MultiDX!

The All-Rounder

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Avflex
GLOBAL TECHNOLOGY – LOCAL SERVICE

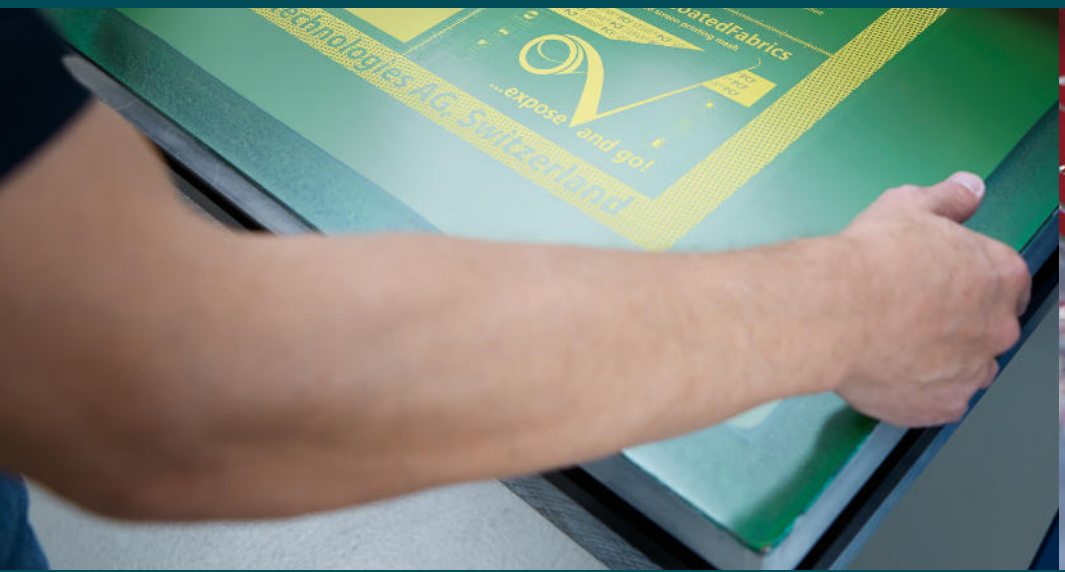
One for All

THE UNIVERSAL FLATBED IMAGESETTER

WITH THE WORLD'S UNIQUE FLAT BED IMAGESETTER MULTIDX!, LÜSCHER TECHNOLOGIES AG HAS DEVELOPED AN INNOVATIVE LASER IMAGING SYSTEM, WHICH MEETS THE INCREASING NEEDS FOR UNIVERSAL AND FLEXIBLE EXPOSING SYSTEMS. DUE TO ITS FLATBED LAYOUT, ALMOST ANY FLEXIBLE AND INFLEXIBLE PRINTING FORM CAN BE EXPOSED IN HIGHEST QUALITY AND EFFICIENCY. MULTIDX! CAN BE EQUIPPED WITH LASER DIODES IN VARIOUS WAVELENGTHS AND NUMBERS ACCORDING TO THE CUSTOMERS' NEEDS.

Hybrid Technology

In a number of fields, such as the label printing industry, the desire to apply various printing methods is increasing. By introducing a hybrid image setter, Lüscher has again set the benchmark in the CTP industry. Besides offset plates, flexo and letterpress plates and printing screens can be processd in the same printing press (by Gallus, Mark Andy, Nilpeter and others). Traditionally, at least two different CtP systems would have been required to image such a variety of printing forms. MultiDX! with its hybrid technology combines two different laser technologies with variable wavelengths (in this case 405 nm UV and 940 nm IR), allowing any printing form to be imaged in one machine. Switching between the wavelengths is made by a simple click of a button, no other operating steps are necessary. Nothing could be easier.



Unlimited

ROTARY PRINTING SCREENS

FLAT PRINTING SCREENS

LETTERPRESS PLATES

WATERLESS OFFSET PRINTING PLATES FLEXO

PRINTING PLATES

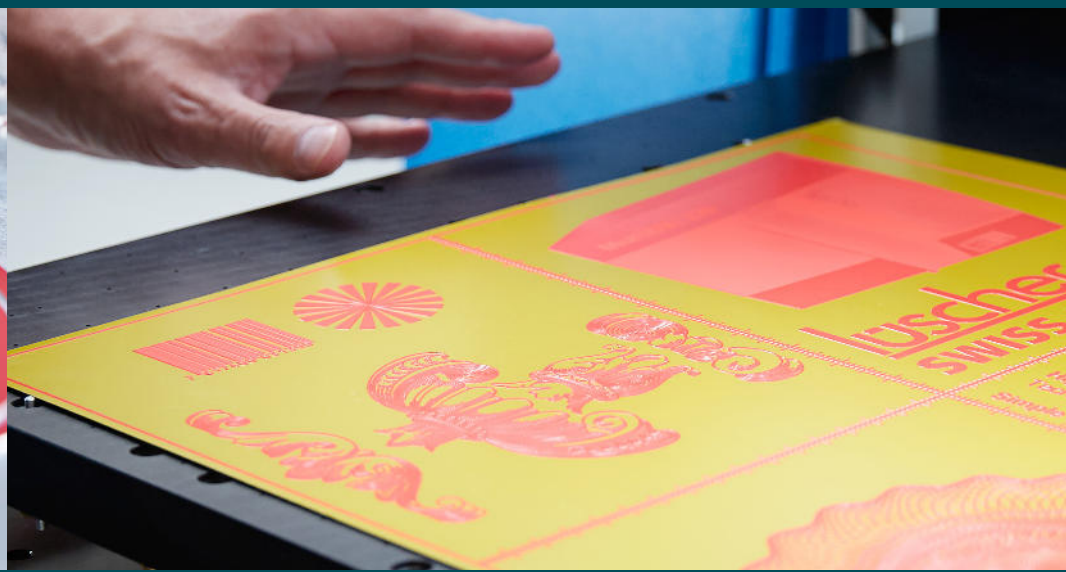
CONVENTIONAL OFFSET PRINTING PLATES

FILM, DIAZO AND ABLATIVE

EMBOSSING WITH COPPER OR ALUMINUM

PAD-PRINTING CLICHES

PRINTED ELECTRONICS



A Milestone in Imaging Technology

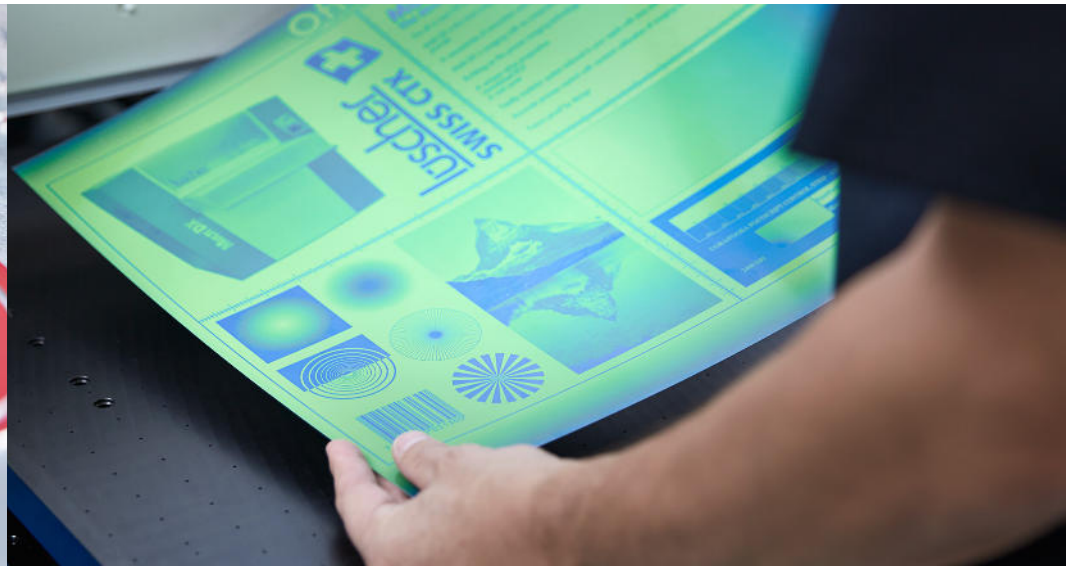
Lüscher is the first manufacturer worldwide having developed an imagesetter combining two different types of lasers in one machine. Whether thermally crosslinking polymers, polymers with ablative layers (LAMS), UV photosensitive emulsions or UV crosslinking polymers are in use: MultiDX! Is equipped with fibre-coupled laser diodes in the required wavelength (nm). The number of laser diodes depends on the exposure performance required by the customer. An on-site upgrade to increase the output performance can be made anytime.

Universal Direct Imaging

Printing forms with steel, aluminum or polyester bases can be imaged in any size, shapes and thickness. The printing form remains static during the exposure. For this reason, balancing problems as they may occur with external drum systems as far as variable thickness and size are concerned, are no longer an issue with MultiDX!.

Custom-built Registering System

The flatbed layout of MultiDX! allows the integration of custom-built registering systems for perfect alignment of the image on the printing form. As a result, the set-up time in the printing press is substantially reduced, which leads to significant savings in terms of material and cost.



Technical Specifications

Flex	**MultiDX! 220**	**MultiDX! 240**
Laser type	Infrared, 940 nm	
Number of laser diodes	8, 16, 24 or 32	8, 16, 24 , 32, 40, 48, 56 or 64
Productivity rate flexo plates m^2/h[1)]	1	2.5
T-Flex	**MultiDX! 220**	**MultiDX! 240**
Laser type	Thermo, 830 nm HiPower	
Number of laser diodes	8, 16, 24 or 32	8, 16, 24, 32, 40, 48, 56 or 64
Productivity rate offset number of plates/h, flexo m^2/h[1)]	4.3 / 1	3.4 / 2.5
UV-Flex	**MultiDX! 220**	**MultiDX! 240**
Laser type	UV, 405 nm / infrared, 940 nm[2)]	
Number of laser diodes	Maximum 48 UV or maximum 24 infrared[3)]	Maximum 112 UV or maximum 56 infrared[3)]
Productivity rate offset number of plates/h, flexo m^2/h, screen m^2/h[1)]	6.4 / 0.8 / 2.7	5.1 / 22 / 6.4
UV	**MultiDX! 220**	**MultiDX! 240**
Laser type	UV, 405 nm	
Number of laser diodes	16, 32, 48 oder 64	16, 32, 48, 64, 80, 96, 112 oder 128
Productivity rate offset number of plates/h, screen m^2/h[1)]	8.5 / 3.6	6.8 / 8.5
Thermal	**MultiDX! 220**	**MultiDX! 240**
Laser type	Thermo, 830 nm	
Number of laser diodes	8, 16, 24 or 32	8, 16, 24, 32, 40, 48, 56 or 64
Productivity rate offset number of plates/h[1)]	4.3	3.4
General Information	**MultiDX! 220**	**MultiDX! 240**
Maximum printing plate (L x W x H) in mm	800 x 600 x 50	1300 x 1100 x 70
Resolution in dpi	1200, 2400, 2540, 4000/4800, 5080, 8000/9600, 10160[4)]	1200, 2400, 2540, 4000/4800, 5080[4)]
Dimensions (L x W x H) in mm	1741 x 1462 x1375	3172 x 2169 x 1487
Average power consumption (with / without suction)	approx. 0.8 / 0.5 kW	approx. 1.8 / 1.5 kW
Weight	490 kgs (1080 lbs)	2000 kgs (4409 lbs)
Power supply	230 V, 50 – 60 Hz, 16 A	3 x 400 V, + N + PE, 50 – 60 Hz, 32 A
Ambient conditions	40 – 65% humidity at 18 – 25°C (64,4 – 77°F)	

[1)] Depending on material, resolution and number of laser diodes
[2)] If required, 830 nm laser may be used instead of 940 nm
[3)] Depending on the configuration
[4)] Other resolutions are available upon request

MultiDX!

Applications for Embossing with Copper and Magnesium

Pad-printing Clichés or Hot Stamp Plates

For the production of pad-printing clichés and/or hot stamp plates, MultiDX! is quipped with 405 nm UV laser diodes. Any traditional UV sensitive etch resist on copper or magnesium plates can be imaged.

Distance Sensor

Prior to the exposure, a distance sensor measures the thickness of the copper or magnesium plate and the optic system is then automatically calibrated according to the measured value.

Laser Adjustment

The laser performance is analyzed and adjusted if necessary before every exposure. This guarantees an absolutely equal quality during the entire exposure process.

Dynamic Focus

The standard version of MultiDX! includes a dynamic focus system. It is used to compensate any irregularities in the thickness of the copper or magnesium plate up to 0.5 mm at full exposure speed.

No Loss of Detail

As opposed to traditional exposure on film, the direct exposure on copper or magnesium plates by means of laser diodes guarantees unmatched sharpness of the image. MultiDX! 220 UV is able to produce 30 micron lines and to defeat undercut issues.

MultiDX!

Applications In Screen Printing

Rotary Screen Printing

MultiDX! UV equipped with 405 nm UV laser diodes can be used for the exposure of any kind of printing screens, either flatscreens or rotary screens, such as Screeny® by Gallus, TecScreen® by Kocher + Beck or RotaPlate® by Storck. The corresponding registering systems are built-in by Lüscher Tecnologies AG and guarantee perfect alignment.

Flatscreen Printing

Flatscreens up to a maximum outside frame format of 1300 x 1100 mm can be easily and accurately imaged with MultiDX!. Lüscher AG Technologies offers custom-made vacuum tables for any size of screen. Frame formats up to 1450 x 1500 mm with the same image size are available as an option.

Advantages of the Lüscher Design

The sophisticated design concept makes sure that the screen remains completely flat on the vacuum table and guarantees highest accuracy. For high demands in the electronic industry, resolutions of up to 10160 dpi are available as an option.

MultiDX!

Applications for Label Printing

Rotary Screen Printing

MultiDX! UV equipped with 405 nm UV laser diodes can be used for the exposure of any kind of rotary printing screens, such as Screeny® by Gallus, TecScreen® by Kocher + Beck or RotaPlate® by Storck. The corresponding registering systems are built-in by Lüscher Technologies AG and guarantee perfect alignment.

Flat Screen Printing

Flat screens are imaged easily and accurately by MultiDX! UV. Up to an outside frame size of 600 x 800 mm, we can build custom-made vacuum tables to hold all of your screens.

Letterpress Plates

For the production of letterpress plates (LAMS), MultiDX! is equipped with up to 32 IR laser diodes of 940 nm wavelenght. Built-in registering systems, e.g. for Gallus, Nilpeter or OMET machines, allow the shortest setup time in the printing machine and the most accurate exposure.

Waterless Offset Printing Plates

Waterless plates, such as Toray TAC VG-5 with or without protective film, are imaged with 830 nm IR laser diodes. Depending on the application, resolutions of up to 10’160 dpi are available, as for instance used in security printing.

Flexo Printing Plates

For the production of flexo printing plates (LAMS), MultiDX! can be equipped with up to 32 IR laser diodes of 940 nm wavelength. A Dual Resolution Optic is available for flexo plate making with «Flat Top Dot». Exposures are made with either 2400/4800 dpi or 2540/5080 dpi.

MultiDX!

Application for Cans, Cups and Tubes

Rotary Screen Printing

MultiDX! UV equipped with 405 nm UV laser diodes can be used for the exposure of any kind of rotary printing screens, such as Screeny® by Gallus, TecScreen® by Kocher + Beck or RotaPlate® by Storck. The corresponding registering systems are built-in by Lüscher Technologies AG and guarantee perfect alignment.

Flat Screen Printing

Equipped with UV laser diodes of 405 nm wavelength, MultiDX! UV can image any kind of printing screen. For flat screens for rotary printing machines, e.g. OMSO, KBA, Kammann or Dubuit, Lüscher Technologies AG offers the corresponding vacuum table and registering system that guarantee highest accuracy. Therefore, the setup time in the printing machine is considerably reduced.

Letterpress Plates

For the production of letterpress plates (LAMS), MultiDX! is equipped with up to 32 IR laser diodes of 940 nm wavelenght. Built-in registering systems, e.g. for Polytype machines, allow the shortest setup time in the printing machine and the most accurate exposure.

Waterless Offset Printing Plates

Waterless plates, such as Toray TAC VG-5 with or without protective film, are imaged with 830 nm IR laser diodes. Depending on the application, resolutions of up to 10’160 dpi are available, as for instance used in security printing.

Custom-built Registering Systems

The flatbed layout allows the integration of custom-built registering systems for perfect alignment and multiple exposures. As a result, the set-up time in the printing system is substantially reduced, which leads to significant savings in terms of material and cost.