

Non-return check valves

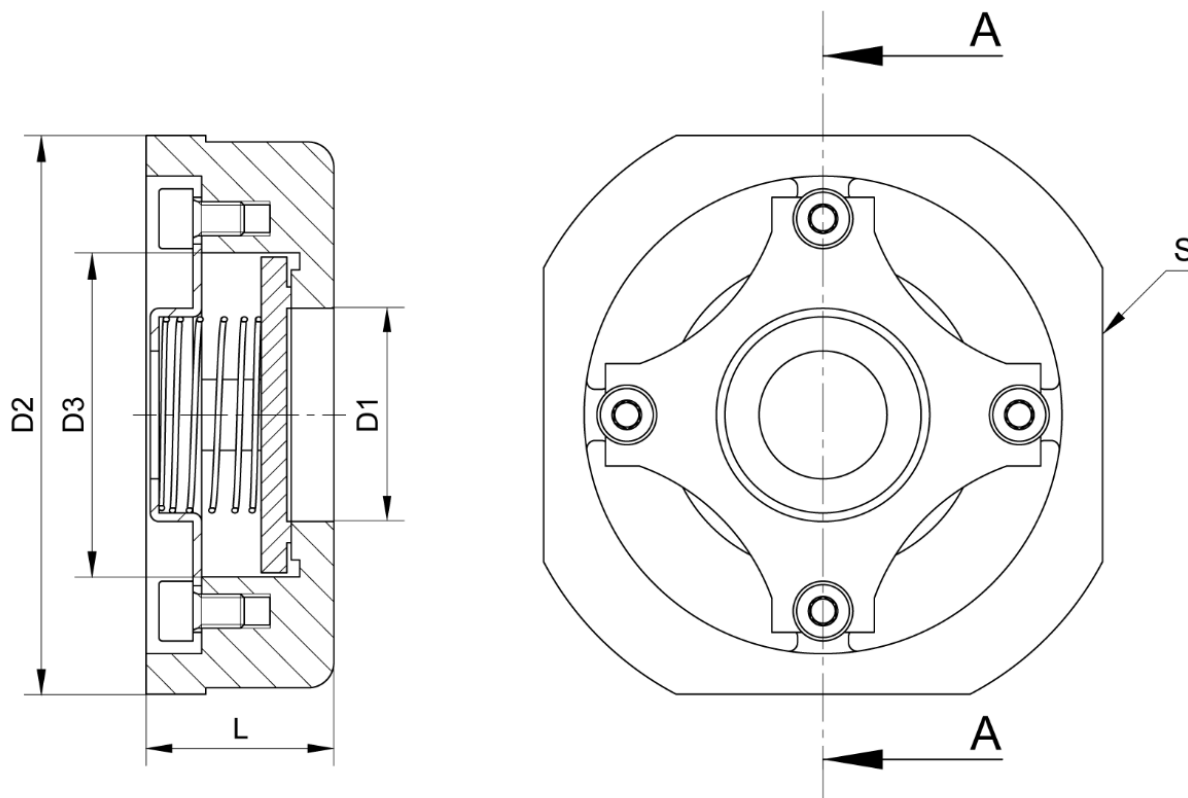
Model 58738**Wafer spring-loaded check valve with flat positioning sections - 316 stainless steel**

Specifications

Dimensions: DN15 to DN100 (1/2" to 4")**Connection:** between flanges**Pressure:** PN40**Max. Temperature:** +200°C**Material:** 316 or CF8M stainless steel

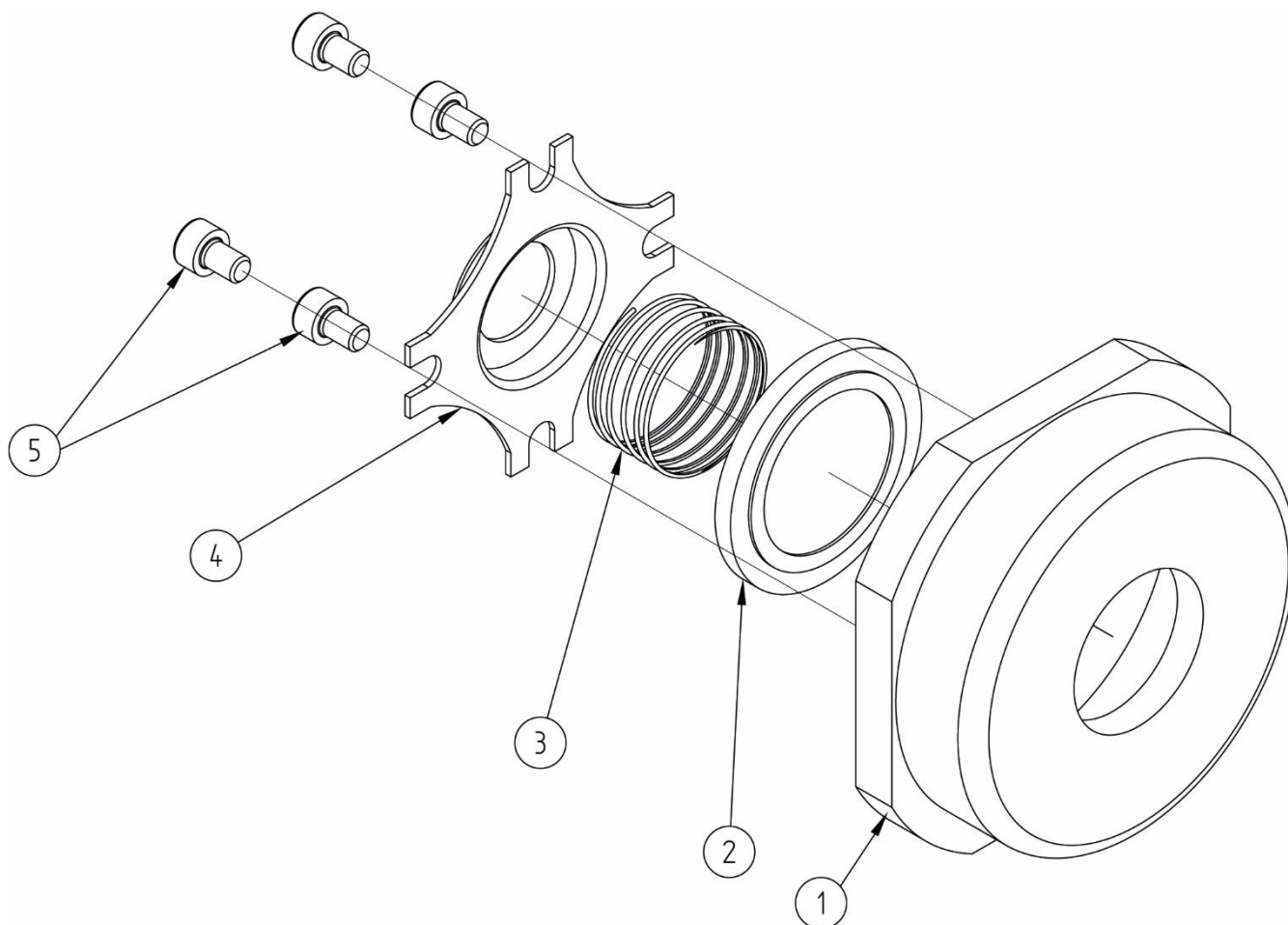
(for the parts that can come into contact with the transported fluid)

Metal/metal check valve



A-A cross section

DN (mm)	NB (inches)	D1 (mm)	D2 (mm)	D3 (mm)	L (mm)	S (mm)	Weight (kg)	Part number
15	1/2"	15	53	38	16.5	45	0.11	458738-15
20	3/4"	20	63	46.5	19.5	55	0.19	458738-20
25	1"	25	73	55.5	22	65	0.30	458738-25
32	1"1/4	30	84	65	28	78	0.40	458738-32
40	1"1/2	38	94	75	31.5	88	0.60	458738-40
50	2"	47	107	84	40	98	0.88	458738-50
65	2"1/2	62.5	126	103	46	118	1.26	458738-65
80	3"	77	144	117	50	134	1.86	458738-80
100	4"	96	164	137	60	154	3.30	458738-100

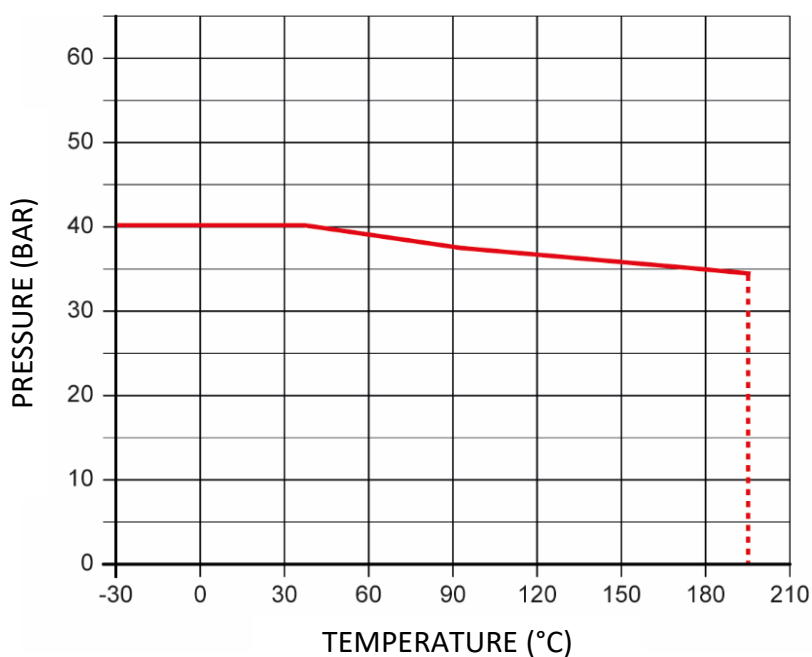


N°	Part Name	Material
1	BODY	CF8M
2	CHECK VALVE DISC	AISI 316
3	SPRING	AISI 316
4	SPRING SUPPORT	CF8M
5	SCREW	A2-70

Use

Pressure and temperature

For pressure/temperature ratings, see the graph below.



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

Fluids

This check 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.

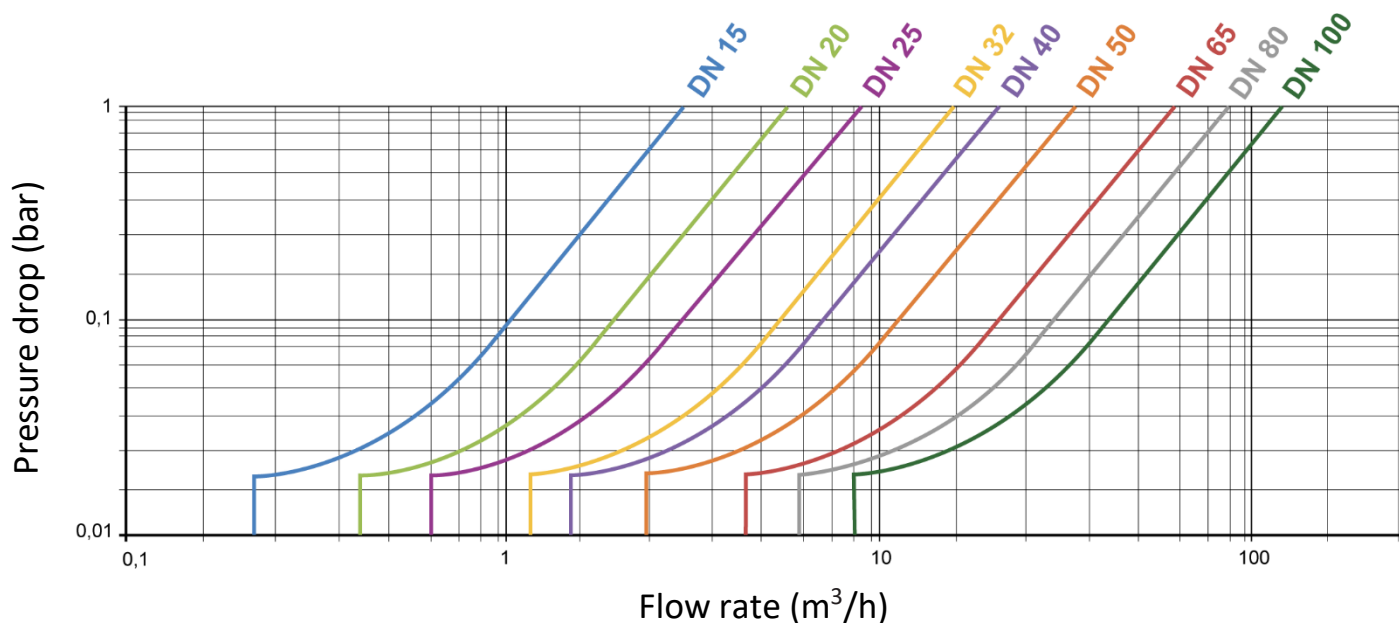
This check valve is not suitable for gases since the leakage rate can be significant.

Opening pressure (OP)

Dimensions	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
	1/2"	3/4"	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
OP (mbar)	42	28	30	32	26	30	26	22	18

Pressure drop

Pressure drop diagram (horizontal flow)



Flow coefficient and pressure loss

Dimensions	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
	1/2"	3/4"	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
Kv (m³/h)	4.9	8.8	11.2	20.7	29.0	40.0	57.0	85.0	92.0

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

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

Assembly and maintenance instructions

Installation

When you install the check valve make sure that the arrow on it is pointing in the direction in which fluids will pass through it.

Check that there is enough space and there are enough valves to isolate this section so that you can carry out maintenance operations where you are planning to install the check valve.

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

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

How to install a wafer check valve:

Weld flanges (e.g. flanges with a collar) onto the piping and respect the required spacing and alignment of the mounting holes. You must check that the check valve is correctly lined up with the flanges during installation. For heavy parts, use lifting devices if necessary.

Clean the installation so that there are no foreign bodies in the piping.

Check that the check valve's disc can move smoothly.

Pressure test the installation according to the relevant standards, but do not exceed the check valve's specifications.

Maintenance

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

You may need to change the check valve due to unusual wear and tear, or if a fluid has damaged the valve and caused a leak or malfunction.

Standards and compliance

- Leak testing according to EN 12266/API 598.
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC).
- ATEX Group II Category 2 G/2D, in accordance with Directive 94/9/EC (certificate EX9 15 02 91284 001).