



Aristo[®] 1000 AC/DC SAW

AC/DC INVERTER POWER SOURCE FOR EFFICIENT
SUBMERGED ARC WELDING



Beyond expectation

Efficient and energy saving.

Energy saving design

Only the most modern and energy efficient components were used when we designed the Aristo® 1000 AC/DC power source. This, together with the new and unique patented pending designs, result in the best welding performance and more welding per kilowatt hour which will help to reduce your carbon footprint.

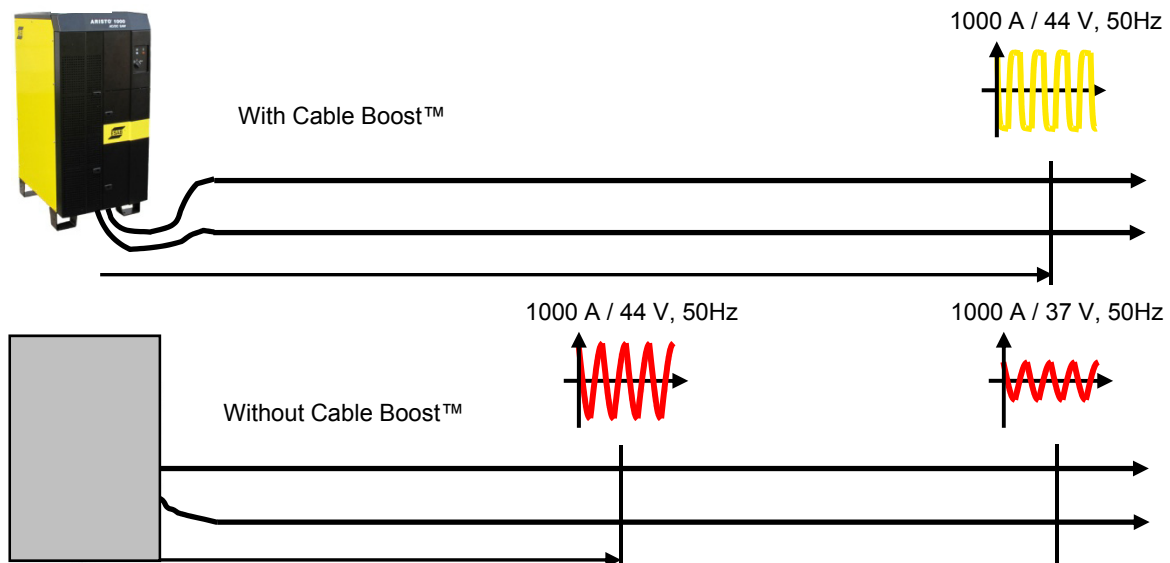
- The most modern components used
- Only components with low power losses used
- Energy saving design
- Cable Boost™ technology to save energy
- Cooling on demand saves energy
- Remote controlled on/off saves energy

Cable Boost™ - Extended working range (patent pending)

With AC welding, the inductance in the welding cables reduces the welding voltage considerably with increased length. This has negative influence on the weld result.

Cable Boost™ extends the maximum cable length that can be used in a welding installation by more than a factor of two, without compromising the weld result.

Cable Boost™ will also save energy as the inductive energy in the long welding cables will be re-used in the welding process and not wasted as heat. The result is reduced running costs and longer life time of the electronic components.

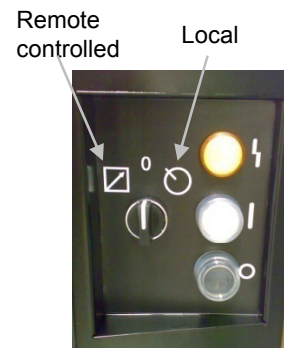


Remote controlled on/off

One or more power sources can be switched on or off remotely. This feature will save energy since it prevents the machines being switched on when they are not in use – an easy to use function is natural to use.

It also saves money on installation since large circuit breakers are not required.

Another benefit is **safety** – no need to access remote areas to switch the machines on or off.



DC/AC “on the fly” function (patent pending)

Aristo® 1000 AC/DC, together with PEK controller, allows you to change between DC and AC welding just by pressing a button. This can be done during welding and it is ideal for welding circular objects. The advantages are:

- **Increased productivity**

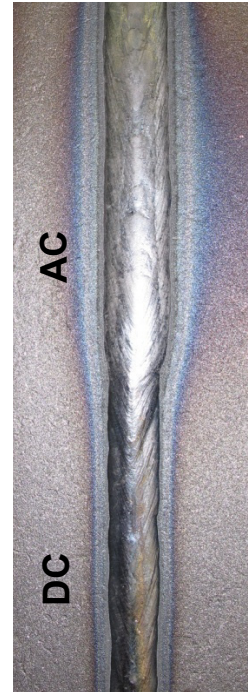
When welding circular objects the root pass is normally welded with DC to achieve full penetration. With the “on the fly” function there is no need to stop welding once the root pass is welded. Instead you just continue to weld and change over to AC. This will increase the productivity by at least 5 to 10 minutes per weld.

- **Increased quality**

The risk of weld defects is minimised since the start/stop sequence is completely eliminated.

- **Increased degree of automation**

Using a PLC controller, it is possible to fully program the complete cycle from root to cap and weld without any interruptions.



AC settings – Bead Profile Modelling™

Aristo® 1000 AC/DC offers full control of the settings for AC welding. By controlling the AC frequency, balance and offset you can optimise the penetration profile, heat input, deposition rate, arc stability and stirring effect to suit your individual needs.

*More penetration
Lower arc stability
Small flare angles*

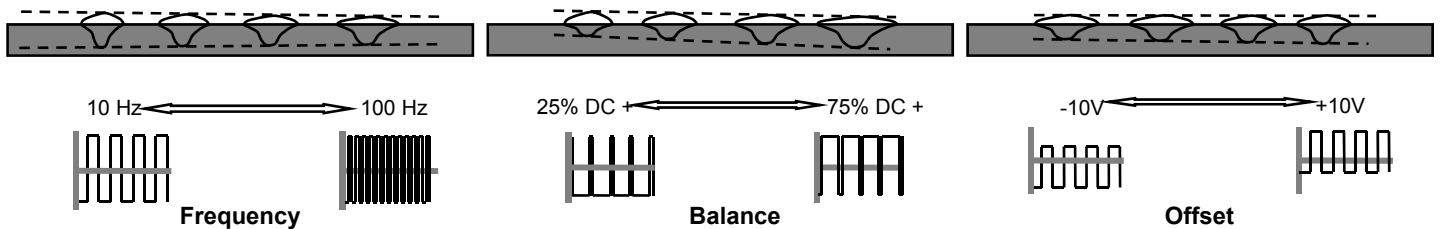
*Less penetration
Higher arc stability
Large flare angles*

*Less penetration
Higher deposition rate
Less stirring effect*

*More penetration
Lower deposition rate
More stirring effect*

*Less penetration
Higher deposition rate*

*More penetration
Lower deposition rate*



Efficient cooling

Cooling channel design provides optimal cooling of the machine while all sensitive components are protected from dust and particles. The cooling channel is easy to blow clean with compressed air.

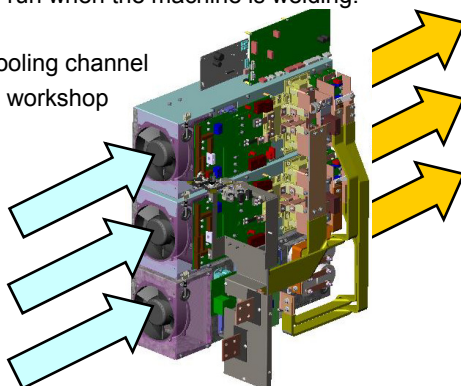
Re-usable air filters reduces the amount of particles in the cooling channel.

Cooling on demand

The cooling fan will only run when the machine is welding.

Advantages:

- Less dust inside the cooling channel
- Less noise level in the workshop
- Less energy used



Cable protection

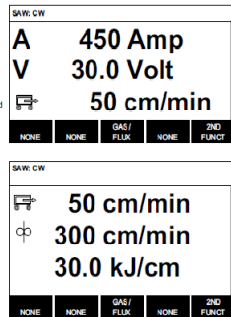
The most common reason for production stop in a welding installation is damaged cables or broken connectors. Aristo® 1000 AC/DC has cables and connectors protected from damage behind a door in the front of the machine. All connections are easily accessible from the front.



3-phase inverter

Connect to any three phase mains supply from 380 to 575 V, 50 or 60 Hz.

The energy efficient inverter power source draws mains current more evenly (power factor 0.94) on each phase without the unbalance often found in transformer based AC power sources. This results in lower installation cost and the ability to install more power sources on the same power line.



More output – Two Aristo® 1000 AC/DC can easily be connected in synchronized parallel mode to deliver more welding current if required.



Advantage PEK

ESABs standard digital controller PEK is used for all types of mechanisation, from tractors to Column and Booms, which provides user recognition and ease of use. The PEK controllers flexibility gives less need for user training and reduces the number of spare parts.

The user friendly PEK controller has a lot of innovative and useful functions. Some examples:

- 255 memory positions that can store all setting data (welding data and welding speed) for easy recall. Here you can store all the welding procedures (WPS) you use in your production.
- The stored data can also be transferred to a USB memory for storage in a computer as back-up or used to transfer all your settings from one PEK controller to another.

With this function you can develop your welding procedures in one machine and later transfer the data to all other machines in your factory to secure the welding quality. You can also store unlimited numbers of weld procedures in a computer and select those you wish to use by copying them to a USB memory and transferring them to your production.

- Different user levels can be set to limit the access for different users, which will ensure the weld quality.
- Limits for welding parameters can be set and stored in the memories. Ability to change the settings is determined by the user login access level.
- PEK gives you full control of your welding production. Productivity data such as consumption of consumables, arc time etc. and quality data (min, max and average values for current, voltage and power) and accurate values for heat input is available for each weld. This can also be transferred to USB and handled in a computer.
- PEK speaks your language. Clear written instructions in 17 different languages will guide you during operation.
- Software updates are easily carried out using USB, so that you can always use the latest software in your installation.

2011-10-20 / ESAB reserves the right to alter specifications without prior notice



ESAB AB
SE-695 81 LAXÅ SWEDEN
Phone: +46 584 81000
Fax: +46 584 411721
E-mail: info@esab.se
www.esab.com

