

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

 **Aquestia**
Directing the Flow



Waterworks

High Pressure, Combination Air Valve

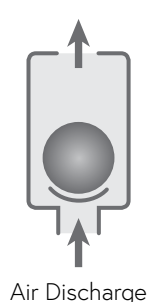
Description

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.

Installation

- Municipal and industrial water conveyance systems
- Water conveyance systems requiring high pressure valves

Operation



Air Discharge



Air Intake



Automatic
Air Release





One-way Out



Non-slam

Features and Benefits

Flow cross sections	Maximum flow in high operating pressure
Installation and maintenance	Compact / simple product design easy to install and to maintain reduces down time
	No need to disconnect the valve from the main line for maintenance procedures
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
Construction materials	Non-corrosive and durable up to 100 bar
	Body, cover and all internal parts made of high strength materials
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	Certification is conditional on the customer connecting the designated part on the product to a dedicated ground connection point
 NSF/ANSI 61 Certified & Listed	Certification for drinking water system component

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
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	Threaded male BSPT/NPT (1"-2") Flanged ends to meet various requested standard (2"-10")	
Standard materials	Cast Steel	
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 PN100	A.R.I. D-016 A.R.I. D-100

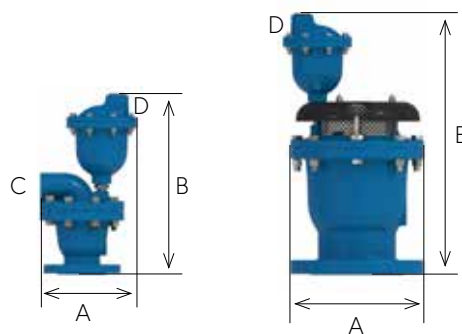
Dimensions and Weight

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

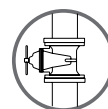


Elbow cover models

Screen cover models

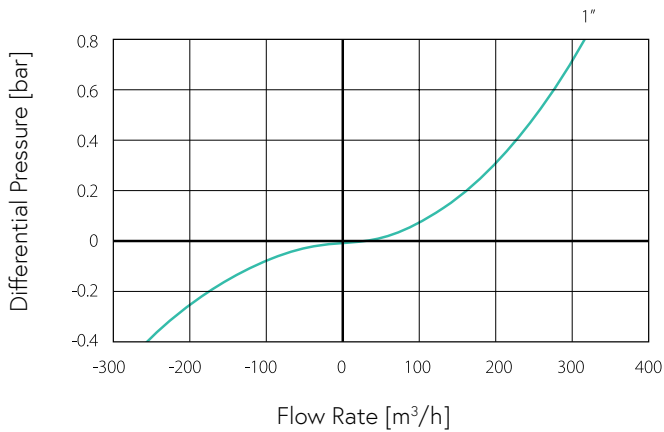
The valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.

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

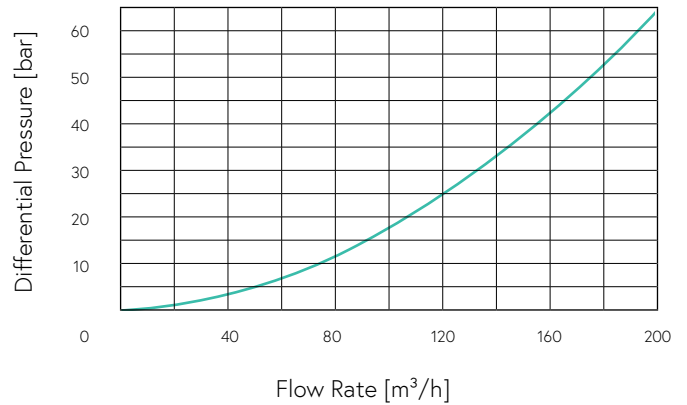


Flow Charts

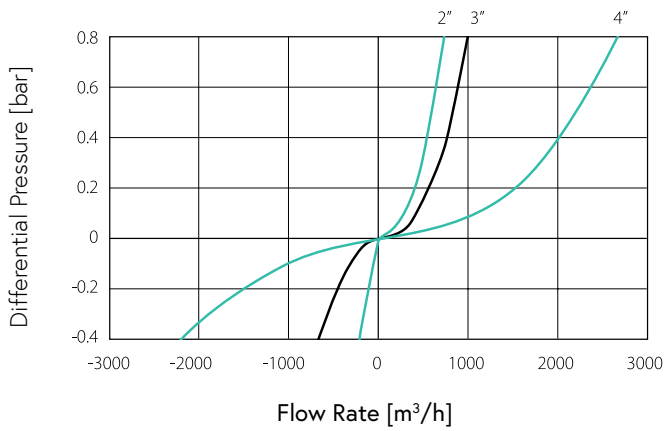
Air & Vacuum Flow Rate



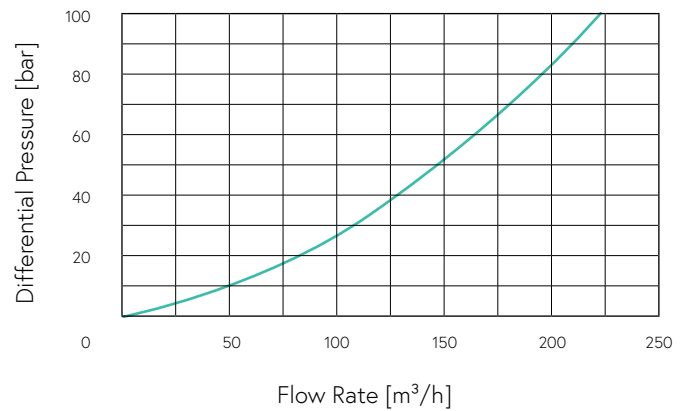
A.R.I. S-016 Automatic Air Release Flow Rate



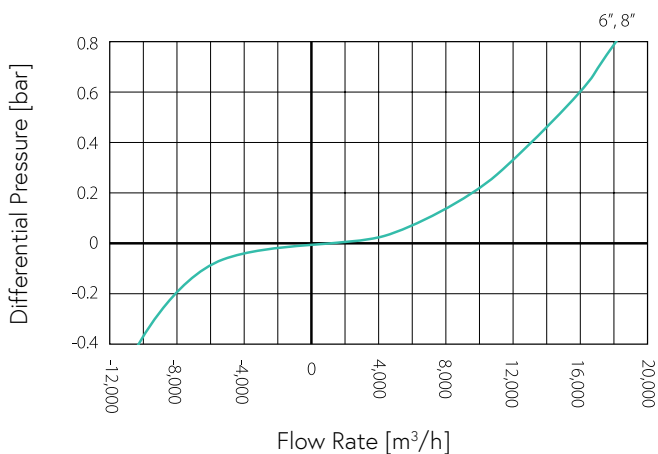
Air & Vacuum Flow Rate



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

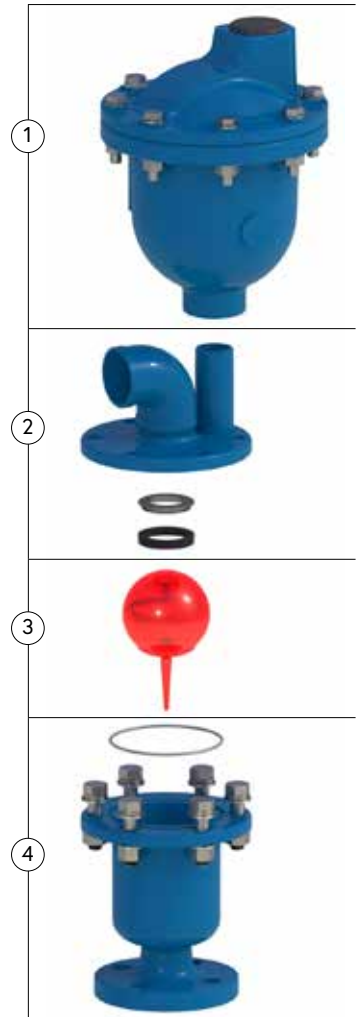


Air & Vacuum Flow Rate



Parts List and Specifications | 1"-2" Elbow Cover Models

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



Parts List and Specifications | 2"-4" Elbow Cover Models

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



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

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

