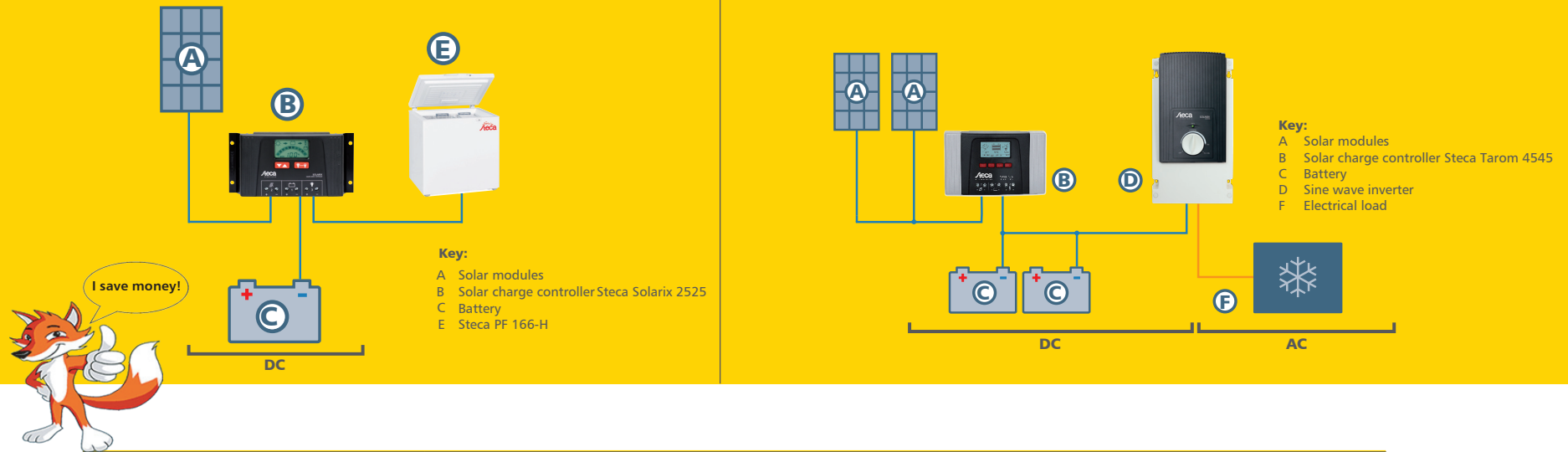


# STECA PF 166-H/240-H

## The most cost efficient solution for refrigeration/freezing!

### A DC/AC Comparison

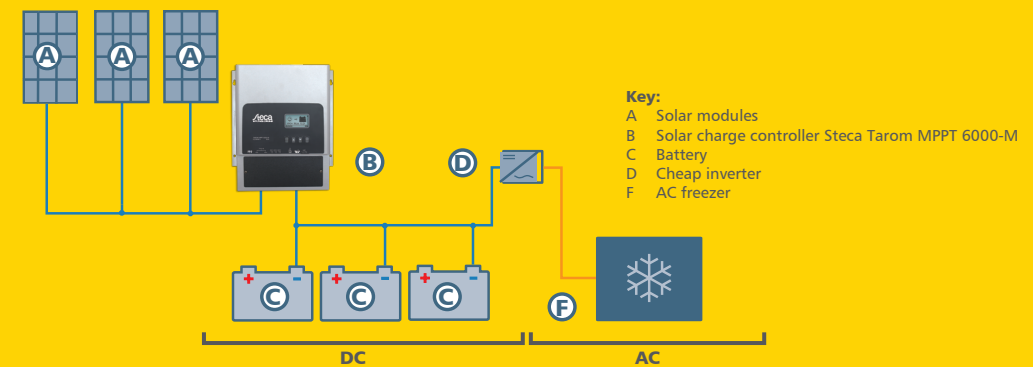
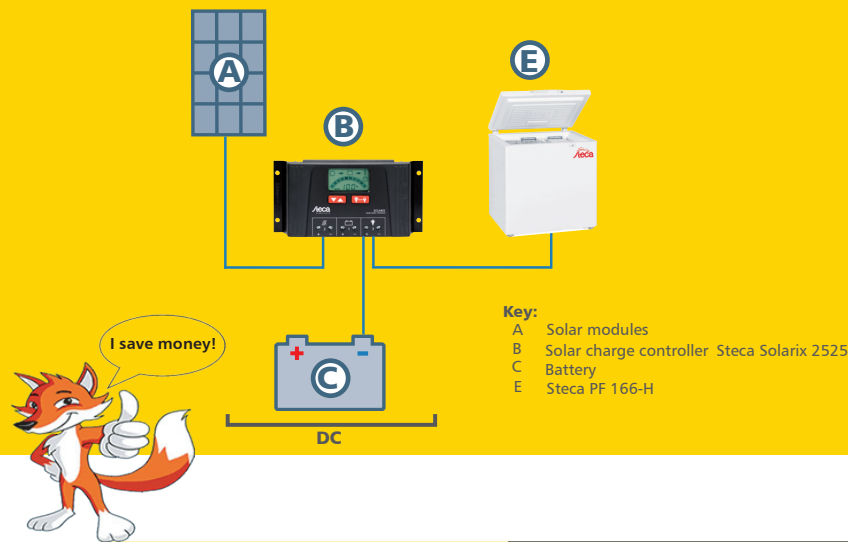


Steca PF 166-H (DC)			AC unit (A++/A+++ ) Solarix PI 550-24	
525	Wh/day	Consumption at 25°C ambient, -20°C inside temperature	525	Wh/day
7,5	Hours/day	Equivalent on-hours with 70W compressor	7,5	Hours/day
-	Watts	Inverter consumption when on without load	6	Watts
-		Inverter efficiency	93%	
-	Wh/day	Inverter losses total	139	Wh/day
525	Wh/day	Total energy consumption per day	664	Wh/day
4,5	kWh/m <sup>2</sup> /day	Insolation Cape Town South Africa, 41° Module angle, June	4,5	kWh/m <sup>2</sup> /day
152	Wp	Necessary PV array (30% losses due to dirt, cables, battery, etc.)	192	Wp
146	Ah	Necessary 12V battery capacity (at approx. 30% DOD average)	184	Ah

Result: the AC freezer requires a more than **26%** larger PV array and battery than the Steca PF 166-H, plus the inverter cost!

# STECA PF 166-H/240-H

## THE MOST COST EFFICIENT SOLUTION FOR REFRIGERATION/FREEZING! A DC/AC COMPARISON



Steca PF 166 (DC)			AC A++/A+++ with cheap inverter	
525	Wh/day	Consumption at 25°C ambient, -20°C inside temperature	525	Wh/day
7,5	Hours/day	Equivalent on-hours with 70W compressor	7,5	Hours/day
-	Watts	Inverter consumption when on without load	20	Watts
-		Inverter efficiency	85%	
-	Wh/day	Inverter losses total	423	Wh/day
525	Wh/day	Total energy consumption per day	948	Wh/day
4,5	kWh/m <sup>2</sup> /day	Insolation Cape Town South Africa, 41° Module angle, June	4,5	kWh/m <sup>2</sup> /day
152	Wp	Necessary PV array (30% losses due to dirt, cables, battery, etc.)	274	Wp
146	Ah	Necessary 12V battery capacity (at approx. 30% DOD average)	263	Ah

**Result: the AC freezer requires nearly 2x as large a PV array and battery than the Steca PF 166-H, plus the inverter cost!**