Reliable high temperature TOC analysis with superior uptime and a lower cost of ownership.

- *Large-volume furnace extends maintenance intervals preventing plugging and failing*
- *Simplified sample delivery system*
- *Passive cooling system avoids complex heat management*
- *Utilizes proven, patented high temperature reactor system*
- *Industrial design withstands the most severe conditions*
- *Analyzer-protecting advanced diagnostics*

Reduced Cost of Ownership and Maintenance

The patented large-volume furnace prevents severe-duty samples from plugging or failing prematurely consequently extending routine maintenance intervals. A platinum catalyst provides an enlarged surface area for the oxidation reaction in the furnace. This increases the lifecycle of the catalyst reducing cost of ownership.

Simplified Sample Delivery System

Innovative sample delivery system avoids inherent mechanical breakdown of complicated sample injection mechanisms. Customarily high temperature analyzers use an injection valve mechanism,which is prone to fail due to its narrow passages, small parts and exposed seals.

The astroTOC HT has a continuous sample feed by a peristaltic pump providing a robust, easy-to-maintain sample injection into the furnace. This dramatically reduces maintenance cost.

How To Order

Contact your local Hach sales representative to configure a TOC analyzer for your application.

CERTIFIED HACH SERVICE PLUS PROGRAM

Primary Applications

- **Industrial Water**
- **Wastewater**

*Specifications**

Range
Note: Must specify range at time of order.
0-25 up to 0-20,000 mg/L TOC

Accuracy
± 5% of reading at ranges less than 1000 mg/L with and without dilution at 25°C (77°F)
± 2% of reading in the range of 2000 to 20,000 mg/L with dilution at 25°C (77°F)

Repeatability
± 5% of reading at ranges less than 1000 mg/L with and without dilution at 25°C (77°F)
± 2% of reading in the range of 2000 to 20,000 mg/L with dilution at 25°C (77°F)

Minimum Detection Limit
< 0.1 mg/L for the range 0-25 mg/L at 25°C (77°F)

Response Time
T90 ≤ 8 minutes (includes TIC sparging)

Inlet Pressure
0.15-6 bar (2-87 psig)

Flow Rate
20-200 mL per minute

Sample Temperature Range
2° to 70°C (36° to 158°F)

Operating Temperature Range
5° to 40°C (41° to 104°F)

Recorder Outputs
Two 4-20 mA analog outputs selectable for sample concentration, analyzer system warning or auto range indication

Alarms
Five alarms selectable for sample concentration alarm, analyzer system warning or analyzer system shutdown alarm.

Optional Serial Communication
One multi-function RS232 or RS485 optional serial port (MODBUS®, CSV)

Power
115/230 Vac 50/60 Hz (switch selectable), 1500 VA maximum

Sample Inlet/Outlet Connection
1/4-inch OD tube, compression fitting

Drain Connection
1 1/2-inch OD standard drain pipe

Carrier Gas
Clean, CO_2 free air or Nitrogen at 2.8-6.2 bar (40-90 psig)

Compliance/Certification
CE certified, listed to UL and CSA safety standards by ETL
Standard Methods 5310 B, EPA 415.1

Enclosure
Cold Rolled Steel epoxy powder coated, IP54/NEMA 12
Optional Stainless Steel IP54/NEMA 12

Dimensions
Approximately 983 mm (38.7 inches) tall, 973 mm (38.3 inches) wide, 244 mm (9.6 inches) deep

Mounting
Wall mount

Shipping Weight
212 lbs. (97 kg)

**Subject to change without notice.*

See pages 192-193 for reagents, test kits, and accessories for measuring TOC in the lab or field.

Turbidity: FilterTrak 660™ sc Nephelometer

Ultra low range turbidity measurement.

EPA APPROVED

CERTIFIED HACH SERVICE PLUS PROGRAM

- *Highest sensitivity available at the lowest levels of turbidity*
- *Optimize your filtration process*
- *Incorporates in (RSD) Relative Standard Deviation metric as a measurement principle to both confirm filter events and be a precursor to filter events*

New Technology for Filtration Optimization

With unprecedented sensitivity and quick response, the FilterTrak 660 sc is capable of providing all the data needed to monitor and control filter and membrane performance. FilterTrak technology is not hindered by any theoretical particle size detection limit. This instrument readily detects the presence of sub-micron particles unseen by other instruments.

Laser Turbidity Method, Approved for Drinking Water Compliance Monitoring

Hach's FilterTrak™ 660 sc Nephelometer is approved for measuring turbidity for drinking water compliance monitoring. This approval provides utilities the opportunity to both monitor and optimize their filtration processes using a single technology.

Primary Applications

- **Drinking Water**
- **Industrial Water**

*Specifications**

Range
0.0 to 5000 mNTU (0.0 to 5.0 NTU) 5000 mNTU = 5.000 NTU

Accuracy
± 5% of reading

Resolution
0.001 mNTU (0.000005 NTU)

Repeatability
+ 3.6% at 30 mNTU (0.03 NTU) / + 1.7% at 800 mNTU (0.8 NTU)

Flow Rate
100 - 750 mL / min (1.6 to 11.9 gal/hour)

Light Source
660 nm Laser Diode

Recorder Output
Selectable for 0-20 mA or 4-20 mA

Alarms
Two nephelometric set-point alarms (SOM required)

Power Requirements
10 to 28 Volts DC at 1.5 Watts

**Subject to change without notice.*

Prod. No.	Description
FT660 sc LASER NEPHELOMETER SYSTEMS	
Single-Sensor System	
6016400	Sensor assembly with sc100 controller
System with Digital Communication	
6016401	Sensor assembly with sc100 controller with RS-485 output
6016402	Sensor assembly with sc100 controller with RS-232 output
6016403	Sensor assembly with sc100 controller with LonWorks output
Does not include power cords.	
INDIVIDUAL FILTERTRAK FT660 sc LASER NEPHELOMETER	
6016000	FilterTrak 660sc sensor assembly only
CONTROLLER	
This sensor requires a Hach sc100 or sc1000 Digital Controller. See pages 388-393 for details.	
OPTIONAL ACCESSORIES	
9142000	Drain Assembly/Grab Sample Funnel
5448800	Power Cord with strain relief, 125 Vac
5448900	Power Cord with strain relief, 230 Vac
DRY VERIFICATION MODULE	
6735500	Verification Quick Check (VQC)
EXTENSION CABLES	
To be used only between sensor and controller.	
5796000	7.7 m (25 ft.)
5796100	15 m (50 ft.)
5796200	31 m (100 ft.)
Standard cable length 10 m (33 ft.)	
Maximum total length 100 m (328 ft.)	

For more information, call to request Literature #1627, or visit www.hach.com

See pages 79-84 for information on Hach laboratory and portable turbidimeters.

The low range turbidimeter.

Accuracy

Continuously flowing sample flows through the patented bubble removal system, which vents entrained air from the sample stream and eliminates the most significant interference in low level turbidity measurement. The 1720E Turbidimeter is also not affected by variations in flow and pressure.

Simplicity

A simplified two-module design includes the sensor and the controller interface. The digital controller systems accept two turbidity sensors—adding a second 1720E sensor makes a system with two complete turbidimeters or any other digital sensor. Connections are simple plug-and-play.

Data Collection and Display

A built-in data logger collects turbidity measurement at user selectable intervals (1-15 minutes), along with calibration and verification points, alarm history, and instrument setup changes for 6 months. Communications using multiple digital protocols are available.

CERTIFIED HACH SERVICE PLUS PROGRAM

Prod. No.	Description
1720E LOW RANGE TURBIDITY SYSTEMS	
6010100	1720E Turbidimeter, with sc100 Controller
6010102	1720E/sc100 with MODBUS®/RS-485 output
6010103	1720E/sc100 with MODBUS®/RS-232 output
6010104	1720E/sc100 with LonWorks® output
Does not include power cords.	
INDIVIDUAL 1720E TURBIDIMETER	
6010101	1720E Turbidimeter sensor assembly only
CONTROLLER	
This sensor requires a Hach sc100 or sc1000 Digital Controller. See pages 388-393 for details.	
CABLES	
5796000	Extension Cable, 7.7 m (25 ft.)
4630600	Power Cord w/ strain relief, 125 Vac
4630800	Power Cord w/ strain relief, 230 Vac, European-style plug
ACCESSORIES	
5743200	Floor Stand
CALIBRATION SUPPLIES	
ICE-PIC Calibration/Verification Module / 1720E	
5225000	20 NTU Module
5221500	1 NTU Module
StablCal Comparative Calibration Standards	
2660153	20.0 NTU, 1 L each
(Calibration Cylinder, Prod. No. 4415300, must be ordered separately.)	
Formazin Calibration Standards	
4415600	Formazin Calibration Kit for user-prepared calibration (includes 500 mL of 4000 NTU Formazin, TenSette® Pipet, and calibration cylinder)
246149	Formazin Primary Standard, 4000 NTU, 500 mL (replacement for P/N 44156-00)
4415300	Calibration Cylinder, 1 L

For more information, call to request Literature #2457, or visit www.hach.com

Primary Applications

- **Drinking Water**
- **Industrial Water**

*Specifications**

Range
0.001-100 Nephelometric Turbidity Units (NTU)

Accuracy
±2% of reading or ±0.015 NTU (whichever is greater) from 0 to 40 NTU;
±5% of reading from 40 to 100 NTU
(Defined according to ISO 15839.)

Displayed Resolution
0.0001 NTU up to 9.9999 NTU; 0.001 NTU from 10.000 to 99.999 NTU

Repeatability
Better than ±1.0% of reading or ±0.002 NTU, whichever is greater
(Defined according to ISO 15839.)

Sample Flow Required
200 to 750 mL/minute (3.1 to 11.9 gal/hour)

Power Requirements
100-230 Vac, 50/60 Hz, auto selecting; 40 VA

Recorder Outputs
Two selectable for 0-20 mA or 4-20 mA; output span programmable over any portion of the 0-100 NTU range; built into the sc100 Controller

Alarms
Three set-point alarms, each equipped with an SPDT relay with unpowered contacts rated 5A resistive load at 230 Vac; built into the sc100 Controller

**Subject to change without notice.*

See pages 79-84 for information on Hach laboratory and portable turbidimeters.

Turbidity: ULTRATURB plus sc

Suitable for low to medium turbidity applications.

ISO 7027 APPROVED

- *Wide measuring range—0 to 1,000 NTU*
- *Self-cleaning sample chamber option*
- *Stable/long lasting light source with IR ratio technology*
- *Dry verification modules with ranges from 0.6 to 25 NTU*

The ULTRATURB plus sc facilitates optimal filtration management in municipal and industrial water treatment—from checks on untreated water to outlet monitoring. The measured data from one or several sensors are processed by the sc controller platform.

ULTRATURB sc and ULTRATURB plus sc comply with DIN EN ISO 7027 and are identical models, except the ULTRATURB plus sc has an automatic cleaning feature with a wiper system. This wiper reliably prevents fouling of the measuring chamber and guarantees stable measured values in higher turbidity water sources.

CERTIFIED HACH SERVICE PLUS PROGRAM

Primary Applications

- **Drinking Water**
- **Wastewater**
- **Industrial Water**

*Specifications**

Measuring Method
90° scattered light in accordance with DIN EN ISO 7027 infrared light 860 nm

Measuring Range
0.0001-1000 NTU (TE/F, NTU, FNU) can be programmed as required (0.0001-250 EBC = 2500 ppm SiO_2)

Displayed Resolution
0.0001-0.9999 / 1.000-9.999 /10.00-99.99 / 100-1000 FNU

Limit of Detection (LOD)
±0.008 FNU or ±1 % (0-10 FNU))

Reproducibility
±0.003 FNU or ±0.5 % (0-2 FNU)

Verification
With StablCal or dry standard CVM

Sample Size Required
Min. 0.2 L/min, max. 1 L/min, max. 6 bar (20°C) (87 psi, 68°F)

Sample Temperature
Max. 50°C (122°F)

Sample Connection
Hose ID 13 mm or fixed connection with G+F system parts

Automatic Cleaning (optional)
Cleaning with wiper

Enclosure Rating
IP 65

Weight
Approx. 1.5 kg (3.3 lbs.)

**Subject to change without notice.*

Prod. No.	Description
SENSOR OPTIONS	
LPV415.52.11002	ULTRATURB sc .35 m Sensor Cable
LPV415.52.21002	ULTRATURB sc 5 m Cable
LPV415.52.10002	ULTRATURB plus sc .35 m Cable & Autoclean
LPV415.52.20002	ULTRATURB plus sc 5 m Cable & Autoclean
LPV415.52.12002	ULTRATURB plus Seawater sc .35 m Cable & Autoclean
LPV415.52.22002	ULTRATURB plus Seawater sc 5 m Cable & Autoclean
CONTROLLER	
This sensor requires a Hach sc100 or sc1000 Digital Controller. See pages 388-393 for details.	
DRY VERIFICATION MODULES	
LZV414.00.00000	CVM Module, 0.6 NTU
LZV414.00.10000	CVM Module, 1.5 NTU
LZV414.00.20000	CVM Module, 6 NTU
LZV414.00.30000	CVM Module, 15 NTU
LZV414.00.40000	CVM Module, 25 NTU
CALIBRATION TOOLS	
246142	4000 NTU Formazin, 500 mL
LZV451	Calibration/Cleaning Kit
WIPER ASSEMBLY FOR SEAWATER APPLICATIONS	
LZV842	Wiper Assembly for Seawater

For more information, visit www.hach.com

See pages 79-84 for information on Hach laboratory and portable turbidimeters.

Turbidity: Surface Scatter® 7 sc Turbidimeter

Measures high range turbidity levels.

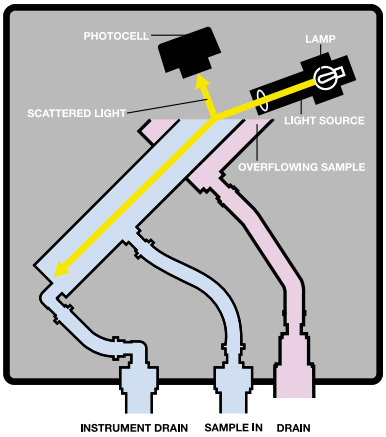
- *Optical components never touch the sample—less fouling for easy maintenance*
- *Wide measurement range—measures turbidity from 0 to 9999 NTU*
- *Durable—manufactured with corrosion/heat-resistant materials for extended life*

The Surface Scatter 7 sc is suitable for a wide variety of applications in water and wastewater treatment processes. The Surface Scatter design is ideal for monitoring raw water, clarifier effluent, and wastewater, where a high solids level can quickly foul a conventional turbidimeter.

All Surface Scatter 7 Turbidimeters are shipped with calibration cup, 4000 NTU Formazin calibration standard, installation accessories, and instruction manual (power cords must be ordered separately).

Prod. No.	Description
SURFACE SCATTER 7 sc TURBIDIMETER SYSTEMS	
7121000	Surface Scatter 7 sc Turbidimeter with Hach sc100 Controller
7121500	Surface Scatter 7 sc High Sample Temperature (HST) Turbidimeter; with Hach sc100 Controller
SENSOR ONLY	
LPV431.99.00002	Surface Scatter 7 sc Turbidimeter
LPV432.99.00002	Surface Scatter 7 sc High Sample Temperature (HST) Turbidimeter
CONTROLLER	
This sensor requires a Hach sc100 or sc1000 Digital Controller. See pages 388-393 for details.	
SAMPLE CONDITIONING OPTIONS	
4669212	Auto Flush Kit; 120 Vac
4669222	Auto Flush Kit; 220 Vac
4668000	Bubble Trap, Head Regulator
4028400	Flow Meter; 100 to 1600 mL/minute Calibration Standards
7121649	400 NTU StablCal; 500 mL
246149	4000 NTU Formazin; 500 mL
CABLES	
5796000	Sensor Cable Extension; 7.7 m (25 ft.)
4630600	Power Cord; 125 Vac, 10 A, 1.83 m (6 ft.)
4630800	Power Cord; 250 Vac, 10 A, 1.83 m (6 ft.)
OPTIONAL ACCESSORIES	
68700	Cylinder Brush; size 2
4502100	Calibration Cup
2351300	Verification Plates

For more information, call to request Literature #2509, or visit www.hach.com



As the sample overflows the top of the turbidimeter body, a photocell measures the light scattered by suspended particles.

Primary Applications

- **Drinking Water**
- **Wastewater**
- **Industrial Water**

*Specifications**

Range
0 to 9999 Nephelometric Turbidity Units (NTU)

Accuracy
±5% from 0 to 2000 NTU; ±10% from 2000 to 9999 NTU

Sample Flow Required
1.0 to 2.0 L/min (15 to 30 gal/hr)

Alarms
Two turbidity set-point alarms, instrument warning and system shutdown alarms are each equipped with an SPDT relay with unpowered contacts rated for 5A resistive load at 230 Vac; alarm 2 can be disabled and its contacts used to control flush valves

Power Requirements
115/230 Vac, 50/60 Hz, switch selectable; 0.5/0.3 A

**Subject to change without notice.*

See pages 79-84 for information on Hach laboratory and portable turbidimeters.

Hach Prepared Reagents

You can eliminate slight variations in reagent concentration and chemical purity when you choose Hach premeasured, premixed reagents that are produced under the most stringent laboratory controls. In the long run, your instrument will last longer and you'll be confident in the accuracy of your results.

On-line Turbidity Instruments Standards and Verification Modules

You can eliminate slight variations in reagent concentration and chemical purity when you choose Hach premeasured, premixed reagents that are produced under the most stringent laboratory controls. In the long run, your instrument will last longer and you'll be confident in the accuracy of your results.

The compact and lightweight ICE-PIC™ is ideal for spot verification or calibration of 1720E Turbidimeters.

The Verification Quick Check is a dry method that verifies calibration to below 0.1 NTU (100 mNTU).

Prod. No. **Description**

1720E Low Range Turbidimeter

StablCal Calibration Standards
2660153 StablCal®, 20 NTU, 1 L
Formazin Calibration Standards
246149 Formazin Primary Standard, 4000 NTU, 500 mL
Verification Modules
5225000 20 NTU ICE-PIC™
5221500 1 NTU ICE-PIC™

FilterTrak 660 sc Ultra Low Range Turbidimeter

Calibration Standards
1 point calibration
2788453 StablCal®, 800 mNTU, 1 L
2 point calibration
2723353 StablCal®, 100 mNTU, 1 L
2788453 StablCal®, 800 mNTU, 1 L
Verification Standards
2697953 StablCal®, 300 mNTU, 1 L
2698053 StablCal®, 500 mNTU, 1 L
Verification Module
6735500 Verification Quick Check, secondary standard

Accu4 Low Range Turbidimeter

StablCal Calibration Standards
2746353 StablCal®, 40 NTU, 1 L
2746356 StablCal®, 40 NTU, 1 Gallon (3.78 L)
Formazin Calibration Standards
246149 Formazin Primary Standard, 4000 NTU, 500 mL
Calibration/Verification Modules
8220G1300 Cal-Cube™ Assembly

Prod. No. **Description**

Surface Scatter 7 sc, High Range Turbidimeter

Formazin Calibration Standards
246149 Formazin Primary Standard, 4000 NTU, 500 mL
7121649 StablCal®, 400 NTU, 500 mL
Calibration/Verification Modules
2351300 Standardization Plate Kit

SOLITAX sc Turbidity and Suspended Solids Analyzers

2660549 800 NTU StablCal®, 500 mL
(2 required for calibration)

Other Available Standards

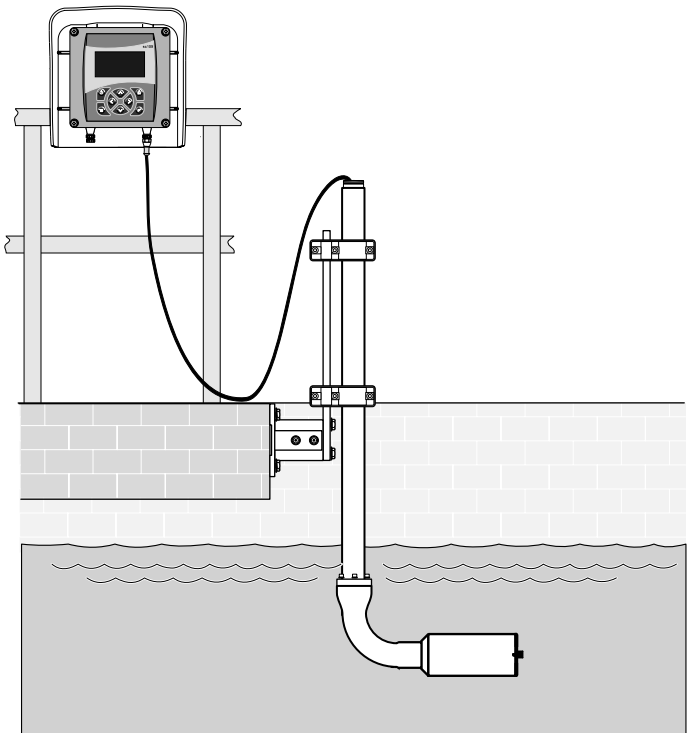
2659600 StablCal® Set, contains four bottles of 20 NTU, and four bottles of <0.1 bottles
2659753 StablCal®, < 0.1 NTU, 1 L
2723356 StablCal®, 0.1 NTU, 1 Gallon (3.78 L)
2746356 StablCal®, 40 NTU, 1 Gallon (3.78 L)

Note: StablCal and Formazin standards are also available in 100, and 500 mL bottles and sealed vials for all of the bench top and portable instrumentation.

For more information, call to request Literature #1582, or visit www.hach.com

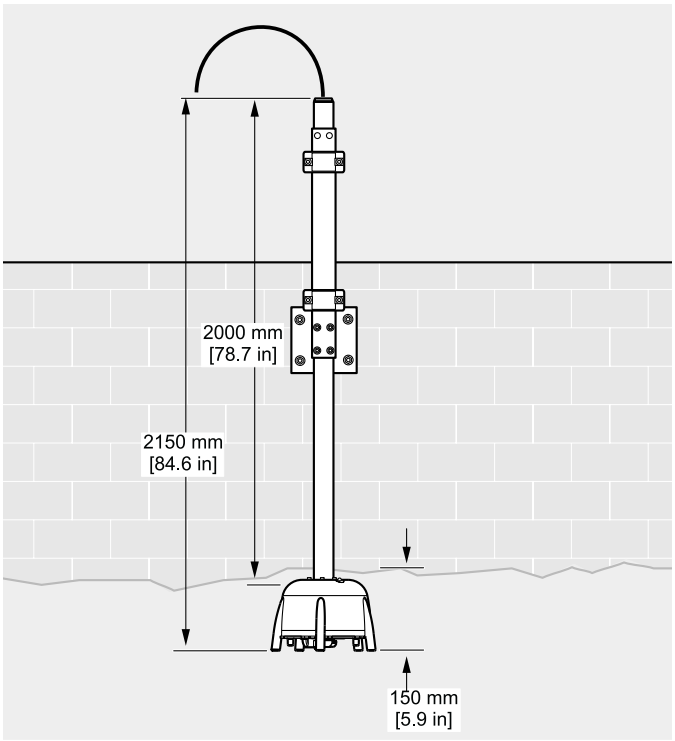
Fixed Point Mounting Kit

NITRATAX™ sc and SOLITAX® sc models t-line, ts-line, and hs-line sensors



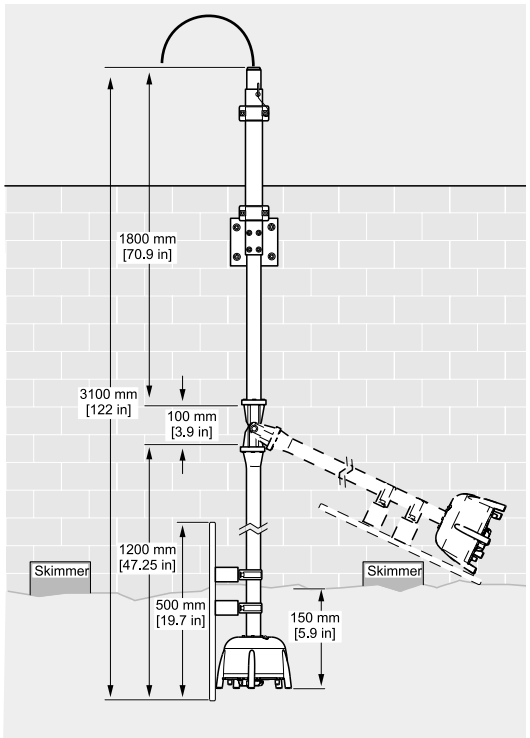
Fixed Point Mounting Kit

SONATAX™ sc sludge level probe (LZX414.00.70000)



Pivot Point Mounting Kit

SONATAX™ sc sludge level probe (LZX414.00.71000)



Prod. No.	Description
MOUNTING KITS	
LZX414.00.70000	Fixed Point Mount for SONATAX sc probe (for mounting probe at a fixed location)
LZX414.00.71000	Pivot Mount for SONATAX sc probe (for mounting probe on a pivot assembly for clarifers with skimmers)
LZX414.00.72000	Pivot Mount for SONATAX sc Probe with 0.35m extension pipe
LZX414.00.73000	Rail Mount kit for SONATAX sc probe (rail mount must be ordered with either LZX414.00.70000 or LZX414.71000)
LZX414.00.74000	Rail Mount kit for SONATAX sc probe with rectangular railing (rail mount must be ordered with either LZX414.00.70000 or LZX414.00.7100)
LZX414.00.10000	Fixed Point Installation Kit for NITRATAX sc sensors and SOLITAX sc models t-line, ts-line, and hs-line sensors for immersion in open tanks.
5738400	Insertion mounting kit for inline and highline insertion sensors (ball valve and extraction system)
CABLE ACCESSORIES	
(For the SOLITAX sc, NITRATAX sc, SONATAX sc, TSS sc, and UVAS sc Analyzers only)	
5867000	Junction Box (for extension cables*)
5796000	7.6 m (25 ft.) Extension Cable
5796100	15.2 m (50 ft.) Extension Cable
5796200	30.5 m (100 ft.) Extension Cable

**Maximum total length 100 m (328 ft.)*

Prepared Reagents

You can eliminate slight variations in reagent concentration and chemical purity when you choose Hach premeasured, premixed reagents that are produced under the most stringent laboratory controls. In the long run, your instrument will last longer and you'll be confident in the accuracy of your results.

Process Analyzer Reagents

APA 6000™ ALKALINITY ANALYZER

	Prod. No.
Sulfuric Acid Titrant, 0.08 M H_2SO_4, 1 L	**2826153**
Mixed Indicator; pH 4.5 & pH 8.3, 1 L	**2696653**
Alkalinity Standard 1, 0 mg/L, 1 L	**2696753**
Alkalinity Standard 2, 500 mg/L, 1 L	**2826253**
Alkalinity Wash Solution, 1 L	**2697053**
Alkalinity Reagent Set	**6001000**
Alkalinity Standards Set	**6001100**

APA 6000 AMMONIA / MONOCHLORAMINE

Reagent 1, Indicator, 1 L	**2776353**
Reagent 2, Buffer, 1 L	**2776453**
Reagent 3, 1 L	**2776553**
Standard 1, 0 mg/L NH_3, 1 L	**2776653**
Standard 2, 2.0 mg/L NH_3, 1 L	**2776753**
Wash Solution, 1 L	**2876453**
Ammonia/Monochloramine Reagent Set	**6001400**
Ammonia/Monochloramine Standards Set	**6001500**

AMTAX™sc AMMONIA ANALYZER

Cleaning Solution 250 mL	**2894246**
Electrolyte, 3 bottles and 3 membrane caps each for ranges 2, 3, and 4	**6182500**
Reagent 2.5 L	**2894452**
Standard Solution, 1 mg/L 2 L	**2894154**
Standard Solution, 10 mg/L 2 L	**2894354**
Standard Solution, 50 mg/L 2 L	**2825854**
Standard Solution, 500 mg/L 2 L	**2825954**
Standard Solution 0.5 mg/L 2 L	**2514654**
Standard Solution 2.5 mg/L 2 L	**2514754**
Electrolyte, 3 bottles and 3 membrane caps each for range 1	**2955300**

CL17 CHLORINE ANALYZER

DPD Indicator Powder (free and total), 24 g	**2297255**
Total Chlorine Indicator Solution, 473 mL	**2263411**
Total Chlorine Buffer Solution, 473 mL	**2263511**
Total Chlorine Reagent Set	**2557000**
Free Chlorine Indicator Solution, 473 mL	**2314011**
Free Chlorine Buffer Solution, 473 mL	**2314111**
Free Chlorine Reagent Set	**2556900**
Calibration/Verification Kit	**5449000**
Calibration/Verification Kit Refill	**2835900**

APA 6000 COPPER (LOW AND HIGH RANGE)

	Prod. No.
Reagent 1, Indicator, 1 L	**2755953**
Reagent 2, Buffer, 1 L	**2756053**
Standard 1, 0 mg/L, 1 L	**2756253**
Standard 2, 1 mg/L (Low Range), 1 L	**2756353**
Standard 2, 10 mg/L (High Range), 1 L	**2756453**
Wash Solution, 1 L	**2876453**
Copper Reagent Set	**6001600**
Low Range Copper Standards Set	**6001700**
High Range Copper Standards Set	**6001800**

APA 6000 HARDNESS (HIGH RANGE)

Reagent 1, Masking Solution, 1 L	**2793553**
Reagent 2 Kit, 1 L	**2793600**
Reagent 3, Titrant Solution, 1 L	**2793753**
Standard 1, 0 mg/L, 1 L	**2793253**
Standard 2, 1000 mg/L, 1 L	**2793353**
Wash Solution, 1 L	**2876453**
High Range Hardness Reagent Set	**6002100**
High Range Hardness Standards Set	**6002200**

APA 6000 HARDNESS ANALYZER (LOW RANGE)

Calmagite Indicator, 1 L	**2695853**
Buffer Solution #2, 1 L	**2695753**
Low Range Hardness Standard 1, 0 mg/L, 1 L	**2696253**
Low Range Hardness Standard 2, 5 mg/L, 1 L	**2696353**
Wash Solution, 1 L	**2876453**
Low Range Hardness Reagent Set	**6001900**
Low Range Hardness Standards Set	**6002000**

SP510 HARDNESS MONITOR

Buffer Solution, 0.3, 1, 2, 5 mg/L, 500mL	**2768549**
Buffer Solution, 10 mg/L, 500mL	**2768649**
Buffer Solution, 20 mg/L, 500mL	**2768749**
Buffer Solution, 50 mg/L, 500mL	**2768849**
Buffer Solution, 100 mg/L, 500mL	**2768949**
Indicator Solution, 0.3 mg/L, 500mL	**2794649**
Indicator Solution, 1 mg/L, 500mL	**2769049**
Indicator Solution, 2 mg/L, 500mL	**2769149**
Indicator Solution, 5 to 100 mg/L, 500mL	**2769249**

MO42 MOLYBDATE ANALYZER

MO42 Reagent, 500 mL	**2890549**

	Prod. No.
NITRATAX™sc UV NITRATE SENSORS	
NITRATAX Standard Solution, 50 mg/L NO_3	**LCW825**
PHOSPHAX™sc PHOSPHATE ANALYZER	
PHOSPHAX Reagent, 2000 mL	**2825254**
PHOSPHAX Cleaning Solution, 1000 mL	**2825352**
SERIES 5000 PHOSPHATE ANALYZER (HIGH RANGE)	
Sulfuric Acid Solution, 5.25 N, 2.9 L	**244903**
Molybdovanadate Reagent, 2.9 L	**1420703**
Anionic Surfactant Solution, 2.9 L	**2375503**
Phosphate Standard Solution, 30 mg/L PO_4, 2.9 L	**1436703**
High Range Phosphate Reagent Set	**4563900**
SERIES 5000 PHOSPHATE ANALYZER (LOW RANGE)	
Anionic Surfactant Solution, 2.9 L	**2375503**
Ascorbic Acid Reagent Package, 2.9 L	**2600303**
Molybdate Reagent Solution, 2.9 L	**2599803**
Phosphate Standard Solution, 3 mg/L PO_4, 2.9 L	**2059703**
Water, Zero Standards, 2.9 L	**2600103**
Low Range Phosphate Reagent Set	**4563300**
High Range Phosphate Reagent Set	**4563900**
SERIES 5000 SILICA ANALYZER	
Molybdate 3 Reagent, 2.9 L	**199503**
Citric Acid/Surfactant Reagent, 2.9 L	**2347003**
Amino Acid F Reagent, 2.9 L	**2353103**
Silica Standard Solution, 500 µg/L SiO_2, 2.9 L	**2100803**
Silica Reagent Set	**4562700**
9073 SODIUM ANALYZER AND 9186 OXYGEN SCAVENGER ANALYZER	
Diisopropylamine, 99%, 1 L	**2834453**
Sodium Chloride as Sodium Standard 10 mg/L, 1 L	**2835153**
Sodium Chloride as Sodium Standard 100 mg/L, 1 L	**2834253**

	Prod. No.
9245 SODIUM ANALYZER	
Reference Electrolyte, KCl, 3 M, 500 mL	**363140,00500**
Di-isopropylamine (DIPA), 1 L	**2834453**
Sodium Standard, 10 ppm, 1 L	**2835153**
Sodium Standard, 100 ppm, 1 L	**2834253**
Sodium Nitrate, 0.5M, 500 mL	**2507149**
astroTOC™ ONLINE TOTAL ORGANIC CARBON ANALYZER	
Phosphoric Acid Solution, 0.1 Molar, 5 Gal	**5845800**
Phosphoric Acid Solution, 0.3 Molar, 5 Gal	**5845900**
Phosphoric Acid Solution, 0.6 Molar. 5 Gal	**5846000**
Phosphoric Acid Solution, 1.0 Molar, 5 Gal	**5846100**
Sodium Persulfate Solution, 0.2 Molar, 5 Gal	**5845100**
Sodium Persulfate Solution, 0.4 Molar, 5 Gal	**5845200**
Sodium Persulfate Solution, 0.6 Molar, 5 Gal	**5845300**
Sodium Persulfate Solution, 0.8 Molar, 5 Gal	**5845400**
Sodium Persulfate Solution, 1.0 Molar, 5 Gal	**5845500**
Sodium Persulfate Solution, 1.2 Molar, 5 Gal	**5845600**
Sodium Persulfate Solution, 1.5 Molar, 5 Gal	**5845700**
Zero Solution, <0.05 mg/L TOC, 4 L	**5847700**
TOC Standard Solution, 2.0 mg/L, 4 L	**5846200**
TOC Standard Solution, 5.0 mg/L, 4 L	**5847100**
TOC Standard Solution, 10.0 mg/L, 4 L	**5846700**
TOC Standard Solution, 25.0 mg/L, 4 L	**5846300**
TOC Standard Solution, 50.0 mg/L, 4 L	**5847200**
TOC Standard Solution, 100.0 mg/L, 4 L	**5846800**
TOC Standard Solution, 200.0 mg/L, 4 L	**5846400**
TOC Standard Solution, 500 mg/L, 4 L	**5847300**
TOC Standard Solution, 1000 mg/L, 4 L	**5846900**
TOC Standard Solution, 2000 mg/L, 4 L	**5846500**
TOC Standard Solution, 5000 mg/L, 4 L	**5847400**
TOC Standard Solution, 10000 mg/L, 4 L	**5847000**
TOC Standard Solution, 20000 mg/L, 4 L	**5846600**

Obsolete Products & Replacements

Instruments No Longer Eligible for Repair by Hach	Replacement Instrument	See Pages
Lab Instruments		
DR/2000 Spectrophotometer DR/2010 Spectrophotometer DR/3000 Spectrophotometer	Choose from the DR 2700, DR 2800, DR 3800, and DR 5000 Spectrophotometers	67-71
DR/700 Colorimeter DR/100 Colorimeter	DR800 Series Colorimeters (up to 90 parameters) or Pocket Colorimeter II (single parameter)	74-77
EC Series pH and ISE Meters Hach One portable pH/ISE meters (Prod. No. 4380000 & others)	HQd Meters and IntelliCAL Probes; H-Series Portable and Benchtop Meters & Probes; MP Probeless Meters; sensION Portable and Benchtop Meters & Probes	24-47
18900 Ratio Turbidimeter 2100A Turbidimeter 43900 Ratio XR Turbidimeter	2100N & 2100AN Laboratory Turbidimeters	80-81
Portalab Turbidimeter	2100Q Portable Turbidimeter	82
Process Instruments		
1220 Hardness Monitor	SP510 Hardness Monitor	426
5041D0 & 5042D0 Zullig DO Sensors	Hach LDO Probe	414-415
AC1000 Series Analyzers	CL17 Chlorine Analyzer	404
CL17 (Prod. No. 4418000) Chlorine Analyzer	New CL17 (Prod. No. 5440001)	404
Metal Case Series 5000 (44900 series)	Series 5000 Analyzers (60000 Series)	449
1720C Turbidimeter	1720E Low Range Turbidimeter	465
95T/8220 Low Range Turbidimeters	1720E Low-Range Turbidimeter	465
95T/8224 Steady Stream Turbidimeters	Surface Scatter 7 sc Turbidimeter	467
Ratio 2000 Process Turbidimeter	Selection of New Process Turbidimeters (application-dependent)	464-468
Surface Scatter 5 Turbidimeter	Surface Scatter 7 sc Turbidimeter	467
Controllers & Transmitters		
672 Series	sc100, sc1000 Controllers and Model 53 Controllers	390-393, 396
692 (all versions)	si792 2-wire transmitter	394-395
EC310 EC1000	sc100 and sc1000 Controllers and Digital pH Sensors and 8362sc High Purity pH System	390-393, 443

DR 5000™, DR 3800™, and DR 2800™ Spectrophotometers

HQd Meters and IntelliCAL™ Probes

sc100 and sc1000 Universal controllers for use with our Digital Sensor Family

800-227-4224
Outside the United States, call 970-669-3050