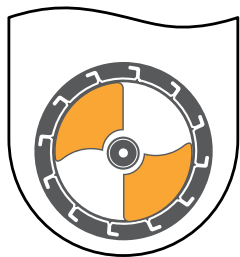


VERTICAL-WHEEL™  
BIOREACTORS



PBS MINI

## 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.



Contact us to learn more

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[www.pbsbiotech.com](http://www.pbsbiotech.com)



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<sub>MINI</sub>

FEATURES	PBS 0.1 <sub>MAG</sub>	PBS 0.5 <sub>MAG</sub>
<b>Universal Base Unit</b> Size: <ul style="list-style-type: none"> <li>• Width</li> <li>• Depth</li> <li>• Height</li> <li>• Weight</li> </ul>	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"> <li>• Mechanism</li> <li>• Speed range</li> <li>• Speed control</li> <li>• Display</li> </ul>	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"> <li>• Temperature</li> <li>• Humidity</li> <li>• Altitude</li> <li>• Environment</li> </ul>	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"> <li>• Power supply</li> <li>• Base unit</li> </ul>	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	
<b>Single-Use Vessel</b> Size: <ul style="list-style-type: none"> <li>• Width</li> <li>• Depth</li> <li>• Height</li> <li>• Height (vessel on base)</li> </ul>	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"> <li>• For liquid mixing</li> <li>• For cell culture</li> </ul>	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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