

A.R.I. D-070 P



Irrigation

Dynamic Combination Air Valve **PATENTED**

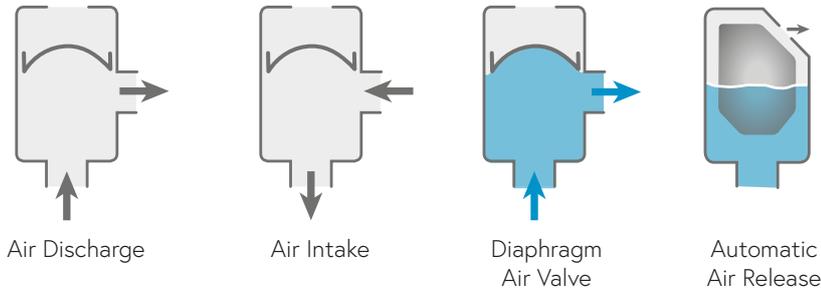
Description

A.R.I. D-070 P is a unique multi-function Dynamic Combination Air Valve, operating without a float; utilizing a rolling diaphragm principle. Its unique structure allows the valve to discharge air from the water system gradually, in a controlled manner to prevent slam or local upsurge. The valve is normally closed when the line is not pressurized, thus prohibiting infiltration of foreign particles or insects into the system.

Installation

- Pump stations: after the pump and after the check valve
- Upstream and downstream of shut-off valves
- Downstream of deep-well pumps
- On long constant-sloped pipeline segments
- At peaks along the pipeline and at peaks relative to hydraulic gradient
- At end lines
- Upstream water meters
- On strainers and filters
- Systems prone to high velocity air discharge.

Operation



Features and Benefits

Multi-purpose design	Combination and surge reduction air valve in one body
System protection mechanism	Reduces local water hammer impact, saves energy and increases system efficiency
Smooth and controlled discharge of air	Prevents slam and reduces local surges
Small footprint, low silhouette	Easily installed in restricted spaces
Normally closed	Prevents intrusion of debris and contaminants
Construction materials	UV resistant, non-corrosive and durable
Large automatic air release orifice	Reduces risk of blockage by debris
Upper drain elbow	Removes accumulated impure water from above the seal
Threaded outlet	Insect-proof, for vent pipe connection
Flow cross-sections	Equal to or greater than nominal port area

Technical Specifications

Size Range	2"-4"
Working pressure range	0.2-10 bar (PN 10) 0.2-16 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 BSP/NPT (Reinforced Nylon) or Flanged ends to meet various requested standard
D-070 P VB	Easily transformed into a vacuum breaker valve
D-070 P V	One-way, out-only attachment. Enables air discharge only, preventing air intake
Flushing Tap	Flushes out the system from debris and contaminants; reducing maintenance downtime
Bug Screen	Add-on prevents the intrusion of debris or insects into the air valve
D-070 P Q	A Dynamic Combination Air and Pressure Relief Valve, combining a two-stage pressure relief Component



D-070 P VB



Flushing Tap



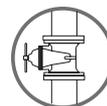
Bug Screen



D-070 P Q

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.



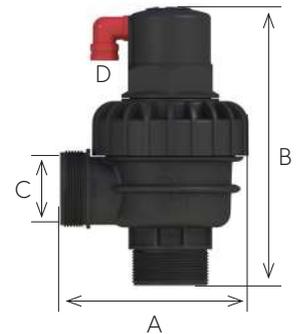
Dimensions and Weight

Model	Dimensions (mm)		Connections		Weight (kg)	Orifice Area (mm ²)	
	A	B	C	D		A / V	Auto.
2" (50 mm) THR	144	216	2" BSP Male	3/8" BSP Female	1.1	1963	7.8
2" (50 mm) FL	167	222	2" BSP Male	3/8" BSP Female	1.5	1963	7.8
3" (80 mm) THR	144	217	2" BSP Male	3/8" BSP Female	1.1	1963	7.8
3" (80 mm) FL	200	222	2" BSP Male	3/8" BSP Female	1.8	1963	7.8
4" (100 mm) FL	228	222	2" BSP Male	3/8" BSP Female	2.2	1963	7.8

FL - Flanged THR - Threaded

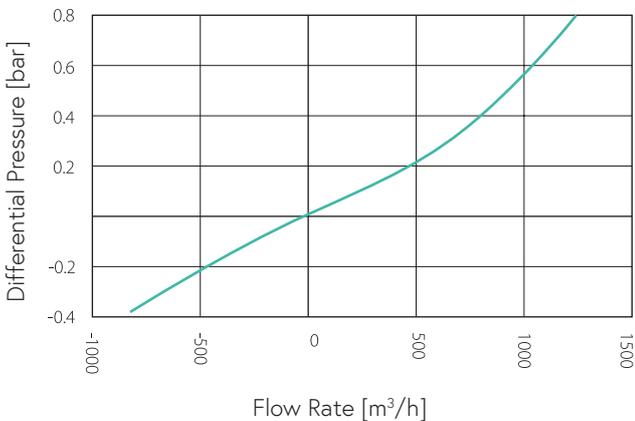
NOTE

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

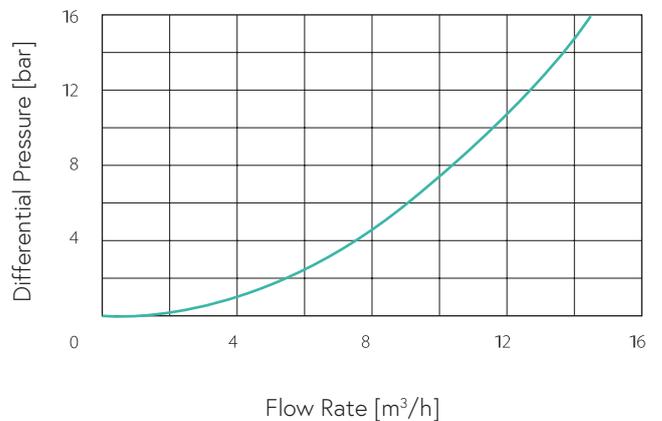


Flow Charts

Air & Vacuum Flow Rate



Automatic Air Release Flow Rate



Parts List and Specifications

No.	Part	Material
1	Air Valve Body Assembly	
1a	Discharge Elbow	Polypropylene
1b	Body	Reinforced Nylon
2	Pilot Seal Assembly	
2a	Clamping Stem	Reinforced Nylon
2b	Pilot Float Assembly	Polypropylene + Stainless Steel 316
2c	Rolling Seal	EPDM
3	Adaptor Assembly	
3a	O-ring	NBR
3b	Locking Ring	Reinforced Nylon
4	Seal Assembly	
4a	Adaptor	Reinforced Nylon
4b	Rolling Diaphragm Sealing Assembly	Reinforced Nylon + EPDM + Stainless Steel 316
5	Body Assembly	
5a	Support Ring	Reinforced Nylon
5b	Body	Reinforced Nylon
5c	O-ring	NBR
5d	Flange	Reinforced Nylon

