



TORONTECH



HIGH SPEED REFRIGERATED CENTRIFUGES

High Speed Refrigerated Centrifuges

Cold separation from 0.2 mL PCR strips to 4 x 750 mL bottles.

High speed refrigerated centrifuges separate samples under controlled temperature, holding the chamber near 4°C while rotor friction would otherwise heat the load. Molecular biology, clinical, and bioprocess laboratories rely on them to protect enzymes, viable cells, and labile proteins through long runs. This range spans seven models from 15,000 to 25,000 rpm. Rotor options run from 0.2 mL PCR strips to 750 mL bottles.

Force matters more than speed when matching an instrument to a protocol, since published methods state relative centrifugal force rather than rpm. Each rotor carries its own maximum, so a model's headline figure describes its fastest rotor, not every configuration. Check the rotor list before ordering to avoid a mismatch.

Why Choose Torontech for Your High Speed Refrigerated Centrifuge

Torontech supplies testing and measurement equipment to laboratories and manufacturers worldwide, backed by responsive technical support and calibration service. The high speed refrigerated centrifuge range is built for reliable, standards-driven results, so you can standardize on one supplier as your testing needs grow. Our team helps you match the right configuration to your samples, applicable standards, and throughput, then supports you through installation and beyond.

Request a Quote

Tell us your sample format, the force your protocol calls for, and your batch size, and we will recommend the right model and rotor. [Contact the Torontech team](#) for pricing and lead times.

APPLICATIONS

Applications

Refrigerated separation appears wherever a sample degrades at room temperature or where the spin itself would raise it above the protocol's limit.

- **Molecular Biology and Genomics:** pellets nucleic acid precipitates, clears lysates, and drives silica spin columns for DNA and RNA extraction kits.
- **Clinical Diagnostics and Blood Banking:** separates serum, plasma, and blood components, and measures packed cell volume on hematocrit rotors.
- **Protein Purification and Enzymology:** collects precipitated protein and removes cell debris while the chamber holds near 4°C.
- **Cell Culture and Bioprocess Development:** harvests bacterial, yeast, and mammalian cultures from flask and bioreactor volumes.
- **Immunoassay Laboratories:** spins ELISA plates, deep-well plates, and filter plate reagent kits in horizontal plate rotors.
- **Pharmaceutical and Biotechnology Quality Control:** clarifies in-process and release samples under controlled temperature.
- **Microbiology and Virology:** concentrates cultures and viral preparations, with aerosol-tight buckets available for containment.
- **Environmental and Food Analysis:** settles suspended solids from bulk samples ahead of chromatographic or spectroscopic measurement.

TECHNICAL SPECIFICATIONS

High Speed Refrigerated Centrifuge Range

Seven models cover the range from bulk bottle work down to microtube sample prep. Maximum speed and maximum force below belong to each model's fastest rotor.

Model	Max Speed / RCF	Max Capacity	Description
ToronCent HSR	25,000 rpm / 50,560 x g	6 x 100 mL	The fastest model in the range, with ten angle rotors and tool-free rotor mounting. Suits molecular biology and protein groups running protocols above 40,000 x g.
ToronCent HSR LC	21,000 rpm / 32,752 x g	4 x 750 mL	Highest volume at 3 liters per run, with PID temperature control holding 4°C within $\pm 0.5^\circ\text{C}$ and aerosol-tight buckets available. Built for blood banking and bioprocess harvesting.
ToronCent HSR MP	20,500 rpm / 29,200 x g	4 x 750 mL	Twelve rotors, a stainless steel chamber, and three damping levels. A general-purpose choice for labs consolidating two instruments into one.
ToronCent HSR B	19,000 rpm / 31,006 x g	4 x 250 mL	The only model with a dedicated plate rotor for ELISA, deep-well, and filter plates. Sixteen rotors cover 0.2 mL tubes through 250 mL bottles.
ToronCent HSR MP100	18,500 rpm / 29,302 x g	4 x 100 mL	Compact at 62 kg and 1 kW, with a 24-place hematocrit rotor and a PCR strip rotor. Fits clinical benches where space and circuit capacity are limited.
ToronCent RM	16,500 rpm / 26,054 x g	48 x 1.5 mL	A microcentrifuge with a 24-place spin column rotor, a 316 stainless steel chamber, and hard-anodized rotors. Built around nucleic acid extraction kits.
ToronCent RM5	15,000 rpm / 21,532 x g	12 x 5 mL	The smallest unit at 32 kg and 700 W, with three rotors sharing one speed. Covers the 5 mL gap between microtubes and conical tubes.

How to Choose the Right High Speed Refrigerated Centrifuge

- **For maximum force above 40,000 x g:** choose the ToronCent HSR, the only model reaching 50,560 x g.
- **For bulk volume up to 3 liters per run:** choose the ToronCent HSR LC or HSR MP, both carrying 4 x 750 mL swing rotors.
- **For the tightest temperature control on labile samples:** choose the ToronCent HSR LC, which holds 4°C within $\pm 0.5^\circ\text{C}$ at maximum speed.
- **For microplate, ELISA, and deep-well work:** choose the ToronCent HSR B, the only model with a dedicated plate rotor.

- **For hematocrit and clinical chemistry:** choose the ToronCent HSR MP100 and its 24-place capillary rotor.
- **For DNA and RNA extraction kits:** choose the ToronCent RM and its 24-place spin column rotor.
- **For limited bench space or circuit capacity:** choose the ToronCent RM5 at 32 kg and 700 W, or the HSR MP100 at 62 kg and 1 kW.
- **For many sample formats on one instrument:** choose the ToronCent HSR B with sixteen rotors, or the HSR MP100 with fifteen.



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