

Ball valves



ISO 7/1

Model 58213 3-way ATEX valve BSP female threaded with ISO mounting plate - 316 stainless steel
1000 lbs / PN63 - reduced L-bore - Lockable handle



Specifications

Dimensions: DN8 to DN50 (1/4" to 2")

Connection: BSP female threaded ISO 7/1

Pressure: PN63 (1000 lbs)

Temperature: from - 29°C to +175°C

Material: 316 or CF8M stainless steel
(for the stainless steel parts in contact with the fluid)

ISO 5211 mounting plate for pneumatic
or electric motorisation

PTFE + FKM gaskets

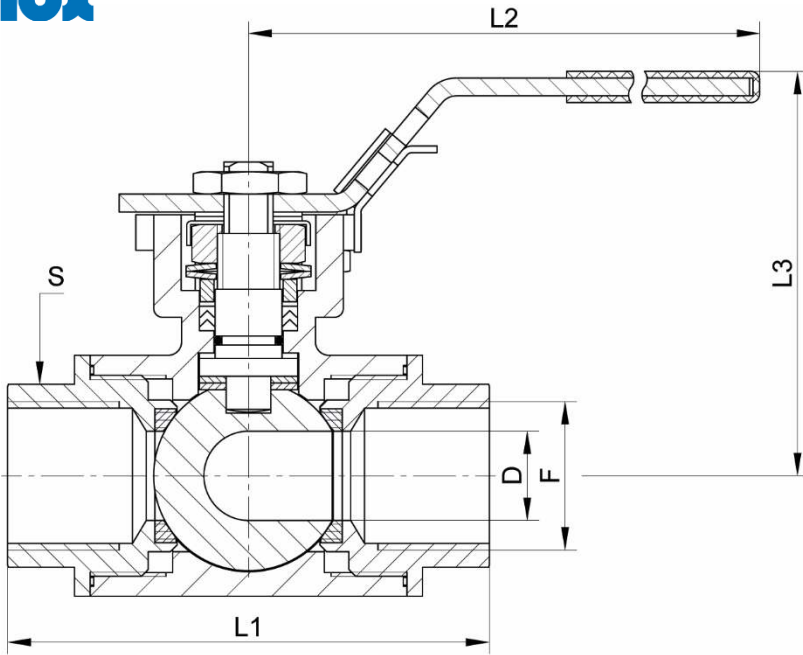
ATEX II 2 GD c T3

ISO 9001
BUREAU VERITAS
Certification

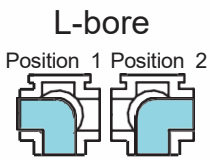
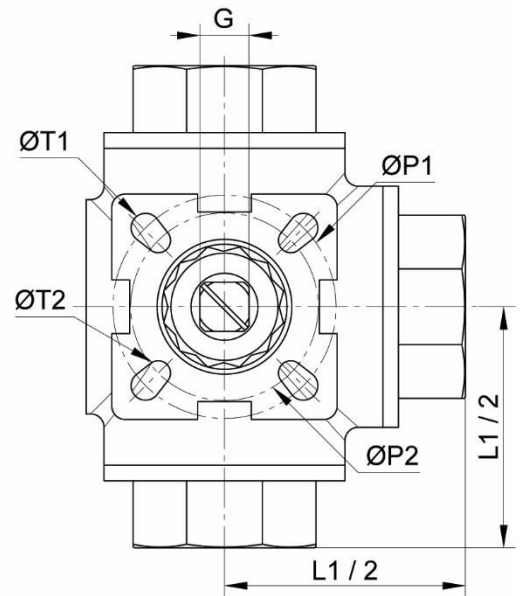
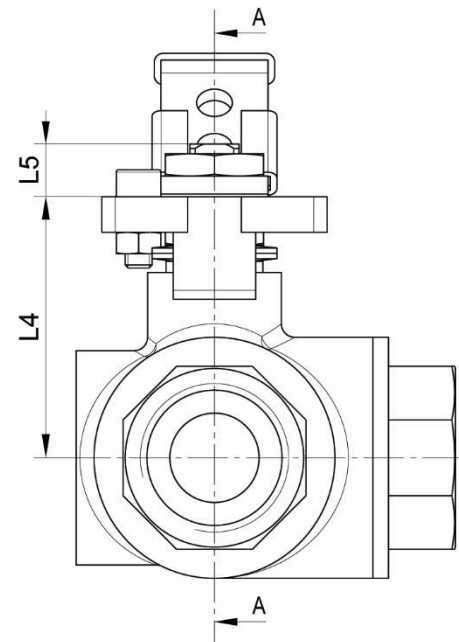


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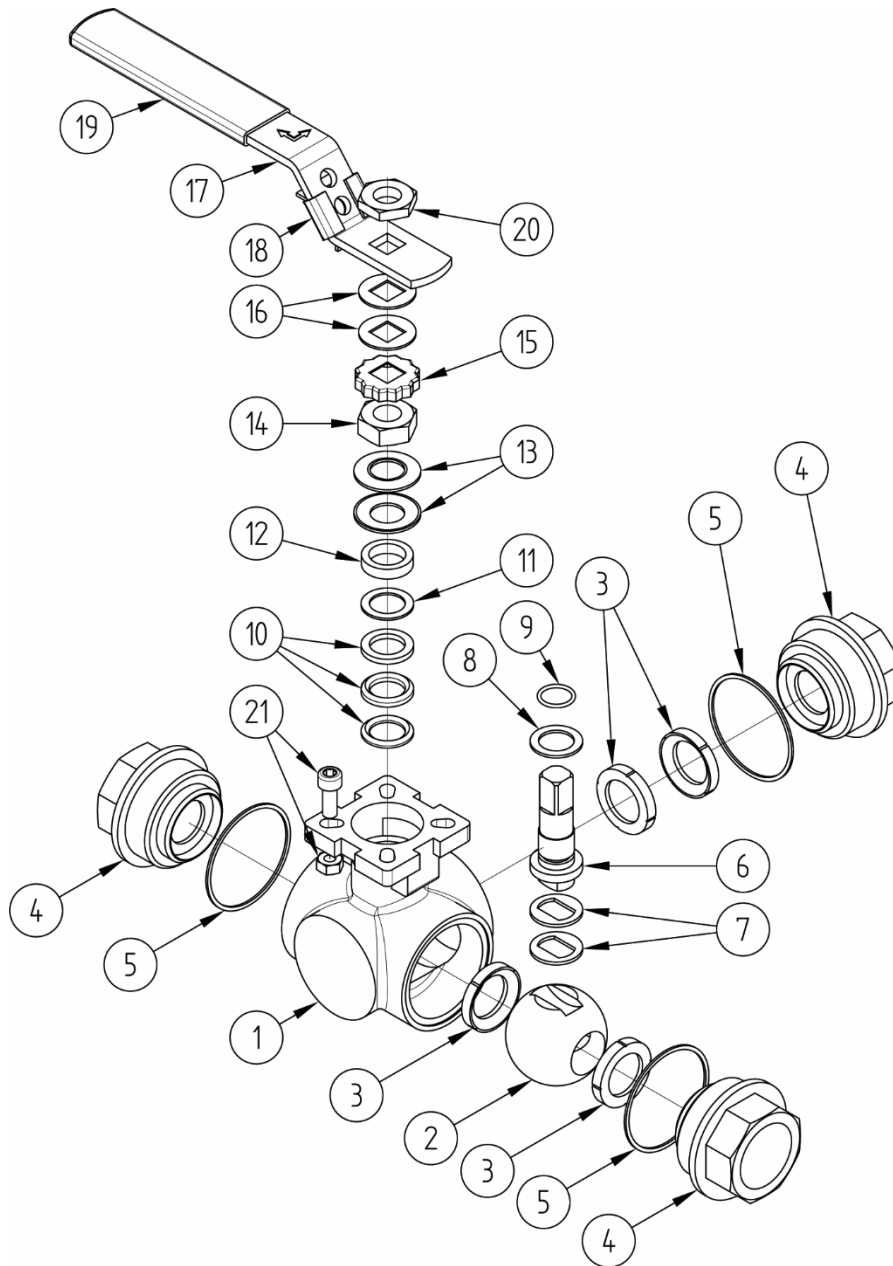
A-A Cross Section



DN (mm)	NB (inches)	D (mm)	F (inches)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	G (mm)	ØP1 (mm)	ØP2 (mm)	ØT1 (mm)	ØT2 (mm)	S (mm)	Weight (kg)	Part number
8	1/4"	11	1/4"	79	150	70	42	9	9	36	42	6	6	27	0.75	458213-8
10	3/8"	11	3/8"	79	150	70	42	9	9	36	42	6	6	27	0.75	458213-10
15	1/2"	11	1/2"	79	150	70	42	9	9	36	42	6	6	27	0.75	458213-15
20	3/4"	15	3/4"	90	150	77	49	9	9	36	50	6	7	34	1.30	458213-20
25	1"	20	1"	108	177	94	60	11	11	42	50	6	7	41	1.80	458213-25
32	1 1/4"	25	1 1/4"	124	177	98	63	11	11	42	70	6	9	50	2.70	458213-32
40	1 1/2"	32	1 1/2"	135	215	106	74	14	14	50	70	7	9	56	3.90	458213-40
50	2"	40	2"	164	215	115	83	14	14	50	70	7	9	70	6.80	458213-50

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N°	Part Name	Material	N°	Part Name	Material
1	BODY	ASTM CF8M	12	SPACER	AISI 316
2	BALL	ASTM CF8M	13	BELLEVILLE WASHER	AISI 301
3	SEAT	TFM1600	14	SHAFT NUT (GLAND)	A194-8
4	FLANGE (FEMALE THREADED END)	ASTM CF8M	15	STOP NUT	AISI 304
5	BODY GASKET	PTFE	16	FLAT WASHER	AISI 304
6	SHAFT	AISI 316	17	HANDLE	AISI 304
7	THRUST WASHER	AISI 316	18	LOCKING DEVICE	AISI 304
8	SEALING RING (SHAFT / BODY)	PTFE	19	HANDLE COVERING	PVC
9	O-RING (SHAFT/BODY)	FKM (VITON)	20	HANDLE NUT	A194-8
10	PACKING (V-WASHER)	PTFE	21	BOLT (HANDLE STOP)	A2-70
11	SUPPORT RING	STAINLESS STEEL + PTFE			

Use

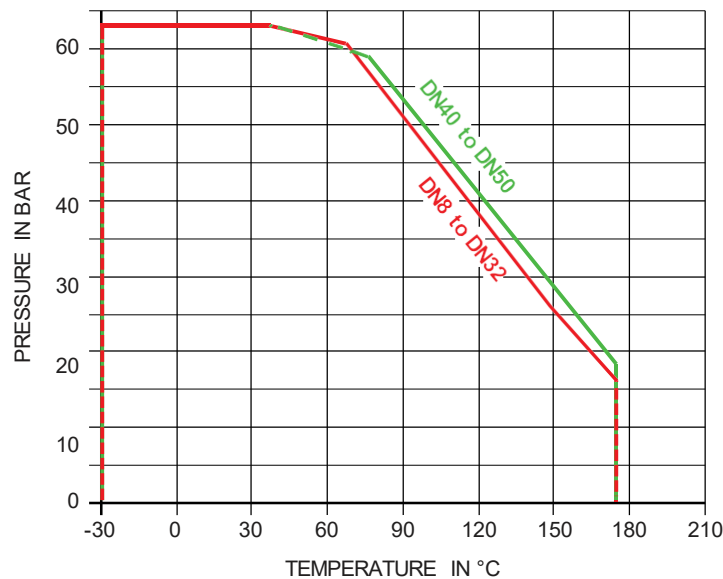
Do not leave the valve partially open: leaving the ball valve partially open could lead to cavitation which is likely to damage the valve.

To operate the valve, lift the locking device **18** so that the handle **17** can be turned 1/4 turn, until it cannot be turned any further.

Pressure and temperature

The data plate indicates the valve's maximum operating pressure and the minimum and maximum operating temperatures (but the valve's data plate does not include this information for any associated actuator or servo motor, please check their specific data plates for this information).

The operating temperature is between - 29°C and + 175°C for the PTFE shaft packings. For pressure/temperature ratings, see the graph below.



Warning: For usage temperatures above 60°C there is a risk of burns.

Fluids

This valve is suitable for non-abrasive and non-coagulable fluids, subject to the chemical compatibility of the parts in contact.

The valve can be motorised (direct mounting), thanks to its ISO mounting plate (ISO 521 I standard), see the corresponding product data sheets.

- Model **50210**: valve with spring return or double-acting type aluminium pneumatic cylinder
- Model **50212**: valve with spring return or double-acting type stainless steel pneumatic cylinder
- Model **50216**: valve with IP65 electric servo motor
- Model **50222 - 50226**: valve with IP66 electric servo motor
- Model **50228 - 50232**: valve with IP68 electric servo motor
- Model **50234 - 50238**: valve with ATEX IP68 electric servo motor

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Required operating torque for valve motorisation

Dimensions	-	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Operating torque	Nm	9	9	9	10	15	22	30	50
Coupling characteristics	Mounting plate	F03 F04	F03 F04	F03 F04	F03 F05	F04 F05	F04 F07	F05 F07	F05 F07
	Square	9x9	9x9	9x9	9x9	11x11	11x11	14x14	14x14

Torque required for water at 63 bar.

It is recommended to use a minimum safety factor of +30% for motorisation with a pneumatic cylinder and +50% for motorisation with an electric actuator.

Refer to the information given on the product data sheets for the corresponding actuators.

Use in ATEX zones

The manual valves (model **58213**) and pneumatic valves (models **50210** and **50212**) can be used in ATEX II 2 GD zones.

If any other element is added (position detection, solenoid valves etc.), it must be confirmed if this addition is compatible with use in an ATEX zone.

The models **50216**, **50222** and **50228**, valves with electric servo motor, **cannot be used in ATEX zones.**

Only valves with electric servo motor models **50234** and **50238** can be used in an ATEX II 2 GD zone.

Assembly and maintenance instructions

Installation

The valve can be used in any position. Ensure that the intended location is sufficiently clear from obstructions for handle operation.

Check that the installation is clean and free from foreign bodies that could damage the valve.

Make sure that the piping is perfectly aligned and its support structures are sufficiently dimensioned so that the valve is not subject to any external stresses. The support structure must support the pipes, not the valve.

Installation of a valve with female threaded ends:

Use a wrench that is suitable for the hexagon-shaped valve end. Do not use the valve body or the handle when you are tightening the assembly (this could damage the valve). To ensure the sealing of the threaded connections, use a product suitable for the working conditions (e.g. anaerobic adhesive model **5291**, PTFE tape, etc.).

Clean the installation leaving the valve open so that there are no impurities between the ball and the body. Check the valve is operating correctly.

Carry out installation pressure testing without exceeding the valve's specifications and according to the applicable standards (e.g. EN 12266-1).

Maintenance

Under normal operating conditions, the valve does not require any specific maintenance.

In the case of a valve that is never operated during normal operation, it is advisable to regularly open and close the valve to ensure it continues to operate correctly.

During operation (or during the valve installation testing phase), if any leaks appear around the shaft **6**, tighten the shaft nut **14**. Usually leaks can be stopped by tightening the nut by 30 to 60°. But do not over tighten the nut, as this could reduce the system's service life. Adhere to the tightening torques (see table **A** on page 7).

Following abnormal wear, or the passage of a product which has damaged the valve and caused a leak or malfunction, it may be necessary to change some of its parts.

In this case, see the "Assembly / Disassembly" section below.

Assembly / Disassembly

The maintenance and removal/reassembly of the valve must be carried out by personnel who are qualified and trained for this type of intervention.



Warning: Before working on the valve, check that the installation has been stopped and that the piping is empty and is not pressurised.

Warning: For usage temperatures above 60°C there is a risk of burns.

Warning: Be careful of hazardous materials - follow supplier usage instructions.

Unscrew the flanges **4** and remove the seat parts **3**.

Remove the ball **2** from its housing, by using the handle **17** to rotate the ball.

Inspect the surface condition of the ball. If it is scratched or damaged it must be replaced at the same time as the seats **3**.

If the shaft needs to be resealed, remove the upper parts of the valve in the following order: handle nut **20**, handle **17** and flat washer(s) **16**, then the stop nut **15**, shaft nut **14**, Belleville washer **13** and the stainless steel support ring and spacer (**11** + **12**).

Push the shaft **6** towards the inside of the body **1** in order to remove it, and remove the o-ring **9** and the PTFE sealing ring **8** (take care not to scratch the shaft).

Remove the PTFE packing (v-washers) **10** from its housing (take care not to scratch the surface of this housing).

Clean and inspect all the parts. Change any worn parts. It is strongly recommended to change all the shaft's sealing parts (gaskets and PTFE packing) if it has been disassembled, as well as the ball's TFM seat rings and the PTFE body gaskets.

To reassemble, follow the disassembly steps in reverse order.

To tighten the shaft packing (shaft + PTFE packing + washers, etc.) with the shaft nut **14** (gland) adhere to the tightening torques given in table **A** below.

Test the valve (pressure testing + manoeuvring) before putting the installation back into service.

Table A	Dimensions	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Tightening torque shaft nut (14)	Nm	8.0 ~ 9.0	8.0 ~ 9.0	8.0 ~ 9.0	8.0 ~ 9.0	9.0 ~ 11.3	9.0 ~ 11.3	15.8 ~ 18.1	15.8 ~ 18.1

Standards and compliance

- Designed in accordance with ASME B16.34, ISO 15848-1 and EN 12516-3 standards
- Connection: BSP female thread in accordance with ISO 7/1
- Complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC) according to Annex III module H (certificate DGR 0036-QS-1045-14)
- ATEX Group II Category 2 G/2D, in accordance with Directive 2014/34/EU (formerly 94/9/EC) (certificate EX9 13 09 82326 002)