BUTTERFLY VALVE FIG. N1
General features

GENERAL FEATURES:

Wafer type butterfly valve, DN32 - DN400
Body, disc and seat material to choice
Max. working pressure: 16 bar (DN 32 - DN 300), 10 bar (DN 350 - DN 400)
Face to face: ISO 5752
Mounting between flanges PN 10, PN 16 and ANSI 150
ISO mounting flange for direct mount
With lever in aluminium, with locking every 10° (DN32 - DN200)
With regulating lever in cast steel (DN250 - DN300)
With free stem from DN350

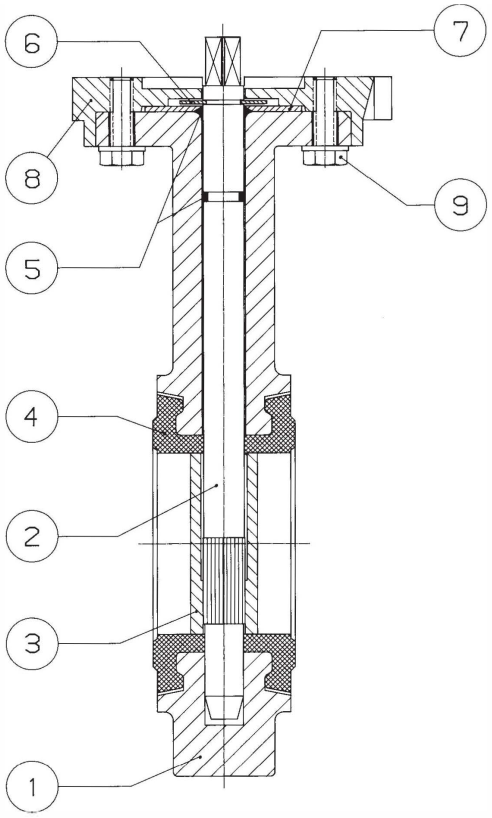


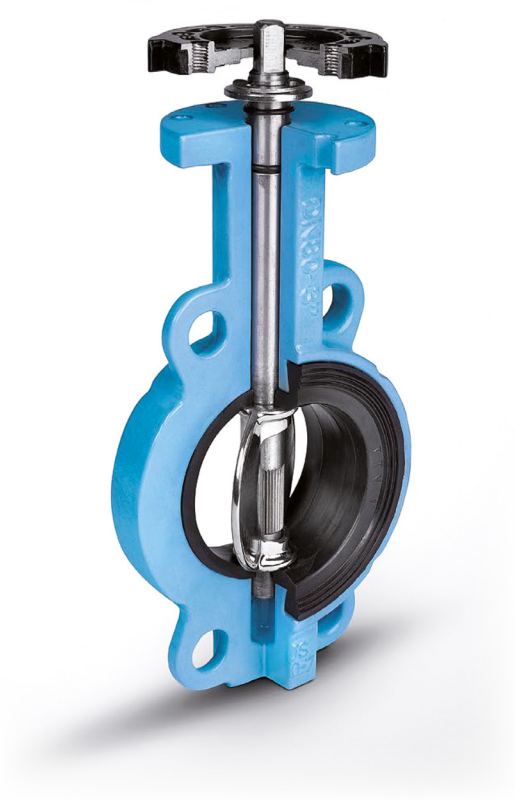


ATEX

DESIGN STANDARDS	
Butterfly valve	ISO 5752, API 609
Compliance	DIN 3202, API 609, BS EN 558
Actuator mounting flange	ISO 5211
Marking	ISO 5209
TESTS AND CERTIFICATES	
PED/CE	2014/68/EU
Pressure test	EN 12266-1

Subject to changes





MATERIALS:

N°	Description	Material
1	Body	see page 3
2	Stem	Stainless steel
3	Disc	see page 3
4	Seat	see page 3
5	O-ring	Nitrile rubber
6	Circlip	Steel
7	Washer	Steel
8	Flange	Aluminium
9	Bolt	DIN 933 5.6
10	Lever	Aluminium (DN32 - DN200), bolt in DIN 933 5.6
		Cast steel (DN250 - DN300), bolt in DIN 933 5.6
		Free stem (DN350 - DN400)

Subject to changes

BUTTERFLY VALVE FIG. N1
Materials

Body	
2	Ductile iron GGG-50 Rilsan coated (C5M)
4	Stainless steel AISI 316
5	Carbon steel GS-C 25
6	Aluminium
1	Cast iron GG-25
3	Stainless steel AISI 304
7	Bronze C-352
8	Aluminium bronze C-415
9	LCB

Seat	
E	EPDM
B	Buna
V	Viton
BV	Buna (vulcanized)
SF	Silicone (food)
SS	Silicone (steam)
EEUF	EPDM (food)
ET	EPDM-HT
EV	EPDM (vulcanized)
EW	White EPDM (max. working pressure: 3 bar)
EWEUF	White EPDM, food (max. working pressure: 3 bar)
BG	Buna gas
BGG	Buna gas (glued)
BGV	Buna gas (vulcanized)
N	Nordel
NR	Natural Rubber
VEUF	Viton (food)
P	PTFE
H	Hypalon

Disc	
2	Ductile iron GGG-50, chromed
4	Stainless steel AISI 316
8	Aluminium bronze C-415
9	CF8M + Halar
H	Hastelloy C
U	Uranus B6
D	Duplex 1.4462
3	Stainless steel AISI 304
4A	Stainless steel CF8M + EPDM
4L	Stainless steel 316L
5	Carbon steel GS-C 25
6	Aluminium
7	Bronze C-352
9A	Ductile iron GGG-50 galvanized + Halar
P	PTFE
M	Stainless steel 316, polished

Stem	
1	Stainless steel AISI 303
3	Stainless steel AISI 420
4	174PH stainless steel
D	Duplex 1.4462
H	Hastelloy
M	Monel

Standard

On request

EXAMPLE:

N1	Body	Stem	Disc	Seat	H
	2	3	4	E	

Wafer type butterfly valve (1),
Body in ductile iron GGG-50, Rilsan coated (C5M) (2),
Stem in stainless steel
Disc in stainless steel AISI 316 (4)
Seat in EPDM (E)
With lever (H)



Subject to changes

BUTTERFLY VALVE FIG. N1
Materials

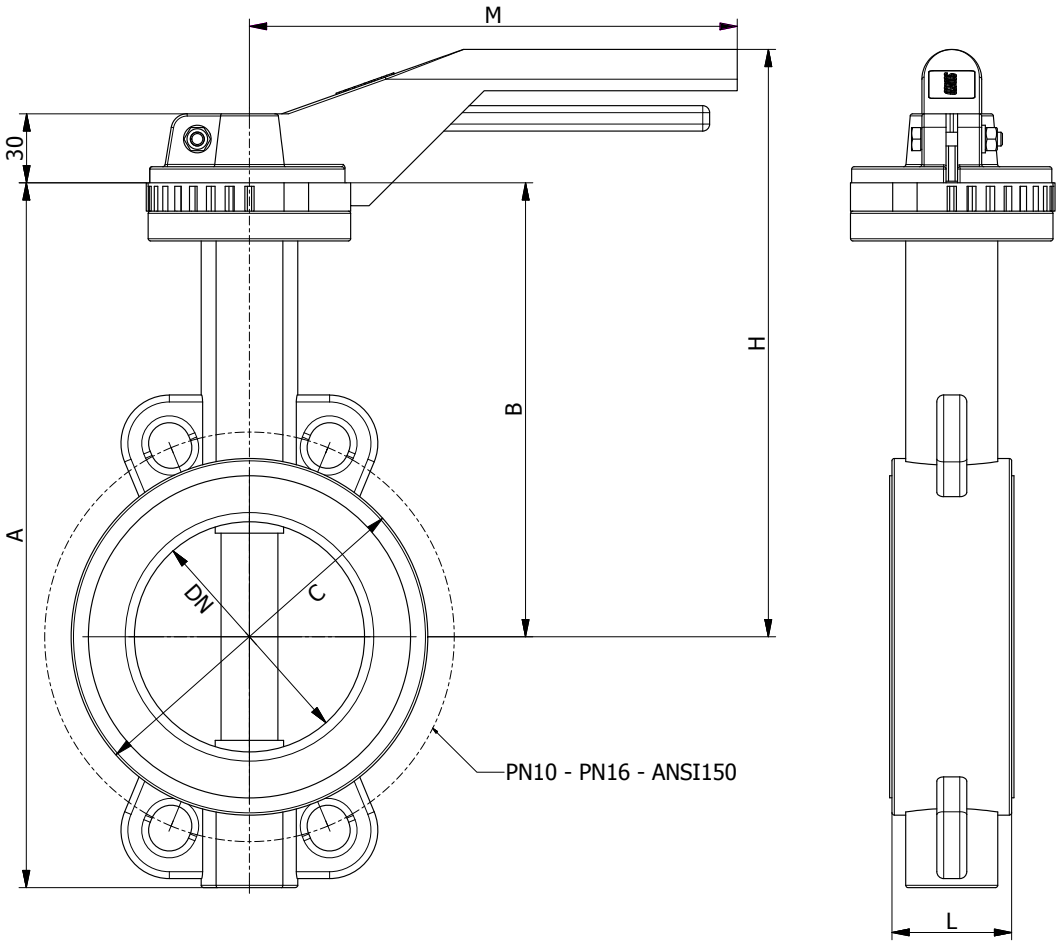
Seat	Colour	Applications	Limitations	T°
EPDM	Black	Mineral acid solutions, mineral bases, alcaline solutions, organic salt dissolutions, alcohols, water, sea water	Organic hydrocarbons	-20°C up to 110°C
Buna	Black	Mineral oils, vegetable oils, gas, animal fats, vegetable fats, air	Organic acids, some mineral acids, chlorine, alcohols, aromatic hydrocarbons	-10°C up to 90°C
Viton	Black	Acids, fats, hydrocarbons, vegetable and mineral oils, fuels	Steam and hot water (30°C), unleaded gasoline, cetones, amines, Freon 22	-5°C up to 180°C
Buna (vulcanized)	Black	Mineral oils, vegetable oils, gas, animal fats, vegetable fats, air	Organic acids, some mineral acids, chlorine, alcohols, aromatic hydrocarbons	-10°C up to 90°C
Silicone (food)	Transparent	Low and high temperature resistance, alimentary	Hydrocarbons, strong acids, strong bases, super heated water, steam	-30°C up to 150°C
Silicone (steam)	Grey	Super heated water	Hydrocarbons, strong acids, strong bases	-50°C up to 160°C
EPDM-HT	Black	Super heated water	Hydrocarbons	-20°C up to 130°C
White EPDM	White	Water and foodstuff	Oils	-20°C up to 110°C
Buna gas	Black	Mineral oils, vegetable oils, gas, animal fats, vegetable fats, air	Organic acids, some mineral acids, chlorine, alcohols, aromatic hydrocarbons	-20°C up to 90°C
Buna gas (glued)	Black	Mineral oils, vegetable oils, gas, animal fats, vegetable fats, air	Organic acids, some mineral acids, chlorine, alcohols, aromatic hydrocarbons	-20°C up to 90°C
Buna gas (vulcanized)	Black	Mineral oils, vegetable oils, gas, animal fats, vegetable fats, air	Organic acids, some mineral acids, chlorine, alcohols, aromatic hydrocarbons	-20°C up to 90°C
Nordel	Black	Mineral acid solutions, mineral bases, alcaline solutions, organic salt dissolutions, alcohols, water, sea water	Organic hydrocarbons	-5°C up to 90°C
NR (Natural Rubber)	Black	Water, alcohols, abrasion resitance, cetones, alimentary	Hydrocarbons, acids, bases, atmospheric agents	-10°C up to 60°C
Hypalon	Black	Mineral acid dissolutions, organic and inorganic acids, oxidizing substances	Mineral and vegetable oils, hydrocarbons, animal and vegetable fats, cetones, nitric acid	-10°C up to 80°C

Standard

On request

Subject to changes

BUTTERFLY VALVE FIG. N1
Dimensions



DIMENSIONS: (mm)

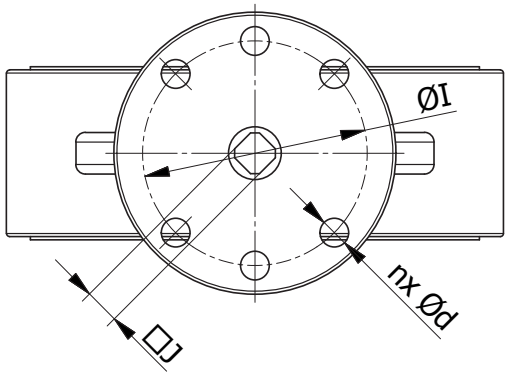
DN	Ø	A	B	C	L	M	H	PN 10		PN 16		ANSI 150		Kg
								K	N x T	K	N x T	K	N x T	
32	1 1/4"	206	140	82	33	212	198	100	4x 18	100	4x 18	88,9	4x 16	2,0
40	1 1/2"	206	140	82	33	212	198	110	4x 18	110	4x 18	98,5	4x 16	2,0
50	2"	228	156	102	43	212	214	125	4x 18	125	4x 18	120,6	4x 19	3,5
65	2 1/2"	248	161	119	46	212	219	145	4x 18	145	4x 18	139,7	4x 19	4,5
80	3"	265	169	135	46	212	229	160	4x 18	160	4x 18	152,4	4x 19	5,0
100	4"	298	187	155	52	212	241	180	4x 18	180	4x 18	190,5	4x 19	6,5
125	5"	331	206	185	56	329	279	210	4x 18	210	4x 18	215,9	4x 23	8,0
150	6"	349	215	208	56	329	287	240	4x 23	240	4x 23	241,3	4x 23	9,0
200	8"	430	255	270	60	329	327	295	4x 23	295	4x 23	298,5	4x 23	15,0
250	10"	461	248	328	68	610	290	350	4x 23	355	4x 27	362,0	4x 26	21,5
300	12"	524	280	381	78	610	325	400	4x 23	410	4x 27	431,8	4x 26	30,0
350	14"	570	300	437	78	*	*	460	4x 23	470	4x 27	476,3	4x 29	39,0
400	16"	644	340	486	102	*	*	515	4x 27	525	4x 30	539,8	4x 29	52,0
450	18"	738	394	538	114	*	*	565	4x M24	585	4x M27	577,9	4x1 1/8"	87,0
500	20"	822	440	593	127	*	*	620	4x M24	650	4x M30	635,0	4x1 1/8"	117,0
600	24"	965	507	695	250	*	*	725	4x M27	770	4x M33	749,3	4x1 1/4"	177,0

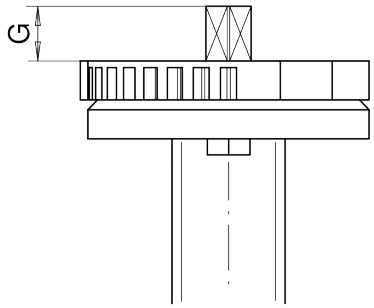
* With free stem

Valves with aluminium housing up to DN150 max.

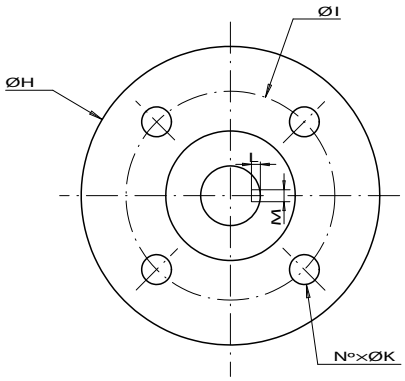
Subject to changes

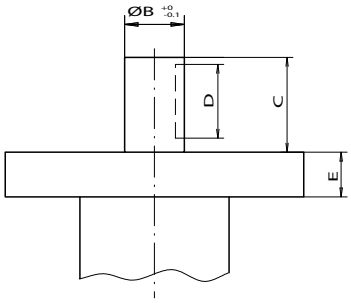
BUTTERFLY VALVE FIG. N1
Dimensions





DN	Ø	ØI	nx Ød	J	G	ISO5211
32	1 1/4”	70	4x 9	8	14	F05 - F07
40	1 1/2”	70	4x 9	8	14	F05 - F07
50	2”	70	4x 9	8	14	F05 - F07
65	2 1/2”	70	4x 9	9	16	F05 - F07
80	3”	70	4x 9	11	16	F05 - F07
100	4”	70	4x 9	11	20	F05 - F07
125	5”	70	4x 9	14	20	F07
150	6”	70	4x 9	14	20	F07
200	8”	70	4x 9	17	24	F07
250	10”	102	4x 11	19	24	F10
300	12”	102	4x 11	22	24	F10
350	14”	140	4x 18	22	29	F14
400	16”	140	4x 18	27	29	F14





DN	Ø	ØB	C	D	E	ØH	ØI	L	M	No x ØK	Key	ISO5211
450	18”	50,0	80	71	20	175	140	5,5	14	4x 18	14x 9	F14
500	20”	50,0	75	71	20	175	140	5,5	14	4x 18	14x 9	F14
600	24”	60,0	90	81	30	250	165	6,8	18	4x 22	18x11	F16

Subject to changes

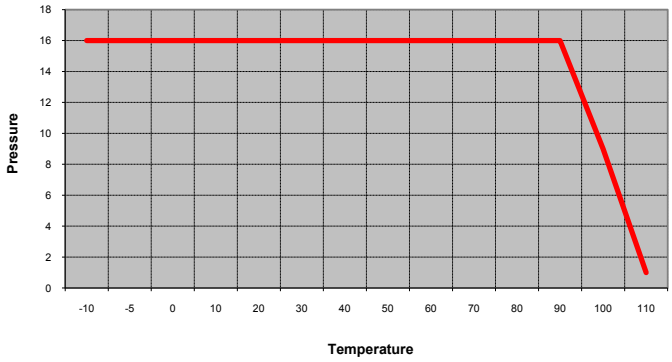
Kv VALUES, BREAK AWAY TORQUE:

DN	Ø	Kv (m³/h)	T (Nm) 16 bar
32	1 1/4”	70	9
40	1 1/2”	70	9
50	2”	111	11
65	2 1/2”	201	20
80	3”	335	29
100	4”	552	47
125	5”	901	82
150	6”	1427	130
200	8”	2392	210
250	10”	3826	360
300	12”	5660	475
350	14”	8179	760
400	16”	10660	1300
450	18”	12560	1600
500	20”	16020	2340
600	24”	22741	3300

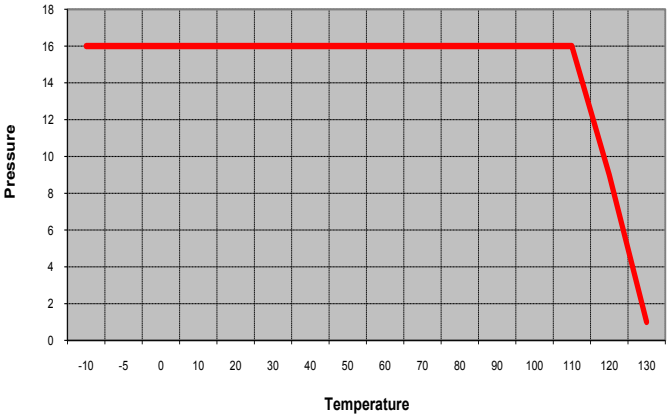
Indicated values are valid for water at room temperature

Subject to changes

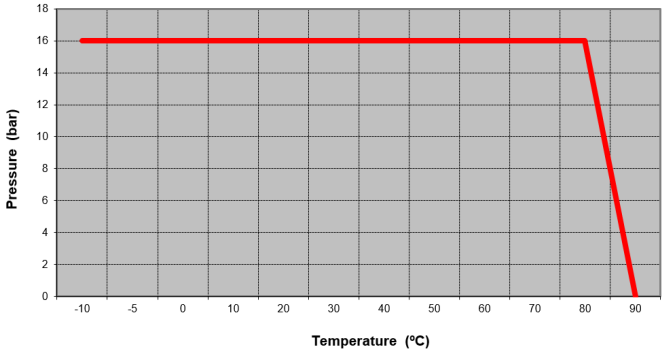
EPDM (all versions)



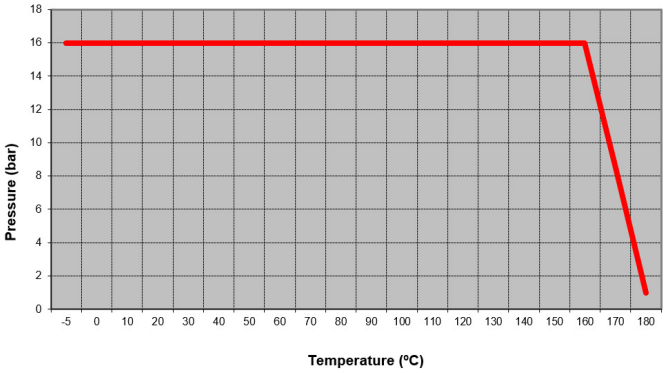
EPDM HIGH TEMP



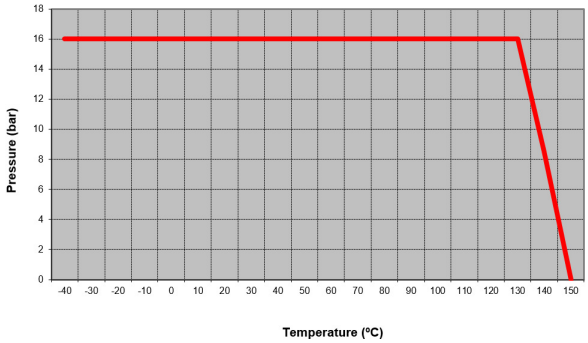
BUNA (all versions) - HYPALON - NATURAL RUBBER - NORDEL



VITON (all versions)



SILICONE



Subject to changes