

Hach BioTector B3500c Online TOC Analyzer



Applications

- Industrial Condensate Water
- Cooling Water
- Boiler Water



Maximum uptime and reliability for TOC analysis in condensate applications

Using patented technology, only requiring scheduled maintenance every 6 months, allowing for dual stream monitoring, and having one of the most compact analyzer footprints, the Hach® BioTector B3500c delivers 99.86% uptime in condensate applications with the lowest operating cost.

Worry-free TOC

With a patented Two Stage, Advanced Oxidation Technology system, the B3500c provides you with maximum reliability and uptime, without sacrificing accuracy.

Lowest Cost of Ownership

Requiring you to replenish reagents, replace the pump tube, and calibrate only twice a year, the Hach BioTector B3500c has the lowest operating cost available.

Small Footprint = Critical Wall Space Savings

With one of the most compact analyzer footprints, this analyzer frees up wall space for other needed instruments.

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.

One Instrument for Multiple Streams

Providing the ability to monitor two streams sequentially, eliminates the double-cost of needing two separate analyzers.

Technical Data*

| | | | |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Temperature | 5 - 45 °C | Multi-Stream | Up to 2 process streams and grab sample |
| 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) Except for Zone 1 certification then Modbus RTU, Modbus TCP/IP & Modbus TCP/IP Redundant is available | Oxidation Method | Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals |
| Cycle Time | From 5.5 minutes, depending on range and application | Particle Size | Up to 100 µm |
| 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 | Power Requirements (Voltage) | 230 V AC |
| Data Storage | Previous 9999 reaction data | Power Requirements (Hz) | 50 Hz |
| Dimensions (H x W x D) | 750 mm x 500 mm x 320 mm | Range Selection | Automatic or Manual Range Selection |
| Display | High contrast 40 character x 16 line backlit LCD with LED backlight | Repeatability | 0 - 25 mg/L C: ±3% of reading or ±0.03 mg/L, whichever is greater; 0 - 100 mg/L C: ±5% of reading or ±0.5 mg/L, whichever is greater |
| EEExp / Hazardous Location | Certification options are available to European Standards, (ATEX Zone 1, Zone 2), North American Standards (Class I Division 2) and IECEx Zone 1 | Sample Inlet Temperature | 0 - 60 °C |
| Humidity | 5 - 85 % (non-condensing) | Service Interval | 6 month service intervals |
| Measurement Method | Infrared measurement of CO ₂ after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1) | User Interface | Microcontroller with membrane keyboard |
| Range | 0 - 25 mg/L C, 0 - 100 mg/L C | Weight | 46 kg (enclosure weight may change depending on system optional features) |
| | | Protection Class | IP44, standard fan cooled, maximum ambient temperature 45 °C (113 °F) IP54, air cooled, maximum ambient temperature 35 °C (95 °F) IP54, vortex cooled, maximum ambient temperature 50 °C (122 °F) |

*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 also measured to ensure the Total Inorganic Carbon (TIC) is not carried over into the TOC.

Oxidation

BioTectors's patented oxidation method (TSAO) efficiently oxidizes the organic carbon in the sample to CO₂. TSAO utilizes hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

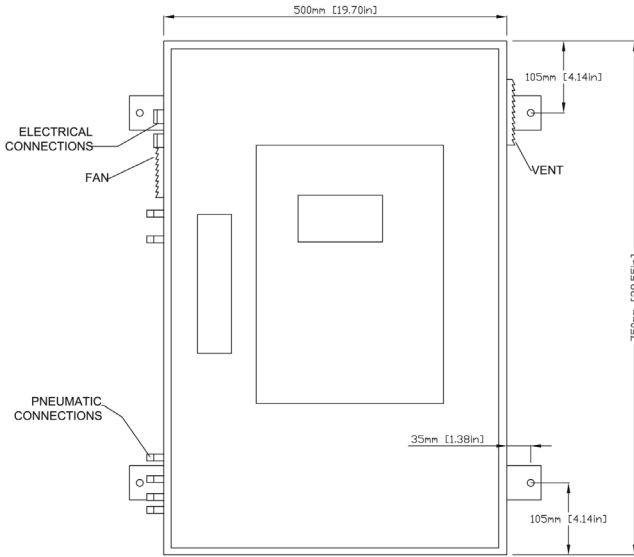
TOC

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).

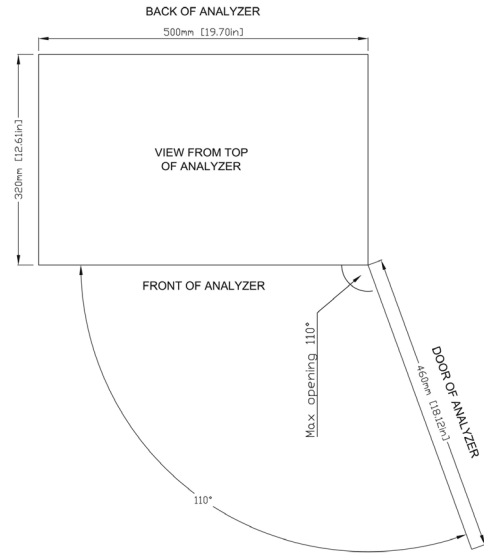


Dimensions

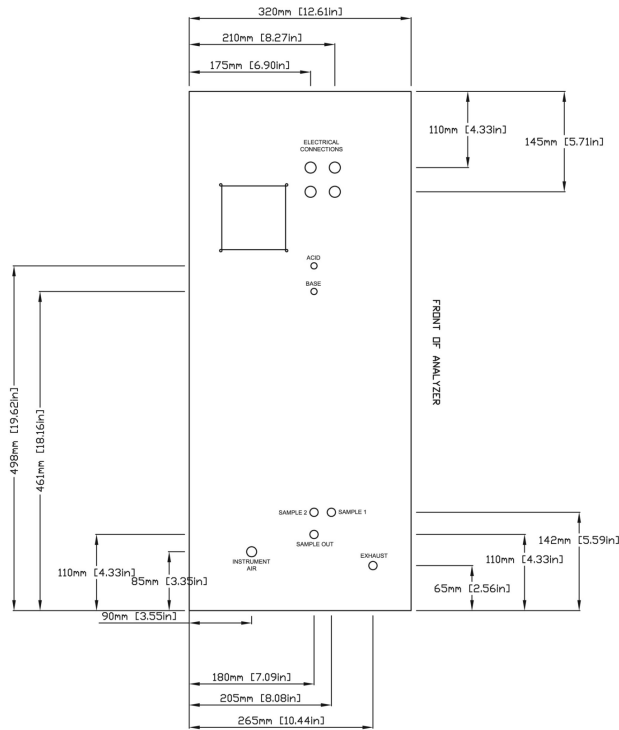
Front View



Top View



Side View



Panel Detail



Order Information

Instruments

- B5ACAA152AAC2** Hach BioTector B3500c TOC analyzer, 0-25 ppm, 1 stream, grab sample, 115 V AC
- B5AFAA152AAC2** Hach BioTector B3500c TOC analyzer, 0-25 ppm with 0-100 ppm range extension, 1 stream, grab sample, 115 V AC
- B5ACAA152AAF2** Hach BioTector B3500c TOC analyzer, 0-25 ppm, 2 streams, grab sample, 115 V AC
- B5AFAA152AAF2** Hach BioTector B3500c TOC analyzer, 0-25 ppm with 0-100 ppm range extension, 2 streams, grab sample, 115 V AC

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

Accessories

- 19-COM-160** BioTector Compressor 115 V / 60 Hz
- 19-COM-250** BioTector Compressor 230 V / 50 Hz
- 10-SMC-001** Air supply filter pack
- 19-KIT-123** Six months spare part kit for BioTector B3500

Reagents

- 2038062** BioTector Reagent, 4.0 N NaOH
- 2038162** BioTector reagent, 6.0 N sulfuric acid with Mn catalyst



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.

Hach 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

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Printed in U.S.A.

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