Hach BioTector B3500s Online TOC Analyser

Applications

- Municipal wastewater





Service Protected

Effluent TOC monitoring made easy

Semi-annual reagent replacement and seamless integration with the Hach® sample homogenisation unit, make the B3500s the easiest solution for regulatory TOC monitoring in municipal wastewater.

Easy sample homogeniser integration

Designed to communicate with the Hach Sigmatax 2 sample homogeniser, the system provides an off-the-shelf solution to meet TOC effluent monitoring regulations.

Extended reagent and maintenance intervals

Every six months reagent replenishment, semi-annual calibration and basic preventative maintenance allows you to focus on what matters most.

Worry-free TOC

With innovative two stage, advanced oxidation technology, the B3500s provides you with reliability and uptime, without sacrificing accuracy.

Reagent costs that don't kill the bottom line

By only needing to replenish reagents every six months, you will see direct bottom line savings in comparison to other systems requiring bi-weekly or monthly replacements.

HACH®
Be Right™

Technical Data*

Ambient temperature	5 - 45 °C
Communication: digital	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol)
Cycle time	From 5.5 minutes, depending on range and application
Parameter	Direct measurement of Total Organic Carbon, Total Inorganic Carbon, Total Carbon Chemical Oxygen Demand, Biological Oxygen Demand via correlation Volatile Organic Carbon via calculation (B3500s VOC mode is not available in combination with Sigmatax)
Data storage	Previous 9999 reaction data
Dimensions (H x W x D)	750 mm x 500 mm x 320 mm
Display	High contrast 40 character x 16 line backlit LCD with LED backlight
Humidity	5 - 85 % (non-condensing)
Measurement method	Infrared Measurement of CO_2 after Oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Measuring range	0-100 mg/L C (ppm)
Multi-Stream	1 process stream, 1 grab sample
Oxidation method	Innovative Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Particle size	Up to 100 µm
Power requirements (Voltage)	230 V AC
Power requirements (Hz)	50 Hz
Range selection	Automatic or manual range selection
Repeatability	0 - 25 mg/L C: ±3% of reading or ±0.03 mg/L, whichever is greater; Lower limit of detection LOD = 0.06 mg/L Exceedance tracking 0 - 100 mg/L C: ±5% of reading or ±0.5 mg/L, whichever is greater
Sample inlet temperature	0 - 60 °C
Service interval	6 month service intervals
User interface	Microcontroller with membrane keyboard
Weight	46 kg
Protection class	IP44, standard fan cooled, maximum ambient temperature 45 °C IP54, air cooled, maximum ambient temperature 35 °C IP54, vortex cooled, maximum ambient temperature 50 °C

**Subject to change without notice.*

Principle of operation

TIC

Acid is added to lower the pH so that inorganic carbon is sparged off as CO_2. This is also measured to ensure the Total Inorganic Carbon (TIC) in not carried over into the TOC.

Oxidation

BioTectors's unique oxidation method (TSAO) efficiently oxidises the organic carbon in the sample to CO_2. TSAO utilises hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

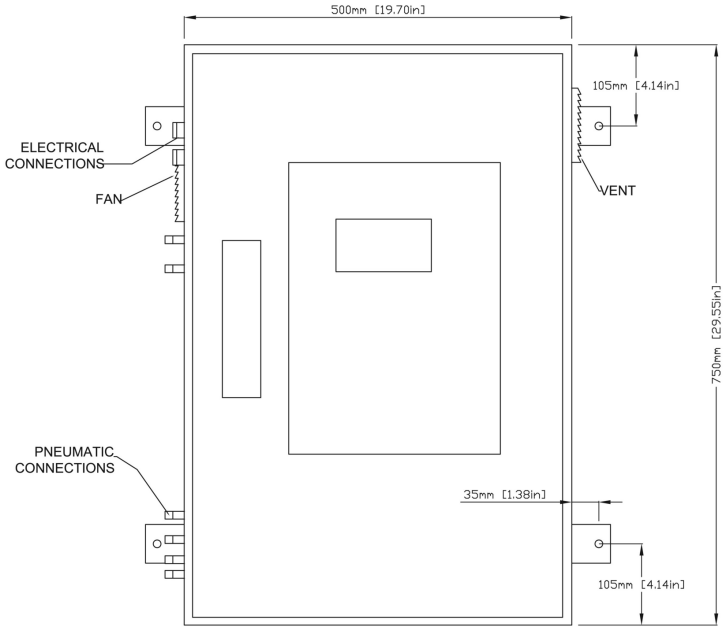
TOC

To remove CO_2 from the oxidised sample, the pH of the sample is lowered again. The CO_2 is sparged and measured by the specially developed NDIR CO_2 analyser. The result is displayed as Total Organic Carbon (TOC).

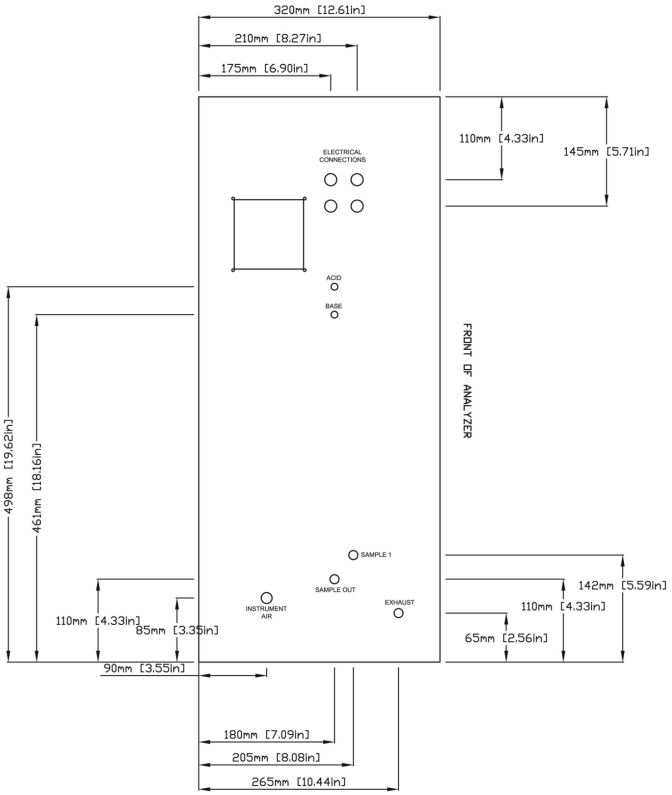


Dimensions

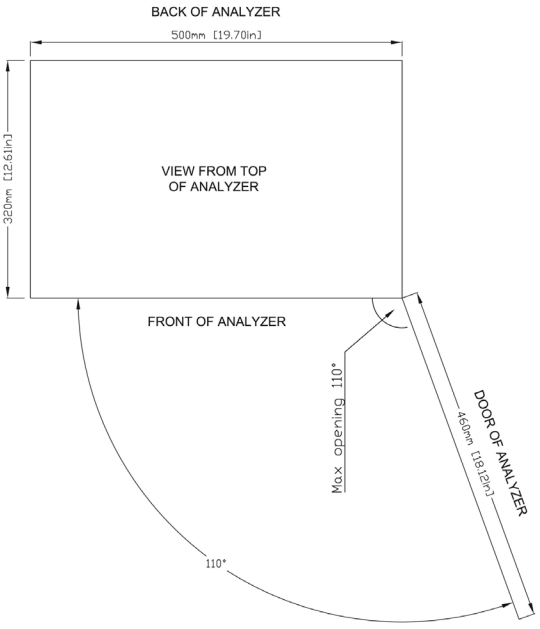
Front View



Side View



Top View



Order Information

Instruments

B5BCAA152AACS	Hach BioTector B3500s Online TOC analyser, 0 - 25 mg/L C, 1 stream, grab sample, 230 V AC
B5BFAA152AACS	Hach BioTector B3500s Online TOC analyser, 0 - 100 mg/L C, 1 stream, grab sample, 230 V AC

There are additional options available. Please contact Hach for more details.
Note: Sigmatax 2 needs to be ordered separately.

Accessories

10-SMC-001	Air supply filter pack
2038062	BioTector reagent, 4.0 N NaOH
2038162	BioTector reagent, 6.0 N sulfuric acid with Mn catalyst
19-KIT-123	Six months spare part kit for BioTector B3500
LXV215	Sigmatax 2 Control unit sampling & ultrasonic homogenisation
LXV231	Suction probe (10 m) for Sigmatax 2
LXV232	Suction probe (20 m) for Sigmatax 2
LXV282	Suction probe (30 m) for Sigmatax 2
LZX306	Valve piston seal set (every 6 months) for Sigmatax 2
LZX299	Air filter without fittings (every 12 months) for Sigmatax 2

Service Protected

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.

DOC053.52.35018.Oct21