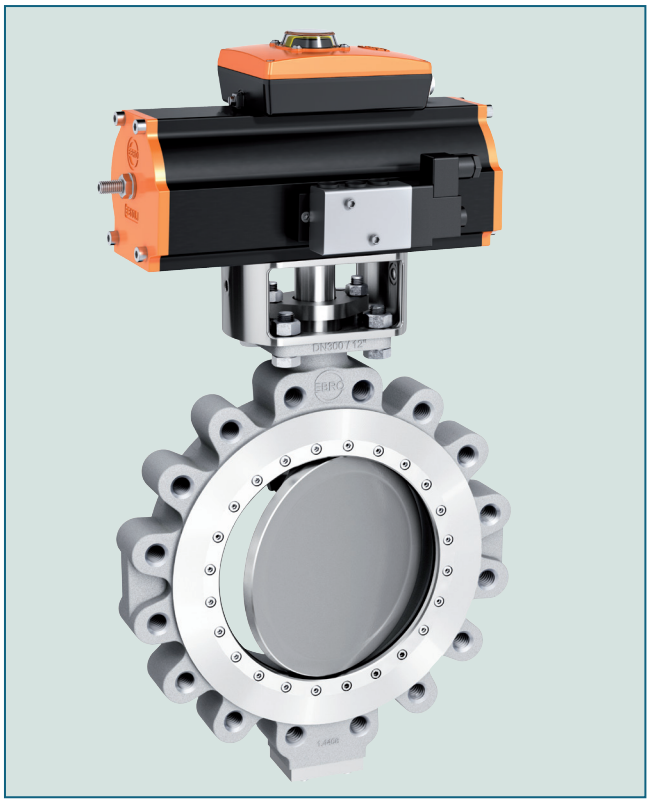
HIGH PERFORMANCE BUTTERFLY VALVE HP 300



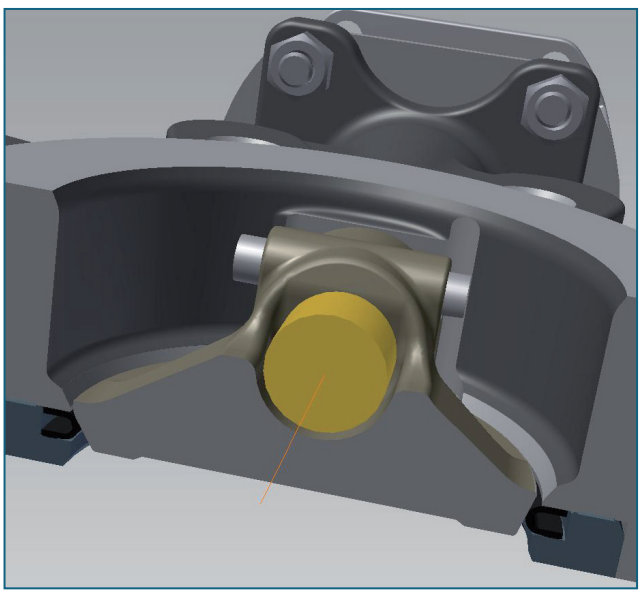
Lug type butterfly valve in triple-eccentric construction. Reliable sealing even with extreme temperature and pressure conditions up to 63 bar.

TECHNICAL DATA

Nominal diameter:	DN 80 - DN 600 (larger nominal diameter on request)
Face-to-face:	EN558 R25 <= DN 250 EN558 R16 >= DN 300 API 609 Class 300
Flange accommodation:	EN1092 PN40, PN63 ANSI B16.5 class 300, class 600
Tightness check:	EN12266 (Leckage rate A) API 598 FCI 70/2
Temperature range:	-60°C to +650°C
Differential pressure:	63 bar <= DN 400 50 bar >= DN 450

FEATURES

- Shut-off and control of gaseous and liquid media
- Control performance nearly linear
- Tricentric design
- Floating design of the seat ring
- Two versions of the seat ring available:
  full-metall and stainless steel / Graphite lamella seat
- Robust design suitable for heavy duty applications and media with solids content
- Shaft gasket adjustable
- End of line service at full pressure
- Flange sealing surface of the clamping ring not interrupted by screw counter bores
- FIRE SAFE BS 6755 PART 2



The sealing system of the HP 300.

GENERAL APPLICATIONS

- Heat power plants
- Refineries
- Paper industry
- Chemical and petrochemical industry
- Hot water and steam systems
- Geothermal energy

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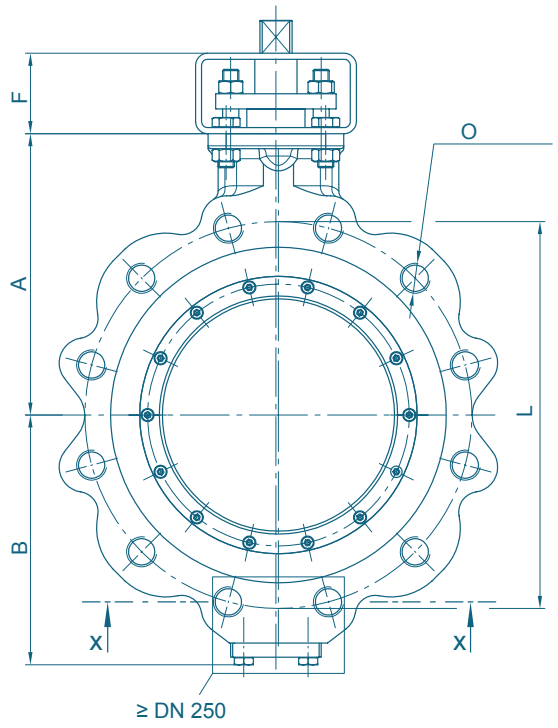
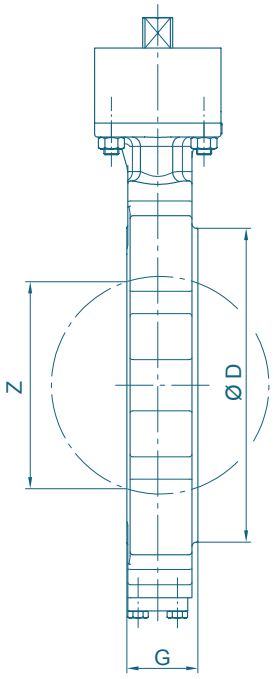
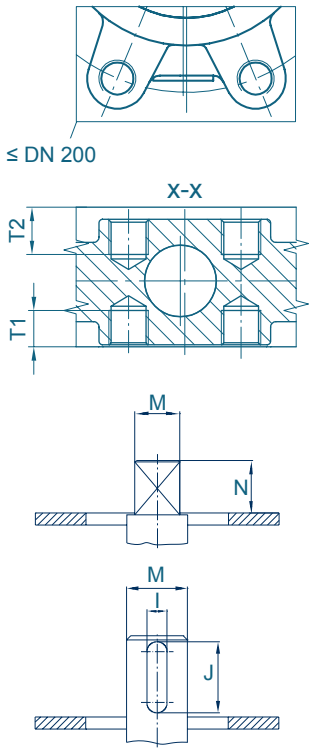
HIGH PERFORMANCE BUTTERFLY VALVE HP 300







HP 300 with bare shaft end acc. to EN ISO 5211

DN [mm]	Size [in]	Flange Connection	Dimensions [mm] A	B	D	F	G	L	Square	I	J	M	N	Flange	O	T1	T2	Z	Weight [kg]
80	3	PN 40	120	95	138	80	49	160	V17	-	-	20	21	F07	8	-	-	68	11
		PN 63	120	95	138	80	49	170	V17	-	-	20	21	F07	8	-	-	68	
		class 300/600	120	95	138	80	49	168	V17	-	-	20	21	F07	8	-	-	68	
100	4	PN 40	154	126	160	80	56	190	V19/22	-	-	24	22	F10	8	-	-	78	14
		PN 63	154	126	160	80	56	200	V19/22	-	-	24	22	F10	8	-	-	78	
		class 300	154	126	160	80	54	200	V19/22	-	-	24	22	F10	8	-	-	81	
		class 600	154	126	160	80	54	216	V19/22	-	-	24	22	F10	8	-	-	81	
150	6	PN 40	199	162	216	80	70	250	V22	-	-	30	25	F12	8	-	-	119	33
		PN 63	199	162	216	80	70	280	V22	-	-	30	25	F12	8	-	-	119	
		class 300	199	162	216	80	60	270	V22	-	-	30	25	F12	12	-	-	127	
		class 600	199	162	216	80	60	292	V22	-	-	30	25	F12	12	-	-	127	
200	8	PN 40	231	198	280	80	72	320	V27	-	-	36	28	F12	12	-	-	185	46
		PN 63	231	198	280	80	72	345	V27	-	-	36	28	F12	12	-	-	185	
		class 300	231	198	280	80	73	330	V27	-	-	36	28	F12	12	-	-	182	
		class 600	231	198	280	80	73	349	V27	-	-	36	28	F12	12	-	-	182	
250	10	PN 40	280	249	335	100	76	385	V32/36	-	-	42	36	F14	12	-	-	226	90
		PN 63	280	249	335	100	76	400	V36/36	-	-	42	36	F14	12	-	-	226	
		class 300	280	249	335	100	83	387	V36/36	-	-	42	36	F14	16	24	25	222	
300	12	PN 40	295	293	410	100	114	450	V36	-	-	50	36	F16	16	32	43	268	110
		PN 63	295	293	410	100	114	460	V36	-	-	50	36	F16	16	30	50	268	
		class 300	295	293	410	100	92	451	V36	-	-	50	36	F16	16	29	28	285	
350	14	PN 40	331	340	460	100	127	510	V46	18	90	60	95	F16	16	31	41	301	175
		PN 63	331	340	460	100	127	525	V46	18	90	60	95	F16	16	33	43	301	
		class 300	331	340	460	100	118	514	V46	18	90	60	95	F16	20	23	24	308	
400	16	PN 40	363	372	512	200	140	585	V46	18	90	60	95	F25	16	43	43		265
		class 300	363	372	512	200	133	572	V46	18	90	60	95	F25	20				
450	18	PN 40	386	388	560	200	152	610	-	20	90	70	95	F25	20	35	35		330
		class 300	386	388	560	200	149	629	-	20	90	70	95	F25	24	35	32		
500	20	PN 40	442	434	610	200	152	670	-	22	125	80	130	F25	20				400
		class 300	442	434	610	200	159	686	-	22	125	80	130	F25	24	30	30		
600	24	PN 40	500	492	725	200	178	795	-	25	125	90	130	F30	20	42	42	588	600
		class 300	500	492	725	200	181	813	-	25	125	90	130	F30	24			587	

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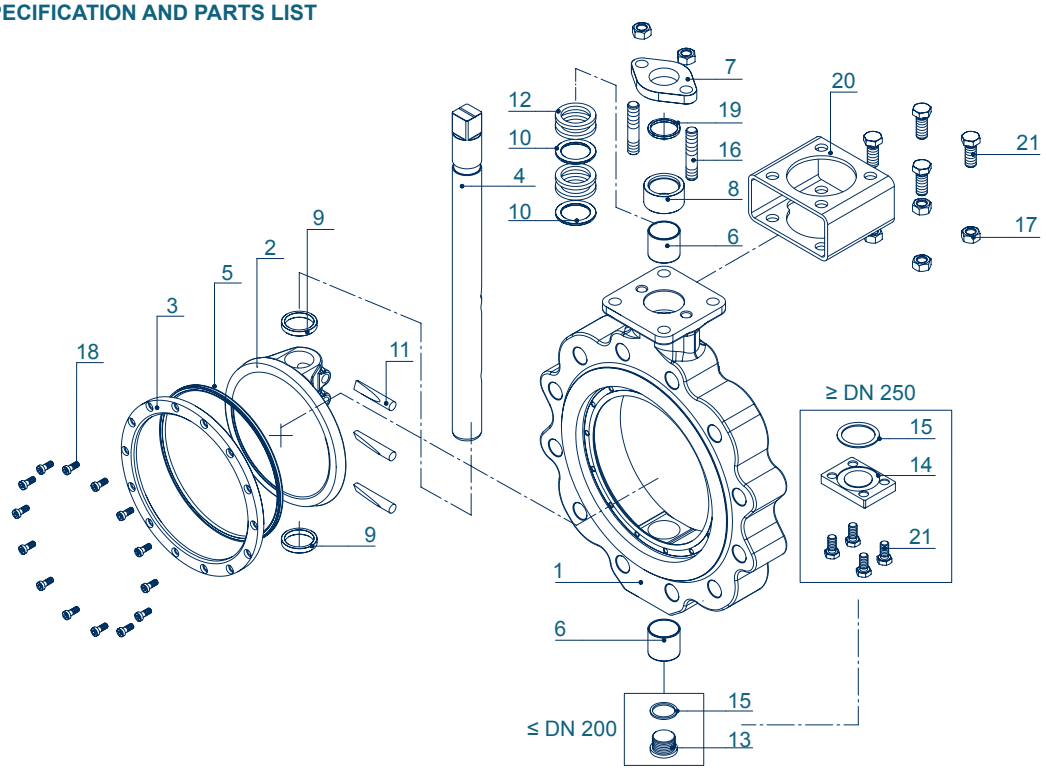
HIGH PERFORMANCE BUTTERFLY VALVE HP 300

MATERIAL SPECIFICATION AND PARTS LIST



Pos.	Description	Material	Material No.	ASTM	Pos.	Description	Material	Material No.	ASTM
1	**Body**				11	**Taper pin**			
	Carbon Steel	GP240GH	1.0619	A216 WCB		Stainless Steel	X4CrNiMo16-5	1.4418	
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	A351 CF8M	12	**Shaft sealing**			
2	**Disc**					Graphite	Graphite	316	316
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	A351 CF8M	13	**Cap screw**			
	Cast Iron	GP240GH (GS- C25 N)	1.0619	A216 WCB		Steel	A4-70		A193-B8
3	**Clamping ring**				14	**Cover plate**			
	Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti		Steel	H II	1.0425	A516-60
4	**Shaft**					Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti
	Stainless Steel	X39CrMo 17-1	1.4122	431	15	**Seal**			
	Stainless Steel	X5CrNiCuNb 16-4	1.4542	630		Grahpite - Stainless Steel			
5	**Seat ring**				16	**Stud bolt**			
	Stainless Steel	X5CrNiCuNb 16-4	1.4542	630		Steel	A2-70		A193-B8
	Graphite	Graphite	316	316	17	**Hexagon nut**			
6	**Bearing bush**					Steel	A2-70		A193-B8
	Stainless Steel	X6CrNiMoTi17-12-2	1.4571 nitriert	316 Ti	18	**Socket head cap screw**			
7	**Packing gland**					Steel	A4-70		A193-B8M
	Steel	H II	1.0425		19	**Blow-out prevention key**			
	Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti		Stainless Steel	X8CrNiS18-9	1.4305	303
8	**Thrust collar**				20	**Bracket**			
	Stainless Steel	X8CrNiS18-9	1.4305	303		=< DN 250	X5CrNi18-10	1.4301	304
9	**Bearing ring**					>DN 250	St galvanized		
	Stainless Steel	X6CrNiMoTi17-12-2	1.4571 h.verchr.	316 Ti	21	**Hexagon bolt**			
10	**Support washer**					Steel	A2-70		A193-B8
	Stainless Steel	X6CrNiMoTi17-12-2	1.4571	316 Ti					
						Other materials upon request.			

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HIGH PERFORMANCE BUTTERFLY VALVE HP 300

TORQUE

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

DN [mm]	Size [in]	Operating pressure 25 [bar]	40 [bar]	50 [bar]	63 [bar]
80	**3**	85	125	150	175
100	**4**	130	190	230	275
150	**6**	300	430	515	620
200	**8**	525	765	915	1100
250	**10**	820	1200	1430	1720
300	**12**	1180	1720	2060	2480
350	**14**	1610	2340	2800	3370
400	**16**	2100	3060	3660	4400
450	**18**	2700	3900	4600	-
500	**20**	3300	4800	5700	-
600	**24**	4700	6900	8200	-

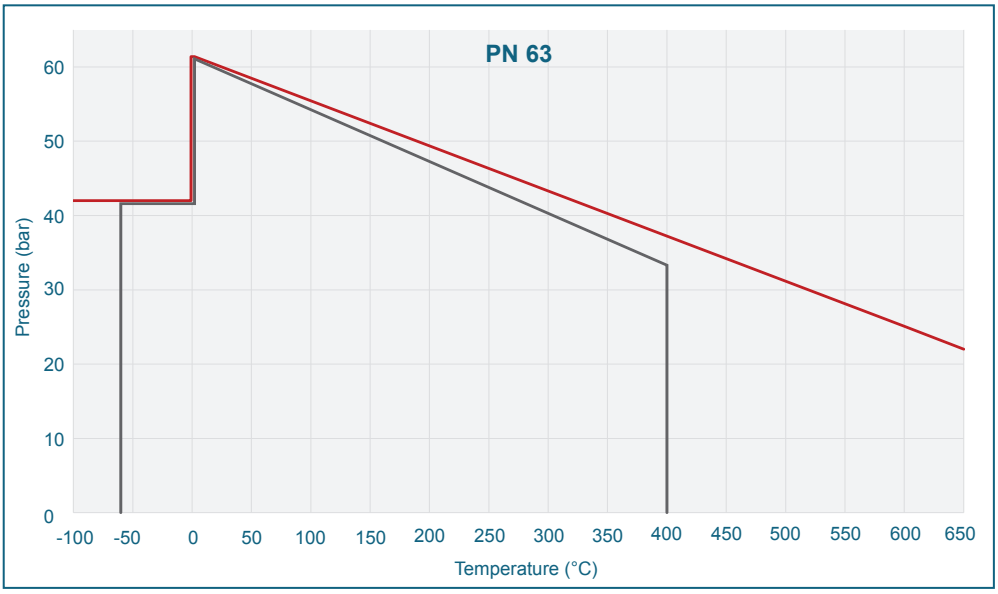
All values in Nm

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

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-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 Vmax 4,5 m/s for liquids, Vmax 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° 30°	40°	50°	60°	70°	80°	90°
80	**3**	8	28	66	110	144	166	173
100	**4**	13	46	110	183	241	277	288
150	**6**	34	117	279	466	613	704	734
200	**8**	36	132	324	560	909	1263	1403
250	**10**	38	147	368	819	1488	2067	2297
300	**12**	65	249	779	1693	2688	3278	3414
350	**14**	90	347	1085	2359	3744	4566	4756
400	**16**	120	461	1442	3135	4976	6068	6321
450	**18**	154	592	1850	4022	6385	7786	8111
500	**20**	192	739	2310	5021	7970	9719	10124
600	**24**	281	1082	3382	7352	11669	14231	14824

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