

Ball valves

**Model 58148**

**2-part valve female/female BSP with
pressure relief hole for compressed air
316 stainless steel**

PN10 - Full bore - Lockable handle



Specifications

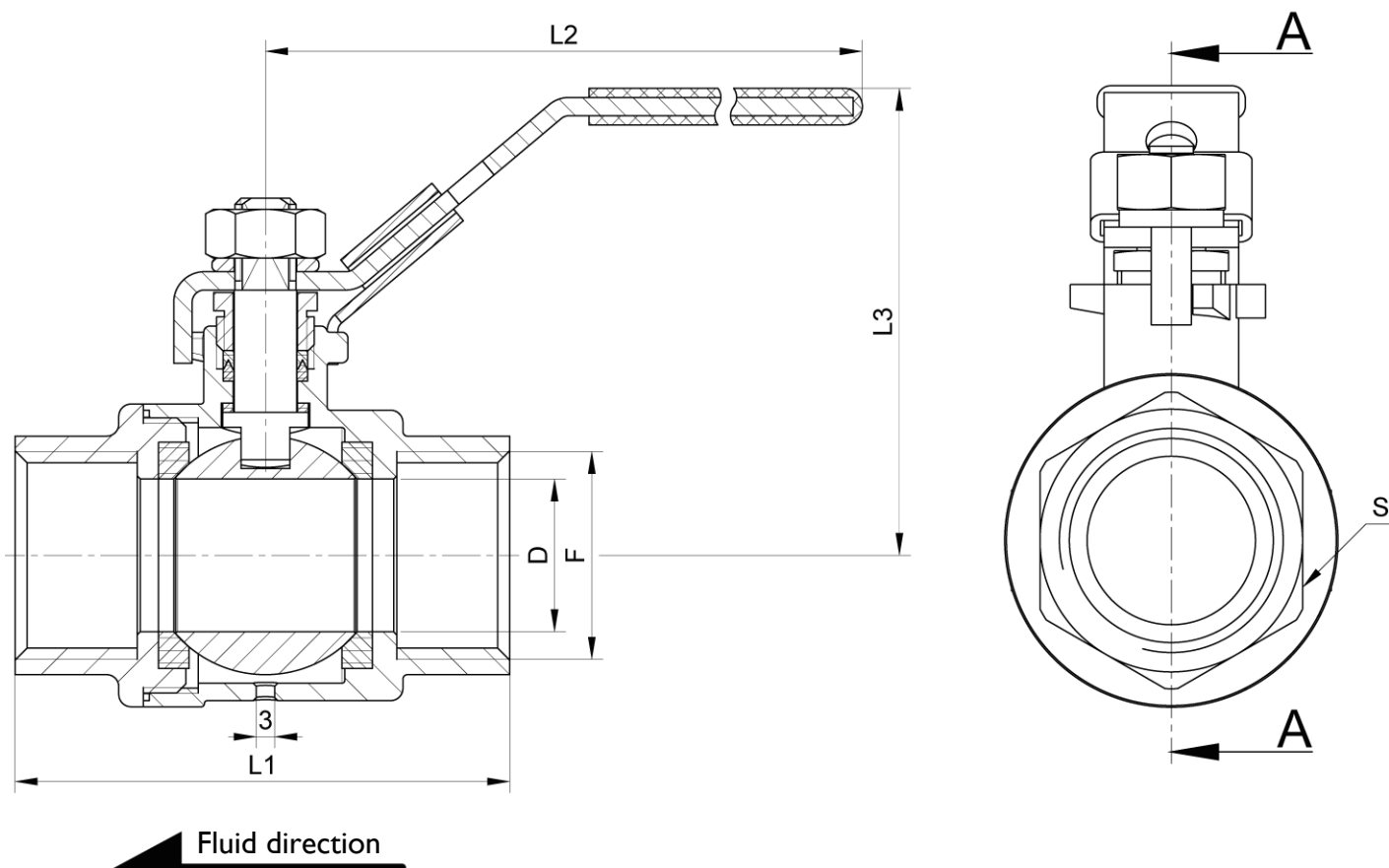
Dimensions: DN8 to DN25 (1/4" to 1")

Connection: BSP female thread ISO 7-1

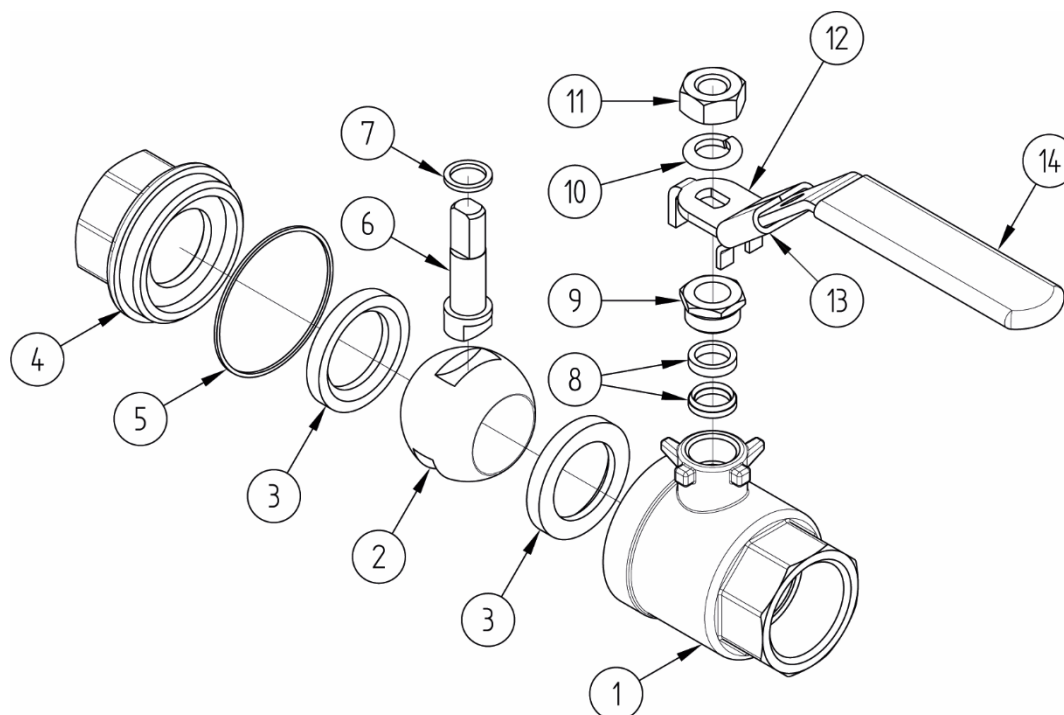
Pressure: PN10

Temperature: -20°C to +60°C

Material: 316 or CF8M stainless steel
(for the parts that can come into contact with the
transported fluid)
PTFE gaskets



DN (mm)	NB (inches)	D (mm)	F (inches)	L1 (mm)	L2 (mm)	L3 (mm)	S (mm)	Weight (kg)	Part number BSP
8	1/4"	9	Rp 1/4"	54	100	50	19	0.25	458148-8
10	3/8"	13	Rp 3/8"	54	100	50	22	0.25	458148-10
15	1/2"	15	Rp 1/2"	57	100	52	26	0.32	458148-15
20	3/4"	20	Rp 3/4"	68	100	56	33	0.46	458148-20
25	1"	25	Rp 1"	80	128	69	39	0.77	458148-25
32	1 1/4"	32	Rp 1 1/4"	91	128	81	50	0.98	458148-32
40	1 1/2"	38	Rp 1 1/2"	103	155	90	55	1.39	458148-40
50	2"	50	Rp 2"	124	155	108	67	2.36	458148-50



N°	Part Name	Material
1	BODY	EN 1.4408
2	BALL	ASTM CF8M
3	SEAT RING	PTFE
4	FLANGE (FEMALE THREADED END)	EN 1.4408
5	BODY GASKET	PTFE
6	SHAFT	AISI 316
7	SHAFT RING	PTFE
8	SHAFT PACKING	PTFE
9	SHAFT NUT (GLAND)	A2
10	LOCK WASHER	A2
11	HANDLE NUT	A2
12	HANDLE	AISI 304
13	LOCKING DEVICE	AISI 304
14	HANDLE COVERING	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 default, 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 **13** to be able to turn the valve's handle **12**. You must always turn the handle by a complete 1/4 turn, until it cannot be turned any further.

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.

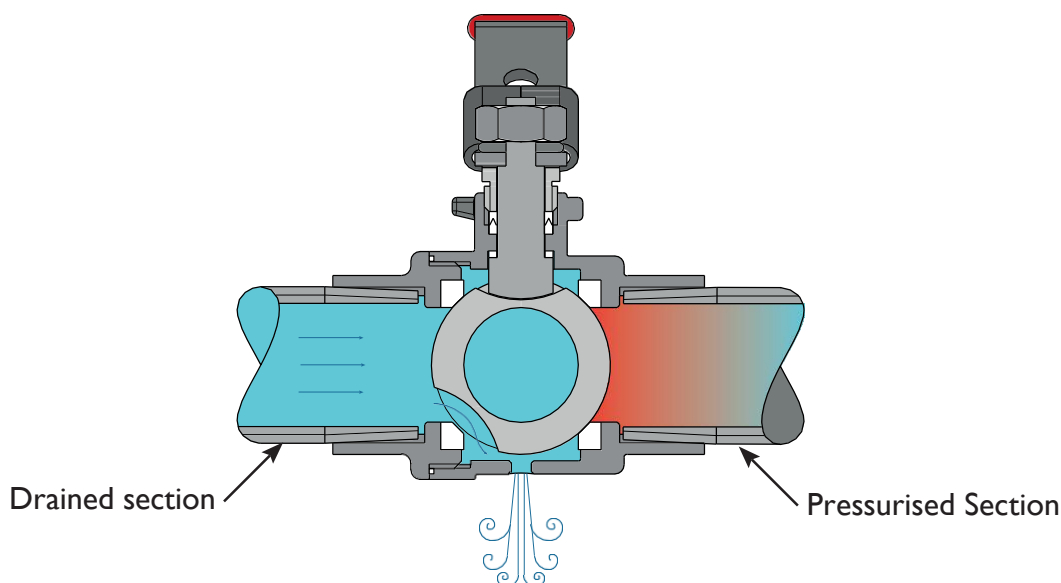
You can lock the handle with a padlock, in the open or closed position.

Operating principle

This valve is designed to drain a section of piping when you close it:

When you close the valve, its flange side **4** opens directly into the area surrounding the outside of the piping system.

This means that any fluid contained within the system will be released through the valve as soon as it is closed, so this valve must only be used in systems carrying compressed air.



Pressure and temperature

The working pressure is 10 bar while the temperature remains within the range -20°C to +60°C.

Fluids

Warning: This valve includes a non-piped drain and so it must only be used in systems transporting air or non-heated, non-hazardous fluids.

Flow coefficient and pressure loss

Dimensions	DN8	DN10	DN15	DN20	DN25
	1/4"	3/8"	1/2"	3/4"	1"
Kv (m³/h)	10.7	20.7	28.5	50.7	79.2

The flow coefficient Kv defines water flow rate through a device (valve, check valve etc.) for a pressure loss (ΔP) of 1 bar. Kv is expressed mathematically as:

$$\Delta P = \frac{Q^2}{K_v^2} \quad \text{so:} \quad K_v = \frac{Q}{\sqrt{\Delta P}} \quad \begin{array}{l} Q \text{ in m}^3/\text{h} \\ \Delta P \text{ in bar} \end{array} \quad \begin{array}{l} K_v \text{ in m}^3/\text{h} \\ C_v \text{ in GPM (Gallons} \\ \text{per minute - US)} \end{array} \quad C_v = 1.16 \times K_v$$

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 threaded ends:

Use a wrench that is suitable for the hexagon-shaped valve ends. You must not use the valve's handle when you are tightening the assembly (this could damage the valve).

Use a product that is suitable for the working conditions (e.g. pipe sealant model **5291**, PTFE tape, etc.) to make sure the valve's threaded connections are sealed correctly.

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 **9**. 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 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' and 'Spare Parts' sections 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 valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch it.

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

Unscrew the female threaded end flange **4** and remove the gasket **5** and seat rings **3**.

Unscrew the handle nut **11**, remove the lock washer **10** and the handle **12**.

Unscrew the shaft nut **9** and remove the packings **8**.

Push the shaft **6** towards the inside of the valve's body in order to remove it, then remove the shaft ring **7**.

Clean and inspect all of the parts of the valve. Replace any worn parts. You are strongly advised to replace any sealing parts that have been disassembled.

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

Spare parts



Gasket kits

A gasket kit contains:

- 2 seat rings **3**
- 1 body gasket **5**
- 1 shaft ring **7**
- 2 packings **8**

(quantity could vary according to the DN)

DN (mm)	NB (inches)	Gasket kit Part no.
8	1/4"	D5171-8
10	3/8"	D5171-10
15	1/2"	D5171-15
20	3/4"	D5171-20

DN (mm)	NB (inches)	Gasket kit Part no.
25	1"	D5171-25
32	1"1/4	D5171-32
40	1"1/2	D5171-40
50	2"	D5171-50

Handle **12; 13; 14**



DN (mm)	NB (inches)	Handle Part no.
8 to 10	1/4" to 3/8"	D5191-810
15	1/2"	D5191-15
20	3/4"	D5191-20

DN (mm)	NB (inches)	Handle Part no.
25 to 32	1" to 1"1/4	D5191-2532
40 to 50	1"1/2 to 2"	D5191-4050

Handle covering **14**



DN (mm)	NB (inches)	Red covering Part no.
8 to 20	1/4" to 3/4"	D5471R-820
25 to 32	1" to 1"1/4	D5471R-2532
40 to 50	1"1/2 to 2"	D5471R-4050

DN (mm)	NB (inches)	Blue covering Part no.
8 to 20	1/4" to 3/4"	D5471B-820
25 to 32	1" to 1"1/4	D5471B-2532
40 to 50	1"1/2 to 2"	D5471B-4050

Customisation possibilities



Handle covering **14**



DN (mm)	NB (inches)	Blue covering Part no.
8 to 20	1/4" to 3/4"	D5471B-820
25 to 32	1" to 1"1/4	D5471B-2532
40 to 50	1"1/2 to 2"	D5471B-4050

DN (mm)	NB (inches)	Yellow covering Part no.
8 to 20	1/4" to 3/4"	D5471J-820
25 to 32	1" to 1"1/4	D5471J-2532
40 to 50	1"1/2 to 2"	D5471J-4050

DN (mm)	NB (inches)	Green covering Part no.
8 to 20	1/4" to 3/4"	D5471V-820
25 to 32	1" to 1"1/4	D5471V-2532
40 to 50	1"1/2 to 2"	D5471V-4050

Standards and compliance

- Connection: BSP female thread in accordance with the standard EN ISO 7-1 (Rp).
- Leak testing according to EN 12266/API 598.
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC).