



Pro Combi

Combined Inverter / Charger
with automatic transfer switch



Sometimes it *pays* to keep things *simple!*

The **ProCombi** range of Inverter / Chargers are straightforward, powerful and robust. With the three functions of Inverter, Battery Charger and 30A changeover switch in one unit, they are an alternative to separate components where space, simplicity and ease of installation are key considerations.

Free from many of the complex functions associated with similar alternatives, **ProCombi** represents a very energy efficient solution that is also easy on the pocket! For the vast majority of uses, the basic functionality is more than enough.



ProCombi models are available either in Quasi-sine wave (**ProCombiQ**) or Sinewave (**ProCombiS**) variants to suit individual preference. There is also a choice of power rating depending upon the duty anticipated.

Principle features:

- ▶ Compact, robust construction
- ▶ Simple DIY installation
- ▶ Fully automatic operation
- ▶ Choice of Quasi or Sine wave inverter output
- ▶ Multi stage automatic battery charger with power factor correction (PFC)
- ▶ Battery type selectable
- ▶ 35A no-break (20ms) transfer switch
- ▶ 30A switched earth/neutral relay
- ▶ Comprehensive status and alarm LED display
- ▶ Remote panel included as standard
- ▶ Very low no-load and operating energy consumption
- ▶ Compliant with CE and UL standards

Battery charger function utilises advanced multi-stage characteristics and is suitable for permanent connection to the battery. Adjustment is easily made via a selector switch to accommodate alternative battery types.

Each unit is supplied as standard with an on board control and indicator panel that can be removed for remote mounting via a 10M cable that is also included with the unit.

Voted **'best buy'** ★★★★★

in *Sailing Today Combi* test, March 2008
compared with Victron, Studer, Mastervolt and Powermaster

Basic functionality:

The ProCombi is based on a single power module that can work either as an Inverter or as a battery charger. When mains power is available ProCombi operates as a powerful, fully automatic, multi stage battery charger simultaneously supplying the incoming power straight through to the on-board consumers. When mains power is disconnected the unit automatically reverts to operating as an inverter, supplying 230V from the battery, until mains power is again restored. All this functionality is contained within a single box with minimal wiring required.

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Technical Details



General Specification

Input wave form	Sinusoidal
Nominal voltage	Input 230Vac
Low voltage trip	184V +/- 4%
Minimum engage	Voltage 194V +/- 4%
High voltage trip	253V +/- 4%
High voltage re engage	243V +/- 4%
Max input a/c voltage	270V rms
Nominal input frequency	50Hz or 60Hz auto detect
Low freq trip	47Hz for 50Hz, 58Hz for 60Hz
High freq trip	53Hz for 50Hz, 62Hz for 60Hz
Overload protection	Circuit breaker
Short circuit protection	Circuit breaker
Transfer switch rating	30 Amps
Efficiency on line transfer mode	96% +
Line transfer time	20Ms
Bypass without battery connected	Yes
Max bypass current	30 Amps
By pass over load current	35 Amps
Size (mm)	185 wide 180 high 430 long
Weight	1500W 18Kg 2500W 20g

Pro Combi Q

Pro Combi S

Input wave form	Pure sine wave
Input 230Vac	184V +/- 4%
Low voltage trip	184V +/- 4%
Voltage 194V +/- 4%	253V +/- 4%
High voltage trip	243V +/- 4%
High voltage re engage	243V +/- 4%
Max input a/c voltage	270V rms
Nominal input frequency	50Hz or 60Hz auto detect
Low freq trip	47Hz for 50Hz, 58Hz for 60Hz
High freq trip	53Hz for 50Hz, 62Hz for 60Hz
Overload protection	Circuit breaker
Short circuit protection	Circuit breaker
Transfer switch rating	30 Amps
Efficiency on line transfer mode	95% +
Line transfer time	20Ms
Bypass without battery connected	Yes
Max bypass current	30 Amps
By pass over load current	35 Amps
Size (mm)	185 wide 180 high 430 long
Weight	1500W 18Kg 2500W 20g

Inverter Specification / Output

Output wave form	Modified sine wave / Quasi sine wave	Pure sine wave
Output continuous power watts	1600 2500	1600 2100
Output continuous power VA	2400 3600	2400 3100
Power factor	0.9 - 1.0	0.9 - 1.0
Nominal output voltage rms	230Vav	230Vav
Max voltage rms	260Vav	260Vav
Output voltage regulation	+/- 10% rms	+/- 10% rms
Output frequency	50Hz +/- 0.3Hz or 60Hz +/- 0.3Hz	50Hz +/- 0.3Hz or 60Hz +/- 0.3Hz
Transient response time	<150Ms - 0% to 100% RCD load	<150Ms - 0% to 100% RCD load
Nominal efficiency	>85%	>88%
Surge ratings	1500 - 4500VA 2500 - 7200VA	1500 - 4500VA 2100 - 6100VA
Online current consumption at 12/24v	12V - 1.8A 24V - 0.9A	12V - 1.8A 24V - 0.9A
Power saver mode current consumption	12V - 0.4A 24V - 0.2A	12V - 0.4A 24V - 0.2A
Short circuit protection	Yes, less than 3 cycles	Yes, less than 3 cycles

Inverter Specification / Input

Nominal input voltage	12 or 24V depending on model	12 or 24V depending on model
Minimum start voltage	10V for 12V model 20V for 24V model	10V for 12V model 20V for 24V model
Low battery alarm	10.5V for 12V model 21V for 24V model	10.5V for 12V model 21V for 24V model
Low battery trip	10V for 12V model 20V for 24V model	10V for 12V model 20V for 24V model
High voltage alarm	10.5V for 12V model 30V for 24V model	10.5V for 12V model 30V for 24V model
Power saver	Below 20 watts when enabled	Below 20 watts when enabled
Power saver	Can be switched on/off by remote control	Can be switched on/off by remote control

Charger Mode Specification

Input voltage range	196 - 245Vac	196 - 245Vac
Output voltage	Dependent on battery type selection	Dependent on battery type selection
Output current 12v model	1500 - 40A 2500 - 70A	1500 - 40A 2100 - 60A
Output current 24v model	1500 - 20A 2500 - 35A	1500 - 20A 2100 - 30A
Battery initial voltage for start up	0 - 15V for 12V x2 / 24V	0 - 15V for 12V x2 / 24V
Over charge protection shutdown	15.7 12V x2 for 24V	15.7 12V x2 for 24V

Charger Curves (4 stage constant current) Battery Types 4 step digital controlled progressive charge (for both models)

Battery Type	charge V	float V
Gel U.S.A	14.0	13.7
A.G.M. 1	14.1	13.4
A.G.M. 2	14.6	13.7
Sealed Lead Acid	14.4	13.6
Gel Euro	14.8	13.8
Open Lead Acid	14.8	13.3
Calcium	15.1	13.6
De-sulphation	15.5	for 4 Hrs

Figures double for 24V

Battery bank size	Auto detected / Auto program selected
Remote control	Front control panel removable as remote

Pro Combi Q

Wave Form	Input Voltage	Inverter Power	Part Number
Quasi Sine	12V	1600 watt	PCBQ121600
Quasi Sine	12V	2500 watt	PCBQ122500
Quasi Sine	24V	1600 watt	PCBQ241600
Quasi Sine	24V	2500 watt	PCBQ242500

Pro Combi S

Pure Sine Wave	12V	1500 watt	PCBS121500
Pure Sine Wave	12V	2100 watt	PCBS122500
Pure Sine Wave	24V	1500 watt	PCBS241500
Pure Sine Wave	24V	2100 watt	PCBS242500

Accessories

1.2m 300A cable for 12V 2500	C300
1.2m 180A cable for 12V 1500 & 24V 2100	C150



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