



WiseAir 2024: Pioneering the Next Generation of Compressed Air Intelligence

At the Forefront of Smart Sensor Technology, WiseAir Is Revolutionizing Compressed Air Measurement by Enhancing Efficiency and Championing Environmental Sustainability



OUR COMPREHENSIVE MONITORING AND ANALYSIS SOLUTIONS



ENERGY MONITORING SUITE

Flow Meter

Precise measurement for optimal energy use.

Pressure Sensor

Accurate pressure data for system integrity.

Power Meter

Detailed power consumption tracking.

Temperature Sensor

Critical monitoring for system efficiency.

ADVANCED SMART MONITORING

IoT Air Audit Suite

Integrated suite for complete air system audits.

Cloud Remote Platform

Secure, scalable cloud platform for data analysis and insights.

IoT Module

Smart connectivity for remote monitoring.

Display & Data Logger

Real-time visualization and historical data logging.

AIR / GAS QUALITY ANALYZERS

Leak Detector

Early detection to prevent energy loss.

Oil Vapour Sensor

Monitor gas purity and quality.

Dew Point Sensor

Ensure optimal gas moisture levels.

Particle Counter

Detect particulate matter in real-time.

SMART DRAINS

Magnetic Drains

Smart connectivity for remote monitoring.

Electronic Drains

Smart connectivity for remote monitoring.

OUR VALUE PROPOSITION

Comprehensive
R&D Expertise
Across the
Spectrum

Integrated
Measurement
Solutions

Superior
Performance
Instruments

Exceptionally
Economical

OUR FACILITY



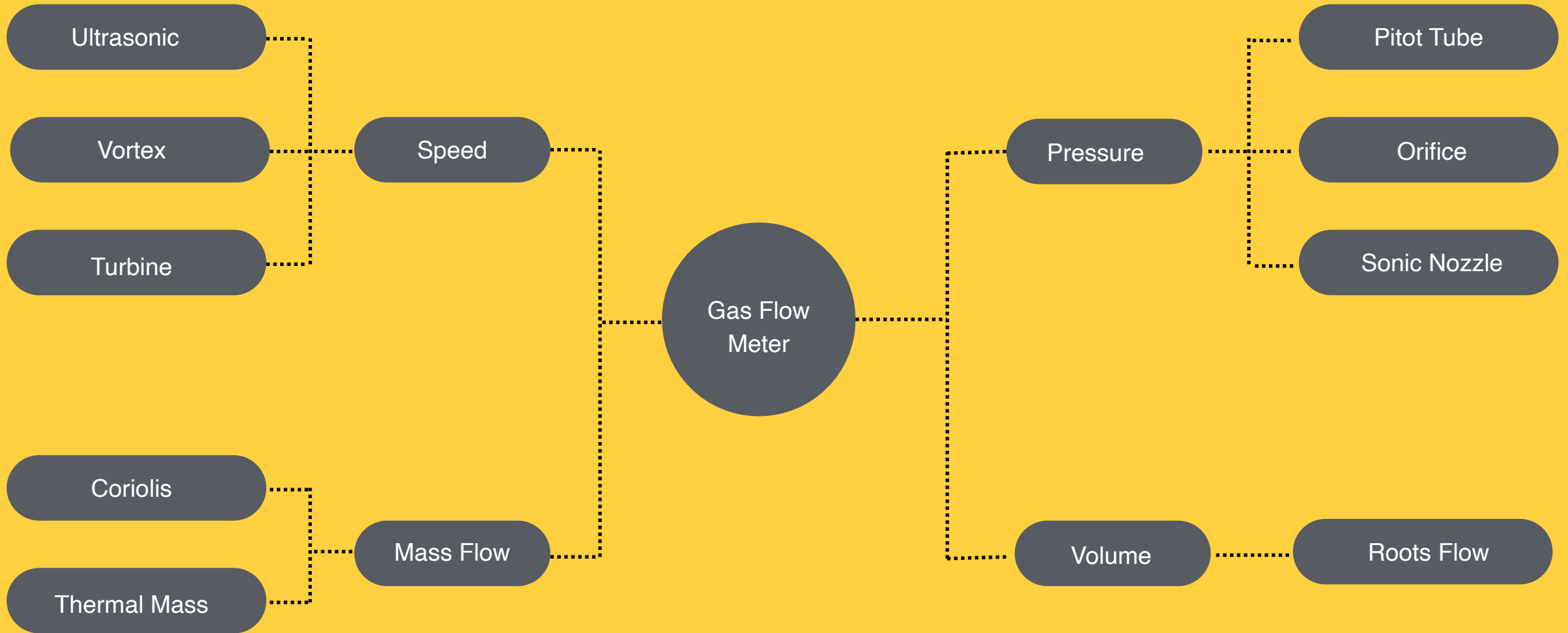
- **State-of-the-Art Calibration Lab** for precise IIoT sensor measurements.
- **Advanced Service Facility** for smart sensor maintenance and testing.
- **Innovative IIoT Sensor Manufacturing** with cutting-edge technology.
- **Strategic Location** in Coimbatore, Tamil Nadu, a hub for technological innovation.
- **Focus on Quality and Precision** in sensor production and calibration.





PART TWO - FLOW MEASUREMENTS

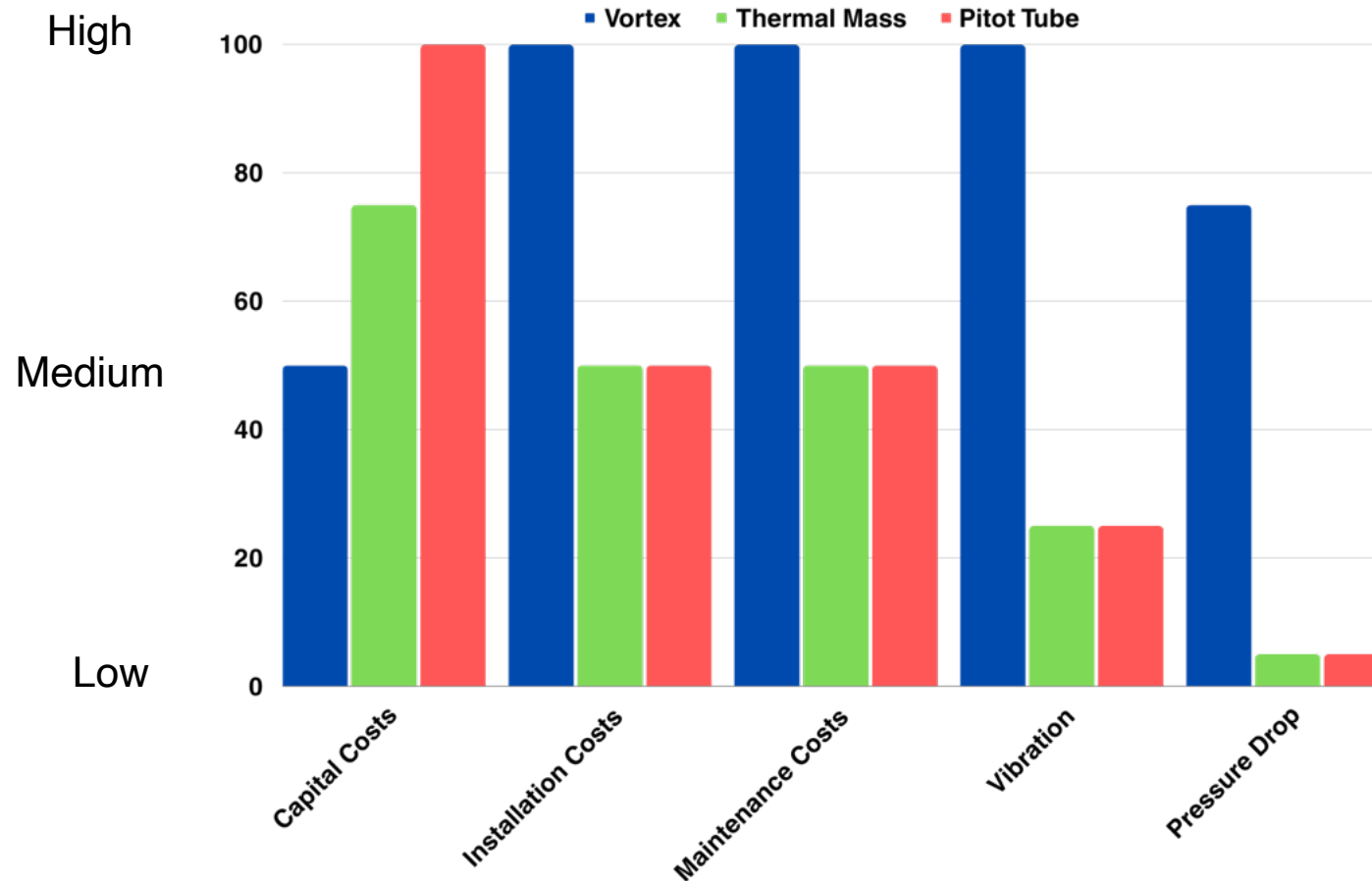
TECHNOLOGIES FOR FLOW MEASUREMENT



Flow Meter Selection Recommendations

Tips :

- Ensure the sensor's flow range aligns with your system's operating flow rates for accurate measurements.
- Choose sensors with construction materials and design that can endure the specific environmental conditions of your application.
- Select sensors that provide rapid response times to accurately track dynamic flow changes within your system.
- Select sensors considering the ease of maintenance to reduce long-term service costs and system downtime.
- Focus on operational costs over initial capital expenditure, as ongoing expenses can outweigh the upfront investment over time.



Our Range of Flow Sensors

Insertion - Thermal Mass Flow

Differential Pressure Pitot Tube

Ultrasonic



Vortex

Inline - Thermal Mass Flow

Flow Meter Selection Recommendations



Vortex	Thermal Mass Flow	Pitot Tube
Lower Limit of Measurement - 13.5 Nm/s	Lower Limit of Measurement - 0.1 Nm/s	Lower Limit of Measurement - 5.0 Nm/s
Turndown Ratio - 1 : 53	Turndown Ratio - 1 : 2500	Turndown Ratio - 1 : 60

Flow Meter Selection Recommendations

Flow Meter	Heavy Contamination In The Medium	Online Installation		Pipe > Dn300	Low Flow Application : Branch Pipe, Single Equipment Consumption	Vacuum Flow (Clean)	Blower Flow (Low Pressure And Usually Large Pipe Diameter)	Steam
		Clean Gas	Wet & Dirt Gas					
Vortex	✓							✓
Insertion Thermal Mass Flow Meter		✓		✓	✓	✓	✓	
Insertion Pitot Tube Flow Meter			✓	✓			✓	

WISEAIR FLOW SENSORS - UNMATCHED PRECISION, UNPARALLELED PERFORMANCE



ACCURACY

RELIABILITY

VERSATILITY

AFFORDABILITY



WAFS - 103 Differential Pressure Pitot Tube Flow Sensor



Resists Moisture Build-up:

Features self-heating and draining capabilities to prevent condensation and contamination, offering superior protection in insertion flow meters.



Automated Self-Calibration:

Implements online self-calibration to counteract inaccuracies due to sensor wear over time.



Ultra-sensitive Detection:

Engineered to detect extremely low gas flows, setting new industry standards **for sensitivity.**



Adaptive Flow Analysis:

Utilises a sophisticated algorithm that adjusts flow profiles in real-time, considering a variety of factors including pipe diameter, pressure, ambient temperature, and gas type for precise measurements.

WAFS - 103 Differential Pressure Pitot Tube Flow Sensor



Feature	WAFS 103 Pitot Tube Flow Meter	1st Nearest Competitor	2nd Nearest Competitor
Range	5~300 Nm/s with a turndown ratio of 1:60, ensuring accurate measurement even at low flow rates, ideal for VSD compressors.	20~200 Nm/s with a turndown ratio of 1:10	20~250 Nm/s with a turndown ratio of 1:12.5
Installation	Insertion type	Insertion type	Insertion type
Vibration	Absent	Absent	Absent
Pressure Loss	Minimal	Minimal	Minimal
Accuracy	Features an auto-calibration function that compensates for drift due to pressure, temperature, and aging to deliver precise measurements.	Calibration required only at initial setup; subsequent changes in pressure, temperature, and aging are not auto-compensated in real time.	
Contamination Prevention	Integrated anti-condensation and pollution solution with auto-drain and auto-heating functions, powered by >24W at 24V.	Filter required to prevent condensation; filter replacement needed regularly.	Lacks anti-condensation function; factory return required for repairs.
Flow Profile	Employs a sophisticated flow profile model that dynamically calculates the profile factor based on pipe diameter, pressure, temperature, and gas type for enhanced accuracy.	Utilizes a fixed coefficient for flow profile factor, which does not account for variable conditions.	



Complete Digital Signal

Processing: Eliminates zero drift for the highest precision in measurements.



Ultra-Low Measurement

Capability: Exceptional 1:2500 turndown ratio for accurate readings at minimal flow rates.



Extensive Calibration: More than 30 calibration points to address and correct non-linear measurement discrepancies.



Smart Diagnostic Features: Proactive detection systems to prevent sensor damage due to contamination.



Adaptive Flow Profile Analysis: Advanced model that dynamically adjusts to varying flow conditions.

WAFS Series Thermal Mass Flow Sensor



Product	WAFS - 104 / 5 / 6 / 7	1st Nearest Competitor	2nd Nearest Competitor
Range	0.1~120 Nm/s or 0.1~250 Nm/s - Leading range offering in the market	0.5~150 Nm/s - Standard range for general use	Variable ranges: 0.6~60 Nm/s, 0.9~90 Nm/s, 1.2~120 Nm/s, 1.5~150 Nm/s
Technology	Fully digital: No drift and unaffected by pressure/temperature changes. Advanced flow profile mathematics. Over 30 calibration points for precision tuning.	Analog bridge: Zero calibration in lab conditions with potential drift under variable conditions. Fixed flow profile coefficient. 3~10 calibration points.	Details not provided



- ◆ **Thermal Mass Flow Measurement:** Offers independent flow measurement unaffected by temperature and pressure changes, with integrated temperature and pressure measurement capabilities.
- ◆ **Ultra Wide 1:100 Turndown Ratio:** Provides exceptional range flexibility, enabling accurate measurement over a wide range of flow rates.
- ◆ **Full Digital Signal Processing:** Unlike traditional analog bridge designs, this flow meter ensures more accurate readings and a broader measuring range due to its digital processing.
- ◆ **Stainless Steel Construction with In-built Pressure Sensor:** Durable, complete stainless steel body construction ensures longevity, complemented by an integrated pressure sensor for comprehensive monitoring.
- ◆ **Standard RS485 Modbus RTU Interface:** Facilitates easy integration into existing systems with a standard digital communication protocol, ensuring reliable data transmission.

WAFS - 110x Vortex Flow Meter Advantage



Dual-Function Vortex Sensor:

Incorporates one sensor for flow detection and another for vibration monitoring.



Advanced Anti-Vibration and EMC Resistance:

Offers a robust full-spectrum anti-vibration feature, maintaining accuracy even at minimal flow rates.



Comprehensive Signal Analysis:

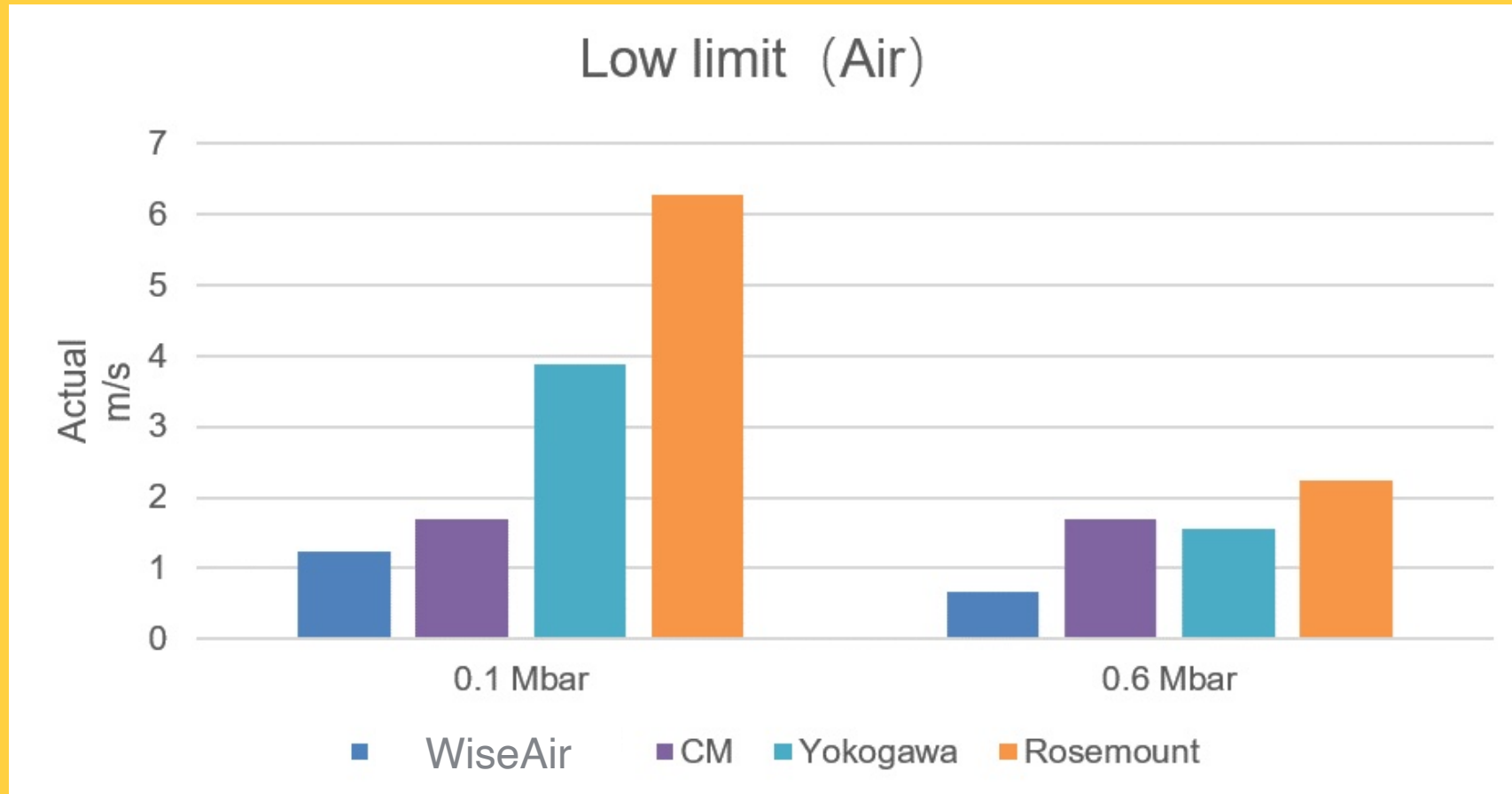
Equipped with a high-performance Digital Signal Processor (DSP) that discerns between flow signals and vibration noise.

1.5_{scf/s}

Superior Lower Measurement Limit:

Capable of detecting very low gas flow rates with high precision.

WAFS - 110x Vortex Flow Meter Advantage





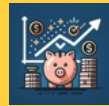
Non-Invasive Technology: Offers contactless installation, eliminating the need for pipe modification and ensuring there's no contact with the fluids, which prevents contamination.



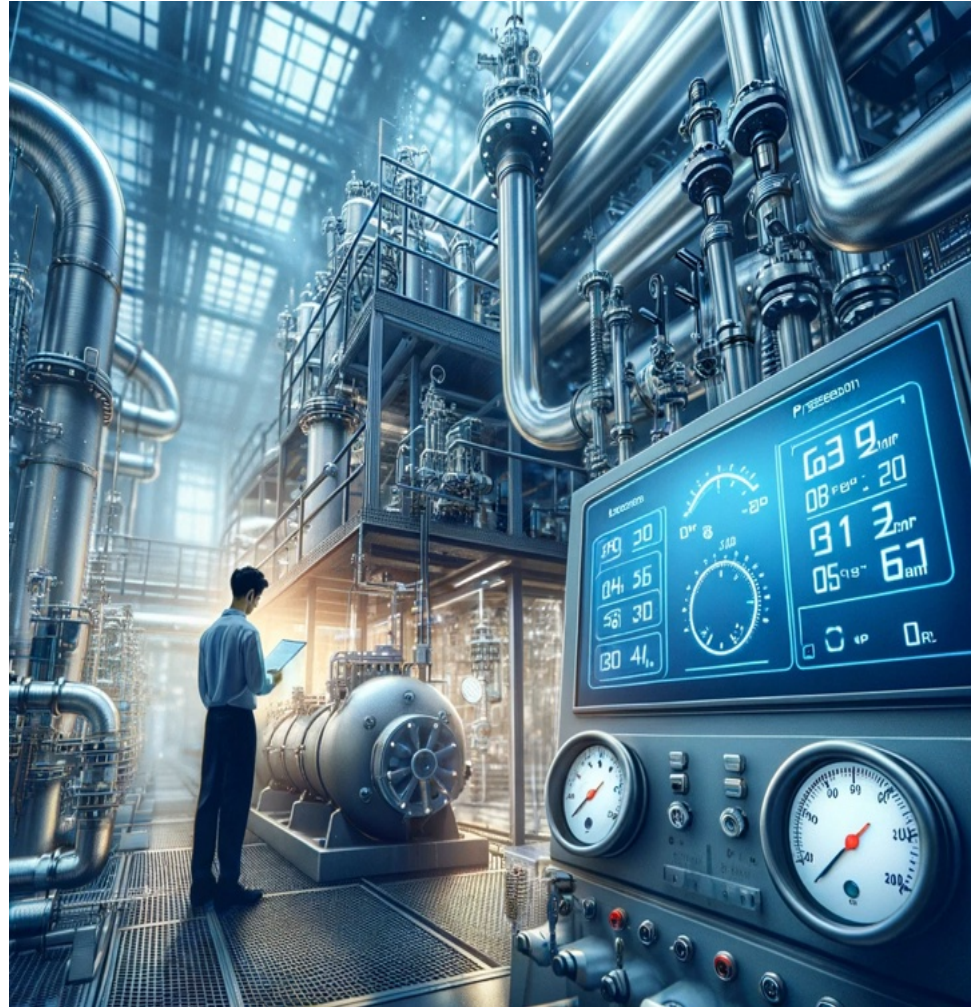
Smart Integration: Features an inbuilt display and Modbus output, allowing for easy integration with energy management software, streamlining the process and reducing the need for additional software investments.



Versatile Performance Range: Capable of accurately measuring a wide range of operating temperatures for both cold and hot water applications, suitable for pipes ranging from 32 to 6000 mm in diameter.



Cost-Efficiency: Priced affordably and designed to lower project costs, this sensor ensures a faster return on investment with its low cost of ownership.








PART THREE - DEW POINT MEASUREMENT

Sensor Module	WADS 201 - 202	WADS - 203	WADS - 204
Sensor Type	Polymer	Aluminum oxide	QCM
			
Suitable Applications			
Refrigerated Dryer	✓		
Desiccant Dryer	✓	✓	✓
Nitrogen Generator		✓	✓
High Purity Industrial Gas			✓
Pollutant Particle Tolerance	✓	✓	
Non-inert & Corrosive Gas Tolerance			✓

WAFS - 2xx Series Dew Point Sensors

Sensor Module	WADS 201 - 202	WADS - 203	WADS - 204
Sensor Type	Polymer	Aluminum oxide	QCM
			
> -60 °CTd: Refrigerated Dryer, Desiccant Dryer, Industrial Gas	✓		
-80 ... -40 °CTd: Desiccant DRyer, Nitrogen Gas Generator, Industrial Gas		✓	
-120 ... -60 °CTd: High Purity Industrial Gas			✓
Contains Pollutant Particles	✓	✓	
Non-Inert & Corrosive Gas		✓	
> -60 °CTd: Refrigerated Dryer, Desiccant Dryer, Industrial Gas	✓		
-80 ... -40 °CTd: Desiccant DRyer, Nitrogen Gas Generator, Industrial Gas		✓	

Dew Point Sensor Selection Recommendations

Model	WADS 201	WADS 202	WADS 203	WADS 204	WADS 205 / 206	WADS 207 - 208
						
Sensor type	Polymer sensor		Aluminum oxide sensor	QCM sensor	Select	Select
Best use range	-60 ... +60 °Ctd - 80...+20 °Ctd		-80 ... -40 °Ctd	-120 ... -60 °Ctd	Select	Select



PART FOUR - POWER METERS



Comprehensive Power Analysis:

Equipped to conduct detailed power quality analysis, ensuring accurate monitoring and diagnostics across various electrical systems.



High Linearity: Maintains precise accuracy across the full measurement scale, which is essential for consistent and reliable power monitoring.



Wide Dynamic Range: Capable of measuring electrical parameters over a broad spectrum, accommodating a diverse array of industrial applications.



Extensive Data Logging Capability:

Features the capacity to log data for up to 100 million valve operations, enabling long-term analysis and trend monitoring.



PART FIVE - LEAK DETECTORS



Wide Frequency Range: Operates from 20 kHz to 90 kHz, allowing for the detection of a wide array of leakage events, from the smallest to more significant leaks.



Noise Filtering Technology: Equipped with three filters to remove main noise frequencies, making it highly effective in industrial environments where background noise is prevalent.



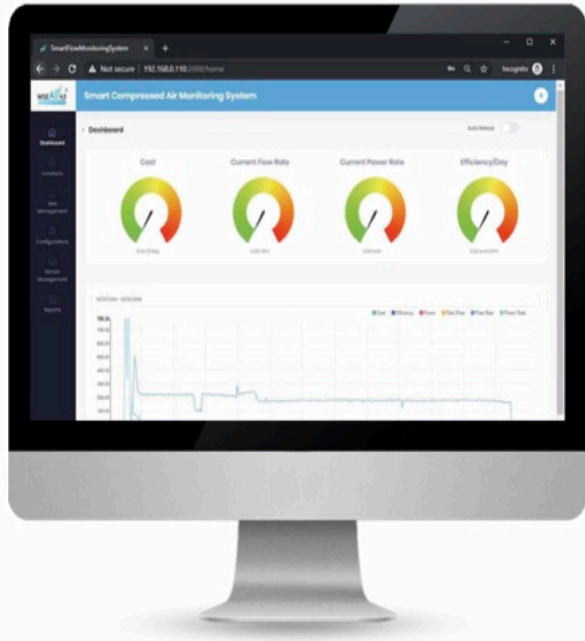
Enhanced Sensitivity Control: Features adjustable receiver sensitivity, which helps in categorising the intensity of the leaks and facilitates accurate detection and analysis.



Versatile Signal Transmission: Offers three levels of transmitter signal strengths, enabling precise leak location across various distances and scenarios.



PART SIX - ADVANCED SMART MONITORING



Visualise the
Entire Plant



Data
Assessments



Real Time
Monitoring



Facts Based
Improvement



Real-Time Data Monitoring:

Provides immediate insights into air flow, pressure, and temperature, enabling prompt issue detection and predictive maintenance.



Energy Efficiency Optimization:

Analyzes system operations to suggest energy-saving measures, significantly reducing operating costs.



Automated Control and Alerts:

Automates control functions and sends instant alerts for abnormalities, minimizing downtime and enhancing efficiency.



Versatile Signal Transmission:

Offers three levels of transmitter signal strengths, enabling precise leak location across various distances and scenarios.



PART FIVE - SMART DRAINS

WAM - Magnetic Drains



Eco-Friendly Operation: Operates without external power, ensuring environmentally responsible performance.



Robust and Safe Design: Features explosion-proof construction and is suitable for outdoor installation, providing durability in various environments.



Intelligent Zero Air-Loss Technology: Only drains when necessary, preserving valuable compressed air and preventing energy waste.



Advanced Safety Features: Includes manual testing, strainer inclusion to prevent blockage, and an optional anti-freezing mechanism for cold climates.



WAL - Smart Electronic Drains



Smart Control: Adapts operations using CPU-based control for optimal condensate level management.



Modular Design: Ensures easy maintenance and contributes to system longevity.



Energy Efficient: Functions without power in standby mode, reducing energy consumption.



Frost Protection: Includes optional heating to maintain reliable operation in cold environments.

WISEAIR 4.0 DIGITAL ECO SYSTEM FOR COMPRESSED AIR

Easily Control and Manage your Compressed Air System with near perfect accuracy.



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