

# UNIRAIN ARV-1"-A(3G)

## Automatic Air Release Valve



Units Conversion	
FLOW	PRESSURE
m <sup>3</sup> / h (cubic metres per hour)	mWc (metres of water column)
l / h (litres per hour)	PSI (pounds per square inch)
GPM (gallons per minute)	
CFM (cubic feet per minute)	
1 CFM = 1.699 m <sup>3</sup> / h	1 PSI = 0.70307 mca
1 GPM = 227.1192 l / h	

### Application

Designed to efficiently extract air trapped in pipes, filters, tanks and other places where unwanted air might cause performance problems.

The air release valves are located at the outlet of pipes whose slope varies according to the hydraulic gradient, in areas where pipes are located above ground level, in long pipes with uniform slope, at the input of measuring instruments, the output of reducing valves, in diameter reductions, pumps, filtration systems, and on both sides of a subterranean crossing road.

For correct operation, the valve should always be in a vertical position.

It is recommended to install a manual ball valve under the ARV, in order to make maintenance and repair operations easier without shutting the whole system\*.

### Advantages

- The valve has one seal, which expels both kinetic and residual air automatically, and this function is not affected by water pressure.
- Simple in design, with only 5 parts, it's easy to disassemble for maintenance and cleaning when needed.
- Its exclusive Y-shaped discharge outlet design allows a much greater air flow than other valves of this type, in both the discharge and the intake phases.
- Owing to a perfect fit, the valve is totally sealed, even at very low pressures.
- The base and body are made of nodular cast iron GGG-40 with EPOXY cover, so you get great strength and durability.

### Technical specifications

- Continuous and automatic operation.
- At least 70 m<sup>3</sup>/h (41,2 CFM) of air released without shutting the valve in the absence of water.
- Released air volume is at least 15 m<sup>3</sup>/h (8,8 CFM) at 10 mWc (14,2 PSI).
- Maximum working pressure 16 kg/cm<sup>2</sup> (225 PSI).
- Body and base made of ductile iron GGG-40.
- Inner body made of fibreglass-reinforced polyamide.
- Float made of expanded polypropylene and seals made of EPDM.
- Covering of body and base made of baked EPOXY.
- 1" M base thread. Optional base in BSP or NPT thread.
- Fasteners made of stainless steel AISI 304, A2-70 quality.

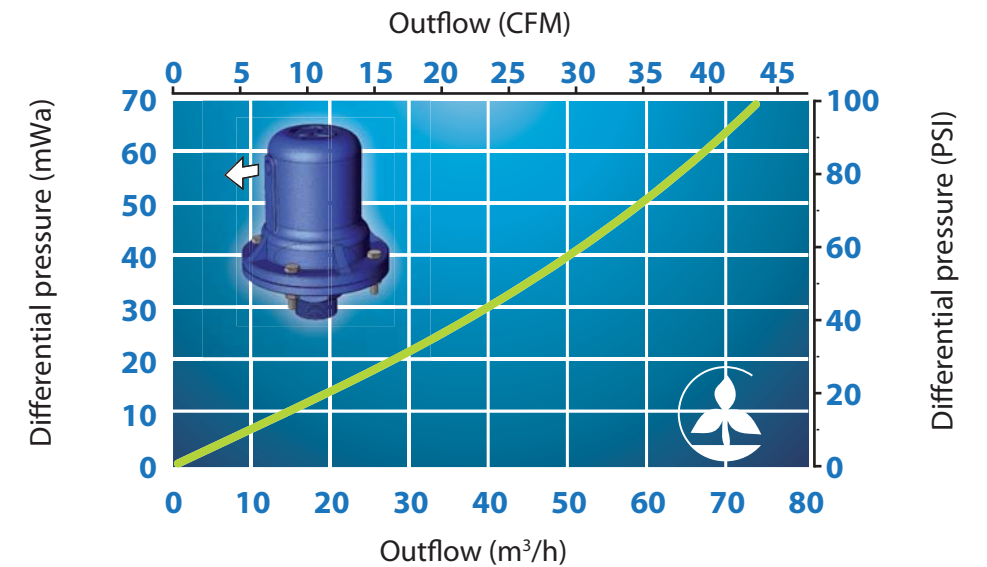


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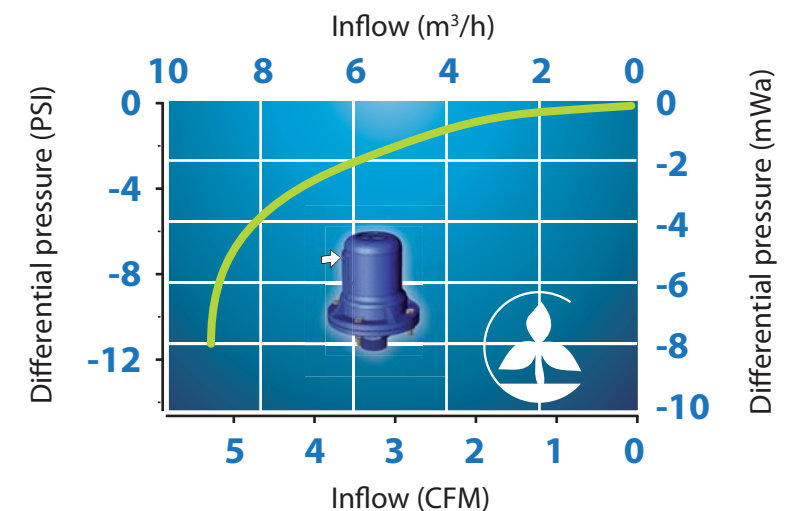
### Performance

- **Extracts** air from small pipes as they fill. When water reaches the inside of the valve, the float rises and seals the discharge outlet.
- **Maintains** automatically and continuously its function of eliminating any residual air pockets reaching the valve, as the float immediately drops and the closure outlet is partly or totally opened. Water pressure does not interfere with this function.
- **Prevents** pipes from collapsing. At the smallest decrease in pressure, the float drops and opens the seal, allowing outside air to enter the pipe immediately.

Outflow



Inflow



### \*Normal conditions of use, service and maintenance.

This product has been tested at low pressure (0.5 bar) and high pressure (16 bar) with satisfactory results.

For correct operation, valves must undergo regular routine checks. The check should include the cleaning of the internal components and inspection of the seal conditions. For more detailed information about the use and maintenance of valves, please check the document called "Unirain ARV: INSTALLATION AND OPERATION MANUAL".

For specific uses, please consult the technical department.

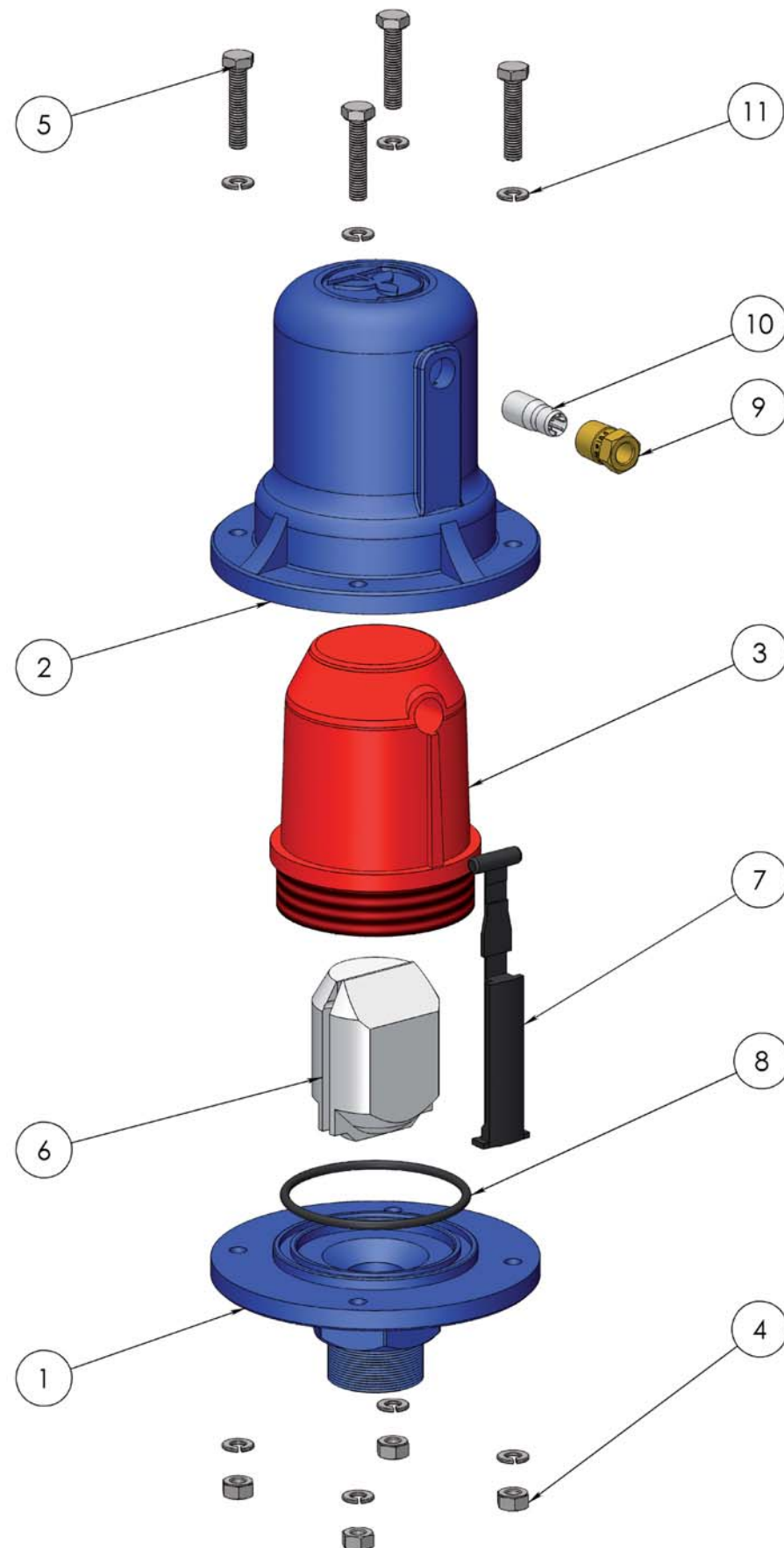
### WARRANTY AND EXCLUSIONS

The manufacturer guarantees its products for direct customers against any defects in materials or manufacture for a period of two years from the original date of purchase, when the products have been used under normal operating and service conditions. The manufacturer assumes no liability for installation, removal or repairs carried out by unauthorised personnel. This warranty is limited to the replacement or repair of defective parts. The manufacturer does not accept liability for damage to crops or any other consequences damages deriving from defects in the products covered by this warranty.

**THIS WARRANTY SUPERSEDES AND VOIDS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR ANY OTHER ATTRIBUTING LIABILITY TO THE MANUFACTURER.**

No agent, employee or representative of the manufacturer is authorised to change, alter or add to the conditions contained in this warranty or to assume liability or make guarantees not specified herein.

UNIRAIN S.A. reserves the right to amend any of the technical features of this product.



ELEMENT NO.	SPARE CODE	MATERIAL	DESCRIPTION	QUANTITY
1	---	Nodular Cast Iron GGG-40	ARV 1" -A (3G) BSP/NPT Valve Base	1
2	---	Nodular Cast Iron GGG-40	ARV 1" -A (3G) Valve Body	1
3	---	PA6 + Fiber Glass	ARV 1" -A Valve Body	1
4	01776	Stainless Steel	DIN 934-M6 Hex Nut A2-70 Quality	4
5	01775	Stainless Steel	DIN 933-M6 Screw A2-70 Quality	4
6	---	Expanded PP	ARV 1" -A Float	1
7	01764	EPDM	ARV 1" -A Seal	1
8	01765	NBR	1" O-Ring	1
9	---	Brass	Optional Nozzle	1
10	---	Polyoxymethylene (POM)	Optional Vane	1
11	01777	Stainless Steel	DIN-125 M6 Washer	8

Notes

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Process/Manufacturer  UNIRAIN	Size A3	Material	Code 06010
	Scale 1:2	Name ARV 1" -A (3G)	
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