COMPOSITE COMBINATION TRIPLE FUNCTION AUTOMATIC AIR VALVE CSA ARGO RFP

The CSA combination, triple function, automatic air valve Mod. ARGO, for irrigation and treated water applications, will ensure the proper operation allowing the release of air pockets during working conditions and the evacuation and entrance of large volumes of air during filling and draining operations.
Single chamber body PN 16 bar rated, provided with internal ribs for accurate guiding of the float.
The aerodynamic full bore body prevents premature closures of the mobile block also at high velocity air intake and discharge.
Available with bias kits for air discharge only (EO), entrance only (IO) and anti-shock (AS) feature.
Available version with rapid filling prevention mechanism RFP.
Drainage valve for chamber control and pressure relief during maintenance available on request.
Maintenance can be easily performed from the top, without removing the air valve from the pipe.
Compact and reliable structure whose parts are fully corrosion, chemical resistant. Lower maintenance.

ATTESTATION DE CONFORMITÉ SANITAIRE ACS

Size :	DN1" to DN2″
Connection :	Male BSP
Min Temperature :	+0°C
Max Temperature :	+60°C
Max Pressure :	16 Bars
Specifications :	Discharge of large volumes of air Controlled outflow Air release during working conditions Entrance of large volumes of air
Materials :	Polypropylene filled with glass fiber body

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SPECIFICATIONS :

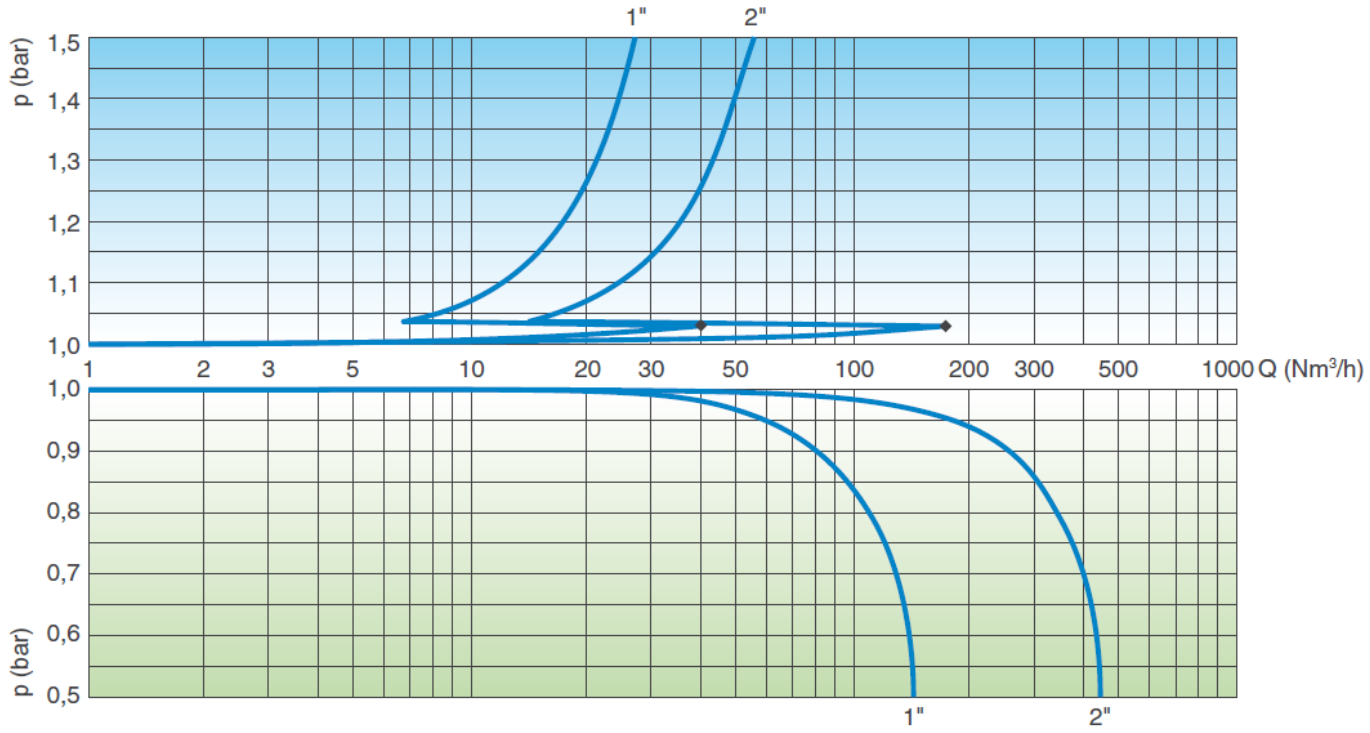
- Discharge of large volumes of air
- Controlled outflow
- Air release during working conditions
- Entrance of large volumes of air
- Perfect tightness at low pressure (0.3 bar minimum)
- Straight body with large automatic orifice
- The aerodynamic full bore body prevents premature closures of the mobile block also at high velocity air intake and discharge.
- Compact and reliable design
- Lateral outlet
- Corrosion-resistant materials

USE :

- Water treatment and irrigation
- Pipelines – Protection against air accumulation in horizontal or low slope lines
- Road / river crossings.
- In proximity to control valves and water meters – Prevention of biased readings and inaccurate pressure regulation due to air flow through these devices.
- Min and max temperature Ts : + 0°C to + 60°C
- Max pressure Ps : 16 bars
- Min Pressure Ps : 0.3 bar

AIR FLOW PERFORMANCE CHARTS :

AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

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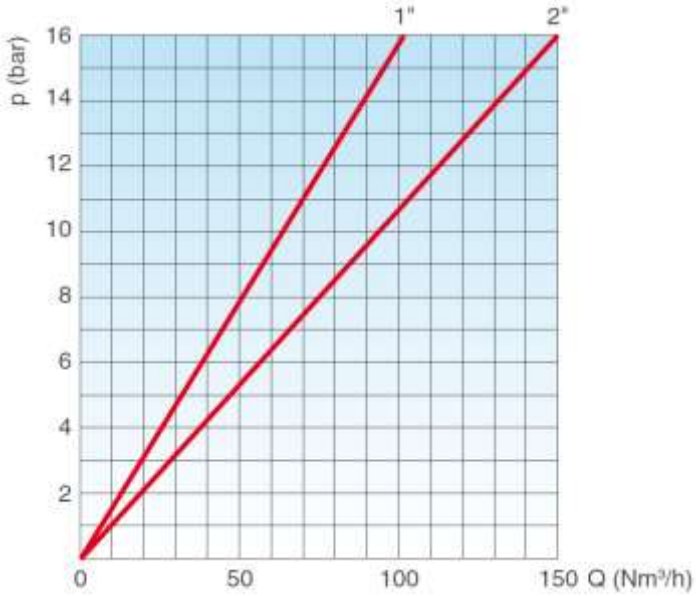
AIR RELEASE DURING WORKING CONDITIONS

The air flow charts were created in Kg/s from laboratory tests and numerical analysis, then converted in Nm3 /h using a safety factor.



RANGE :

- Automatic triple function composite male air valve BSP DN1" **Ref.3130006**
- Automatic triple function composite male air valve BSP DN2" **Ref.3130009**

- Automatic triple function composite male BSP DN1" with ball valve and flange DN40-65 **Ref.3130016**
  (composed of 1 air valve 3130006, 1 ball valve with drain Ref.550006 and 1 square flange DN40/65 Ref.2514053)

- Automatic triple function composite male BSP DN2" with ball valve and flange DN100 **Ref.3130019**
  (composed of 1 air valve 3130009, 1 ball valve Ref.528009 and 1 flange DN100 Ref.2514105)

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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.

Controlled outflow

If the differential pressure of air, during pipe filling, increases above a certain value without control there is the risk of water hammer and damages to the system. Should that happen the RFP upper float will rise automatically, reducing the outflow and consequently the velocity of the approaching water column.

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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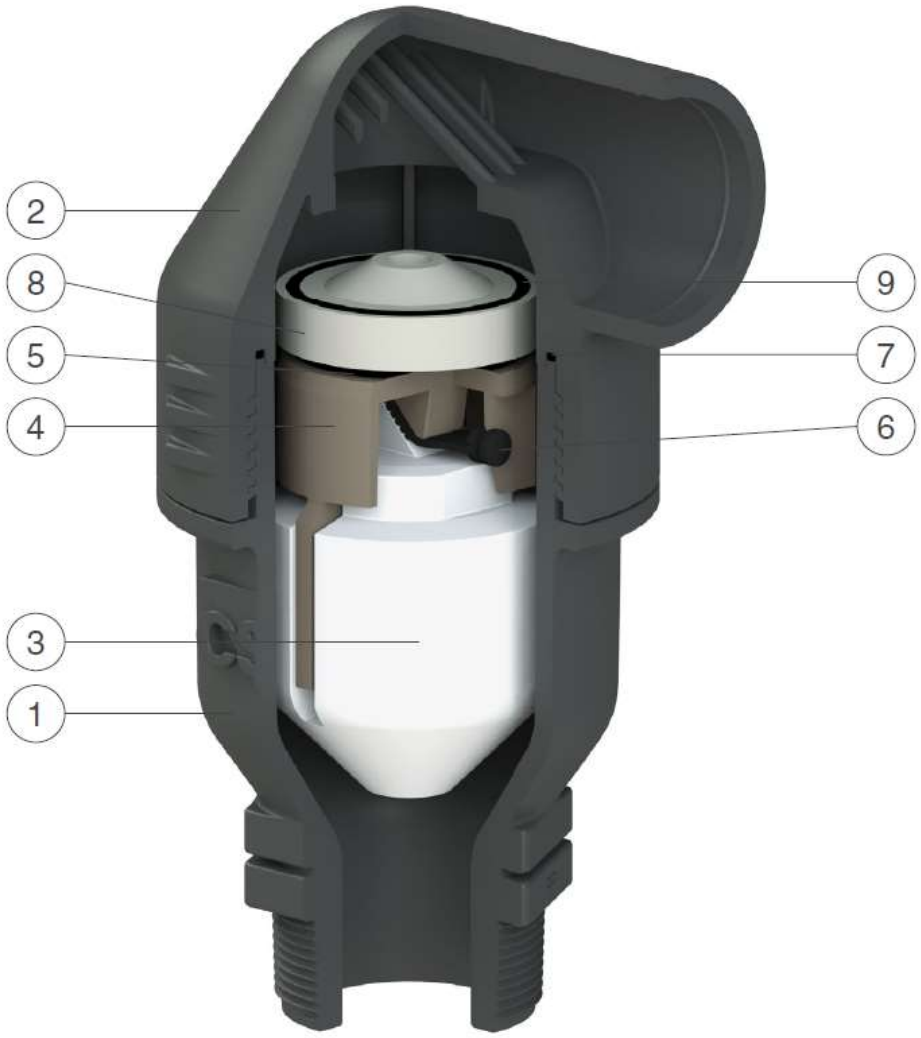
MATERIALS :



Item	Designation	Materials
1	Body	Glass reinforced Polypropylene
2	Bonnet	
3	Float	Polypropylene
4	Kinetic plug	Glass reinforced Polypropylene
5	Kinetic orifice seal	EPDM
6	Automatic orifice seal	
7	O-ring	
8	RFP device	Polypropylene
9	O-ring	EPDM

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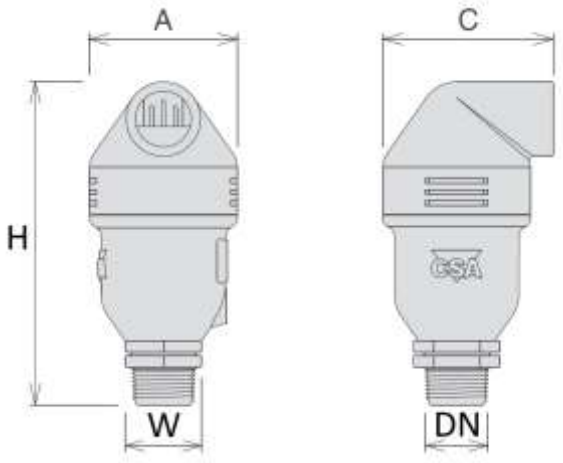
SIZE (in mm) :



DN	1"	2"
A	80	110
C	92	135
H	167	226
W (on flat)	41	65
Weight (in Kg)	0.3	0.75
Ref.	3130006	3130009

NOZZLE SPECIFICATION :

DN	Kinetic orifice		Automatic orifice
	d (mm)	A (mm²)	A (mm²)
1"	21	346	5
2"	45	1590	12

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)
- French water agreement **A.C.S. N° 23 ACC LY 542**
- Threaded male BSP conical acording to ISO 7-1 R

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COMPOSITE COMBINATION TRIPLE FUNCTION AUTOMATIC AIR VALVE CSA ARGO RFP

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