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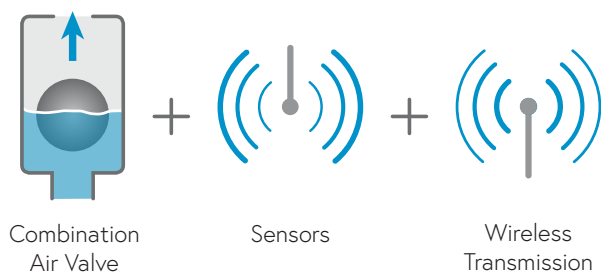Directing the Flow

Waterworks

Smart Air Valve for Waterworks Monitoring

Description

ARISENSE is an advanced IoT-based system that enhances the reliability and efficiency of potable water air valves. By continuously monitoring air valve performance (including leaks, pressure fluctuations and system anomalies), it provides real-time insights and instant alerts to prevent water loss, optimize network efficiency and ensure compliance.

With early leak detection, pressure monitoring and remote asset management capabilities, ARISENSE helps utilities to reduce water loss (NRW), prevent pipeline failures and minimize operational costs. Seamlessly integrating with SCADA and cloud platforms, its battery-powered, easy-to-install design ensures proactive maintenance and a stable, uninterrupted water supply.

Operation

Combination Air Valve + Sensors + Wireless Transmission

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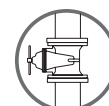## Features and Benefits

Long battery life & energy efficient	Low-power operation, plus 5-year battery lifespan; reduces maintenance
	Energy-efficient sensors extend monitoring capabilities at no added cost
	Ideal for remote locations; reliable long-term operation & minimal energy usage
Integrated smart air valve – no external sensors	All-in-one, built-in monitoring solution; no need for additional installations
	Easily retrofitted onto existing air valves, for less complex setup
Leak detection & water conservation	Early leak detection; reduces non-revenue water (NRW) & prevents water loss
	Optimizes network efficiency by minimizing water waste & improving supply reliability
Pressure monitoring & pipeline protection	Detects pressure anomalies to prevent bursts, reduces pipeline stress & extends infrastructure lifespan
	Enhances system performance by detecting faulty valves & identifying irregular pressure fluctuations or consumption patterns
Remote monitoring & smart asset management	Alerts via SMS or email allow instant response; lowering operational threats & pipeline stress
	Trend analysis & predictive insights; optimize maintenance schedules & prevent failures
Seamless IoT & SCADA integration	Wireless connectivity (2G/3G/4G) ensures secure, real-time data transmission
	Compatible with SCADA (.CSV) & analytics systems for centralized monitoring

Technical Specifications

Power source	Field-replaceable lithium battery 3.6 V, 19Ah capacity
	Up to 5-year lifetime (based on manufacturer specifications)
Connectivity	Cellular 2G/3G/4G (CATM1 and NB-IoT)
Local connectivity	Bluetooth
LTE antenna	Built-in internal & external antenna capability
Internal sensors	Leaks
	Tilt, tamper
Device management	ARISENSE IoT platform
	ARISENSE field app. (Android)
IP rating	IP67
	IP68 (2M up to 24H)
Certifications	CE, FCC
Optional add-on components	Pressure sensor
	Manhole flood sensor
	External antenna
	Non-slam

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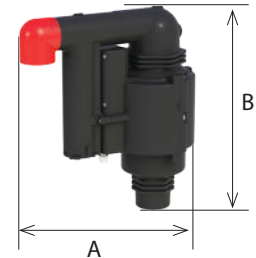
For complete installation instructions, please refer to the IOM document.

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Dimensions and Weight

Model	Dimensions (mm)		Weight (kg)
	A	B	
ARISENSE D-040L Th.	310	347	3.1
ARISENSE D-040L 2" Fl	321	354	3.5

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

Parts List and Specificationss

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.

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

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