DOSUN

BLUE ROTERY UV Laser Engraver

Introduction

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CONTENT

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§1. About *DOSUN*

DOSUN was established in 1998 as a professional enterprise specialized in manufacturing, developing, marketing and service digital prepress equipments for textile print. It has 120 employees or so, and 50% of staffs are professional engineer in kind of techniques such mechanics, electronics, optics, computers as print. Distributed in R&D, Manufacture, Marketing, Engineer, Sales service DEP. DOSUN comes up with Rotary Inkjet Engraver. Flat-bed Inkjet Engraver, digital textile Inkjet printer and CTP. And it has hundreds of customers both in china and abroad.

DOSUN product has been well-received at home and abroad for its perfect design, technology, quality and service. In domestic market, we set four offices respective in Zhejiang, Jiangsu, Shandong and Guangdong. In foreign market, we sold our product to Europe, Asia, South America, etc. Totally, extending hundreds of customers all over.

We were and we will keep our principle Perfect Every Point all along.

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§2. Brief Introduction

Since 2005, DOSUN has studied and developed for UV-CTP (Ultra Violet- computer to plate). For more than 5 years, the company finally has promoted UV-CTP, 2400 dpi of output revolution, which is in a leading position in domestic. By using **UV-FINA™** Laser Engine, technology and long-term experience on manufacturing Inkjet Engraver, we provide DOSUN BLUE-ROTARY UV-Laser Engraver for whole textile printing industry.

DUSUN BLUE-ROTARY UV Laser Engraver is a new generation of CTS (computer to screen) equipment. By using **DOSUN UV-FINA™** Laser Engine, it can directly image on the sensitive layer.

By using **UV-FINA™** Laser Engine technology, sensitive emulsion, engraving technology is basically same with the traditional technology, improving the precision and efficiency.

1. Appearance

2. Product components

- UV Laser: Japan
- Grating encoder: Japan
- Reducer: Germany
- Servo motor: Japan
- Lead rail: Taiwan

3. The characteristics

- The UV technology of laser direct imaging is directly imaging on the surface of traditional UV sensitive emulsion. Because of don't need film and ink, so the cost is low, and convenient, environmental protection.
- DOSUN **UV-FINA™** Laser Engine: Integrating several high technologies, such as 405nm laser diode, fiber dot-matrix, automatic focusing, light-power balancing,

constant temperature controlling and so on, output precision 720dpi, can manufacture complex moiré patterns, achieve no errors in repeat head-to-end joint.

- Using advanced high-power UV laser and fiber dot-matrix, BLUE-ROTARY UV Laser Engraver is the fastest in engraving industry.
- By using constant temperature controlling, the machine can work for along time under the ordinary room temperature.
- DOSUN PERFECTA™ Hardware Platform: Dexterous, Solid, Accurate, Reliable. It is the crystallization of time and experience, and has several items of national monopolies.
- Automatic focusing system can optional sets laser intensity, adjusting the balance of laser power by automatic, in order to achieve the best exposure efficiency, improve the using life of laser.
- Advanced Pawl Locking device, leading to create in china.

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4. Specification

Model	BR2500
Screen Breadth	2500mm
Screen Repeat	640/820/914mm
Resolution	360/720dpi (standard)
Registration Accuracy	±0.02mm
Imaging Light Source	405nm laser diode LD
Engraving Speed	6～8min./m（16paths 640mm）
Acceptable File Format	BMP/TIFF
Interface	USB
Power	1.5KW/220V, 50Hz
Dimension	3950mmx1100mmx1220mm (BR2500)
Net Weight	1000kgs(BR2500)

5. Ambience

- Temperature: 5～40℃
- Humidity: 30～80% (Non-condensing)
- Lighting: yellow light
- Electric Resistance: ≦ 4Ω
- Power: 1.5KW/ 220V, 50HZ

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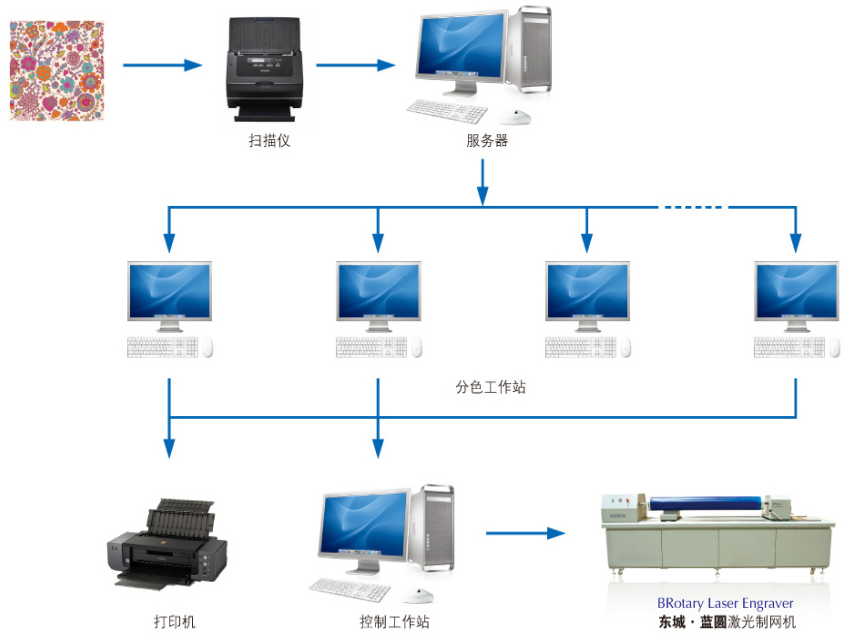
6. Drawing, Color Separation, Output Process



7. Process

Wash screen→ Mixing glue→ reshaping→ coating→ Low temperature baking→ laser Engraving→ Developing→ Retouching screen→ High temperature baking

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§3. Technology Introduction

1. Advantage

- UV laser engraving is a “ultimate” technology
- UV laser engraving use semiconductor laser, wavelength is 405nm, in the spectroscopy, it calls Ultra-Violet, so we also call it blue laser. Now, the engraving sensitive emulsion of textile print, paper print and PCB all use UV sensitive emulsion, the most wavelength of engraving sensitive emulsion as same as UV sensitive emulsion’s, so engraving technology will not be replaced.
- UV laser engraving technology is a fast engraving technology. The speed of engraving is depending on size of power and number of ray path. DOSUN UV-FINA™ laser engine can achieve 64 paths, which provide 16 paths for print engraving. For example, the speed of 640mm/1800mm ROTARY UV Laser Engraver can achieve 68min. /m.
- UV laser engraving technology is a precision engraving technology.
- UV laser engraving is a real photo etching technology, using on the paper offset print, DOSUN UV-FINA™ Laser

Engine can achieve 2400dpi, making the line of 0.01mm, showing the net-point of 1%~99%, it can provide the 720dpi for print engraving, on the “continuing” neurogen (offset plate), it can manufacture the line of 0.035mm. Because rotary engraving isn’t “un-continuing” neurogen, now, the highest mesh number is 195 meshes, in theory, we can achieve the smallest line for 0,13mm, in the manufacturing, we usually use 125 meshes, in theory, and we can achieve the smallest line for 0.21mm (Data for STORK Company). So, the output precision of DOSUN BLUE-ROTARY UV Laser Engraver is better than rotary screen engraver’s. It can satisfy any precision for output size.

- UV laser engraving is a low carbon, environment protection technology.

  Low power: 1.5

  No consumable items: Do not need film, ink, wax

  Low cost: the function of sensitive emulsion is basically same with traditional, the price also basically same.

- UV laser engraving is a “friendly” engraving technology. The manufacture process is not only as same as traditional process, but also more convenient. Basing on the design

principle of “convenient, practical, reliable, advanced”, in the process of engraving image, the equipment provides monitor display, operation help and so on. By using the software and hardware, it all can reflect a “friendly” attitude to operational workers.

2. Contrasting

Equipment	consumable	quality	speed	cost	Maintain cost	Comprehensive cost
Image-setter	Film	Higher	Slow	Highest	Low	Highest
Wasjet	Wax	Medium	Medium	Higher	Higher	Higher
Inkjet	Ink	Medium	Medium	Medium	Medium	Low
CO_2 Laser Carving	None	Highest	Low	Low	Highest	Highest
UV Laser Engraver	None	Highest	Fast	Low	Low	Low

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