



STEEL
CONSTRUCTION

ANGLES & FLATS
BEAMS & PIPES
PLATES
SURFACE TREATMENT
ROBOTIC WELDING
SOFTWARE & AUTOMATION



GEMINI

Automatic gantry CNC drilling, milling and thermal cutting systems for large plates



Montfort International Itée

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The GEMINI is the complete plate processor for fabricators and manufacturers of all sizes.

It handles from light to heavy plate for thermal cutting, marking, milling, drilling, tapping, beveling and more, with

unprecedented productivity and accuracy.

This achieves the lowest part cost due to its minimal floor space, low capital investment and productivity.



Bevel plasma torch



Automatic tool changer with up to 24 tools per drill head (depending upon the model)

STANDARD TECHNICAL FEATURES

- Twin bridge beam box construction for minimum deflection when drilling and milling.
- High precision hardened and ground helical rack on the X & Y & U axes.
- Simple floor mounted installation without the need for special foundations.
- Minimal footprint.
- High speed milling and drilling with 7,000 RPM spindle speeds and automatic tool changer.
- Multiple integrated plate clamps rapidly adjust to the plate thickness to reduce the clamping cycle. The clamps rigidly secure the plate to the material bed to eliminate vibration and extend tool life even during aggressive machining.
- Precision laser for plate referencing that automatically rotates the plate nesting program to eliminate the need to square plates prior to processing.
- Secondary X axis reduces the chip-to-chip time by eliminating the need to reposition the gantry and generate a clamp and unclamp cycle after each drilling or milling process.
- Tool changing occurs while the plate remains rigidly clamped to the material bed for precision tapping, countersinking, boring and milling.
- Helical milling is used to generate larger holes at a fraction of the tooling cost associated with drilling of large holes.
- Face milling is achieved typically without having to unclamp the material or move the gantry when generating bearing surfaces in construction machine applications and columns in structural steel fabrication.

OPTIONAL FEATURES

- CNC bevel plasma head for weld preparations
- Multiple oxy-fuel torches
- Down draft or water tables
- Plate marking and layout "scribing" with patented technology
- Marking with plasma
- Chip vacuum evacuation systems



J groove edge beveled for deep penetration and no back welding



Hypertherm
Cut with confidence™
True Hole™





CUTTING

The Gemini's mobile gantry design allows for a greater range of plate sizes and thicknesses without concern for the plate weight. Material loading and unloading occurs in masked time as this transpires while the Gemini is 100% productive.

The Gemini can be supplied with plasma and optional oxy-fuel torches to process plates from 1/4" to 12".

The plasma power supply is the new Hypertherm XPR300 as standard. This new technology incorporates several additional unique features and benefits in terms of cut quality on mild and stainless steel, bevel capabilities, performance, optimized productivity, reduced operating costs and nozzle life.

The Hypertherm HPR400XD is also available on all Gemini models as an option.



MARKING AND SCRIBING

Fabrication, bending lines, identification lines and part numbers can be indicated with either a scribed line or with plasma marking.

When deeper marking is required for identification after painting or galvanizing, scribing is utilized in these applications.

Layout locations for the positioning and welding of parts with reference points are produced with our patented scribing tool.



DRILLING AND TAPPING

The Gemini's high speed machining spindle allows extremely productive drilling of holes from .2" to 3.15". For larger holes up to 15.75", the Gemini can mill holes with exceptional accuracy. A tolerance of .0039" on diameter and concentricity can be maintained.

The high-speed spindle positioning (sub X and Y axis) combined with the wide processing window, where the gantry movement and material clamping/unclamping is eliminated, provides for industry leading productivity.

For many applications, tapped holes in the components can reduce welding, fitting and assembly time. When tapping, the digital control system provides exceptionally high quality threads on tapped holes.



FACE AND SLOT MILLING

On machine parts and many structural detail items, slotted holes, milled bearing mating surfaces, etc. are required. Traditionally, these operations were performed on large machining centers or boring machines after fabrication. The accuracy of the Gemini in both cutting and machining enables many of these operations to be performed on the stock plate, thus eliminating expensive secondary operations.



EDGE BEVELING

The Gemini can make weld preps (V, Y, X, K) with plasma beveling. For precision bevels, milling is more accurate and J groove bevels can also be achieved.



**DOUBLE GANTRY SYSTEM:
GEMINI + GEMINI OR GEMINI + KRONOS**

- Reduced manpower (one operator for two machines)
- Lower total investment
- Same Fanuc controls and drives
- Common rails & table
- Less material handling & improved safety
- Reduced floor space
- Higher availability & greater flexibility
- Increased throughput capacity
- Less downtime and maintenance
- Installation of the overall system in one step, or the possibility to add the second system at a later stage



ROBOTIC UNLOADING OF SMALL TO HEAVY FINISHED PARTS!

FICEP has enhanced the productivity and automation of the Gemini plate processors with the integration of an independent robotic part unloading system:

- A 4-axis robot with dual magnetic systems addresses the diversity of part sizes.
- Exceptional efficiency is achieved with the ability to robotically unload and stack finished parts while the Gemini plate processor is performing other diverse fabrication operations.
- Even the skeleton can be automatically removed to a designated area.
- Steel Projects comprehensive nesting and production software optimizes the multiple unloading and fabrication operations of the Gemini plate processor.



GEMINI Automatic gantry CNC drilling, milling and thermal cutting systems for large plates	G25SP	G32SP	G25HPE	G32HPE	G36HDE	G36XD
Plate size [max. inch]	100" x 236"	122" x 236"	100" x 236"	122" x 236"	141" x 236"	141" x 236"
Plate thickness with plasma [max. inch]	3"	3"	3"	3"	3"	3"
Plasma straight torches [max. no]	1	1	1	1	2	2
Plasma bevel torches [max. no]	1	1	1	1	2	2
Plate thickness with oxy [max. inch]	4"	4"	4"	4"	5"	6"
Oxy-fuel torches [max. no]	3	3	3	3	3	3
Drilling heads [no.]	1	1	1	1	2	2
Drilling tools per head [no.]	6	6	24	24	24	16
Drilling diameter [max. inch]	1-9/16"	1-9/16"	1-9/16" (9-3/4")	1-9/16" (9-3/4")	2-15/16" (15-3/4")	3-1/4" (15-3/4")
Drilling thickness [max. inch]	3"	3"	3"	3"	5"	12"
Spindle power [HP]	20	20	20	20	35	78
Spindle speed [max RPM]	7,000	7,000	7,000	7,000	6,000	4,500
Machine weight [lbs.]	9,900	10,600	9,900	10,600	20,900	33,000

TECH SPECS