

thermo scientific



# Performance simplified at every turn

Sorvall BIOS centrifuge series

**ThermoFisher**  
SCIENTIFIC

# Centrifuges designed for reliable, high-throughput bioprocessing

We've expanded our line of leading large-capacity centrifuges that are designed for high-throughput bioprocessing. Both the Thermo Scientific™ Sorvall™ BIOS 16 and Sorvall™ BIOS A centrifuges include features that not only help enhance reliability, but make them much simpler to use. Whether you require outstanding capacity or high performance for application flexibility, both designs offer features that will help maximize productivity—and when combined with our space-saving footprint, one of these options is sure to be a perfect fit in your bioprocessing facility.



The Sorvall BIOS 16 centrifuge provides outstanding capacity to maximize productivity.



The Sorvall BIOS A centrifuge offers high performance for application flexibility.

## Outstanding capacity to maximize productivity

- Unique capacity of eight 2,000 mL (16 L) spaces, accommodating innovative wide-mouth bottles or eight 1,000 mL (8 L) bottles in the **Sorvall BIOS 16 centrifuge**



## High performance for application flexibility

- Achieve up to 12,000 x g with the **Sorvall BIOS A** centrifuge and the Thermo Scientific™ Fiberlite™ F6-10x1000 LEX rotor, providing the benefits of a carbon fiber design including resistance to corrosion and fatigue and backed by a 15-year warranty\*



## Enhanced ergonomics with push-button convenience

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



## Simplified operation and space-saving design

- Thermo Scientific™ Auto-Lid™ instant rotor opening and closing technology with lid storage
- Glove-friendly Thermo Scientific™ Centri-Touch™ interface



\* Subject to our standard limited warranty. See [thermofisher.com](http://thermofisher.com) or your sales representative for details.

# Bioprocessing simplified

Support your applications, from R&D to large-scale production

## High-throughput, flexible sample processing

Process from six 1 L bottles to eight 2 L bottles per run at speeds up to 8,500 x g with the Sorvall BIOS 16 centrifuge, or up to ten 1 L bottles with performance up to 12,000 x g with the Sorvall BIOS A centrifuge.

## Built-in safety and efficiency

- Compact design, automatic front-to-back centrifuge door opening and closing capabilities with Auto-Door technology, and Auto-Lid rotor lid opening technology and storage help optimize everyday centrifuge use
- A standard power supply eliminates the need for expensive hardwiring
- Latest global safety standards
- Energy savings with Thermo Scientific™ Eco-Spin™ windshielded rotors
- Nickel-coated rotor buckets are also available, providing protection against corrosion due to moisture, chemicals, or alkaline solutions that otherwise can weaken the structural integrity of a metal rotor bucket
- The Centri-Touch interface with a bright, highly visible and glove-friendly display simplifies run setup, and is further enhanced with access controls such as user login with password protection
- Get real-time run monitoring and control with the Thermo Scientific™ Centri-View™ application
- Designed to assist with GMP/GLP compliance with data logging and easy-to-use Thermo Scientific™ Centri-Log™ Plus data collection software

## Designed to support a broad array of bioprocessing applications

- Biologics
- Vaccines
- Biofuels
- Veterinary medicines
- Recombinant proteins
- Raw materials



# Bioprocessing solutions, built around you

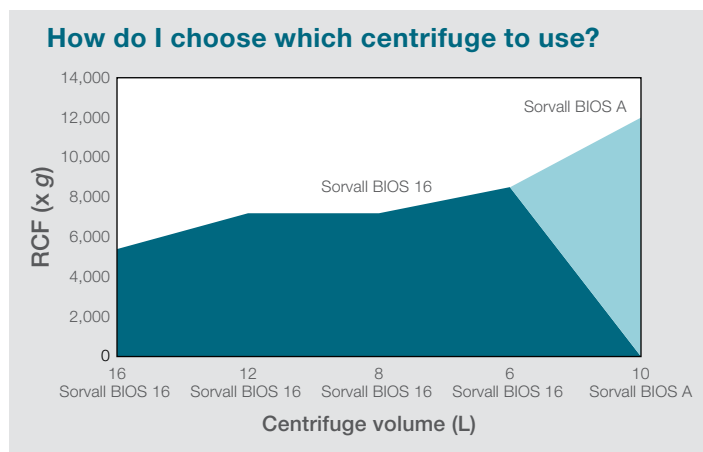
Whether you need capacity or speed

Sorvall BIOS centrifuges are available in two models, the Sorvall BIOS 16 or the Sorvall BIOS A, offering the flexibility to select a higher capacity with lower-speed swinging bucket rotors or higher performance, up to 12,000 x g, in a fixed-angle configuration.

## Maximize capacity and flexibility

### Sorvall BIOS 16 model

To support gentle separations with lower RCF requirements, select the Sorvall BIOS 16 centrifuge with your choice of four Thermo Scientific™ rotors, providing the flexibility for a 1 or 2 L bottle capacity to match your existing workflows.




				
<b>Description</b>	8 x 2,000 mL rotor	8 x 1,000 mL rotor	6 x 2,000 mL rotor	6 x 1,000 mL rotor
<b>Maximum speed (rpm)</b>	3,900 rpm	4,600 rpm	4,700 rpm	5,400 rpm
<b>Maximum RCF (x g)</b>	5,374 x g	7,117 x g	7,187 x g	8,500 x g

## Enhance performance

### Sorvall BIOS A model

For higher separation efficiency, choose the Sorvall BIOS A centrifuge with the Fiberlite F6-10x1000 LEX rotor that processes 10 L at up to 12,000 x g and is combined with the benefits of carbon fiber rotors, including corrosion- and fatigue-resistance, and is backed by a 15-year warranty.\*\*

**Sorvall BIOS A fixed angle rotor**



<b>Description</b>	Fiberlite F6-10x1000 LEX Rotor
<b>Maximum speed (rpm)</b>	6,250 rpm
<b>Maximum RCF (x g)</b>	12,000 x g

\*\* Subject to our standard limited warranty. See [thermofisher.com](http://thermofisher.com) or your sales representative for details.

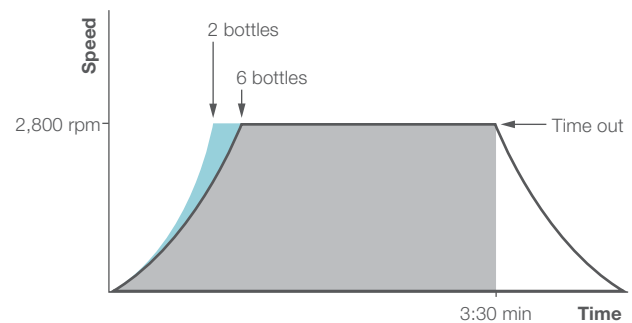


# Ergonomics and safety simplified

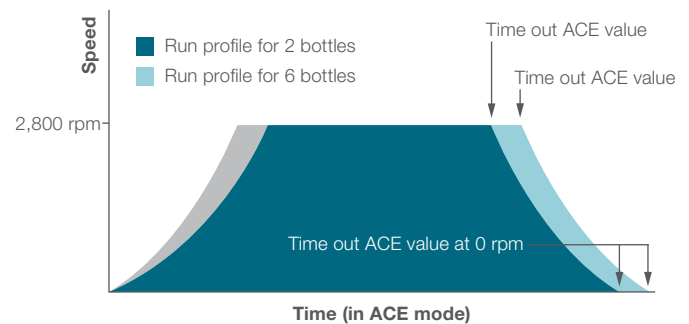
## Designed for the needs of more users

- Effortless loading and unloading with an optimal working height of 930 mm
- Listed with the latest global safety standards without the need to bolt the instrument to the floor, simplifying installation and allowing the flexibility to relocate within the facility
- Designed for run-to-run reproducibility
  - Use the ACE function to automatically adjust the centrifuge run time to compensate for variations in acceleration due to full or partial rotor loading (see Figure 1)
  - Automatically neutralize loading imbalance with Thermo Scientific™ DuraFlex™ drive technology
  - In slow start/stop mode, select from 11 acceleration and 12 deceleration profiles to customize results for maximum yields with minimum resuspension
- With the press of a button, the Auto-Door technology automatically and completely opens or closes the centrifuge door, which uses a hands-free Auto-Lid windshielded rotor lid storage
- Get immediate rotor detection and programming with the Thermo Scientific™ Auto-ID instant rotor identification technology, helping eliminate over-speed risk, reduce error messages, and improve centrifuge, sample, and operator safety
- Quiet performance (<62 dBA) provides a safe and low-stress environment
- Eco-Spin windshielded rotors provide energy savings of up to 64% when compared with non-windshielded rotors† (see Figure 2)

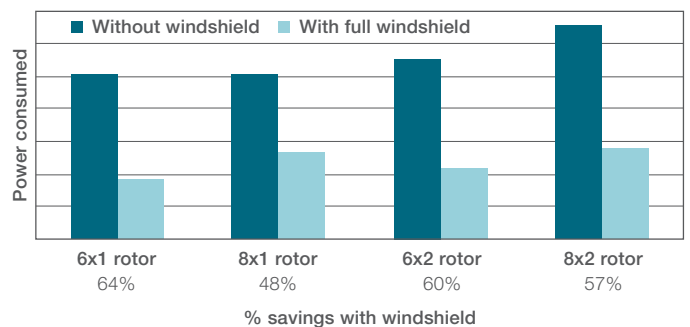
### Results without the ACE integrator function



### Results with the ACE integrator function



**Figure 1. In a typical first centrifugation step, a two-bottle rotor load attains set speed faster than a six-bottle 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 2 bottles 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 simplified

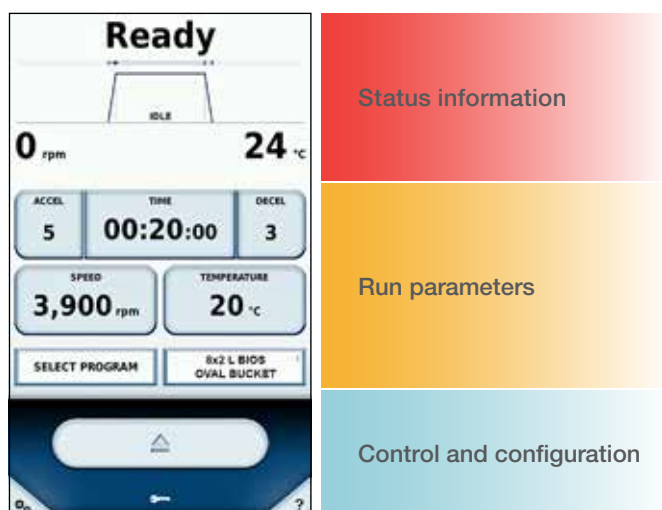
## Intuitive access to powerful functions

Large, bright, interactive Centri-Touch interface for all centrifuge functions and durable for use run after run, year after year.

- Glove- and detergent-friendly
- Simple and quick run setup with Speed, Time, Temp, plus Pre-Temp, and Accel and Decel ramp menu options
- 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, which are enlarged during the run for clear visibility—even from across the lab
- Real-time connection with the Centri-View app to monitor protocols on your smart device



### Simple, quick run setup and monitoring



Easily set current parameters and monitor centrifuge status.

### Powerful functions are just one touch away:

- Quick recall of up to 120 programs with alphanumeric naming to minimize the time between runs and for quick run starts by routine users
- User access control and security with optional password protection, ideal for multiuser environments
- Multilingual instructions on programming, run conditions, alerts, and service messages
- Integrated rotor calculator for simplifying protocol modifications and transfers
- Help screens and in-use training with onboard tutorial videos and a quick-start manual
- Thermo Scientific™ Centri-Track™ onboard software logs users, run conditions, and error messages
- The Thermo Scientific™ Cycle-Log™ rotor bucket cycle log monitors bucket life for added safety

# Connection simplified

## Real-time run status in the palm of your hand

Our Centri-View app provides a real-time connection with your Sorvall BIOS 16 or BIOS A centrifuge. With your smart device, you can check on your run status or find out whether a centrifuge is available from across the campus, building, or lab.

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

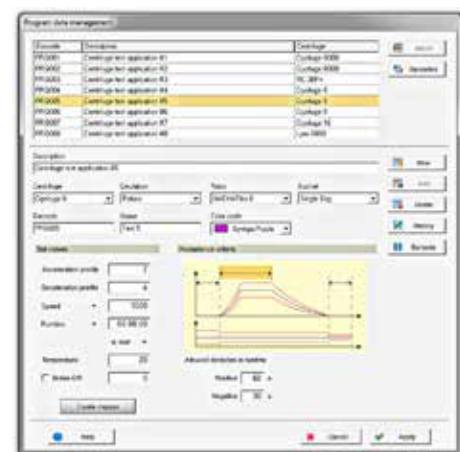


Download the Centri-View app for instant remote monitoring and control, available for both iOS™ and Android™ devices, and stay connected.

# Data collection simplified

## Onboard or through your existing network

- Three logging modes and optional external monitoring and control
- Onboard Centri-Track run logs, downloadable via USB port or real-time via Ethernet
- Centri-Log Plus data collection software is a protocol-tracking solution to enable 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 the 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 <sup>‡</sup>	Centri-Track via Ethernet <sup>‡</sup>	Centri-Log Plus Software Cat. No. 75007742
	Sample Tracking Kit <sup>§</sup> Cat. No. 75007740	Sample Tracking Kit <sup>§</sup> Cat. No. 75007740	Sample Tracking Kit <sup>§</sup> Cat. No. 75007740
Without Sample Tracking	Run Log	Network Access Kit Cat. No. 75007741	Network Access Kit Cat. No. 75007741
		Network Access Kit Cat. No. 75007741	Not Available

<sup>‡</sup> GMP-mode must be enabled.






<sup>§</sup> Sample tracking kit contains barcode scanner, holder, and cable.







## Ordering information

Description	Rotor capacity (places x volume, mL)	Maximum speed (rpm)	Maximum RCF (x g)	Cat. No.
<b>Sorvall BIOS 16 centrifuge rotors</b>				
 6 x 1,000 mL Swinging Bucket Rotor, Round Buckets and 1000 mL Bottles (set)	6 x 1,000 mL	5,400	8,500	75003961
6 x 1,000 mL Swinging Bucket Rotor, Round Buckets with Dura-Coat and 1,000 mL Bottles (set)	6 x 1,000 mL	5,400	8,500	75004161
 8 x 1,000 mL Swinging Bucket Rotor, Round Buckets and 1,000 mL Bottles (set)	8 x 1,000 mL	4,600	7,117	75003981
8 x 1,000 mL Swinging Bucket Rotor, Round Buckets with Dura-Coat and 1,000 mL Bottles (set)	8 x 1,000 mL	4,600	7,117	75004181
<b>Sorvall BIOS 16 centrifuge rotor buckets, bottles and adapters (sets of 2, unless otherwise indicated)</b>				
 Round Bucket				75003963
 Round Bucket with Dura-Coat				75003864
 Cover for Round Bucket				11776
Seal Kit for Cover for Round Bucket (sets of 6)				12995
 1,000 mL Nalgene Bottle, PPCO, (PC) 184.5 mm				3120-1000 (3122-1000)
500 mL Oak Ridge Bottle Adapter	6 or 8 x 500 mL			00444, 00511
250 mL Oak Ridge Bottle Adapter	6 or 8 x 250 mL			01092
50 mL Disposable Conical Tube (Unsealed Bucket) Adapter	30 or 40 x 50 mL			00436
50 mL Disposable Conical Tube (Sealed Bucket) Adapter	18 or 24 x 50 mL			00445
15 mL Disposable Conical Tube Adapter	48 or 84 x 15 mL			00447
15 mL Blood Collection Tube Adapter	108 or 144 x 15 mL			00385
10 mL Blood Collection Tube Adapter	108 or 144 x 10 mL			00385
7 mL Blood Collection Tube Adapter	132 or 176 x 7 mL			00384
5 mL Blood Collection Tube Adapter	132 or 176 x 5 mL			00857
Microplate Carrier	6 or 8 x 3 standard or 6 or 8 x 1 deep-well microplates			11267

## Ordering information








Description	Rotor capacity (places x volume, mL)	Maximum speed (rpm)	Maximum RCF (x g)	Cat. No.
<b>Sorvall BIOS 16 centrifuge rotors</b>				
 6 x 2000 mL Swinging Bucket Rotor, Oval Buckets and 2000 mL Bottles (set)	6 x 2000 mL	4,700	7,187	75003962
6 x 2000 mL Swinging Bucket Rotor, Oval Buckets with Dura-Coat and 2000 mL Bottles (set)	6 x 2000 mL	4,700	7,187	75004162
 8 x 2000 mL Swinging Bucket Rotor, Oval Buckets and 2000 mL Bottles (set)	8 x 2000 mL	3,900	5,374	75003982
8 x 2000 mL Swinging Bucket Rotor, Oval Buckets with Dura-Coat and 2000 mL Bottles (set)	8 x 2000 mL	3,900	5,374	75004182
<b>Sorvall BIOS 16 centrifuge rotor buckets and bottles (sets of 2, unless otherwise indicated)</b>				
 Oval Bucket				75003964
 Oval Bucket with Dura-Coat				75003965
 2000 mL Oval Bottle				75003870

## Ordering information

Description	Rotor capacity (places x volume, mL)	Maximum speed (rpm)	Maximum RCF (x g)	Cat. No.
<b>Sorvall BIOS A centrifuge rotor</b>				
 Fiberlite F6-10x1000 LEX Carbon Fiber Rotor (complete with set of 10 bottles)	10 x 1,000 mL	6,250	12,000	096-101001
<b>Sorvall BIOS A centrifuge rotor bottles (sets of 2)</b>				
 1,000 mL Fiberlite Superspeed Bottle Assembly, PPCO				010-1491
 1,000 mL Fiberlite Superspeed Bottle Assembly, PC				010-1492
Rotor Lid Assembly (each)				099-101001
Rotor Care Kit (each)				020-101001
 Rotor buckets with Thermo Scientific™ Dura-Coat™ nickel coating are also available, providing protection against corrosion due to moisture, chemicals, or alkaline solutions that otherwise can weaken the structural integrity of a metal rotor bucket.				

<b>Centrifuge specifications</b>		
<b>Specifications</b>	<b>Sorvall BIOS 16 Centrifuge</b>	<b>Sorvall BIOS A Centrifuge</b>
Maximum capacity	8 x 2,000 mL	10 x 1,000 mL
Maximum speed	5,400 rpm	6,250 rpm
Maximum RCF	8,500 x g	12,000 x g
Drive system	DuraFlex high-torque brushless drive technology	
Accumulated Centrifugal Effect (ACE) integrator	Yes	
Green technology	Refrigeration off when door opens; Eco-Spin windshilded 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	30 profile/speed/time triplets, up to 3 steps each	
Maintenance tracking log	Yes	
Protocol traceability	Built-in Centri-Track run logging software with optional Centri-Log Plus software available	
Performance range	Speed 300–5,400 rpm; RCF 29–8,500 x g	Speed 300–6,250 rpm; RCF 29–12,000 x g
Run time	99 hours 59 min 59 sec (1 sec increment)	
Pre-cooling function	Yes	
Temperature set range	–20°C to 40°C, adjustable to 1°C	–20°C to 30°C, adjustable to 1°C
Other functions	Multilingual selection, onboard 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) 1015 x 816 x 990 mm (39.9 x 32.1 x 35.4 in.)	
Weight	200, 208, 220, 230, 240 V; 50/60 Hz: 475 kg (1,047 lb); 380, 400, 415 V; 50 Hz: 495 kg (1,090 lb)	200, 208, 220, 230, 240 V; 50/60 Hz: 481 kg (1,060 lb); 380, 400, 415 V; 50 Hz: 466 kg (1,027 lb)
Heat putput	<2 kW	2.3 KW/h
Power consumption	<5,400 VA	<6,400 VA
Certifications	UL, CE	UL, CE
Standards	EN 61010-1 3rd Edition, IEC 61010-2-020 2nd Edition and IEC 61010-2-020 3rd Edition, EN 61326-1 Class B	
Warranty	Unit: 2 yr; power train (motor shaft and drive): 5 yr; refrigeration: 5 yr	

## Ordering information

Description		Cat. No.
<b>Centrifuges</b>		
Sorvall BIOS 16 Bioprocessing Centrifuge, 200, 208, 220, 230, 240 V $\pm 10\%$ ; 50/60 Hz; single phase		75007685
Sorvall BIOS 16 Bioprocessing Centrifuge, 380, 400, 415 V $\pm 10\%$ ; 50 Hz; 3 phase		75007697
Sorvall BIOS 16 Heavy Duty Centrifuge, 200, 208, 220, 230, 240 $\pm 10\%$ ; 50/60 Hz; single phase		75007696
Sorvall BIOS A centrifuge (rotor to be ordered separately), 200, 208, 220, 230, 240 V $\pm 10\%$ ; 60 Hz, single phase; 200 V $\pm 10\%$ ; 50 Hz; Japan only		75007698
Sorvall BIOS A centrifuge (rotor to be ordered separately), 380, 400, 415 V $\pm 10\%$ ; 50/60 Hz; 3 phase		75007699
Sorvall BIOS A Heavy Duty centrifuge (rotor to be ordered separately), 200, 208, 220, 230, 240 V $\pm 10\%$ ; 60 Hz; single phase; 200 V $\pm 10\%$ ; 50 Hz; Japan only		75007700
<b>Power plugs for Sorvall BIOS 16 centrifuges††</b>		
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
<b>Power plugs for Sorvall BIOS A centrifuges††</b>		
NEMA L6-30P 30 A, 200–205 V (permanently connected with the device at the factory)		20190366
IEC60309 32A-6h 5 pin red (3P+N+PE), 220/380 V; 230/400 V; 240/415 V		20190369
<b>Accessories</b>		
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.



**Additional options available: heavy duty with stainless steel front plate, top plate, and side panels.**



**Wolflabs**

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**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

