

PurpleCore™

High Shear Homogenizer

- The dispersing assembly is detachable, allowing convenient cleaning and easy replacement.
- Equipped with a 6-level adjustable speed system for flexible operation.
- Suitable for processing liquids with viscosities up to 10000mPas.
- Rotor and stator components are manufactured together to ensure precision and stable performance.
- Optional dispersing shafts are available for different sample handling requirements.
- Built-in overload protection enhances operational safety and reliability.
- Smooth motor performance minimizes splashing and ensures stable mixing during operation.



Description:

The high shear homogenizer is designed for a wide variety of sample preparation and processing tasks. The motor-driven rotor rotates at high speed inside the stator, enabling rapid homogenization, dispersion, and emulsification of materials within a short processing time.

Applications:

Suitable for a broad range of laboratory and industrial processes, including:

- ☐ Tissue disruption and cell processing
- 🥄 Emulsion preparation and mixing applications
- 🔬 Fine particle dispersion at micron and nano scale
- 🧪 Biological and pharmaceutical sample analysis
- 🧴 Food and cosmetic formulation development
- ☐ Chemical and agricultural research activities
- 📄 Petrochemical and environmental testing
- ⚠️ Mineral extraction and material processing
- 🏭 Industrial production and quality control applications

🔄 Routine Homogenization, Emulsification & Sample Processing

Designed for regular laboratory applications involving homogenization, emulsification, and efficient sample preparation across multiple industries.

🥄 Dispersion & Suspension Preparation

Suitable for creating stable dispersions and suspensions by ensuring uniform particle distribution in liquid systems.

☐ Emulsion Formation & Mixing Applications

Efficiently performs liquid-liquid emulsification and blending processes for research, pharmaceutical, and cosmetic applications.

🔧 Processing of Medium to High Viscosity Samples

Capable of handling viscous materials smoothly while maintaining stable and consistent mixing performance.

💧 Liquid-Liquid and Solid-Liquid Dispersion

Ideal for dispersing powders into liquids and mixing immiscible liquid phases with high shear efficiency.

☐ Cell Disruption & Tissue Treatment

Widely used for biological sample preparation, including tissue homogenization and cell breakdown applications.

🧴 Food & Dairy Emulsification Processes

Suitable for food processing tasks such as dairy blending, emulsification, and ingredient homogenization.

🧴 Cosmetic and Personal Care Formulation

Helps in the preparation of creams, lotions, gels, and other cosmetic formulations requiring fine mixing.

🧪 Pharmaceutical Ingredient & API Processing

Applicable for the dispersion, dissolution, and processing of pharmaceutical compounds and active ingredients.

Dispersion Probe Selection:

Premium Probe Construction

The dispersing probe is manufactured using high-quality SS316 stainless steel, providing excellent corrosion resistance and durability for demanding laboratory applications.

High-Speed Rotor-Stator Technology

The precision-engineered rotor rotates at high speed within the stator to generate powerful shear force, ensuring efficient homogenization, emulsification, and particle size reduction.

Durable Bearing System

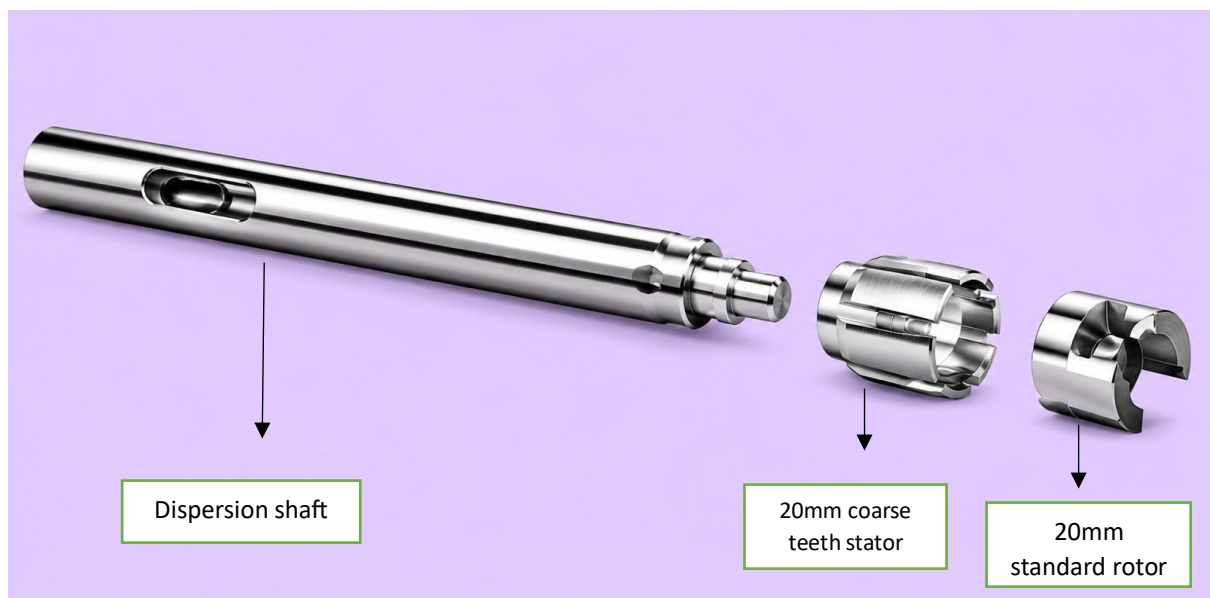
Built with advanced bearing support for stable performance, reduced vibration, and reliable long-term operation during continuous processing.

Easy Cleaning & Maintenance

The quick-connect shaft design allows convenient assembly and disassembly, making cleaning and maintenance simple and time-efficient.

Interchangeable Shaft Options

Multiple dispersing shaft configurations are available to suit different sample volumes, viscosities, and application requirements.

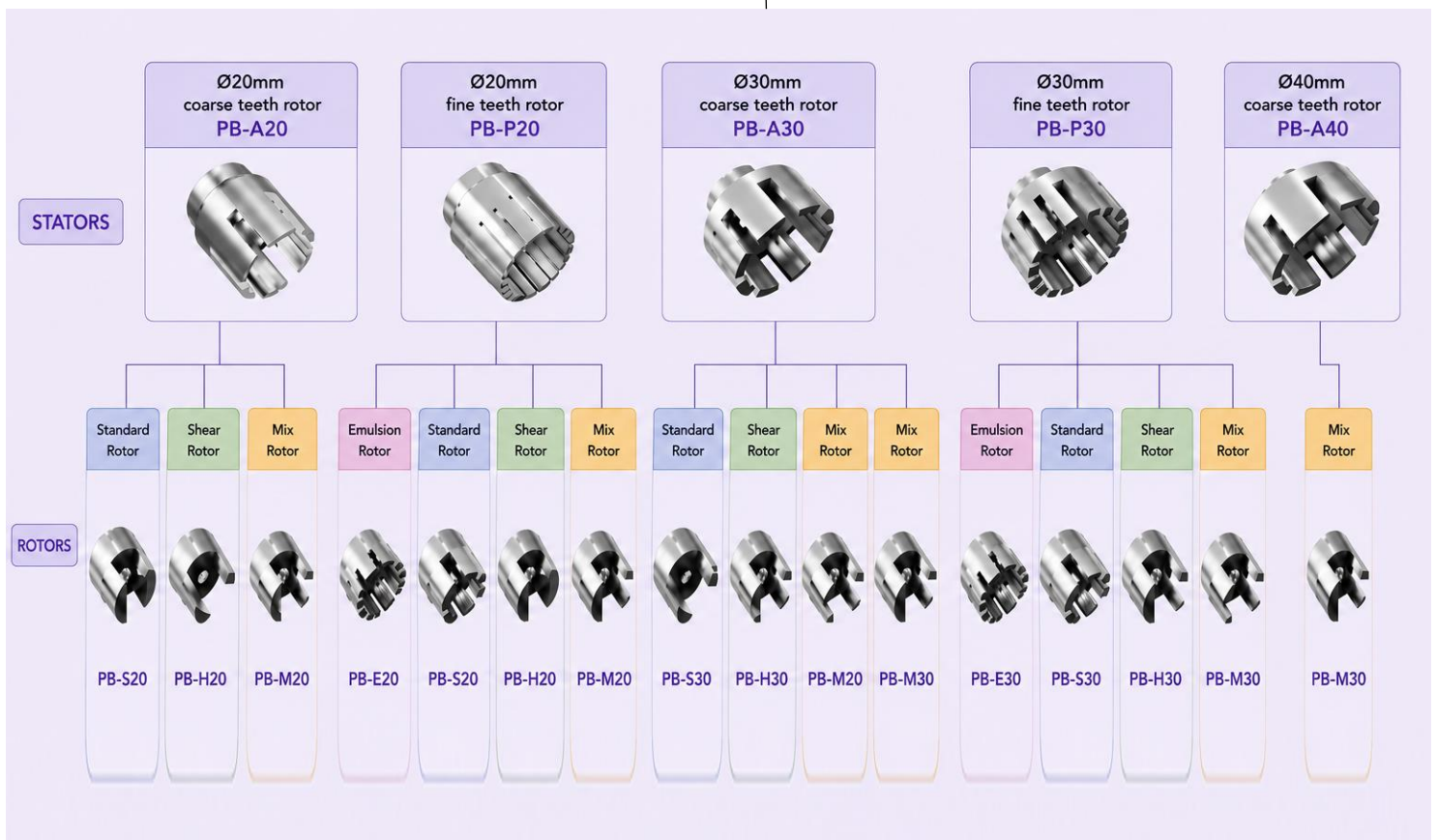




5mm shaft



shaft



Solid–Liquid Dispersion Capability

Designed for efficient dispersion and mixing of both solid and liquid samples within a processing volume range of 10–5000 mL.

⚡ Maximum Peripheral Speed: Up to 22.7 m/s for rapid and effective sample processing.

☑ Versatile Application Performance: Suitable for general mixing, homogenization, and sample preparation tasks across various laboratory applications.

☐ Fine Emulsion Production: Capable of generating emulsions with particle sizes typically ranging from 1–10 μm .

☑ Suspension Particle Size Reduction: Produces suspensions with particle sizes generally between 10–50 μm .



Small-Volume Solid–Liquid Mixing Probe

📄 Processing Capacity: Suitable for sample volumes from 1–50 mL.

⚡ Linear Speed: 5.8 m/s

📏 Probe Dimensions:

- Stator Diameter: 5 mm
- Rotor Diameter: 3.8 mm

☐ Typical Applications:
Ideal for biological sample processing, tissue homogenization, cell disruption, emulsification, and preparation of small-volume liquid samples.

☐ Suitable Sample Types:
Designed for use with microcentrifuge tubes, tube strips, and Eppendorf tubes requiring precise high-shear mixing and dispersion.



Technical Specifications

Specification :	
Product Code	PBI024
Power	550W
Speed Range	10,000 ~30,000 rpm
Speed setting level	6 Levels
Dispersion Probe Material	SS316L Stainless Steel, PTFE
Sample Capacity	10~40000 ml
Max viscosity	10000mPa.s
Dimension (with workbench) LxWxH	350x300x600mm
Weight	1.7 kg
Power Supply	110V/220V;50/60Hz



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