

FOGALE nanotech

biopod f200

THE PROTEIN MACHINE ON THE BENCH
WITH THE **biopod** series



unique and essential : this tool will revolutionize your lab

- ✓ A double 80ml fermentation POD with the same performance and features of a 2L bioreactor
- ✓ High density process and greater quantity of recombinant protein produced at mini-scale
- ✓ True scale-up ratio to larger volume
- ✓ Monitors real time cell growth with turbidity sensors
- ✓ Reduces lab manipulation by simultaneous process automation
- ✓ Reproducibility of complex and sophisticated processes

biopod f200 - Specification

Control unit	Dimensions (H x L x P) / Weight	660 x 380 x 365 mm / 35 kg (70 Lbs.) Process variables monitoring, pumping, mixing gaz, control and supervision
Bioreactor support	Number of bioreactor per socket Dimensions (H x L x P TBC) Functions	1 or 2 225 x 295 x 200 (for 2 bioreactor control) Thermal control, optical biomass monitoring Thermal slope (25°C) : +6.2°C / min -2.5 °C/min
Power supply		110-230 V ac / 200 W
IP classification		IP65 working area
Connexion to fluids		6 mm external diameter, quick connector Gas : Air, Oxygen, Nitrogen 1 bar nominal pressure
	Pressure	
Regulation loops	Type and modes	T°, pH, pO ₂ , Anti-Foam, gas mixing station for 3 gas Improved PID on T°, PID on pH (3 modes acid, alkaly, acid+alkaly), PID on pO ₂ , O ₂ flow profile from Biomass signal PID on each gas control loop
Temperature probe	Range, noise (10 Hz), repetability	0 / 65°C , 0.003 °C rms, +/-0.05°C
pH electrode	Range, repetability, noise (10 Hz)	0-14 pH, 0.01 pH, 0.0007 pH rms
Dissolved oxygen probe	Range, electronic repetability	300 % air saturation (or 1600nA from probe), 0,01%
Anti-Foam		Up to 100mS/cm
Biomass control		Optical integrated in socket, range from 0 to 100
Aux. inputs	Per bioreactor	4 analog, 2 digital
Aux. output	Per bioreactor	4 analog, 4 digital
Pumps		Up to 6 pumps (30 ml/min, up to 450 ml/min) - modular set-up Two speeds selectable, involved in loops, Pseudo continuous flow rate by pulse modulation
Connexion	Ethernet, USB 2.0	
SCADA software	Integrated in the control unit Storage of culture parameters, supervision and culture recipe Web server for remote control 3 access levels : Viewer, Operator, Programmer	B.O.S.S. View software

B.O.S.S. View (Bioreactor's Operation & Supervisor System view) specifications

- Parallel process control system for up to 2 fermentors
- Independent monitoring for each culture
- Data acquisition, display and recording
- Integrated recipe management
- User management with access control and automatic logout
- Configurable online charts feature zooming and scrolling
- Online changeable controller parameters
- Data export and support generation in CSV and XML file format
- Remote access via Ethernet network
- Alarm management via email
- Metabolic activity monitoring and feeding
- Automatic temperature decrease to 4°C at the end of the process
- No programming skills required



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