CNC LASER MACHINE

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What is LASER?

LASER or Light Amplification by Stimulated Emission for Radiation is a device that emits light through a process of optical amplification based on stimulated emission of electromagnetic radiation.

LASERs have many important applications in the field of medicine, consumer products, industry and scientific research.

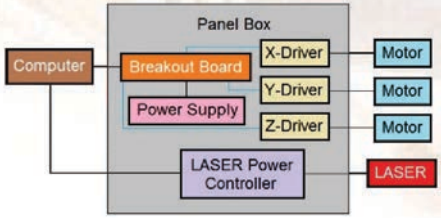
LASER Cutting

An industrial manufacturing technology that uses LASER to cut materials. LASER cutting works by directing the output of a high-power LASER at the material to be cut. It melts, burns and vaporizes away the material leaving an edge with high-quality surface finish.

CNC LASER Machine

MIRDC, in partnership with Inzpect Technologies, Inc., designed and developed a 3-axis CNC LASER Machine system to address the technology needs of the local metals and engineering (M&E) industries. With the use of the CNC LASER machine, the process produces items with a polished, finished edge requiring no post-cutting work.

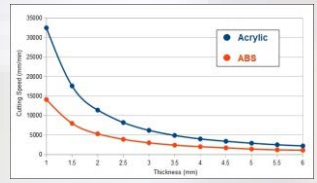
A 200-W power CO^2 LASER can cut and engrave in acrylics and metals (mild and stainless steel). Furthermore, LASER Technology improves the cutting performance of the CNC Router and CNC Plasma Cutter. With process speed of 15m/min, the machining time is reduced, thus, improving the productivity.



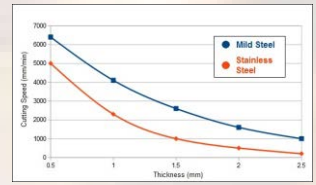
Control System Block Diagram

CAD CAM Operations

Planet CNC Software



Acrylic & ABS Cutting Profile



Metal Cutting Profile

Machine Specifications

Max. Working Area (mm): 2500 x 1300
Max. Travel Speed (mm/min): 20
Max. Cutting Speed (mm/min): 15
Accuracy (mm): +/-0.1
Shuttle Table: Motorized-chain Driven
Motion System: Servo-stepper Motors
File Format Acceptable: G-code Format (.nc, cnc, .tap, etc.)
X-Transmission System: Ball Screw with Linear Guideways
Y-Transmission System: Ball Screw with Linear Guideways
Z-Transmission System: Ball Screw with Slides Guideways
Laser Type: 200-W CO^2 (gaseous), Liquid-cooled
Dust Collector: Drawer-type
CNC Controller: PC-controller
Cutting Thickness
Acrylic Plastic: 12mm
Mild Steel: 2mm
Stainless Steel: 1mm
Intended Applications: Sheet Metal Fabrication (Cutting); Signages, Engraving and Marking

Research Program
Countryside Development and Industrial Growth

Research Program
Support Program for the Productivity and Competitiveness of the Metals and Engineering Industries

R&D Partner
Inzpect Technologies, Inc.