



WARREN MORRISON UK LTD



CHECK VALVES
CV SERIES

Warren-Morrison Valves

Established in 1949 in the United Kingdom, Warren-Morrison UK Ltd. has been manufacturing its own unique range of industrial valves and actuators for over 70 years. Benefitting from our own internal rubber mould department, machine shop and development and test facilities, we maintain total control over production and quality through continuous 'in process inspection'. Our dedication towards future development has continued to ensure our market position as a select industrial valves, actuators and accessories manufacturer and supplier.

Warren-Morrison Check Valves:

The Warren Morrison CV Series Check Valve is a well-engineered valve to suit various industries and applications from drinking water, water and sewage treatment, fire protection, oil and gas, HVAC, petrochemical, power and others. Designed as either wafer or flanged, dual plate or swing style with various pressure and end connection standards.

Check Valves Features:

- Rigid compact design that meets fully rated ASME 600 pressure class.
- Proper seal at low as well as high pressure values suitable for various temperature ranges.
- Different Materials for body/disc/stem and seat to suit a wide range of industries.
- Various paint options available upon request.
- Compatibility to International Standards.
- Retainerless design for the high-pressure steel check valves for the ease of installation.

CVD Wafer Dual Plate PN 10/ PN 16 Rating

Size	DN 50- DN 800
Working Pressure	DN 50- DN 600: PN 16, DN 700- DN 800: PN 10
Design Standard	Manufacturer Standard
Face to Face	EN558-1 Series 16
End Connection	EN 10921-2 PN 10/ EN 10921-2 PN 16/ASME B16.5 CL150 ASME B16.47 Series A
Testing Standard	BS EN 12266-1/ API 598
Leakage Rate	Zero Leakage



Parts list

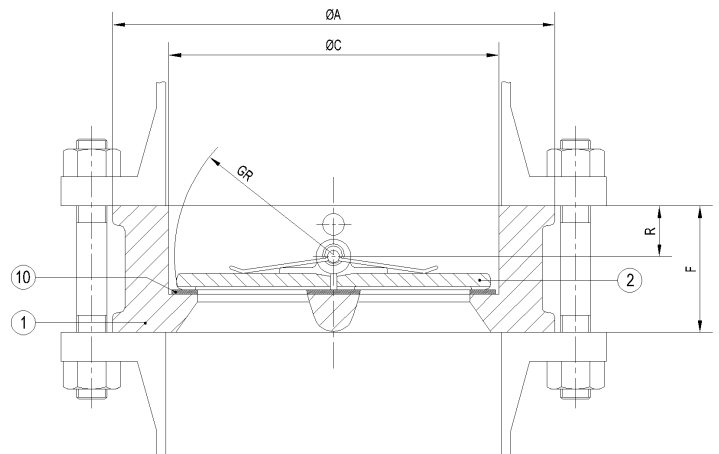
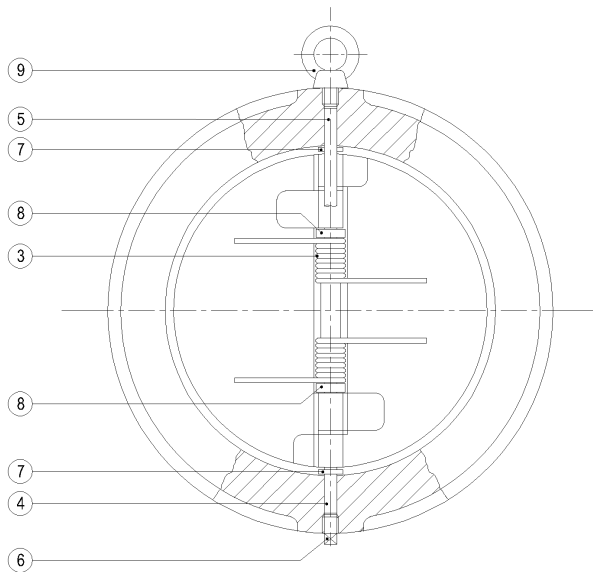
Sl. No.	Description	Material	Sl. No.	Description	Material
1	Body	Cast Iron, Ductile Iron	6	Plug	Carbon Steel
2	Plate	SS 316, SS 304, Aluminum Bronze, NiAB, DI+Ni	7	Body Bearing	PTFE
3*	Spring	SS 304	8	Spring Bearing	PTFE
4*	Hinge Pin	SS 410	9*	Eye Bolt	Carbon Steel
5*	Stop Pin	SS 410	10	Body Sea	EPDM, Buna, Viton

3* SS 316 spring is available on request

4* SS 304/ SS 316 Hinge Pin is available on request

5* SS 304/ SS 316 Stop Pin is available on request

9* For size 8" and above



Dimensions and Weight

Valve Size		Dimensions							Weight Kg
Inch	mm	ØC	F	GR	R	ØA			
						PN10	PN16	ANSI 150	
2	50	65	43	28.8	19	107	107	102	1.5
2.5	65	80	46	36.1	20	127	127	121	2.5
3	80	94	64	43.4	28	142	142	134	4
4	100	117	64	52.8	27	162	162	171	6
5	125	145	70	65.7	30	192	192	193	8
6	150	170	76	78.6	31	218	218	219	9
8	200	224	89	104.4	33	273	273	276	17
10	250	265	114	127	50	328	328	336	26
12	300	310	114	148.3	43	378	378	406	42
14	350	360	127	172.4	45	438	438	448	55
16	400	410	140	197.4	52	489	489	511	75
18	450	450	152	217.8	58	539	555	546	107
20	500	505	152	241	58	594	617	603	111
24	600	624	178	295.4	73	695	700	714	172
28	700	720	229	338.5	98	810	804	828*	219
32	800	825	241	385.5	100	915	911	936*	316

* ASME B16.47 Series A

CVS Swing Flanged PN 10/ PN 16 Rating

Size	DN 50- DN 400
Working Pressure	PN 16
Design Standard	BS 5153
Face to Face	EN558-1 Series 10
End Connection	Raised Face: EN 10921-2 PN 10/ EN 10921-2 PN 16
Testing Standard	EN-12266-1
Leakage Rate	Rate D
Options	Flat face end connection, counterweight and lever

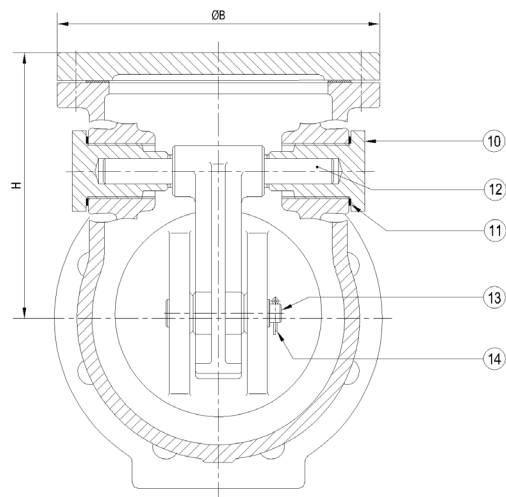
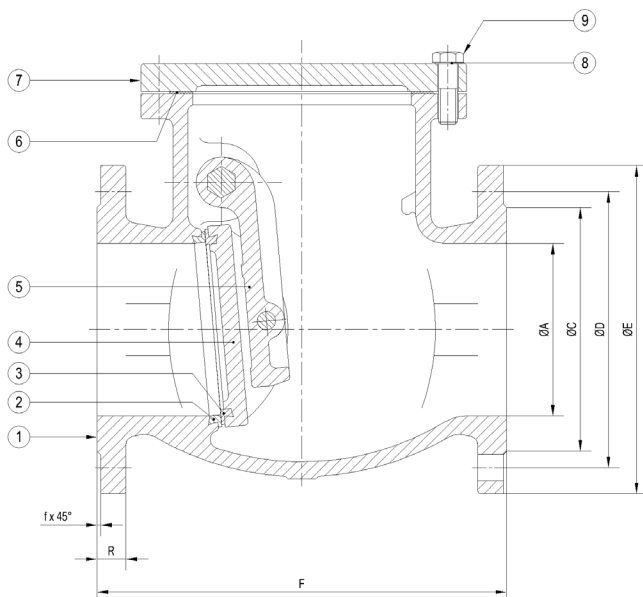


Parts list

Sl. No.	Description	Material	Sl. No.	Description	Material
1	Body	Ductile Iron	8	Washer	Carbon Steel
2*	Seat Seal	Brass	9	Bolt	SS 304
3*	Disc seal	Brass	10	Nut	SS 304
4	Disc	Ductile Iron	11	O-ring	EPDM
5	Hinge	Ductile Iron	12	Pin	SS 410
6	Gasket	EPDM	13	Pin	SS 410
7	Cover	Ductile Iron	14	Cotter Pin	Steel

2* Gunmetal is available on request

3* Gunmetal is available on request



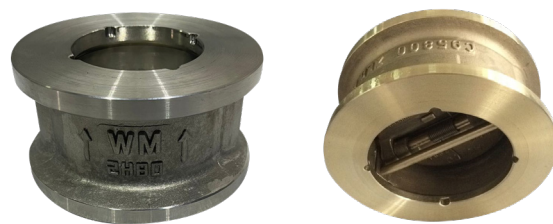
Dimensions and Weight

Valve Size		Dimensions				Flange Bolting Dimensions										Weight Kg
Inch	mm	ØA	F	H Approx.	ØB	ØC	PN10			PN16			ØE	f	R	
							ØD	n	Ød	ØD	n	Ød				
2	50	50	203	135	170	99	125	4	19	125	4	19	165	3	19	14
2.5	65	65	216	148	176	118	145	4	19	145	4	19	185	3	19	17
3	80	80	241	178	205	132	160	8	19	160	8	19	200	3	19	25
4	100	100	292	195	220	156	180	8	19	180	8	19	220	3	19	31
5	125	125	330	210	265	184	210	8	19	210	8	19	250	3	19	51
6	150	150	356	250	295	211	240	8	23	240	8	23	285	3	19	63
8	200	200	495	300	370	266	295	8	23	295	12	23	340	3	20	97
10	250	250	622	355	430	319	350	12	23	355	12	28	405	3	22	147
12	300	300	698	365	505	370	400	12	23	410	12	28	460	4	24.50	218
14	350	350	787	415	610	429	460	16	23	470	16	28	520	4	26.50	378
16	400	400	914	455	685	480	515	16	28	525	16	31	580	4	28	515

Weights are without counterweights and lever

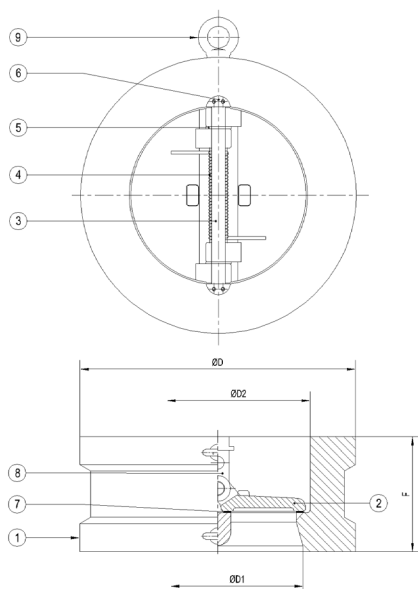
CVD/ CVF Dual Plate Wafer and Flanged High Pressure 150#/ 300#/ 600# Rating

Size	DN 50 - DN 600
Working Pressure	150#/ 300#/ 600#
Design Standard	API 594
Face to Face	API 594
End Connection	ASME B16.5 CL150/ CL300/ CL600
Testing Standard	API 598
Leakage Rate	Soft Seat: Zero Leakage/ Metal Seat: ISO 5208 Class G

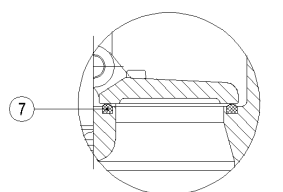


Parts list

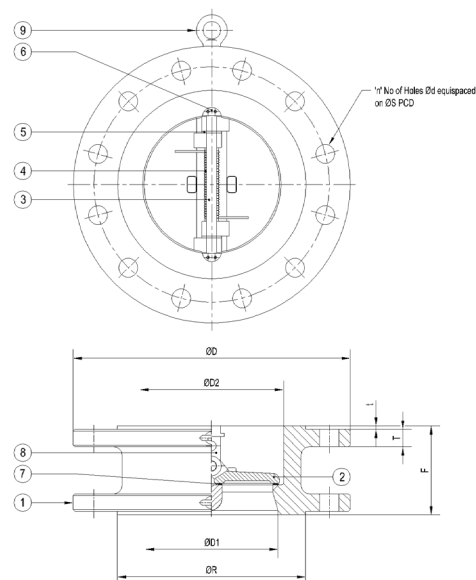
Sl.No.	Description	Material	Sl.No.	Description	Material
1	Body	WCB, CF8, CFBM, CF3, CF3M, Duplex 4A/ 5A/ 6A	6	Holder Lock	A105, SS 316
2	Disc	WCB+13 Cr, A217 CA15, CF8, CFBM, CF3, CF3M, Duplex 4A/ 5A/ 6A	7	Seat	Integral, Integral+SS 304 Overlay, Integral+SS 316 Overlay, Integral+Stellite Overlay, EPDM, Buna-N, Viton
3	Pin	SS 410, SS 316, F51, F53, F55	8	Pin Holder	SS 410, SS 316
4	Spring	Inconel x-750	9*	Eye Bolt	Carbon Steel
5	Bearing	SS 316			



CVD Wafer Style



SOFT SEAT CONSTRUCTION



CVF Flanged Style

Dimensions

CVD Wafer Style ANSI 150#

Valve Size		Dimensions				Flange Bolting Dimensions			
Inch	mm	F	ØD	ØD1	ØD2	No of Bolts	Dia. of Bolt Circle	Dia. Of Bolts Inch	Dia. Of Bolts mm
2	50	60	103	51	55	4	120.5	5/8"	M16
2.5	65	67	122	65	68	4	139.5	5/8"	M16
3	80	73	135	80	82	4	152.5	5/8"	M16
4	100	73	173	102	108	8	190.5	5/8"	M16
5	125	86	195	127	130	8	216	3/4"	M20
6	150	98	221	152	165	8	241.5	3/4"	M20
8	200	127	277	203	220	8	298.5	3/4"	M20
10	250	146	337	254	270	12	362	7/8"	M24
12	300	181	408	305	320	12	432	7/8"	M24
14	350	184	448	337	350	12	476	1"	M27
16	400	191	513	387	400	16	540	1"	M27
18	450	203	547	438	438	16	578	1- 1/8"	M30
20	500	219	604	495	495	20	635	1- 1/8"	M30
24	600	222	715	595	595	20	749.5	1- 1/4"	M33

CVD Wafer Style ANSI 300#

Valve Size		Dimensions				Flange Bolting Dimensions			
Inch	mm	F	ØD	ØD1	ØD2	No of Bolts	Dia. of Bolt Circle	Dia. Of Bolts Inch	Dia. Of Bolts mm
2	50	60	110	51	55	8	127	5/8"	M16
2.5	65	67	128	65	68	8	149	3/4"	M20
3	80	73	147	80	82	8	168.5	3/4"	M20
4	100	73	179	102	108	8	200	3/4"	M20
5	125	86	214	127	130	8	235	3/4"	M20
6	150	98	249	152	165	12	270	3/4"	M20
8	200	127	305	203	220	12	330	7/8"	M24
10	250	146	359	254	270	16	387.5	1"	M27
12	300	181	420	305	320	16	451	1- 1/8"	M30
14	350	222	483	337	350	20	514.5	1- 1/8"	M30
16	400	232	537	387	400	20	571.5	1- 1/4"	M33
18	450	264	594	438	438	24	628.5	1- 1/4"	M33
20	500	292	652	495	495	24	686	1- 1/4"	M33
24	600	318	772	595	595	24	813	1- 1/2"	M39

CVD Wafer Style ANSI 600#

Valve Size		Dimensions				Flange Bolting Dimensions			
Inch	mm	F	ØD	ØD1	ØD2	No of Bolts	Dia. of Bolt Circle	Dia. Of Bolts Inch	mm
2	50	60	110	51	55	8	127	5/8"	M16
2.5	65	67	128	65	68	8	149	3/4"	M20
3	80	73	147	80	82	8	168.5	3/4"	M20
4	100	79	191	102	108	8	216	7/8"	M24
5	125	105	240	127	130	8	267	1"	M27
6	150	136	264	152	165	12	292	1"	M27
8	200	165	318	200	210	12	349	1- 1/8"	M30
10	250	213	398	250	255	16	432	1- 1/4"	M33
12	300	229	455	300	300	20	489	1- 1/4"	M33
14	350	273	490	335	335	20	527	1- 3/8"	M36
16	400	305	562	385	385	20	603	1- 1/2"	M39
18	450	362	610	435	435	20	654	1- 5/8"	M42
20	500	368	680	487	487	24	724	1- 5/8"	M42
24	600	438	786	585	585	24	838	1- 7/8"	M48

CVF Flanged Style ANSI 150#

Valve Size		Dimensions			Flange Bolting Dimensions						
Inch	mm	F	ØD1	ØD2	ØD	n	Ød	ØR	ØS	t	T
2	50	114	51	55	150	4	15.8	92.1	120.5	2	14.3
3	80	121	80	82	190	4	15.8	127	152.5	2	17.5
4	100	121	102	108	230	8	15.8	157.2	190.5	2	22.3
6	150	130	152	165	280	8	19.1	215.9	241.5	2	23.9
8	200	127	203	220	345	8	19.1	269.9	298.5	2	27
10	250	146	254	270	405	12	22.2	323.8	362	2	28.6
12	300	181	305	320	485	12	22.2	381	432	2	30.2
14	350	184	337	350	535	12	25.4	412.8	476	2	33.4
16	400	191	387	400	595	16	25.4	469.9	540	2	35
18	450	203	438	438	635	16	28.5	533.4	578	2	38.1
20	500	219	495	495	700	20	28.5	584.2	635	2	41.3
24	600	222	595	595	815	20	31.8	692.2	749.5	2	46.1

CVF Flanged Style ANSI 300#

Valve Size		Dimensions			Flange Bolting Dimensions						
Inch	mm	F	ØD1	ØD2	ØD	n	Ød	ØR	ØS	t	T
2	50	114	51	55	165	8	15.8	92.1	127	2	20.7
3	80	121	80	82	210	8	19.1	127	168.5	2	27
4	100	121	102	108	255	8	19.1	157.2	200	2	30.2
6	150	130	152	165	320	12	19.1	215.9	270	2	35
8	200	152	203	220	380	12	22.2	269.9	330	2	39.7
10	250	178	254	270	445	16	25.4	323.8	387.5	2	46.1
12	300	181	305	320	520	16	28.5	381	451	2	49.3
14	350	222	337	350	585	20	28.5	412.8	514.5	2	52.4
16	400	232	387	400	650	20	31.8	469.9	571.5	2	55.6
18	450	264	438	438	710	24	31.8	533.4	628.5	2	58.8
20	500	292	495	495	775	24	31.8	584.2	686	2	62
24	600	318	595	595	915	24	31.8	692.2	813	2	68.3

CVF Flanged Style ANSI 600#

Valve Size		Dimensions			Flange Bolting Dimensions						
Inch	mm	F	ØD1	ØD2	ØD	n	Ød	ØR	ØS	t	T
2	50	121	51	55	165	8	15.8	92.1	127	7	25.4
3	80	143	80	82	210	8	19.1	127	168.5	7	31.8
4	100	165	102	108	275	8	22.2	157.2	216	7	38.1
6	150	194	152	165	355	12	25.4	215.9	292	7	47.7
8	200	219	200	210	420	12	28.5	269.9	349	7	55.6
10	250	244	250	255	510	16	31.8	323.8	432	7	63.5
12	300	229	300	300	560	20	31.8	381	489	7	66.7
14	350	273	335	335	605	20	35	412.8	527	7	69.9
16	400	305	385	385	685	20	38.1	469.9	603	7	76.2
18	450	362	435	435	745	20	41.2	533.4	654	7	82.6
20	500	368	487	487	815	24	41.2	584.2	724	7	88.9
24	600	438	585	585	940	24	47.6	692.2	838	7	101.6

If EN 1092-1 End connection is required please consult with the factory.

Slight dimension might vary. Please consult the factory in case of an order. Weights are based on material selection. Please consult with the factory based on specific requirement

Part Number

Series		Action		Rating		Flange Suitability		Facing		Coating	
CV	Check	D	Dual Plate Wafer	PN 6	P0	PN 6	P0	NA	O	None	O
		F	Dual Plate Flanged	PN10	P1	PN 10	P1	RF	R	Epoxy	E
		S	Swing Flanged	PN 16	P2	PN 16	P2	FF	F	Nylon	N
				PN 25	P3	PN 25	P3			Standard	S
				PN40	P4	PN 40	P4			Phosphating	P
				ANSI 150	A1	ANSI 150	A1			Special	X
				ANSI 300	A2	ANSI 300	A2				
				ANSI 600	A3	ANSI 600	A3				
						PN10/PN16/1NSI150	MD				

Body		Disc		Stem/ Pin		Seat		Special	
Ductile Iron	1	WCB + 13 Cr	1	SS 410	1	Buna-N	1	C	Counter Weight
Carbon Steel WCB	2	A217 CA15	2	SS 316	2	EPDM	2	N	Nace material
Stainless Steel 304	3	Stainless Steel 304	3	Duplex SS F51	3	Viton	3		
Stainless Steel 304L	4	Stainless Steel 304L	4	Duplex SS F53	4	Integral	4		
Stainless Steel 316	5	Stainless Steel 316	5	Duplex SS F55	5	SS 410 + Stellite	5		
Stainless Steel 316L	6	Stainless Steel 316L	6	Inconel	6	Integral+SS 304 Overlay	6		
Duplex SS 4A	7	Duplex SS 4A	7	Special	X	Integral+SS 316 Overlay	7		
Duplex SS 5A	8	Duplex SS 5A	8			Integral+Stellite Overlay	8		
Duplex SS 6A	9	Duplex SS 6A	9			Special	X		
Special	X	Special	X						



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