

Table of Contents

“T” Concentric Butterfly Valve	1 ~ 5
--------------------------------	-------

“TB”Double Eccentric Butterfly Valve	6 ~ 9
--------------------------------------	-------

“T” Concentric Butterfly Valve

Size: DN50-1800

Product description

Lining butterfly valves used for water treatment, water distribution, in dams, power plants and in industry

Design standards

- EN 1074 part 1 & 2, EN593, ISO10631, AWWA C504, API 609, UL1091
- Face-to-face dimension according to EN 558, AWWA C504, API 609
- Flange drilling to EN1092-2 PN10/16/PN25, ASME B 16.1/16.42 CL125/CL150, AWWA C207, ASME B16.5, ASME B16.47
- End type: Lug, Wafer, Double Flange

Test

- EN 12266, API 598
- Seat: 1.1 x PN (in bar), Body: 1.5 x PN (in bar)

Approvals

- WRAS
- UL

Features

- Replaceable seat
- Centric disk, mounted in three maintenance-free bearing bushes
- Triple shaft bearing
- Anti-blow-out shaft design with an anti blow-out plate at the top
- With double-stem and no pin to resist to leak
- Vacuum tight up to 0.1 bar absolute
- Tight in both flow directions
- Fusion bonded epoxy coating inside and outside

Accessories

- Extension spindle

Operator Options

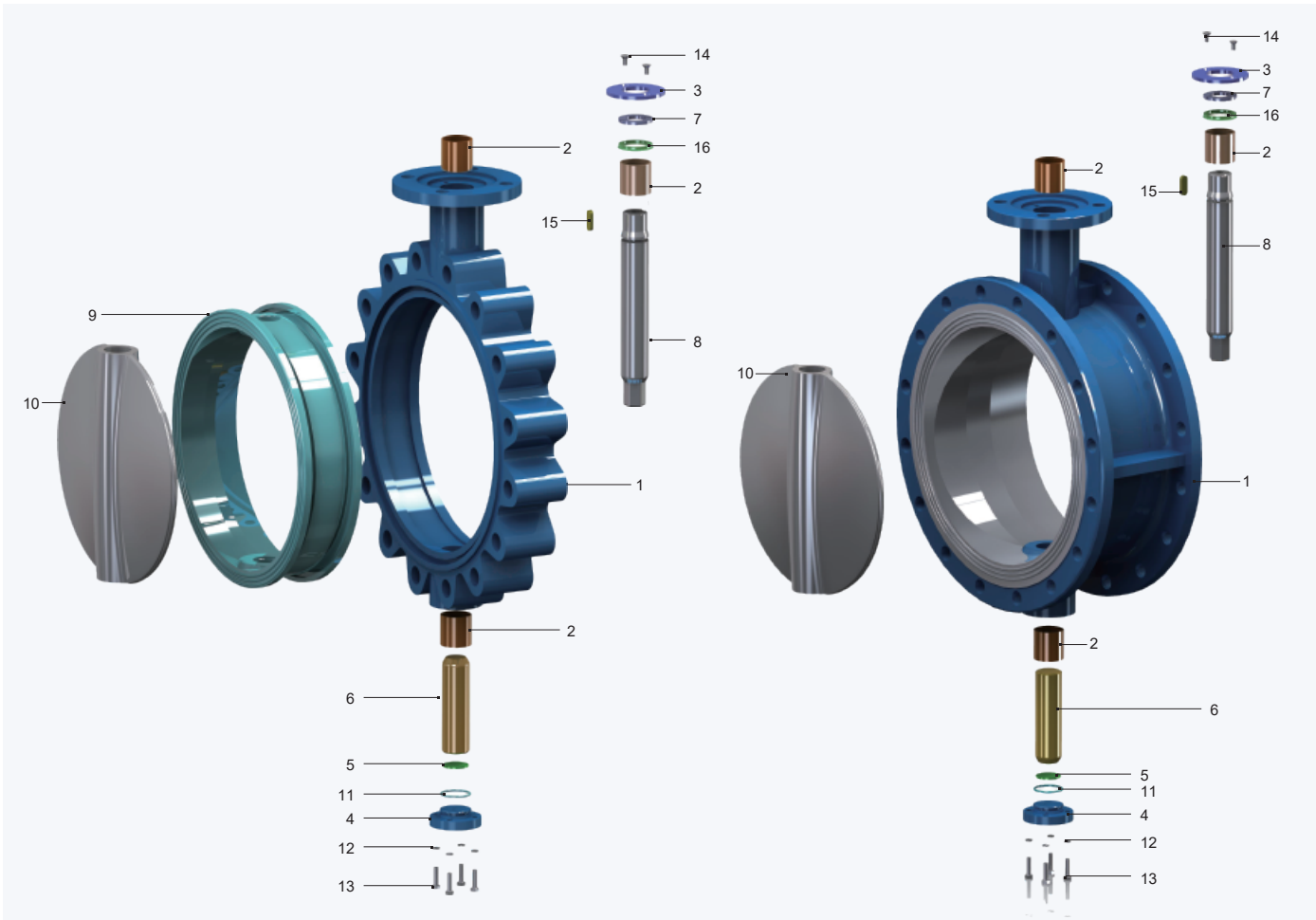
- Gear box
- Pneumatic actuator
- Electric actuator
- Hydraulic actuator

Main application

- Water supply systems
- Desalination & wastewater treatment plants
- Installation in plants
- Underground installation



“T” Concentric Butterfly Valve

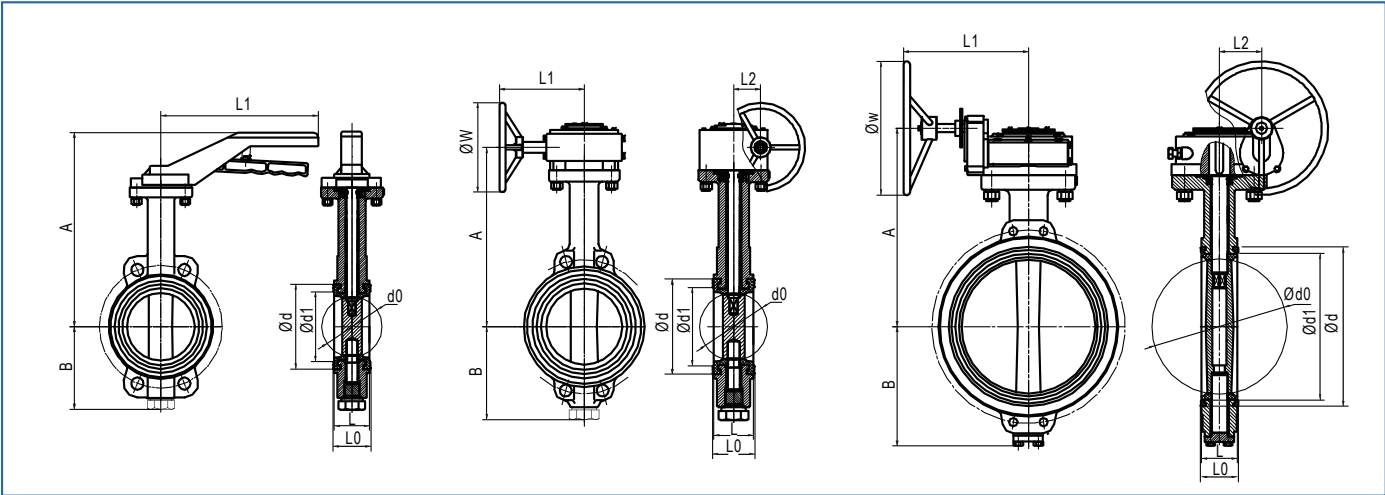


Part List						
Item	Part Name	Material-1	Material-2	Material-3	Material-4	Material-5
1	Body	DUCTILE IRON	CARBON STEEL	STAINLESS STEEL	SUPER DUPLEX STEEL	AL BRONZE
2	Bearing	PTFE/ BRONZE	PTFE/ BRONZE	PTFE/ BRONZE	PTFE/ BRONZE	PTFE/ BRONZE
3	Limit Plate	ASTM A283 GRD	ASTM A283 GRD	316SS	316SS	316SS
4	Down Flange*	DUCTILE IRON	CARBON STEEL	STAINLESS STEEL	316SS	AL BRONZE
5	Thrust Washer	304SS	304SS	316SS	316SS	316SS
6	Hub Shaft	ASTM A479 431	ASTM A479 431	ASTM A479 431	SUPER DUPLEX STEEL	MNL K500
7	Retainer Ring	ASTM A276 420	ASTM A276 420	ASTM A276 420	316SS	316SS
8	Stem	ASTM A479 431	ASTM A479 431	ASTM A479 431	SUPER DUPLEX STEEL	316SS
9	Seat	EPDM/NBR/VITON PTFE	EPDM/NBR/VITON PTFE	EPDM/NBR/VITON PTFE	EPDM/NBR/VITON PTFE	EPDM/NBR/VITON PTFE
10	Disc	DUCTILE IRON STAINLESS STEEL SUPER DUPLEX STEEL AL BRONZE	STAINLESS STEEL SUPER DUPLEX STEEL AL BRONZE	STAINLESS STEEL SUPER DUPLEX STEEL AL BRONZE	SUPER DUPLEX STEEL	AL BRONZE
11	O Ring	EPDM/NBR	EPDM/NBR	EPDM/NBR	EPDM/NBR	EPDM/NBR
12	Washers	304SS/316SS	304SS/316SS	316SS	316SS	316SS
13	Bolts	ISO 3506 A2-70	ISO 3506 A2-70	316SS	316SS	316SS
14	Screw	ISO 3506 A2-70	ISO 3506 A2-70	316SS	316SS	316SS
15	Key	AISI 1045	AISI 1045	ASTM A705 630	ASTM A705 630	ASTM A705 630
16	O Ring	EPDM/NBR	EPDM/NBR	EPDM/NBR	EPDM/NBR	EPDM/NBR

NOTE:* can be different depend on the specific design

“T” Concentric Butterfly Valve

Wafer Type

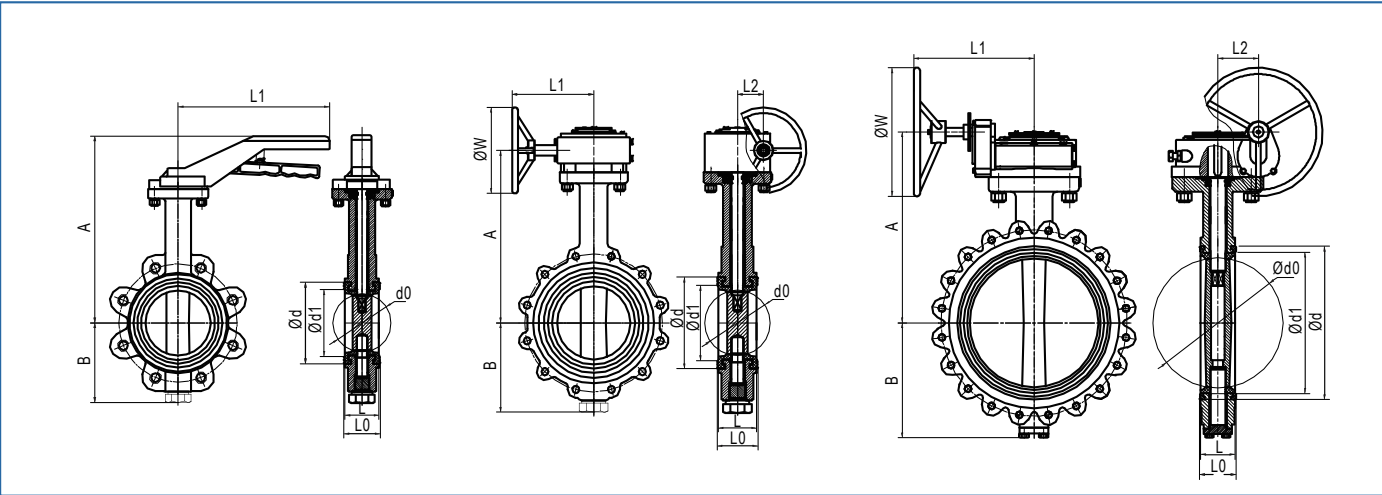


DN	L	L0	d	d0	d1	A* (gear/lever)	B*	L1* (gear/lever)	L2*	W*
50	43	46	81	53	69	172/193	61	160/210	45	145
65	46	49	93	64.7	81	184/205	72	160/210	45	145
80	46	50	111	79.1	98	192/213	93	160/210	45	145
100	52	56	140	104.1	128	210/231	106	160/210	45	145
125	56	59	165	123.3	152	224/245	123	160/210	45	145
150	56	60	186	155.5	173	235/256	137	160/210	45	145
200	60	64	246	201.7	233	287	174	245	63	300
250	68	72	301	250.5	277	320	209	245	63	300
300	78	83	352	301.6	332	364	244	245	78	300
350	78	85	388	333.6	374	408	260	245	78	300
400	102	109	450	389.6	431	510	315	245	160	300
450	114	124	506	440.5	489	535	340	245	160	300
500	127	138	561	491.7	541	595	379	245	160	300
600	154	162	650	592.6	600	693	440	260	154	400
700	165	170	770	695	708	595	510	340	235	400
800	190	198	875	795.4	815	662	580	340	235	400
900	203	206.5	948.5	864.7	908.5	723	653	350	260	400
1000	216	220	1056.5	965	1010	798	723	350	260	400
1200	258	276	1288	1159	1175	1220	891	650	246.4	700
1400	279	289	1500	1383	1414	1303	941	650	246.4	700
1500	318	328	1580	1434.9	1466	1372	1080	705	279	800

NOTE:* Values are for reference only

“T” Concentric Butterfly Valve

Lug Type

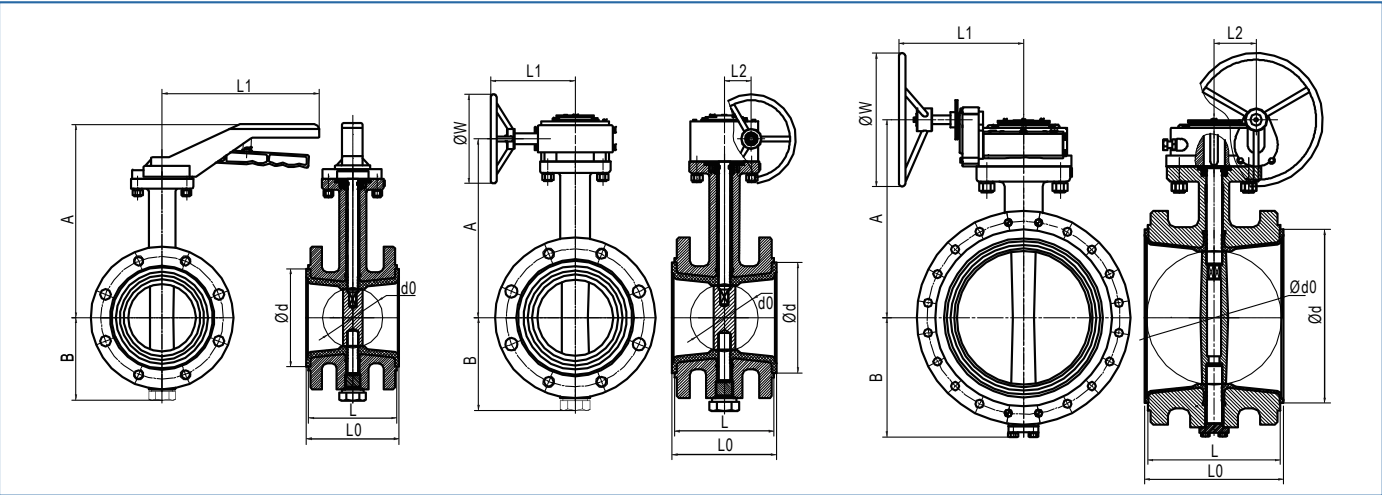


DN	L	L0	d	d0	d1	A* (gear/lever)	B*	L1* (gear/lever)	L2*	W*
50	43	46	81	53	69	172/193	62	160/210	45	145
65	46	49	93	64.7	81	184/205	72	160/210	45	145
80	46	50	111	79.1	98	192/213	95	160/210	45	145
100	52	56	140	104.1	128	209/230	106	160/210	45	145
125	56	59	165	123.3	152	224/245	123	160/210	45	145
150	56	60	186	155.5	173	235/256	138	160/210	45	145
200	60	64	246	201.7	233	287	173	245	63	300
250	68	72	301	250.5	277	320	207	245	63	300
300	78	83	352	301.6	332	364	235	245	78	300
350	78	85	388	333.6	374	408	267	245	78	300
400	102	109	450	389.6	431	510	312	245	160	300
450	114	124	506	440.5	489	535	330	245	160	300
500	127	138	561	491.7	541	595	363	245	160	300
600	154	162	650	592.6	600	693	440	260	154	400
700	165	170	770	695	708	560	510	340	235	400
800	190	198	875	795.4	815	635	585	340	235	400
900	203	206.5	948.5	864.7	908.5	720	635	350	260	400
1000	216	220	1056.5	965	1010	820	705	350	260	400
1200	258	276	1288	1159	1175	1220	891	650	246.4	700
1400	279	289	1500	1383	1414	1303	941	650	246.4	700
1500	318	328	1580	1434.9	1466	1372	1080	705	279	800
1600	318	328	1755	1529.9	1583	1338	1046	714	154	800
1800	457	467	1915	1760.5	1800	1320	1210	837	380	800

NOTE:* Values are for reference only

“T” Concentric Butterfly Valve

Double Flange Type



DN	L	L0	d	d0	A* (gear/lever)	B*	L1* (gear/lever)	L2*	W*
50	108	113	94	52.6	151/172	82	160/210	45	145
65	112	120	104	64.3	161/182	93	160/210	45	145
80	114	121	130	78.8	176/197	100	160/210	45	145
100	127	133	151	104	186/207	113	160/210	45	145
125	140	144	187	123.3	200/221	126	160/210	45	145
150	140	144	208	155.7	220/241	145	160/210	45	145
200	152	158	258	202.4	245	171	245	63	300
250	165	170	315	250.4	277	197	245	63	300
300	178	183	368	301.5	320	220	245	78	300
350	190	198	422	333.3	365	253	245	78	300
400	216	224	468	389.6	468	290	245	160	300
450	222	228	508	440.5	502	325	245	160	300
500	229	235	580	491.6	555	360	245	160	300
600	267	273	675	592.5	653	428	260	154	400
700	292	300	777	695	577	455	340	235	400
800	318	326	881	795.4	623	553	340	235	400
900	330	338	982	864.7	680	630	350	260	400
1000	410	418	1090	965	735	680	350	260	400
1200	470	478	1280	1160.6	915	810	370	320	400
1400	530	540	1500	1383	1303	941	650	246.4	700
1500	600	610	1580	1434.9	1372	1080	705	279	800
1600	600	610	1755	1529.9	1338	1046	714	154	800
1800	457	467	1915	1760.5	1320	1210	837	380	800

NOTE:* Values are for reference only

“TB” Double Eccentric Butterfly Valve

Size: DN50-4000

Product description

Rubber seat eccentric butterfly valves used for water treatment, water distribution, in dams, power plants and in industry.

Design standards

- EN 593, AWWA C504/516
- Face-to-face dimension according to EN 558, AWWA
- Flange drilling to EN1092-2 PN10/16/25/40, ASME B 16.1/16.42 CL125/CL150, AWWA C207, ASME B16.5, ASME B16.47

Test

- EN 12266, API 598
- Seat: 1.1 x PN (in bar), Body: 1.5 x PN (in bar)

Approvals

- WRAS

Features

- Double eccentric design ensure the low operating torque
- Tight closure in both flow directions
- Possible to replace rubber seat without disassembling the disk
- Dry shaft design
- Disc firmly fixed to the shaft to prevent fluttering
- Automatic sealing system with enclosed and pressure-supported profile sealing ring
- Low flow resistance due to special disc design
- Fusion bonded epoxy coating inside and outside

Accessories

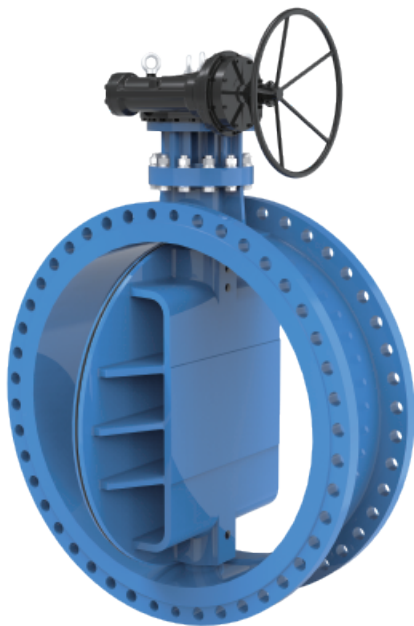
- Extension spindle
- Locking device
- Street cover
- Flange adaptor and combi-flange
- Limit switch

Operator Options

- Gear box
- Pneumatic actuator
- Electric actuator
- Hydraulic actuator

Main application

- Water supply systems
- Desalination & wastewater treatment plants
- Installation in plants
- Underground installation



Typical Structure



▲ Sealing Ring On The Disc



▲ Sealing Ring On The Body

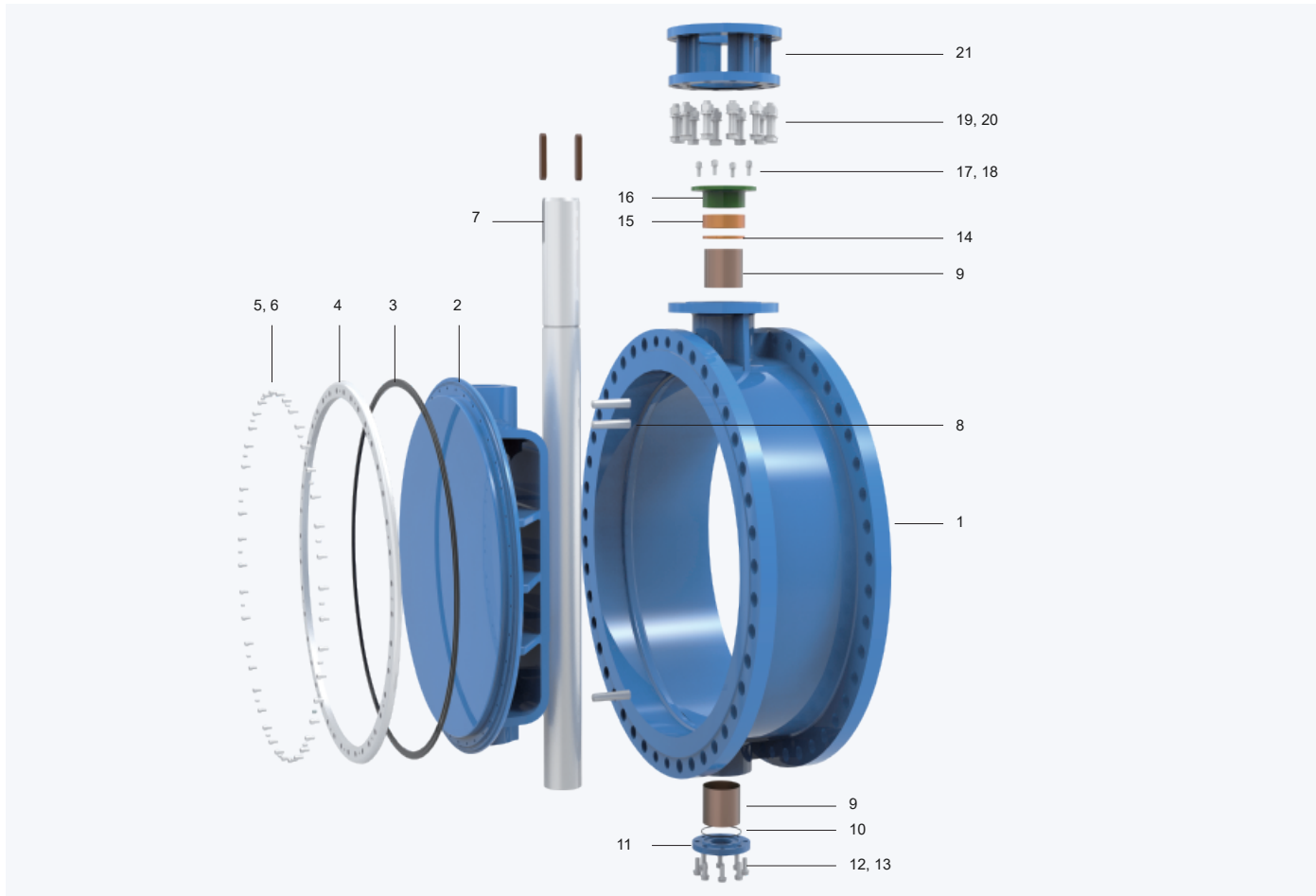


▲ Body Lining Or Disc Lining



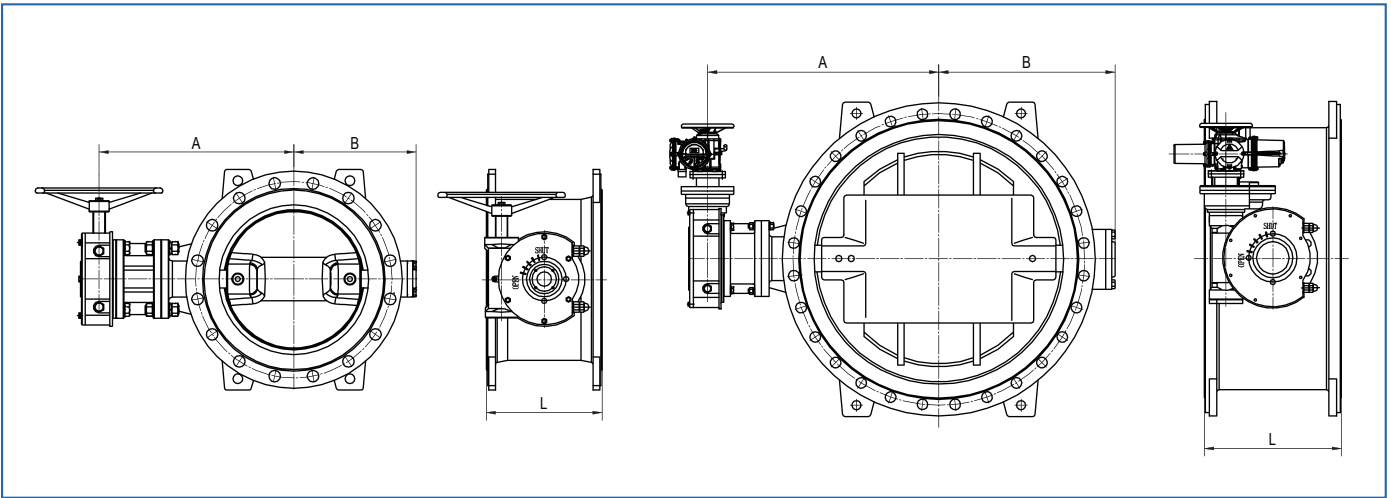
▲ Hydraulic actuator with weight

“TB” Double Eccentric Butterfly Valve



Part List						
Item	Part Name	Material-1	Material-2	Material-3	Material-4	Material-5
1	Body	DUCTILE IRON	CARBON STEEL	STAINLESS STEEL	SUPER DUPLEX STEEL	AL BRONZE
2	DISC	DUCTILE IRON	CARBON STEEL STAINLESS STEEL SUPER DUPLEX STEEL AL BRONZE	STAINLESS STEEL SUPER DUPLEX STEEL AL BRONZE	SUPER DUPLEX STEEL	AL BRONZE
3	Seat	EPDM/NBR/VITON	EPDM/NBR/VITON	EPDM/NBR/VITON	EPDM/NBR/VITON	EPDM/NBR/VITON
4	Disc Retainer Ring	ASTM A182 F316	ASTM A182 F316	ASTM A182 F316	SUPER DUPLEX STEEL	AL BRONZE
5	Screw	ISO 3506 A2-70	ISO 3506 A2-70	ISO 3506 A2-70	SUPER DUPLEX STEEL	MNL K500
6	Washers	304SS	304SS	304SS	SUPER DUPLEX STEEL	MNL K500
7	Stem	ASTM A276 420	ASTM A479 431	ASTM A479 431	SUPER DUPLEX STEEL	MNL K500
8	Pin	ASTM A276 420	ASTM A479 431	ASTM A479 431	SUPER DUPLEX STEEL	MNL K500
9	Bushing	BRASS	BRASS	BRASS	BRASS	BRASS
10	O Ring	NBR	NBR	NBR	NBR	NBR
11	Down Flange	DUCTILE IRON	CARBON STEEL	STAINLESS STEEL	SUPER DUPLEX STEEL	AL BRONZE
12	Bolts	ISO 3506 A2-70	ISO 3506 A2-70	ISO 3506 A2-70	316SS	316SS
13	Washers	304SS	304SS	304SS	316SS	316SS
14	Clipping Ring	304SS	304SS	304SS	316SS	316SS
15	Packing	PTFE+NBR	PTFE+NBR	PTFE+NBR	PTFE+NBR	PTFE+NBR
16	Gland Flange	DUCTILE IRON	CARBON STEEL	STAINLESS STEEL	SUPER DUPLEX STEEL	AL BRONZE
17	Bolts	ISO 3506 A2-70	ISO 3506 A2-70	ISO 3506 A2-70	316SS	316SS
18	Washers	304SS	304SS	304SS	316SS	316SS
19	Bolts	ISO 3506 A2-70	ISO 3506 A2-70	ISO 3506 A2-70	316SS	316SS
20	Washers	304SS	304SS	304SS	316SS	316SS
21	York	DUCTILE IRON	CARBON STEEL	CARBON STEEL	CARBON STEEL	CARBON STEEL

“TB” Double Eccentric Butterfly Valve



DN	Outline mm			
	L		A*	B*
	Series 13	Series 14		
50	108	150	83	223
65	112	170	93	228
80	114	180	100	246
100	127	190	110	277
125	140	200	125	286
150	140	210	143	304
200	152	230	170	437
250	165	250	193	495
300	178	270	223	519
350	190	290	253	544
400	216	310	283	647
450	222	330	308	667
500	229	350	335	730
600	267	390	390	835
700	292	430	448	895
800	318	470	508	955
900	330	510	558	1058
1000	410	550	615	1096
1200	470	630	728	1243
1400	530	710	838	1380
1600	600	790	958	1620
1800	670	870	1058	1631
2000	760	950	1163	1859
2200	800	1000	1385	1920
2400	850	1100	1500	2200
2600	900	1200	1600	2300
2800	950	1300	1750	2450
3000	1000	1400	1900	2600
3200	1100	-	2050	2750
3400	1200	-	2200	2900
3600	1200	-	2300	3000
3800	1200	-	2400	3100
4000	1300	-	2500	3200

NOTE:* Values are for reference only