Steca PF 166 and Steca PF 240

Solar refrigerator/freezer

Steca PF refrigerators are the most efficient DC energy-saving refrigerators ever developed. They can be used as either a refrigerator or a freezer.

The Steca PF 166 and Steca PF 240 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. Thanks to the latest A^{++} energy efficiency class, together with optimal electronic control and an RPM control of the compressor, it is possible to ensure that the energy is used extremely efficiently. 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 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.

Steca PF 240

Steca PF 166

Product features

- A^{++} energy efficiency class
- Fast cooling due to compressor speed control
- The freezers can be operated via an off-grid battery system with a 70 W 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
- Auto-dimming for reduction of own consumption

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

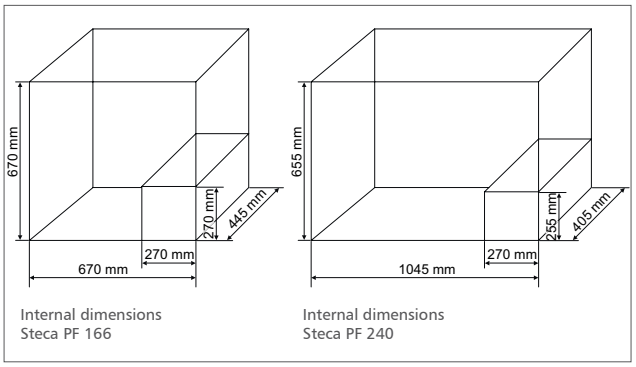
Certificates

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

Consumption Steca PF 166 [Wh / day]					
Ambient temperature	20 °C	25 °C	30 °C	35 °C	40 °C
Interior temperature +8 °C	44	72	109	156	216
Interior temperature +3 °C	72	109	156	216	291
Interior temperature -10 °C	190	259	346	454	589
Interior temperature -20 °C	346	454	589	756	946
Consumption Steca PF 240 [Wh / day]					
Ambient temperature	20 °C	25 °C	30 °C	35 °C	40 °C
Interior temperature +8 °C	49	82	125	183	256
Interior temperature +3 °C	82	125	183	256	351
Interior temperature -10 °C	225	311	421	561	739
Interior temperature -20 °C	421	561	739	964	1,246

Areas of application:

40 W...100 W



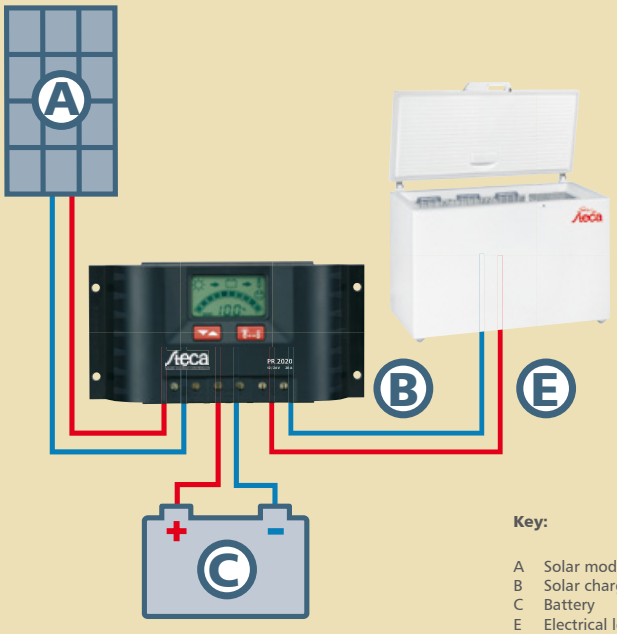
Internal dimensions Steca PF 166

Internal dimensions Steca PF 240

	PF 166	PF 240
Certificates		
Energy efficiency class	A^{++}	
Characterisation of the operating performance		
System voltage	12 V (24 V)	
Nominal power	40 W … 100 W	
Cooling volume	166 litres	240 litres
Refrigerator temperature	+2 °C … +12 °C	
Freezer temperature	-20 °C … -10 °C	
DC input side		
Input voltage	10 V … 17 V (17 V … 31.5 V) 12 V / 24 V battery	
DC output side		
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)	917 x 872 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	190 g R134a	
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

»KEEPS IT ALL FRESH«



Key:

A Solar modules
B Solar charge controller
C Battery
E Electrical load

Example applications

The application areas of the Steca PF 166 and Steca PF 240 solar refrigerators and freezers are multifarious: 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 at a glance in the table opposite.

	Minimum case	Steca PF 166 Solar refrigerator	Steca PF 166 freezer	Steca PF 240 Solar refrigerator	Steca PF 240 freezer
Irradiation	7kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d	5 kWh / m² / d
ambient temperature	20 °C	35 °C	35 °C	35 °C	35 °C
inside temperature	8 °C	5 °C	-15 °C	5 °C	-15 °C
PV power required	45 Wp	175 Wp	510 Wp	185 Wp	550 Wp
battery power required	12 V, 50 Ah	24 V, 120 Ah	24 V, 350 Ah	24 V, 125 Ah	24 V, 375 Ah
duration of battery independence	2 days	3 days	3 days	3 days	3 days


Cooled drinks, Caribbean


Hospital, Nigeria


Hospital , Afghanistan

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