



PHARMACY REFRIGERATORS

**HOW THEY ADVANCE  
PATIENT SAFETY**

# YOUR BENEFITS

**Vestfrost Solutions has always developed new innovative features to be ahead of the high demand for medical cooling.**



### Low Noise

We realize that our products are often placed in our user's immediate work environment. That's why it is important for us to contribute to a healthy work environment by keeping our products as quiet as possible, without compromising their performance.



### Environment Friendly

Keeping power consumption low is not only about reducing our customers operational costs, it's also a matter of supporting them in reducing the environmental impact. On that same note we are also proud to state that our products are 80% recyclable on average.

Additionally, Vestfrost has been using natural refrigerants for more than 15 years, which means that our products are 100% CFC and HCFC free. Consequently, they carry virtually no impact on the ozone layer or the global warming.



### User Friendly

We understand that our products serve a role as facilitator for the end user. With that in mind we develop products from a user-perspective – They must be intuitive to use, easy to operate and effortless to clean, so that the user can concentrate on what's important for them.

## GLOBAL DIVERSITY, COMMON PURPOSE

*"...they all have one thing in common, patient safety comes first..."*

Being a manufacturer of refrigerators since 1963 and serving a global market, Vestfrost has first-hand experience with global diversity.

In the Pharmacy industry differences can be found in the people that work there, the processes they follow, the type of medication they manage, the documentation that is required from them and not least the budget they have available. Nonetheless, whoever we seem to talk to, they all have one thing in common, patient safety comes first.

We have developed this flyer, so that you know **how a pharmacy refrigerator can advance your patient safety, and minimize the risk to your inventory, compared to cheaper alternatives.**

# TEMPERATURE PERFORMANCE



An often overlooked, but essential parameter is the temperature performance of the refrigerator.

Many types of medicine are susceptible to damage if not maintained in ideal temperature conditions throughout its life cycle. This poses a considerable risk both to the patients receiving the potentially damaged or ineffective medicine, and to the pharmacists in having to discard their expensive inventory.

A refrigerators Temperature performance is therefore essential and yet often overlooked, due to lack of information or the complexity associated with understanding it.

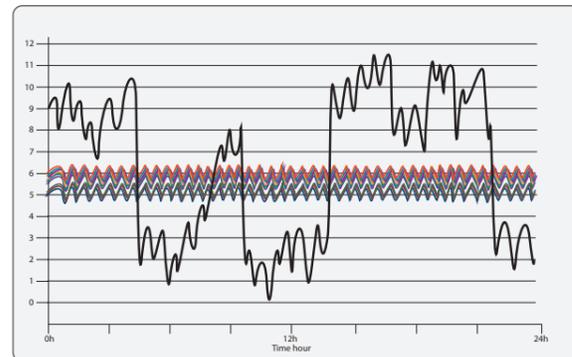
Here are 3 key indicators of temperature performance:

- **Temperature stability** - The precision in terms of maintaining a set-point temperature
- **Temperature accuracy** - How closely readings will match those of a calibrated standard
- **Temperature uniformity** - The potential variation in temperature between different points (*top & bottom i.e.. - see graph*)

Looking at those parameters you will find that domestic-, food- & even some biomedical refrigerators, are not adequate for safe storage of medicine.

## UNIFORMITY GRAPH

Illustration of a 9-point test on a Vestfrost 397 with a set point of 5°C



A German Study showed an average value of 20.000€ in Medicine being stored in refrigerators at pharmacies

- What's your risk?

## So what's different?

Typically a good quality biomedical refrigerator is fitted with up to 5 probes, accurately monitoring the temperature at different points inside the cabinet, ensuring that the compressor works optimally. Better panels, construction and airflow are also contributing factors to a good temperature performance.

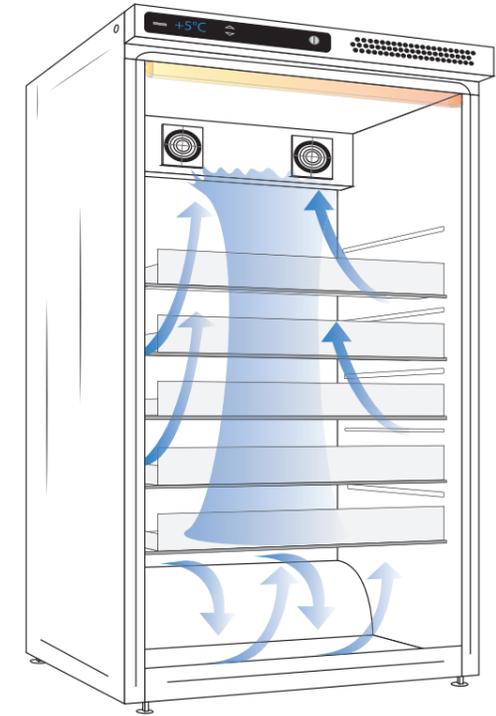
# AIRFLOW

Distribution of the airflow inside the cabinet will improve temperature uniformity.

Another contributing factor to the safe storage of medicine, is the addition of fans.

By generating airflow in the cabinet they improve temperature uniformity & stability by eliminating "hot and cold spots" which you would see in domestic refrigerators & refrigerators with no or inadequate airflow.

These hot and cold spots often entails that areas of your storage space would not be suited for medicine, as the temperature conditions can affect both the quality and effectiveness of the medicine.



## kWh/24h

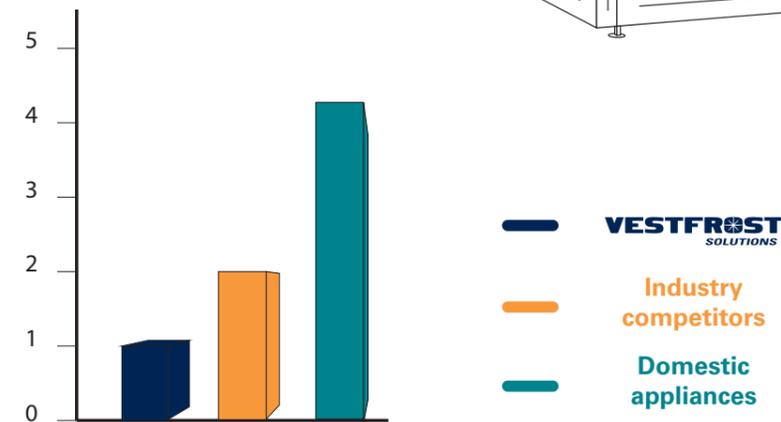


Illustration of energy consumption of AKG 397, compared to an avg. of similar price competitors & domestic appliance

## Low energy consumption makes a difference

With energy prices in EU upwards of 0,16 € pr. kWh, it is relevant to look at the energy consumption of the storage appliance you intend to buy. Domestic appliances are typically substantially more costly in operation due to their excessive consumption.

A difference of 1,00 kWh/24 in energy consumption would cost you ~58.- € annually, and thus 580.- € in the life span of an average refrigerator.

# DOCUMENTATION & RISK REDUCTION



## A professional pharmacy controller provides a number of key advantages.

Refrigerators intended for domestic use or storage of food, is equipped with a basic controller, and can often be placed inside the cabinet, obscuring visibility and can result in unnecessary door openings, which affects the temperature performance. Others are placed at floor level, which is considered a contaminated area to Hospitals & pharmacies, and is ergonomically impractical to use.

Below is an illustration of key advantages gained with a professional Vestfrost Pharmacy controller.

### Visual & Acoustic Alarms

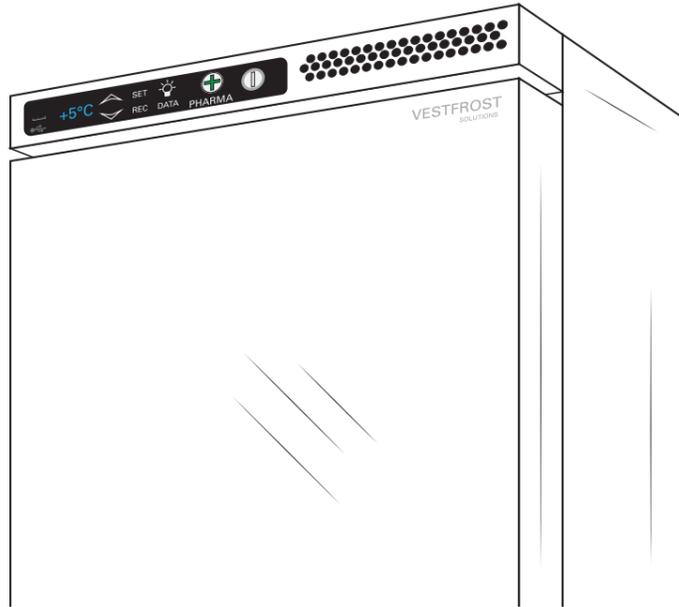
- High/Low Temperature
- Open Door
- Probe Failure
- Power Failure

### Adjustable Parameters

Change settings to fit your requirements

### Datalogger

Logs the temperature on each of the 5 probes and any alarms that may have occurred. With a capacity of 35.000 it will log up to 3 years of operation, easily retrieved via USB connection



### Accurate Temperature Display

With 5 individual probes, the controller will accurately indicate the cabinet temperature

### Freeze Protection

Independent controller will shut off compressor to prevent your medicine from freezing, in the event of a malfunction

# VESTFROST

## Our safe and reliable options.



**LOW NOISE**  
<41 dB



**ENVIRONMENT FRIENDLY**  
Natural Refrigerant  
Solid door below 0,8 kWh/24h



**USER FRIENDLY**  
Plug & Play  
Ergonomic door handle  
Filterless construction

Available with Glass doors



SPECIFICATIONS	AKS/G 157
Dimensions, H x W x D, mm	825 x 595 x 645
Gross volume, Litres	133
Net volume, Litres	119
Temperature range, C°	+2 to +8
Max number of shelves	3 + bottom

SPECIFICATIONS	AKS/G 397
Dimensions, H x W x D, mm	1919 x 595 x 638
Gross volume, Litres	360
Net volume, Litres	351
Temperature range, C°	+2 to +8
Max number of shelves	8 + bottom

SPECIFICATIONS	AKS/G 337
Dimensions, H x W x D, mm	1550 x 595 x 638
Gross volume, Litres	288
Net volume, Litres	281
Temperature range, C°	+2 to +8
Max number of shelves	6 + bottom

ISO 9001,  
13485, 14001 &  
18001 OHSAS  
Certified

# PROFESSIONAL SOLUTIONS

Vestfrost Solutions is a global developer and manufacturer of innovative and efficient refrigerators and freezers for the professional market. With more than 50 years' experience, we have strong records within manufacturing supplied to the global professional industry, where temperatures must be reliable and precise at all times. We employ numerous initiatives to reduce costs of product usage and to minimize environmental impact.

The continuously expanding product line is based on extensive research and thoroughly tested technology; all products honoring the highest requirements in terms of safety, quality and usability.

For more information, please visit our website:  
[www.vestfrostsolutions.com](http://www.vestfrostsolutions.com)



ISO 13485  
Management System Certification  
BUREAU VERITAS  
Certification Denmark A/S

