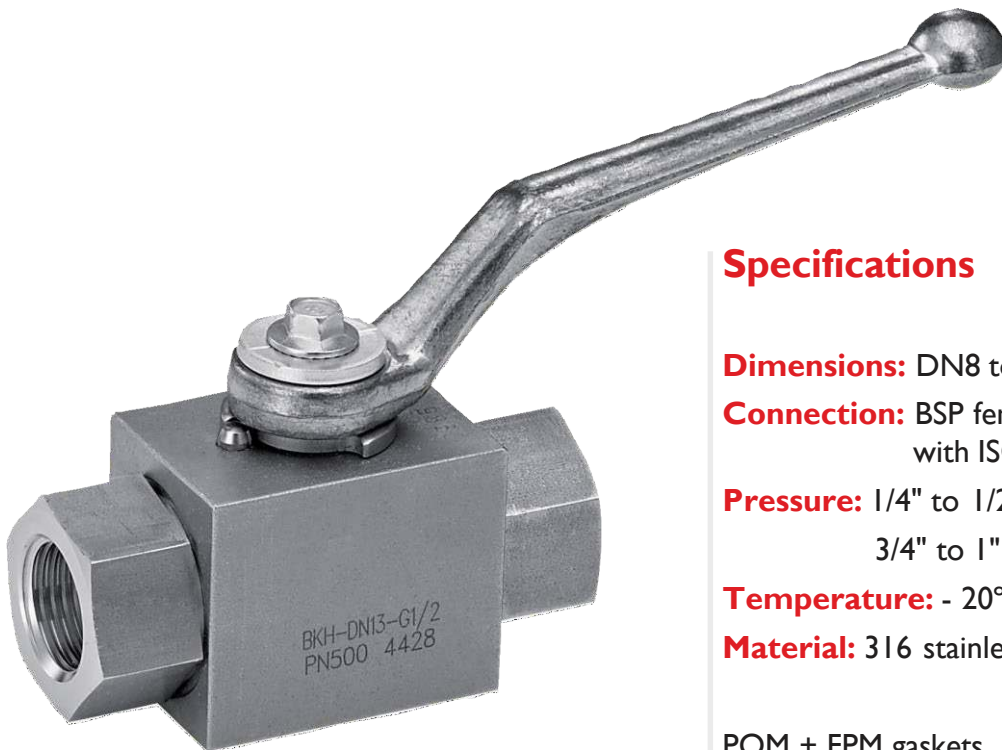


Ball valves

High pressure ball valve female/female - Reduced bore

Model 58543 BSP female thread

Model 58545 NPT female thread



Specifications

Dimensions: DN8 to DN40 (1/4" to 1 1/2")

Connection: BSP female thread in accordance with ISO 228-1 or NPT

Pressure: 1/4" to 1/2" - PN500

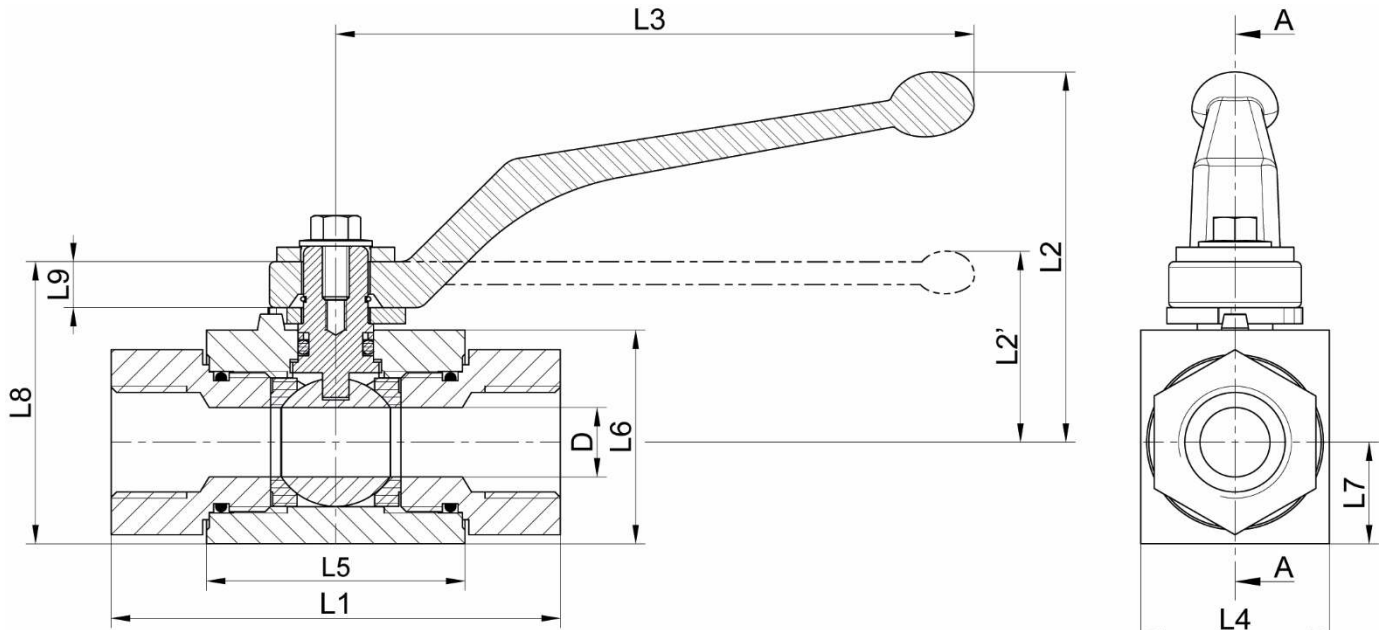
3/4" to 1" 1/2" - PN315

Temperature: - 20°C to +100°C

Material: 316 stainless steel

POM + FPM gaskets

On request: other materials, version that can be motorised



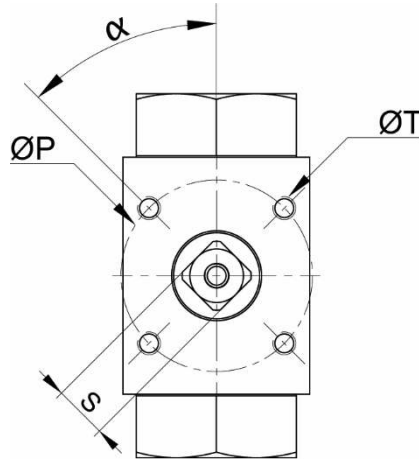
A-A Cross Section

DN (mm)	NB (inches)	D (mm)	F (inches)	L1 (mm)	L2 (mm)	L2' (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	S (mm)	Weight (kg)	BSP manual part number
8	1/4"	6	1/4"	69	69	-	117	26	40	33	13.5	47	11	9x9	0.40	458543-8
10	3/8"	10	3/8"	72	70	-	117	32	43	38	17.5	52	11	9x9	0.45	458543-10
15	1/2"	13	1/2"	83	71	-	117	35	48	40	19	54	11	9x9	0.65	458543-15
20	3/4"	20	3/4"	95	-	56*	200	49	62	57	24.5	75	14	14x14	1.50	458543-20
25	1"	25	1"	113	-	59*	200	58	66	65	29.5	83	14	14x14	2.00	458543-25
32	1 1/4"	25	1 1/4"	120	-	59*	200	58	66	65	29.5	83	14	14x14	3.20	458543-32
40	1 1/2"	25	1 1/2"	130	-	59*	200	58	66	65	29.5	83	14	14x14	4.00	458543-40

DN (mm)	NB (inches)	D (mm)	F (inches)	L1 (mm)	L2 (mm)	L2' (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	S (mm)	Weight (kg)	NPT manual part number
8	1/4"	6	1/4"	69	69	-	117	26	40	33	13.5	47	11	9x9	0.40	458545-8
10	3/8"	10	3/8"	72	70	-	117	32	43	38	17.5	52	11	9x9	0.45	458545-10
15	1/2"	13	1/2"	83	71	-	117	35	48	40	19	54	11	9x9	0.65	458545-15
20	3/4"	20	3/4"	95	-	56*	200	49	62	57	24.5	75	14	14x14	1.50	458545-20
25	1"	25	1"	113	-	59*	200	58	66	65	29.5	83	14	14x14	2.00	458545-25
32	1 1/4"	25	1 1/4"	120	-	59*	200	58	66	65	29.5	83	14	14x14	3.20	458545-32
40	1 1/2"	25	1 1/2"	130	-	59*	200	58	66	65	29.5	83	14	14x14	4.00	458545-40

* flat handle

Model **58543-M**: Version without a handle that can be motorised

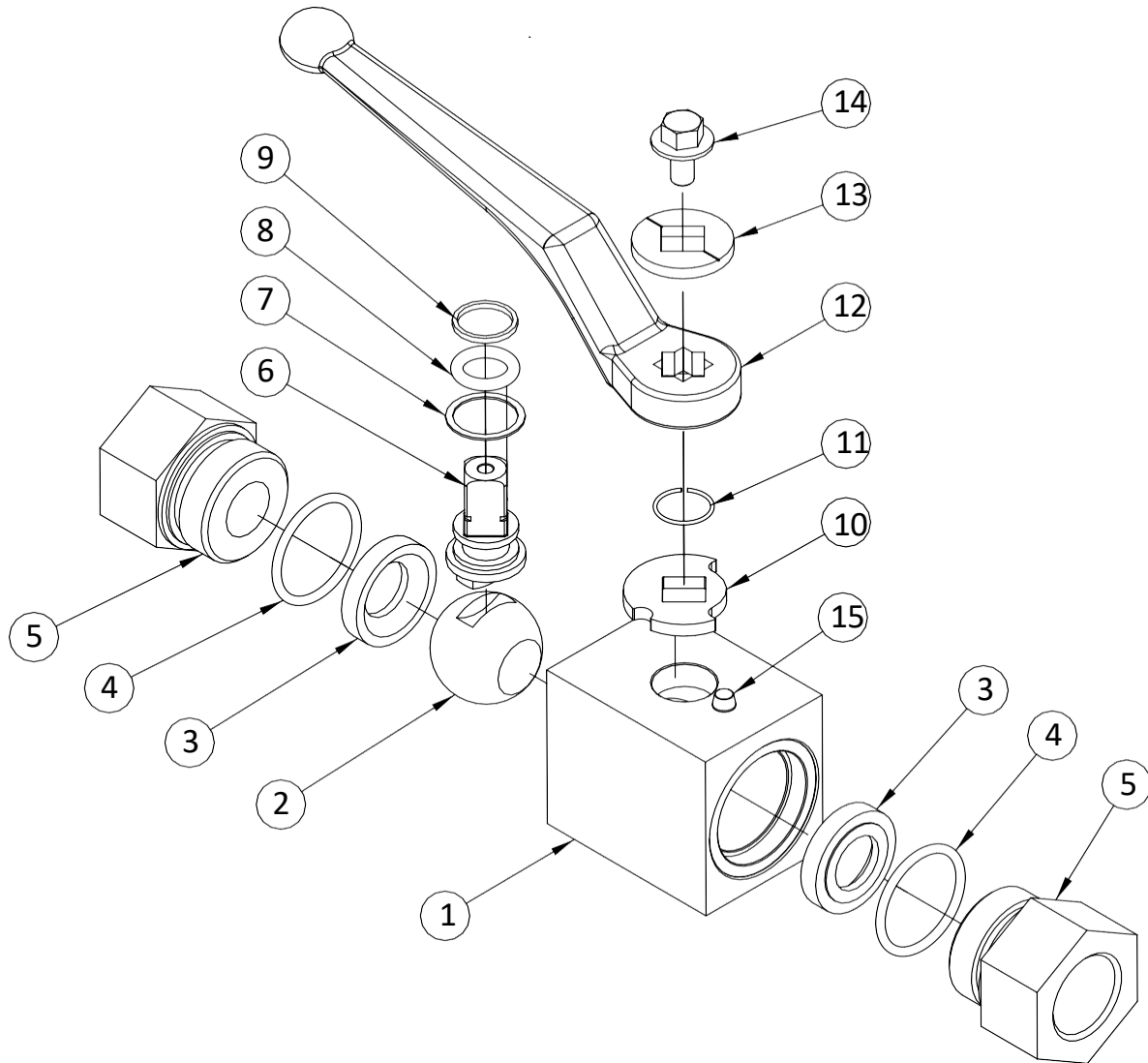


DN (mm)	ISO mounting plate	S (mm)	ØP (mm)	ØT (mm)	α (°)	BSP part number (for motorisation)	NPT part number (for motorisation)
8	F03*	9	36	M5	30*	458543-8M	458545-8M
10	F03	9	36	M5	45	458543-10M	458545-10M
15	F03	9	36	M5	45	458543-15M	458545-15M
20	F05	14	50	M6	45	458543-20M	458545-20M
25	F05	14	50	M6	45	458543-25M	458545-25M
32	F05	14	50	M6	45	458543-32M	458545-32M
40	F05	14	50	M6	45	458543-40M	458545-40M

*30° does not correspond to the ISO 5211 standard

Delivered without a handle

All of the other dimensions for the valve that can be motorised are the same as for the manual valve.



N°	Part Name	Material
1	BODY	SS316
2	BALL	SS316
3	SEAT RING	POM
4	O-RING	FPM
5	FLANGE (FEMALE THREADED END)	SS316
6	SHAFT	SS316
7	STAINLESS STEEL RING (SHAFT)	SS316
8	O-RING (SHAFT)	PTFE
9	ANTI EXTRUSION BACK UP RING (SHAFT)	SS316
10	HANDLE STOP WASHER OPEN/CLOSED	SS316
11	RETAINING RING	SS316
12	HANDLE	ALUMINIUM
13	HANDLE WASHER	SS316
14	SCREW (HANDLE)	SS316
15	STOP PIN	SS316

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Technical information, illustrations and photographs are provided for information only, they are not contractual. Some may vary according to the tolerances accepted in the profession and the applicable standards. All instructions for use, disassembly and maintenance are recommendations only. These could also vary depending on product usage conditions, its installation environment and purchaser requirements – of which the purchaser alone is responsible for their definition.

Use

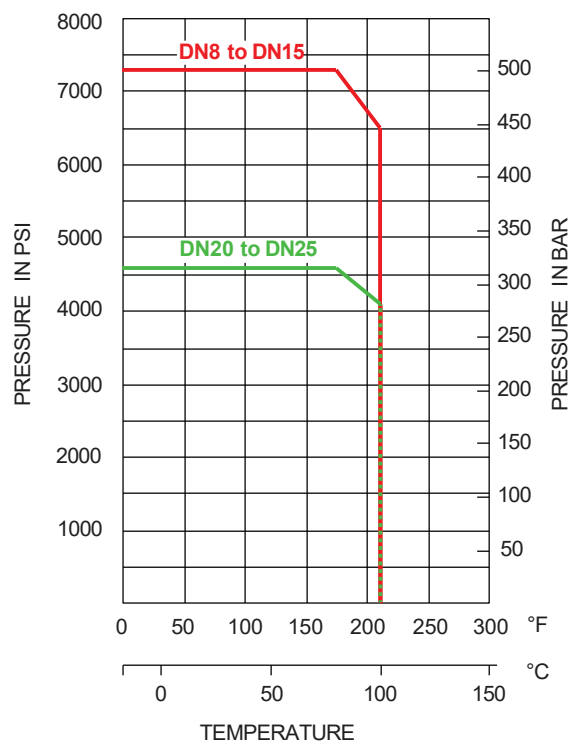
This valve is a shut-off valve: it must be either fully open or fully closed.

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.

Turn the valve's handle 1/4 turn until it cannot be turned any further.

Pressure and temperature

For pressure/temperature ratings, see the graph below.



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.

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 female threaded ends:

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

You must use a flat gasket (for BSP ISO 228-1 thread) or a product that is suitable for the working conditions (e.g. PTFE tape for NPT thread) to make sure the 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.

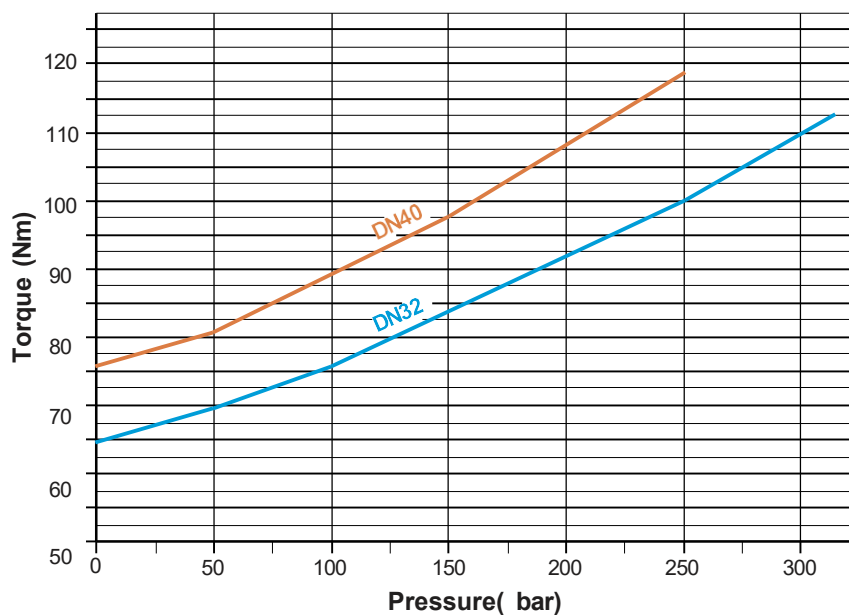
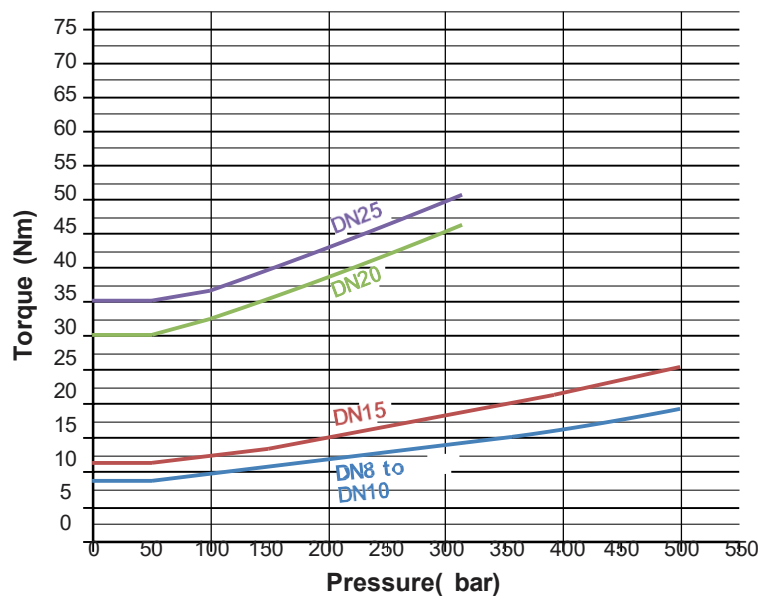
You may need to change some of the valve's parts due to unusual wear and tear, or if a fluid has damaged the valve and caused a leak or malfunction.

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

Flow coefficient

	DN 8	DN 10	DN 15	DN20	DN25	DN 32	DN 40
	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2
Cv (gal/min)	4.76	13.29	22.6	53.0	83.1	122.1	197.7
Kv (m³/h)	4.12	11.49	19.4	45.6	71.5	105	170

Operating torque



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.

You should work with the valve in the open position.

Remove the valve and the flanges **5**.

Close the valve to remove the ball **2**. Check the condition of the ball's surface. You must replace it at the same time as the seat rings **3** 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: screw **14**, handle washer **13**, handle **12**, retaining ring **11** and handle stop washer **10**. Push the shaft **6** towards the inside of the body **1** in order to remove it, and remove the stainless steel ring **7**, the o-ring **8** and the anti extrusion back up ring **9** from it (be careful you do not scratch the shaft).

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 POM seat rings and FPM o-rings.

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.

Standards and compliance

- Connection: BSP female thread in accordance with EN ISO 228-1 and NPT in accordance with ANSI B1.20.1
- Leak testing according to EN 12266 / API 598
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC)