



THM-100™

Online THM Monitor

Frequent and significant fluctuations in trihalomethane (THM) levels are difficult for water and wastewater utilities to capture based on the infrequency of quarterly regulatory grab samples and the turnaround time of external laboratory analysis. As a result, utilities often conservatively operate their facilities to ensure they remain in compliance with regulatory requirements because they do not have visibility of THM levels in real-time. This approach often leads to avoidable financial and environmental costs that result from overtreatment, unnecessary treatment, and the increased use of energy intensive THM removal processes.

The online THM-100™ monitor provides utilities with continuous high frequency THM and THM formation potential (THM-FP) data in real time. With the help of the THM-100™, utilities can design cost-effective THM treatment systems, optimize their water or wastewater treatment process and reduce related expenses while ensuring compliance with regulatory standards for THMs.



Monitoring real-time THM and THM-FP levels across single or multiple sampling points is made possible with the THM-100™.

- Accurate ($\pm 10\%$), reliable and continuous measurement of TTHM levels and THM speciation
- Self-calibrating and fully automated, unattended operation
- Rapid THM results within two hours, delivered on a four-hour schedule
- Condition monitoring of analyzer performance is provided 24/7/365

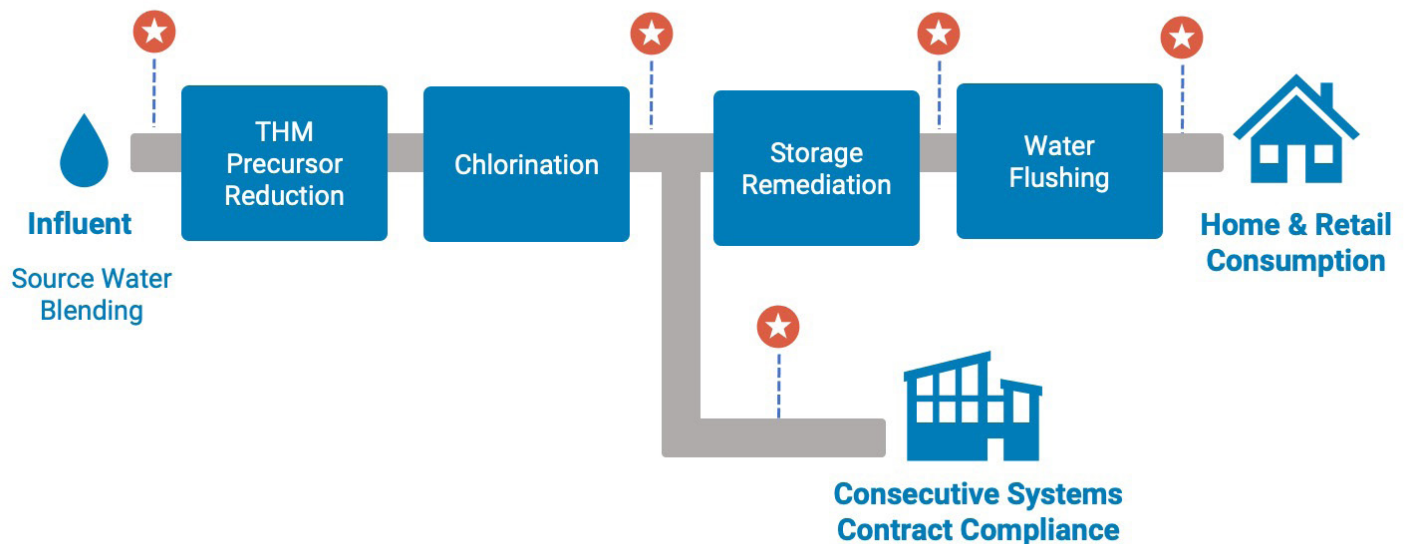
Flexible Options

The standard THM-100™ monitor operates in an online mode for frequent scheduled sampling at the install location. The THM-100™ also supports the analyses of manually collected 'grab-samples' from multiple off-site locations. The instrument can be configured with a maximum of three ports for multi-stream analysis (e.g., two online streams and one for grab-sample) or any other permutation of online/grab-sample. Results are delivered through communication options including 4-20 mA current loop, Modbus (TCP-IP) USB download from the monitor, and cloud-based data services.



THM-100™ Provides Real-Time THM Data

Water Treatment Process



- ★ The online THM-100™ monitor can be installed at multiple locations in the drinking water or wastewater treatment process.

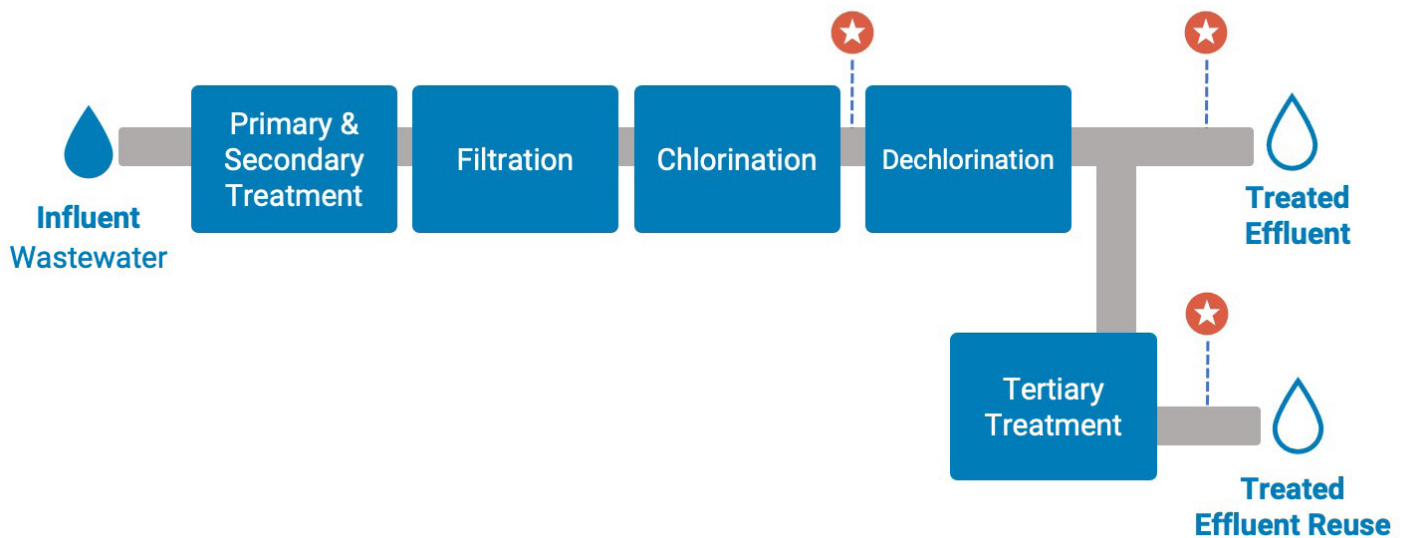
Simple Operation, Reliable Results

The THM-100™ analyzer uses the well-known “purge-and-trap” sampling method, followed by desorption into a chemical mixture that generates a colored product and spectrophotometric analysis for detection and determination of speciated THM levels. The analyzer reports the largest of either chloroform or bromoform as well as TTHM, although other options are configurable. The THM-100™ instrument has an accuracy specification of $\pm 10\%$ and it has demonstrated a relative standard deviation of 3% or less on CHCl_3 and approximately 1% or less of the TTHM value during independent testing. The THM-100™ analyzer has been demonstrated to be more reliable than external laboratory analyses.



Every THM-100™ analyzer is offered with an annual service contract inclusive of a 10-year warranty.

Wastewater Treatment Process



THM-100™ Online THM Monitor Specifications

PERFORMANCE

Quantitation Range	Standard 5-200 µg/L Total THM (options for higher and lower THM concentration ranges are available)
Accuracy	Total THM: ±10% Chloroform: ±10% Bromoform: ±20%
Repeatability	Total THM: ±5% at 50 µg/L Chloroform: ±5% at 50 µg/L Bromoform: ±10% at 50 µg/L
Sample Size	250 mL
Average Sample Time	90-110 minutes; standard with online sampling every 4 hours and adjustable for shorter or longer intervals
Operation	Online: THM and THM-FP Manual Grab-Samples: THM and THM-FP

OPERATING ENVIRONMENT

Instrument	< 95% relative humidity, non-condensing 5-35 °C for CHCl ₃ dominant locations, or 15-25 °C for install sites with significant CHBr ₃
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FACILITY REQUIREMENTS

Air: Clean, Dry and THM-free	Maximum 10 Lpm Average <1.3 Lpm
Electrical	110-220 VAC, 1 phase, 50/60 Hz, 150 VA

HARDWARE

Physical Size	2.0' W x 5.0' H x 1.3' D (610 mm W x 1,524 mm H x 406 mm D)
Weight	110 lbs (50 kg)

WARRANTY

Service	Annual service contract inclusive of 10-year warranty.
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* Note - AMS reserves the right to change the specifications as necessary.



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