

QUALITY FEATURES ABRO

RESILIENT SEATED VALVE P 011-A

SHAFT RETAINER

The shaft retainer guarantees blow-out resistance of the shaft.

CONVEX FORM OF THE LINER

The end connection sealing faces of the liner have a convex form. During assembly of the valve into the pipeline controlled deformation of the volume of the liner achieved when clamping between flanges. This controlled deformation restricts any increase in operating torque and eliminates damage to or destruction of the elastomers.

POLISHED SEALING SURFACES

The sealing surfaces are mirror polished and guarantee low torque combined with tightness.

MULTIPLE BEARINGS

The shafts have multiple bearings. Optimal guidance even after many years of use. No contact corrosion.

NARROW TOLERANCES

Precision-machined bodies form the basis for perfect seating of the liner and precise positioning of the shaft.

DOUBLE- SIDED PROFILES

Double-sided profiles ensure the sleeve-body engagement in the outer body recess.

ROUND COLLAR

The collars at the shaft locations ensure accurate positioning of the liner within the valve body - sizes DN 250 and larger have an integral vulcanized in steel ring.

CONTINUOUS FORMING LOBE

The continuous forming lobe fits perfectly in the relevant groove of the body, stabilising the liner.



WAFER BUTTERFLY VALVE TYPE P 011-A ABRO

PIE through the simple construction and the great variation in materials, butterfly valves are broadly applied for various media such as water and air, but also chemical and aggressive media. Butterfly valves are used for open/close purposes, but are also suitable for simple regulating purposes, especially designed for the use in following markets:

Butterfly valves feature the following four general design options:

TECHNICAL DATA

Nominal diameter:	DN 50 - DN 1200
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 6/10/16 ASME Class 150 AS 4087 PN 16
Flange Surface Design:	EN 1092 Form A /B ASME RF, FF
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check:	EN 12266 (Leakage rate A) ISO 5208, Category 3
Temperature range:	-40°C to +200°C (depending on pressure, medium and material)
Operating pressure:	max. 16 bar



FEATURES

For easy adaption of both manual and automatic actuators the valve is executed with a top flange according to the ISO 5211 standard.

Applications of series P 011 A butterfly valves can be found amongst others in general industrial and maritime & petrochemical systems for media such as (ballast) water, gases, hydrocarbons and light corrosive media up to a maximum of 16 bar (PN 16 execution).

- Absolutely tight sealing with flow in either direction
- The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- Two shaft bearings prevent shaft deflection and guarantee optimum guidance even after many years of operational service
- Four flange mounting holes ensure correct valve location when installing
- Can be installed in any desired position
- Vertical & Horizontal Or any angle

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Available Sizes: DN 50 - DN 400

GENERAL APPLICATIONS:

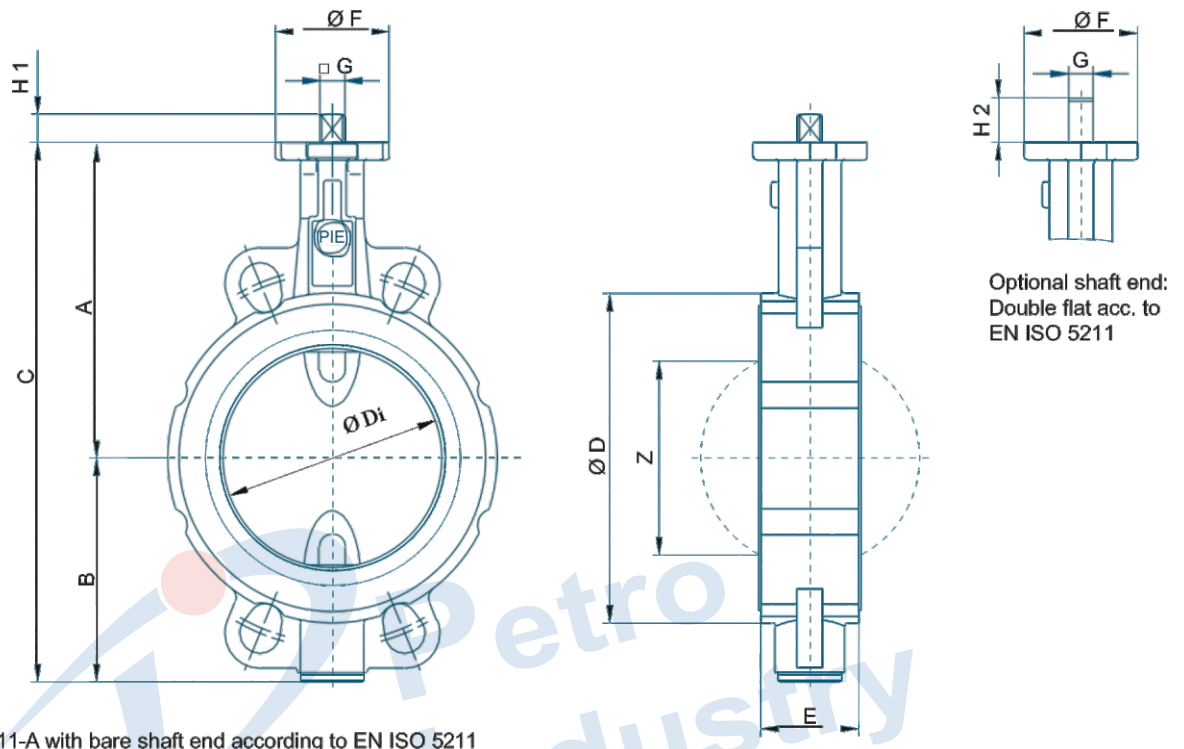
- General industry
- Maritime sector
- Chemical and petrochemical industries
- Potable water piping systems
- Water treatment plants
- Pneumatic materials handling technology
- Power generation industry
- Heating and air treatment



Ring type

This type is suitable for mounting between flanges acc. to DIN or ANSI ductile cast iron butterfly valve, ring type with centric disc, through-going shaft and replaceable rubber liner. Body fitted with four centering holes and suitable for installation between flanges rated DIN PN 10/16 and ANSI 150#. Short Face To Face acc. to ISO 5752 table 5 short, API 609, DIN 3202 K1 and BS 5155. The body is fitted with a top flange rated ISO 5211 as required for mounting of various manual controls or automatic controls. This type of butterfly valve is general used in systems for water, gases, hydrocarbons and light corrosive media up to a maximum of 16 bar (PN 16 model).

WAFER BUTTERFLY VALVE TYPE P 011-A ABRO



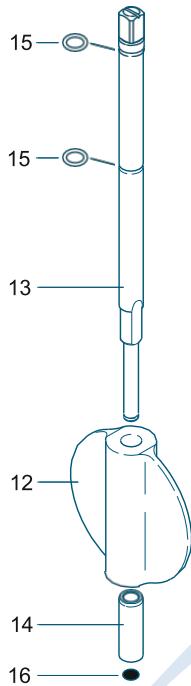
Dimensions [mm]														Weight [kg] (GG 25)	
DN [mm]	Size [in]	A	B	C	D	Di	E	F	Flange	G	H1	H2	Z	2 Piece shaft	TS- shaft
20	¾	104	45	149	59	31,5	33	54	F04	11	12	19	-	1,3	-
25	1	104	45	149	63	31,5	33	54	F04	11	12	19	-	1,3	-
32	1¼	104	50	154	68	31,5	33	54	F04	11	12	19	-	1,4	-
40	2	113	66	179	80	38	33	54	F04	11	12	19	22	1,8	-
50		126	84	210	95	48,5	43	54	F04	11	12	19	25	2,2	-
65	2½	134	93	227	115	63,5	46	54	F04	11	12	19	45	2,9	-
80	3	157	104	261	138	78,5	46	65	F05	14	16	25	65	4,0	4,5
100	4	167	115	282	158	98,5	52	65	F05	14	16	25	85	5,2	5,8
125	5	180	127	307	188	123,5	56	65	F05	14	16	25	111	6,9	7,5
150	6	203	150	353	212	148	56	90	F07	17	19	30	139	9,5	11,0
200	8	228	176	404	268	199	60	90	F07	17	19	30	190	13,2	15,0
250	10	266	212	478	320	248	68	125	F10	22	24	39	240	22,5	25,5
300	12	291	237	528	370	296	78	125	F10	22	24	39	287	31,5	35,0
350	14	332	269	601	408	338	78	150	F12	*	*	-	330	39,4	45,0
400	16	363	314	677	470	388	102	150	F12	*	*	-	378	58,7	64,5
450	18	397	335	732	530	430,5	114	210	F16	*	*	-	417	91,0	95,5
500	20	437	371	808	574	494,5	127	210	F16	*	*	-	474	107,0	113,5
600	24	498	469	967	675	590	154	300	F16/F25	*	*	-	563	171,0	198,0
700	28	581	507	1088	772	680	165	300	F16/F25	*	*	-	660	251,0	304,0
800	32	630	556	1186	874	780	190	300	F25	*	*	-	757	355,0	375,0
900	36	696	617	1313	973	880	203	300	F25	*	*	-	860	456,0	498,0
1000	40	771	675	1446	1070	980	216	350	F30	*	*	-	956	570,0	718,0
1200	48	880	810	1690	1510	1170	254	350	F30	*	*	-	1154	-	1156,0

* According to mounted actuator

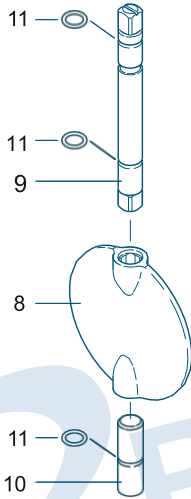
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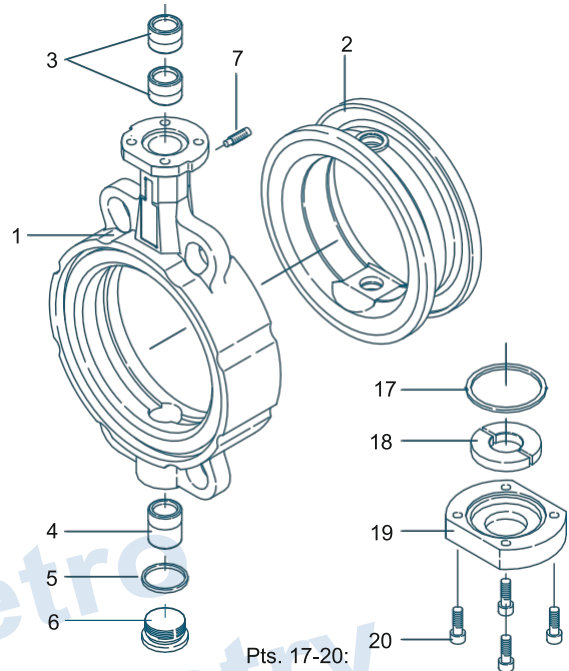
MATERIAL SPEZIFICATION AND PARTS LIST



TS-Version



Version with splitted shaft



Pts. 17-20:
Cover plate for
valve \geq DN 350

Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM
1	Body				9/10	Shafts			
	Aluminium alloy	G-AlSi9Cu3	3.2163	B 380.1		Stainless Steel	X39CrMo17-1	1.4122	
		G-AlSi10Mg	3.2381	361.1			X14CrMoS17	1.4104	430 F
	Grey Cast Iron	GG-25	0.6025	40 B			X5/(X2)CrNiMo17-12-2	1.4401/1.4404	316
	Nodular Cast Iron	GGG-40	0.7040	60-40-18			Hastelloy	2.4883	Hastelloy
		GGG-40.3	0.7043			Aluminum Bronze	CuAl10Ni	2.0975	
	Carbon Steel	GS-C25	1.0619	WCB	11	O-ring			
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M		NBR	Nitrile butadiene rubber		
2	Seat					FPM	Fluorocarbon rubber		
	NBR	Nitrile butadiene rubber			12	TS-disc			
	EPDM	Ethylene propylene diene monomer rubber				Nodular Cast Iron	GGG-40	0.7040	60-40-18
	CSM	Chlorosulfonated polyethylene rubber				Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M
	FPM	Fluorocarbon rubber				Aluminium Bronze	G-CuAl10Ni	2.0975	C 95800
	VSI	Silicone rubber				Coating	Halar, Rilsan		
	SBR-green	Styrene butadiene rubber				Surface quality	electropolished, mirror finished		
3/4	Bearing bush				13	TS-shaft			
	Brass	MS 58	2.0401	B 45		Stainless Steel	X14CrMoS17	1.4104	430 F
	Polyamide	PA 66					X39CrMo17-1	1.4122	
	PTFE	Polytetrafluorethylene					X5CrNiMo17-12-2	1.4401	316
5	Seal DIN 7603					Aluminum Bronze	CuAl10Ni	2.0975	
	Copper	Cu		Copper	14	Sleeve			
6	Plug screw DIN 908					Stainless Steel	X5CrNi18-10	1.4301	304
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M	15	O-ring			
7	Set screw DIN 915					NBR	Nitrile butadiene rubber		
	Steel	45 H galvanized				FPM	Fluorocarbon rubber		
	Stainless Steel	A4-70		B8M	16	Retaining ring			
8	Disc					Stainless Steel	X39CrMo17-1	1.4122	
	Steel	St 52.3	1.0570	572-50	17	O-ring			
	Stainless Steel	G-X5CrNiMo19-11-2	1.4301	304		NBR	Nitrile butadiene rubber		
		G-X6CrNiMo18-10	1.4408	CF8M	18	Shaft retainer			
		X2CrNiMo17-12-2	1.4404	316 L		Brass	MS 58	2.0401	B 45
		X6CrNiMoTi17-12-2	1.4571	316 Ti	19	Cover plate			
		G-X2CrNiMoN26-7-4	1.4469	F 51		Grey Cast Iron	GG-25	0.6025	40 B
		Hastelloy	2.4883	Hastelloy	20	Screw			
	Aluminium Bronze	G-CuAl10Ni	2.0975	C 95800		Steel	45 H galvanized		
	Coating	Halar, Rilsan, NBR, EPDM				Stainless Steel	A2-70		B 8
	Surface quality	electropolished, mirror finished					A4-70		B8M
							Other materials upon request		

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The values listed in the table are initial breakaway torques, taken with liquids and lubricant media.

Please regard these as approximate values, as the objective value depends on different factors like pressure, medium, rubber, quality, temperature ... etc.

- Our engineers look forward to help you with exact values for your application.

- Powdery (non-lubricant) media
Md x 1,3

- Dry gases/high viscous media
Md x 1,2

DN [mm]	Size [in]	Adapted disc size pressure rating			
		3 bar disc	6 bar disc	10 bar disc	16 bar disc
20	¾	5	5	5	-
25	1	5	5	5	-
32	1¼	5	5	5	-
40	1½	8	8	8	8
50	2	9	9	9	9
65	2½	18	18	18	18
80	3	8	10	18	24
100	4	9	18	28	37
125	5	15	22	45	59
150	6	36	45	78	125
200	8	59	76	140	200
250	10	150	180	200	240
300	12	200	240	280	360
350	14	350	540	610	700
400	16	420	620	750	850
450	18	720	746	860	1500
500	20	900	1100	2255	3690
600	24	1050	2100	3000	5830
700	28	1560	2240	3450	8100
800	32	2070	3800	6600	11200
900	36	2700	4900	7100	14500
1000	40	4600	6780	11500	24400
1200	48	7800	12000	21000	44000

All values in Nm

DN [mm]	Size [in]	Opening angle α°							
		20°	30°	40°	50°	60°	70°	80°	90°
20	¾	-	3,46	5,95	7,97	9,7	11,2	12,8	14,5
25	1	-	3,53	7,33	11,5	15,8	20,0	24,0	27,3
32	1¼	-	2,56	7,97	15,5	24,2	33,0	40,8	46,6
40	1½	0,94	4,96	11,9	20,7	30,4	40,2	49,0	55,8
50	2	3,84	10,1	20,7	34,4	49,7	65,2	79,5	91,2
65	2½	9,5	16,6	39,1	72,6	113	157	199	235
80	3	15,6	20,6	51,4	102	165	234	304	368
100	4	24,9	39,8	96,5	183	288	398	503	589
125	5	51,8	67,2	135	256	428	652	926	1250
150	6	76,5	97,3	197	375	629	957	1360	1830
200	8	137	187	373	697	1160	1760	2510	3400
250	10	227	271	563	1090	1850	2830	4010	5390
300	12	287	409	820	1550	2610	4050	5880	8120
350	14	399	488	1070	2110	3590	5480	7760	10400
400	16	557	703	1360	2600	4470	7060	10400	14600
450	18	716	907	1810	3440	5830	8980	13000	17800
500	20	875	1110	2250	4280	7180	10900	15500	20900
600	24	1230	1550	3150	6010	10090	15400	21800	29400
700	28	1100	1770	3590	6610	10900	16400	23200	31400
800	32	1670	2680	5450	10000	16500	24900	35200	47600
900	36	1960	3150	6390	11800	19300	29200	41300	55900
1000	40	2430	3890	7910	14600	23900	36100	51100	69100
1200	48	3500	5620	11400	21000	34500	52100	73800	99800

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