

Ball valves

Model 58249 Wafer ATEX ball valve with ISO mounting plate - 316 stainless steel

Full bore - Lockable handle



Specifications

Dimensions: DNI15 to DNI50 (1/2" to 6")

Connection: flanges in accordance with EN 1092-1

Pressure: PN depending on flange dimensions

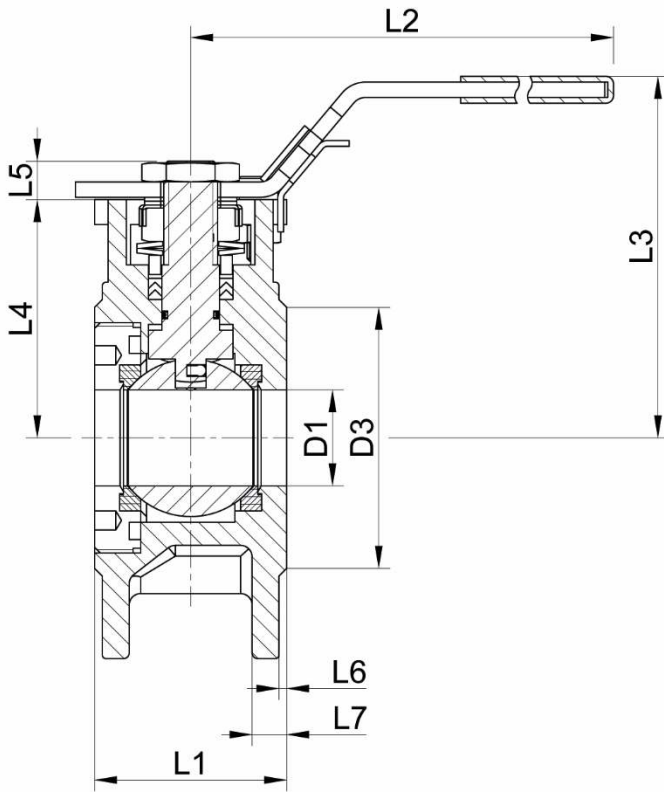
Temperature: -29°C to +175°C

Material: 316 or 1.4408 stainless steel (for the stainless steel parts in contact with the fluid)

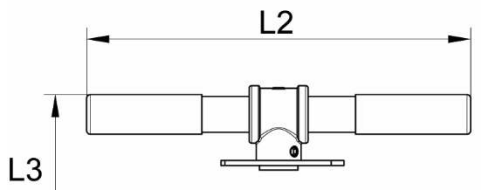
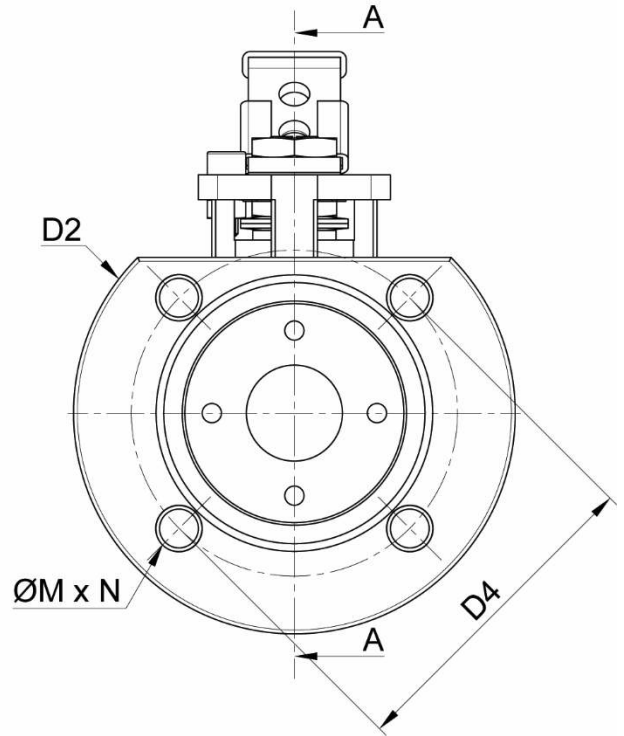
ISO 5211 mounting plate for pneumatic or electric actuators

PTFE + FKM gaskets

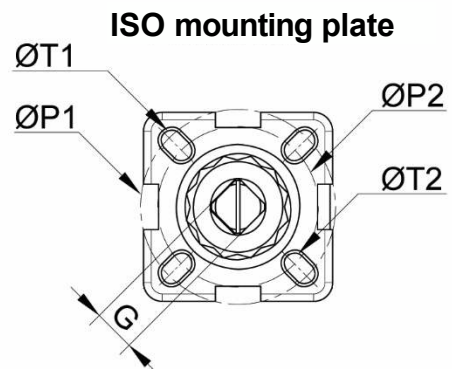
ATEX Ex II 2 GD c T3



A-A Cross Section



Handle DN100 - 150 (4" - 6")



ISO mounting plate

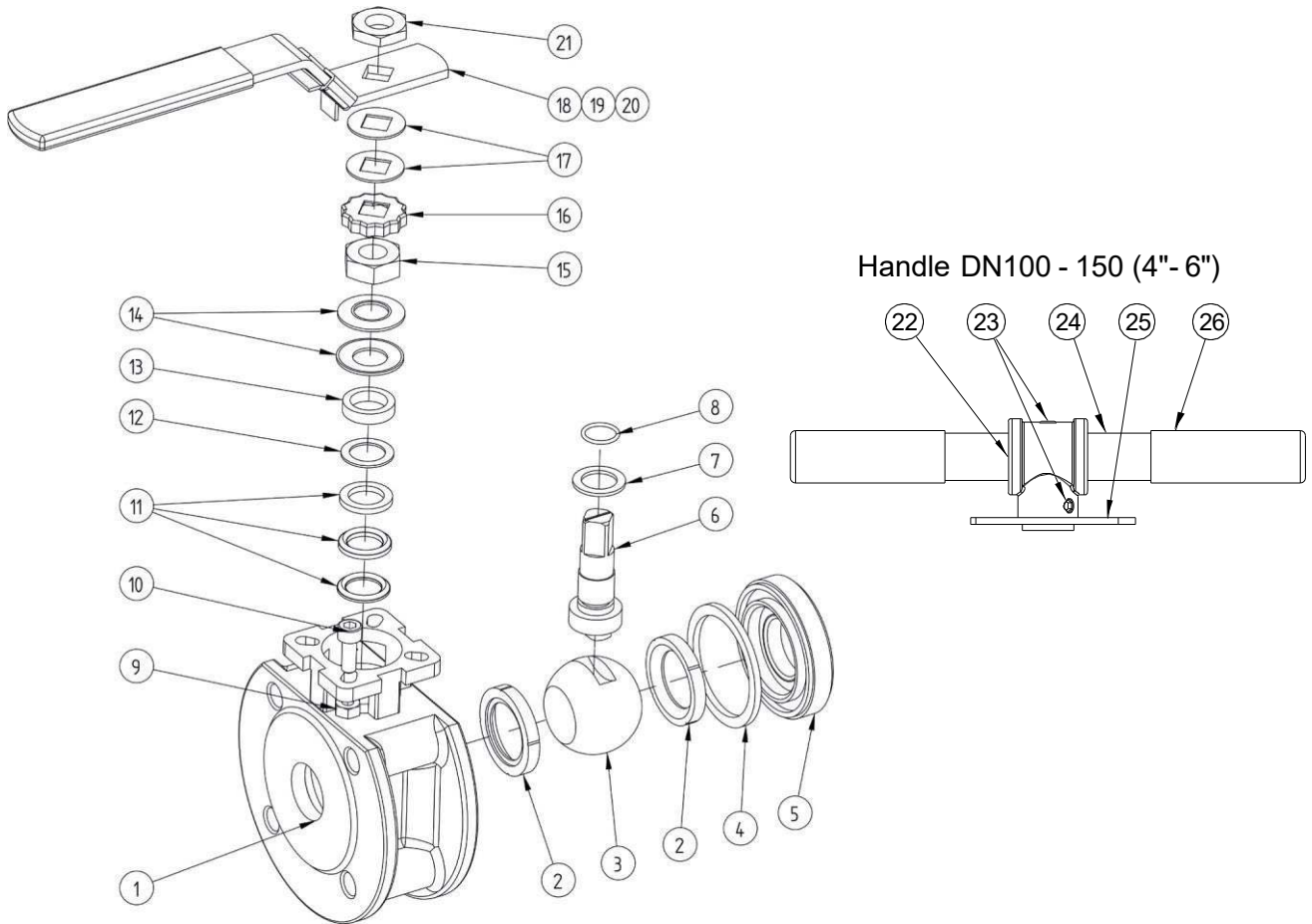
DN (mm)	NB (inches)	PN (bar)	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
15	1/2"	40	15	95	45	65	42	150	77	46	9	2	9
20	3/4"	40	20	105	58	75	43	150	83	51	9	2	9
25	1"	40	25	115	68	85	50	177	97	62	11	2	9
32	1"1/4	40	32	140	78	100	60	177	110	72	11	2	12
40	1"1/2	40	38	150	88	110	65	197	115	78	14	3	13
50	2"	40	50	165	102	125	78	197	121	86	14	3	20
65	2"1/2	16	63.5	185	122	145	110	267	161	108	17	3	18
80	3"	16	76	200	138	160	120	267	170	116	17	3	20
100	4"	16	96	220	158	180	150	400*	196	139	22	3	20
125	5"	16	118	250	188	210	180	800*	240	176	27	3	22
150	6"	16	142	285	212	240	225	800*	274	192	27	3	22

DN (mm)	NB (inches)	G (mm)	M (mm)	N (mm)	ØP1 (mm)	ØP2 (mm)	ØT1 (mm)	ØT2 (mm)	ISO mounting plate	Torque (Nm)	Weight (kg)	Part number
15	1/2"	9	M12	4	36	42	6	6	F03-F04	5	1.40	458249-15
20	3/4"	9	M12	4	36	42	6	6	F03-F04	6	1.60	458249-20
25	1"	11	M12	4	42	50	6	7	F04-F05	11	2.60	458249-25
32	1"1/4	11	M16	4	42	50	6	7	F04-F05	16	3.50	458249-32
40	1"1/2	14	M16	4	50	70	7	9	F05-F07	23	4.80	458249-40
50	2"	14	M16	4	50	70	7	9	F05-F07	34	6.70	458249-50
65	2"1/2	17	M16	4	70	102	9	11	F07-F010	49	10.10	458249-65
80	3"	17	M16	8	70	102	9	11	F07-F010	81	14.80	458249-80
100	4"	22	M16	8	-	102	-	11	F10	122	22.50	458249-100
125	5"	27	M16	8	-	125	-	14	F12	245	-	458249-125
150	6"	27	M20	8	-	125	-	14	F12	340	-	458249-150

* positionable tubular handle

It is recommended to use a minimum safety factor of +50% for the valve torque if you motorise the valve.

Dimensions	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
	1/2"	3/4"	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"	5"	6"
Cv (gal/min)	18	36	48	93	165	207	450	780	1360	1700	2600
Kv (m ³ /h)	16	31	42	80	143	179	389	675	1176	1471	2249



N°	Part Name	Material
1	BODY	1.4408
2	SEAT RING	PTFE
3	BALL	1.4408
4	BODY GASKET	PTFE
5	THREADED CLAMPING RING	1.4408
6	SHAFT + ANTISTATIC	SS316
7	SHAFT RING	PTFE
8	FLAT SHAFT GASKET	FKM (VITON)
9	NUT (HANDLE STOP)	A2-70
10	BOLT (HANDLE STOP)	A2-70
11	SHAFT PACKING	PTFE
12	SUPPORT RING	50% STAINLESS STEEL + 50% PTFE
13	SPACER	SS316

N°	Part Name	Material
14	BELLEVILLE WASHER	SS301
15	SHAFT NUT (GLAND)	A2-70
16	STOP NUT	SS304
17	FLAT WASHER	SS316
18	HANDLE	SS304
19	LOCKING DEVICE	SS304
20	HANDLE COVERING	PLASTIC
21	HANDLE NUT	A2-70
22	HANDLE ADAPTER (DN 80-150)	CF8M
23	SCREW (DN 80-150)	A2-70
24	TUBULAR HANDLE (DN 80-150)	GALVANISED STEEL
25	LOCKING DEVICE (DN 80-150)	SS304
26	HANDLE COVERING (DN 80-150)	PLASTIC

Use

This valve is a shut-off valve: it must be either fully open or fully closed.

Do not leave the valve partially open: an opening defect, or leaving the ball valve partially open to decrease flow, could lead to cavitation which is likely to damage the valve.

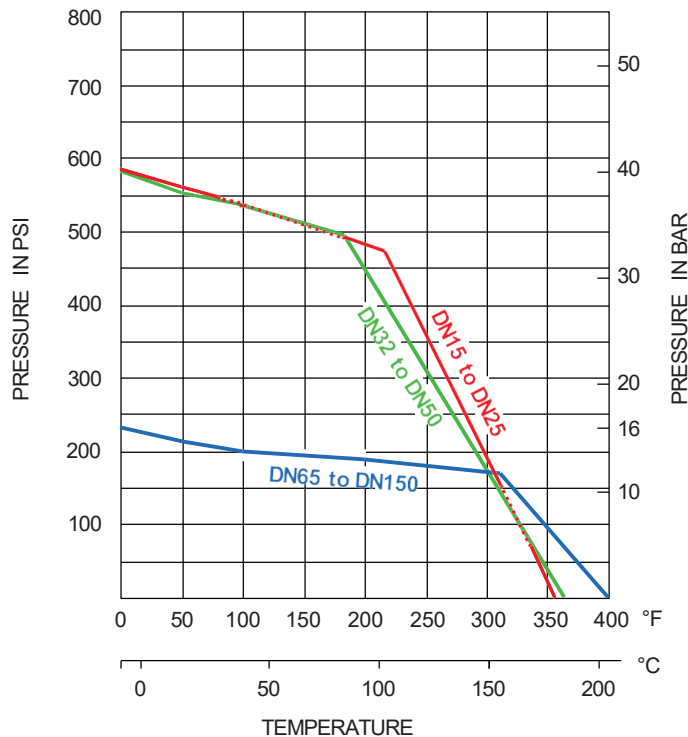
You must lift the locking device **19** to be able to turn the valve's handle **18** 1/4 of a turn until it cannot be turned any further due to **10**.

Turn the valve's handle 1/4 turn (90°) clockwise to close the valve or 1/4 turn (90°) anti-clockwise to open it.

The valve is open if the handle is in line with the piping.

You can lock the handle with a padlock, in the open or closed position.

Pressure and temperature



Warning: If the ball valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch the valve.

Fluids

This valve is suitable for non-abrasive and non-coagulable fluids, as long as the fluids are chemically compatible with the valve parts that they can come into contact with.

You can motorise the valve through direct mounting using its ISO mounting plate (ISO 5211 standard), see the corresponding product data sheets.

- Valve with spring return or double-acting pneumatic actuator (model 50270)
- Valve with spring return or double-acting stainless steel pneumatic actuator (model 50271)
- Valve with IP65 electric servo motor (model 50273)
- Valve with IP66 electric servo motor (models 50277-50278-50279)
- Valve with IP68 electric servo motor (models 50281-50282-50283)
- Valve with ATEX IP68 electric servo motor (models 50285-50286-50287)

Use in ATEX zones

Manual valves (model 58249), pneumatic valves (50270 and 50271) and electric valves (50285, 50286 and 50287) can be used in ATEX Ex II 2 GD c T3 zones.

If you add any other element (e.g. position detection, solenoid valves etc.), you must check that this addition can be used in ATEX zones.

You **cannot use** model 50273 (valve with electric servo motor) **in ATEX zones.**

Assembly and maintenance instructions

Installation

You can install the valve in any position. However, check that there is enough space to move the valve's handle where you are planning to install the valve.

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

Check that all piping is perfectly aligned and that the piping support structure is dimensioned so that the valve is not subject to any external stresses. The piping support structure must only support the pipes, not the valve.

How to install a valve with flanges:

Weld flanges (e.g. flanges with collar) onto the piping and respect the required spacing and alignment of the mounting holes. You must check that the valve is correctly lined up with the flanges during installation. For heavy parts, use lifting devices if necessary (do not lift the valve by its handle).

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

Pressure test the installation according to the relevant standards (e.g. EN 12266-1), but do not exceed the valve's specifications.

Maintenance

The valve does not require any specific maintenance if it is used in normal operating conditions.

If the valve is never opened or closed during normal operation then you should regularly open and close the valve to check that it is still working correctly.

If any leaks appear around the shaft **6**, during operation (or during the valve installation testing phase), tighten the shaft nut **15**. You can usually stop leaks by tightening the nut by 30 to 60°. But you must not over tighten the nut, as this could reduce the system's service life. You must adhere to the tightening torques (see table **A** on page 8).

You may need to change some of the valve's parts due to unusual wear and tear, or if a fluid has damaged the valve and caused a leak or malfunction.

If this is the case see the "Assembly / Disassembly" section below.

Assembly / Disassembly

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



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

Warning: If the ball valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch the valve.

Warning: Beware of hazardous materials - follow the instructions provided by the suppliers.

Remove the valve; unscrew the clamping ring **5** from the valve's body **1**.

Remove the body gasket **4** and the first seat ring **2**.

Close the valve to remove the ball **3** and the second seat ring **2**. Check the condition of the ball's surface. You must replace it at the same time as the seat rings **2** if it is scratched or damaged.

If you need to replace the shaft's sealing, remove the parts from the upper part of the valve in the following order: handle nut **21**, handle **18** and flat washer(s) **17** in the case of a manual valve (otherwise remove the valve's motorisation), then the stop nut **16**, shaft nut **15**, Belleville washers **14** and stainless steel rings (**12** + **13**).

Push the shaft **6** towards the inside of the body **1** in order to remove it, and remove the flat shaft gasket **8** and the PTFE shaft ring **7** (be careful you do not scratch the shaft).

Remove the PTFE shaft packing (v-washers) **11** from its housing (be careful you do not scratch the surface of this housing).

Clean and inspect all of the parts of the valve. Replace any worn parts. You are strongly advised to replace all the shaft's sealing parts (gaskets and PTFE packing) if it has been disassembled, as well as the ball's PTFE seat rings and body gasket.

Follow the disassembly steps in reverse order to reassemble the valve.

Pressure test the valve and check that it can be opened and closed before you put the installation back into service.

Table A	Dimensions	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
	Tightening torque for shaft nut (gland)	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	20.4 ~ 22.6	20.4 ~ 22.6

Standards and compliance

- This valve is designed in accordance with DIN 3375 and EN 12516-I standards
- The casting process used to make this valve is compliant with AD 2000 W0
- Connection: flanges in accordance with EN 1092-1
- Leak testing according to EN 12266
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC) according to the annexe III module H (certificate DGR 0036-QS-1045-20)
- ATEX Ex II 2 GD c T3, in accordance with Directive 94/9/EC (certificate EX9 13 09 82326 002)