SONATAX sc
SLUDGE BLANKET
LEVEL PROBE

Continuous ultrasonic measurement of sludge blanket level.

The Hach SONATAX sc is designed for use in primary and secondary clarifiers, thickeners in wastewater treatment, raw water clarifiers, sludge settling basins in water treatment, and special industrial applications.

Superior Accuracy

The digitalized SONATAX sc probe features an ultrasonic measurement system, which automatically scans a range of frequencies to find the ideal settings for the application. Built-in software can disregard signals reflected from tank structures such as pipes, rods, etc. Besides this temperature compensation, and position sensor ensure accuracy and reliability.

Reduced Maintenance with Innovative Wiper Design

The Hach SONATAX sc Sludge Blanket Level Probe features a wiper with a magnetic connector that effectively cleans the probe. No o-rings to replace and no tools needed to replace the wiper blades.

Visual Performance Indicator Enhances Troubleshooting

A visual performance LED indicator light on the SONATAX sc probe provides assurance of proper performance at a glance.

Multi-probe, Multi-parameter Capability

Expand systems as needed without additional controller investment. Hach sc digital controllers can accept from two to eight probes, accommodating any combination of parameters with Hach's line of digital probes.

Increased Efficiency Saves Energy and Money

The Hach SONATAX sc Sludge Blanket Level Probe can decrease your power costs by automatically actuating pumps to control pump rates for WAS/RAS. Other benefits of continuous blanket level measurement include early warning information of solids wash-out potential at the outlet and optimized sludge extraction to minimize dewatering and final disposal cost.
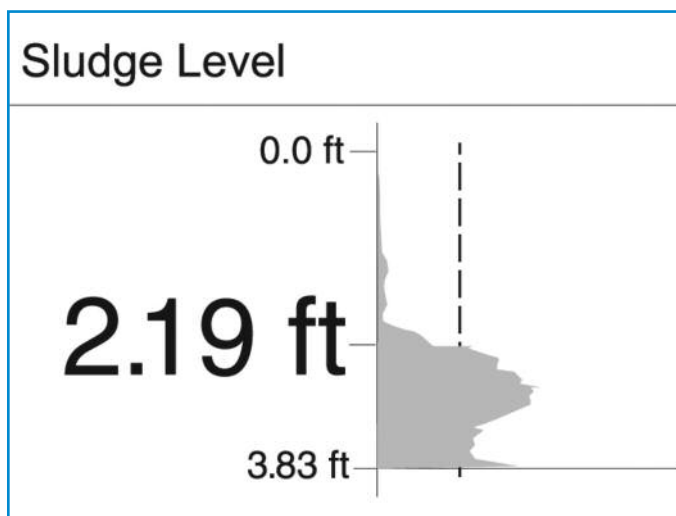
HACH®

Be Right™

Specifications*

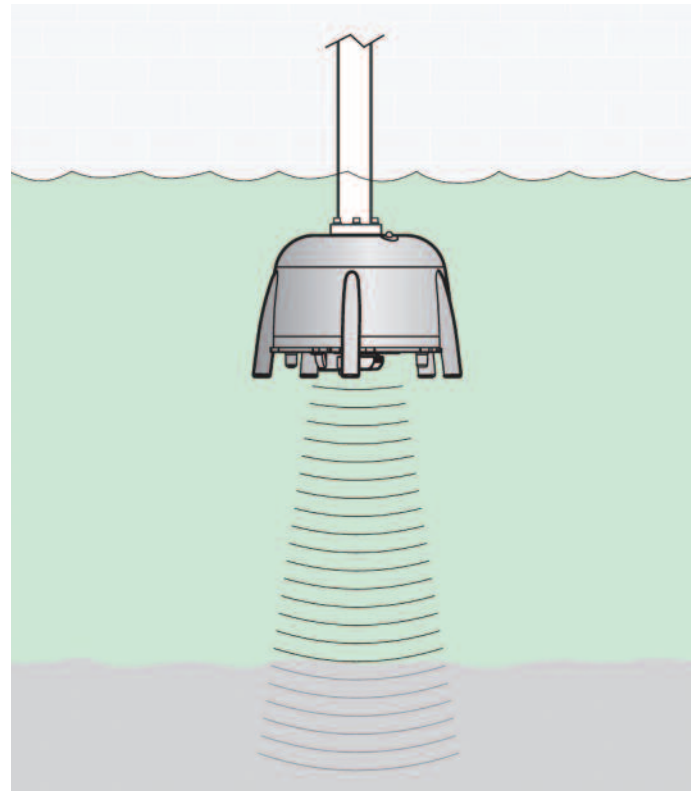|				
Measuring Principle	Ultrasonic measurement		**Calibration**	Factory calibrated
Range	0.2 to 12 m (0.6 to 40 ft.)		**Probe Construction**	Wiper: Silicon Body: Stainless steel Face: Polyoxymethylene
Resolution	0.03 m (0.09 ft.)			
Accuracy	±0.1 m (±0.33 ft.)		**Certifications**	CE
Operating Temperature	2 to 50°C (35 to 122°F)		**Dimensions**	130 x 185 mm (5 x 7.3 in.)
Pressure Range	<= 0.3 bar or <=3 m (<= 4.35 psi or <= 10 ft)		**Weight**	3.5 kg (7.7 lbs.)
			Cable Length	10 m (33 ft.)
Power Requirement	12 V, 2.4 W, provided by sc controller		**Warranty**	2 years
Measurement Interval	10 to 1800 seconds (adjustable)		**Display Unit**	sc200 controller or sc1000 controller
Probe Mounting	Fixed pole mount, pivot mount or chain mount			

Subject to change without notice.

Principle of Operation

The Hach SONATAX sc Sludge Level Probe uses an ultrasonic pulse to accurately measure the sludge level. An ultrasonic signal sent from the probe is directed towards the sludge blanket in the tank (figure at right). Height and depth measurements are based on the time it takes for the ultrasonic echo to return to the probe and are displayed on the controller (figure below).
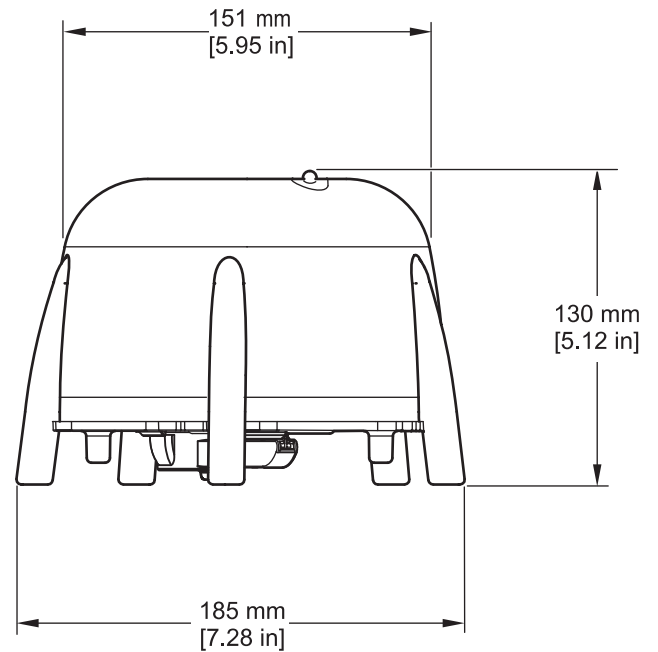

NOTE: Graphical display of sludge profile is available only with the sc1000 controller.
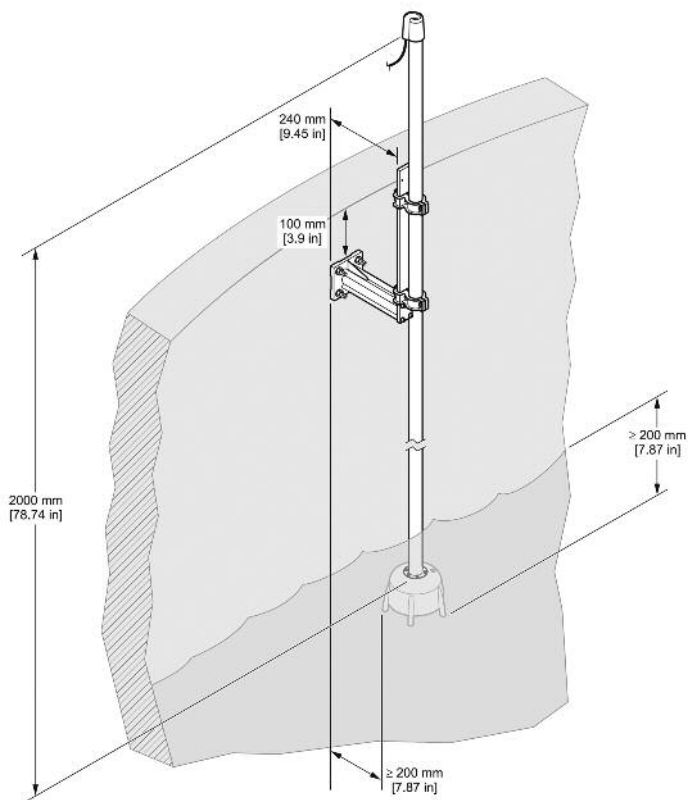
Dimensions

The Hach SONATAX sc Sludge Level Probe must be installed with the ultrasonic head submerged at least 20 cm (8 in.). Protect it against larger objects in the sewage flow such as branches or ice. Slight rocking of the mounting link of the ultrasound head will not affect measurements.

151 mm
[5.95 in]

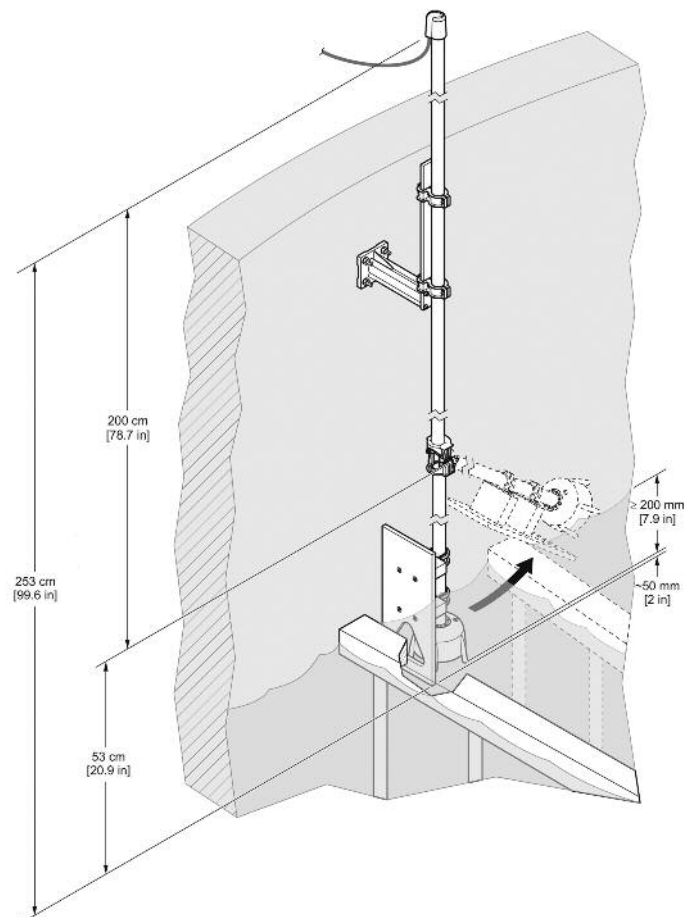130 mm
[5.12 in]

185 mm
[7.28 in]

Installation / Mounting

Installation of SONATAX sc with stainless steel fixed point mount (Prod. No. LZY714.99.42120).

Installation of SONATAX sc with stainless steel pivot mount for operation with skimmer (Prod. No. LZY714.99.62160)

240 mm
[9.45 in]

100 mm
[3.9 in]

≥ 200 mm
[7.87 in]

2000 mm
[78.74 in]

≥ 200 mm
[7.87 in]

200 cm
[78.7 in]

≥ 200 mm
[7.9 in]

253 cm
[99.6 in]

~50 mm
[2 in]

53 cm
[20.9 in]

Ordering Information

Single Probe Systems

2976300   SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 standard controller

Single Probe Systems with Digital Communication

2976200   SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 controller with RS-232/485 MODBUS® output

2976100   SONATAX sc System; includes one SONATAX sc probe, pivot mount hardware, and sc200 controller with Profibus DP

Note: Power cords must be ordered separately.

SONATAX sc Probes

Each probe is equipped with 10 m (33 ft.) cable

LXV431.99.00002   One SONATAX sc Sludge Level Probe

5773000   One SONATAX sc Sludge Level Probe with one pivot mount hardware

5773100   Two SONATAX sc Sludge Level Probes with two pivot mount hardware

Note: For information about Hach sc controllers, please see LIT2403 and LIT2665.

Cable Accessories

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 of cables: 50 m (164 ft.)

Accessories

LZY714.99.42120   Fixed Point Mount for probe
For mounting probe at a fixed location.

LZY714.99.00030   Extension pipe 1m (3.3 ft.)
For fixed point mount LZY714.99.42120

LZY714.99.00040   Extension pipe 2m (6.6 ft.)
For fixed point mount LZY714.99.42120

LZY714.99.62160   Pivot Mount for probe (0.35m (1.15 ft.) extension pipe)
For mounting probe on a pivot assembly for clarifiers with skimmers.

LZY714.99.72160   Pivot Mount for probe (1 m (3.3 ft.) extension pipe)
For mounting probe on a pivot assembly for clarifiers with skimmers.

LZX414.00.73000   SONATAX sc Rail Mounting Assembly
Rail Mount must be ordered with either LZY714.99.42120 or LZY714.99.72160 or LZY714.99.72160.

LZX914.99.11300   Chain Mount Assembly for SONATAX sc

9202900   120V Power Cord for sc200 with Strain Relief

9220600   Sun Shield for sc200 controller

LZX328   Wiper Blades for Probe, replacement only, pkg. of 5

HACH COMPANY World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel   970-669-2932 fax   orders@hach.com
Outside United States: 970-669-3050 tel   970-461-3939 fax   int@hach.com
hach.com

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