

# bioPROBE single

## Aseptic Sampling from Bioreactors & Fermentors Fully Automated and Sterile by Design

Sampling from every  
bioreactor – at every scale

Aseptic and fully  
automated - 24/7

Full-medium and  
cell-free samples

Dead-volume-free,  
fast at every sample volume

Reusable stainless steel and disposable  
sampling probes for GMP processes

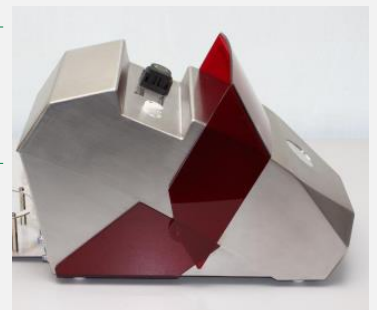
Sterile by design: no filters in the bioreactor,  
no issues with biofilms / biofouling, no influence on cultivation process

PAT solutions for the whole range of bioprocess analyzers  
and connectivity to all bioprocess / bioreactor control and SCADA systems



## Aseptic and Automated Sampling with bioPROBE

General	Globally patented sampling probe technology	
	Developed and protected in cooperation with Max-Planck-Institute (MPI)	
General	Sample volume from 0.5 ml (dead-volume-free)	
	Standard cleaning with sterile air; optional with cleaning detergent	
General	Small foot print (22 x 50 x 25 cm)	
	Sampling directly in the bioreactor (with unique filterless sampling technology)	
Materials	All components are biocompatible (FDA-certified and USP-Class VI)	
	Stainless steel 1.4571 for in-situ sterilizable and autoclavable systems	
Materials	PEEK for single-use, disposable and in-situ sterilizable systems	
	Stainless steel	Length 154 mm
Diameter 12 mm		
Disposible	Length 30 mm	Adapters for all sizes available
	Diameter 12 mm	
Installation	Every bioreactor and fermentor port $\geq 12$ mm (side and top plate)	
	Length customization for guaranteed submerge valve installation	
Installation	Completely autoclavable and in-situ sterilizable with bioreactor	
	Sample transfer via pre-sterilized hose sets	
Control Unit	Valuable, elegant stainless steel design	
	Intuitive control via browser – no additional software required	
Control Unit	Advanced control possibilities via HMI, OPC-UA, TTL, RS232, RS485, USB, ...	
	Features	Sterility safety guard
Flexible sampling sequences		Automated waste disposal
Control of external devices		Various cleaning options
Data logger		Export in csv- or binary format



## Sample Storage Solutions with orbitSAM and multiSAM

orbitSAM	Economic and robust autosampler in valuable stainless steel design	
	Available for different vial sizes (5 ml, 15 ml, 30 ml, 50 ml) for up to 51 vials	
orbitSAM	Completely controlled by bioPROBE	
	Most flexible autosampler in valuable stainless steel design	
multiSAM	Multitude of extension packs to connect external devices and analyzers	
	Fast and easy switching between different configurations	
multiSAM	Solutions for filtered and cooled storage of more than 350 samples	
	Completely controlled by bioPROBE	



## Parallel Automated Sampling with bioPROBE quad

Features	Parallel sampling from four vessels	
	multiSAM support for cooled and filtered sample storage	
	One bioreactor – one sampling probe set	
	Completely independent fluid paths for each vessel (no cross-contamination)	
	Most compact footprint - integration into existing installations	

