

# PHOSPHAX™ sc Phosphate Analyzer

Phosphate

## Features and Benefits

### Wide Measurement Range

Hach PHOSPHAX sc Phosphate Analyzers are available in two measurement ranges. Each range consists of an optimized dosing vessel and photometer to ensure the highest accuracy at each range.

**Low Range—0.05 to 15 mg/L PO<sub>4</sub>-P**

**High Range—1 to 50 mg/L PO<sub>4</sub>-P**

### Wide Detection Limit for a Variety of Wastewater Applications

With detection limits as low as 0.05 mg/L and as high as 50 mg/L, the PHOSPHAX sc Phosphate Analyzer can be used anywhere in the wastewater treatment process, from the influent or start of the phosphorous removal process where phosphate levels may be high to the effluent where phosphate levels are at their lowest.

### Low Cost of Operation with Proven Analysis Method

The PHOSPHAX sc analyzer determines phosphate concentration using the vanado-molybdate yellow colorimetric method. This method requires very little reagent and therefore reduces operating cost considerably.

### 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 the ability to choose the measurement interval, make the PHOSPHAX sc Phosphate Analyzer the fastest responding phosphate analyzer on the market.

### Easy Installation at the Measurement Point

Hach's PHOSPHAX sc Phosphate Analyzer is designed to be installed at the measurement point—including outdoor installations. The housing is weatherproof and lockable so that the PHOSPHAX 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 PHOSPHAX sc Phosphate Analyzer measures PO<sub>4</sub>-P concentrations as low as 0.05 mg/L and as high as 50 mg/L. And operation costs are low because it uses 50% less chemicals. This is no “black box” system—you get transparent, high-quality measurements for reliable values.*

### Low Maintenance

Several features make the PHOSPHAX sc Phosphate Analyzer easy to use and maintain:

- The Filterprobe sc is equipped with a self-cleaning filter
- With at least a 4-month supply of reagents, the PHOSPHAX sc analyzer offers the most economical consumption
- Automatic cleaning at customized intervals and automatic zero-calibration at each measuring cycle
- Comprehensive self diagnosis
- 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 sc1000™ Multi-parameter Universal Controller. Just plug in any Hach digital sensor or analyzer and it's ready to use—it's “plug and play.” Please see Hach Lit. #2403 for more information.

### Optional Filterprobe sc Sample Preparation System

The Hach PHOSPHAX sc Phosphate 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 PHOSPHAX sc analyzer may also be used with existing filtration systems that deliver a continuous sample stream.

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\*

### PHOSPHAX sc Phosphate Analyzer

#### Measurement Method

Photometric method using vanado-molydan

	Low Range	High Range
<b>Measurement Range (PO<sub>4</sub>-P)</b>	0.05 to 15 mg/L	1 to 50 mg/L
<b>Lower Detection Limit</b>	0.05 mg/L	1 mg/L
<b>Accuracy</b>	2% ±0.05 mg/L	2% ±1 mg/L
<b>Reproducibility</b>	2% ±0.05 mg/L	2% ±1 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 sc1000 Multi-parameter Universal Controller (see Hach Lit. #2403)

#### Data Transmission

With data cable on sc1000 Multi-parameter Universal Controller (see Hach Lit. #2403)

#### Outputs

Relay, current outputs, and bus interface via sc1000 Multi-parameter Universal Controller (see Hach Lit. No. 2403)

#### 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.

#### 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.)

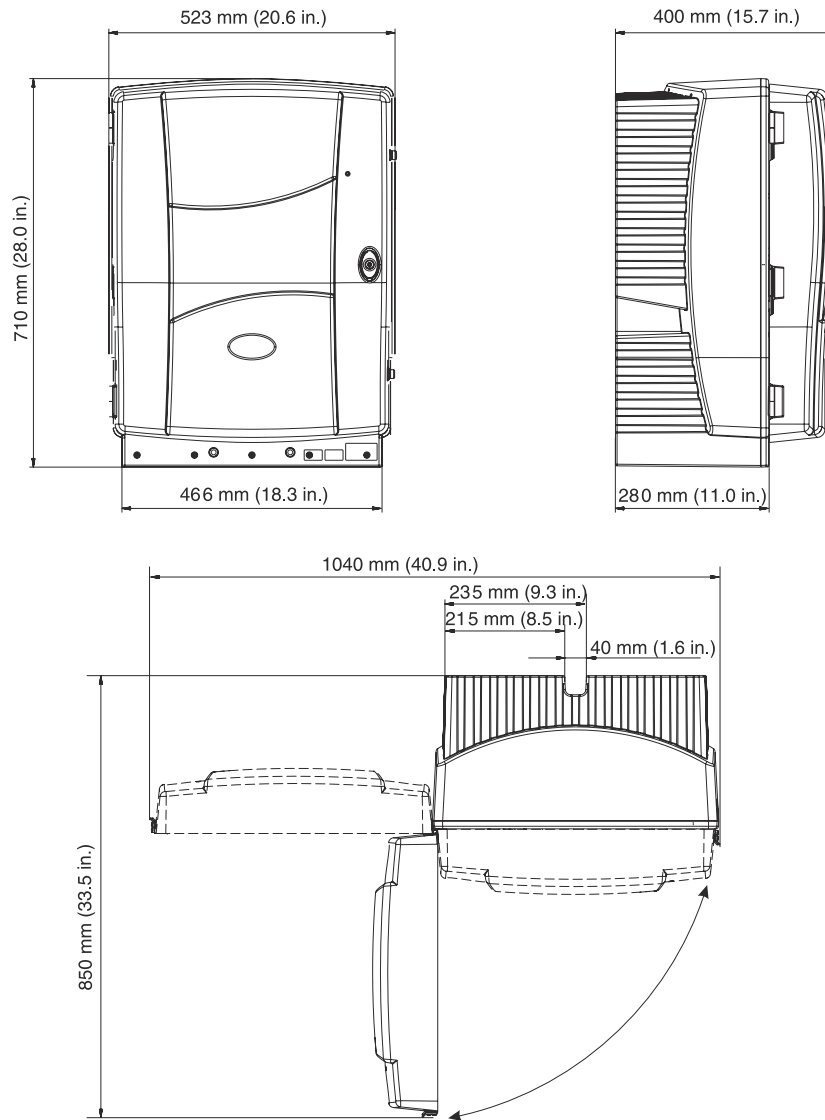
\*Specifications subject to change without notice.

## Engineering Specifications

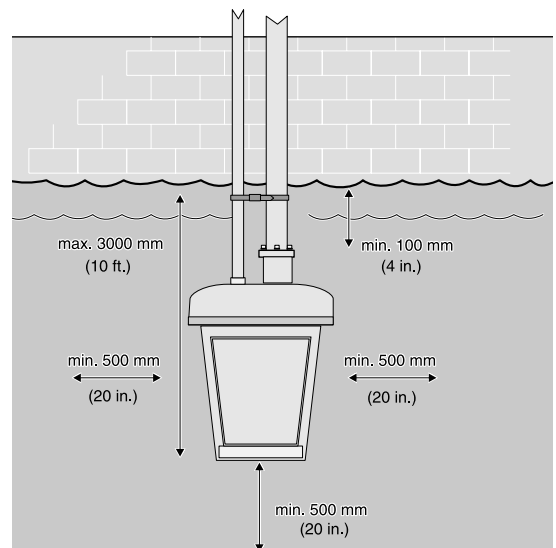
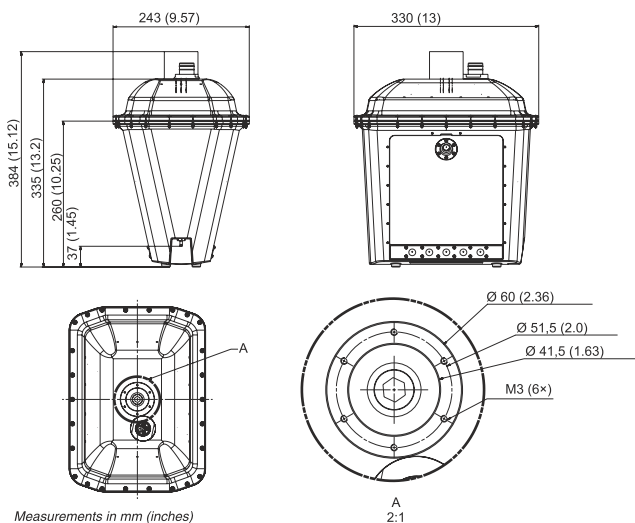
- The analyzer shall utilize the vanado-molybdate yellow colorimetric method to measure ortho-phosphate (PO<sub>4</sub>-P).
- The analyzer shall be housed in an ASA UV-resistant, IP55-rated, lockable housing to be installed at the measurement point.
- The analyzer measurement range shall be from 0.5 to 50 mg/L PO<sub>4</sub>-P in two intervals.
- The lower detection limit of measurements shall be 0.05 mg/L PO<sub>4</sub>-P.
- 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 Vac, 50-60Hz or 230 Vac, 50 Hz, via the controller.
- The analyzer shall zero-calibrate and clean automatically.
- The analyzer shall be equipped with self-diagnostics.
- There shall be available an optional filtration system that conditions the sample for the analyzer.
- The analyzer shall be Hach Company PHOSPHAX sc Phosphate Analyzer.

## Dimensions

The PHOSPHAX sc Phosphate 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

### PHOSPHAX sc Phosphate Analyzer with Filterprobe sc

<b>61590-00</b>	PHOSPHAX sc Phosphate Analyzer, 0.05 to 15 mg/L, 115 Vac; includes filtration probe with 5 m heated hose	<b>57390-00</b>	Filtrax system, 10 m heated hose, 115 Vac
<b>61591-00</b>	PHOSPHAX sc Phosphate Analyzer, 0.05 to 15 mg/L, 115 Vac; includes filtration probe with 10 m heated hose	<b>57391-00</b>	Filtrax system, 20 m heated hose, 115 Vac
<b>61594-00</b>	PHOSPHAX sc Phosphate Analyzer, 1 to 50 mg/L, 115 Vac; includes filtration probe with 5 m heated hose	<b>57389-01</b>	Filtrax system, 2 m unheated hose, 230 Vac
<b>61595-00</b>	PHOSPHAX sc Phosphate Analyzer, 1 to 50 mg/L, 115 Vac; includes filtration probe with 10 m heated hose	<b>57390-01</b>	Filtrax system, 10 m heated hose, 230 Vac
		<b>57391-01</b>	Filtrax system, 20 m heated hose, 230 Vac

### PHOSPHAX sc Phosphate Analyzer Only

<b>61596-00</b>	PHOSPHAX sc Phosphate Analyzer, 0.05 to 15 mg/L, one channel with continuous sample, 115 Vac
<b>61598-00</b>	PHOSPHAX sc Phosphate Analyzer, 1 to 50 mg/L, one channel with continuous sample, 115 Vac

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

### Sample Filtration

<b>LXV429.99.01000</b>	Filterprobe sc, 5 m heated hose, 230 Vac/50 Hz
<b>LXV429.99.02000</b>	Filterprobe sc, 10 m heated hose, 230 Vac/50 Hz
<b>LXV429.99.01100</b>	Filterprobe sc, 5 m heated hose, 115 Vac/50 to 60 Hz
<b>LXV429.99.02100</b>	Filterprobe sc, 10 m heated hose, 115 Vac/50 to 60 Hz
<b>57389-00</b>	Filtrax system, 2 m unheated hose, 115 Vac

### Controller

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

### Mounting Accessories

<b>LZY285</b>	Rail Mounting Kit for PHOSPHAX sc analyzer with sc1000 controller
<b>LZY316</b>	Rail Mounting Kit for PHOSPHAX sc analyzer without sc1000 controller
<b>LZY286</b>	Stand Mounting Kit for PHOSPHAX sc analyzer with sc1000 controller
<b>LZY287</b>	Stand Mounting Kit for PHOSPHAX sc analyzer without sc1000 controller
<b>LZX414.00.50000</b>	Rim Mounting Kit for Filterprobe sc
<b>LZX414.00.60000</b>	Rail Mounting Kit for Filterprobe sc

### Reagents

<b>28252-54</b>	PHOSPHAX Reagent, 2000 mL
<b>28253-52</b>	PHOSPHAX Cleaning Solution, 1000 mL

### Replacement Parts

<b>LZY181</b>	Pump Head for PHOSPHAX sc analyzer air pump
<b>LZY140</b>	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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