

A.R.I. K-016/K-100

 **Aquestia**
Directing the Flow



Waterworks

High Pressure, Air & Vacuum Valve

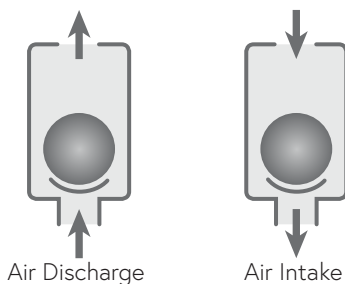
Description

A.R.I. K-016, K100 are high pressure Air & Vacuum Air Valves. Valve operation includes venting air from a filling pipeline and also vacuum breaking (air intake) of a draining pipeline, to optimize pipeline hydraulic efficiency and flow.




Installation

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

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 |
|  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/CAN 61 certified & listed | For drinking water system component |
|  NSF/ANSI 372 certified & listed | Conforms with lead content requirements for "lead-free" plumbing |

Technical Specifications

| | |
|------------------------|--|
| Size range | 1" - 8" |
| Working pressure range | K-016: 0.2 - 64 bar (PN 64) K-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. K-016 A.R.I. K-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 A.R.I. K-016 PN100 A.R.I. K-100 |

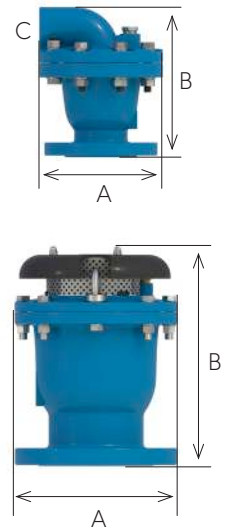
Dimensions and Weight

| Model | Dimensions (mm) | | Connections | Weight (kg) | Orifice Area (mm ²) |
|---------------------|-----------------|-----|----------------------|-------------|---------------------------------|
| | A | B | C | | A / V |
| Elbow cover models | | | | | |
| 1" (25 mm) FL | 165 | 260 | 1.5" BSP/NPSM Female | 6.8 | 794 |
| 2" (50 mm) FL | 210 | 276 | 1.5" BSP/NPSM Female | 24 | 794 |
| 3" (80 mm) FL | 235 | 289 | 2" BSP/NPSM Female | 31 | 1809 |
| 4" (100 mm) FL | 270 | 358 | 3" BSP/NPSM Female | 50 | 3318 |
| Screen cover models | | | | | |
| 6" (150 mm) FL | 556 | 536 | - | 115.8 | 17662 |
| 8" (200 mm) FL | 556 | 536 | - | 120 | 17662 |

FL - Flanged

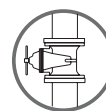
NOTE

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



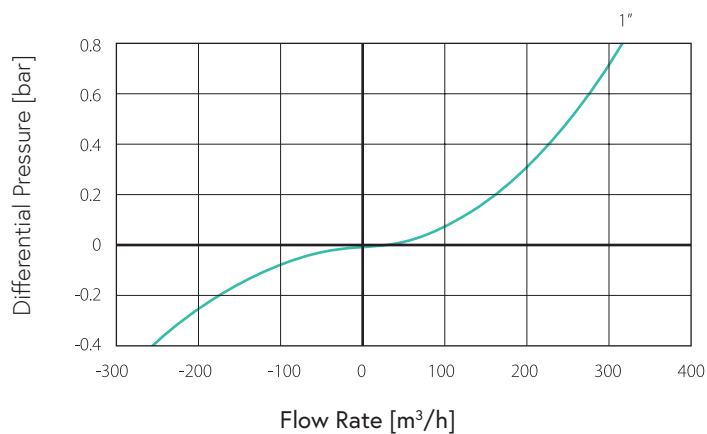
The isolation valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.

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

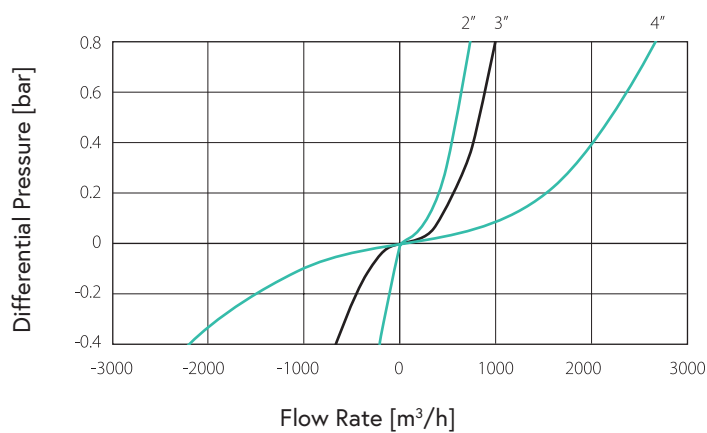


Flow Charts

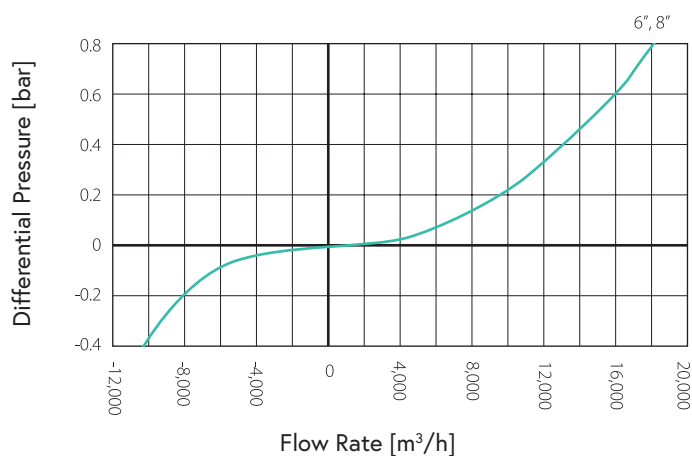
Air & Vacuum Flow Rate



Air & Vacuum Flow Rate

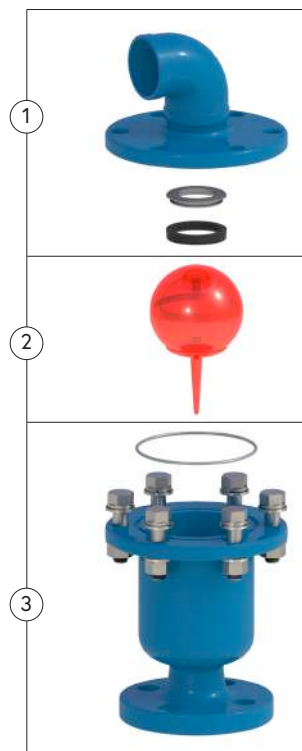


Air & Vacuum Flow Rate



Parts List and Specifications | 1" Elbow Cover Models

| No. | Part | Material |
|-----|-----------------------|-----------------------------------|
| 1 | Cover Assembly | |
| 1a | Discharge Elbow | Cast Steel |
| 1b | Orifice Seat | Stainless Steel 316 |
| 1c | Orifice Seal | EPDM |
| 2 | Float Assembly | Polycarbonate/Stainless Steel 316 |
| 3 | Body Assembly | |
| 3a | O-ring | NBR / EPDM |
| 3b | Bolts, Nuts & Washers | Steel/Stainless Steel 316 |
| 3c | Body | Cast Steel |



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

| No. | Part | Material |
|-----|-----------------------|-----------------------------------|
| 1 | Cover Assembly | |
| 1a | Plug | Brass |
| 1b | Discharge Elbow | Cast Steel |
| 1c | Orifice Seat | Stainless Steel 316 |
| 1d | Orifice Seal | EPDM |
| 2 | Float Assembly | Polycarbonate/Stainless Steel 316 |
| 3 | Body Assembly | |
| 3a | O-ring | EPDM |
| 3b | Bolts, Nuts & Washers | Steel/Stainless Steel 316 |
| 3c | Body | Cast Steel |



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

| No. | Part | Material |
|-----|-----------------------|---------------------------|
| 1 | Cover Assembly | |
| 1a | Screen Cover | Polyethylene |
| 1b | Screen | Stainless Steel 316 |
| 1c | Bolts Nuts & Washers | Steel/Stainless Steel 316 |
| 1d | Plug | Brass |
| 1e | Cover | Cast Steel |
| 1f | Orifice Seat | Stainless Steel 316 |
| 1g | Orifice Seal | EPDM |
| 2 | Float Assembly | |
| 2a | Float | Duplex |
| 3 | Body Assembly | |
| 3a | O-Ring | EPDM |
| 3b | Bolts, Nuts & Washers | Steel/Stainless Steel 316 |
| 3c | Body | Cast Steel |

