

## ECOLINE CDB-L

Centered disc butterfly valves



PN10 bar: DN40 to DN1200  
PN16 bar / CL 150: DN40 to DN1200

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## Applications

- General circuits: Water, Fuel, Oil and Gas.
- Flow shut-off or regulation function in the sectors Including water supply, treatment, distribution, sewage and irrigation.
- Used in the fields of Fossil & Cogeneration Power, Nuclear, Refining, Petrochemicals, Pulp & Paper, LNG & Cryogenics, Pharma Industry

## Design Standard

- Design in accordance with
  - BS EN 593 / IS 13095
  - AWWA C-504 (On Request)
- Face- to- face dimensions in accordance with
  - ISO 5752 / BS EN 558 / IS 13095
- Inspection & Testing
  - API 598 / BS EN 12266 – 1
- Top Mounting Flange Drilling
  - ISO 5211
- End Connections
  - Wafer
  - Lug
  - Flanged (On Request)

## Variants

- Gear Operated
- Clutch Type Hnadle
- Pneumatic actuator
- Electric Actuator
- Limit switches and Position Indicator
- Locking Arrangement

Note: Seat for Drinking Water application shall be offered Upon customer request.

## Data to be supplied when ordering

- ECOLINE CDB-L series valve in accordance with type leaflet

Type	Size	Pressure Class	Pressure & Temperature
Nature of Fluid & Flow	Body Material	Disc + Shaft Material	Seat Material
Body Style	Operation		

## Materials

Model	Body	Disc	Stem
PN 10	EN-GJL-250	SG IRON A351 GR CF8 A351 GR CF8M A351 GR CF3 A351 GR CF3M	SS 410
PN 16 / CL 150	A216 GR WCB A351 GR CF8 A351 GR CF8M A351 GR CF3 A351 GR CF3M	SG IRON A351 GR CF8 A351 GR CF8M A351 GR CF3 A351 GR CF3M	SS 410

## Operating Data

Characteristic	Value
Nominal Pressure	PN10, PN16, CL 150
Nominal Size (Inch)	1 1/2" to 48"
Nominal Size	DN40 to DN1200
Max.Permissible Pressure (Bar)	20 Bar
Max.Permissible Temperature (°C)	150°C

## Seat Materials

NBR	EPDM	VITON	PTFE
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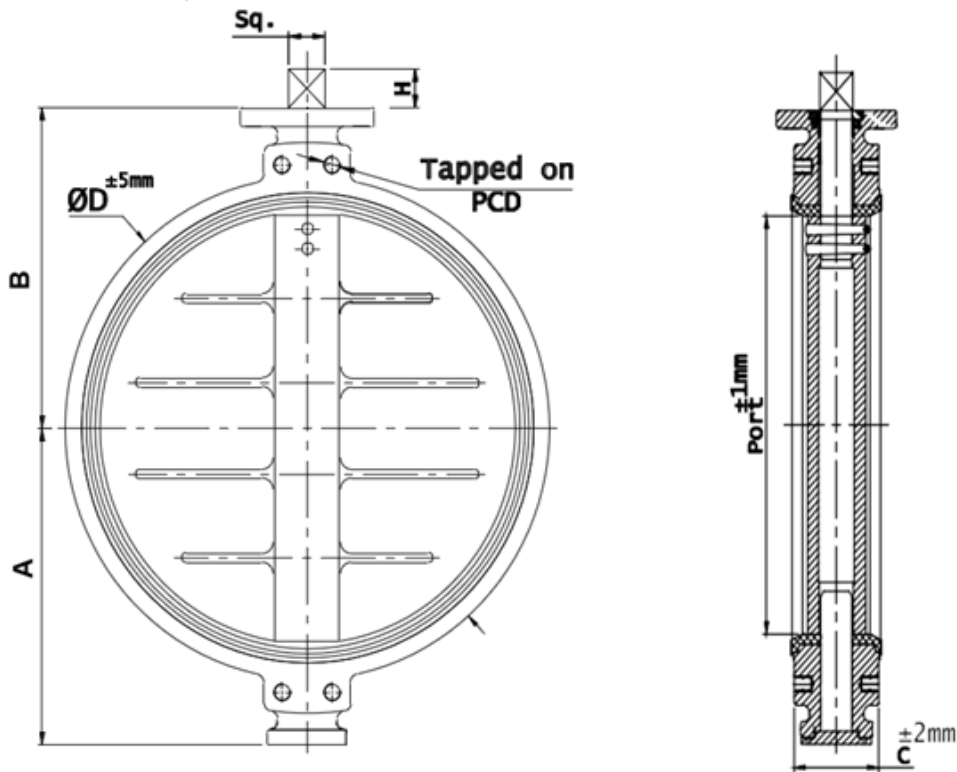
## Seat Temperature Range

Material	Temp ° C	
	Minimum	Maximum
NBR	-20° C	+80° C
EPDM	-20° C	+120° C
VITON	-10° C	+150° C
PTFE	-20° C	+150° C

## Disc Coating

Epoxy	EPDM	Ebonite
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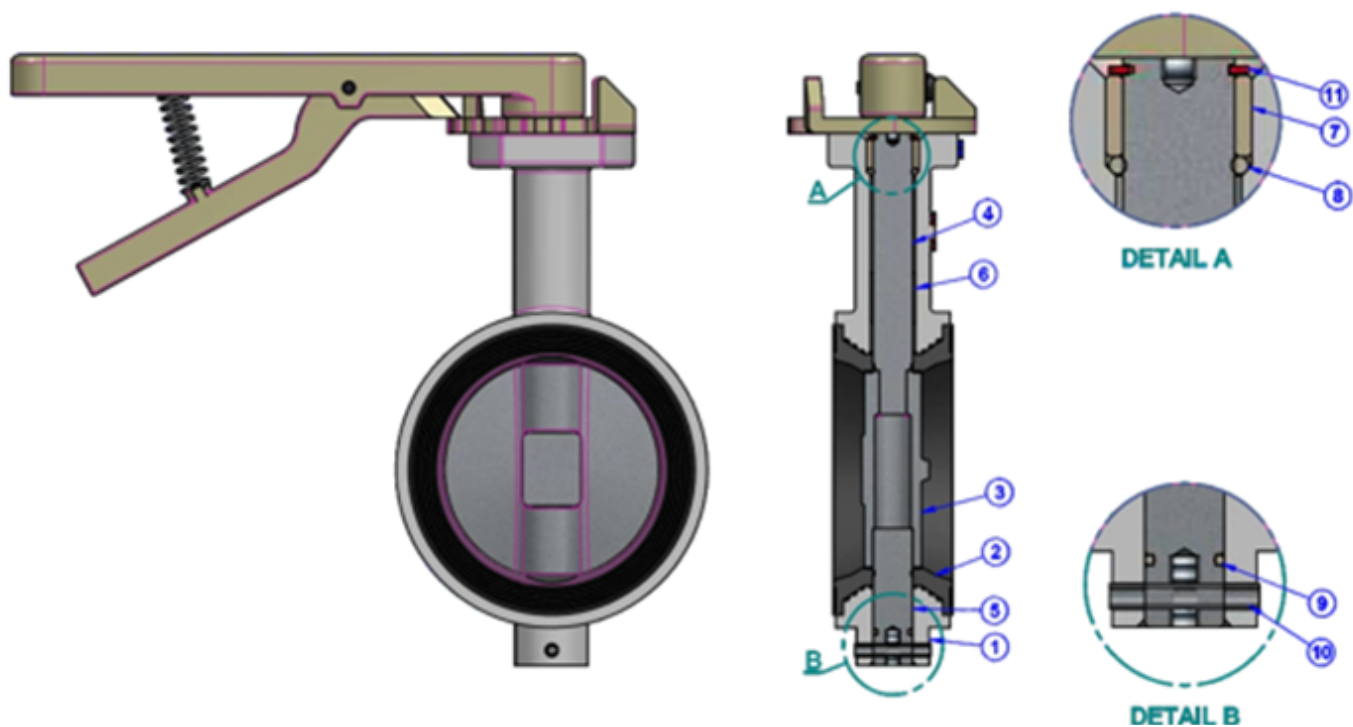
## Dimensions PN10, PN16



\*\*Drawing not to scale

Tolerance		$\pm 1\text{mm}$	$\pm 5\text{mm}$	$\pm 5\text{mm}$	$\pm 2\text{mm}$	$\pm 5\text{mm}$	$\pm 0.5\text{mm}$	Tapped	Weight (Approx.) Kgs.
Valve Size	Inch	Port	A	B	C	ØD	PCD		
DN40	1 1/2"	40	59	104.5	34	80	98.4	-	1.15
DN50	2"	50	61.5	120.5	44	95	120.7	-	1.85
DN65	2 1/2"	65	70.75	123.75	46	108	139.7	-	2.36
DN80	3"	80	77.5	133.5	46	124	152.4	-	2.72
DN100	4"	100	95	145	52	150	190.5	-	3.65
DN125	5"	125	109	162.03	56	186	215.9	-	5.42
DN150	6"	150	120	177	56	205	241.3	-	6.86
DN200	8"	200	148.5	200	60	258.5	298.5	-	12.28
DN250	10"	241	195	265	68	320	362	-	25
DN300	12"	286	218.5	288.5	78	370	431.8	-	33
DN350	14"	333	236	332	78	440	476.3	-	43
DN400	16"	382	280	360	102	490	539.8	-	56
DN450	18"	433	305	386	114	540	577.9	1" UNC	86
DN500	20"	476	367	421	127	589	635	1" UNC	120
DN600	24"	590	448	494	154	702	749.3	1 1/4" UNC	217
DN650	26"	635	474	495	165	718	806.4	1 1/4" UNC	267
DN700	28"	680	495	541.5	165	790	863.6	1 1/4" UNC	313
DN750	30"	725	531	577	190	840	914.4	1 1/4" UNC	375
DN800	32"	785	565	623	190	900	977.9	1 1/2" UNC	424
DN850	34"	810	630	645	190	970	1028.7	1 1/2" UNC	500
DN900	36"	885	620	689	203	1010	1085.8	1 1/2" UNC	560
DN1000	40"	965	680	727	216	1115	1200.2	1 1/2" UNC	650
DN1200	48"	1170	809	856	254	1350	1422.4	1 1/2" UNC	850

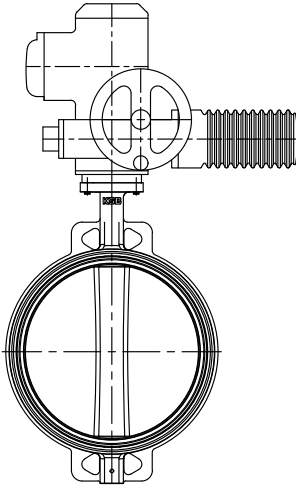
## Bill of Materials



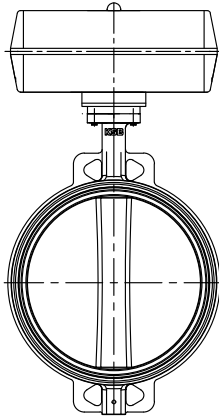
No.	Description	Material
01	Body	EN-GJL-250 / SG IRON / A216 GR WCB / A351 GR CF8 / A351 GR CF8M / A351 GR CF3 / A351 GR CF3M
02	Seat Liner (Moulded)	NBR / EPDM / VITON
03	Disc	A216 GR WCB / CF8 / CF8M
04	Top Shaft	SS 304 / 316 / 410
05	Bottom Shaft	SS 304 / 316 / 410
06	Bearing Bush	Steel + PTFE
07	Gland Bush	Delrin
08	O-Ring Top	NBR / EPDM
09	O-Ring Bottom	NBR / EPDM
10	Dowel Pin	Mild Steel, Stainless Steel
11	Circlip	Stainless Steel

## Standard Variants

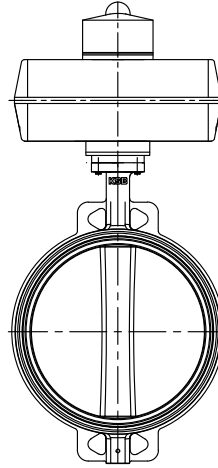
**ELECTRICAL ACTUATOR**



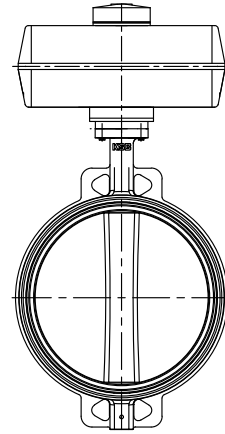
**PNEUMATIC ACTUATOR**



**POSITIONER**



**LIMIT SWITCHES**



## Pressure Test Chart

Pressure Rating	Hydrostatic Test Pressure	
	Body (Shell)(kg/cm <sup>2</sup> )	Seat(kg/cm <sup>2</sup> )
PN 10	15	11
PN 16	24	18
CL 150 - WCB	30	22
CL 150 - CF8/CF8M	29	21

Pneumatic (AIR) Seat Testing at Seat 5 to 7 kg/cm<sup>2</sup>

## Operation of the Valve

- For lever operated valves, the hand lever is either assembled with the valve or shipped loose depending upon the size of valve/hand lever.
- For gear operated valves, THE GEAR OPERATOR OPEN / CLOSE ADJUSTMENT HAS BEEN DONE PRIOR TO SHIPMENT AND MUST NOT BE CHANGED. Rotation of hand wheel in the clockwise direction closes the valve and counter clockwise rotation opens it. (Looking from hand wheel end).
- Butterfly valve always close in a clockwise direction. Valve should always be rotated through 90° to the fully opened or fully closed position.
- Valve should be opened and closed slowly to avoid hammering effect on the valve and pipeline.
- Once the flushing is complete, valve should be operated 3-4 times and then kept in the fully open Position.
- If the valve is not operating to fully open or fully closed position, and/or leaking, do not apply excessive force to operate the valve. This can damage the seats or stem.

## Safety Precaution

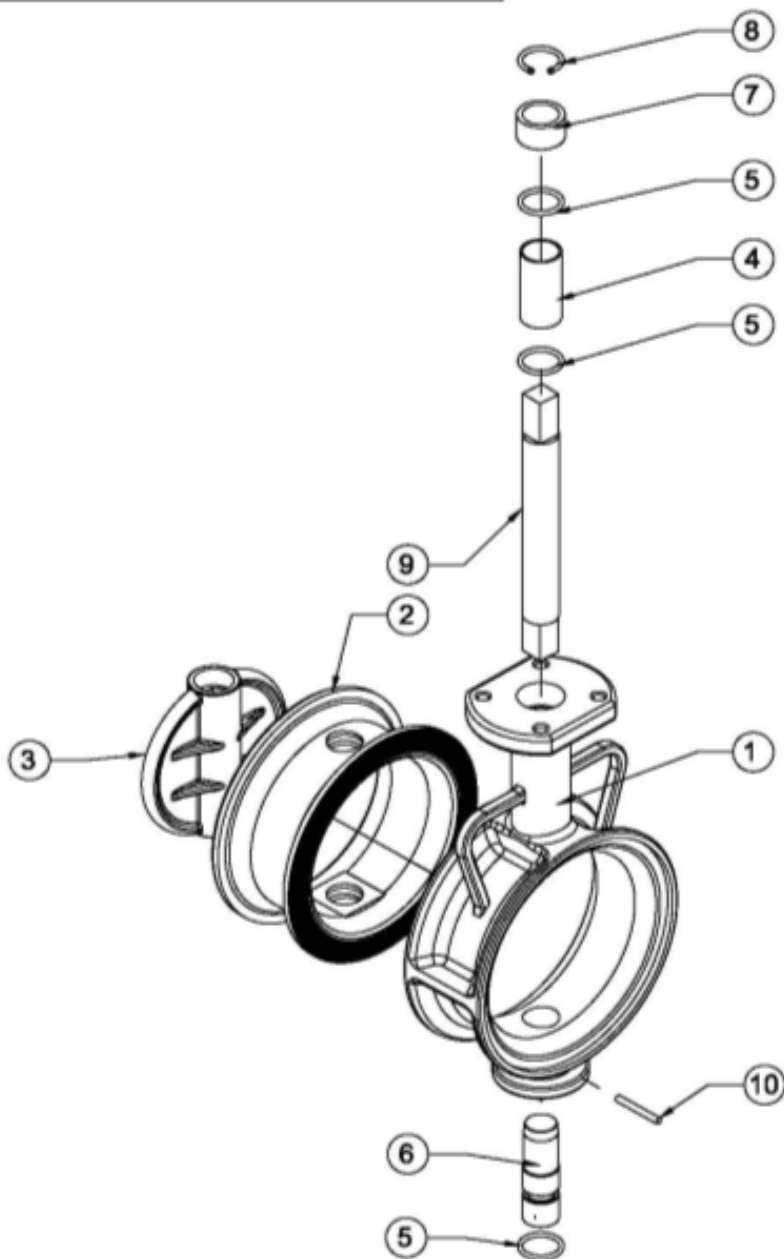
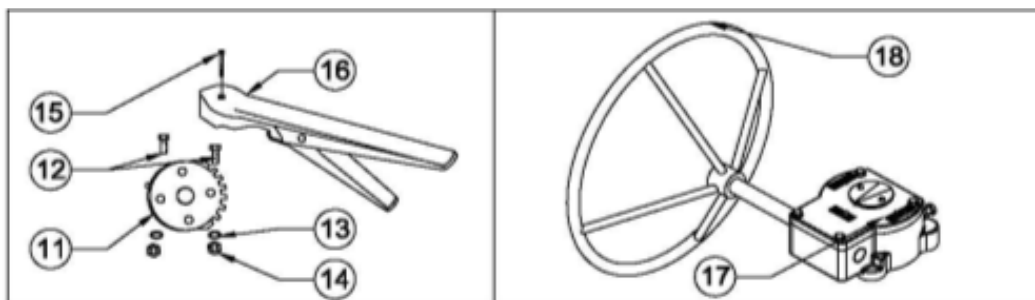
- Do not exceed the valve pressure & Temperature rating limitations
- Use the valve for specified application only

- Follow the safety rules and regulations
- Do not disassemble the valve or remove it from the pipeline while the valve is pressurized!
- When handling the valve or the valve package, bear in mind its weight!

## Installations

- When removing the valve from storage a careful check should be made to ensure that the valve has not been damaged during the storage period.
- Valve open or close position is indicated on the notch plate for lever operated valves or on the top of the gear Operator for gear operator operated valves.
- Centre valve, span body with bolts, but do not tighten. Slowly open disc to ensure that it clears adjacent pipe ID and leave at fully open position. Tighten bolts in criss cross pattern.
- For flange welding centre valve with disc 100 open between flanges, span bolts, align this assembly in pipe and tack weld flanges to pipe. After tack welding, remove valve and finish welding.
- Valve should be checked for identification purpose and ensure that characteristics of valve match to those specified for piping specifications, for the line where that is to be mounted. Nameplate instructions will give the necessary information.

## Exploded View



### Part List

Item No.	Part Description	Qty
1	BODY	1
2	SEAT	1
3	DISC	1
4	METAL BUSH	1
5	O-Ring	3
6	Bottom Shaft	1
7	Deirin Bush	1
8	Cir Clip	1
9	Top Shaft	1
10	Dowel Pin	1
11	Notch Plate	1
12	L.N. Key Bolt	2
13	Plain Washer	2
14	Hex Nut	2
15	Hand Lever Locking Screw	1
16	Hand Lever	1
17	Gear Operator	1
18	Hand Wheel	1

### ASSEMBLY FOR CENTRIC DISC BUTTERFLY VALVE



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Subject to technical modification without prior notice



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