



STEEL
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ENTERPRISE

Automatic gantry CNC drilling line for
bridge girders and welded structures



Montfort International Itée

H ENTERPRISE

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The Enterprise gantry drill features innovative laser probing technology for the productive processing of bridge girders and large welded structures. An expanded processing envelope of 157" x 78-3/4" addresses a wide range of applications. The gantry travel can be up to 115 ft. to accommodate either long structures or multiple short parts with loading and unloading in masked time.

This expansive processing window, with laser scanning technology, can eliminate the laydown process and manual drilling in the fabrication of bridge girders that are frequently cambered or curved. The exceptional size capability also lends itself to process box girders, trusses and large welded structures.

Prior to any spindle operations laser technology is employed to scan all material surfaces to achieve accurate hole locations. The movable gantry design of the Enterprise is the ideal solution for the fabrication of large and heavy parts that are difficult to convey since they remain stationary during all system processes.

Each of the drill spindles feature a sub-axis movement to facilitate milling applications and the drilling of holes on three surfaces simultaneously even if they are offset to maximize the productivity of the system. The drill spindles feature a DIRECT DRIVE system that delivers 100% of the motor's power to the tool at up to 5,000 RPM. The vertical spindle also has the capability to rotate up to 90° in each direction to permit end-milling routines such as weld prep.



Rotating drilling head for end milling



Non-contact triple laser probing



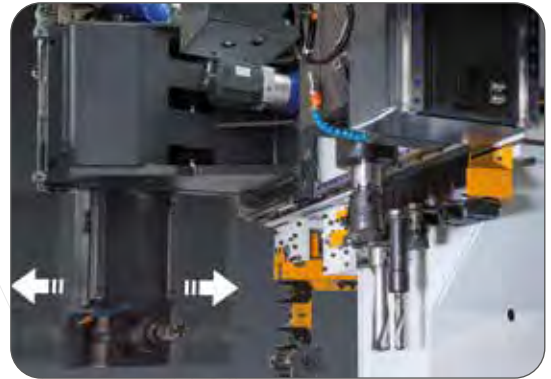
Horizontal spindle with automatic tool changer





New auxiliary axes

The three DIRECT DRIVE spindles are optionally equipped with an auxiliary "X" axis stroke of 9-7/8" that allows independent control of the spindle. This capability permits the part and the gantry to remain stationary while the spindle sub-axis motion permits operations in all three surfaces simultaneously even if the holes, for example, are offset. Drilling, scribing, and milling for such operations as pocketing, slotting, weld prep, helical milling of large holes and more can occur simultaneously for exceptional productivity.



Pegaso is the latest generation CNC for FICEP lines where the PC, CNC and PLC are all integrated into a single circuit board for maximum reliability. Pegaso is based upon a field bus technology using CanBus and EtherCAT for controlling up to 32 separate CNC axes.

Main advantages

- Capable of processing special profiles such as welded girders and cambered beams
- Auxiliary sub-axes maximizes spindle utilization for diverse and productive operations
- The DIRECT DRIVE spindles deliver 100% of the motor's power to the tool at up to 5,000 RPM for exceptional industry leading productivity.
- 180° web spindle rotation also permits milling of both ends of sections



ENTERPRISE Automatic gantry CNC drilling line	1501/8 GDD	2003/8 GDD	2503/10 GDD	3003/12 GDD	3003/18 GDD	4003/12 GDD	4003/18 GDD
Profile size [min. inch]	8" x 4"	8" x 4"	8" x 4"	8" x 4"	8" x 4"	8" x 4"	8" x 4"
Profile size [max. inch]	59" x 31-1/2"	78-3/4" x 31-1/2"	98-3/8" x 39-3/8"	118" x 47-1/4"	118" x 70-3/4"	157-1/2" x 47-1/4"	157-1/2" x 70-3/4"
Drilling heads [no.]	1	3	3	3	3	3	3
Drilling tools per head [no.]	6	6	6	6	6	6	6
Drilling diameter [max. inch]	1-9/16"	1-9/16"	1-9/16"	1-9/16"	1-9/16"	1-9/16"	1-9/16"
Spindle power [HP]	42	42	42	42	42	42	42
Spindle speed [max. RPM]	5000	5000	5000	5000	5000	5000	5000
Spindle sub-axis stroke [inch]	-	9-7/8"	9-7/8"	9-7/8"	7-7/8"	9-7/8"	7-7/8"
Machine weight [lbs.]	33,000	51,800	53,575	55,100	56,200	63,900	66,100

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