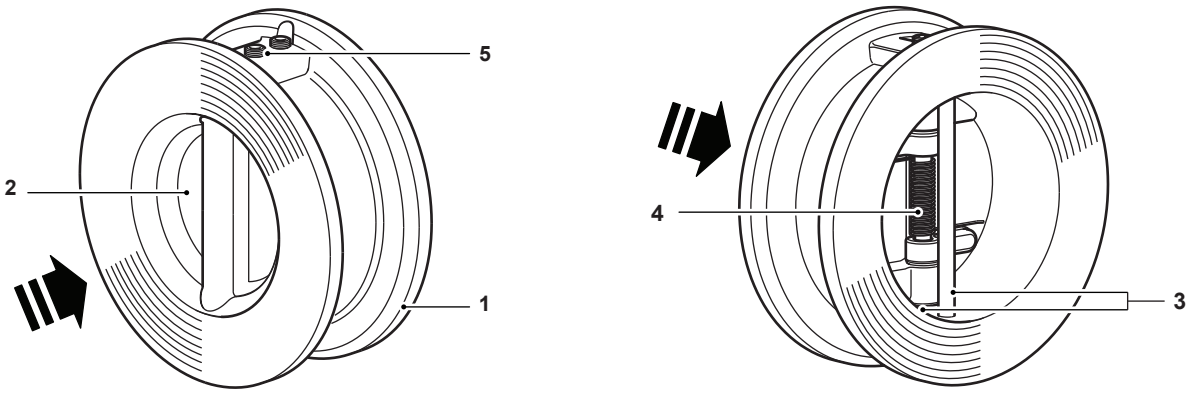
SDCV44
Austenitic Stainless Steel Split Disc Check Valve

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. 4" SDCV44 Patent Pending.

Size and pipe connections
2" (DN50), 3" (DN80), 4" (DN100)
Suitable for installation between the following flanges: ANSI B 16.5 class 150, 300.

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

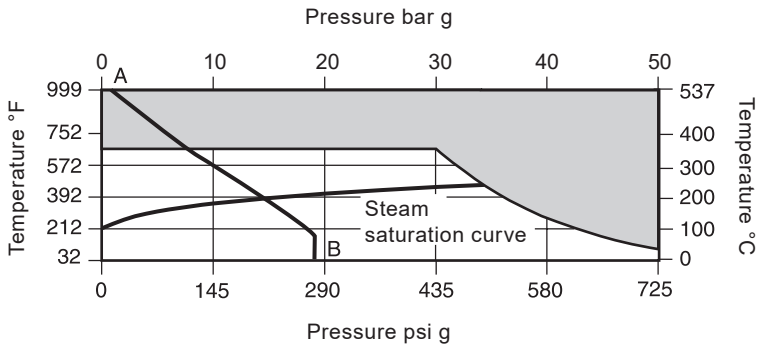
Materials



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

Standard shut-off
Valve shut off to API 598 available on request.

Pressure/temperature limits



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

A - B ANSI 150 flanges

A - C ANSI 300 flanges

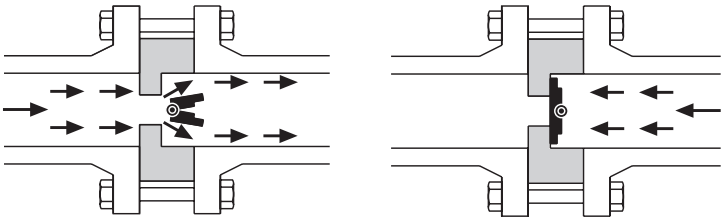
Maximum body design condition			
PMA	Maximum allowable pressure	720 psi g	(49.6 bar g)
TMA	Maximum allowable temperature	650 °F	(343.3 °C)
PMO	Maximum operating pressure	720 psi g	(49.6 bar g)
TMO	Maximum metal seat operating temperature	650 °F	(343.5 °C)
Minimum operating metal seat temperature		-20 °F	(-28.89 °C)
Product is safe for use under full vacuum conditions.			
Designed for a maximum cold hydraulic test pressure		1475 psi g	(101.7 bar g)

Note: Limited to flange rating

Product is safe for use under full vacuum conditions.

Operation

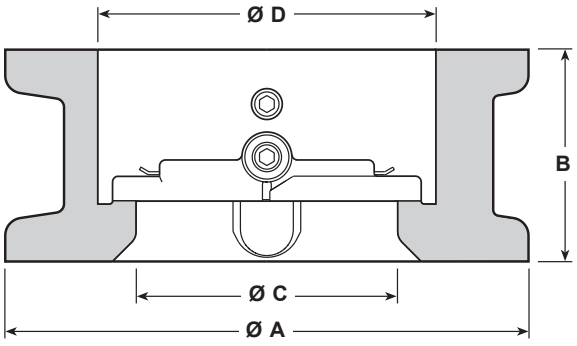
A split disc check valve is opened by the pressure of the fluid and closed by the spring as soon as the flow ceases and before the reverse flow occurs.



Dimensions/weights

(approximate) in inches (mm) and lbs (kg)

	Ø A	B	Ø C	Ø D	Weight
2" DN50	4.1" (104.1)	2.2" (55.9)	1.7" (43.2)	2.7" (69)	5.5 (2.5)
3" DN80	5.3" (134.6)	2.9" (73.7)	2.6" (66)	3.7" (94)	11.5 (5.2)
4" DN100	7.1" (180)	3.0" (76)	3.5" (89)	4.75" (121)	15.2 (6.9)



Kv values

Size	2" (DN50)	3" (DN80)	4" (DN100)
Kv	40	111	226

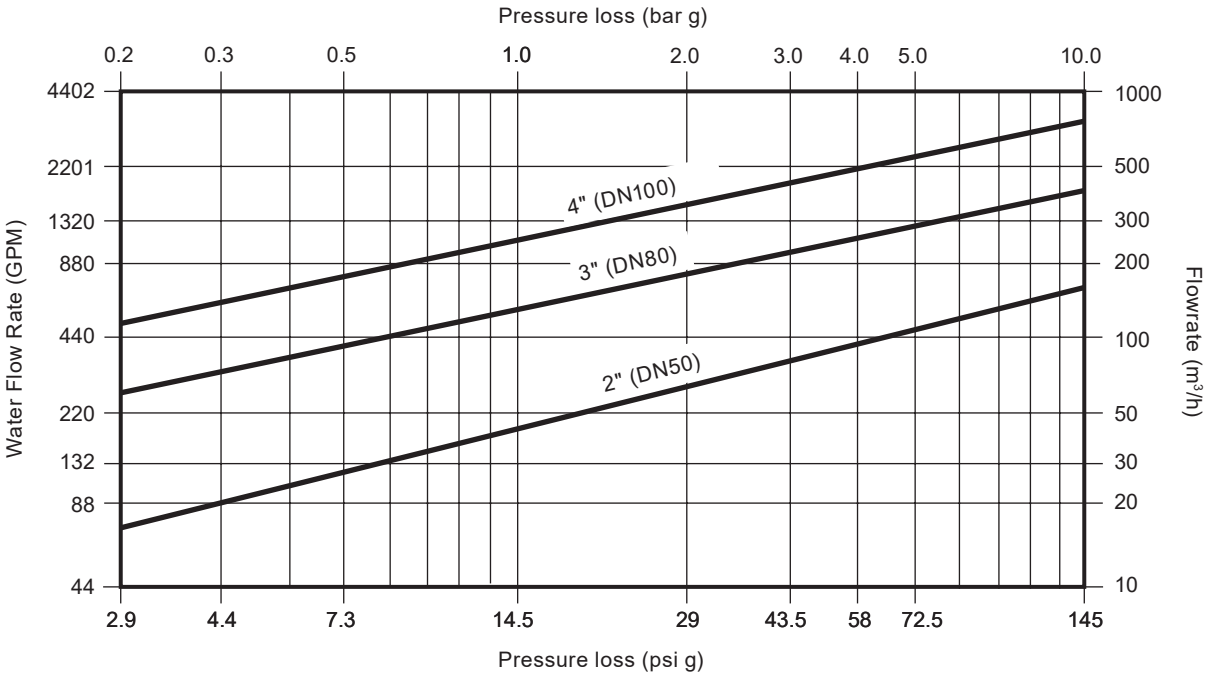
For conversion:
Cv (US) = Kv x 1.17
Cv (UK) = Kv x 0.97

Opening pressures in psi (mbar)

Differential pressures with zero flow. → Flow direction

	2" (DN50)	3" (DN80)	4" (DN100)
→	0.44 (30)	0.44 (30.0)	0.38 (26)
↑	0.7 (48)	0.65 (44.8)	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.

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

Vw = 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-P154-11-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.