

# Hach BioTector B7000i Dairy Online TOC Analyser

**Applications**  
• Food and Dairy



## Maximise your profits by minimising your product loss.

The Hach® BioTector B7000i Dairy Online TOC Analyser is the most innovative, maintenance-free TOC analyser on the market, designed specifically to detect product loss, decrease and conserve water usage and improve production processes.

Industry studies show that lost product can be reduced by over 15% in Dairy Processing Plants by using accurate, reliable and continuous TOC measurement. Further savings of up to 40% can be made in the operating cost of the treatment plant by reducing energy and water consumption.

### Reliable measurements, every time

With an innovative Two Stage Advanced Oxidation Technology system, a sample injection unit and a self-cleaning sample reactor, as well as tubing designed specifically for dairy applications, the B7000i Dairy analyser provides you with maximum reliability and uptime so you will be certain to get the measurements you need.

### Minimum maintenance, even in the harshest conditions

The B7000i Dairy analyser comes with self-cleaning technology which limits necessary maintenance to only twice a year, with no calibration requirements between services. Even in the harsh dairy environment, it will handle samples with soft particles up to 2 mm in diameter, including samples with fat, oil, greases, sludge and salts.

### One instrument for multiple streams

A single B7000i Dairy TOC analyser gives you the ability to monitor up to six streams with now added Flow input to enable product management to see actual real time product loss on the BioTector display.

## Technical Data\*

<b>Parameter</b>	TOC, TIC, TC, VOC, after correlation COD, BOD
<b>Measurement method</b>	Infrared measurement of CO <sub>2</sub> after oxidation
<b>Oxidation method</b>	Unique Two-Stage Advanced Oxidation Process using Hydroxyl Radicals
<b>Measuring range</b>	0 - 20000 mg/L C
<b>Range selection</b>	Automatic or Manual Range Selection
<b>Multi-Stream</b>	1, 2, 4 and 6 streams
<b>Repeatability</b>	±3 % of reading or ±0.3 mg/L C, whichever is greater, with Automatic Range Selection
<b>Cycle time</b>	From 6.5 minutes, depending on application
<b>Permissible Chloride range</b>	Up to 30%
<b>Communication: digital</b>	Modbus RTU, Modbus TCP/IP & Profibus
<b>Enclosure waterproof rating</b>	IP44; optional IP54 with air purge
<b>Sample inlet temperature</b>	2 - 60 °C
<b>Ambient temperature</b>	5 - 40 °C Air conditioning and heating options are available.
<b>Humidity</b>	5 - 85 % (non-condensing)
<b>Particle size</b>	Up to 2 mm, soft particulates

<b>Data storage</b>	Previous 9999 analysis data on screen in the microcontroller memory and storage of data archive for the lifetime of the analyser in the SD/MMC card.  Previous 99 fault data on screen in the microcontroller memory and storage of fault data archive for t he lifetime of the analyser in the SD/MMC card.
<b>Display</b>	High contrast 40 character x 16 line backlit LCD with CFL backlight
<b>Power requirements (Voltage)</b>	115 V AC / 230 V AC
<b>Power requirements (Hz)</b>	50/60 Hz
<b>Service interval</b>	6 months service intervals
<b>Dimensions (H x W x D)</b>	1250 mm x 750 mm x 320 mm
<b>Weight</b>	90 - 120 kg  Enclosure weight may change depending on system optional features.

\*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.

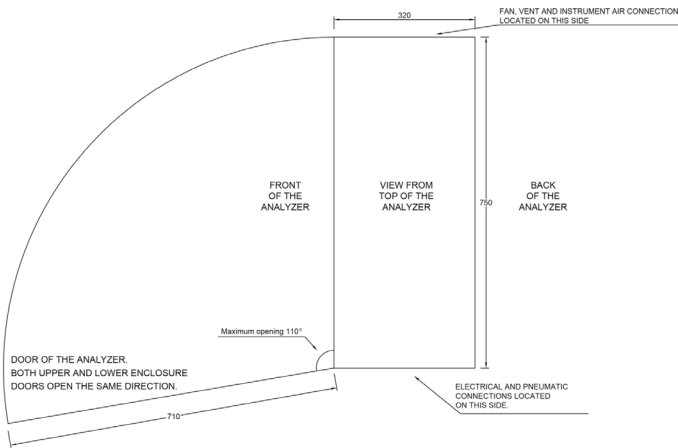
### TOC

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

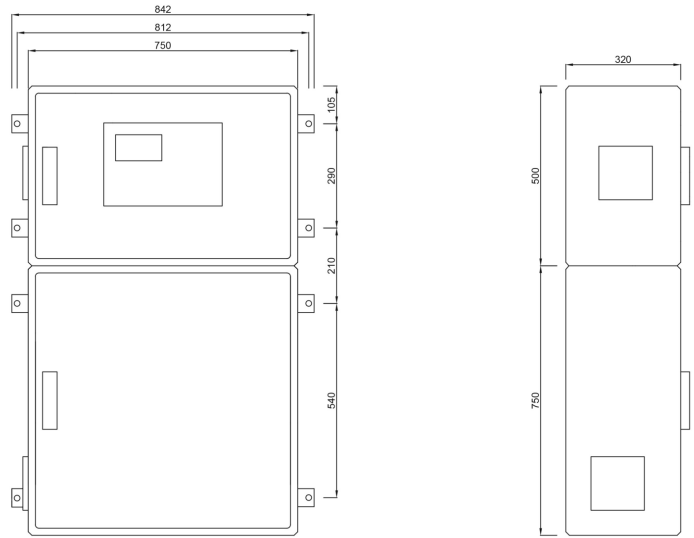
### Access requirements



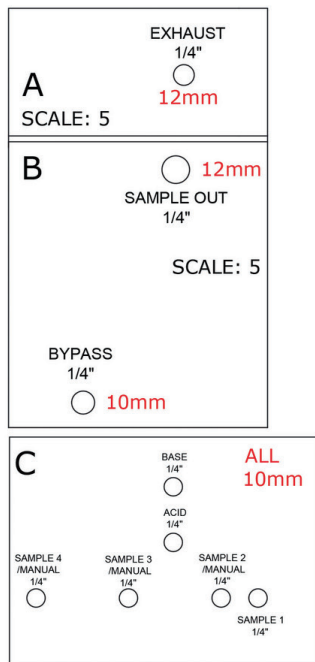
It is recommended that a clear space of 300mm is allowed around the BioTector in all directions. 1500mm should be free in front of the BioTector so that its access doors can easily be opened. Dimensions in mm.

### Enclosure

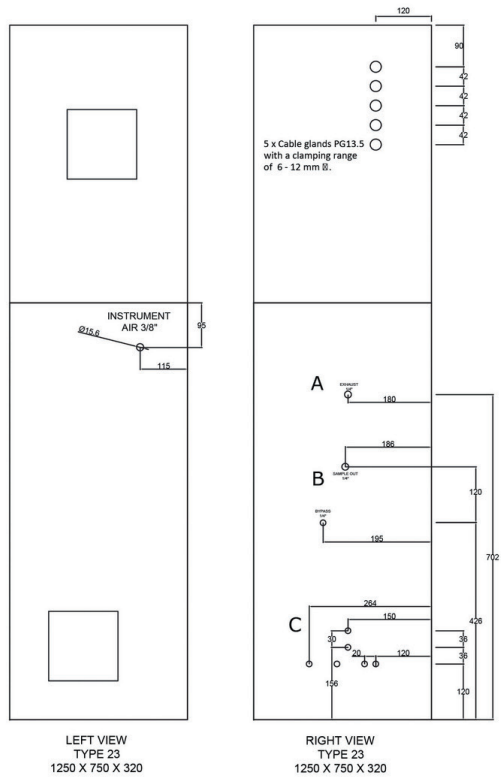
TYPE 23  
1250 X 750 X 320



### TOC connections



PRODUCTION NOTES:  
DIMENSIONS IN RED ARE HOLES SIZES



## Order Information

### Instruments

**BDBAAA052MABAA4** Hach BioTector B7000i Dairy Online TOC Analyser, 0 - 20000 mg/L C, 1 channel, 230 V AC

**BDBAAA052NABAA4** Hach BioTector B7000i Dairy Online TOC Analyser, 0 - 20000 mg/L C, 2 channels, 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-132** B7000i Dairy 6 month service kit

### Reagents

**2985562** BioTector base reagent 1.2 N sodium hydroxide

**25255061** BioTector acid reagent 1.8 N sulfuric acid containing 80 mg/L Mn

### Be confident with Hach Service

**Start-Up/Commissioning:** Our service technicians visit your site and setup instrumentation, provide basic end-user training on operations and maintenance, and validate settings and performance to get you started.

**Service Agreement:** Hach provides on-site and in-factory repair, preventive maintenance, and calibration programs for your instruments to ensure reliability and instrument up-time. We have services to fit your specific needs.