

Mass Combi Ultra & Mass Combi Pro: Powerful, complete and versatile

The Mass Combi Ultra series comprises several models, varying from 3000 W to 3500 W. For higher capacities up to 35 kW the Combi Ultra can be used in parallel or 3-phase configurations. An efficient and integrated solar charge regulator helps make the most of your solar panels.

The Mass Combi Ultra is equipped with the latest technologies. The new inverter technology ensures a uniquely low stand-by use, while an ultra-fast Digital Signal Processor guarantees seamless switching between all available energy sources. **Power Assist** prevents power dips and failures, even with a weak electricity connection or small generator. Moreover, all Mass Combi Ultra models are equipped with MasterBus.

Higher yield from solar energy

At Mastervolt we used our knowledge gained in the grid connected solar sector to make a super-efficient built-in MPPT solar charge regulator.

Compared to most solar charge regulators on the market, the MPPT offers up to 30 % more yield from solar panels. The solar panels power 'hidden' consumers and keep your batteries in optimal condition.

'Pro' Models

For professional applications. Mastervolt offers a 'Pro' model, featuring all Ultra functions, but without the solar input and secondary battery charger.



QUOTE

"When working at an event or any outside location we can really trust the intelligence of this Mass Combi system. It regulates everything by itself without our involvement or the need for external power supplies, allowing us to focus on selling our products to the customers knowing that we always have power available in our mobile food truck."

ANNA GEIGER,
FOOD TRUCK OWNER



FEATURES



- For professional and semi-professional use.
- Quiet, powerful inverter with 200 % peak power.
- Compact, lightweight and hum-free thanks to HF technology.
- Pure sine wave voltage prevents malfunctions and damage to sensitive equipment such as adapters.
- High yield and more power from your batteries.
- Intelligent 3-step+ battery charger with low DC ripple current for fast charging times and long battery life.
- Power Assist: prevents blown fuses.
- A dynamic battery voltage window allows you to enjoy AC power for longer without damaging your batteries.
- Active Optima Cooling concept prevents unnecessary fan noise.
- Charges two individual battery banks simultaneously (Mass Combi Ultra).
- An integrated MPPT solar charge controller allows for 30 % more yield from solar power for charging the batteries (Mass Combi Ultra).
- Quick installation and reliable professional connections.
- CE and ABYC certified.

Quiet Operation



The Mass Combi Ultra and Mass Combi Pro can provide up to 50 % of the charging current or inverter capacity without fan cooling. This is perfect for night-time operation; if little power is consumed, the fan stops turning and goes silent. When maximum capacity is required, or the ambient temperature is very high, the Active Optima Cooling concept regulates the fan speed in a linear way, ensuring that it never spins too fast or makes any unnecessary ticking noises.

Parallel and 3-phase operation



The Mass Combi Ultra and Mass Combi Pro functionality goes beyond stand-alone operation, the design also allows parallel and 3-phase configurations for larger applications up to 35 kW. For larger systems, an external transfer system is required.

Dual AC inputs and outputs

The Mass Combi Ultra and Mass Combi Pro have inputs for generator or mains supply, each optimized for the power source. A robust intelligent transfer system switches seamlessly between AC power, generator and inverter, and ensures a constant power supply. Flickering lights or failure of electronic equipment belong to the past. Separate AC outputs provide the ability to power heavy users via mains and/or generator.



Specifications

Mass Combi Ultra

Mass Combi Pro

230 V



	Mass Combi Ultra 12/3000-150	Mass Combi Ultra 24/3500-100	Mass Combi Ultra 48/3500-50	Mass Combi Pro 12/3000-150
Product code	38013000	38023500	38343500	38513000
SPECIFICATIONS SINE WAVE INVERTER				
Nominal DC voltage	12 V (9.5 – 16 V)	24 V (19 – 32 V)	48 V (38 – 62 V)	12 V (9.5 – 16 V)
Output voltage	180-260 V, adjustable	180-260 V, adjustable	180-260 V, adjustable	180-260 V, adjustable
Output waveform	true sine	true sine	true sine	true sine
Continuous power at 40 °C, cos phi 1	3000 W	3500 W	3500 W	3000 W
Surge capability	6000 W	7000 W	7000 W	6000 W
Parallel configuration	yes, up to 10 standard	yes, up to 10 standard	yes, up to 10 standard	yes, up to 10 standard
<i>For larger systems, an external transfer system is required.</i>				
3-Phase configuration	yes, up to 3x3	yes, up to 3x3	yes, up to 3x3	yes, up to 3x3
Max. efficiency	≥ 90 %	≥ 92 %	≥ 93 %	≥ 90 %
Energy saving mode consumption	7 W	7 W	7 W	7 W
SPECIFICATIONS BATTERY CHARGER				
Max. charge current at 40 °C	150 A at 14.25 V	100 A at 28.5 V	50 A at 57 V	150 A at 14.25 V
Secondary charger output voltage	12 V	12/24 V selectable, 3-step+	12/24 V selectable, 3-step+	n.a.
Secondary charger output current	10 A	10 A	10 A	n.a.
Battery temperature sensor	yes, included	yes, included	yes, included	yes, included
SPECIFICATIONS TRANSFER SYSTEM				
AC input (generator)	50 A (switched)	50 A (switched)	50 A (switched)	50 A (switched)
AC input (mains)	30 A (switched)	30 A (switched)	30 A (switched)	30 A (switched)
AC output 1	67 A	67 A	67 A	67 A
AC output 2	50 A (switched)	50 A (switched)	50 A (switched)	50 A (switched)
Transfer speed	seamless (< 1 ms)	seamless (< 1 ms)	seamless (< 1 ms)	seamless (< 1 ms)
SOLAR INPUT DC SPECIFICATIONS				
Input voltage range	25-50 V	25-100 V	n.a.	n.a.
Max. PV peak power	500 Wp	500 Wp	n.a.	n.a.
Max. input current	19 A	19 A	n.a.	n.a.
Max. charge current	30 A at 14.25 V	15 A at 28.5 V	n.a.	n.a.
MPP Tracker	full power at 25-50 V	full power at 35-80 V	n.a.	n.a.
GENERAL SPECIFICATIONS				
Display/read-out	LED display	LED display	LED display	LED display
Dimensions, hxxwxd	472 x 318 x 178 mm 18.6 x 12.5 x 7 inch	472 x 318 x 178 mm 18.6 x 12.5 x 7 inch	472 x 318 x 178 mm 18.6 x 12.5 x 7 inch	472 x 318 x 178 mm 18.6 x 12.5 x 7 inch
Weight	15.3 kg / 33.7 lb	15.3 kg / 33.7 lb	15.3 kg / 33.7 lb	15.3 kg / 33.7 lb
Approvals	CE, E-mark, ABYC, RMRS	CE, E-mark, ABYC, RMRS	CE, E-mark, ABYC, RMRS	CE, E-mark, ABYC
TECHNICAL SPECIFICATIONS				
Charge characteristic	IUoUo, automatic 3-step+ for AGM/Gel/MLI/flooded/traction/spiral			
Ground relay	yes, configurable	yes, configurable	yes, configurable	yes, configurable
Temperature range (ambient temp.)	-25 °C to 60 °C, derating > 40 °C / -13 °F to 140 °F, derating > 104 °F			
Cooling	vario fan	vario fan	vario fan	vario fan
Protection degree	IP23 (vertical mounting)	IP23 (vertical mounting)	IP23 (vertical mounting)	IP23 (vertical mounting)
Protections	over-temperature, overload, short circuit, high/low battery voltage			
MasterBus compatible	yes	yes	yes	yes

ACCESSORIES		EasyView 5 77010310	option	option	option	option
		MasterBus USB Interface 77030100	option	option	option	option
		RJ12 communication / sync cable, available lengths: 1, 3, 6, 10 or 15 metre	option	option	option	option
		Temperature sensor 6m 41500500	delivered as standard	delivered as standard	delivered as standard	delivered as standard
		Temperature sensor 15m 41500800	option	option	option	option

Waterproof system monitor with 'daylight readable' colour display and intuitive multi-language touchscreen to show the key system information at a glance. There is also a logbook feature for warnings and alarms, along with a buzzer and alarm notifications. The home button gives access to favorite pages.

Communication port between MasterBus and the USB port of your PC; makes possible reading and configuration of your MasterBus system on the PC when combined with MasterAdjust software (free to download).

High quality communication cable fitted with RJ12 type modular plugs, suitable for connecting a remote control panel. Also suitable as a sync cable for Mass Combi Ultra or Mass Combi Pro models, both in parallel or 3-phase configurations.



Mass Combi Pro
24/3500-100

38523500

24 V (19 – 32 V)
180-260 V, adjustable
true sine
3500 W
7000 W
yes, up to 10 standard

yes, up to 3x3
≥ 92 %
7 W

100 A at 28.5 V
n.a.
n.a.
yes, included

50 A (switched)
30 A (switched)
67 A
50 A (switched)
seamless (< 1 ms)

n.a.
n.a.
n.a.
n.a.
n.a.

LED display
472 x 318 x 178 mm
18.6 x 12.5 x 7 inch
15.3 kg / 33.7 lb
CE, E-mark, ABYC

yes, configurable

vario fan
IP23 (vertical mounting)

yes

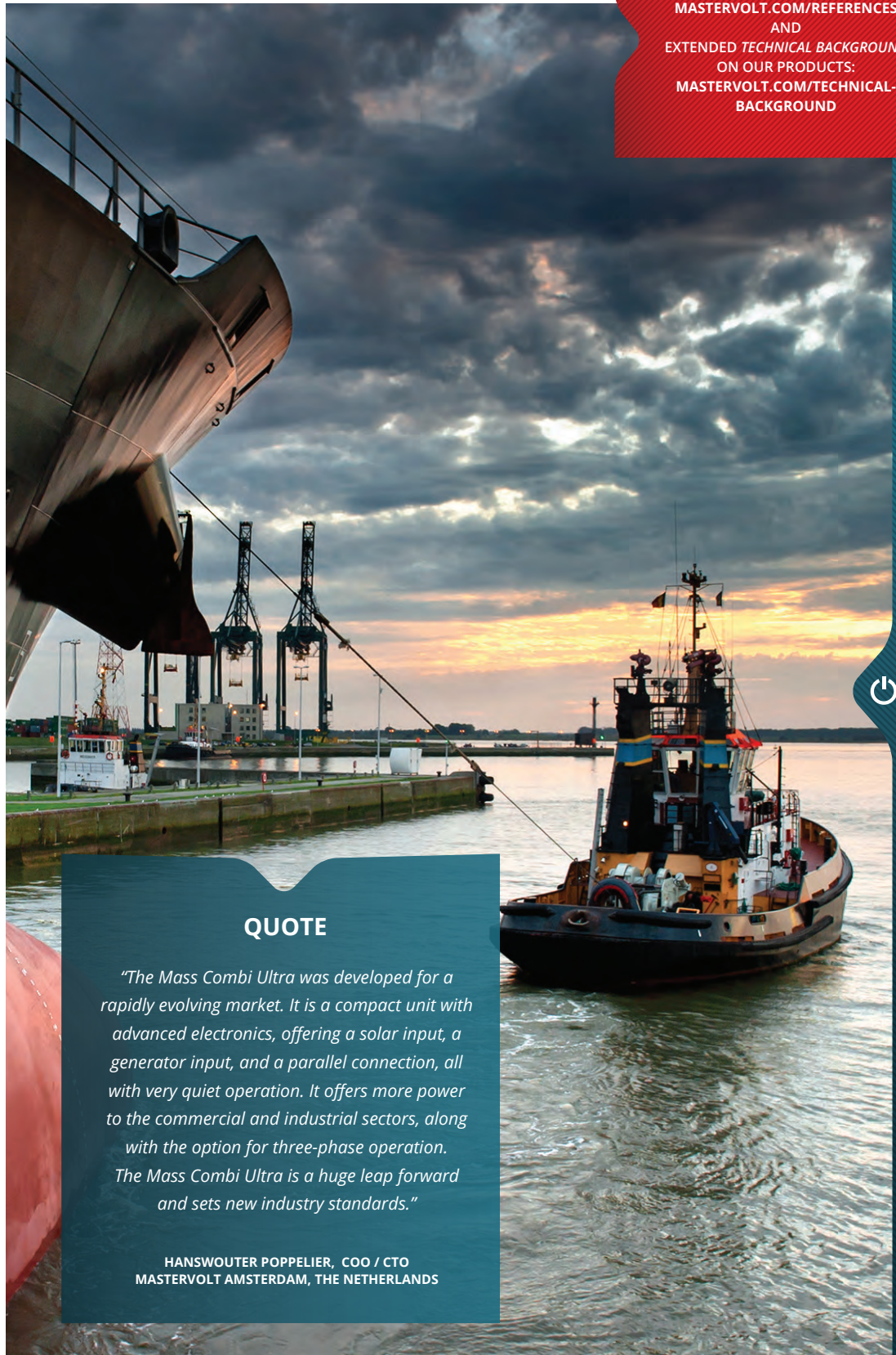
option

option

option

delivered as standard

option



QUOTE

“The Mass Combi Ultra was developed for a rapidly evolving market. It is a compact unit with advanced electronics, offering a solar input, a generator input, and a parallel connection, all with very quiet operation. It offers more power to the commercial and industrial sectors, along with the option for three-phase operation. The Mass Combi Ultra is a huge leap forward and sets new industry standards.”

HANSWOUTER POPPELIER, COO / CTO
MASTERVOLT AMSTERDAM, THE NETHERLANDS

CHECK THE MASTERVOLT SITE FOR
INTERESTING REAL-LIFE SYSTEMS:
[MASTERVOLT.COM/REFERENCES](https://mastervolt.com/references)
AND
EXTENDED TECHNICAL BACKGROUND
ON OUR PRODUCTS:
[MASTERVOLT.COM/TECHNICAL-
BACKGROUND](https://mastervolt.com/technical-background)

