

Mass Combi 12/2500-100 (120 V)



Product code: 37012505

The Mastervolt Combi literally 'combines' an advanced battery charger and silent-running inverter in one remarkably compact device. But that isn't all: it also adds extra functionality. This includes Power Assist, system paralleling and secondary battery charging. This makes the Combi your ideal solution for a wide range of needs, from low power recreational use right up to full-on, high power industrial applications.

Versatility in power supply

Every model of the Mastervolt Combi is highly versatile, so using one greatly simplifies installation. This single product not only brings you fast and complete charging of your starter and service batteries, it also provides a silent, robust and clean AC power supply. Multiple AC outputs allow heavy-draw items to be separated from the most critical equipment, making sure they don't unintentionally deplete your batteries. The AC inputs facilitate both mains and generator connections, which the Combi can support with additional power if your loads require more than either can provide. Essentially, just this one product can handle all the power requirements in an autonomous system.

Modern technology

The unique design of the Combi range is typically Mastervolt. Rather than installing heavy transformers, you can use our high-frequency technology for major benefits in terms of compact size, a lightweight chassis and silent running (there is no transformer hum).

Perfect in a MasterBus system

Designed for system compatibility, the Mastervolt Combi fits perfectly into a MasterBus system. The network will allow you to easily control and monitor your product, while also optimising the configuration to your needs. In addition, the internal communication between other MasterBus products in your system can even boost the overall electrical performance.

Benefits of the Mass Combi

- Compact, lightweight and no hum thanks to HF technology.
- 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.
- Charges two individual battery banks simultaneously.
- Quiet, powerful inverter with 200 % peak power.
- Power Assist: extra power assistance from the batteries in case of limited grid or generator power (prevents blown fuses).
- Pure sine wave energy prevents failures and damage to sensitive equipment such as adapters.
- Dual AC outputs to separate critical equipment from heavy loads.
- Higher yields possible via parallel switching (only 2500 W models).
- Professional connections ensure fast installation and operational security.
- CE approved and E-marking for mobile applications.

Specifications

Specifications sine wave inverter

Nominal DC voltage	12 V (10-15 V)
Output voltage	120 V ($\pm 5\%$), adjustable 90-135 V
Output frequency	60/50 Hz ($\pm 0.05\%$), configurable
Output waveform	true sine, Thd < 2.5 % under standard conditions
Continuous power at 25 °C / 77 °F, cos phi 1	2500 W
Max. peak load	4000 W
Max. efficiency	$\geq 90\%$
Max. ripple on DC (battery at full load)	< 5 %
No-load power consumption on DC (ON/inverter OFF/OFF/energy saving)	9 W / 0.1 W / 0 W / 0.5 W
Parallel configuration	yes, up to 2 units
3-Phase configuration	no
Synchronise with mains/generator	yes

Specifications battery charger

Input voltage range	90-135 V
Max. input current	14.5 A
Max. charge current at 25 °C / 77 °F	100 A at 14.25 V, adjustable
Secondary charger output voltage	12 V
Secondary charger output current	5 A
No-load power consumption on AC	< 15 W
Battery temperature sensor	yes, included
Battery voltage sense	automatic compensation

Specifications transfer system

AC input 1	50 A (25 A switched, to short break output)
AC output 1	35 A (short break output)
AC output 2	50 A (power output)
AC input fuse	yes, resettable
Transfer speed	half seamless (25 ms max., 10 ms typical)
Transfer voltage range	90-135 V
Transfer frequency range	45-65 Hz

General specifications

Display/read-out	LED display
Dimensions, hxxwx d	496 x 318 x 156 mm 19.5 x 12.5 x 6.1 inch
Weight	11 kg

Approvals

24.3 lb

CE, ABYC

Technical specifications

Charge characteristic

3-step+ (IUoUo, fully automatic), Equalize

Battery types

AGM/gel/MLI/flooded/spiral/traction

Recommended battery capacity

~ 200-600 Ah (based on gel batteries, may differ for other types)

Ground relay

yes, configurable

Temperature range (ambient temp.)

-25 °C to 60 °C, derating > 25 °C

-13 to 140 °F

Protection degree

IP23 (vertical mounting)

Safety class

IEC protection class I

Humidity protection

conformal coating, max. 95 % relative humidity, non condensing

Protections

over temperature, over load, short circuit, high/low battery voltage

Cooling

maintenance-free vario fans

Power Assist

yes

MasterBus compatible

yes, in combination with a MasterBus Combi Interface