

PLANET LPI

ENCL



UV LASER PRINTING

Exquisite and Fine Printing on Tablet and Capsule

ENCLONY

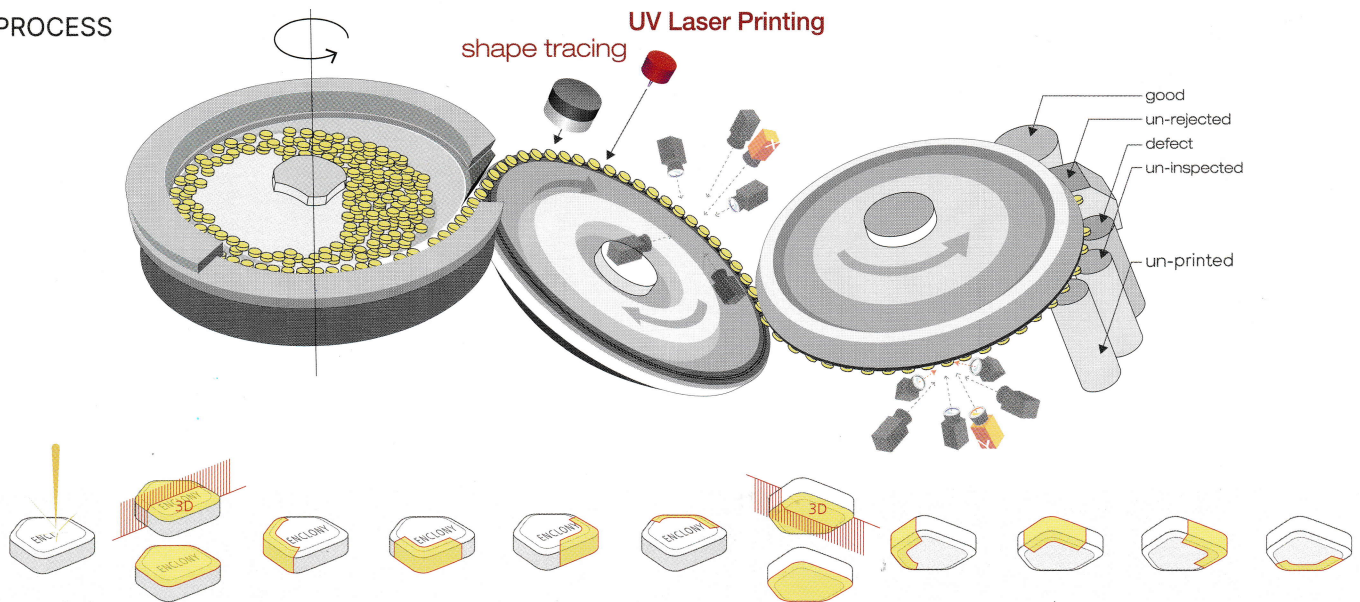
FINE AND INNOVATION DESIGN



Fine printing technology allows you to print your ideal design. Lines can be printed with a minimum of 100µm, and the maximum surface of the tablet can be used for the design, such as the edges and corners.

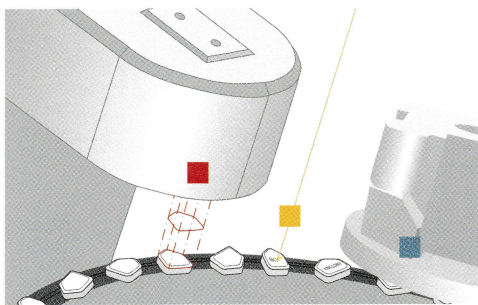
UV LASER PRINTING WITH FULL VISION INSPECTION

PROCESS

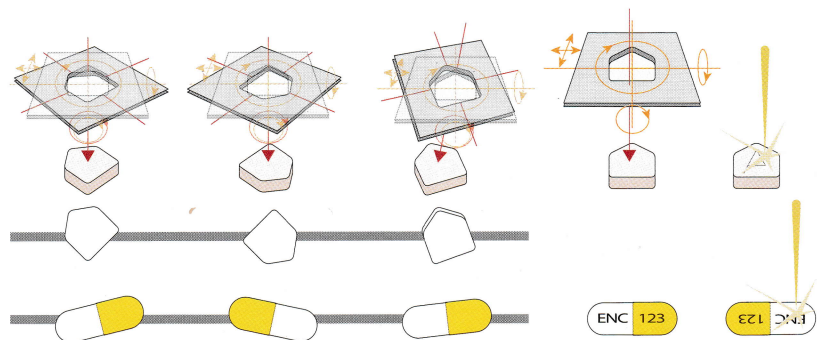


The machine performs UV laser printing with shape tracing first, and then operates full inspection. For inspection, each tablet is inspected by ten 2D cameras capturing the complete surface areas without any blind spot. In addition two 3D cameras measure the height of tablet surface, both sides of top and bottom, which allow to detect minimum 30µm defects.

SHAPE TRACING AND KEY TECHNOLOGIES

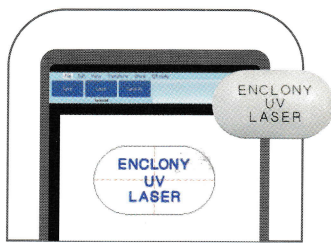


- 1) Shape tracing
- 2) Laser Printing as per its shape
- 3) Inspection



In addition to precise shape tracing, a complex UV laser control method, and precise motor movement control, accurate printing locations are made within 100µm of the XY axis and 1° of rotation. Due to its ability to read the convex surface of the tablet well, the fine printing can be performed even on deep convex tablets without distortion.

SMART HMI



ID Artwork on HMI

ID design work on HMI and immediate trials of printings are available.



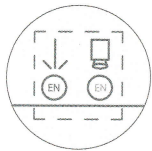
Saving Defect Images and Running Simulation



Easy Parameter Setting

ADVANTAGE OF 2-IN-1 SYSTEM

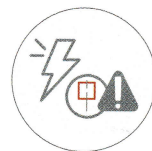
A combination of UV laser printing and vision inspection



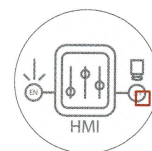
Minimizing of production process



Cost saving of time, labor, spaces, etc.



Immediate detection of defective ID



Integrated control on single HMI of printing and inspection

Integrated Control and Real Time Operation Status on HMI

- One HMI controls all functions of laser printing, inspection, and machine operation demonstrates in real time.
- Real time quality control of every single tablet/capsule is possible.

The HMI interface is divided into several functional areas:

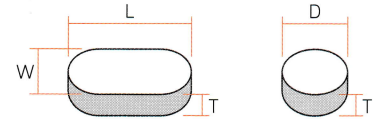
- Machine Control:** Includes heater setting, numerical setting, speed control, grade setting, table, and laser setting.
- Inspection Control:** Displays 'ENCLONY UV LASER' and 'Print speed 0T/H'.
- Print Quality Control:** Shows 'Print brightness' and 'Print brightness (recent: 100)'.
- Art Work:** Displays 'ENCLONY UV LASER'.
- Concentration Check:** Shows 'Print brightness' and 'Print brightness (recent: 100)'.
- Laser Setting:** Includes 'Print speed 0T/H', 'Unprinted print quantity 0H 2M 32S', and 'Unprinted print quantity 0'.
- Position Check:** Shows 'Rank of occurrence of deviation in print position' with a table of data.
- Brightness Check:** Shows 'Print brightness' and 'Print brightness (recent: 100)'.



Operation Chamber

APPLICABLE FLEXIBILITY OF TABLET / CAPSULE

- Round tablet : Diameter(D) 3.5mm – 14mm
- Oval/Oblong tablet : Width(W) 3.5mm – 14mm
Length(L) 10mm – 22mm
- Thickness(T) : 2mm – 8mm *Diameter (or Width) minus Thickness ≥ 0.7 mm
- Polygon tablet : triangle, square, diamond, pentagon, hexagon, octagon shapes, etc.
- Free shaped tablet : heart, kidney, bean, water drop, half round, almond, flower shapes, etc.
- Hard gelatin capsule : capsule No. 00, 0, 1, 2, 3, 4, 5



* Inspection applicability of respective products is subject to actual product testing and confirmation by Enclony.

CAPACITY



5mm Round : 400,000 tablets/hr



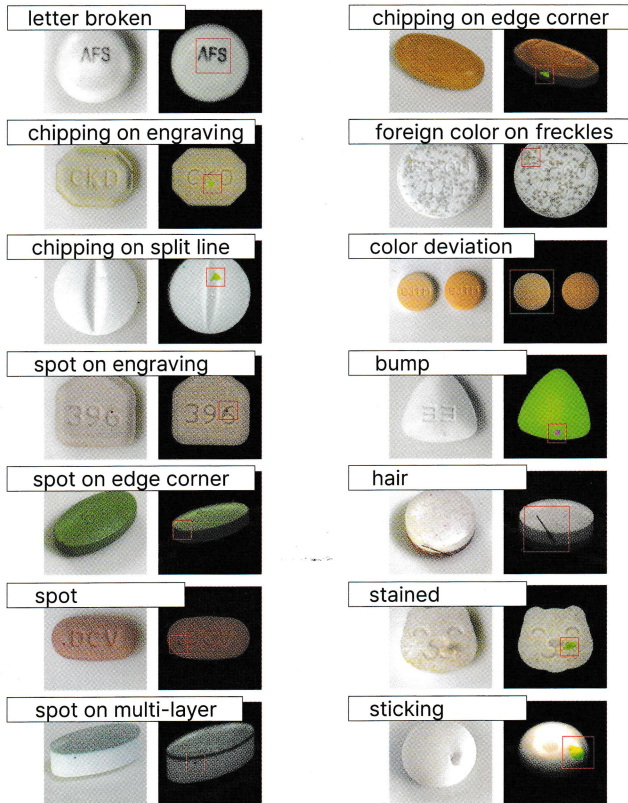
10mm Oblong : 200,000 tablets/hr



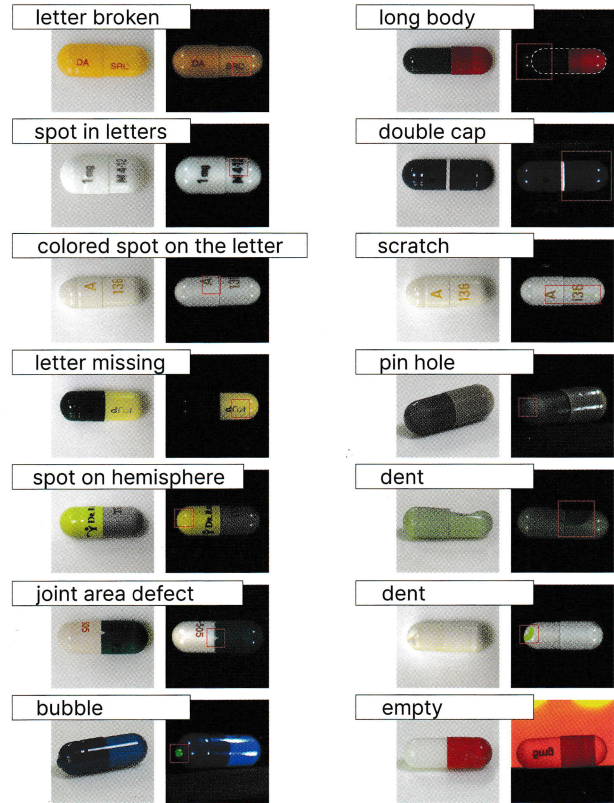
#5 Capsule : 150,000 capsules/hr

DEFECT ANALYZATION

Tablet



Capsule



ENCLONY

ENCLONY Co., Ltd.

www.enclony.com

No.1901,243,Digital-ro, Guro-gu, Seoul, Korea 08382

E-mail : sales1@enclony.com Tel : +82 2 855 0095 Fax : +82 70 8650 4810

ENCLONY GmbH

Carl-Legien-Straße 15, 63073 Offenbach am Main, Germany
(Sirius Business Park, Offenbach)