

U-Section Butterfly Valves

CVM has developed U-Section 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.
- The seat is field replaceable.
- 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

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. Long service life with easy maintenance.
Low wear results in long service life. However, when damages do occur, the unique resilient seat design allows for easy replacement of rubber valve seat.
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 - 300 mm ANSI Class: 2 - 12 Class 150	Direction of Operation	Clockwise Opening Anti-clockwise Opening	
Operation	Lever Operated: 20 - 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 - 300mm			
	Bare Shaft for Actuator.			
Product Standard	BS EN 593 BS 5155 ISO 10631 AWWA C504	Flanges PN 10 & PN 16	BS 4504 BS EN 1092-2 ISO 7005-2 DIN 2501 ANSI B 16.1 Class 125 ANSI B 16.1 Class 150 JIS 5K JIS 10K BS 10 Table D, E.	
Face To Face Dimensions	ISO 5752 / EN 558-1 Basic series 20. Wafer short		Others flanges upon request.	
Pressure Ratings	PN 6, 10, 16 ANSI Class 125, 150 JIS 10K, 16K AS 2129 C, D, E & F.			
Temperature Range	-60°C to 150°C			
Construction	Concentric Disc			
Mounting Flange	ISO 5211 Part Turn	Hydrostatic Test Pressure and Inspection	Seat (bar)	Body (bar)
		PN 10	11	15
		PN 16	17.5	24

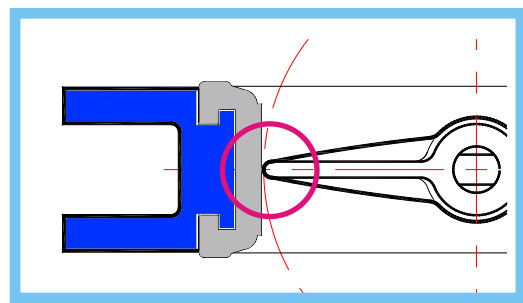
Disc Design

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 than 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.

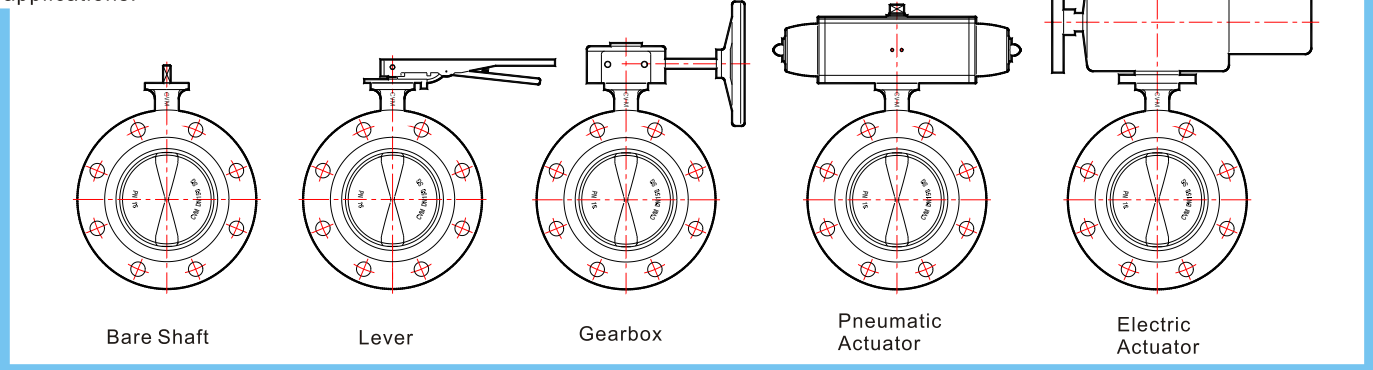


A smooth-machined profile of the disc edge provides excellent sealing and less wear to the lining.

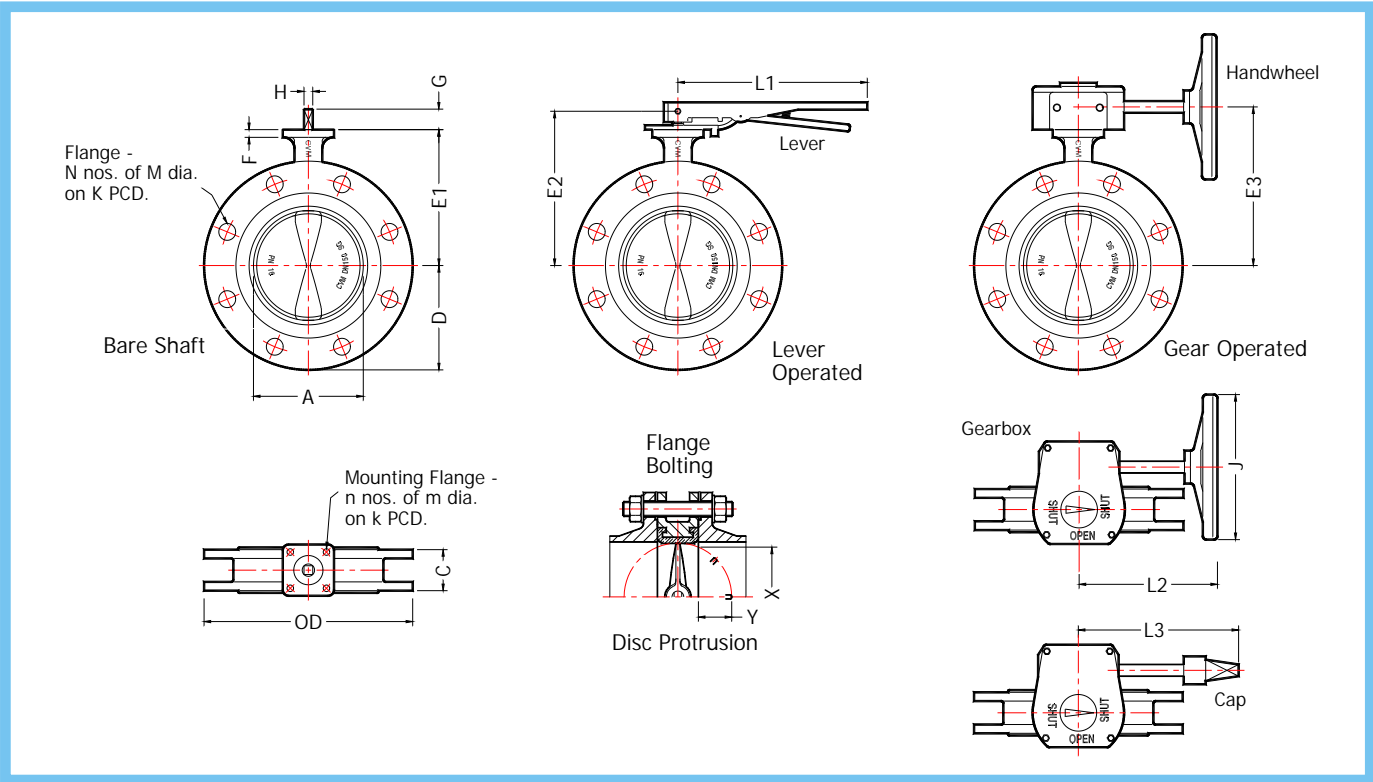
U-Section Butterfly Valves

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				Mounting Flange					
														OD	K	M	N	OD	K	M	N	Type	k	m	n		
50	50	43	83	111	131	131	11	34	10	260	150	175	180	165	125	19	4	165	125	19	4	F07	70	9	4	25	4
65	65	46	93	126	146	146	11	34	10	260	150	175	180	185	145	19	4	185	145	19	4	F07	70	9	4	46	10
80	80	46	100	133	153	153	11	34	10	260	150	175	180	200	160	19	8	200	160	19	8	F07	70	9	4	66	17
100	100	52	110	153	173	173	11	34	12	260	150	175	180	220	180	19	8	220	180	19	8	F07	70	9	4	86	24
125	125	56	125	160	181	180	11	34	12	260	150	175	180	250	210	19	8	250	210	19	8	F07	70	9	4	112	35
150	150	56	143	186	206	206	11	34	16	260	150	175	240	285	240	23	8	285	240	23	8	F07	70	9	4	140	47
200	200	60	170	205	240	225	15	34	16	385	150	175	240	340	295	23	8	340	295	23	12	F10	102	11	4	191	70
250	250	68	203	245		272	15	45	24		215	240	240	395	350	23	12	405	355	28	12	F10	102	11	4	241	91
300	300	78	230	270		297	15	45	24		215	240	270	445	400	23	12	460	410	28	12	F10	102	11	4	290	111

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.

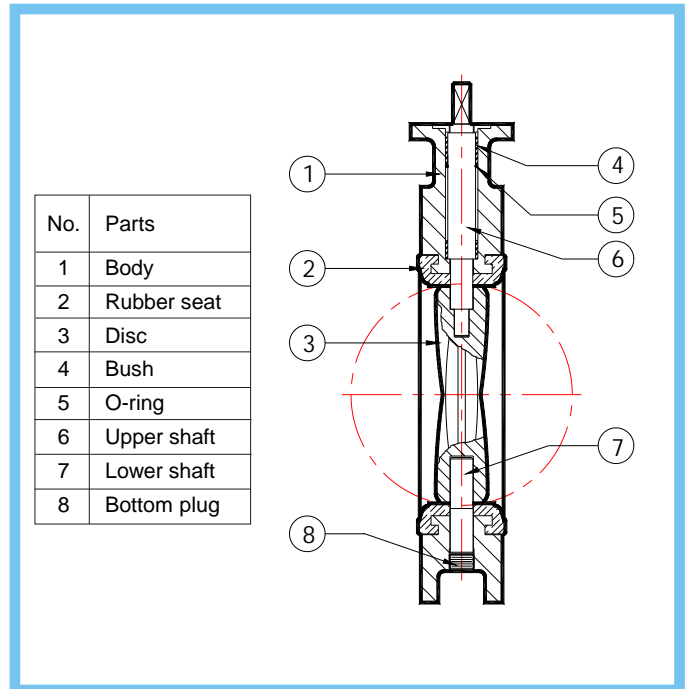
Flow Characteristics

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



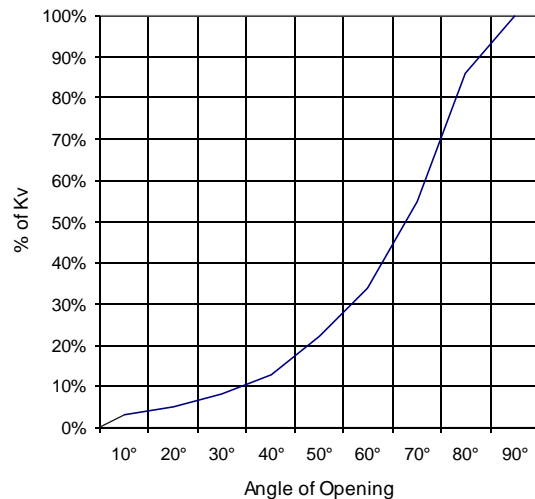
Note :

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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