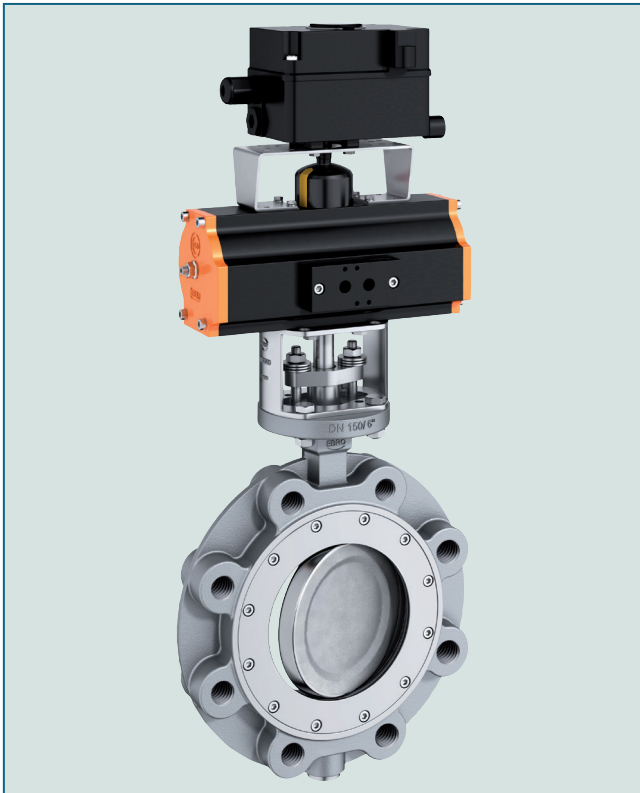


HIGH PERFORMANCE BUTTERFLY VALVE HP 114



Lug type butterfly valve in double-eccentric construction. Reliable sealing even with extreme temperature and pressure conditions.

TECHNICAL DATA

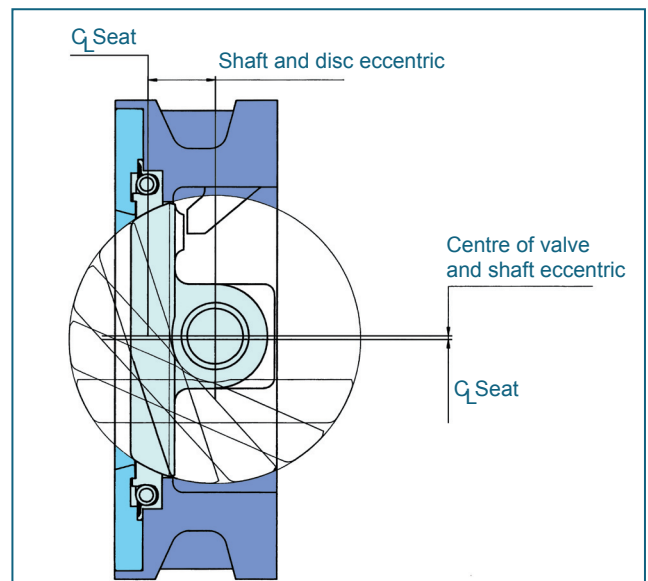
Nominal diameter:	DN 50 - DN 1200 (larger nominal diameter on request)
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 10/16/25/40 (to DN 150) EN 1092 PN 10/16/25 (DN 200-DN 600) ASME Class 150/300 AS 4087 PN16/21
Flange Surface Design:	EN 1092, Form A/B, ASME RF,FF
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check	
- for R-PTFE seat:	EN 12266 (Leakage rate A)
- for Inconel seat:	EN 12266 (Leakage rate B) ISO 5208, Category 3
Temperature range:	-60°C to +600°C
Differential pressure:	≤ DN150 max. 40 bar > DN150 max. 25 bar
Vacuum:	up to 1mbar absolute

FEATURES

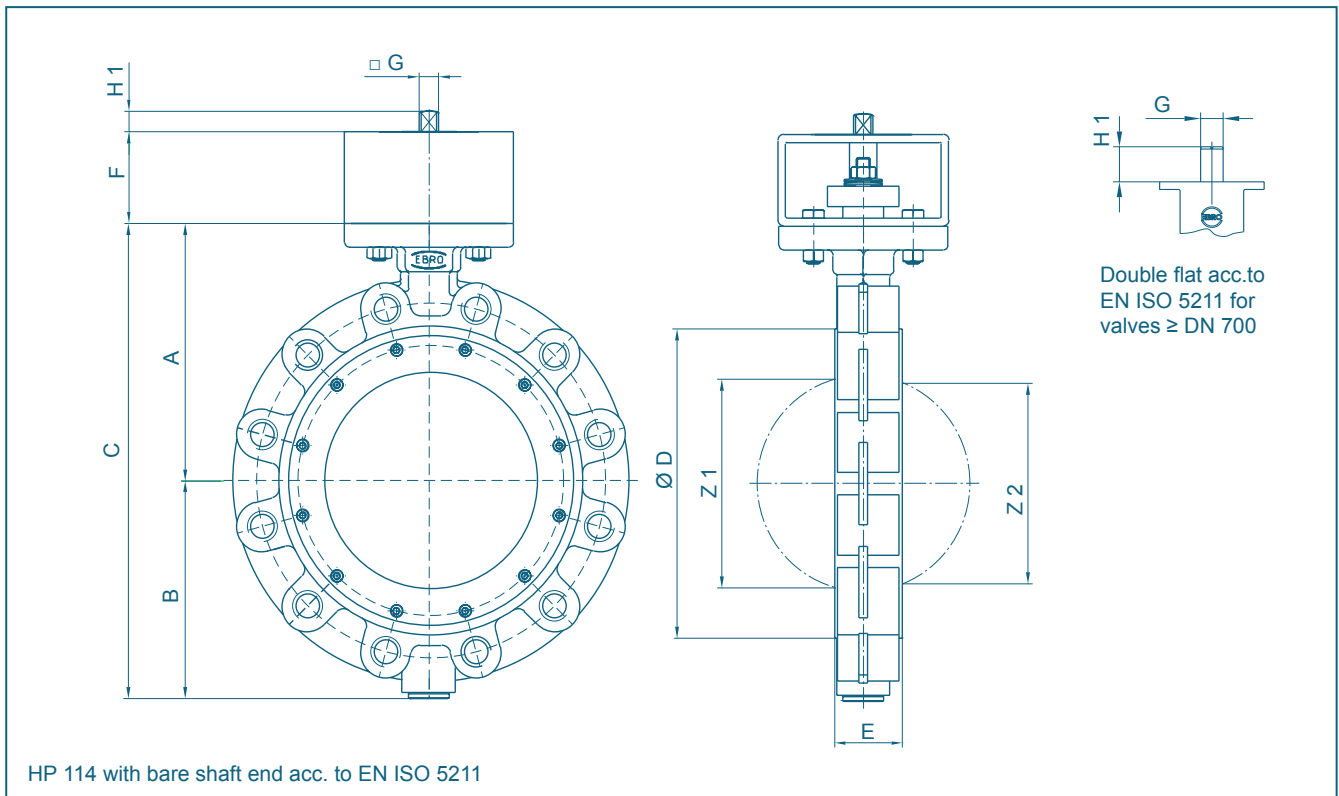
- Shut-off and control of gaseous and liquid media
- Disc and shaft have double-eccentric bearing
- Centering pieces can be used as installation aid
- Two seat ring systems available: R-PTFE and Inconel
- Seal variants:
 - soft-sealing (R-PTFE) max. 230°C
 - metallic sealing (Inconel) max. 600°C
- Maintenance-free
- Long service life, even at high switching frequencies
- FIRE SAFE BS 6755 PART 2

GENERAL APPLICATIONS

- Chemical and petrochemical industries
- Hot water and steam systems
- District heat supply
- Vacuum systems
- Shipbuilding
- Gas process technology
- Food industry
- Heavy duty services



HIGH PERFORMANCE BUTTERFLY VALVE HP 114



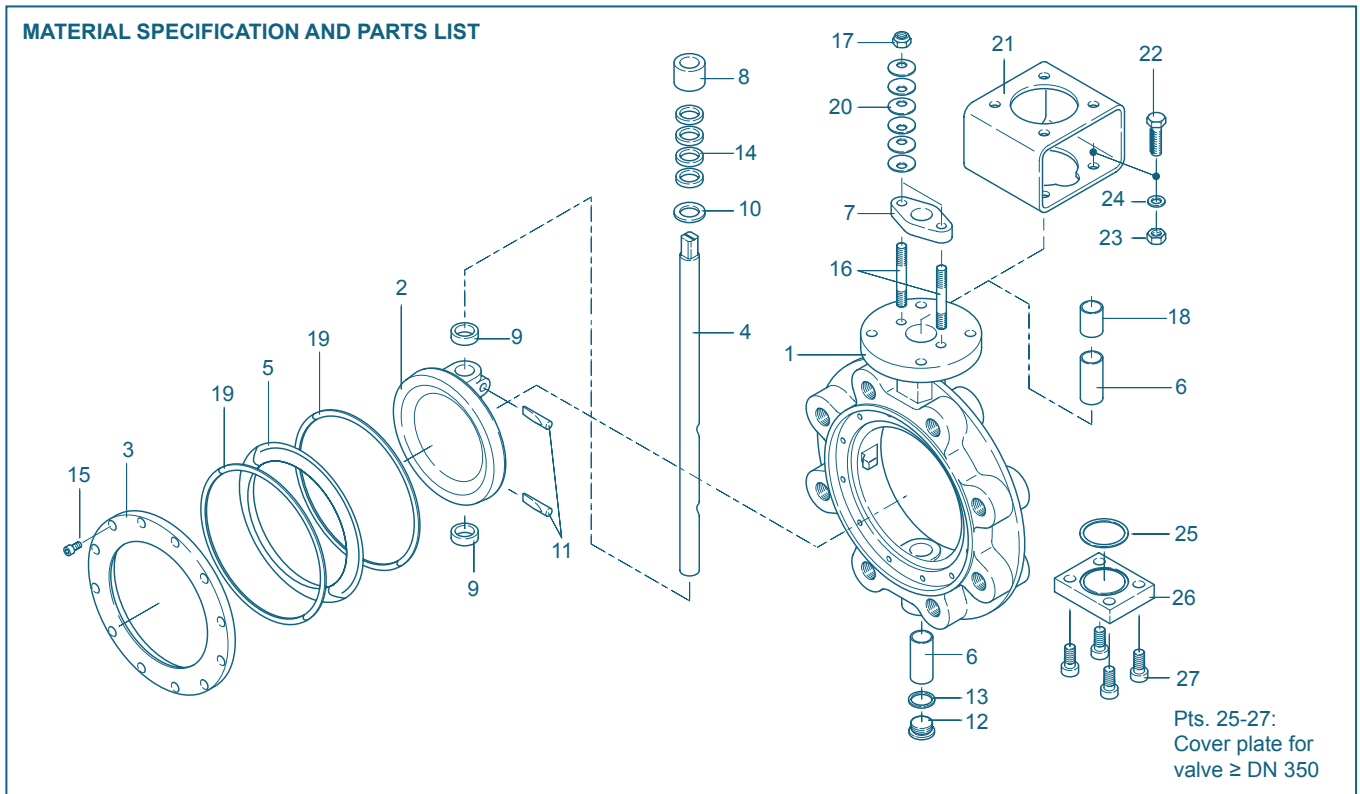
Double flat acc.to
EN ISO 5211 for
valves \geq DN 700

DN [mm]	Size [in]	Dimensions [mm]											min. pipe-Ø	Weight [kg]
		A	B	C	D	E	F	Flange	G	H1	Z1	Z2		
50	2	133	99	232	112	43	80	F05	12	15	40,9	-	51	7,4
65	2½	133	99	232	112	43*	80	F05	12	15	40,9	-	51	7,4
80	3	142	113	255	138	46	80	F05	12	15	70,7	54,4	80	10,2
100	4	158	124	282	160	52	80	F05	12	15	94,2	81,6	103	13,5
125	5	181	140	321	192	56	80	F07	14	18	114,5	105,3	124	17,6
150	6	195	154	349	216	56	80	F07	14	18	143,5	135,4	151	21,0
200	8	225	191	416	270	60	80	F10	17	18	187,4	181,2	196	32,9
250	10	268	222	490	326	68	80	F12	22	23	235,2	228,8	245	49,0
300	12	300	255	555	378	78	90	F12	27	28	280,7	275,8	296	68,5
350	14	345	304	649	438	92	100	F14	27	28	322,8	315,9	334	104,0
400	16	375	339	714	488	102	100	F14	36	36	371,6	363,9	385	135,0
450	18	412	340	752	530	114	120	F16	36	36	426,8	426,8	438	174,0
500	20	425	399	824	593	127	120	F16	46	46	468,7	466	484	240,0
550	22	456	405	861	635	154	200	F25	46	46	525,7	525,7	540	268,0
600	24	490	468	958	692	154	200	F25	55	55	544,2	542,2	560	390,0
700	28	554	522	1076	820	165	200	F25	80	130	673	659	678	535,0
800	32	605	566	1171	902	190	200	F30	90	130	748	736	776	570,0
900	36	660	637	1297	1006	204	200	F30	100	145	847	833	876	800,0
1000	40	715	687	1402	1112	216	200	F30	100	145	944	935	975	880,0
1200	48	815	800	1615	1328	254	200	F35	110	185	1139	1135	1175	1480,0

*Special face to face

Subject to change without notice

HIGH PERFORMANCE BUTTERFLY VALVE HP 114



Pt.	Description	Material	Material No.	ASTM	Pt.	Description	Material	Material No.	ASTM
1	Body	Carbon Steel	GS-C25N	1.0619	WCB	14	Shaft seal		
		Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M			PTFE	
2	Disc								
		Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M	15	Hex.-socket screw		
3	Clamping ring								
		Steel	St37-2	1.0037	283-C	16	Threaded pin		
4	Shaft								
		Stainless Steel	X4CrNiMo16-5	1.4418		17	Hex. nut		
5	Seat ring								
		R-PTFE	PTFE-Compound			18	Spacer sleeve		
6	Shaft bearing								
		Inconel	Inconel 625			19	Graphite seal (for metal seat)		
7	Gland flange								
		Steel	St37-2	1.0037	283-C	20	Belleville spring washer		
8	Thrust collar								
		Stainless steel	X5CrNi18-10	1.4301	304		Spring Steel	50CrV4	1.8159
9	Bearing ring								
		Stainless Steel	X5CrNi18-10	1.4301	304		Stainless Steel	X6CrNiMoTi17-12-2	1.4571
10	Suppor. washer								
		Stainless Steel	X6CrNiMoTi17-12-2	1.4571 chr-pld	316 Ti	21	Bracket		
11	Taper pin								
		Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti		Steel	St37-2 galvanized	1.0037
12	Plug screw DIN 908								
		Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti	22	Hex. bolt		
13	Seal								
		PTFE	X6CrNiMoTi17-12-2	1.4571	316 Ti		Steel	St galvanized	
14	Shaft seal								
		Graphite	X6CrNiMoTi17-12-2	1.4571 chr-pld	316 Ti		Steel	St galvanized	
15	Hex.-socket screw								
		Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M		Steel	St galvanized	
16	Threaded pin								
		Stainless Steel	X4CrNiMo16-5	1.4418			Stainless Steel	A2-70	1.4301
17	Hex. nut								
		Stainless Steel	X4CrNiMo16-5	1.4418			Stainless Steel	A 2	1.4301
18	Spacer sleeve								
		Stainless Steel	X10CrNi18-8	1.4310	301 Ti				
19	Graphite seal (for metal seat)								
		Graphite	PTFE-Compound						
20	Belleville spring washer								
		Graphite	Inconel 625						
21	Bracket								
		Steel	St37-2 galvanized	1.0037	283-C				
22	Hex. bolt								
		Steel	St galvanized		CS				
23	Hex. nut								
		Steel	St galvanized		CS				
24	Washer								
		Steel	St galvanized		CS				
25	Seal								
		Graphite							
26	Cover plate								
		Steel	St37-2 galvanized	1.0037	283-C				
27	Hex.-socket screw								
		Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M				
		PTFE							
		Graphite							
Other materials upon request									

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HIGH PERFORMANCE BUTTERFLY VALVE HP 114

TORQUE

- The values specified are based on the initial breakaway torque. (disc disengages from seat, torque then drops)

DN [mm]	Size [in]	Operating pressure							
		10 [bar]		16 [bar]		25 [bar]		40 [bar]	
		R-PTFE	Inconel	R-PTFE	Inconel	R-PTFE	Inconel	R-PTFE	Inconel
50-65	2-2½	27	35	28	42	30	58	31	66
80	3	28	55	30	65	34	90	38	100
100	4	51	90	61	100	80	120	93	140
125	5	63	150	83	172	95	220	125	285
150	6	125	170	136	220	168	300	220	360
200	8	205	350	260	430	280	505	*	*
250	10	485	505	550	620	600	860	-	-
300	12	584	740	700	970	855	1280	-	-
350	14	740	815	930	1050	1200	1370	-	-
400	16	1050	1530	1640	2240	2460	2900	-	-
450	18	1150	1700	1750	2500	2700	3500	-	-
500	20	1210	2010	1800	2760	2800	4260	-	-
550	22	3500	3750	4430	4550	6010	6800	-	-
600	24	4000	4500	4600	5740	6200	8080	-	-
700	28	5300	-	6100	-	8100	-	-	-
800	32	6400	-	7400	-	9800	-	-	-
900	36	7800	-	9000	-	12000	-	-	-
1000	40	9800	-	11300	-	15000	-	-	-
1200	48	14300	-	16500	-	22000	-	-	-

* DN 200 PN 16 max. 25 bar

All values in Nm

K_v-VALUES

- The K_v-value [m³ per hour] is the flow of water at a temperature of 5°C to 30°C (41°F to 86°F) at Δp of 1 bar

- The K_v-values specified are based on tests carried out by the Delfter Hydraulics Laboratories, the Netherlands

- Permissible velocity of flow
V_{max} 4,5 m/s for liquids,
V_{max} 70 m/s for gases

- The throttle function is linear at an angle 30° to 70°

- Avoid cavitation!

For further values, please contact our engineers.

DN [mm]	Size [in]	Opening angle α°							
		20°	30°	40°	50°	60°	70°	80°	90°
50	2	1,3	6	15	18	19	21	22	23
65	2½	1,5	7	18	22	23	24	25	25
80	3	7	30	50	68	82	97	113	115
100	4	22	60	97	119	164	199	223	251
125	5	45	100	152	195	256	346	452	493
150	6	63	109	162	250	391	588	814	845
200	8	96	168	301	509	742	1107	1581	1747
250	10	264	458	682	980	1421	2083	2882	2889
300	12	397	625	956	1368	1938	2778	3794	3940
350	14	460	720	1100	1650	2500	3400	4800	5400
400	16	550	870	1250	2000	3200	4800	6800	8080
450	18	730	1200	1800	3100	4600	6400	8400	10500
500	20	920	1600	2600	4100	6000	8500	12100	12800
550	22	1090	1950	3100	4600	7500	10200	14700	15300
600	24	1370	2250	3780	4950	9000	12500	17100	18500
700	28	1999	3182	4764	7738	11451	16283	22071	25000
800	32	2795	4450	6661	10821	16014	22770	30864	34960
900	36	3590	5715	8555	13898	20567	29243	39640	44900
1000	40	4677	7447	11147	18107	26796	38101	51646	58500
1200	48	7188	11444	17130	27826	41179	58552	79367	89900

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