



# ABO valve

**GRIP THAT HOLDS**

## SERIES 2E-3

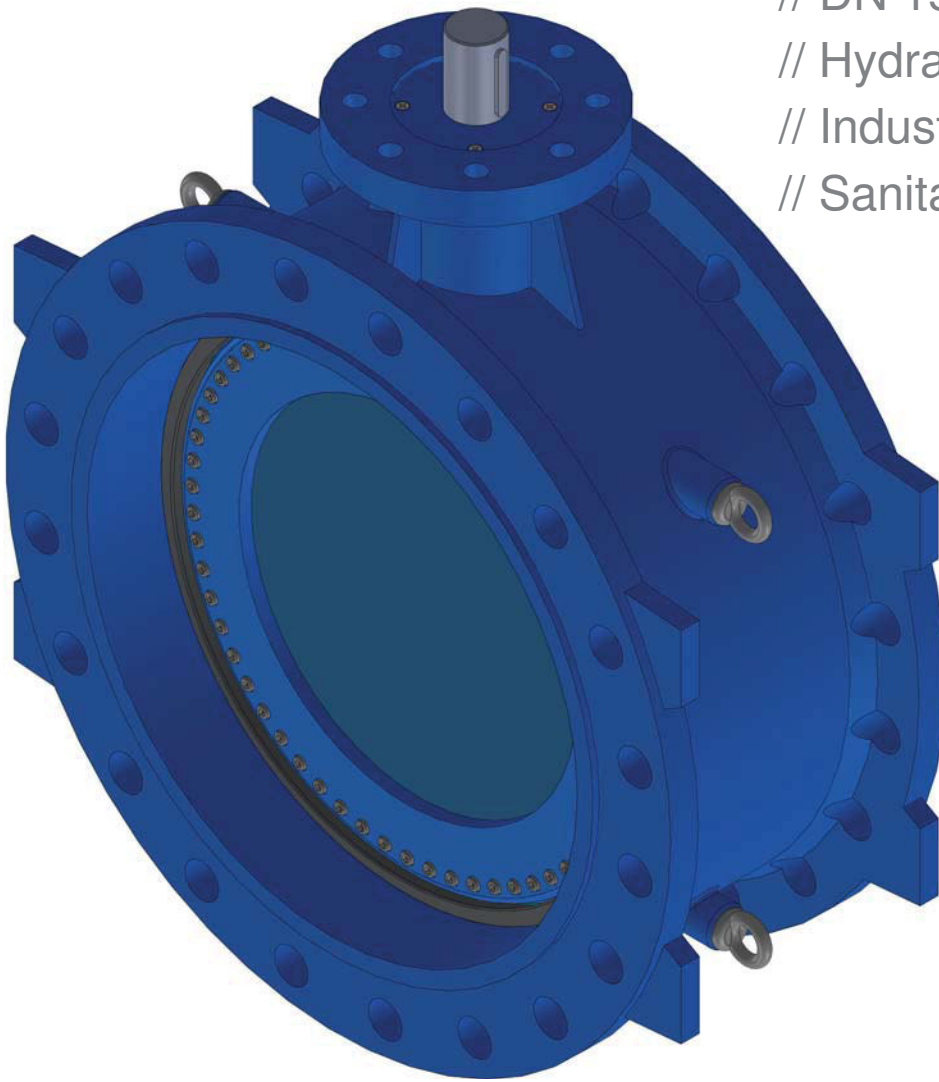
// PN 10/16/25/40

// DN 150 - 3000 (6" – 118")

// Hydraulic equipment

// Industrial piping

// Sanitary installations



**DOUBLE OFFSET FLANGED  
BUTTERFLY VALVES**

# GENERAL INFORMATION

## GENERAL CHARACTERISTICS

- DN 150 – 3000 (PN10/16/25/40)
- Double flanged design, double eccentricity
- On/off or regulating device
- Bi-directional sealing, standard & optional body seat
- Welded disc seat
- Stainless steel sealing
- Electrostatically applied coating
- Easy repair & maintenance
- Easy installation & mounting
- WRAS approval as option

## APPLICATIONS:

Double flanged butterfly valves Series 2E are suited for wide range of industrial applications including:

- Sanitary installations
- Industrial piping
- Hydraulic equipment
- Chilled water, potable water, waste water
- Irrigation & Drainage systems
- Sewage piping systems
- Desalination

The butterfly valves are not suitable for throttling. Disc's shafts should be always installed in horizontal position.

## STANDARDS

### LEAK TEST:

- EN 12266-1
- ISO 5208
- API 598

### FACE TO FACE ACC.:

- EN 558-1/14
- ISO 5752-14
- EN 558-1/13

### END CONNECTION:

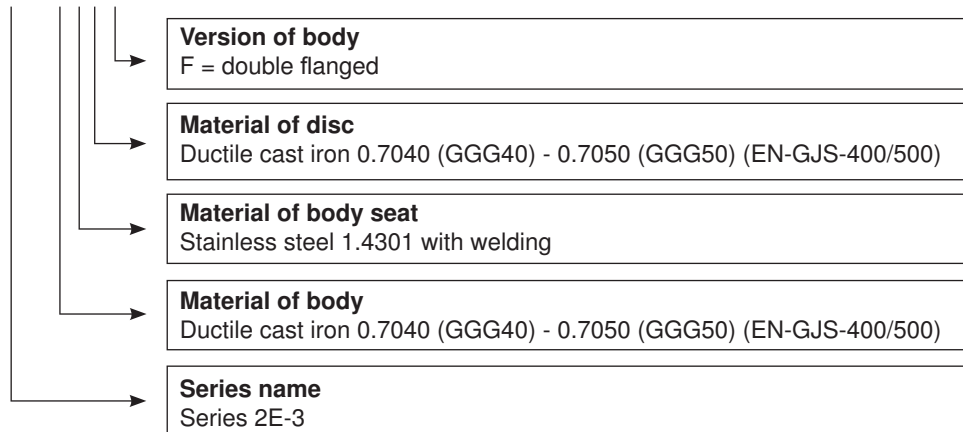
- EN 1092
- DIN PN10/PN16/PN25/PN40
- ASME B16.5 CLASS 150

### TOP FLANGE:

- EN ISO 5211

## TYPE DESIGNATION

2 E - 3 3 4 3 F



## INSTALLATION BETWEEN FLANGES (DN 150 – 3000 )

PN/DN	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1500	1600	1800	2000	2200	2400	2500	2600	3000	
PN 10																										
PN 16																										
PN 25																										
PN 40																										

■ standard    □ not available

## PRODUCT QUALITY AND CONTROL

ABO production facilities are certified in accordance to ISO 9001 quality system, which ensures product quality and precision in manufacturing as well as strict product testing. Quality control guidelines and procedures include number of steps in 3 main areas: Incoming materials control, In-production control and After-production control.

- Test procedures are established according to: EN 12266-1, ISO 5208, API 598, ANSI/FCI 70-2
- Manufacture according to the requirements of the European Directive 97/23/CE – Equipment under pressure (Category III, modul H)
- All ABO valves pass pressure tests to 110% of rated pressure to ensure bubble tight shutoff
- All actuators are calibrated and cycle tested before shipment
- Material Traceability Rule – Certification is provided for all supplied valves as per customer's request
- Positive Material Identification – All materials are subjected to PMI testing in order to verify Material Traceability Certificate

**Certificates** - Complete list of certificates can be found on [www.abovalve.com](http://www.abovalve.com).

# DESIGN BENEFITS

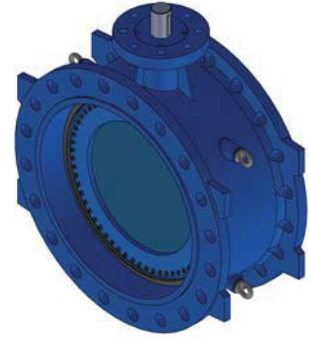
## EASY SEAT REPLACEMENT

Possibility of replacement of the profile sealing ring without disassembling the disc.



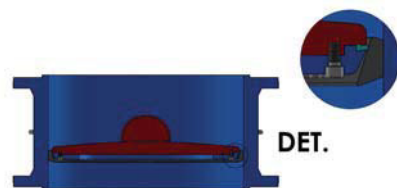
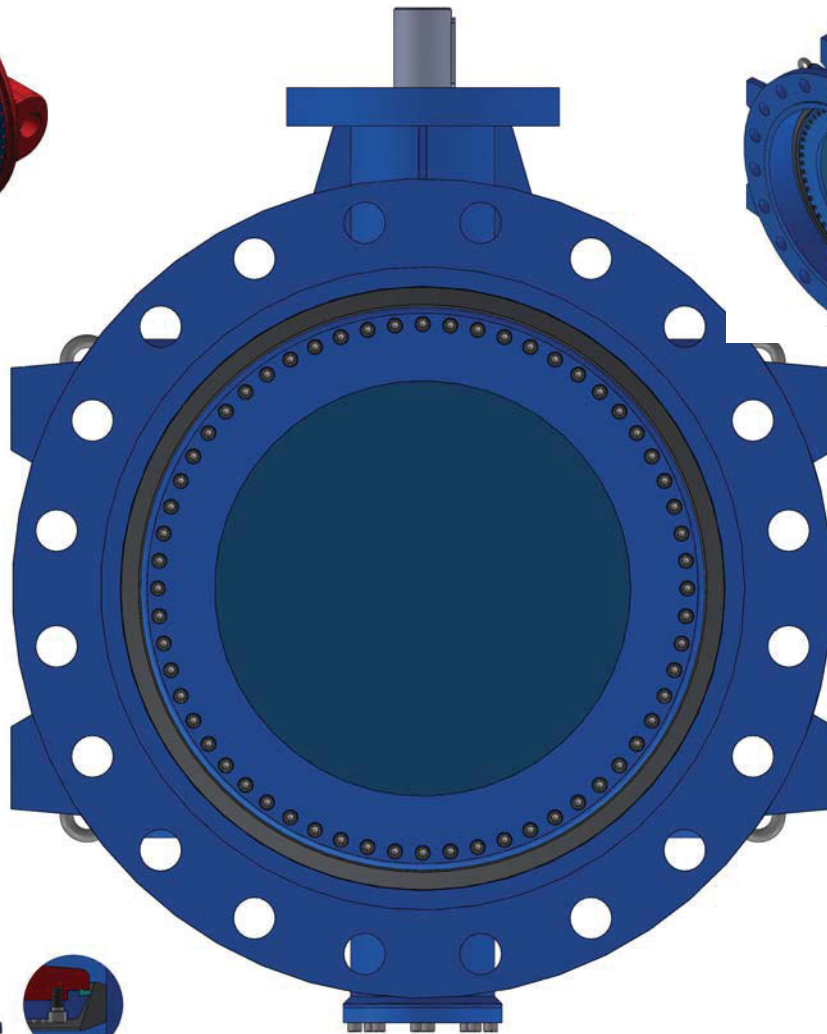
## INTERNATIONAL STANDARD COMPATIBILITY

Top flange acc. to ISO 5211 allows direct installation of manual gearboxes or actuators.



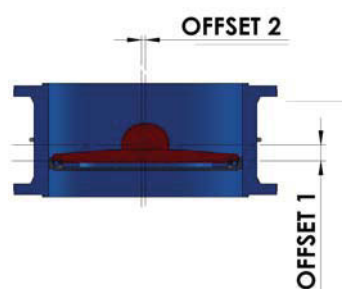
## IMPROVED SEALING PERFORMANCE

Automatic sealing system with enclosed and pressure-supported profile sealing ring.



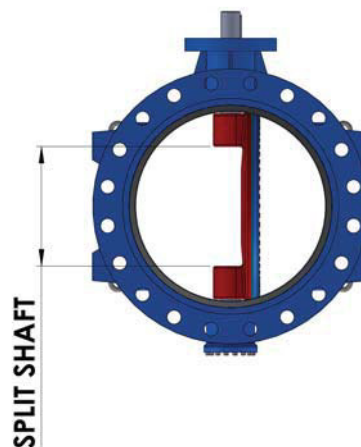
## SPLITTED STEM

Splitted stem allows higher flow rate and Kv value and lower pressure drop.



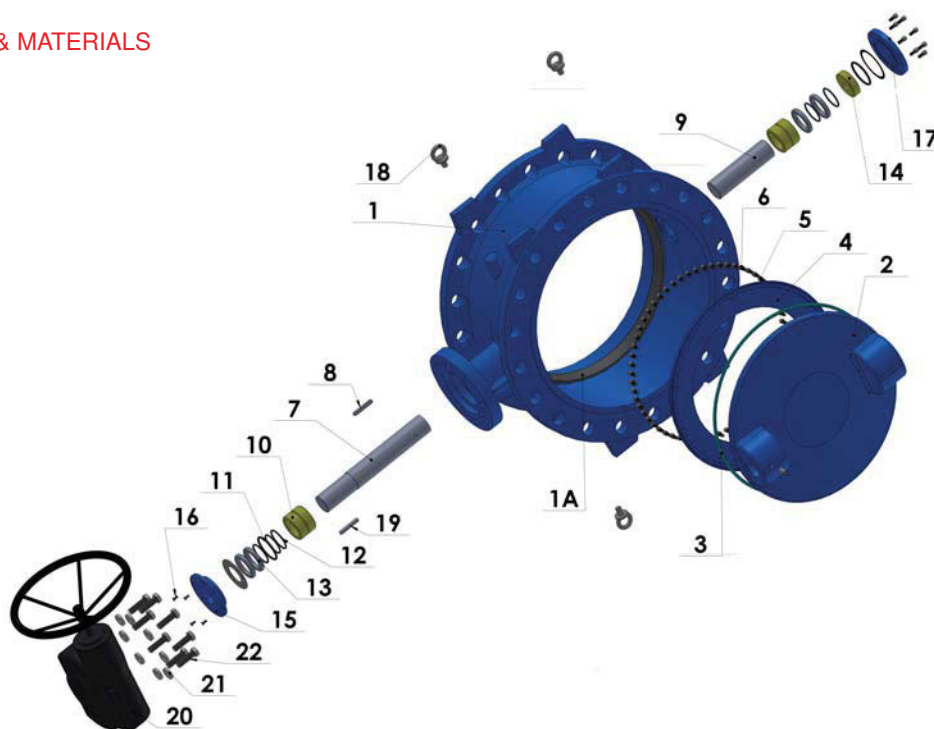
## DOUBLE OFFSET

Double offset design ensures perfect tightness and function of the valve, especially in case of water hammer. This offset results in friction during the first 10 degrees of opening and final 10 degrees of closing.



# MATERIALS & TECHNICAL INFORMATION

## DRAWING & MATERIALS



Item	Name	Material
1	Body	Ductile cast iron 0.7040 (GGG40) - 0.7050 (GGG50) (EN-GJS-400/500)
1A	Body seat	Stainless steel 1.4301 with welding
2	Disc	Ductile cast iron 0.7040 (GGG40) - 0.7050 (GGG50) (EN-GJS-400/500)
3	Disc sealing ring	EPDM
4	Retaining ring	Steel 1.0037
5	Bolt	Stainless steel A4
6	Setscrew	Stainless steel A4
7	Shaft	Stainless steel 1.4021
8	Key	Steel 1.1141
9	Shaft	Stainless steel 1.4021

10	Bushing	Bronze 2.0936
11	O-ring	NBR
12	O-ring	NBR
13	Adjustment ring	Delrin
14	Adjustment ring	Delrin
15	Cover	Steel 1.0037
16	Bolt	Steel A4
17	Cover	Steel 1.0037
18	Eye bolt	Steel A21CWCB
19	Key	Steel 1.0037
20	Gearbox	Grey cast iron GG 25 0.6025
21	Washer	Steel 1.0037
22	Bolt	Steel 8.8 A4

Execution in other material types can be provided upon request. Choice of the seat and disc materials for various media will be recommended upon specific enquiry.

### OPERATING TORQUES UPON WORKING PRESSURE (NM)

DN	150	200	250	300	350	400	450	500	600	700	800	900
PMA 10 bar	156	234	429	468	815,1	1313	1372	1950	4680	6318	10576	15535
PMA 16 bar	195	286	455	650	1430	1950	2600	2860	7800	11700	15600	20865
PMA 25 bar	150	429	858	1040	2488	4230	5495	6864	11700	25512	26400	38532

DN	1000	1100	1200	1300	1400	1500	1600	1700	1800	2000	2200
PMA 10 bar	24518	29640	30396	35230	37700	44525	65000	74100	100035	122330	169000
PMA 16 bar	33800	39000	58500	71500	65000	71500	117000	123500	125000	234000	247000
PMA 25 bar	52858	-	71500	-	104000	-	144000	-	180000	270000	289001

The given torque values include the 30% safety factor.

### COATING

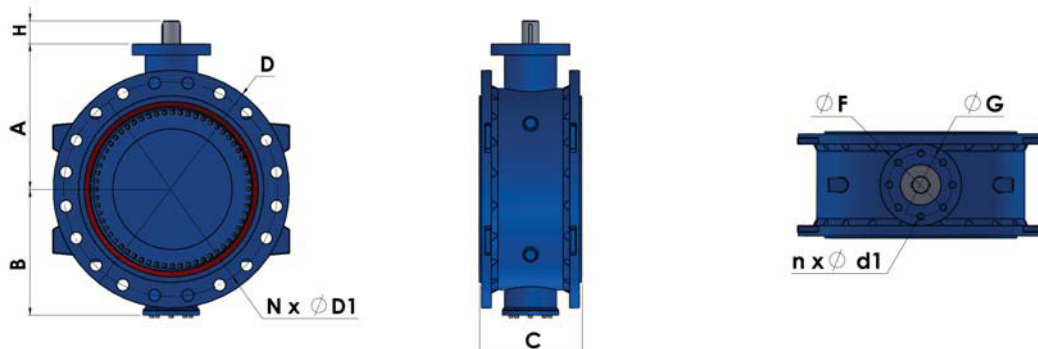
Epoxy coating is applied for excellent corrosion resistance. The coating is electrostatically applied (inside and outside) thickness 250 µ. ABO epoxy coating is executed in blue finish RAL 5005.

# WORKING CONDITIONS, DIMENSIONS

## DN 150 - 3000 (6" - 118"), PN (10, 16)

### WORKING CONDITIONS

- Working pressure: 10, 16 bar
- Working temperature: 0°C to +70°C (32°F – 158 °F) ≥ 70 °C (158 °F) upon request



DN		PN	D	C	A	B	D1 x N	„Free Shaft Weight“	H	n x Ø d1	Ø F	Ø G
mm	inch	bar	mm	mm	mm	mm	mm - N x mm	kg				
150	6"	10/16	285/-	210/-	164/-	190/-	Ø240-8xØ23/-	32/32	34	4 x 9	90	70
200	8"	10/16	340/340	230/230	198/198	227/227	Ø295-8xØ23/Ø295-12xØ23	43/46	40	4 x 10.5	125	102
250	10"	10/16	395/405	250/250	219/230	248/273	Ø350-12xØ23/Ø355-12xØ28	59/69	45	4 x 10.5	125	102
300	12"	10/16	445/460	270/270	254/254	296/296	Ø400-12xØ23/Ø410-12xØ28	84/95	64	4 x 14	150	125
350	14"	10/16	505/520	290/290	279/295	321/342	Ø460-16xØ23/Ø470-16xØ28	111/129	64	4 x 14	150	125
400	16"	10/16	565/580	310/310	320/334	367/372	Ø515-16xØ28/Ø525-16xØ31	146/171	70	4 x 18	175	140
450	18"	10/16	615/640	330/330	359/368	397/423	Ø565-20xØ28/Ø585-20xØ31	179/222	92	4 x 18	175	140
500	20"	10/16	670/715	350/350	393/400	448/460	Ø620-20xØ28/Ø650-20xØ34	233/289	100	4 x 23	210	165
600	24"	10/16	780/840	390/390	450/480	510/478	Ø725-20xØ31/Ø770-20xØ37	323/460	110	4 x 23	210	165
700	28"	10/16	895/910	430/430	530/563	528/555	Ø840-24xØ31/Ø840-24xØ37	494/630	110	8 x 18	300	254
800	31"	10/16	1015/1025	470/470	614/623	606/613	Ø950-24xØ34/Ø9515-24xØ41	653/824	114	8 x 18	300	254
900	35"	10/16	1115/1125	510/510	675/698	665/689	Ø1050-28xØ34/Ø950-28xØ41	914/1033	130	8 x 22	350	298
1000	39"	10/16	1230/1255	550/550	748/766	739/782	Ø1160-28xØ37/Ø1050-28xØ44	1141/1470	146	8 x 22	350	298
1200	47"	10/16	1455/1485	630/630	865/910.5	881/903	Ø1380-32xØ41/Ø1390-32xØ50	1706/2352	165	8 x 33	415	356
1400	55"	10/16	1675/1685	710/710	1011/1063	1003/1071	Ø1590-36xØ44/Ø1590-36xØ50	2619/3255	202	8 x 33	415	356
1500	59"	10/16	1785/1820	750/750	1112/1120	1078/1118	Ø1700-36xØ44/Ø1710-36xØ57	2840/3833	218	8 x 40	475	406
1600	63"	10/16	1915/1930	790/790	1161/1172	1128/1187	Ø1820-40xØ50/Ø1820-36xØ57/4-M52	3382/4449	250	8 x 40	475	406
1800	71"	10/16	2115/2130	870/870	1324/1416	1319/1397	Ø2020-44xØ50/Ø2020-36xØ57/8-M52	4574/6510	260	8 x 40	475	406
2000	79"	10/16	2325/2345	950/950	1436/1583	1424/1496	Ø2230-48xØ50/Ø2230-48xØ62	6701/8610	305	12 x 40	560	483

Execution in other material types can be provided upon request. Choice of the seat and disc materials for various media will be recommended upon specific enquiry. Max. temperatures for each material of seat are accepted only for a specific medium and short time exposure. Please always consult material selection with the manufacturer.



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