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FICEP
STEEL THINKING

ENERGY

CNC gantry working center for plate edge milling

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H ENERGY

CNC gantry working center for plate edge milling

Energy is the new CNC working center designed and manufactured by FICEP for plate edge milling, drilling, tapping and marking, specially dedicated to the wind sector (towers, TP, foundations, etc.).
An advanced and powerful technological solution, studied to guarantee high productivity, processing versatility and great performance within the high quality standards required by the different application fields regulations.
Energy mills, drills, and marks plates of small and large dimensions and is able to process thickness up to 6"/10" Within this wide range of capabilities, Energy guarantees precision, speed and extremely high production rates.
Regarding milling operations, Energy is able to carry out different types of bevels respecting the strict parameters required by the different application field regulations.

Milling of stainless steel and surface milling are also available on Energy.

Example of possible bevels in single pass:

Y bevel

K bevel

V bevel

A.E.P TECHNOLOGY

Accurate Edge Preparation is the new FICEP technology which allows ENERGY to be so performing. High processing speed, extremely complex bevels, no modification to the material properties and substantial bevelling quality, are just few of the characteristics that make A.E.P. technology a unique performance, **allowing milling operations without the use of oxy-fuel torches.**

POWERFUL

The power generated by the 94/165 HP spindles pushes the milling tools at very high torque. This power, in combination with the performances of the tools with HSK-A100 or HSK-A125 adapter, offers an excellent chip removal and a fast, accurate and efficient processing. The maximum torque and the high feed rates are achieved even when heavy plates are milled.

STRONG

FICEP fully controls the manufacturing process, thus ensuring the use of the best raw material and components and offering outstanding sturdiness and stability. As evidence of this concept, the gantry and the guides are manufactured to handle challenging working cycles.

FAST

The spindle engineering and power guarantee very high chip removal speed. The high working and positioning speed, that reaches up to 98 FPM on the X axis, the ad hoc solutions for a quick tool change, in addition to the wide working table and availability of all four sides of the plate for machining in one clamping, offer an excellent productivity.

SIMPLE

The user interface is simple and user-friendly guaranteeing a quick and comfortable use of the machine by the operator. The system layout moreover allows easy tooling setup and the ordinary maintenance procedures. The 5 CNC axes, the 10 motors and the 2 independent spindles are designed to guarantee high processing efficiency.

ACCESSORIZED

The spindles are equipped with a probing device to allow the processing information sensing at ultimate precision. The tool changer system, mounted on board of the spindle, automates and expedites the tool replacement phase in order to quickly start a new processing and new bevelling operation.

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X bevel

U/J bevel

J/Y bevel

Other bevels in single pass are also available

Milling tools

Automatic 5-position tool changer on each side (6 positions available upon request)

Marking tool: plasma – laser – scribing – Inkjet (text, numbers, bar codes, auxiliary lines)

Chip removal by vibrating chute

BEVELS WITH DIFFERENT SHAPES

Energy carries out all the bevels required by the different welding technologies. The shaping precision and the high working speed add on to the processing versatility. It is possible to design customized milling tools with specific geometries according to the customer needs.

APPLICATION FIELDS

Energy is studied, designed and manufactured to satisfy the high production needs of different application fields: milling, drilling, tapping and marking operations carried out by Energy are mainly involved in the production of wind towers/foundations, but they are also extended to the energy sector – heat exchangers, pressure vessels, boilers – and to Oil & Gas, civil constructions, shipyards, large steel structures and petrochemical.

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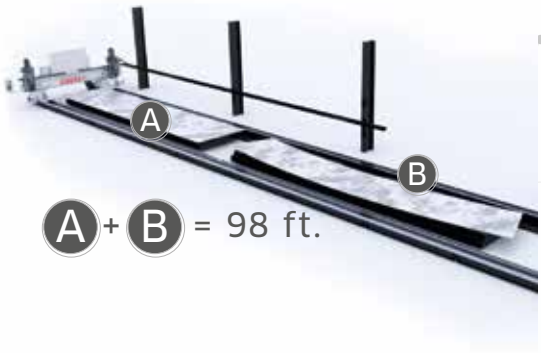
TWO WORKING AREAS and NON-STOP PROCESSING

The gantry system and the two separate working areas allow to optimize the plates loading and unloading phases without stopping the processing, in order to preserve the significant productivity rates guaranteed by FICEP technology.

A B Processing “A” while “B” is being positioned

A B Processing “B” while “A” is being removed



HIGH FLEXIBILITY GANTRY

The technological design of the gantry, together with the reduced overall dimension of the spindles, allow a wider range of processing: it’s, in fact, possible to process both small and large size plates. The gantry stroke is extended and allows quick and easy tool replacement in the tool changers installed on board of the spindles, as the end stroke of the heads is wider than the working table.

Axes characteristics:

Z axis feeding speed	**65 FPM**
X and Y axes feeding speed	**98 FPM**

POWERFUL INDEPENDENT SPINDLE

Spindle characteristics:

- Gearless technology
- Symmetric counter balance system
- Large roller bearing size
- Automatic adjusting system of the spindle vertical working height to balance eventual irregularity of the plates to be processed
- Reduced overall size to allow the simultaneous processing of small plates

TECH SPECS

ENERGY CNC gantry working center for plate edge milling	**3202 GDX DD**	**5002 GDX DD**
Plate size [max. inch]	138” x 197 ft.	196” x 197 ft.
Plate thickness [max. inch]	6” / 10”	6” / 10”
Independent milling heads [no.]	2	2
Milling tools per head [no.] (6 tools per head are available upon request)	5	5
Milling tool diameter [max. inch]	14”	14”
Spindle power [HP]	94 / 165	94 / 165
Spindle speed [max. RPM]	1500 / 1000	1500 / 1000
Machine weight [lbs.]	61,800	68,400

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