SUBJECT	CNC PLASMA CUTTING MACHINE
MACHINE MODEL	ECOCUT

STANDARD EQUIPMENT

PLASMA
POWER SOURCE
POWERMAX105
HYPERTHERM USA

CNC CONTROLLER
ESA S 630
ITALY

LINEAR RAIL
25mm
LMT
TAIWAN

TOUCH SCREEN
10“

RACK&PINION SYSTEM
HELICAL
GAMBINI
ITALY

AC DIGITAL SERVO
MOTORS & DRIVERS
ESA
ITALY

ELECTRICAL SYSTEM
WAGO GERMANY
SCHNEIDER GERMANY
OMRON JAPAN

REDUCER
EISELE
GERMANY

GENERAL FEATURES

- 1500 mm x 3000 mm cutting area
- Solid steel construction designed for higher speeds
- Mechanical fume extraction table, exchangeable grilss, optional filter system which allows clean, safety and healthy working environment by vacuuming dust and fume which raises during plasma cutting process
- High precise positioning possibility with linear sledge system in all axis‘
- Synchronised drive allows a smoothly and vibration free motion
- Brushless AC servo motors (on all axis‘)
- Pinion and gearrack drive system facilitates smooth and fast motion
- Automatic heigth control and automatic ignition torch system
- Torch collision protection
- Operative system: ETS real time windows compatible
- Auto-nesting programme which provides economy on material and saves time
- In comparison to laser cutting, plasma cutting decreases the cost of the process by 25%. With similar cutting quality, plasma is a preferable alternate to laser cutting.
- Cutting surface is close to 90 degrees and the vertical roughness tolerance is in minimum level.
- Instruction Manual

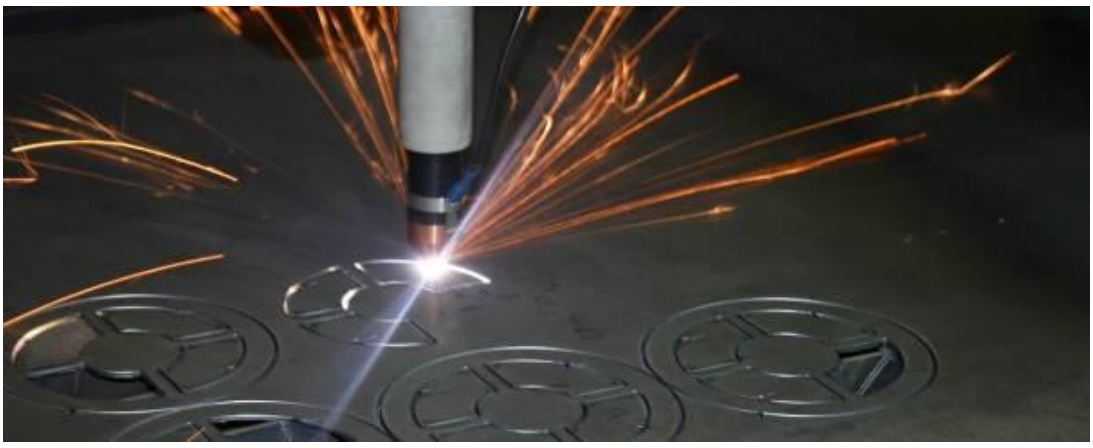
TECHNICAL FEATURES

Machine Model	ECOCUT

Power Source	Hypertherm POWERMAX105		
Cutting Thicknesses		**Piercing**	**Severance (Edge Start)**
Mild Steel		22mm	36mm
Stainless Steel		20mm	20mm
Aluminium		20mm	20mm

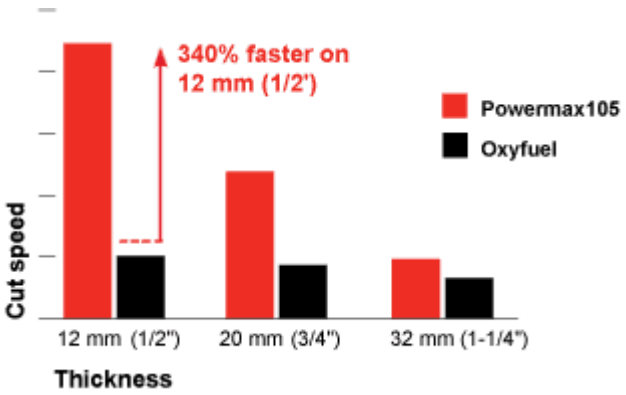
Working table size	1500x3000 mm
Working table height	800 mm
Working table extraction system	Pneumatic switch controlled fume extraction system
Maximum Loading Capacity	750 kg/m²

Axial Movements	X- Axis	1.550 mm
	Y- Axis	3.100 mm
	Z- Axis	150mm
Positioning Accuracy		± 0.01mm
Transvers speed		25mt/dk.
Z axis Distance Control		LOYAL THC with SERVO MOTOR



PLASMA POWER SOURCE
HYPERTHERM POWERMAX105

Relative cut performance on mild steel



- Fast cut speeds: three times faster than oxyfuel on 12 mm (½") mild steel.
- Superior cut and gouge quality means less time spent on grinding and edge preparation.
- Smart Sense™ technology automatically sets correct air pressure based on torch length and operating mode.
- Handheld, straight machine and robotic torches for greater versatility and ease-of-use.
- Wide voltage tolerance improves performance on motor generators and in low-line conditions.
- Improved shield reduces dross buildup and enables smoother drag cutting for a better cut.
- Duramax™ torches are designed for high impact and heat-resistance.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Low maintenance for maximum uptime – it keeps on going.
- Long consumable life for lower cost and more uptime.
- Exclusive electrode end-of-life detection protects the torch and workpiece from damage by automatically stopping power when the electrode is overused.
- High power efficiency lowers energy consumption.

Safer

- Cutting with a plasma system needs no flammable gasses.

More productive

- Much faster cut speeds, no preheating needed, a cleaner edge with smaller heat requires less grinding of the cut edge.
- Our consumable technology delivers faster speeds and better cut quality to help you do more in less time.

CNC CONTROLLER
ESA S 630 – ITALY

The most powerful in its class. 10” touch screen with powerful graphic. All the performances of a high-level cnc in an economical and user-friendly controller. High-level graphic programming for easiness of use and sophisticated algorithms to make the most of your machine. Direct management of any kind of servo with no need of external amplifiers. Can Manage up to four axes in any combination

BASIC UNIT EQUIPPED WITH CPU AMD ETX-LX800 500MHZ, 128MB DRAM INCLUDING

- Graphic colour 10” touch screen display (1024 x 600 pixels resolution).
- 128 MB silicon disk.
- Interactive 2d graphic editor for work-pieces and tools data entry
- 2D graphic display of machine frame, work-piece and tools
- 4 fast counting circuits for line drive 0-5Vdc differential encoders or npn/push pull.The encoders are powered at 5Vdc (max 200mA per channel).
- 4 analog outputs (±10V) with 13bits + sign resolution.
- 4 digital inputs for the zero micros.
- 4 analog inputs, 12 bits resolution, ranges 0÷10V, 0÷5V.
- 2 general purposes analog outputs, 0÷10V (8 bits resolution).
- 32 digital inputs (24Vdc).
- 32 digital outputs (24Vdc, 0,7A max.) protected against overload and short-circuits.
- 2 serial port rs232.
- 1 Can port with 9 pins subd f connector.
- 1 ethernet port 10/100 Mbit (lan connection)
- 1 VGA port for external monitor connection
- 2 USB (2.0) ports.
- 24Vdc power supply.

TABLE WITH MECHANICAL FUME EXTRACTION SYSTEM

Mechanical fume extraction table, exchangeable grilss, optional filter system which allows clean, safety and healthy working environment by vacuuming dust and fume which raises during plasma cutting process

TORCH HEIGHT CONTROL WITH SERVO CONTROL UNIT

- Torch height control can be adjusted easily by arc voltage feedback control which effects the cutting quality positively.
- Torch height control system through voltage divider board by Hypertherm.
- All values and also errors could be found easily through the relating indicators.
- System control can be reviewed or can be transfered to the CNC control.

TORCH MAGNETIC BREAK-AWAY SYSTEM

- Magnetic breakaway is designed in order to reduce or eliminate damage on the torch due to accidental collisions in all axis.