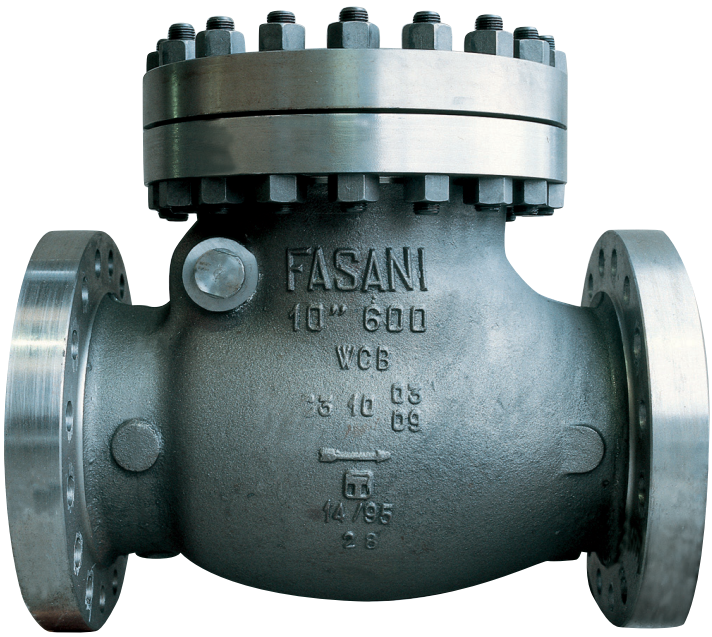
FASANI CHECK VALVES

BOLTED BONNET CONFIGURATION

The bolted bonnet type valves are manufactured to guarantee the highest performance in the widest spectrum of oil and gas applications



FEATURES

- Swing check valves can fit on both horizontal and vertical (up-flow) piping.
- Lift check valves are designed to be installed on horizontal piping or, with the aid of a spring, on vertical piping. They can also offer a quick closing service type.
- Tilting disc check valves are designed to prevent the disc slamming and to ensure, at the same time, a quick closing service.
- Standards for check valves design manufacturing are ASME B16.34 and BS 1868.
- Robust valve body in a wide range of materials (NACE compliance included).
- Threaded seat rings facilitate maintenance and/or replacement. On request, they can also be supplied as tack or seal welded. Above NPS 24 seats are seal welded as standard.
- Connections are offered as flanged, buttweld or special, such as clamp type, to meet any customers' request.

GENERAL APPLICATION

The high quality valves are installed in a large variety of services in the oil and gas field, chemical and petrochemical industry, in onshore and offshore drilling/refining, and in the power industry.
These valves are successfully installed worldwide on applications requiring flow reversal prevention.

TECHNICAL DATA

Sizes:	DN 50 to 1500 and larger
Temperature (°C):	-60 to + 650
Pressure ratings:	From ASME 150 to 2500
Body materials:	Carbon, alloy and stainless steels, duplex steels, special alloys

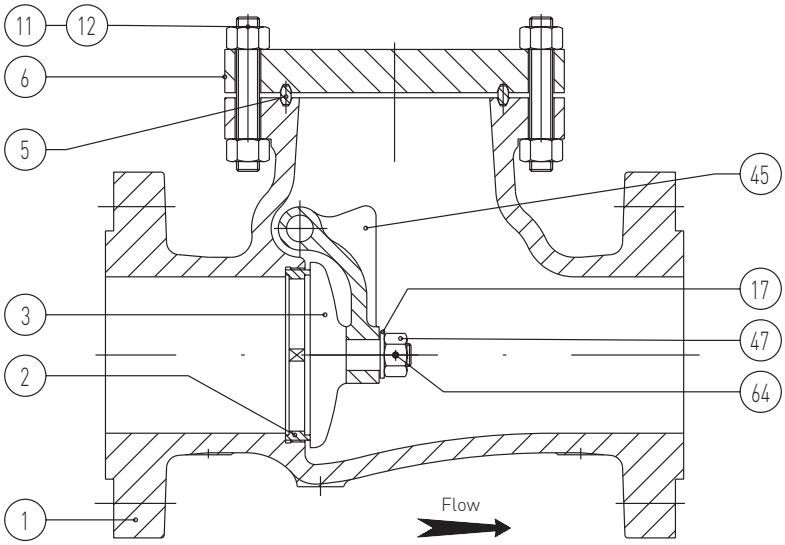
Connections standards

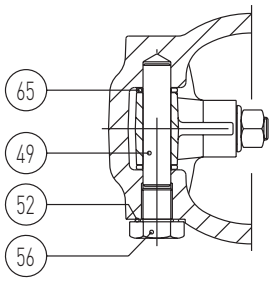
Flanges:	ASME B16.5 and B16.47, API 605, MSS-SP 44
Buttweld:	ASME B16.25

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FASANI CHECK VALVES

BOLTED BONNET CONFIGURATION





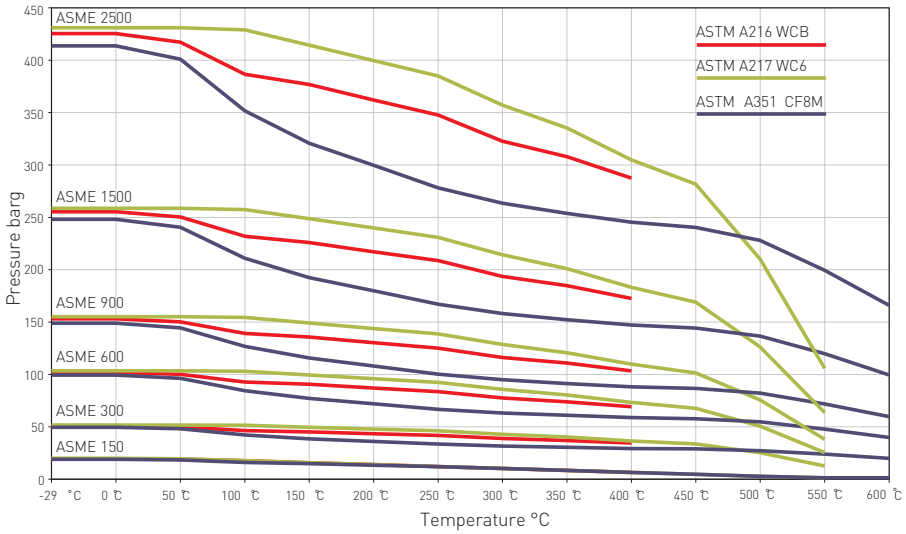
MATERIAL SELECTION

Item	Description	Body in WCB	Body in WC6	Body in CF8M
1	Body	A216 WCB	A217 WC6	A351 CF8M
2	Seat ring	A105 + AWS ER 430	A182 F22 + AWS ER 430	A182 F316
3	Disc	A216 WCB + AWS ER 430	A217 WC6 + AWS ER 430	A351 CF8M
5	Gasket	Soft Iron	A182 F5	A182 F316
6	Bonnet	A516 gr. 70	A217 WC6	A351 CF8M
11	Body - bonnet bolt	A193 B7	A193 B16	A193 B8M
12	Body - bonnet nut	A194 2H	A194 4	A194 8
17	Washer	A182 F316	A182 F316	A182 F316
45	Hinge	A216 WCB	A217 WC6	A351 CF8M
47	Nut	A194 2H	A194 4	A194 8
49	Hinge pin	A182 F6a	A182 F6a	A182 F316
52	Pin gasket	Flexible graphite	Flexible graphite	Flexible graphite
56	Hinge pin plug	A193 B7	A193 B16	A193 B8M
64	Split pin	Stainless steel	Stainless steel	Stainless steel
65	Spacer ring	A182 F316	A182 F316	A182 F316

NOTES

1. Other materials are available on request.
   Please consult supplier.
2. The item 5 (gasket) is supplied in different versions
   ASME Class 150 and 300: spiral wound gasket in 316/graphite.
   All remaining classes: RTJ in the materials indicated in the material specification.
3. The sectional drawing represented here refers to ASME Class 600 and larger.

PRESSURE/TEMPERATURE RATINGS IN BARG/PSIG (ASME B16.34)



NOTES

All valves are fully rated in accordance with ASME B16.34. The table represented here indicates the pressure/temperature rating values as per ASME B16.34-1996.

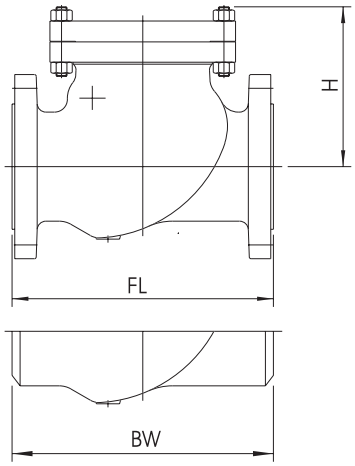
TRIM

		Material type					
Trim no.	**Nominal trim symbol**	**Seal surfaces**	**Disc/wedge surfaces**	**Stem hinge pin**	**Backseat**	**Small internal parts**	**Service**
1	CR13	13% Cr	13% Cr	13% Cr	13% Cr	13% Cr	General erosive or non-corrosive service between -100°C and 400°C
2	18-8	304	304	304	304	304	For moderate pressure in non-erosive, corrosive service between -265°C and 320°C
3	25-20	310	310	310	310	310	For moderate pressure in corrosive or non corrosive service. Between -265°C and 450°C
4	SH	Hard 13% Cr	Hard 13% Cr	13% Cr	13% Cr	13% Cr	As trim no. 1 but for medium pressure
5	HF	Co-Cr A	Co-Cr A	13% Cr	13% Cr	13% Cr	High pressure slightly erosive and corrosive service between -265°C and 650°C
5A	HFNi	Ni-Cr	Ni-Cr	13% Cr	13% Cr	13% Cr	As trim no. 5 where Co is not allowed
6	Cr13 Ni-Cu	Ni-Cu	13% Cr	13% Cr	13% Cr	13% Cr	As trim no. 1
7	CR13 SH	Hard 13% Cr	13% Cr	13% Cr	13% Cr	13% Cr	As trim no. 1 but for moderate pressure
8	CR13 HF	Co-Cr A	13% Cr	13% Cr	13% Cr	13% Cr	As trim no. 5 for moderate pressure
8A	CR13 HFNi	Ni-Cr	13% Cr	13% Cr	13% Cr	13% Cr	As trim no. 5A for moderate pressure
9	Ni-Cu	Ni-Cu	Ni-Cu	Ni-Cu	Ni-Cu	Ni-Cu	Very corrosive fluids. Erosive-corrosive service between -240°C and 480°C
10	18-8SMO	316	316	316	316	316	As trim no. 2
11	Ni-Cu HF	Co-Cr A	Ni-Cu	Ni-Cu	Ni-Cu	Ni-Cu	As trim no. 9 but for medium pressure
12	18-8SMO HF	Co-Cr A	316	316	316	316	As trim no. 10 but for medium pressure
13	Alloy 20	19Cr-29Ni	19Cr-29Ni	19Cr-29Ni	19Cr-29Ni	19Cr-29Ni	Very corrosive service. For moderate pressure between -45°C and 320°C
14	Alloy 20 HF	Co-Cr A	19Cr-29Ni	19Cr-29Ni	19Cr-29Ni	19Cr-29Ni	As trim no. 13 but for medium pressure

Co-Cr A is equivalent to Stellite® 6

FASANI CHECK VALVES

BOLTED BONNET CONFIGURATION



NOTES

1. All dimensions are in mm.
2. Check valves are also available as both tilting disc and piston type, and as lift check type. Sizes and classes larger than mentioned here are available: please consult supplier for more information.
3. W1 corresponds to weight in kilos for flanged body style.

* For sizes larger than NPS 24, weight depends on flange standards.

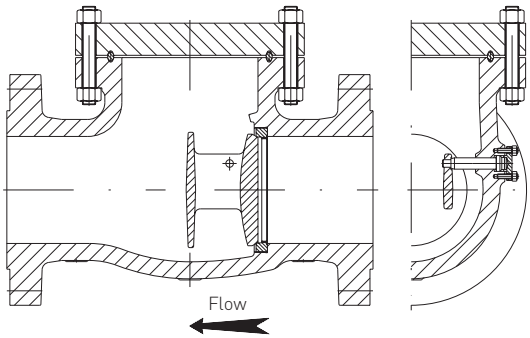
4. W2 corresponds to weight in kilos for welding body style.

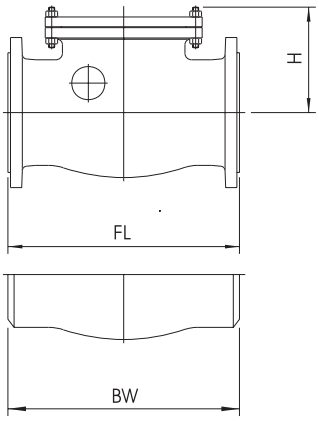
Sizes		ASME class 150 (Fig. VR 150 BB)					ASME class 300 (Fig. VR 300 BB)					ASME class 600 (Fig. VR 600 BB)				
DN	NPS	FL	BW	H	W1	W2	FL	BW	H	W1	W2	FL	BW	H	W1	W2
50	2	203	203	140	15	10	267	267	150	20	15	292	292	200	30	25
65	2½	216	216	160	20	15	292	292	170	30	25	330	330	220	35	30
80	3	242	242	180	25	20	318	318	190	40	30	356	356	240	55	45
100	4	292	292	195	40	30	356	356	220	55	40	432	432	280	90	70
125	5	330	330	215	60	50	400	400	250	85	65	508	508	300	150	110
150	6	356	356	240	70	60	445	445	280	110	85	559	559	325	195	145
200	8	496	496	290	120	100	533	533	345	205	160	660	660	425	385	310
250	10	623	623	360	195	160	623	623	415	320	255	787	787	475	580	505
300	12	699	699	425	290	275	711	711	485	460	370	838	838	505	785	680
350	14	788	788	490	365	320	838	838	560	645	530	889	889	605	990	870
400	16	864	864	520	520	470	864	864	550	675	650	991	991	660	1370	1250
450	18	978	978	545	610	535	978	978	590	975	840	1092	1092	655	1750	1530
500	20	978	978	635	800	730	1016	1016	680	1290	1000	1194	1194	840	2360	2035
550	22	-	1067	680	-	950	-	1118	710	-	1450	-	1295	930	-	2500
600	24	1295	1295	715	1220	1120	1346	1346	760	2080	1900	1397	1397	960	3820	3200
650	26	1295	1295	740	*	1510	1346	1346	800	*	2100	1448	1448	1000	*	4070
700	28	1448	1448	760	*	1750	1499	1499	970	*	3450	1600	1600	1050	*	4950
750	30	1524	1524	840	*	2490	1594	1594	970	*	3580	1651	1651	1080	*	5200
800	32	1676	1676	880	*	2860	1787	1787	1020	*	4200	1787	1787	1180	*	6300
850	34	1829	1829	910	*	3230	1905	1905	1070	*	4830	1905	1905	1280	*	7400
900	36	1956	1956	950	*	3600	2083	2083	1120	*	5450	2083	2083	1380	*	8500
950	38	-	-	-	*	-	-	-	-	*	-	-	-	-	*	-
1000	40	2006	2006	1040	*	4470	2134	2134	1250	*	7580	2318	2318	1460	*	11165
1050	42	2038	2038	1090	*	4900	2159	2159	1290	*	8125	2438	2438	1500	*	12500
1100	44	-	-	-	*	-	-	-	-	*	-	-	-	-	*	-
1150	46	-	-	-	*	-	-	-	-	*	-	-	-	-	*	-
1200	48	2134	2134	1210	*	6200	2235	2235	1380	*	9750	2540	2540	1610	*	16500

Sizes		ASME class 900 (Fig. VR 900 BB)					ASME class 1500 (Fig. VR 1500 BB)					ASME class 2500 (Fig. VR 2500 BB)				
DN	NPS	FL	BW	H	W1	W2	FL	BW	H	W1	W2	FL	BW	H	W1	W2
50	2	-	-	-	-	-	368	368	245	70	55	451	451	280	130	100
65	2½	-	-	-	-	-	419	419	295	105	75	508	508	360	210	150
80	3	381	381	260	90	70	470	470	300	135	85	578	578	360	250	190
100	4	457	457	315	155	125	546	546	345	220	175	673	673	415	370	285
125	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	6	610	610	400	300	250	705	705	490	545	430	914	914	605	1050	780
200	8	737	737	485	570	430	832	832	565	890	720	1022	1022	725	1800	1410
250	10	838	838	540	780	635	991	991	660	1510	1080	1270	1270	875	2800	2000
300	12	965	965	610	1150	950	1130	1130	765	2230	1767	1422	1422	925	3950	2900
350	14	1029	1029	690	1560	1350	1257	1257	880	3200	2500	-	-	-	-	-
400	16	1130	1130	660	1750	1500	1384	1384	830	3700	3050	-	-	-	-	-
450	18	1219	1219	670	2300	2000	1537	1537	880	5280	4250	-	-	-	-	-
500	20	1321	1321	700	2540	2150	1664	1664	920	6850	5500	-	-	-	-	-
550	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	24	1549	1549	925	5000	4500	1943	1943	1000	10000	8000	-	-	-	-	-

FASANI CHECK VALVES

BOLTED BONNET CONFIGURATION





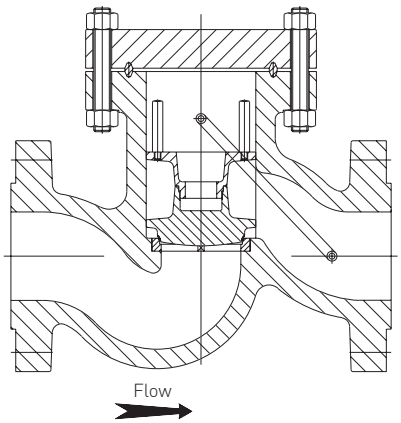
Sizes		ASME CLASS 600 (Fig. TD 600 BB)					ASME CLASS 900 (Fig. TD 900 BB)					ASME CLASS 1500 (Fig. TD 1500 BB)					ASME CLASS 2500 (Fig. TD 2500 BB)				
DN	**NPS**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**
80	3	356	254	170	55	45	381	305	225	75	55	470	305	285	100	60	578	368	265	160	80
100	4	432	305	230	100	75	457	356	270	130	95	546	406	315	150	100	673	457	315	240	125
125	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	6	559	457	295	195	145	610	508	335	290	190	705	559	380	350	230	914	610	405	700	380
200	8	660	584	335	395	325	737	660	375	480	335	832	711	450	600	440	1022	762	545	1300	860
250	10	787	711	405	605	490	838	787	440	900	730	991	864	510	1600	1160	1270	914	590	2900	2075
300	12	838	813	465	795	645	965	914	490	1140	910	1130	991	615	1900	1300	1422	1041	710	3170	2250
350	14	889	889	550	940	750	1029	991	530	1420	1020	1257	1067	750	2460	1680	-	1118	790	-	2550
400	16	991	991	595	1300	1085	1130	1092	570	1950	1650	1384	1194	870	2650	2080	-	1245	860	-	3750
450	18	1092	1092	580	1720	1460	1219	1143	690	2750	2240	1537	1346	970	3170	2740	-	1397	910	-	4500
500	20	1194	1194	545	1920	1600	1321	1245	740	2850	2250	1664	1473	1015	4870	3600	-	1524	975	-	5600
550	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	24	1397	1397	645	2400	1950	1549	1397	980	3530	2540	1943	1752	1002	5300	3800	-	1676	1290	-	6000

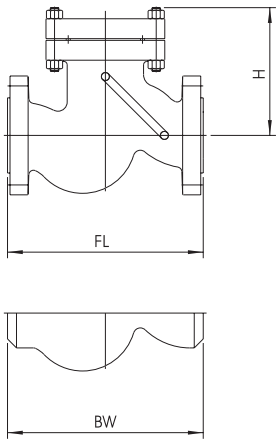
NOTES

1. All dimensions are in mm.
2. Sizes and classes larger than mentioned here are available: please consult supplier for more information.
3. W1 corresponds to weight in kilos for flanged body style. For sizes larger than NPS 24, weight depends on flange standards.
4. W2 corresponds to weight in kilos for welding body style.

FASANI CHECK VALVES

BOLTED BONNET CONFIGURATION





Sizes		ASME class 150 (Fig. PC 150 BB)					ASME class 300 (Fig. PC 300 BB)					ASME class 600 (Fig. PC 600 BB)				
DN	**NPS**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**
50	2	203	203	130	12	10	267	267	140	25	20	292	292	165	30	25
65	2½	216	216	150	20	15	292	292	170	30	25	330	330	190	40	30
80	3	242	242	150	25	20	318	318	180	45	35	356	356	220	50	40
100	4	292	292	180	40	30	356	356	220	70	55	432	432	265	105	90
125	5	356	356	230	60	50	400	400	250	95	85	508	508	280	160	130
150	6	407	407	235	75	70	445	445	260	110	90	559	559	290	185	140
200	8	496	496	260	130	110	559	559	310	235	210	660	660	360	380	305
250	10	623	623	310	245	210	623	623	370	345	310	787	787	510	585	480
300	12	699	699	370	340	270	711	711	400	480	445	838	838	510	840	690
350	14	788	788	425	520	415	825	825	430	695	655	-	-	-	-	-
400	16	915	915	460	665	625	953	953	460	920	865	-	-	-	-	-
450	18	940	940	475	830	775	978	978	480	1025	945	-	-	-	-	-
500	20	978	978	495	1000	935	1016	1016	500	1160	1015	-	-	-	-	-
550	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	24	1296	1296	540	1360	1265	-	-	-	-	-	-	-	-	-	-

Sizes		ASME class 900 (Fig. PC 900 BB)					ASME class 1500 (Fig. PC 1500 BB)					ASME class 2500 (Fig. PC 2500 BB)				
DN	**NPS**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**	**FL**	**BW**	**H**	**W1**	**W2**
50	2	-	-	-	-	-	368	368	235	75	60	451	451	355	150	145
65	2½	-	-	-	-	-	419	419	280	110	90	508	508	330	280	235
80	3	381	381	260	105	90	470	470	290	145	120	578	578	410	335	290
100	4	457	457	290	160	130	546	546	320	205	180	673	673	440	465	400
125	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	6	610	610	400	365	320	705	705	345	470	375	914	914	515	960	710
200	8	737	737	490	720	545	832	832	545	935	760	1022	1022	600	1425	930
250	10	838	838	550	1120	910	991	991	630	1400	1175	1270	1270	680	2000	1280
300	12	965	965	610	1720	1520	1130	1130	710	2080	1840	1422	1422	760	2610	1455
350	14	1029	1029	670	2120	1705	-	-	-	-	-	-	-	-	-	-
400	16	1130	1130	730	2640	1960	-	-	-	-	-	-	-	-	-	-
450	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
550	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES

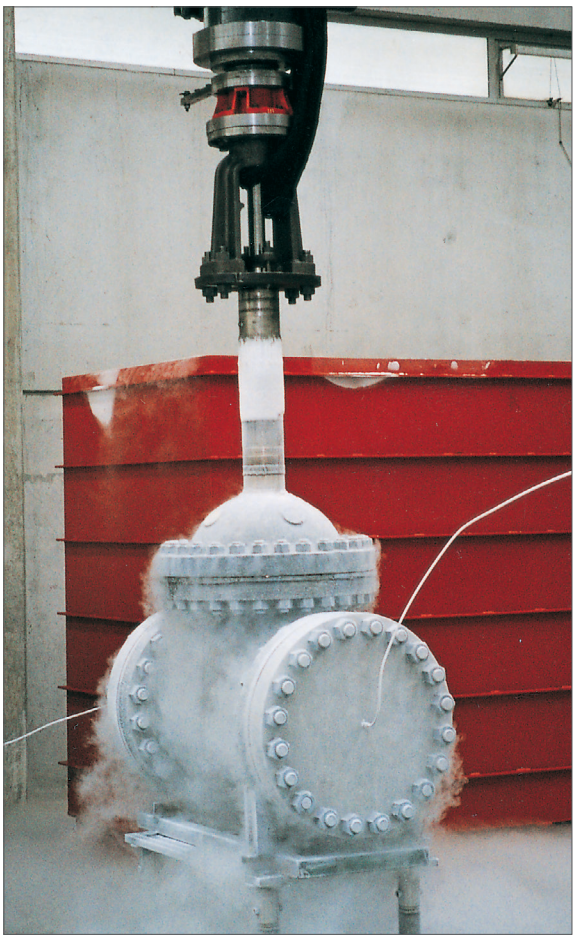
1. All dimensions are in mm.
2. Sizes and classes larger than mentioned here are available: please consult supplier for more information.
3. W1 corresponds to weight in kilos for flanged body style.
4. W2 corresponds to weight in kilos for welding body style.

FASANI CHECK VALVES
CRYOGENIC CONFIGURATION

FEATURES

The Fasani cryogenic valves face the harsh conditions of services involving temperatures down to -254°C.

- Body in a range of materials suitable for extremely low temperatures, such as CF8M, CF8 and other very low temperature steels.
- Connections are offered as flanged or special.
- All cryogenic valves are designed in full compliance with ASME B16.34 and BS 6364.
- The cryogenic tests are performed in the fully equipped in-house Fasani facilities, according to BS 6364 and all major oil and gas cryogenic test procedures.
- Seats are welded in.



TECHNICAL DATA

Sizes:	DN 50 to 600 and larger
Temperature (°C):	As low as -254
Pressure ratings:	From ASME Class 150 to 900
Body materials:	CF8M, CF8 and other low temperature steels

Connections standards

Flanges:	ASME B16.5
Buttweld:	ASME B16.25

GENERAL APPLICATION

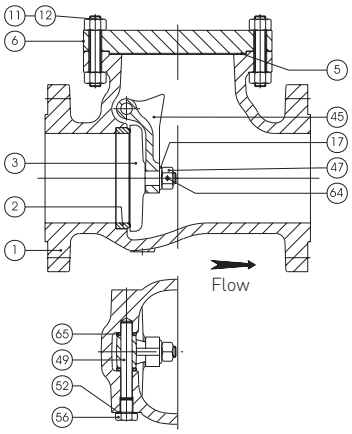
The cryogenic valves are widely installed on applications involving media at extremely low temperatures, such as the production, storage and transportation of liquefied natural gas, hydrogen, oxygen, etc.

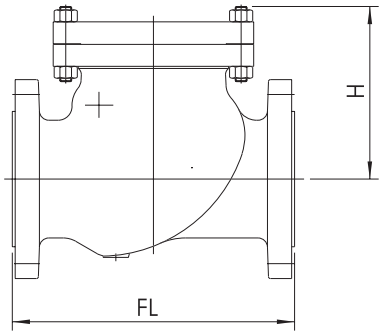


FASANI CHECK VALVES
CRYOGENIC CONFIGURATION

MATERIAL SELECTION

Item	Description	Body in CF8	Body in CF8M
1	Body	A351 CF8	A351 CF8M
2	Seat ring	A182 F316	A182 F316
3	Disc	A351 CF8	A351 CF8M
5	Gasket	Spiral wound 316/Graphite	Spiral wound 316/Graphite
6	Bonnet	A351 CF8	A351 CF8M
11	Body - bonnet bolt	A320 B8	A320 B8M
12	Body - bonnet nut	A194 8	A194 8
17	Washer	A182 F316	A182 F316
45	Hinge	A351 CF8	A351 CF8M
47	Nut	A194 8	A194 8
49	Hinge pin	A182 F304	A182 F316
52	Pin gasket	Flexible graphite	Flexible graphite
56	Hinge pin plug	A320 B8	A320 B8M
64	Split pin	Stainless steel	Stainless steel
65	Spacer ring	A182 F316	A182 F316





NOTES

1. All dimensions are in mm.
2. Swing check valves in sizes and classes larger than mentioned here are available. Please consult supplier for more information.
3. "W" corresponds to weight in kilos (flanged body style).

Sizes		ASME class 150 (Fig. VRC 150 BB)			ASME class 300 (Fig. VRC 300 BB)			ASME class 600 (Fig. VRC 600 BB)			ASME class 900 (Fig. VRC 900 BB)		
DN	NPS	FL	H	W	FL	H	W	FL	H	W	FL	H	W
50	2	203	140	15	267	150	20	292	200	30	-	-	-
65	2½	216	160	20	292	170	30	330	220	35	-	-	-
80	3	242	180	25	318	190	40	356	240	55	381	260	90
100	4	292	195	40	356	220	55	432	280	90	457	315	155
125	5	330	215	60	400	250	85	508	300	150	-	-	-
150	6	356	240	70	445	280	110	559	325	195	610	400	300
200	8	496	290	120	559	345	205	660	425	385	737	485	570
250	10	623	360	195	623	415	320	787	475	580	838	540	780
300	12	699	425	290	711	485	460	838	505	785	965	610	1150
350	14	788	490	365	838	560	645	889	605	990	1029	690	1560
400	16	864	520	520	864	550	675	991	660	1370	1130	660	1750
450	18	978	545	610	978	590	975	1092	655	1750	1219	670	2300
500	20	978	635	800	1016	680	1290	1194	840	2360	1321	700	2540
550	22	-	680	-	-	710	-	-	930	-	-	-	-
600	24	1295	715	1220	1346	760	2080	1397	960	3820	1549	925	5000

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