LIFT CHECK VALVES

Rev.1

TYPE **C09 3**

Range NPS: ¼“ ~ 12“

Range Class: 150 ~ 2500

PED 97/23/EC
PED 2014/68/EU

TR TS 10/11, 12/11, 32/11

Operating temperature: -196 °C ~ 550 °C

Connection into piping: Flanged, welded ends, threaded ends, combined execution

DESCRIPTION

The lift check valves are automatic check valves. They automatically prevent the reverse flow of the medium. The medium can flow in one direction only. These valves are designed and manufactured to ensure maximum service life and reliability acc. to API standards.

MATERIAL SPECIFICATION

The valve parts that work under pressure, i.e., body, bonnet and plug are made of unalloyed or alloyed steels intended for casting. The material is selected depending on the characteristics of the process medium and operating temperature.

APPLICATION

The lift check valves can be used for water (except drinking water), steam, oil, air, hydrocarbons, petroleum and oil products.

BASIC STANDARDS FOR DESIGN

Basic design
API 602, API 6D, ASME B16.34

Pressure-temperature rating
ASME B16.34

Testing
API 598, EN 12 266 - 1, 2

Face-to-face dimensions
ANSI B16.10

Dimensions of the welded ends
ANSI B16.25

Top Flange dimensions
- - -

Flange dimensions
ANSI B 16.5

Special
NACE MR-0175

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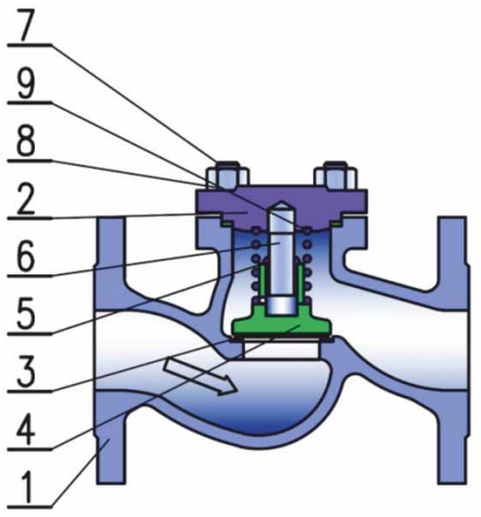
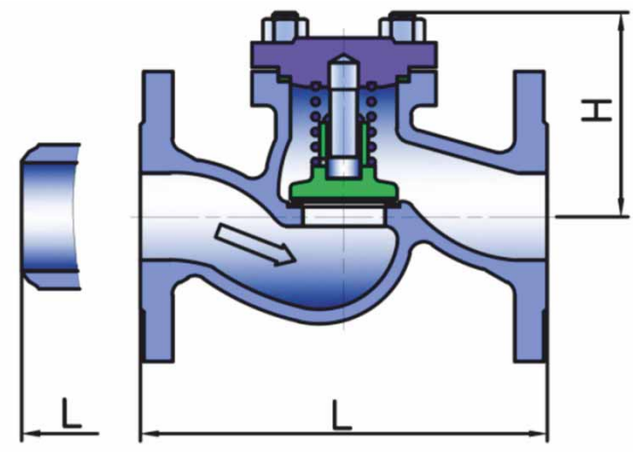
MATERIAL SPECIFICATION

ITEM	NAME	MATERIAL	
1	BODY	A352 LCB, A352 LCC, A216 WCB, A350 LF2, A105	A351 CF8, A351 CF8M, A182 F304, A182 F316
2	BONNET		
3	BODY SEAT PLUG SEAT	18-8-Cr Ni 13Cr, 17Cr, Stl.6	
4	PLUG	A352 LCB, A352 LCC, A216 WCB, A350 LF2, A105	A351 CF8, A351 CF8M, A182 F304, A182 F316
5	SLEEVE	A182 F304, A182 F316	
6	PLUG GUIDE		
7	BONNET STUD	A320 L7, A194 B7	A193 B8
8	NUT	A194 4, A194 2H	A194 8
9	SPRING	STAINLESS STEEL	



DIMENSIONS – DIRECT EXECUTION



NPS	CLASS 150				CLASS 300				CLASS 600				CLASS 900			
	L		H	Mass (kg)	L		H	Mass (kg)	L		H	Mass (kg)	L		H	Mass (kg)
	1/RF	2			1/RF	2			1/RF	2			1/RF	2		
3/8	102	102	76	1,8	152	152	78	2,2	-	-	-	-	-	-	-	-
1/2	108	108	76	2,2	152	152	78	3	-	-	-	-	-	-	-	-
3/4	117	117	76	3,6	178	178	82	5	-	-	-	-	-	-	-	-
1	127	127	98	5	203	203	102	7	-	-	-	-	-	-	-	-
1 1/2	165	165	115	7,5	229	229	118	10	-	-	-	-	-	-	-	-
2	203	203	140	9,5	267	267	140	13	292	292	152	14,3	368	368	180	15,5
3	241	241	168	16	318	318	178	21	356	356	178	25	381	381	235	35
4	292	292	194	20	356	356	195	29	432	432	215	33	457	457	270	42
6	406	406	226	31	445	445	245	43	559	559	279	57	610	610	350	65
8	495	495	250	67	559	559	280	98	660	660	328	118	737	737	400	150
10	622	622	275	152	622	622	336	188	-	-	-	-	-	-	-	-
12	698	698	332	180	711	711	380	222	-	-	-	-	-	-	-	-

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LIFT CHECK VALVES

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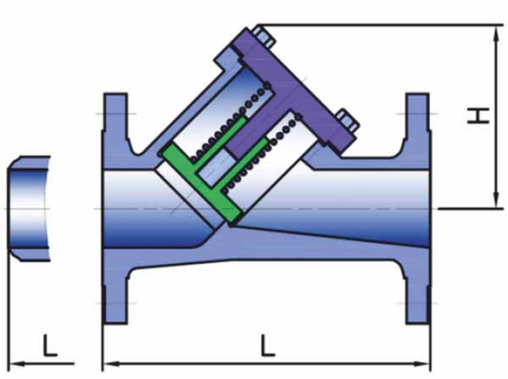
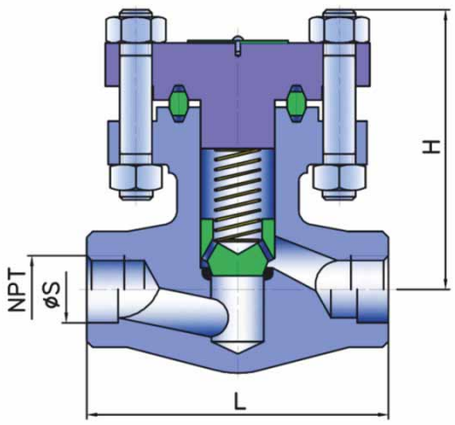
DIMENSIONS – OBLIQUE EXECUTION



NPS	CLASS 150				CLASS 300				CLASS 600				CLASS 900			
	L		H	Mass (kg)	L		H	Mass (kg)	L		H	Mass (kg)	L		H	Mass (kg)
	1/RF	2			1/RF	2			1/RF	2			1/RF	2		
3/8	102	102	76	1,8	152	152	78	2,2	-	-	-	-	-	-	-	-
1/2	108	108	76	2,2	152	152	78	3	-	-	-	-	-	-	-	-
3/4	117	117	76	3,6	178	178	82	5	-	-	-	-	-	-	-	-
1	127	127	98	5	203	203	102	7	-	-	-	-	-	-	-	-
1 1/2	165	165	115	7,5	229	229	118	10	-	-	-	-	-	-	-	-
2	203	203	140	9,5	267	267	140	13	292	292	152	14,3	368	368	180	15,5
3	241	241	168	16	318	318	178	21	356	356	178	25	381	381	235	35
4	292	292	194	20	356	356	195	29	432	432	215	33	457	457	270	42
6	406	406	226	31	445	445	245	43	559	559	279	57	610	610	350	65
8	495	495	250	67	559	559	280	98	660	660	328	118	737	737	400	150
10	622	622	275	152	622	622	336	188	-	-	-	-	-	-	-	-
12	698	698	332	180	711	711	380	222	-	-	-	-	-	-	-	-

DIMENSIONS – FORGED



		CLASS 800						CLASS 1500						CLASS 2500					
NPS	DN	L		NPT	S	H	BEC (KG)	L		NPT	S	H	BEC (KG)	L		NPT	S	H	BEC (KG)
		3	4				H.W.	3	4				H.W.	3	4				H.W.
1/4	6	80	80	1/4	14,2	55	1,3	110	110	1/4	14,2	96	3,2	150	150	1/4	14,2	128	7,5
3/8	10	80	80	3/8	17,6	55	1,3	110	110	3/8	17,6	96	3,2	150	150	3/8	17,6	128	7,5
1/2	15	80	80	1/2	21,8	55	1,3	110	110	1/2	21,8	96	3,2	150	150	1/2	21,8	128	7,5
3/4	20	90	90	3/4	27,2	60	1,6	150	150	3/4	27,2	128	7,3	150	150	3/4	27,2	128	7,5
1	25	110	110	1	33,9	78	2,8	150	150	1	33,9	128	7,3	210	210	1	33,9	152	18,5
1 1/2	40	150	150	1 1/2	48,8	92	5,6	210	210	1 1/2	48,8	155	17	230	230	1 1/2	48,8	190	30
2	50	180	180	2	61,2	108	9,0	230	230	2	61,2	195	29	230	230	2	61,2	190	30

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TYPE C09 3

TYPE DESIGNATION

C09 3 AC/DE M_1 CLASS/S

A BODY DESIGN

1	Direct
S	Oblique

E CONTROL

7	Automatic

S SPECIAL EXECUTION

As	Antistatic

C CONNECTION INTO PIPE

1	Flanged
2	Welded ends
3	Threaded
4	Socket welding
8	Combined

M_1 BODY MATERIAL

0	Stainless steel
2	Cast alloy steel
3	Forged alloy steel
4	Forged carbon steel
5	Cast carbon steel
LT	Carbon steel for low temperatures

D FLANGE FACING

ANSI B 16.5

PFF	Flat face
RF	Raised face
LTF	Large tongue face
STF	Small tongue face
LGF	Large groove face
SGF	Small groove face
LMF	Large male face
SMF	Small male face
LFF	Large female face
SFF	Small female face
RTJ	Ring join face

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