ALPHATOME²
HIGH PRECISION PLASMA CUTTING

LINCOLN ELECTRIC
**ALPHATOME**

Lincoln Electric proposes the ALPHATOME® as an advanced cutting machine to carry out high precision work to meet intensive production requirements while providing increased safety for the operator and their environment.

**Flexible applications**

ALPHATOME® is an installation particularly used in industry sectors for metal cutting, boiler making, shipbuilding and railway construction, sub-contracting, ventilation, sheet steel for precision and cutting quality.

- Carbon & stainless steel, aluminium.
- Thickness range from 0,5 to 50 mm.
- Plate width from 2 to 4 m.
- Length up to 24 m.

**Equipped**

- Up to 2 high precision plasma Nertajet HPI.
- Tube cutting.
- Visio process.
- Remote control.
- Marking options.

**Guiding system & Motorisation**

Optimized motion for a better quality cut.

- Precision of the guides by ball-bearing systems on the X, Y and Z axis.
- Quality of the drive by brushless motors.
- Robust roller track and rigid structure which is adapted to the process constraints.
- Available at any time thanks to its absolute encoders.
- EtherCAT servomotors for a dynamic response.
- Reduction of maintenance costs and extends the machine’s quality of movement.

**Double beam structure**

- Double transversal beam facilitates high precision in repositioning the torch (accuracy 0,05 mm).
- The tool is perfectly centered and stable between the 2 beams.
- The carriage fitted with double guide shoes ensures precise and dynamic positioning.
- Closed cable chain for perfect protection of cables and hoses.

**Safety first**

5 emergency stops and light barriers located at the front, and rear, of the machine provides a safe working environment for the operator.

- Advanced PROTECT casing.
- Allowing visual protection against the plasma arc and reducing the noise.

- A protective curtain that can be lifted at the front, controlled from the control panel.
- A fixed rear curtain.
- Two side doors that can be opened quickly, to allow easy access to the torch (or torches) for quick replacement of worn out parts (thanks to its ergonomic design).

- Centralised control system

- Large tactile screen integrates machine management and cutting parameters.
- Quick access to manual functions to facilitate cutting operations.

- **Flexible applications**

- **Equipped**

- **Guiding system & Motorisation**

- **Double beam structure**

- **Safety first**

- **Centralised control system**
Complements

- Up to 2 high precision plasma Nertajet HPi driven by 2 motorized axis.
- Marking options.
- Extension up to 24 m.

Visio-process

A camera allows the operator to see the position of the torch on the control screen. The controlled area, approximately 250 mm in diameter, facilitates the positioning before and during cutting and monitoring of the arc. Whatever the location of the control panel the operator can control the cutting and position its torch.

Remote control

This option facilitates the control of the main operations of the machine, avoiding the to and fro movement of the operator from the control console in the work area. It is also a complementary element for safety that allows one to stop the machine, at a distance.

Tube cutting

Can be implemented between the tracks or on external side with an extended beam.

- Central fumes extraction.
- Diameter from 60 to 400 mm.
- Length up to 6 m.
- Max weight 550 kg.

HPC digital process 2

The most intuitive and efficient digital control on the market. It fully manages the cutting machine: from the trajectory to the processes. The ergonomics of the HMI and its large 19” touch screen make it operator friendly and easy to use.

How does the automatic adjustment of processes work on HPC 2?

Phase 1:
After choosing a programme, the operator chooses the material and the thickness to cut.

Phase 2:
HPC 2 offers one or more solutions of cutting.

Phase 3:
After accepting the proposal, the setting of the parameters is done automatically.

Phase 4:
When the cutting tool is equipped with the right components, the machine is ready to cut.

Material & communication

- ETHERCAT bus management,
- Industrial PC,
- SSD hard disk,
- Real-time system.

NERTAJET HPi

ALPHATOME® uses all the plasma cutting and marking process of the NERTAJET HPi installations of the HP150, HP300 or HP450 version.

Next generation high precision plasma, it implements the latest advanced features developed by Lincoln Electric in order to increase the cutting quality while optimising production costs:

- CYCLE BOOST & INSTANT MARKING for reducing the production time.
- MASTER HOLE & CDHC for increasing the cutting quality.
- SOFT IGNITION, SOFT PIERCING & TWIN DETECT to simplify usage and integration.
CUSTOMER ASSISTANCE POLICY
The business of Lincoln Electric is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers’ particular purpose is specifically disclaimed.

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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectriceurope.com for any updated information.

www.lincolnelectriceurope.com

Main characteristics:
- High speed: 25 m/min.
- Cutting speed: from 0 to 10 m/min.
- Number of tools: 1 or 2.
- Transverse drive: 1 motor per torch.
- Numerical control: HPC2 DIGITAL PROCESS.
- Roller track: by components of 2 m or 3 m.
- Cutting table: not fixed to the machine, its dimensions are adapted by means of the sheet dimensions.

The table will be coupled to a suction and cutting smoke processing system.

Main characteristics:

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