Solar Vaccine Refrigerator and Freezer 59 L, 2-8°C Direct Drive Chest Fridge, 180 h Holdover

Model **MSCRF10-S97SWISS** | Brand **Master Science**









The Master Science Solar Vaccine Refrigerator and Freezer runs directly on solar power to store vaccines, medicines and ice packs where grid power is unreliable or unavailable. The chest-type cabinet combines a 59 L vaccine compartment held at 2-8°C with a 38 L freezer at -10°C or below.

KEY HIGHLIGHTS

- Works off-grid
- Long holdover
- Fridge and freezer in one
- Traceable storage

AT A GLANCE

0.1°C TEMPERATURE SETTING ACCURACY	**59 L / 48 L** VACCINE GROSS / STORAGE CAPACITY
5-43°C AMBIENT TEMPERATURE	**38 L** FREEZER GROSS CAPACITY

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

It is built for wide climates, working at ambient temperatures from 5 to 43°C, and keeps the vaccine compartment in range for more than 180 hours at 43°C ambient without power. A microcomputer controller displays temperature at 0.1°C resolution and stores 30 days of temperature records.

> Where mains power is available, consider our Compact Pharmacy Refrigerator, 60 L alongside the Solar Vaccine Refrigerator and Freezer.

Key Benefits

Works off-grid
Solar direct drive powers the unit without mains electricity.

Long holdover
More than 180 hours in range at 43°C ambient.

Fridge and freezer in one
Vaccine storage at 2-8°C plus ice-pack freezing at -10°C or below.

Traceable storage
30 days of temperature records with USB data interface.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSCRF10-S97SWISS
SKU	MSCRF10-S97SWISS
Type	Chest type
Freezer Gross Capacity	**38 L**
Holdover Time	180 h
Water-Pack Freezing Capacity	**2 kg / 24 h**
Cooling Type	Direct cooling
Door	Foamed door
Refrigerant	R290
Vaccine Working Temperature	2-8°C
Freezer Working Temperature	≤ -10°C
Controller	Microprocessor
Temperature Setting Accuracy	**0.1°C**

DISPLAY & DATA

Vaccine Gross / Storage Capacity	**59 L / 48 L**
Water-Pack Storage Capacity	**10 kg**
Display	LED digital display
Data Interface	USB
Charging Interface	5 V

ENVIRONMENT

Ambient Temperature	5-43°C
Freeze-Protection Classification	A

POWER

Voltage	DC 18-28 V
Power / Current	190 W / 8 A
Power Consumption	1.7 kWh/24 h stable running; 2 kWh/24 h cool-down test

DIMENSIONS & WEIGHT

Exterior Dimensions (W x D x H)	1050 x 750 x 975 mm
Package Dimensions (W x D x H)	1127 x 781 x 1075 mm
Net / Gross Weight	100 / 130 kg

COLD-CHAIN CHALLENGES IT IS DESIGNED FOR

No reliable mains power	Solar direct drive runs the unit from solar panels.
Long cloudy periods or night-time	Over 180 hours holdover at 43°C ambient.
No ice packs for outreach	The freezer section freezes 2 kg of water packs per day.
Missing temperature history	30 days of records with USB data access.

The Solar Vaccine Refrigerator and Freezer is suitable for

- **Vaccine storage in hospitals and clinics**
- **Disease control centres**
- **Remote and off-grid health posts**
- **Medicine storage**
- **Ice-pack freezing for outreach work**
- **Scientific research institutions**

Power and Cooling

- Solar direct drive
- Direct cooling with R290 refrigerant
- Freeze-protection classification A
- Water-pack freezing 2 kg per 24 h

Control and Monitoring

- Microcomputer control
- Temperature display with 0.1°C resolution
- 30-day temperature record
- USB data interface

Alarms

- High and low temperature alarm
- Sensor malfunction alarm
- Low-battery alarm
- Buzzer and flashing digital display alarm modes

Design

- Safety door lock
- USB charging port (5 V)
- Aluminium inner tank with bottom drainage hole
- 2 vaccine baskets
- Low noise

Standard Accessories Included

- 2 vaccine baskets