

Ball valves



ISO 228-1

Model 58139 Valve with connector for a flexible pipe (garden tap with hose connector) male **BSPP** **316 stainless steel**

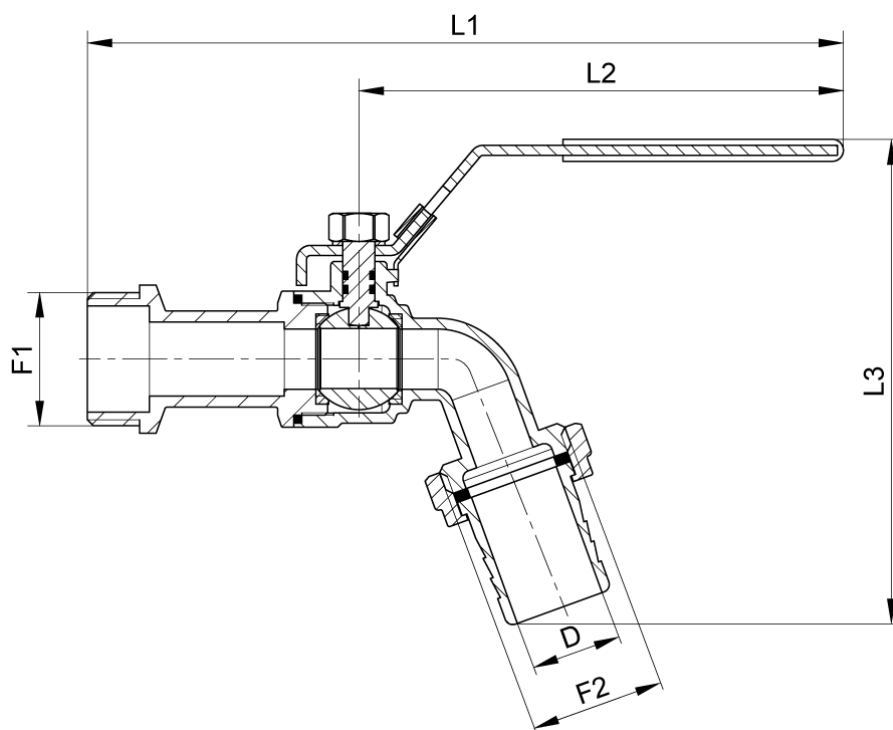
Lockable handle



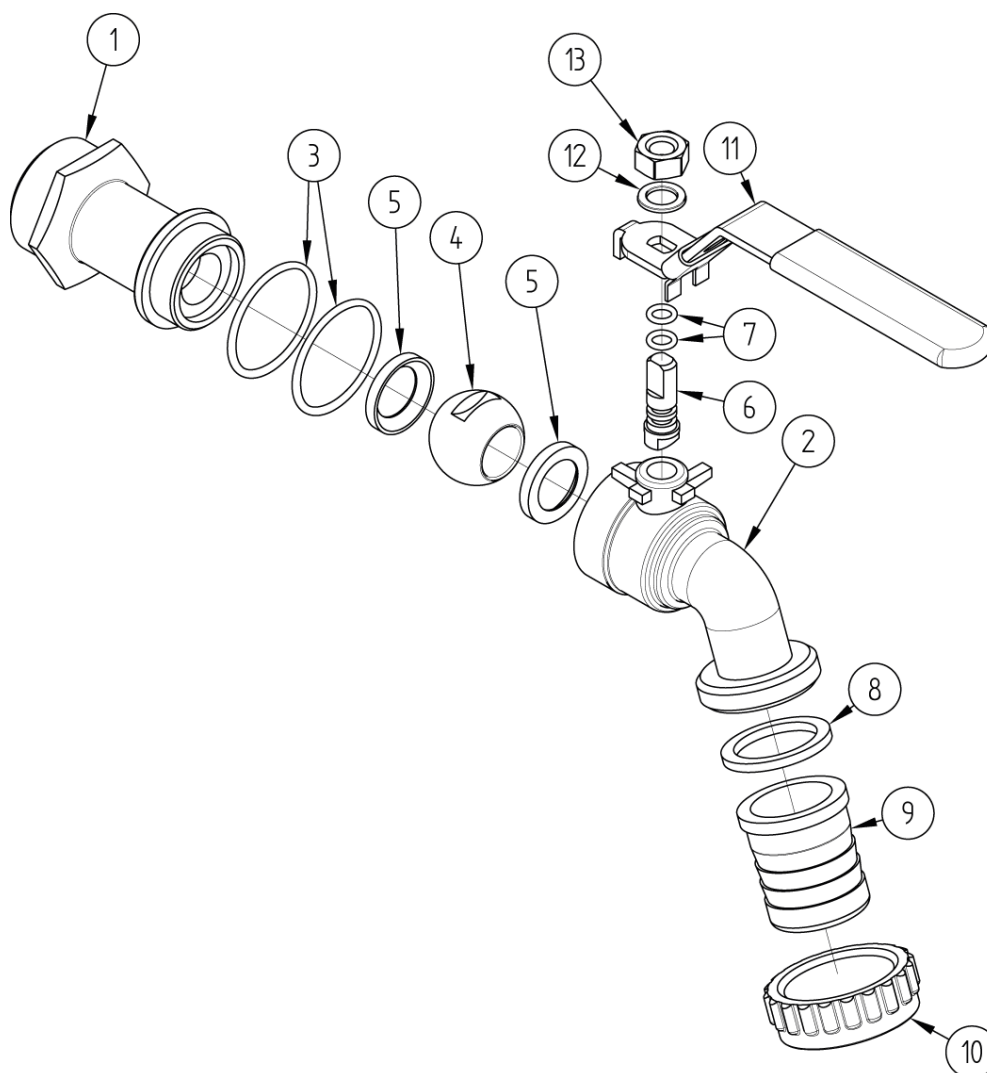
Specifications

Dimensions: DN15 to DN25 (1/2" to 1")**Connection:** BSPP male thread (ISO 228-1)**Pressure:** PN16**Temperature:** from 0°C to +110°C**Material:** 316 stainless steel
(for the parts that can come into contact with
the transported fluid)

PTFE and NBR gaskets



DN (mm)	NB (inches)	D (mm)	F1 (inches)	F2 (inches)	L1 (mm)	L2 (mm)	L3 (mm)	Weight (kg)	Part number
15	1/2"	13	G 1/2"	G 3/4"	145	92	87	0.21	458139-15
20	3/4"	16	G 3/4"	G 3/4"	155	92	87	0.28	458139-20
25	1"	27.5	G 1"	G 1"	185	115	120	0.44	458139-25



N°	Part Name	Material
1	FLANGE (MALE THREADED END)	AISI 316
2	BODY	AISI 316
3	BODY GASKET	NBR
4	BALL	AISI 316
5	SEAT RING	PTFE
6	SHAFT	AISI 316
7	GASKET (SHAFT)	NBR
8	GASKET (RIBBED END)	NBR
9	RIBBED END	AISI 316
10	END NUT	AISI 316
11	HANDLE	AISI 304 + PLASTIC COVERING
12	WASHER	A2
13	SHAFT NUT	A2

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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 to be able to turn the valve's handle **II**. You must always turn the handle by a complete 1/4 turn, until it cannot be turned any further.

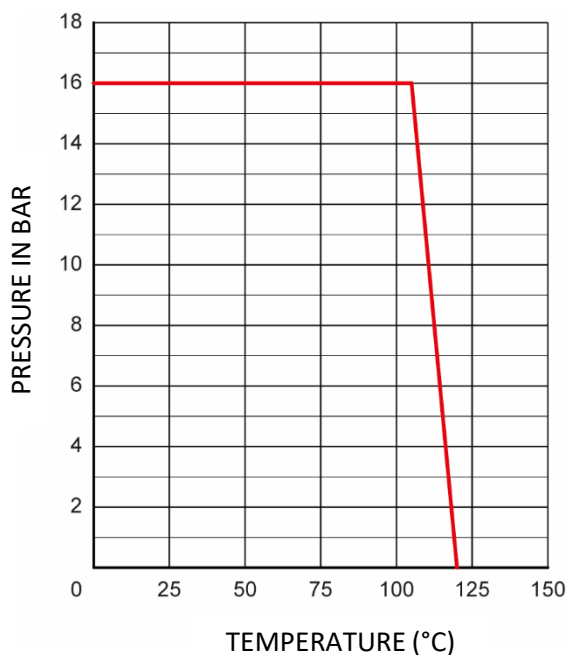
Turn the valve's handle 1/4 turn (90°) clockwise to close the valve or 1/4 turn (90°) anti-clockwise to open it.

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.

Pressure and temperature

For pressure/temperature ratings, see the graph below.



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

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.

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Flow coefficient and pressure loss

Dimensions	DN15	DN20	DN25
	1/2"	3/4"	1"
Kv (m³/h)	2.2	3.9	5.7

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:

$$\Delta P = \frac{Q^2}{K_v^2} \quad \text{so:} \quad K_v = \frac{Q}{\sqrt{\Delta P}}$$

Q in m³/h Kv in m³/h $C_v = 1.16 \times K_v$
 ΔP in bar Cv in GPM (Gallons per minute - US)

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 end. You must not use the valve's handle when you are tightening the assembly (this could damage the valve).

Use a flat gasket to make sure the valve's threaded connections are sealed correctly. Use gasket model **5297** for 'internal mounting' or gasket model **5296** for 'external mounting'.

Use a hose clip (see **Range 72** in our Connections Catalogue) to keep the flexible piping attached to the tap's ribbed end.

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 **13**. 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 male threaded end flange **1** and remove the body gasket **3** and seat rings **5**.

Unscrew the handle nut **13**, remove the lock washer **12** and the handle **11**.

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

Unscrew the end nut **10**, remove the ribbed end **9** and the gasket **8**.

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 **5**
- 2 body gasket **3**
- 1 end gasket **8**
- 2 shaft gaskets **7**

(quantity could vary according to the DN)

DN (mm)	NB (inches)	Gasket kit Part no.
15	1/2"	D5161-15
20	3/4"	D5161-20
25	1"	D5161-25

Handle **11**



DN (mm)	NB (inches)	Handle Part no.
15	1/2"	D5151-15
20	3/4"	D5151-20
25	1"	D5151-25

Standards and compliance

- Connection: BSP male thread in accordance with EN ISO 228-1 (G).
- Leak testing according to EN 12266/API 598.
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC).