



®

MIRAB CO.

Manufacturer of Industrial Valves
and Relevant Equipment

**Single Chambers-Double Orifices
Triple Function Air Valves**



Single Chamber - Double Orifices Triple Function Air Valves

Size: DN 50 - 200 mm

Pressure rating: PN10 - 40 bars

Flange: drilling according to DIN EN 1092-2 (DIN 2501)

Function:

Automatic air venting of the fluid in the main and supply lines. In these types of valves the fluid flow activates the venting operation.

Large orifice:

Large venting orifice allows large volumes of air to be released on start-up and enter the pipe for vacuum breaking on shut down.

Small orifice:

Small venting orifice allows small volumes of air to be released under the fluid pressure

Application:
For working pressure of minimum 0.3 bar and fluid temperature up to 70°C (for other conditions on request).

Corrosion protection:

All casting parts, internal and outside, are covered with electrostatic epoxy powder coating.min.250 µm.

Hydrostatic test Pressure (bar) according to DIN EN 12266-1	
Nominal Pressure PN (bar)	Test Pressure
	Shell Test
10	17
16	25
25	38
40	60

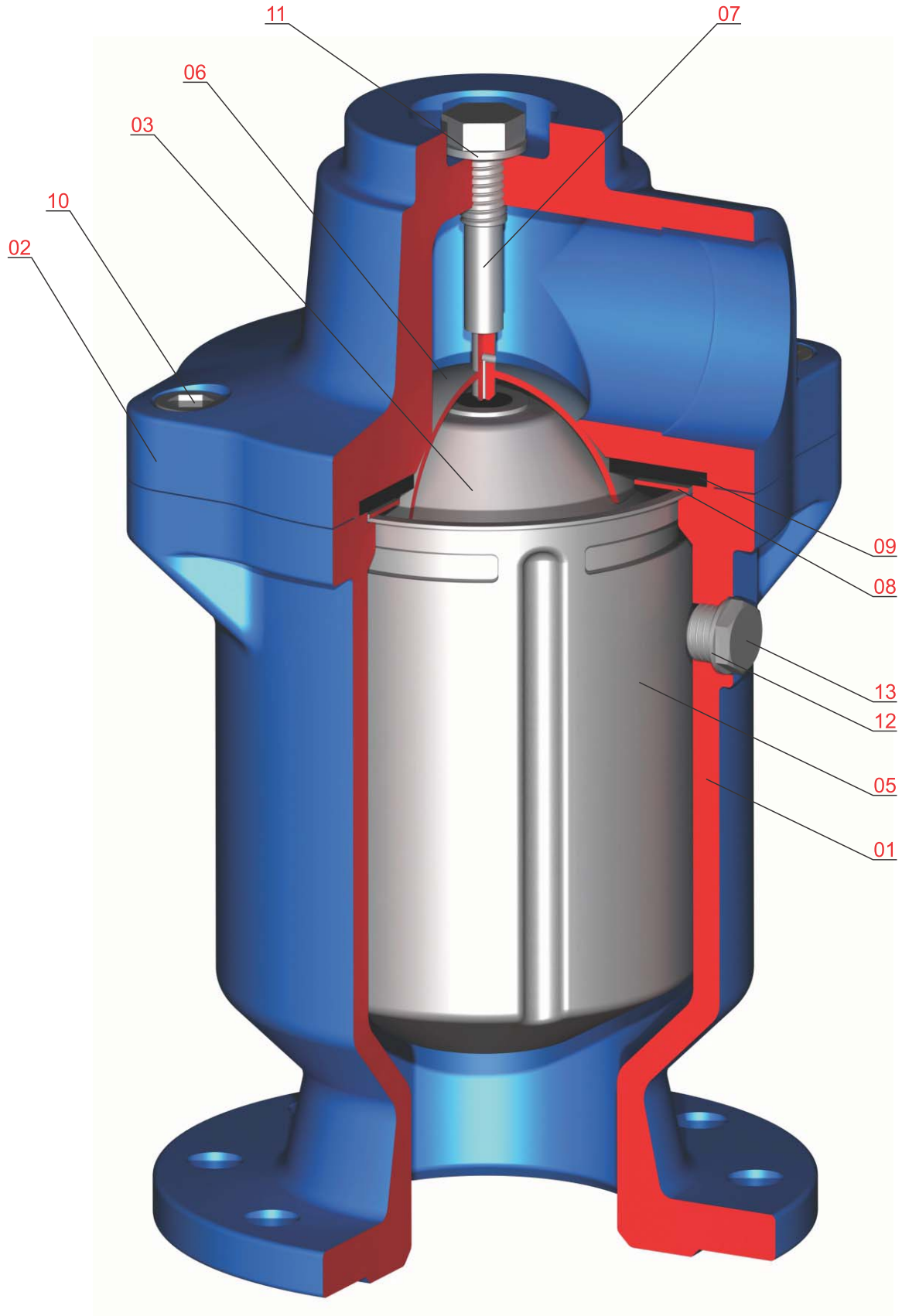
Advantages:

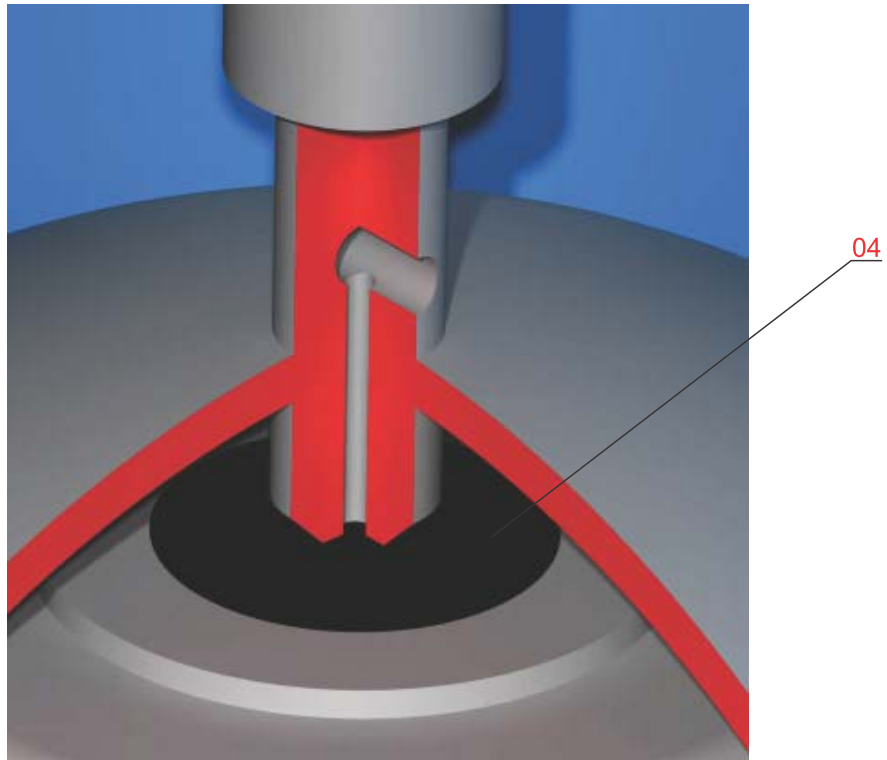
- Higher capacity than double chamber valves.
- Screws of corrosion resistant steel A2.
- Internal parts made of stainless steel.
- Electrostatic epoxy powder coating.
- Sealing: NBR or EPDM.
- Small dimension.
- Reliable design.





Part List





Part No.	Part Name	Part Material	1	2
01	Body	* EN 1563/ EN-GJS-400-15		
02	Bearing Cover	* EN 1563/ EN-GJS-400-15		
03	Float	** Polypropylene	•	
04	Gasket	EPDM (NBR on Request)	•	•
05	Shell Body	DIN EN 10088-3/ 1.4301		
06	Hood	DIN EN 10088-3/ 1.4301		
07	Guide screw	DIN EN 10088-3/ 1.4301	•	
08	Disc	DIN EN 10088-3/ 1.4301	•	
09	Sealing ring	EPDM (NBR on Request)	•	•
10	Socket Screw	ISO 3506-1, Gr. A2, Property Class 70		
11	Washer	ISO 3506-2, Gr. A2, Property Class 70		
12	Gasket	CU	•	
13	Plug screw	ISO 3506-1, Gr. A2, Property Class 70		

(1) Recommended Spare Parts

(2) Parts Subjected to Wear

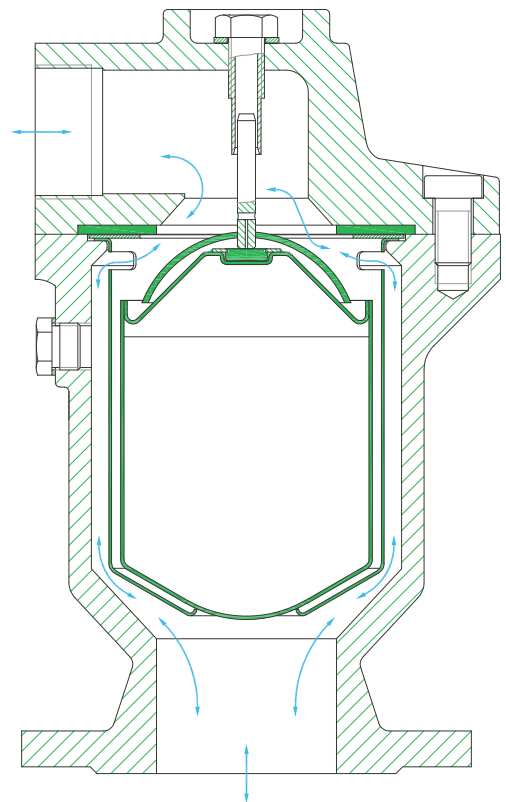
* EN-GJS-500-7 available on request.

** For pressure up to 16 bar Polypropylene and for higher pressure S.St.304
(S.St.304 available for all pressure on request.)

Operation
Air venting in shut-down

(Fig-1)

When the pipe pressure drops below atmosphere pressure, in the pipe drainage, the hood drops because of its weight and opens the large orifice.

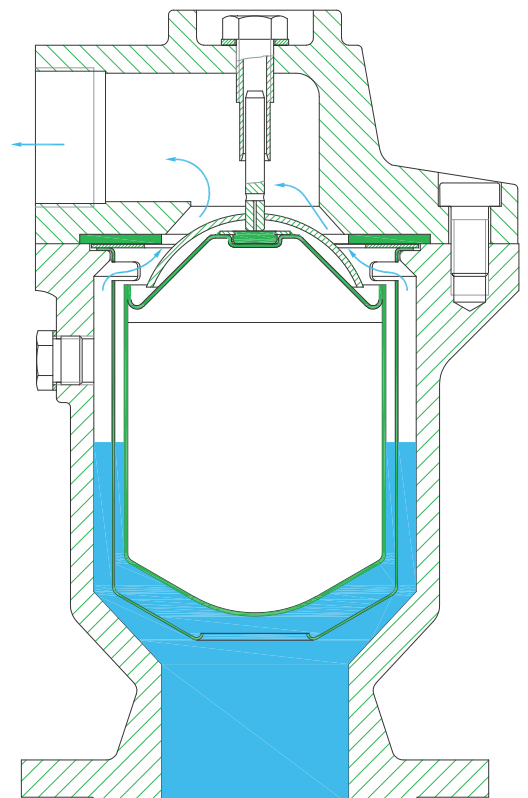


(Fig-1)

Air release in start-up

(Fig-2)

When the pipe line is filling up, the hood (because of its geometrical shape) stays down until the air is completely released from the pipe. The air exhaust speed could reach up to the speed of sound.

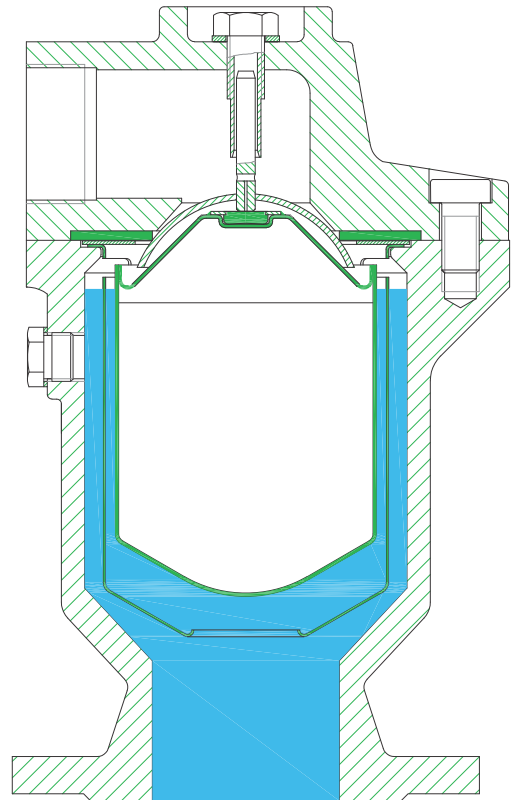


(Fig-2)

Filling up pipe

(Fig 2-3)

When the pipe is filled up, water level rises in the air valve & forces the float and the hood to rise and close the orifice.

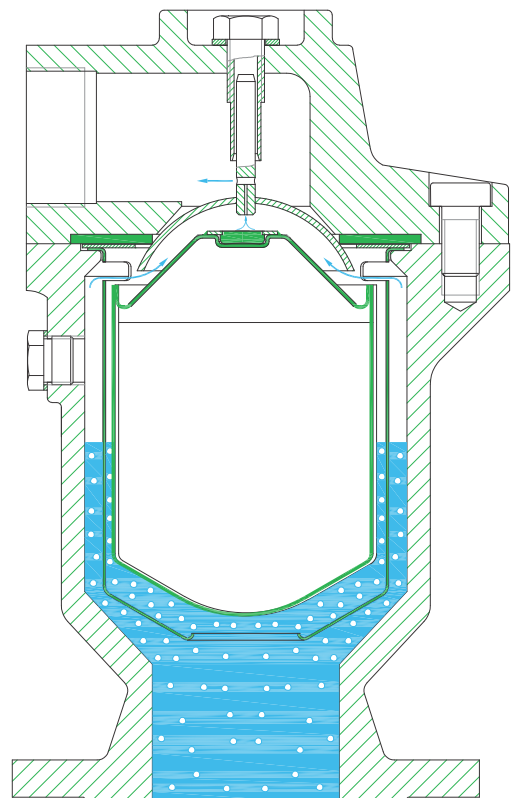


(Fig-3)

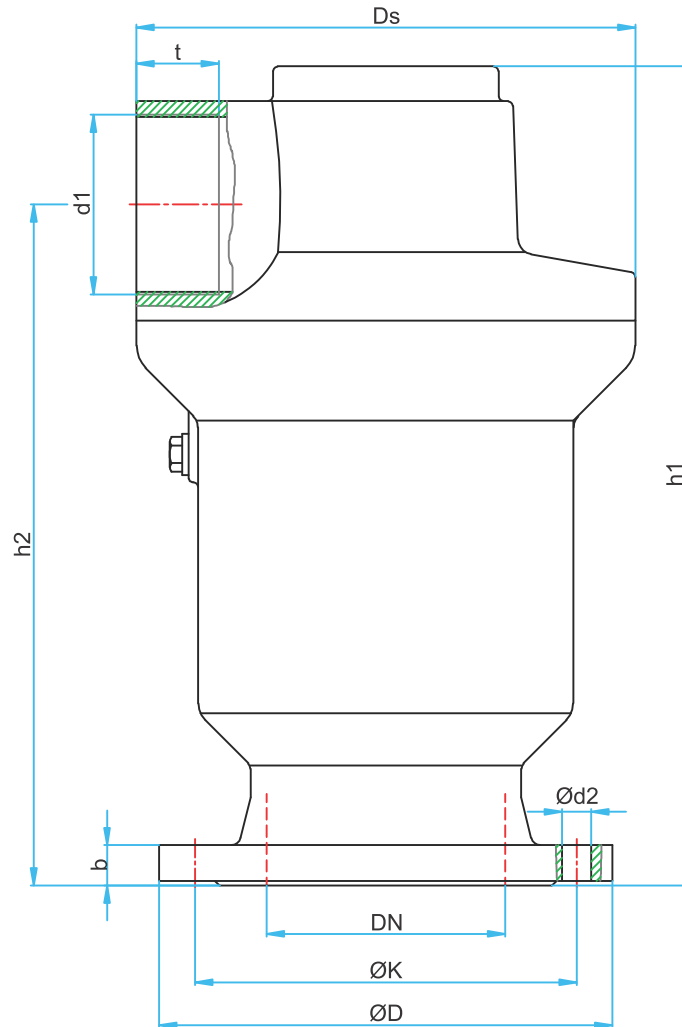
Air release during the line operation and under working pressure

(Fig-4)

In pumping condition, air traps start to accumulate at high points in the pipe line, forcing the water level down, so that the float and the hood of the air valve stays down to allow the air out of the pipeline. The float closes the orifice when the air is completely released from the line, and stays closed under the line pressure.



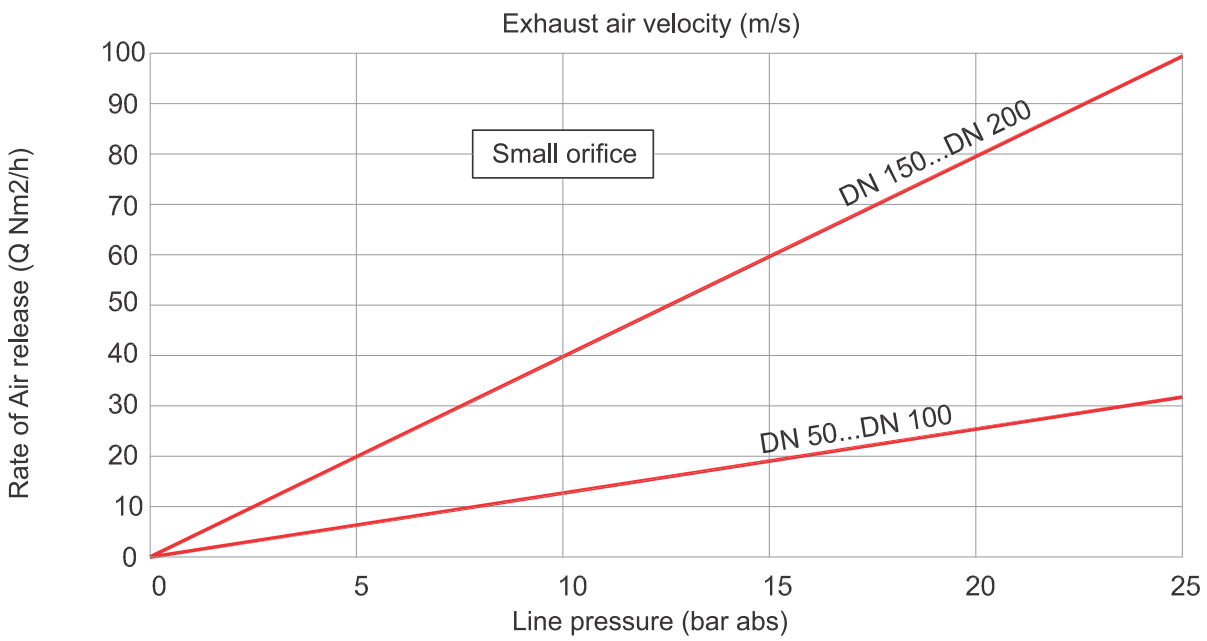
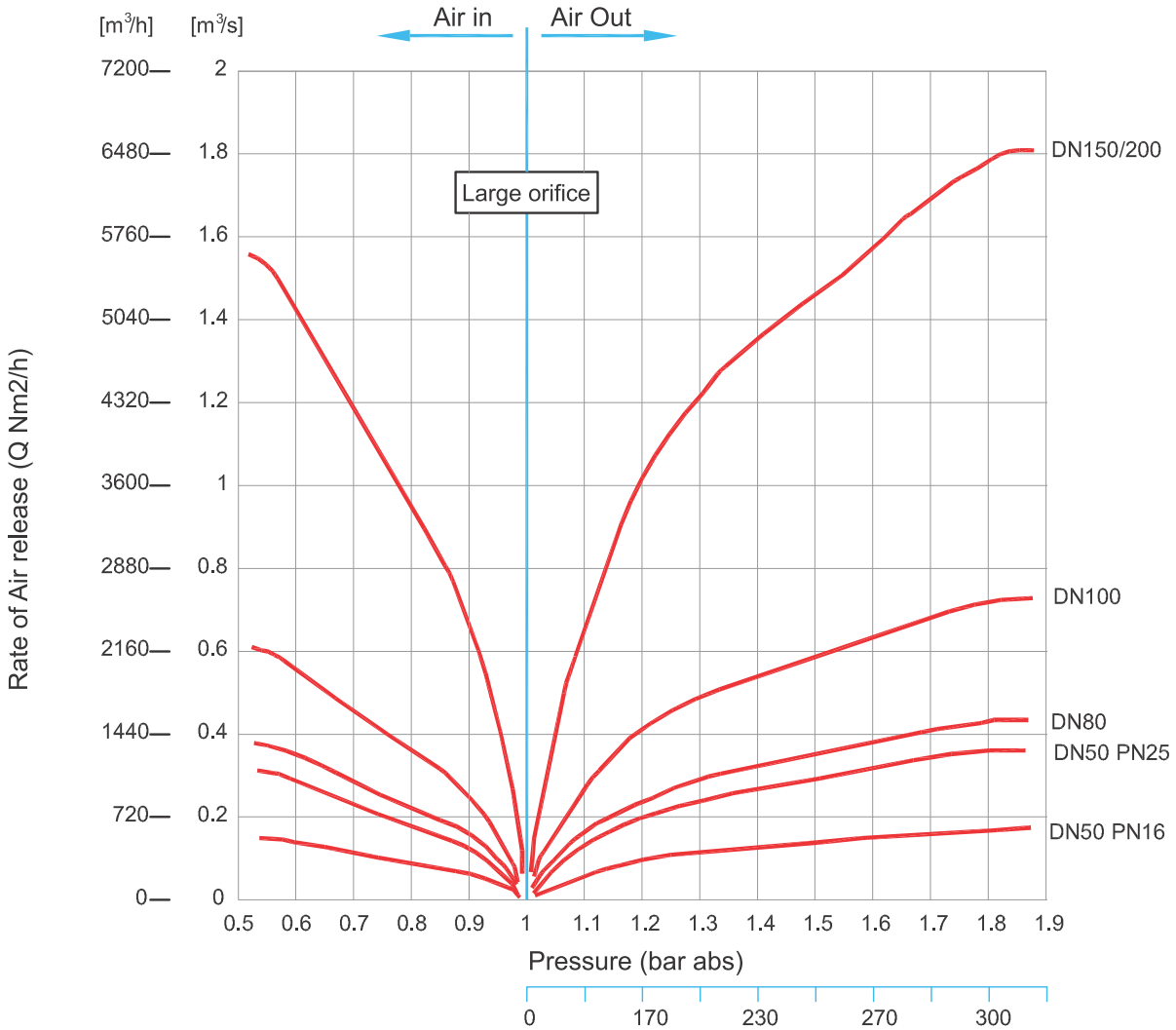
(Fig-4)

Dimensions and weight

• DIN EN 1092 - 2 (DIN 2501)

DN mm	PN bar	•ØD mm	•ØK mm	•Ød2 mm	•n	•b mm	h1 mm	h2 mm	Ds mm	d1 mm	t mm	~W (Kg)	~V (dm ³)
50	10.16.25	165	125	19	4	19	280	240	157	R1 ¼"	20	14.5	10
65	10.16.25	185	145	19	PN10,16=4 PN25=8	19	280	240	157	R1 ¼"	20	16.5	10
80	10.16.25	200	160	19	8	19	340	285	188	R2"	25	22	15
100	10.16	220	180	19	8	19	384	319	205	R2 ½"	30	28	20
	25	235	190	23								29.5	
150	10.16	285	240	23	8	19	510	423	266	R4"	52	55	40
	25	300	250	28		20						56.5	
200	10.16	340	295	23	PN10=8 PN16=12	20	510	423	266	R4"	52	59	40
	25	360	310	28	12							22	



Flow rate of inlet and outlet air



MIRAB Co' PRODUCTS

Butterfly Valves Family: Double Flanged Type, Butt-weld End, Wafer Type, Lug Type, Hydraulic Actuated, Pneumatic Actuated.

Gate Valves Family: Soft-Sealing Gate Valve, Metal Seat Gate Valve, Knife Gate Valve, Sluice Gate Valve.

Non Return Valves Family: Tilting Disc with Counter Weight, Tilting Disk with Counter Weight and Hydraulic Damper, Swing Check Valve, Silent Check Valve, Foot Valve, Nozzle Check Valve, Wafer Pattern Check Valve, Flap Valve.

Air Vent Family: Single Chamber - Double Orifices , Double Chambers - Double Orifices, Sewage Air Valves, Large - Orifice Air Valve.

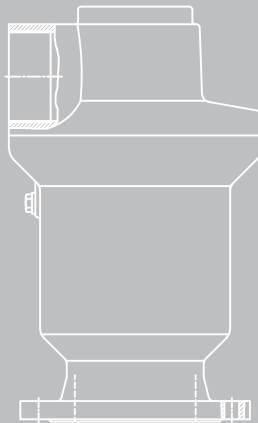
Control Valves Family: Automatic Control Valves, Needle Valve, Globe Valve, Fixed Cone Free Discharge Valve, Hollow Jet Valve, Sleeve Valve.

Hydrant Valves Family: Standing Type, Pit Type, Wet Barrel Fire Fighting Valve, Post Indicator Valve.

Strainers Family: Y Type, T Type, One Side Flanged Type.

Fittings Family: Dismantling Joint F1&F2, Pipe Coupling, Flange.

Actuators: Electrical, Hydraulic, Pneumatic, Portable Electrical.



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