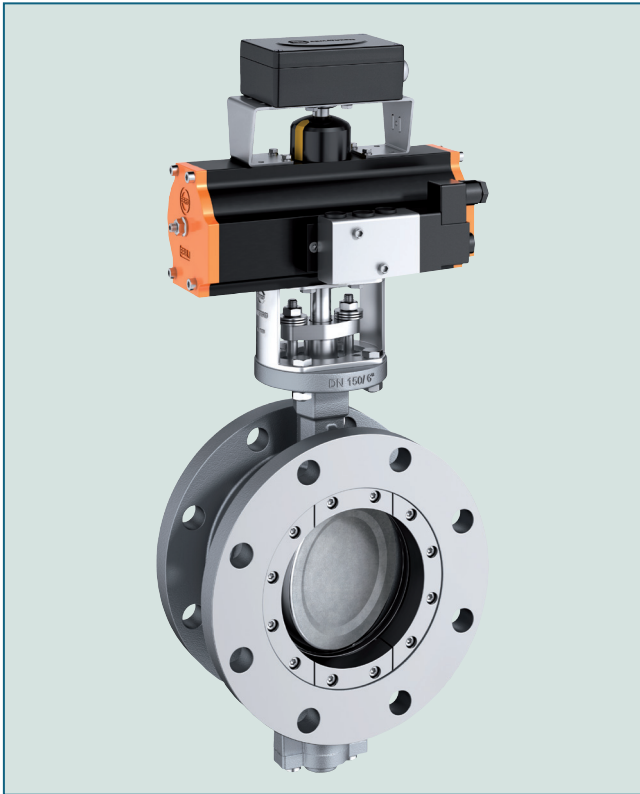


HIGH PERFORMANCE BUTTERFLY VALVE HP 112



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

TECHNICAL DATA

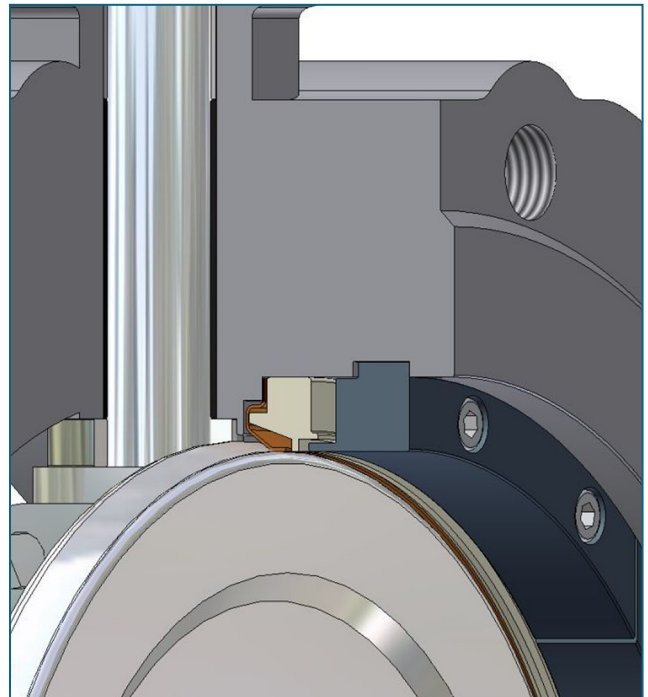
Nominal diameter:	3 inch - 24 inch
Face-to-face::	EN 558 Series 13 others upon request
Flange accomodation:	EN 1092 PN 10/16/25/40 ASME Class 150 ASME Class 300 AS 4087 PN 16/21
Flange Surface Design:	EN 1092 Form A/B ASME RF, FF
Marking:	EN 19
Tightness check	
- for R-PTFE seat:	EN 12266 (Leakage rate A)
- for Inconel seat:	EN 12266 (Leakage rate B) ISO 5208, Category 3
Temperature range:	-76°F to +1112°F
Operating pressure:	≤ DN 150, 40 bar > DN 150, 25 bar
Vacuum:	up to 1mbar absolute

FEATURES

- Shut-off and control valve for gaseous and liquid media
- Disc and shaft have double-eccentric bearing
- Seat ring systems available: R-PTFE, Inconel and Fire Safe
- Maintenance-free
- Long service life, even at high switching frequencies
- Seal variants:
 - soft-sealing (R-PTFE) max. 446°F
 - metallic sealing (Inconel) max. 1,112°F
 - special material for temperatures > 1,112°F

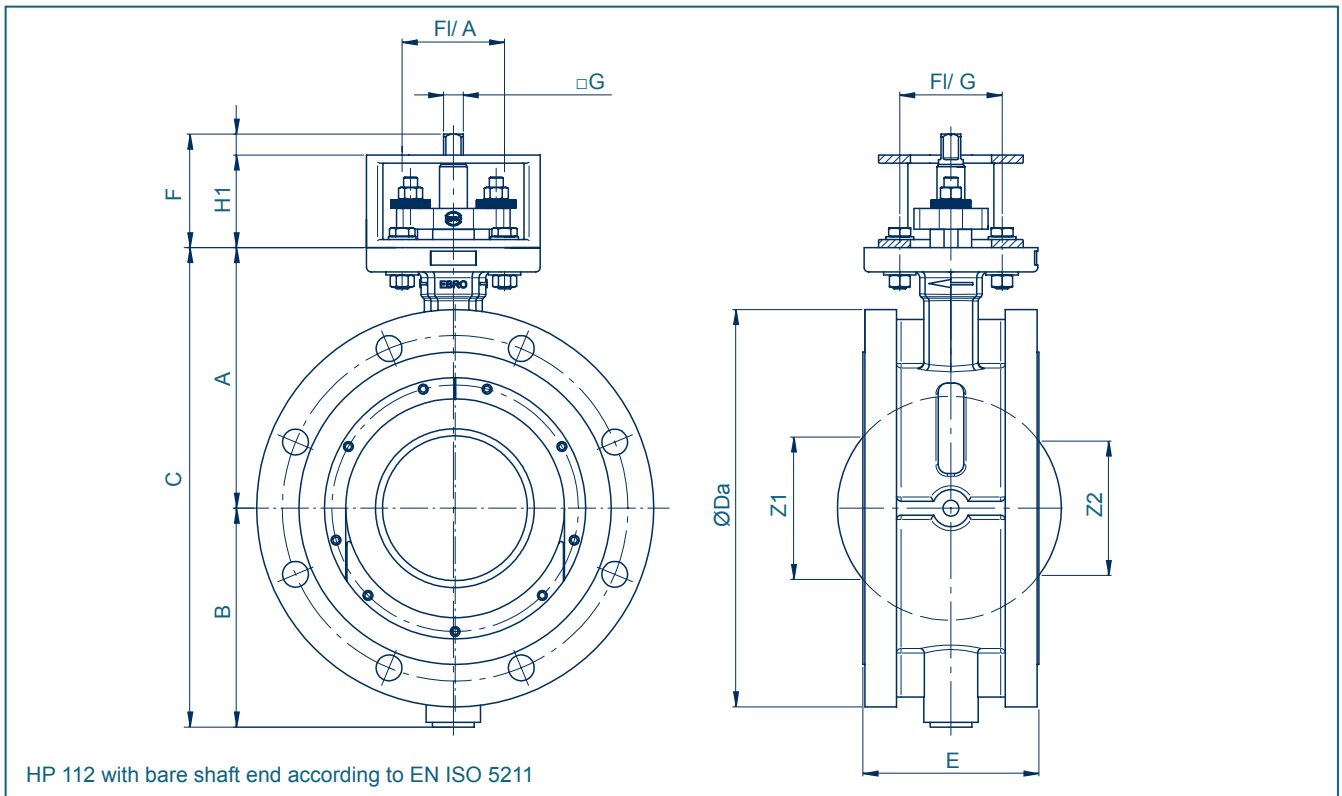
GENERAL APPLICATIONS:

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



Sealing system with inside metallic thrust collar.

HIGH PERFORMANCE BUTTERFLY VALVE HP 112



DN [mm]	Size [in]	Dimensions [in]													Weight [lb]	
		A	B	C	ØDa	ØDa	E	F	FL/A	FL/G	G	H1	Z1	Z2	CL 5,91	CL 11,81
															CL 5,91*	CL 11,81**
80	3	5.59	4.29	9.88	7.52	8.27	4.49	3.74	F05	F07	0.47	0.59	-	-	33.10	41.90
100	4	6.22	4.80	11.02	9.02	10.00	5.00	3.74	F05	F07	0.47	0.59	-	-	44.10	52.90
150	6	7.68	5.98	13.66	11.02	12.52	5.51	3.86	F07	F10	0.55	0.71	2.44	1.85	70.50	110.20
200	8	8.86	7.48	16.34	13.50	15.00	5.98	3.86	F10	F12	0.67	0.71	4.84	4.57	110.20	154.30
250	10	10.55	8.66	19.21	16.02	17.48	6.50	4.06	F12	F12	0.87	0.91	7.09	6.85	154.30	198.40
300	12	11.81	10.04	21.85	19.02	20.51	7.01	4.65	F12	F14	1.06	1.10	9.06	8.90	231.50	330.70
350	14	13.58	11.97	25.55	21.02	23.03	7.48	5.04	F14	F14	1.06	1.10	10.87	10.63	341.70	463.00
400	16	14.76	13.39	28.15	23.50	25.51	8.50	5.35	F14	F16	1.42	1.42	12.48	12.24	451.90	562.20
450	18	16.22	14.41	30.63	25.00	27.99	8.74	6.14	F16	F16	1.42	1.42	15.12	14.96	540.10	694.40
500	20	17.36	15.71	33.07	27.52	30.51	9.02	6.54	F16	F16	1.81	1.81	16.85	16.65	650.40	848.80
600	24	20.63	18.43	39.06	32.01	35.98	10.51	10.04	F25	F25	2.17	2.17	19.72	19.45	1036.20	1355.80

* Acc. to ASME Class 150 max. 278 psi

Subject to change without notice

**Acc. to ASME Class 300 8 in - 24 in max. 363 psi

Acc. to ASME Class 300 9 in - 6 in max. 580 bar

Exploded view diagram of a valve assembly. The main assembly includes the following parts:

- 1: Valve body
- 2: Bonnet
- 3: Gasket
- 4: Stem
- 5: Disc
- 6: Seat
- 7: Bolt
- 8: Nut
- 9: Washer
- 10: Seal
- 11: Packing
- 12: Nut
- 13: Bolt
- 14: Bolt
- 15: Bolt
- 16: Bolt
- 17: Gasket
- 18: Bolt
- 19: Nut
- 20: Seal
- 21*: Cover plate
- 22: Bolt
- 23: Bolt
- 24: Bolt
- 25: Bolt
- 26: Bolt
- 27: Bolt
- 28: Bolt

Pts. 21 - 23:
Cover plate for
valve >12 inch

Subject to change without notice

HIGH PERFORMANCE BUTTERFLY VALVE HP 112

TORQUE

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

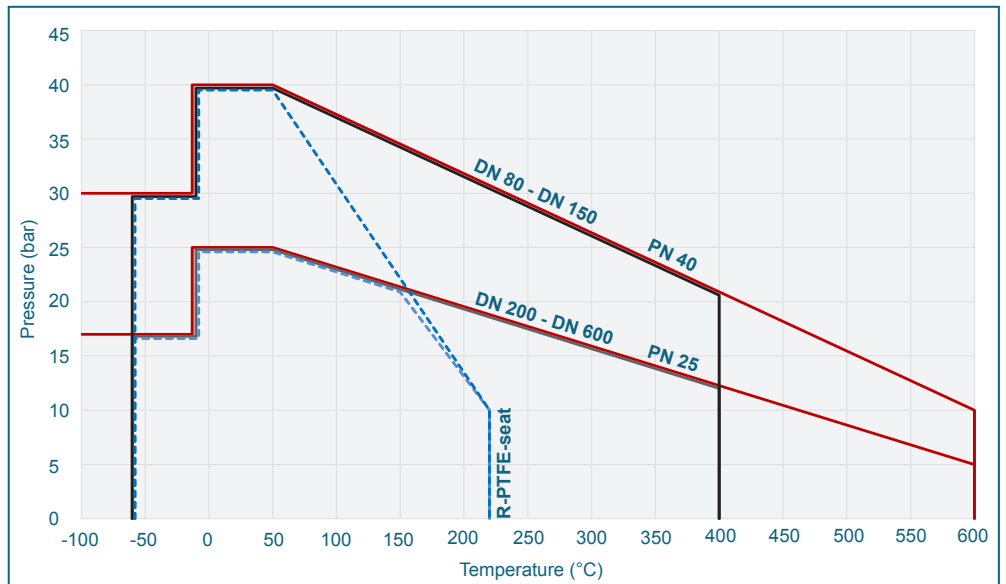
DN [mm]	Size [in]	Operating pressure							
		150 [psi]		200 [psi]		300 [psi]		600 [psi]	
		R-PTFE	Inconel	R-PTFE	Inconel	R-PTFE	Inconel	R-PTFE	Inconel
80	3	256	503	229	496	249	659	348	915
100	4	467	824	465	763	586	879	851	1282
150	6	1144	1556	1037	1678	1230	2197	2014	3295
200	8	1877	3204	1983	3280	2050	3698	-	-
250	10	4440	4623	4195	4729	4394	6298	-	-
300	12	5346	6774	5340	7399	6261	9373	-	-
350	14	6774	7460	7094	8009	8788	10032	-	-
400	16	10527	14005	12510	17087	18015	21237	-	-
450	18	10527	15561	13349	19070	19772	25630	-	-
500	20	11076	18399	13731	21054	20504	31196	-	-
600	24	36615	41192	35089	43785	45402	59170	-	-

All values in Inch Lbs

PRESSURE/TEMPERATURE DIAGRAM

- Pressure control line for 1.0619 body material and metal seat
- Pressure control line for 1.4408 body material and metal seat
- - - Pressure control line for R-PTFE

The diagram illustrates the performance of the standard version of our valve type HP. Valves for higher pressure or deviating temperature are available upon request.



K_V-VALUES

- The K_V-values [US Gallon per minute] 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°
80	3	31	132	220	299	361	427	498	506
100	4	97	264	427	524	722	876	982	1105
150	6	277	480	713	1101	1722	2589	3584	3720
200	8	423	740	1325	2241	3267	4874	6961	7692
250	10	1162	2017	3003	4315	6256	9171	12689	12720
300	12	1748	2752	4209	6023	8533	12231	16704	17347
350	14	2025	3170	4843	7265	11007	14970	21134	23775
400	16	2422	3830	5504	8806	14089	21134	29939	35575
450	18	3214	5283	7925	13649	20253	28178	36984	46230
500	20	4051	7045	11447	18052	26417	37424	53275	56357
600	24	1370	2250	3780	4950	9000	12500	17100	18500

Subject to change without notice