

# LLE - Laser Light Engraving

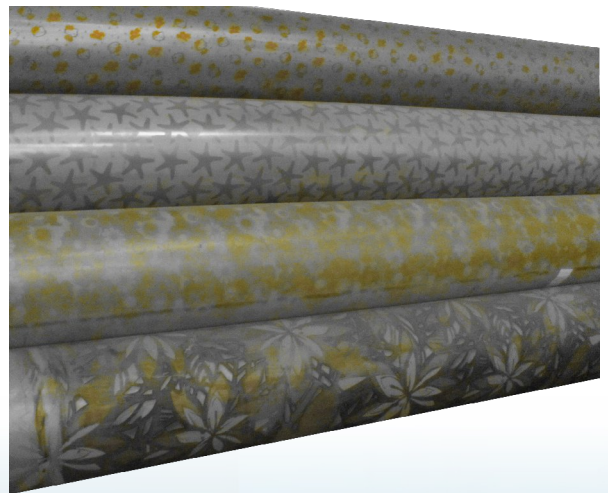
## for textile rotary screen



LLE allows to engrave a rotary textile nickel screen through laser polymerization of a photosensitive emulsion totally chrome free.

### Economical Advantages

- Initial investment for LLE lower than the investment for other engraving systems
- Energy cost about 60% lower than the other engraving systems
- Zero cost for consumables or auxiliaries
- Zero cost for chemical auxiliaries for the development of the emulsion
- Lower cost for personal
- Lower cost of the diode laser than any other laser source



### Technological Advantages

- Higher engraving resolution: up to 2450 dpi
- Higher flexibility: any width and any repeats
- Higher respect for the operative environment: no dust production in the operative environment
- Operative conditions more favorable: no acoustic emissions
- Higher respect for the ecological environment: emulsion is entirely chrome free
- Best technology: blue-violet diode laser

## LLE TECHNICAL FEATURES

### Mechanical

- Electro-welded steel structure with high-precision linear guides.
- Lasers and optical holder mounted on a special linear guides with ball recycling cart, having rectified screws to give the system rigidity and precision. This limits the alignment errors and increases tolerance to vibration.
- Group of focus movement through movable lens driven by a stepper motor. The adjustment in the vertical direction is automatically controlled by PC
- The laser alignment system allow a tolerance in the centering cylinder of  $\pm 0.05\text{mm}$
- Laser holder movement through ball screws
- Cylinder rotation and laser translation made with brushless motors.

**Optical group :** It consists of a deflection mirror with focusing lens. The architecture of the optical unit is totally new and the source is integral to supporting the optical group. This simplifies the alignment and minimizes any misalignment, making it more stable in time.

**Laser technology :** LLE uses the most advanced laser technology. LLE is arranged with a multi laser beam technology (up to 16 lasers max 1200mW) to proportionally reduce the engraving time. The monochromatic blue-violet laser light does instantaneously polymerize the emulsion creating the draw with high resolution.

**Engraving width :** LLE can engrave screens between 50 mm to 3500 mm in all the rapports between 640 mm and 1018 mm, with the possibility of engraving with or without ending rings .

**Resolution :** LLE can engrave with resolution between 508 dpi and 2450 dpi. The minimum size of the laser spot is 10 micron.

**Software :** LLE is governed through monitor touch screen directly on the machine. Files can be transferred to the machine through LAN or cd. LLE works with different software for the preparation and the variation of the drawings.

- Adjustable parameters for each cycle
- Laser intensity adjustment
- Multi-shot available
- Seamless option
- Step and repeat option
- Adjusting spot size (minimum 20 micron)

**Electric power :** LLE needs only 5 KW of electric power.

