

# A.R.I. D-025



Industry

## Combination Air Valve for Non Clean Water - Short Version

### Description

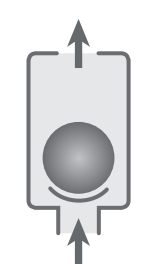
A.R.I. D-025 Series is a reduced bore, Combination Air Valve installed on a wastewater transmission systems. The Air Valve is designed to improve hydraulic operation by protecting the pipeline, increasing pipeline efficiency, and reducing energy requirements. The unique body shape of the valve, enables a continuous air gap that separates the wastewater from the sealing mechanism and helps to avoid deposits or blockage.

Applicable for: Desalination & Sea Water, Mines, Marine - Ballast Water, Oil & Gas, Food Industry, Power Plant Cooling, CBM, Hydro / Thermal Power.

### Installation

- Wastewater & water treatment plants
- Wastewater and effluent water transmission lines
- Industrial water transmission lines and applications

### Operation



Air Discharge



Air Intake



Automatic  
Air Release



One Way out



One Way In



Non Slam

## 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 wide range of pressure differentials
All parts are suitable for corrosive liquid and environment	non-corrosive and durable parts
Screened threaded outlet	compatible for 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	2" - 4"
Sealing pressure range	0.05 - 10 bar (PN10) Testing pressure: 1.5 times maximum working pressure
Temperature	Maximum working temperature: 60° C Maximum intermittent temperature: 90° C

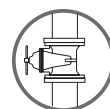
Upon ordering, please specify: model, size, working pressure, thread / flange standard and type of liquid

## Valve Selection Options

Valve connection	Threaded BSP/NPT or Flanged ends to meet various requested standard
Standard materials	Reinforced nylon body, optional: stainless steel
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 Non-Slam discharge-throttling attachment, allows for free air intake, throttles air discharge
Additional product configurations	SB Underground Air Valve System ARISENSE Air Valve Monitoring System
 ATEX certified air valves	certification is conditional on the customer connecting the designated part on the product to a dedicated ground connection point.

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.



## Non-Slam Add-on Component Data Table for Variable Orifices

Size	Discharge orifice (mm)	Total NS area (mm <sup>2</sup> )	NS orifice (mm)	Switching point (bar)	Flow at 0.4 bar (m <sup>3</sup> /h)
2" (50mm)	37.5	12.6	4	Spring loaded normally closed	23
3" (80mm)					
4" (100mm)					

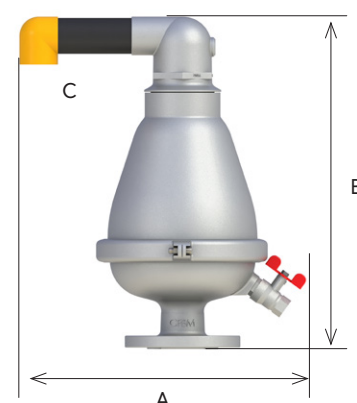
## Dimensions and Weight

Size	Dimensions (mm)		Connections	Weight (kg)		Orifice Area (mm <sup>2</sup> )	
	A	B		RN	ST ST	A / V	Auto.
2" (50mm) THR	370	455	1½" BSP F	3.8	14.4	804	12
2" (50mm) FL	370	460	1½" BSP F	4.2	16.2	804	12
3" (80mm) THR	370	455	1½" BSP F	3.8	14.7	804	12
3" (80mm) FL	370	460	1½" BSP F	5.4	16.5	804	12
4" (100mm) THR	370	455	1½" BSP F	3.9	16.6	804	12
4" (100mm) FL	370	460	1½" BSP F	6.0	18.4	804	12

THR - Threaded  
FL - Flanged

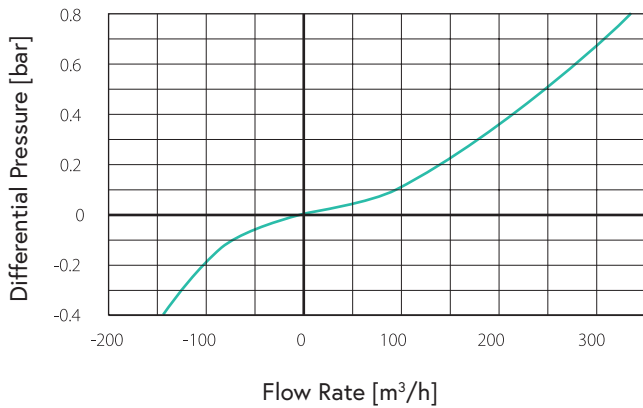
### NOTE

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

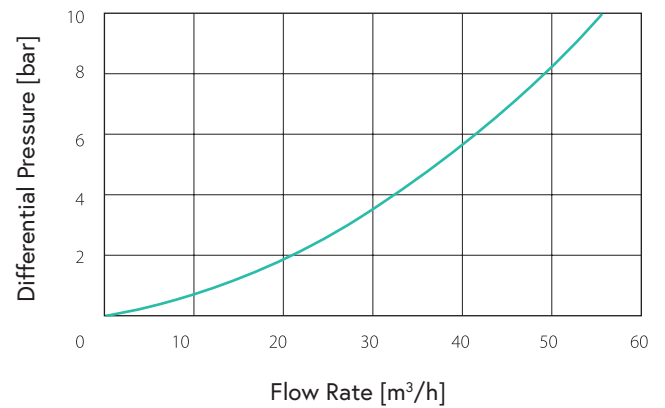


## Flow Charts

Air & Vacuum Flow Rate

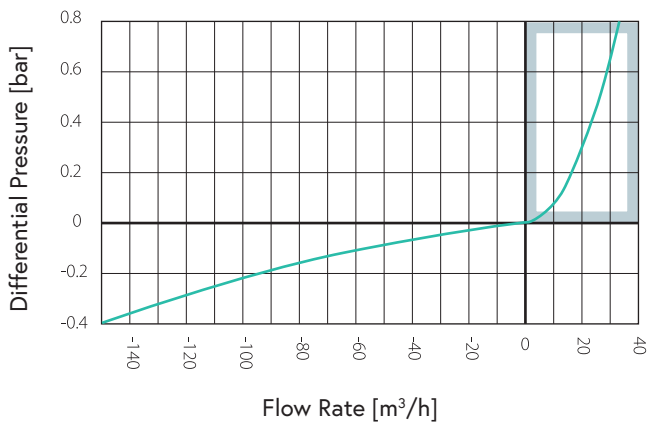


Automatic Air Release Flow Rate

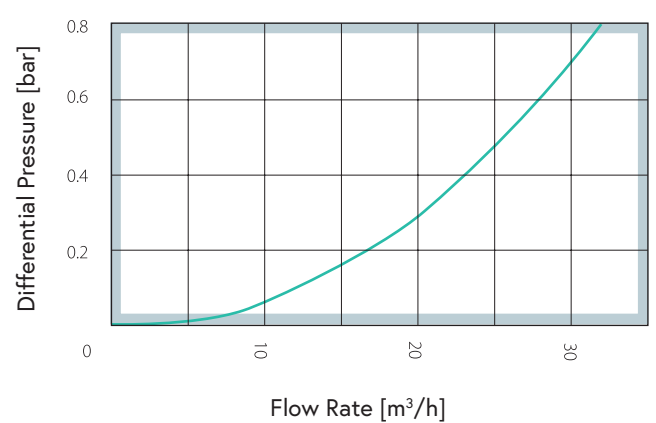


## D-025 NS

Air & Vacuum Flow Rate



Air Discharge Flow Rate



## Parts List and Specification

No.	Part	Material
1	Air Valve Body Assembly	
1a	Body	Reinforced Nylon
1b	Extension	Polypropylene
1c	Discharge Elbow	Polypropylene
1d	Camlock (Optional)	Polypropylene
1e	Non-Slam (Optional)	Polypropylene + Stainless Steel
2	Seal Assembly	
2a	Clamping Stem	Reinfoced Nylon / Polypropylene
2b	Float	Foamed Polypropylene
2c	Seal Assembly	
2d	Screws	Stainless Steel, Optional Electroless Nickel coat
2e	Plug Cover	Reinforced Nylon / Polypropylene
2f	Rolling Seal	EPDM
2g	Plug	Reinforced Nylon / Polypropylene
3	Body Assembly	
3a	O-Ring	NBR / EPDM / VITON
3b	Body	Reinforced Nylon
4	Float Assembly	
4a	Domed Nut	Stainless Steel 316
4b	Stopper	Polypropylene
4c	Spring	Stainless Steel 316 / Hastelloy
4d	Float & Rod	Foamed Polypropylene + Stainless Steel 316 or Titanium
5	Base Assembly	
5a	O-ring	NBR / EPDM / VITON
5b	Clamp Assembly	Reinforced Nylon + Stainless Steel 316
5c	Base	Reinforced Nylon
5d	Tap	Stainless steel 316
5b	Flange (Optional)	Reinforced Nylon



## Parts List and Specification

No.	Parts	Material
1	Air Valve Body Assembly	
1a	Body	Stainless Steel 316
1b	Extension	Polypropylene
1c	Discharge Elbow	Polypropylene
1d	Camlock (Optional)	Polypropylene
1e	Non-Slam (Optional)	Polypropylene + Stainless Steel
2	Seal Assembly	
2a	Clamping Stem	Reinfoced Nylon / Polypropylene
2b	Float	Foamed Polypropylene
2c	Seal Assembly	
2d	Screws	Stainless Steel
2e	Plug Cover	Reinfoced Nylon / Polypropylene
2f	Rolling Seal	EPDM / VITON
2g	Plug	Reinfoced Nylon / Polypropylene
3	Body Assembly	
3a	O-Ring	NBR / EPDM / VITON
3b	Body	Stainless Steel 316
4	Float Assembly	
4a	Domed Nut	Stainless Steel 316
4b	Stopper	Polypropylene
4c	Spring	Stainless Steel 316 / Hastelloy
4d	Float & Rod	Foamed Polypropylene + Stainless Steel 316 or Titanium
5	Base Assembly	
5a	O-ring	NBR / EPDM / VITON
5b	Clamp Assembly	Stainless Steel 316
5c	Base	Stainless Steel 316
5d	Tap	Stainless steel 316
5e	Flange (Optional)	Stainless steel 316

