

# Mass Combi Ultra 24/3500-100 (230 V)



Product code: 38023500

# Your own power station: For continuous power

## The new standard in power systems

Mastervolt, the Dutch leader in off-grid electrical systems, has unveiled an innovative new Mass Combi Ultra series. This compact inverter/charger combination with a smart transfer system, highly efficient MPPT solar charge regulator (available from October 2014 onwards) and separate second charger is all enclosed within a robust quality unit that is easy to install.

Following the ever-increasing demand for higher power and greater comfort, systems are becoming more and more complex. In response the Mastervolt team went back to the drawing board to redesign what was already the best product in the market. Our goal was to fulfil the requirements of today and tomorrow, which the Mass Combi Ultra achieves by integrating all the common needs of an electrical system. This simplifies installation, lowers overall costs and significantly increases performance.

## The latest technologies

The Mass Combi Ultra includes revolutionary technology developed by Mastervolt's own engineering team. Notable achievements include combining the latest V6 high frequency converter technology with ultra-fast and powerful DSP controls. This offers major user benefits such as a low 'no load' current, preventing your batteries from draining, and extreme peak power capability which allows high current loads such as air conditioning to start-up easily without power dips or light flickering. Another benefit is the high efficiency, which makes the Mass Combi Ultra the most complete product in its class.

## Mass Combi Ultra in a Mastervolt system

The new Mass Combi Ultra fits perfectly into Mastervolt systems. All components are easily connected via MasterBus and installation can be controlled and monitored intuitively, even with just one MasterView Easy touchscreen. This will provide and manage all information about the Combi, the batteries and other sources such as the generator, grid or solar panels. The system is also suitable for Digital Switching, Mastervolt's decentralised digital switching system.

# Specifications

## General specifications

Display/read-out	LED display
Dimensions, hwxwd	472 x 318 x 178 mm 18.6 x 12.5 x 7.0 inch
Weight	15.3 kg 33.7 lb
Cooling	maintenance free vario fans
Approvals	CE, ABYC

## Technical specifications

Charge characteristic	IUoU, automatic 3-step+ for AGM/gel/MLI/wet/traction/spiral
Ground relay	yes, configurable
Temperature range (ambient temp.)	-25 °C to 60 °C, derating > 40 °C -13 to 140 °F
Protection degree	IP23 (vertical mounting)
Safety protections	over temperature, AC over load, AC short circuit, DC short circuit, high/low battery voltage
MasterBus compatible	yes

## Specifications sine wave inverter

Nom. battery voltage	24 V (20-32 V)
Output voltage ( $\pm 2\%$ )	230 V ( $\pm 2\%$ ), adjustable 180-260 V
Output waveform	true sine wave, Thd < 1% under standard conditions
Cont. power at 40 °C, cos phi 1	3500 W
Surge capability	7000 W - 30.4 A
Parallel configuration	yes, up to 10 standard
3-Phase configuration	yes, up to 3x3
Max. efficiency	$\geq 92\%$
Max. ripple on DC (battery at full load)	< 5%
No-load power consumption (ON/inverter OFF/OFF)	16 W / 4 W / 0 W

## Specifications battery charger

Nom. input voltage	184-275 V
Charge method secondary charger	IUoU, automatic 3-step+ or constant voltage
Secondary charger output voltage	12/24 V adjustable
Secondary charger output current	10 A
Battery temperature sensor	yes, included
Max. charge current at 40 °C	100 A at 28.5 V

## Specifications transfer system

AC input 1	50 A (generator only, switched)
AC input 2	30 A (mains only, switched)
AC output 1	67 A
AC output 2	50 A (switched)
Transfer speed	seamless (< 1 ms)
Transfer voltage range (adjustable)	184-275 V
Transfer frequency range (adjustable)	35-68 Hz

## Solar input (DC) specifications

MPP Tracker	full power at 25-50 V
Input voltage range	25-100 V
Max. PV peak power	500 Wp
Max. input current	19 A
Max. charge current	15 A at 28.5 V