

AMTAX™ sc Ammonia Analyzer

Ammonia



Features and Benefits

Wide Measurement Range

Hach AMTAX sc Ammonia Analyzers are available in four measurement ranges. Each range only needs a different set of reagents and selection of the desired range in the instrument menu.

Range 1: 0.02 to 5 mg/L

Range 2: 0.05 to 20 mg/L

Range 3: 1 to 100 mg/L

Range 4: 10 to 1000 mg/L

Wide Detection Limit for a Variety of Wastewater and Drinking Water Applications

With detection limits as low as 0.02 mg/L and as high as 1000 mg/L, the AMTAX sc Ammonia Analyzer can be used anywhere in the wastewater treatment process, from the influent or start of the nitrification process where ammonia levels are at their highest to the effluent where ammonia levels are at their lowest. In the lowest range it can also be used for drinking water applications.

Fast Response Time for Control of Nutrient Removal Process

Nutrient removal is a critical and sensitive process in wastewater treatment. Quick response is vital for optimal operation. The fast response time of only 5 minutes, including sample preparation and selection of the measurement interval, make the AMTAX sc Ammonia Analyzer the fastest responding ammonia analyzer on the market.

Easy Installation at the Measurement Point

Hach's AMTAX sc Ammonia Analyzer is designed to be installed at the measurement point—including outdoor installations. The housing is weatherproof and lockable so that the AMTAX sc analyzer can be installed right at the basin, even in the toughest climates.

- Easily mounts to a wall. Rail- and stand-mounting options are available
- The unit comes complete and assembled—no separate housing is required

The Hach AMTAX sc Ammonia Analyzer measures NH_4-N concentrations as low as 0.02 mg/L and as high as 1000 mg/L. With a fast, 5-minute response time, it enhances control of the nutrient removal process. This is no “black box” system—you get transparent, high-quality measurements for reliable values.

Low Maintenance

Several features make the AMTAX sc Ammonia Analyzer easy to use and maintain.

- The Filterprobe sc is equipped with a self-cleaning filter
- With at least a 3-month supply of reagents (for 5 min interval), the AMTAX sc Analyzer offers the most economical reagent consumption
- Automatic cleaning and calibration once a day with two standard solutions
- Comprehensive self diagnostics
- Easy access to reagents and wear parts

Full Featured Plug-and-Play Digital Controller

There's no complicated wiring or set up procedures with the Hach sc200™ or sc1000™ Multi-parameter Universal Controllers. Just plug in any Hach digital sensor or analyzer and it's ready to use—it's plug-and-play. Please see Hach Lit. Nos. 2403 and 2665 for more information.

Optional Filterprobe sc Sample Preparation System

The Hach AMTAX sc Ammonia Analyzer is available with a low-maintenance filtration probe that removes particles larger than 0.15 μm . Filtrate is sent to the analyzer while air bubbles constantly clean the filtration membrane. When cleaning is required, a simple wipe with a cloth or sponge is all that is needed. The AMTAX sc analyzer may also be used with existing filtration systems that deliver a continuous sample stream.

DW

WW

IW

DW = drinking water WW = wastewater municipal PW = pure water / power
IW = industrial water E = environmental C = collections FB = food and beverage



Be Right™

Specifications*

AMTAX sc Ammonia Analyzer

Measurement Method

GSE (Gas Sensitive Electrode) with screw-on membrane cap

| | Range 1 | Range 2 | Range 3 | Range 4 |
|---|---|-----------------|---------------|-----------------|
| Measurement Range (NH₄-N) | 0.02 to 5 mg/L | 0.05 to 20 mg/L | 1 to 100 mg/L | 10 to 1000 mg/L |
| Lower Detection Limit | 0.02 mg/L | 0.05 mg/L | 1 mg/L | 10 mg/L |
| Accuracy | ≤1 mg/L: 3% + 0.02 mg/L >1mg/L: 5% + 0.02 mg/L | 3% ±0.05 mg/L | 3% ±1.0 mg/L | 4.5% ±10 mg/L |
| Reproducibility | 3% + 0.02 mg/L | 2% ±0.05 mg/L | 2% ±1.0 mg/L | 2% ±10 mg/L |

Response time (T₉₀)

Less than 5 minutes, including sample preparation

Measurement Interval

5 to 120 minutes, adjustable

Sample Conditions

Temperature: 4 to 40°C (39 to 104°F)
pH: 5 to 9

Operating Conditions

Temperature: -20 to 45°C (-4 to 113°F)
Humidity: 95% relative humidity, non-condensing

Storage Conditions (excluding reagents)

Temperature: -20 to 50°C (-4 to 122°F)
Humidity: 95% relative humidity, non-condensing

Power Supply

230 Vac/50Hz or optional 115 Vac/50-60Hz; connected to sc200 or sc1000 Multi-parameter Universal Controller or sc200 with power box. (see Hach Lit. Nos. 2403 and 2665)

Data Transmission

With data cable on sc200 or sc1000 Multi-parameter Universal Controller or sc200 with power box. (see Hach Lit. Nos. 2403 and 2665)

Outputs

Relay, current outputs, and bus interface via sc200 or sc1000 Multi-parameter Universal Controller or sc200 with power box. (see Hach Lit. Nos. 2403 and 2665)

Special Features

ASA UV-resistant, lockable housing, rated to IP55
Automatic cleaning and calibration
Extensive self-diagnostics
Optional 2-channel version for continuous sample preparation

Sample Preparation

Filterprobe sc (see specifications below) or continuous sample preparation (approximately 500 to 1000 mL/min) with FILTRAX, ultrafiltration, etc. in combination with continuous sample AMTAX sc

Dimensions

540 x 720 x 390 mm
(21.3 x 28.3 x 15.4 in.)

Cable Length

2 m (6.6 ft.) from housing

Weight

35 kg (77 lbs.) including reagents

Filterprobe sc

Operation

In-situ membrane filtration

Filter modules are exchangeable

Continuous self-cleaning with air bubbles

Particles larger than 0.15 µm are separated from sample stream

Power Supply

Via analysis instrument 100 VA (brief peak power consumption: 1000 VA), with 5 or 10 m heated filter probe hose. Electrical fuse protection.

Immersion Depth

3 m (9.8 ft.), maximum

Sample Flow Rate

3 m/s, maximum

Filtrate Flow Rate

5 mL/minute, minimum,
4 out of 5 minutes

Maintenance

0.5 hours per month, typical

Dimensions

315 x 250 x 120 mm (12.4 x 9.8 x 4.7 in.)

Supply Hose Length

5 or 10 m (16.4 or 32.8 ft.)

Weight

Filter housing: 9.5 kg (30 lbs.)
Hose: 8 kg (18 lbs.)

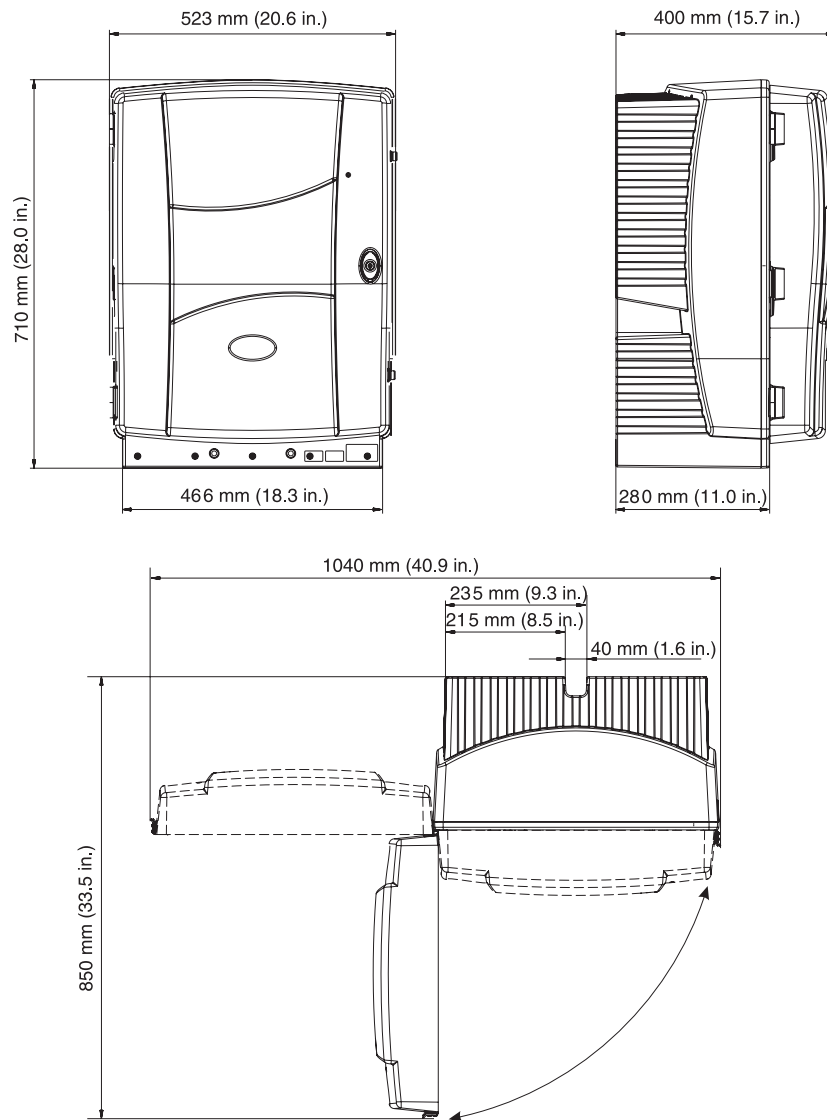
*Specifications subject to change without notice.

Engineering Specifications

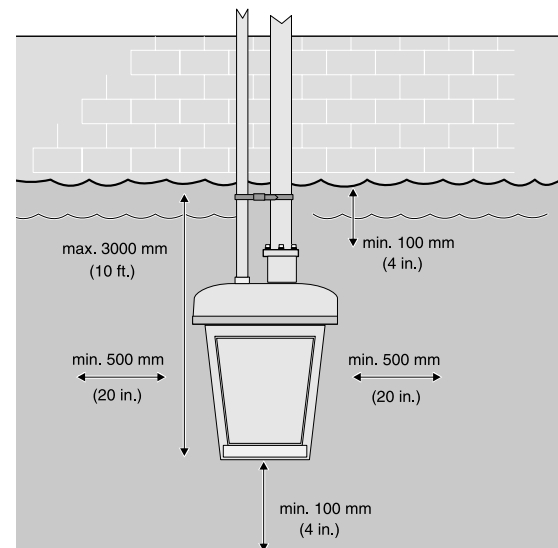
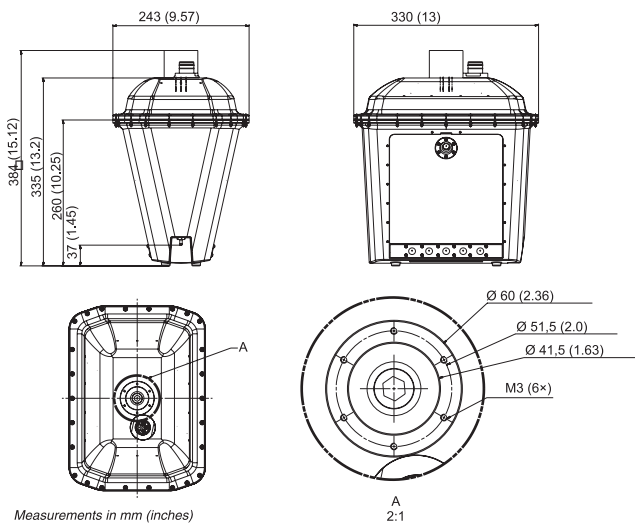
- The analyzer shall be equipped with a gas sensitive electrode (GSE) for the purpose of ammonia measurement.
- The analyzer shall be housed in an ASA UV-resistant, IP55-rated, lockable housing to be installed at the measurement point.
- The analyzer measurement range shall be from 0.02 to 1000 mg/L NH₄-N in four intervals.
- The lower detection limit of measurements shall be 0.02 mg/L NH₄-N.
- The response time, including sample preparation, shall be 5 minutes.
- The analyzer's operating temperature range shall be from -20 to 45°C.
- The power requirements shall be 115 or 230 Vac, 50/60 Hz, via the controller.
- The analyzer shall calibrate and clean automatically.
- The analyzer shall be equipped with self-diagnostics and shall have a validation possibility.
- There shall be available an optional filtration system that conditions the sample for the analyzer.
- The analyzer shall be Hach Company AMTAX sc Ammonia Analyzer.

Dimensions

The AMTAX sc Ammonia Analyzer is designed for wall mounting, outdoors or indoors. Rail- and stand-mounting options are available. The enclosure is rated to IP55, is weatherproof, and is lockable.



The Filterprobe sc should be installed at least 20 inches from the bottom and walls of the tank and must have at least four inches, but no more than 10 feet, of water above it.



Ordering Information

AMTAX sc Ammonia Analyzer with Filterprobe sc

| | |
|---------|--|
| 9008700 | AMTAX sc Ammonia Analyzer, 0.02 to 5 mg/L, 115 Vac; includes filtration probe with 5m heated hose |
| 9008800 | AMTAX sc Ammonia Analyzer, 0.02 to 5 mg/L, 115 Vac; includes filtration probe with 10m heated hose |
| 6157200 | AMTAX sc Ammonia Analyzer, 0.05 to 20 mg/L, 115 Vac; includes filtration probe with 5 m heated hose |
| 6157300 | AMTAX sc Ammonia Analyzer, 0.05 to 20 mg/L, 115 Vac; includes filtration probe with 10 m heated hose |
| 6157800 | AMTAX sc Ammonia Analyzer, 1 to 100 mg/L, 115 Vac; includes filtration probe with 5 m heated hose |
| 6157900 | AMTAX sc Ammonia Analyzer, 1 to 100 mg/L, 115 Vac; includes filtration probe with 10 m heated hose |
| 6158400 | AMTAX sc Ammonia Analyzer, 10 to 1000 mg/L, 115 Vac; includes filtration probe with 5 m heated hose |
| 6158500 | AMTAX sc Ammonia Analyzer, 10 to 1000 mg/L, 115 Vac; includes filtration probe with 10 m heated hose |

AMTAX sc Ammonia Analyzer Only

| | |
|---------|---|
| 9009100 | AMTAX sc Ammonia Analyzer, 0.02 to 5 mg/L, one channel with continuous sample, 115 V |
| 6157400 | AMTAX sc Ammonia Analyzer, 0.05 to 20 mg/L, one channel with continuous sample, 115 Vac |
| 6158000 | AMTAX sc Ammonia Analyzer, 1 to 100 mg/L, one channel with continuous sample, 115 Vac |
| 6158600 | AMTAX sc Ammonia Analyzer, 10 to 1000 mg/L, one channel with continuous sample, 115 Vac |

For two-channel version of the AMTAX sc Ammonia Analyzer, please contact your Hach representative or call 1-800-227-4224.

FILTRAX in combination with continuous sample AMTAX sc

| | |
|---------|--|
| 5739000 | FILTRAX system, 10m heated hose, 115 Vac |
|---------|--|

For further FILTRAX versions, please contact your Hach representative or call 1-800-227-4224.

Lit. No. 2487 Rev 2
C11 Printed in U.S.A.

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In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.

Controller

To order the sc200 or sc1000 Multi-Parameter Universal Controllers, please contact your Hach representative or call 1-800-227-4224.

Note: for sc200 controller the power box is needed.

Accessories

| | |
|-----------------|--|
| LZY285 | Rail Mounting Kit for AMTAX sc analyzer with sc1000 controller |
| LZY316 | Rail Mounting Kit for AMTAX sc analyzer without sc1000 controller |
| LZY286 | Stand Mounting Kit for AMTAX sc analyzer with sc1000 controller |
| LZY287 | Stand Mounting Kit for AMTAX sc analyzer without sc1000 controller |
| LZX414.00.50000 | Rim Mounting Kit for Filterprobe sc |
| LZX414.00.60000 | Rail Mounting Kit for Filterprobe sc |
| LQV155.99.00002 | Power box without power connection cable (needed for operation with sc200) |
| LQV155.99.00012 | Power box with power connection cable (needed for operation with sc200) |

Reagents

| | |
|---------|--|
| 2514654 | 0.5 mg/L NH ₄ -N Standard Solution, 2000 mL |
| 2894154 | 1 mg/L NH ₄ -N Standard Solution, 2000 mL |
| 2514754 | 2.5 mg/L NH ₄ -N Standard Solution, 2000mL |
| 2894354 | 10 mg/L NH ₄ -N Standard Solution, 2000 mL |
| 2825854 | 50 mg/L NH ₄ -N Standard Solution, 2000 mL |
| 2825954 | 500 mg/L NH ₄ -N Standard Solution, 2000 mL |
| 2894452 | AMTAX sc Reagent, 2500 mL |
| 2955300 | Set of 3 Electrolyte solutions and 3 membrane caps (for Range 1) |
| 6182500 | Set of 3 Electrolyte solutions and 3 membrane caps (for Range 2-4) |
| 2894246 | AMTAX sc Cleaning Solution, 250 mL |

Replacement Parts

| | |
|--------|--|
| LZY069 | NH ₄ -N Electrode for AMTAX sc analyzer with one membrane cap |
| LZY181 | Pump Head for AMTAX sc analyzer air pump |
| LZY140 | Filter Module for Filterprobe sc |

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

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Be Right™