

# DOUBLE EXCENTRIC BUTTERFLY VALVE TYPE TECWAT

TECHNICAL PASSPORT

**PN10 FLANGED DOUBLE EXCENTRIC  
BUTTERFLY VALVE  
WITH ELECTRIC ACTUATOR BERNARD**

VP 4208-B04

## APPLICATION

Tecwat type butterfly valves are intended to be used for ON/OFF operations in fluid transfer circuits.

**Area of use:** water networks, production plants, pumping stations, fire circuits on industrial site, etc.

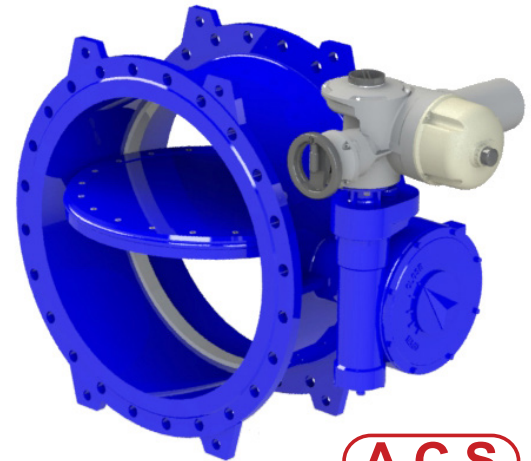


**Fluids:** water, drinking water.

## GENERAL CHARACTERISTICS

**TECWAT model:** long pattern.

- Design according to NF EN 595.
- Range : from DN200 to DN1600.
- Bi-directional sealing with a preferred mounting direction indicated by the arrow on the body.
- Pinned stem/disc connection.
- Double eccentric butterfly valve prevents wear due to the stainless steel seat attached to the body.
- Seal on disc retained by a stainless steel retaining ring.
- Optimized maneuvering torque.
- Low pressure drop.
- Operating by IP67 gear box.
- Equipped with an ISO 5210 actuator mounting plate.
- Clockwise closing



**ACS**

DRY SHAFT

## STANDARDS

<b>Design</b>	Complies with standard EN 593
<b>Face to face</b>	Face to face according to standard NF EN 558 serie 14.
<b>Connection</b>	ISO PN10 flange mounting according to standard EN1092-2.
<b>Tests</b>	Hydraulic tests carried out according to the standard EN12266-1: -Body : 15 bar -Seat : 11 bar

## PRODUCT APPROVALS

Certificat WRAS n° 1607394



**EN 1074**

Health compliance certificate n° 19 ACC LY 582



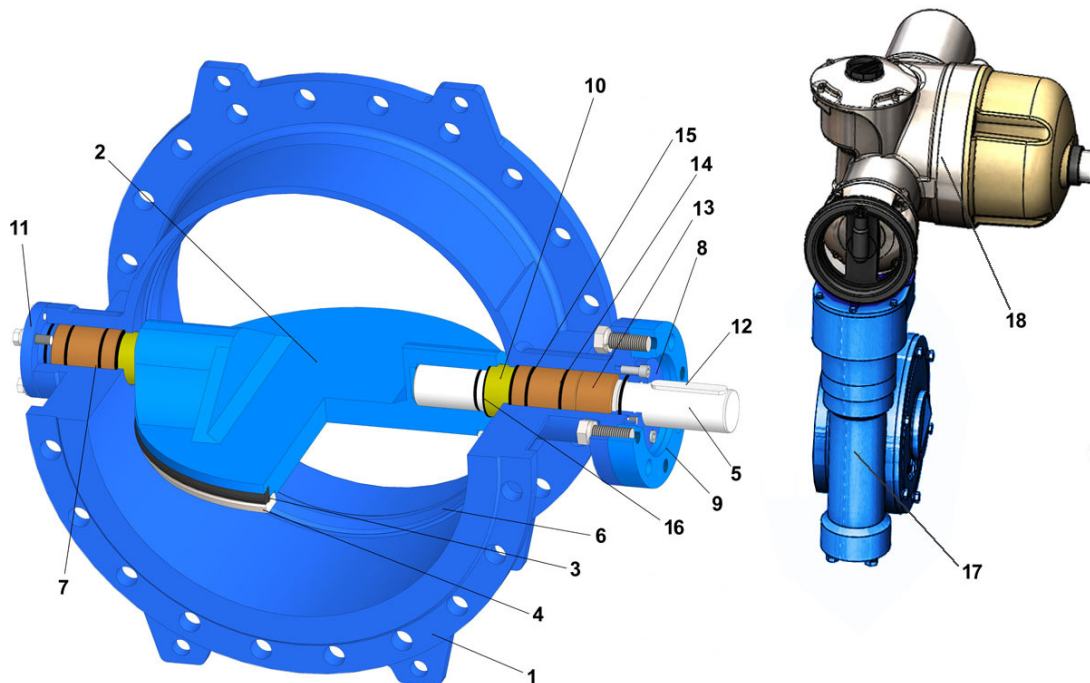
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## CONSTRUCTION



Component	Coating
Body	Epoxy powder RAL 5015 250 microns

Pos.	Description	Material	Equivalences		
			DIN	ASTM	BS
1	Body	Ductile iron ENGJS-500-7	GGG 50	ASTM 80-55-06	BS 500/7
2	Disc	Ductile iron ENGJS-500-7	GGG 50	ASTM 80-55-06	BS 500/7
3	Sealing gasket	EPDM			
4	Retaining ring	Stainless steel X5CrNi 18 10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
5	Shaft	Stainless steel 420	1.4021	AISI 420	420 S 37
6	Body seal ring	Stainless steel X5CrNi 18 10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
7	Bearing	Al-Bronze	G-CuAl10Fe	C95200	ZCuAl10Fe3
8	Packing gland	Ductile iron	GGG 50	ASTM 80-55-06	BS 500/7
9	Mounting flange	Steel Q235B	EN 10025-2	ASTM A36	S235JR
10	Adjusting bushing	Al-Bronze	G-CuAl10Fe	C95200	ZCuAl10Fe3
11	Cover	Ductile iron ENGJS-500-7	GGG 50	ASTM 80-55-06	BS 500/7
12	Key	Stainless steel 420	1.4021	AISI 420	420 S 37
13	Shaft bushing	Al-Bronze	G-CuAl10Fe	C95200	ZCuAl10Fe3
14	O seal ring	EPDM			
15	Shaft gasket	EPDM			
16	Gasket	EPDM			
17	Gear box	Ductile iron			
18	Electric actuator	BERNARD			

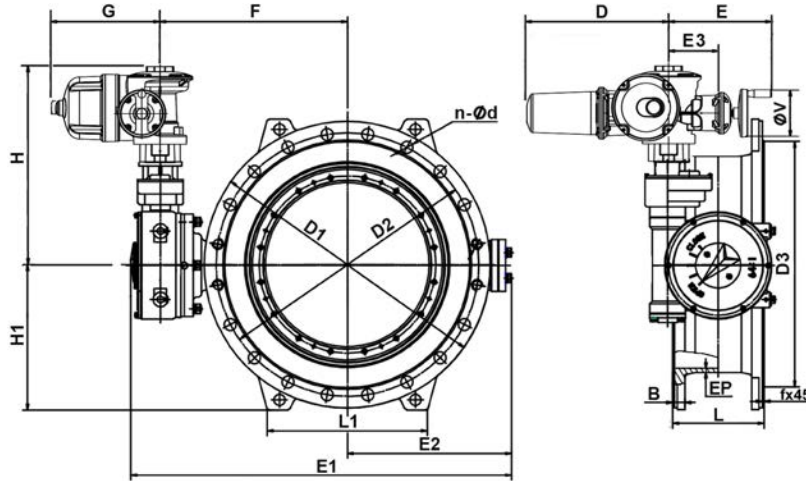
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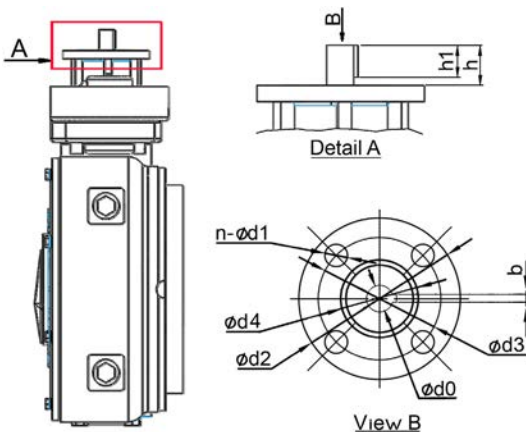
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## DIMENSIONS



DN		ØD1	ØD2	ØD3	B	f	L	n-Ød	H	H1	D	E	E1	E2	E3	EP	F	G	L1	Actuator reference	ØV	Weight (kg)
mm	inch																					
200	8"	340	295	266	20	3	230	8-Ø23	384	175	388	326	526	198	64	9	278	315	196	AT3	160	80
250	10"	395	350	319	22	3	250	12-Ø23	454	202.7	472	343	568	219	64	9	308	347	240	AT6	160	111
300	12"	460	400	370	24.5	4	270	12-Ø23	495	227.5	472	343	670	254	93.4	10	350	347	275	AT6	160	141
350	14"	505	460	429	24.5	4	290	16-Ø23	495	257.5	472	343	720	279	93.4	10	385	347	280	AT14	160	159
400	16"	565	515	480	24.5	4	310	16-Ø28	509	287.5	472	343	834	320	120	10	457	347	310	AT14	160	203
450	18"	615	565	530	25.5	4	330	20-Ø28	509	312.5	472	343	903	359	120	10	499	347	340	AT14	160	234
500	20"	670	620	582	26.5	4	350	20-Ø28	564	340	388	326	988	393	120	10	515	315	370	AT6L	160	257
600	24"	780	725	682	30	5	390	20-Ø31	632	395	472	343	1119	450	148	12	580	347	430	AT14	160	388
700	28"	895	840	794	32.5	5	430	24-Ø31	632	452.5	472	343	1217	530	148	13	598	347	480	AT14	160	514
800	32"	1015	950	901	35	5	470	24-Ø34	663	512.5	472	343	1410	614	185	14	691	347	560	AT14	160	706
900	36"	1115	1050	1001	37.5	5	510	28-Ø34	663	562.5	472	343	1530	675	185	14	750	347	615	AT14	160	878
1000	40"	1230	1160	1112	40	5	550	28-Ø37	707	620	472	343	1712	748	230	16	839	347	670	AT14	160	1216
1100	44"	1355	1270	1218	55	5	590	32-Ø37	707	682.5	472	343	1893	795	230	26	973	347	750	AT14	160	1900
1200	48"	1455	1380	1328	45	5	630	32-Ø41	768	732.5	472	343	1971	865	230	18	981	347	800	AT14	160	1758
1400	56"	1675	1590	1530	46	5	710	36-Ø44	824	842.5	472	343	2313	1011	315	21	1138	347	920	AT14	160	2614
1500	60"	1785	1700	1640	48	5	750	36-Ø44	824	897.5	472	343	2489	1112	315	22	1213	347	980	AT14	160	3184
1600	64"	1915	1820	1750	49	5	790	40-Ø50	824	962.5	472	343	2588	1161	315	24	1263	347	1050	AT14	160	3885

## ISO 5210 UPPER FLANGE DIMENSIONS



DN		ISO 5210							Number of turns		Torque *
mm	inch	ISO flange	Ød0	n-Ød1	Ød2	Ød3	Ød4	h	bxh1		(Nm)
200	8"	F10	20	4-Ø10	125	102	70	28	6X20	10	23
250	10"	F10	20	4-Ø10	125	102	70	28	6X20	10	36
300	12"	F10	20	4-Ø10	125	102	70	28	6X20	12	47
350	14"	F10	20	4-Ø10	125	102	70	28	6X20	12	65
400	16"	F10	20	4-Ø10	125	102	70	30	6X25	20	57
450	18"	F10	20	4-Ø10	125	102	70	30	6X25	20	72
500	20"	F10	20	4-Ø10	125	102	70	30	6X25	80	28
600	24"	F10	20	4-Ø10	125	102	70	30	6X25	64	53
700	28"	F10	20	4-Ø10	125	102	70	30	6X25	64	76
800	32"	F10	20	4-Ø10	125	102	70	30	6X25	96	73
900	36"	F10	20	4-Ø10	125	102	70	30	6X25	96	100
1000	40"	F10	20	4-Ø10	125	102	70	30	6X25	198,9	65
1100	44"	F10	20	4-Ø10	125	102	70	30	6X25	198,9	86
1200	48"	F10	20	4-Ø10	125	102	70	30	6X25	382,2	52
1400	56"	F10	20	4-Ø10	125	102	70	30	6X25	421,4	67
1500	60"	F10	20	4-Ø10	125	102	70	30	6X25	421,4	82
1600	60"	F10	20	4-Ø10	125	102	70	30	6X25	421,4	98

\* Values without safety factor

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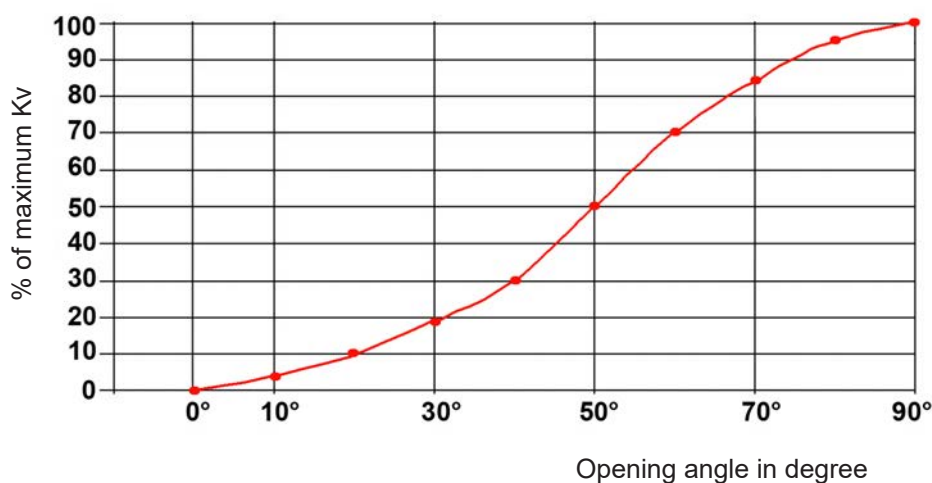


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## WORKING CONDITIONS

Maximum working pressure : 10 bar.  
Maximum working temperature : + 80 °C.

## FLOW FACTOR - Kv



DN	mm	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1600
	inch	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	44"	48"	56"	64"
<b>Kvs</b>		1880	3800	4950	8000	10900	14200	18250	28000	40500	55100	74000	93338	116213	142516	167310	264433

Values given for information

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