

DOUBLE EXCENTRIC BUTTERFLY VALVE TYPE TECWAT

TECHNICAL PASSPORT

**PN16 FLANGED DOUBLE EXCENTRIC
BUTTERFLY VALVE
WITH ELECTRIC ACTUATOR BERNARD**

VP 4248-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.

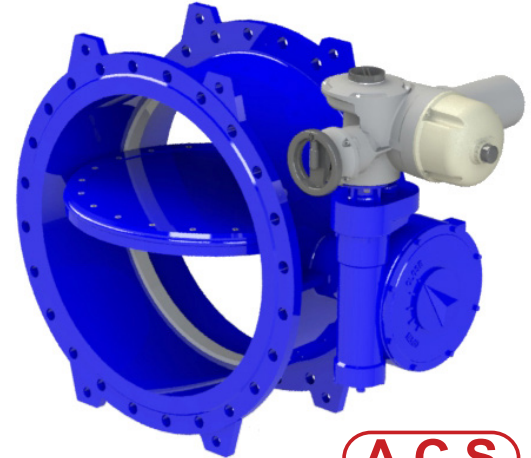


Fluids: water, drinking water.

GENERAL CHARACTERISTICS

TECWAT model: long pattern.

- Design according to NF EN 595.
- Range : from DN80 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

Design	Complies with standard EN 593
Face to face	Face to face according to standard NF EN 558 serie 14.
Connection	ISO PN16 flange mounting according to standard EN1092-2.
Tests	Hydraulic tests carried out according to the standard EN12266-1: -Body : 24 bar -Seat : 17.6 bar

PRODUCT APPROVALS

WRAS Certificate n° 1607394



EN 1074

Health compliance certificate n° 19 ACC LY 582



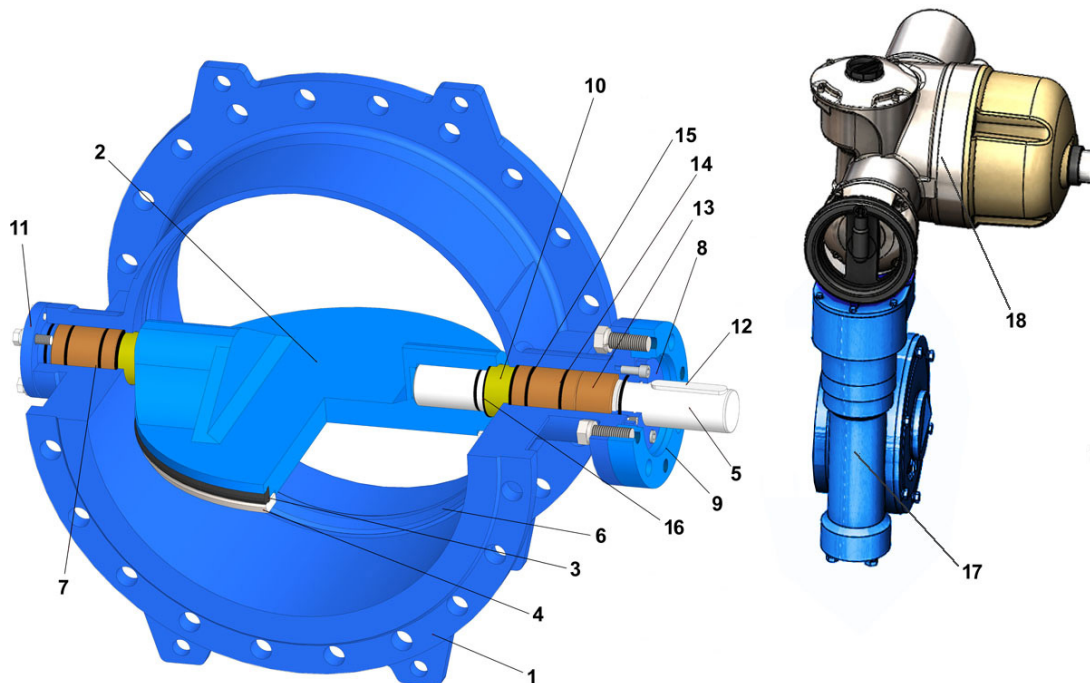
Tecofi France

83 rue Marcel Mérioux - 69960 Corbas
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19
E-mail : sales@tecofi.fr - www.tecofi.fr



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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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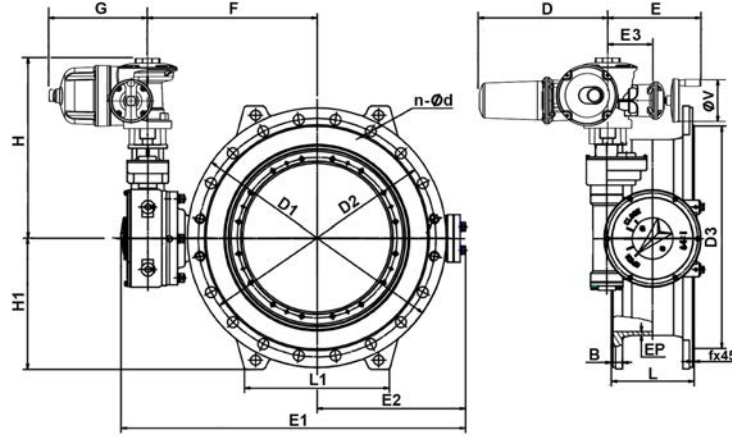
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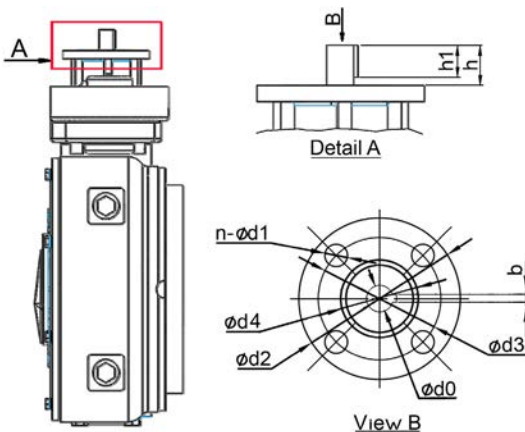
DIMENSIONS

L1	Actuator reference	ØV	Weight (kg)
	AT3	160	46
	AT3	160	48
	AT3	160	50
	AT3	160	56
196	AT6L	160	100
240	AT6	160	138
275	AT14	160	151
280	AT14	160	201
310	AT14	160	226
340	AT6	160	293
370	AT14	160	364
430	AT14	160	490
480	AT14	160	661
560	AT25	160	872
615	AT14	160	1178
670	AT14	160	1452
750	AT14	160	2277
800	AT14	160	2356
920	AT14	160	3783
980	AT14	160	3184
1050	AT14	160	4507



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																					
80	3"	200	160	132	19	3	180	8-Ø19	295	-	388	326	297	100	-	-	194	315	150	AT3	160	46
100	4"	220	180	156	19	3	190	8-Ø19	295	110	388	326	322	110	43.2	8	194	315	150	AT3	160	48
125	5"	250	210	184	19	3	200	8-Ø19	295	125	388	326	350	125	43.2	8	-	315	-	AT3	160	50
150	6"	285	240	211	19	3	210	8-Ø23	295	147.5	388	326	407	142.5	43.2	8.5	225	315	180	AT3	160	56
200	8"	340	295	266	20	3	230	12-Ø23	295	175	472	343	526	198	64	9	272	315	196	AT6L	160	100
250	10"	405	355	319	22	3	250	12-Ø28	317	202.7	472	343	568	219	93.4	10	328	347	240	AT6	160	138
300	12"	460	410	370	24.5	4	270	12-Ø28	317	235	472	343	670	254	93.4	10	351	347	275	AT14	160	151
350	14"	520	470	429	26.5	4	290	16-Ø28	317	265	472	343	720	279	120	11	407	347	290	AT14	160	201
400	16"	580	525	480	28	4	310	16-Ø31	317	295	472	343	834	320	120	12	437	347	320	AT14	160	226
450	18"	640	585	548	30	4	330	20-Ø31	317	325	472	343	903	359	120	13	488	347	360	AT6	160	293
500	20"	715	650	609	31.5	4	350	20-Ø34	317	362.5	472	343	988	393	148	14	530	347	395	AT14	160	364
600	24"	840	770	720	36	5	390	20-Ø37	317	425	472	343	1119	450	148	15	548	347	470	AT14	160	490
700	28"	910	840	794	39.5	5	430	24-Ø37	317	460	472	343	1217	530	185	17	640	347	480	AT14	160	661
800	32"	1025	950	901	43	5	470	24-Ø41	317	517.5	472	380	1410	614	185	19	698	385	560	AT25	160	872
900	36"	1125	1050	1001	46.5	5	510	28-Ø41	317	567.5	472	343	1530	675	230	21	789	347	618	AT14	160	1178
1000	40"	1255	1170	1112	50	5	550	28-Ø44	317	635.5	472	343	1712	748	230	23	882	347	600	AT14	160	1452
1100	44"	1355	1270	1218	55	5	590	32-Ø44	317	682.5	472	343	1967	795	315	30	1008	347	750	AT14	160	2277
1200	48"	1485	1390	1328	57	5	630	32-Ø50	317	747.5	472	343	1971	865	315	26	1038	347	800	AT14	160	2356
1400	56"	1685	1590	1530	60	5	710	36-Ø50	317	847.5	472	343	2313	1011	412	30	1253	347	920	AT14	160	3783
1500	60"	1930	1820	1750	65	5	790	36-Ø57/4-M52	317	915	472	343	2489	1112	412	26	1300	347	1000	AT14	160	3184
1600	64"	1915	1820	1750	49	5	790	40-Ø50	317	970	472	343	2588	1161	412	37	1369	347	1060	AT14	160	4507

ISO 5210 UPPER FLANGE DIMENSIONS



DN		ISO 5210										Number of turns	Torque * (Nm)
mm	inch	ISO flange	Ød0	n-Ød1	Ød2	Ød3	Ød4	h	bxh1				
80	3"	F07	15	4-Ø8	90	70	55	18	5X16	8	5		
100	4"	F07	15	4-Ø8	90	70	55	18	5X16	8	11		
125	5"	F07	15	4-Ø8	90	70	55	18	5X16	8	16		
150	6"	F10	20	4-Ø10	125	102	70	28	6X20	10	15		
200	8"	F10	20	4-Ø10	125	102	70	28	6X20	10	33		
250	10"	F10	20	4-Ø10	125	102	70	28	6X20	12	49		
300	12"	F10	20	4-Ø10	125	102	70	28	6X20	12	69		
350	14"	F10	20	4-Ø10	125	102	70	30	6X25	20	63		
400	16"	F10	20	4-Ø10	125	102	70	30	6X25	20	84		
450	18"	F10	20	4-Ø10	125	102	70	30	6X25	80	32		
500	20"	F10	20	4-Ø10	125	102	70	30	6X25	64	54		
600	24"	F10	20	4-Ø10	125	102	70	30	6X25	64	83		
700	28"	F10	20	4-Ø10	125	102	70	30	6X25	96	80		
800	32"	F10	20	4-Ø10	125	102	70	30	6X25	96	118		
900	36"	F10	20	4-Ø10	125	102	70	30	6X25	198.9	75		
1000	40"	F10	20	4-Ø10	125	102	70	30	6X25	382.2	52		
1100	44"	F10	20	4-Ø10	125	102	70	30	6X25	421.4	61		
1200	48"	F10	20	4-Ø10	125	102	70	30	6X25	421.4	75		
1400	56"	F10	20	4-Ø10	125	102	70	30	6X25	641.25	70		
1500	60"	F10	20	4-Ø10	125	102	70	30	6X25	641.25	74		
1600	60"	F10	20	4-Ø10	125	102	70	30	6X25	641.25	107		

* Values without safety factor

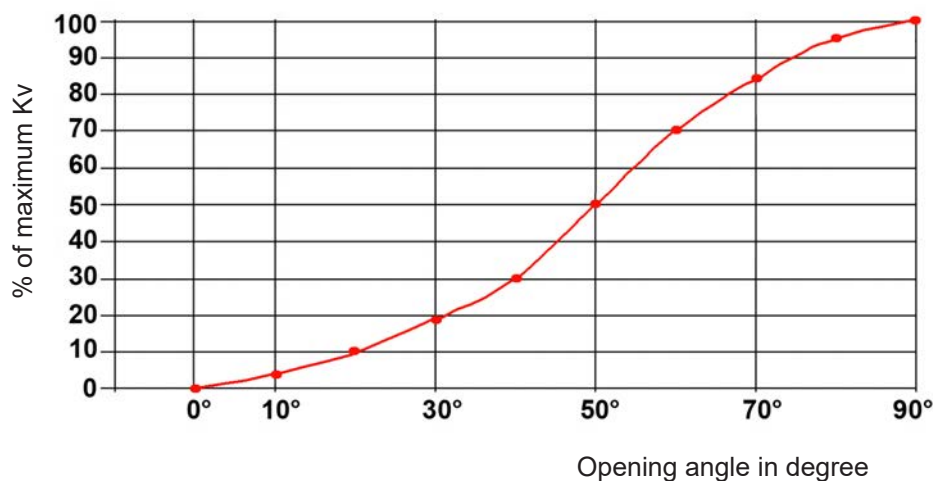


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WORKING CONDITIONS

Maximum working pressure : 16 bar.
Maximum working temperature : + 80 °C.

FLOW FACTOR - Kv



DN	mm	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1600
	inch	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	44"	48"	56"	64"
Kvs		680	1880	3800	4950	8000	10900	14200	18250	28000	40500	55100	74000	93338	116213	142516	167310	264433

Values given for information

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