# MultiDX!
## Multi-talented

luscher
Technologies


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# Lüscher History

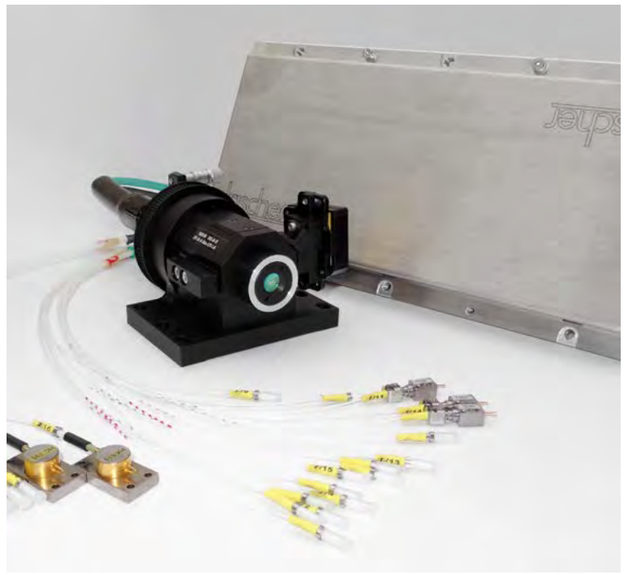
Lüscher Technologies AG, with its headquarters in Bleienbach, Switzerland, is a worldwide manufacturer of technologically advanced laser imaging systems for a wide range of applications in all printing technologies and specialist applications. Founded in 1946 in Obstalden, Switzerland, the company draws on a long tradition and has been providing technical excellence in its services to the graphic and textile industry for over 68 years. Our interest in specific problems and the development of customised solutions ensure that our customers and partners benefit from technical and economic advantages for years to come. Over 2,500 satisfied customers from all over the world are proof of this!


# MultiDX!
# Technology

With the world's unique, patented flat-bed CTP system MultiDX!, Lüscher has developed another innovative laser imaging system which meets the increasing needs for universal and flexible imaging systems. Almost all rigid and flexible printing plates of any kind can be imaged in the highest quality and efficiency in this flat-bed system. The laser diodes can be adjusted to different wavelengths and to the number of the respective customer needs.

## Universal direct imaging

Printing plates with steel, aluminium or polyester bases can be imaged in any size, shape and thickness. The printing plate used during the imaging remains static. This means there are no balancing problems with the MultiDX! when it concerns different sizes or thicknesses of material, as can happen, for example, with external drum systems. Because of the flat-bed design, it is also extremely simple to implement customer-specific registering or recording systems, which guarantee the absolute accuracy of the position of the image on the printing plate. As a positive result, this massively reduces the set-up times in the printing system as well as achieving significant savings in terms of materials and cost.



## A milestone in imaging technology

Lüscher is the first manufacturer worldwide to have developed an imaging system, which allows the use of different types of laser in one machine. Whether thermally crosslinking polymers are used or polymers with ablation layers (LAMS), UV photosensitive emulsions or UV crosslinking polymers, with the MultiDX! the fibre-coupled laser diodes can be installed in the required wavelength range. The built-in number of laser diodes depends on the desired imaging performance of the customer. A field upgrade is possible on-site at any time in order to increase the output performance.

## Hybrid technology

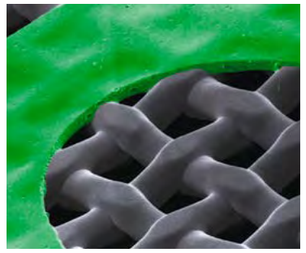
Once again, Lüscher sets the benchmark in the CTP industry, with the development of hybrid imaging systems. Increasingly different printing processes are being used in various fields, such as in the label industry. Now, offset and flexographic, letterpress and screen printing plates can all work in the same printing machine (e.g. Gallus, Mark Andy, Nilpeter, etc.). Usually this would require at least two different Computer to Plate systems to image these printing plates. But not with the MultiDX! from Lüscher. Thanks to the hybrid technology two laser technologies can be installed in different wavelengths (in this case 405 nm and UV 940 nm IR) so that all the printing plates can be imaged. The conversion from one wavelength to another is done by the simple push of a button, no other steps are necessary. It cannot get any easier!


## A safe investment that is future-oriented

The modular construction of the MultiDX! grows with the needs of the customer. Every system can be upgraded at any time and "on site" very quickly to higher imaging speeds and/or higher resolutions; it is even possible to upgrade on site from a single laser to hybrid technology. Our engineers have always strived to make it possible for existing systems to be retrofitted with the latest technology. That is why we can offer our clients a high level of investment security.

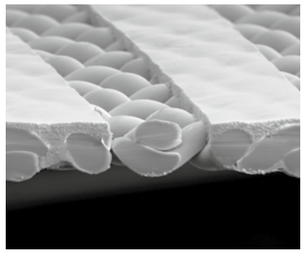
# MultiDX!
# Applications

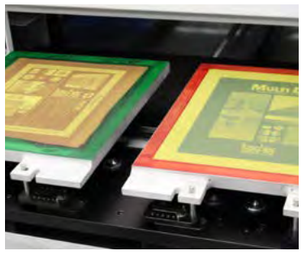
Due to the different configuration options and sizes of the MultiDX!, it lends itself to an extremely wide range of applications, some of the possible options are shown below:



## Rotary screen printing templates

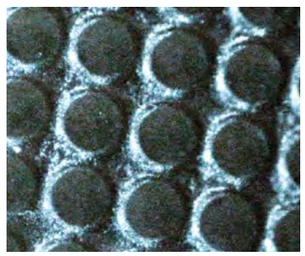
The MultiDX! UV equipped with UV 405 nm laser diodes can image all kinds of rotary screen printing templates without a problem. Whether flat-bed screens or rotation screens Screeny® from Gallus, Tecno Screen® from Kocher + Beck or RotaPlate® from STORK: we install the necessary registering systems.





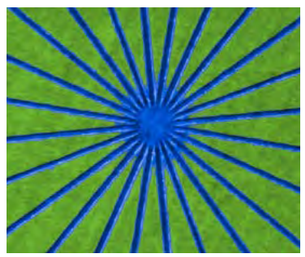
## Flat screen printing templates

Flat screens screen printing templates can be imaged easily and accurately on the MultiDX! UV. We construct custom screen imaging tables that can accommodate all of your templates, up to a maximum external frame size of 1300 x 1100 mm (MultiDX! 240).



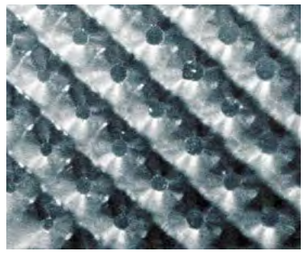
## Letterpress plates

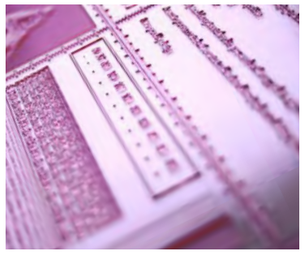
The MultiDX! is fitted with a maximum of 32 / 64 IR diodes in the 940nm wavelength range for the production of letterpress plates (LAMS). Built-in registering systems, for example polytype machines, guarantee accurate imaging and the shortest set-up times in the printing unit.




## Waterless offset printing plates

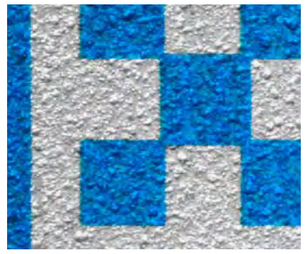
It is possible to image waterless offset printing plates, e.g. Toray TAC VG-5, with 830nm IR diodes. The imaging can be done with or without a protective film. Depending on the application, e.g. in security printing, a resolution of up to 10,160 dpi can be selected.





## Flexographic printing plates

In order to produce flexographic printing plates (LAMS), the MultiDX! is fitted with a maximum of 32 / 64 IR diodes in the 940 nm wavelength range. To produce flexographic plates with "Flat Top Dot" there is a dual-resolution optics option, which can image either at 2400 / 4800 dpi or 2540 / 5080 dpi.

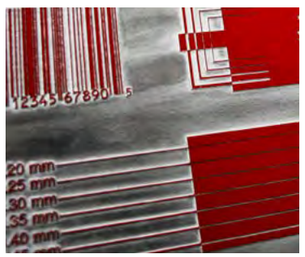



## Thermal or conventional offset plates

830 nm lasers or 405 nm lasers are used for the imaging of thermal or conventional offset plates.

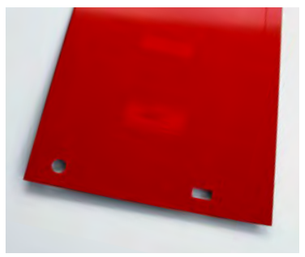

## Film imaging

UV Trans film (diazo) is characterised by its high resolution capability. With UV lasers it is imaged with 405 nm. It is also possible to image ablation films with 940 nm IR lasers.


## Embossed stamp made from magnesium and copper

UV 405 nm laser diodes are used for clichés and / or embossing plates (stamp). All conventional UV-sensitive resist etching systems on magnesium or copper plates can be imaged with the MultiDX! UV.

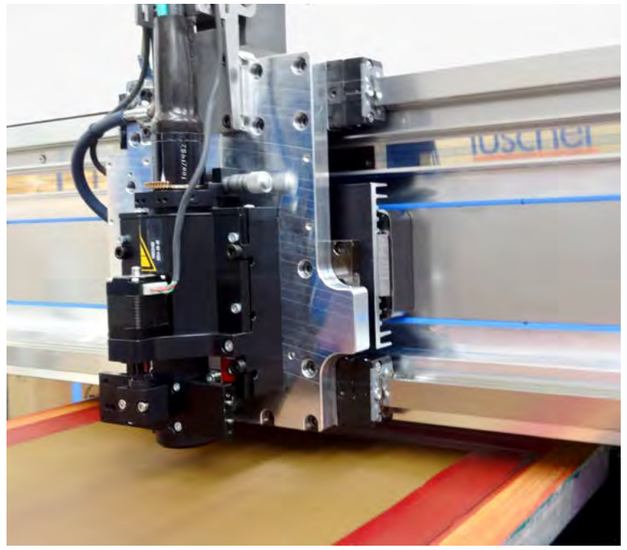


## Pad printing plates (clichés)

Pad printing plates (clichés) made from steel or polymers can also be processed in any desired magnitude with UV 405 nm (steel) or IR 940 nm laser diodes (polymers).

# State of the art components in our mechanics, electronics, laser technology and optics

Efficient technology and a perfect service. We have consistently incorporated the requirements of our customers and our practical experience into the development and optimisation of our imaging systems. Protecting the environment and low operating costs are important factors for us. The use of premium components that we develop with our partners around the world are to your advantage because you will benefit from sophisticated and reliable technology, designed for industrial production processes around the clock – seven days a week.

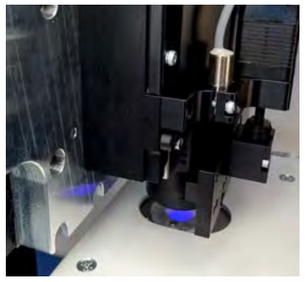


## Linear drive

The writing axis is at the heart of the MultiDX!. The drive of the fast axis uses the latest linear technology that ensures highest accuracy for many years. Carriages are equipped with an oil storage unit that optimises the lubrication interval.

## Optics

The optics of all MultiDX! machines are designed in such a way that they can reproduce wavelengths of 375 nm, 405 nm, 830 nm and 940 nm. The MultiDX! is available with resolutions of 1200dpi, 2400dpi, 2540 dpi, 5080 dpi 10160 dpi. Other resolutions are available on request.

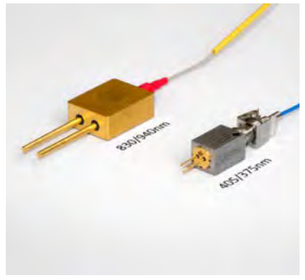


## Laser adjustment

The lasers are tested by a laser sensor before each exposure. This ensures a more consistent imaging quality.

## Laser

The MultiDX! fibre-coupled laser diodes are used as an energy source. The laser diodes are characterised by their high efficiency and durability.

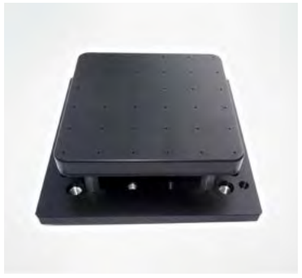


## Software

For most applications, Lüscher offers coordinated software packages that have been developed in-house, which simplify the operation of the MultiDX! and shorten the working steps. The programs can be customised by our software engineers when needed.

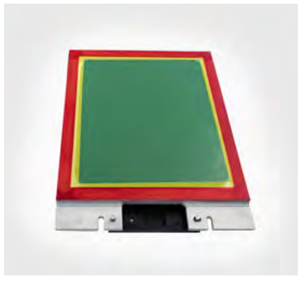

## Remote Service

All the machines from Lüscher have a remote servicing option. Via the Internet, we can access every machine around the world and check the status of the system as well as troubleshoot if necessary. Fast failure analysis and assistance at customer's premises can be done efficiently through our hotline and at a minimum cost, too. The downtime of the system will thus be limited to an absolute minimum.



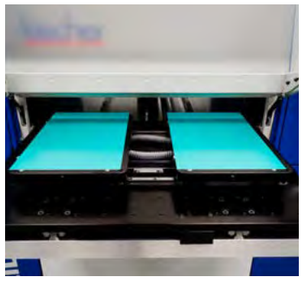
## Flexible table combinations

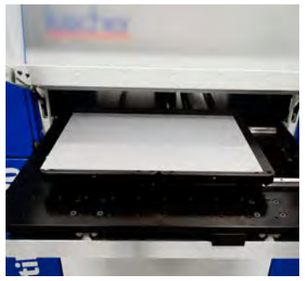
We focus our efforts on efficient and process-oriented work. We put together a tailor-made recording plate for each application, which allows the simultaneous multiple imaging of several printing plates, thus achieving high production speeds. If you use pass systems of any kind in your printing machine, we also install the register pin in the MultiDX! and thereby cut down on set up times and material costs for the printing machine by up to 50 %.



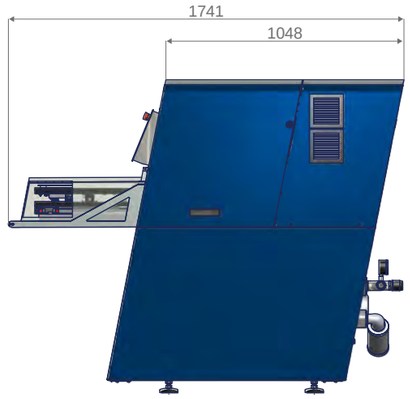
## Registering system

No matter whether offset, rotary screens (Gallus, Kocher + Beck) flat screens, letterpress plates or other materials are to be imaged: Lüscher Technologies AG places a great deal of importance to an agreed solution with the customer. Through the precise register imaging of the printing templates, the set-up and thus wastepaper costs can be reduced to a minimum.

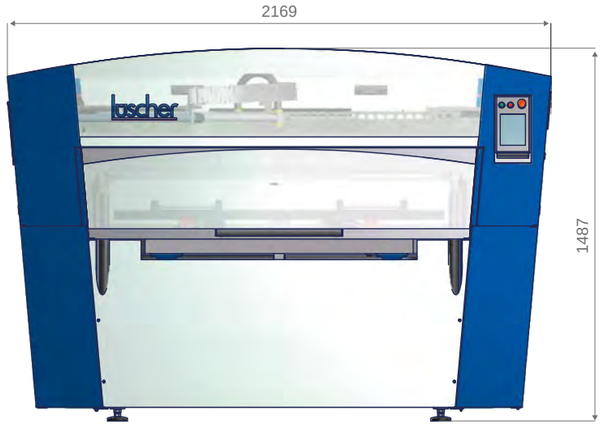


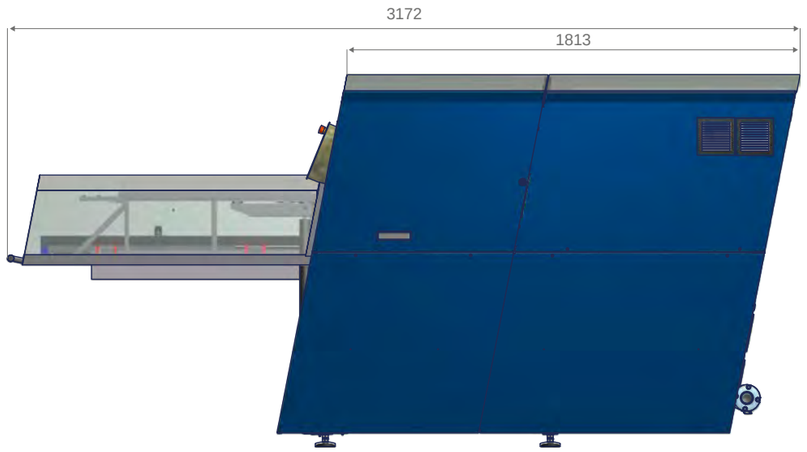


# Dimensions MultiDX! 220


# MultiDX! 240




# Technical Data

| 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 of flexo plates in m²/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 of offset in plates/h / flexo in m²/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 with offset in plates/h / flexo in m²/h / screen in m²/h [1] | 6.4 / 0.8 / 2.7 | 5.1 / 2.2 / 6.4 |
| **UV** | **MultiDX! 220** | **MultiDX! 240** |
| Laser type | UV, 405 nm | |
| Number of laser diodes | 16, 32, 48 or 64 | 16, 32, 48, 64, 80, 96, 112 or 128 |
| Productivity with offset in plates/h / screen in m²/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 with offset in 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 x 1375 | 3172 x 2169 x 1487 |
| Average energy consumption (with / without suction) | approx. 0.8 / 0.5 kW | 1.8 / 1.5 kW |
| Electrical connection | 230 V, 50 – 60 Hz, 16 A | 3 x 400V, 50 – 60 Hz, 32 A |
| Environmental conditions | 40 – 65% humidity at 18 – 25 ° C | |

[1] Depending on the 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 on request