

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 DN104

Connection : Orbital SMS

Min Temperature : -50°C

Max Temperature : +210°C

Max Pressure : 63 Bars up to DN51

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

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

Sferaco 90 rue du Ruisseau 38297 St Quentin Fallavier Tel: + 33 (0) 474.94.15.90 Fax: + 33 (0) 474.95.62.08 Internet: www.sferaco.com E-mail: info@sferaco.fr

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

SPECIFICATIONS :

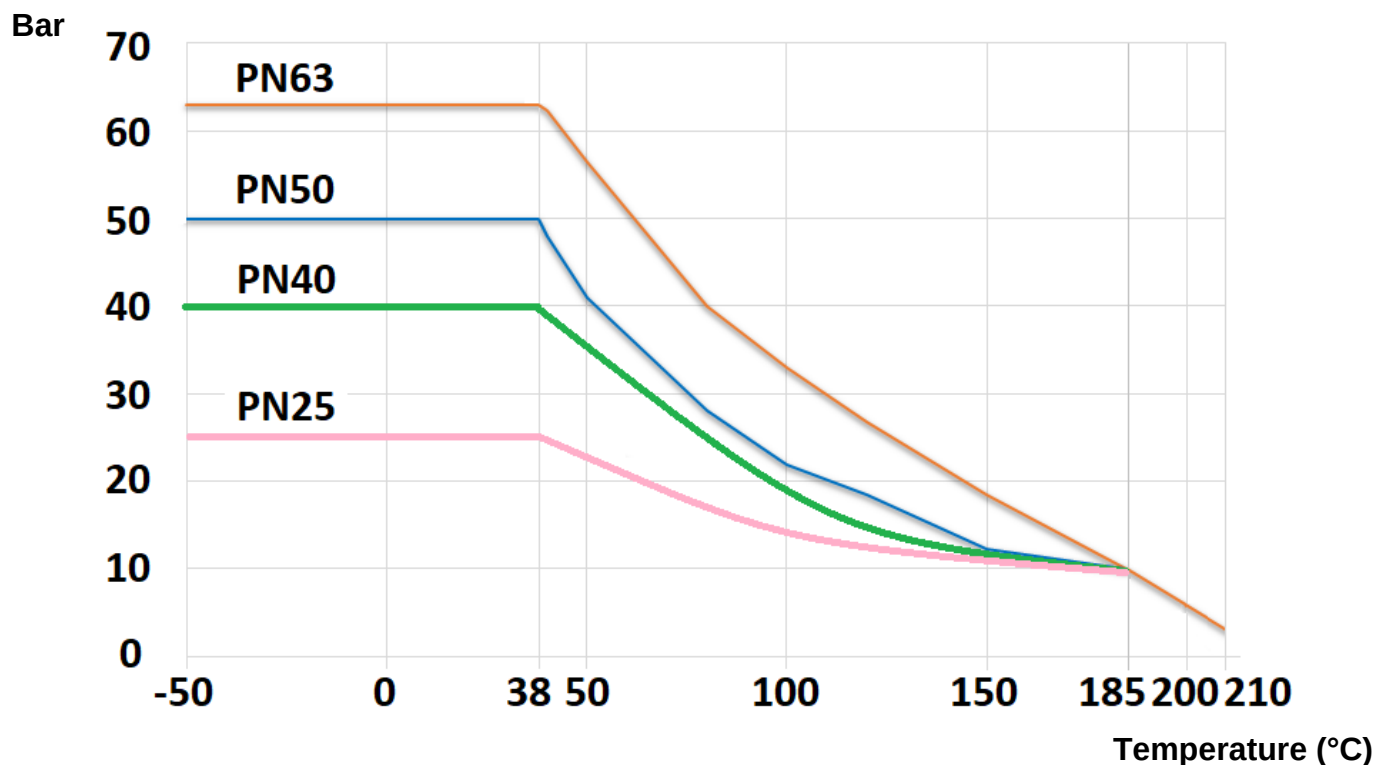
- Anti blow-out stem
- Packing with 3 chevrons gaskets
- Double antistatic device (ball between stem-body and stem-ball)
- Fugitive emissions according to ISO 15848-1 2015
- Lockable handle
- Oval handwheel and stem extension on request
- ISO 5211 mounting pad
- Rotating ends
- Welding possible without 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 back pressure)
- Min and max Temperature Ts : -50°C to + 210°C
- Max Pressure Ps : 63 bars up to DN51, 50 bars for DN63, 40 bars for DN76 and 25 bars for DN104 (see graph under)
- Steam : 10 bars max

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

Pressure



3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

FLOW COEFFICIENT Kvs (M3 / h) :

DN (mm)	25	38	51	63	76	104
NPS (")	1"	1"1/2	2"	2"1/2	3"	4"
Kvs (m3/h)	59	159	230	418	725	1768

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 DN104

ENDS :

- Orbital SMS

OPTIONS :

- AISI 304 Oval Handwheel Ref. **ELVO20**



DN (mm)	25
NPS (")	1"
Ref.	ELVO20



- AISI 304 stem extension with ISO 5211 plate and bolting Ref. **ELRISO20-ELRISO50 (Height 63.5 mm)**

DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Ref.	ELRISO20	ELRISO32	ELRISO40	ELRISO50

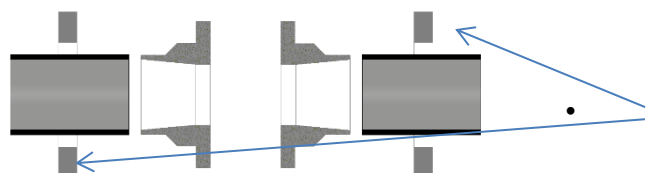


- AISI 304 stem extension with ISO 5211 plate and bolting Ref. **ELRISO20FR-ELRISO50FR (Height 81.5 mm)**

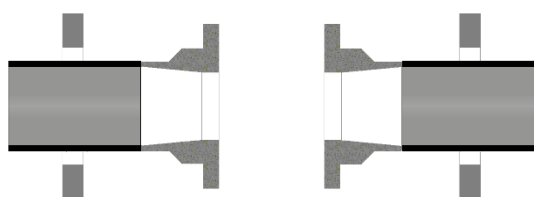
DN (mm)	25	38	51	63
NPS (")	1"	1"1/2	2"	2"1/2
Ref.	ELRISO20FR	ELRISO32FR	ELRISO40FR	ELRISO50FR

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

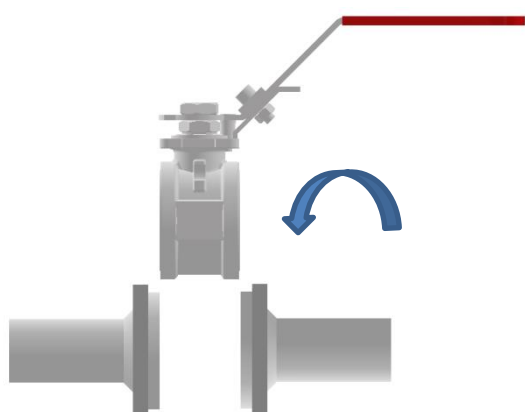
INSTALLATION :



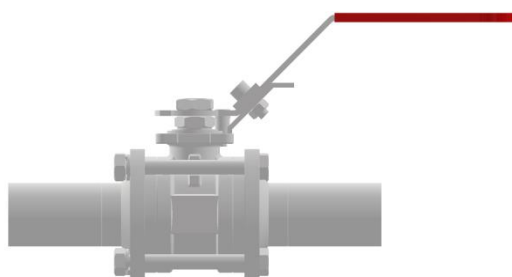
- Insert flanges on the pipe then place the ends



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



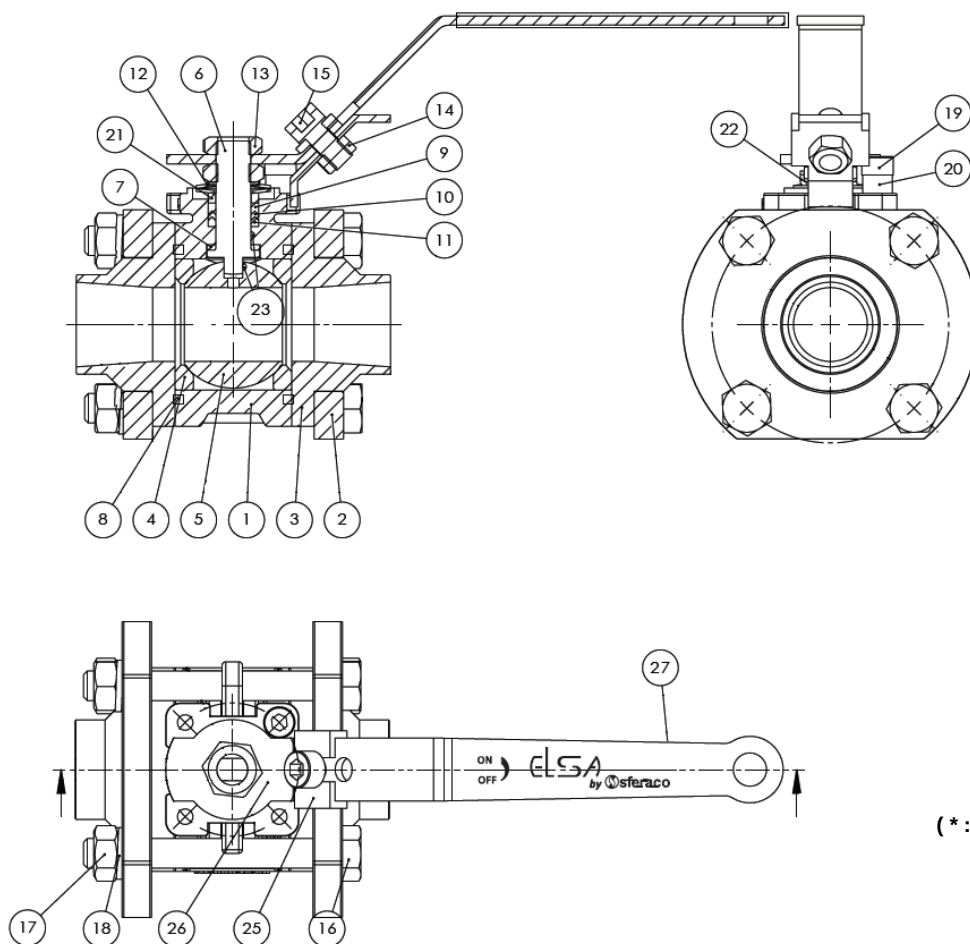
- Insert the body between the ends, thanks to the rotating ends, it's easy to place and adjust the desired angle



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

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

MATERIALS :

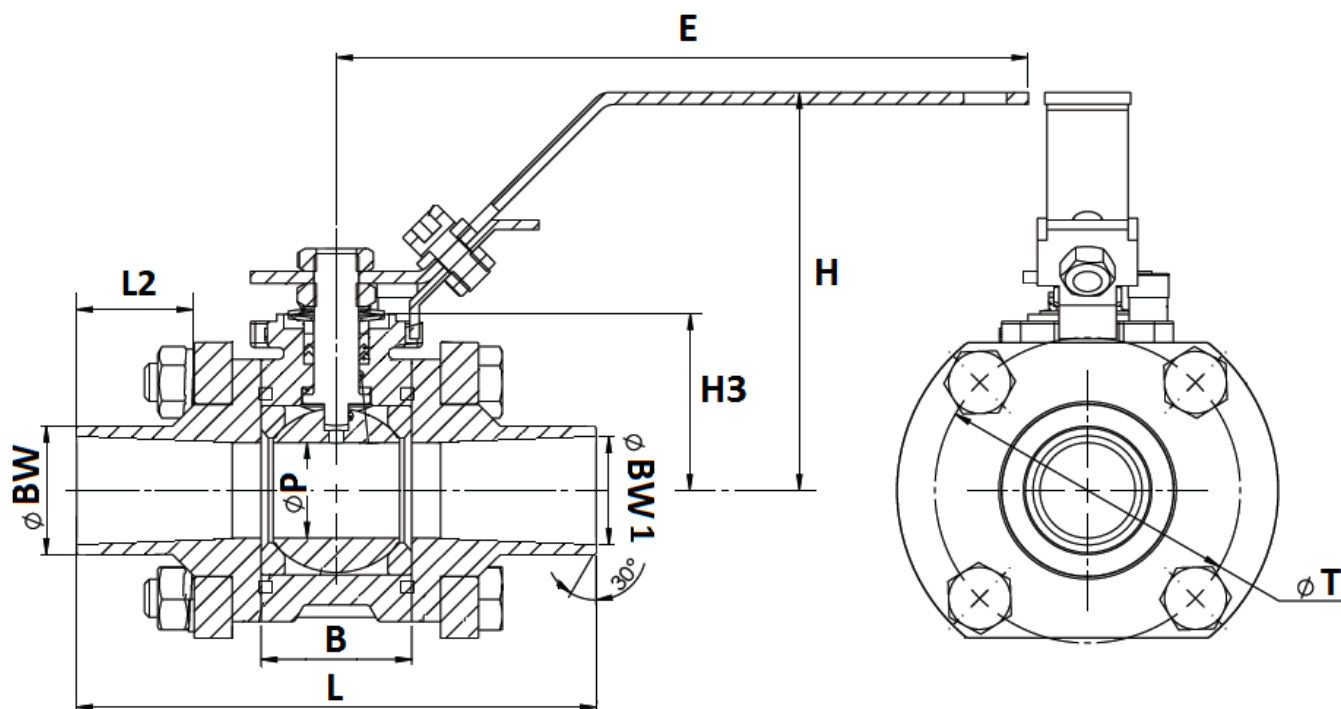


(* : Included in gaskets kit)

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)	AISI 301
12	Elastic rings	
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	AISI 316
23	Antistatic device	
25	Locking device	AISI 304
26	Handle	
27	Handle cover	PVC

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

SIZE (in mm) :

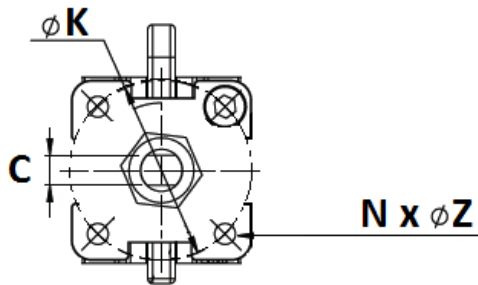
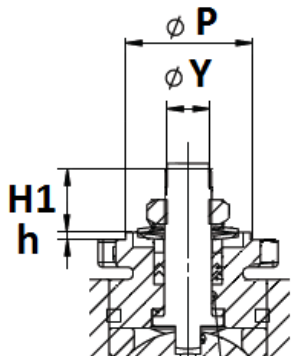


NPS (")	1"	1"1/2	2"	2"1/2	3"	4"
DN (mm)	25	38	51	63	76	104
Ø P	20	32	38.2	50	65	100
Ø BW	25	38	51	63.5	76.1	104
Ø BW1	22.6	35.6	48.6	60.5	72.9	100
L	130	151	159	185	201.8	255.8
L2	35.2	35.4	35.4	37.5		
B	31.6	48.2	56.2	71	83.8	129.8
E	149	192.5	212.5	216	300	350
H	83.4	110.4	108.7	139.6		
H3	36.9	48.1	53.1	72.5	104.7	131.3
Ø T	64	80.9	94.2	114	146	208
Number of studs	4				6	8
Ref.	ELITOSMS25	ELITOSMS38	ELITOSMS51	ELITOSMS63	ELITOSMS76	ELITOSMS104

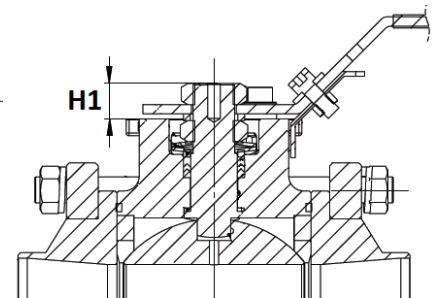
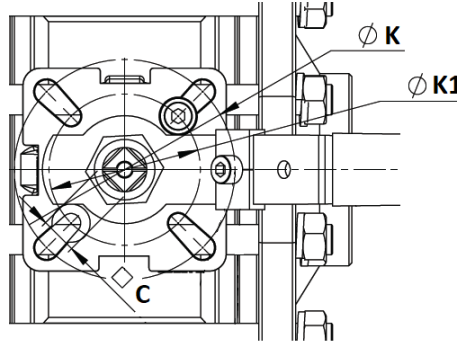
3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

ISO MOUNTING PAD AND STEM SIZE (in mm) :

DN25-63



DN76-104



DN (mm)	76	104
NPS (")	3"	4"
H1	18.95	18.7
C	17	
Ø K	102	
ISO	F10	
Ø K1	70	
ISO1	F07	

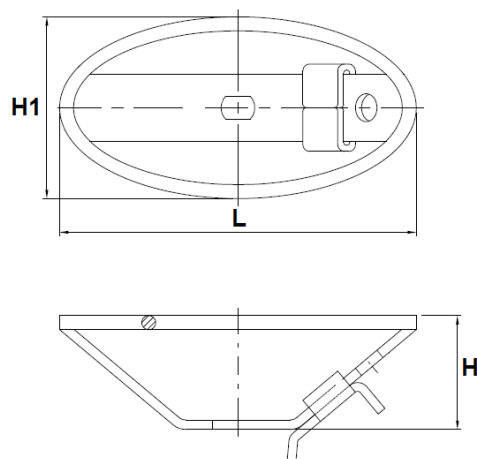
DN (mm)	25	38	51	63
NPS (")	1"	1 1/2"	2"	2 1/2"
H1	12.7	18.7	23.4	31.6
h	1.5			
C	6	8	10	14
Ø Y	3/8"-24UNF	1/2"-20UNF	5/8"-18UNF	3/4"-16UNF
Ø P	30	35	35	55
Ø K	42	50	50	70
ISO	F04	F05	F05	F07
N x Ø Z	4 x M5x0.8	4 x M6x1		4x M8x1.25

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

3 PIECES STAINLESS STEEL BALL VALVE WITH ROTATING ENDS ELSA SMS

AISI 304 OVAL HANDWHEEL SIZE (in mm) :



DN (mm)	25
NPS (")	1"
L	136
H	46
H1	80
ISO	F04
Ref.	ELVO20

STANDARDS :

- Manufacturer certified ISO 9001:2015
- DIRECTIVE 2014/68/EU : For liquids and gas of Group 1
 - DN25 : Article 4, §3 (SEP), no CE marking
 - DN38-104 : Risk Category II, CE 0035 marking
- 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

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.