

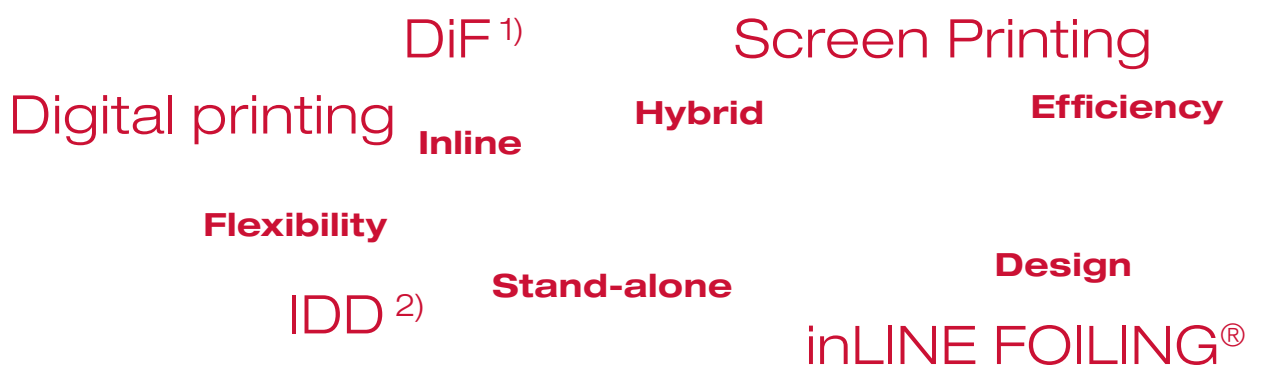
Aluminium Decoration

Individual printing solutions for aluminum containers





New perspectives for your finishing portfolio



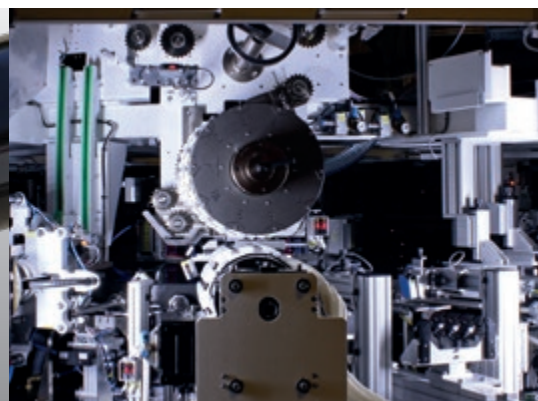
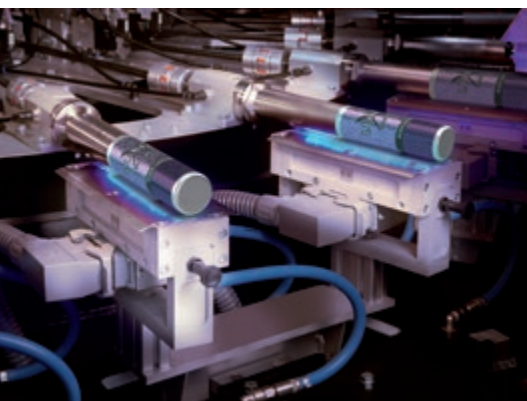
¹⁾ Digital inLINE FOILING®
²⁾ Indirect Digital Decoration



First choice for efficient and extraordinary aluminium decoration

As product packaging, aluminum containers are highly valued by manufacturers and consumers alike - as an efficient form of packaging, for their practicality and for their promotional effect. In order to fully exploit their functional and emotional value and to impressively present unique brand messages, it is necessary to understand the complexity of aluminum containers and at the same time to translate them into individual and comprehensive decorative solutions - such as those from ISIMAT.

As an expert in complex, fully automated, high-performance printing machines, ISIMAT is the number one choice for tube decoration and your first choice for efficiency, quality, and exceptional finishing of sophisticated hollow bodies. Benefit from tailor-made solutions ranging from stand-alone can printing machines to integration into existing production lines that fully meet your individual requirements for cost-effective processing, first-class finishing, and new design options for your containers.



We offer the technology. The choice is yours.

inLINE FOILING®

Basic

on cylindrical and complex articles



Your choice for

multi-color
metallization

inLINE FOILING®

Digital (DiF)

on cylindrical articles



Your choice for

multi-color
360° metallization

Digital
inLINE FOILING® (DiF)

Conical (CiF)

on conical articles



Your choice for

multi-color
metallization
on conical articles

Konisches
inLINE FOILING® (CiF)

Keen to impress your customers with first-class decoration aluminium containers – always right on point in terms of quality, time, and budget? With our solutions we offer you exactly what you need to fulfill your customer requirements: a complete range of printing technologies from proven screen through innovative inLINE FOILING® to highly flexible digital printing.

Screen Printing



Your choice for

**razor-sharp text
and
haptic effects**

Digital Printing

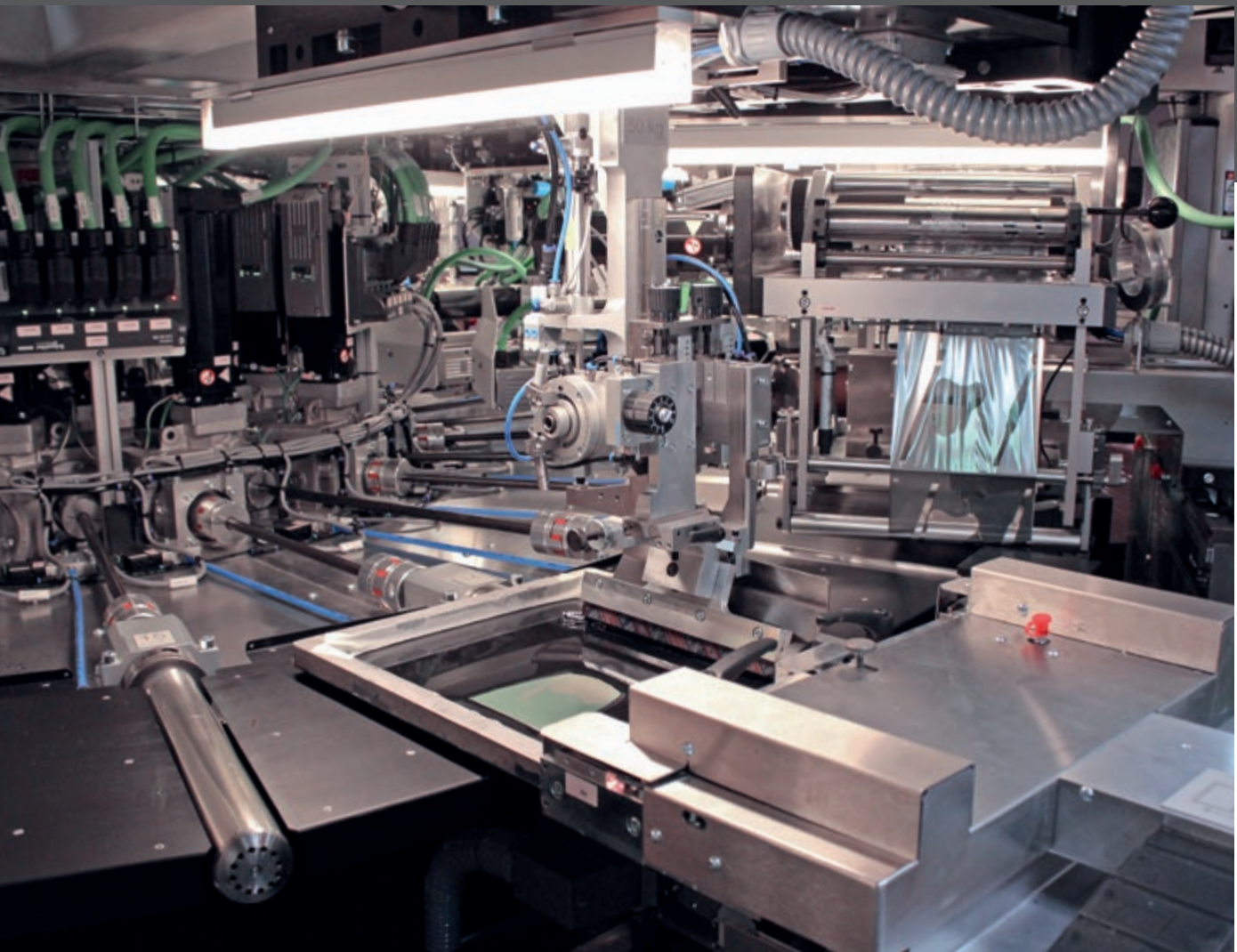


Your choice for

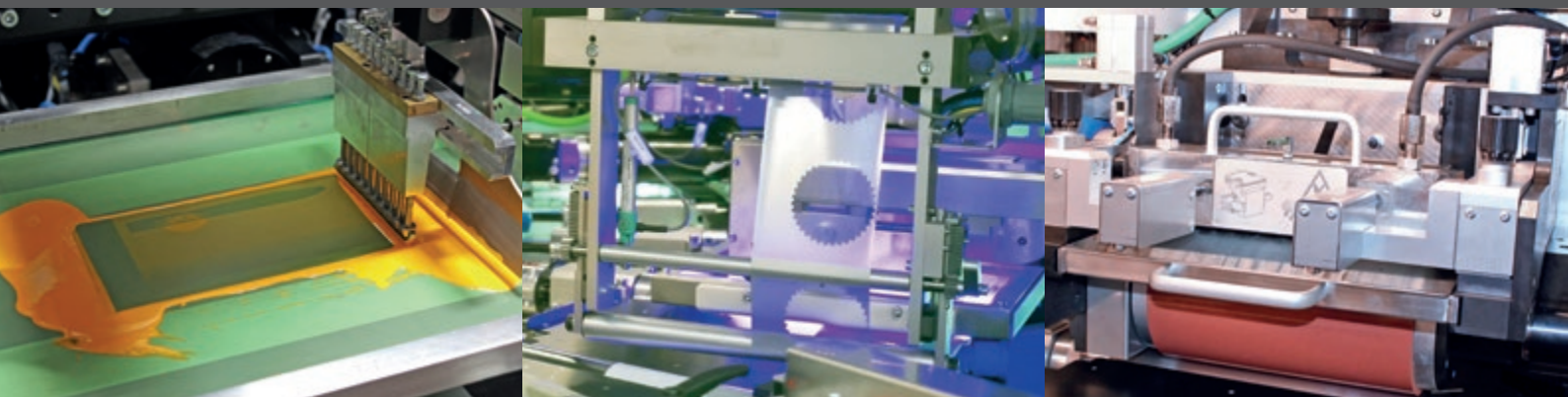
custom special editions

Indirect Digital Decoration (IDD)

Sophisticated technology
for every conceivable
decoration requirement



Your requirements are the benchmark for our printing machines when it comes to decorating aluminium containers. For our hybrid printing machines, we offer a wide range of printing technologies that can be individually combined or merged in a single press – as an inline or as a stand-alone solution. In addition, our machines are specially designed for direct printing and boast a mechanical circular ring on which the intake modules are mounted. Each intake is driven by a separate servo or torque motor. The tubes are accurately positioned on the mandrel of the respective printing station. The CNC control ensures the highest color-to-color register accuracy in multi-color printing.



Screen printing printing unit:

We use flat screens for our T-series. These screens have a higher mesh count and have significant cost advantages over round screens. Pre-coated screens with a uniform emulsion thickness are also available.

Foiling unit:

A foil is applied to the article in the foiling station. In the foiling unit, the transfer layer is released from the carrier foil with the help of the pinning unit and UV light and applied to the article.

Varnishing unit:

Our printing machines offer you the option of varnishing aluminium cans. This makes it possible to use both gloss and matt varnish on the cans.

Our screen printing units have the following properties:

- ✓ Screens controlled by servo motors
- ✓ High register accuracy during job changeovers
- ✓ Motor-controlled screen adjustment in increments of 0.01 mm (axial and radial)

Our foiling printing units have the following properties:

- ✓ Servo driven foil transport

Our varnishing units have the following properties:

- ✓ Interchangeable varnishing unit
- ✓ Suitable for every station of the T-series

Screen printing onto complex-shaped items

Perfect for sharp texts and solids

The classic decoration

Complex shapes can be printed on an ISIMAT screen printing machine with servo drives and modern CNC control. The shape of the print items can be cylindrical, oval or rectangular. Combined or special shapes are also possible.



The movements of four servo axes are synchronized in each printing station:

- Squeegee axis
- Screen axis
- Print head axis
- Support axis

Individual movements depend on the contours of the printing areas. Contours can be different in different printing stations.

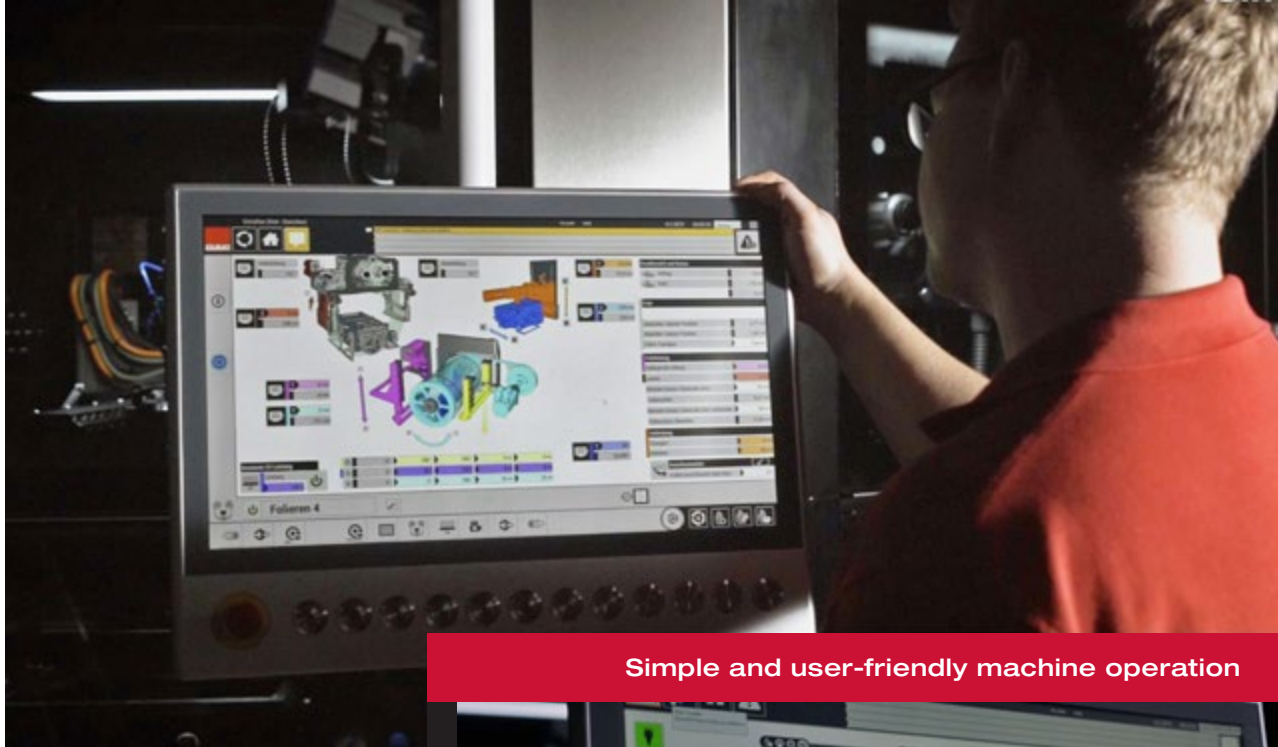
Screen printing is a frequently used printing process that is particularly characterized by high opacity, feel, sharpness and brilliance of the printed images.

In screen printing, the color is transferred through a screen to the surface of the article with the help of a squeegee. The areas of the fine mesh where no color should be transferred are made impervious to color.

Our I-Series allows you to decorate a wide variety of materials such as glass, plastic, or aluminum.

With UV inks, complete drying takes place directly after printing inside the machine by a UV drying station.

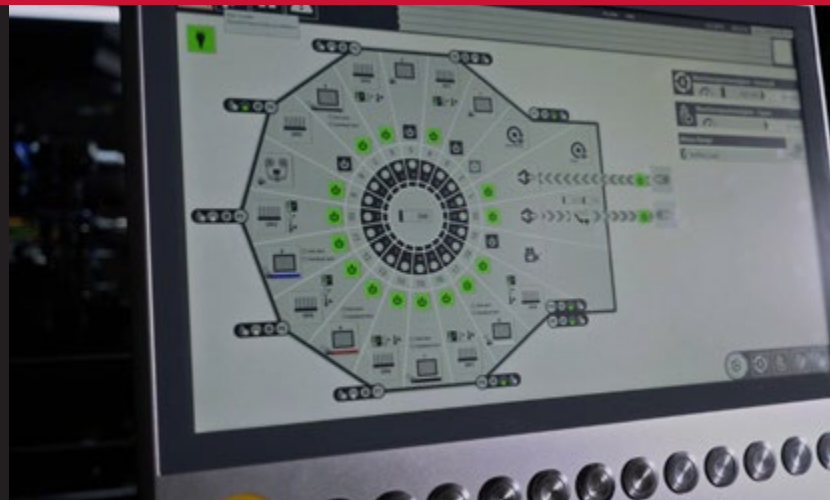




Simple and user-friendly machine operation

Intuitive user guidance

The large touch screen of the control system displays information and allows adjustments while the machine is running. Fields for adjustments and status information are color coded. Display of information is tailored to different access levels which can be password protected.



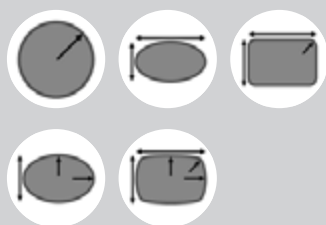
Clear graphics for easy understanding

Many clear graphics illustrate the movements and setting options of the controllable assemblies. This enables intuitive operation with little text.



Contour editor for complex shapes

The operator can easily edit and create standard contours. Import of special contours from CAD data is possible too.

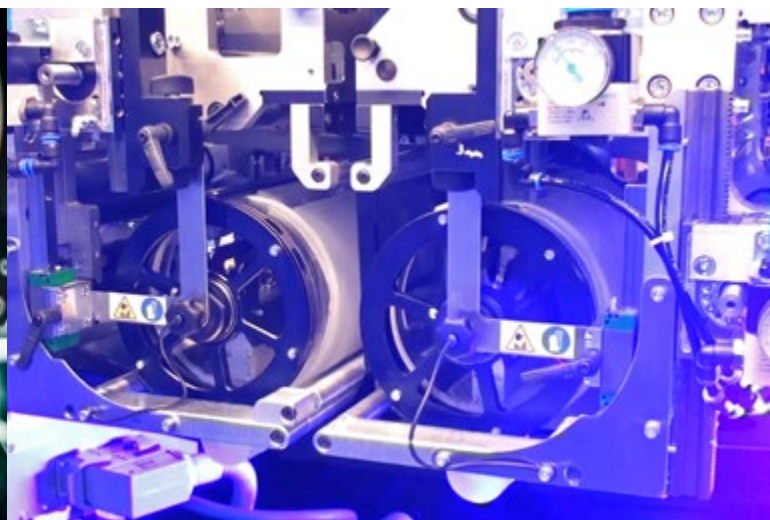




Classic and digital

inLINE FOILING®

Brilliant metallic eye-catchers
on aluminium containers



Your advantages with inLINE FOILING® and DiF

- ✓ The silver foil can be over-varnished immediately with tinted varnish – offering countless color options for metallization
- ✓ Excellent edge definition
- ✓ High-gloss print motifs
- ✓ No additional product handling required – everything in a single pass at high speed
- ✓ 360° metallization possible with DiF



BASIC



DiF



CiF

High-gloss metallization – in just one pass

With the innovative inLINE FOILING® method, aluminium containers can be finished easily, quickly, and cost-effectively with extraordinary metallic decors – with little pressure and no heat.

inLINE FOILING® can be used in conjunction with screen printing or digital printing in one machine pass. Owing to the perfect color-to-color registration, no further product handling is necessary.

Even more flexible with Digital inLINE FOILING® (DiF)

For the first time, the new DiF process now makes it possible to apply 360° metallization. This further development of the classic inLINE FOILING® method differs in that the special adhesive is not printed in advance via screen printing, but by means of digital printing technology directly in the transfer unit. This makes metallized all-round decorations possible. In addition, the ISIMAT T-series is made more flexible because the screen printing station is no longer needed for applying the adhesive.

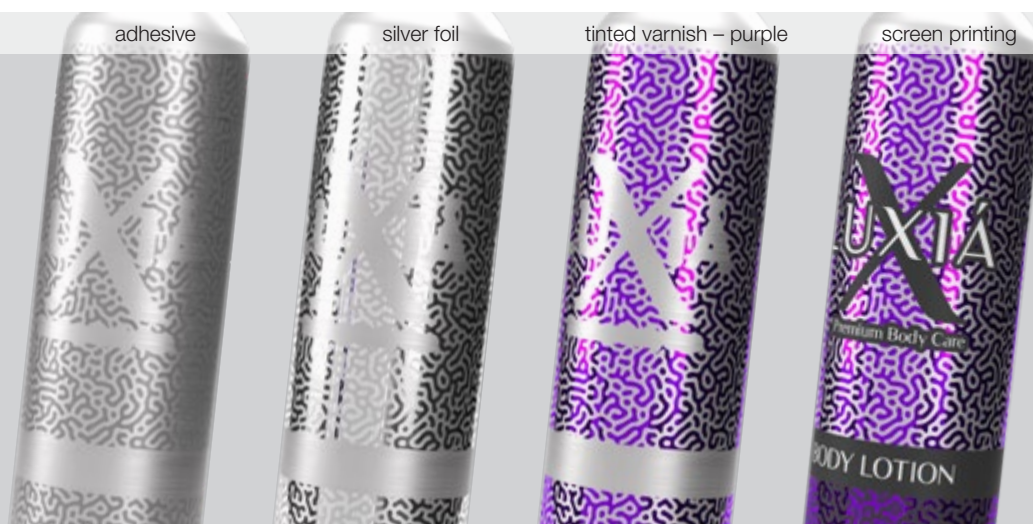
The further development for conical items

Up to now there was the limitation that conical items could not be metallized using a foil. The different article diameters, leads to wrinkling at the foil during the unwind process.

We can now counteract this effect by making a decisive adjustment to the unwind process. The entire foiling unit swivels with the article while the foil is applied, so that we can achieve a constant rotation speed at all times and for every article diameter.

It works like this:

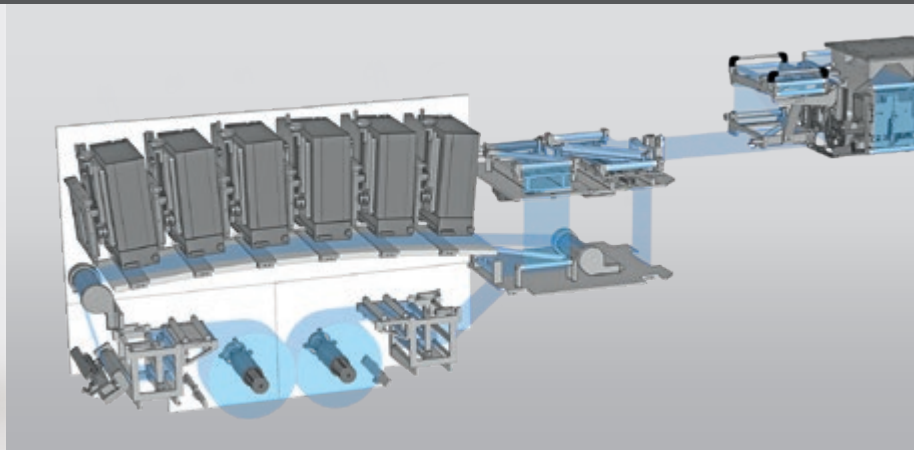
- A special adhesive is applied in screen printing
- Bringing the metallized layer of the foil into contact with the adhesive and curing the adhesive at the same time
- The metallization only sticks in the areas with the adhesive – the other areas remain unaffected
- The surface can now be over-varnished immediately to achieve a wide range of metallic effects



Benefit from the digital advantage

High-efficiency aluminium finishing with Indirect Digital Decoration (IDD)

Flexibility, time, and cost – these are the three major factors that are increasingly deciding whether a project in your industry will be successful. Reason enough to include digital printing in your process portfolio in the future. In order to make today's and future tube decoration requirements even more flexible, we, as a leading tube printing provider, have thought out of the box and developed a highly efficient solution for our T-series for printing on aluminium containers: Indirect Digital Decoration (IDD). It combines the proven advantages of our high-performance printing presses with the benefits of digital printing.



Double the flexibility for tubes and cans with more personality

With IDD, our new, indirect digital printing solution for the T-series high-performance can printing machines, you are ahead of the competition in two ways when it comes to can finishing: You not only benefit from the efficiency benefits of the digital printing process itself. The technological principle of our modular ISIMAT solution for digital can printing also offers advantages.

Our IDD module consists of two units. In the digital printing unit, a transfer foil is printed with the individual motif. The second unit, the transfer module, is

integrated into the machine. It ensures the transfer in register of the motif to the tube. The transferred print motif can, for example, be transferred to an already metallized print image. Synergies with other printing processes such as inLINE FOILING® or screen printing thus allow unprecedented finishing options.

IDD can be deployed as needed. If the project requires digital printing, IDD enables you to flexibly design your printing machine according to customer requirements. For you, this means that –



from large runs with changing print images through custom promotional series and personalized short runs to special editions with short production times – you're not only well-positioned with the printing technology for high-quality tube finishing, but you can also easily meet individual customer requirements across the board.

Your benefits with IDD:

- ✓ Flexible digital printing solution for the T-series
- ✓ Ideal for personalization, serialization, customization
- ✓ Fast and cost-efficient processing of small and medium batch sizes
- ✓ Suitable for nearly all tube diameters and print image lengths - no changeover necessary
- ✓ Brilliant designs with excellent gloss
- ✓ Finishing such as metallization via inLINE FOILING® or DiF possible
- ✓ Short setup and lead times and easy handling
- ✓ High process reliability thanks to already tested flat printing on the transfer foil

TD-C

Highly efficient thanks to two-up operation

The TD-C is a high-performance printing machine with up to 7 printing stations for the inline printing of aluminium cans.

The TD-C stands for maximum flexibility through the integration of various printing technologies like screen printing, inLINE FOILING® and varnishing. It is designed for reliable 24/7 operation and has a printing capacity of up to 180 items/min. Extensive motorization and a servo control system ensure a very accurate color-to-color registration during printing as well as short changeover times that improves the cost-efficiency.

Decoration options

Screen printing

inLINE FOILING®

Varnishing

Options

Sensor orientation, camera orientation, Corona surface treatment, ink pumps, Spot UV LED, inline print image control

I-Series

Individual printing and metallization

The ISIMAT decoration machines of the I-Series enable the efficient and economical decoration of glass, plastic, and aluminum items. The modular design enables the machine configuration to be completely adapted to the customer's requirements

Decoration options

Screen printing

inLINE FOILING®

Options

Sensor orientation, camera orientation, Corona surface treatment, ink pumps, Spot UV LED, inline print image control

Technical data

Printing stations	7
Printing performance	up to 180 parts/min
Printed items	Aluminium cans
Diameter of printed items	35 – 66 mm
Height of printed items	100 – 267 mm
Max. height of print image	200 mm
Colors	UV inks
Processing stations	18

Highlights of the I-Series

- ✓ up to 80 items/min¹
- ✓ up to 8 printing stations
- ✓ All printing methods can be combined in one machine run
- ✓ inLINE FOILING® possible on non-round articles
- ✓ xxxxx Individually configurable thanks to the modular design – inLINE FOILING®, Conical inLINE FOILING®, screen printing and much more
- ✓ User-friendly handling thanks to the new innovative and ergonomic design

Technische Daten

	I8	I6
Printing stations	8	6
Printing performance	up to 80 parts/min	
Printed items	Glass bottles, glasses, jars, aluminium containers	
Diameter of printed items	20 - 120 mm	
Height of printed items	30 - 370 mm	
Max. height of print image	230 mm	
Colors	UV inks, thermoplastic inks	
Processing stations	20	16



Digital inLINE FOILING® (DiF)

Indirect Digital Decoration (IDD)



Digital inLINE FOILING® (DiF)

Indirect Digital Decoration (IDD)

* Other diameters on request

Machinery and options

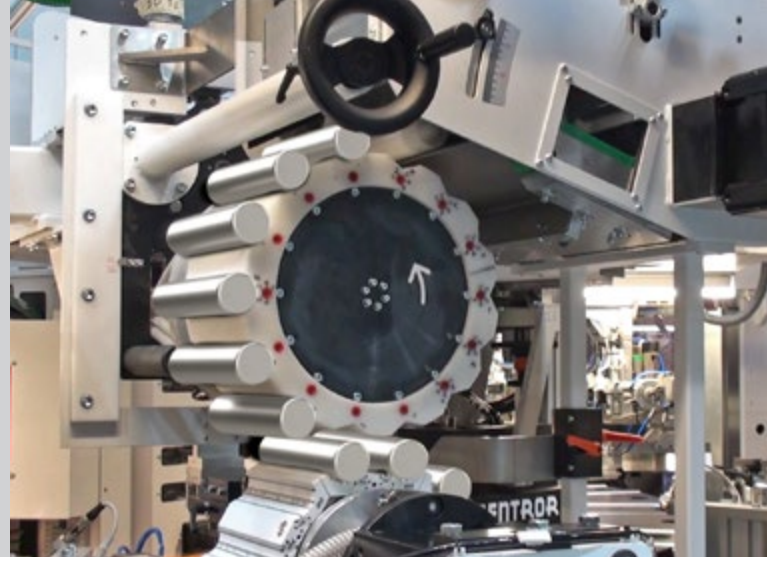
Innovation in detail for more efficiency in aluminium printing

We are constantly working on new technologies that make our custom machines even better. We have registered several patents in Germany and worldwide and support our customers all the way from planning to production. Each of our machines is unique. And yet all have one thing in common: State-of-the-art technology down to the last detail – as standard or optional.



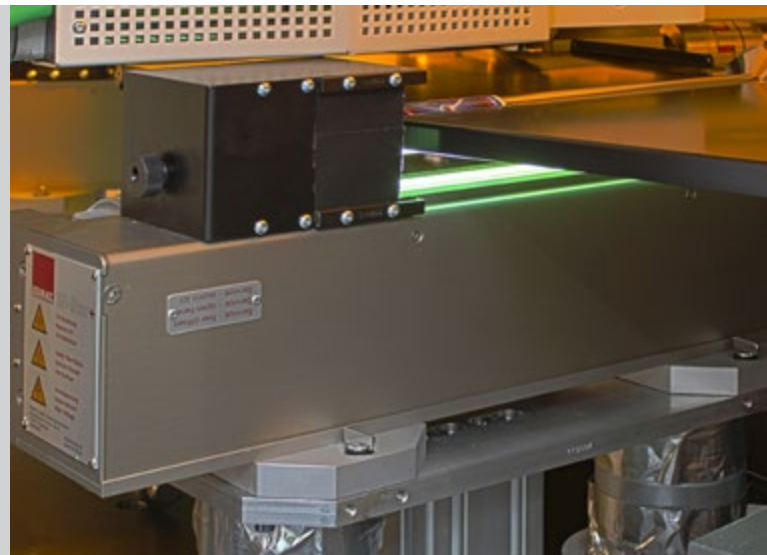
Loading

The print items are transported into the machine by a tray conveyor belt and a vacuum loading drum. The print items are then pushed from the loading drum onto the mandrel by a pusher.



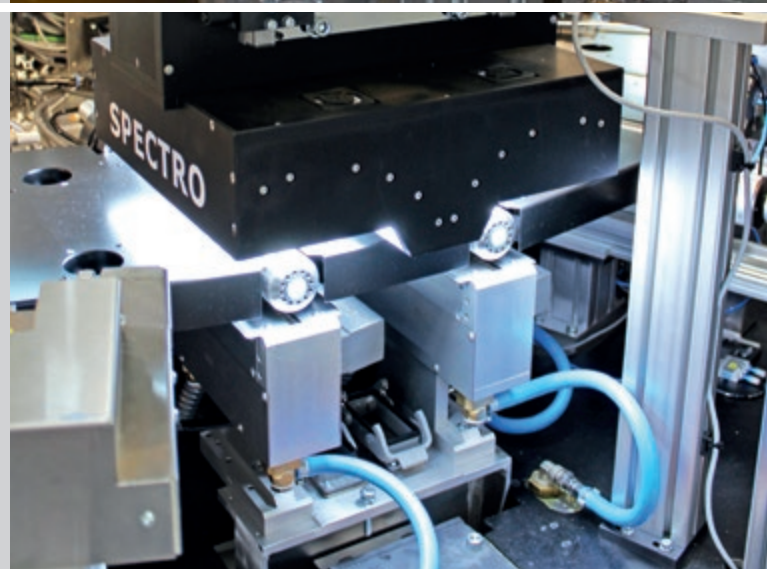
UV drying system

ISISTAR+ UV drying systems ensure within a fraction of a second thorough drying of UV inks. Each color is dried before the next color is printed. Glass items are ready for packaging after unloading from a screen printing machine.



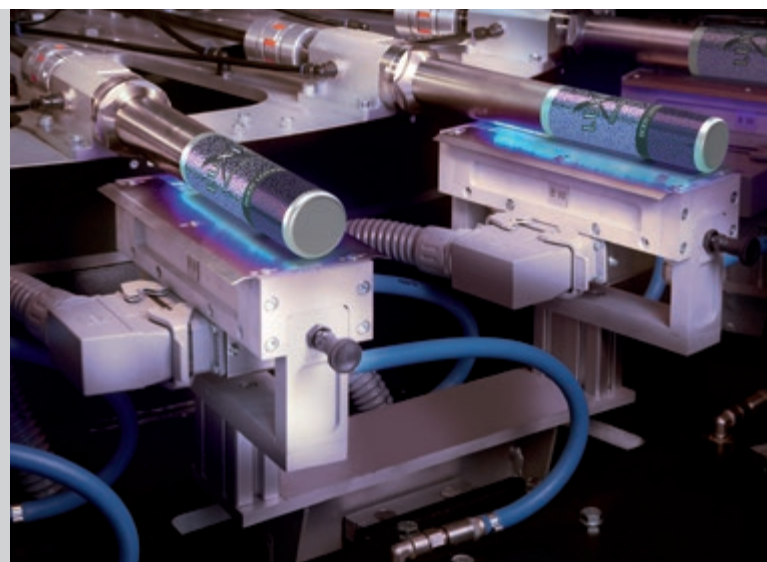
In-line Print Inspection

100% print inspection checks that every decorated item meets the set quality standard. Intelligent on-line print inspection allows operators to define different defect sizes and defect combinations for different printing areas. If defects in a print image exceed the size or the permitted combination of errors, then the print article will be rejected.



Spot UV LED

The Spot UV LED enables seamless 360° wrap-arounds. It already dries the start of the printed area during the printing process. The print image can be up to 200 mm wide, creating an almost invisible combined print.



Sustainability

For a better future

Be a green leader



The Earth's environment is precious. We are aware of our global responsibility for our planet. That is why we are working on the positive implementation of our sustainability goal: A holistic lifecycle.

What use is the most environmentally friendly product if it is priceless?
That is why we focus on optimizing our hybrid machines. We are constantly working to reduce the environmental impact of the products we manufacture.

Hybrid Thinking

Thanks to the hybrid solution and the use of many technologies in one machine, we effectively reduce the total energy requirement for finishing a product compared to using many individual finishing machines.

be a green leader

ISIMAT
a KURZ company

Foil Recycling

LED Technology

The use of our transfer products has no negative impact on recyclability. In this way we can give your recyclable packaging a glossy finish without losing any of its sustainable character.

Our optional LED technology offers a sustainable benefit in significantly reducing the energy consumption of the machine



Service

Fast and digital

Digital service system and Kanban board



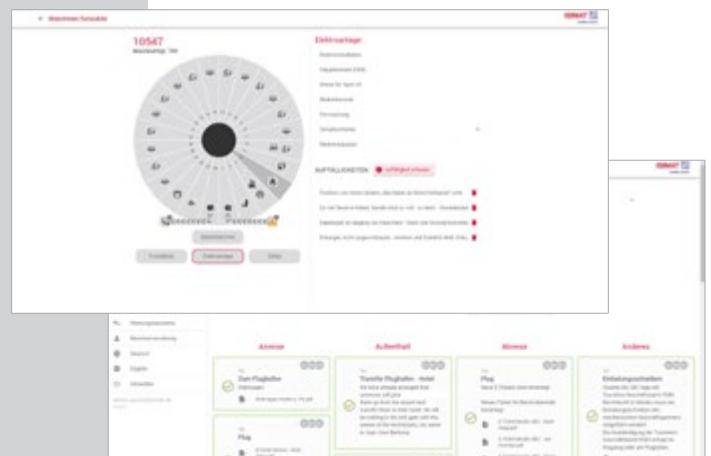
As a customer, you benefit from our efficient tools!

We offer you fast and seamless processing of your service cases.

isiCare Our digital service system

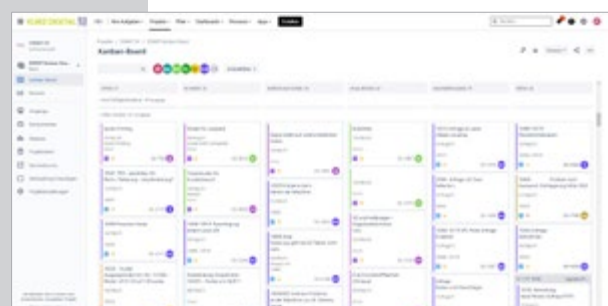
Together with our group sister, KURZ Digital Solutions, we have developed a web application that will be used to plan, carry out, and post-process all service calls in the future. With this application, all of our machines can be digitally mapped and documented by us:

- Resource planning
- Service with tailor-made checklists for each machine
- Documentation of machine problems
- Time recording for service technicians
- Commercial and technical post-processing



Intensive use of our digital kanban board

Our kanban board is used intensively by all departments. This enables us to organize and efficiently process all pending topics in service. This efficient way of working means that you, the customer, benefit from the quick and seamless processing of your service cases.





We look forward to
hearing from you!

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