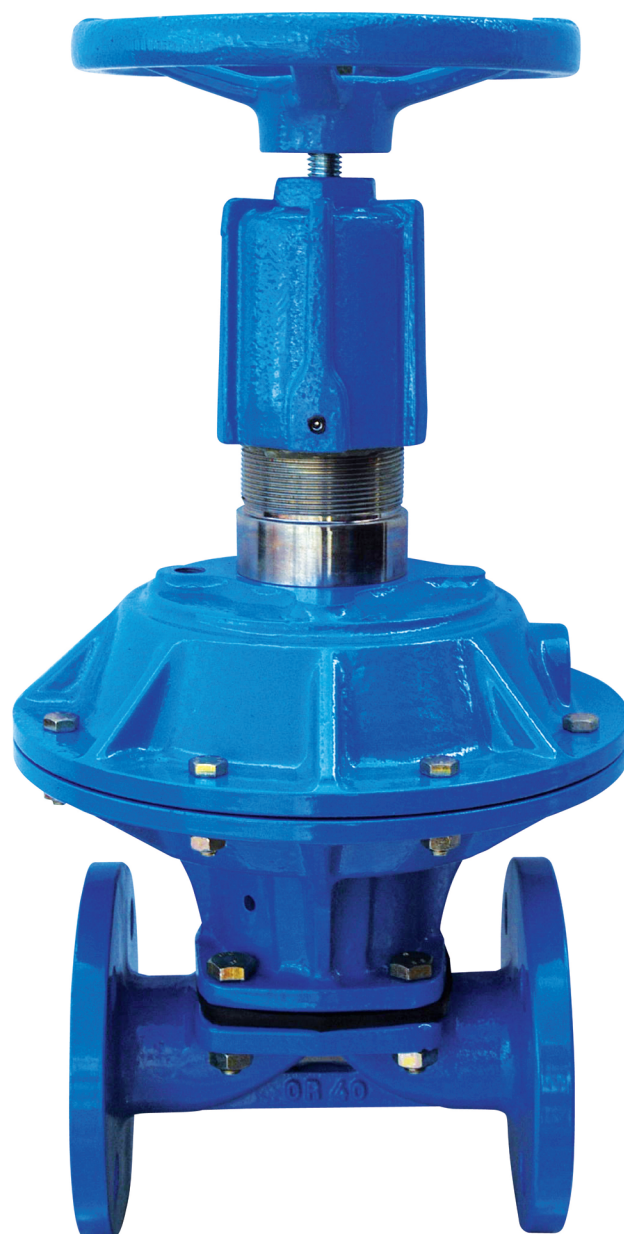
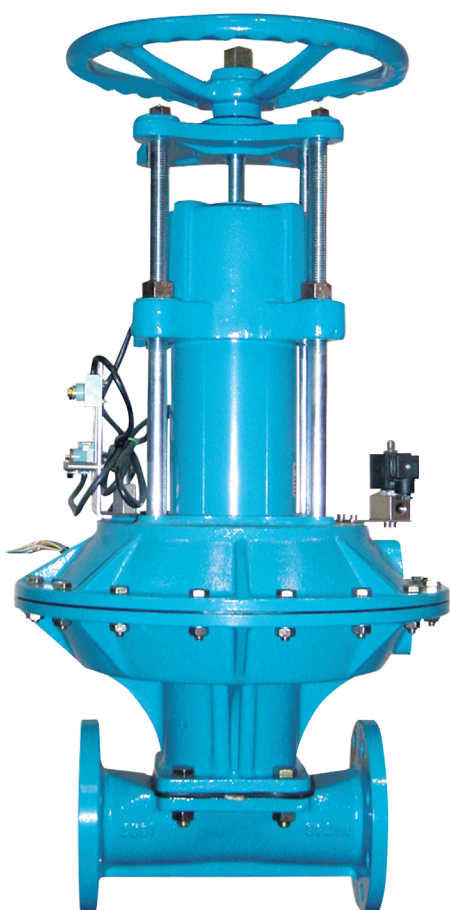




SERIES 85 & 100

PN 10/16 // Class 150

DN 15–300 (½"–12")



DIAPHRAGM VALVES

GENERAL INFORMATION

GENERAL CHARACTERISTICS

- DN 15–300
- Monoblock bidirectional valve
- Three part design bonnet
- Total watertightness when closed and to the outside
- Valve usable in any position
- Simple, safe mechanism
- Easy, infrequent maintenance
- Bonnet lubricated for long working life
- Suitable to work in vacuum environment
- No packing/gaskets inside the valve body
- Top flange acc. to ISO 5211 allows connection with various kinds of actuators (electric, pneumatic, hydraulic etc.)

APPLICATIONS

Diaphragm valves are suited for applications such as:

- Water and wastewater
- Potable water
- Chemical Processing
- Desalination
- Power Generation
- Mining slurry
- Process industry
- Food & beverage

STANDARDS

LEAK TEST:

- EN 12266
- ISO 5208

FACE TO FACE:

- DIN 3202
- BS 5156

CONNECTION BETWEEN FLANGES:

- EN 1092
- DIN PN6/PN16
- ASME B16.5

TOP FLANGE:

- ISO 5211

TYPE DESIGNATION

85 1 2 M

Type

- M – manual
- AD – air to close
- AD-V – air to close (with handwheel)
- AL-V – air to open

Material of diaphragm

- 1 – NBR
- 2 – EPDM
- 3 – Natural rubber
- 4 – Viton
- 5 – Butyl
- 6 – Silicone
- 7 – Neoprene
- 8 – Hypalon
- 9 – PTFE

Material of body

- 0 – Bronze
- 1 – Cast iron 0.6025 (GG25)
- 2 – Stainless steel 1.4308 (CF8)
- 3 – Ductile iron 0.7040 (GGG40)
- 4 – Stainless steel 1.4408 (CF8M)
- 5 – Carbon steel 1.0446/1.0619/1.0625 (A216 WCB)

Series name

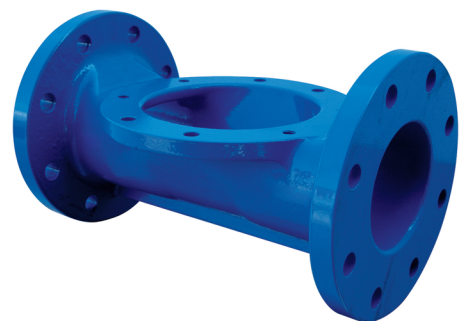
- Series 85
- Series 100

MODELS

Series 100
(weir)



Series 85
(straight way)



WORKING CONDITIONS

Working pressure:

a) handwheel

- DN 15–150: 10 bar
- DN 200–250: 8 bar
- DN 300: 4 bar

b) actuator (air close AD-V)

- DN 15–125: 10 bar
- DN 150–250: 8 bar
- DN 300: 4 bar

Recommended air supply pressure 4 bar

c) actuator (air open AL-V)

- DN 15–125: 10 bar
- DN 150: 6 bar
- DN 200–300: 3 bar

Recommended air supply pressure 5 bar

Working temperature:

• Max. working temperature is subjected to the selected lining material. Please consult with ABO representatives for detailed information.

Body lining:

- unlined: GG25 epoxy coated
- rubber coated: GG25 + hard rubber lining
- plastic lined body: GG25 + halar lining

Coating:

- RAL 5015 (other coating types upon request)

Maximum temperatures for each seat material are accepted only for a specific medium and limited time exposure. Contact ABO for material selection for various media and conditions.

DESIGN BENEFITS

SHAFT DESIGN

Shaft designed to reduce friction for low operating torque.

WEIR TYPE DESIGN

Series 100 with its weir type design reduces diaphragm travel for extended service and fine control.

INTERNATIONAL STANDARD COMPATIBILITY

Top flange according to standard ISO 5211 enables direct mounting of manual operators and actuators. Longer neck of ABO butterfly valves result in insulation of ISO top flange (protection of mounted actuator) and meeting heating system requirements.

DIAPHRAGM BODY DESIGN

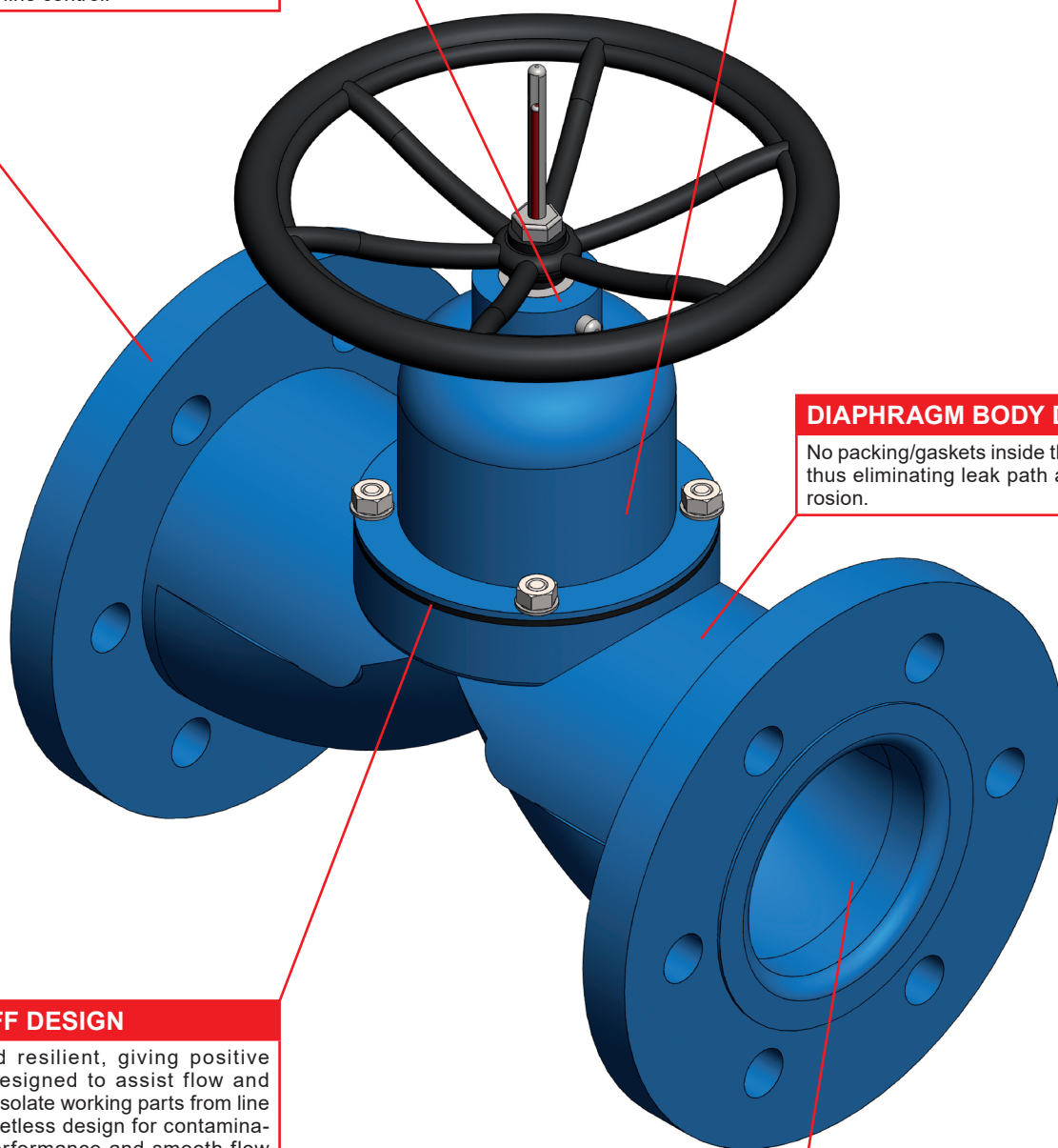
No packing/gaskets inside the valve body, thus eliminating leak path and deep corrosion.

SHUT-OFF DESIGN

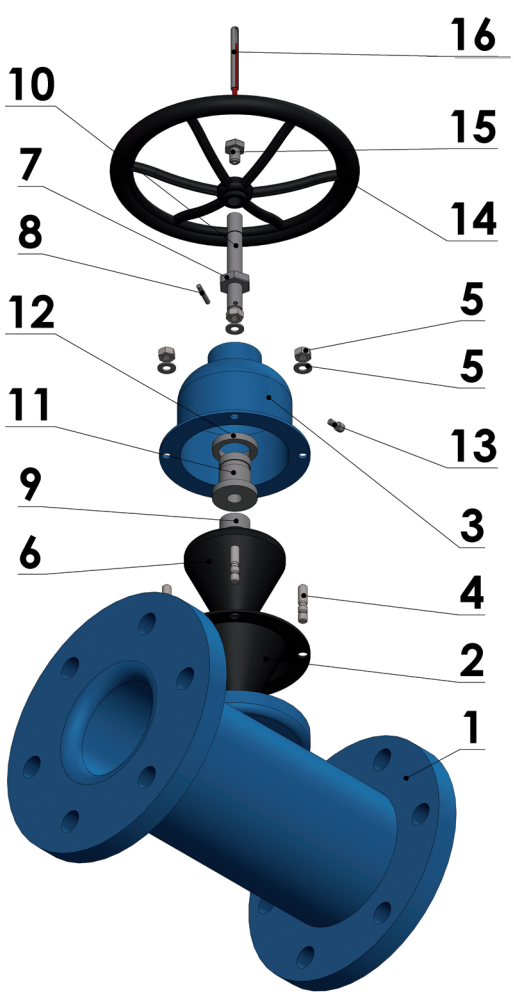
Strong and resilient, giving positive shut-off. Designed to assist flow and completely isolate working parts from line fluids. Pocketless design for contamination free performance and smooth flow characteristics. No gasket costs or pipe-line disturbance problems.

WIDE RANGE OF MEDIA

Suitable body & lining components for wide range of media - e.g: gas, oil, sea water, waste water, acids, slurry, industrial fluids.



SERIES 85 - DRAWING, MATERIALS

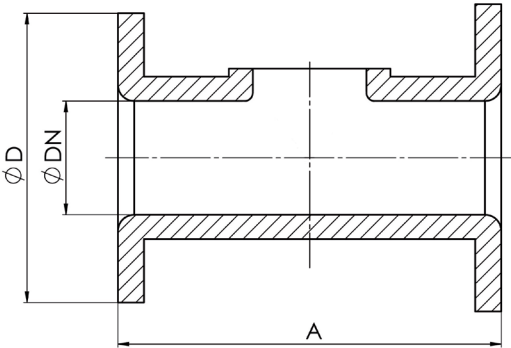


Item	Name	Material
1	Body	0 – Bronze
		1 – Cast iron 0.6025 (GG25)
		2 – Stainless steel 1.4308 (CF8)
		3 – Ductile iron 0.7040 (GGG40)
		4 – Stainless steel 1.4408 (CF8M)
2	Diaphragm	5 – Carbon steel 1.0446, 1.0619, 1.0625 (A216 WCB)
		1 – NBR
		2 – EPDM
		3 – Natural rubber
		4 – Viton
		5 – Butyl
		6 – Silicone
		7 – Neopreno
		8 – Hypalon
		9 – PTFE
3	Bonnet	Cast iron 0.6025 (GG25)
4	Studs	Steel
5	Nut and washer	Steel
6	Compressor	Cast iron 0.6025 (GG25)
7	Nut	Stainless steel
8	Pin	Stainless steel
9	Stem nut	Stainless steel
10	Stem	SS303
11	Bushing	PTFE
12	Ring	SS303
13	Greasing	Standard
14	Handwheel	Cast iron 0.6025 (GG25)
15	Nut indicator	Stainless steel
16	Indicator	Stainless steel

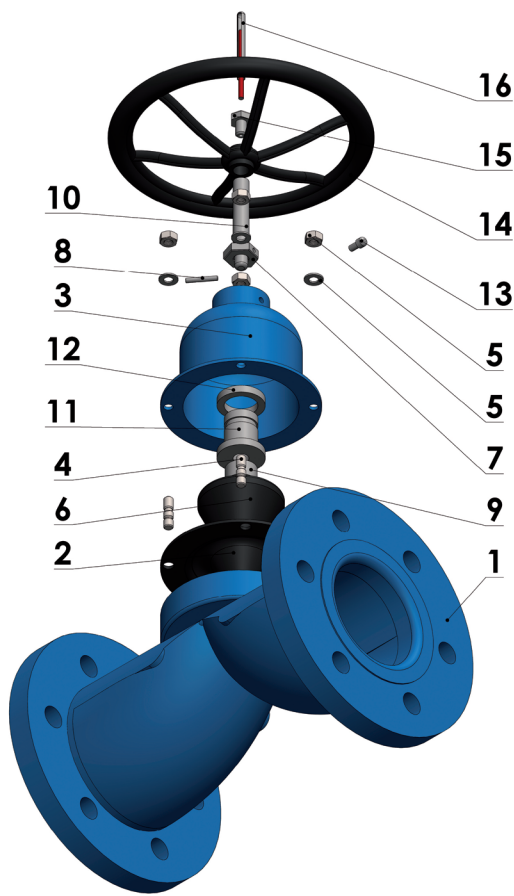
Other material execution upon request.

DN	NPS	Ø D		A	
		PN 10/16	ANSI 125/150	DIN 3202	BS 5156
15	½"	95	89	130	108
20	¾"	105	99	150	117
25	1"	115	108	160	127
32	1 ¼"	140	118	180	146
40	1 ½"	150	127	200	159
50	2"	165	153	230	190
65	2 ½"	185	178	290	216
80	3"	200	190	310	254
100	4"	220	228	350	305
125	5"	250	254	400	356
150	6"	285	280	480	406
200	8"	340	343	600	521
250	10"	395	406	650	635
300	12"	445	483	735/750/850	749

Dimensions mentioned in mm.



SERIES 100 - DRAWING, MATERIALS

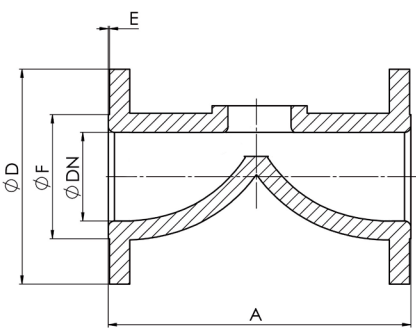


Item	Name	Material
1	Body	0 – Bronze
		1 – Cast iron 0.6025 (GG25)
		2 – Stainless steel 1.4308 (CF8)
		3 – Ductile iron 0.7040 (GGG40)
		4 – Stainless steel 1.4408 (CF8M)
2	Diaphragm (rubber)	5 – Carbon steel 1.0446, 1.0619, 1.0625 (A216 WCB)
		1 – NBR
		2 – EPDM
		3 – Natural rubber
		4 – Viton
		5 – Butyl
		6 – Silicone
		7 – Neopreno
		8 – Hypalon
		9 – PTFE
3	Bonnet	Cast iron 0.6025 (GG25)
4	Studs	Steel
5	Nut and washer	Steel
6	Compressor	Cast iron 0.6025 (GG25)
7	Nut	Stainless steel
8	Pin	Stainless steel
9	Stem nut	Stainless steel
10	Stem	SS303
11	Bushing	PTFE
12	Ring	SS303
13	Greasing	Standard
14	Handwheel	Cast iron 0.6025 (GG25)
15	Nut indicator	Stainless steel
16	Indicator	Stainless steel

Other material execution upon request.

DN	NPS	Ø D		A		Ø F	E
		PN 10/16	ANSI 125/150	DIN 3202	BS 5156		
15	½"	95	89	130	108	50	2
20	¾"	105	99	150	117	58	2
25	1"	115	108	160	127	68	2
32	1 ¼"	140	118	180	146	78	2
40	1 ½"	150	127	200	159	88	3
50	2"	165	153	230	190	102	3
65	2 ½"	185	178	290	216	122	3
80	3"	200	190	310	254	138	3
100	4"	220	228	350	305	158	3
125	5"	250	254	400	356	188	3
150	6"	285	280	480	406	212	3
200	8"	340	343	600	521	268	3
250	10"	395	406	650	635	320	3
300	12"	445	483	735/750/850	749	372	4
350	14"	505	533	750	-	440	4

Dimensions mentioned in mm.



ACTUATION, TORQUES, COATING

ACTUATION POSSIBILITIES

All ABO manual operators and actuators can be mounted directly to ABO diaphragm valves without the need for brackets or coupling. This allows for simple installation in the field, minimizes possible misalignment, and decreases overall height. All actuated diaphragm valves are equipped with auxiliary handwheel to secure proper closing/opening.

MANUAL ACTUATION: HANDWHEEL

For manual actuation, ABO offers handwheel in cast iron material. The ABO ergonomic and robust handwheel allows for great comfort and ease of operation.

ACTUATORS

- PNEUMATIC ACTUATORS – ABO pneumatic actuators available: double acting actuator (air open/air close), spring to close (to secure the closing when air fails), spring to open (to secure the opening when air fails).
- ELECTRIC ACTUATORS – ABO electric actuators available in 24V, 230V and 400V.

ACCESSORIES

ABO diaphragm valves can be automated using pneumatic and electric actuators fitted with a wide range of accessories including:

- Solenoid valves
- Switch enclosures
- Electro-pneumatic positioners
- Limit stops
- Emergency handwheel over-rides

INSTALLATION BETWEEN FLANGES (DN 15–300)

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
PN 6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PN 10														
PN 16														
CLASS 150	•	•	•	•	•	•	•	•	•	•	•	•	•	•

 standard

 upon request



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness

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1. 10. 2018

Data subject to change.

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