

# LUGGED TYPE BUTTERFLY VALVE

## TECHNICAL PASSPORT

### LUGGED PN16 BUTTERFLY VALVE DUCTILE IRON BODY - WITH MANUAL GEAR BOX

VPE 4649-08

#### APPLICATION

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

**Area of use:** water treatment, pumping, irrigation.



**Fluids:** cold water, hot water, wastewater, alkalis, sodium hydroxide, etc.



#### GENERAL CHARACTERISTICS

**Range :** from DN350 to DN1200.

- Design according to standard NF EN 593.
- Soft sleeve guaranteeing waterproofing in both directions.
- Disc profiled and reduced in thickness ensuring a low maneuvering torque. Large flow capacity.
- Low pressure drop
- Connection with ISO PN16 flanges
- Standard ISO 5211 mounting plate.
- Gear box with outlet mounting plate ISO 5210 allowing the installation of multiturn electric actuators.

#### STANDARDS

<b>Design</b>	Design in accordance with NF EN 593.
<b>Face to face</b>	Face to face dimensions according to NF EN 558 serie 20, ISO 5272 serie 20, DIN 3202.
<b>Connection</b>	Connection with ISO PN16 flanges according to EN1092-2.
<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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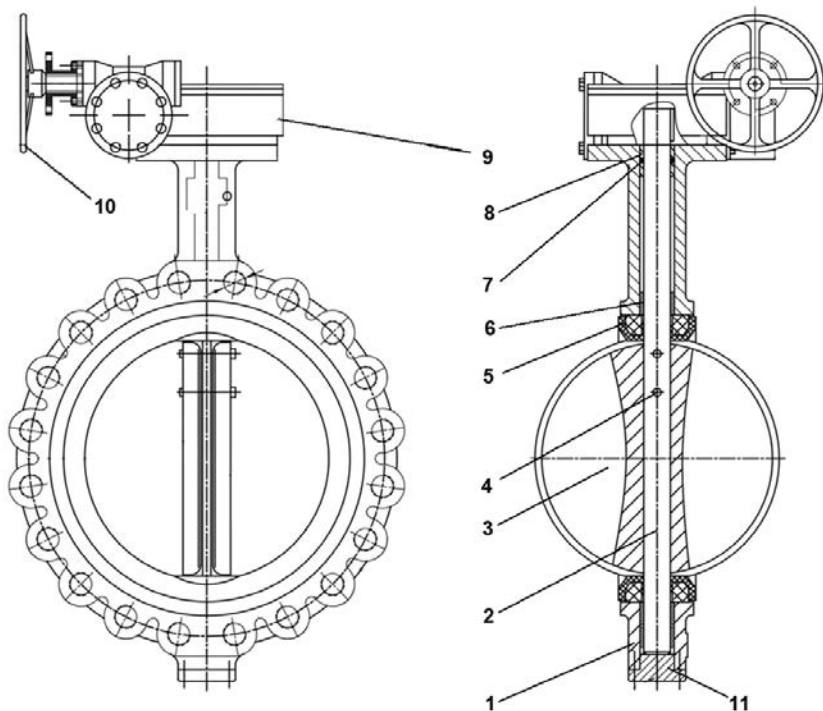


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#### CONSTRUCTION



Component	Coating
Body (1)	Epoxy powder RAL5019 250 µm

Pos.	Q-ty	Description	Material	Equivalences		
				DIN	ASTM	BS
1	1	Body	Ductile iron EN-GJS-400	GGG40	A536 65-45-12	EN-JS1030
2	2	Shaft	Stainless steel 410			
3	1	Disc	GX5CrNiMo19-11-2	G-X6CrNiMo18 10	A 351 Grade CF8M	1504 316 C16
4	1	Pin	Stainless steel 410			
5	1	Sleeve	Heat EPDM			
6	1	Bushing	Copper alloy			
7	1	O ring	NBR			
8	1	Bushing	Copper alloy			
9	1	Gear box	Ductile iron			
10	1	Handwheel	Ductile iron			
11	1	Cover	Ductile iron EN-GJS-400	GGG40	A536 65-45-12	EN-JS1030

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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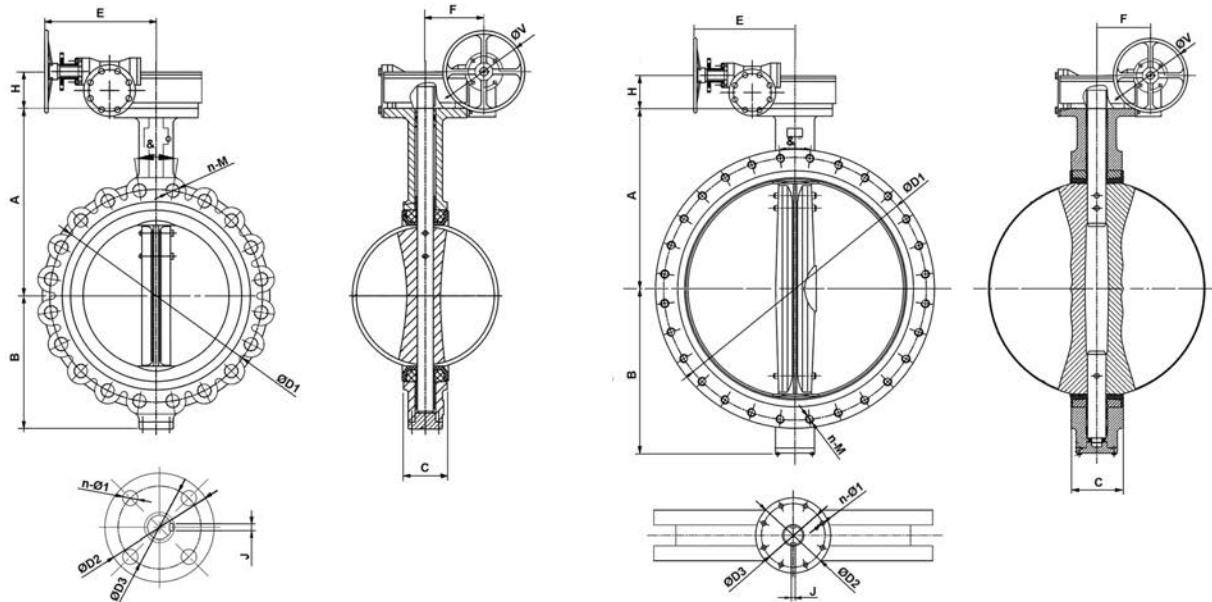


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#### DIMENSIONS



DN350-600

DN700-1200

DN		A	B	C	ISO	ØD2	ØD3	n1-Ø1	ØD1	n-M	α°	J	E	F	H	ØV	Weight (kg)
mm	inch																
350	14"	368	267	78	F14	175	140	4-18	470	16-M24	22.5	10	226	165	109	300	75
400	16"	400	309	102	F14	175	140	4-18	525	16-M27	22.5	10	226	165	109	300	118
450	18"	422	340	114	F14	175	140	4-18	585	20-M27	18	10	226	165	109	300	142
500	20"	455	362	127	F14	175	140	4-18	650	20-M30	18	14	226	165	109	300	170
600	24"	565	452	154	F16	210	165	4-22	770	20-M33	18	16	274	194	128	300	256
700	28"	624	511	165	F25	300	254	8-18	840	24-M33	15	18	297	225	159	450	397
800	32"	670	580	190	F25	300	254	8-18	950	24-M36	15	18	297	225	159	450	462
900	36"	720	635	203	F25	300	254	8-18	1050	28-M36	12.85	20	320	238	165	450	650
1000	40"	805	710	216	F25	300	254	8-18	1170	28-M39	12.85	22	328	238	165	450	744
1200	48"	955	845	276	F30	350	298	8-22	1390	32-M45	11.25	28	429	307	204	450	1320

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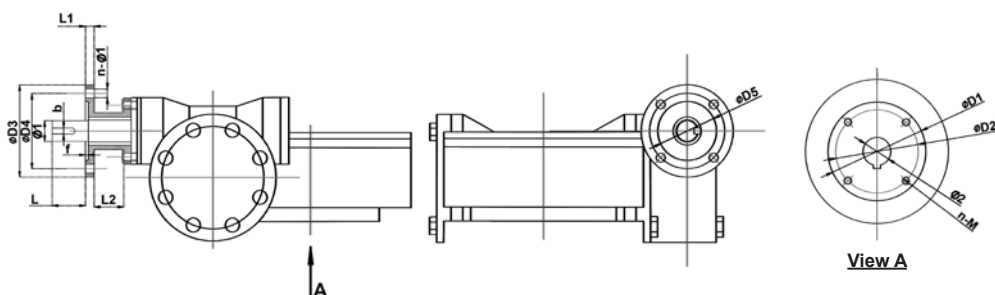
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#### WORKING CONDITIONS

Maximum working pressure : 16 bar  
 Maximum working temperature : -15°C / +130°C  
 Peak temperature : -30°C / +150°C

#### GEAR BOX DIMENSIONS



DN		D1	D2	D3	D4	D5	f	Ø1	Ø2	n-M	ISO plate		n-Ø	b	L	Number of turns	Torque* Nm
mm	inch										5211	5210					
350	14"	175	140	125	102	70	3	20	31.6	4-M16	F14	F10	4-Ø12	6	30	133	7
400	16"	175	140	125	102	70	3	20	37.9	4-M16	F14	F10	4-Ø12	6	30	133	11
450	18"	175	140	125	102	70	3	20	37.9	4-M16	F14	F10	4-Ø12	6	30	133	15
500	20"	175	140	125	102	70	3	20	45.7	4-M16	F14	F10	4-Ø12	6	30	133	20
600	24"	210	165	125	102	70	3	20	50.6	4-M20	F16	F10	4-Ø12	6	30	160	29
700	28"	300	254	125	102	70	3	20	63.4	8-M16	F25	F10	4-Ø12	6	45	176	46
800	32"	300	254	175	140	100	4	30	63.4	8-M16	F25	F10	4-Ø12	8	45	176	69
900	36"	300	254	175	140	100	4	30	75	8-M16	F25	F10	4-Ø12	8	45	212	71
1000	40"	300	254	175	140	100	4	30	85	8-M16	F25	F14	4-Ø20	8	45	212	91
1200	48"	350	298	175	140	100	4	30	105	8-M20	F30	F14	4-Ø20	8	45	268	123

\* Values without safety factor

#### FLOW FACTORS (KV)

DN		Kv values								
mm	inch	10°	20°	30°	40°	50°	60°	70°	80°	90°
350	14"	6	338	715	1549	2761	4568	7230	10844	11917
400	16"	8	464	983	2130	3797	6282	9942	14913	16388
450	18"	11	615	1302	2822	5028	8320	13168	19752	21705
500	20"	14	971	1674	3628	6465	10698	16931	25396	27908
600	24"	22	1222	2587	5605	9989	16528	26157	39236	43116
700	28"	30	1633	3522	7630	12599	20236	30482	46899	58696
800	32"	45	2387	4791	8736	13786	20613	31395	48117	68250
900	36"	60	3021	6063	11055	17449	26086	39731	60895	86375
1000	40"	84	4183	8395	15307	24159	36166	55084	84425	119750
1200	48"	102	4651	10365	17010	27242	43853	70431	108968	132888

Kv = water volume in m³/h passing through the valve at a given throttle opening under a pressure drop of 1 bar.

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