

1300 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—it's part of how we enable our customers to make the world healthier, cleaner and safer. This fact sheet provides details on the energy-saving features of Thermo Scientific™ Class II Biological Safety Cabinets (BSCs)—including the 1300 Series A2, Herasafe™ 2025, Herasafe™ 2030i,

and MSC-Advantage™ BSCs—and the rationale behind the environmental claim that they are 40–68% more energy-efficient than previous models as well as comparable products.

Product description

The 1300 Series A2, Herasafe 2025, Herasafe 2030i, and MSC-Advantage BSCs are available in a variety of packages that can include the cabinet and a manually adjustable height stand, factory-installed UV light, and armrests. These BSCs deliver exceptional design and technology advancements such as outstanding protection with proprietary airflow design, ergonomics to help provide a safe and comfortable environment, and energy efficiency for operational cost savings.

Green features

Energy-efficient

With proprietary airflow design and energy-efficient DC motors, the 1300 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 has the added benefit of extending the filter life with more balanced loading. The impact of these two innovative design features means increased energy efficiency with an annual reduction of up to 2,405 kW-hr 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.

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

- **Time-adjustable UV germicidal light**—has an auto-shutoff feature at the desired interval 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 energy usage from 0.18 kW to 0.070 kW for the 1300 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.

Table 1. 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 (kW-hr/year when used 8 hr/day)	Total energy usage (kW-hr/year when used 24 hr/day)	Energy use reduction of Herasafe 2030i and 1300 Series A2 BSCs compared to other products
Herasafe 2030i and 1300 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	2,295	51%
Average traditional AC cabinet†	0.564	1,178	3,533	68%

* Power usage of NuAire 4 ft, Type A2 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 market of 201 Class II, Type A2 BSCs of nominal 4 ft width surveyed at various locations from 2007 through 2015.

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