

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

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 : DN25 to DN63
Connection : Orbital SMS
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
 Anti blow-out stem
 Double antistatic device, ATEX
 Fugitive Emissions, EC 1935/2004 and FDA

Materials : Stainless Steel EN 1.4409

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SPECIFICATIONS :

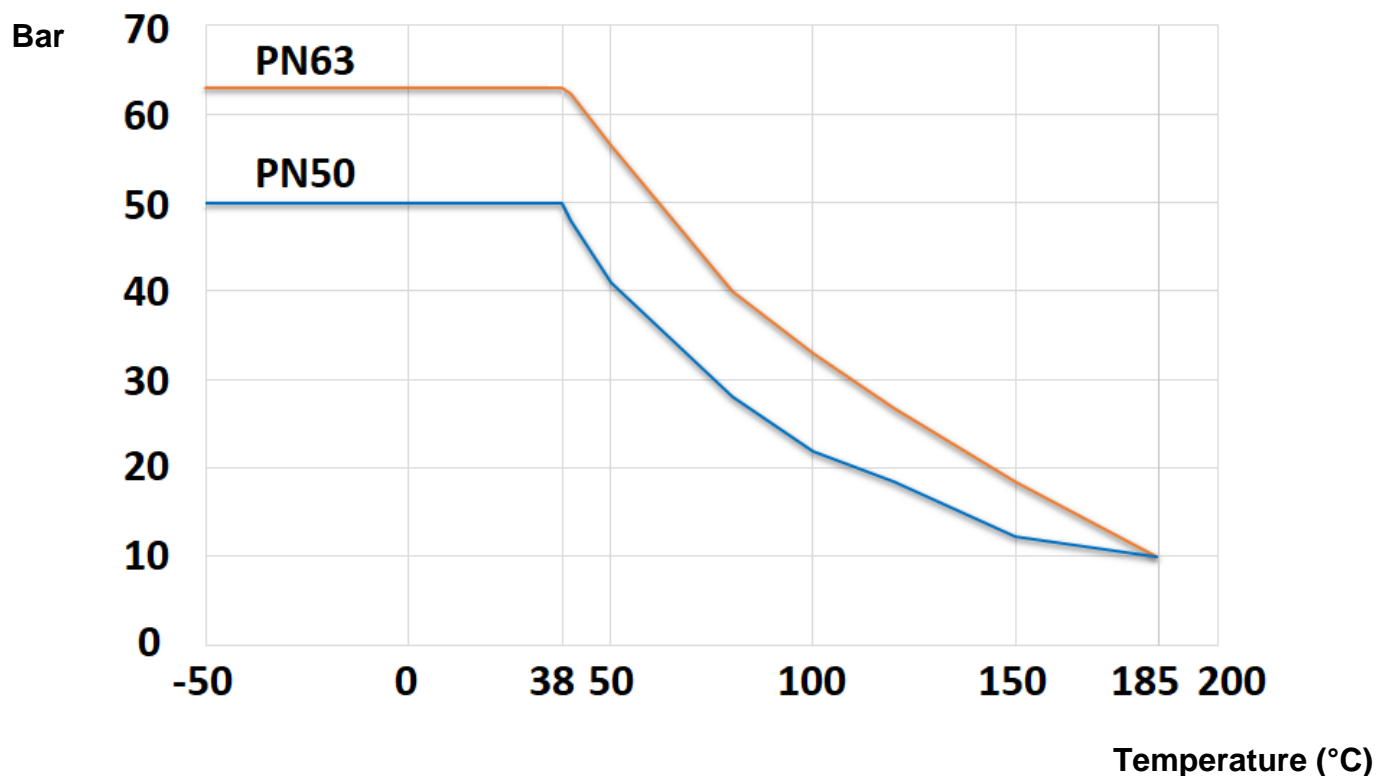
- Anti blow-out stem
- Packing with 3 chevrons gaskets
- Double antistatic device (ball between stem-body and stem-ball)
- Fugitive emissions according to ISO 15848-1 2015
- Lockable handle
- Oval handwheel and stem extension on request
- ISO 5211 mounting pad
- Rotating ends
- Welding possible without 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 upstream 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) :

DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Kvs (m3/h)	59	159	230	418

TORQUES VALUES (in Nm without safety coefficient) :

DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Torque (Nm)	5.9	19.6	29.4	39.2

BOLT TIGHTENING TABLE (in Nm) :

DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Torque (Nm)	20	40	40	50

RANGE :

- 3 Pieces ball valve with rotating ends EN 1.4409 reduced (venturi) bore Orbital SMS Ref. **ELITOSMS** from DN25 to DN63

ENDS :

- Orbital SMS

OPTIONS :

- AISI 304 Oval Handwheel Ref. **ELVO01520**



DN (mm)	25
NPS (")	1"
Ref.	ELVO15 or ELVO1520

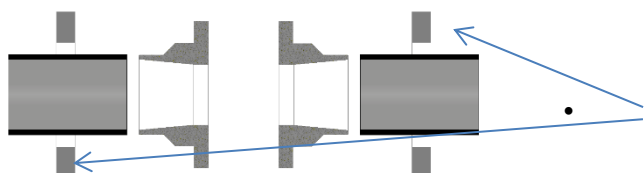
- AISI 304 stem extension with ISO 5211 plate and bolting Ref. **ELRISO01520-ELRISO040**



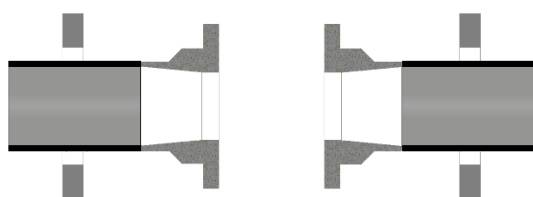
DN (mm)	25	38	51
NPS (")	1"	1"1/2	2"
Ref.	ELRISO1520	ELRISO32	ELRISO40

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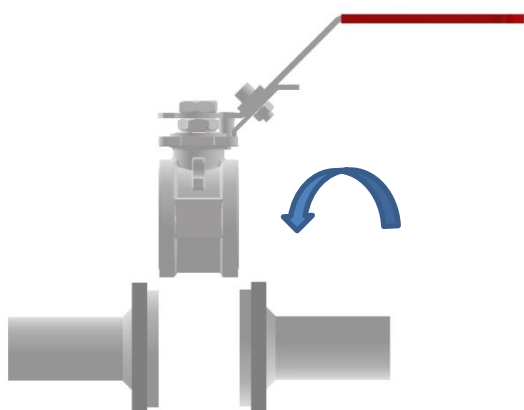
INSTALLATION :



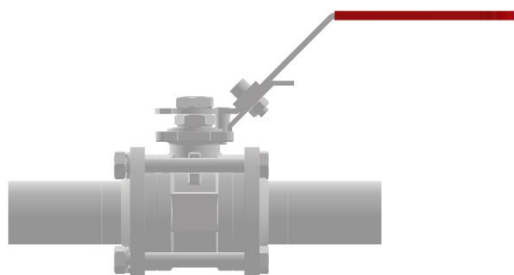
- Insert flanges on the pipe then place the ends



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



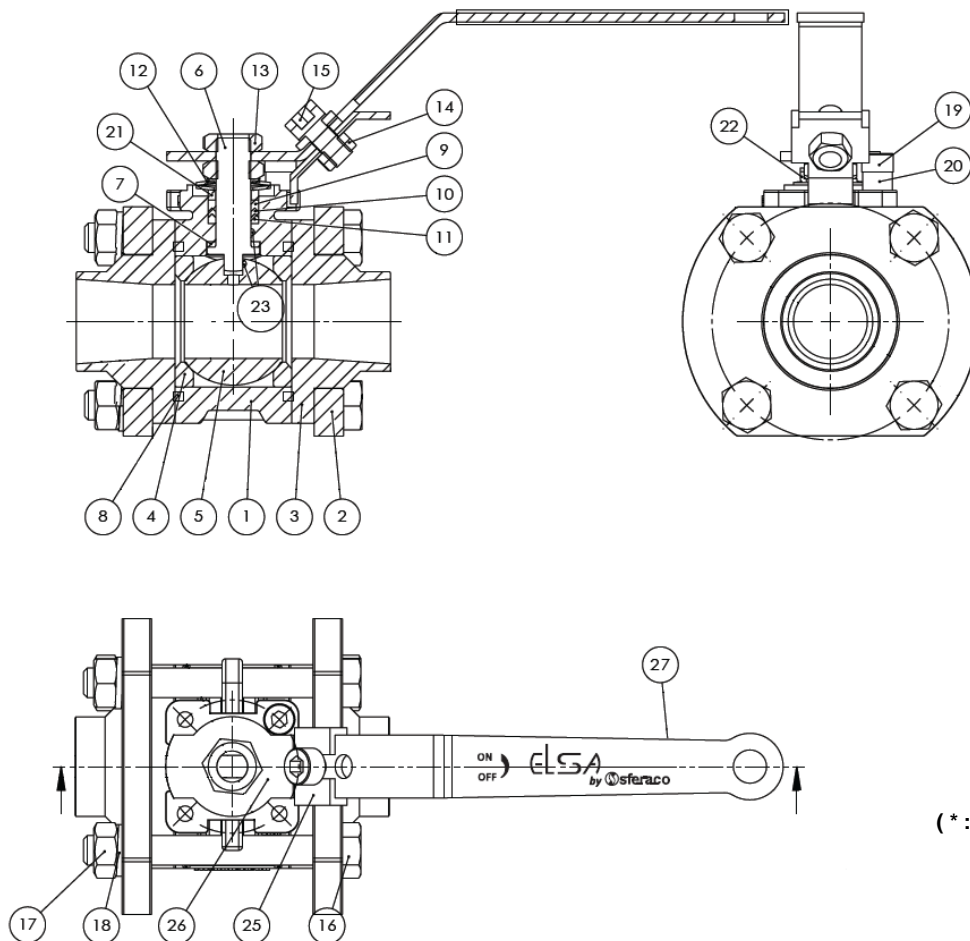
- Insert the body between the ends, thanks to the rotating ends, it's easy to place and adjust the desired angle



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

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MATERIALS :

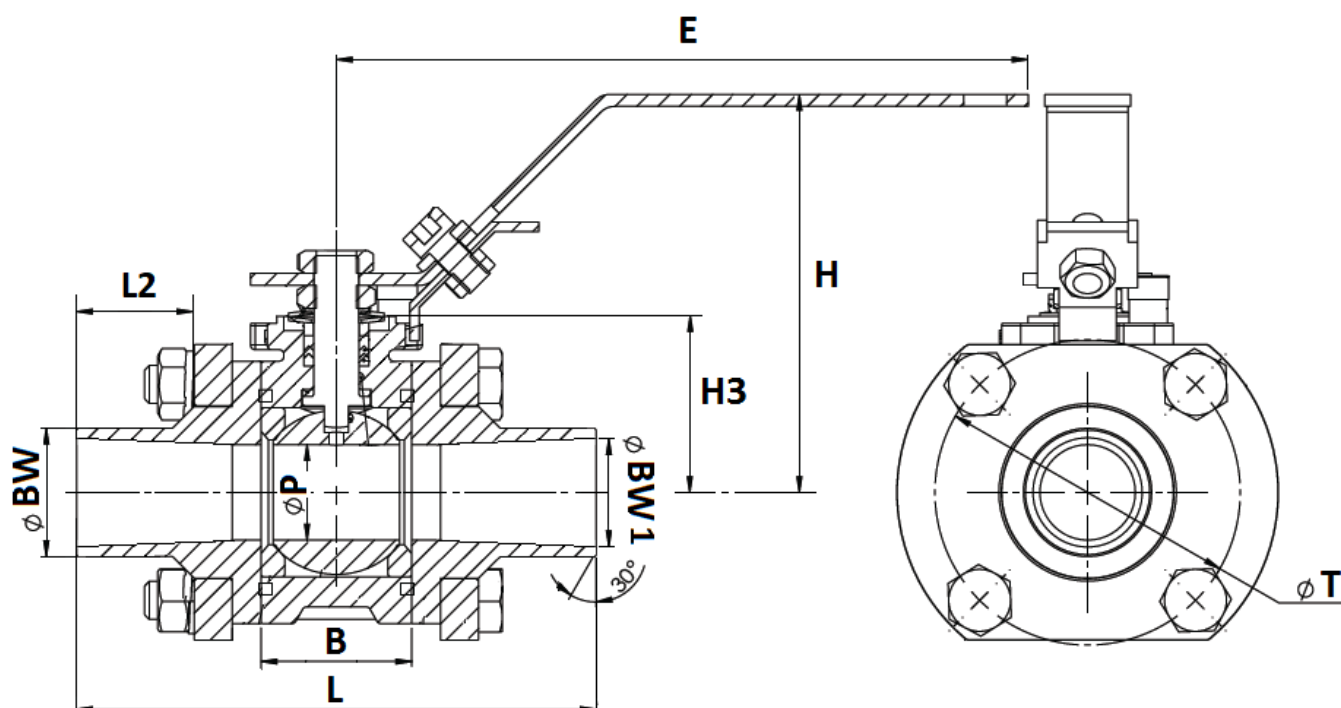


(* : Included in gaskets kit)

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

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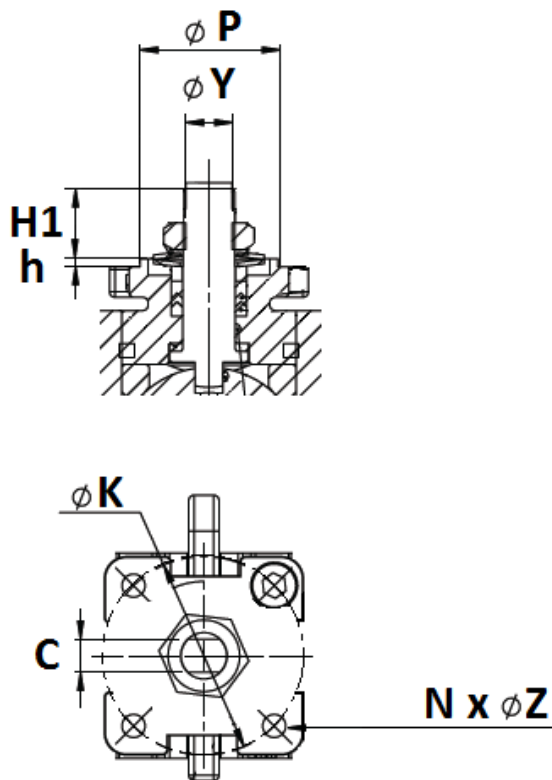
SIZE (in mm) :



NPS (")	1"	1"1/2	2"	2"1/2
DN (mm)	25	38	51	63
Ø P	20	32	38.2	50
Ø BW	25	38	51	63.5
Ø BW1	22.6	35.6	48.6	60.5
L	130	151	159	185
L2	35.2	35.4	35.4	37.5
B	31.6	48.2	56.2	71
E	149	192.5	212.5	216
H	83.4	110.4	108.7	139.6
H3	36.9	48.1	53.1	72.5
Ø T	64	80.9	94.2	114
Ref.	ELITOSMS25	ELITOSMS38	ELITOSMS51	ELITOSMS63

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ISO MOUTING PAD AND STEM SIZE (in mm) :



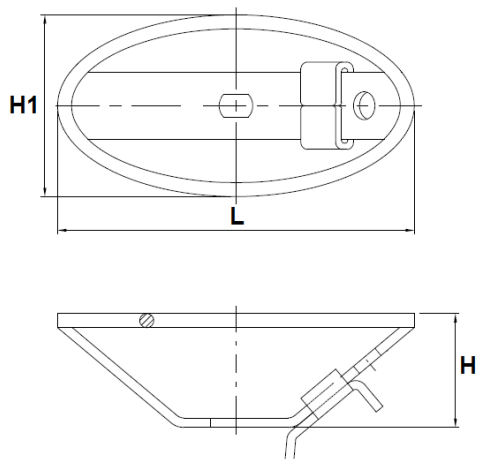
DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
H1	12.7	18.7	23.4	31.6
h	1.5			
C	6	8	10	14
Ø Y	3/8"-24UNF	1/2"-20UNF	5/8"-18UNF	3/4"-16UNF
Ø P	25	30	35	55
Ø K	36	50	50	70
ISO	F03	F05	F05	F07
N x Ø Z	4 x Ø 4.2	4 x Ø 5	4 x Ø 5	4 x Ø 6.8

TORQUES VALUES (in Nm without safety coefficient) :

DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Torque (Nm)	5.9	19.6	29.4	39.2

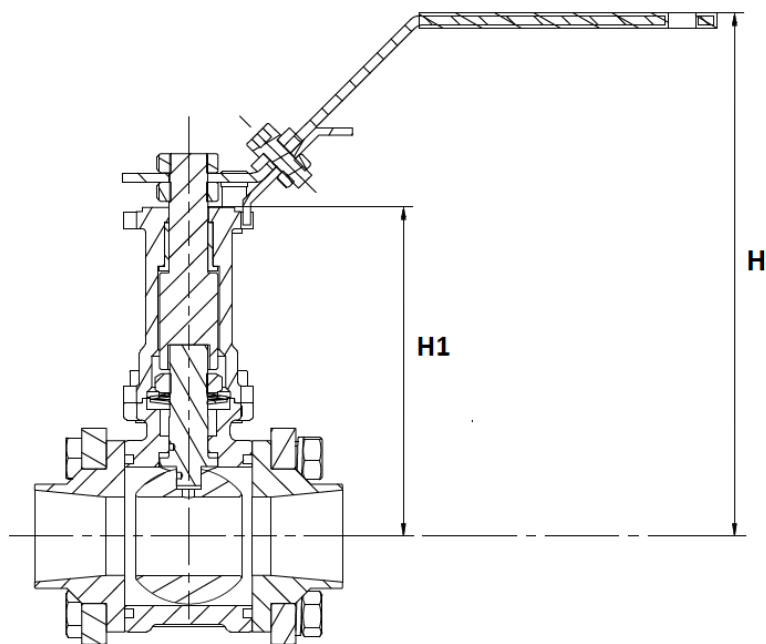
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AISI 304 OVAL HANDWHEEL SIZE (in mm) :



DN (mm)	25	
NPS (")	1"	
L	96	136
H	45	45
H1	60	80
ISO Plate	F03	
Ref.	ELVO15	ELVO1520

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



DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
H	145.1	172.5	168.4	199.5
H1	98.9	110.2	115.1	134.5
Ref. Stem extension alone (without valve and handle)	ELRISO1520	ELRISO32	ELRISO40	ELRISO50

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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
- Orbital ends according to SMS standard
- 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