

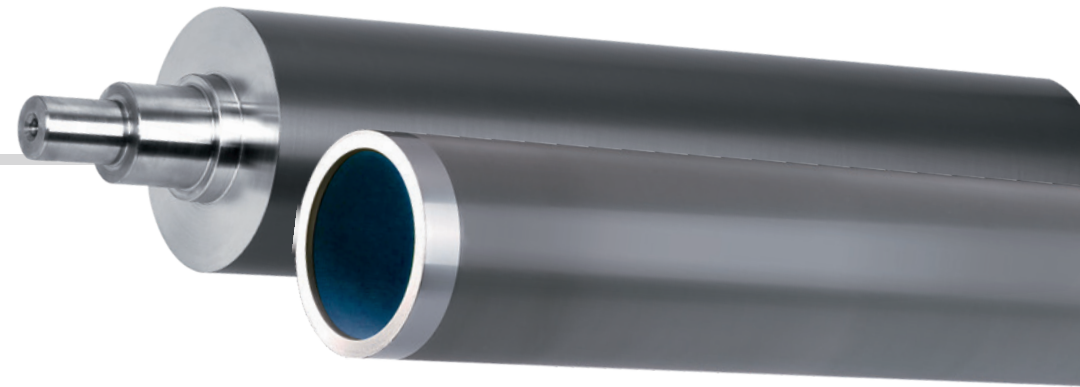
ZECHER ANILOX ROLLERS

Innovative anilox roller solutions for your requirements



ZECHER IN FIGURES

- More than 150 employees
- More than 75 years of experience in the anilox roller sector
- 4 production plants
- 17 laser engraving units
- 10 mechanical engraving units and 5 coating machines
- Production of approximately 12,000 anilox rollers annually
- Annual turnover of about € 23 million



ANILOX ROLLER SOLUTIONS FOR EVERY INDUSTRY

As an innovative manufacturer, we produce engraved anilox rollers and sleeves for your individual print application. We have worked intensively for many years together with all the well-known machine manufacturers and end users from the fields of flexible packaging, label printing, offset printing, coating and corrugated cardboard printing and are therefore well established in the industry.

MADE-TO-MEASURE SERVICES

When it comes to obtaining optimum printing results, anilox rollers need to be adapted to your individual circumstances, as this is the only way to get the best out of your printing process while at the same time reducing your costs. It is for this reason that we offer a wide range of anilox roller solutions that we would be pleased to customise in order to meet your requirements.

SERVICE PORTFOLIO

Chrome anilox rollers – with diamond engraving

Ceramic anilox rollers – with laser engraving

Anilox roller sleeves – for short print jobs

CFRP anilox rollers – the lightweight anilox roller

Surface finishing – for long-lasting quality

Laser cleaning – innovative cleaning processes

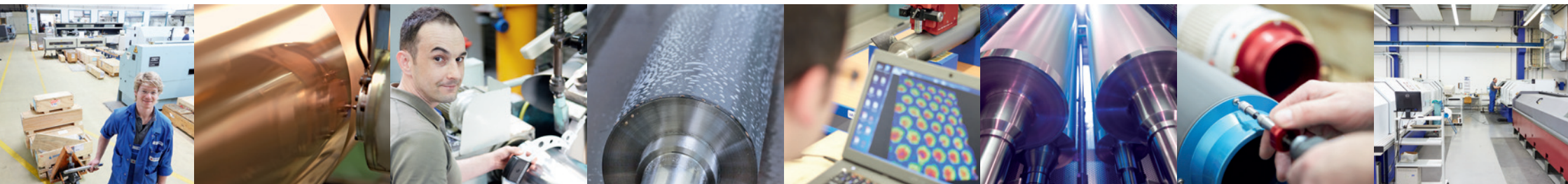
Zecher cleaning products – tailored to your requirements

Technical printing support – individual project support

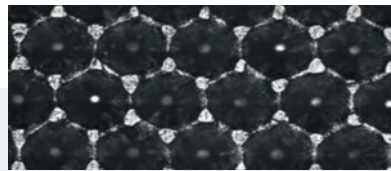
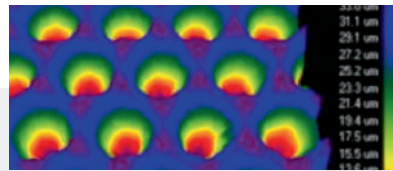
Roller inspection – comprehensive results of analysis

INTERNATIONAL SALES PARTNERS

Thanks to our continuously growing sales network, our anilox rollers are installed in printing machines all over the world. With our sales partners in around 70 countries, we ensure that your personal point of contact is there for you locally.

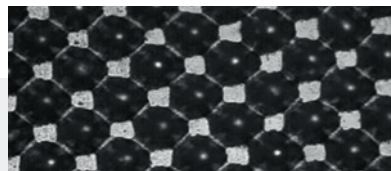
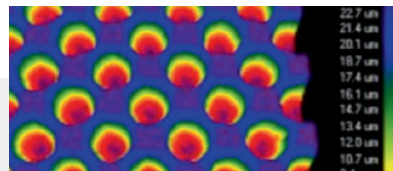


The right engraving technology for each are of application – we have the ideal anilox roller engraving to hand.



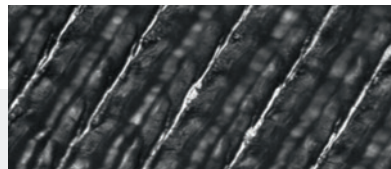
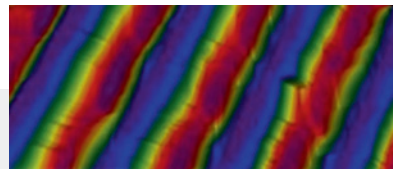
HEXA 60°

The Hexa 60° is an established standard engraving technology for high quality applications in the Flexo or Coating industry.



DIAMOND 45°

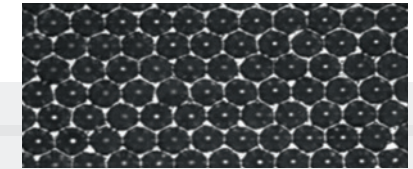
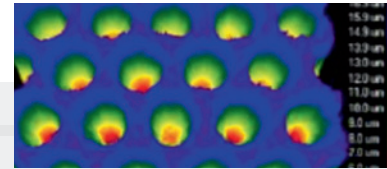
In the Flexo industry this engraving has mostly been replaced by Hexa 60° but is still used for special applications.



TRIHELICAL

The open cell engraving Trihelical, also known as „Haschur“, serves to widen the standard engraving range or as a technological alternative.

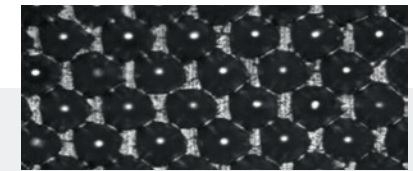
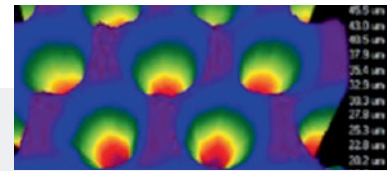
The Trihelical engraving provides a very good transfer due to the open engraving line structure, which is suitable for large-area printing and coatings.



HD READY - FULL HD

The HD Ready or Full HD Anilox enables printing in perfect HD quality.

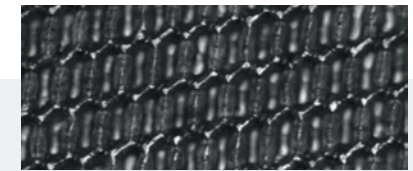
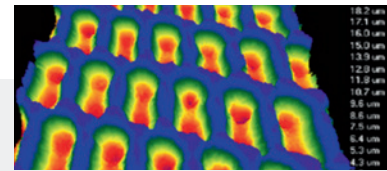
The HD Ready or Full HD engraving is an Esko certified engraving for high resolution applications.



H.I.T.

The open cell engraving H.I.T. serves to widen the standard engraving range or as a technological alternative. The H.I.T. is a classic 60° engraving, characterised by

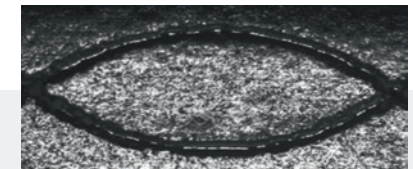
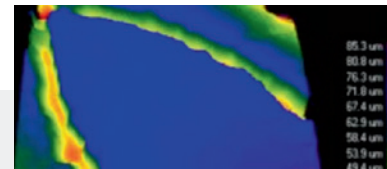
specially engraved hanging cell walls. The intentionally reduced cell walls help to minimize the pinhole effect especially in applications of white and varnish.



STEPPEDHEX

The open cell engraving SteppedHex serves to widen the standard engraving range or as a technological alternative. In comparison to standard 60° engraving,

the SteppedHex technology offers the possibility to increase the resolution without losing volume, due to a unique cell connection. Also this engraving is based on the 60° angle.



CUSTOMISED

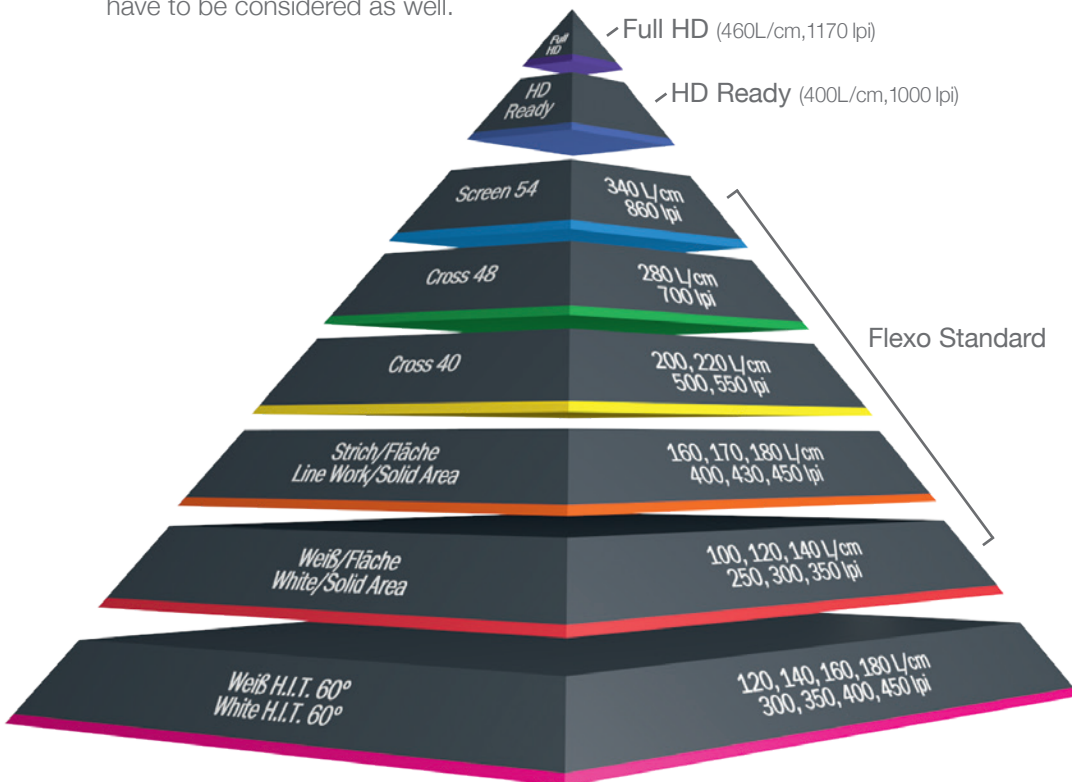
We are able to manufacture special laser engravings which are based on individual-designed TIFF data.

By this, special shapes and application ranges can be covered.

ORGANIZATION IN THE DIVERSITY

The modern flexo printing requirements are versatile. Film, paper, cardboard or other substrates. From intense solid area, small font elements, illustrations, to finest gradients in 200 l/inch halftones. Special colours, effects, front-side or reverse printing: not only the printing requirements must be taken into account, the economic aspects have to be considered as well.

Depending on your requirement we manufacture anilox rolls, tailored to your individual needs. Individual consultation and expert analysis are the foundation for your success. Equally important is: to provide orientation for possibilities to improve quality levels.



FUNCTIONS OF THE PYRAMID

Screen 70 Full HD

Highest resolution for halftone printing of 70, 80 L/cm (180, 200 l/inch) and more. Realization of finest gradients, as well reproduction of 7-colour separations. Suitable for all HD-plate techniques and types!

Screen 60 HD Ready

Halftone printing of 60 L/cm (150 l/inch) and more. The ideal choice to take the first steps for high-resolution motives. Best results with your existing repro, which enables you to achieve a surplus to the common standard.

Screen 54

Process printing and graduations up to 54 L/cm (140 l/inch). The option to print in impressive quality with full production reliability.

Cross 48

This level of combi engraving fulfills demands on halftone printing up to 48 L/cm (120 l/inch). Scale and brand colours are enabled par excellence.

Cross 40

Separated colours, graduations and halftones up to 40 L/cm (100 l/inch). The ideal starting point into the combination of area/line print and halftone.

Line work/Solid Area

Intensive solid areas, used in combination with text/line and barcodes. High densities, homogeneous areas: ideal for spot colours. Suitable as well for highest press speeds.

White/Solid Area

Best density, high opacity. The conventional solid basis. The right foundation not only for packaging printing.

White H.I.T.

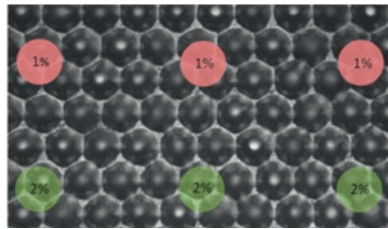
The „extra portion white“ density. This special engraving technology reduces pinholing by an optimized ink transfer without overfilling details. Ideal to reduce the ink consumption at the same time.



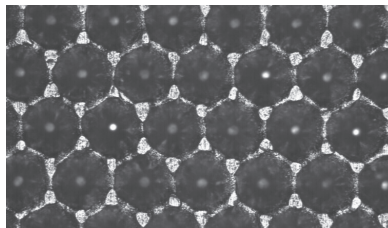
INNOVATIVE ENGRAVING TECHNOLOGY

The SteppedHex technology, protected by a German utility model, is characterised by its unique, specially staggered cell geometry. The engraving is based on the familiar 60° angle, with the connection of just three consecutive conventional cells. In order to let you take full advantage of this open engraving system, we have optimised the levels of resolution (L/cm) with respect to the corresponding volume.

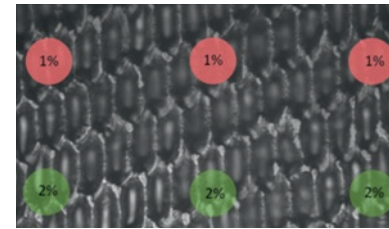
If you have any further questions, please consult with the Zecher team. We will be happy to advise you, and act jointly to find the best specification for your requirements.



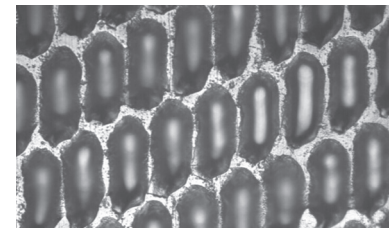
400 L/cm; 4,0 cm³/m² Hex, 60°;
1 % + 2 % tonal value, 60 L/cm



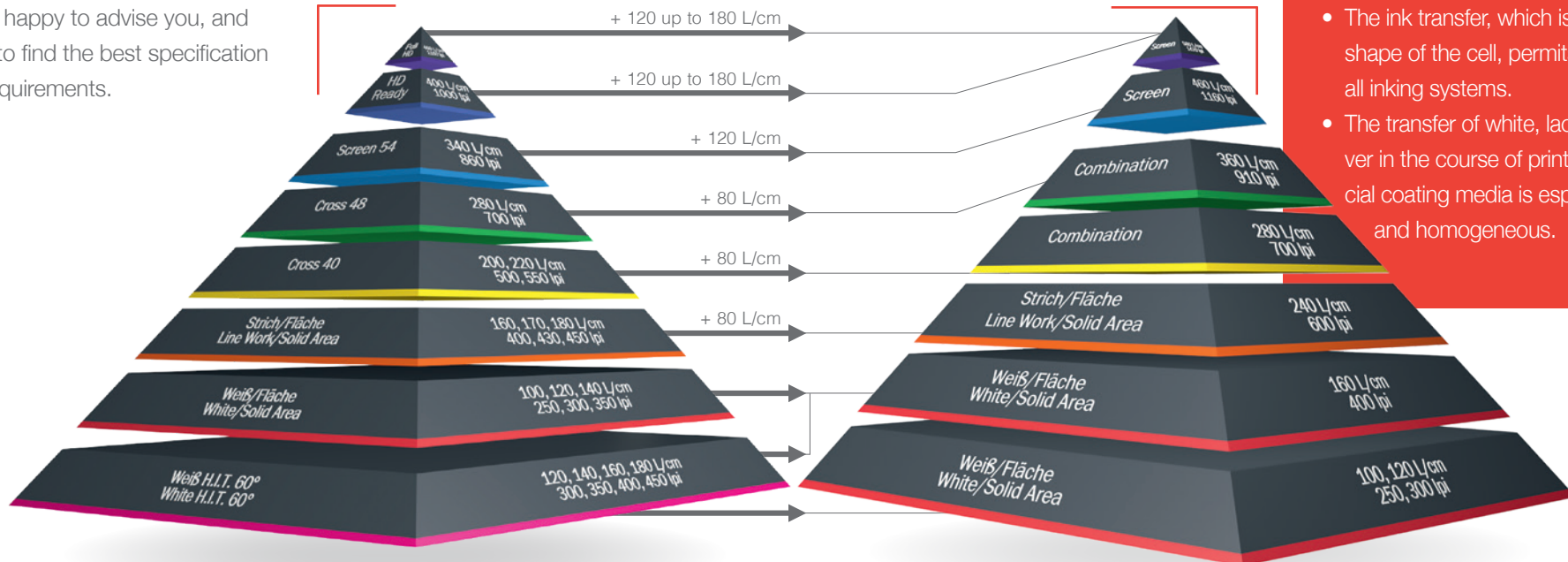
Hexa 60°



580 L/cm; 4,0 cm³/m² SteppedHex;
1 % + 2 % tonal value, 60 L/cm



SteppedHex 60°



TECHNICAL BENEFITS

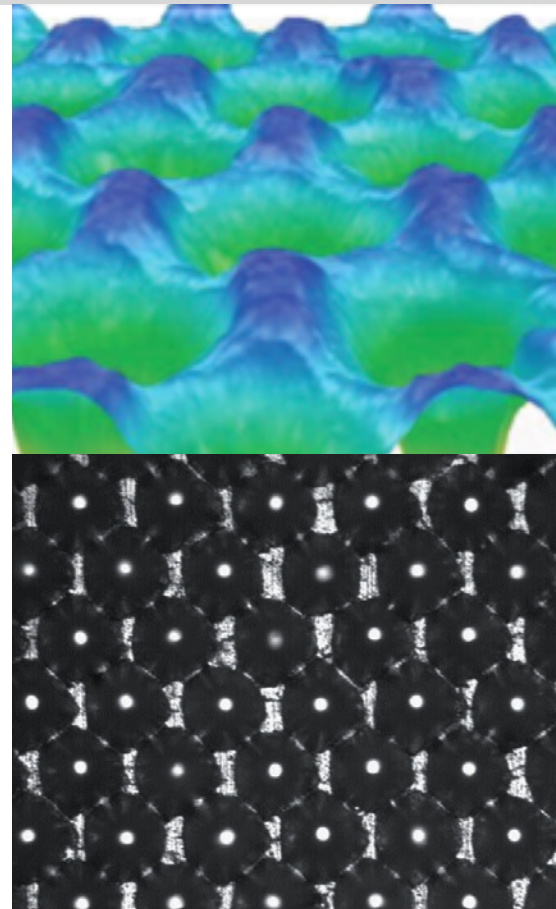
- Higher resolution, without any significant loss of volume.
- Smooth running of your doctor blade on the surface of the anilox roller.
- The special staggered engraving lets you achieve optimum printing-nip dimensions.
- The unique cellular form improves evacuation and cleaning.
- The customised levels of resolution (L/cm) and the specific staggered structure provide you with defined, optimal support for the print format, in addition to the combination area, even in the higher-resolution raster.
- The ink transfer, which is benefited by the shape of the cell, permits application with all inking systems.
- The transfer of white, lacquer, gold or silver in the course of printing and with special coating media is especially uniform and homogeneous.

H.I.T. = HIGH INK TRANSFER

Anilox rolls with H.I.T. engraving offer a higher and more homogeneous ink transfer due to their special cell geometry in comparison to conventional rollers. This is not obtained by means of volume, but by an optimised and open cell geometry which is easily cleanable. Thus, an efficient and homogeneous ink transfer is generated which offers new possibilities for opaque white printing, lacquering and coating.

H.I.T. engravings are suitable for lacquer units in offset printing and for coating machines. The application potential in Flexo Printing depends on technical machine parameters, on the applied ink and the printing speed.

Our technicians will be pleased to support you in finding the optimal specifications for your application.



ADVANTAGES

The H.I.T. technology offers some significant advantages, as

- high ink transfer
- equal opacity at less ink consumption
- closed film formation without pinholes
- suitability even for highly viscous media
- uncomplicated and easy cleaning
- special suitability for opaque white, lacquer and special process inks.

All of the advantages provide optimised solutions for the printing industry.

YOUR BENEFIT: THE SAVING POTENTIAL!

Example:
10.000 running metre with 1 metre width
= 10.000 m² and 100 % area coverage

57,3 kg reduced consumption here 12 kg, approx. 20% 45,3 kg



Standard → H.I.T.

Ink transfer volume	
dry	2,29 g/m ²
wet	5,73 g/m ²

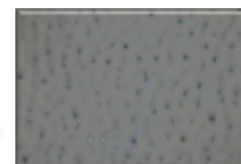
60 L/cm, 19cm³/m²

Ink transfer volume	
dry	1,8 g/m ²
wet	4,53 g/m ²

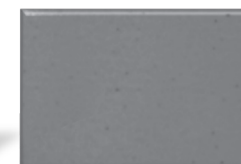
H.I.T. 140 L/cm, 17cm³/m²

Customer demand → Optimised cell geometry

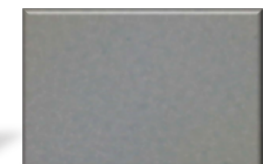
opacity behaviour



PET 60 L/cm, 19cm³/m²



PET H.I.T. 140 L/cm, 17cm³/m²



BOPP 140 L/cm, 17cm³/m²

INNOVATIVE ENGRAVING OPTIMIZATION

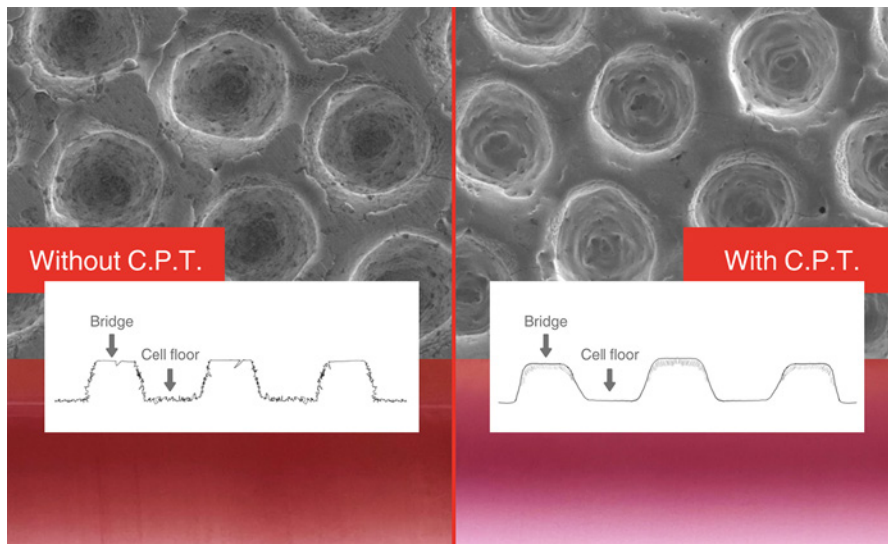
Zecher C.P.T. (Cell Polish Treatment) technology is an innovative solution for improving ceramic anilox rollers. This new method revolutionizes surface treatment after laser engraving and ensures noticeably improved print quality.

Zecher C.P.T. is a thermal finishing process that effectively smooths out sub-microscopic imperfections such as pores and nano-cracks in the roller surface.

This precise thermal intervention “polishes” the cell structure of the anilox roller, which significantly increases the mechanical stability and service life of the rollers. Zecher C.P.T. is suitable for all ceramic anilox rollers and sleeves and can be seamlessly integrated into existing production processes.

PRINTING ADVANTAGES AT THE HIGHEST LEVEL

- **Improved emptying behavior:**
The optimized cells ensure a more even and effective emptying of the cells, which leads to more consistent results, especially at high speeds.
- **Easier cleaning:**
Thanks to the smooth cell surfaces, the rollers can be cleaned more easily and thoroughly, reducing downtime and lowering maintenance costs.
- **Consistent ink transfer:**
Even at varying print speeds, ink application remains consistent, significantly improving print quality.
- **Fewer imperfections:**
The precise structure of the cells makes the printing process less vulnerable to blemishes, enabling consistently high quality with every print run.



For further information contact us or visit our website:



www.zecher.com/anilox-rollers/surface-finishing/#cpt

AQUA/UV INK

Our “Anilox Cleaner - Aqua/UV Ink” was specially developed for water- and UV-based inks and varnishes on anilox rollers and printing equipment. You can use this water dilutable cleaner for in-line washing systems as well as manual cleaning of your anilox rollers. With the periodical use of “Anilox Cleaner - Aqua/UV Ink” you benefit from an highly economical cleaning process that ensures an optimal volume of the cells of your anilox rollers.

GEL

Our powerful “Anilox Cleaner - Gel” is biodegradable and can be used for manual cleaning or in combination with an ultrasonic bath. This gel has been specifically formulated for the periodical cleaning of cylinders and rollers for printing. The versatile “Anilox Cleaner - Gel” removes all deposits of ink and varnish on your anilox roller and therefore enables you to continue printing in great quality.

IN-LINE

Our waterbased “Anilox Cleaner - In-Line” can be used with an in-line washing system in combination with a heating tank or to clean your anilox rollers manually. It is a concentrated cleaning agent that has been developed for daily or periodical cleaning of surfaces polluted with water- or solvent-based inks. “Anilox Cleaner - In-Line” cleans the cells of your anilox roller thoroughly so that you can maintain the high print quality and efficient ink usage you are accustomed to.

WASHING MACHINE

Our water-based “Anilox Cleaner - Washing Machine” is designed for the exclusive use in equipment washing machines. You can use this alkaline cleaner for the periodical cleaning of water- and solvent-based inks on your anilox rollers. It has been specifically formulated for the cleaning needs of rotogravure cylinders and anilox rolls and will therefore let you benefit from a flawless cleaning result.



Based on decades of industry experience, ULMEX developed a new concept for laser cleaning of anilox rollers. The Evolux laser cleaning machines fit perfectly into production processes, reducing the factors of time and cost in anilox roller reconditioning. It also improves print quality and enables longer reproducibility. Discover the Evolux laser cleaning machines from ULMEX now!

The Evolux laser cleaning machines are available in web widths of up to 1000, 1700, 2100, 2500 and 3000 mm and enable process-optimized cleaning of sleeves and solid rolls with a respective individual weight of 50 - 1000 kg.

WHY EVOLUX?

Individual cleaning programs

At the heart of Evolux technology is the pulse laser source. Unlike other types of lasers, which can only be regulated in terms of power, a pulsed laser is extremely flexible and also allows the user to calibrate the frequency and characteristics of the pulse.

Free of chemical cleaning agents and solvents

Evolux laser cleaning machines do not require chemical cleaning agents and solvents. This is particularly interesting in the food packaging sector.

Fully automatic cleaning process

No inspection by an operator is required and cleaning is always performed with maximum effectiveness.

Removes even the most difficult residues

With the Evolux laser cleaning machine, you not only clean your anilox roller of ink residues, but residues of varnishes, adhesives, silicones and resins can also be removed without leaving any residues. No matter whether solvent-, water- or UV-based.

Uniform results

The autofocused laser beam cleans each individual cell of the engraving with the same intensity and energy. This technology enables consistent results along the entire length of the anilox roller.

EVOLUX SMART - PORTABLE LASER CLEANING

The small Evolux Smart laser cleaning machine is the portable version of its big sister. It is used in the areas of medium and wide web, cardboard and pulp printing as well as in coating and convinces with its simple operation, small size and integrated suction device.



For further information visit our website:



www.zecher.com/anilox-rollers/roller-cleaner/#laser-cleaning-machines



www.pmr-werbung.de | 21012



Zecher GmbH
Görlitzer Straße 2 • 33098 Paderborn • Germany
Tel. +49 5251 1746-0 • contact@zecher.com
www.zecher.com

