

BioTector Venturi Vacuum Sampler



Applications

- Industrial wastewater influent and effluent
- Industrial process monitoring
- Municipal wastewater influent
- Storm water / River water

Combine the TOC Analysis Power of BioTector with the Sampling Ease of the Venturi Vacuum Sampler

The BioTector Venturi Vacuum Sampler is an air operated, vacuum-pumping system capable of drawing samples over long distances and depths to the BioTector B7000 series TOC analysers. Specifically designed for highly charged and dirty wastewater, it comes standard with a self cleaning feature, which prevents cross-contamination or carry-over and offers multi-channel operation.

Covers Long Distances with Multiple Channels

The Venturi Vacuum Sampler is a pump capable of drawing samples from a horizontal distance of up to 80 meters and a vertical distance of up to 7 meters. It can be equipped with 1, 2, 3, 4, or 6 channels allowing you to make upstream adjustments to a downstream analyser and requires pressurized air and hot water connections for operation.

Boasts a Simple, Worry-Free Design

The Venturi Vacuum Sampler creates a vacuum generated by a flow of pressurized air to draw sample content to the BioTector TOC analyser. The Venturi Sampler requires no electricity and can be integrated next to the TOC analyser, allowing for ease of installation and access. Unlike mechanical sample pumps, the Venturi Vacuum Sampler requires infrequent maintenance and attention, even with highly charged wastewater containing large amounts of things like oil, grease, or solids.

Requires Little Maintenance While Ensuring Sample Quality

After each measurement cycle the sample is pushed out of the Venturi Vacuum Sampler and associated sampling lines and all components that come in contact with the sample are backwashed with a hot water microbubble mixture. These components are then air dried and are ready to receive the next sample, avoiding any potential cross contamination or dilution and providing a truly representative sample for analysis.

Handles Low Flow with Ease

Where mechanical pumps would be in danger of damages by running dry, the Venturi Vacuum Sampler can be adjusted to low flow rates in the respective sampling channel without the need of a barrier system and comes with an automatic no sample fill fault indication.

Technical Data*

Suction hose length	Max. distance of sample transport: 80 m	Requirement rinse water pressure	3 bar (~10 L/h at 3 bar) Water can be heated up to 90 °C for hot water backwash Water regulator and/or water heater to be supplied by the user
Suction Height	7 m (at sea level; measured from the bottom of the sampler to the lowest liquid level)	Material	Sample chamber: PFA Fittings and valves: SS-316, EPDM, PTFE Venturi pump: SS-316 Sample tubing: PFA (1/2" OD x 3/8" ID)
Sampling principle	Vacuum sampling	Housing material	PLC Enclosure: Polystyrene with glazed polycarbonate door
Sample inlet temperature	2 - 90 °C	Operating system	PLC with Keyboard Automatic 'no sample fill' fault indication Direct control from the BioTector through the 6 core cable
Sample pressure	For ambient pressure and pressurized samples two different Venturi vacuum samplers are available.	Sample quality	Only for non-foaming samples!
Ambient temperature	5 - 40 °C		
Power consumption	24 W (1 Amp 24 V DC), power supplied by BioTector analyser		
Dimensions (H x W x D)	2010 mm x 390 mm x 160 mm		
Service interval	6 months (typical)		
Number of sample streams	1, 2, 3, 4, or 6		
Instrument air	Instrument air: 6 bar (50 L/min flow rate when venturi pump is running at 6 bar) (~100 L/min flow rate when venturi sampler is purging at 3.5 bar) Air quality: -20 °C dew point (free of water, oil and dust)		

**Subject to change without notice.*

Order Information

Sampler

19-BAS-001	Venturi Vacuum Sampler with air and wash, 1 stream
19-BAS-002	Venturi Vacuum Sampler with air and wash, 2 streams
19-BAS-003	Venturi Vacuum Sampler with air and wash, 3 streams
19-BAS-004	Venturi Vacuum Sampler with air and wash, 4 streams
19-BAS-006	Venturi Vacuum Sampler with air and wash, 6 streams

Analysers

The Venturi Vacuum Samplers are suitable for BioTector B7000/B7000i/B7000i Dairy TOC Analysers.

Accessories and Consumables

10-SCA-009	PTFE tube 9.53 mm ID x 12.70 mm OD
BT-UPG-063	BioTector Venturi Sampler Sensor Upgrade for samples with high fouling potential

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