

# A.R.I. D-016, D-100

 **Aquestia**  
Directing the Flow



Mining

## High Pressure, Combination Air Valve

### Description

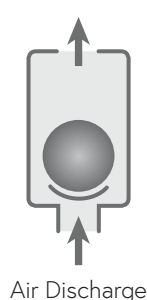
A.R.I. D-016, D-100 are high pressure reduced bore Combination Air Valves. Installed on liquid transmission systems, the Air Valves are designed to improve hydraulic operation by protecting the pipeline, increasing pipeline efficiency and reducing energy requirements.

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


### Installation

- Desalination plants - along the process water lines and RO membranes
- Mining sites along the process water lines
- Desalination plants - along the process water lines and RO membranes
- Mining sites along the process water lines

### Operation



## Features and Benefits

Simple product design	No need to disconnect the valve from the main line for maintenance
	Reduces downtime
Aerodynamic design	High capacity air discharge, no premature closure
	Reduces water hammer impact
	Saves energy and increases system efficiency
Unique orifice seat / seal design	Long-term maintenance-free operation
Screen protected outlet (6"-8")	Prevents intrusion of insects and debris
High strength construction materials	Non-corrosive and durable up to 100 bar
	Performs in extreme working conditions
Automatic air release valve rolling seal	Leak-free sealing over a wide range of pressure differentials up to 100bar
Large automatic air release valve orifice	High-flow air release, lessens obstruction by debris
 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	1" - 8"
Sealing pressure range	A.R.I. D-016: 0.2 - 64 bar (PN 64) A.R.I. D-100: 0.2 - 100 bar (PN 100) Testing pressure: 1.5 times maximum working pressure
Temperature	Maximum working temperature: 60° C. Maximum intermittent temperature: 90° C.
Valve coating	Fusion bonded epoxy coating in compliance with standard DIN 30677-2 (applied on Cast Steel valves)

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

## Valve Selection Options

Models	A.R.I. D-016   A.R.I. D-100
Valve connection	Flanged ends to meet various requested standard (1"-8")
Standard materials	Cast Steel / Stainless Steel / Super Duplex
Optional add-on components	One-way Out attachment, allows for air discharge only, prevents air intake Non-slam discharge-throttling attachment, allows for free air intake, throttles air discharge
Pressure rating	PN64 A.R.I. D-016 PN100 A.R.I. D-100

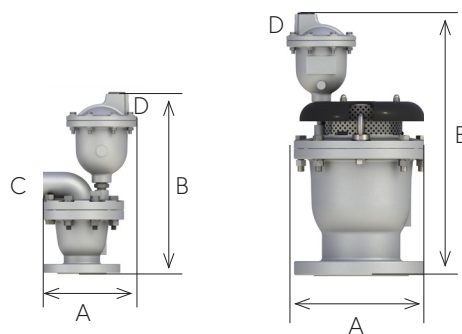
## Dimensions and Weight

Model	Dimensions (mm)		Connections		Weight (kg)	Orifice Area (mm²)	
	A	B	C	D		A / V	Auto.
Elbow cover models							
1" (25 mm) FL	214	481	1½" BSP Female	1/2" BSP Female	18	794	15
2" (50 mm) FL	254	513	1½" BSP Female	1/2" BSP Female	37	794	15
3" (80 mm) FL	270	508	2" BSP Female	1/2" BSP Female	45	1809	15
4" (100 mm) FL	309	553	3" BSP Female	1/2" BSP Female	65	3318	15
Screen cover models							
6" (150 mm) FL	402	731	-	1/2" BSP Female	123	17662	15
8" (200 mm) FL	402	731	-	1/2" BSP Female	133	17662	15

FL - Flanged

### NOTE

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

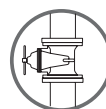


Elbow cover models

Screen cover models

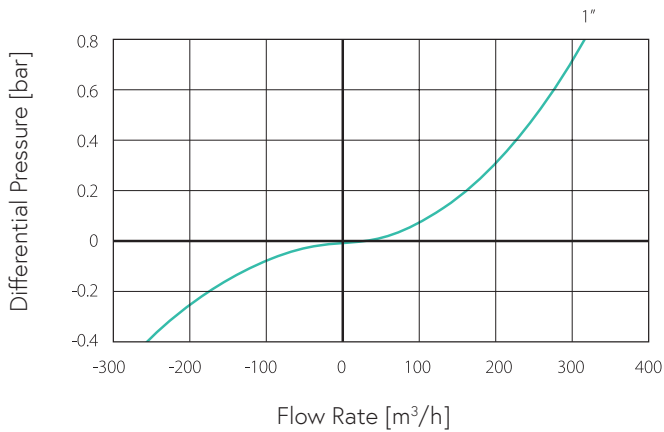
The isolation valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.

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

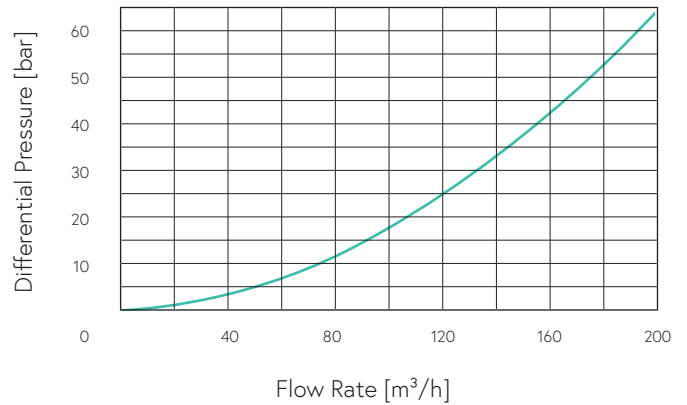


## Flow Charts

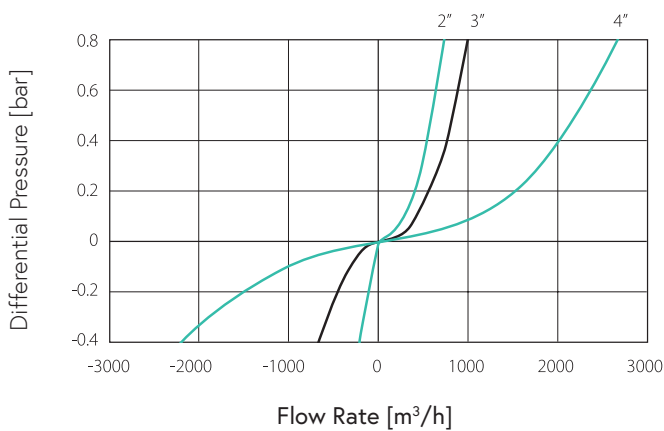
Air & Vacuum Flow Rate



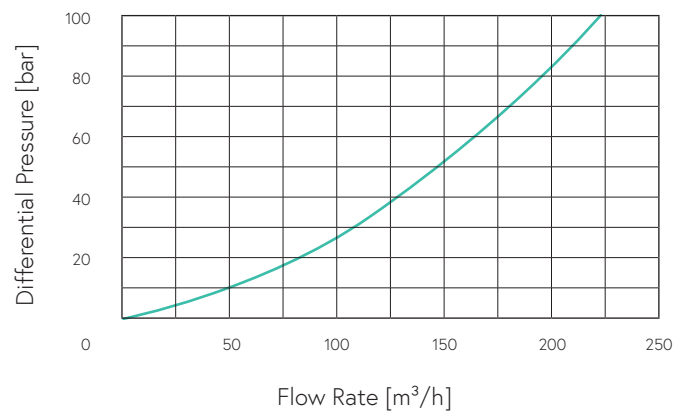
A.R.I. S-016 Automatic Air Release Flow Rate



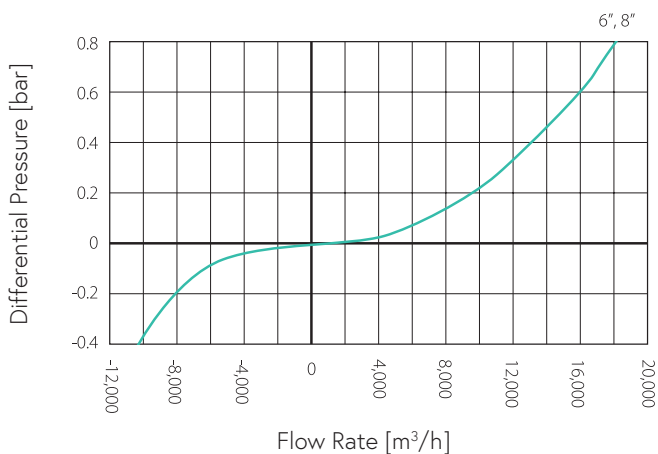
Air & Vacuum Flow Rate



A.R.I. S-100 Automatic Air Release Flow Rate

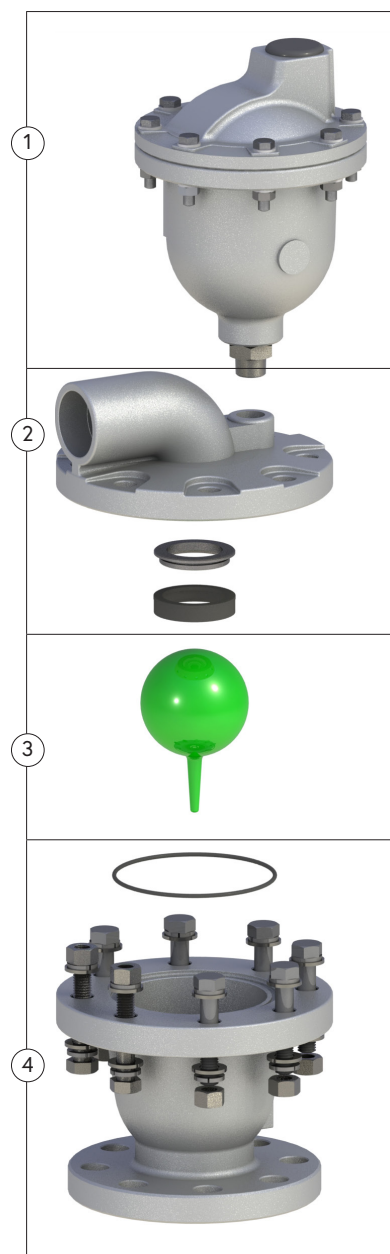


Air & Vacuum Flow Rate



## Parts List and Specifications | 1"-4" Elbow Cover Models

No.	Part	Material
1	Automatic Assembly	
	A.R.I. S-016	Cast Steel, Stainless Steel 316, Super Duplex
	A.R.I. S-100	Cast Steel, Stainless Steel 316, Super Duplex
2	Cover Assembly	
2a	Cover	Cast Steel, Stainless Steel 316, Super Duplex
2b	Orifice Seat	Cast Steel, Stainless Steel 316, Super Duplex
2c	Orifice Seal	EPDM / Viton
3	Float	Polycarbonate / Stainless Steel 316/ Duplex
4	Body Assembly	
4a	O-ring	EPDM / Viton
4b	Bolts, Nuts & Washers	Steel / Stainless Steel 316
4c	Body	Cast Steel, Stainless Steel 316, Super Duplex



## Parts List and Specifications | 6"-8" Screen Cover Models

No.	Part	Material
1	Automatic Assembly	
	A.R.I. S-016	Cast Steel, Stainless Steel 316, Super Duplex
	A.R.I. S-100	Cast Steel, Stainless Steel 316, Super Duplex
2	Cover Assembly	
2a	Screen Cover	Polyethylene
2b	Screen	Stainless Steel 316
2c	Bolts, Nuts & Washers	Stainless Steel 316
2d	Cover	Cast Steel, Stainless Steel 316, Super Duplex
2e	Orifice Seat	Cast Steel, Stainless Steel 316, Super Duplex
2f	Orifice Seal	EPDM / Viton
3	Float	Polycarbonate / Stainless Steel 316/ Duplex
4	Body Assembly	
4a	O-ring	EPDM / Viton
4b	Bolts, Nuts & Washers	Steel / Stainless Steel 316
4c	Body	Cast Steel, Stainless Steel 316, Super Duplex

