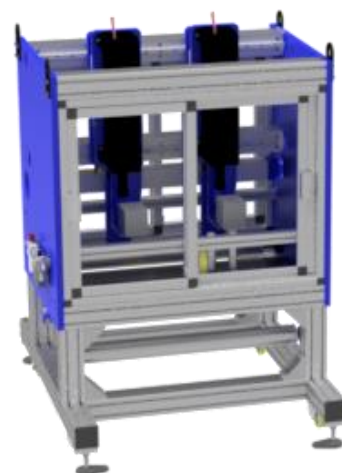


LASER MICROPERFORATING UNIT MODEL LO-S 40

This machine is designed to make **MICRO HOLES** or **PRECUTS** through **LASER SOURCE** on **MOVING FILMS** of various materials and thicknesses. This machine has to be integrated into existing machinery such as extruders, bag machines, slitters, printing machines, welding machines, etc.

The **LO-S 40 LASER** model guarantees perfect micro holes even on multi-layered, mono or bi-oriented materials. It is ideal for delicate processes such as **MICRO-PERFORATION** and **SCORING** of plastic film for **4TH AND 5TH RANGE PRODUCTS, FOR MAP AND EMAP PACKS**.

With the holes made by this machine, it is possible to control air exchange with the outside and, more generally, to **CONTROL PERMEABILITY**, thus increasing the **SHELF LIFE** of all fresh products.



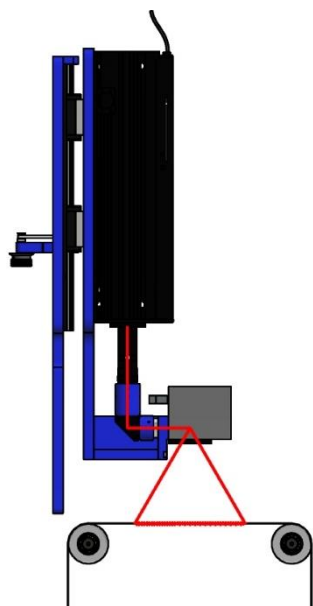
Ø OF THE HOLE

Ø 70µm → Ø 200µm

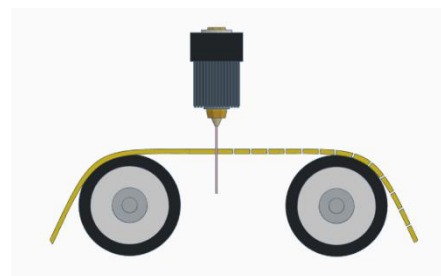
How it works

The moving film, kept in perfect tension by the idle rollers, arrives at the unit and is perforated or pre-cut by the laser equipment by **EMITTING BEAMS OF LIGHT** with a predetermined **INFRARED FREQUENCY**.

These beams are "combed" and expanded by a **BEAM EXPANDER**. The light beam direction is then controlled and moved through the use of motorised mirrors. At the end, there is a **FOCUSING LENS** that concentrates the emitted light beam onto a circumscribed surface of the moving film.



Micro perforation is made by **SUBLIMATING** the material through the heat of the laser beam.



TECHNICAL DESCRIPTION



The **ACTIVATION** and **ADJUSTMENT** of the **LO-S 40** is entrusted to our software with predisposition 4.0. From the electrical control panel, via touch screen, the operator manages all the operations inherent to the device such as the adjustment of the laser pulses, the diameter and position of the holes. The electronics is equipped with a PC through which the operator can control each scanning head and decide the perforation pattern.

Using the laser unit, you can decide either to **MAKE HOLES** or **WEAKEN THE MATERIAL** in depth, reducing the thickness of the film, without perforating it. The latter process, called scoring, is ideal, for example, to create **EASY-OPEN** products.

TECHNICAL SHEET

DESCRIPTION	LASER UNIT
NUMBER OF LASER SOURCES INSTALLED	FROM A MINIMUM OF 1 LASER SOURCE TO A MAXIMUM OF 6 LASER SOURCES
Ø OF THE HOLE	MIN. Ø 0,07MM - MAX. Ø 0,2MM
MAX. SPEED	380* METERS/MINUTE
MAXIMUM POWER OF THE SOURCE	360W
SIGNAL RESOLUTION	10 MICROSECONDS
PULSE FREQUENCY	MAX. FREQUENCY 30 KHZ
COOLING SYSTEM	LIQUID
*	THIS VALUE DEPENDS ON THE TYPE OF MATERIAL TO BE PROCESSED AND THE PATTERN TO BE MADE
OPTIONALS	CAMERA TO AUTHOMATICALLY ADJUST THE DIMENSION AND SHAPE OF HOLES

OUR LASER UNIT ASSOCIATED WITH OUR LASER ELECTRONICS

- PLC
- Industrial computer
- Control panel
- Touch screen
- Software with 4.0 predisposition
- Recipe management (insertion, storage, recall)
- Photocell control
- Encoder control
- Remote assistance and diagnostic