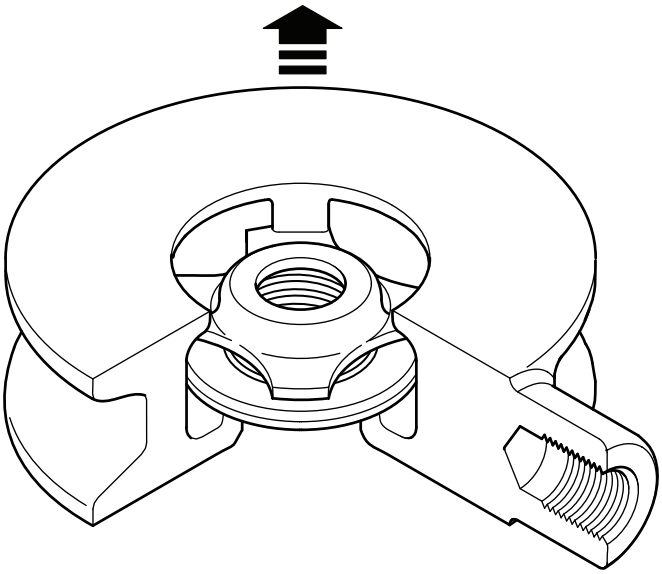
Local regulations may restrict the use of this product to below the conditions quoted.
In the interests of development and improvement of the product, we reserve the right to change the specification without notice. © Copyright 2026

DCV8
Disc Check Valve



Description
DCV8 disc check valves are of a wafer pattern, designed to be sandwiched between DIN 2501 and EN 1092 flanges. Their function is to prevent reverse flow on a wide variety of fluids. The DCV8 is designed for use with agressive fluids, vapours, acids and alkalines at high pressures and temperatures.
The valves are provided with an M8 threaded tapping for product earthing and conform to EN 558, series 49.

Optional extras

Heavy duty springs (700 mbar opening pressure, up to DN65) for boiler feed applications

High temperature springs

Viton soft seats for oils and gas applications

EPM soft seats for water applications

Standards
Designed and manufactured in accordance with ÄD Merkblatter. This product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU.

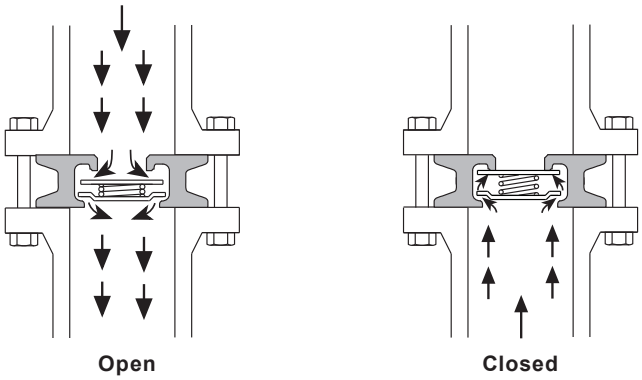
Standard shut-off
Standard valves conform to EN 12266-1 rate D.
Soft seated versions meet EN 12266-1 rate A, providing a differential pressure exists.

Certification
These products are available with certification to EN 10204 3.1 and the body is sourced from a TÜV approved foundry.
Note: All certification/inspection requirements must be stated at the time of order placement.

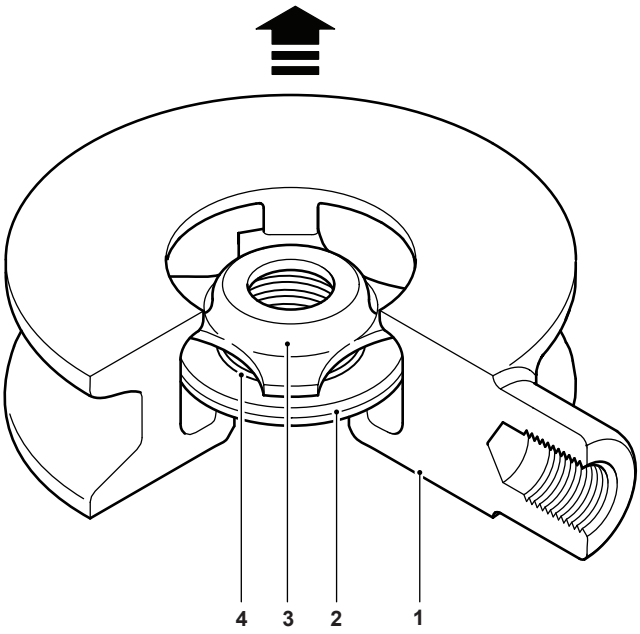
Sizes and pipe connections
DN15, DN20, DN25, DN32, DN40, DN50, DN65, DN80 and DN100
Suitable for installation between the following flanges: EN 1092/DIN 2501 PN10, PN16, PN25 and PN40.
Note: DN100 will not fit between PN16.

Operation

Disc check valves are opened by the pressure of the fluid and closed by the spring as soon as the flow ceases and before the reverse flow occurs.

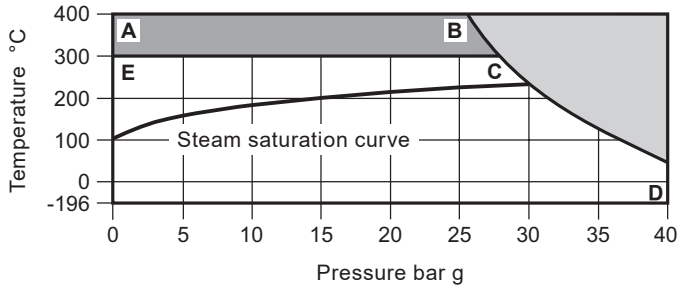


Materials



No.	Part	Material	
1	Body	Austenitic stainless steel	WS 1.4408
2	Disc	Austenitic stainless steel	316L
3	Spring retainer	Austenitic stainless steel	316L
4	Standard spring	Austenitic stainless steel	316
	Heavy duty spring	Austenitic stainless steel	316
	High temperature spring	Nickel alloy	Nimonic 90

Pressure/temperature limits



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

For use in this area use a DCV8 with high temperature spring or DCV8 without spring.

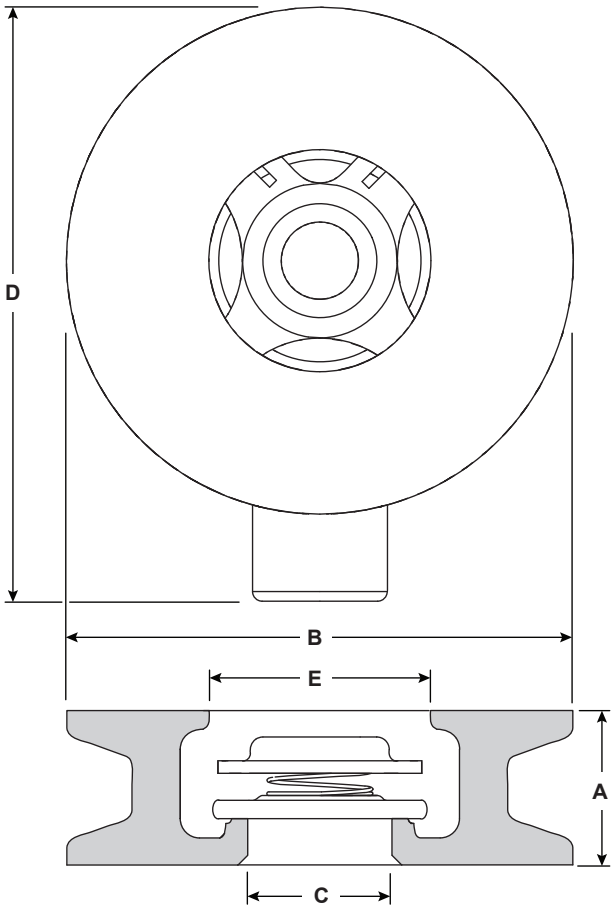
A-B-D Without standard or high temperature springs.

E-C-D Standard spring and heavy duty spring.

Please note: Special testing to allow lower temperature operation can be provided at extra cost. Consult Spirax Sarco.

Body design conditions			PN40
PMA	Maximum allowable pressure		40 barg @ 50 °C
TMA	Maximum allowable temperature		400 °C @ 25.6 barg
Minimum allowable temperature			-196 °C
PMO	Maximum operating pressure		40 bar g @ 50 °C
TMO	Maximum operating temperature	Standard spring	300 °C @ 27.6 bar g
		Heavy duty spring	300 °C @ 27.6 bar g
		High temperature spring	400 °C @ 25.6 bar g
		Without spring	400 °C @ 25.6 bar g
Minimum operating temperature (standard disc)			-196 °C
Temperature limits		Viton seat	-25 °C to +205 °C
		EPDM seat	-40 °C to +120 °C
Designed for a maximum cold hydraulic test pressure of			60 bar g

Dimensions/weights (approximate) in mm and kg



		A (EN 558, series 49)	B	C	D	E	Weight
DN15		16.0	53	15	65	23.0	0.18
DN20		19.0	63	20	72	28.0	0.27
DN25		22.0	72	25	78	33.8	0.40
DN32		28.0	84	32	93	41.8	0.67
DN40		31.5	94	40	104	49.8	0.90
DN50		40.0	109	50	115	59.8	1.45
DN65		46.0	129	65	138	75.8	2.14
DN80		50.0	144	80	152	90.8	2.69
DN100	**PN16**	60.0	164	100	171	111.8	4.36
	PN40	60.0	169	100	174	111.8	4.36

Kv values

DN	15	20	25	32	40	50	65	80	100	For conversion: Cv (UK) = Kv x 0.963 Cv (US) = Kv x 1.156
Kv	4.4	6.8	10.8	17	26	43	60	80	113	

Opening pressures in mbar

Differential pressures with zero flow for standard and high temperature springs.

➔ Flow direction

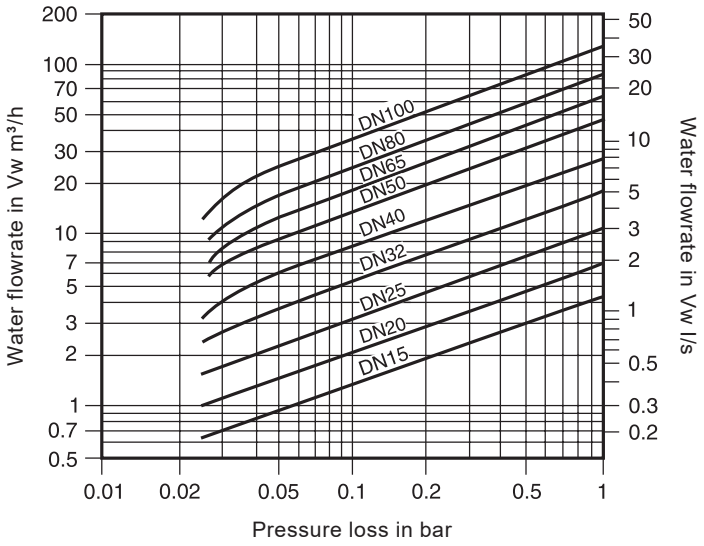
DN	15	20	25	32	40	50	65	80	100
↑	25	25	25	27	28	29	30	31	33
➔	22.5	22.5	22.5	23.5	24.5	24.5	25	25.5	26.5
↓	20	20	20	20	20	20	20	20	20

Where lowest opening pressures are required, valves without springs can be installed in vertical pipes with bottom-to-top flow.

Without spring									
↑	2.5	2.5	2.5	3.5	4	4.5	5	5.5	6.5

Heavy duty springs approximately 700 mbar

Pressure loss diagram



Pressure loss diagram with open valve at 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 20 °C. To determine the pressure for other fluids the equivalent water volume flowrate must be calculated and used in the graph.

$$\dot{V}w = \sqrt{\frac{\rho}{1000}} \times \dot{V}$$

Where:

$\dot{V}w$ = Equivalent water volume flow in l/s or m³/h

ρ = Density of fluid kg/m³

$\dot{V}$ = Volume of fluid l/s or m³/h

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

Safety information, installation and maintenance

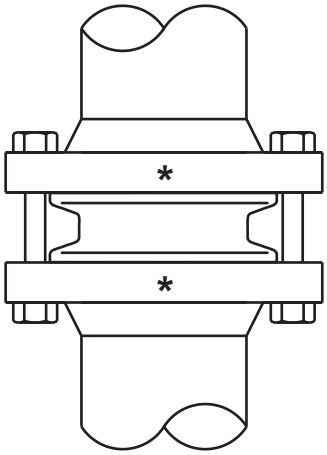
For full details see the Installation and Maintenance Instructions supplied with the product.
DCV8 disc check valves must be fitted in accordance with the direction of flow arrow indicating correct fluid flow direction. When fitted with a spring they can be installed in any plane. When supplied without a spring they must be fitted in a vertical flow line with the flow from bottom-to-top.

*** Note:** Flanges, bolts (or studs), nuts and joint gaskets are to be provided by the installer. Disc check valves are non-maintainable (no spares are available). Disc check valves are not suitable for use where heavily pulsating flow exists, such as close to a compressor.

Various options are denoted by a marking on the valve body:

'N'	– High temperature spring	– Standard metal disc
'W'	– Without spring	– Standard metal disc
'H'	– Heavy duty spring	– Standard metal disc
'V'	– Standard spring	– Viton soft faced disc
'E'	– Standard spring	– EPDM soft faced disc

No identification indicates a standard spring with a metal disc.



Disposal

If a product that contains a Viton component has been subjected to a temperature approaching 315 °C or higher, then it may have decomposed and formed hydrofluoric acid. Avoid skin contact and inhalation of any fumes as the acid will cause deep skin burns and damage to the respiratory system. Viton must be disposed of in a recognised manner as stated in the Installation and Maintenance Instructions (IM-P601-02). No other ecological hazard is anticipated with the disposal of this product providing due care is taken.

How to order

Example: 1 off Spirax Sarco DN25, DCV8 disc check valve for fitting between DIN 2501/EN 1092 DN25 PN40 flanges.