

Multi! Cube

Versatile Imaging System for Screen
and Plate Making



BASED ON INNOVATION.

luscher
Technologies

Advantages of the Patented Lüscher Laser Diode Technology

- PATENTED, INDIVIDUALLY FIBER-COUPLED LASER DIODE SYSTEM
- CONFIGURABLE UV AND THERMAL LASER DIODES FOR DIFFERENT PRINTING FORMS
- MODULAR IMAGING CAPACITY - UPGRADEABLE IN 16-DIODE STEPS, UP TO 128 DIODES
- FULLY AUTOMATIC CALIBRATION OF THE LASER DIODES
- LASER DIODES DESIGNED FOR MAINTENANCE-FREE OPERATION
- ULTRA-LONG LIFESPAN OF THE LASER DIODES WITH +20'000 IMAGING HOURS
- HIGH OPTICAL OUTPUT WITHOUT ACTIVE COOLING OF THE LASER DIODES
- LOW ENERGY CONSUMPTION

Advantages of the Multi! Cube

- COMPACT FOOTPRINT WITH A MAXIMUM IMAGING AREA OF 1'200 x 900 mm
- CONFIGURABLE FLATBED TABLE FOR DIFFERENT PRINTING FORMS AND FORMATS
- CUSTOM-BUILT REGISTER SYSTEMS
- DYNAMIC AUTOFOCUS ACROSS THE ENTIRE WORKING AREA
- GUIDED MAINTENANCE AND REMOTE SUPPORT



Dry Offset Plate



Embossing Cliché

Technical Specifications of the Multi! Cube

MachineType	Laser Type	Number of Laser Diodes
Multi! Cube UV	UV, 405 nm	16 / 32 / 48 / 64 / 96 / 128
Multi! Cube UV-Direct	UV, 380 nm	16 / 32 / 48 / 64 / 96 / 128
Multi! Cube T-Flex	TH, 830 nm	16 / 32 / 64 / 128
Multi! Cube Flex	TH, 980 nm	16 / 32 / 48 / 64
Multi! Cube UV-Flex	UV, 405 nm andTH, 830 nm / TH, 980 nm	Combination upon request

General Information of the Multi! Cube

Feature	Multi! Cube
Max. Imaging Area (L x W)	1’200 x 900 mm (47.2 x 35.4 inch)*
Max. Frame Size (L x W)	1’300 x 1’000 mm (51.2 x 39.4 inch)
Machine Dimensions (L xW x H)	1’732 x 2’034 x 1’419 mm (68.2 x 80.1 x 55.9 inch)
Weight	800 kg (1’764 lb)
Resolution	2’400 / 2’540 / 4’800 / 5’080 / 9’600 / 10’160 / 20’320 dpi**
Power Supply	230 V / 50 - 60 Hz / 16 A
Power Consumption	approx. 0.5 kW / approx. 0.8 kW with extraction system
Ambient Conditions	40 - 65 % humidity at 18 - 25 °C (64.4 - 77 °F)
Room Conditions	yellow light***, vibration-free floor

*1’100 x 900 mm (43.3 x 35.4 inch) > speed reduction

**other resolutions upon request

***only for UV

Universal Flatbed Computer-to-Screen (CtS) and Computer-to-Plate (CtP) System

Patented, Individually Fiber-Coupled Laser Diode System

Lüscher's patented system connects each laser diode individually to the optical system through an optical fiber. Because the diodes are connected separately, both the wavelength and the number of installed diodes can be selected for the required printing forms and production capacity. This architecture is the basis for combining different laser wavelengths and scaling imaging capacity within one machine.

Modular Imaging Capacity, Upgradeable in 16-Diode Steps

Imaging speed depends on the number of laser diodes. As production demand grows, the system can be upgraded in 16-diode increments, up to 128 diodes depending on the configuration. For example, increasing from 32 to 64 diodes of the same laser type halves the actual imaging time.

Fully Automatic Calibration of the Laser Diodes

Before each imaging job, the system checks the settings of the installed laser diodes and calibrates them automatically when required. This keeps the laser output consistent at any time and ensures production reliability.

Large Imaging Area with a Compact Footprint

The flatbed design accommodates frames up to 1'300 x 1'000 mm and an imaging area of 1'200 x 900 mm, providing large-format flexibility within a compact machine footprint.

Custom-Built Register Systems

Custom-built register systems enable repeatable positioning of the printing form, helping reduce press setup times and material waste.

Dynamic Autofocus

Dynamic autofocus compensates for variations in material thickness and surface height, maintaining precise focus across the entire working area.

Guided Maintenance and Remote Support

The maintenance software informs the operator about required maintenance tasks and guides through the required process steps. An integrated remote-service interface allows the system to be connected to Lüscher's technical support for online assistance when required.



Flat Screen



Rotary Screen

Applications

Label Printing

Label production can involve several printing processes and different printing forms. Depending on its laser configuration, the Multi! Cube can image flexographic, letterpress and offset plates as well as flat and rotary screens. Compatible rotary screens include Screeny® by Gallus, TecScreen® by Kocher+Beck and RotaPlate® by SPGPrints. Optional dual-resolution optics with 2'540 and 5'080 dpi support high-resolution flexographic plate imaging.

Embossing with Copper and Magnesium Clichés

Photoresist-coated copper or magnesium plates are directly imaged with UV laser diodes. After development, the remaining resist forms the mask for the subsequent etching process.

Flat and Rotary Screen Printing

UV laser diodes directly image the photosensitive emulsion on flat and rotary screens. Common steel or polyester meshes can be processed, including screens with thicker emulsion layers.

Printing on Cans, Cups, and Tubes

Different printing processes are used to decorate cans, cups and tubes. Depending on the process and laser configuration, the Multi! Cube can image the required waterless offset, flexographic or letterpress plates, as well as flat or rotary screens.

Pad Printing Applications

For pad printing, UV laser diodes image photoresist-coated steel plates for subsequent etching, while infrared laser diodes directly ablate suitable polymer clichés.

Screen Printing on Glass

Customized vacuum table concepts provide maximum flexibility for different frame sizes, heights, and shapes.

They can also be adapted to existing registration and positioning systems. Multiple stencils can even be imaged simultaneously.

Other Applications

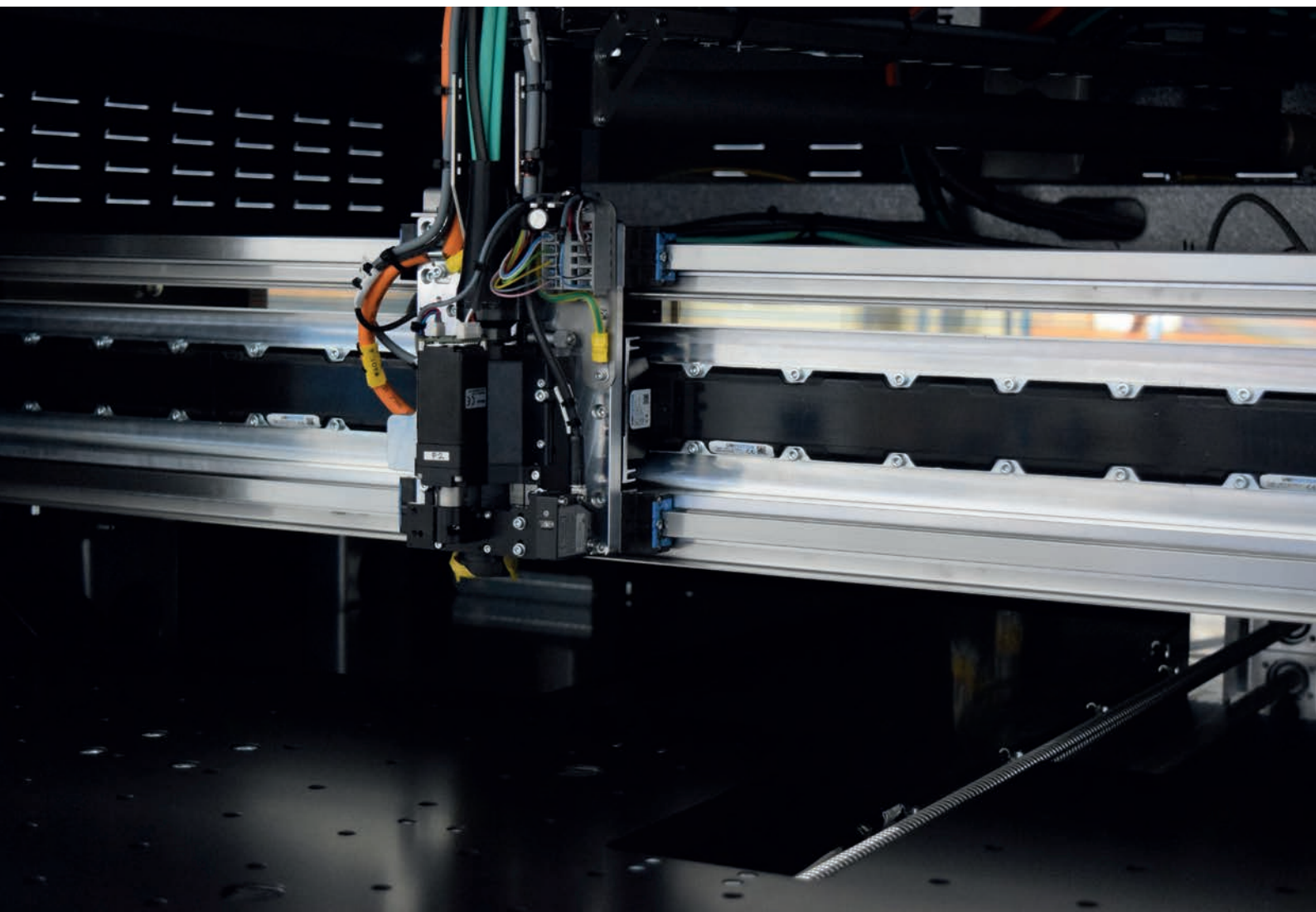
- Industrial Screen Printing
- Packaging
- Printed Electronics
- Displays, Sensors, Membrane switch & Overlays
- Whitegoods
- Printed Circuit Boards and Photovoltaics Applications



Offset Plate



Flexo Plate



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