

Hach BioTector B3500e TOC Analyzer



Applications

- Discharge Control
- Wastewater Effluent
- Ground Water / Raw Surface Water
- Storm Water / River Water
- Carbon Bed Absorber
- Cooling Water



Highest reliability in TOC analysis for water control meets low cost of ownership.

The Hach® BioTector B3500e delivers the market leading, patented self-cleaning technology to provide accurate on-line TOC analysis. With 99.86% certified uptime the B3500e delivers maximum availability for reliable results. Ideal for water control, the B3500e helps you to be compliant while minimizing your operating costs.

Ensure environmental compliance.

The B3500e is tailor-made for monitoring final wastewater effluent and discharges to meet TOC requirement in water regulations. Being regulatory compliant will save you significant penalty costs while protecting the local environment.

Save with low ownership costs.

Requiring you to replace the pump tube and calibrate only twice a year, the Hach BioTector B3500e provides low operating expenses.

Worry-free TOC with smart design.

The B3500e comes with a built in self-cleaning sample tube and reactor. This enables the B3500e to deliver trustworthy results even if your water contains some level of fat, oil, greases and sludge or has moderate pH swings.

Information you can rely on.

Using BioTector's internationally proven and patented Two Stage Advanced Oxidation technology, the B3500e delivers maximum uptime, reliability and accuracy.

Access your results from everywhere.

With the B3500e TOC results can be viewed at your desk, your home, or while you are on the move with the BioTector Network Control Unit remote access.



Technical Data*

Parameter	Direct measurement of Total Organic Carbon, Total Inorganic Carbon Chemical Oxygen Demand, Biological Oxygen Demand via correlation
Range	0 - 250 mg/L C, 0 - 1000 mg/L C
Range Selection	Automatic or manual range selection
Repeatability	±3% of reading or ±0.45 mg/L, whichever is greater in 0 - 250 mg/L C range ±4% of reading or ±2 mg/L, whichever is greater in 0 - 1000 mg/L C range
Measurement Method	Infrared measurement of CO ₂ after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Number of sample streams	Single process stream and manual grab sample
Cycle Time	Typically 7 minutes 30 seconds
Particle Size	Up to 100 µm
Automatic cleaning	Yes
Data Storage	Previous 9,999 reaction data

Communication	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)
User Interface	Microcontroller with membrane keyboard
Display	High contrast 40 character x 16 line backlit LCD with LED backlight
Sample Inlet Temperature	2 - 60 °C
Ambient Temperature	5 - 45 °C
Humidity	5 - 85 % (non-condensing)
Service Interval	6 month service intervals
Power Requirements (Voltage)	115/230 V AC
Power Requirements (Hz)	60 Hz
Dimensions (H x W x D)	750 mm x 500 mm x 320 mm
Weight	46 kg (enclosure weight may change depending on system optional features)

*Subject to change without notice.

Principle of Operation

TIC

Acid is added to lower the pH so that inorganic carbon is sparged off as CO₂. This is measured to ensure Total Inorganic Carbon (TIC) is not carried over into the TOC.

Oxidation

BioTector's patented oxidation method (TSAO) achieves total and complete oxidation of the sample, including organic carbon to CO₂. TSAO utilises hydroxyl radicals generated within the analyzer by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

TOC

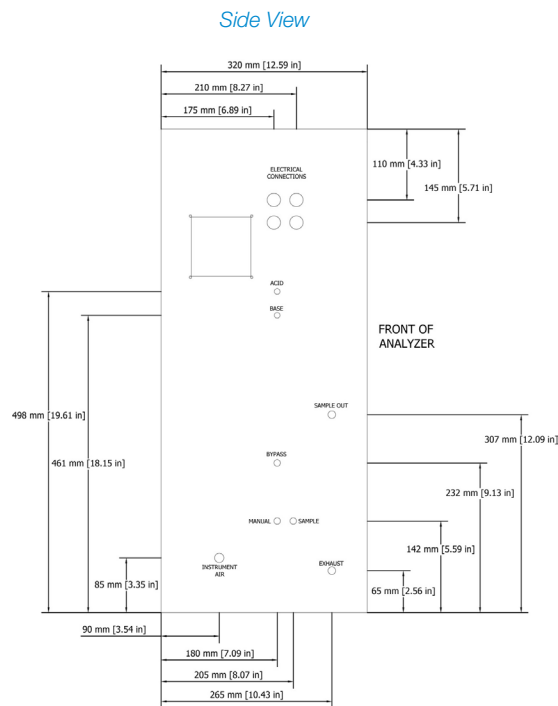
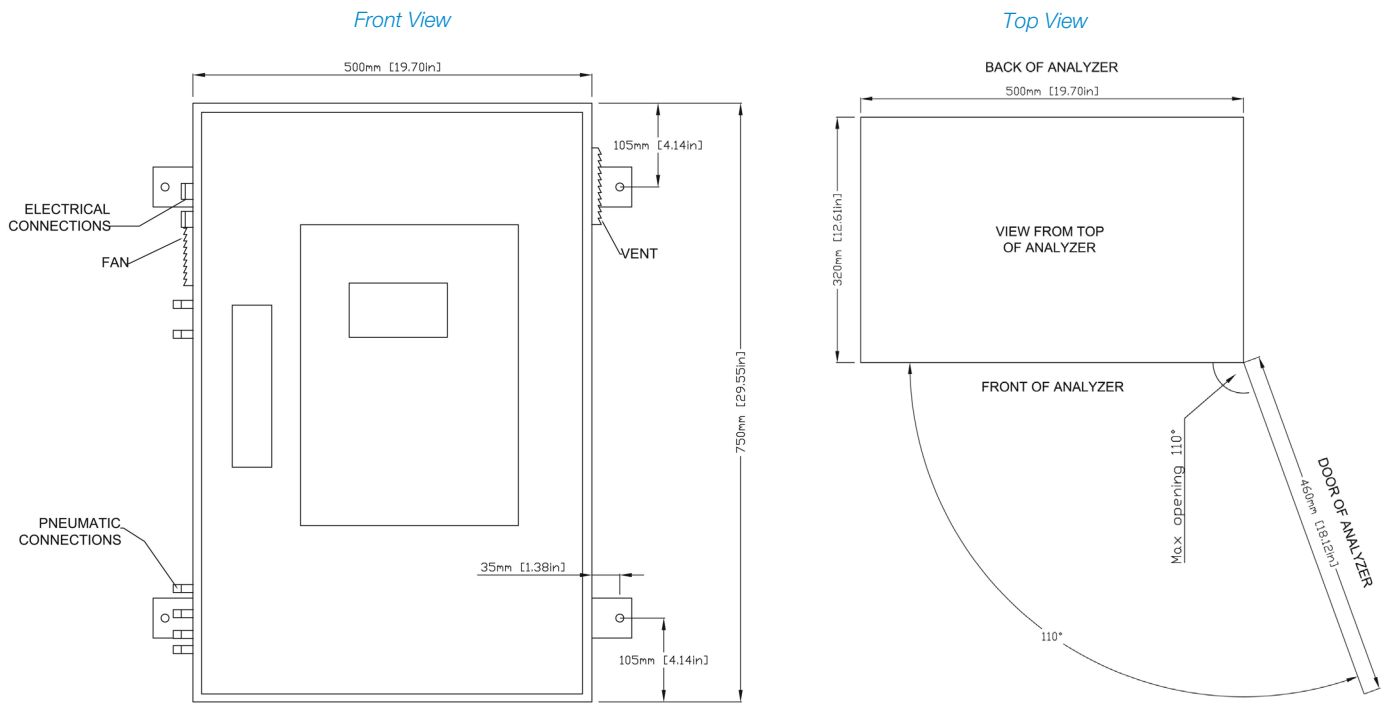
To remove CO₂ from the oxidized sample, the pH of the sample is lowered again. The CO₂ is sparged and measured by the specially developed NDIR CO₂ analyzer. The result is displayed as Total Organic Carbon (TOC).

Cleaning

The entire system is automatically self-cleaned by the reaction process during every cycle.



Dimensions



Order Information

Instruments

- BEAAAA152AAA2** Hach BioTector B3500e Online TOC analyzer, 0-250 ppm, 1 stream, grab sample, cleaning, 115 V AC
- BEABAA152AAA2** Hach BioTector B3500e Online TOC analyzer, 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, 115 V AC
- BEAAAA152AAB2** Hach BioTector B3500e Online TOC analyzer, 0-250 ppm, 1 stream, grab sample, cleaning, sample sensor, 115 V AC
- BEABAA152AAB2** Hach BioTector B3500e Online TOC analyzer, 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, sample sensor, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

- 10-SMC-001** Air supply filter pack
- 19-COM-160** BioTector Compressor 115 V / 60 Hz
- 19-COM-250** BioTector Compressor 230 V / 50 Hz

Service Kit

- 19-KIT-130** B3500e 6 month service kit



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.

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