

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

3 pieces stainless steel ball valve with rotating ends, full bore for chemical, fine chemical, pharmaceutical, food, cosmetics and cooling industries networks.

Easy installation thanks to the rotating ends.

TFM1600 packing with 3 chevrons gaskets and one thrust washer on stem, body gasket and seat in TFM1600.

Fugitive emission according to EN 15848-1 :2015 for an excellent tightness on the stem and to prevent external leakage.

Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 thanks to the double antistatic device.

Valve in accordance with the regulation (EC) N° 1935/2004, FDA and USP Class VI on request.

Handling with lockable handle, locking oval handwheel or stem extension with ISO5211 plate.

Thanks to the ISO 5211 plate, an actuator can be installed on the valve.



Fugitive Emissions



- Size :** DN8 to DN50
- Connection :** BW ISO
- Min Temperature :** -50°C
- Max Temperature :** +185°C
- Max Pressure :** 63 Bars up to DN40 (50 bars for DN50)
- Specifications :** Rotating ends
ISO 5211 mounting pad
Abti blow-out stem, Full or Reduced bore
Double antistatic device, ATEX
Fugitive Emissions, EC 1935/2004 and FDA

Materials : Stainless Steel EN 1.4409

*the installation defects and wear defects are not covered by the guarantee

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SPECIFICATIONS :

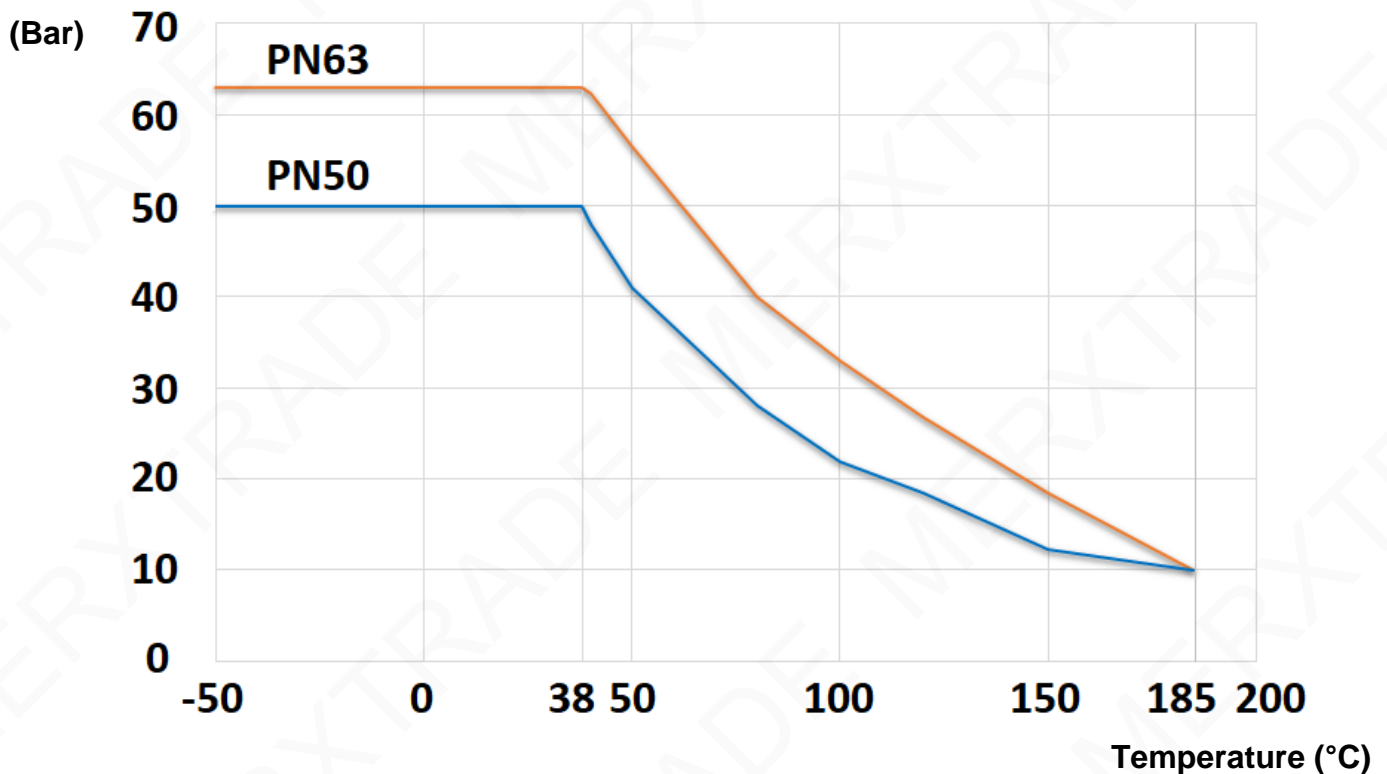
- Full or reduced (venturi) bore
- Anti blow-out stem
- Packing with 3 chevrons gaskets
- Double antistatic device (ball between stem-body and stem-ball)
- Fugitive emissions according to ISO 15848-1 2015
- Lockable handle
- Oval handwheel and stem extension on request
- ISO 5211 mounting pad
- Rotating ends
- Welding possible without removing the central part if the valve is in opened position
- **EC 1935/2004** for food industries
- Seat with notches for automatic decompression in the dead area
- With exhaust hole in the ball (located in the top of the ball to avoid overpressure in it in opened position)
- Roughness Ra 0.4 for the ball, Ra 0.8 for the ends

USE :

- Chemical, fine chemical, pharmaceutical, food industries, cosmetics and cooling
- Vacuum 10^{-2} bar (without back pressure)
- Min and max Temperature Ts : -50°C to + 185°C
- Max Pressure Ps : 63 bars up to DN40, 50 bars for DN50 (see graph under)
- Steam : 10 bars max

PRESSURE / TEMPERATURE graph for full bore types (STEAM EXCLUDED) :

Pressure



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FLOW COEFFICIENT Kvs (M3 / h) for full bore types :

| | | | | | | | |
|--------------|-----------|------|------|----|-------|-------|-----|
| DN (mm) | 8-12 | 15 | 20 | 25 | 32 | 40 | 50 |
| NPS (") | 1/4"-3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Kvs (m3/h) | 17 | 31 | 59 | 98 | 159 | 230 | 418 |

TORQUES VALUES for full bore types (in Nm without safety coefficient) :

| | | | | | | | |
|-------------|-----------|------|------|------|-------|-------|------|
| DN (mm) | 8-12 | 15 | 20 | 25 | 32 | 40 | 50 |
| NPS (") | 1/4"-3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Torque (Nm) | 4.5 | 4.9 | 5.9 | 11.8 | 19.6 | 29.4 | 39.2 |

BOLT TIGHTENING TABLE For full bore types (in Nm) :

| | | | | | | | |
|-------------|-----------|------|------|----|-------|-------|----|
| DN (mm) | 8/12 | 15 | 20 | 25 | 32 | 40 | 50 |
| NPS (") | 1/4"-3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Torque (Nm) | 12 | 20 | 20 | 20 | 40 | 40 | 50 |

RANGE :

- 3 Pieces ball valve with rotating ends EN 1.4409 full bore BW Ref. **ELITBW** from DN8 to DN 50
- 3 Pieces ball valve with rotating ends EN 1.4409 reduced (venturi) bore BW Ref. **ELITBWR** from DN15 to DN 50

ENDS :

- B.W. ISO

OPTIONS :

- AISI 304 Oval Handwheel Ref. **ELVO0812-25**



| | | | | | | |
|-------------------|----------|------|--------------------|--------------------|--------|-------|
| DN (mm) | 8 | 12 | 15 | 20 | 25 | 32 |
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 |
| Ref. Full bore | ELVO0812 | | ELVO15 ou ELVO1520 | | ELVO25 | |
| Ref. Reduced bore | | | ELVO0812 | ELVO15 ou ELVO1520 | ELVO25 | |

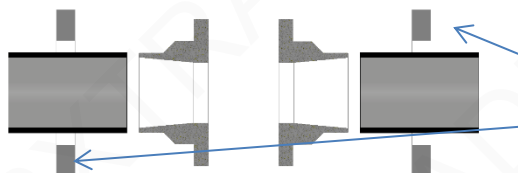
- AISI 304 stem extension with ISO 5211 plate and bolting Ref. **ELRISO015-ELRISO050**



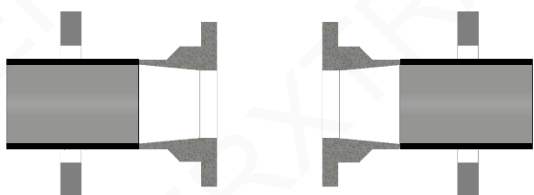
| | | | | | | | | |
|-------------------|------------|------|------------|------------|----------|----------|----------|----------|
| DN (mm) | 8 | 12 | 15 | 20 | 25 | 32 | 40 | 50 |
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Ref. Full bore | ELRISO0812 | | ELRISO1520 | | ELRISO25 | ELRISO32 | ELRISO40 | ELRISO50 |
| Ref. Reduced bore | | | ELRISO0812 | ELRISO1520 | ELRISO25 | ELRISO32 | ELRISO40 | |

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

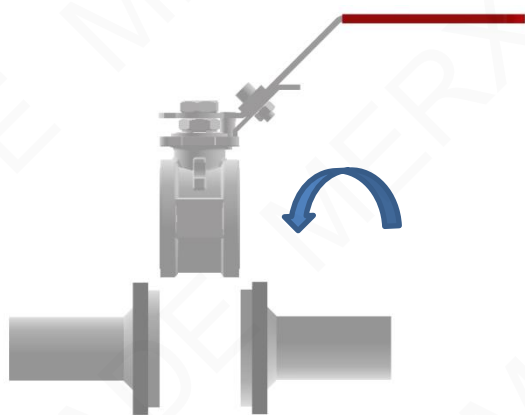
INSTALLATION :



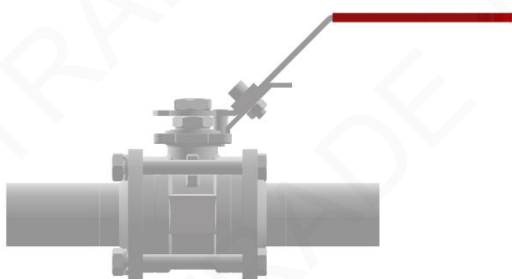
- Insert flanges on the pipe then place the ends



- Weld the ends on the pipe and check the length between them is correct



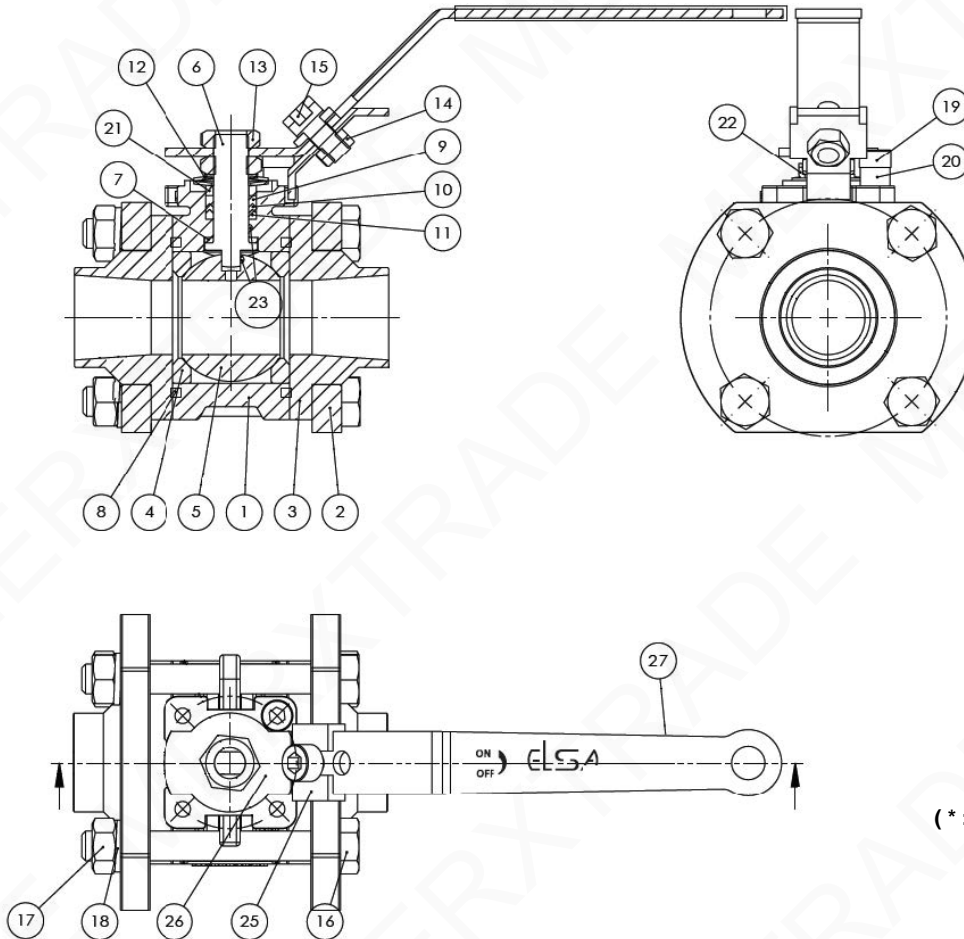
- Insert the body between the ends, thanks to the rotating ends, it's easy to place and adjust the desired angle



- Insert the studs and tightnen them at the torque indicated page 3

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

MATERIALS :

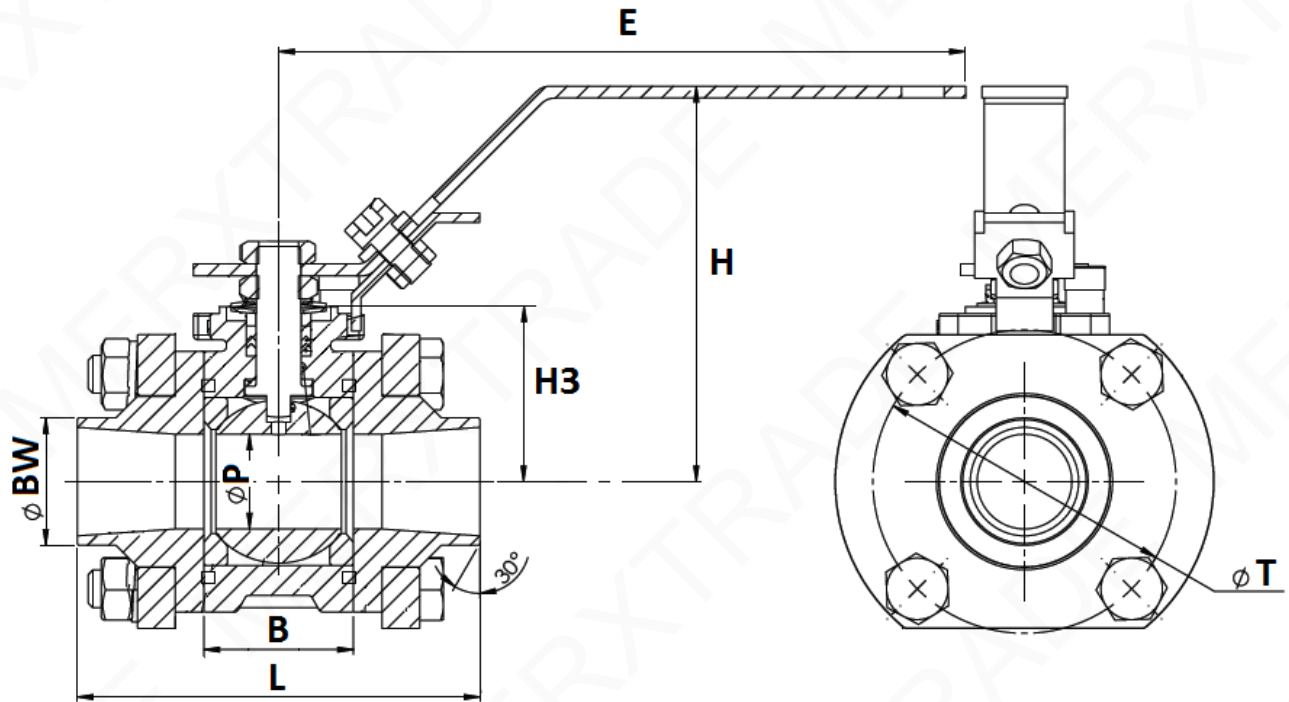


(* : Included in gaskets kit)

| Item | Designation | Materials |
|--------------|--------------------|------------------|
| 1 | Body | EN 1.4409 |
| 2 | Flange | EN 1.4308 |
| 3 | Ends | EN 1.4409 Ra 0.8 |
| 4* | Seat | TFM1600 |
| 5 | Ball | CF3M Ra 0.4 |
| 6 | Stem | AISI 316L |
| 7* | Thrust washer | TFM1600 |
| 8* | Body gasket | |
| 9*, 10*, 11* | Packing (chevrons) | |
| 12 | Elastic rings | AISI 301 |
| 13 | Handle nut | AISI 304 |
| 14, 15 | Screw and nut | |
| 16, 17 | Studs and nut | A2-70 |
| 18 | Washer | AISI 304 |
| 19, 20 | Screw and stop | |
| 21 | Gland | |
| 23 | Antistatic device | AISI 316 |
| 25 | Locking device | AISI 304 |
| 26 | Handle | |
| 27 | Handle cover | PVC |

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

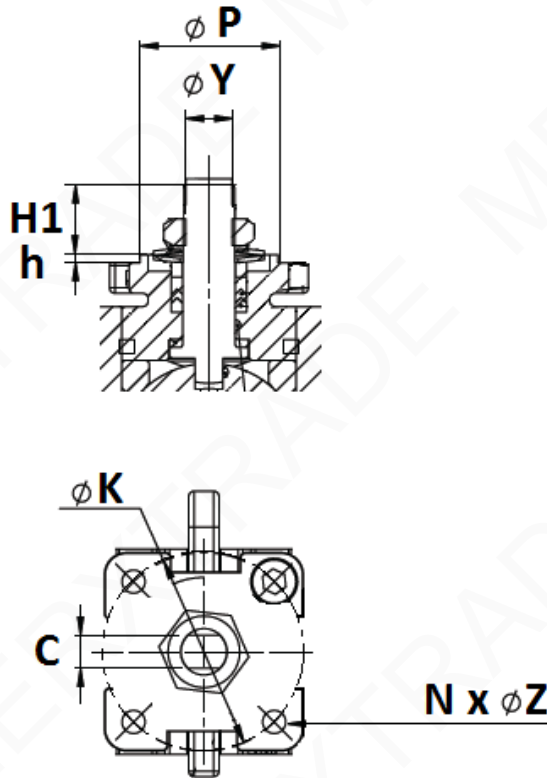
SIZE BW Type with Full bore (in mm) :



| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Ø P | 11.3 | | 15 | 20 | 25.4 | 32 | 38.2 | 50 |
| Ø BW | 13.5 | 17 | 21.3 | 26.9 | 33.7 | 42.4 | 48.3 | 60.3 |
| L | 65.2 | | 70 | 85 | 100 | 110 | 125 | 150 |
| B | 20.4 | | 24.4 | 31.6 | 41.4 | 48.2 | 56.2 | 71 |
| E | 130 | | 149 | 149 | 170.5 | 192.5 | 212.5 | 216 |
| H | 70.3 | | 79 | 83.4 | 106.6 | 110.4 | 108.7 | 139.6 |
| H3 | 28 | | 32.85 | 36.9 | 44.7 | 48.1 | 53.1 | 72.5 |
| Ø T | 43 | | 53.1 | 64 | 71.4 | 80.9 | 94.2 | 114 |
| Weight (in Kg) | 0.6 | 0.6 | 0.88 | 1.42 | 1.95 | 3.1 | 4 | 7.7 |
| Ref. Full bore | ELITBW08 | ELITBW10 | ELITBW15 | ELITBW20 | ELITBW25 | ELITBW32 | ELITBW40 | ELITBW50 |

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ISO MOUNTING PAD AND STEM SIZE for Full bore type (in mm) :



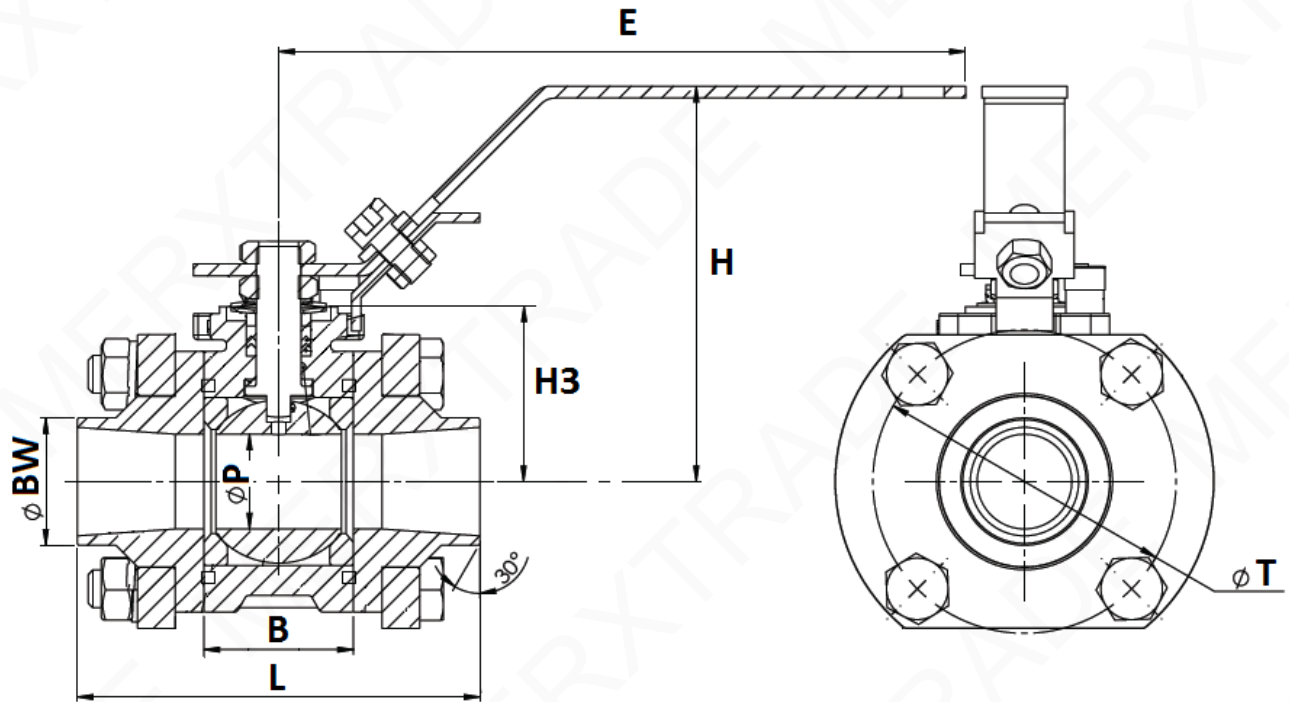
| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|---------|-------------|------|------------|------|------------|------------|------------|------------|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| H1 | 4.5 | | 12.7 | | 17.4 | 18.7 | 23.4 | 31.6 |
| h | 1 | | 1.5 | | | | | |
| C | 6 | | | | 8 | 8 | 10 | 14 |
| Ø Y | 5/16"-24UNF | | 3/8"-24UNF | | 1/2"-20UNF | 1/2"-20UNF | 5/8"-18UNF | 3/4"-16UNF |
| Ø P | 25 | | 30 | | 30 | 35 | 55 | |
| Ø K | 36 | | 42 | | 50 | 50 | 70 | |
| ISO | F03 | | | | F04 | F05 | F05 | F07 |
| N x Ø Z | 4 x Ø 4.2 | | | | 4 x Ø 4.2 | 4 x Ø 5 | | 4 x Ø 6.8 |

TORQUES VALUES for full bore types (in Nm without safety coefficient) :

| DN | 15 | 20 | 25 | 32 | 40 | 50 |
|-------------|------|------|------|--------|--------|------|
| NPS | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| Torque (Nm) | 4.9 | 5.9 | 11.8 | 19.6 | 29.4 | 39.2 |

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

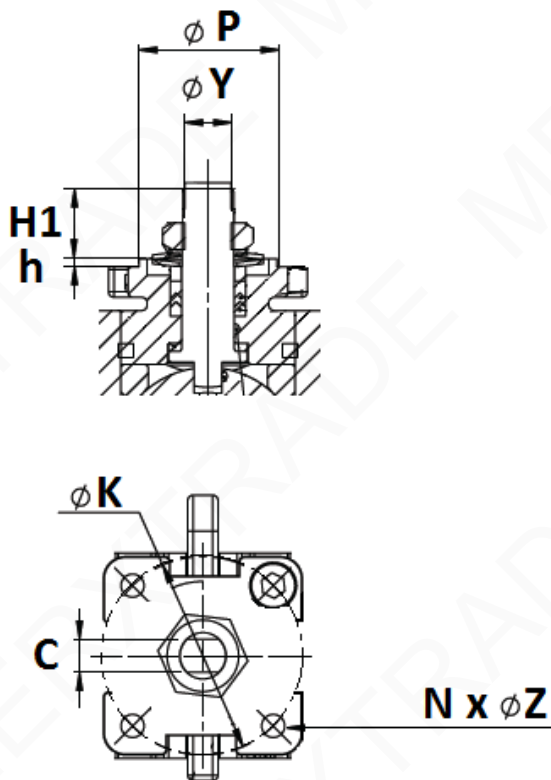
SIZE BW Type with Reduced (Venturi) bore (in mm) :



| DN (mm) | 15 | 20 | 25 | 32 | 40 | 50 | 65 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ø P | 10 | 15 | 20 | 25.4 | 32 | 38.2 | 50 |
| Ø BW | 21.3 | 26.9 | 33.7 | 42.4 | 48.3 | 60.3 | 76.1 |
| L | 65.2 | 70 | 85 | 100 | 110 | 125 | 150 |
| B | 20.4 | 24.4 | 31.6 | 41.4 | 48.2 | 56.2 | 71 |
| E | 130 | 149 | 149 | 170.5 | 192.5 | 212.5 | 216 |
| H | 70.3 | 79 | 83.4 | 106.6 | 110.4 | 108.7 | 139.6 |
| H3 | 28 | 32.85 | 36.9 | 44.7 | 48.1 | 53.1 | 72.5 |
| Ø T | 43 | 53.1 | 64 | 71.4 | 80.9 | 94.2 | 114 |
| Ref. Reduced bore | ELITBW15R | ELITBW20R | ELITBW25R | ELITBW32R | ELITBW40R | ELITBW50R | ELITBW65R |

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

ISO MOUTING PAD AND STEM SIZE for Reduced (Venturi) type (in mm) :



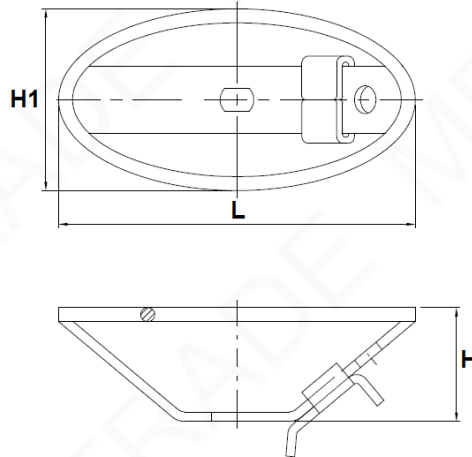
| DN (mm) | 15 | 20 | 25 | 32 | 40 | 50 | 65 |
|---------|-------------|------------|------------|------------|------------|------------|------------|
| NPS (") | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 |
| H1 | 4.5 | 12.7 | 12.7 | 17.4 | 18.7 | 23.4 | 31.6 |
| h | 1 | 1.5 | | | | | |
| C | 6 | | | 8 | 8 | 10 | 14 |
| Ø Y | 5/16"-24UNF | 3/8"-24UNF | 3/8"-24UNF | 1/2"-20UNF | 1/2"-20UNF | 5/8"-18UNF | 3/4"-16UNF |
| Ø P | 25 | | | 30 | 30 | 35 | 55 |
| Ø K | 36 | | | 42 | 50 | 50 | 70 |
| ISO | F03 | | | F04 | F05 | F05 | F07 |
| N x Ø Z | 4 x Ø 4.2 | | | 4 x Ø 4.2 | 4 x Ø 5 | 4 x Ø 5 | 4 x Ø 6.8 |

TORQUES VALUES for reduced bore types (in Nm without safety coefficient) :

| DN | 20 | 25 | 32 | 40 | 50 | 65 |
|-------------|------|-----|-------|-------|------|-------|
| NPS | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 |
| Torque (Nm) | 4.9 | 5.9 | 11.8 | 19.6 | 29.4 | 39.2 |

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AISI 304 OVAL HANDWHEEL SIZE Ref. ELVO (in mm) :

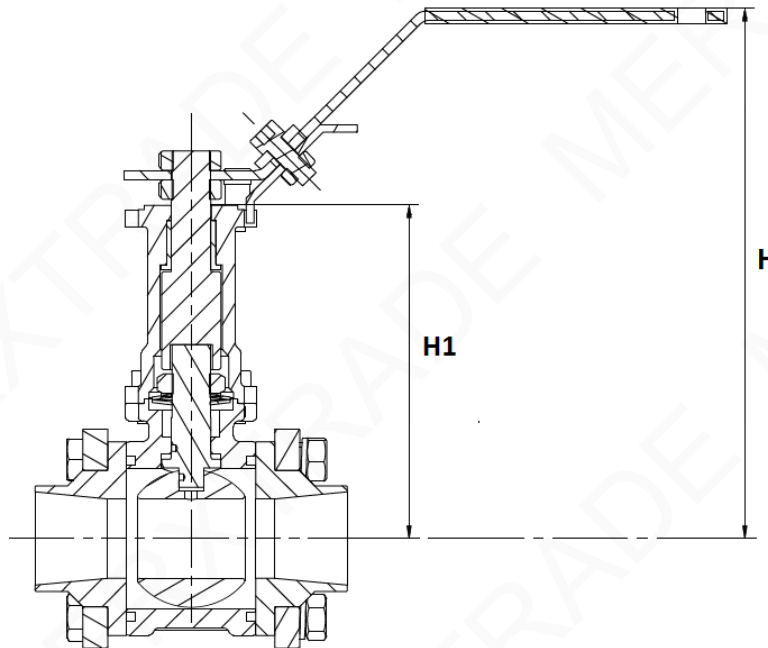


| DN (mm) | 8-12 | 15-20 | | 25 |
|----------------|-----------|-----------|----------|--------|
| NPS (") | 1/4"-3/8" | 1/2"-3/4" | | 1" |
| L | 96 | 96 | 136 | 136 |
| H | 37 | 45 | 45 | 46 |
| H1 | 60 | 60 | 80 | 80 |
| Platine ISO | F03 | | | F04 |
| Ref. Full bore | ELVO0812 | ELVO15 | ELVO1520 | ELVO25 |

| DN (mm) | 15 | 20-25 | | 32 |
|-------------------|----------|---------|----------|--------|
| NPS (") | 1/2" | 3/4"-1" | | 1"1/4" |
| L | 96 | 96 | 136 | 136 |
| H | 37 | 45 | 45 | 46 |
| H1 | 60 | 60 | 80 | 80 |
| Platine ISO | F03 | | | F04 |
| Ref. Reduced bore | ELVO0812 | ELVO15 | ELVO1520 | ELVO25 |

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ELSA VALVE WITH STEM EXTENSION ELRISO SIZE (in mm) :



| DN (mm) | 8 | 12 | 15 | 20 | 25 | 32 | 40 | 50 |
|---|------------|------------|-------|----------|----------|----------|----------|----|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4" | 1"1/2" | 2" |
| H | 134.9 | 140.4 | 145.1 | 168 | 172.5 | 168.4 | 199.5 | |
| H1 | 90 | 94.9 | 98.9 | 106.7 | 110.2 | 115.1 | 134.5 | |
| Ref. Stem extension alone (without valve and handle) | ELRISO0812 | ELRISO1520 | | ELRISO25 | ELRISO32 | ELRISO40 | ELRISO50 | |

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA BW

STANDARDS :

- Manufacturer certified ISO 9001:2015
- DIRECTIVE 2014/68/EU : CE N° 0035
Risk category III module H
- Certificate 3.1 on request
- Design according to EN 12516-2&3
- Pressure tests according to EN 12266-1, Rate A
- B.W. ends according to ISO 1127/4200 and ASME Sch.10
- ISO 5211 mounting pad
- ATEX Group II Category 2 G/2Dc Zone 1 & 21 Zone 2 & 22 (optional marking) according to directive 2014/34/EU
- Fugitive Emissions according to ISO 15848-1 : 2015
- Valve in accordance with the regulation **(EC) N° 1935-2004, FDA and USP Class VI** on request
- SIL2 according to IEC/EN 61508, SIL 3 possible according to the type of installation

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