

LASER MICROPERFORATING UNIT MODEL LASER-ONE

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 **LASER-ONE** model guarantees perfect micro holes even on multi-layered, mono or bi-oriented materials. It is ideal for delicate processes such as **MICROPERFORATION** 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.



HOLES OF
Ø 70µm → Ø 200µm

How it works

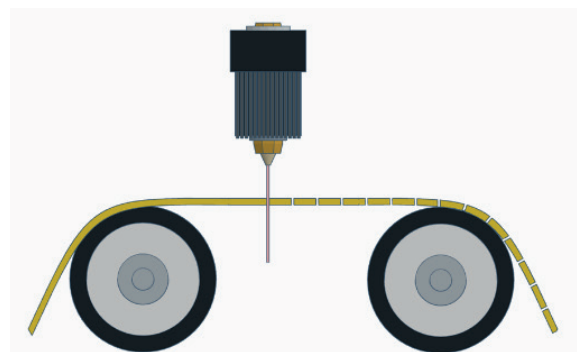
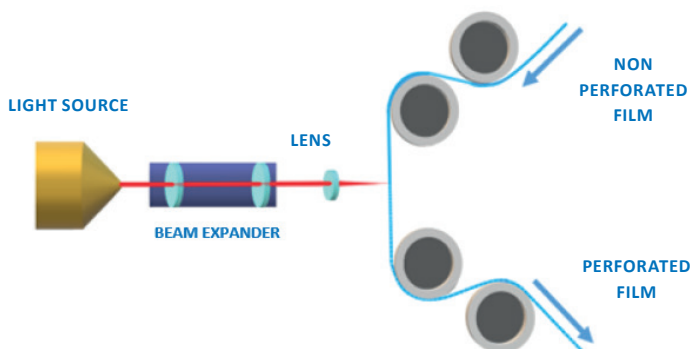
The moving film, kept in perfect tension by the idle rollers, arrives at the unit and is perforated or pre-cut by the laser equipment by **EMITTING BEAMS OF LIGHT** with a predetermined **INFRARED FREQUENCY**.

Subsequently, the beams are “combed” and expanded by a **BEAM EXPANDER**. 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.

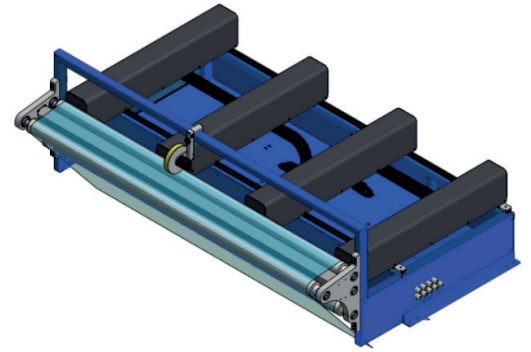


Focus lens example



TECHNICAL DESCRIPTION

The **ACTIVATION** and **ADJUSTMENT** of the **LASER-ONE** is entrusted to our **software with 4.0 predisposition**. 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.



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 installable laser sources	From a minimum of 1 laser source to a maximum of 8
Ø of the hole	Min. Ø0,07mm - Max. Ø0,2mm
Max. Speed	400* Meters/minute
Maximum power of the source	360W
Signal resolution	10 Microseconds
Pulse frequency	Max. Frequency 30 khz
Cooling system	Liquid / Air
Control system	Encoder
*	This value depends on the type of material to be processed
Optionals	Idler rolls



Detail of a laser head in position over the film

LASER UNIT ASSOCIATED WITH OUR LASER ELECTRONICS

PLC	Photocell control
Industrial computer	Encoder control
Touch screen	Software with 4.0 predisposition
Recipe management (insertion, storage, recall)	Bluetooth connection for card diagnostics
Control panel	



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