

# Hach BioTector B3500e TOC Analyser



## 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, unique 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 minimising 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 unique 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\*

<b>Parameter</b>	Direct measurement of Total Organic Carbon, Total Inorganic Carbon  Chemical Oxygen Demand, Biological Oxygen Demand via correlation	<b>User interface</b>	Microcontroller with membrane keyboard
<b>Measuring range</b>	0 - 250 mg/L C, 0 - 1000 mg/L C	<b>Display</b>	High contrast 40 character x 16 line backlit LCD with LED backlight
<b>Range selection</b>	Automatic or manual range selection	<b>Sample inlet temperature</b>	2 - 60 °C
<b>Repeatability</b>	±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	<b>Ambient temperature</b>	5 - 45 °C
<b>Measurement method</b>	Infrared measurement of CO <sub>2</sub> after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)	<b>Humidity</b>	5 - 85 % (non-condensing)
<b>Oxidation method</b>	Unique Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals	<b>Service interval</b>	6 month service intervals
<b>Number of sample streams</b>	Single process stream and manual grab sample	<b>Power requirements (Voltage)</b>	115/230 V AC
<b>Cycle time</b>	Typically 7 minutes, 30 seconds	<b>Power requirements (Hz)</b>	60 Hz
<b>Particle size</b>	Up to 100 µm	<b>Dimensions (H x W x D)</b>	750 mm x 500 mm x 320 mm
<b>Automatic cleaning</b>	Yes	<b>Weight</b>	46 kg (enclosure weight may change depending on system optional features)
<b>Data storage</b>	Previous 9,999 reaction data		
<b>Communication: digital</b>	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)		

\*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<sub>2</sub>. This is measured to ensure Total Inorganic Carbon (TIC) is not carried over into the TOC.

### Oxidation

BioTector's unique oxidation method (TSAO) achieves total and effective oxidation of the sample, including organic carbon to CO<sub>2</sub>. TSAO utilises hydroxyl radicals generated within the analyser by combining ozone generated in the analyser, with sodium hydroxide.

### TOC

To remove CO<sub>2</sub> from the oxidised sample, the pH of the sample is lowered again. The CO<sub>2</sub> is sparged and measured by the specially developed NDIR CO<sub>2</sub> analyser. The result is displayed as Total Organic Carbon (TOC).

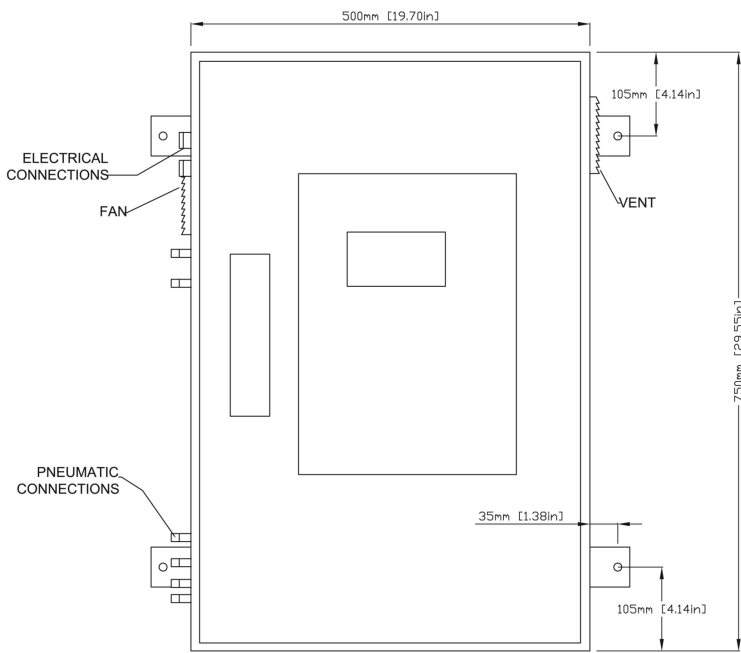
### Cleaning

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

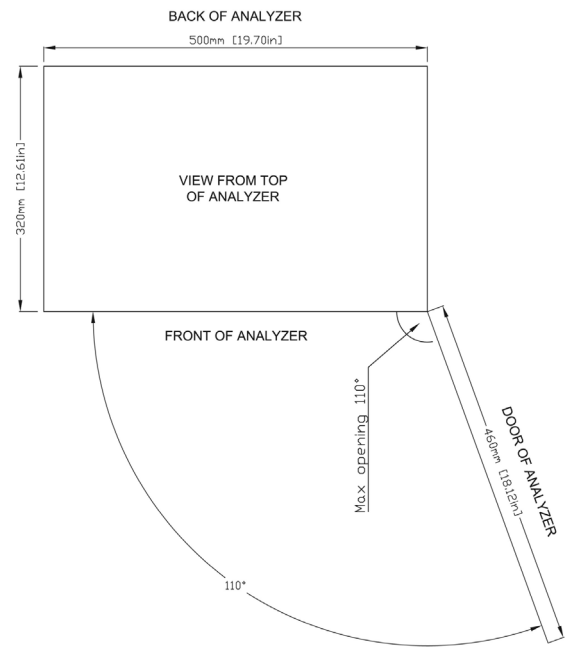


## Dimensions

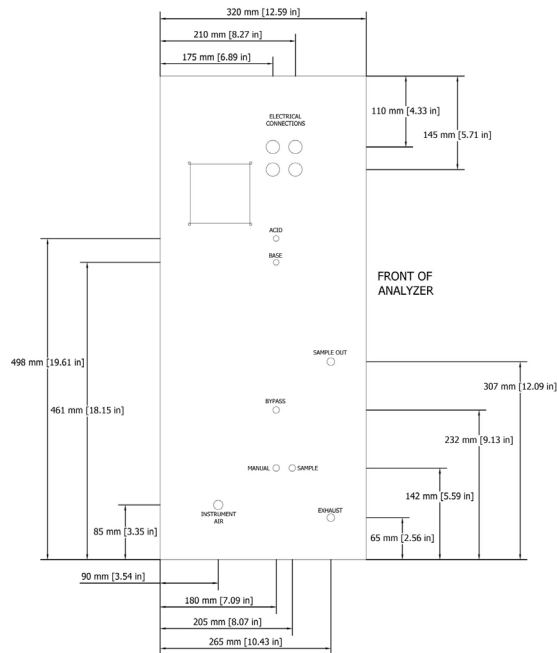
Front View



Top View



Side View



## Order Information

### Instruments

- BEBAAA152AAA2** Hach BioTector B3500e Online TOC analyser, 0-250 mg/L, 1 stream, grab sample, cleaning, 230 V AC
- BEBBAA152AAA2** Hach BioTector B3500e Online TOC analyser, 0-250 mg/L with 0-1000 mg/L range extension, 1 stream, grab sample, cleaning, 230 V AC
- BEBAAA152AAB2** Hach BioTector B3500e Online TOC analyser, 0-250 mg/L, 1 stream, grab sample, cleaning, sample sensor, 230 V AC
- BEBBAA152AAB2** Hach BioTector B3500e Online TOC analyser, 0-250 mg/L with 0-1000 mg/L range extension, 1 stream, grab sample, cleaning, sample sensor, 230 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

## Hach Service Protects Your Investment

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.