

# BUTTERFLY VALVE WITH GEAR BOX

## TECHNICAL PASSPORT

### BUTTERFLY VALVE - DUCTILE IRON BODY WITH GEAR BOX - LUGGED

VPG4648-08

#### APPLICATION

VPG butterfly valves are intended for ON/OFF or control use in fluid transfer circuits.

##### Area of use

Area of use: water supply, water treatment, pumping, irrigation, industry, HVAC.



##### Fluids

Cold water, hot water, wastewater, liquid discharges, etc.

##### Contraindications

Use on steam is strongly discouraged.



#### GENERAL CHARACTERISTICS

**Range:** from DN40 to DN300.

- Design according to standard NF EN 593.
- Removable type with threaded lugs
- Sealing in both directions of piping circulation.
- Body coated with epoxy paint protection against corrosion
- Raised neck compatible with pipe insulation
- Soft sleeve insures a perfect seal.
- Disc profiled and reduced in thickness
- Low operating torque.
- Stem in two parts couples to the disc using a square.
- Reduced head losses.
- Standardized ISO 5211 upper flange for easy assembly of actuators.

#### STANDARDS

<b>Design</b>	Manufacture according to the requirements of the European directive 2014/68/UE «Equipment under pressure»: modulate H.
<b>Face to face</b>	Face to face according to standards NF EN 558-1 serie 20, ISO 5272 serie 20, DIN 3202.
<b>Connection</b>	Mounting with flanges : ISO PN10/16 from DN40 to DN150 and PN16 from DN200 to DN300 in accordance with the standards EN1092-2, BS450, AISI B16.1-5.
<b>Tests</b>	Pressure test according to standards EN12266-1, DIN 3230 and ISO 5208: -Body: 24 bar -Seat: 17.6 bar

#### PRODUCT APPROVALS



#### Tecofi France

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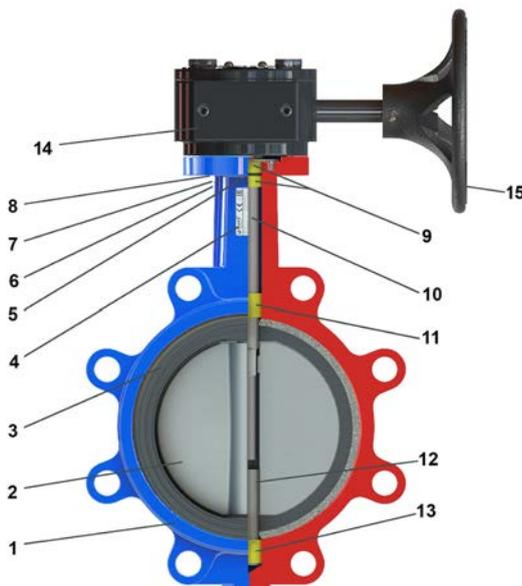


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### CONSTRUCTION



Pos.	Q-ty	Description	Material	Equivalences			Epoxy coating
				DIN	ASTM	BS	
1	1	Body	Ductile iron EN-GJS-400-15	GGG40	A536 65-45-12	EN-JS1030	RAL 5015, 250 µm
2	1	Disc	Ductile iron EN-GJS-400-15 + Nickel	GGG40	A536 65-45-12	EN-JS1030	
3	1	Sleeve	Heat EPDM				
4	1	Nameplate	Stainless steel 304	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15	
5	1	O ring	EPDM				
6	2	Screw	Stainless steel 304/A2	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15	
7	2	Nut	Stainless steel 304/A2	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15	
8	2	Washer	Stainless steel 304/A2	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15	
9	2	Upper bushing	PTFE				
10	1	Upper stem	Stainless steel 420	X20Cr13	A276 AISI 420	970-1 420S37	
11	1	Bushing	PTFE				
12	1	Lower stem	Stainless steel 420	X20Cr13	A276 AISI 420	970-1 420S37	
13	1	Lower bushing	PTFE				
14	1	Gear box					Dark black RAL 9005
15	1	Handwheel	Cast iron				Dark black RAL 9005

The photographs and technical art works are not contractual. The specifications of the presented products are open to modifications without previous advice.

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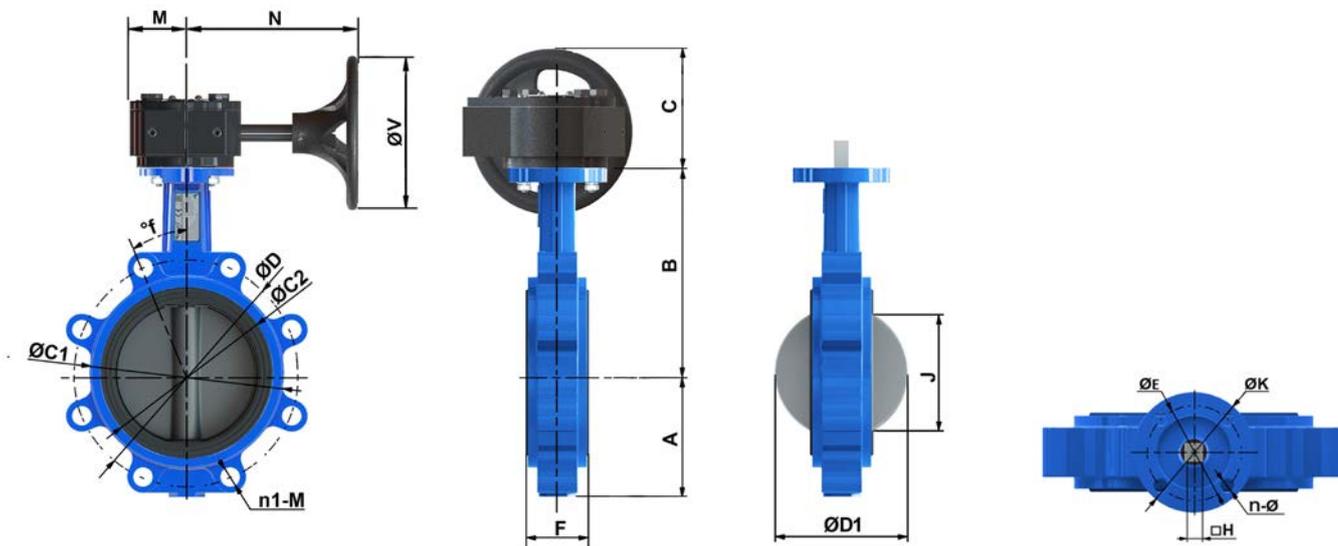


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#### DIMENSIONS



DN		A	B	C	ØC1	ØC2	ØD	ØD1	n1-M	F	M	N	ØV	ØE	ØK	n-Ø	f°	H	Torque (Nm)	Weight (kg)
mm	inch																			
40	1"1/2	60	102	112	88	71	110	43	4-M16	33	50	160	150	50	65	4-Ø7	45°	9	12	5,95
50	2"	60	128	116	93	75	125	53	4-M16	43	50	160	150	50	65	4-Ø7	45°	9	16	6,49
65	2"1/2	72	140	115	110	92	145	65	4-M16	45	50	160	150	50	65	4-Ø7	45°	9	18	6,99
80	3"	89	146	116	123	105	160	79	8-M16	46	50	160	150	50	65	4-Ø7	45°	9	25	8,15
100	4"	100	165	115	156	134	180	105	8-M16	52	50	160	150	50	65	4-Ø7	22.5°	11	42	9,2
125	5"	116	175	116	183	158	210	124	8-M16	54.4	50	160	150	70	90	4-Ø10	22.5°	14	65	11,3
150	6"	131	199	116	211	187	240	155	8-M20	56	50	160	150	70	90	4-Ø10	22.5°	14	110	13,23
200	8"	162	220	208	264	236	295	203	12-M20	60	75	232	305	102	125	4-Ø12	15°	17	200	25,96
250	10"	195	251	209	329	291	355	251	12-M24	66	75	232	305	102	125	4-Ø12	15°	22	330	33,62
300	12"	228	288	210	385	342	410	302	12-M24	77	75	232	305	102	125	4-Ø12	15°	22	500	45,28

\* Torque values without safety factor

#### WORKING CONDITIONS

Maximum working pressure: 16 bar  
(6 bar for compressed air)

Maximum vacuum pressure: -0.8 bar for 10 minutes  
(vacuum tests performed in laboratory, valve tested open at -0.8 bar for 10 minutes)

Maximum working temperature: -20°C / +130°C

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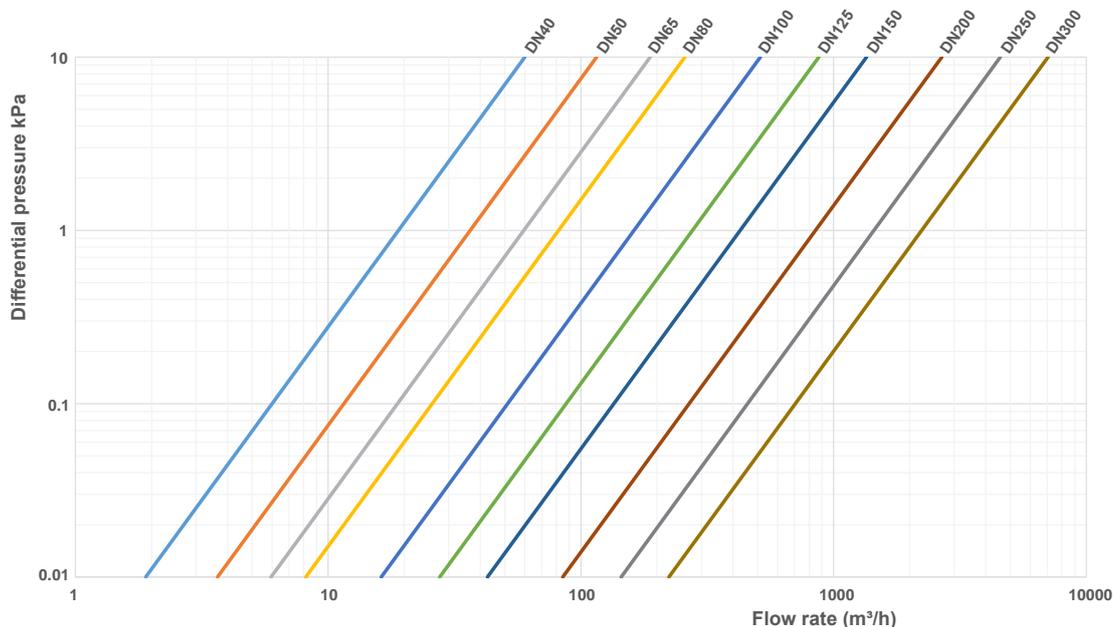


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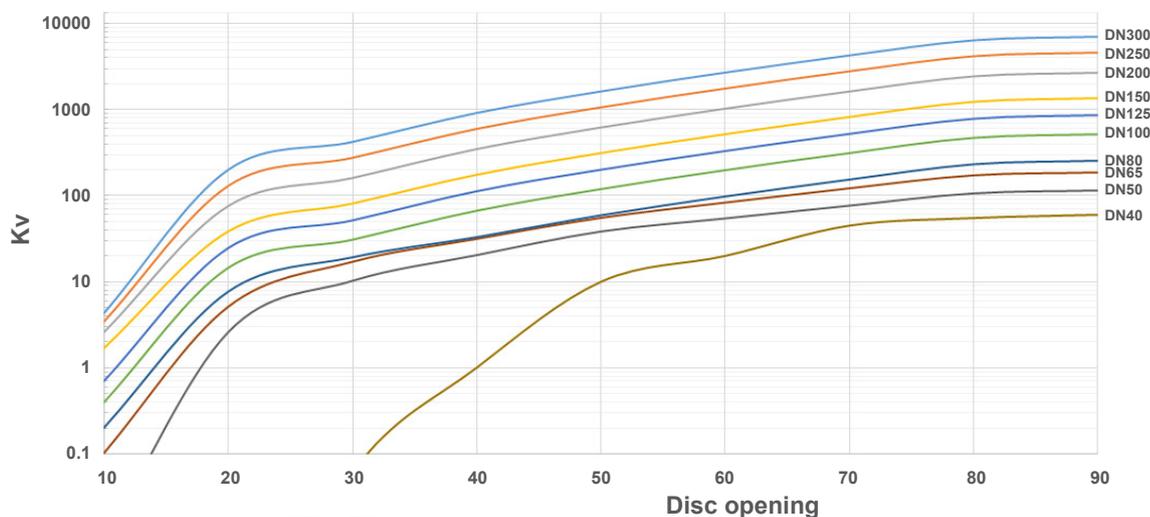
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#### HEAD LOSSES DIAGRAMM



#### FLOW FACTOR

DN		Kv								
mm	inch	10°	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	0.0	0.0	0.1	1.0	10.0	20.0	45.0	55.0	60.0
50	2	0.0	2.6	10.3	20.5	38.5	54.7	77.0	106.9	115.4
65	1 1/2	0.1	5.1	17.1	31.6	55.6	83.8	123	174	188
80	3	0.2	7.7	19.4	33.3	59.9	99.2	156	235	258
100	4	0.4	14.5	30.8	66.7	119	197	311	467	513
125	5	0.7	24.8	52.2	114	203	335	530	795	874
150	6	1.7	38.5	81.2	175	313	517	819	1229	1350
200	8	2.6	76.1	161	349	622	1028	1627	2440	2681
250	10	3.4	129	274	593	1058	1750	2770	4154	4566
300	12	4.3	200	423	917	1634	2704	4279	6418	7054



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