



## V101 (Wafer) / V102 (Lug) Series Proval Soft Seat Butterfly Valves

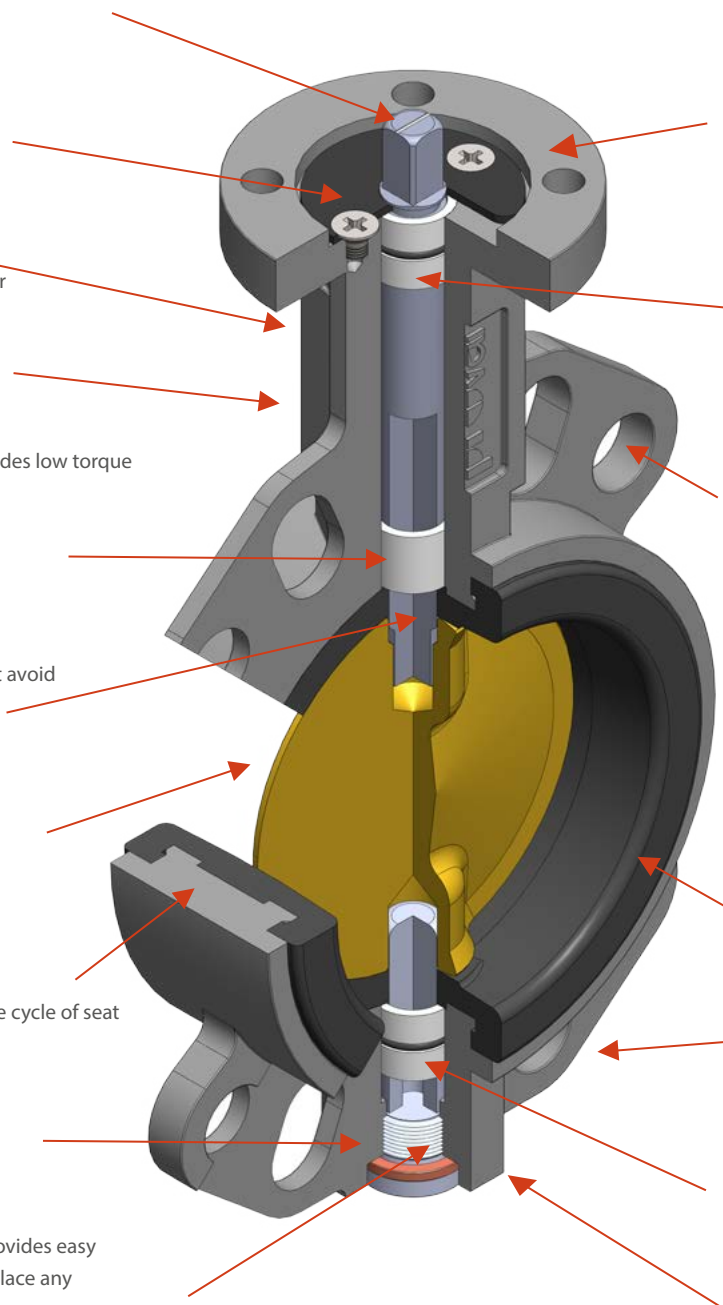
Butterfly valves, since their invention in 1960's became one of the most demanded flow control elements in industrial and domestic flow control applications due to their light weight, low pressure loss, 100% leak free operation, easy and economic automation capabilities.

Beside the soft seat applications, development of PTFE seats and metal seats of double eccentric high performance valves today, butterfly valves are used from basic water applications to industrial applications and highly corrosive severe service applications

Butterfly valves have wide range of applications in water, sea water, steel, food, paper, chemical, petrochemical and all HVAC and general industrial flow process controls.

### Superiorities of New Design Proval V101 Butterfly Valves

- Flow indication marked, ISO standard valve rotating shaft
- Easy removable, anti blow-out plate
- Tag plate with all valve material and useage data including valve Serial number
- Long neck for easy insulation
- PTFE / Bronzee bushing provides low torque and longer seat life by centering the disc and avoids leakage from stem due to non-centric rotation
- Integral o-ring system on seat avoid the leakage from stem
- 2 Pc shaft construction disc provides higher flow rates (kv) and lower pressure loss in pipeline.
- Special groove on body provides less torque figures in operation and improves the life cycle of seat
- O-ring to ensure 100% leak free operation
- Easy removable lower cap provides easy dismantling of the valve to replace any defected parts on maintenance
- According to ISO 5211 direct mount ISO pad
- Upper stem bushing
- EN1092 PN10, PN16 ANSI 125/150 and BS10 Table-D, Table-E suitable flange holes
- Wide range of seat solutions for all industrial applications
- 4 flange locating holes for easy alignment of valve during installation.
- PTFE / Bronzee bushing provides low torque and longer seat life by centering the disc and avoids leakage from stem due to non-centric rotation
- Heat No for easy tracing and QC

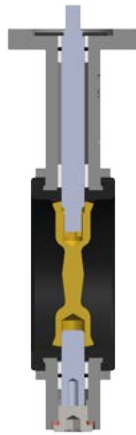




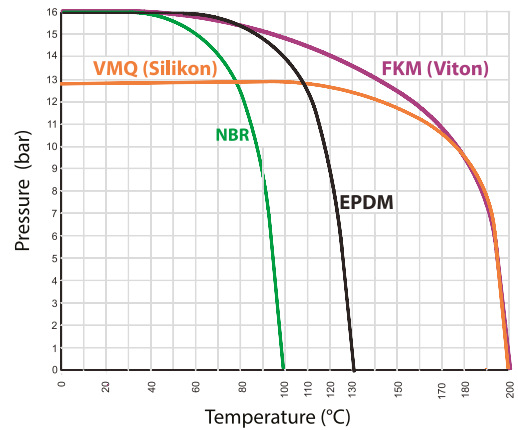
## V101 (Wafer) / V102 (Lug) Series DN25-600 Butterfly Valves Material List

### General Design and Manufacturing Standards

Design Standard	EN 558 Series 20 (DIN3202-K1)
	ISO5752 Series 20
	API609 Table 1
Flange Drilling	BS5155 Series 4
	EN1092 PN 6/10/16
Mounting Flange	ANSI B 16.5 Class 150
	ISO5211
Testing Standard	EN12266-1/2
	ISO5208, Category 3
	API 598 Table 5
	ANSI B16-104, Class VI
Pressure Rating	Max 16 bar
Differential Pressure	$\Delta p$ 16 bar
Vacuum	Max 0.2 bar absolute pressure



Pressure - Temperature Diagram



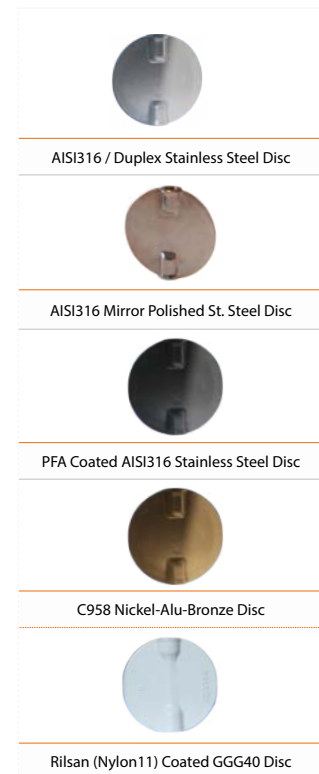
### V101 / V102 / V103 Series Butterfly Valves Flow Coefficient Kv Values

Kv values given in the table below, show the volume of water in m<sup>3</sup>/h at room temperature that will pass through a given valve opening with a pressure drop of  $\Delta p$  1 bar.

Butterfly Valves offer flow characteristics close to linear at angles of opening between 30° and 90°.

Recommended maximum velocity of flow for Butterfly Valves is 1.5 m/s.

DN	Disc Angle-Openness (%)								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0,1	4,3	10	21	39	55	78	108	116
65	0,2	6,9	17	32	56	85	125	176	190
80	0,3	10	19	34	61	100	158	238	261
100	0,4	15	31	68	120	199	315	472	519
125	0,7	25	53	115	205	339	536	804	884
150	1,7	39	82	177	317	523	828	1243	1365
200	2,6	77	162	353	629	1039	1646	2468	2713
250	3,7	131	276	600	1070	1771	2802	4203	4619
300	4,3	202	428	927	1653	2735	4329	6494	7136
350	5,2	292	618	1339	2388	3951	6254	9380	10308
400	6,9	401	850	1842	3284	5434	8599	12899	14176
450	9,5	532	1126	2441	4349	7197	11390	17085	18774
500	12	684	1448	3138	5592	9253	14645	21967	24140
600	19	1057	2238	4848	8640	14296	22626	33939	37295
700	31	1568	3148	5740	8650	12930	19695	30186	42817
800	44	2064	4144	7557	11927	17830	27156	41621	59036
900	52	2613	5244	9563	15137	22564	34367	52674	74714
1000	73	3618	7262	13240	20897	31283	47648	73028	103583
1200	153	7598	15195	20020	43886	65695	100060	10146	217525





## V101 Series Wafer Type DN25-300 Butterfly Valves

- Available in sizes from DN25 to DN300 .
- Tongue and groove design, field-replaceable resilient rubber seats for a wide variety of applications and media.
- Bidirectional bubble tight shut off at full rated pressure of 16 bar(g).
- Flange locating holes drilled to meet PN10/16, ANSI Class 150 and other world drilling standards.



Dimensions	Lever / Gearbox Dimensions	Part List

### Material List

No	Part Name	Material	No	Part Name	Material	No	Part Name	Material
1	Body	Epoxy Coated GG25 Cast Iron	3	Seat	EPDM (-30° C ~ +130° C)	10	Lower Stem	AISI420 Stainless Steel
		Epoxy Coated GGG40 Ductile Iron			NBR (-20° C ~ +100° C)			AISI316 Stainless Steel
		A216 WCB			Silicon (-30° C ~ +200° C)			Carbon Steel
		AISI316 Stainless Steel			Viton (-15° C ~ +200° C)			Brass
2	Disc	AISI316 Stainless Steel	4/5/6/7/8	Bushing	Bronze / PTFE	13	Retainer Plate	Carbon Steel
		Rilsan Coated (Nylon11) GGG40 Ductile Iron	9	Upper Stem	AISI420 Stainless Steel	14	Screw	Stainless Steel
		Alu-Bronze			AISI316 Stainless Steel	15/16	O-Ring	NBR/Viton
		HALAR / ETFE Lined AISI316 Stainless Steel						
	Super Duplex							

### Dimensions (mm)

Size (DN)	A	B	C	ØD1	ØD2			ØD3 ISO5211	ØD4	4xØd	4xØd1	L	E	G	M	N	S	P	ØR	Net Unit Weight (Kg)		
					PN10	PN16	#150													Free Shaft	Lever Op.	Gearbox Op.
25	41	92	12	31,5	85	85	79,25	42	55	18	6	33	9	13	180	28	115	54	140	1,0	1,3	3,0
32/40	45	98	12	38	110	110	98,55	42	55	18	6	33	9	13	180	28	115	54	140	1,0	1,3	3,0
50	63	126	16	51,2	125	125	120,6	50	65	18	7	43	9	13	180	33	115	54	140	2,1	2,3	4,1
65	69	133	16	65,6	145	145	139,7	50	65	18	7	46	9	13	180	33	115	54	140	2,5	2,8	4,6
80	86	152	16	80	160	160	152,4	50	65	18	7	46	9	13	180	33	115	54	140	3,0	3,3	5,0
100	106	170	19	102,2	180	180	190,5	70	90	18	10	52	11	14	284	33	120	54	160	4,8	5,2	6,8
125	115	181	25	125,6	210	210	215,9	70	90	18	10	56	14	14	284	33	145	67	160	6,6	7,0	9,8
150	128	196	25	150,6	240	240	241,3	70	90	22	10	56	14	14	284	33	145	67	160	7,5	7,9	10,7
200	160	238	30	200,4	295	295	298,4	102	125	22	12	60	17	14	350	45	155	67	250	13,8	14,9	18,1
250	190	258	39	249	350	355	361,9	102	125	26	12	68	22	14	350	45	165	73	300	21,2	22,3	27,4
300	235	300	39	300	400	410	431,8	102	125	26	12	78	22	20	350	45	165	73	300	31,5	33,0	37,7



## V101 Series Wafer Type DN350-600 Butterfly Valves

- Available in sizes from DN350 to DN600 .
- Tongue and groove design,field-replaceable resilient rubber seats for a wide variety of applications and media.
- Bidirectional bubble tight shut off at full rated pressure of 16 bar(g).
- Flange locating holes drilled to meet PN10/16,ANSI Class 150 and other world drilling standards.



Dimensions	Gearbox Dimensions	Part List

### Material List

No	Part Name	Material	No	Part Name	Material	No	Part Name	Material
1	Body	Epoxy Coated GG25 Cast Iron	3	Seat	EPDM (-30° C ~ +130° C)	10	Lower Stem	AISI420 Stainless Steel
		Epoxy Coated GGG40 Ductile Iron			NBR (-20° C ~ +100° C)			AISI316 Stainless Steel
		A216 WCB			Silicon (-30° C ~ +200° C)			Carbon Steel
		AISI316 Stainless Steel			Viton (-15° C ~ +200° C)			Brass
2	Disc	AISI316 Stainless Steel	4/5/6/7/8	Bushing	Bronze / PTFE	13	Retainer Plate	Carbon Steel
		Rilsan Coated (Nylon11) GGG40 Ductile Iron	9	Upper Stem	AISI420 Stainless Steel	14	Screw	Stainless Steel
		Alu-Bronze			AISI316 Stainless Steel	15/16	O-Ring	NBR/Viton
		HALAR / ETFE Lined AISI316 Stainless Steel						
Super Duplex								

Standart construction material for valve body.

### Dimensions(mm)

DN	A	B	H	E	G	L	P	S	ØR	ØD2			ØD4	ISO5211 (ØD3)	4-ØD1	nxØd			Net Unit Weight (kg)	
										PN10	PN16	#150				PN10	PN16	#150	Free Shaft	Gearbox Op.
350	260	310	40	27	22	78	96	210	104	460	470	476,3	150	125	4-14	16x20	16x24	12x1 1/8 UNC	42,5	55
400	315	340	40	27	23	102	104	240	300	515	525	539,8	175	140	4-18	16x24	16x27	16x1 1/8 UNC	53	72,2
450	330	375	40	36	25	114	108	240	400	565	585	577,9	175	140	4-18	20x24	20x27	16x1 1/4 UNC	88	111,5
500	348	425	40	36	27	127	108	240	400	620	650	635	175	140	4-18	20x24	20x30	20x1 1/4 UNC	98	121,5
600	438	505	50	46	27	154	122	270	400	725	770	749,3	210	165	4-23	20x27	20x33	20x1 3/8 UNC	138	182,5