

# spirax sarco

## DCV 10 Stainless Steel Disc Check Valve for use with Automatic Pump Traps

### Description

The DCV10 disc check valve has been designed specifically for use with Spirax Sarco's APT14HC and APT14SHC automatic pump-traps. The check valve ensures the correct flow of condensate and other suitable fluids through these condensate pumps and also prevents reverse flow.

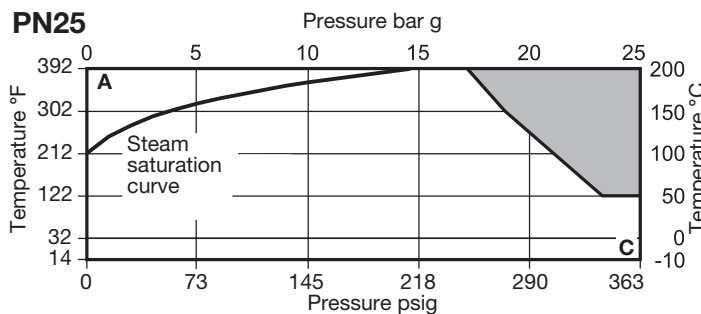
**Standards** - Designed in accordance with BS EN 14341:2006. This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC.

**Shut-off** - Shut-off conforms to EN 12266-1:2003 Rate F.

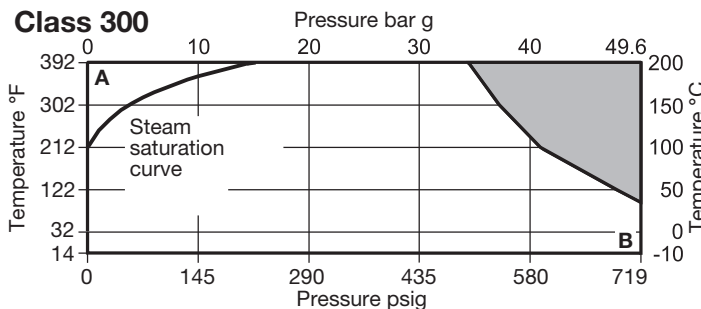
**Certification** - This product is available with certification to EN 10204 3.1. **Note:** All certification/inspection requirements must be stated at the time of order placement.

### Pressure/temperature limits

#### PN25



#### Class 300



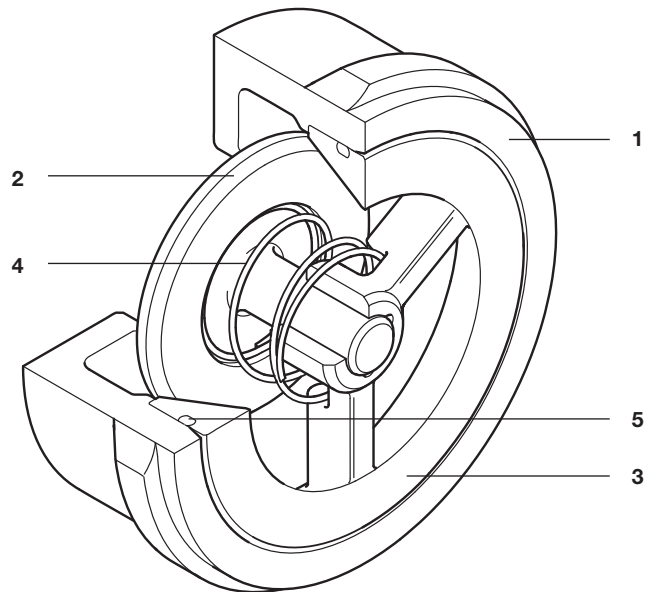
The product **must not** be used in this region.  
**A - B** For fitting between Class 150 and Class 300 flanges.  
**A - C** For fitting between EN 1092 PN16 and JIS/KS 10K flanges.

Body design condition		PN25 or Class 300	
PMA	Maximum allowable pressure	PN25	363 psig @ 32°F
		Class 300	719 psig @ 32°F
TMA	Maximum allowable temperature	PN25	392°F @ 250 psig
		Class 300	392°F @ 500 psig
Minimum allowable temperature			
-10°C			
PMO	Maximum operating pressure	PN25	363 psig @ 32°F
		Class 300	718 psig @ 32°F
TMO	Maximum operating temperature	PN25	392°F @ 250 psig
		Class 300	392°F @ 500 psig
Temperature limits			
14°F to 392°F			
Minimum operating temperature			
14°F			
Designed for a maximum cold hydraulic test pressure of:		PN25	544 psig
		Class 300	1079 psig

### Sizes and pipe connections

The PN25 design is available in sizes 1½" to fit between EN 1092 PN16 and JIS/KS 10K flanges.

**Please note:** The Class 300 design is available in size 1½" only to fit between ASME B 16.5 (ANSI) Class 150 and Class 300 flanges.



### Materials

No.	Part	Material	
1	Body	PN	Austenitic stainless steel 1.4308
		ANSI	Austenitic stainless steel A351 CF8
2	Disc	Austenitic stainless steel	A276 316L
3	Spider	Martensitic stainless steel	BS 3146-2 ANC2
4	Springs	Stainless steel	BS 2056 316 S42
5	'O' ring	Fluorocarbon polymer FEPM (TFEP)	

### C<sub>v</sub> values

Size	1½"
C <sub>v</sub>	30

For conversion:  $C_v$  (UK) =  $K_v \times 0.963$      $C_v$  (US) =  $K_v \times 1.156$

### Opening pressures in psi (mbar)

Differential pressures with zero flow.

→ Flow direction

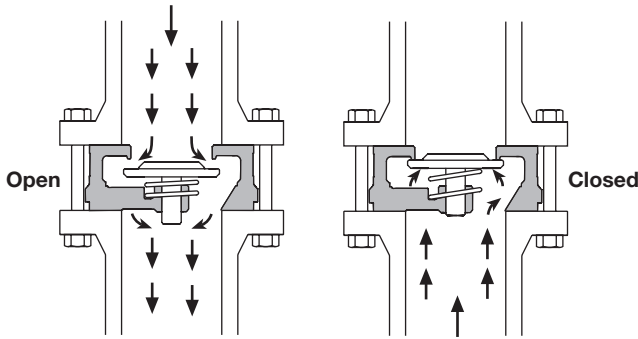
Size	1½"
↑	0.41 (28)
→	0.36 (24.5)
↓	0.29 (20)

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

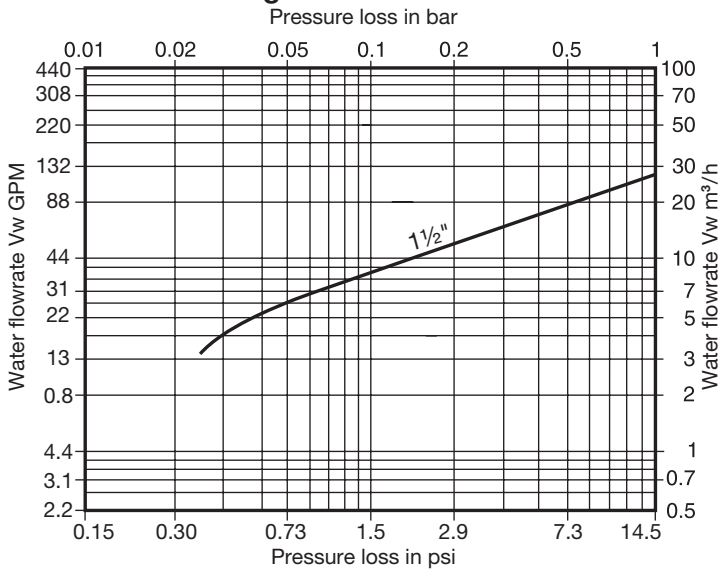
In the interests of development and improvement of the product, we reserve the right to change the specification. TI-P601-32-US 10.14

## Operation

The DCV10 is opened by the pressure and flow of condensate and is closed by the pressure of the spring when flow ceases and before reverse flow occurs.



## Pressure loss diagram



Pressure loss diagram with open valve at 68°F (20°C). The values indicated are applicable with 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.

## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P601-33) supplied with the product.

### Installation note:

The DCV10 must be installed close coupled to the pump. It can be fitted in either a horizontal or vertical line in accordance with the direction of flow arrow on the body. **Note:** Flanges, bolts (or studs), nuts and gaskets to be supplied by the installer.

## How to order

**Example:** 1 Spirax Sarco 1 1/2" DCV10 stainless steel check valve to fit between ANSI 150 flanges for use with an APT 14 HC pump.

## Dimensions / weights (approximate) in inches and lb.

### ANSI 150 and ANSI 300

Size	A	B	C	D		E	F	Weight
				Open	Closed			
1 1/2"	3.7	3.4	1.8	1.9	1.8	1.6	1.9	1.8

