

A.R.I. D-46



Irrigation

Combination Air Valve for High Flow **PATENTED**

Description

A.R.I. D-46 Series, is a full-bore Combination Air Valve. Installed on liquid transmission systems, the Air Valve is designed to improve hydraulic operation by protecting the pipeline, increasing pipeline efficiency and reducing energy requirements. The Air Valve provides high-capacity air release and intake.

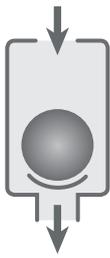
Installation

- Pump stations: after the pump and after the check valve
- Downstream (after) and upstream (before) of shut-off valves
- After deep-well pumps
- On long constant-sloped pipeline segments
- At peaks along the pipeline and at peaks relative to hydraulic gradient
- At end lines
- Before water meters
- On strainers and filters

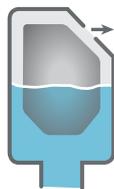
Operation



Air Discharge



Air Intake



Automatic
Air Release



One Way out



Non Slam

Features and Benefits

Reliable operation	reduces water hammer impact, saves energy and increases system efficiency
Dynamic design	high capacity air discharge
One-piece lightweight body	lessens the chance of leaks and vandalism
Screened threaded outlet	insect-proof, for vent pipe connection
All internal operating parts - specially selected materials	non-corrosive and durable
Automatic air release orifice	high flow air release, lessens obstruction by debris
Minimum down-time for maintenance	all operating parts in one replaceable cartridge
Rolling seal	leak-free sealing over wide range of pressure differentials
Built-in drainage outlet	hygienic, drains surplus water above the sealing mechanism
ATEX certified air valves 	certification is conditional on the customer connecting the designated part on the product to a dedicated ground connection point.

Technical Specifications

Size Range	2"
Sealing pressure range	0.1-16 bar (PN 16) Testing pressure: 1.5 times maximum working pressure
Temperature	Maximum working temperature: 60° C Maximum intermittent temperature: 90° C

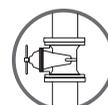
Upon ordering, please specify: model, size, working pressure, thread / flange standard and type of liquid

Valve Selection Options

Valve connection	Threaded male BSPT/NPT, Flanged ends to meet various requested standard
Optional Add-on Components	One-way, Out-only attachment, allows for air discharge only, prevents air intake Non-Slam discharge-throttling attachment, allows for free air intake, throttles air discharge
Additional Product Configurations	A.R.I. D-96 - SB Underground Air Valve System

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.

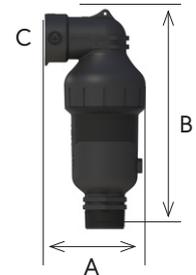
For complete installation instructions, please refer to the IOM document.



Dimensions and Weight

Size	Dimensions (mm)		Connections	Weight (kg)	Orifice Area (mm ²)	
	max. A	B			C	A / V
2" (50mm) TRH	150	327	2" BSP/NPT F	1.4	2122	15.0
2" (50mm) FL	170	367	2" BSP/NPT F	1.9	2122	15.0

FL - Flanged THR - Threaded



NOTE

The cover assembly with the discharge elbow can be set in four directions. Dimension A in the picture and in the table shows the maximum product width. This width can be reduced by changing the cover direction.

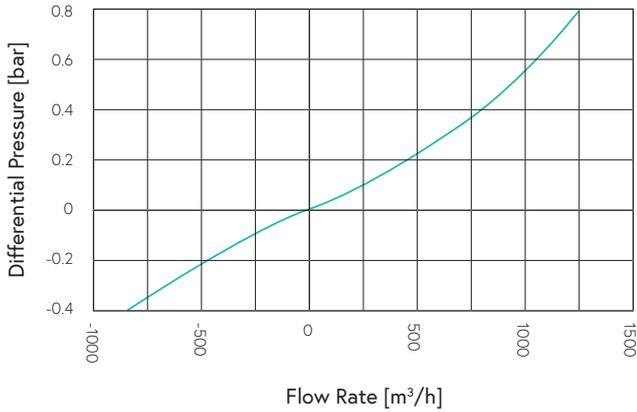
All product weights are approximate, due to the differences in flange standards, materials and variable accessories.

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

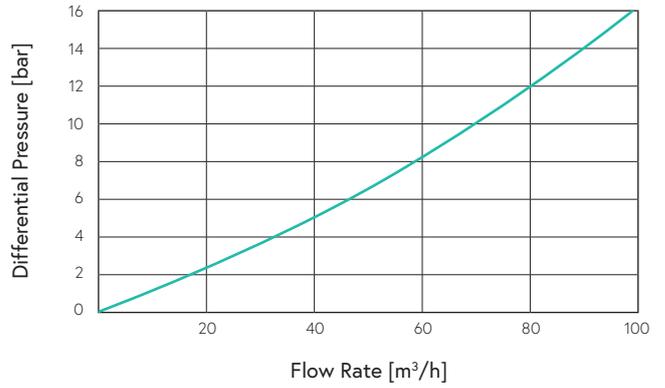
Size	Number of orifices	Discharge orifice (mm)	Total NS area (mm ²)	NS orifice (mm)	Switching point (bar)	Flow at 0.4 bar (m ³ /h)
2" (50mm)	1 orifice	50	15.9	4.5	Spring loaded normally closed	23
	2 orifices	50	31.8	6.4		32
	3 orifices	50	47.7	7.8		40

Flow Charts

Air & Vacuum Flow Rate

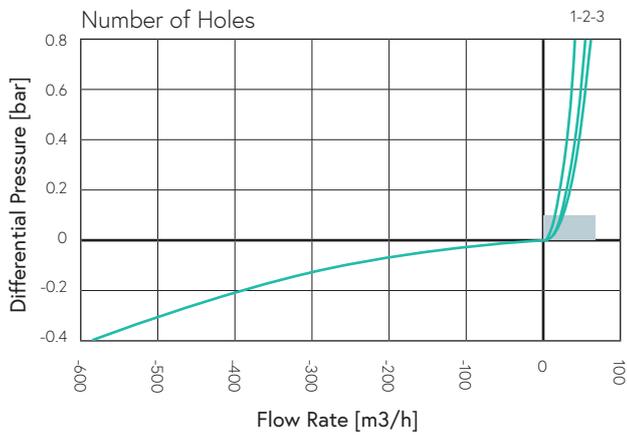


Automatic Air Release Flow Rate

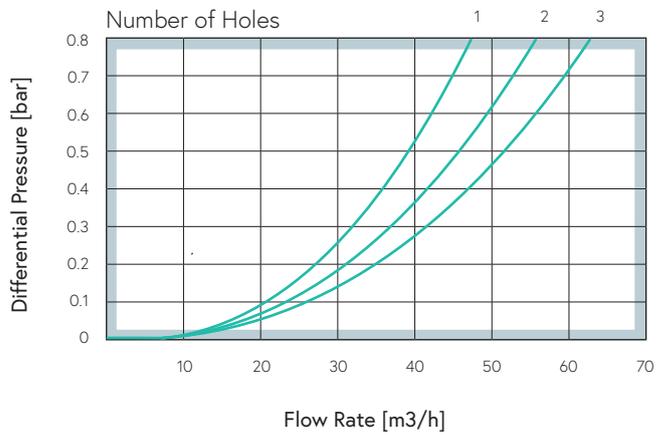


D-46 NS

Adjustable NS Check Valve



Adjustable NS Check Valve



Parts List and Specification

No.	Part	Material
1	Cover Assembly	
1a	Cover	Reinforced Nylon
1b	NS	Reinforced Nylon
2	Air Release / Air & Vacuum Assembly	
2a	Air & Vacuum Seal	EPDM
2b	Air Release Cover	Reinforced Nylon
2c	Rolling Seal	EPDM
2d	Float	Polypropylene
2f	O-ring	NBR
3	Body	Reinforced Nylon
4	Optional Flange Assembly	
4a	O-ring	NBR
4b	Flange	Reinforced Nylon + Stainless Steel 316

