Aristo® 1000 AC/DC SAW

DESIGNED FOR REAL-WORLD APPLICATIONS

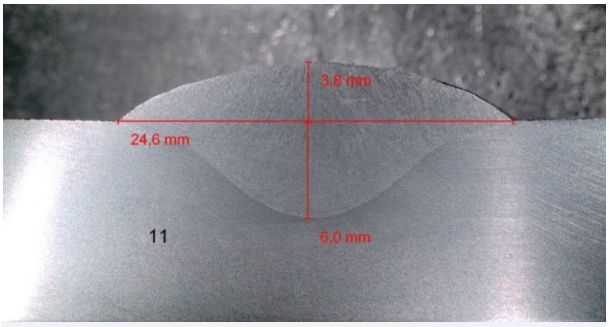
Productive
High quality
Reliable
Easy to use
Efficient

XA00171020

High productivity for real-world welding

The Aristo® 1000 AC/DC power source provides high productivity and high quality to meet real-world welding challenges. Innovative features ensure reliability, efficiency and ease of use in a machine designed to satisfy the most demanding of welding requirements.

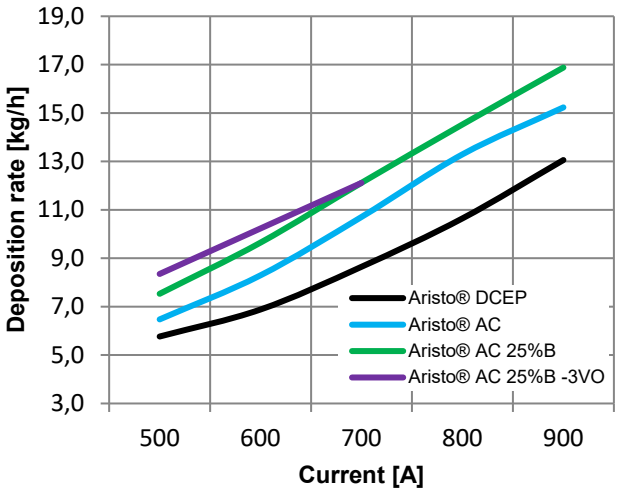
- **Multi-purpose heavy duty AC/DC** provides a flexible solution for any welding job – DC, balanced AC or unbalanced AC. The 1000A @ 100% duty cycle and the ability to control penetration and deposition make this machine the only SAW power source you need.
- **Increase productivity up to 65%** compared to DC+ welding by using the higher deposition rate of unbalanced AC with the same heat input.



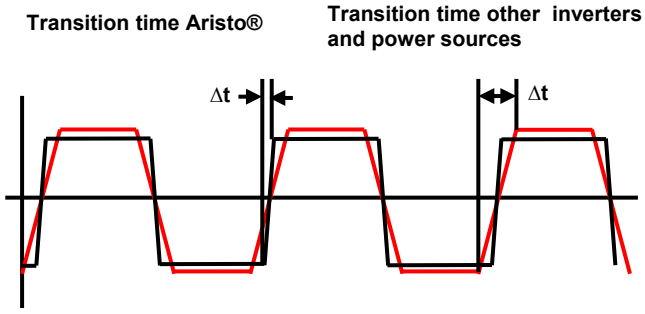
DC+ 650A, 29V, 45cm/min
Deposition rate: 7,2kg/h
Unbalanced AC 650A, 39V, 45cm/min
Balance 25%, Offset -3V, Frequency 100HZ
Deposition rate: 11,6kg/h

61% higher deposition rate with unbalanced AC

Aristo® 1000 AC/DC deposition rate chart
A6, 4mm wire, ESO 32mm



- **CableBoost™** patented technology ensures the performance of the power source is unaffected even when long welding cables are used. What you set is what you get.
- **Non-stop root to cap welding** allows change over from DC welding to AC welding "on the fly."
- **True Square Wave Technology™** delivers the optimum wave form to overcome issues traditionally impacting AC welding. This technology increases process stability compared to conventional AC power sources.



High quality and consistent reliability

- **SoftStart™** sequence reduces the risk of weld defects. This specially designed start sequence provide improved quality, saves cost and down time by avoiding re-work.
- **Critical component protection** is provided by a cooling channel design that guards all sensitive power source components from dust and particle contamination, ensuring extended component life.
- **Minimal maintenance** keeps uptime at a maximum with re-usable air filters that are easily accessed at the front of the machine and cooling channels that are quickly cleaned using compressed air.
- **Cable protection** ensures there are no production stops because of damaged cables or connectors. All connectors are positioned behind an enclosed door located at the front of the unit for protection and easy access.

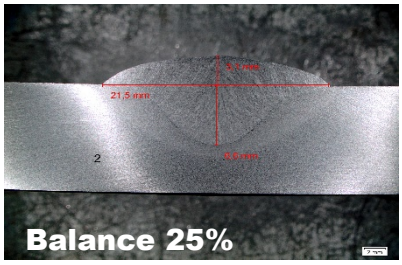
High quality and consistent reliability

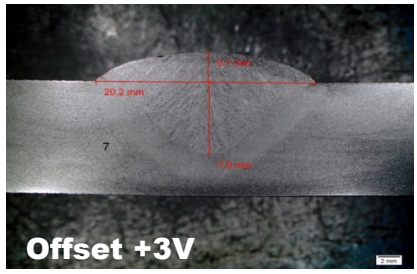
Bead Profile Modelling™ provides adjustable AC settings for precise control of penetration profile and depth, dilution, arc stability and weld appearance to achieve the best productivity and quality for each weld.

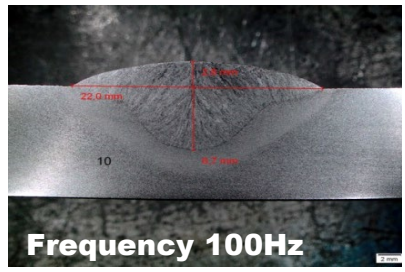
Balance: Lowering balance will mainly increase deposition rate. Increasing balance will increase penetration.

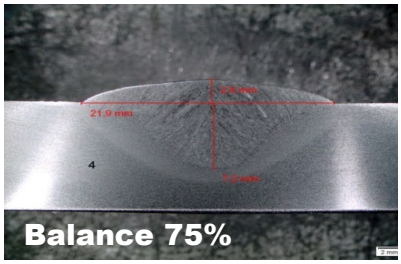
Offset: Increasing offset will increase penetration. Lowering offset will mainly increase deposition rate.

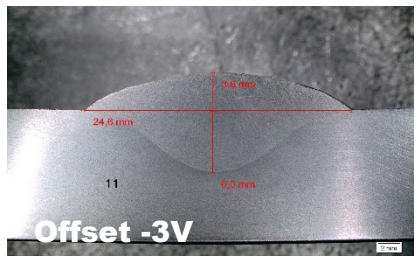
Frequency: Adjusting frequency will stabilise the process, help improve side wall wetting and increase flare angle, decreasing large grain structure in the flares.

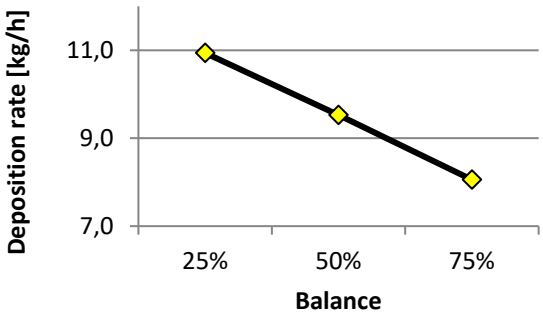


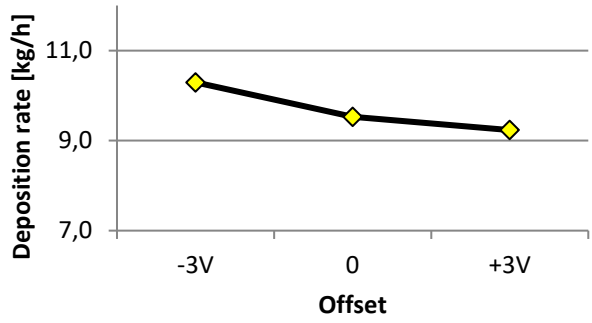












Easy to use

Aristo 1000 can be controlled from the ESAB standard controller PEK used in the A2/A6 Tractor range and the ESAB welding head range covering Single, Tandem, Multi-wire and ICE setup.

PEK Features

- **Programmable sequential welding and distance measuring via encoder feedback.**
- **Control your heat input using heat input displayed in real time during welding.**
- **High resolution encoder feedback from wire feed and motion control.**

For additional information on the PEK controller please see separate fact sheet.

Furthermore Aristo 1000 can be controlled from a PLC or PC using the PAB Fieldbus interface.

PAB Features

- **PLC control of ESAB Subarc power sources**
- **Standard HMI**
- **Control the welding application from same communication panel in a multifunctional automation system**

For additional information on the PAB fieldbus interface please see separate fact sheet.

Energy efficient and environmentally friendly

ESAB's unique technologies reduce energy consumption, are environmentally friendly, and save you money.

- **Reduced energy consumption and cost** is the result of higher deposition rates that complete the job faster using less energy.
- **Remote On/Off Control** makes it quick and convenient to turn off the power source to avoid unnecessary use of energy. It also provides freedom for power source placement.
- **Lower power installation cost compared to conventional AC power source** with a 3-phase connection that lowers grid installation cost over conventional 2-phase AC power sources. Easily set-up with a three phase mains supply from 380 to 575 V, 50 or 60 Hz.

Technical Data

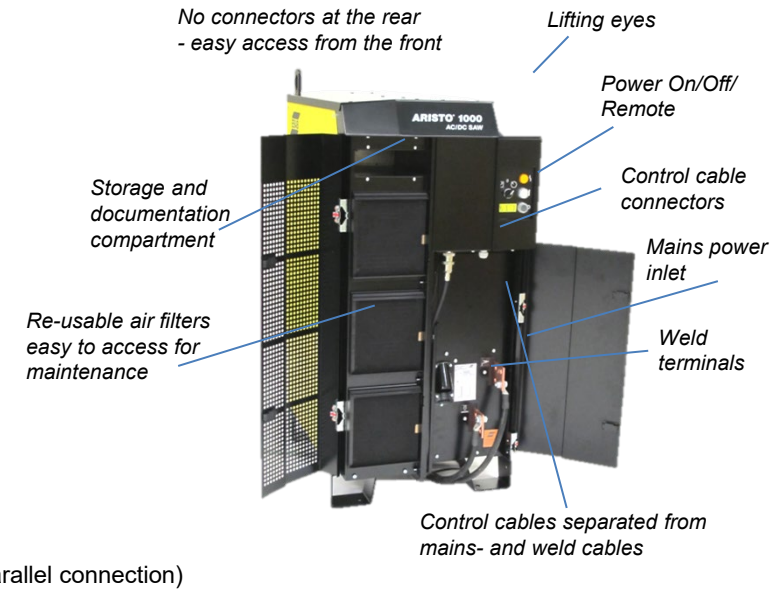
Mains Supply 3ph V, Hz	380-575, 50/60
Mains current, A	86-57
Rated output at 100% A/V	1000 / 44
AC Balance,%	25-75
AC Offset (CC / CA,CW)	± 300 A / ±10 V
AC Frequency, Hz	10-100
Output range, A	200-1000
Parallel connection (2000 A)	Yes
Cable requirements, mm^2	2x95 / 2x120
Welding cable length	Up to 100m (PS to weld head)
Remote On/Off input	Yes

Open circuit voltage, VDC	126
Idle power, W	200
Efficiency at max output	88%
Power factor	0.93
Enclosure class	IP23
Dimensions LxWxH mm	865x610x1320
Weight, kg	330
Certification	CE certified
3rd party approvals	CCC and Ghost R

This welding power source complies with the requirements of IEC-/EN 60974-1 and IEC-/EN 60974-10

Ordering information

Aristo® 1000 AC/DC SAW	0462 100 880
Control cable, 15 m	0460 910 881
Control cable, 25 m	0460 910 882
Control cable, 35 m	0460 910 883
Control cable, 50 m	0460 910 884
Interconnection cable 4 m (for parallel/tandem operation)	0463 282 880
Installation manual (for parallel/tandem operation)	0740 801 030
A2/A6 Process controller PEK	0460 504 880



Additional processes

- ESSC – Electroslag Strip Cladding max 2x1000 A (parallel connection)
- ESW – Electroslag Welding up to 2x3.2 mm wire
- CAG – Carbon Arc Gouging up to Ø 20 mm rods 2x1000 A (parallel connection)
- GMAW – Gas Metal Arc Welding with Short or Spray Arc

For more information about the additional processes please contact your local ESAB office.

ESAB®

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GLOBALLY CERTIFIED MANAGEMENT SYSTEMS