FYBRA MARKING LASER

LASER

Compact, powerful laser built for integration.

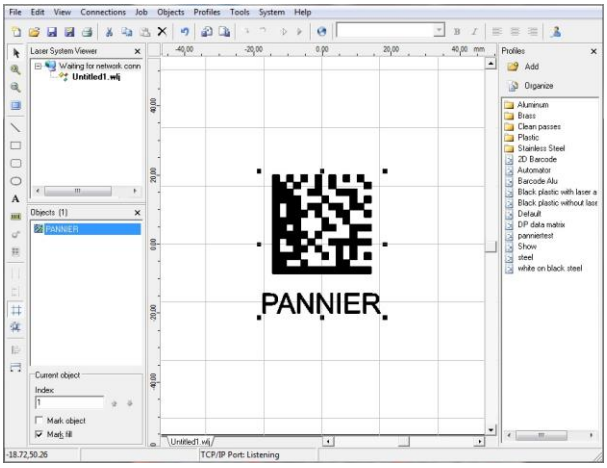
FYBRA marking lasers offer fast, deep engraving for heavy duty marking and difficult-to-mark materials with a conventional "controller-active fiber-marking head" configuration. The high power beam generated from the laser source travels to the marking head via a flexible fiber cable. The innovative control box and marking head are designed and optimized to work in heavy duty work environments where vibrations, disturbance, and dust are common.

The FYBRA's unique combination of high peak power and exceptional beam quality produces a tight beam profile perfect for a wide variety of applications, from deep engraving to micro etching. The proprietary A-wave™ technology allows for a considerable increase of the power without compromising the size of the laser spot. This results in excellent mark quality at higher powers and a better efficiency of the system.

WATTAGES

Source	Wattages
Ytterbium Fiber, 1050–1090nm Wavelength	22 Watt Q-Switch
	33 Watt Q-Switch
	54 Watt Q-Switch

The FYBRA's operating software is an easy, reliable user interface developed from years of laser marking experience. Create and modify text and variable data, automatic serial numbers and date codes, and logos in many formats. Easily adjust the laser parameters such as Q-switch frequency, beam power, number of repetitions, delay, and speed to obtain the best configuration for marking your product.



SPECIFICATIONS

Control Box	15.7" x 13.2" x 7.1" / 400 x 335 x 180mm 33 lbs / 19.5 Kg IP30 Rating
Marking Head	21.3" x 3.8" x 5.2" / 540 x 96 x 132mm (including min. space required for fiber cable) 5.7 lbs / 2,6 Kg IP60 Rating
Fiber Length	6.5 feet / 2 meters
Modality	TEM_{00}
MTBF	125,000 hours
Power Supply	110/240V 50/60Hz
Cooling	Air Cooled
Compliance	CDHR and CE

Operating Environment	0° to 40°C / 32° to 104°F 10 to 85% on-condensing humidity
Communications	I/O, RS-232 Serial, Ethernet TCP/IP
2D Codes	Data Matrix, QR, PDF
Bar Codes	Code 39, Code 93, Code128, EAN/UCC128, Interleaved 2 of 5 ITF, PostNet, Upla, Uple, EAN 8, EAN 13, Booklan
Graphics Files	Raster and Vector: AI, BMP, DXF, JPG, PLT
Fonts	Any TrueType Font
Languages	English, Chinese, German, French, Spanish, Japanese, Korean, Italian
Positioning Light	Red LED

MARKING HEAD

The marking head consists of the galvanometric mirrors to direct the beam and the lens. An integrated red diode positioning light helps the operator set the correct positioning of the laser. The head can be mounted in any direction on a production line or in a safety enclosure.

LENSES

Lens	Marking Area	Focus Length
F100 Lens	60mm x 60mm	107mm / 4.2"
F160 Lens	110mm x 110mm	177mm / 7"
F254 Lens	180mm x 180mm	281mm / 11"
F430 Lens	320mm x 320mm	454mm / 17.9"

CONTROL BOX

The controller contains the laser source and the electronics in separate cases, which protects the laser source from dust and interference. Several configurations are available:

Basic – PC required. Remote Interface Protocol is used to upload marking jobs, update fields inside a job, and control the system status.

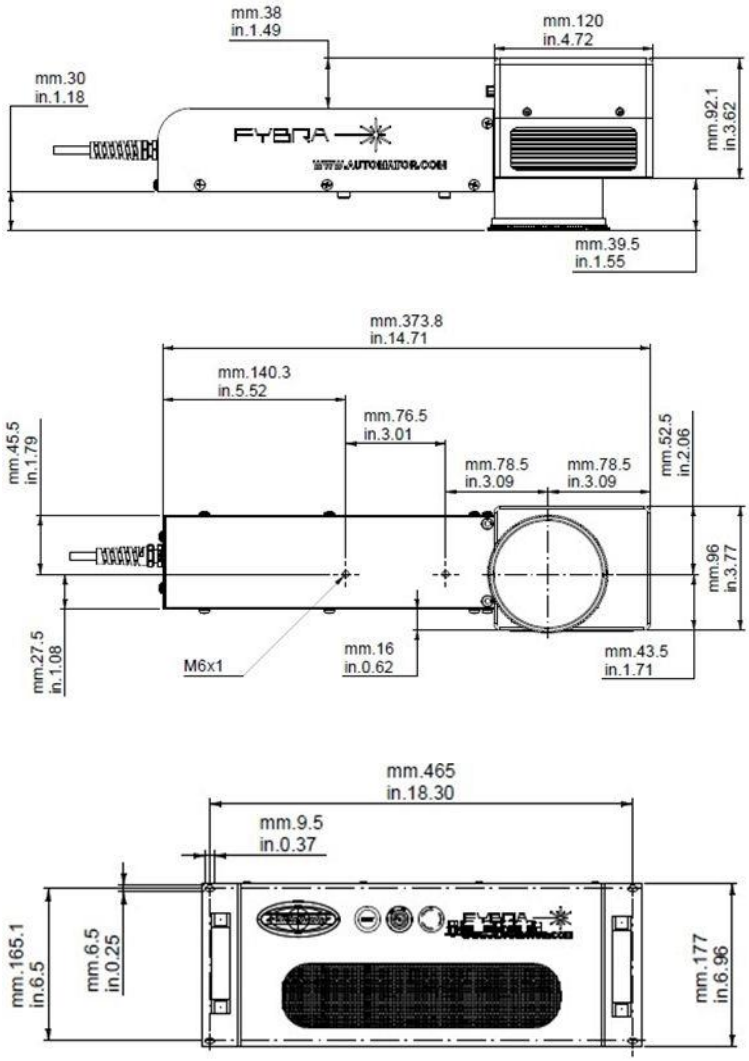
Standard – Once the laser is programmed, the system can operate without a PC. API protocol is used to communicate with the laser.

Advanced – Incorporates mark-on-the-fly capability for marking moving materials.

ACCESSORIES (PC Required)

- Programmable X/Y Axis
- Programmable Zeta axis to move the head vertically for marking at different heights
- Theta axis for marking round parts

DIMENSIONS



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