

1500 Series A2, Herasafe 2025, Herasafe 2030i, and MSC-Advantage Biological Safety Cabinets



Introduction

We are committed to designing our products with the environment in mind. This fact sheet provides details on the energy-saving features of Thermo Scientific™ Class II Biological Safety Cabinets (BSCs)—including the 1500 Series A2, Herasafe™ 2025, Herasafe™ 2030i, and MSC-Advantage™ BSCs—and the rationale behind the environmental claim that they use 40–68% less energy than previous models and comparable products.

Product description

The 1500 Series A2, Herasafe 2025, Herasafe 2030i, and MSC-Advantage BSCs are available with or without the cabinet and a manually adjustable height stand, factory-installed UV light, and armrests. These BSCs deliver outstanding protection due to their exceptional airflow design and their thoughtful ergonomic design to help provide safety and comfort. Couple that with their energy efficiency and operational cost savings, and it's easy to see why scientists find them to be an exceptional value.

Green feature

More energy efficient

With proprietary airflow design and energy-efficient DC motors, the 1500

Series A2, Herasafe 2025, Herasafe 2030i and MSC-Advantage BSCs are designed to reduce energy consumption. They use up to 68% less energy than cabinets with traditional AC motors (Table 1). This is primarily due to the increased efficiency of DC motors in converting electric energy to airflow without the braking required in AC motors. In addition to energy savings, the reduced airflow helps extend the filter life with more balanced loading. These features translate to an annual reduction of up to 2,405 kWh of energy consumption (1.7 tons CO₂ equivalents) per unit [1]. Using energy-efficient equipment helps save our customers money and lightens the environmental impact of using these products.

Table 1. Comparison of energy usage during operation. Total energy usage was calculated using the assumption that each cabinet would be in operational mode for 261 working days per year.

Model	Power usage in operational mode (kW)	Total energy usage (kWh/year when used 8 hr/day)	Total energy usage (kWh/year when used 24 hr/day)	Energy use reduction of Herasafe 2030i and 1500 Series A2 BSCs compared to other products
Herasafe 2030i and 1500 Series A2 BSC	0.180	376	1,128	—
NuAire™ Class II Type A2 BSC*	0.299	624	1,873	40%
Baker SterilGARD™ 404 BSC**	0.414	864	2,593	56%
Average traditional AC cabinet†	0.564	1,178	3,533	68%

* Power usage of NuAire Class II, Type A2 4 ft. BSC in operational mode is referenced on page 7 of brochure "Process 9-1163P Rev. 4 5/1".

** Power usage of SterilGARD 404 BSC with standard opening height in operational mode is referenced on page 10 of brochure "SG-115v-specrevB-Apr2014".

† Power usage in operational mode referenced here is based on the average of prior and other models on the market of 201 Class II, Type A2 BSCs of nominal 4 ft width surveyed at various locations from 2007 through 2015.

The Thermo Scientific BSCs listed here offer several key features that further reduce energy use during operation, including:

- **Time-adjustable UV germicidal light**—auto-shutoff feature helps to save energy and preserve bulb life
- **Standby mode**—automatically reduces blower speed and protects samples until you are ready to resume work; the standby mode reduces power usage from 0.18 kW to 0.070 kW for the 1500 Series Type A2 BSC and 0.055 kW for the Herasafe 2030i BSC
- **Light bulb replacement alert (Herasafe 2030i BSC)**—activates when the UV germicidal light bulb needs to be replaced, preventing early disposal of the bulb
- **Configurable one-touch automatic start and stop function (Herasafe 2030i BSC)**—efficiently activates or deactivates all cabinet components to streamline the process for all users of the BSC

Contact our technical service representative for more information about how to select a BSC that saves energy while continuing to deliver leading performance in containment and safety.

Designing these BSCs to use significantly less energy represents a win for our company, our customers, and the planet.

Reference

1. U.S. EPA greenhouse gas equivalencies calculator.
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

 Find out more at thermofisher.com/bsc

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