

# HACH BIOTECTOR B3500c ONLINE TOC ANALYSER



## Applications

- Industrial condensate water
- Cooling water
- Boiler water

## 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.

## Technical Data\*

<b>Ambient temperature</b>	5 - 45 °C	<b>Oxidation method</b>	Innovative Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
<b>Communication: digital</b>	Modbus, Profibus DP, Ethernet Via add on module via converter	<b>Particle size</b>	Up to 100 µm
<b>Cycle time</b>	From 5.5 minutes, depending on range and application	<b>Power requirements (Voltage)</b>	115/230 V AC
<b>Parameters</b>	Direct measurement of Total Organic Carbon, Total Inorganic Carbon, Total Carbon  Chemical Oxygen Demand, Biological Oxygen Demand via correlation  Volatile Organic Carbon via calculation	<b>Power requirements (Hz)</b>	50/60 Hz
<b>Data storage</b>	Previous 9999 reaction data	<b>Range selection</b>	Automatic or manual range selection
<b>Dimensions (H x W x D)</b>	750 mm x 500 mm x 320 mm	<b>Repeatability</b>	0 - 25 mg/L C: ± 3% of reading or ± 0.03 mg/L, whichever is greater;  Lower limit of detection LOD = 0.06 mg/L  Exceedance tracking 0 - 100 mg/L C: ± 5% of reading or ± 0.5 mg/L, whichever is greater
<b>Display</b>	High contrast 40 character x 16 line backlit LCD with LED backlight	<b>Sample inlet temperature</b>	0 - 60 °C
<b>EExp / Hazardous Location</b>	Certification options are available to North American Standards (Class 1, Div 2) and EU Standards (ATEX Zone 2)	<b>Service interval</b>	6 month service intervals
<b>Humidity</b>	5 - 85 % (non-condensing)	<b>User interface</b>	Microcontroller with membrane keyboard
<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>Weight</b>	46 kg
<b>Measuring range</b>	0 - 25 mg/L C, with exceedance tracking up to 100 mg/L C	<b>Protection class</b>	IP44, standard fan cooled, maximum ambient temperature 45 °C  IP54, air cooled, maximum ambient temperature 35 °C  IP54, vortex cooled, maximum ambient temperature 50 °C
<b>Multi-Stream</b>	Up to 2 process streams and grab sample		

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

### Oxidation

BioTectors's unique oxidation method (TSAO) efficiently oxidises the organic carbon in the sample to CO<sub>2</sub>. TSAO utilises hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

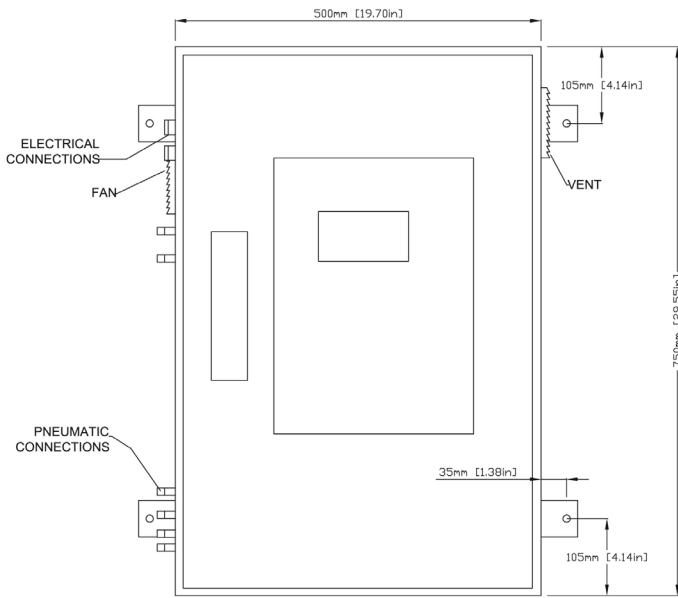
### TOC

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).

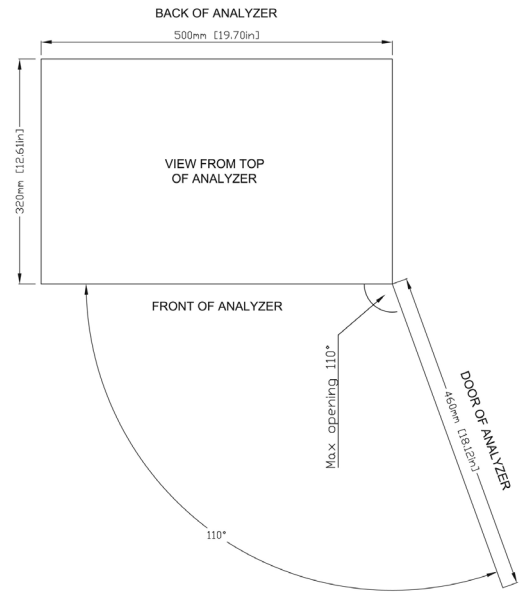


## Dimensions

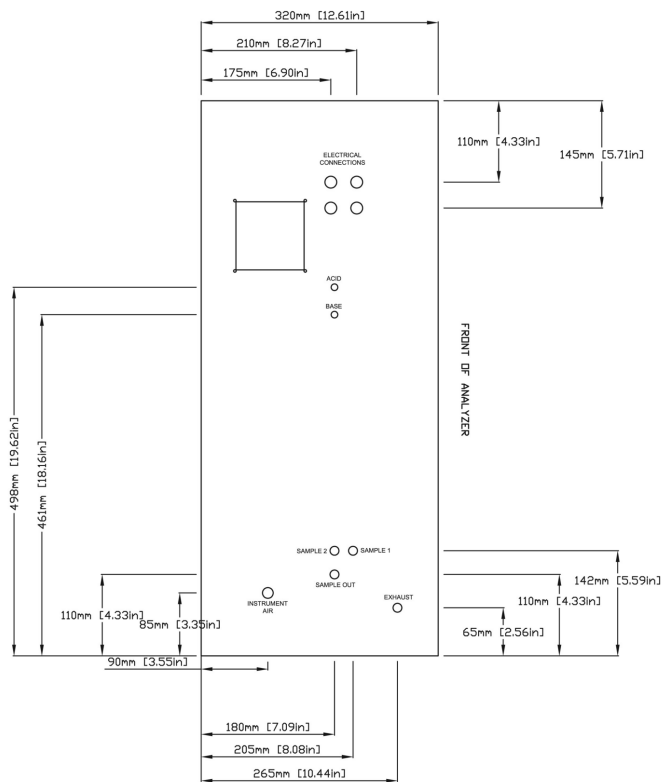
Front View



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** B3500 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

### 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 maximise 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 maximise your measurement reliability and instrument uptime.

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