

Double Flange Concentric Butterfly Valves

CVM has developed double flanged type concentric rubber lined butterfly valve with high efficiency , excellent flow performance and highly cost effective for many applications in many industries. The designed according to latest international standards and meet environmental requirements.

Features

- Bi-directional and bubble tight shut-off.
- Double tightness at the flanges.
- Fully rubberlined inside the body. Fluid does not contact the body for corrosion protection.
- Rounded polished disc edge provides full concentric sealing, high cycling of closing and less wear of lining.
- User friendly and lower torques.
- Full bore and high efficiency streamlined disc provides minimum obstruction to flow, resulting in excellent flow performance reducing energy losses.
- High reliability and cost effective.
- No distortion of lining. Suitable for vacuum service and at the suction side of the pump.
- No maintenance and long service life.
- Mounting flange is fully complied with ISO 5211 for easy automation and retrofitting of actuator.



General Applications

- Industrial processing
- Water & waste water
- Air conditioning
- Power generation
- Fire alarm system
- Marine & Shipbuilding
- Food and beverage processing
- Pulp and paper production



H H Export (M) Sdn. Bhd. (650606-A)
H H Engineering (M) Sdn. Bhd. (356324-X)

International Sales Office : 38-2, Jalan 10/116B, Kuchai Entrepreneurs' Park, 58200 Kuala Lumpur, Malaysia.

Tel : + 6 03 - 7980 3040 Fax : + 6 03 - 7980 3050

East Malaysia Office : 163-3, Bormill Estate, Lrg. Tun Ahmad Zaidi Adruce 8, 93250 Kuching, Sarawak, Malaysia.

Tel : + 6 016 - 886 5653

Website: www.hhengineering.com.my Email: sales@hhengineering.com.my / export@hhengineering.com.my

Design Features

CVM Butterfly Valves, the product of many years of valve expertise and continuous research into great durability with economical operation and maintenance cost. Designed to meet the stringent requirements of international standard.

1. Compact and efficient.
The design is compact and simple, requiring less installation spaces and facilitates piping layout.
2. High reliability and long service life.
An excellent of rubber boned lining to body results no maintenance and long service life.
3. Easy and quick operation.
Unique valve seat design permit lower stem torque and easy manual operation. Only 90°C turning required to fully open or close the valve results in fast operation and energy saving.

Standard Specification

Product Range	BS, DIN: 50 - 400 mm ANSI Class: 2 - 16 Class 150	Direction of Operation	Clockwise Opening Anti-clockwise Opening	
Operation	Lever Operated: 50 - 200mm	Coating	Quality epoxy coated with 200 microns internally and externally, immediate after shot blasting. (Others coating are available on request.)	
	Worm Gear Box 250 - 400mm			
	Bare Shaft for Actuator.			
Product Standard	BS EN 593 BS 5155 ISO 10631 AWWA C504	Flange connections	BS 4504 BS EN 1092-2 ISO 7005-2 DIN 2501	PN 10 PN 16
Face To Face Dimensions	ISO 5752 / EN 558-1 Basic series 13. Wafer short		ANSI B 16.1	Class 125 Class 150
Pressure Ratings	PN 10, 16 ANSI Class 125, 150 JIS 10K, 16K AS 2129 C, D, E & F.		JIS	5K 10K
			BS 10 Table D, E.	
Temperature Range	-60°C to 150°C	Others flange drilling are available upon request.		
Construction	Concentric Disc	Hydrostatic Test Pressure and Inspection	Seat (bar)	Body (bar)
Mounting Flange	ISO 5211 Part Turn		PN 10 11 PN 16 17.5	15 24

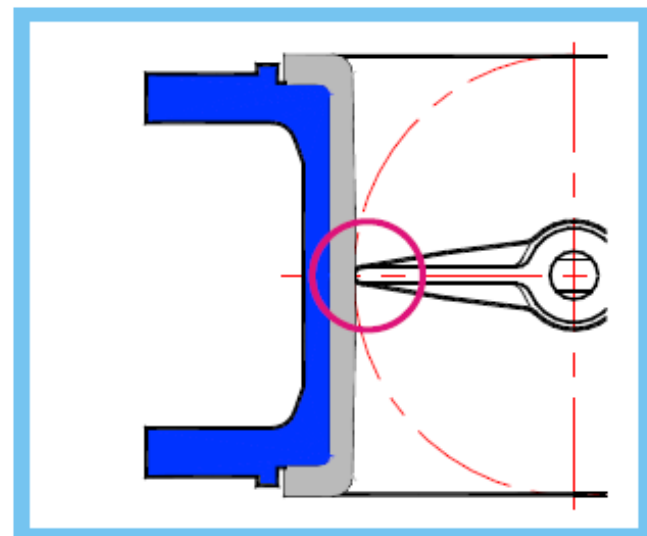
Disc Design

The double D design requiring no disc screws or pins to connect stem to disc with no possible leak paths in disc-stem connection. The features enable to eliminate the corrosion and vibration failure due to wear of disc screws or taper pin.

The design also enhancing higher Cv values then other valves, and reduced turbulence flow in the pipelines.

Disc is spherically machined and polished manually in order to provide a minimum torque and totally water tight shut off.

No field adjustment necessary.

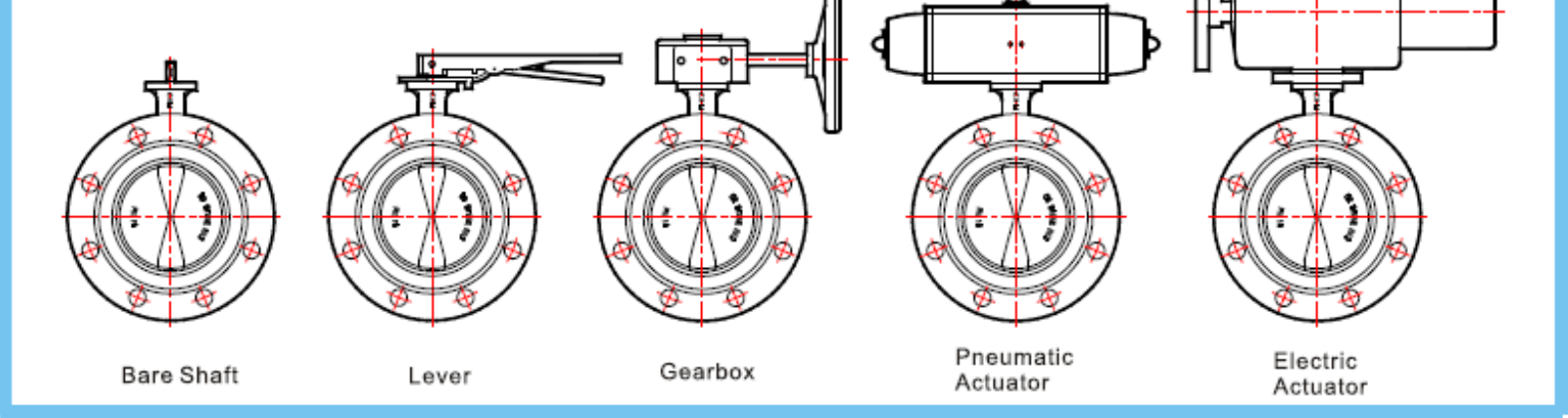


A smooth-machined profile of the disc edge provides excellent sealing and less wear to the lining.

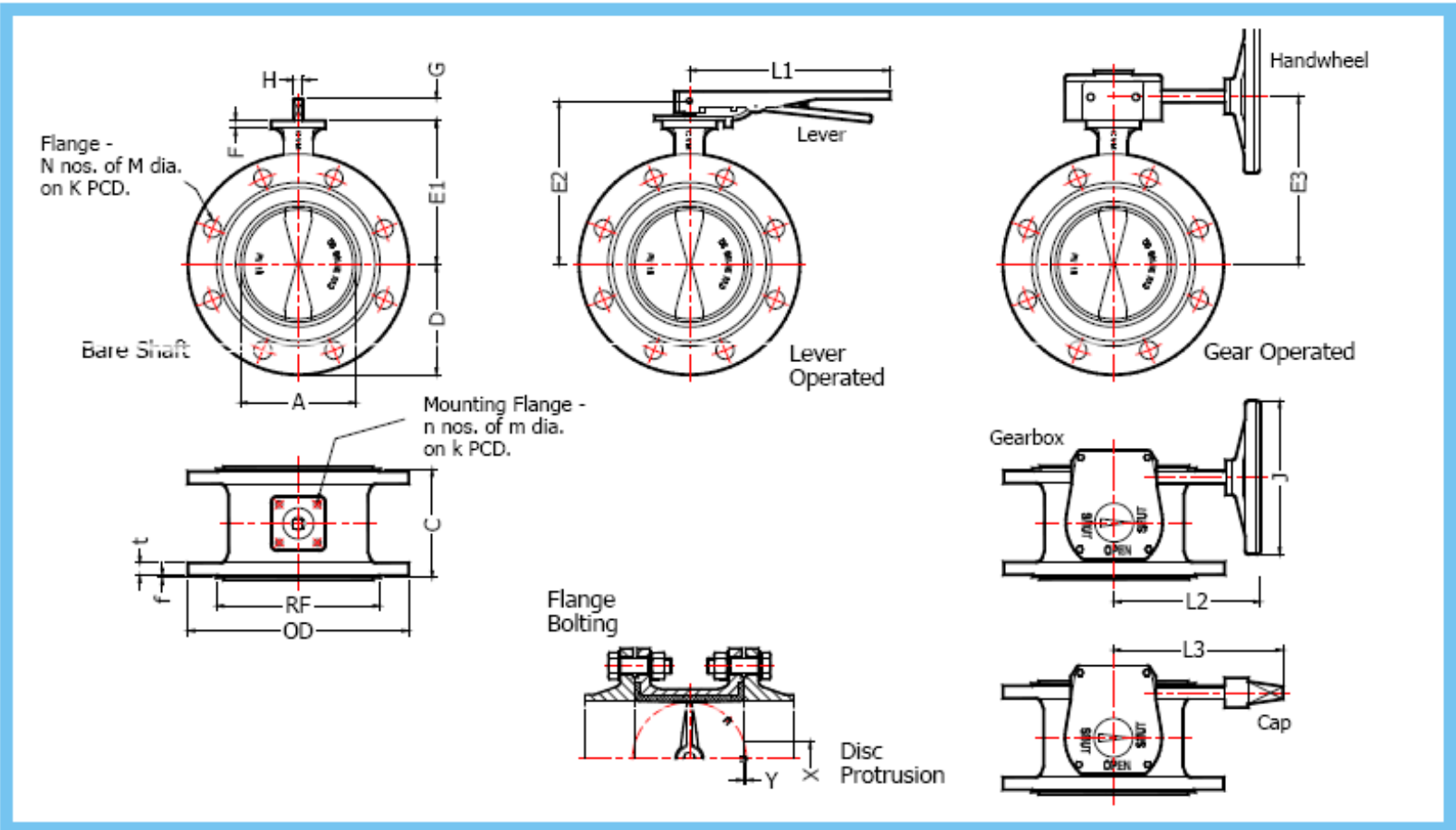
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Operators Available

CVM wafer butterfly valve is easy to mount with gearbox, pneumatic actuator and electrical actuator in the workshop or retrofitted on-site for the needs of industrial applications.



Dimensions (mm)



DN	A	C	D	E1	E2	E3	F	G	H	L1	L2	L3	J	Flange to BS EN 1092-2										ISO 5211				X	Y		
														PN 10					PN 16					RF	f	Mounting Flange					
														OD	K	M	N	t	OD	K	M	N	t			Type	k			m	n
50	50	108	83	111	131	131	11	34	10	260	150	175	180	165	125	19	4	19	165	125	19	4	19	99	3	F07	70	9	4		
65	65	112	93	126	146	146	11	34	10	260	150	175	180	185	145	19	4	19	185	145	19	4	19	118	3	F07	70	9	4		
80	80	114	100	133	153	153	11	34	10	260	150	175	180	200	160	19	8	19	200	160	19	8	19	132	3	F07	70	9	4		
100	100	127	110	153	173	173	11	34	12	260	150	175	180	220	180	19	8	19	220	180	19	8	19	156	3	F07	70	9	4		
125	125	140	125	160	181	180	11	34	12	260	150	175	180	250	210	19	8	19	250	210	19	8	19	184	3	F07	70	9	4		
150	150	140	143	186	206	206	11	34	16	260	150	175	240	285	240	23	8	19	285	240	23	8	19	211	3	F07	70	9	4	5	54
200	200	152	170	205	240	225	15	34	16	385	150	175	240	340	295	23	8	20	340	295	23	12	20	266	3	F10	102	11	4	24	130
250	250	165	203	245		272	15	45	24		215	240	240	395	350	23	12	22	405	355	28	12	22	319	3	F10	102	11	4	42	188
300	300	178	230	270		297	15	45	24		215	240	270	445	400	23	12	25	460	410	28	12	25	370	4	F10	102	11	4	61	242
350	336	190	260	315		342	15	45	24		215	240	270	505	460	23	16	25	520	470	28	16	27	429	4	F12	125	13	4	73	277
400	386	216	290	365		421	22	50	30		190	215	430	565	515	28	16	25	580	525	31	16	28	480	4	F14	140	17	4	85	320

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Construction Details

Body

Grey cast iron	BS 1452 Grade 220 ASTM A126 Class B
Ductile iron (SG)	BS 2789 Grade 420/12 ASTM A536 Grade 65-45-12

Shaft

Stainless steel	AISI 304 AISI 316
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Disc

Ductile iron (SG)	BS 2789 Grade 420/12
Stainless steel	AISI 304 AISI 316
Aluminium Bronze	AB2

Rubber Seat

- NBR rubber
- EPDM rubber
- BUNA-N (Nitrile)- Food Grade
- EPDM - Food Grade
- Viton
- White BUNA-N (Nitrile) - Food Grade

Coating

Discs coated with standard food grade quality epoxy.
Bodies externally coated with polyurethane.

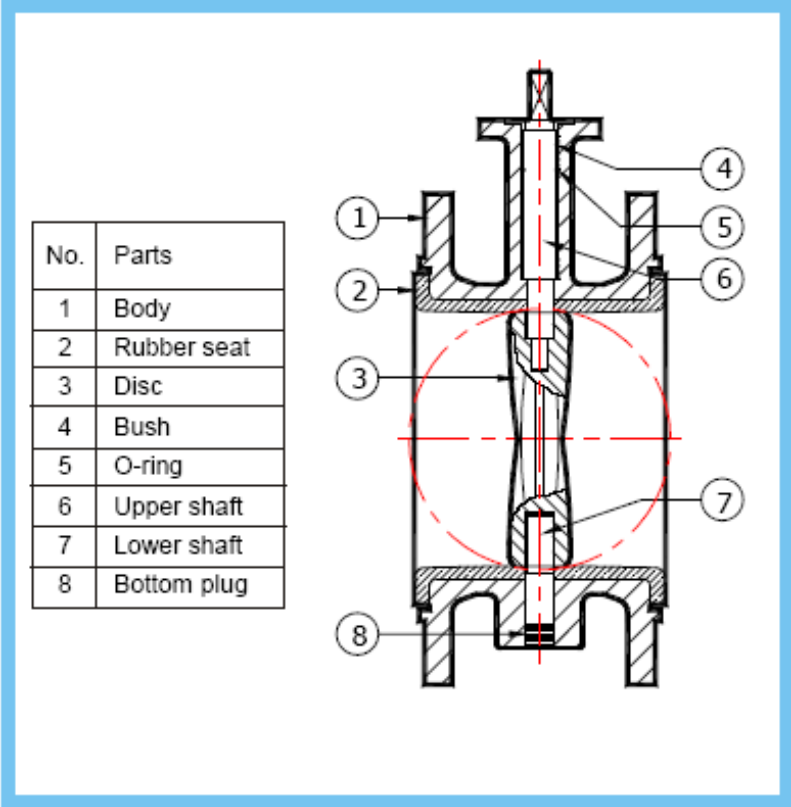
Flow Characteristics

Flow coefficients

Kv: The flow coefficient is the flow in m³/hr of water, at an average temperature of 20°C, crossing the valve with generate a pressure drop of 1 bar.

Cv = 1.16 Kv
Cv = GPM at 1 psi differential pressure across valve

DN	Kv
40	45
50	50
65	150
80	180
100	270
125	410
150	750
200	1800
250	2700
300	4600
350	6200
400	8200

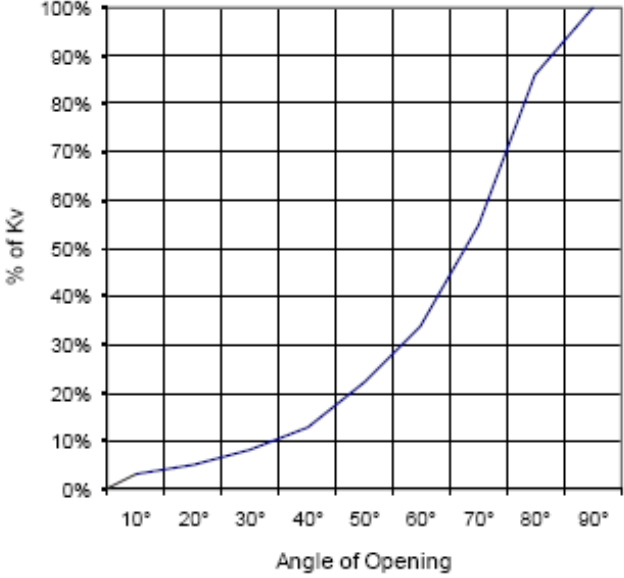


Note :
Other valve materials and coatings are available on request.

Characteristic curve

Variation of the flow coefficient Kv depending on the valve opening.

Kv vs Disc Angle



Subject to change without prior notice.



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