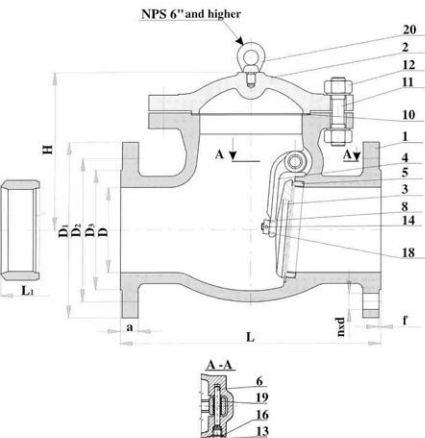


Swing check valve

C 09 406 (PN 16)

CLASS 150



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 ₁	D ₂	D ₃	L=L ₁	a	f	n	d	H	kg
2"	51	152	121	92	203	16	2	4	19	160	14,4
2.5"	63,5	178	139,7	105	216	18	2	4	19	180	21,5
3"	76	190	152	127	241	19	2	4	19	210	24,4
4"	102	229	190,5	157	292	24	2	8	19	215	44
6"	152	280	241,3	216	356	26	2	8	22	265	70,5
8"	203	343	298,5	270	495	29	2	8	22	312	111
10"	254	406	362	324	622	31	2	12	25	352	218
12"	305	483	431,8	381	698	32	2	12	25	402	269
14"	337	533	476,3	413	787	35	2	12	28	405	352
16"	387	597	539,8	470	864	37	2	16	28	455	482
18"	438	635	577,8	533	978	40	2	16	32	500	574
20"	489	598?	635	584	978	43	2	20	32	525	704
24"	591	813	749,5	692	1295	48	2	20	35	650	1080

Basic standards for design

Basic design	ASME B 16.34
Face-to face dimensions	ASME B16.10
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 [CSN 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.