A.R.I. D-021

Aquestia
Directing the Flow

Irrigation

Combination Air Valve - Reclaimed & Non-Potable Water

Description

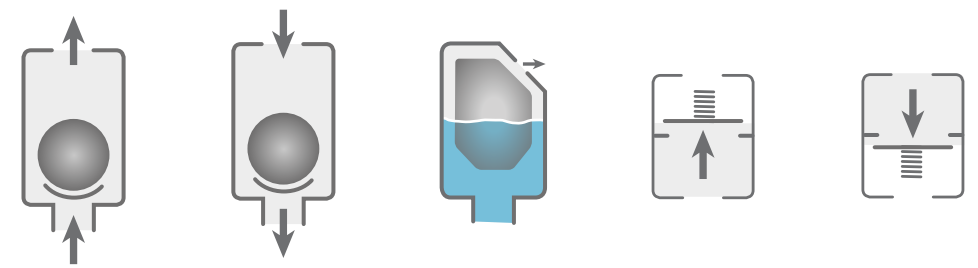
A.R.I. D-021 is a reduced bore ultra-compact combination air valve installed on a raw water transmission system to increase pipeline efficiency and reduce energy requirements by improving the hydraulic operation of the system. A continuous air gap at the top of the air valve separates the reclaimed water from the sealing mechanism.

Installation

Water with low concentrations of suspended solids:

- Reclaimed water
- Raw water
- Effluent water
- Coolant water

Operation



Air Discharge | Air Intake | Automatic Air Release | One Way Out | One Way In

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Features and Benefits

Conical body shape & unique design	maximum air gap / minimum body length
Continuous air gap	separates the liquid from the sealing mechanism
Float assembly and sealing mechanism linkage	free movement, turbulence will not unseal the sealing mechanism
Funnel-shaped lower body	residue matter falls back into the system pipeline
Rolling seal mechanism	leak-free sealing over a wide range of pressure differentials
All parts - stainless steel 316, polymer, rubber materials	non-corrosive and durable
Screened threaded outlet	compatible with vent pipe connection, prevents insect intrusion
Dynamic design	high capacity air discharge, no premature closure
Tap	releases pressure and drains valve prior to maintenance

Technical Specifications

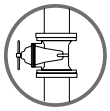
Size Range	1" - 2"
Sealing pressure range	Sealing pressure range: 0.1 - 10 bar (PN 10) Testing pressure: 1.5 times maximum working pressure
Temperature	Maximum working temperature: 60° C. Maximum intermittent temperature: 90° C.
Upon ordering, please specify: model, size, working pressure, thread / flange standard and type of liquid	

Valve Selection Options

- Connections: threaded BSP/NPT or flanged
- Flanged ends to meet any requested standard
- Optional Add-on components:
  One-way, Out-only attachment, allows for air discharge only, prevents air intake
  Vacuum Breaker, In-only attachment, allows for air intake only, prevents air discharge

The valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.

For complete installation instructions, please refer to the IOM document.



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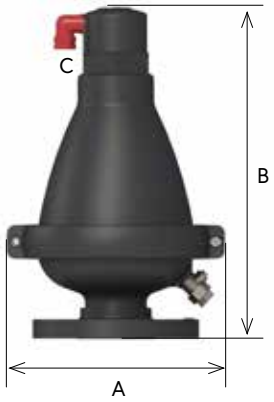
Dimensions and Weight

Size	Dimensions (mm)		Connections	Weight (kg)	Orifice Area (mm²)	
	A	B	C		A / V	Auto.
1" (25mm) THR	216	323	3/8" BSP F	1.7	100	7.8
1" (25mm) FL	216	331	3/8" BSP F	1.9	100	7.8
2" (50mm) THR	216	324	3/8" BSP F	1.8	100	7.8
2" (50mm) FL	216	328	3/8" BSP F	2.1	100	7.8

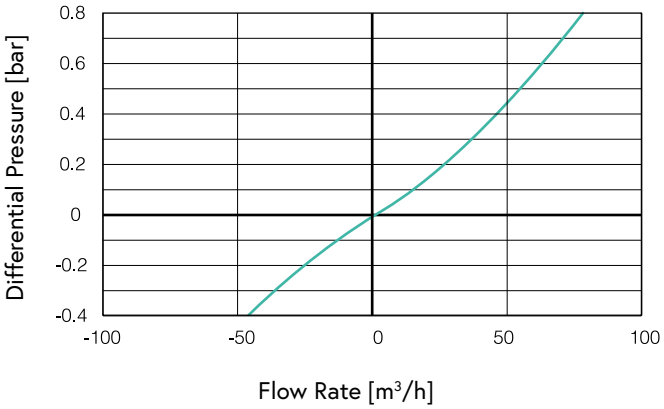
NOTE

All product weights and dimensions are approximate, due to the differences in flange standards, materials and variable accessories.

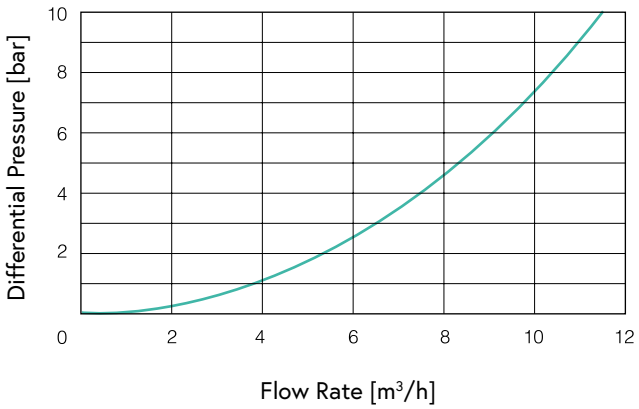


Flow Charts

Air & Vacuum Flow Rate



Automatic Air Release Flow Rate



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Parts List and Specificationss

Part	Material
1. Air Valve Body Assembly	
1a. Body	Reinforced Nylon
1b. Discharge Elbow	Polypropylene
2. Seal Assembly	
2a. Rolling Seal	EPDM
2b. Float Connector	Foamed Polypropylene
2c. Clamping Stem	Reinforced Nylon
3. Body Assembly	
3a. O-Ring	BUNA-N
3b. Body	Reinforced Nylon
4. Float Assembly	
4a. Domed Nut	Stainless Steel 316
4b. Stopper	Polypropylene
4c. Spring	Stainless Steel 316
4d. Float & Rod	Foamed Polypropylene + Stainless Steel 316
5. Base Assembly	
5a. O-Ring	BUNA-N
5b. Clamp Assembly	Reinforced Nylon + Stainless Steel 316
5c. Base	Reinforced Nylon
5d. Tap	Brass Nickel Plated / Stainless Steel 316

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