

**Centrifugation**

# Thermo Scientific BIOS A and 16 Bioprocessing Centrifuges

## Greener with every spin

Thermo Scientific™ BIOS A and 16 Centrifuges feature a next-generation natural refrigerant cooling system. Thermo Scientific™ GreenCool Technology operates with carbon dioxide (CO<sub>2</sub>) as refrigerant, which has a Global Warming Potential (GWP) of 1, lower than other refrigerants, while not contributing to depletion of the ozone layer and is compliant with EU and US EPA F-gas regulations. Besides being less hazardous, the centrifuges are more energy efficient with up to 15% lower energy consumption compared to previous models. Additionally, they are manufactured in a certified zero-waste facility using 100% renewable energy in Osterode am Harz, Germany.

### BIOS A Centrifuge

High performance, up to 12,000 x g in a fixed-angle configuration (one rotor option), up to 10L capacity (10 x 1L)

### BIOS 16 Centrifuge

Lower speeds, but up to 16L capacity (8 x 2 L bottles) with flexibility to spin blood bags, bottles, bioprocess containers and tubes

### Thermo Scientific™ features

- Large capacity of up to 16 L or 10 L at 12,000 x g
- Auto-ID™ Instant Rotor Identification
- GreenCool Technology and Eco-Spin™ Rotors
- Centri-Touch™ Interface
- Auto-Door™ and Auto-Lid™ Function
- DuraFlex™ Drive Technology
- Accumulated Centrifugal Effect (ACE™) Function
- Centri-Cross™ Function
- Centri-Vue™ Application
- Latest global safety and compliance standards

**GREEN  
COOL  
TECHNOLOGY**



**GLOBAL  
WARMING  
POTENTIAL\***

**1**

**LOWER ENERGY  
CONSUMPTION  
UP TO\*\***

**-15%**

**MADE IN A  
CERTIFIED  
ZERO-  
WASTE  
FACILITY\*\*\***

**LESS  
WEIGHT**

**-60 kg**

**LOWER  
NOISE  
LEVEL\*\*\*\***

**-50%**

\* Due to natural refrigerant (CO<sub>2</sub>)

\*\* Energy use measured for a 1-hour run at maximum speed and compared to previous model. New BIOS A: 5400W vs Previous Sorvall BIOS A model: 6400W; BIOS 16: 4600W vs. Previous Sorvall BIOS 16 model: 5400W

\*\*\* Zero waste defined as less than 10% of non-hazardous waste sent to landfill, incineration or waste-to-energy

\*\*\*\* 4 db(A) less for BIOS 16 model compared to previous model, measured at maximum speed.



| Specifications                                       | BIOS 16 Centrifuge                                                                                                                                                                                                                        | BIOS A Centrifuge                                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 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                                     | GreenCool 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-second increment)                                                                                                                                                                                               |                                                                                                     |
| Pre-cooling function                                 | Yes                                                                                                                                                                                                                                       |                                                                                                     |
| Temperature set range                                | –20° to 40°C, adjustable to 1°C                                                                                                                                                                                                           | –20° 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) 1,015 x 816 x 990 mm (39.9 x 32.1 x 35.4 in.)                                                                                                                                                                                 |                                                                                                     |
| Weight                                               | 200, 208, 220, 230, 240 V; 50/60 Hz: 415 kg (915 lb);<br>380, 400, 415 V; 50 Hz:<br>438 kg (966 lb)                                                                                                                                       | 200, 208, 220, 230, 240 V; 50/60 Hz: 415 kg (915 lb);<br>380, 400, 415 V; 50 Hz:<br>415 kg (915 lb) |
| Heat output                                          | <2.9 kW                                                                                                                                                                                                                                   | 3.5 kW/h                                                                                            |
| Power consumption                                    | <4,600 VA                                                                                                                                                                                                                                 | <5,400 VA                                                                                           |
| Noise level                                          | 58dB (A)                                                                                                                                                                                                                                  | 60dB (A)                                                                                            |
| Certifications                                       | UL, CE                                                                                                                                                                                                                                    | UL, CE                                                                                              |
| Cleanroom compatibility                              | Class ISO 6 according to DIN EN ISO 14644-1                                                                                                                                                                                               |                                                                                                     |
| Standards                                            | EN 61010-1 3rd Edition, IEC 61010-2-020 2nd Edition and<br>IEC 61010-2-020 3rd Edition, EN 61326-1 Class B                                                                                                                                |                                                                                                     |
| Warranty                                             | 2 years for unit, 5 years for powertrain (motor shaft and drive), 5 years for refrigeration                                                                                                                                               |                                                                                                     |

## Ordering information

| Centrifuge                                                                                                                                                                                  | Cat. No. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| BIOS 16 Bioprocessing Centrifuge with GreenCool Technology<br>200, 208, 220, 230, 240 V $\pm 10\%$ ; 50/60 Hz; single phase                                                                 | 75008612 |
| BIOS 16 Bioprocessing Centrifuge with GreenCool Technology<br>380, 400, 415 V $\pm 10\%$ ; 50 Hz; 3 phase                                                                                   | 75008617 |
| BIOS 16 Heavy Duty Centrifuge with GreenCool Technology<br>200, 208, 220, 230, 240 $\pm 10\%$ ; 50/60 Hz; single phase                                                                      | 75008614 |
| BIOS A Centrifuge with GreenCool Technology (rotor to be ordered separately)<br>200, 208, 220, 230, 240 V $\pm 10\%$ ; 60 Hz, single phase; 200 V $\pm 10\%$ ; 50 Hz; Japan only            | 75008620 |
| BIOS A Centrifuge with GreenCool Technology (rotor to be ordered separately)<br>380, 400, 415 V $\pm 10\%$ ; 50/60 Hz; 3 phase                                                              | 75008621 |
| BIOS A Heavy Duty Centrifuge with GreenCool Technology (rotor to be ordered separately)<br>200, 208, 220, 230, 240 V $\pm 10\%$ ; 60 Hz; single phase; 200 V $\pm 10\%$ ; 50 Hz; Japan only | 75008622 |



Learn more at [thermofisher.com/bioscentrifuge](https://thermofisher.com/bioscentrifuge)

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