



# Connect to the Sun









# Welcome to the world of new energy

Welcome to the world of Mastervolt. As a leading brand in integrated power solutions, Mastervolt already installed in the Solar Market since 1993 and has led the way ever since. With a clear focus on designing, developing and manufacturing reliable inverters for any type of environment, Mastervolt is now a worldwide-recognised solar specialist. Our solutions have been applied by our Business Partners in a broad range of installation sizes and with many types of solar modules, supported by continuous innovation.

We make new energy available to everyone and everywhere, giving you the power to be independent!





# Answering **the world's** **increasing** energy demands

Electrical energy is invaluable for all requirements of day-to-day life. There are many reasons why energy requirements are constantly increasing on our planet. Mastervolt addresses these growing demands with intelligent, reliable and sturdy solar inverter solutions.





### **The sun as our prime source**

Growing dependencies promote the need for decentralized production and the sun is our prime source. Its potential energy is limitless, being sufficient to supply us permanently with an almost endless supply of solar energy. Every day the sun provides us with 10,000 times more energy than our needs. This constant power source is vital for all life on earth and gives heat and light, the right conditions for growth and the possibility to remain healthy.

### **Mastervolt's mission and position**

Mastervolt's mission is to make this high-value energy source available to everyone everywhere – for grid connected and off grid systems. The company plays a key role globally. Profound expertise, long-standing experience and top class products are major factors. The proof is in the numerous awards.

### **Meeting international standards and national requirements**

Mastervolt products are always used whenever high-performance interfaces are essential between photovoltaic generators and electrical loads. Therefore, Mastervolt technology conforms to international standards and is adapted to national requirements.

### **Looking at the future**

With a little luck and hard work, within only a few decades, we will be in a position to supply all our energy needs from renewable sources. Mastervolt is dedicated to help: reliably, anywhere and at any time.







1993: First mini  
inverters

1994: Launch of the  
Sunmaster 1800

1997: Grid connected  
Sunmaster 2500

2000: Introducing  
Soladin 120

2001: Rising  
demand for  
string inverters

# Mastervolt: the heart of photovoltaic systems

Mastervolt is the heart of photovoltaic systems. First, they transform captured sunlight into usable electricity and facilitate a reliable power supply. Mastervolt is among the pioneers for transforming solar into electrical energy. Aware of the key role played by photovoltaics for electricity generation, since 1993 the company has devoted itself to developing grid connected solar inverters. A historical overview.



## 1993: First mini inverters

The first mini inverters were unveiled with Sunmaster 130, jointly developed with Ecofys, Shell Solar & ECN. These inverters can feed energy produced by each solar module into the network. They were ideally suited to use in low current applications, primarily when decentralized electricity supply is required. Maximum use emerged in 1998 in the Netherlands in a sound insulation system on the A9 Motorway. All 2160 PV-modules were equipped with small inverters on the rear side.



## 1994: Launch of the Sunmaster 1800

The Sunmaster 1800 was launched on the market. As one of the first system inverter, it was one of the first switch mode technology inverters with a nominal capacity of 1500 Watt. Many projects in Spain and Portugal were fitted with it. Since nominal capacity and direct current voltage of maximum 100 Volt only allowed limited applications, the next innovation followed soon afterwards.



## 1997: Grid connected Sunmaster 2500

The Sunmaster 2500 is a grid connected system inverter, which was initially built for local utilities. The integrated alternating and direct current connection box was the biggest innovation of its time and also included a standard LCD display. The Sunmaster 2500 made a broad spectrum of applications possible.



Even at an ambient temperature of 45 degrees Celsius it achieved its full rated output. The inverter is built-in in many places. The world's first Megawatt-Project in the city of Amersfoort, the Netherlands, was based on this model. All the devices maintained by Mastervolt are still running smoothly nowadays.

## 2000: Introducing Soladin 120

The Soladin 120 replaced the Sunmaster 130 after more than 45,000 units had been sold. Fitted with the same input, output and rated output characteristics it was substantially smaller and more intelligent than its predecessor. For the first time, a display indicating the yield was introduced. The alternating current plug made fast plug & play installation possible. In addition an intelligent direct current plug and an improved efficiency were added. This QNS mechanism for switching the device off was added to all Mastervolt solar inverters.



## 2001: Rising demand for string inverters

By introducing the QS series, Mastervolt reacted to the rising demand for string inverters in the international market. The needs of the consumers are consistent: small, light, sturdy and flexible. The QS inverter is particularly popular on the growing German market. The product series distinguishes itself through its easy installation and long life span.







2005: Making solar simple: Soladin 600

2006: XS range: one range for all applications

2007/2008: Introducing the Sunmaster XL

2009: Next generation MasterSol CS series

2010: Expand solutions to higher power: CP series

# Improving efficiency and a flexible design

With recently introduced products, Mastervolt have further increased efficiency, monitoring and easy plug & play installation of its inverter range. Also the weight further diminishes and the sturdiness when used in outdoor conditions is significantly improved, setting and meeting the standards for the future.



## 2005: Making solar simple: Soladin 600

The Soladin 600 was developed for modern high current photovoltaic modules. The design suits small photovoltaic systems with a rated output up to 600 Watts. In string configuration, it can be operated up to a capacity of 150 V DC. The built-in monitoring processor has a RS232 connection, an intelligent software assistant makes setting completely hassle-free. In some countries the inverter can be plugged directly in a socket, relying on Mastervolt's QNS system.



## 2006: XS range: one range for all applications

The QS devices receive a new IP44 outdoor cover and are therefore suitable for outdoor applications. The high power output remains, even if the ambient temperatures rise. Three versions with extended LCD indicator display, a direct current switch and alternatively a PG or MCII plugs are supplied. In a new shape, Mastervolt brings a new generation of more compact, easily installable and high-efficient solar inverter for outdoor use onto the market. The waterproof IP44 examined casing allows use with many ranges. As a special feature, the XS line has a new, extended LCD display that can present all of the data and facts regarding the energy produced, for 30 days.



## 2007/2008:

### Introducing the Sunmaster XL

To meet the demand of larger installations, Mastervolt introduces the Sunmaster XL, a high performance and highly efficient solar inverter with AC output between 10–15 kW. The direct current voltage range is 100 to 600 V DC. In the case of a power failure, all three modules switch off immediately to prevent network splitting. The Sunmaster XL has an efficiency rating of over 95% according to EU standards. Best in class yield and designed for a low cost of ownership. Easy installation due to integrated connection box.



## 2009: Next generation MasterSol CS series

Trafoless technology to meet efficiency levels and reducing cost of ownership. One of the highest efficiencies available up to 98% even with a wide input voltage range of 200–1000 V DC. Ideal solution for larger solar installations.



## 2009/2010: Expand solutions to higher power: CP series

Completing our range towards large centralized inverter solutions above 100 kW. Based on this concept the increasing demand for inverters for multi Megawatt applications are met. Service support is offered remotely and locally by qualified Mastervolt service partners.





# Five reasons to use Mastervolt inverters

## 1. High degree of efficiency

Many Mastervolt devices deliver 100% output at an ambient temperature of 45 °C. The high frequency technology guarantees high efficiency. The devices switch on with the first ray of sun and switch off much later. The adaption of the adaptive cooling increases the yield further.

## 2. Flexible design

The modern design of the Mastervolt products is not only an optical characteristic. Many models in this series can be connected onto any photovoltaic module on the market. The modular system lowers the requirements of the design. The control settings for the particular country can be chosen via the LCD display. Many of the devices can be used outside due to IP44 standard or higher.

## 3. Reliability & worldwide service

Thanks to the expertise and experience gathered over two decades, Mastervolt has developed reliable products. Mastervolt gives a five year guarantee as standard. Optionally, it can be increased to ten years. Another option offered by Mastervolt is the 20 year guarantee program, which shows our confidence in our products.

## 4. Modern monitoring

Many Mastervolt series store the daily energy production for up to thirty days; this can be shown on your laptop or PC with the help of free software. The monitoring can also take place via the internet, so that you can be sure that your system is functioning at all times. To keep up to date, Mastervolt offers free plug & play software on its homepage.

## 5. Simple and safe installation

The devices from Mastervolt are one of the lightest in the market. The installation time is shortened even further due to the DC-switch. The plug & play option is available for the PC-monitoring software.









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The concept appears to be so simple; convert sunlight into useable energy. Good for the environment, no more demands on the world's shrinking stocks of fossil fuels and therefore a responsible investment.

Many progressive and advanced technologies are needed before suitable solar energy generated power actually comes out of your electrical socket. Mastervolt is the master of these techniques.

A complete portfolio of energy conversion systems for grid connected solar power supply is at your disposal. Coming from one of the first pioneers in the field with a sunny history and a bright and shiny future.

## More information

Contact your nearest sales agent or visit [www.mastervolt.com](http://www.mastervolt.com)

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