

## CARBON STEEL SWING CHECK VALVE FLANGED CLASS 300 PN50



**Size :** DN 50 to DN 400 ( NPS 2“ to 16“ )

**Ends :** Flanges R.F. Class 300 (PN50)

**Min Temperature :** - 29°C

**Max Temperature :** + 425°C

**Max Pressure :** 50 Bars

**Specifications :** Swing check valve

Bolted bonnet

Vertical or horizontal position

**Materials :** Carbon steel

# CARBON STEEL SWING CHECK VALVE FLANGED CLASS 300 PN50

## SPECIFICATIONS :

- Swing check valve
- Full bore
- Vertical position with ascendant fluid or horizontal position ( respect the flow direction indicated by the arrow )
- Flanges R.F. Class 300 (PN50)
- Carbon steel body
- Bolted bonnet
- Hoisting eye from DN150 to 400 (NPS 6" to 16")
- ½ stellite ( Trim 8 , seat with stellite )
- Grey painting RAL 7001 color, 60 µm thickness

## USE :

- Water distribution, gas oil, petrochemical, petroleum industry
- Min and max Temperature Ts : - 29°C to + 425°C
- Max Pressure Ps : 50 bars

## FLOW COEFFICIENT Kvs :

DN ( mm )	50	80	100	150	200	250	300	350	400
NPS ( " )	2"	3"	4"	6"	8"	10"	12"	14"	16"
Kvs	40.7	92.9	169.6	381.5	685	1076.8	1556.7	1891	2515

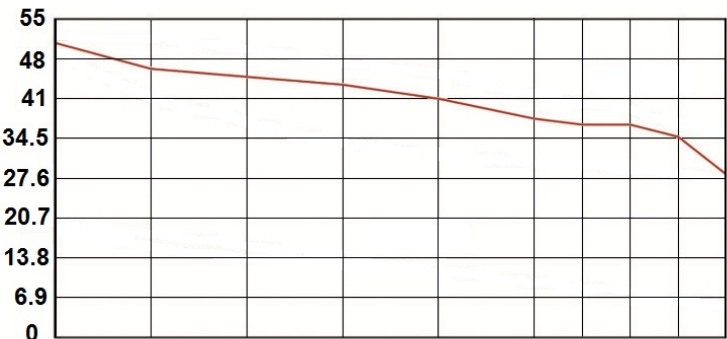
## PRESSURE / TEMPERATURE RELATION :

( According to AMSE B16-34 for A216 WCB )

Pressure ( Bar )	51.1	51.1	46.2	45.1	43.8	41.3	37.9	36.9	36.9	34.8	28.2
Temperature ( °C )	-29	38	93	149	204	260	316	343	371	399	425

## PRESSURE / TEMPERATURE GRAPH :

Pressure (Bar)



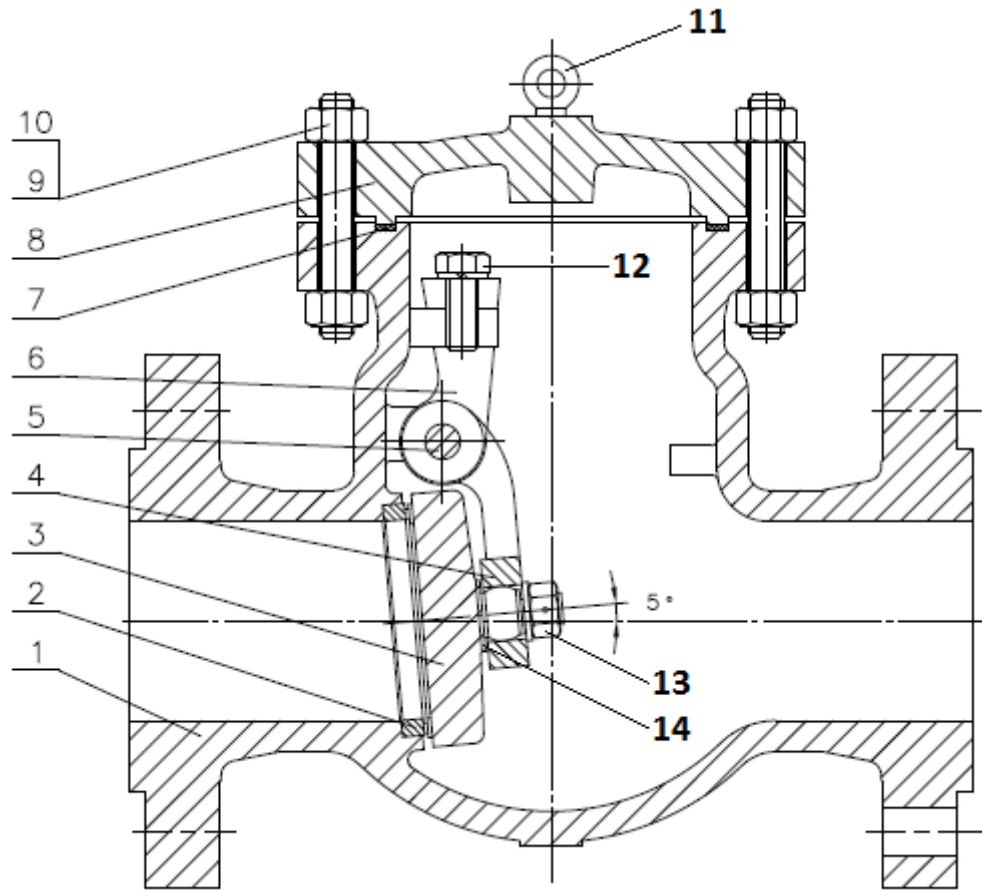
## RANGE :

-29-0 93 149 204 260 316 343 371 399 425 Temperature (°C)

- Carbon steel swing check valve flanged R.F. Class 300 (PN50) **Ref. 374** from DN 50 to DN 400 ( NPS 2" to 16" )

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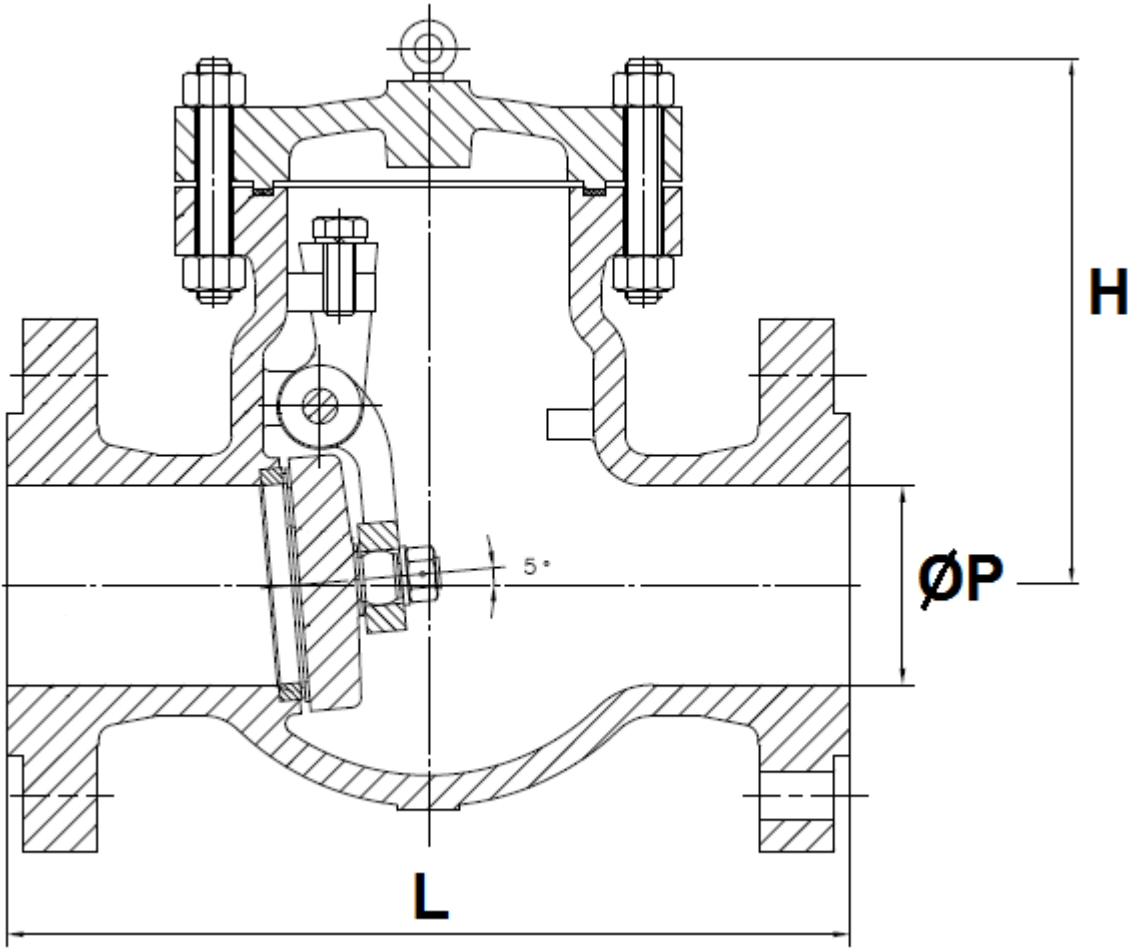
## MATERIALS :



Item	Designation	Materials
1	Body	ASTM A216 WCB
2	Seat	ASTM A105 + stellite Gr.6
3	Disc	ATM A216 WCB + 13Cr
4	Stem	ASTM A216 WCB
5	Pin	ASTM A276-420
6	Support	ASTM A216 WCB
7	Bonnet gasket	Graphite + SS 304
8	Bonnet	ASTM A216 WCB
9	Stud bolt	ASTM A193 Gr B7
10	Nut	ASTM A194 Gr 2H
11	Hoisting eye	Steel 1025
12	Screw	ASTM A193 Gr B7
13	Nut	ASTM A194 Gr 2H
14	Washer	ASTM A276-420

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SIZE ( in mm ) :



DN ( mm )	50	80	100	150	200	250	300	350	400
NPS ( " )	2"	3"	4"	6"	8"	10"	12"	14"	16"
Ø P	51	76	102	152	203	305	305	337	388
L	267	318	356	445	533	622	711	838	864
H	152	175	204	293	353	390	432	485	530
Weight (Kg)	22	40	63	106	136	204	302	315	503



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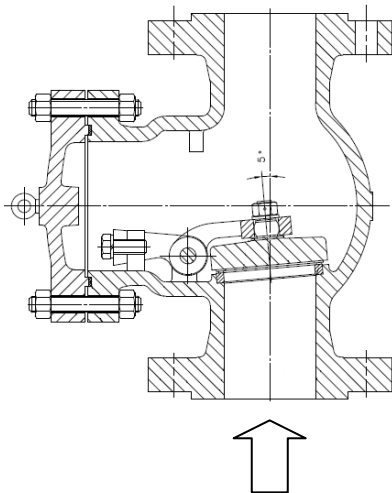
## STANDARDS :

- Fabrication according to ISO 9001 :2008
- DIRECTIVE 97/23/CE : CE N° 0036  
Risk category III module H
- Designing according to API 594
- Pressure tests according to API 598, table 6
- Length according to ASME B16.10, table 2 A17 series
- Flanges R.F. according to ANSI B16.05
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 (optional marking )
- Approval certificate Russian **GOST-R**
- Materials according to NACE MR 01-75 **on request**

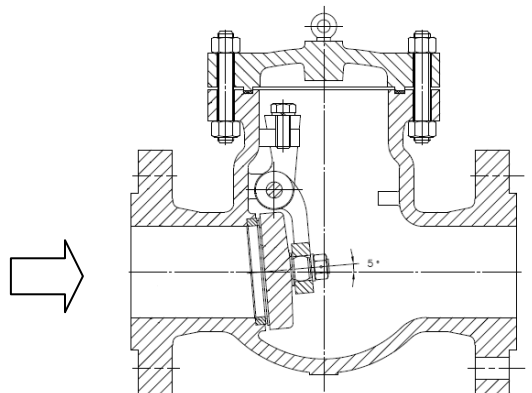
**ADVICE :** Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.  
The customer must check the right choice of the products with the real service conditions.

## INSTALLATION POSITIONS :

**Vertical position ( ascendant fluid )**



**Horizontal position**



# CARBON STEEL SWING CHECK VALVE FLANGED CLASS 300 PN50

## INSTALLATION INSTRUCTIONS

### GENERAL GUIDELINES :

- Ensure that the check valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength to be able to support the capacity of their usage.

### INSTALLATION INSTRUCTIONS :

- **Remove the disc hold before using.**
- **Before installing the check valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the check valve (upstream and downstream) are aligned (if they're not, the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match, the check valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the check valve and can even cause a rupture.** To be sure, place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the check valve.**
- If there is a direction changing or if there's another material, it's better to take away the check valve so that it is outside the turbulence area ( **between 3 and 5 times the ND before and after** ).
- After a pump please refer to norm FD CEN/TR 13932 to install the check valve.
- Respect the flow direction indicated by the arrow