



**Range DN:** 40 ~ 2000  
**NPS:** 1 1/2" ~ 80"



PED 97/23/EC  
PED 2014/68/EU



TR TS 10/11,  
12/11, 32/11



**Range PN:** 16 ~ 160  
**Class:** 150 - 300

**Operating temperature:**

Depending on the sealing material

**Connection into piping:**

Flanged, welded ends, WAFER type, LUG type



## DESCRIPTION

DE BTF (double eccentric) butterfly valves are controlled shut-off valves. They are designed to stop or allow the flow of the medium by external operation, via either the hand wheel or the installed drive. The medium can flow in one direction only. These butterfly valves are designed and manufactured to ensure maximum service life and reliability.

## MATERIAL SPECIFICATION

DE BTF butterfly valves are made from carbon ,alloyed and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions.

## APPLICATION

DE BTF butterfly valves are suitable for various liquids, gases and steam.

## BASIC STANDARDS FOR DESIGN

### Basic design

API 609, ASME B16.34

### Pressure-temperature rating

ASME B16.34, EN 12 516 - 1

### Testing

API 598 EN 12 266 - 1, 2

### Face-to-face dimensions

ANSI B16.10, EN 558

### Dimensions of the welded ends

ANSI B16.25, EN 12 627

### Top Flange dimensions

EN ISO 5211

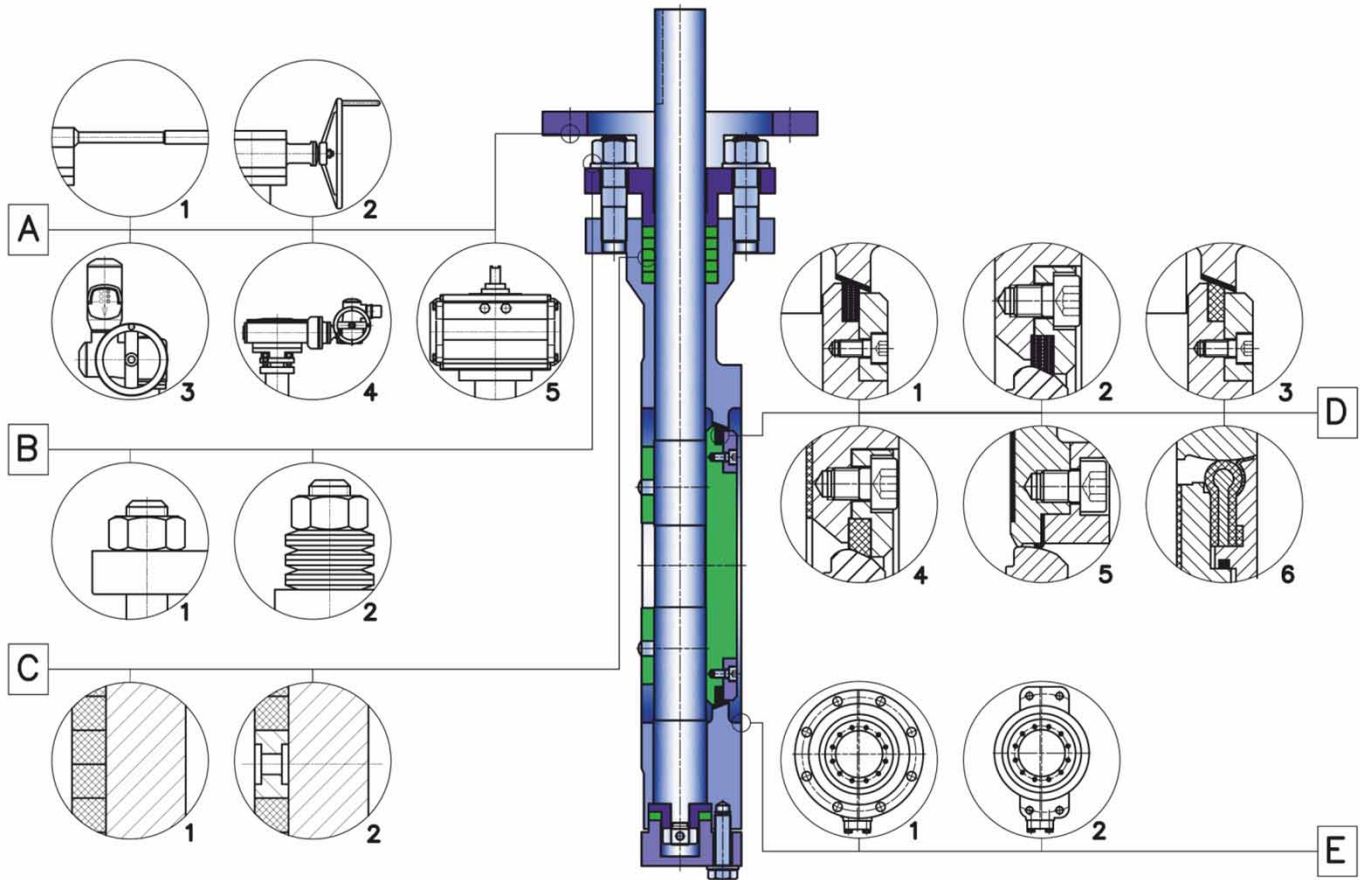
### Flange dimensions

ANSI B 16.5, ANSI B16.47A, EN1092 - 1

### Special

NACE MR-0175

### STRUCTURAL DESIGN



#### A - Control

- by hand lever into DN 150
- by gearbox
- by electric actuator
- by electric actuator with gear box
- by pneumatic actuator

#### B – Gland compression

- in case of valve operation with cyclic changes in pressure or at high pressures and temperatures, the gland compression by means of Belleville springs, which secure a constant pre-stress in packing, is preferred.

#### C - Execution of gland

- standard
- double stem packing with lantern ring – shall be chosen in dependence on working conditions

#### D – Seat Execution

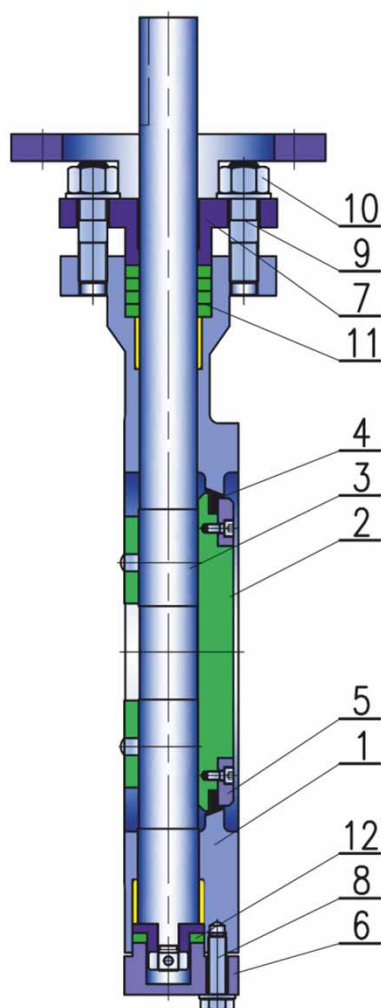
- PTFE
- Viton
- Stainless steel
- NBR
- EPDM
- Stainless steel + graphite

The seat ring can be placed either in the body or on the disc

#### E – Connection into piping

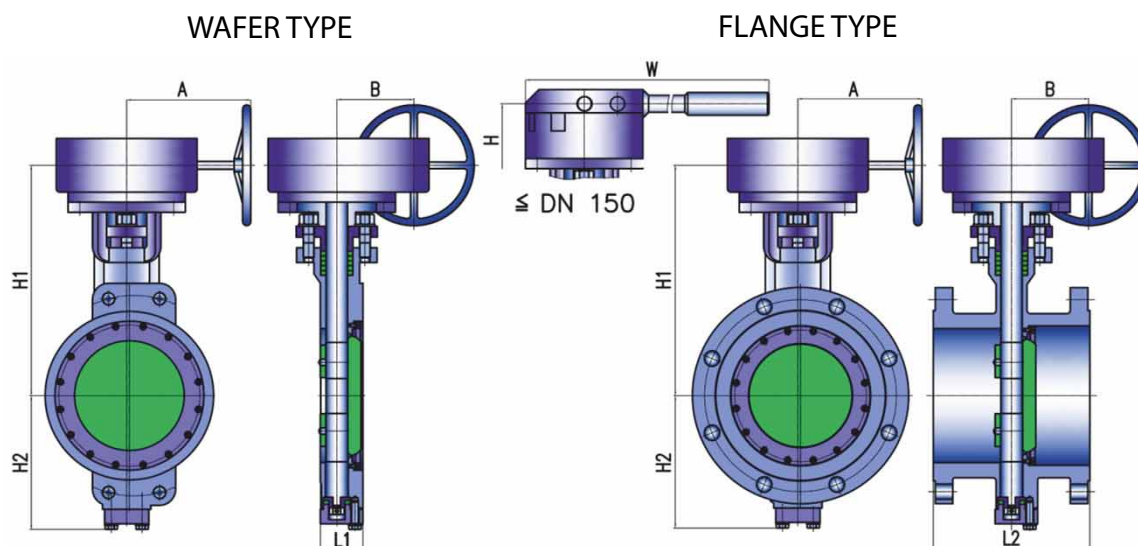
- flanged, welded ends, wafer type, lug type

### MATERIAL SPECIFICATION



Pos.	Designation	WCB	LCC	LCB	WC6	WC9	C5	C12	CF8 / 304	CF8M / 316
1	Body	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
2	Disc	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
3	Control stem	AISI 420	AISI 420	AISI 420	AISI 420	AISI 420	AISI 420	AISI 420	A182 F304	A182 F316
4	Seat	AISI 430	AISI 430	AISI 430	AISI 430	AISI 430	AISI 430	AISI 430	AISI 304	AISI 316
		+ seat ring (EPDM, NBR, HNBR, VITON, GRAPHITE)								
5	Retaining ring	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
6	Bottom cover	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
7	Gland flange	A216 WCB	A352 LCC	A352 LCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A351 CF8	A351 CF8M
8	Bolt	A193 B7	A320 L7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
9	Bolt	A193 B7	A320 L7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M
10	Nut	A194 2H	A194 4	A194 4	A194 B8M	A194 B8M	A194 2H	A194 2H	A194 8	A194 8M
11	Gland packing									
12	Gasket	graphite								

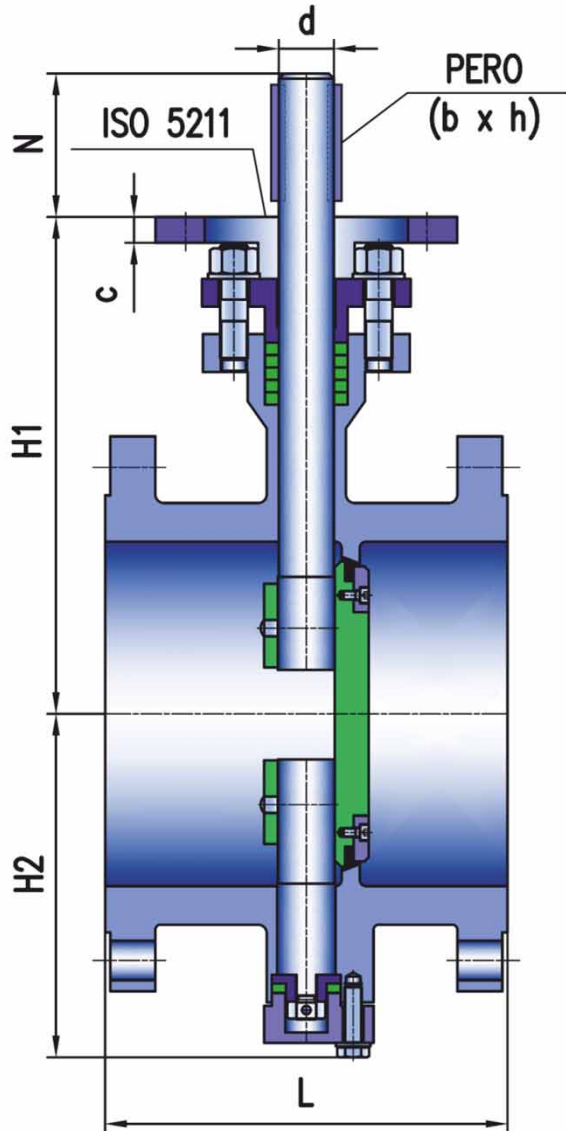
### DIMENSIONS



DN	PN 2,5 – 16 CLASS 150						PN 25 , 40 CLASS 300							
	L1	L2	H	H2	W	KG		L1	L2	H	H2	W	KG	
						L1	L2						L1	L2
40	47	106	155	49	180	3,4	3,8	54	106	155	49	180	3,4	3,8
50	50	108	162	59	200	4,1	4,8	58	108	162	59	200	5	5,8
65	55	112	179	67	230	6	6,8	62	112	179	82	230	7,2	8
80	57	114	187	89	250	7,7	8,9	66	114	187	89	250	9	10
100	57	127	192	101	270	9,8	11	66	127	202	108	270	12	13,5
125	60	140	212	115	300	13	14,5	72	140	218	127	300	16	17,5
150	64	140	222	130	350	18	20	74	140	232	140	350	22	24

DN	PN 2,5 – 16 CLASS 150						PN 25 , 40 CLASS 300									
	L1	L2	H1	H2	A	B	KG		L1	L2	H1	H2	A	B	KG	
							L1	L2							L1	L2
200	86	152	297	174	170	84	37,5	41	86	152	307	219	170	84	48	52
250	96	165	327	206	170	84	54,5	60	96	165	347	246	200	108	65	71,5
300	108	178	364	242	200	108	90	99	108	178	384	289	220	128	101	111
350	114	190	404	290	200	108	116	127	114	190	424	318	240	152	132	150
400	126	216	444	313	240	128	157	183	126	216	464	362	260	168	198	219
450	134	222	472	342	240	152	207	227	134	222	492	377	300	180	247	271
500	144	229	522	380	300	68	269	295	144	229	544	416	341	229	341	382
600	163	267	608	440	320	192	378	415	163	267	618	463	350	237	413	454
700	184	292	795	478	332	218	554	609	-	-	-	-	-	-	-	-
800	184	318	835	547	350	237	673	740	-	-	-	-	-	-	-	-
900	-	330	885	612	350	237	-	788	-	-	-	-	-	-	-	-
1000	-	410	945	672	350	237	-	888	-	-	-	-	-	-	-	-

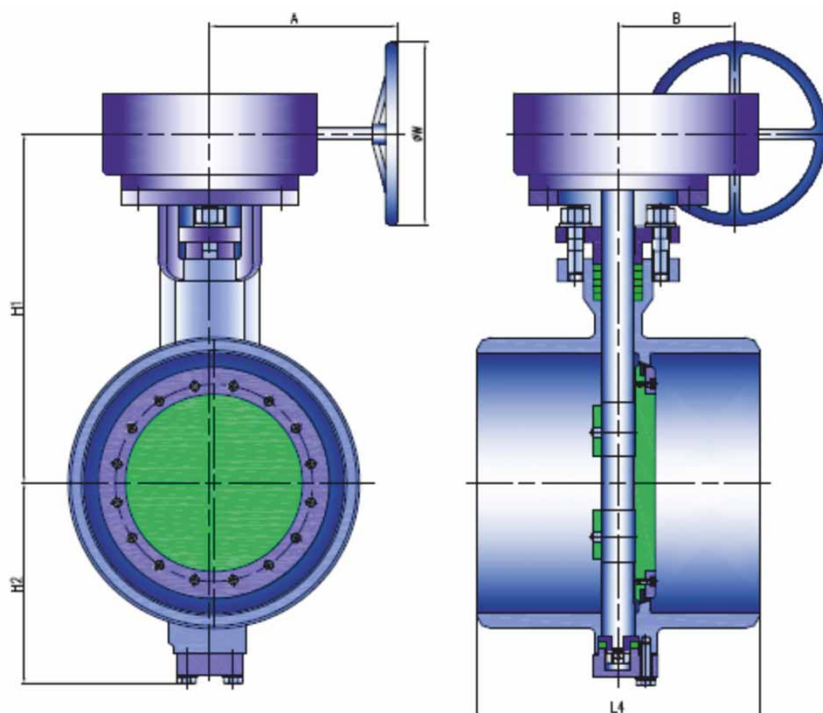
### DIMENSIONS – DE BTF R



DN	PN 10									
	L	H1	H2	ISO 5211	d	N	c	key		kg
								b	h	
200	230	200	180	F10	25	40	15	8	7	74
250	250	240	200	F12	30	40	20	8	7	114
300	270	255	230	F12	30	50	20	8	7	148
350	290	280	260	F12	35	50	20	10	8	183
400	310	310	300	F12	35	50	20	10	8	215
500	350	375	355	F14	40	70	25	12	8	337
600	390	744	542	F16	50	85	25	14	9	511
700	430	754	510	F16	65	90	25	18	11	905
800	470	824	595	F16	70	90	25	20	12	1221
900	510	916	660	F16	75	100	30	20	12	1576
1000	550	1000	740	F25	80	110	30	22	14	2090
1200	630	1237	880	F25	80	110	30	22	14	2227
1400	710	1367	1013	F25	90	110	35	22	14	2705
1600	790	1638	1113	F25	100	110	35	22	14	4327
1600	790	1638	1113	F25	100	110	35	22	14	4327
2000	950	1820	1350	F25	140	165	40	22	14	4865

DN	PN 16									
	L	H1	H2	ISO 5211	d	N	c	key		KG
								b	h	
200	230	200	180	F10	25	40	15	8	7	74
250	250	240	200	F12	30	50	20	8	7	114
300	270	255	230	F12	35	50	20	10	8	148
350	290	280	260	F12	40	50	20	12	8	183
400	310	310	300	F14	40	70	20	12	8	215
500	350	375	355	F16	50	90	25	14	9	337
600	390	744	542	F25	65	90	25	18	11	511
700	430	754	510	F25	70	110	25	20	12	905
800	470	824	595	F25	85	110	25	22	14	1221
900	510	916	660	F25	90	110	30	25	14	1576
1000	550	1000	740	F30	100	130	30	28	16	2090
1200	630	1237	880	F30	100	130	30	28	16	2227
1400	710	1367	1013	F30	120	130	35	32	18	2705
1600	790	1638	1113	F30	120	130	35	32	18	4327

### DIMENSIONS



DN	PN 2,5 – 16 Class 150						PN 25, 40 Class 300					
	L4	H1	H2	A	B	kg	L4	H1	H2	A	B	kg
						L1						L1
40		155	49	-	-	3,4		155	49	-	-	3,4
50	150	162	59	-	-	4,1	150	162	59	-	-	5
65	170	179	67	-	-	6	170	179	82	-	-	7,2
80	180	187	89	-	-	7,7	180	187	89	-	-	9
100	190	202	101	-	-	9,8	190	202	108	-	-	12
125	200	218	115	-	-	13	200	218	127	-	-	16
150	210	232	130	-	-	18	210	232	140	-	-	22

DN	PN 2,5 – 16 Class 150						PN 25, 40 Class 300					
	L4	H1	H2	A	B	kg	L4	H1	H2	A	B	kg
						L1						L1
200	230	297	205	170	84	37,5	230	297	205	170	84	37,5
250	250	327	235	170	84	54,5	250	327	235	170	84	54,5
300	270	364	275	200	108	90	270	364	275	200	108	90
350	290	404	309	200	108	116	290	404	309	200	108	116
400	310	444	346	240	128	157	310	444	346	240	128	157
450	330	472	392	240	152	207	330	472	392	240	152	207
500	350	522	427	300	68	269	350	522	427	300	168	269
600	390	608	509	320	192	378	390	608	509	320	192	378
700	430	795	572	332	218	554	-	795	572	332	218	554
800	470	835	638	350	237	673	-	835	638	350	237	673
900	510	885	700	350	237	-	-	885	700	350	237	-
1000	550	945	765	350	237	-	-	945	765	350	237	-

➤ TYPE DESIGNATION

## DE BTF C E M<sub>1</sub>/M<sub>2</sub> PN or CLASS/S

<p><b>C</b></p> <p><b>CONNECTION INTO PIPE</b></p> <p>1 Flanged 2 Welding on ends 0L Type „LUG“ 0W Type „WAFER“</p>	<p><b>E</b></p> <p><b>CONTROL</b></p> <p>1 Hand lever 2 Gearbox+hand wheel 3 Electric actuator 4 Gearbox + electric actuator 5 Pneumatic actuators 6 Hydraulic actuator 9 Without control</p>	<p><b>M<sub>1</sub></b></p> <p><b>BODY MATERIAL</b></p> <p>0 Stainless steel 1 Modular cast iron 2 Cast alloy steel 3 Forged alloy steel 4 Forged carbon steel 5 Cast carbon steel 6 Grey cast iron LT Carbon steel for low temperatures</p>
<p><b>M<sub>2</sub></b></p> <p><b>SEAT RING MATERIAL</b></p> <p>E EPDM N NBR HN HNBR P CR S WMQ T PTFE V VITON</p>	<p><b>S</b></p> <p><b>SPECIAL EXECUTION</b></p> <p>As Antistatic execution DT Bi-directional tightness</p>	

