



GEKA 
The steel working company

SIGMA

SIGMA - SINGLE SPINDLE DRILLING
FOR STEEL PROFILES



The SIGMA is a CNC numerical control production line for drilling, tapping, marking and pocket milling of steel beam profiles, which can be supported on two flat surfaces and programmable from a CNC.

The SIGMA can also work with angles, flat bar, U-profile, and square & rectangular tubes.

The machine is designed to process the profiles loaded on the fixed work table. The program is automatically given by CNC and the machining head will first reference the profile and then process all of the operations commanded, automatically changing the tools and giving the shortest path possible to optimize the machining process.

The machine has an innovative profile rotator as an add-on option that severely shortens idle time of repositioning the profiles by a crane, eliminating cost-prohibitive manual operations.

STANDARD FEATURES

- 12 meter work bench table (custom lengths available)
- Automatic tool changer
- Automatic drag-chain system for profile positioning
- Drills, threads, mills and countersinks
- Hydraulic clamping system
- Laser detection for part recognition
- External & through spindle MQL
- Works with profiles with chamfers on ends
- Emergency stop
- External control panel
- 15" B&R touch screen
- LinePro software with file import & nesting for 2D files

PERFORMED OPERATIONS



DRILLING



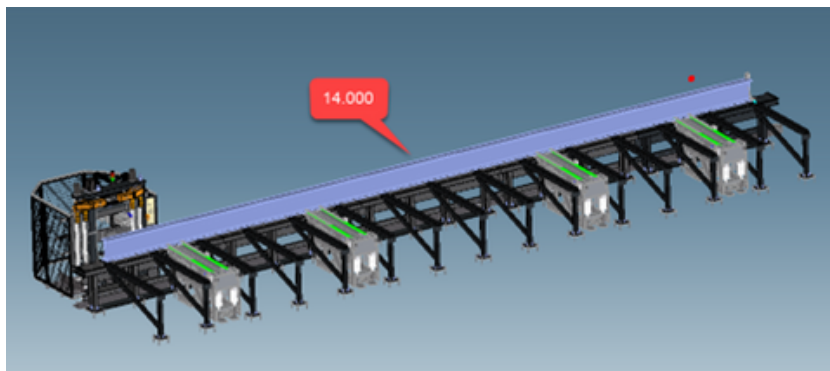
THREADING



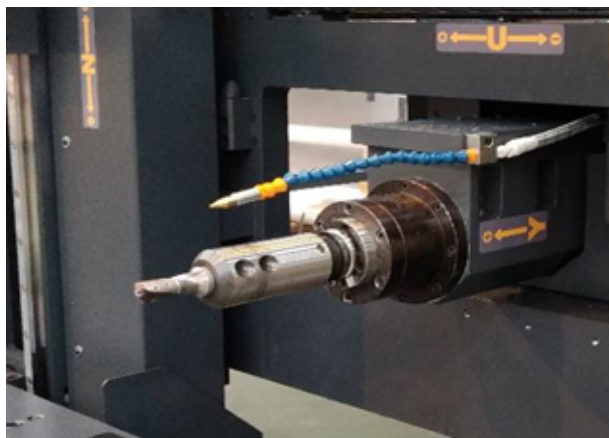
MILLING



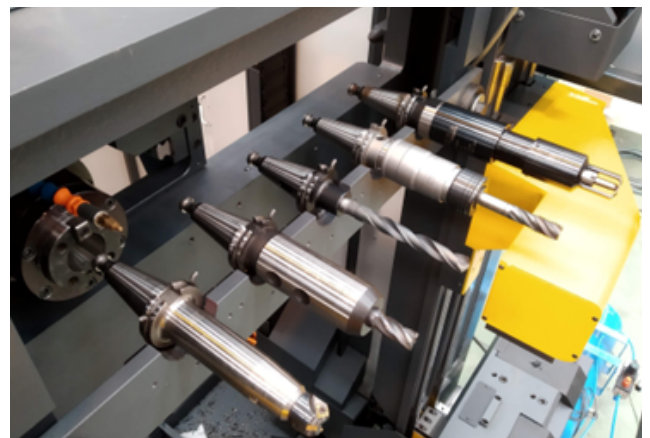
COUNTERSINKING



- 12 meter work bench table
- The standard work bench can process profiles up to 14 meters in length, except for the last 100mm.
- Up to 5 pieces can be positioned and processed in the table.
- Custom table lengths available



- Powerful drilling unit with an additional ± 250 mm milling axis



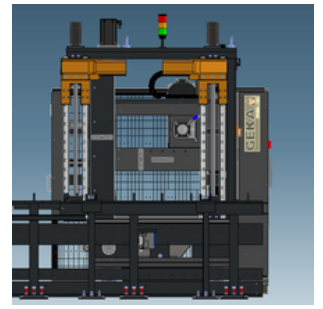
- Automatic tool change with capacity of 5 up to tools, selected by the CNC.



- Chain drag system for automatic material positioning against the stops in the table.
- Removes cost-ineffective operations.



- CNC Windows 10 with LinePro software which allows as a standard 2D file import and part nesting.
- 2 licenses given as a std.



- 2 powerful hold-downs for a correct material holding.

OPTIONAL FEATURES

In order to make the most out of the SIGMA series, we have additionally developed features that will allow further operations on the machine: the typical material turning, or material layout/weld-prep marking operations, which are very time consuming and cost-ineffective are eliminated.

AUTOMATIC PROFILE ROTATOR UNIT

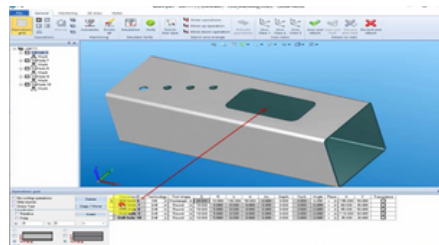


Five hydraulic fingers placed alongside the length of the work bench and controlled by the CNC, that allows the machine to automatically process all the profile in all the faces needing, removing the unnecessary time of stopping the machine to turn the profile and start again. It maximizes the productivity in reduced space workshops.



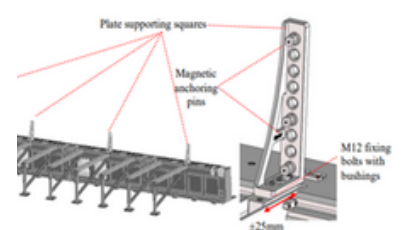
PART MARKING

- Powerful scribing tool for marking letters, contours, numbers or importing free drawings.
- Perfect for weld-preps.



LANTEK 3D SOFTWARE

- Advanced software options which allows for a wider file formats to be accepted in the CNC and also allows the 3D viewing of parts.



FLAT BAR PROCESSING

- Magnetic supports for positioning and processing flat bar .

MAIN TECHNICAL SPECIFICATIONS		SIGMA-600	SIGMA-1000
PROFILE CAPACITY			
Section volume	max. (mm)	600 x 600	1000 x 1000
	min. (mm)	70 x 70	70 x 70
Bar length standard	max. (mt)	12	12
Maximum processable length (last 100mm not processable)	max. (mt)	14	14
Suitable for beams, UPN/UPE, angles, flat bar, square tube	Yes	Yes	Yes
DRILLING CAPACITY			
Drill heads	no.	1	1
Spindles per vertical drill head	no.	1	1
Drilling diameter	max. (mm)	40	40
Power per head	kW	13	13
Program controlled spindle rotation speed	RPM	300 - 3000	300 - 3000
Automatic tool changer capacity	no. of tools	5	5
Drilling, tapping, milling, countersinking, and marking (optional)	-	Yes	Yes
Tool holder		ISO DIN 69871 (SK40/ISO40)	
OTHER SPECIFICATIONS			
Complementary stroke to the X axis for the vertical head (U-Axis)	mm	± 250	± 250
X axis positioning speed (portal)	mt/min.	40	40
Y axis positioning speed (drill head)	mt/min.	40	40
Laser sensor for quick profile position detection and positioning.	Std.	Included	Included
Internal lubrication	Std.	Included	Included
External lubrication	Std.	Included	Included
Light security	Std.	Included	Included
Operating system	Std.	Windows 10	Windows 10
Ethernet connection and remote service for troubleshooting	Std.	Included	Included
Rotating system for beams up to 600mm		Optional	



IS THE SIGMA RIGHT FOR MY WORKSHOP?

- Do you have to drill and/or mill holes in a wide variety of steel profiles?
- Do you want to process beams and profiles in a cheaper and faster way?
- Are processing the material now by manually laying out positions and then do holes by a magnetic drill, punch or plasma?
- Are you looking for a single machine that can make all these operations?
- Do you have a limited space for material handling and struggling take on larger jobs?
- Do you want to make more profit?