



Wastewater

Combination Air Valve for Wastewater

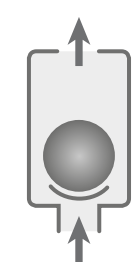
Description

A.R.I. D-025 is a Combination Air Valve Series installed on 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.

Installation

- Wastewater & water treatment plants
- Wastewater & effluent water transmission lines

Operation



Air Discharge




Air Intake



Automatic
Air Release

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 - high-strength UV resistant reinforced composite and rubber materials	Non-corrosive and durable
Screened threaded outlet (optional)	Compatible for vent pipe connection, prevents insect intrusion
Dynamic design	High capacity air discharge, no premature closure
Ball valve	Releases pressure and drains valve prior to maintenance
 ATEX certified air valves	ATEX certified air valves are optional by customer request. Certification is conditional upon the customer connecting the designated part on the product to a dedicated ground connection point.

Technical Specifications

Size range	2" - 4"
Discharge orifice size	1.25 Sq.in
Working pressure range	0.7 - 150 psi
Testing pressure	1.5 times maximum working pressure
Temperature	Maximum working temperature: 140° F Maximum intermittent temperature: 194° F

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

Valve Selection Options

Models	D-025 - Reinforced nylon base, body, and upper body / cover D-025 ST - Stainless steel base and body, and reinforced nylon upper body / cover D-025 STST - Stainless steel base, body, and upper body / cover
Valve connection	Threaded BSP/NPT or flanged ends to meet various requested standards
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

➤ Non-slam Add-on Component Data Table for Variable Orifices

Size	Discharge orifice (Inch)	Total NS area (Sq.in)	Switching point (psi)	Flow at 5.8 psi (CFM)
2" (50mm)	1½	0.02	Spring loaded normally closed	10.3
3" (80mm)				
4" (100mm)				

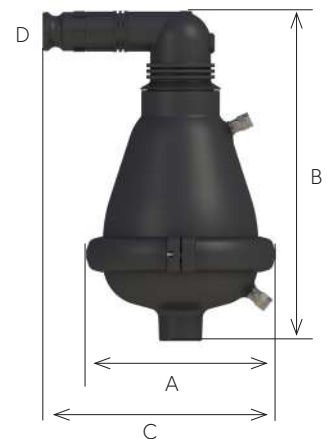
➤ Dimensions and Weight

Size	Dimensions (Inch)			Connection	Weight (Lbs)			Orifice Area (Sq.in)	
	A	B	C		D	RN	ST	ST ST	A / V
2" (50 mm) THR	13.9	17.9	11.2	Camlock 1½" NPT	8.4	30	33.6	1.25	0.018
2" (50 mm) FL	13.9	18.1	11.2	Camlock 1½" NPT	9.2	33	36.7	1.25	0.018
3" (80 mm) THR	13.9	18.1	11.2	Camlock 1½" NPT	8.4	34.3	37	1.25	0.018
3" (80 mm) FL	13.9	18.1	11.2	Camlock 1½" NPT	12	34.7	37.4	1.25	0.018
4" (150 mm) FL	13.9	18.1	11.2	Camlock 1½" NPT	13.2	39.3	42.5	1.25	0.018

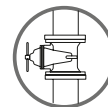
THR - Threaded FL - Flanged

NOTE

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



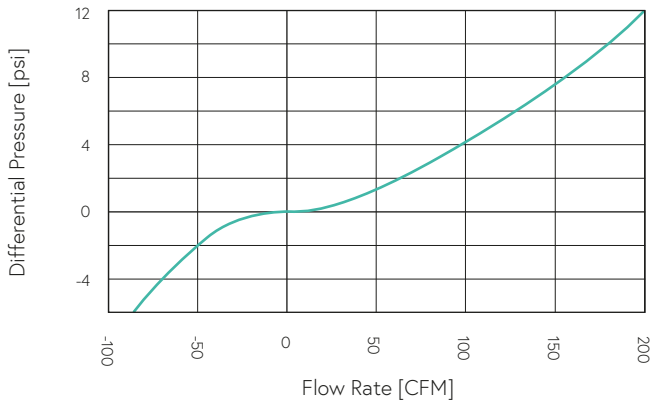
The isolation valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.



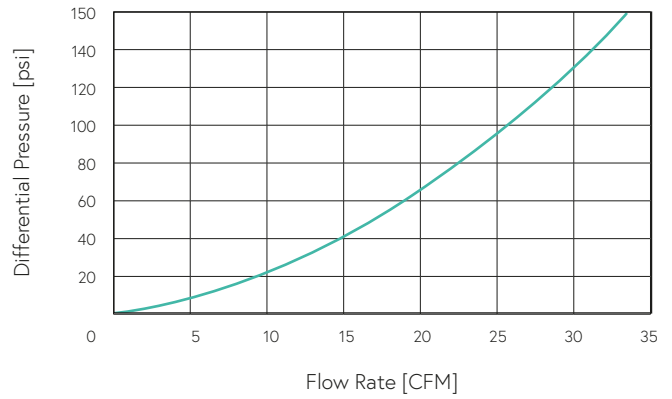
For complete installation instructions, please refer to the IOM document.

Flow Charts

Air & Vacuum Flow Rate

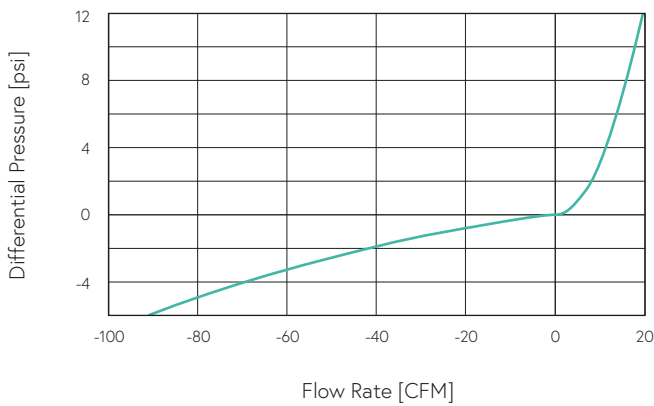


Automatic Air Release Flow Rate

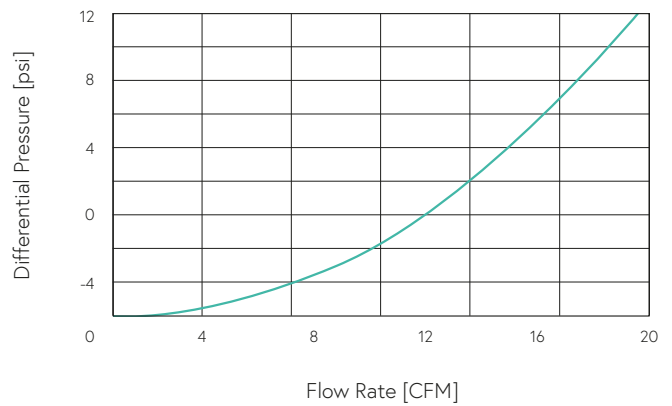


A.R.I. D-025 NS

Air & Vacuum Flow Rate



Air Discharge Flow Rate



Parts List and Specifications | Nylon Models

No.	Part	Material
1	Air Valve Body Assembly	
1a	Body	Reinforced Nylon
1b	Non-slam (optional)	Polypropylene
1c	Camlock	Polypropylene
2	Seal Assembly	
2a	Clamping Stem	Reinforced Nylon / Polypropylene
2b	Float	Foamed Polypropylene
2c	Seal Assembly	
	Screws	Stainless Steel *optional stainless steel with electroless nickel Coat
	Plug Cover	Reinforced Nylon / Polypropylene
	Rolling Seal	EPDM
	Plug	Reinforced Nylon / Polypropylene
3	Body Assembly	
3a	O-ring	NBR / EPDM / VITON
3b	Body	Reinforced Nylon
3c	1/4" Tap	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 / Titanium
4e	Washer	Stainless Steel 316
5	Base Assembly	
5a	O-ring	NBR / EPDM / VITON
5b	Clamp Assembly	Reinforced Nylon + Stainless Steel 316
5c	Base	Reinforced Nylon
5d	1/4" Tap or 1/2" Ball Valve	Stainless Steel 316
5e	Flange (optional)	Reinforced Nylon



Parts List and Specifications | Metal Models D-025 ST, D-025 STST

No.	Parts	Material
1	Air Valve Body Assembly	
1a	Camlock	Polypropylene
1b	Non-slam (optional)	Polypropylene + Stainless Steel
D-025 ST Model		
1e	Body	Reinforced Nylon
D-025 STST Model		
1c	Shell	Stainless Steel 316
1d	O-ring	NBR
1e	Body	Reinforced Nylon
2	Seal Assembly	
2a	Clamping Stem	Reinforced Nylon / Polypropylene
2b	Float	Foamed Polypropylene
2c	Seal Assembly	
2d	Screws	Stainless Steel
2e	Plug Cover	Reinforced Nylon / Polypropylene
2f	Rolling Seal	EPDM / VITON
2g	Plug	Reinforced 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	1/2" Ball Valve	Stainless Steel 316
5e	Flange (optional)	Stainless Steel 316

