



SURECHILL

VACCINE REFRIGERATORS

PROTECTING  
VACCINES.  
SAVING  
LIVES.

Simply impossible **cooling**

*“Sure Chill has not only ensured that our vaccines are stored at the right temperature even without power for a long time, but also relieved us of the tension of getting the valuable vaccines spoiled due to regular outage of power and high ambient temperatures.”*

**GILBERT MUSONDA**

*Chief Medical Equipment  
Officer, Republic of Zambia,  
Ministry of Health*

**VACCINES ARE SPOILT  
BY FREEZING**

It is well documented that 75% to 100% of vaccine shipments are exposed to freezing temperatures at some point during their time in the cold chain.<sup>1</sup> Sure Chill® vaccine refrigerators are guaranteed never to freeze vaccines. The unique technology limits the temperature variation in the cabinet to less than 1°C. This eliminates the stratification and freezing problems found in conventional vaccine refrigerators and ensures vaccines are kept at a constant safe temperature.

**VACCINES ARE SPOILT  
BY EXPOSURE TO HIGH  
TEMPERATURES**

Damage can occur to vaccines through a single exposure to heat when there is a power outage. It can also occur through several short exposures to heat when standard equipment fails to meet the twin challenges of high ambient temperatures and unreliable electricity supply. **Sure Chill vaccine refrigerators are different.** They deliver outstanding performance with as little as 2½ hours of electricity per day at high ambient temperatures. If the power goes off completely, Sure Chill can keep vaccines at a safe temperature for 10 days or more, even with the refrigerator in normal use.

**NO ELECTRICITY? NO PROBLEM**

The Sure Chill solar direct drive vaccine refrigerator delivers the same reliable performance as the mains powered version. What's more it doesn't need a battery to keep delivering that performance overnight or in low light conditions.

**A PRINCIPLE THAT NEVER FAILS**

Sure Chill works on the principle that water is at its densest at 4°C. Water, not ice, surrounds a Sure Chill refrigeration compartment. When power is supplied to the refrigerator, the water cools and ice is formed above the compartment leaving only water at 4°C cooling the contents. When the power is switched off, the water warms and rises while the ice begins to melt. This keeps only water at a perfect 4°C cooling the contents of the compartment. The system can operate like this, without any power whatsoever, for many days.

**PROTECTING YOUR INVESTMENT.  
PROTECTING COMMUNITIES**

Vaccines are a major investment. A vaccine refrigerator may hold \$30,000 worth of vaccines at any one time. Over the course of its lifetime millions of dollars of vaccines will be stored in it. Thousands of lives will depend on its performance. It makes sense to invest in a vaccine refrigerator that can guarantee the safe storage of vaccines even under the most challenging conditions. An inferior refrigerator is a false economy and one that could cost lives.

**WORKS ANYWHERE IN  
THE WORLD**

Sure Chill vaccine refrigerators are safeguarding vaccines and saving lives in many countries across the world, including Chad, DR Congo, Ethiopia, Haiti, Malaysia, Mali, Nigeria, Senegal, Sierra Leone, South Africa, South Sudan, USA, Vietnam, Zambia and Zimbabwe. **The Sure Chill Company** has delivered cold chain refrigeration for clients including UNICEF, Partners in Health, PATH, Econet Wireless and many country and state Ministries of Health.

## SURE CHILL VACCINE REFRIGERATOR FACT FILE

### Stunning performance

- Sure Chill keeps cabinet temperatures between 4°C and 5°C and limits temperature variation within the cabinet to less than 1°C – guaranteed never to freeze vaccines.
- Mains powered model guaranteed to keep vaccines safe in the absence of any power supply for more than 10 days at a constant 43°C ambient
- Solar direct drive model provides guaranteed cooling for more than 7 days without power at 43°C ambient.
- Both perform even longer at lower ambient temperatures.

### HASSLE FREE USE, HASSLE FREE MAINTENANCE

- Sure Chill refrigerators never form ice on the cabinet walls – no risk of freezing vaccines and no need to ever defrost the refrigerator.
- Upright refrigerator design makes it easier to see, access and manage stock.
- Vaccines kept at safe temperatures even when the refrigerator door is opened to access stock.
- Solar direct drive model does not need batteries to maintain performance overnight or when there is limited sunlight.
- Mains version requires an average of less than 4 hours electricity per day at 43°C and just 2½ hours at 32°C.
- Made from quality composite materials that are robust and easy to clean.
- Designed for easy maintenance and repair – the refrigeration circuit is accessible by removing just a few screws.

## COMPLIANT WITH INTERNATIONAL STANDARDS

- Products are the result of more than 20 years of experience.
- Units are extensively tested in the laboratory to simulate the harshest environmental conditions.
- Intensive in-field testing in many locations worldwide has demonstrated exceptional, reliable and reproducible performance in a wide variety of climatic conditions.
- Both mains powered and solar models have been independently tested and are WHO pre-qualified. Follow the link below to our WHO PQS approved products.  
[www.surechill.com/pqs/blf100ac](http://www.surechill.com/pqs/blf100ac)  
[www.surechill.com/pqs/blf100dc](http://www.surechill.com/pqs/blf100dc)

*“It is my view that Sure Chill technology will make a huge contribution to childhood vaccination programs worldwide, especially in poorer communities.”*

### SIR RICHARD FEACHEM

*Professor of Global Health at the University of California, San Francisco and Berkeley, and Under Secretary General of the United Nations*





## SPECIFICATIONS

	BLF 100 AC	BLF 100 DC	
Size	W89cm x D76cm x H185cm	W89cm x D76cm x H185cm	
Gross storage capacity	124L	124L	
Vaccine storage capacity	99L	99L	
Holdover time 43°C	>10 days	>7 Days	
Holdover time 32°C	>12 days*	>9 days*	
Power consumption	43°C < 4 hours supply per day**	32°C < 2 ½ hours supply per day**	Solar array 370W suitable for most geographical locations.
Minimum rated ambient temperature	10°C	5°C	
Refrigerant	R134a (CFC free)	R600a (CFC/HFC free)	
Insulation	CFC/HFC free	CFC/HFC free	
PQS code	E003	E003	
Optional extras	Extra shelves, drawers, chilled water packs, blood bank modification.		

\* Result from in-house testing

\*\*This is an average figure that may be applied to one single 24 hour period or, say, one week e.g. 2.5hrs/day or 17.5 hours for one week at any time in that week.

<sup>1</sup> Matthias DM et al Freezing temperatures in the vaccine cold chain: A systematic literature review. Vaccine 25 (2007) 3980-3986

® Sure Chill® is a patented technology.

*“At our Kayosha Maternity Clinic, we’re so pleased with the new Sure Chill Refrigerator we have shifted all the vaccines to this from our existing conventional vaccine refrigerators.”*

**SAMUEL DAKA**

*Clinical Officer; Kayosha Rural Health Centre*



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