

# BUTTERFLY VALVES

## VF-435T / VF-455T

CE Ex II 2 G/D T.F. 02

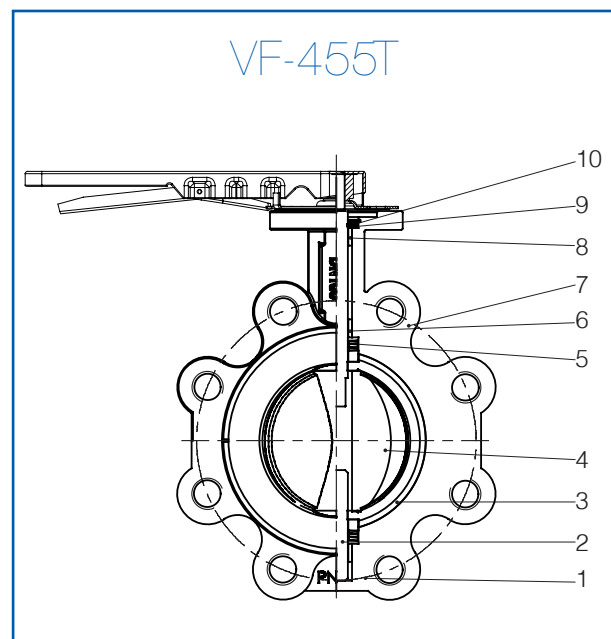
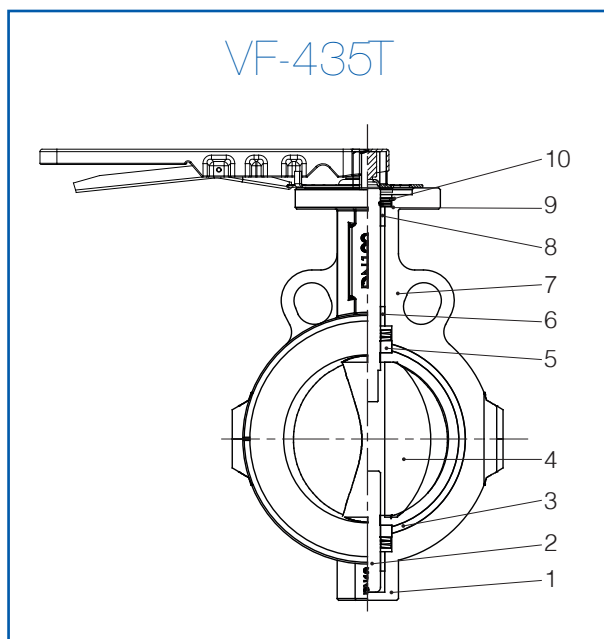
**Wafer butterfly valves**, used for aggressive and corrosive fluid with particular design of PTFE pressed on stainless steel disc and PTFE liner

**AT.EX. Certified for zone 1 and 21**

### Available types

art. VF-435T wafer

art. VF-455T lug



N°	PARTS	MATERIALS	SPECIFICATION	DETAIL
1-7	BODY	DUCTILE IRON	GGG50	-
2	STEM	STAINLESS STEEL	AISI 316	-
3	SEAT	PTFE	-	Working temperature: -20°C / +180°C (*)
4	DISC	PTFE PRESSED ON STAINLESS STEEL DISC	PTFE + ASTM A351 CF8M	-
5-6-8	STEM SLEEVE	FIBER REINFORCED POLYMER	FRP	-
9-10	SEEGER	STEEL	EN 1.5023	-

(\*) Working temperature must always be related to working pressure and chemical composition of fluid

**ARA**<sup>®</sup>  
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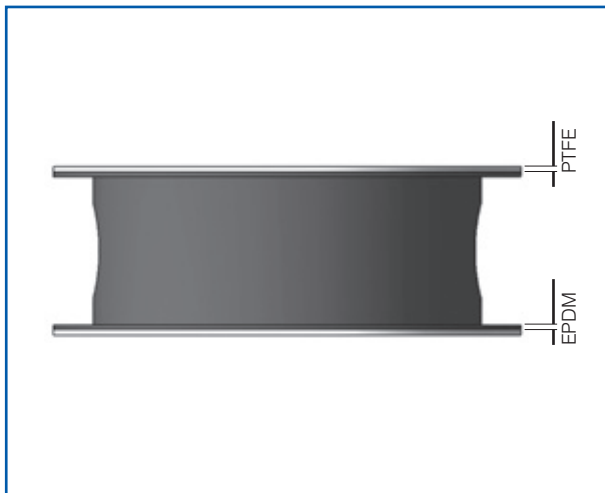
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## Technical details

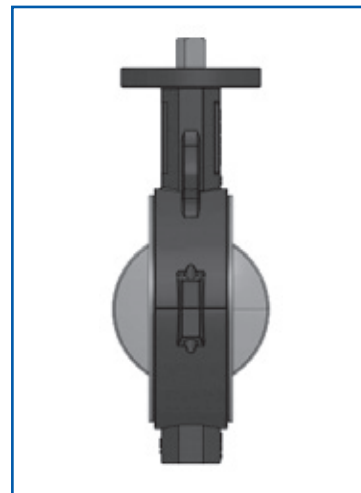
- Two-pieces epoxy painted body
- Face to face according to API 609
- ISO 5211 upper flange for mounting of electrical or pneumatic actuator
- Valve are suitable for UNI PN 10/16 or ANSI 150 welding neck or slip-on flanges
- Lever operated from DN 50 to DN 100, gear operated from DN 125 to DN 600
- Working pressure: 16 bar (DN 50-150), 10 bar (DN 200-300), 6 bar (DN 350-600)
- Hydraulic tests according to API 598:
  - Seat: 18 bar (DN 50-150), 11 bar (DN 200-300), 7 bar (DN 350-600)
  - Body: 24 bar (DN 50-150), 15 bar (DN 200-300), 9 bar (DN 350-600)

## PTFE thickness

The fluid intercepted by VF-435T/VF-455T meet only PTFE material. The seat is all PTFE and the disc is PTFE pressed on stainless steel material.

**SEAT**

DN	PTFE thickness (mm)	EPDM thickness (mm)
50	2	2
65	2	2
80	2	2
100	2,3	2,2
125	2,4	2,6
150	2,4	2,6
200	2,4	2,6
250	2,5	3
300	2,5	3
350	2,8	3
400	3	3
450	3	3
500	3,5	3,5
600	3,5	3,5

**PTFE PRESSED ON DISC**

DN	PTFE thickness (mm)
50	4±0.3
65	4.5±0.3
80	5±0.3
100	5.5±0.5
125	5.5±0.5
150	6±0.5
200	6.5±0.5
250	7±0.5
300	7.5±0.5
350	7.5±0.6
400	8.5±1
450	8.5±1
500	9±1.5
600	9±1.5

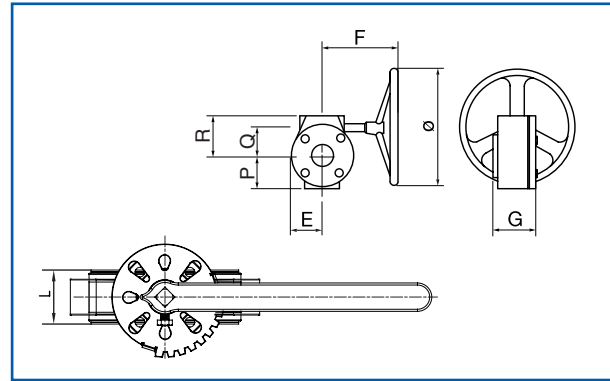
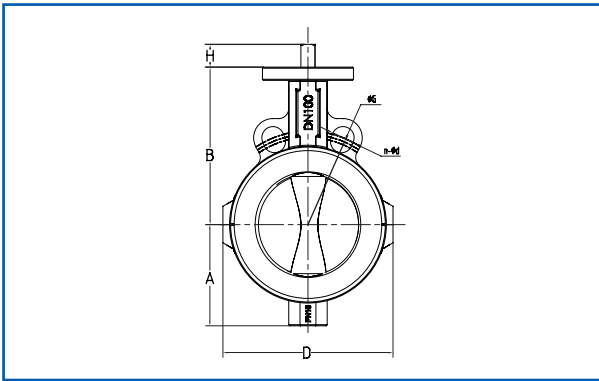
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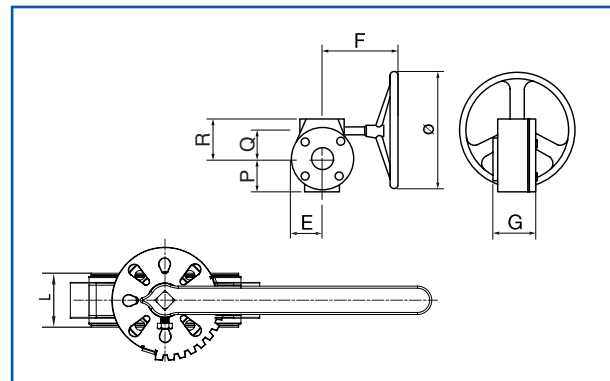
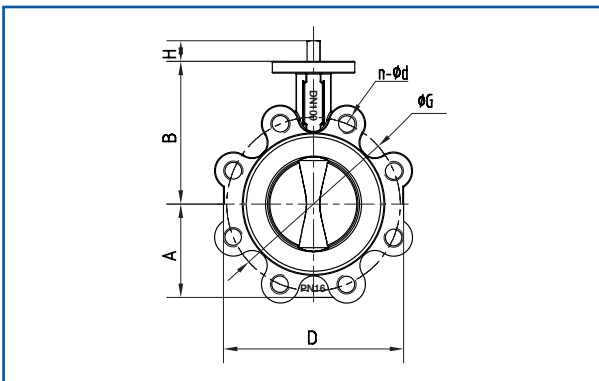
## DIMENSIONS

VF-435T



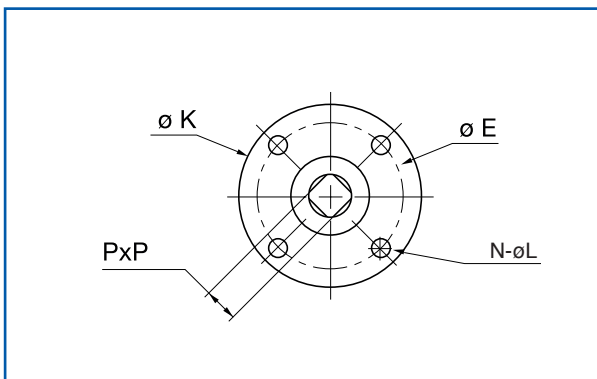
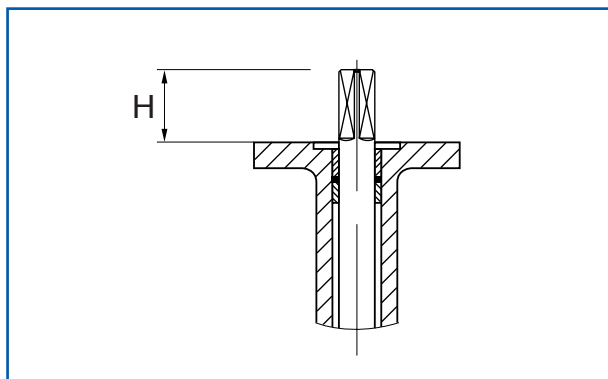
SIZE	DIMENSIONS VF-435T WAFER																	Weight kg	
	DN	A	B	D	L	H	ANSI 150		DIN PN 10		DIN PN 16		GEAR						
							øG	n-ød	øG	n-ød	øG	n-ød	P	Q	R	E	F		G
50	62	136	112	47	32	120,5	4-19	125	4-19	125	4-19	52	45	74	52	153	75	150	3
65	70	138	126	50	32	139,5	4-19	145	4-19	145	4-19	52	45	74	52	153	75	150	4
80	78	140	142	50	32	152,5	4-19	160	4-19	160	8-19	52	45	74	52	153	75	150	5
100	105	158	168	55,5	32	190,5	8-19	180	8-19	180	8-19	52	45	74	52	153	75	150	8
125	122	180	240	59	32	216	8-22,4	210	8-19	210	8-19	52	45	74	52	153	75	150	11
150	134	186	265	59	32	241,5	8-22,4	240	8-22	240	8-22	52	45	74	52	153	75	150	14
200	165	234	320	63	32	298,5	8-22,4	295	8-22	295	12-22	75	63	101	75	250	86	285	22
250	194	273	385	73	45	362	12-25,4	350	12-22	355	12-26	75	63	101	75	250	86	285	29
300	224	302	450	81	45	432	12-25,4	400	12-22	410	12-26	81	80	118	81	227	83	285	38
350	260	320	500	81	45	476,3	12-28,4	460	16-22	470	16-26	81	80	118	81	227	83	285	68
400	298	408	585	92	52	539,9	16-28,4	515	16-26	525	16-30	107	106	144	107	262	180	285	115
450	315	422	616	116,5	52	577,9	16-31,75	565	20-26	585	20-30	107	106	144	107	262	180	285	160
500	356	480	685	130	66	635	20-31,75	620	20-26	650	20-33	131	130	168	131	297	198	385	200
600	440	562	818	157	66	749,3	20-35,1	725	20-30	770	20-36	131	130	168	131	297	198	385	255

VF-455T



SIZE	DIMENSIONS VF-455T LUG																	Weight kg	
	DN	A	B	D	L	H	ANSI 150		DIN PN 10		DIN PN 16		GEAR						
							øG	n-ød	øG	n-ød	øG	n-ød	P	Q	R	E	F		G
50	60	138	153	47	32	120,5	4-5/8"	125	4-M16	125	4-M16	52	45	74	52	153	75	150	5
65	70	142	155	50	32	139,5	4-5/8"	145	4-M16	145	4-M16	52	45	74	52	153	75	150	6
80	84	142	180	50	32	152,5	4-5/8"	160	4-M16	160	8-M16	52	45	74	52	153	75	150	7
100	102	161	205	55,5	32	190,5	8-5/8"	180	8-M16	180	8-M16	52	45	74	52	153	75	150	8
125	122	180	240	59	32	216	8-3/4"	210	8-M16	210	8-M16	52	45	74	52	153	75	150	13
150	134	186	265	59	32	241,5	8-3/4"	240	8-M20	240	8-M20	52	45	74	52	153	75	150	17
200	165	234	320	63	32	298,5	8-3/4"	295	8-M20	295	12-M20	75	63	101	75	250	86	285	30
250	194	273	385	73	45	362	12-7/8"	350	12-M20	355	12-M24	75	63	101	75	250	86	285	38
300	224	302	450	81	45	432	12-7/8"	400	12-M20	410	12-M24	81	80	118	81	227	83	285	48
350	260	320	500	81	45	476,3	12-1"	460	16-M20	470	16-M24	81	80	118	81	227	83	285	78
400	290	408	585	92	52	539,9	16-1"	515	16-M24	525	16-M27	107	106	144	107	262	180	285	145
450	315	422	616	116,5	52	577,9	16-1.1/8"	565	20-M24	585	20-M27	107	106	144	107	262	180	285	184
500	356	480	685	130	66	635	20-1.1/8"	620	20-M24	650	20-M30	131	130	168	131	297	198	385	230
600	440	562	818	157	66	749,3	20-35,1	725	20-M27	770	20-M33	131	130	168	131	297	198	385	300

### ISO 5211 UPPER FLANGE - TORQUE - CV



SIZE		TORQUE Nm			Upper flange dimensions					ISO 5211
		PN6	PN10	PN16	H	K	E	N-øL	PxP	
DN 50	2"	20	35	43	32	65	50	4-6	9x9	F05
DN 65	2 1/2"	35	40	55	32	65	50	4-6	9x9	F05
DN 80	3"	40	55	70	32	65	50	4-6	9x9	F05
DN 100	4"	65	85	90	32	90	70	4-8	11x11	F07
DN 125	5"	80	130	155	32	90	70	4-8	14x14	F07
DN 150	6"	130	160	200	32	90	70	4-8	14x14	F07
DN 200	8"	250	350	-	32	125	102	4-10	17x17	F10
DN 250	10"	350	400	-	45	125	102	4-10	22x22	F10
DN 300	12"	460	580	-	45	125	102	4-10	22x22	F10
DN 350	14"	780	-	-	45	125	102	4-10	22x22	F10
DN 400	16"	1690	-	-	52	175	140	4-16	27x27	F14
DN 450	18"	2535	-	-	52	175	140	4-16	27x27	F14
DN 500	20"	2990	-	-	66	210	165	4-20	36x36	F16
DN 600	24"	4225	-	-	66	210	165	4-20	42x42	F16

To calculate the correct coupling with actuators please contact our technical department

### CV VALUES

DN	Opening position								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0,1	4,5	12	24	45	60	90	120	130
65	0,2	6,5	20	38	65	90	140	200	210
80	0,3	10	22	40	70	115	180	275	300
100	0,5	17	36	75	135	230	350	520	600
125	0,8	28	60	130	231	385	620	920	1000
150	1,8	40	95	201	356	600	950	1400	1500
200	3	85	188	401	715	1200	1900	2810	3000
250	4	150	312	684	1254	1980	3200	4831	5200
300	5	230	465	1001	1810	3000	5000	7500	8180
350	6	300	700	1500	2756	4500	7200	10010	11565
400	8	450	963	2101	3564	6200	9500	14850	16188
450	15	550	1220	2320	3860	6561	11210	16500	21568
500	22	680	1660	2810	4395	7212	12950	19856	27600
600	40	1110	2520	4650	6981	18880	19850	28650	34680

CV = U.S. gallon/min at pressure of 1 psi with water at 20°C

CV = 1,17 Kv, Kv = m³/h at pressure of 1 kg/cm² with water at 20°C

**BUTTERFLY VALVES**

VF-435T / VF-455T

CE Ex II 2 G/D T.F. 02

**SUGGESTED BOLTS FOR UNI PN 10/16 FLANGES**

SIZE	Art. VF435T			Art. VF455T	
	Quantity	BOLTS (screw+nut)	TIE-RODS	Quantity	SCREWS
DN 50	4	M16 x 110	M16 x 140	8	M16 x 35
DN 65	4	M16 x 110	M16 x 140	8	M16 x 40
DN 80	4	M16 x 120	M16 x 150	16	M16 x 40
DN 100	8	M16 x 120	M16 x 150	16	M16 x 45
DN 125	8	M16 x 130	M16 x 160	16	M16 x 50
DN 150	8	M20 x 130	M20 x 170	16	M20 x 50
DN 200 PN 10	8	M20 x 140	M20 x 180	16	M20 x 55
DN 200 PN 16	12	M20 x 140	M20 x 180	24	M20 x 55
DN 250 PN 10	12	M20 x 160	M20 x 190	24	M20 x 65
DN 250 PN 16	12	M22 x 160	M22 x 190	24	M24 x 65
DN 300 PN 10	12	M20 x 170	M20 x 200	24	M20 x 70
DN 300 PN 16	12	M22 x 170	M22 x 210	24	M24 x 70
DN 350 PN 10	16	M20 x 170	M20 x 200	32	M20 x 70
DN 350 PN 16	16	M22 x 170	M22 x 210	32	M24 x 70
DN 400 PN 10	16	M22 x 180	M22 x 210	32	M24 x 70
DN 400 PN 16	16	M27 x 180	M27 x 210	32	M27 x 70
DN 450 PN 10	20	M22 x 210	M22 x 240	40	M24 x 80
DN 450 PN 16	20	M27 x 210	M27 x 240	40	M27 x 80
DN 500 PN 10	20	M22 x 240	M22 x 270	40	M24 x 90
DN 500 PN 16	20	M30 x 240	M30 x 270	40	M30 x 90
DN 600 PN 10	20	M27 x 270	M27 x 300	40	M27 x 100
DN 600 PN 16	20	M33 x 270	M33 x 320	40	M33 x 100



**Electrical or pneumatic actuators**, positioners, limit switches, solenoid valves and other equipments. Assembled on VALSAR butterfly valves.

**ARA**<sup>®</sup>  
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