

# 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\*

<b>Parameter</b>	Measures TOC, TIC and TC
<b>Range</b>	0 to 250 or 0 - 1000 mg/L C
<b>Range Selection</b>	Automatic or manual range selection
<b>Repeatability</b>	Standard range $\pm 3\%$ of reading or $\pm 0.45$ mg/L C (ppm), whichever is greater
<b>Measurement Method</b>	Infrared measurement of CO <sub>2</sub> after oxidation
<b>Oxidation Method</b>	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
<b>Number of sample streams</b>	Single process stream and manual grab sample
<b>Cycle Time</b>	Typically 7 minutes 30 seconds
<b>Exceedance Tracking</b>	Full exceedance tracking up to 1,000 mg/L C
<b>Particle Size</b>	Up to 100 $\mu$ m
<b>Automatic cleaning</b>	Yes
<b>Data Storage</b>	Previous 9,999 reaction data Previous 99 fault events

<b>Communication</b>	Modbus, Profibus, Ethernet, and Network Control over Internet
<b>User Interface</b>	Microcontroller with membrane keyboard
<b>Display</b>	High contrast 40 character x 16 line backlit LCD with LED backlight
<b>Sample Inlet Temperature</b>	0 to 60 °C (36 to 140 °F)
<b>Ambient Temperature</b>	5 to 40 °C (41 to 113 °F)
<b>Humidity</b>	5 to 85 % (non-condensing)
<b>Service Interval</b>	6 months service intervals
<b>Power Requirements (Voltage)</b>	115/230 V AC
<b>Power Requirements (Hz)</b>	50/60 Hz
<b>Weight</b>	101.41 lbs. (46 kg)
<b>Dimensions (H x W x D)</b>	750 mm x 500 mm x 320 mm

\*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 patented oxidation method (TSAO) achieves total and complete oxidation of the sample, including organic carbon to CO<sub>2</sub>. TSAO utilises hydroxyl radicals generated within the analyzer by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

### TOC

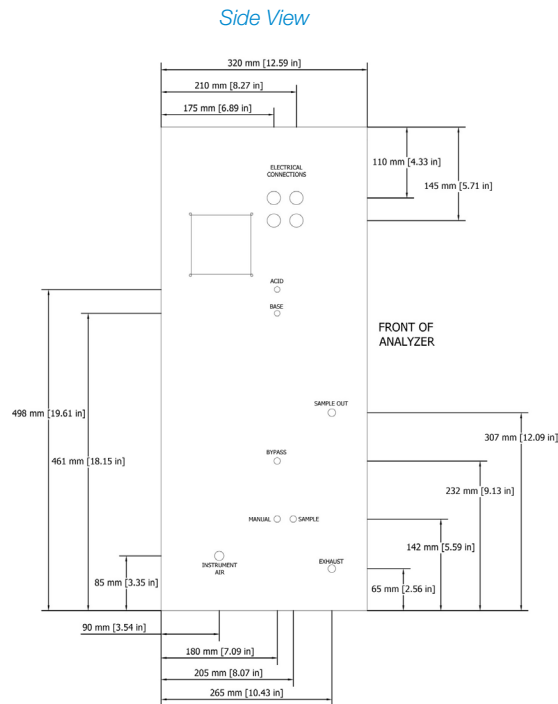
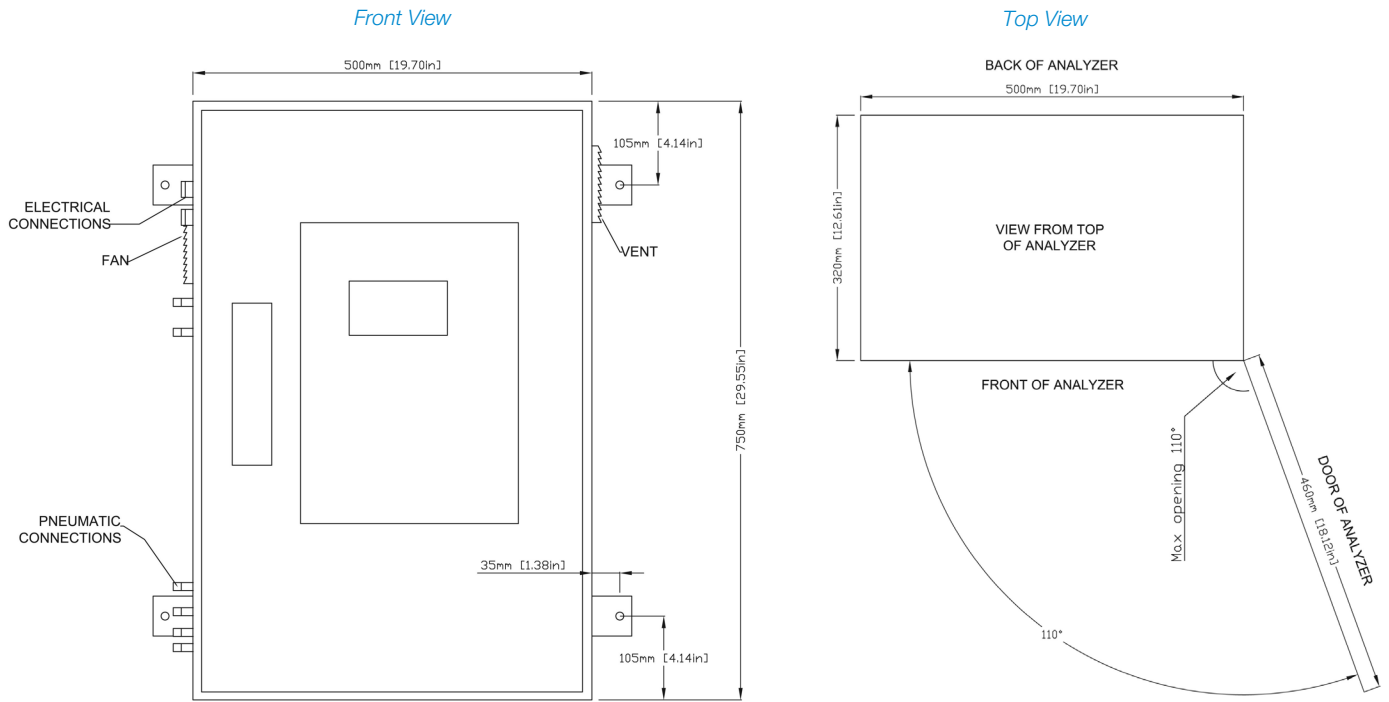
To remove CO<sub>2</sub> from the oxidized sample, the pH of the sample is lowered again. The CO<sub>2</sub> is sparged and measured by the specially developed NDIR CO<sub>2</sub> analyzer. The result is displayed as Total Organic Carbon (TOC).

### 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
- BEBAAA152AAA2** Hach BioTector B3500e Online TOC analyzer, 0-250 ppm, 1 stream, grab sample, cleaning, 230 V AC
- BEBBAA152AAA2** Hach BioTector B3500e Online TOC analyzer 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, 230 V AC
- BEBAAA152AAB2** Hach BioTector B3500e Online TOC analyzer 0-250 ppm, 1 stream, grab sample, cleaning, sample sensor, 230 V AC
- BEBBAA152AAB2** Hach BioTector B3500e Online TOC analyzer 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, sample sensor, 230 V AC

### Accessories

- 10-SMC-001** B3500 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

### Be certain in your measurements with a first class Service Partner. Be confident with Hach Service.

By having regular on-site preventative maintenance and calibration, you maximize your measurement reliability and instrument uptime. Hach Service Programs give you full assurance that your instruments stay in compliance, and you stay within your budget.

#### Start-Up:

Commissioning will ensure you get the best performance from your instrumentation from the first day you use it.

#### Service Agreements:

Hach offers a wide range of service agreements that can be tailored to you to help maximize your measurement reliability and instrument uptime.

*Contact us to get a service offering designed for you.*

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