

# GIOTTO

Laser System



GIOTTO Nd:YAG 3 ASSI

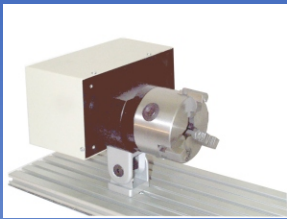


 LA TECNOLOGIA LASER ITALIANA NEL MONDO

COMPANY  
WITH QUALITY MANAGEMENT  
SYSTEM CERTIFIED BY DNV  
=ISO 9001:2000=

# GIOTTO

## Nd:YAG DPSS 3 ASSI



**Giotto Nd:YAG DPSS 3 AXES** is a highly reliable laser marking system designed and manufactured by SEI.

Giotto Nd:Yag 3 axes matches the high quality of Nd:Yag diode pumped laser sources with a controlled 3 axis scan head.

Its main features are : small spot diameters even on big areas ( i.e. 400 x 400 mm, with spots similar to those of the 2 axis systems 180 x 180 mm) a compact system , high quality laser beam, an easy integration into production lines , a constant, through monitoring of the vital parts.

Giotto ND:YAG 3 axes is a high quality marking system even for big work areas up to 500 x 500 mm with small spots up to 90 µm ( up to 30 µm on the small area 200 x 200 mm). These details set the state of the art system for marking on PCB, Night & Day components, metal and plastic components and every application where the laser beam quality and the width of the work area are the key elements of the laser application.

Laser marking is carried out without any mechanical contact and it is the result of the thermo-acoustic interaction between the laser and the processed material ( metals, plastics etc) it is indelible and has features of fast speed and execution . The 3 axis marking head enables to set and program the mark area and its distance as any other laser work parameter, without any operation of optic replacement.

Giotto can be configured with different options which ensure a remarkable application flexibility and enhance performances such as the dynamic control of the fire point ( dynamic fire) of spot size ( automatic mode selector).

Giotto disposes of a wide range of ancillary equipments such as XY table, Z axis, rotary attachment, automatic label loader, label unwinding system etc.) which make it a flexible and complete work station. It can easily be integrated into production lines and driven by any external pc, it also has a self-diagnosis device.

Giotto 3 axes is driven by the software ICARO® ( for any PC with the operating system Windows). The operator can easily change the work parameters such as power, frequency, marking speed so that the requested performance is obtained . Graphics in different CAD formats (\*.plt, \*.dxf, \*.pcx, \*.bmp, \*.mcl, besides machine formats) can be imported and the text can directly be changed. ( All the windows fonts are used besides graphic editing operations). Icaro directly drives options such as XY tables, rotary tables, linear tables, synchronisms with production lines and interface to external systems by RS232 or Ethernet LAN.

## TECHNICAL SPECIFICATIONS

### Laser source

Laser powers available: 15-30-60-80-120 W DPSS  
 Pulse repetition frequency: 0÷100 Khz  
 Laser output mode: From M2 < 1,2 a M2 <10  
 Pumping: Laser diode arrays  
 Cooling: Closed loop chiller  
 Wavelength: 1,064 µm

### Marking head

Technology: 3 axis scanning galvo dynamic focusing  
 Useful work area: 200x200 mm -> 500x500 mm (bigger areas available on request)  
 Work distance: 280 ÷ 650 mm  
 Spot diameter: ~ 30 (75) µm (area 200x200) -> ~ 90 (260) µm (area 500x500)  
 Writing speed linear: > 3 m/s  
 Writing speed (font): > 5 m/s  
 Positioning speed: > 6 m/s

Operating temperature: 10÷40° C  
 Relative operating humidity: 10÷85% RH max, non-condensing  
 Storage temperature: -10÷70° C ( H<sub>2</sub>O empty circuit)

### System

Control: DSP card microprocessor, 128 MB RAM, Ethernet LAN 10/100 Mbit/s.  
 Sw: Windwos98, 2000, XPPRO, ICARO CAM SW.  
 Files: PLT, DXF, BMP, PCX, TIFF, JPEG, GIF MCL, etc.  
 Interface: LAN net, serial RS232/485, I/O digital, Encoder  
 Laser safety norms: Laser system CLASS 4, CEI EN 60825-1  
 Options: Z axis, Rotary table class 1, Rotary attachment 360°, Enclosure Class1

SEI S.p.A. reserves the right to change the technical data and photos without any previous

**CAUTION !!**  
 INVISIBLE LASER RADIATION.  
 AVOID EYE OR SKIN EXPOSURE  
 TO DIRECT OR SCATTERED RADIATION.  
 CLASS 4 LASER PRODUCT

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