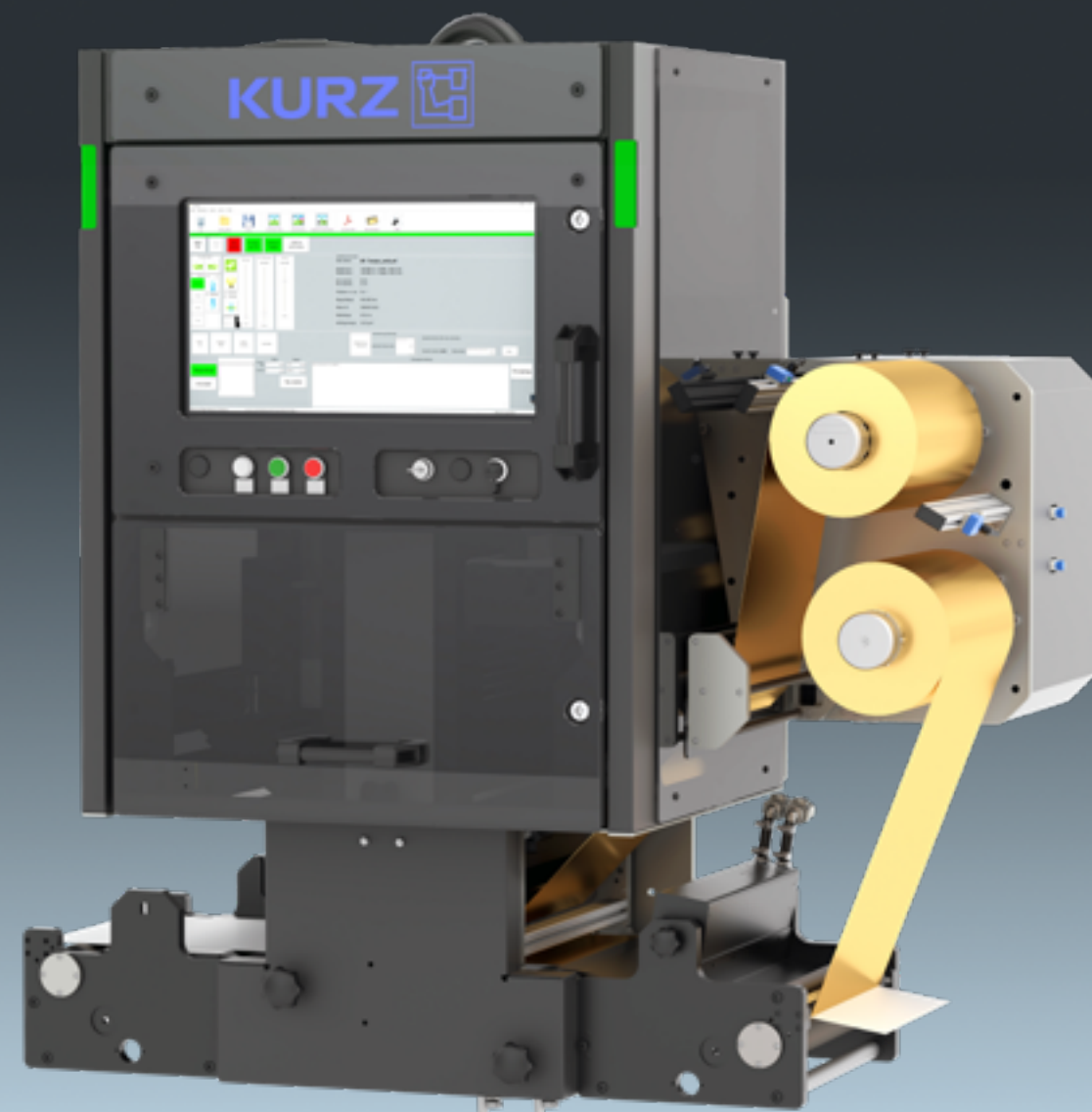# Digital Metallization Integration Module

DM-FLEXLINER 2D: More flexibility for brilliant flat metallization in narrow web finishing

Maximum design freedom and flexibility for breathtaking finishing results
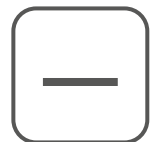
DM-FLEXLINER 2D:

The integration module for flat digital metallization in narrow web finishing is ready to use whenever and wherever you need it in your printing process. Brilliant, flexible and highly efficient. Specified to your individual requirements.

▶ Flexible inkjet on transfer layer integration module for digital metallization ready to use in existing finishing machines or converting solutions – before or after the printing process

▶ Customized metallic finishing for individual labels or various label campaigns

▶ For mass customization and individualization

▶ Attractive embellishment for small runs, special editions, or different product series

▶ Variable data brilliantly highlighted

▶ Impressive high-gloss effects

▶ Huge variety of colors and metallic shades feasible

▶ Creative design freedom

▶ Late-stage customization

Roll-to-roll printing process   Flat finishing result   High gloss level

Standing out from the crowd, differentiating yourself from others, creating individuality – the demands on product designs and labels are constantly increasing. Short-lived trends, competition and individual customer wishes require quick adaptability and high quality standards. Open up new markets and create high-caliber metallic decoration options with **KURZ DM-FLEXLINER 2D**, our digital metallization integration module for even more flexibility for flat digital metallization in narrow web finishing. Whether existing or new finishing lines, the **KURZ DM-FLEXLINER 2D** module can be integrated into your finishing system as desired.

DM-FLEXLINER 2D: Whether classic production or mass customization, short runs or special editions – you remain flexible and highly efficient. Experience fascinating metallic effects and high-gloss surfaces, first-class resolution, many colors and deep brilliance. Discover high flexibility with inkjet on transfer layer technology for labels – ready to use whenever and wherever it is needed in your finishing process. At any time.

Real metal and high gloss from roll-to-roll: Convincing solutions with KURZ embellishment

High-quality finishing results

Discover with the integration of the DM-FLEXLINER 2D module the inkjet on transfer layer technology where adhesive is applied to the transfer layer and experience the highest range of DIGITAL METAL® finishing possibilities. The heart of our inkjet on transfer layer technology is the innovative inkjet technology combined with the KURZ DIGITAL METAL® finishing solution. Create optimal finishing results with high-gloss, flat metallic effects and deep color brilliance – even for difficult jobs and materials such as shrink sleeves or uncoated paper.

User friendly

Be ready for many applications and benefit from easy use and easy handling. No matter the substrate – by printing on the transfer layer the printing surface always stays the same. Create new finishing possibilities with DM-FLEXLINER 2D and discover maximum design freedom.

Inkjet on transfer layer technology – versatile from film to uncoated paper

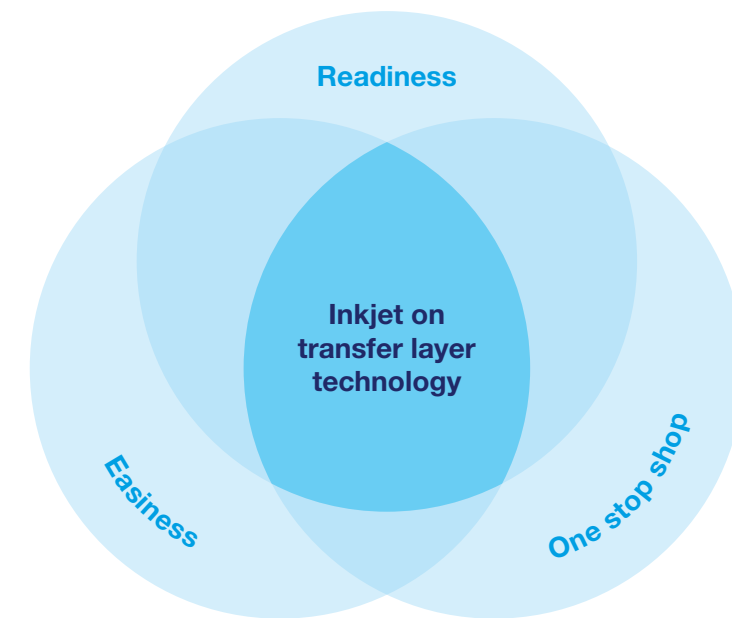## Digital alternative to hot-stamping

Whether individual labels, special editions or series production: Experience brilliant finishing that makes your product eye-catching and unmistakable. Whether finishing of small details or large areas, whether before or after the printing process or further processing: The inkjet on transfer layer technology provides a large range of digital individual finishing possibilities according to your wishes.

Individual use of material

Discover design freedom and create impressive, high-gloss effects, color diversity, and highlights in metallic shades – including on difficult materials such as uncoated paper for the wine industries or shrink sleeves. Experience the new, flexible dimension of embellishment and conjure up creations that impress your customers at the POS.

Readiness

Inkjet on transfer layer technology
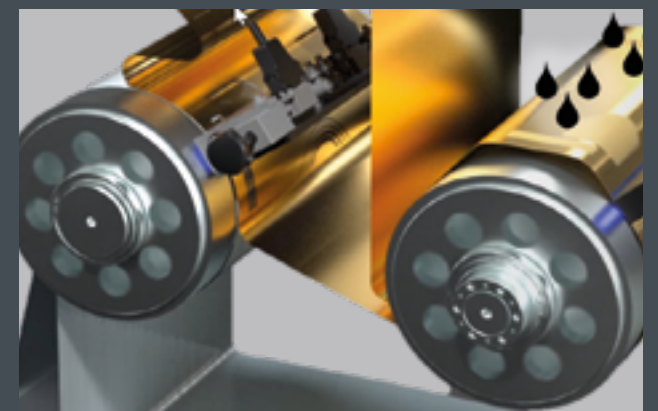
Easiness

One stop shop

Readiness

Ready to use whenever and wherever it is needed in your finishing process: Integrate the KURZ DM-FLEXLINER 2D into your current or new machine solution and achieve breathtaking finishing results in no time at all – even on difficult materials from shrink sleeve and plastic to uncoated paper, suitable for a wide range of substrates. Turn your finishing ideas into reality and create designs that make your products unique and unmistakable.

Easiness

The DM-FLEXLINER 2D is easy to use. You don't have to be an expert in inkjet printing to be able to operate the module. There is no big training necessary, because you're always printing on the same surface. Even when changing the substrate, the printing environment doesn't change, so brilliant and high-quality finishing results can be consistently achieved. Digital stamping parameters can be saved and reused for further application. This means that the finishing process can be easily incorporated into the digital workflow. Automatic job changes enable highly efficient finishing regardless of the size of the job.

One stop shop

We also offer you a one stop solution: Transfer product, machine, software and service – tailored to your individual needs, convenient, all from one single source. Flexible and convenient finishing? With our complete solution, we achieve this with high efficiency. From the machine to the transfer metallization to the ink, we offer you all components from one single source – perfectly matched to each other. And should there ever be an issue, you can contact us directly, and we'll take care of your concerns about the process – reliably and competently.

From flexible packaging to uncoated paper

Digital transfer with inkjet on transfer layer technology

Special features

Compact Unit

The DM-FLEXLINER 2D is a very compact unit that includes all that is needed to bring high quality digital embellishment inside your processes. The unit includes everything that is needed to apply our DIGITAL METAL® to your products, from the foil winding, UV pinning, the NIP roller to the final curing and the foil release. All of these components have proven themselves in our stand alone solutions in a variety of production installations world wide.

Easy access

The machine is designed very open to have easy access everywhere. This makes it very convenient for set up, maintenance and service.

Short substrate route

To avoid an extended web path through your machine, we made sure that the web goes straight through our module.
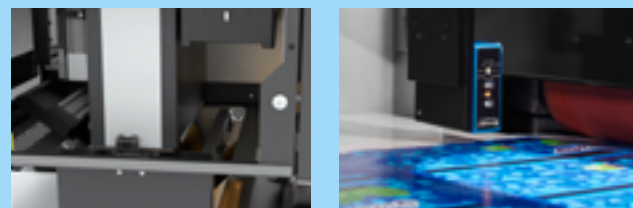
Semi-Automatic print head cleaning

Convenient solution to enable a consistent cleaning process of the print heads.

Independent of running direction

No matter if the machine should be integrated in a process going from left to right or in a process going from right to left, our machine is ready for the integration. Thanks to a symmetrical structure, we are free to choose the direction of travel at installation.

Automatic job change over at full run

KURZ DM-FLEXLINER 2D is designed for your digital work-flow. The digital printing unit works regardless of the job size with minimal operator effort. Several orders run on one roll. Every new job is detected automatically, and the job change is performed automatically during full operation.
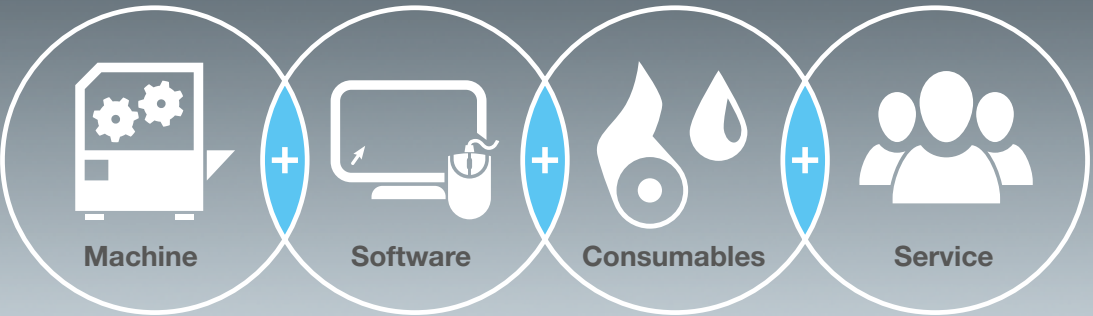
DM-FLEXLINER 2D

Only pay for what you use

With DM-FLEXLINER 2D, you benefit from the advantages of a market-tested complete solution with optimally coordinated components. The module's web-based software provides an overview of your consumption and inventory of your DIGITAL METAL® transfer decorations. However, according to the 'pay-per-stamp' principle, you only pay for what you process. We will only charge you for the transfer products that are actually used.

KURZ – your one-stop solution partner

Flexible and convenient finishing? With our complete solution, we achieve this with high efficiency. From the machine to the transfer metallization to the ink, we offer you all components from one single source – perfectly matched to each other.

See for yourself – with our printed samples and portfolio of available shades.

Machine + Software + Consumables + Service

DM-FLEXLINER 2D – Specifications

General information

Length/width/height:	1,200 x 1,400 x 1,150 mm
Control system:	PC, PLC, touchscreen
Weight:	350 kg

Connection values

Electrical requirements:	3 x 400 V AC, 50 Hz, L1/L2/L3/N/PE, 16 A pre-fuse
Compressed air:	Max. 6.5 bar (oil-free)

Application unit

Application width:	Max. 324 mm
Application speed:	Max. 75 m/min (max. feasible speed depending on substrate)
Ink type:	LED UV curable ink
UV-LED pinning unit:	Approx. 8 watt/cm², adjustable by machine control, air-cooled
UV-LED final curing:	Approx. 28 watt/cm², adjustable by machine control, air-cooled
Print head resolution:	600 x 600 dpi
Droplet sizes:	3/7/11/14 pl (application amount from 1.7 to 12.6 g/m² available)
Register accuracy (in-setting on preprint):	± 0.20 mm (lengthwise and crosswise)
Outside foil diameter:	Ø max. 300 mm (11.8") foil length approx. 2,100 m (6,890 ft)
Supported substrates:	Self-adhesive labels, PP, PE and PET, coated and uncoated paper, shrink sleeves
File formats:	PDF, TIFF, BMP, EPS

All technical data are approximate.

The KURZ Group

KURZ

KURZ worldwide

The KURZ Group is an international leader in thin-film technology and supplies products for surface finishing and decoration. With over 5,500 employees at more than 30 sites worldwide, KURZ has an international presence and manufactures under uniform quality and environmental standards in Europe, Asia, and the USA. Thanks to KURZ's many years of experience and the constant expansion of our portfolio, we can offer our customers a wide range of products – and all from one source. A global network of subsidiaries, representatives and sales offices ensures short paths and individual, on-site consulting.

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Los Angeles/New York
KURZ TRANSFER PRODUCTS, L.P. (KTP)
www.kurzusa.com

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Shanghai/Shenzhen
KURZ STAMPING TECHNOLOGY
(HEFEI) Co., Ltd.
www.kurz.com.cn

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KURZ do BRASIL
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KURZ Chile S.A.
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www.kurz.com.tw

Thailand/Bangkok
KURZ (Thailand) Ltd.
www.kurz.co.th

Tunisia/Tunis
KURZ North Africa
www.kurz-na.com

Fields of expertise

KURZ is always investing in new technologies. KURZ subsidiaries develop innovative solutions for functional integrations into surfaces as well as products for labeling and counterfeit protection, along with the corresponding software. A comprehensive range of stamping presses and stamping tools rounds off the versatile KURZ product portfolio. Furthermore, KURZ subsidiaries use their expertise to provide future-oriented, custom-made complete solutions including project consultancy and machine and tool technology.

Baier GmbH + Co KG Maschinenfabrik
www.baier-praegetechnik.de

BURG DESIGN GmbH
www.burg-design.com

Hinderer + Mühlich GmbH & Co. KG
www.hinderer-muehlich.com

ISIMAT GmbH Siebdruckmaschinen
www.isimat.de

KURZ Digital Solutions GmbH & Co. KG
www.kurzdigital.com

MPRINT Morlock GmbH & Co. KG
www.mprint.de

OVD Kinegram AG
www.kinegram.com

PolyIC GmbH & Co. KG
www.polyic.com

SCHÖFER GmbH
www.schoefer.at

SCRIBOS GmbH
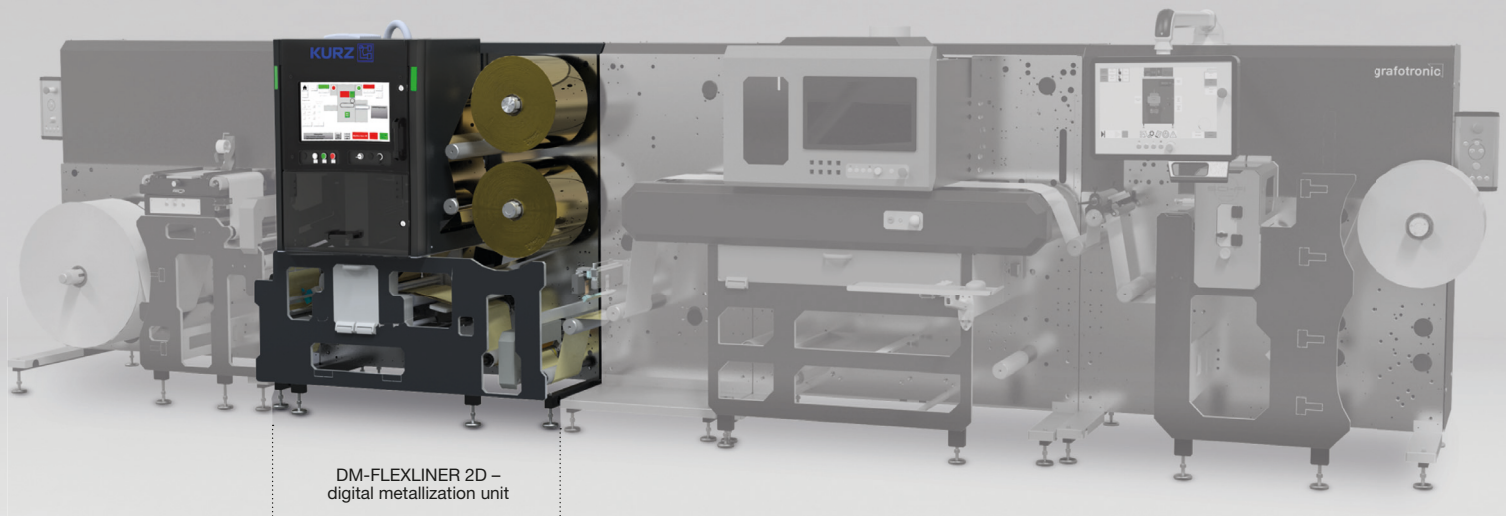www.scribos.de

Steinemann DPE AG
www.steinemann-dpe.com

Follow us on:

DM-FLEXLINER 2D – Add digital metallization to your finishing line now!

Even more flexibility for brilliant flat digital metallization in narrow web finishing

DM-FLEXLINER 2D –
digital metallization unit

A strong partnership

Grafotronic and LEONHARD KURZ are bundling their expertise to make high-grade embellishment even more flexible, brilliant, and convenient. Combine the Grafotronic DCL2 series with the DM-FLEXLINER 2D and experience breathtaking digital embellishment, high flexibility, efficiency, and individual design freedom. Whether existing or new Grafotronic finishing lines, the KURZ DM-FLEXLINER 2D module can be integrated into the DCL2 line as desired. Individual labels, special editions, or series production: Experience brilliant embellishment that makes your product eye-catching and unmistakable. Create impressive, high-gloss effects, color diversity, and highlights in metallic shades – including on difficult materials such as uncoated paper for the wine industry. Discover the new, flexible dimension of embellishment and conjure up creations that impress your customers at the POS.

Grafotronic DCL2 and the KURZ DM-FLEXLINER 2D: Ready to use whenever and wherever it is needed in the finishing process. At any time.

Main advantages

· **Ready for many jobs:**
Metallization on a wide range of substrates from plastic to uncoated paper

· **High flexibility:**
Modular solution for individual use options, attractive embellishment for small runs, special editions, or different product series up to serial production. Metallic finishing for individual labels or various label campaigns. Automatic job change over included

· **Cost optimization:**
No costs for stamping dies, no need for experienced operators to set up tools. Efficent job set up for a minimum of waste

· **Design freedom, breathtaking results:**
Impressive high-gloss effects, huge variety of colors and metallic shades feasible. Small details or solid surfaces or both combined next to each other, metallization without the restrictions of conventional hot stamping possible

· **Easy to use:**
No major training necessary

· **Consistently high quality:**
Digital stamping parameters can be saved and reused for further application processes in order to achieve consistently high results

Technical specifications

General technical specifications

Min. web width	150 mm
Max. web width	350 mm
Max. mechanical speed	Up to 200 m/min
Max. unwind roll diameter	800 mm
Max. printing width	324 mm
Max printing speed	75 m/min
Max. rewind roll diameter on 1 shaft	800 mm

DM-FLEXLINER 2D specifications

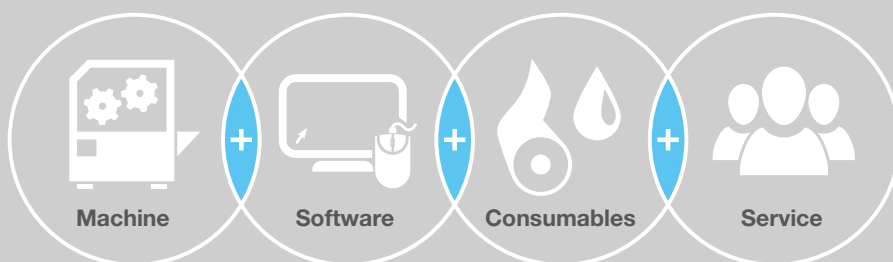|	
Max. application width	324 mm
Max. application speed	75 m/min (max. feasible speed depending on substrate)
Ink type	LED UV curable ink
UV-LED pinning unit	Approx. 8 watt/cm^3, adjustable by machine control, air-cooled
UV-LED final curing	Approx. 28 cm^3, adjustable by machine control, air-cooled
Print head resolution	600 x 600 dpi
Droplet sizes	3/7/11/14 pl (application amount from 1.7 to 12.6 g/m^2 available)
Register accuracy (in-setting on preprint)	±0,20 mm (lengthwise and crosswize)
Max. outside foil diameter	300 mm (11.8")
Supported substrates	Self-adhesive labels / PP / PE / PET / coated paper / uncoated paper / shrink sleeves
File formats	PDF / TIFF / BMP / EPS
Drive	Servo

All technical data are approximate.

KURZ – your one-stop solution partner

Flexible and convenient finishing?
With our complete solution, we achieve this with high efficiency. From the machine to the transfer metallization to the ink, we offer you all components from one single source – perfectly matched to each other.

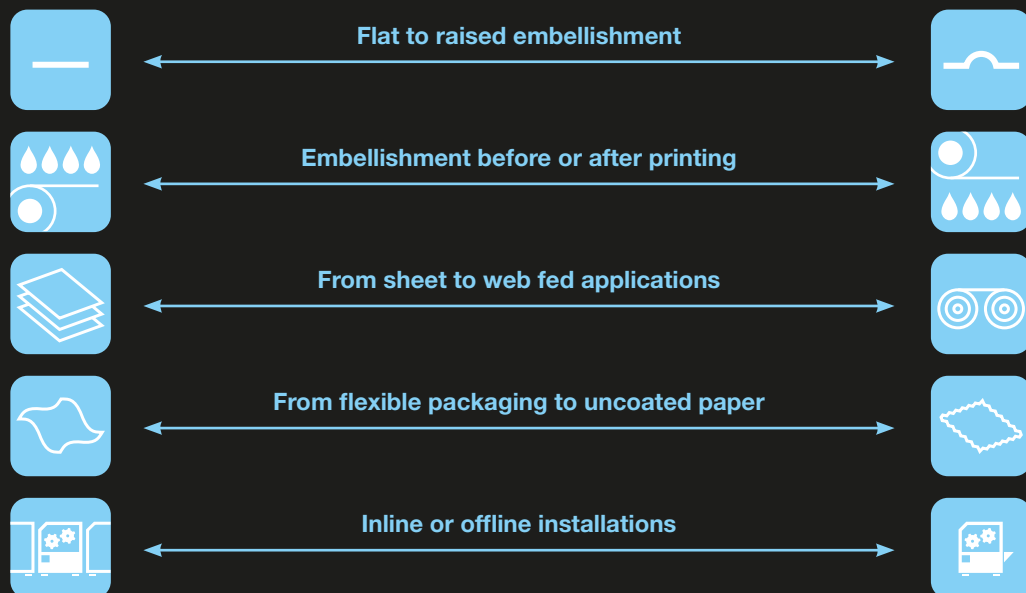See for yourself – with our printed samples and portfolio of available shades.

Machine + **Software** + **Consumables** + **Service**

Digital Embellishment Solutions

Digital embellishment at its peak

Standing out from the crowd, differentiating yourself from others, creating individuality – the demands on product designs are constantly increasing. Short-lived trends, competition and individual customer wishes require quick adaptability and high quality standards. Open up new markets and create high-caliber metallic decoration options with our DIGITAL METAL® solutions that expand your range and open up new perspectives.

Flat to raised embellishment

Embellishment before or after printing

From sheet to web fed applications

From flexible packaging to uncoated paper
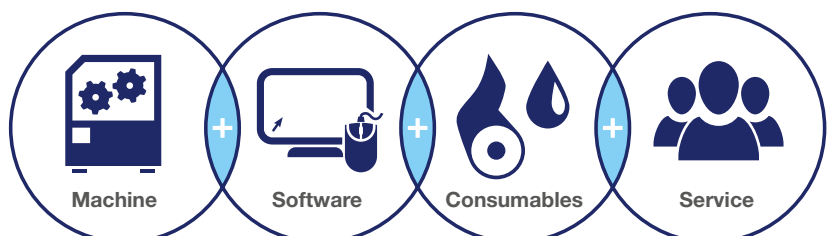
Inline or offline installations

Sustainability for a responsible future

We stand for top quality in the sense of sustainability. The careful use of resources is just as important to us as the core idea of lifecycle thinking. Material and resource efficiency along the production range, optimization of our finishing machines, consistent waste minimization and recycling, reduced energy and ink consumption not only stand for economical, but also for ecological efficiency. We support you in optimizing your ecological footprint.

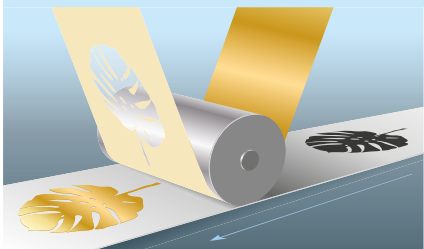be a green leader

KURZ – your one stop solution partner

Flexible and convenient finishing? With our complete solution, we achieve this with high efficiency. From the machine to the transfer metallization to the ink, we offer you all components from one single source – perfectly matched to each other.

Machine + Software + Consumables + Service

Digital Embellishment Solutions

KURZ

Digital metallization technologies

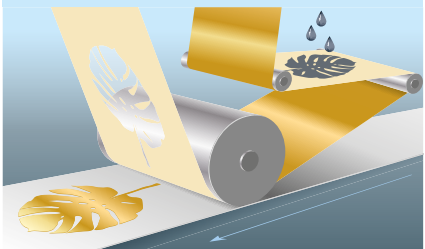| Transfer on toner / electro-ink	Inkjet on transfer layer	Inkjet on substrate
Design to be metallized already pre printed	Adhesive is applied to transfer layer	Adhesive is applied directly on substrate

The desired metallization is simply transferred to paper or cardboard using the digital printing process. The metallization is transferred before digital color printing and can be overprinted easily.

- ✓ **No additional digital print equipment needed**
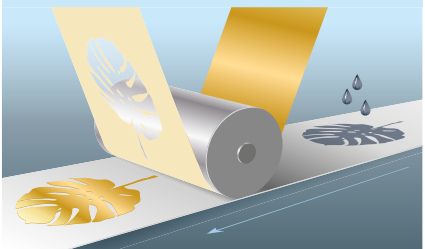- ✓ **Large process window allows easy use with high quality**

The heart of our inkjet on transfer layer technology is the innovative inkjet technology combined with the KURZ DIGITAL METAL® finishing solution.

- ✓ **Be ready for many applications from flexible packaging to uncoated papers**
- ✓ **Easy to use – no matter the substrate – by printing on the transfer layer the printing surface always stays the same**

Experience maximum design freedom and create glossy spot coatings, relief coatings with haptic effects, raised structures and brilliant metallizations in only one single pass.

- ✓ **Offer new effects with raised metallization**
- ✓ **Combine various thicknesses to allow more design freedom**
- ✓ **Add UV spot varnish all in one single pass**

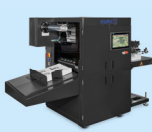### Flat metallization
(always overprintable)

Raised metallization
(overprintable in defined conditions)

Web fed

DM-SMARTLINER 350	DM-UNILINER 2D	DM-JETLINER	DM-UNILINER 3D

	DM-FLEXLINER 2D		DM-FLEXLINER 3D

Sheet fed

DM-SMARTLINER	DM-MAXLINER 2D	DM-MAXLINER 3D

COMING SOON!