

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 analyzers. 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 analyzer. The Venturi Sampler is powered by and integrated next to the TOC analyzer, 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 |
| Sample Pressure | Ambient pressure | Sample Quality | Direct control from the BioTector through the 6 core cable Only for non-foaming samples! |
| Ambient Temperature | 5 - 40 °C | | |
| Power Consumption | 24 W (1 Amp 24 V DC), power supplied by BioTector analyzer | | |
| 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 |

Analyzers

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

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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