

# BUTTERFLY TILTING DISC CHECK VALVE

## DN250-DN1200 PN16

### MODEL - BCV4



## FEATURES AND BENEFITS

- Seal on disc design.
- Slanted seat design offers short closing time and reduced potential for water hammer creation due to reduced stroke.
- Double eccentric design minimises friction due to zero contact between the seal and seat ring when valve is open thus reducing wear and ensuring a long service life.
- Pin and dowel disc to through shaft connection provides a positive and high strength connection.
- Lever and weight is interchangeable, it can be mounted on the left or right hand side of the valve.
- Suitable for installation in both vertical and horizontal pipeline applications.
- Body includes integral disc travel stops preventing disc over travel and jamming.
- Adjustable weight offers adaptability to individual working conditions.
- Replaceable seat ring and seals.
- Safety cage provided as a standard feature to meet OH&S requirements.
- Hydraulic dampener (dashpot) is optional to enable slow closing, preventing slamming caused by reverse flow.
- Optional high quality Omron mechanical SPDT switch for positive feedback (125-250VAC, 8-125VDC)

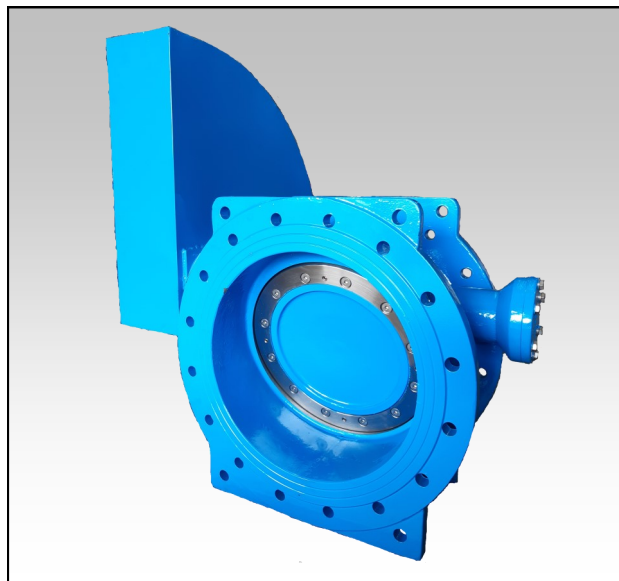
## OPTIONS:

- No flow sensor
- Mechanical SPDT switch.
- Bolted seat design
- Metal seat design
- Stub shafts—key and dowel disc connection.
- Hydraulic dampener (Dashpot)

## APPLICATIONS

Challenger Valves and Actuators are the **“Right Choice for Valves and Actuation”** when quality matters.

Servicing industries such as: Water & Waste Water, Mining, Desalination, Pumping, Industrial Processing, Irrigation, Materials Handling and General Industries



## TECHNICAL SPECIFICATION

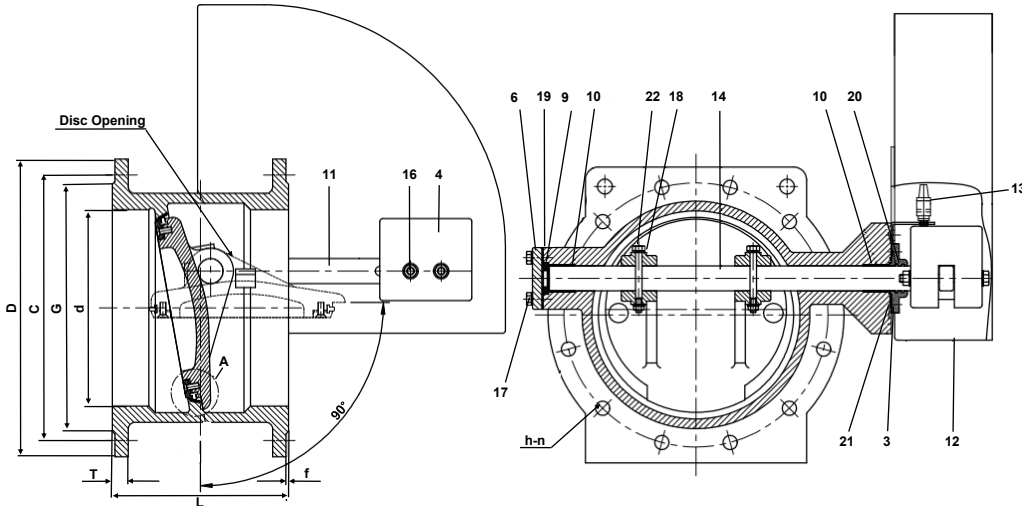
<b>Construction:</b>	Butterfly Tilting Disc Check Valve
<b>Size:</b>	250mm - 1200mm (other sizes available on request)
<b>Pressure Rating:</b>	PN16
<b>Design Standard:</b>	Designed According to BS EN593:2004
<b>Face to Face:</b>	BS EN 558:2008 (ISO5752) Series 14
<b>Flange Design:</b>	BS EN1092-2
<b>Flange Drilling:</b>	AS2129 Table D, E AS4087 B5 AS4331.2 (other drillings available on request)
<b>Coatings:</b>	FBE (AS4158) Jotagaurd VA-5001
<b>Temperature Range:</b>	100°C (Max)
<b>Pressure Testing:</b>	AS4794
<b>Seat Slant:</b>	10 Degrees (DN100—DN300) 15 Degrees (DN350—DN2000)
<b>Disc Opening (Max):</b>	90 Degrees
<b>Application:</b>	Water, Sea Water , Oil, Sewage.
<b>Lever Weight Orientation:</b>	left hand side looking downstream. (Consult factory for right hand side)

# BUTTERFLY TILTING DISC CHECK VALVE DN250-DN1200 PN16 MODEL - BCV4



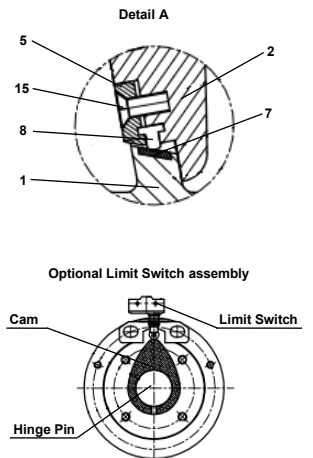
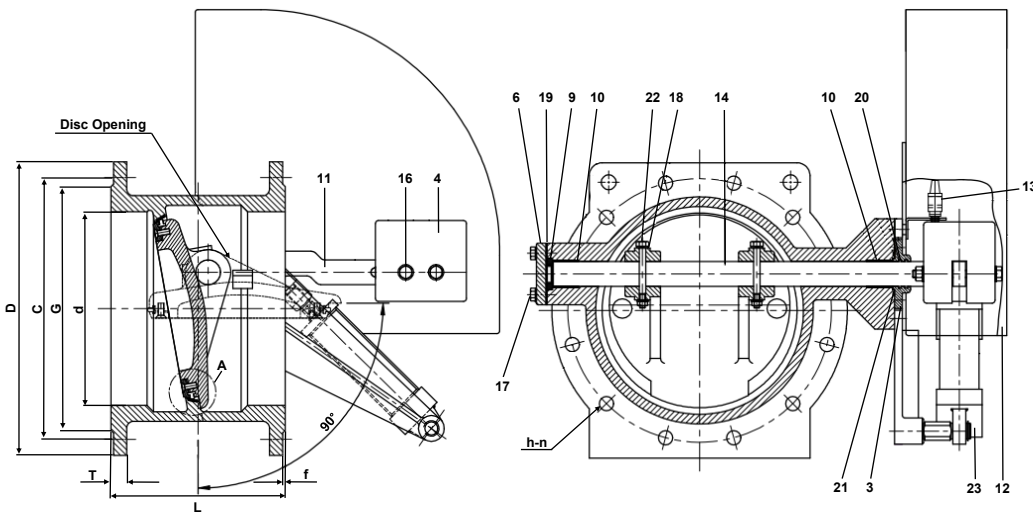
## DIMENSIONS AND MATERIALS

### LEVER WEIGHT AND ARM



ITEM	COMPONENT	MATERIAL	STANDARD and GRADE
1	Body	Ductile Iron	AS1831 400-15
2	Disc	Ductile Iron	AS1831 400-15
3	End Plate A	Ductile Iron	AS1831 400-15
4	Weight	Cast Iron	AS1830 T220
5	Seal Retainer	Stainless Steel	ASTM A276 316
6	End Plate B	Ductile Iron	AS1831 400-15
7	Body Seat Ring	Stainless Steel	ASTM A276 316
8	Disc Seal Ring	EPDM	AS1646
9	Thrust Bearing	Gunmetal	AS1565 C83600
10	Bushing	Stainless Steel	ASTM A276 304
11	Weight Arm	Ductile Iron	AS1831 400-15
12	Safety Cage	Steel	-
13	Limit Switch (Optional)	Omron Z-15 GQ22B	-
14	Hinge Pin	Stainless Steel	ASTM A276 420
15	Bolt (Socket Head)	Stainless Steel	ASTM A276 316
16	Bolt, Washer, Nut	Stainless Steel	ASTM A276 316
17	Bolt and Washer	Stainless Steel	ASTM A276 316
18	Spring Washer	Stainless Steel	ASTM A276 316
19	O-ring	EPDM	AS1646
20	O-ring A	EPDM	AS1646
21	O-ring B	EPDM	AS1646
22	Stud and Nuts	Stainless Steel	ASTM A276 316
23	Dashpot	-	-

### LEVER WEIGHT AND ARM WITH DASHPOT



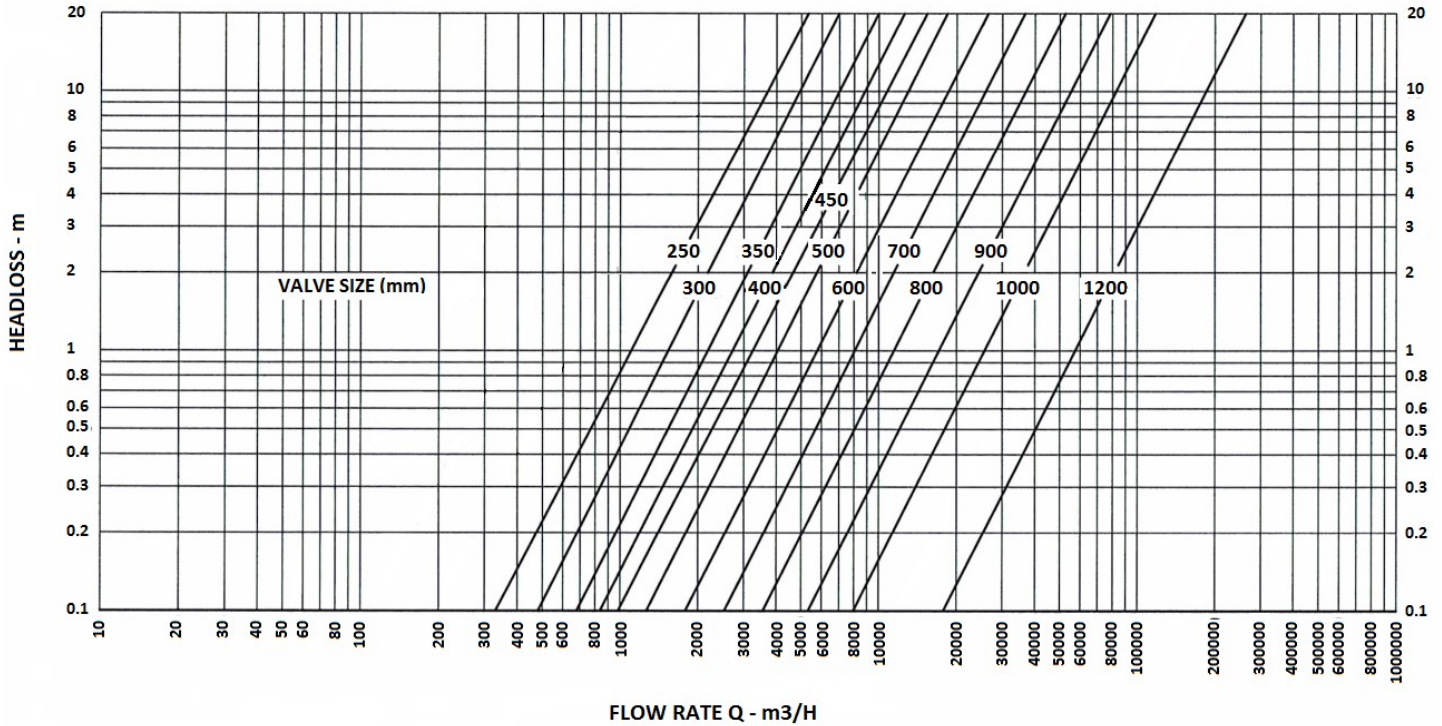
DIMENSIONS										
DN	AS4087 B5							Weight (Kg) Without Dashpot	Weight (Kg) With Dashpot	f
	d	L	D	G	C	h	n			
250	250	400	328	356	22	8	22	134	145	3
300	270	455	378	406	22	12	24.5	151	163	4
350	290	520	438	470	26	12	26.5	216	240	4
400	310	580	489	521	26	12	28	241	266	4
450	330	640	552	584	26	12	30	299	326	4
500	350	715	609	641	26	16	31.5	356	383	4
600	390	840	720	756	30	16	36	519	546	5
700	430	910	809	845	30	20	39.5	622	662	5
800	470	1060	942	984	36	20	43	1024	1084	5
900	510	1175	1050	1092	36	24	46.5	1280	1360	5
1000	550	1255	1133	1175	36	24	50	1647	1727	5
1200	630	1485	1368	1410	36	32	57	2407	2487	5

**BUTTERFLY TILTING DISC CHECK VALVE**  
**DN250-DN1200 PN16**  
**MODEL - BCV4**



**CHALLENGER**  
**VALVES AND ACTUATORS**

**TECHNICAL: PRESSURE DROP**



**TECHNICAL: FLOW RATES**

Kv = The flow rate of water in cubic meter per hour, which passes through the valve with 1 bar pressure drop across the valve.

FLOW VALUES					
Size (mm)	Kv	Size (mm)	KV	Size (mm)	KV
250	3733	300	4907	350	7012
400	9352	450	11362	500	13386
600	18941	700	26596	800	37811
900	55663	1000	87440	1200	187206
Additional sizes available upon request					

HOW TO ORDER					
SERIES	DESIGN	CONNECTIONS	RATING	SIZE	ACCESSORIES
BCV4	L	D	4	0600	
Example: DN600 Butterfly Tilting Disc Check Valve with Counterweight and Arm, AS4087 B5 Flange Drilling, PN16					
SERIES	PRESSURE RATING	SIZE			ACCESSORIES
BCV4 = Tilt Disc Butterfly Check Valve	4 = PN16	0250 = 10" (250mm)	0300 = 12" (300mm)	0350 = 14" (350mm)	Blank = Not Applicable
DESIGN		0400 = 16" (400mm)	0450 = 18" (450mm)	0500 = 20" (500mm)	M = Factory issued Mechanical No Flow Switch SPDT
D = Counterweight, Arm and Dashpot		0600 = 24" (600mm)	0700 = 28" (700mm)	0800 = 32" (800mm)	
L = Counterweight and Arm		0900 = 36" (900mm)	1000 = 40" (1000mm)	1200 = 48" (1200mm)	
CONNECTIONS	Additional sizes available upon request				
A = ANSI#150					
D = AS4087 B5					
E = AS2129 TABLE E					