



Wastewater

Smart Air Valve for Wastewater Monitoring

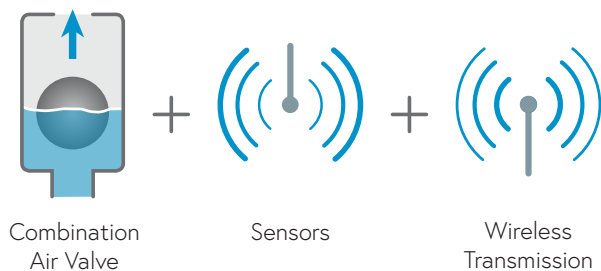
Description

ARISENSE is an advanced IoT-based system that enhances the reliability and efficiency of wastewater air valves.

By continuously monitoring air valve performance, detecting leaks, blockages, pressure fluctuations, and manhole water levels, it provides real-time insights and instant alerts to prevent pollution, reduce maintenance costs and ensure compliance.

Seamlessly integrating with existing air valves, ARISENSE transmits critical data to a secure platform or SCADA system. With its battery-powered, easy-to-install design, it enables proactive maintenance; preventing costly failures and operational disruptions.

Operation



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
Real-time leak & blockage detection	Continuous monitoring detects leaks, blockages & pressure anomalies before they escalate
	Prevents pipeline stress & reduces unintended maintenance costs
Early overflow & pollution prevention	Manhole & flood-level monitoring detects rising water levels in pits or chambers
	Helps utilities to avoid regulatory fines by identifying issues before damage occurs
Real-time alerts & smart decision-making	Alerts via SMS or email allow instant response; lowering operational threats & environmental risks
	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
	Overflow & clogging
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



ARISENSE D-020



ARISENSE D-025 L



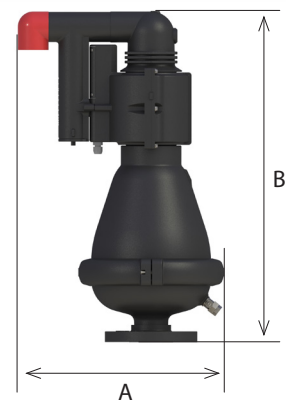
ARISENSE D-025

Valve Selection Options

Air valve models	ARISENSE D-020, ARISENSE D-025, ARISENSE D-025 L
Valve selection options	2", 3", 4" valve connection: flanged or threaded BSP/NPT

Dimensions and Weight

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

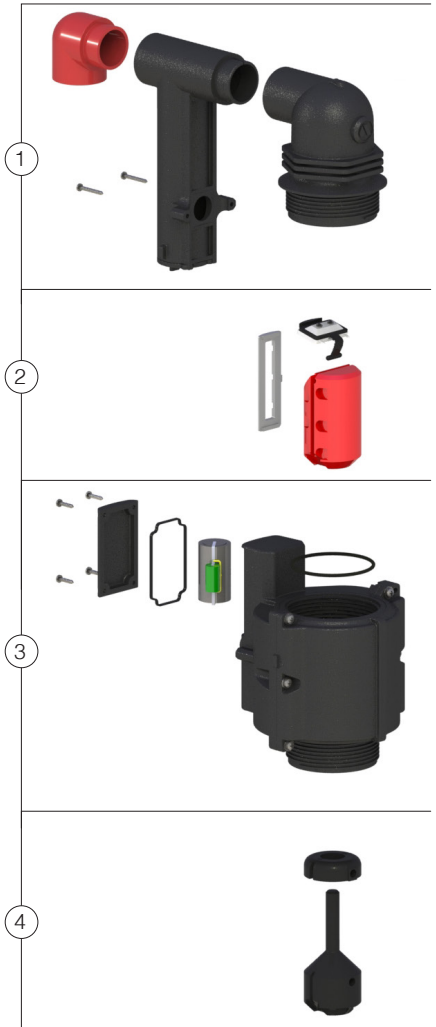


NOTE

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

Parts List and Specifications

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.

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.

