

Air Valve Monitoring System

Application

Wastewater, Water Supply

Description

A data transmitting system that collects and transmits the air valve status and accessories data to a central web server.

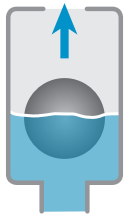
The system provides a comprehensive view of the air valves installed on the system pipelines.

It detects abnormal issues before they occur, notifies the need for service, significantly reduces maintenance costs and prevents fines caused by leakage, spillage, clogging, tilting, vandalism, high pressure and flooding.

ARISENSE employs a combination of sensors integrated within the air valve housing that continuously monitor the valve functioning and performance and transmits the data to the web server.



Operation



Combination
Air Valve

+



Sensors

+



Wireless transmission

Installation

- Sewage and water treatment systems
- Water distribution systems
- Agricultural water systems
- Industrial fluid systems

Features and Benefits

Fast and stable IoT connectivity	transmits data from air valve sensors via wireless communication to a secure cloud and to your app
Early detection of leaks or blockages in air valves or pipes across your network	avoids costly penalties, reduces water loss and minimizes environmental impact
24/7 monitoring of pressure flow within pipelines and air valves	enables more effective management of your water system
Easy installation	smart air valves with built-in IoT can be installed by regular employees in the field
Monitor your network easily	full picture of the state of your air valves and key pipelines from the dashboard on your smartphone or tablet
Instant alerts of a leak or blockage directly to your smartphone	take immediate action wherever you are
Intelligent air valves with built-in sensors	continuous monitoring, health-checks and alerts
Early warning alerts in rural or remote wastewater systems	avoids environmental damage and water loss not normally detected using current practices
Very low energy needs extend battery life	prolongs battery replacement time
SCADA SYSEM connection compatibility	transmits data directly to your in-house system

Technical Specifications



Network Transmission

- Determined by the country of installation
- Wired or wireless networks (radio, 3G\4G), employing a variety of communication protocols
- Global SIM cards



Sensors

- Pressure Sensor Range: 0 – 25 bar
- Manhole Flood Sensor: alerts when liquid level reaches set point
- Leakage Sensor: alerts only when a leak in the air valve is detected



Battery Life (based on manufacturer specifications)

- Master unit: 5 years
- Partner unit: 10 years



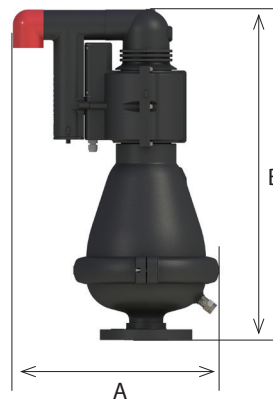
- Working **temperature** range: 4° - 60° C.
- Intermittent temperature range: 4° - 90° C.

Valve Selection Options

- 2", 3", 4" valve connection: flanged or threaded BSP/NPT
- Models D-040 L, D-020, D-025, D-025 L
- Optional Add-on Components:
 - Partner or Master
 - Pressure Sensor
 - Manhole Flood Sensor
 - Non Slam
 - External Antenna

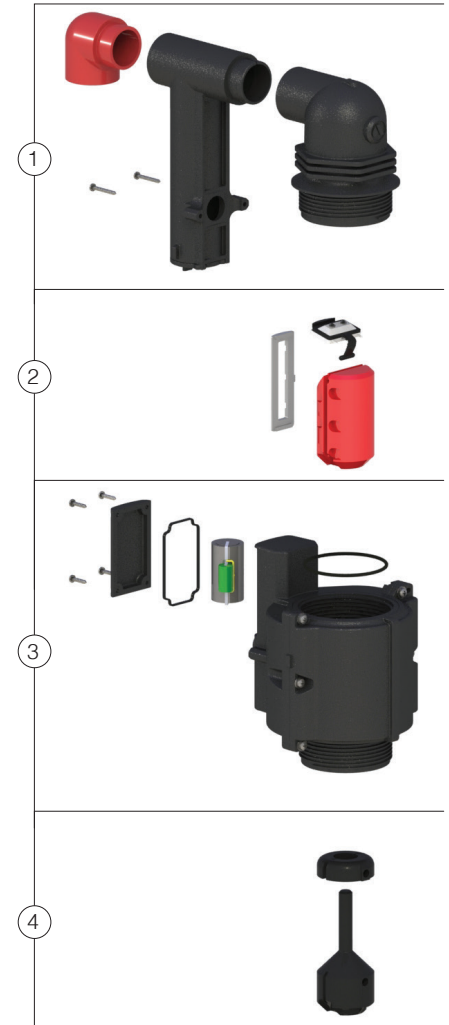
Dimensions and Weight

Model	Dimensions (mm)		Weight (kg)
	A	B	
D-040L Th.	310	347	3.1
D-040L 2" FI	321	354	3.5
D-020 2" Th	536	777	17.6
D-020 2" FI	536	782	19.4
D-020 3" Th	536	825	18.6
D-020 3" FI	536	782	20.8
D-020 4" FI	536	782	22.2
D-025 2" Th	367	585	6.2
D-025 2" FI	367	590	6.6
D-025 3" Th	367	585	6.3
D-025 3" FI	367	590	6.9
D-025 4" FI	367	591	7.1
D-025L 2" Th	372	695	8.7
D-025L 2" FI	372	700	9.1
D-025L 3" Th	372	695	8.8
D-025L 3" FI	372	700	9.4
D-025L 4" FI	372	700	9.7



Parts List and Specification ARISENSE Assembly

Part		Material
1	Body Assembly	
1a	Body	Reinforced Nylon
1b	Leak Detector Case	Polypropylene
1c	Leak Detector Cover	Polypropylene
1d	Discharge Elbow	Polypropylene
1e	Screws	Stainless Steel 316
2	Seal Assembly	
2a	Rolling Seal Assembly	Nylon + EPDM + Stainless Steel
2b	Float	Foamed Polypropylene
2c	Clamping Stem	Reinforced Nylon
3	Electronics & Sensors Assembly	
3a	Battery Cover	Polypropylene
3b	Battery Cover Seal	EPDM
3c	Battery	Lithium
3d	O-Ring	EPDM
3e	Electronics Case	Polypropylene
3f	Electronics Case Cover	Polypropylene
3g	Electronics & Sensors	
3h	Screws	Stainless Steel 316
4	Float Assembly (for sewage air valves)	
4a	Ring Float	Polypropylene
4b	Ring Float Connector	Polypropylene



The Parts List refers only to the ARISENSE unit. For the Parts List of the air valve itself, please refer to the relevant air valve catalog page.