high speed refrigerated centrifuge with -20°C to +40°C range

The high speed refrigerated centrifuge is a high performance, versatile and widely adaptable piece of laboratory equipment designed for routine analysis in medical, biological and industrial laboratories.

High Speed Refrigerated Centrifuge

Main Features

1. Temperature control range: -20°C to +40°C, stably maintains -4°C to +4°C during high-speed operation—ensures sample activity and integrity.
2. Rapid pre-cooling: Quickly lowers sample temperature, ideal for rapid freezing needs.
3. Continuous temperature control: Maintains set temperature even when idle—prevents external fluctuations from affecting samples.
4. Automatic standby: Switches to standby when not in use—optimizes cooling and extends compressor life.

5. Robust, durable build: Stainless steel chamber for high-load, long-term use.
6. User-friendly interface: 5-inch LCD display with clear, real-time settings and operational feedback.
7. Rotor automatic identification: Auto-adapts to different rotor types for safe, convenient operation.
8. Comprehensive safety: Overspeed, imbalance, and lid protection—real-time monitoring for accident prevention.
9. Low noise: Quiet lid operation and efficient design—maintains a peaceful lab environment.
10. Instant centrifugation: Dedicated button for rapid centrifugation—boosts workflow efficiency.

Advantages

1. Precise temperature control: Wide, accurate range for sensitive sample handling.
2. High speed & control: Brushless frequency conversion motor, 100–16,000rpm, precise centrifugal force adjustment.
3. Multi-functional rotor support: Compatible with 1.5ml/2.2ml, capillary, 5ml, 0.2ml, and more—supports diverse sample volumes.
4. High safety: Automated monitoring and protection systems for safe, stable operation.
5. Corrosion resistance: Rotor/chamber materials resist chemicals—extends equipment life.
6. Easy operation: Intuitive controls, auto rotor ID, preset programs—streamlines experimental workflow.

Working Principle

High-speed rotation generates centrifugal force, efficiently separating sample components by density. Refrigeration system maintains low temperature, preserving sensitive molecules (proteins, nucleic acids) and preventing thermal damage.

- Centrifugal force principle: High-speed rotor separates sample components by density within the tube.
- Temperature control principle: Refrigeration system keeps samples stable, minimizing heat effects.

Application Fields

1. Medical labs: Blood, cell, culture fluid separation for diagnostics and hematology.
2. Molecular biology: DNA/RNA/protein purification, genetic engineering, transgenic research.
3. Biochemistry: Enzymology, immunology, metabolic studies—separates diverse molecules.
4. PCR product processing: DNA fragment extraction, purification, and concentration post-PCR.
5. Industrial analysis: Food/pharma sample separation for raw material and quality testing.

Rotor Types

- 24 × 1.5/2.2ml rotor: Small-volume biological samples (cells, blood, etc.)
- 24 × capillary rotor: Blood analysis in clinical settings.
- 10 × 5ml rotor: Medium-volume samples for drug/chemical analysis.
- 4 × 8 × 0.2ml rotor: Small-volume PCR sample separation.
- 36 × 0.5ml rotor: High-throughput, small-volume sample processing.

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Model	**C11**
Speed range	100rpm to 16000rpm
Speed accuracy	±10rpm
relative centrifugal force	23470xg
Capacity	1.5mlx24, 2.2mlx24, Capillary blood volume tube X24, 5mlx10, PCR 0.2mlx8x4
Timer	0 to 99minutes 59seconds or continuously
Motor type	brushless dc motor

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Model	**C11**
Temperature range	-20°C to +40°C
Display screen	LCD
Safety	safety lid-lock, imbalance system
Acceleration and deceleration	20 seconds
Power supply	200Vac to 240Vac,50Hz, 60Hz