

MetalGuard™ Iron

Dissolved, Organic and Total Iron Monitor



The MetalGuard™ Iron analyzer from AMS provides real-time, reliable and accurate data on dissolved, organic and total iron levels in just 30 minutes with sensitivity down to 20 ppb. The fully automated analyzer is offered with an annual service contract inclusive of a 10-year warranty.

MetalGuard™ Iron Applications

Monitoring iron values in real-time is critical to support the delivery of safe drinking water and monitor the risk of corrosion in water transport systems.

The benefits of using the MetalGuard Iron online analyzer include:

- Help validate treatment system performance and ensure compliance with regulatory requirements
- Obtain baseline operational data on influent and effluent contaminant levels
- Monitor critical process steps to aid in process control and optimization
- Control blending schemes with multi-stream analysis
- Quickly detect any declining effectiveness and avert a regulatory breach

MetalGuard™ Iron Features

- Accurate ($\pm 15\%$), reliable and continuous measurement of dissolved, organic and total iron
- Dissolved, organic and total iron can be analyzed separately
- Rapid results within 30 minutes
- Self-calibrating, automated unattended operation with remote control capabilities
- Robust and stable design, regardless of sample matrix conditions
- Condition monitoring of analyzer performance is provided 24/7/365

Simple Operation, Reliable Results

The MetalGuard Iron online analyzer delivers rapid results with an equivalent accuracy compared to an accredited analytical laboratory. With MetalGuard Iron, frequent and economical testing can be completed through an automated and unattended process. The analyzer features self-calibration and is equipped with the SafeGuard™ Pro automated sample preparation and analyzer support system.

With SafeGuard Pro, sample preparation is completed in fewer than 60 minutes and provides the MetalGuard Iron analyzer with a sample suitable for iron speciation: dissolved, organic and total iron. Also, the versatile SafeGuard Pro module removes sample matrix interferences, ensuring high iron probe stability and sensitivity



MetalGuard™ Iron Specifications

PERFORMANCE

Measurement Range	0.02 - 100 ppm for dissolved, organic and total iron. Dependent on sample matrix quality (which if poor would require additional hardware).
Measurement Accuracy	20 ppb or ± 15%
Measurement Time	30 minutes typical (dissolved iron), 60 minutes total iron
Sample Streams Supported	Standard configuration: 1 With optional external manifold: Fewer than 5
Sample Requirements	Temperature: 5-40°C Pressure: 5-45 psi pH range: 4-9
Sampling Scheme	Standard configuration: fast-loop, input line pumped out prior to each measurement, stagnant between measurements Optional configuration: custom plumbing on external rack

SYSTEM

User Interface	Display: 12" touch screen industrial panel computer, 1280 x 600 resolution Dedicated function keys for: system initialization and test, automatic operation, manual maintenance, sampling and data acquisition setup
Annunciator Interface	Configurable up to 10 alarm relays, plus 24 relays to control external solenoid valves
Telemetry	Remote data access and system health monitoring
Electrical	100-130VAC, 50/60Hz (option for 200-260VAC 50/60Hz) 200W
Operating Conditions	Temperature (standard configuration): 10-30°C Temperature (with optional ambient control): -20-50°C Humidity: <95%, non-condensing
Monitor Cabinet	NEMA 12 rated Houses all electronics and measurement fluidics User-friendly, front panel HMI
Reagent Cabinet	NEMA 12 rated Houses standard reagent tray
Maintenance Schedule	Quarterly
Reagent Consumption	Standard reagent tray provides up to 3,000 measurements (Replenished monthly at continuous sampling of 4 sample streams)
Consumables	Nitrogen (electronic grade) required to purge oxygen from solution, regulated down to 10 psi. Deionized water supply provided
Dimensions	H 60", W 32", D 13"

OPTIONS

External Rack	Houses sample manifold & sample pressure regulation and filtering Supplies waste drain connection and waste carboy
Weatherproof Enclosure	NEMA 4X system enclosure Environmentally controlled enclosure: with /air conditioner, heat
Sample Preparation	Pre-treatment module Filter system

* Note: AMS reserves the right to change the specifications as necessary.