# MONOLIGHT COMPA

Laser Marking & **Engraving Machine** 

With a monitor, wireless keyboard (scope of deliver) Optional accessories: Suction and filter unit







Issue 20 : April - June 2024 **Quarterly Company** Newsletter

# T.A.O. NEWSLETTER





# MONOLIGHT COMPACT: Laser Marking & Engraving Machine

### The Multitalent

The new laser system, Monolight Compact provides feature with a powerful tool for making precise and fine markings on smaller components, labeling them or personalizing them. At the same time, it has the independence to produce lasercapable pad printing clichés without having to rely on external service providers.

## **Etching for Product decoration**

Fibre laser 20W (up to 100W) wave length 1,064 nm is high performance for fine markings and high precision individual laser marking of components and for small series production that require high resolution

Powerful laser marking for any objects such as Steel, Plastic, Aluminium, etc.





### **Product Sample**









Surgical Tool









Steel Connecting Rod









## **Plate production**

For the production of laser-capable printing cliche with predefined cliche marking parameters.

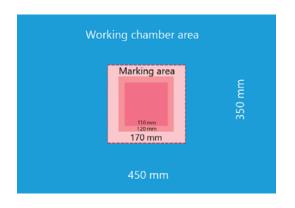
Engraving on multi clicheplates: Magnetic-Aloxid, Aloxid-special cliches, Ceramic plate cliches Plate size for engraving up to 300x150mm.

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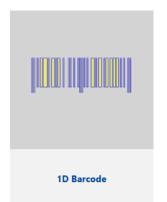


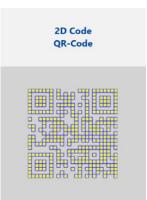
## **Working area**

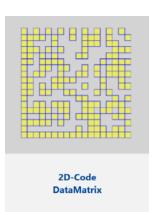
- Working chamber area of up to 450 x 350 mm. under compact design.
- Different lenses for different marking area for up to 170 x 170 mm (standard 110 x 110 mm)











#### Creative design & Multi file import print image data by TAMPOPRINT® LASER SUITE PROGRAM

- Create different graphics such as alphanumeric characters, Barcode 1-D and QR code 2-D codes
- Integrated databased recording
- Multi file import print image data



Import function

☐ Vector data \*.pdf, \*.ai, \*.eps

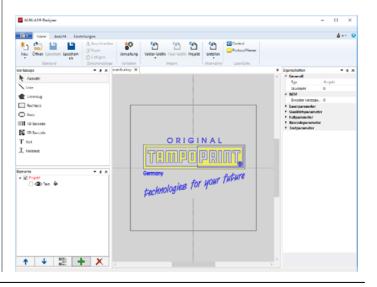
□ Pixel data (\*.jpg, .tiff, .bmp)

- Inserting geometric figures
- Lines, squares, circles etc.
- Inserting of text
- Laser font, True-Type-Font
- ☐ Text straight, Text on the arc
- Alignment function (justification etc.)
- External Text data (\*.txt, \*.csv)



### More optional

- Suction unit to clean dust from engraving
- Cliché adapter plate for other cliché formats on request
- Electric door instead of manual door
- Electric height of the laser head adjustment via software



e.g. created with Excel

Interested in more information please contact K. Kitiraj Sonso Email: kitirajs@taobangkok.co.th

The previous issue, it was mentioned the type of glass and printing techniques Including various solutions from T.A.O. that support customer needs.

In this issue, we present examples of successful work developed together with our customers.



**Case Study 1 :** Streamlining Commercial Refrigerator Printing Production

T.A.O. Solution:

High-temperature resistant CG-T glass eliminates the need for baking, saving 60 minutes per printing cycle.

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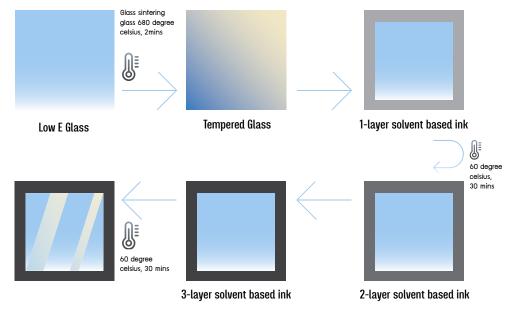


# **Refrigerator Glass Door Panel Printing**

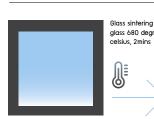
### **Current Process:**



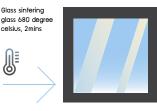
Low-E glass is sintered at 680 degree C for 2 mins to transform normal glass to be the tempered glass. Then 3 layers of screen printing is conducted. At the 1st and last layer are required the heat drying at 60 degree C for 30 min per each layer to enhance ink curing. Following the printing and baking stages, the printed glass must be left at ambient temperature for 24 hours to achieve its final hardness before advancing to subsequent processes.



# T.A.O. solution proposed :



2-layer printing at back side of low E glass (wet on wet)



Tempered Glass



Changed from using solvent-based printing ink, which is a ceramic ink, which is resistant to high heat.

Therefore, the ink can be cured along with the glass tempering process at the same time. Therefore, it will reduce the ink curing process for solvent ink printing, which requires 30 mins for each printing layer.

### Benefits:

- 1 Reduced production time
- 2 Lower energy consumption
- 30% ink cost savings
- Excellent ink adhesion and sharp abrasion resistance
- 5 Good silicone glue compatibility
- 6 No ink pot life

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## Case Study 2:

### **Refrigerator Door Panel**

T.A.O. Solution:

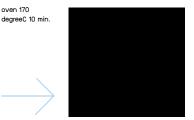
Optimized mesh selection and reduced hardener usage.



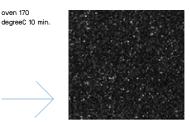
## **Current printing process:**



Layer 1st Pearl color mesh no.150 T/cm



Layer 2<sup>nd</sup> Black color mesh no.150 T/cm



Final outcome



## T.A.O. solution proposed:

oven 170

reeC 10 min

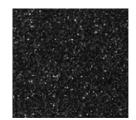


Laver 1st Pearl color mesh no 150 T/cm



Laver 2nd Black color mesh no 200 T/cm





Final outcome

#### **Benefits:**

- 1 28% ink saving but still maintain ink opacity
- Reduced % amount of hardener
- Excellent ink adhesion and physical properties
- Strong PU foam compatibility in assembly process

## T.A.O. goes beyond inks to provide a comprehensive printing system.

**Beyond Inks:** Your Complete Printing Solution

Are you ready to collaborate with expert?

Contact T.A.O. today and let our expertise guide you to stunning results!

- 1 TMA Automatic fridge door glass screen printer
- 2 High-end stencils from Frintrup: Ensures superior printing quality for any application.
- 3 RKS squeegees which has 2 popular series, PRINTAN and CARBON S. Available in various sizes and harnesses for optimal performance and chemical resistance. Deliver exceptional precision and efficiency for demanding jobs.
- T.A.O. is proud to present its highperformance Roland UV printer, specially designed for glass panels. This innovative printing solution unlocks a world of limitless design possibilities, while delivering exceptional print quality and vibrant colors thanks to its premium inks.



RKS CARBON S



RKS PRINTAN