NH6000sc Online Ammonium Analyser

Experience Unmatched Efficiency and Reliability with the NH6000sc Ammonium Analyser: High-Quality Measurements and Predictive Diagnostics for Optimal Performance

Simplify your online operations with the NH6000sc, an online Ammonium Analyser using gas sensing electrode (GSE) technology. The environmentally controlled design is ready for easy, outdoor installations at the measurement point you need. With minimal maintenance requirements and proven reliability, Hach's NH6000sc will give you confidence in your measurement results and improved process efficiency.

Maximise uptime and accuracy with trusted technology

The NH6000sc ammonium analyser from Hach® uses fast, accurate and trusted GSE technology. The NH6000sc provides reliable measurements with automatic calibration, validation, and cleaning. A verification grab sample improves consistency between online and lab data through an automatic sampling process. Predictive diagnostics and supportive maintenance workflows help you maximise uptime.

Save time with biannual maintenance

The NH6000sc ammonium analyser reduced routine user maintenance frequency to only twice per year. Engineered with efficiency in mind, the instrument's streamlined design and optimised reagents make operation simple and user-friendly. With a standard cleaning cycle, the reagents have an extended replacement time of every 6-months.

Robust and lightweight intergrated filtration options

The integrated FX610 filtration system and the more rugged FX620 feature lightweight construction with improved air cleaning and innovative flow detection. These features ensure reliable functionality and reduced operational touchpoints. Plus, you'll have the ability to remotely check that your sample is consistently supplied to your analyser to increase confidence in your results.

Technical Data*

	Measuring Range 1	**Measuring Range 2**	**Measuring Range 3**	**Measuring Range 4**
Measuring range	0.02 - 5.0 mg/L NH_4-N	0.05 - 20 mg/L NH_4-N	1 - 100 mg/L NH_4-N	10 - 1000 mg/L NH_4-N
Detection limit	0.02 mg/L NH_4-N	0.05 mg/L NH_4-N	1 mg/L NH_4-N	10 mg/L NH_4-N
Accuracy	≤ 1 mg/L: 3% of the measured value + 0.02 mg/L > 1 mg/L: 5% of the measured value + 0.02 mg/L	3% of the measured value + 0.05 mg/L	3% of the measured value + 1.0 mg/L	4.5% of the measured value + 10 mg/L
Repeatability	3% of the measured value + 0.02 mg/L	2% of the measured value + 0.05 mg/L	2% of the measured value + 1.0 mg/L	2% of the measured value + 10 mg/L
Response time	≤ 0.2 mg/L: 3 measurements required (15 total minutes minimum) > 0.2 mg/L: 1 measurement required (5 total minutes)	< 5 minutes	< 5 minutes	< 5 minutes
Measurement method	Gas sensing electrode (GSE)			
Measuring interval	5, 10, 15, 20 or 30 min. (user adjustable)			
pH range	5 - 9 pH			
Permissible Chloride range	≤ 1000 mg/L Cl^-			
Sample quality	Ultra filtrated or comparable (FX6x0 < 0.45 µm)			
Flow rate	1.0 - 20.0 L/h to the analyser from the external sample filtration			
Sample pressure	2.5 bar (0.25 mPa) maximum			
Sample temperature	4 - 40 °C			
Special remarks	The liquid level in the basin must be below the bottom of the analyser			
Operating temperature range	-20 - 45 °C; 95% relative humidity, non-condensing			
Storage conditions	-20 - 60 °C; 95% relative humidity, non-condensing			
Power supply	Power supplied by the SC controller. With the SC4500, an additional power box is needed. Analyser and heated drain tubing (powered by analyser): 115 VAC or 230 VAC			
Cable length	Data and power cable: 2 m from edge of enclosure			
Material	PUR 66 UV-resistant			
Enclosure waterproof rating	Rating: IP55, NEMA 3R UL50E Material: PUR 66			
Controller compatibility	Digital SC Controller. Controllers are sold separately.			
Dimensions	575 x 991 x 425 mm (22.63 x 39.01 x 16.73 in.)			
Weight	Approximately 45 kg without chemicals			

Subject to change without notice.

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Technical Data Filtration Systems*

	Integrated - FX610 and FX620[1]	External - Filtrax	External - TMS-C
Dimensions (H x W x D)	FX610: 348 mm x 287 mm x 81 mm FX620: 424 mm x 408 mm x 86 mm	Control unit: 530 x 430 mm x 220 mm Module carrier: 500 mm x 340 mm x 92 mm	600 mm x 600 mm x 200 mm
Weight	FX610: 2.2 kg with filter module FX620: 3.5 kg with filter module	Control unit: approx. 22 kg Module carrier with 5 m suction tube: approx. 9 kg Sample tube 10 m: approx. 5 kg Sample tube 20 m: approx. 10 kg Sample tube 30 m: approx. 15 kg Mounting pipe 2 m: approx. 5 kg	Filter system control unit without hoses: 30.5 kg (cabinet only)
Sample volume	Delivers a sample volume of ~1 L/h	Approximately 900 mL/h suitable for up to 3 process instruments	200 - 500 mL/h , depending on pollution level of the TMS-C membrane and length of the suction hose
Hose length	5 m or 10 m heated sample hose	Suction hose: 5 m heated Sample hose: 2 m unheated or 10 m, 20 m, 30 m heated	Suction hose: 5 m heated Sample hose: 2 m unheated or 10 m, 20 m, 30 m heated
Maintenance requirements	Approximately 30 minutes/ 3 months in standard municipal wastewater aeration basin applications	Approximately 1 hour/month in typical applications	Manual cleaning of the filter system membrane: 1/week
Sample temperature	4 - 40 °C in basin	5 - 40 °C	4 - 40 °C
Ambient temperature	-20 - 45 °C	-20 - 40 °C	-20 - 45 °C
pH range	5 - 9 pH	5 - 9 pH	2 - 10 pH
Power Requirements	115 - 230 VAC; 50/60 Hz, supplied by analyser	115 - 230 VAC; 50/60 Hz	230 VAC; 50 Hz
Certifications	CE, UKCA, CMIM, FCC, ISED, certified to UL and CSA safety standards by TÜV	CE, UL, CSA	CE

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[1] *The NH6000sc can be retrofit with the integrated FX610 or FX620 filtration systems. Contact Hach for more information.*
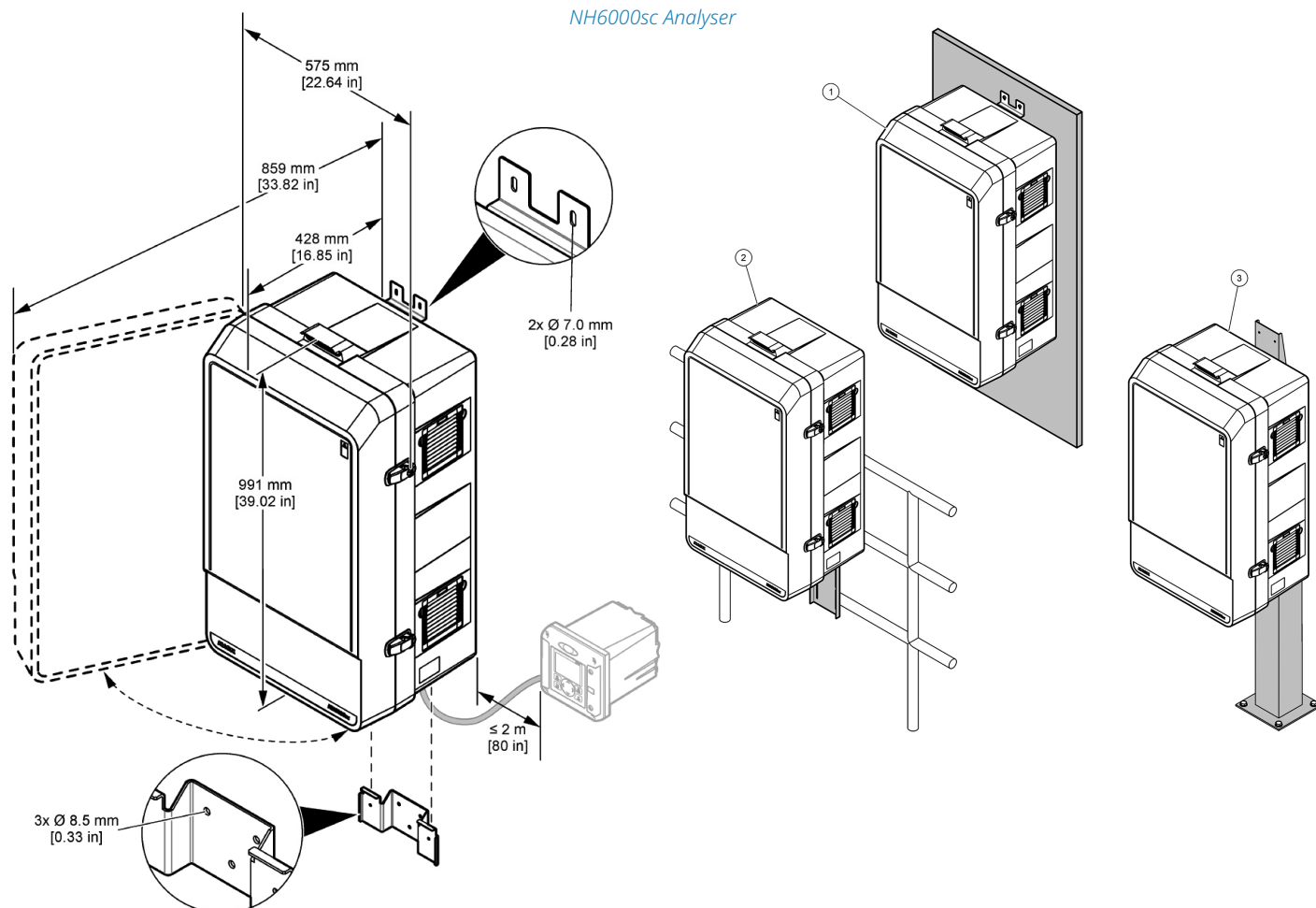
Principle of Operation

The NH6000sc analyser measures the ammonium concentration with a gas sensing electrode (GSE). The ammonium in the sample is first converted to gaseous ammonia. Only the NH_3 gas passes through the gas-permeable membrane of the electrode and is detected. This method supports a wide measuring range and is less susceptible to cross sensitivity than methods based on an ion-selective electrode (ISE).
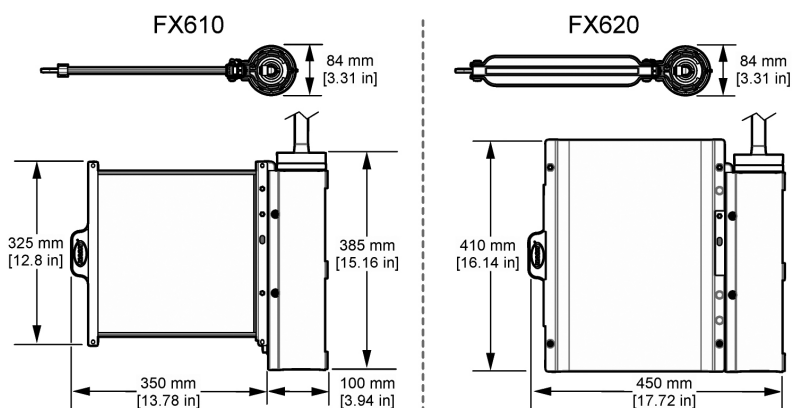
Dimensions

The NH6000sc ammonium analyser is designed for wall mounting (1), outdoor or indoor. Rail mounting (2) and stand mounting (3) options are available.

NH6000sc Analyser

575 mm [22.64 in]
859 mm [33.82 in]
428 mm [16.85 in]
991 mm [39.02 in]
2x Ø 7.0 mm [0.28 in]
≤ 2 m [80 in]
3x Ø 8.5 mm [0.33 in]

FX610 and FX620 Filtration Units

FX610
84 mm [3.31 in]
325 mm [12.8 in]
385 mm [15.16 in]
350 mm [13.78 in]
100 mm [3.94 in]

FX620
84 mm [3.31 in]
410 mm [16.14 in]
450 mm [17.72 in]

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Order Information

Analysers

LXV461.99.00311   NH6000sc Ammonium Analyser, 1 channel, for use with 1 external sample filtration system, flow detection, automatic verification grab sample, 230 VAC

LXV461.99.01311   NH6000sc Ammonium Analyser, 1 channel, includes integrated sample supply pump
for use with FX610 sample filtration system, flow detection, automatic grab sample verification, 230 VAC

LXV461.99.02311   NH6000sc Ammonium Analyser, 1 channel, includes integrated sample supply pump
for use with FX620 sample filtration system, flow detection, automatic verification grab sample, 230 VAC

Please note: These are the most common product configurations, but others are available. Please contact your Hach representative for additional information.

A sample filtration system (Filtrax, FX6x0, or TMS-C) and a digital Hach SC controller are required for operation of the NH6000sc. Sample filtration system and controller are sold separately.

Mounting Hardware and Accessories

LZY285	Rail mounting kit for SC analyser with SC controller
LZY286	Stand mounting kit for SC analyser with SC controller
LZY316	Rail mounting kit for SC analyser without SC controller
LZY287	Stand mounting kit for SC analyser without SC controller
LXZ461.99.00007	Controller Mounting kit
LXZ461.99.00011	Heated Drain Hose, 5 m, 230 V
LXZ461.99.00003	Sample and Connection Tube for multiple Analysers
LQV155.99.00001	Power connection box for SC analysers, without power cord
LQV155.99.00011	Power connection box for SC analysers, with power cord

Reagents

LCW1210	NH6000sc Reagent Set for Measuring Range 1 (0.02-5 mg/L NH_4-N)
LCW1220	NH6000sc Reagent Set for Measuring Range 2 (0.05-20 mg/L NH_4-N)
LCW1230	NH6000sc Reagent Set for Measuring Range 3 (1-100 mg/L NH_4-N)
LCW1240	NH6000sc Reagent Set for Measuring Range 4 (10-1000 mg/L NH_4-N)
LCW1211	NH6000sc Standard Solution 1 for Measuring Range 1, 0.5 mg/L NH_4-N, 2 L
LCW1212	NH6000sc Standard Solution 2 for Measuring Range 1, 2.5 mg/L NH_4-N, 2 L
LCW1221	NH6000sc Standard Solution 1 for Measuring Range 2, 1 mg/L NH_4-N, 2 L
LCW1222	NH6000sc Standard Solution 2 for Measuring Range 2, 10 mg/L NH_4-N, 2 L
LCW1231	NH6000sc Standard Solution 1 for Measuring Range 3, 10 mg/L NH_4-N, 2 L
LCW1232	NH6000sc Standard Solution 2 for Measuring Range 3, 50 mg/L NH_4-N, 2 L
LCW1241	NH6000sc Standard Solution 1 for Measuring Range 4, 50 mg/L NH_4-N, 2 L
LCW1242	NH6000sc Standard Solution 2 for Measuring Range 4, 500 mg/L NH_4-N, 2 L
LCW1255	NH6000sc Reagent Solution, 2 L
LCW1265	NH6000sc Cleaning Solution, 250 mL
LCW1275	NH6000sc Electrolyte Set for Measuring Range 2, 3 and 4
LCW1285	NH6000sc Electrolyte Set for Measuring Range 1

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Order Information

Sample Filtration Systems

Integrated - FX610 and FX620

The FX610 and FX620 are lightweight, sample filtration systems for the NH6000sc with a sample pump and compressor directly integrated into the analyser. The filter system collects a sample from the basin and the integrated sample pump moves the sample to the measuring chamber.

The FX610 and FX620 offer lower user maintenance, each with one membrane that requires cleaning only every 3 months and a large diameter air supply tube. The FX620 has an air bubble cleaning module below the filter system to decrease the collection of solids on the filter membrane.

LXV464.98.11011	FX610 Sample Filtration System, 5 m heated hose, 230 VAC
LXV464.98.12011	FX610 Sample Filtration System, 10 m heated hose, 230 VAC
LXV464.98.21011	FX620 Sample Filtration System, rough samples, 5 m heated hose, 230 VAC
LXV464.98.22011	FX620 Sample Filtration System, rough samples, 10 m heated hose, 230 VAC

External - Filtrax

The Filtrax sample filtration system continually extracts samples directly from process effluent and pull the water through ultra-filtration membranes (0.15 µm) that are immersed in the aeration basin or primary settling tank. The control unit of the Filtrax can be placed outdoor in any climate and is virtually maintenance free, all tubing is completely accessible and easy to replace. A programmable alarm relay alerts operators to inspect the system when flow decreases, and a second relay can shut the unit down if flow decreases further.

LXV294.99.01000	Filtrax Sample Filtration System, 2 m unheated pressure hose, 230 VAC
LXV294.99.05000	Filtrax Sample Filtration System, 2 m heated pressure hose, 230 VAC
LXV294.99.02000	Filtrax Sample Filtration System, 10 m heated pressure hose, 230 VAC
LXV294.99.03000	Filtrax Sample Filtration System, 20 m heated pressure hose, 230 VAC
LXV294.99.04000	Filtrax Sample Filtration System, 30 m heated pressure hose, 230 VAC

External - TMS-C

Suitable for difficult applications such as inlet of a municipal wastewater treatment plant and industrial wastewater. The system can be combined with the process analyser in a bypass solution. The outdoor versions include a built-in heater and cooler, so the unit can be installed at the basin without any additional modifications. The sample hoses of the outdoor versions are heated to prevent freezing.

LZH418.82.00101	TMS-C Filtration System, Indoor, 5 m unheated sample hose, 230 VAC
LZH418.82.01101	TMS-C Filtration System, Outdoor, 5 m heated sample hose, 230 VAC
LZH419.82.00201	TMS-C Filtration System, Indoor, 8 m unheated sample hose, 230 VAC
LZH419.82.01201	TMS-C Filtration System, Outdoor, 8 m heated sample hose, 230 VAC

Part numbers may vary by country.

*For more details and technical specifications please visit uk.hach.com.

Enable the Benefits of Smart Monitoring

This instrument connects to Claros, Hach's innovative Water Intelligence System. Claros allows you to seamlessly connect and manage instruments, data, and process – anywhere, anytime. The result is greater confidence in your data and improved efficiencies in your operations. To unlock the full potential of Claros, insist on Claros Enabled instruments.

Hach Service Protects Your Investment

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.