



ABO valve

GRIP THAT HOLDS

SERIES 85 and 100

// PN 10/16/Class 150

// DN 15 - 300 (1/2" - 12")



DIAPHRAGM VALVES

GENERAL INFORMATION - SERIES 85 & 100

GENERAL CHARACTERISTICS

- DN 15 – DN 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:

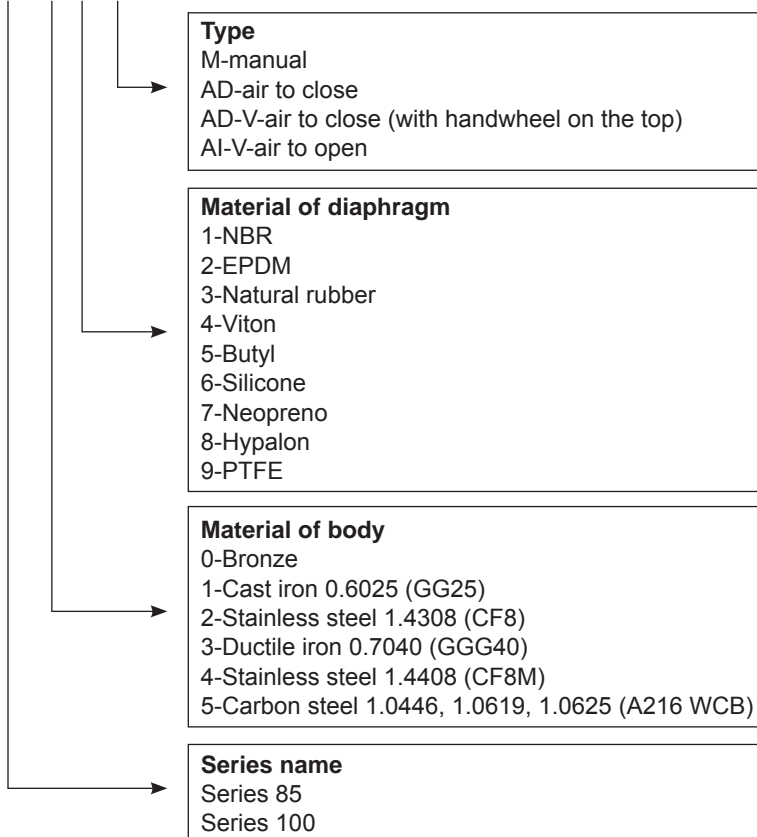
- Water and Wastewater
- Potable Water
- Chemical Processing
- Desalination
- Power Generation
- Mining slurry
- Process industry
- Food industry

STANDARDS

TEST & INSPECTION:	FACE TO FACE ACC.:	END CONNECTION:	TOP FLANGE:
• EN 12266	• DIN3202	• EN 1092	• EN ISO 5211
• ISO 5208	• BS5156	• DIN PN10/PN16	
		• ASME B16.5 CLASS150	

TYPE DESIGNATION

85 1 2 M



WORKING CONDITIONS

Working pressure

a) handwheel
DN15 (1/2") – DN150 (6"): 10 bar
DN200 (8") – DN250 (10"): 8 bar
DN300 (12"): 4 bar

b) actuated (air close AD-V)
DN15 (1/2") – DN125 (5"): 10 bar
DN150 (6") – DN250 (10"): 8 bar
DN300 (12"): 4bar
*Recommended air supply pressure 4 bar

c) actuated (air open AI-V)
DN15 (1/2") – DN125 (5"): 10 bar
DN150 (6"): 6 bar
DN200 (8") – DN300 (12"): 3 bar
*Recommended air supply pressure 5 bar

Working temperature

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

INSTALLATION BETWEEN FLANGES (DN 15-300)

PN	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

upon request

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 enables direct mounting of manual operators and power actuators. Longer necks of ABO diaphragm valves result in insulation of ISO top flange (protection of mounted actuator), and further in complying with Heating Systems Regulation standards.

DIAPHRAGM BODY DESIGN

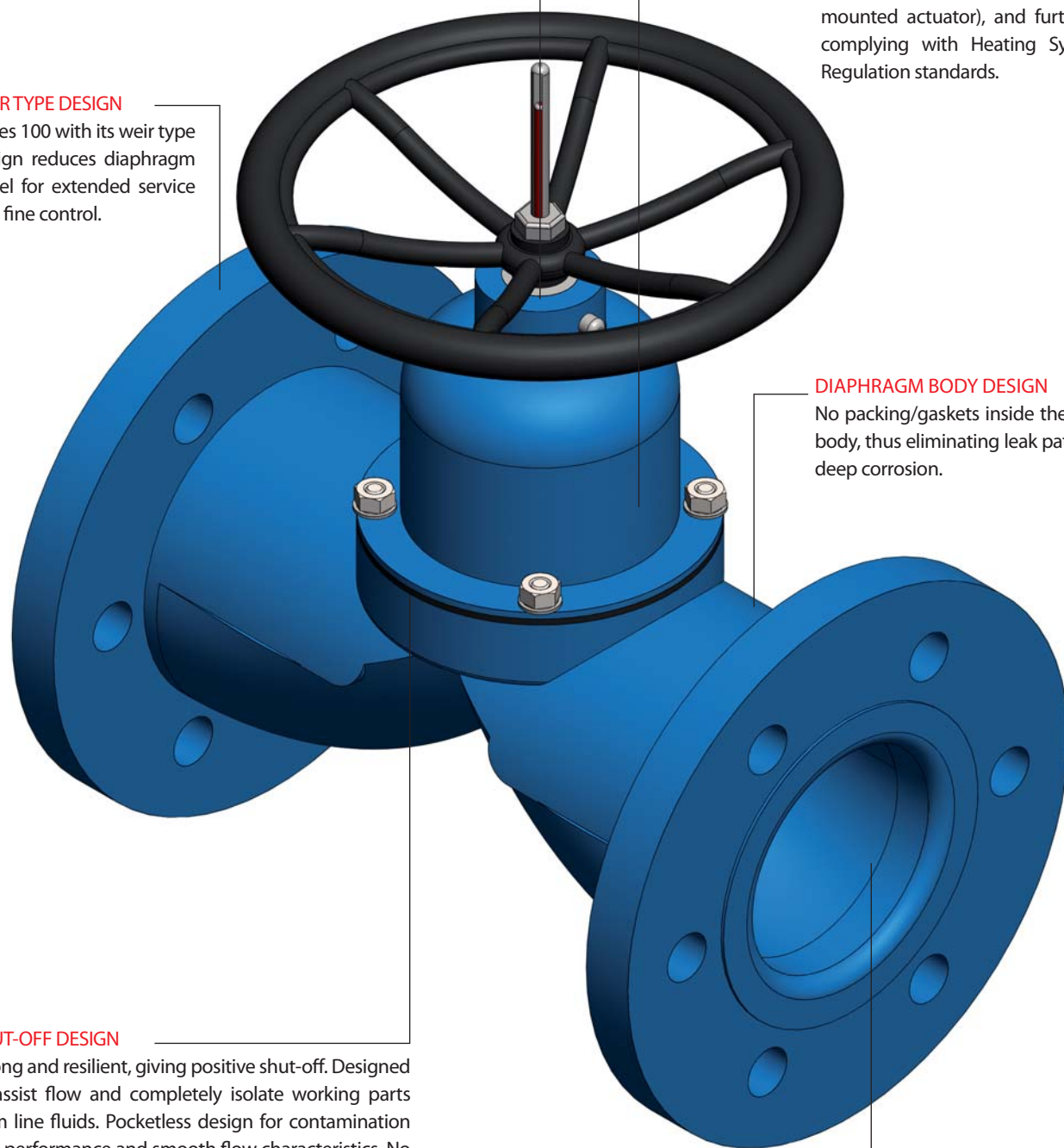
No packing/gaskets inside the valve body, thus eliminating leak path and deep corrosion.

SHUT-OFF DESIGN

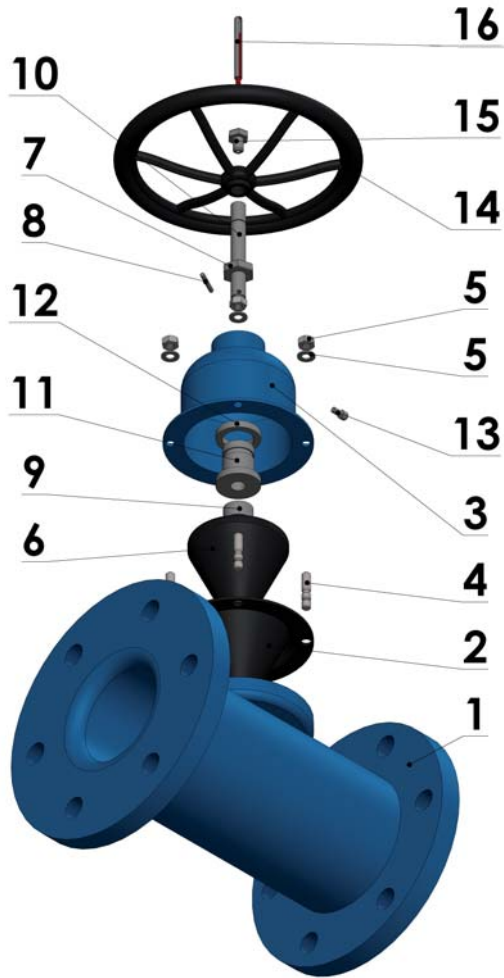
Strong and resilient, giving positive shut-off. Designed to assist flow and completely isolate working parts from line fluids. Pocketless design for contamination free performance and smooth flow characteristics. No gasket costs or pipeline disturbance problems.

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.



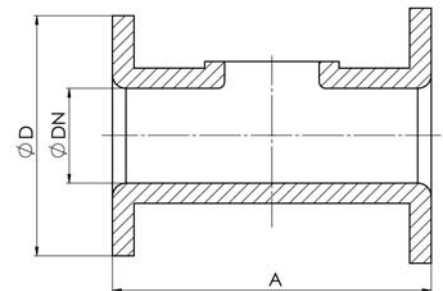
SERIES 85 - DRAWING, MATERIALS, DIMENSIONS: DN 15 - 300 / 1/2" - 12"



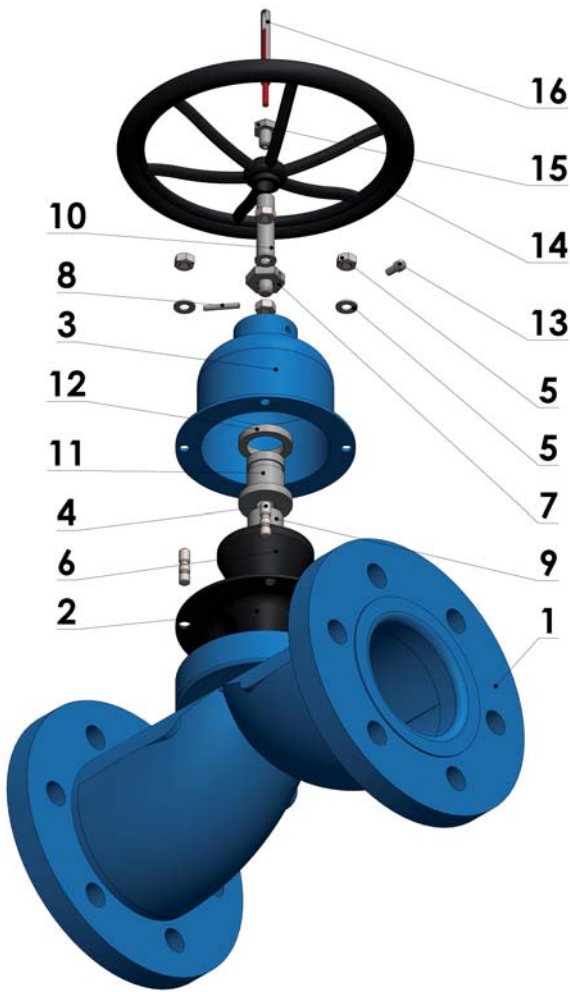
Item	Name	Material
1	Body	0-Bronze 1-Cast iron 0.6025 (GG25) 2-Stainless steel 1.4308 (CF8) 3-Ductile iron 0.7040 (GGG40) 4-Stainless steel 1.4408 (CF8M) 5-Carbon steel 1.0446, 1.0619, 1.0625 (A216 WCB)
2	Diaphragm	1-NBR 2-EPDM 3-Natural rubber 4-Viton 5-Butyl 6-Silicone 7-Neopreno 8-Hypalon 9-PTFE
3	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 upon request.

DN		Ø D		A	
mm	inch	PN 10/16	ANSI 125/150	DIN3202	BS5156
15	1/2"	95	89	130	108
20	3/4"	105	99	150	117
25	1"	115	108	160	127
32	1 1/4"	140	118	180	146
40	1 1/2"	150	127	200	159
50	2"	165	153	230	190
65	2 1/2"	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

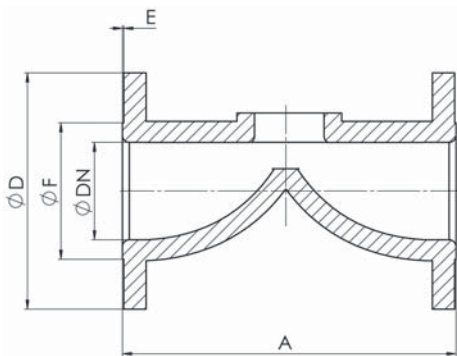


SERIES 100 - DRAWING, MATERIALS, DIMENSIONS: DN 15 - 300 / 1/2" - 12"



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 upon request.



DN		Ø D		A		Ø F	E
mm	inch	PN 10/16	ANSI 125/150	DIN3202	BS5156		
15	1/2"	95	89	130	108	50	2
20	3/4"	105	99	150	117	58	2
25	1"	115	108	160	127	68	2
32	1 1/4"	140	118	180	146	78	2
40	1 1/2"	150	127	200	159	88	3
50	2"	165	153	230	190	102	3
65	2 1/2"	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

ACTUATION, TORQUES, COATING

ACTUATION POSSIBILITIES

All ABO manual operators and actuators can be mounted directly to ABO diaphragm valves. Top flange designed to ISO 5211 ensures compatibility between the valve and its actuator. This feature eliminates the need for brackets or couplings, 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.

a) MANUAL (HANDWHEEL)

As standard, manually actuated ABO diaphragm valves are equipped with a handwheel in GG25 material. The ABO ergonomic and robust hand wheel allows for great comfort and ease of operation.

b) ACTUATOR

- PNEUMATIC ACTUATORS
 - 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 - Electric actuators of 24V, 230V and 400V can be installed on ABO diaphragm valves.

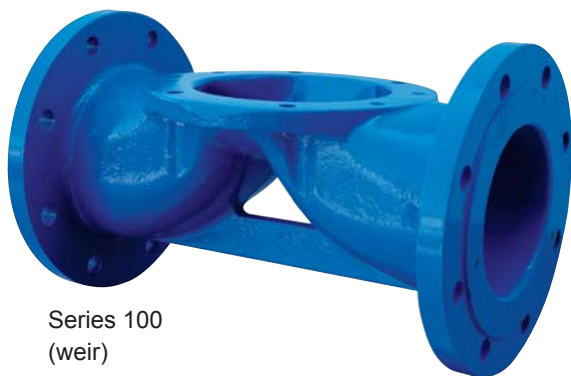
ACCESSORIES

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 hand wheel over-rides.

COATING

- Body lining: Unlined (GG25+Epoxy coated), Rubber coated (GG25+Hard rubber lining), Plastic lined body (GG25+Halar lining)
- Standard colour: RAL 5015, other variants can be offered upon request



Series 100
(weir)



Series 85
(straight way)

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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Data subject to change.

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