CRITICAL CARE FOR CRITICAL NEEDS

Godrej Medical Refrigerators with Sure Chill® technology ensure perfect temperature control with no risk of freezing.
Why choose Godrej Medical Refrigerators with Sure Chill technology?

• **Guaranteed never to freeze vaccines:** Research suggests that 75% to 100% of vaccine shipments are exposed to freezing temperature at some point during their time in the cold chain. Sure Chill™ technology guarantees 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.

• **Minimises thermal shock:** 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. Godrej Medical Refrigerators with Sure Chill technology 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.

• **Thrives under testing conditions:** 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.

• **Patented Sure Chill technology:** 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.

• **A sound investment:** Vaccines are a major investment. Over the course of its lifetime millions of dollars worth 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 ensure the safe storage of vaccines even under the most challenging conditions. An inferior refrigerator is a false economy and one that could cost lives.

Sure Chill is a patented technology licensed by The Sure Chill Company
Proven Performance with Sure Chill technology -

**Uncompromised cooling**
- Sure Chill technology limits temperature variation within the cabinet to less than 1°C and guarantees never to freeze vaccines
- The technology provides exceptionally long holdover times to cope with periods of no power
- Ice never forms on the cabinet walls - no risk of freezing and no need to ever defrost the refrigerator
- Solar Direct Drive models deliver same reliable performance as mains powered versions

**Compliant with International Standards**
- All Lifo models are being independently tested for WHO prequalification
- All models are extensively tested to simulate the harshest environmental conditions
- Independent study confirms Sure Chill technology provides dependable cooling - protecting lifesaving vaccines

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**30 day compartment temperature monitoring study**

![Graph showing temperature monitoring over 30 days for Conventional ILR Chest Refrigerator vs Vaccine Refrigerator with Sure Chill technology.](image)

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**Saving lives around the world**
- Sure Chill technology is in use in over 30 countries across the world including: Afghanistan, Chad, DR Congo, Ethiopia, Haiti, India, Malaysia, Mali, Nigeria, Philippines, Senegal, Sierra Leone, South Africa, South Sudan, USA, Vietnam, Zambia and Zimbabwe

**Trusted by Ministries of Health**
- "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 ambient temperatures."

Gilbert Musonda, Chief Medical Equipment Officer, Republic of Zambia, Ministry of Health
Key Features

- Sure Chill technology guarantees never to freeze vaccines
- Environment friendly - CFC, HFC and HCFC free
- WHO pre-qualified*. Ambient temperature rated +10°C to +43°C
- Built-in intelligent temperature control, early warning and energy management system
- Refrigerator continues to operate on only 2.5 hrs of power per day*

Rated Grade A - Freeze Protection by WHO
Product Features:

1. General
   - Vaccine refrigerators powered by mains electricity

2. Performance
   - Minimises thermal shock during usage compared to conventional refrigerators
   - Operating temperature range: +10°C to +43°C
   - Voltage and frequency: 220-240V 50/60 Hz
   - Guaranteed never to freeze contents with patented Sure Chill technology

3. Features
   - Display Thermometer: Externally readable digital display thermometer
   - Voltage Stabiliser (optional): Operating range 160-270V
   - Front opening for easy stock management
   - Corrosion resistant: Epoxy Polyester (EPO) coated Galvanized Steel Outer Cabinet
   - Fitted with two latch locks for use with a padlock
   - Designed for easy maintenance and repair
   - 2 year of warranty

4. Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GVR 50AC</th>
<th>GVR 100AC</th>
<th>GVR 225AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (WxDxH) mm</td>
<td>795 x 750 x 1220</td>
<td>795 x 750 x 1820</td>
<td>795 x 750 x 1820</td>
</tr>
<tr>
<td>Gross Storage Capacity (L)</td>
<td>57.7</td>
<td>121</td>
<td>278</td>
</tr>
<tr>
<td>Vaccine Storage Capacity (L)</td>
<td>46.5</td>
<td>99</td>
<td>225</td>
</tr>
<tr>
<td>Energy Consumption, Stable Running</td>
<td>0.56 kWh/ 24 hours</td>
<td>0.75 kWh/ 24 hours</td>
<td>1.6-2 kWh/ 24 hours</td>
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<tr>
<td>Energy Consumption, Cool Down Test</td>
<td>0.64 kWh/ 24 hours</td>
<td>1.90 kWh/ 24 hours</td>
<td>-</td>
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<tr>
<td>Refrigerant</td>
<td>R600a</td>
<td>R600a</td>
<td>R600a</td>
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<tr>
<td>PQS Code</td>
<td>E003/046</td>
<td>E003/047</td>
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<tr>
<td>Net Weight (Kg)</td>
<td>96</td>
<td>125</td>
<td>125</td>
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<tr>
<td>Gross Weight (Kg)</td>
<td>125</td>
<td>160</td>
<td>160</td>
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<tr>
<td>Holdover Time</td>
<td>7+ days</td>
<td>12+ days</td>
<td>2-3 days</td>
</tr>
<tr>
<td>Stuffing Quantity (20' container)</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Stuffing Quantity (40' container)</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
</tbody>
</table>
Key Features

- Lighter & slimmer
- Data logger records up to 30 days’ temperature reading with 5 customisable temperature alarm settings
- Sure Chill technology guarantees never to freeze vaccines
- Environment friendly - CFC, HFC and HCFC free
- Ambient temperature rated +10°C to +43°C.
- Built-in intelligent temperature control and energy management system
Product Features:

1. General
   - Vaccine refrigerators powered by mains electricity

2. Performance
   - Minimises thermal shock during usage compared to conventional refrigerators
   - Operating temperature range: +10°C to +43°C
   - Voltage and frequency: 220-240V 50/60 Hz
   - Guaranteed never to freeze contents with patented Sure Chill technology

3. Features
   - Display Thermometer: Externally readable digital display thermometer
   - Voltage Stabiliser (optional): Operating range 160-270V
   - Front opening for easy stock management
   - Corrosion resistant: Epoxy Polyester (EPO) coated Galvanized Steel Outer Cabinet.
   - Fitted with two latch locks for use with a padlock
   - Designed for easy maintenance and repair
   - 2 year of warranty

4. Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GVR 51 Lite</th>
<th>GVR 75 Lite</th>
<th>GVR 99 Lite</th>
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<tbody>
<tr>
<td>Dimensions (WxDxH) mm</td>
<td>620 x 735 x 151</td>
<td>620 x 735 x 1515</td>
<td>620 x 735 x 1700</td>
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<tr>
<td>Gross Capacity (L)</td>
<td>69</td>
<td>99.5</td>
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<td>Vaccine storage capacity (L)</td>
<td>50.5</td>
<td>72.5</td>
<td>98.5</td>
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<tr>
<td>Energy consumption KWh/24 h*</td>
<td>1 to 1.6</td>
<td>1 to 1.5</td>
<td>0.9 to 1.23</td>
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<td>Refrigerant</td>
<td>R600a</td>
<td>R600a</td>
<td>R600a</td>
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<td>Net Weight (Kg)</td>
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<td>85</td>
<td>95</td>
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<tr>
<td>Gross Weight (Kg)</td>
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<td>115</td>
<td>125</td>
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<td>Holdover time*</td>
<td>3-4 days</td>
<td>3-4 days</td>
<td>2-3 days</td>
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<td>Stuffing Quantity (20° container)</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Stuffing Quantity (40° container)</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>
Key Features

- **Solar Direct Drive Refrigerator**
- Easy to use plug and play solar panels
- Does not rely on batteries to store energy during periods of no power
- Sure Chill technology guarantees never to freeze any stored content
- Environment friendly - CFC, HFC and HCFC free
- WHO pre-qualified. Ambient temperature rated +10°C to +43°C.
- Built-in intelligent temperature control, early warning and energy management system

**Rated Grade A - Freeze Protection by WHO**
Product Features:

1. General
   - Solar Direct Drive Blood Storage refrigerators

2. Performance
   - Minimises thermal shock during usage compared to conventional refrigerators
   - Operating temperature range: +10°C to +43°C
   - Voltage and frequency: 2 x 235 Wp, 24V solar panels
   - Guaranteed never to freeze contents with patented Sure Chill technology

3. Features
   - Display Thermometer: Externally readable digital display thermometer
   - Surge protector (optional)
   - Front opening for easy stock management
   - Corrosion resistant: Epoxy Polyester (EPO) coated Galvanized Steel Outer Cabinet.
   - Fitted with two latch locks for use with a padlock
   - Designed for easy maintenance and repair
   - 2 year of warranty

4. Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GVR 50DC SOLAR DIRECT</th>
<th>GVR 100DC SOLAR DIRECT</th>
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<tbody>
<tr>
<td>Dimensions (WxDxH) mm</td>
<td>795 x 750 x 1220</td>
<td>795 x 750 x 1820</td>
</tr>
<tr>
<td>Gross Storage Capacity (L)</td>
<td>57.7</td>
<td>121</td>
</tr>
<tr>
<td>Vaccine Storage Capacity (L)</td>
<td>46.5</td>
<td>99</td>
</tr>
<tr>
<td>Energy Source</td>
<td>Solar direct drive</td>
<td>Solar direct drive</td>
</tr>
<tr>
<td>Solar Array Details</td>
<td>Multicrystalline panels 470 WP</td>
<td>Multicrystalline panels 470 WP</td>
</tr>
<tr>
<td>Power Consumption at +43°C*</td>
<td>0.85 kWh/ 24 hours</td>
<td>0.85 kWh/ 24 hours</td>
</tr>
<tr>
<td>(Stable running and cool down)</td>
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<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td>R600a</td>
<td>R600a</td>
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<tr>
<td>PQS Code</td>
<td>E003</td>
<td>E003</td>
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<tr>
<td>Net Weight</td>
<td>95 Kg for solar system</td>
<td>95 Kg for solar system</td>
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<tr>
<td>Gross Weight</td>
<td>125/96Kg for refrigerator</td>
<td>160/125Kg for refrigerator</td>
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<tr>
<td>Holdover Time</td>
<td>5+ days</td>
<td>11+ days</td>
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<tr>
<td>Stuffing Quantity(20’ container)</td>
<td>20</td>
<td>12</td>
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<tr>
<td>Stuffing Quantity(40’ container)</td>
<td>42</td>
<td>30</td>
</tr>
</tbody>
</table>
GVR 60 FF DC

Key Features

- Standalone vaccine storage device for remote health centres
- Vaccine storage capacity 60L
- Combined fridge freezer
- Freezer capacity: 14.5L (0.6 x 24L water packs)
- Solar array 275 x 2 W*
- 2 DC SDD compressor provides for redundancy

Product Features:

1. General
   - Vaccine refrigerators powered by mains electricity

2. Performance
   - Minimises thermal shock during usage compared to conventional refrigerators
   - Voltage and frequency: 2x275 Wp, 24V solar panel*
   - Guaranteed never to freeze contents with patented Sure Chill technology

3. Features
   - Display Thermometer: Externally readable digital display thermometer
   - Surge protector (optional)
   - Front opening for easy stock management
   - Corrosion resistant: Epoxy Polyester (EPO) coated Galvanized Steel Outer Cabinet.
   - Fitted with two latch locks for use with a padlock
   - Designed for easy maintenance and repair
   - 2 year of warranty

4. Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GVR 60 FF DC</th>
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<tbody>
<tr>
<td>Dimensions (WxDxH) mm</td>
<td>795 x 750 x 1820</td>
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<td>Gross Capacity (L)</td>
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<tr>
<td>Freezer Capacity</td>
<td>14.5 ltr (0.6 x 24 water packs)</td>
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<tr>
<td>Vaccine storage capacity (L)</td>
<td>67.5</td>
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<tr>
<td>Approx Energy consumption (Kwh/24 h)*</td>
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<tr>
<td>Refrigerant</td>
<td>R600a</td>
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<tr>
<td>Weight approx (Kg)</td>
<td>150</td>
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<tr>
<td>Quality standard</td>
<td>ISO 9001:2008</td>
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<tr>
<td>Hold over time (Approx)*</td>
<td>4 Days</td>
</tr>
</tbody>
</table>

* Under PGS certification process
Godrej Medical Refrigerators with Sure Chill technology

Sure Chill technology is a result of more than 20 years of experience and in use in over 30 countries across the globe.

Our refrigerators have been independently tested and WHO pre-qualified to ensure consistent performance and reliability.

Godrej Appliances is a pioneer in the field of refrigeration with a rich experience of over 57 years.

Expert Opinion

“Sure Chill technology has the potential to improve the living conditions and healthcare of populations in some of the poorest countries and to lessen the impact of global warming on mankind. There can be no greater purpose.”

Sir John Houghton, CBE FRS
Former Chair of the Royal Commission on Environmental Pollution and Author of Global Warming: The Complete Briefing

“Nothing has made a greater contribution to the health of mankind than the massive scale up of childhood immunisation around the world, over the past two decades. Sure Chill technology will play a critical role in both sustaining and expanding of this impact in the years to come.”

Sir Richard Feachem, KBE, FREng, DSc(Med), PhD
Professor of Global Health at the University of California and Under Secretary General of United Nations
CRITICAL CARE FOR CRITICAL NEEDS

Godrej Medical Refrigerator Range

Call us: 1800 209 5511 (Toll-free - all subscribers) Or Visit us: www.godrejappliances.com
Godrej & Boyce Mfg. Co. Ltd. - Appliance Division, Proshananagar, Vikhroli (West), Mumbai - 400 079.

In view of Godrej policy of continuous development, features, specifications and colours are subject to change without prior notice. Images are representative only. Features may vary by model. Colours depicted in this catalogue are as close to actual as modern printing process allows.

Sure Chill is a patented technology licensed by The Sure Chill Company.