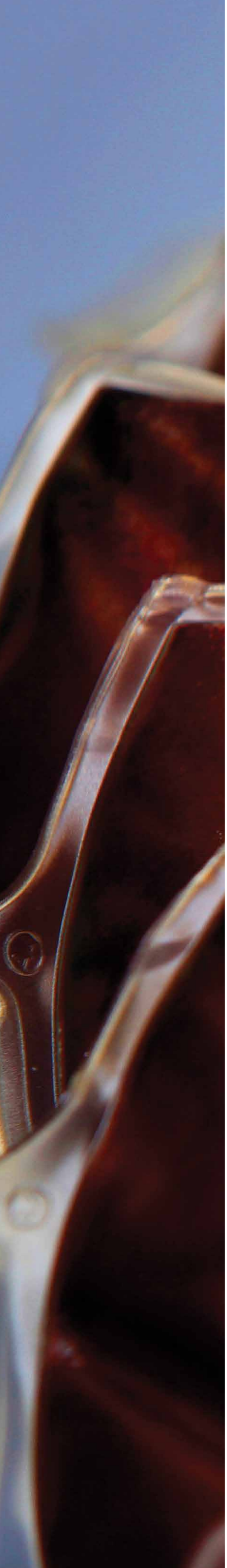
ThermoFisher SCIENTIFIC

Centrifugation

Cryofuge 8 and 16 Blood Banking Centrifuges

Proven productivity, built around you

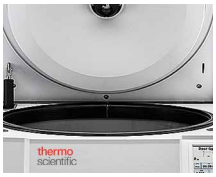
thermo scientific



Proven productivity, built around you

Thermo Scientific™ Cryofuge™ 8 and 16 centrifuges are designed for flexible, large-capacity blood banking

Thermo Scientific™ large-capacity centrifuges have a proven track record for reliability and productivity in blood processing centers. The enhanced capacity of 16 x 500 mL blood bags and user-friendly design of the Thermo Scientific™ Cryofuge™ 8 and 16 Blood Banking Centrifuges make working with large volumes easier and more convenient while using the protocols you've already validated and staying in compliance with global standards. Enhanced ergonomics and a compact design combined with the quick setup of traceable, reproducible runs makes this centrifuge an ideal choice for simplified blood processing productivity.



Enhanced ergonomics with push-button convenience

Thermo Scientific™ Auto-Door™ automatic centrifuge door opening and closing

Simplified operation and space-saving design

Thermo Scientific™ Auto-Lid™ instant rotor opening and closing with lid storage

Quick run setup and standardization

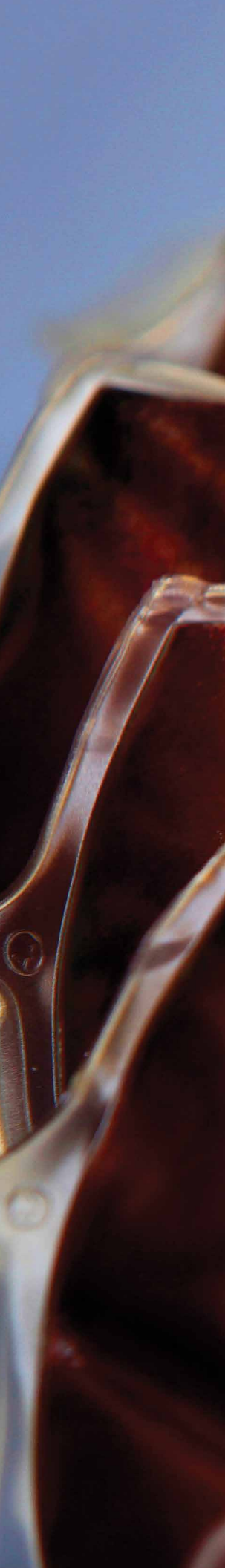
Glove-friendly Thermo Scientific™ Centri-Touch™ interface with Centri-Cross™ function to convert your existing protocols

Improved capacity to maximize productivity

Unique 16 x 500 mL blood bag capacity

Latest global safety and compliance standards

- Certified by UL and CE
- Meets MDD CE requirements (under the transitional provisions of MDR)
- Listed with the US FDA



Innovative solutions, built around you

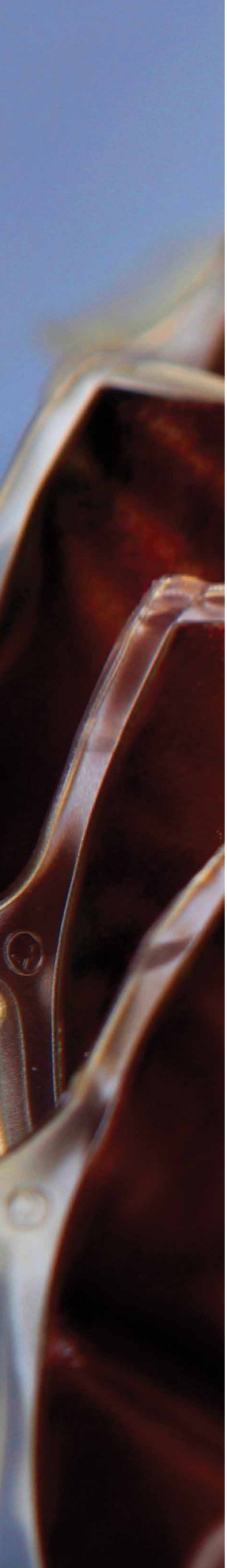
Combining more than 60 years of application expertise with innovation designed to improve your productivity

High-throughput sample processing with the flexibility to match your current and future needs from 6, 8, 12 or 16 x 500 mL blood bags per run and designed to achieve reproducible results with the Thermo Scientific™ Accumulated Centrifugal Effect (ACE™) Function, automatically adjusting run time to account for variations in acceleration.

We also offer a **range of adapters** allowing the centrifugation of most common tubes and microplates.

Built-in safety and efficiency

- Compact design, automatic front-to-back centrifuge door opening and closing with Auto-Door and Auto-Lid rotor lid opening and storage optimize everyday centrifuge use, while a standard power supply eliminates the need for expensive hardwiring
- Immediate rotor detection and programming with Thermo Scientific™ Auto-ID™ Instant Rotor Identification that helps save time and protects the integrity of your samples
- Centri-Touch interface with a bright, highly visible and glove-friendly display simplifies run set-up, further enhanced with access controls such as user login with password protection and Centri-Cross protocol conversion
- Real-time run monitoring and control with Thermo Scientific™ Centri-Vue™ Application
- Designed to assist with GMP/GLP compliance with Thermo Scientific™ Centri-Track™ on-board application for run logging of user and run conditions, and error messages, and optional Thermo Scientific™ Centri-Log™ Plus software for data collection



Blood banking built around you

Cryofuge blood banking centrifuges are available in two models, offering the flexibility to select higher-capacity rotors or match existing workflows, with a choice of four Thermo Scientific™ HAEMAFlex™ rotors

Goal:	Expand individual bucket capacity	Maximize total blood bags per spin
Centrifuge	For regular- to medium-throughput blood processing needs, select the Thermo Scientific™ Cryofuge™ 8 Centrifuge, providing 6 x 550 mL blood bag capacity that is upgradeable to 8 x 550 mL bags utilizing the same bucket system	For high-throughput blood processing needs, choose the Thermo Scientific™ Cryofuge™ 16 Centrifuge with 12 x 500 mL capacity, upgradeable to 16 x 500 mL blood bags with the same bucket selections

				
Rotor	HAEMAFlex 6 rotor	HAEMAFlex 8 rotor	HAEMAFlex 12 rotor	HAEMAFlex 16 rotor
Cat. No.	75003861	75003881	75003862	75003882
Blood bags—rotor capacity (places x volume, mL)	6 x 550 mL	8 x 550 mL	12 x 500 mL	16 x 500 mL
Tubes—rotor capacity (places x volume, mL)	N/A	N/A	312 x 5 or 7 mL tubes	416 x 5 or 7 mL tubes
Maximum speed (rpm)	5,000	4,600	4,700	3,900
Maximum RCF (x *g*)	7,295	7,144	7,187	5,374

Ergonomics and safety, built around you

- Effortless loading and unloading with optimal working height of 930 mm
- Meets MDD CE requirements (under the transitional provisions of MDR) and listed with US FDA, with latest global safety standards including UL and CE, without the need to bolt down the instrument to the floor, greatly simplifying installation and flexibility to relocate within a facility
- Designed for run-to-run reproducibility
- ACE function automatically adjusts the centrifuge run time to compensate for variations in acceleration due to full or partial rotor loading (see Figure 1)
- Automatically neutralize up to 125 *g* loading imbalance with Thermo Scientific™ DuraFlex™ Drive Technology
- In slow start/stop mode, select from 11 acceleration and 12 deceleration profiles, including profiles loaded from another Thermo Scientific large capacity centrifuge, to customize results for maximum yields with minimum re-suspension
- With the press of a button, Auto-Door function automatically and completely opens or closes the centrifuge door, with hands-free Auto-Lid rotor lid storage on the centrifuge door
- Auto-ID instant rotor identification improves ease-of-use
- Thermo Scientific™ Eco-Spin™ Windshielded Rotors provide energy savings up to 64% when compared with non-windshielded rotors* (see Figure 2)

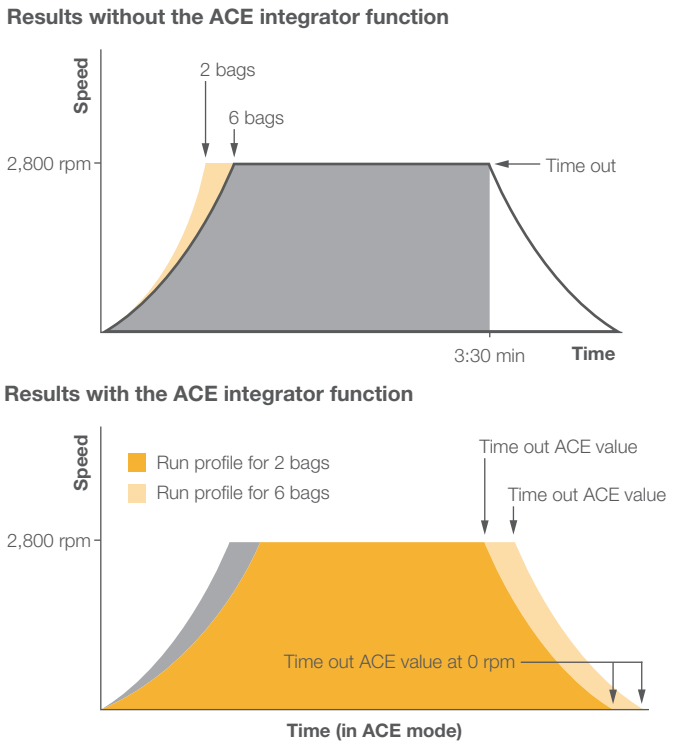


Figure 1. In a typical first centrifugation step, a two-bag rotor load attains set speed faster than a six-bag load. Since both loads will time out at the set time of 3:30 minutes, different g-forces are achieved during the run. By using the ACE integrator function, the time for two bags would be changed to 3:00 minutes to obtain the same overall g-force for both loads. With an ACE value and speed set at the start of a run, times were adjusted to achieve the same overall g-force regardless of the rotor load.

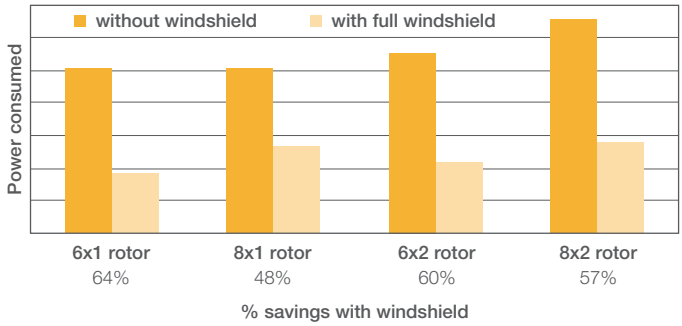


Figure 2. Power consumption of Thermo Scientific windshielded rotors as compared with non-windshielded designs of the same rotor body.

* Based on an engineering evaluation of windshielded and non-windshielded designs of the same rotor body.

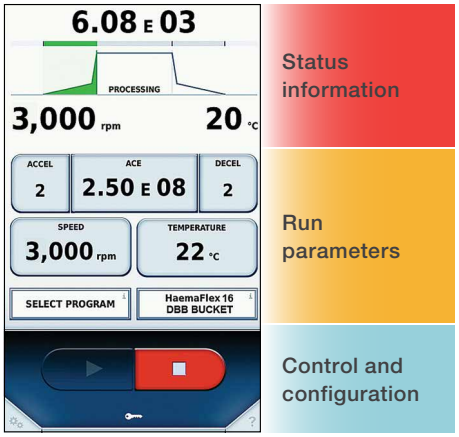
Operation, built around you

Large, bright, interactive Centri-Touch interface offers:

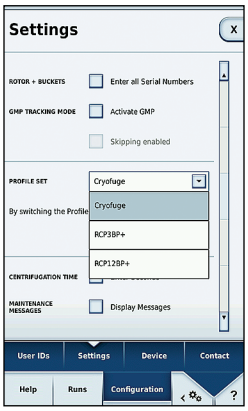
- Glove- and detergent-friendly design
- Simple and quick run setup with ACE function, speed, time, temp, plus pre-temp and accel and decel ramps
- Convenient touchscreen keyboard for direct input of program parameters
- Highly visible backlit display of set and actual run conditions, including rpm, g-force, and the rotor in operation, enlarged during the run for clear visibility—even from across the lab
- Real-time connection with Centri-Vue application to monitor protocols on your smart device

Simple, quick run setup and monitoring, plus powerful functions just one touch away, providing:

- Quick recall of up to 120 programs with alpha-numeric naming to minimize time between runs and for quick run start by routine users
- User access control and security with optional password protection, ideal for multi-user environments
- Multilingual instructions on programming, run conditions, alerts, and service messages
- Protocol conversion from another Thermo Scientific centrifuge model with Centri-Cross function
- Integrated rotor calculator for simplifying protocol modifications and transfers
- Help screens and in-use training with on-board tutorial videos and a quick-start manual
- Centri-Track on-board run logging of user, run conditions, and error messages
- Thermo Scientific™ Cycle-Log™ rotor bucket cycle log monitors bucket life for added safety



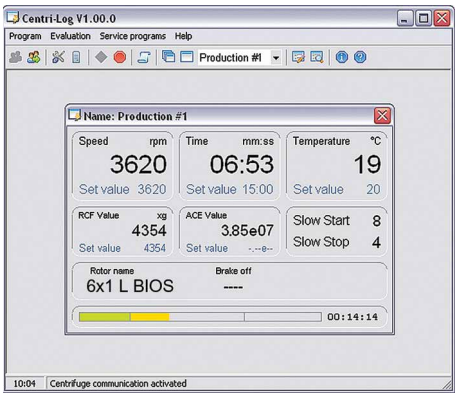
Easily set current parameters and monitor centrifuge status

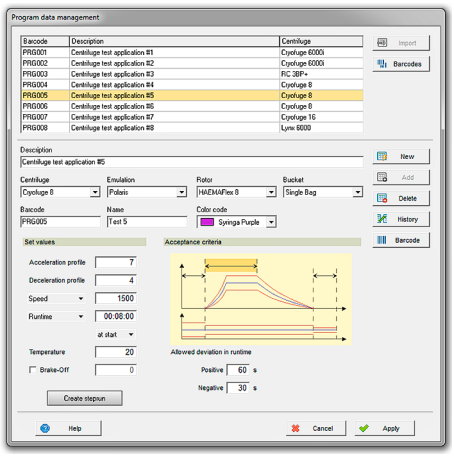


Emulate protocols from other centrifuges with Centri-Cross function

Data collection, built around you

- On-board Centri-Track app for run logs, downloadable via USB port or real-time via Ethernet
- Centri-Log Plus data collection software: protocol-tracking solution enabling lifecycle management of processed samples, equipment optimization, and compliance with standard operating procedures. Connect and track multiple centrifuges on the same network.
  - Improve traceability with documentation of processes, including continual monitoring of speed, time and temperature with alarm messages in case of protocol deviation
  - Ability to check run parameters against procedures in PC database
  - Connection to central database through customized export file





Ordering information

Data collection options	Data transfer via USB	Data transfer via Ethernet	Device management via Centri-Log Plus software
With barcode sample tracking	Centri-Track via USB*	Centri-Track via Ethernet*	Centri-Log Plus Software* Cat. No. 75007742
	Sample Tracking Kit** Cat. No. 75007740	Sample Tracking Kit** Cat. No. 75007740	Sample Tracking Kit** Cat. No. 75007740
		Network Access Kit Cat. No. 75007741	Network Access Kit Cat. No. 75007741
Without sample tracking	Run log	Network Access Kit Cat. No. 75007741	Not available

* GMP mode must be enabled.
** Sample tracking kit contains barcode scanner, holder, and cable.

Connection built around you

The Centri-Vue application provides a real-time connection with your Cryofuge 8 and 16 Blood Banking Centrifuges. Use your smart device to check your run status or whether a centrifuge is available from across the campus, building, or lab. With the Centri-Vue application, you can also:

- Determine status of 1 or up to 100 centrifuges at a glance
- Monitor your run:
  - Replicate instrument main screen on your smart device
  - Know when your run is complete
  - Check for diagnostic errors affecting your run
- Establish secure centrifuge connection for start and stop control

Download the Centri-Vue application for instant remote monitoring and control, available for both iOS™ and Android™ devices.

Compliance, built around you

Full GMP/GLP traceability and compliance

- Two logging modes and optional external monitoring and control
- Simplified quality control and record keeping
- Electronic signatures for runs with user log-in and password protection
- Latest global safety and compliance standards:
  - UL listed
  - CE marked for Medical Devices Directive 93/42/EEC
  - US FDA listed
  - RoHS compliant
  - WEEE compliant
  - EN 61010-1
  - IEC 61010-2-020
  - IEC 61010-2-101
  - EN 61326-1 Class B
  - EN 61326-2-6
  - EN 62304
  - EN 62366
  - EN ISO 14971
  - EN ISO 13485

Additional options available

- Heavy duty with stainless steel front plate, top plate, and side panels

- Water or air-cooling configuration, complete with containment skirt (Figure 3)

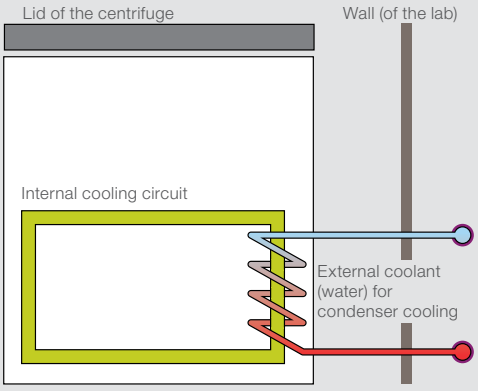


Figure 3. External cooling options.

Rotor specifications

	Description	Rotor capacity (places x volume)	Maximum speed (rpm)	Maximum RCF (x *g*)	Cat. No.
Rotors					
	HAEMAFlex 6 Swinging Bucket Rotor	6 x 550 mL blood bags	5,000	7,295	75003861
	HAEMAFlex 8 Swinging Bucket Rotor	8 x 550 mL blood bags	4,600	7,144	75003881
Rotor buckets and adapters (sets of 2)*					
	Oval Single Blood Bag Bucket		5,000	7,127	75003834
	450–550 mL Quad or Quint Blood Bag Adapter	6 or 8 x 550 mL			75003837
	400–450 mL Double or Triple Blood Bag Adapter	6 or 8 x 450 mL			75003838
	250 mL Platelet-rich Plasma or Buffy Coat Bag Adapter	6 or 8 x 250 mL			75003839
	400–450 mL Single or Double Blood Bag Adapter	12 or 16 x 450 mL			75003841
	Single Blood Bag Bucket with Filter Pack		5,000	7,211	75003835
	450–550 mL Triple, Quad, or Quint Blood Bag with Additive Solution Adapter	6 or 8 x 550 mL			75003842
	Filter Holder				75003859
	Single Blood Bag Round Bucket		5,000	7,295	75003836
	450–500 mL Triple or Quad Blood Bag Adapter	6 or 8 x 500 mL			75003857
	450 mL Single or Double Blood Bag Adapter	6 or 8 x 450 mL			75003858

* Order three sets of rotor buckets and adapters for use with the HAEMAFlex 6 rotor and four sets for use with the HAEMAFlex 8 rotor.

Rotor specifications, cont.

	Description	Rotor capacity (places x volume)	Maximum speed (rpm)	Maximum RCF (x *g*)	Cat. No.
Rotors					
	HAEMAFlex 12 Swinging Bucket Rotor	12 x 500 mL blood bags	4,700	7,187	75003862
	HAEMAFlex 16 Swinging Bucket Rotor	16 x 500 mL blood bags	3,900	5,374	75003882
Rotor buckets and adapters (sets of 2)*					
	Double Blood Bag Bucket		4,700	7,187	75003846
	Double Quint Blood Bag Adapter for XXL size, HD (110 x 88 mm)	12 or 16 x 500 mL			75003899
	Double Quint Blood Bag Adapter for XXL size (110 x 88 mm)	12 or 16 x 500 mL			75003851
	Double Quint Blood Bag Adapter for XL size (110 x 76 mm)	12 or 16 x 500 mL			75003852
	Double Quint Blood Bag Adapter for M size (110 x 57 mm)	12 or 16 x 450 mL			75003853
	Hook Adapter for Cord Blood Separations, for use with M size adapters	12 or 16 x 300 mL		1,328	75003855
	Hook Adapter for Cord Blood Separations, for use with XXL size adapters	12 or 16 x 300 mL		1,328	75003868
Rotor buckets and adapters (sets of 2)*					
	Oval Bucket Rotor		4,700	7,187	75003964
	52 x 5/7 mL Blood Tube Adapter				75003341
	42 x 10 mL Blood Tube Adapter				75003342
	26 x 15 mL Conical Tube Adapter				75003343
	11 x 50 mL Conical Tube Adapter				75003344
	5 Microplates/1 Deep-Well Plate Adapter				75003345

* Order three sets of rotor buckets and adapters for use with the HAEMAFlex 12 rotor and four sets for use with the HAEMAFlex 16 rotor.

Rotor specifications, cont.

	Description	Rotor capacity (places x volume)	Maximum speed (rpm)	Maximum RCF (x *g*)	Cat. No.
Rotor accessories					
	Liner Stand for Single Blood Bag Adapters (set of 2)				75003833
	Liner Stand for Double Blood Bag Adapters (set of 2)				75003832
	Blood Bag Spacer (set of 12)				75003843
	Rubber Volume Compensation Plates (set of 12)				75006681
	Rubber Balancing Plates (set of 4)				75005759
	Dummy Weights				75005759

Centrifuge specifications

Specifications	Cryofuge 8 Centrifuge	Cryofuge 16 Centrifuge
Capacities	6 x 550 mL and 8 x 550 mL blood bags	12 x 500 mL and 16 x 500 mL blood bags
Maximum speed	5,000 rpm	4,700 rpm
Maximum RCF	7,295 x *g*	7,187 x *g*
Drive system	DuraFlex high torque brushless drive technology	
Imbalance tolerance	125 *g* in opposite loads	
ACE integrator	Yes	
Green technology	Refrigeration off when door opens; Eco-Spin windshielded rotors	
Control	Centri-Touch touchscreen interface	
Accel/decel profiles and existing protocol emulation	11 accel, 12 decel, multiple emulation profiles	
Modes	At start, at speed, time start	
Step-runs	Yes, 30 profile/speed/time triplets, up to 3 steps each	
Maintenance tracking log	Yes	
Protocol traceability	Yes, built-in Centri-Track run logging	
Performance range	Speed 300–5,000 rpm; RCF 26–7,295 x *g*	Speed 300–4,700 rpm; RCF 29–7,187 x *g*
Run time	99 hours 59 min 59 sec (1-second increment)	
Precooling function	Yes	
Temperature set range	–20 to 40°C, adjustable to 1°C	
Other functions	Multilingual selection, on-board training videos, user logging, user lock-out, automatic door opening, automatic rotor ID, on-screen display for imbalance, over temperature, stainless steel chamber, guidance display for error messages	
Dimensions (H x W x D)	1,015 x 816 x 900 mm (39.9 x 32.1 x 35.4 in.)	
Weight	230V: 475 kg/1,047.2 lb; 400V: 495 kg/1,091.3 lb	230V: 475 kg/1,047.2 lb; 230V Water Cooled: 479 kg/1,056 lb; 400V: 495 kg/1,091.3 lb
Heat output	<2 kW	
Power consumption	<5,400 VA	
Certifications	UL, CE, MDD (transitional device), FDA listed	
Standards	EN 61010-1, IEC 61010-2-020, IEC 61010-2-101, EN 61326-1 Class B, EN 61326-2-6, EN 62304, EN 62366, EN ISO 14971, EN ISO 13485	
Warranty	2 years for unit, 5 years for powertrain (motor shaft and drive), 5 years for refrigeration	

Ordering information

Description	Cat. No.
Centrifuges	
Cryofuge 8 centrifuge, 200, 208, 220, 230, 240 V ±10%, 50/60 Hz, Single phase	75007671
Cryofuge 8 centrifuge, 380, 400, 415 V ±10%, 50 Hz, 3-phase	75007672
Cryofuge 16 centrifuge, 200, 208, 220, 230, 240 V ±10%, 50/60 Hz, Single phase	75007673
Cryofuge 16 centrifuge, 380, 400, 415 V ±10%, 50 Hz, 3-phase	75007674
Additional options	
Cryofuge 16 Heavy Duty Water Cooled centrifuge, 200, 208, 220, 230, 240 V ±10%, 50/60 Hz, Single phase	75007677
Cryofuge 16 Heavy Duty centrifuge, 380, 400, 415 V ±10%, 50 Hz, 3-phase	75007678
Power plugs*	
IEC60309 32A-6h-3-pin blue, 200–250 V 	20190357
NEMA 6-30P 30 A-6h, 200–250 V 	20190358
IEC60309 32A-6h 5-pin red, 230–400 V 	20190359
IEC60309 16A-6h 5 pin red (3P+N+PE), 380/400 V 	20190360
3x AWG10 NEMA L6-30P/CEE 	20190364
Accessories	
Drain Box (600 x 400 x 50 mm)	75007730

* Centrifuges will include power plug most common for country of order. Please indicate alternate power plug requirements at time of order.

Learn more at **thermofisher.com/bloodbankcentrifuges**