

1300 Series, Type A2 Class II 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 remarkable energy-saving features of Thermo Scientific™ 1300 Series Class II, Type A2 Biological Safety Cabinets (BSCs), and the rationale for our claim that they are 40–68% more energy-efficient than previous models as well as products of other competitors.

Product description

The 1300 Series Type A2 BSCs are available in a variety of packages that 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 BSCs are designed with reduced energy consumption in mind. 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 the 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

(1.7 tons CO₂ equivalents) per unit [1]. Therefore, using energy-efficient equipment helps save our customers money. This represents a win for us, our customers, and the planet.

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

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

Model	Power usage in operational mode (kW)	Total energy usage (at 8 hr/day; kW-hr/year)	Total energy usage (at 24 hr/day; kW-hr/year)	Energy use reduction of 1300 Series BSCs compared to other products
1300 Series Class II Type 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 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>

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