

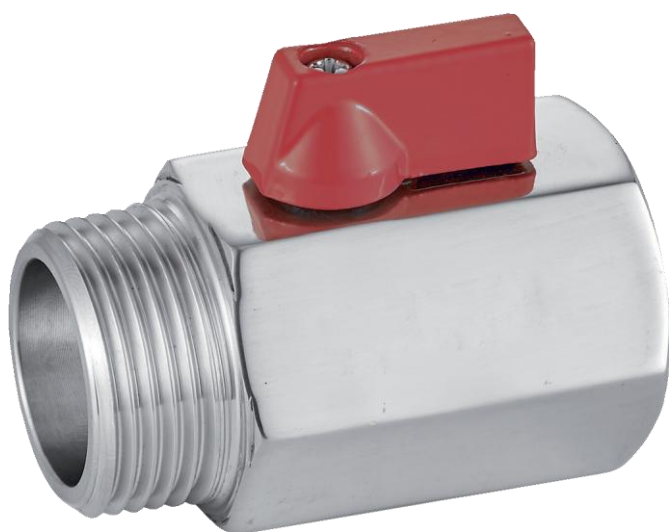
# Ball valves



ISO 7-1

**Model 58106****Mini ball valve male/female BSP****316 stainless steel**

1000 lbs/PN63 - Reduced bore

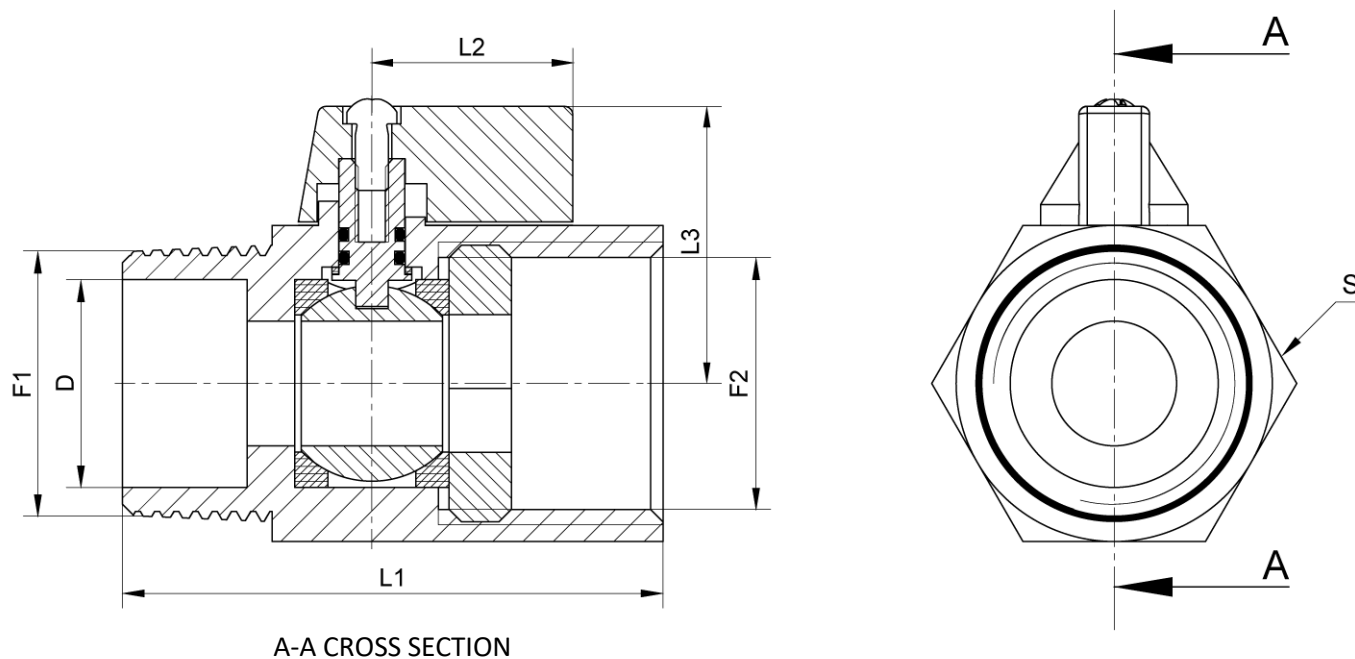


## Specifications

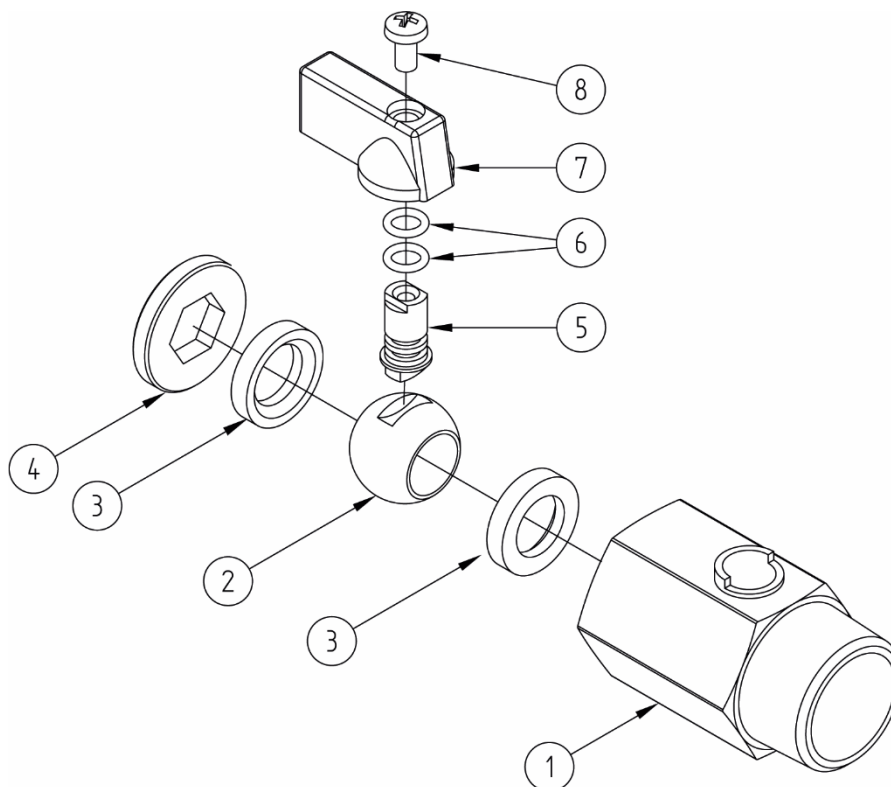
**Dimensions:** DN8 to DN25 (1/4" to 1")**Connection:** BSP female thread ISO 7-1**Pressure:** PN63 (1000 lbs)**Temperature:** -20°C to +180°C**Material:** 316 or CF8M stainless steel  
(for the parts that can come into contact with  
the transported fluid)

PTFE + FKM gaskets

Polished body



| DN<br>(mm) | NB<br>(inches) | D<br>(mm) | F1<br>(inches) | F2<br>(inches) | L1<br>(mm) | L2<br>(mm) | L3<br>(mm) | S<br>(mm) | Weight<br>(kg) | Part number |
|------------|----------------|-----------|----------------|----------------|------------|------------|------------|-----------|----------------|-------------|
| 8          | 1/4"           | 7         | R 1/4"         | Rp 1/4"        | 43         | 23         | 25         | 21        | 0.09           | 458106-8    |
| 10         | 3/8"           | 7         | R 3/8"         | Rp 3/8"        | 43         | 23         | 25         | 21        | 0.09           | 458106-10   |
| 15         | 1/2"           | 9         | R 1/2"         | Rp 1/2"        | 46         | 23         | 27.5       | 24.5      | 0.11           | 458106-15   |
| 20         | 3/4"           | 12.5      | R 3/4"         | Rp 3/4"        | 54         | 23         | 31         | 31        | 0.19           | 458106-20   |
| 25         | 1"             | 15        | R 1"           | Rp 1"          | 65         | 23         | 34.5       | 38        | 0.33           | 458106-25   |



| N° | Part Name     | Material  |
|----|---------------|-----------|
| 1  | BODY          | ASTM CF8M |
| 2  | BALL          | AISI 316  |
| 3  | SEAT RING     | PTFE      |
| 4  | CLAMPING RING | ASTM CF8M |
| 5  | SHAFT         | AISI 316  |
| 6  | GASKET        | FKM       |
| 7  | HANDLE        | ALUMINIUM |
| 8  | BOLT          | A2        |

## Use

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.

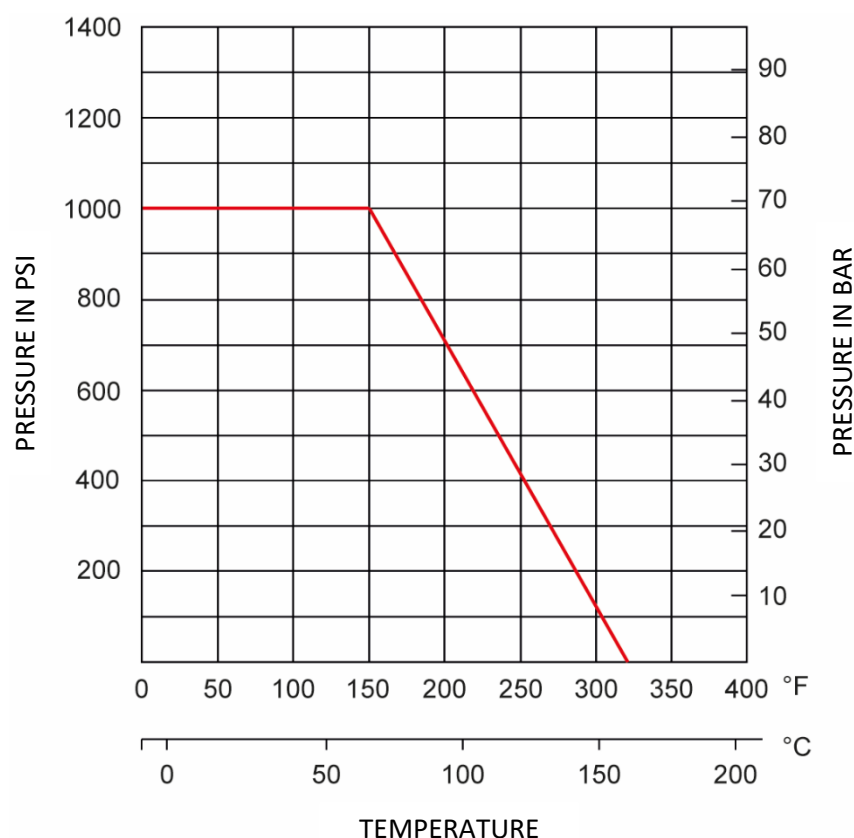
This valve is a shut-off valve: it must be either fully open or fully closed.

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.

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.

## 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.

## Flow coefficient and pressure loss

| Dimensions | DN8  | DN10 | DN15 | DN20 | DN25 |
|------------|------|------|------|------|------|
|            | 1/4" | 3/8" | 1/2" | 3/4" | 1"   |
| Kv (m³/h)  | 5.0  | 5.0  | 11.9 | 22.9 | 34.3 |

The flow coefficient Kv defines water flow rate through a device (e.g. valve, check valve etc.) for a pressure loss ( $\Delta P$ ) 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:

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. PTFE tape) to make sure the valve's threaded connections are sealed correctly, but do not over tighten the connections as this could deform the valve's body.

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.

## Standards and compliance

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