



INVEST IN THE FUTURE



Made in France

Plasma cutting on automatic table

Interfacing analog & digital CNC kits



The analog & digital kits have been designed to make the communication possible between GYS plasma cutters and Computer Numerical Control of cutting tables.



Why using an automatic cutting?

Hand held cutting is ideal to quickly cut metal sheets, nuts & bolts, pipes on a large range of conductive materials. Hand held torch can be used to cut small parts in metal sheets but it is not possible to get precise cuts and clear marking.

The acronym «CNC» stands for «Computer Numerical Control» meaning that a computer is used to control the torch movement on the cutting table through programs. The computerization of the process gives us a constant and reliable output, a maximum productivity and an optimal cutting quality.

CNC-1 kit **Analog** - ref. 039988

The analog CNC kit enables to exchange just the necessary information between the plasma cutter and the computer numerical control of the cutting table in order to ensure a good functioning of the installation.

CNC-2 kit **Digital** - ref. 064737

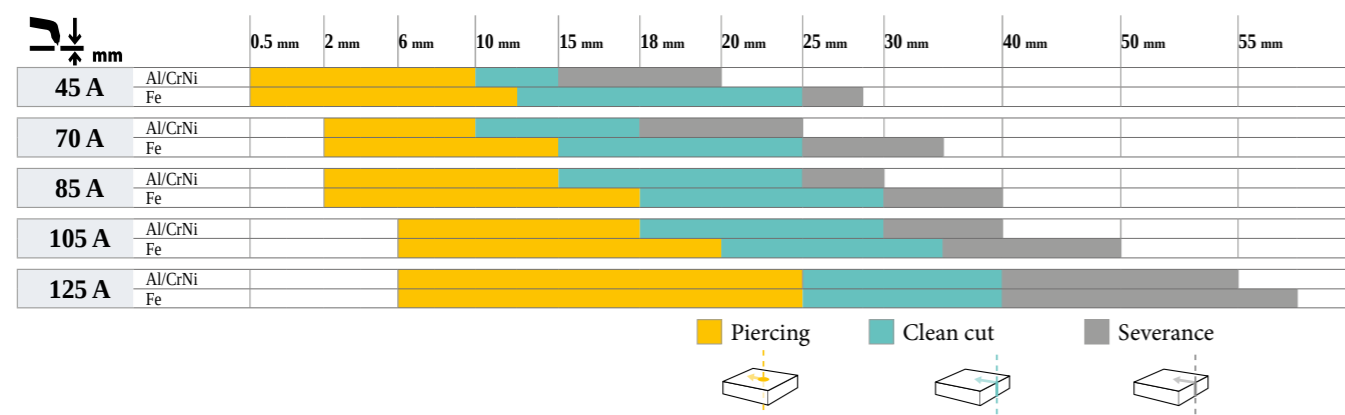
The digital kit is an advanced version of the analog one. It enables a full control of the different parameters from the computer numerical control of the cutting table (mode selection, settings adjustment, informative messages & product status).

CNC-3 kit **Digital** Retrofit - ref. 068957

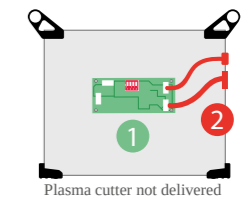
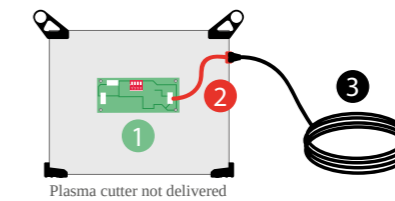
The digital retrofit kit has the same features as the CNC-2 kit. The difference is on the connections so that it can be compatible with existing standard installations (14-pin CPC AMP® connector, 5-point Phoenix Contact®).

PLASMA CUTTER	45 CT 014787*	70 CT 013636*	NEOCUT 105 063044*		NEOCUT 125 067431*	
Compatible CNC kit	Analog	Analog	Analog	Digital	Analog	Digital
Start/Stop	•	•	•	•	•	•
Transfer OK	•	•	•	•	•	•
Divided arc voltage	•	•	•	•	•	•
Marking			•	•	•	•
Current adjustment				•		•
Air pressure adjustment				•		•
Mode choice				•		•
Remote diagnosis				•		•

*Plasma cutter + earth clamp



Package content



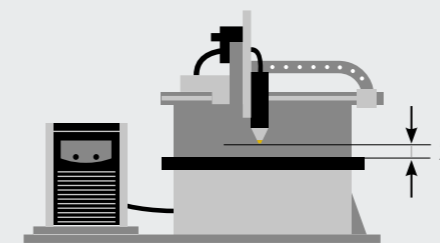
CNC-1 / CNC-2

- 1 Interfacing board
- 2 Internal connection
- 3 External connection (15m - adjustable if needed)

CNC-3

- 1 Interfacing board
- 2 Internal connection

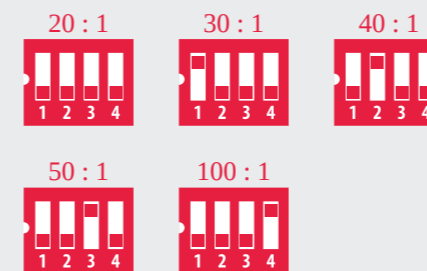
Torch Height Compensation



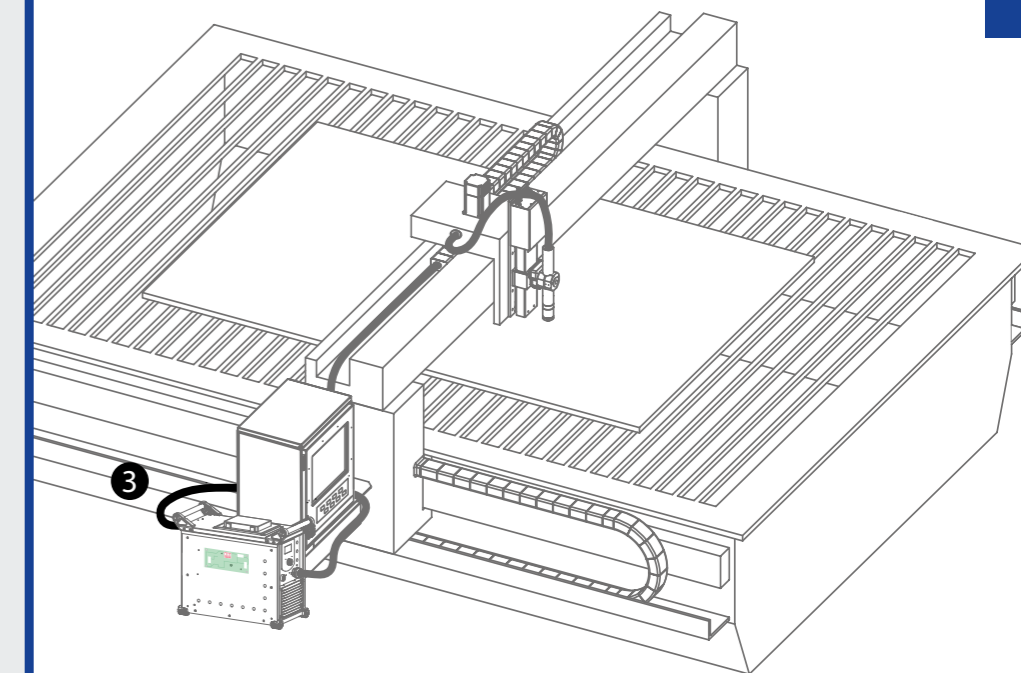
Computer numerical control equipped with a THC module (Torch Height Compensation), the plasma cutter returns the arc voltage information. It enables to optimise the distance between the torch and the base material to cut.

Most of the torch height compensation modules have to receive a divided arc voltage for safety reasons.

5 possibilities of configuration: (DIP switch integrated on the electronic card)



Implementation



	Signal	Plasma	CNC
Analog	Start / Stop	←	
	Transfer OK		→
	Arc voltage		→
	Marking	←	
Digital	Transmitter (Tx ⁺)		→
	Transmitter (Tx ⁻)		→
	Receiver (Rx ⁺)	←	
	Receiver (Rx ⁻)	←	

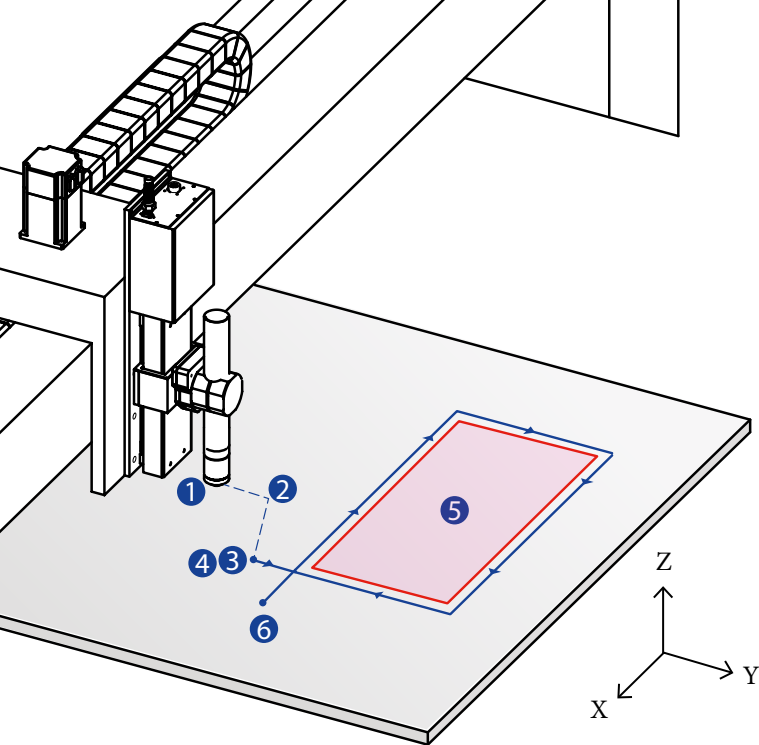
For more details regarding the pinout of the 14-point connector and the wires identification, please check the user manual.



Installation videos of the CNC kits

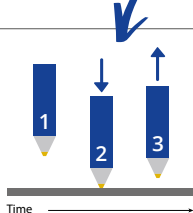
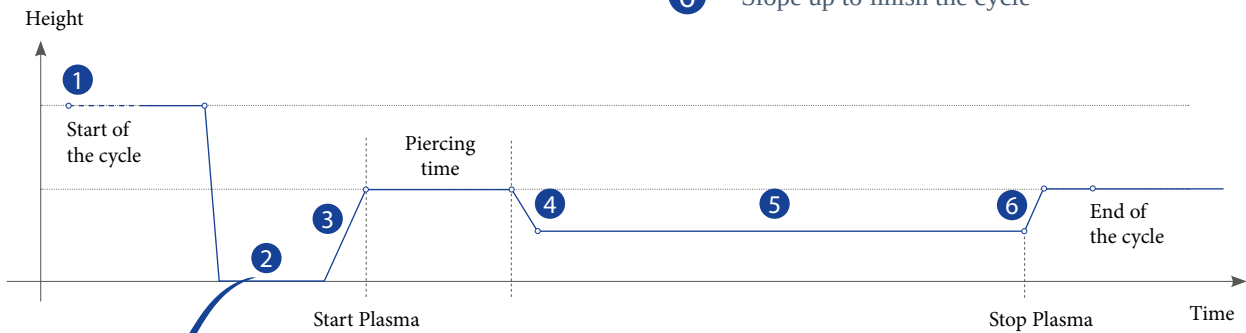


CNC kits user manuals



Different steps of a cutting cycle

- 1 Torch in initial position
- 2 Sensing:
Mechanical: ideal for rusty, oily, greasy or film-wrapped metal sheets.
Ohmic: ideal for thin metal sheets
- 3 Positioning to piercing height
- 4 Positioning to cutting height
- 5 Cutting following the CAD drawing and torch height compensation (THC)
- 6 Slope up to finish the cycle



Mechanical sensing : As soon as the torch touches the metal sheet, a downward pressure on the material is put in order to have the zero point.

Ohmic sensing : As soon as the torch touches the metal sheet, electrical detection of the contact between the deflector and the sheet. Thus, the zero point can be made where the electrical contact is established while not flexing the metal sheets. An ohmic nozzle is necessary for this process.

Kit choices:

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