# Hach BioTector B3500c Online TOC Analyser


### Applications

- Industrial condensate water
- Cooling water
- Boiler water

Service Protected

## Maximum uptime and reliability for TOC analysis in condensate applications

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

### Worry-free TOC

With innovative two stage, advanced oxidation technology, the B3500c provides you with maximum reliability and uptime, without sacrificing accuracy.

### Lowest cost of ownership

Requiring you to replace the sample 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 analyser footprints, this analyser 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 analysers.

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)<br>Except for Zone 1 certification then Modbus RTU, Modbus TCP/IP & Modbus TCP/IP Redundant is available |
| **Cycle time** | From 5.5 minutes, depending on range and application |
| **Parameter** | Direct measurement of Total Organic Carbon, Total Inorganic Carbon, Total Carbon<br>Chemical Oxygen Demand, Biological Oxygen Demand via correlation<br>Volatile Organic Carbon via calculation |
| **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 |
| **EExp / 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 |
| **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 - 25 mg/L C, 0 - 100 mg/L C |
| **Multi-Stream** | Up to 2 process streams and 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;<br>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 (enclosure weight may change depending on system optional features) |
| **Protection class** | IP44, standard fan cooled, maximum ambient temperature 45 °C<br>IP54, air cooled, maximum ambient temperature 35 °C<br>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

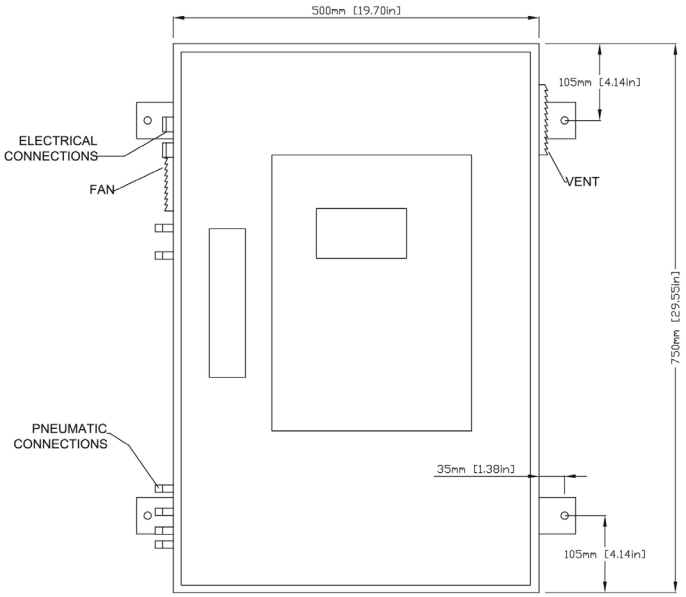
BioTectors's unique oxidation method (TSAO) efficiently oxidises the organic carbon in the sample to $CO_2$. TSAO utilises hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

### TOC

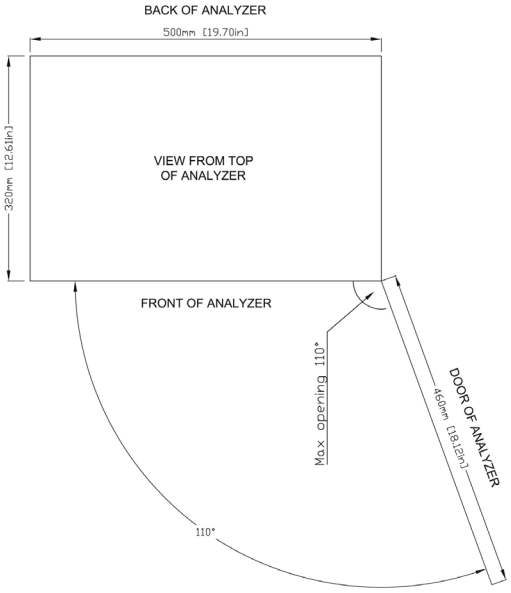
To remove $CO_2$ from the oxidised sample, the pH of the sample is lowered again. The $CO_2$ is sparged and measured by the specially developed NDIR $CO_2$ analyser. The result is displayed as Total Organic Carbon (TOC).

## Dimensions

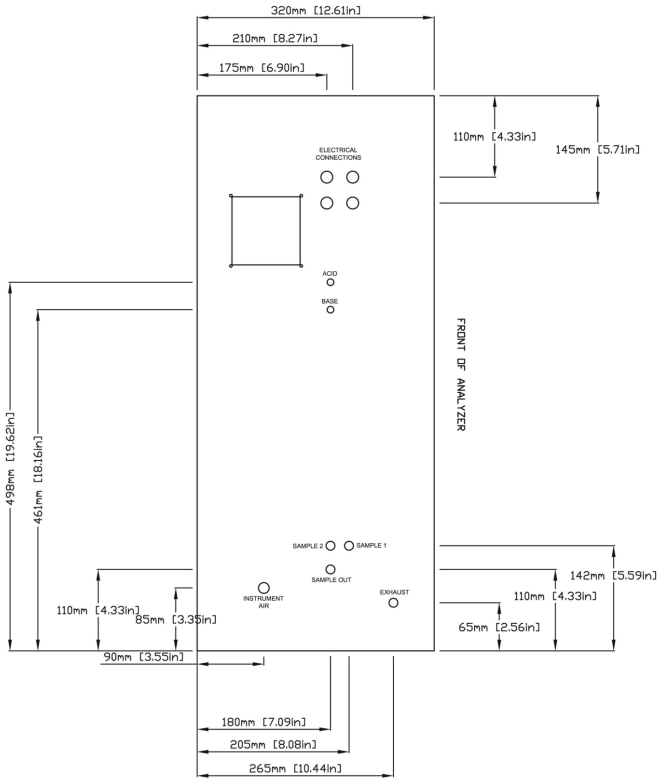
*Front View*




*Top View*




*Side View*




*Panel Detail*

# Order Information

## Instruments

| | |
|---|---|
| **B5BCAA152AAC2** | Hach BioTector B3500c Online TOC analyser, 0-25 mg/L C, 1 stream, grab sample, 230 V AC |
| **B5BFAA152AAC2** | Hach BioTector B3500c Online TOC analyser, 0-25 mg/L C, with 0-100 mg/L C range extension, 1 stream, grab sample, 230 V AC |
| **B5BCAA152AAF2** | Hach BioTector B3500c Online TOC analyser, 0-25 mg/L C, 2 streams, grab sample, 230 V AC |
| **B5BFAA152AAF2** | Hach BioTector B3500c Online TOC analyser, 0-25 mg/L C, with 0-100 mg/L C range extension, 2 streams, grab sample, 230 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 |

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.

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