

AIR VANTAGE® 600-i from Lincoln Electric: powerful, dependable and advanced

Thulani Mngomezulu, technical manager of Lincoln Electric South Africa, introduces the company's new Air Vantage 600-i generator-driven welding solution.

The Air Vantage 600-i from Lincoln Electric is a powerful, multifunction diesel-driven welding machine that offers up to 600 A of welding current, 20 kW of auxiliary power and 1.7 m³/min (60 cfm) of compressed air in a single package. This 3-in-1 workhorse has been designed to meet the most challenging onsite needs and environments, handling a wide array of tasks from heavy-duty carbon arc gouging to pulsed GMAW welding.

Diesel engine-driven, the Air Vantage® 600-i welding power source uses a brush type alternating current generator for multi-purpose dc welding, and includes both 120 and 240 Vac single phase and 240 V three-phase auxiliary standby power sockets. The welding control system uses state of the art chopper technology and the package includes a belt-driven rotary screw compressor.

For welding, any one of five standard process modes can be selected, including cc-stick, downhill pipe, touch start dc-TIG, cv-wire (GMAW) or arc-air gouging mode with a maximum output for carbon rods of up to 9.5 mm.

Arc performance is optimised for minimal spatter for stick or pipe welding and enhanced

gouging performance prevents the engine from stalling, resulting in smooth material removal.

Expanded welding capabilities are included via customised modes for welding stainless steel, aluminium and carbon steels, as well as advanced submerged-arc welding (SAW). If the ArcLink® communications accessory is added, advanced orbital pipe mode and pulsing capabilities also become available to enable better arc control for out-of-position work or for lower heat input welding of critical welds.

From a reliability perspective, the unit is manufactured in an ISO 9001 and ISO 14001 facility, and is laboratory tested and field proven for ruggedness and durability. It is engineered for outdoor use in the harshest environments (IP23-rated) and includes high quality electrical insulation, stainless steel panelling and potted PC boards for added protection and durability.

A turbocharged Deutz® TD2.9L4 4-cylinder, 50 kW (65.7 hp) industrial diesel engine powers the unit smoothly and quietly, while standard engine gauges allow performance to be monitored at a glance. This Tier-3 engine does not require ultra-low sulphur diesel and the 94.6 l (25 gallon) fuel tank enables exceptionally long running times before refuelling.

Key features of the new Air Vantage 600-i include:

- An IEC welding output rated for 575 A at 43 V with a 100% duty cycle.
- 20 kW of auxiliary power to run all types of industrial tools or an additional inverter welder.
- 1.7 m³/min@6.9 bar (60 cfm@100 psi) of compressed air powered by a VMAC®-manufactured unit.
- Powered by an industry proven 50 kW (65.7 hp), turbocharged Deutz® diesel engine-generator set.
- Capable of gouging with up to 9.5 mm carbon steels.
- Lab tested and field proven for ruggedness and durability, and engineered for outdoor use and harsh

environments (IP23-rated).

- Encapsulated GFCIs, stainless steel panelling, and potted PC boards for added protection and durability.
- Welding performance offers minimal spatter for stick or pipe welding.
- Expanded welding capabilities for stainless, aluminium, and steel.
- With the ArcLink® communications accessory, pulsed GMAW is enabled for out-of-position and low heat input welding.
- Enhanced gouging performance with ArcLink® prevents the engine from stalling, resulting in smooth material removal.
- For GMAW, FCAW and MCAW, a Power Feed® 25M, a compact workshop or onsite wire feeder that includes push-pull capabilities for aluminium welding and extended gun feeder distances.

Other features of the feeder include: the Lincoln's MAXTRAC® drive system with full digital controls; internal lighting to illuminate the wire drive for working in dark environments; and internal heating to maintain control of the humidity by keeping consumables warmed and protected within the enclosed feeder case.

Other associated add-on capabilities and equipment for Lincoln Electric's Air Vantage 600-i include: the ArcLink Communications accessory for seamlessly sharing information between intelligent components and transferring critical data to system components such as wire feeders; a remote output controller; a large trailer with a fender and light kit; and a cable rack for the safe storage of approximately 30.5 m of 70 mm² welding cable per side.

The Air Vantage 600-i is ideal for onsite use for heavy equipment repair; energy utility repair; construction and general fabrication.

"We at Lincoln Electric manufacture and sell high quality welding equipment, consumables and cutting equipment that meet our customer's needs and exceed their expectations. Our Air Vantage generator-driven welding solution offers a high-end solution to local onsite welding needs. It will not disappoint," says Thulani Mngomezulu, technical manager of Lincoln Electric South Africa.

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