

## V110 (Wafer) / V112 (Lug) Series High Performance Butterfly Valves

PROVAL V110 Series PTFE seated high performance valves are of double eccentric design and are widely used in chemical, petrochemical, power, steel plants and common industrial applications as well as ship building industries.

PROVAL V110 Series high performance valves are available from DN50 to DN1200 sizes in wafer, full lug and flanged construction.

Double eccentric design ensures 100% leak free operation, longer life cycle on sealing and seat materials and provides lower operating torques and low-cost actuation even at higher pressure applications.



ATEX  
2014/34/EU



BUREAU  
VERITAS  
Design Review  
NC 315 ITB 08



Anti-Static  
Design



ISO5211  
Top Flange

V110 Series valves can be supplied with hand levers and gear boxes as manual valves and with pneumatic, electric or hydraulic actuators.

Proval V110 Series valves are Bureau Veritas design approved and can be inspected in accordance with 3.2.C for use in ship building industry.

### Applicable Standards

Design Standards	ISO5752
	API 609
Flange Standards	EN1092-1
	ANSI B 16.15 Class 150 / 300
Top Flange Standard	ISO 5211
Leakage Test Standard	EN 12266/1-2
	ISO 5208
	API 598
	ANSI B16-104 Class IV
Pressure Class	Max 40 Bar (PN)
	Max Class 300 (ANSI)
Fire-Safe Standard	API607



V112 Series Pneumatic Actuated  
Lug Type HP  
Butterfly Valve



V110 Series Electric Act.  
Wafer Type HP  
Butterfly Valve



V110 Series Gearbox Operated  
Wafer Type HP  
Butterfly Valve

### V110 Series High Performance Valves Kv Flow Coefficient Values (m<sup>3</sup>/h)

Size (DN)	Valve Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0,9	9,4	23,1	34,1	51,2	70,8	90,4	113,4	119,4
65	0,9	9,4	23,1	34,1	51,2	70,8	90,4	113,4	119,4
80	1,7	17,1	42,6	62,3	93,8	131,4	170,6	213,2	221,8
100	3,4	27,3	68,2	102,4	153,5	213,2	272,9	341,2	358,3
125	5,9	46,9	119,4	170,6	255,9	366,8	469,2	580,1	614,2
150	9,4	76,8	196,2	290,1	435,1	605,6	776,2	972,4	1023,6
200	17,1	127,9	332,6	477,6	725,1	1015,1	1296,6	1620,7	1706
250	25,6	204,7	511,8	742,1	1117,4	1569,5	2013,1	2507,8	2644,3
300	34,1	307,1	784,8	1134,5	1706	2388,4	3070,8	3838,5	4051,8
350	46,9	383,8	963,9	1398,9	2132,5	2985,5	3838,5	4691,5	4990,1
400	63,9	554,4	1364,8	1961,9	2985,5	4179,7	5373,9	6696,1	7079,9
450	81,1	682,4	1706	2473,7	3753,2	5203,3	6738,7	8444,7	8871,2
500	106,6	853	2303,1	3326,7	5032,7	6994,6	8956,5	11089	11771,4
600	170,6	1450	3753,2	5373,9	8103,5	11344,9	14501	18168,9	19192,5

### V110 Series Torque Values (Nm)

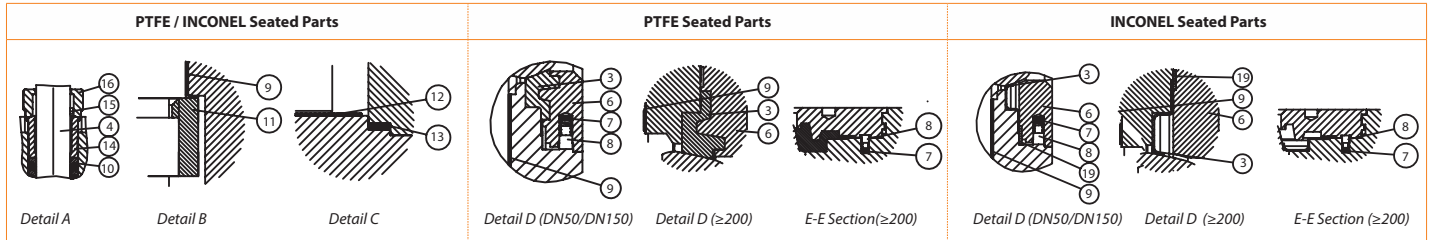
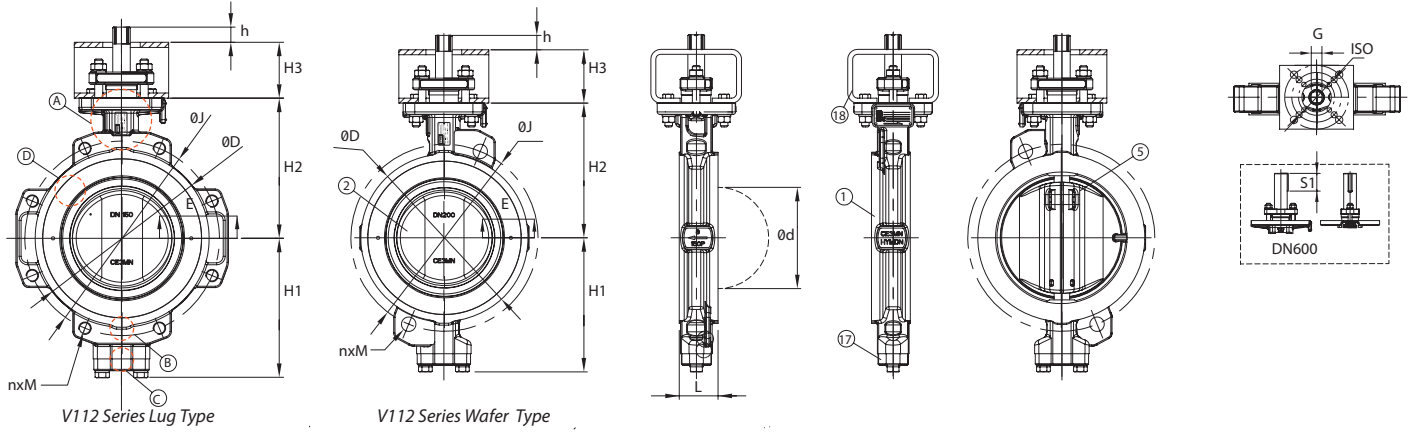
DN (mm)	PTFE Seat		INCONEL	
	PN10	PN16	PN10	PN16
50	6	8	10	12
65	9	14	17	20
80	16	22	25	31
100	28	42	43	55
125	49	72	70	90
150	65	97	93	122
200	120	183	174	229
250	191	293	273	362
300	302	460	413	550
350	448	677	589	787
400	656	988	830	1118
450	839	1282	1075	1458
500	1236	1859	1504	2043
600	1931	2883	2269	3093

Note: The specified torque values incorporate a safety factor.



## V110 (Wafer) / V112 (Lug) Series High Performance Butterfly Valves

### Dimensions (mm)



### Material List

No	Part Name	Qty	Material	No	Part Name	Qty	Material	No	Part Name	Qty	Material
1	Body	1	A216 Gr. WCB	6	Seat Thrust Ring	1	A216 Gr. WCB	13	Seat	1	PTFE
			AISI304				AISI316	14	Bushing	1	AISI316
			AISI316				7	Spring	1	F316	15
2	Disc	1	AISI316 + HCr	8	Locking Pin	1	PTFE	16	Packing Retainer	1	WCB / AISI304
3	Seat	1	PTFE	9	Bushing	2	PTFE+F316	17	Bottom End Cover	1	WCB / AISI304
			INCONEL 718	10	Packing	1	PTFE	18	Flange	1	WCB
4	Stem	1	F316	11	Thrust Ring	1	AISI316	19	Seat	1	Graphite
5	Pin	2	F316	12	Thrust Plate	1	PTFE+F316L				

### Dimensions (mm)

Size	DN	Inch	L	ØD	Ød	H1	H2	H3	G	h	ØJ			nxM			ISO5211 Top Flange			Weight (Kg)	
											PN10	PN16	#150	PN10	PN16	#150	F1	F2	F3	Wafer	Lug
50	2	45	95	46	118	124	86	14	16	125	125	120.7	4xM16	4xM16	4x1/2"	F05	F07	F10	5,0	6,0	
65	2-1/2	48	112	61	126	132	86	14	16	145	145	139.7	4xM16	4xM16	4x1/2"	F05	F07	F10	6,0	7,0	
80	3	48	126	76	134	140	86	14	16	160	160	152.4	4xM16	4xM16	4x1/2"	F05	F07	F10	7,0	8,0	
100	4	54	155	96	144	150	86	14	16	180	180	190.5	8xM16	8xM16	4x1/2"	F05	F07	F10	9,0	13,0	
125	5	57	184	118	178	170	89	17	19	210	210	215.9	8xM16	8xM16	4x1/2"	F05	F07	F10	12,0	16,0	
150	6	57	215	143	190	185	89	17	19	240	240	241.3	8xM20	8xM20	4x5/8"	F05	F07	F10	13,0	19,0	
200	8	62	267	188	214	215	101	19	21	295	295	298.5	8xM20	12xM20	4x5/8"	F10	F12	-	21,0	28,0	
250	10	70	326	236	254	260	104	22	24	350	355	362	12xM20	12xM24	4x5/8"	F10	F12	-	30,0	44,0	
300	12	81	375	281	298	290	129	27	29	400	410	431.8	12xM20	12xM24	8x5/8"	F12	F14	-	46,0	66,0	
350	14	92	416	320	328	320	134	32	34	460	470	476.3	16xM20	16xM24	8x3/4"	F12	F14	-	63,0	86,0	
400	16	102	480	371	377	370	158	36	38	515	525	539.8	16xM24	16xM27	8x3/4"	F14	-	-	95,0	130,0	
450	18	114	534	420	402	395	158	36	38	565	585	577.9	20xM24	20xM27	8x3/4"	F14	-	-	120,0	163,0	
500	20	127	588	469	437	430	168	46	48	620	650	635	20xM24	20xM30	12x7/8"	F14	-	-	160,0	227,0	
600	24	154	692	549	492	480	198	18*12	90	725	770	749.3	20xM27	20xM33	12x7/8"	F16	-	-	265,0	358,0	

Note: For sizes DN700 and above, please contact the sales department.