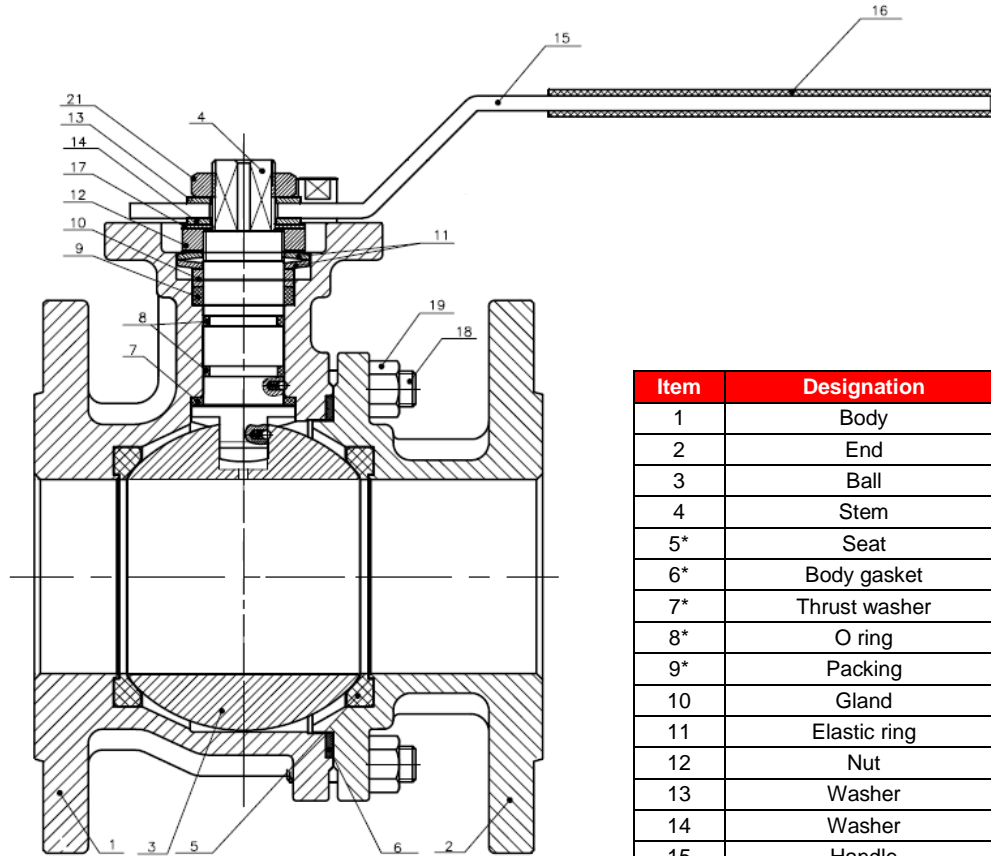
| Item | Designation | Materials |
|------|---------------------|---------------------------------|
| 1 | Body | ASTM A216 WCB |
| 2 | End | |
| 3 | Ball | AISI 304 |
| 4 | Stem | AISI 316 |
| 5* | Seat | PTFE filled with 3% glass fiber |
| 6* | Body gasket DN15-32 | PTFE filled with 15% graphite |
| 6* | Body gasket DN40-50 | AISI 304 + graphite |
| 7* | Thrust washer | PTFE filled with 15% graphite |
| 8* | O ring | FKM |
| 9* | Packing | PTFE |
| 10 | Gland | AISI 304 |
| 11 | Elastic ring | AISI 301 |
| 12 | Nut | AISI 304 |
| 13 | Washer | |
| 14 | Washer | |
| 15 | Handle | |
| 16 | Handle cover | Plastic |
| 17 | Nut | AISI 304 |
| 18 | Stud bolt | |
| 19 | Spring washer | |
| 20 | Locking device | |
| 21 | Stopper | |

(* : Included in gaskets kit)



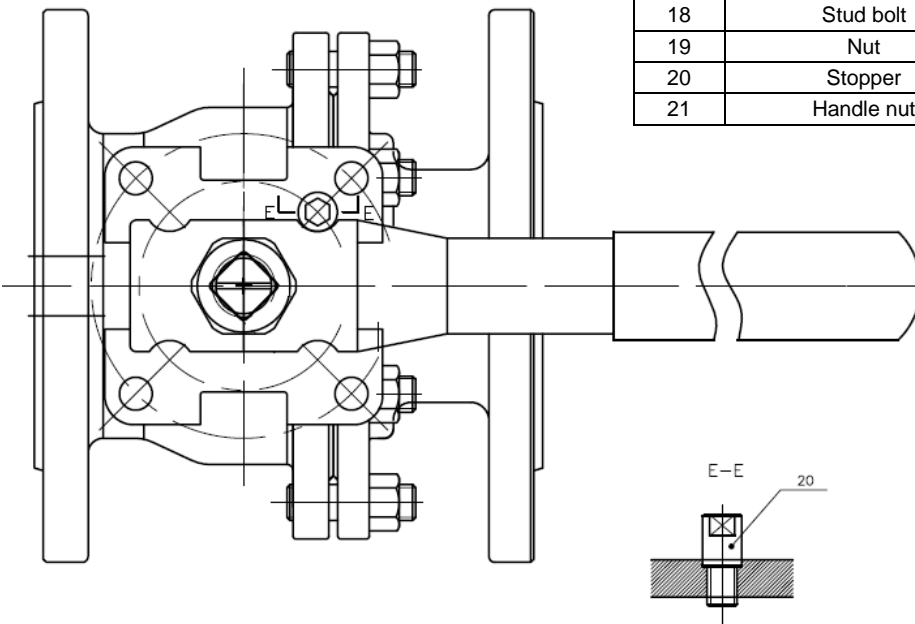
2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

MATERIALS DN 65 - 100 (NPS 2"1/2 to 4") :



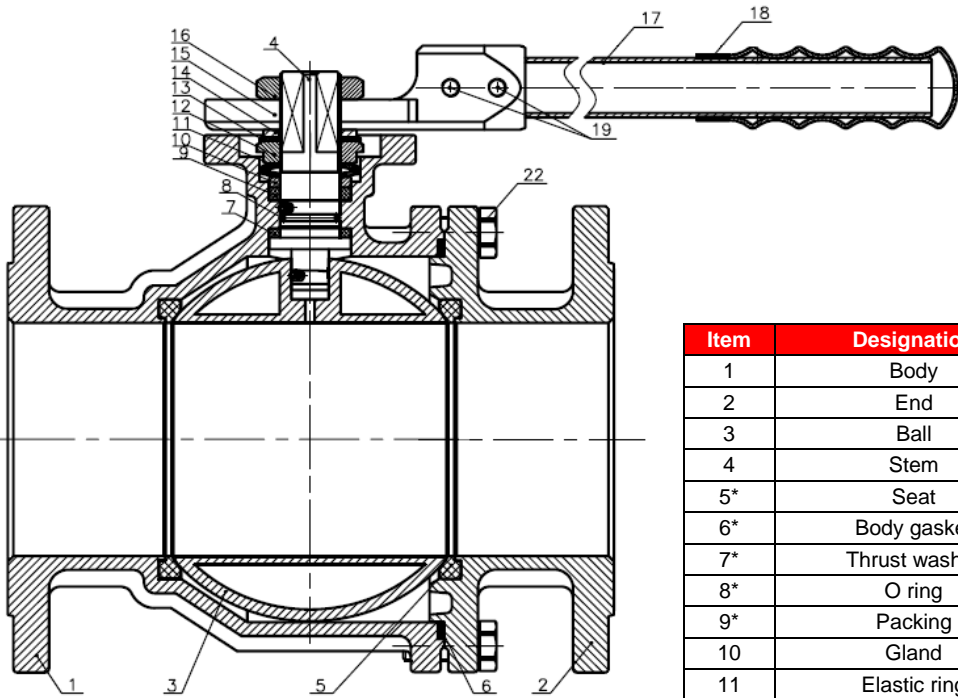
| Item | Designation | Materials |
|------|---------------|---------------------------------|
| 1 | Body | ASTM A216 WCB |
| 2 | End | |
| 3 | Ball | AISI 304 |
| 4 | Stem | AISI 316 |
| 5* | Seat | PTFE filled with 3% glass fiber |
| 6* | Body gasket | AISI 304 + graphite |
| 7* | Thrust washer | PTFE filled with 15% graphite |
| 8* | O ring | FKM |
| 9* | Packing | PTFE |
| 10 | Gland | AISI 304 |
| 11 | Elastic ring | AISI 301 |
| 12 | Nut | AISI 304 |
| 13 | Washer | |
| 14 | Washer | |
| 15 | Handle | |
| 16 | Handle cover | Plastic |
| 17 | Spring washer | AISI 304 |
| 18 | Stud bolt | |
| 19 | Nut | |
| 20 | Stopper | |
| 21 | Handle nut | |

(* : Included in gaskets kit)

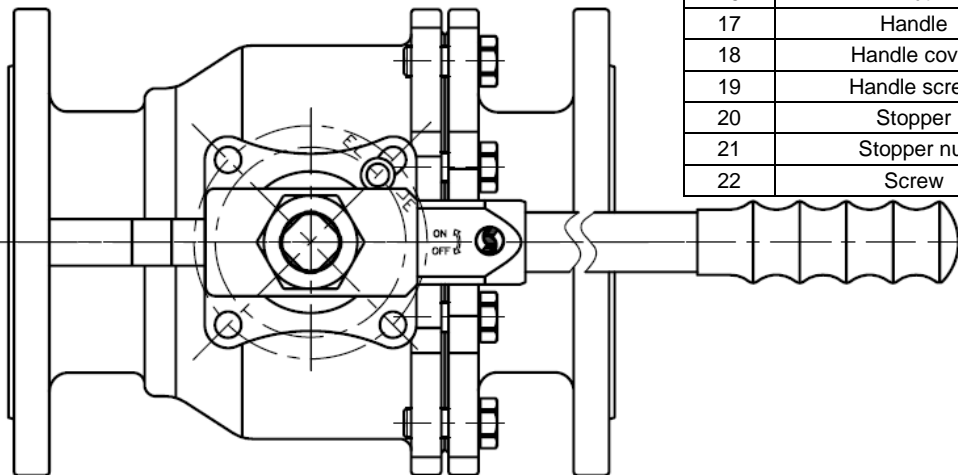


2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

MATERIALS DN 150 (NPS 6") :



| Item | Designation | Materials |
|------|----------------|---------------------------------|
| 1 | Body | ASTM A216 WCB |
| 2 | End | |
| 3 | Ball | AISI 304 |
| 4 | Stem | AISI 316 |
| 5* | Seat | PTFE filled with 3% glass fiber |
| 6* | Body gasket | AISI 304 + graphite |
| 7* | Thrust washer | PTFE filled with 15% graphite |
| 8* | O ring | FKM |
| 9* | Packing | PTFE |
| 10 | Gland | AISI 304 |
| 11 | Elastic ring | AISI 301 |
| 12 | Nut | ASTM A351 CF8 |
| 13 | Spring washer | AISI 304 |
| 14 | Washer | AISI 304 |
| 15 | Handle adaptor | ASTM A351 CF8 |
| 16 | Nut | ASTM A351 CF8 |
| 17 | Handle | AISI 304 |
| 18 | Handle cover | Plastic |
| 19 | Handle screw | AISI 304 |
| 20 | Stopper | |
| 21 | Stopper nut | |
| 22 | Screw | |

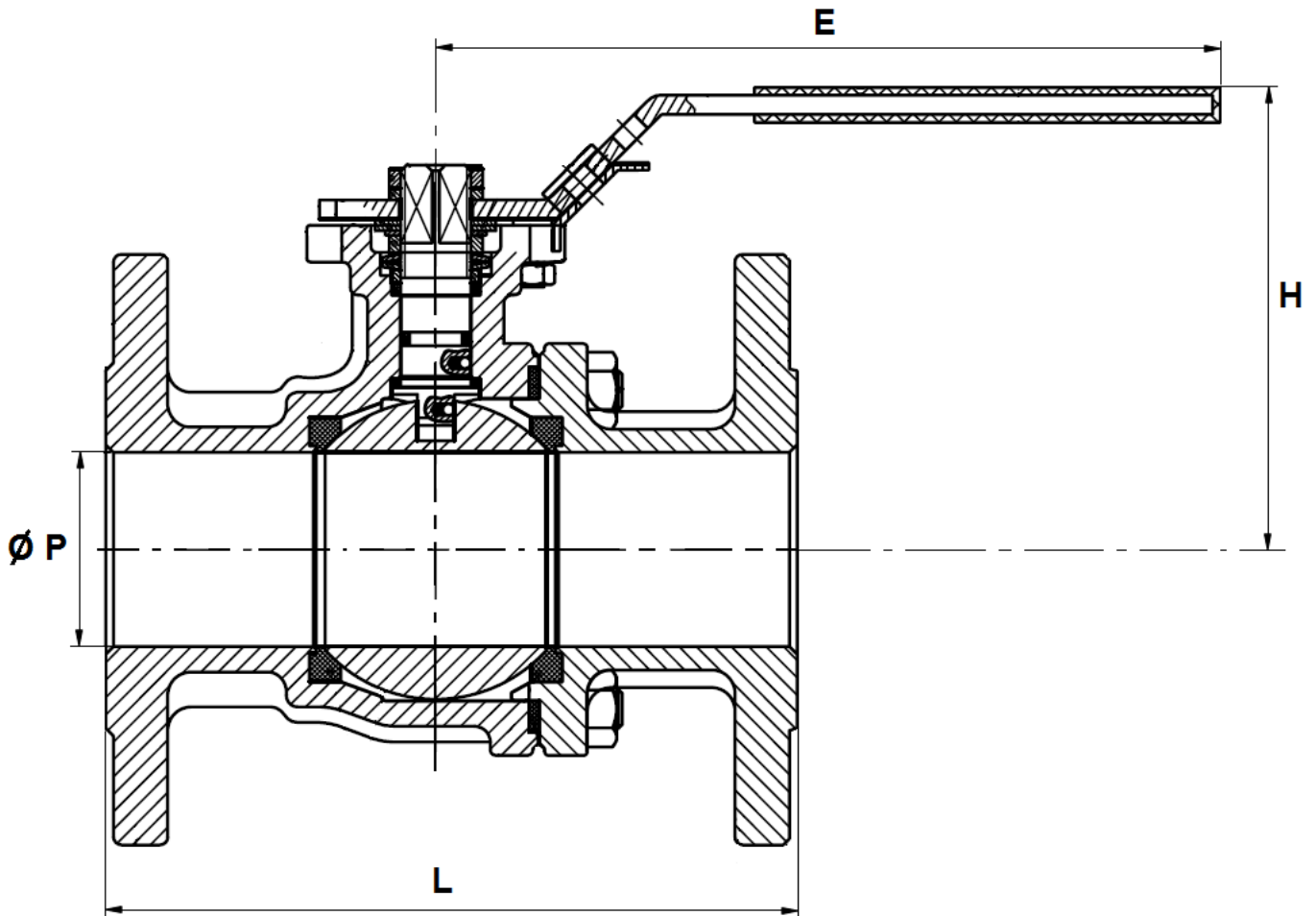


(* : Included in gaskets kit)

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

SIZE DN 15 – 50 (NPS 1/2" to 2") (in mm) :

DN 15 – 50 (NPS 1/2" to 2")

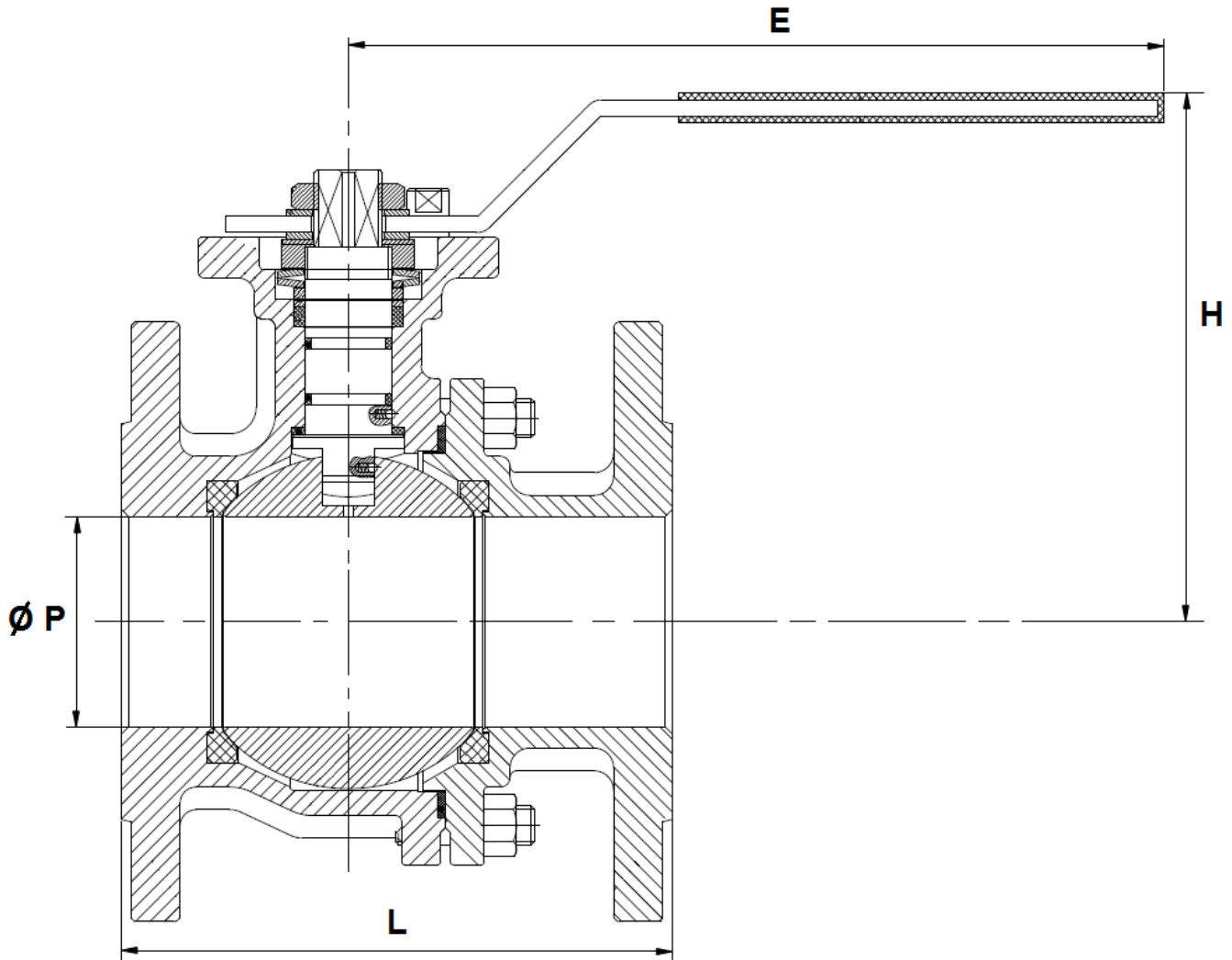


| Ref. | DN | 15 | 20 | 25 | 32 | 40 | 50 |
|------|-------------|-------|-------|-------|-------|-------|-------|
| | NPS | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| 793 | Ø P | 15 | 20 | 25 | 32 | 40 | 50 |
| | L | 108 | 117 | 127 | 140 | 165 | 178 |
| | E | 111.5 | 137.5 | 137.5 | 160 | 205 | 205 |
| | H | 75 | 82.5 | 87.5 | 107.5 | 108.5 | 116.5 |
| | Weight (Kg) | 1.58 | 1.84 | 2.85 | 3.65 | 6.3 | 8.15 |

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

SIZE DN 65 – 100 (NPS 2"1/2 to 4") (in mm):

DN 65 – 100 (NPS 2"1/2 to 4")

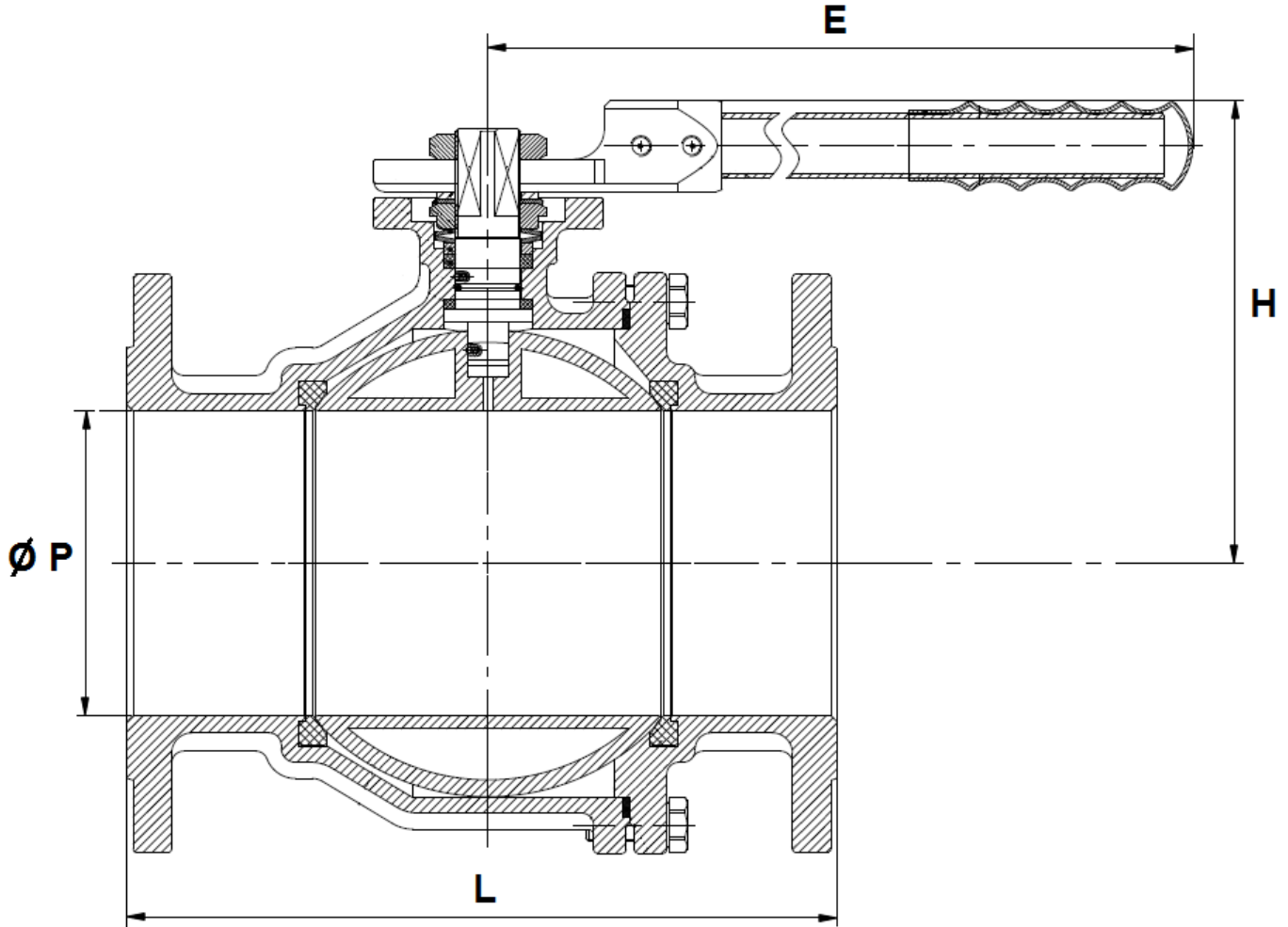


| Ref. | DN | 65 | 80 | 100 |
|------|-------------|-------|-------|-----|
| | NPS | 2"1/2 | 3" | 4" |
| 793 | Ø P | 65 | 80 | 100 |
| | L | 190 | 203 | 229 |
| | E | 323 | 323 | 323 |
| | H | 160 | 170 | 186 |
| | Weight (Kg) | 12.81 | 16.97 | 29 |

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

SIZE DN 150 (NPS 6") (in mm) :

DN 150 (NPS 6")



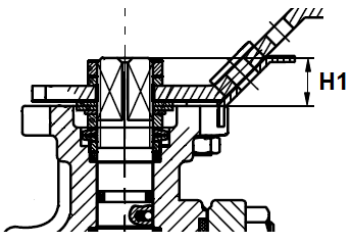
| Ref. | DN | 150 |
|------|----------------|------|
| | NPS | 6" |
| 793 | Ø P | 150 |
| | L | 394 |
| | E | 620 |
| | H | 228 |
| | Weight (in Kg) | 55.8 |

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE

ISO MOUNTING PAD AND STEM SIZE (in mm) :

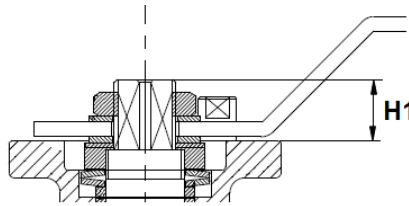
DN 15 – 50

(NPS 1/2" - 2")



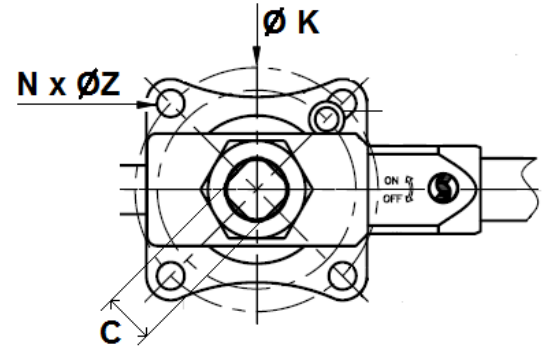
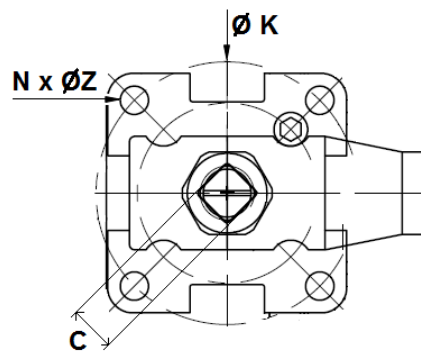
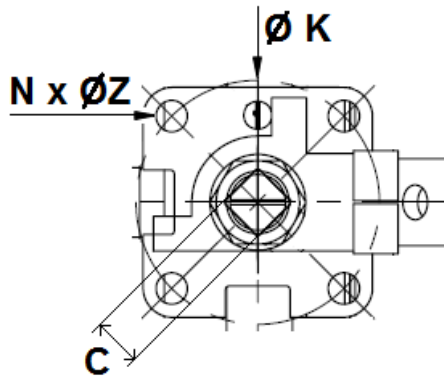
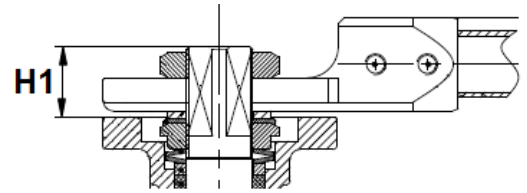
DN 65 – 100

(NPS 2"1/2 - 4")



DN 150

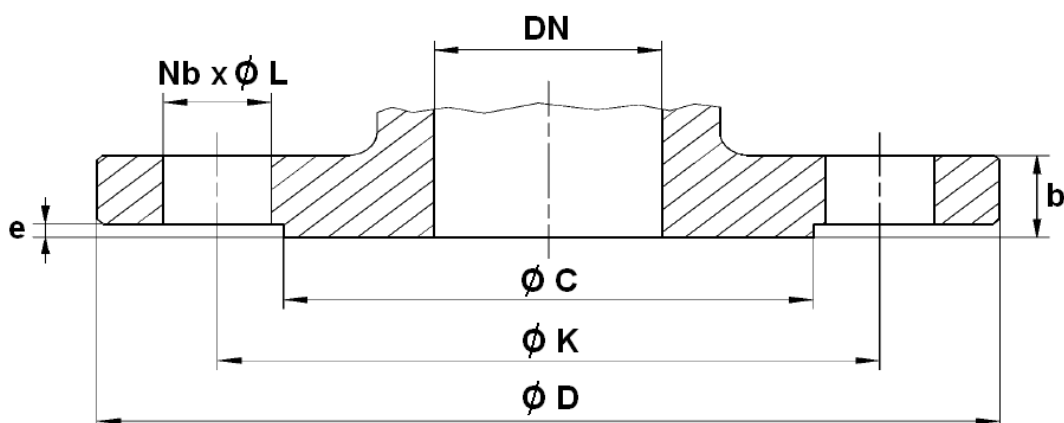
(NPS 6")



| Ref. | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 150 |
|------|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| | NPS | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 4" | 6" |
| 793 | C | 9 | 9 | 11 | 14 | 14 | 14 | 17 | 17 | 17 | 27 |
| | Ø K | 42 | 42 | 50 | 50 | 70 | 70 | 102 | 102 | 102 | 125 |
| | ISO | F04 | F04 | F05 | F05 | F07 | F07 | F10 | F10 | F10 | F12 |
| | N x Ø Z | 4 x 6 | 4 x 6 | 4 x 7 | 4 x 7 | 4 x 9 | 4 x 9 | 4 x 11 | 4 x 11 | 4 x 11 | 4 x 14 |
| | H1 | 11 | 9 | 10.5 | 14.5 | 14.5 | 14.5 | 21 | 21 | 21 | 34 |

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FLANGES SIZE (in mm) :



| Ref. | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 150 |
|------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| | NPS | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 4" | 6" |
| 793 | Ø C | 35 | 43 | 51 | 64 | 73 | 92 | 105 | 127 | 157 | 216 |
| | Ø D | 89 | 98 | 108 | 117 | 127 | 152 | 178 | 190 | 229 | 279.4 |
| | Ø K | 60.5 | 70 | 79.5 | 89 | 98.5 | 120.5 | 139.5 | 152.5 | 190.5 | 241.3 |
| | Nb x Ø L | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 19 | 4 x 19 | 4 x 19 | 8 x 19 | 8 x 22.2 |
| | b | 11 | 11 | 12 | 13 | 15 | 16 | 18 | 19 | 24 | 26 |
| | e | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |

2 PIECES BALL VALVES FLANGED CLASS 150 PN 20 INITIAL RANGE**TORQUE VALUES (in Nm without safety coefficient) :**

| | | | | | | | | | | |
|----------------------|-------------|-------------|-----------|--------------|--------------|-----------|--------------|-----------|------------|------------|
| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 150 |
| NPS | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 4" | 6" |
| Torque (Nm) | 6 | 8 | 10 | 14 | 20 | 30 | 36 | 60 | 95 | 210 |

STANDARDS :

- Fabrication according to ISO 9001 : 2015
- DIRECTIVE 2014/68/EU : CE N° 0035
Risk Category II module D1
- Certificate 3.1 on request
- Designing according to EN 12516-1
- Tests according to API 598, table 6
- Class 150 PN20 R.F flanges according to ASME B16.5
- ISO 5211 mounting pad
- Length according to ASME B16.10 (EN 558 series 3 up to DN100, series 12 for DN150)

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