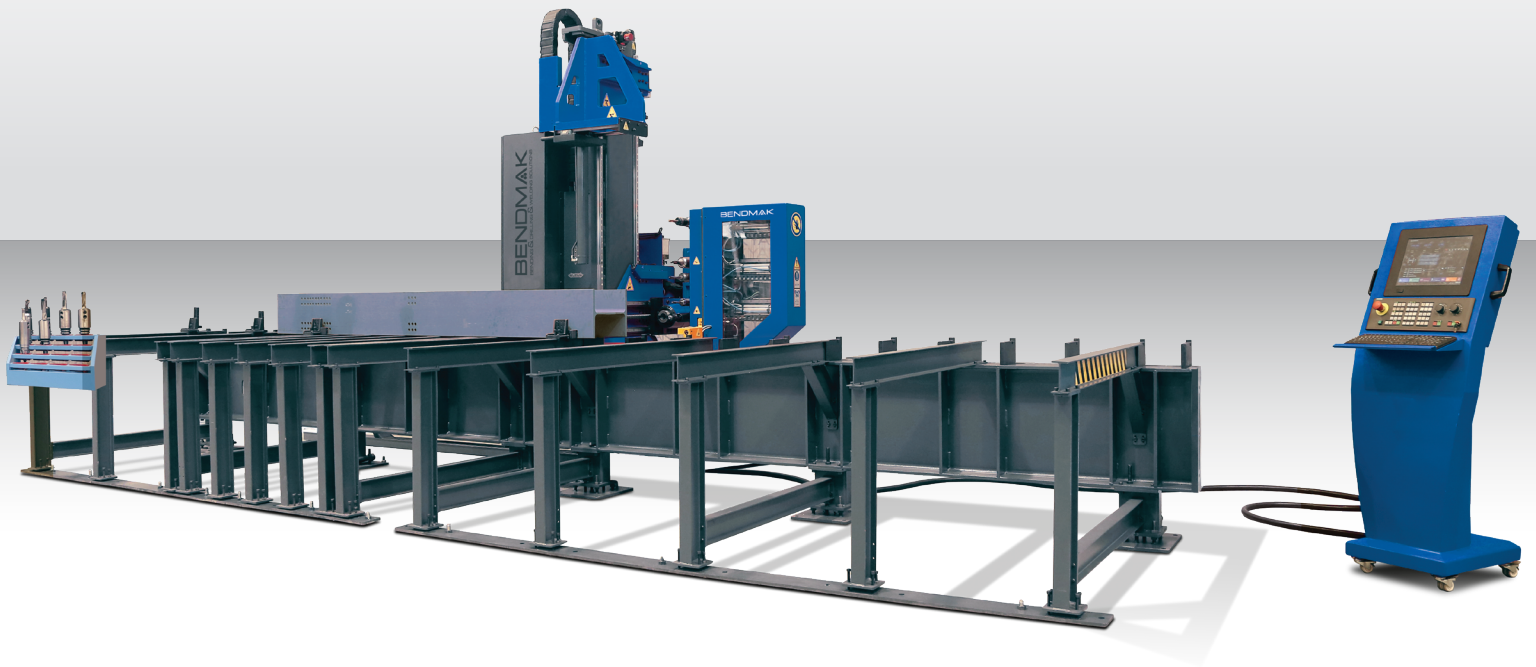


BENDMAK USA[®]

BENDING & DRILLING & WELDING SOLUTIONS



BIDL 1200

SINGLE SPINDLE DRILL LINE





FABRICATING MACHINERY & WELDING SOLUTIONS

The most effective solutions to the steel fabricating industry

Bendmak was founded in Bursa, Turkey in 2008. Since the first day, Bendmak has made an impression on clients with its fast response capability and meticulous understanding of customer needs. Bendmak has earned trust in the market with its reliable solutions that exceed customer expectations.

Bendmak continuously develops technology and improves quality of service with an innovative mindset. Its advanced manufacturing capabilities also separate Bendmak from typical machinery manufacturers, which enables us to boost production efficiency, quality and speed.

Having certifications such as ISO:9001 which approve its international quality standards, and compliance with CE norms, Bendmak provides synchronized and unparalleled service from initial contact through delivery and to after-sales.

Plate and Angle Rolls: 3 and 4 Roll Hydraulic Plate and Profile Rollers

Structural Steel and Plate Processing: Single and Three Spindle Drill Lines, Plasma Cutting Tables, Plate Drilling Machines, Combined Oxy-Plasma & Drilling Machines, Punching Machines, Bandsaws

Dishing and Flanging Machines: Dishing Presses and Rotary Flanging

Welding Solutions: Column-Boom Welders, Tank Rotators and Welding Positioners, Rope and Chain Rotators, H-Profile Welding and Straightening Lines





The BIDL 1200 is developed to drill any kind of profile in a compact space saving design. Further access to all sides of the material is easily achieved by rotating the beam using the optional beam flipping device making this drilling machine perfect for Small-Mid Size Fabricators. The tight tolerance between the holes is not a matter anymore since day by day steel fabricators need more accurate manufacturing and assembling in shorter time. The labor is costly so BIDL 1200 is ready to reduce your labor either for drilling or for on-site assembly.

Ready to drill beams, angles, flat sheets and any suitable geometry. You can also make milling for slots, pockets and any geometry by having state of arts control system.

- Fast Return on Investment
- High Versatility in Small Footprint
- Fully CNC Control
- Powerful 20HP Spindle Motor Power
- 6 Station Tool Changer
- Automatic LASER Tool Measurement & Material Zero Referencing
- High positioning tolerance and repeatability
- Very robust design
- Worldwide spare parts availability
- User friendly interface
- Fast, accurate and maintenance free

○ Capabilities



DRILLING



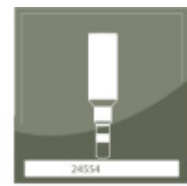
MILLING



TAPPING



COUNTERSINKING



LAYOUT MARKING



BEAM



CHANNEL



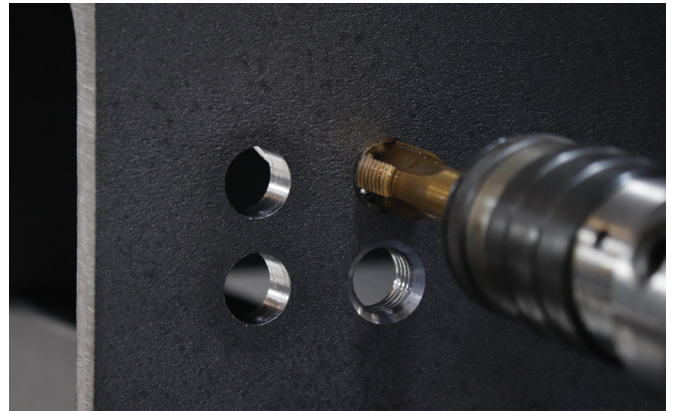
TUBE



ANGLE



PLATE





Axis Movements

The spindle head moves on 2 linear guides and by 1 ball screw in Z axis. The machine body moves in longitudinal by hardened rack/pinion. By means of 2 bumpers & safety rope, the operator is safe in case of unexpected collision.

**X
Speed
Zero-point
Length**

Horizontal longitudinal
32,80'/min
Optical sensor
19,68', 26,24', 39,37', 45,93', 52,49',
59,05', 65,61', 72,17', 78,74' Feet

**Y
Speed
Length**

Vertically longitudinal
32,80'/min
4''

**Z
Speed**

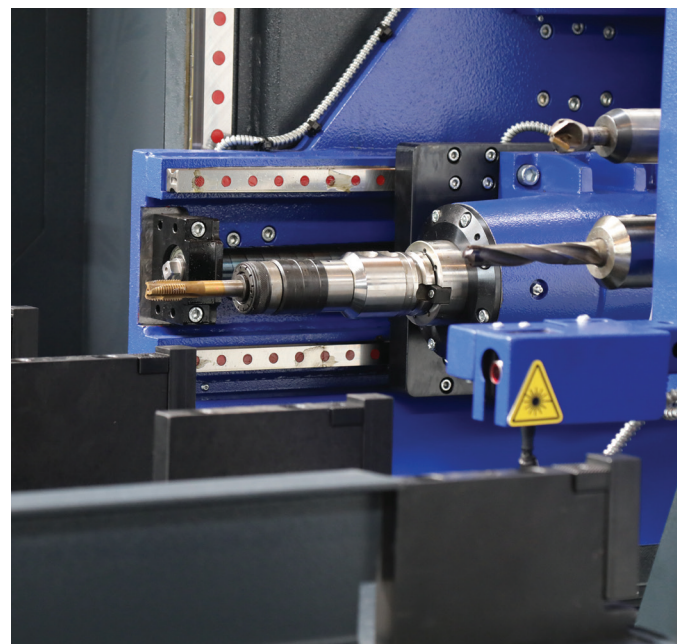
Spindle drilling direction
15,68' /min

Standard Features

250mm Sub-axe for high efficiency

The BIDL is equipped with sub-axe that enables to control of spindle within 0,82' in the length of beam without repositioning it. So, no need to unclamp the hydraulic top clamp in the distance of 0,82' to complete hole cluster. The beam will stand stationary until first hole of next cluster. Thus, reduced processing time increases the efficiency ~%50.

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Intelligent Drilling Process

Spindle feed speed can be adjustable stepless. The spindle approaches the material with a maximum feed rate until it reaches the safety distance which set on the control panel. It reduces the required feed rate in safety distance, thus the drilling cycle time is reduced.

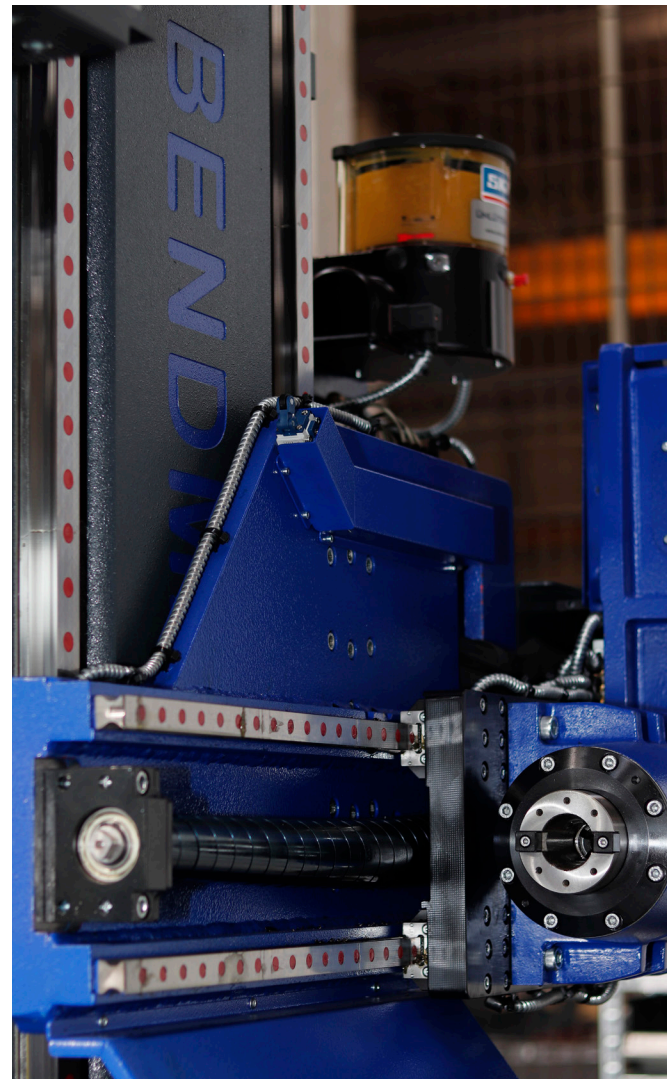
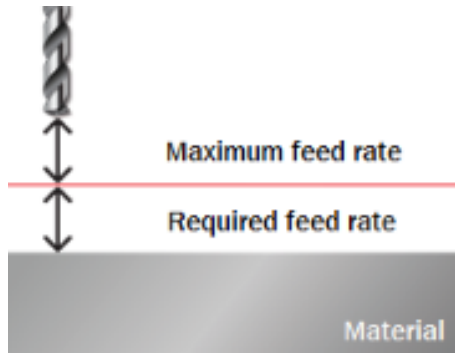
MQL- Minimum Quantity Lubrication

MQL minimizes the environmental impact using 100% natural, vegetable oil-based mixture and eliminating the need for cleaning coolant liquid. Almost-dry processing allows the machine to proceed to the next operation (welding, marking, etc.) without wasting time for coolant liquid disposal.

The 3 liter capacity coolant system for internal cooling of drilling tools. More lubricants can also be provided upon request (5 lt. or 25 lt.)

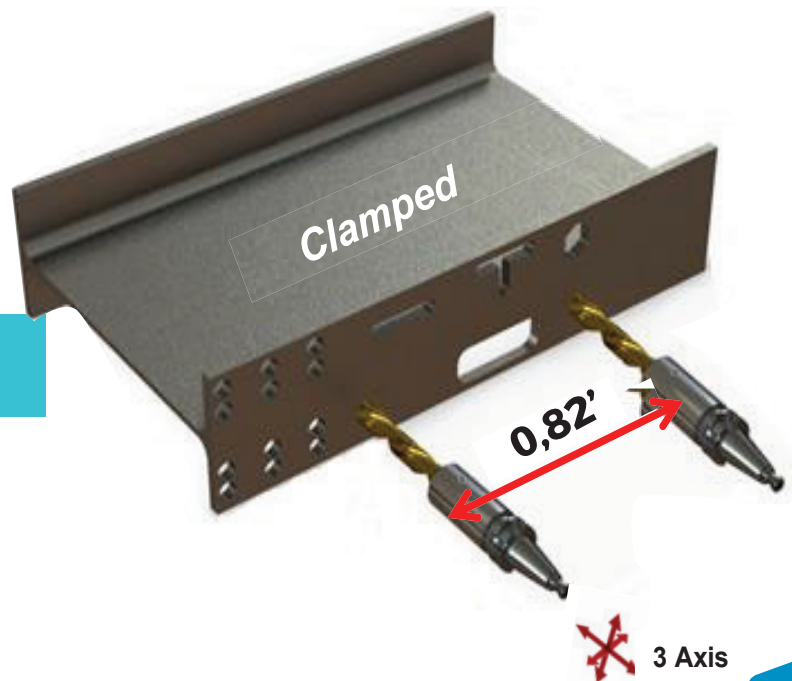
Hydraulic Power System

3 kW hydraulic power unit generates high working pressure. Hoses and connections used are resistant under high pressure. Easy intervention and troubleshooting are carried out thanks to the power hydraulic unit from Parker (USA), Brevini (Italy), or equivalent.



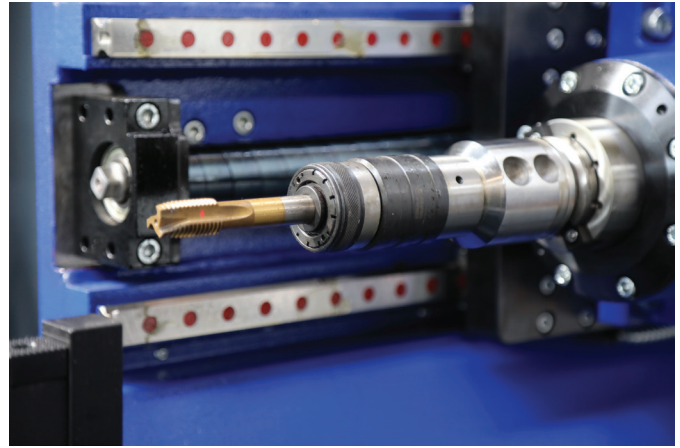
Spindle Motor

It is equipped brand motors that provide precise motion and includes single high speed spindle motor.



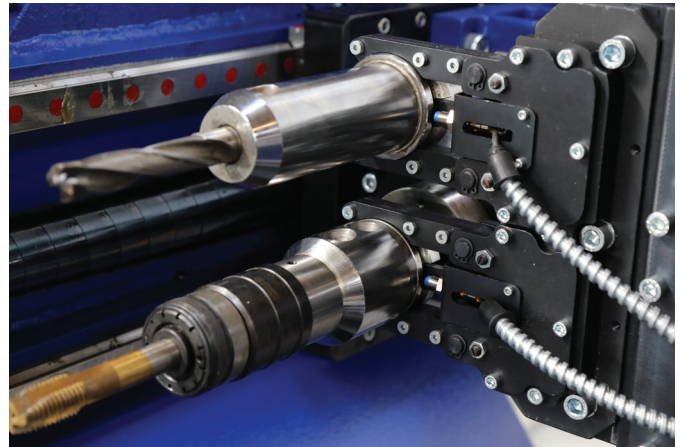
Auto-Lubrication

The central lubrication system consists of a grease pump and main and intermediate distributors. 20 lubrication points on the machine are lubricated automatically and periodically by this system. It is 2 liter and designed to resist 250 bar oil pressure. All movable components work smoothly and have a longer lifetime thanks to auto-lubrication.



Electrical Components

All critical electrical components used in the system such as thermic, contactor, relay, etc. are chosen high quality products by well known brands. All components and drivers are kept at a constant temperature in the electrical enclosure with a standard air-conditioner.

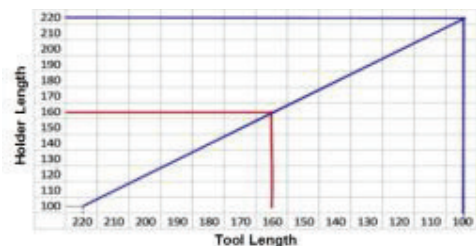
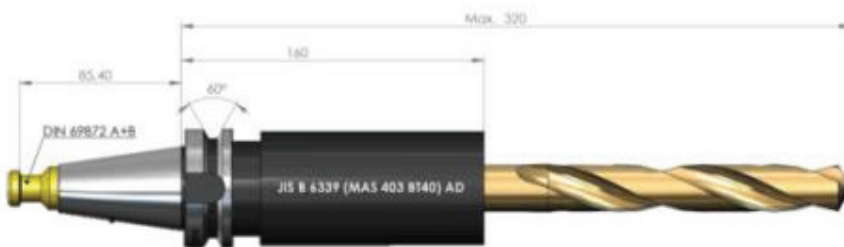
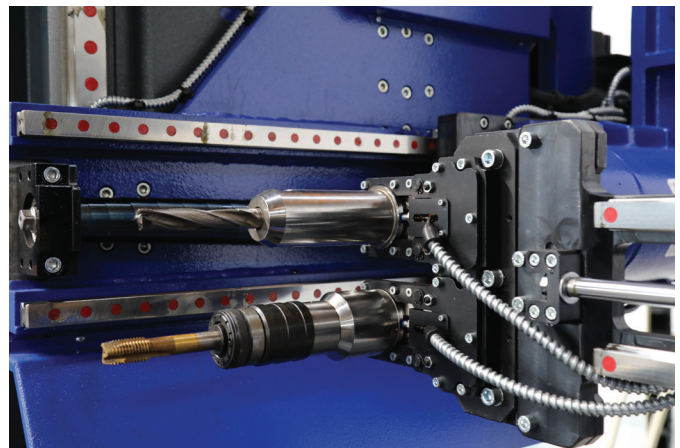


Automatic Tool Measurement & Material Zero Referencing

The operator sets the material type with dimensions in the program. The beam is referencing zero by detecting the one end with laser. The tool length can also be measured automatically by a laser sensor too, when a new tool is placed in the tool changer.

Tools

- BT 40 DIN 6383 (MAS 403 BT) AD/AD
- BT 40 DIN 6359 (MAS 403 BT) AD/AB



ATC- Automatic Tool Changer

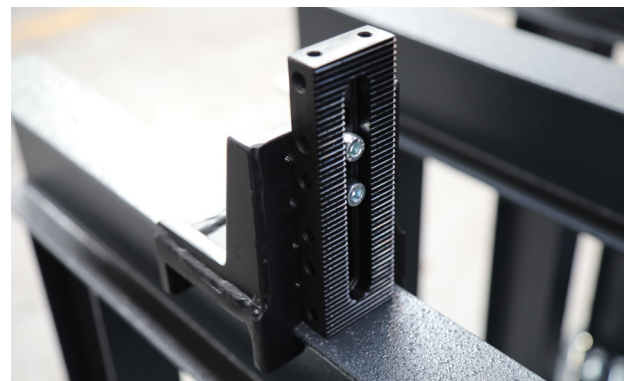
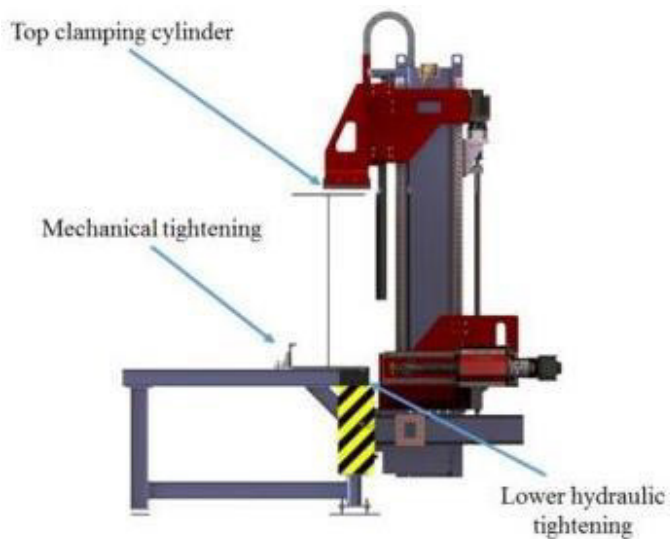
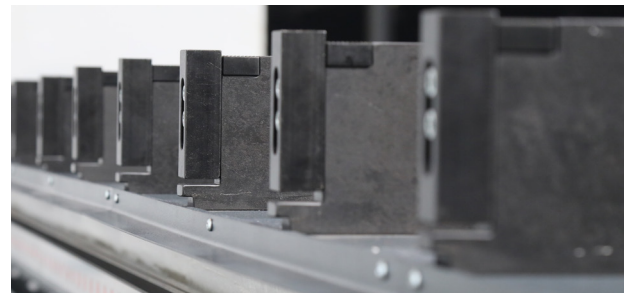
6-Six stations for different tools with single automatic tool changing unit.

The ATC system enables the machine to change tools quickly and automatically, thus eliminating manual intervention and reducing downtime of the machine. Capacity , 16 kg for each station.



Material Clamping System

The beam stands on non-slip seats (Pic. 1). With manual clamps (Pic. 2), the beam is clamped on the table surface additional to upper hydraulic clamp. Thus, deflections and vibrations generated during drilling operation are prevented.



The body is also hydraulically clamped (3) onto the table by non-slip features during the processing. Thus, any vibrations or movements prevented.



CE And International Standards

All Bendmak Drill Lines are in compliance with CE regulations and meet the following international standards. Related Directives and Annex: Machinery Directive 2006/42/EC/Annex VIII. Related Standards: EN ISO 12100:2010, EN 12717:2001+A1:2009, EN 60204-1:2006/AC:2010.

CNC Control System And Software

Siemens SIMOTION Merging performance and modularity

SIEMENS SIMOTION, the proven high-end motion control system, features optimal performance for all machine concepts as well as maximum modularity.

SIEMENS SIMOTION further optimizes its benefits with regard to modularity, openness, and efficient software development.

SIEMENS SIMOTION, the proven high-end motion control system, combines powerful hardware with efficient engineering and innovative software. Here you can see the highlights of our modular motion control solution.

The SIMOTION enables CNC Control to be Integrated with Sequence, Motion, and Robot automation systems.



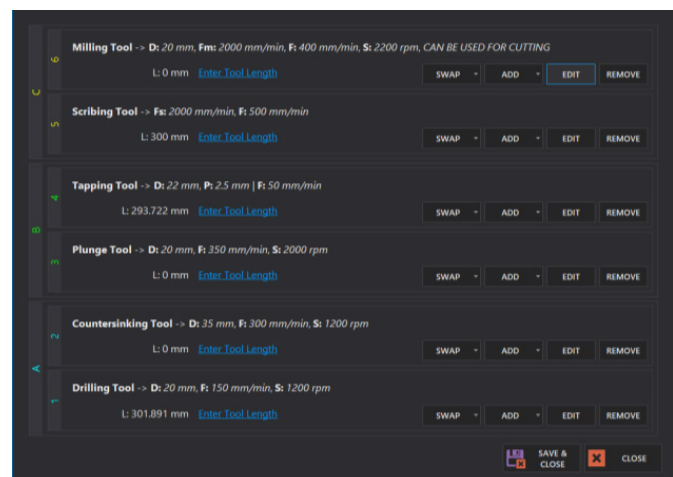
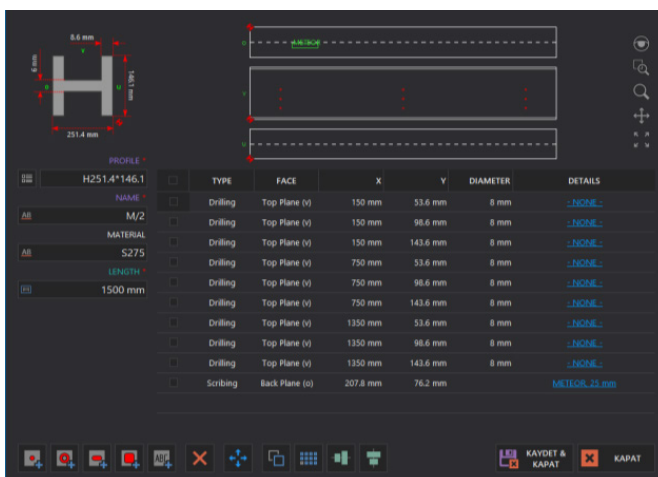
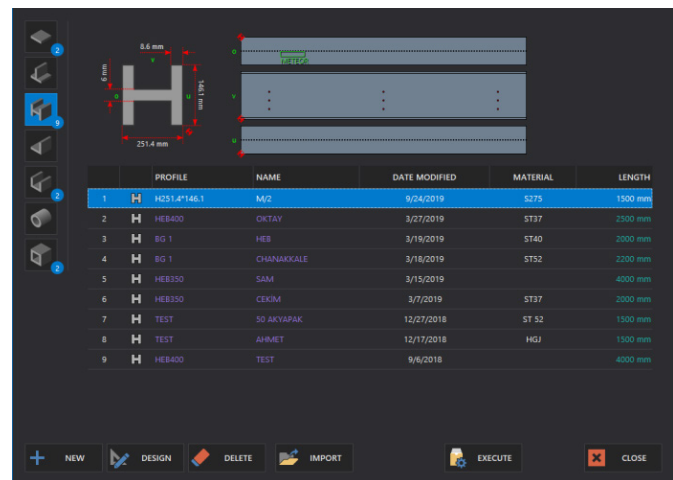
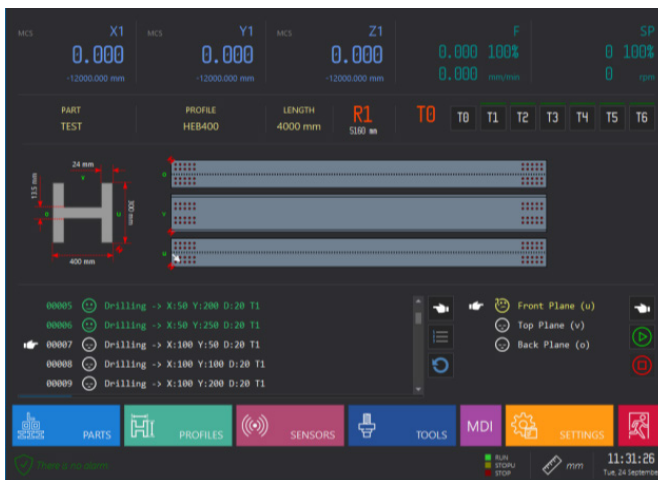
Key Features

- Accelerated communication speed over the inter-CPU shared memory
- 15" Touch screen Monitor- HMI
- Profinet benefits, including noise free, 100Mbps communication
- Continuous to operation in case of electric power cut-off
- USB port for program backup
- Available Languages; English, Turkish, Russian, Spanish, German, French and more upon request.

Programming Software

BIDL Controller® is developed by Bendmak Software Engineers with best care of operator needs and minimum downtime. The beam can easily be dimensioned by operator on user friend interface in seconds.

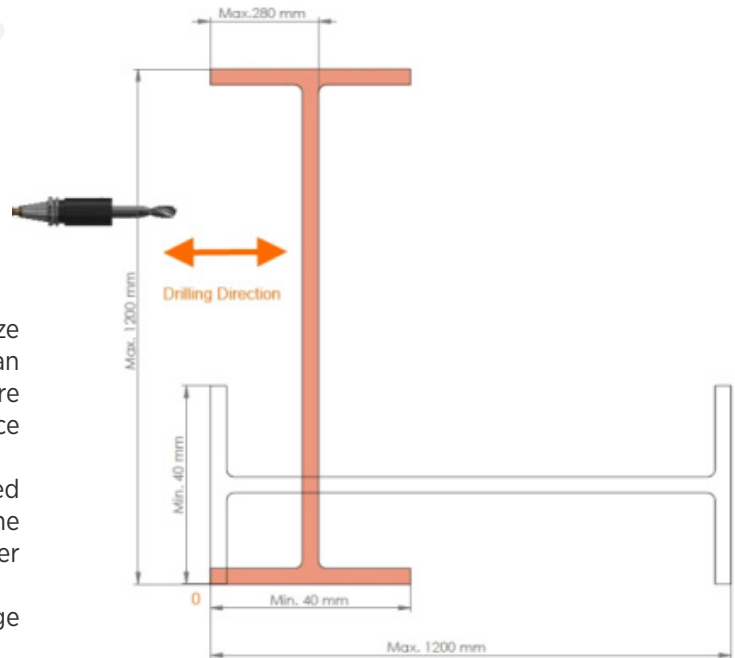
- Metric or Imperial unit selection
- 10-ten different zero referencing can be set for lowest hole-to-hole distance tolerance for long beams
- Flat or bar, T, I/H, L C or Hollow sections can be sized in seconds if not exist in the library
- Continue to process where it is stopped due to energy cut off or on purpose break down thanks to intelligent system
- Axe offset possible when required
- Tool specifications saving
- Diagnostic
- Online Connection Hub (for remote service)





DSTV importer is available

DSTV format file can be imported and processed with holes and texts. Text import is also possible for scribing the beam for following process needs.



Online Connection & Support

The engineers can monitor the machine and analyze the data by connecting online. Thus, the problems can be solved easily and quickly. The required hardware is already part of the system so no additional device required.

Only Broadband internet connection is required for the online remote connection directly to the machine. Ethernet line is provided by the customer where the machine is installed.

Online connection & support service is free of charge of machine lifetime.

Optional Features

- Scribe Marking Tool
- Scribing tool is available upon request.
- The marking is readable quality even after painting or blasting processes. Ask for details if more info required.
- Two different tool available.
- Tool 1 - 20.000 rpm with Air motor
- Tool 2 - Spindle speed.



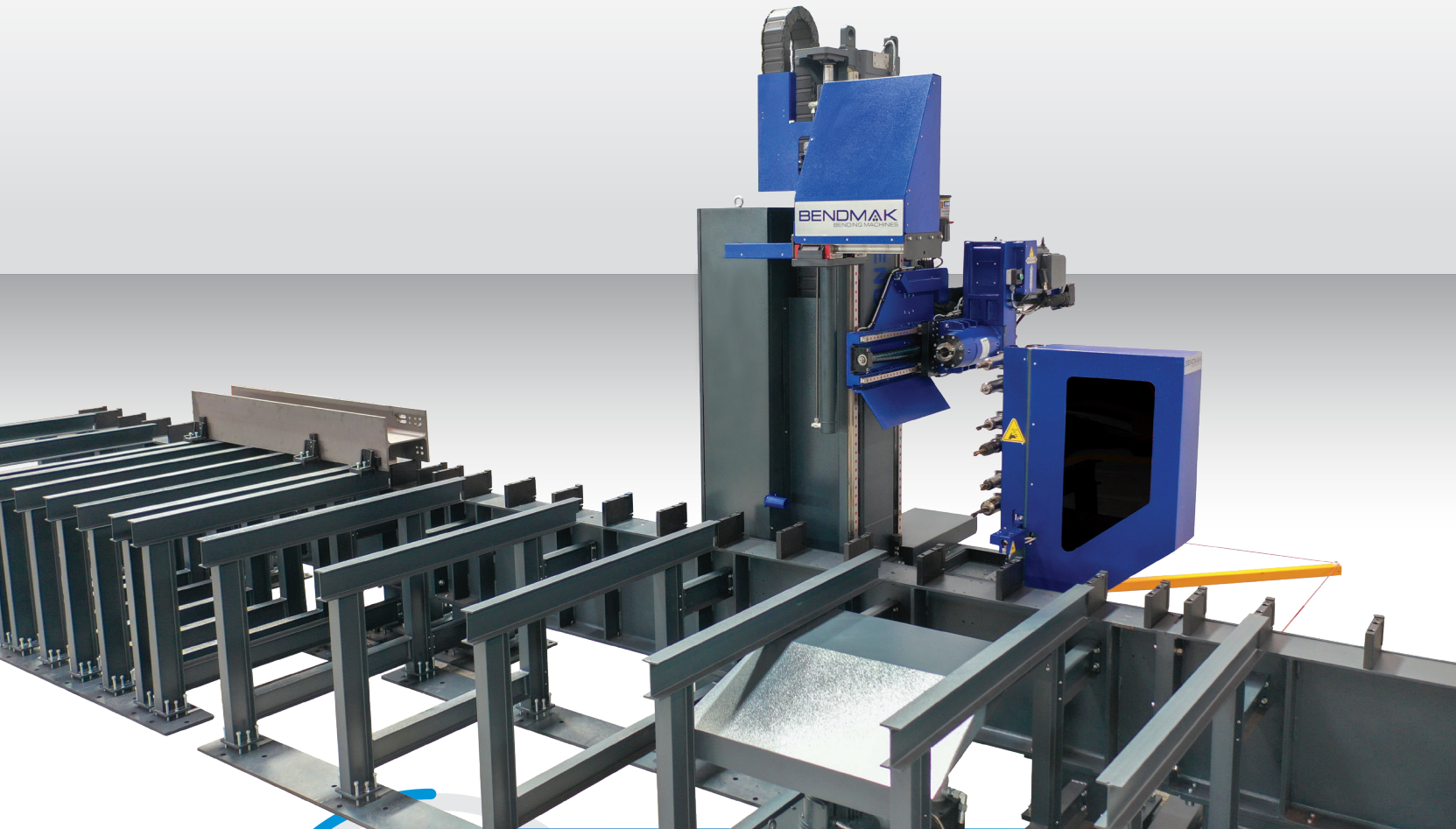
Remote Control (Standart)

The remote control allows the operator to check and inspect the process in safely without walking around.

Note: The functions are still under development.

Technical Specifications

Controller	Siemens	
Working length	feet	20-33-46-59-72-85
Profile height	inch	2-47
Profile width	inch	2-47
Support table height	inch	1000
Length	feet	Working length + 11,8 feet
Height	inch	124
Width	inch	118
Weight	lbs	Varies with model
Maximum tool length	inch	12,6
Drilling capacity	inch	3/8-1 -1/4
RPM	rpm	10 -3.000
Spindle Motor Power	HP	20
Total Power	HP	60
ATC station capacity	nos.	6



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