

# Biomatics Sampling System

– The first step towards real-time process optimization

The first step towards optimizing manufacturing performance is collecting detailed process-information. This requires frequent and consistent process insights based on constant sample-taking during production – a task that typically is labor-intense and error-prone. Biomatics Technology offers a solution for automated aseptic sampling in biotech, pharma and food-tech

industries. The automated sampling system offers different options to secure appropriate hygienic sampling, system cleaning and sample delivery suiting your procedures. Biomatics Sampling System is directly installed in the manufacturing and connected to a bioreactor or process line.



## RELIABLE AUTOMATED SAMPLING

- Consistent sampling procedure
- Aseptic sampling secures process integrity
- 24/7 and with high sampling frequency
- Robust for slurry and high viscosity media
- Sample preparation such as filtration

## EASY AND SAFE PROCESS INTEGRATION

- Installation at existing sample outlets with hygienic design and certified fittings (EHEDG)
- Options for Steam-in-Place (SIP) and Clean-in-Place (CIP) procedures
- Designed for production environments
- Easy service and maintenance procedures

## ENHANCED PROCESS MONITORING

- Improved process documentation
- Enhanced process monitoring and control
- Possibility to reduce batch-to-batch variation, increase yield and improve manufacturing capacity
- Reduce number of deviations due to sampling errors

## MULTIPLE DELIVERY OPTIONS

- Sample storage with flexible vial and storage options, i.e. cooling, carousel, etc.
- Sample transportation system to central lab for easy and fast analysis
- Coupling directly to analysis instrument (HPLC, pH, density, etc.) enables real-time analysis

# Each installation can be customized to meet customer requirements.

	STANDARD PRODUCT	OPTIONS	CUSTOMER REQUEST
<b>SAMPLING VALVE</b>			
VALVE + MOUNT	Keofitt Ingold	Any type	
STEAM PRESSURE	Max 3 bar(g)		
PROCESS PRESSURE	0.2 - 2.5 bar		
LIFE SPAN, PTFE SEALS IN SAMPLE VALVE	2 months with 4 - 20 samples/day		
DISTANCE VALVE TO SAMPLER	1 - 2 m		
<b>SAMPLING UNIT INCLUDING CIP</b>			
SAMPLE VOLUME	1- 15 ml	Up to 100 ml	
SAMPLE INTERVAL	Down to 1 per 20 minutes	Adjustable	
VOLUME USED PR. SAMPLE	< 500 ml <sup>1)</sup>		
SAMPLE FILTRATION	None	Membrane filtration	
DILUTION/CARRYOVER	< 1% <sup>1)</sup>		
SAMPLE VISCOSITY	< 50 cP <sup>1)</sup>	< 10 cP	
SAMPLE PARTICLES	< 1 mm <sup>1)</sup>	< 5mm	
SAMPLE TEMPERATURE	2 - 60 °C		
SAMLE PH	1 - 14 <sup>2)</sup>		
LIFE SPAN POLYMER TUBES	1000 cycles or 1 month		
CIP SOLUTION	1M NaOH	Adapted to customer standard	
WATER PRESSURE	1 - 6 bar(g)		
CIP RESERVOIR	20 liters		
<b>SAMPLE STORAGE</b>			
TYPE	Carousel		
NUMBER OF VIALS	2 x 42 (84 in total)		
TEMPERATURE	Room temperature	3 - 5 °C	
<b>SAMPLE VIALS</b>			
MATERIAL	Polymer	Glass	
BARCODE		2D barcode	
VOLUME	15 ml centrifuge tube	On request	
SEPTA	Yes		
<b>DESIGN STANDARDS</b>			
SAMPLE VALVE	3A & EHEDG	Any QA req.	
SAMPLER INTERNAL	Food grade		
EXTERNAL SURFACES	Sanitary design		

1) These specifications might change if filtration is required

2) pH tolerance to be verified for each specific case, depends on type of chemicals