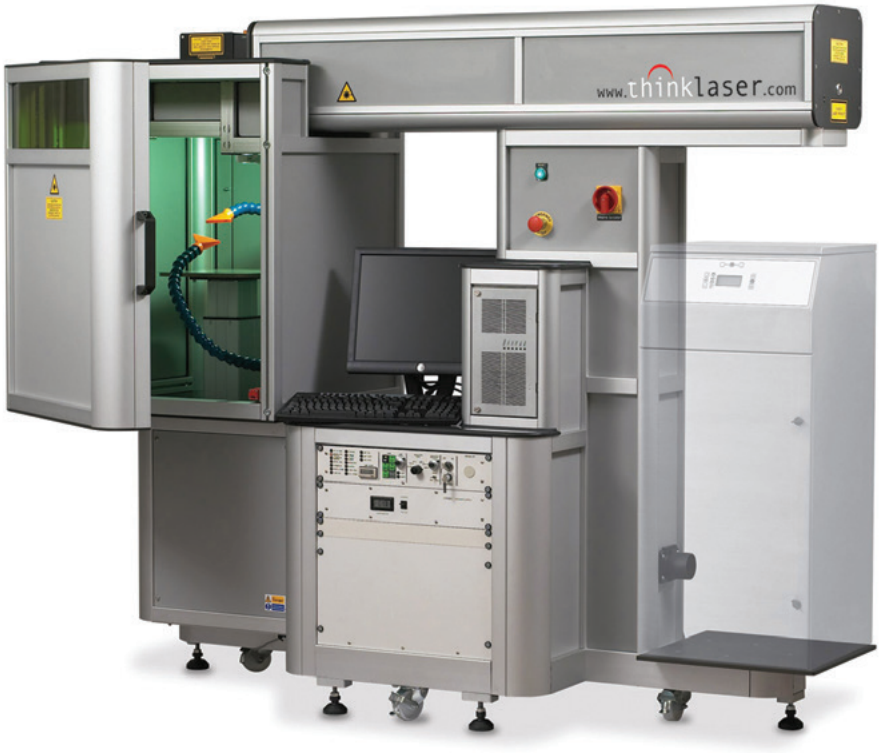
M series



Laser Marking Systems

Thinklaser markers have evolved to be the optimum combination of performance and reliability. Designed and manufactured to reflect both the flexible and ergonomic process requirements the system comprises of a fully integrated Laser and Class 1 enclosure within a freestanding chassis. Its rugged construction ensures beam and part location alignment integrity along with laser safety standards to European specifications. The system can be described as follows:

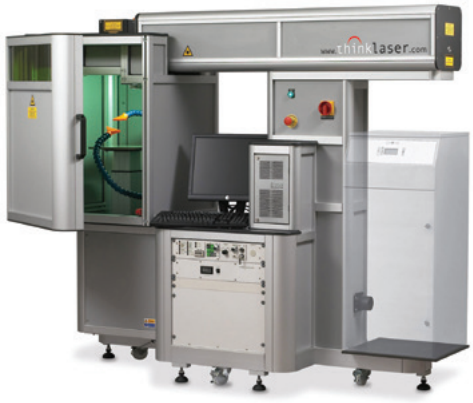
The chassis is fabricated from Aluminium extrusion with panelling throughout. A two tone Grey colour scheme is used. The unit will be free standing with jacking feet to enable it to be easily positioned and levelled at it's manufacturing location. The chassis will contain all necessary equipment, electronics and service requirements.

To one end of the main frame is located the laser work-site safety enclosure which is fabricated from aluminium extrusion and equipped with a single opening access door. The internal dimensions are 500 x 500 mm (larger process areas are available, if required please talk to our engineering group).

A viewing window manufactured from filtered safety acrylic is fitted to the enclosure door for process observation along with interlocks for operational safety.

The chassis is fitted with extraction ducting running from the enclosure to a back outlet port. This can be connected to an external extraction system, this is recommended for removal of fumes, (please note that the extraction unit is not included as part of the system) The enclosure will house all relevant tooling, fixturing and the focal Z motion facility. A tooling base plate with machined cross-slots allows for the location and fixing of the jig tools. The base plate will form part of a motorised Z table that will allow for the manual setting of the Laser focal point. The base plate is 300 x 300 mm square and provides a marking area of 175 mm square.

M series



The marking medium can be either CO2 or Nd:YAG. The laser is positioned above the marking area mounted within the structure of the main chassis firing downwards. The laser is positioned at a fixed focal height. The beam is delivered to the work piece using high precision galvo mirrors.

The remaining top surface area of the chassis is fitted with Corian work surfaces supporting the system monitor and keyboard. The Laser and its ancillary equipment are all connected via umbilical cables to the system electronics cabinet, which sits within the chassis.

This unit is connected to relevant external supplies, such as water and power, these are located at the rear of the system utilising quick fit – release connections

The laser rail housing has a sliding removable lid for fast access during lamp changes, if required, or maintenance work. The complete housing is also interlocked. Between the galvo head and the laser rail there are two indicator lights showing system status.

The control panel mounted to the front of the machine contains the main power on facility and fault finding indicator panels. All preventative maintenance is performed through the system front panels The front control panel also contains the system clock that monitors usage. All these modules are 19" rack mounted for easy access and replacement.

Access to the system computer is from a front panel also. Access is from behind a lockable security panel. On the centre column there is a mains power on switch, an emergency button and the emergency reset button.

The system uses the industry standard Windows as the operating platform. The graphical interface software has editing menus that are intuitive and easy to use making the operating software user friendly and efficient throughout the complete programming and product marking process. The laser operator interface is via monitor and keyboard input.

Safety is a key objective on our entire range of laser marking systems. This product is supplied as a class 1 operating system:

The marking system can be networked in a variety of different formats. If you would like information on this subject please contact the thinklaser office.

Marking heads

- High performance galvanometer beam positioning
- Resolution 1.8um
- Positional accuracy 0.1%
- Nominal focal length F=254 mm
- Multi element flat field lens
- Standard mark area 180 x 180 mm

65 watt flash lamp configuration

- High Performance 65 Watt Nd:YAG laser
- Wavelength: 1064nm
- Mode Structure: TEM00 and Multimode
- Single linear Krypton lamp
- DC switching Power supply
- 2- 8 x Variable Beam Expander
- Water-cooled primary and secondary systems
- Electrical Supply three phase
- System controller inc. RF switch driver creating pulsed and CW modes

90 watt flash lamp configuration

- High Performance 90 Watt Nd:YAG laser
- Wavelength: 1064nm
- Mode Structure: TEM00 and Multimode
- Single linear Krypton lamp
- DC switching Power supply
- 2- 8 x Variable Beam Expander
- Water-cooled primary and secondary systems
- Electrical Supply three phase
- System controller inc. RF switch driver creating pulsed and CW modes

RF CO2 50- 150 watt Sealed tube lasers

- High performance 50-150 watt CO2 laser
- Wavelength 10.6 um
- Sealed tube CO2 source laser
- Water cooled only
- Variable beam expander
- Electrical supply three phase.

Hardware options available

- Rotary C indexers in stand alone mode
- Automatic Z motion control
- Jigs and fixtures
- Water chiller modules