DUCTILE IRON WASTEWATER COMBINATION AIR VALVE FLANGED CSA SCF

The SCF combination air valve is a high quality single chamber double function combination air valve that evacuates air during pipeline filling, allows release of air pockets from pressurized pipelines, and admits large volume of air in the event of pipe draining/burst, to prevent vacuum and negative pressure conditions.
Entirely made in ductile cast iron, with air release system and seat in stainless steel, SCF is designed to ensure long lasting and reliable performances also in presence of raw sewage keeping the solids and dirt away from the air release and sealing system.

Size : DN50 to DN200
Connection : Flanged PN10/16
Min Temperature : +0°C
Max Temperature : +60°C
Max Pressure : 16 Bars
Specifications : Discharge of large volumes of air
Air release during working conditions
Entrance of large volumes of air

Materials : Ductile iron EN GJS-450-10 body

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SPECIFICATIONS :

- Sewage main transmission lines, treatment plants
- Large lower body designed with strongly sloped funnel shaped walls to avoid deposit of grease or other material, and containing four ribs obtained by casting to guide the stainless steel float
- Upper body containing a casing that protects the air release device against spurts during rapid filling
- Mobile block including a large AISI 316 stainless steel float, placed on the lower body, and connected through a stainless steel rod to the air release system
- Flat obturator in solid polypropylene to avoid deformations and to prevent it from remaining stuck to the gaskets, while other materials have the tendency to do it
- Drainage valve for chamber control and draining
- Nozzle and gasket holder (patent pending) wear resistant thanks to gasket compression control
- Maintenance can be easily performed from the top without removing the air valve from the pipe
- Evacuation bend in polypropylene standard for DN 50/65 and on request for other DN (trough SUB kit)

USE :

- Sewage main transmission lines, treatment plants
- Irrigation systems in presence of solids/debris in suspension
- Whenever the technology of air valves for treated water can't be used for the risk of clogging and damages to the internal components
- Min and max temperature Ts : + 0°C to + 60°C
- Max pressure Ps : 16 bars
- Min Pressure Ps : 0.2 bar

RANGE :

- Ductile iron wastewater combination air valve flanged PN10/16 from DN50 to DN200 **Ref.3160**

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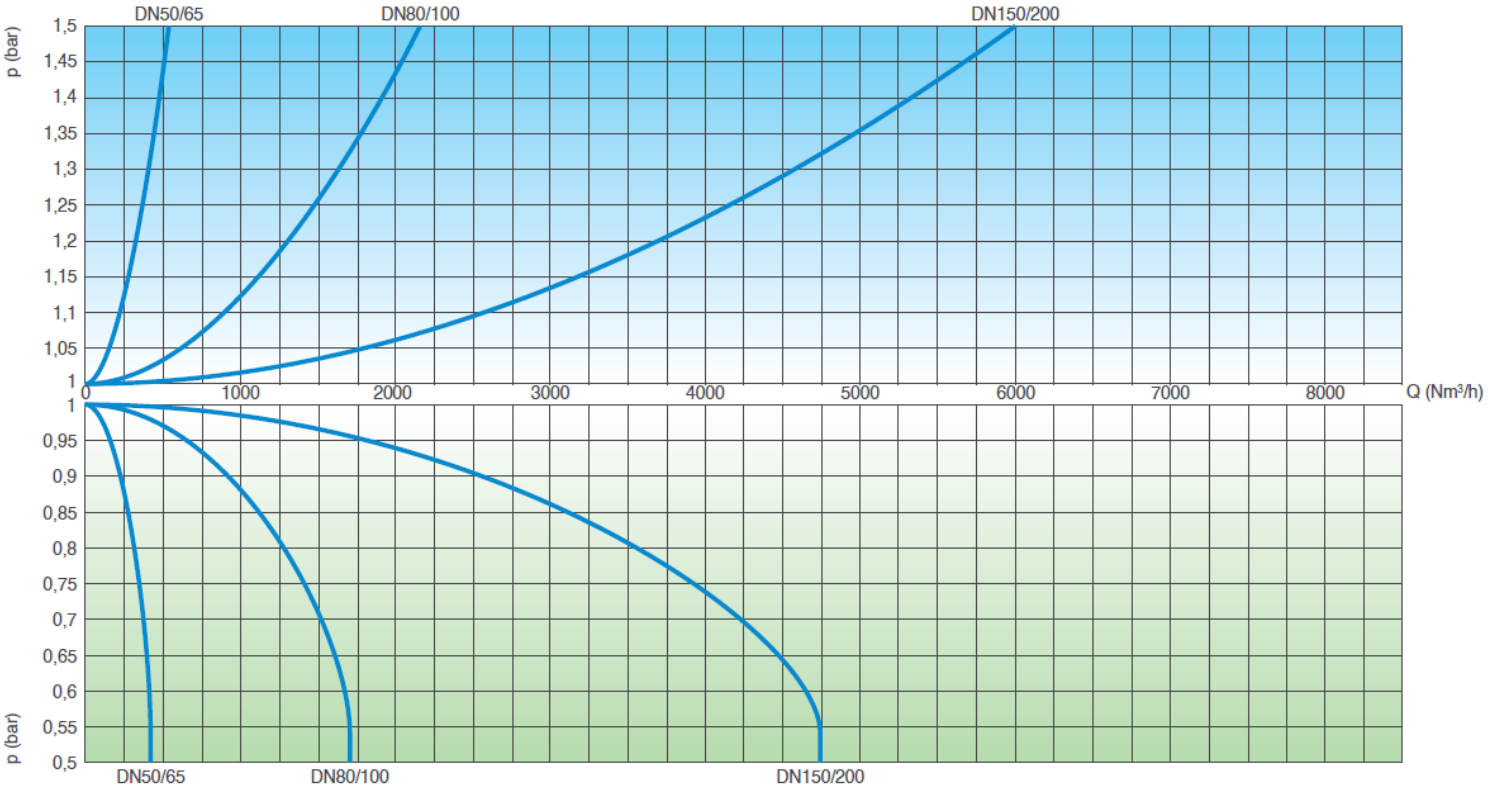
AIR FLOW PERFORMANCE CHARTS :

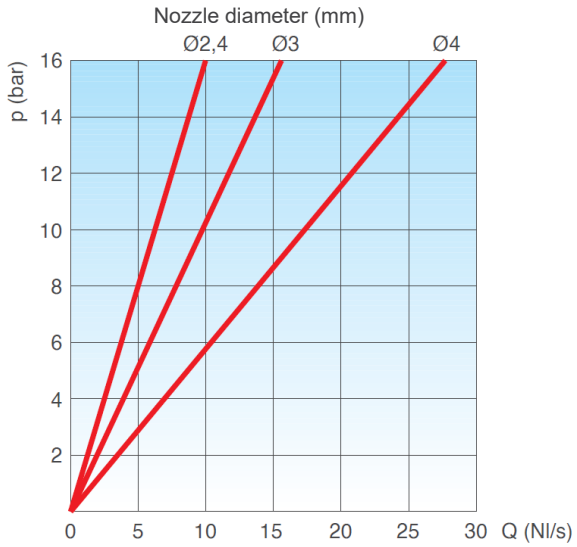
AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

The air flow charts were created in Kg/s from laboratory tests and numerical analysis, then converted using a safety factor.

AIR RELEASE DURING WORKING CONDITIONS



Nozzle diameter :

DN	Ø nozzle
DN50/65	2.4
DN80/100	3
DN150/200	4

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OPERATING PRINCIPLE :

Discharge of large volumes of air

During the pipe filling it is necessary to discharge air as water flows in. The ARGO 3F RFP, thanks to the aerodynamic body and float, will make sure to avoid premature closures of the mobile block during this phase.

Air release during working conditions

During operation the air produced by the pipeline is accumulated in the upper part of the air valve. Little by little it is compressed and the pressure arrives to water pressure, therefore its volume increases pushing the water level downwards allowing the air release through the nozzle

Entrance of large volumes of air

During pipeline draining, or pipe bursts, it is necessary to bring in as much air as the quantity of outflowing water to avoid negative pressure and serious damages to the pipeline, and to the entire system.

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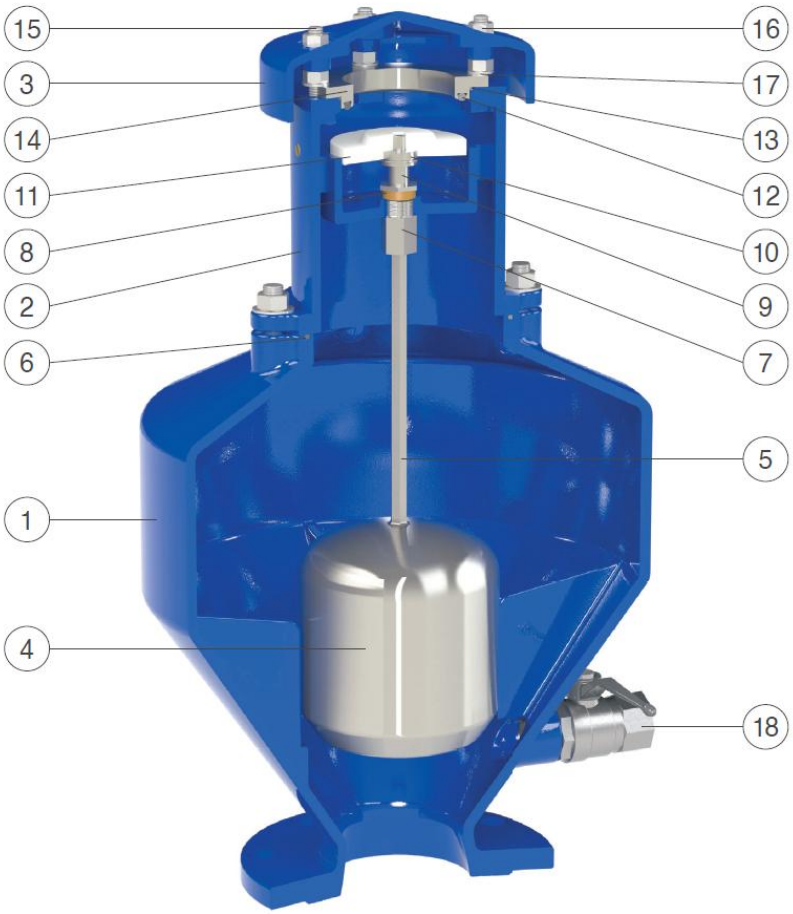
MATERIALS :



DN50/65 : evacuation bend in PP threaded DN1"1/2

Item	Designation	Materials
1	Lower body	Ductile iron EN GJS 450-10
2	Upper body	
3	Bonnet	
4	Float	AISI 316
5	Float shaft	
6	O-ring	NBR
7	Driving sleeve	AISI 303
8	Plane gasket	NBR
9	Gasket holder	AISI 316
10	Nozzle subset	
11	Obturator flat	Polypropylene
12	Seat gasket	NBR
13	O-ring	
14	Seat	AISI 304 (AISI 303 for DN50/65)
15	Studs	AISI 304
16	Nuts	
17	Washers	
18	Ball valve 1"	AISI 316

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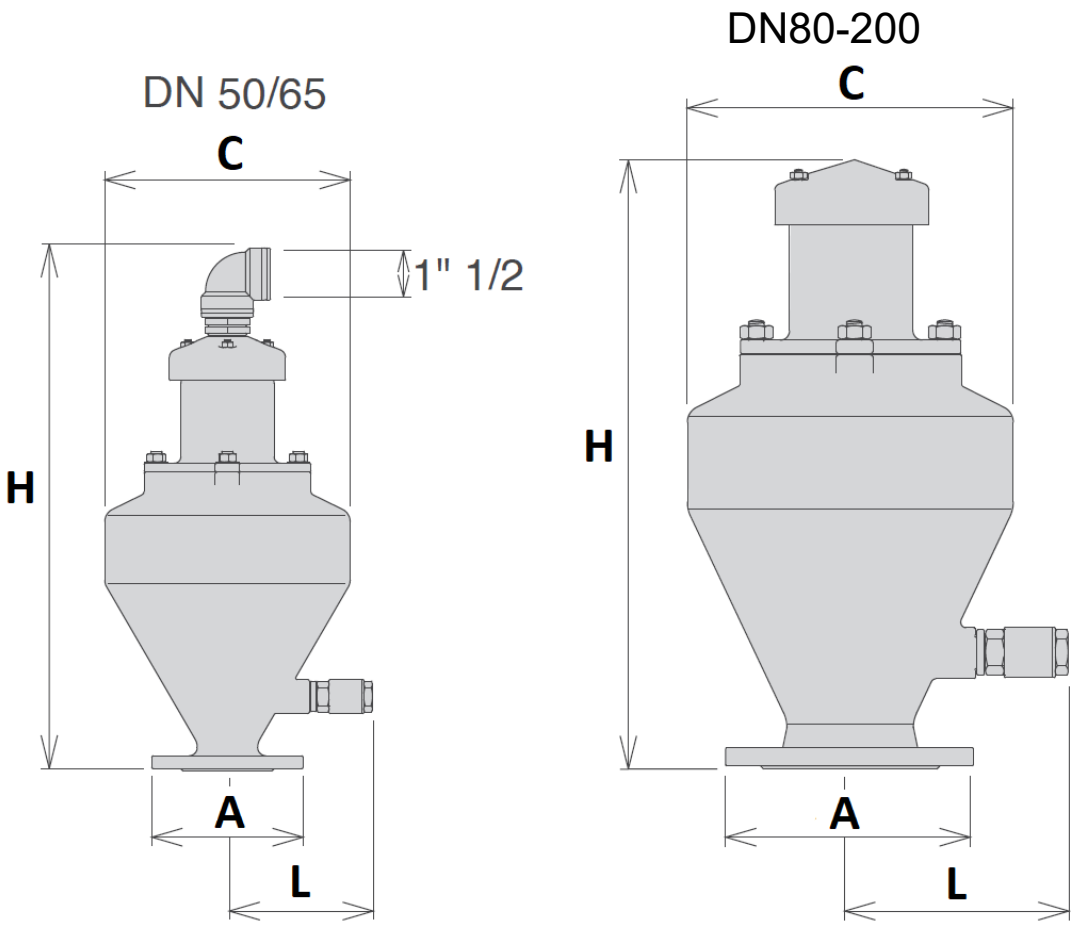
SIZE (in mm) :



DN	Ø A	Ø C	H	L	Weight (Kg)	Ref.	PN
50/65	185	300	650	190	29	3160050	PN10/16
80/100	220	350	600	202	40	3160080	
150	285	488	850	243	78	3160150	
200	340	488	850	243	82	3160200	PN10
						3160201	PN16

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STANDARDS :

- Manufacturer certified ISO 9001 : 2015
- Design and tests according to EN 1074-4
- DIRECTIVE 2014/68/EU : Products excluded from directive (Article 1, § 2.b)
- Flanges according to EN 1092-2 PN10/16

ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.
The customer must check the right choice of the products with the real service conditions.

INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid,pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strenght to be able to support the capacity of their usage.

INSTALLATION INSTRUCTIONS :

Automatic air valves have to be installed :

- At the top of the pumps for admission and evacuation
- At the high points of the installation
- Before and after the pressure reducer
- For each pipe DN changing
- About every 500 meters, along linear pipes
- Underpass
- Before flowmeters
- Filtration installation
- At each broken slope