

# Hach BioTector B3500s Online TOC Analyser

## Applications

- Municipal wastewater



## Effluent TOC monitoring made easy

Semi-annual reagent replacement and seamless integration with the Hach® sample homogenisation unit, make the B3500s the easiest solution for regulatory TOC monitoring in municipal wastewater.

### Easy sample homogeniser integration

Designed to communicate with the Hach Sigmatax 2 sample homogeniser, the system provides an off-the-shelf solution to meet TOC effluent monitoring regulations.

### Extended reagent and maintenance intervals

Every six months reagent replenishment, semi-annual calibration and basic preventative maintenance allows you to focus on what matters most.

### Worry-free TOC

With innovative two stage, advanced oxidation technology, the B3500s provides you with reliability and uptime, without sacrificing accuracy.

### 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.

## Technical Data\*

<b>Ambient temperature</b>	5 - 45 °C	<b>Power requirements (Voltage)</b>	230 V AC
<b>Communication: digital</b>	Modbus, Profibus DP, Ethernet Via add on module via converter	<b>Power requirements (Hz)</b>	50 Hz
<b>Cycle time</b>	From 5.5 minutes, depending on range and application	<b>Range selection</b>	Automatic or manual range selection
<b>Parameter</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>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>Data storage</b>	Previous 9999 reaction data	<b>Sample inlet temperature</b>	0 - 60 °C
<b>Dimensions (H x W x D)</b>	750 mm x 500 mm x 320 mm	<b>Service interval</b>	6 month service intervals
<b>Display</b>	High contrast 40 character x 16 line backlit LCD with LED backlight	<b>User interface</b>	Microcontroller with membrane keyboard
<b>Humidity</b>	5 - 85 % (non-condensing)	<b>Weight</b>	46 kg
<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>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>Measuring range</b>	0 - 25 mg/L C, with exceedance tracking up to 100 mg/L C		
<b>Multi-Stream</b>	1 process stream, 1 grab sample		
<b>Oxidation method</b>	Innovative Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals		
<b>Particle size</b>	Up to 100 µm		

\*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

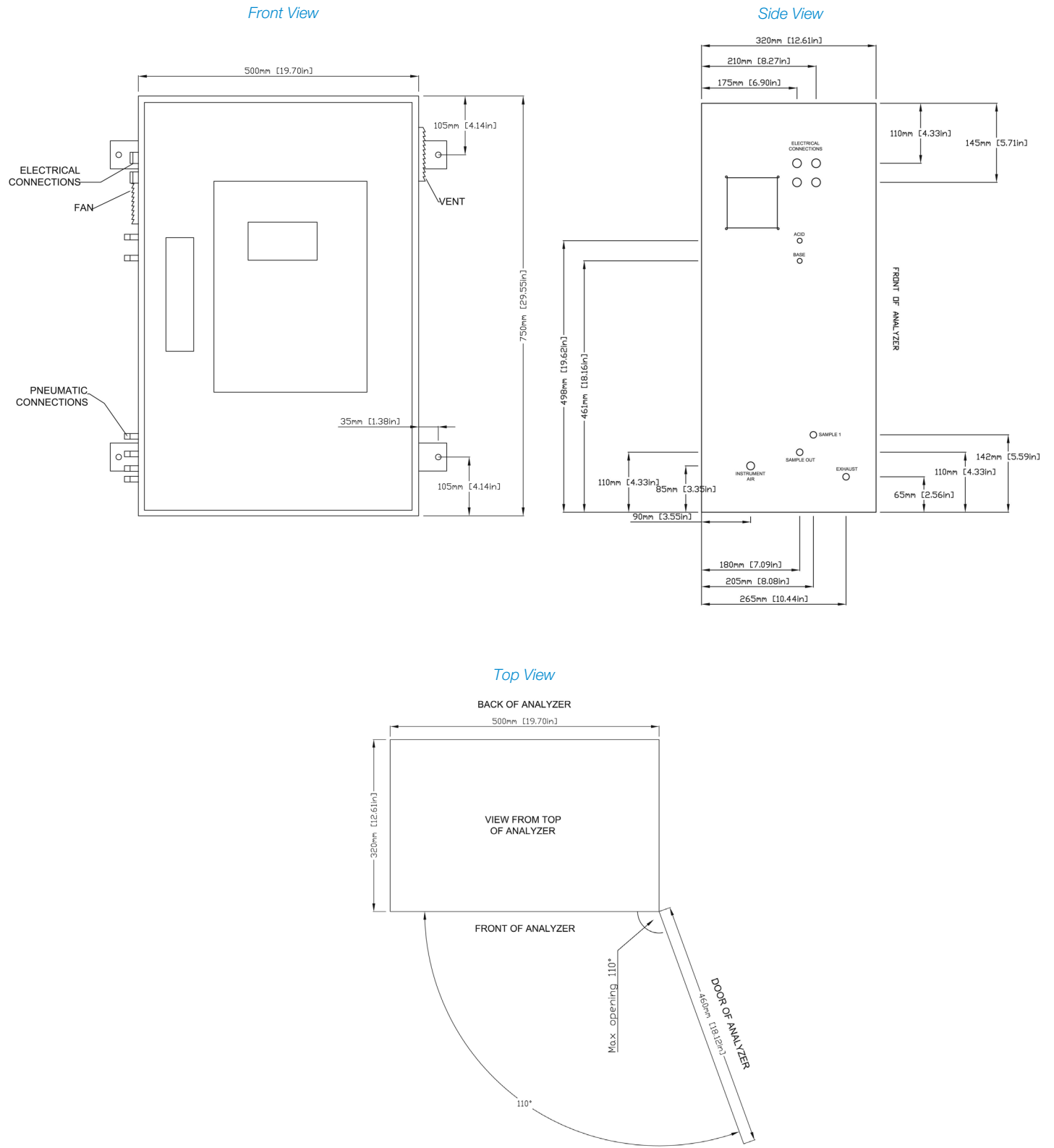
BioTectors's unique oxidation method (TSAO) efficiently oxidises the organic carbon in the sample to CO<sub>2</sub>. TSAO utilises hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

### 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



## Order Information

### Instruments

**B5BCAA152AACS** Hach BioTector B3500s Online TOC analyser, 0 - 25 mg/L C, 1 stream, grab sample, 230 V AC

**B5BFAA152AACS** Hach BioTector B3500s Online TOC analyser, 0 - 25 mg/L C, with 0 - 100 mg/L C range extension, 1 stream, grab sample, 230 V AC

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

*Note: Sigmatax 2 needs to be ordered separately.*

### Accessories

<b>10-SMC-001</b>	Air supply filter pack
<b>2038062</b>	BioTector reagent, 4.0 N NaOH
<b>2038162</b>	BioTector reagent, 6.0 N sulfuric acid with Mn catalyst
<b>19-KIT-123</b>	Six months spare part kit for BioTector B3500
<b>LXV215</b>	Sigmatax 2 Control unit sampling & ultrasonic homogenisation
<b>LXV231</b>	Suction probe (10 m) for Sigmatax 2
<b>LXV232</b>	Suction probe (20 m) for Sigmatax 2
<b>LXV282</b>	Suction probe (30 m) for Sigmatax 2
<b>LZX306</b>	Valve piston seal set (every 6 months) for Sigmatax 2
<b>LZX299</b>	Air filter without fittings (every 12 months) for Sigmatax 2



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.