



What Should You Look for in a Blood Bank Refrigerator?



Introducing Blood Bank Refrigerators

According to the American Red Cross, "nearly 16 million blood components are transfused each year in the U.S."¹ This enormous volume of blood makes blood bank refrigerators an in-demand piece of equipment in hospitals and laboratories everywhere.

Blood refrigerators are Class II medical devices that must be certified and approved by the FDA. These science-backed machines offer new capabilities to safely store the sensitive composition of blood.

How are Blood Components Stored?

What makes a blood refrigerator suitable to store blood? Blood storage equipment requires temperature uniformity, reliable alarms, temperature stability and recovery, and compliance with all FDA requirements.

Different blood products require different storage conditions. For example, plasma is separated from the blood before storage, and frozen rather than refrigerated. Whole blood components are typically refrigerated and stored in blood bags. Whatever the case, all blood products require specialized blood storage equipment and FDA certification.

Where are Blood Banks Used?

The American Red Cross states that, "13.6 million units of whole blood and red blood cells are collected in the U.S. in a year."² This enormous supply requires an immense network of blood storage facilities including hospitals, blood transfusion centers, clinics, research laboratories and more.

Blood transfusions are used to treat patients with serious illnesses, traumatic injuries, cancer, and more. A single blood donation can save more than one life.³ Blood bank refrigerators are needed in all facilities that collect, process, and store blood and blood components.

Blood Storage Requirements and Certifications

The storage of blood is strictly regulated by the FDA—and for good reason. Precise temperatures must be maintained to preserve the sensitive nature of the substance. Blood requires consistent refrigeration at 1 to 6°C. Rapid cooling features integrated within blood storage units help equipment recover from door openings and preserve the fragile nature of blood samples.

Blood bank refrigerators must be tested and approved by FDA standards before they are allowed to market. Units already in use are subject to inspections to make sure they are up to quality standards. FDA inspectors may look for the misuse of equipment or safety compromises where the medical systems are being mishandled. Ultimately these FDA requirements—although strict—are intended to preserve blood components at the highest quality for end patients. These safe storage checks ensure that each patient receives blood in optimal condition when administered.

The Association for the Advancement of Blood and Biotherapies (AABB) is another trusted source which tests and regulates blood bank refrigerators. Products with this seal of approval must meet a strict AABB standard. Blood bank refrigerators with AABB compliance are engineered to reflect the highest quality standard.

Features of a Blood Bank Refrigerator

What features should you look for in a blood bank refrigerator? While features for your specific blood application can vary, here are some key components to look for during your search:

Variable Speed Compressors: Variable speed compressors reduce energy consumption and improve temperature control—both incredibly beneficial features when it comes to blood storage. Variable speed compressors also contribute to temperature uniformity and enforce other efforts to keep blood temperature stable.

Chart Recorder or Data Logging Capabilities: Blood bank equipment that manually charts a temperature range or provides access to digital data logging is vital. Consider smart controllers with data logging capabilities or try tracking temperatures through a chart recorder. Because tracking temperature metrics is required with blood bank equipment, having digital or built-in tracking methods is incredibly helpful.

Slide-out Stainless-Steel drawers: Think about ease of access when it comes to reaching your blood bags or blood products. Not only is quick access to these substances time-saving and convenient, but it will keep energy consumption lower through shorter door openings and quicker temperature recovery. Spacious sliding drawers offer ready access and increased storage capacity. Stainless steel drawers are a bonus, since this material is trusted in medical systems, easy to clean, and durable.

Controller Battery Backup: Having a blood refrigerator with a battery backup can give you great peace of mind. A battery backup will keep your controller running, your alarms activated, and blood temperatures monitored during an otherwise fatal power loss.

Blood Simulator Product Sensors: Blood bank refrigerators often use blood simulator sensors to monitor conditions inside a blood cabinet. Thermal ballasts or glycerol bottles may be used for monitoring temperature range and air conditions. These additions are a helpful gauge on how blood will respond to the current air conditions of a cabinet.

Digital Display : Another feature to look out for is a digital controller with a clear temperature display and easy-to-use monitoring features. These digitized features will benefit you every day as you maintain a temperature log and track temperature uniformity.

Size and Cabinet Materials: Consider size, dimensions, and cabinet capacity. Undercounter blood bank refrigerators are useful for small spaces requiring stored blood. A glass door unit can be helpful to quickly scan supplies without increasing the frequency of door openings. The cabinet size and materials used can make a world of difference to the everyday tasks you perform.

Certifications: Always look for certifications on each prospective unit. Certifications to look out for include Energy Star certification, AABB, ANRC and FDA certifications. These certifications add validity and reassurance to your purchasing decision. Above all, make sure each prospective blood bank refrigerator meets FDA compliance guidelines.

The Wrap on Blood Storage

The cold storage of blood is vital for advancing medical sciences in our ever-evolving world. A highly dependable product, the blood bank refrigerator is ideally suited for the task.

Today, no one can dispute the importance of blood preservation, with patients all over the world depending on this critical substance. Currently, many medical services aren't

possible without blood. Protect your blood supply with storage equipment that will preserve lives and advance medical discoveries for years to come.



About Corepoint Scientific®

Corepoint Scientific® provides a full range of temperature-controlled equipment to our customers across the clinical, laboratory, and industrial segments. Explore [Corepoint® blood bank refrigerators](#) to learn more.



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