

A.R.I. S-050

 **Aquestia**
Directing the Flow



Industry

Automatic Air Release Valve Series

Description

A.R.I. S-050 is an Automatic Air Release Valve Series that releases accumulated air from a pressurized system, to optimize pipeline hydraulic efficiency by reducing head losses and improving flow.

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

Installation


- On pumps
- On liquid transmission pipelines
- After filters & pressure reducers

Operation



Automatic Air Release

Features and Benefits

| | |
|---|---|
| Rolling seal | Leak-free sealing over a wide range of pressure differentials |
| One-size orifice | Covers a wide pressure range (up to 25 bar) |
| Nylon strainer | Prevents plugging from debris |
| Construction materials | UV resistant, non-corrosive and durable |
| Lightweight, small dimensions | Easily installed, even on polymeric piping systems, simple to maintain |
| Unique body and float design | Seals at very low pressure A.R.I. (S-050 L) |
| Continual air gap | Separates the liquid from the sealing mechanism (A.R.I. S-050 L) |
|  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 |

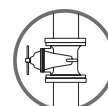
Technical Specifications

| | |
|------------------------|---|
| Size range | 1/2" 3/4" 1" |
| Working pressure range | A.R.I S-050 0.1 - 10 bar (PN10) A.R.I S-050 L 0.02 - 10 bar (PN10) A.R.I S-050 0.2 - 16 bar (PN16) A.R.I S-050 L 0.05 - 16 bar (PN16) A.R.I S-052 0.2 - 25 bar (PN25) |
| Temperature | Maximum working temperature: 60° C Maximum intermittent temperature: 90° C |
| Testing pressure | 1.5 times maximum working pressure |
| Valve coating | Fusion bonded epoxy coating in compliance with standard DIN 30677-2 (Model A.R.I. S-050 C, A.R.I. S-052) |

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

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.



Valve Selection Options

| | |
|----------------------------|---|
| Models | A.R.I. S-050 A.R.I. S-050 L Specifically designed to operate with liquids containing small suspended solids A.R.I. S-052 Protective metal shell |
| Valve connection | Threaded male BSPT/NPT |
| Standard materials | Reinforced Nylon, Polypropylene, Stainless Steel 316, Cast Ductile Iron Shell |
| Optional add-on components | One-way Out attachment, allows for air discharge only, prevents air intake |
| Pressure rating | PN10 A.R.I. S-050 A.R.I. S-050 L PN16 A.R.I. S-050 A.R.I. S-050 L PN25 A.R.I. S-052 |



A.R.I. S-050

A.R.I. S-050 L

Dimensions and Weight

| Model | Dimensions (mm) | | Connections | Weight (kg) | Orifice Area (mm ²) |
|----------------------------|-----------------|-----|-----------------|-------------|---------------------------------|
| | max. A | B | | | |
| Composite materials models | | | | | |
| S-050 | 87 | 143 | 1/8" BSP Female | 0.3 | 12 |
| S-050 L | 88 | 223 | 1/8" BSP Female | 0.34 | 12 |
| Metal Models | | | | | |
| S-050 | 85 | 148 | 1/8" BSP Female | 1.65 | 12 |
| S-050 L | 84 | 216 | 1/8" BSP Female | 1.6 | 12 |



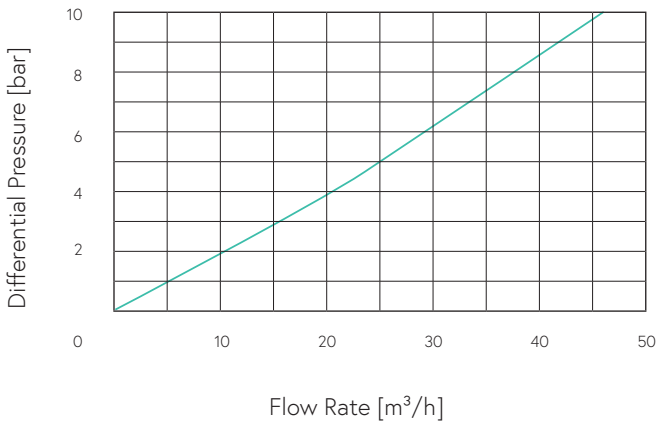
NOTE

Dimension A in the picture and in the table shows the maximum product width.

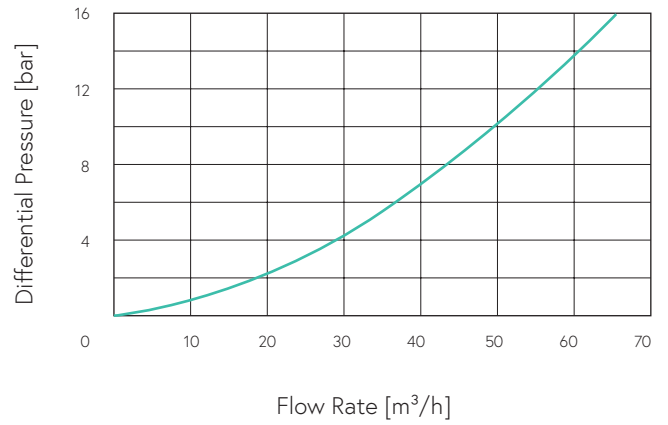
All product weights are approximate, due to the differences in flange standards, materials and variable accessories.

Flow Charts

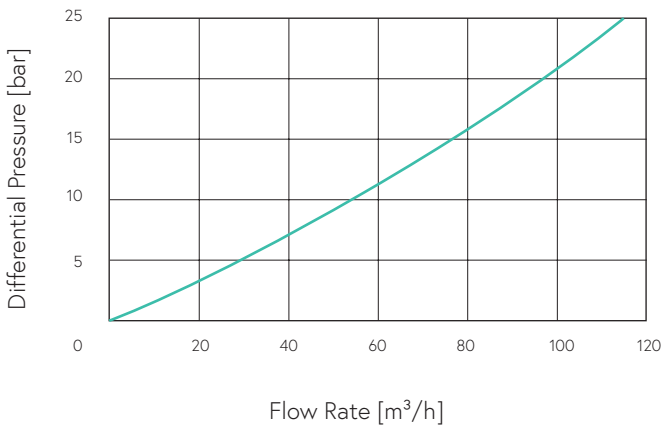
PN10 Automatic Air Release Flow Rate



PN16 Automatic Air Release Flow Rate



PN25 Automatic Air Release Flow Rate



Parts List and Specifications | Metal Models

| No. | Part | Material |
|-----|----------------------|---|
| 1 | Cover Assembly | |
| 1a | Discharge Outlet | Polypropylene |
| 1b | Body | Stainless Steel 316 / Super Duplex Grade 5A |
| 2 | Air Release Assembly | |
| 2a | Clamping Stem | Reinforced Nylon / Polypropylene |
| 2b | Float | Foamed Polypropylene |
| 2c | Rolling Seal | EPDM |
| 3 | Base Assembly | |
| 3a | O-ring | NBR |
| 3b | Base | Stainless Steel 316 / Super Duplex Grade 5A |



Parts List and Specifications | Composite Materials Models

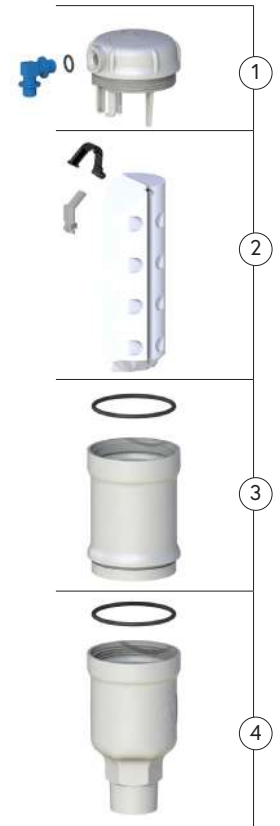
| No. | Part | Material |
|-----|----------------------|---|
| 1 | Cover Assembly | |
| 1a | Discharge Outlet | Polypropylene |
| 1b | Body | Reinforced Nylon / Polypropylene / PVDF |
| 2 | Air Release Assembly | |
| 2a | Clamping Stem | Reinforced Nylon / Polypropylene |
| 2b | Float | Foamed Polypropylene |
| 2c | Rolling Seal | EPDM |
| 3 | Base Assembly | |
| 3a | O-ring | NBR |
| 3b | Base | Reinforced Nylon / Polypropylene / PVDF |
| 3c | Strainer | Reinforced Nylon |



NOTE: Polypropylene for PN10 models only

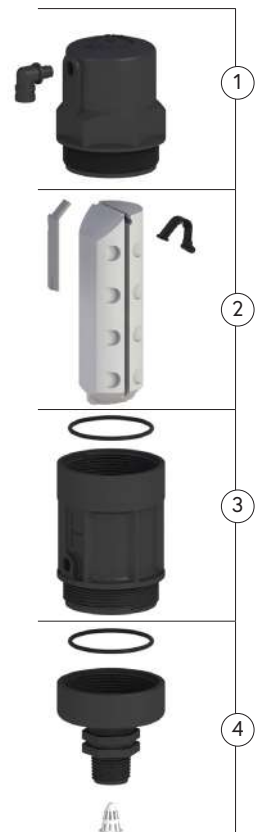
Parts List and Specifications | Metal Models

| No. | Part | Material |
|-----|----------------------|---|
| 1 | Cover Assembly | |
| 1a | Discharge Outlet | Polypropylene |
| 1b | Body | Stainless Steel 316 / Super Duplex Grade 5A |
| 2 | Air Release Assembly | |
| 2a | Clamping Stem | Reinforced Nylon / Polypropylene |
| 2b | Float | Foamed Polypropylene |
| 2c | Rolling Seal | EPDM |
| 3 | Extension Assembly | |
| 3a | Extension | Stainless Steel 316 / Super Duplex Grade 5A |
| 3b | O-ring | NBR |
| 4 | Base Assembly | |
| 4a | O-ring | NBR |
| 4b | Base | Stainless Steel 316 / Super Duplex Grade 5A |



Parts List and Specifications | Composite Materials Models

| No. | Part | Material |
|-----|----------------------|---|
| 1 | Cover Assembly | |
| 1a | Discharge Outlet | Polypropylene |
| 1b | Body | Reinforced Nylon / Polypropylene / PVDF |
| 2 | Air Release Assembly | |
| 2a | Clamping Stem | Reinforced Nylon / Polypropylene |
| 2b | Float | Foamed Polypropylene |
| 2c | Rolling Seal | EPDM |
| 3 | Extension Assembly | |
| 3a | Extension | Reinforced Nylon / Polypropylene / PVDF |
| 3b | O-ring | NBR |
| 4 | Base Assembly | |
| 4a | O-ring | NBR |
| 4b | Base | Reinforced Nylon / Polypropylene / PVDF |
| 4c | Strainer | Reinforced Nylon |



NOTE: Polypropylene for PN10 models only