

spirax/sarco®

SDCV44 Austenitic Stainless Steel Split Disc Check Valve (ANSI Flanges)

Description

A range of austenitic stainless steel split disc check valves in a wafer pattern suitable for fitting between ANSI Class 150 and class 300 flanges. Their function is to prevent reverse flow on a wide variety of fluids for applications in process lines, hot water systems, steam and condensate systems. The face-to-face dimension of the SDCV44 conforms to API 594. As standard the valve has a metal-to-metal seat.

Size and pipe connections

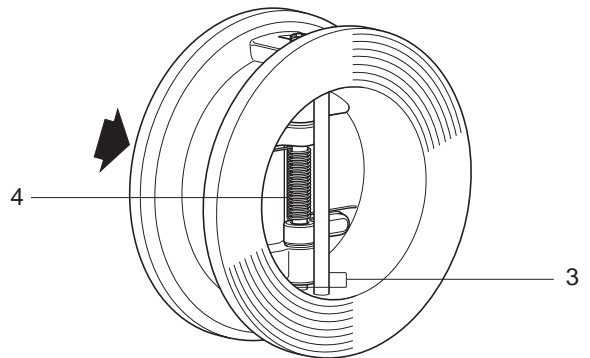
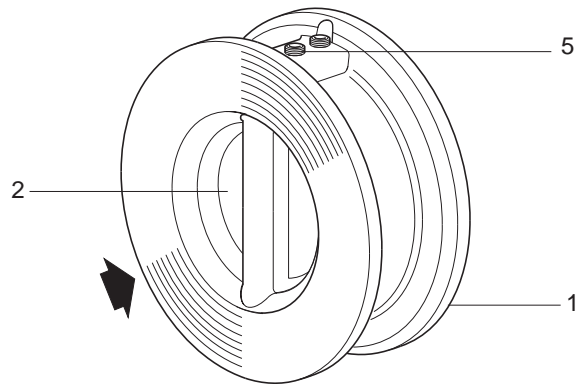
2" (DN50), 3" (DN80), 4" (DN100)

Suitable for installation between the following flanges:

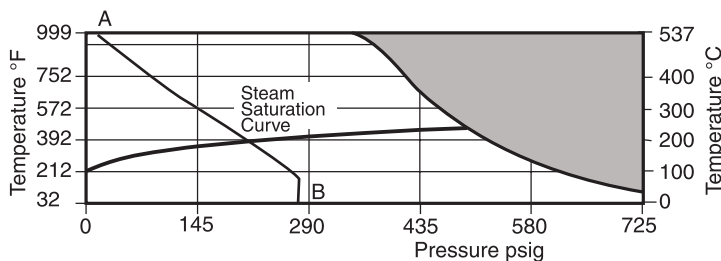
ANSI B 16.5 class 150, 300.

Limiting conditions

Maximum Body Design Condition	ANSI 150	ANSI 300
PMA - Maximum allowable pressure	275 psig (18.9 barg)	720 psig (49.6 barg)
TMA - Maximum allowable temperature	1000°F (537.7°C)	1000°F (537.7°C)
PMO - Maximum operating pressure	275 psig (18.9 barg)	720 psig (49.6 barg)
TMO - Maximum Metal seat operating temperature	1000°F (537.7°C)	1000°F (537.7°C)
Minimum operating Metal seat temperature	-20°F (-28.88°C)	-20°F (-28.88°C)
Designed for a maximum Cold hydraulic test pressure	425 psig (29.3 barg)	1,100 psig (137.9 barg)



Operating range



■ The product **must not** be used in this region.

A - B ANSI 150 flanges

A - C ANSI 300 flanges

Materials

No.	Part	Material
1	Body	Austenitic stainless steel ASTM A351 CF8M
2	Plate	Austenitic stainless steel ASTM A351 CF8M
3	Hinge/stop pin	Austenitic stainless steel AISI 316
4	Spring	Nickel alloy Inconel-718
5	Retainer plug	Austenitic stainless steel AISI 316

Certification

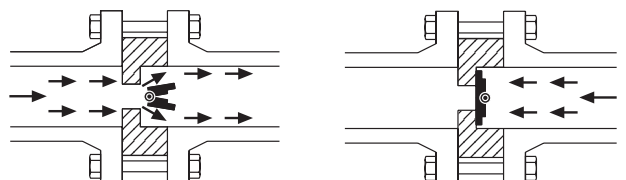
The product is available with certification to EN 10204 3.1.B for the body at extra cost. Certification must be specified at the time of order placement.

Standard shut-off

Valve shut off to API 598 available on request.

Operation

A split disc check valve is opened by the pressure of the fluid and closed by the spring as soon as the flow ceases and before the reverse flow occurs.



Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

In the interests of development and improvement of the product, we reserve the right to change the specification.

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Dimensions approximate in inches and pounds (*mm and kg*)

		ANSI 150				
		Ø A	B	Ø C	Ø D	Weight
2"	DN50	4.4" (111mm)	2.4" (60mm)	2" (51mm)	2.7" (63mm)	5.5 lbs (2.5kg)
3"	DN80	5.9" (149mm)	2.9" (73mm)	3" (76mm)	3.7" (95mm)	11.5 lbs (5.2kg)
4"	DN100	6.8" (173mm)	3.0" (76mm)	3.5" (89mm)	4.75" (121mm)	15.2 lbs (6.9kg)
		ANSI 300				
4"	DN100	7.1" (180mm)	3.0" (76mm)	3.5" (89mm)	4.75" (121mm)	15.2 lbs (6.9kg)

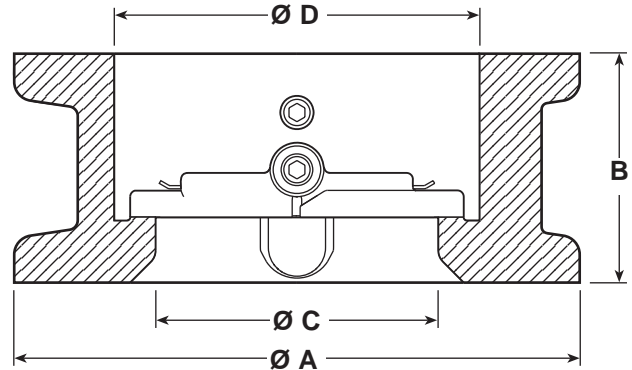
Kv values

Size	DN50 2"	DN80 3"	DN100 4"
Kv	40	111	226
For conversion	Cv (US) = Kv x 1.17		Cv (UK) = Kv x 0.97

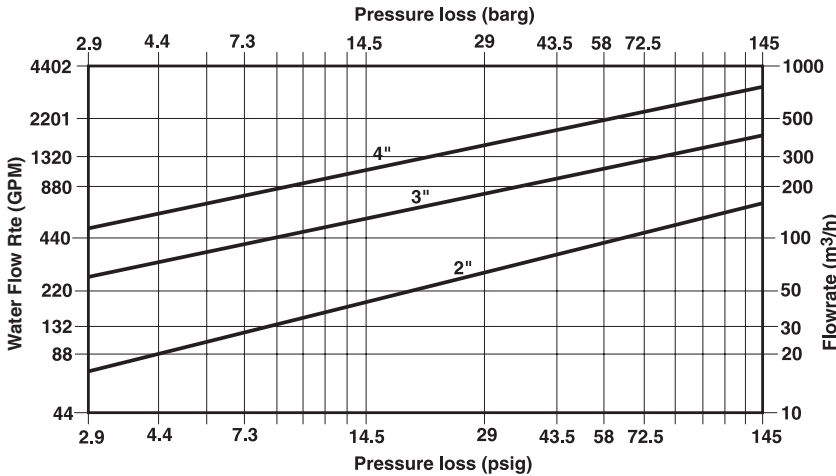
Opening pressures

in psi (mbar)
Differential pressures with zero flow. → Flow direction

	DN50	DN80	DN100
→	0.44 (30)	0.44 (30.0)	0.38 (26)
↑	0.7 (48)	0.65 (45.5)	0.62 (43)



Pressure loss diagram



Pressure loss diagram with open valve at 68°F (20°C).
The values indicated are applicable to spring loaded valves with horizontal flow. With vertical flow, insignificant deviations occur only within the range of partial opening.
The curves given in the chart are valid for water at 68°F (20°C). To determine the pressure drop for other fluids, the equivalent water volume flowrate must be calculated and used in the graph.

$$V_w = \sqrt{S.G.} \times V$$

V_w = Equivalent water volume flow in GPM

S.G. = Specific Gravity

V = Volume of fluid GPM

Pressure loss information for steam, compressed air, and gases is available from Spirax Sarco.

How to order

Example: 1 of Spirax Sarco SDCV44 having an austenitic stainless steel body for installation between DN50, ANSI Class 150 flanges.

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions IM-7-224-US supplied with the product.

Note: The SDCV44 is not suitable for heavy pulsating flows (compressors) or vertical down flows.

Flanges, bolts (or studs), nuts and joint gaskets are to be provided by the installer.