

# BioTector® Vacuum Sampler Water Sampling System for Analysers

## General Information

The BioTector® vacuum sampling system is designed to bring water over a distance of 40 meters with a maximum lift of 6 meters, and to present the sample to the BioTector® TOC analyser or alternative water analyser at ambient pressure.

## Functions

The operation of the sampling system is controlled from the analyser and operates as follows:

1. The vacuum sampler pump generates a vacuum in the sample container which draws the sample up into the sample container.
2. A built-in conductivity probe confirms that the sample has filled the container. The vacuum pump is stopped, a pinch valve closes to seal the sample in the container and vacuum valves open to restore the pressure in the sample container to ambient. If the sample does not make contact with the conductivity probe within a pre-set time, a fault condition is triggered.
3. The analyser takes its sample from the container. If necessary, a short sedimentation period (to allow sand and hard particles to settle) may be programmed before the analyser takes its sample.
4. When the sample has been taken, the pinch valve opens. The vacuum pump, through a series of valves, generates pressure in the sample container which forces the sample from the container back through the sample line.
5. The cycle then repeats.



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## General Technical Data

Enclosure	Glass Reinforced Polyester (GRP)
Colour	Grey RAL 7036
Dimensions: Enclosure	500H x 440W x 250D
Dimensions: Enclosure w/ Sample Container	700H x 550W x 250D
Weight	15 kg
Power consumption	80W
Voltage	230V or 115V AC
Control Signal	24V DC forward polarity to fill, reverse polarity to empty

## Operating Parameters

Sample container	PVC
Sample volume	400 ml
Sample Valve	Pinch valve with EMPP tube
Vacuum Pump	Teflon coated diaphragm with Kalrez valves
Vacuum Valves	PVDF body with Kalrez and diaphragm
Main sample line	3/8" OD x 1/4" ID
BioTector® analyser sample line	1/4" OD x 5/32" ID

## Features

Membrane keyboard
Automatic fault indication
Direct control from the BioTector® TOC analyser, through a 6 core cable
<b>OPTIONAL FEATURES</b>
Stand alone operation
Direct control from alternative analyser
Additional sample container for second analyser
Additional sample container for composite sampling

## Operating Conditions

Vacuum generated	800 mbar standard
Maximum recommended sample lift	6 meters standard <b>Option:</b> 9 meters
Maximum recommended sample transport distance	40 meters with a 6 meter lift
Fill time	<b>Typical:</b> 25 seconds for 3 meters horizontal with a 3 meter lift 120 seconds for 40 meters horizontal with a 6 meter lift
Filtering	Not required
Maintenance	Normal service frequency - 6 months

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