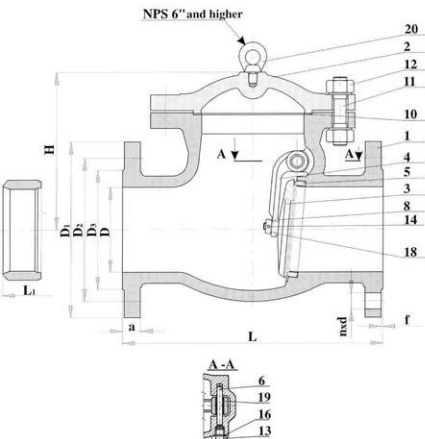


# Swing check valve

C 09 407 (PN 40)

CLASS 300



## Application

Swing check valves with flanged and butt-weld ends are pipeline valves designed to automatically prevent reverse flow of medium. They are used for: non-aggressive liquids, water, steam, oil, crude oil and oil products. Operating parameters meet requirements of ASME/ANSI B 16.34 standard. Application for other operating liquids must be discussed with the manufacturer. Ambient temperature is from -13°F to +122°F (-25°C do +50°C).

Characteristics of working conditions for materials:

Pressure-temperature ratings are according to ANSI / ASME B 16.34

## Technical description

Swing check valves with flanged or butt-weld ends, full bore, consist of a body, cover, disc and arm. Seat is screwed or welded into body. Disc bears on seat sealing surface and is carried in an arm revolving on a special hinge pin. Connecting flanges for the flanged type are integral part of body casting.

## Face-to-face dimensions:

Main and connection dimensions of a standard design are given in the table. Face-to-face dimensions and other dimensions meet ANSI B 16.10 standard, flange connecting dimensions correspond to ANSI B 16.5 standard. Butt-weld ends are as per ASME B 16.25.

## Materials:

Swing check valves are manufactured from the following materials - ASTM A 216 WCB, ASTM A 352 LCC, ASTM A 352 LCB, ASTM A 217 WC6, ASTM A 217 C5, ASTM A 217 C12.

Body materials can be supplied according to customer's requirements.

## Testing

Swing check valves are pressure tested according to API 598 for: strength and tightness, sealing tightness by low pressure (based on customer's order), sealing tightness by high pressure.

## Installation

Swing check valves can be installed either into horizontal or vertical pipeline. In vertical pipeline disc must be in upper position and flow direction must be upwards.

## Order specification:

Specifications necessary for order: type number, nominal diameter, pressure class, connection type, wedge type, control, body and bonnet material, trim, operating parameters, tests, accompanying documentations.

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NPS	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L=L <sub>4</sub>	a	f	n	d	H	kg
2"	51	165	127	92	267	23	2	8	19	160	19,3
2.5"	63,5	191	149	105	292	25,5	2	8	22	195	30
3"	76	210	168,5	127	318	29	2	8	22	210	37,8
4"	102	254	200	157	356	32	2	8	22	215	58,8
6"	152	318	270	216	445	37	2	12	22	300	108,5
8"	203	381	330,2	270	533	42	2	12	25	332	181,5
10"	254	444	387,4	324	622	48	2	16	28	362	272
12"	305	521	450,9	381	711	51	2	16	32	427	387
14"	337	584	514,4	413	838	54	2	20	32	447	465
16"	387	648	571,5	470	864	58	2	20	35	540	775
18"	432	711	628,5	533	978	61	2	24	35	590	805
20"	483	775	686	584	1016	64	2	24	35	640	1255
24"	584	914	813	692	1346	70	2	24	41	922	1902

### Basic standards for design

Basic design	ASME B 16.34
Face-to-face dimensions	ASME B 16.10
Flange dimensions	ASME B 16.5
Ends dimensions	ASME B 16.25
Testing	API 598
Pressure-temperature ratings	ASME B 16.34

### Gasket materials

No.	Name	Class	Body material:
			WCB LCC WC6 C5 C12
		150, 300	Spiral wound graphite gasket
10	Cover sealing	600	RTJ rings
			Soft low carbon steel AISI 321
16	Plug sealing	150- 600	AISI 316, AISI 321

### TRIM - materials according to API 600

No.	Name	TRIM Nr.				
		1	5	8	11	12
3a	Disc sealing surface	13 Cr overlay	Stellite 6	13 Cr overlay	Monel overlay	316 overlay
5a	Seat sealing surface	13 Cr overlay	Stellite 6	Stellite 6	Stellite 6	Stellite 6
6	Pin	A 182 F6a	A 182 F6a	A 182 F6a	Monel	A 182 F 316

### Standard material specification ( \* )

No.	Name	WCB	LCC	WC6	C5	C12
	Trim No.	1, 5, 8, 11, 12	12	5	5	5
1	Body	A 216 WCB	A 352 LCC	A 217 WC6	A 217 C5	A 217 C12
2	Cover	A 216 WCB	A 352 LCC	A 217 WC6	A 217 C5	A 217 C12
3	Disc	A 276 410 T A 216 WCB + overlay A 182 F 316 A 105 + overlay	A 182 F 316 A 352 LCC + overlay	A 182 F9 + overlay A 217 WC6 + overlay	A 182 F9 + overlay A 217 C5 + overlay	A 182 F9 + overlay A 217 C12 + overlay
4	Arm	A 216 WCB	A 352 LCC	A 217 WC6	A 217 C5	A 217 C12
5	Seat	A 106 B + overlay	A 350 LF2 mod. + overlay	A 182 F5 + overlay	A 182 F5 + overlay	A 182 F5 + overlay
8	Nuts	AISI 316				
11	Bolts	A 193 B7 A 193 B7M	A 320 L7M	A 193 B7	A 193 B7	A 193 B7
12	Nuts	A 194 2H A 194 2HM	A 194 7M	A 194 2H	A 194 2H	A 194 2H
13	Plug	AISI 1035 A 276 430	A 276 430	A 276 430	A 276 430	A 276 430
14	Pin	AISI 304				
18,1 9	Arm sleeve	0,5 % C – 15 % Cr [ČSN 41 7029 ]				
17	Name plate	AISI 304				
20		carbon steel A 105				

( \* ) - Body material according to customer's requirements.

Change of technical data and drawings reserved.