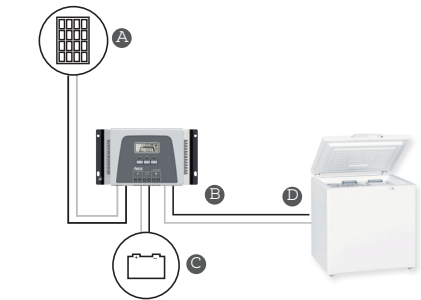


# EXAMPLE OF APPLICATION

The application areas of the Steca PF 166-H and Steca PF 240-H solar refrigerators and freezers are diverse: solar refrigerators and freezers by Steca cater for the most demanding requirements at all times, whether for cooling drinks, in solar home systems, for storing medication in hospitals supplied by stand-alone systems or for storage of frozen food. The most important parameters for the planning of such applications are summarized in the table below.

	Minimum system size Steca PF 166-H	Steca PF 166-H refrigerator	Steca PF 166-H freezer	Steca PF 240-H refrigerator	Steca PF 240-H freezer
Irradiation	2.5 kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d
Ambient temperature	25 °C	35 °C	35 °C	35 °C	35 °C
Inside temperature	8 °C	8 °C	-20 °C	8 °C	-20 °C
PV power required	50 Wp	50 Wp	276 Wp	57 Wp	402 Wp
Battery power required	12 V, 50 Ah	24 V, 80 Ah	24 V, 220 Ah	12 V, 90 Ah	24 V, 320 Ah
Duration of battery independence	4.4 days	3.5 days	3.5 days	3.5 days	3.5 days

Assumption: 10% additional energy consumption to compensate daily opening and cooling of warm goods.



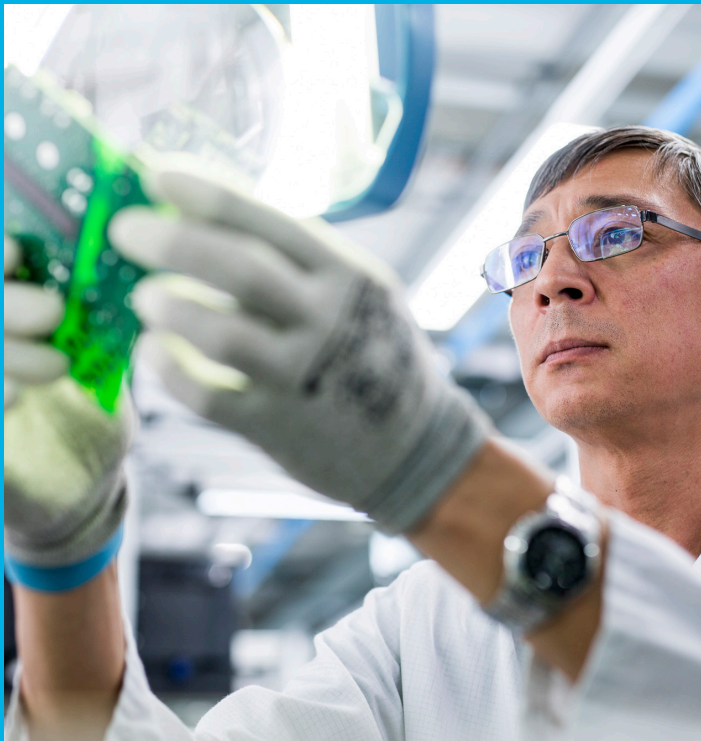
- Key:
- A Solar modules
  - B Solar charge controller Steca Solarix MPPT 3020
  - C Battery
  - D Steca PF 166-H or Steca PF 240-H

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#stecasolar

## Steca PF PF 240-H | PF 166-H



ENGLISH

# Solar refrigerator / Solar freezer



Steca PF refrigerators are some of the most efficient DC energy-saving refrigerators ever developed. Now filled with an even more climate-friendly refrigerant, they can be used as either a refrigerator or a freezer.

The Steca PF 166-H and Steca PF 240-H are fully programmable. The inside temperature and each of the other configuration values can be set by the user. They are therefore perfectly suited for all DC applications including even the refrigeration of medicines in hospitals. The optimal electronic control and speed regulation of the compressor guarantees extremely efficient use of energy. This leads to significant cost reductions.

This product stands out for its user-friendliness, thanks to a large digital display with setting options, the highest standards of quality and reliability, energy efficient interior LED lamp and a long service life. The refrigerator or freezer is easy to clean as it has a sealing plug on the bottom for draining water.

### Product features

- Fast and efficient cooling due to compressor speed control
- The freezers can be operated via an off-grid battery system with a 70 Wp photovoltaic module in most climates
- Automatic detection of voltage
- Temperature fully programmable
- Adjustable refrigerator or freezer function
- Suitable for all DC applications
- Low maintenance and easy to clean
- Lock with two keys
- Also suitable for mobile use
- Climate-friendly refrigerant
- Energy-efficient LED interior lamp

### Electronic protection functions

- Reverse polarity protection
- Deep discharge protection
- Power breakdown display
- Temperature alarm

### Displays

- Multifunction LED display
- Digital temperature display

### Operation

- Programming by buttons

### Certificates

- Compliant with European Standards (CE)
- RoHS compliant
- Abstinence of ozone destroying materials according EC 1005/2009 (CFC-free)
- Made in EU
- Manufactured according to ISO 9001 and ISO 14001



Cooled drinks, Caribbean



Hospital, Nigeria

	PF 166-H	PF 240-H
Characterisation of the operating performance		
System voltage	12 V (24 V)	
Nominal power	50 W ... 72 W	
Cooling volume (net)	166 litres	240 litres
Refrigerator temperature	+2 °C ... +12 °C	
Freezer temperature	-20 °C ... -10 °C	
Battery		
Input voltage	10 V ... 17 V (17 V ... 31.5 V) 12 V (24 V) battery	
Reconnection voltage (LVR)	11.7 V (24.2 V)	
Deep discharge protection (LVD)	10.4 V (22.8 V)	
Operating conditions		
Ambient temperature	+10 °C ... +43 °C	
Fitting and construction		
Dimensions (X x Y x Z)	872 x 917 x 709 mm	1,288 x 919 x 760 mm
Insulation strength	11 cm	12 cm
Weight	47 kg	62 kg
Cooling principle	compressor	
Refrigerant	60 g R290	70 g R290
Celsius / Fahrenheit temperature display	adjustable	
Display brightness	adjustable	
Hanging baskets	2	
Freezer trays	3	
Cold battery	1	
Automatic energy-saving mode	yes	

Technical data at 25 °C / 77 °F

Consumption [Wh / Tag]	Steca PF 166-H		Steca PF 240-H	
Ambient temperature	25 °C	40 °C	25 °C	40 °C
Interior temperature +8 °C	87	232	93	266
Interior temperature +3 °C	113	303	136	361
Interior temperature -10 °C	277	624	370	878
Interior temperature -20 °C	525	1215	764	1794

Internal dimensions  
Steca PF 166-H

Internal dimensions  
Steca PF 240-H

