



Next Generation Single-Use Bioreactors with Revolutionary Vertical-Wheel™ Technology

Proven Benefits of PBS Bioreactors

Superior Mixing Performance

Gentle yet complete particle suspension with minimal shear forces in a homogeneous mixing environment.

True Scalability

Similar hydrodynamic conditions can be achieved across all bioreactor volumes, from benchtop to clinical and commercial scale.

Representative Scale-Down Model

Process development and optimization in small scale vessels is predictive of cell culture performance at larger scales.

Certified Plastic Components

Product contact materials certified to be animal-derived component free and to meet the requirements for USP Class VI Testing for Plastics <88> and/or ISO 10993, with complete material lot traceability.



PBS0.1 MAG

PBS0.5 MAG

Universal Base Unit accommodates either size of U-shaped Single-Use Vessel. Magnetic coupling between Vertical-Wheel and Base Unit controls agitation rate. The PBS MINI requires a controlled environment such as an incubator.

- Optimal for culturing cell therapy products such as human MSCs or primary cells grown on microcarriers, or PSCs grown as cell aggregates
- Minimal shear forces benefit cells grown on the surface of suspended microcarriers and eliminate need for shear protectants
- Homogeneous fluid dynamic conditions result in uniformly spherical cell aggregates, with inverse correlation between diameter and agitation rate

Technical Highlights for PBS_{MINI}

PBS 0.1 MAG

PBS 0.5 MAG

FEATURES	PBS 0.1 MAG	PBS 0.5 MAG
Universal Base Unit Size: <ul style="list-style-type: none"> • Width • Depth • Height • Weight 	5.3 in (13.5 cm) 7.3 in (18.5 cm) 6.1 in (15.5 cm) 2.8 lb (1.3 kg)	
Vertical-Wheel™ agitation: <ul style="list-style-type: none"> • Mechanism • Speed range • Speed control • Display 	Magnetic coupling 5 - 100 RPM Speed Adjust Dial controls on/off and agitation rate Digital display of agitation (RPM)	
Operational ranges: <ul style="list-style-type: none"> • Temperature • Humidity • Altitude • Environment 	16 °C to 40 °C 5% to 100% (condensing) Up to 2,000 m Indoor use, pollution degree 2	
Electrical: <ul style="list-style-type: none"> • Power supply • Base unit 	Input: 1 A MAX, 100 - 240 V~, 50 - 60 Hz, Cl. II Output: 1.5 A, 24 Vdc (LPS) Input: 24 Vdc --- 120 mA	
Safety and regulatory	NRTL, CE	
Construction	Stainless steel chassis & base, injection-molded plastic enclosure, environmentally-sealed components	
Illumination of vessel	Two embedded white LEDs	
Single-Use Vessel Size: <ul style="list-style-type: none"> • Width • Depth • Height • Height (vessel on base) 	2.5 in (6.4 cm) 1.8 in (4.6 cm) 5.0 in (12.8 cm) 8.0 in (20.2 cm)	4.0 in (10.2 cm) 2.4 in (6.2 cm) 8.0 in (20.2 cm) 10.1 in (25.6 cm)
Working volume range: <ul style="list-style-type: none"> • For liquid mixing • For cell culture 	20 - 100 mL 60 - 100 mL	100 - 500 mL 300 - 500 mL
Number of ports	1	2
Gassing	Diffusion through 0.22 micron filter on vent cap	
Liquid transfer	Port with screw-on vent cap	
Product contact materials	Meet requirements for USP Class VI Testing for Plastics <88> and/or ISO 10993	

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