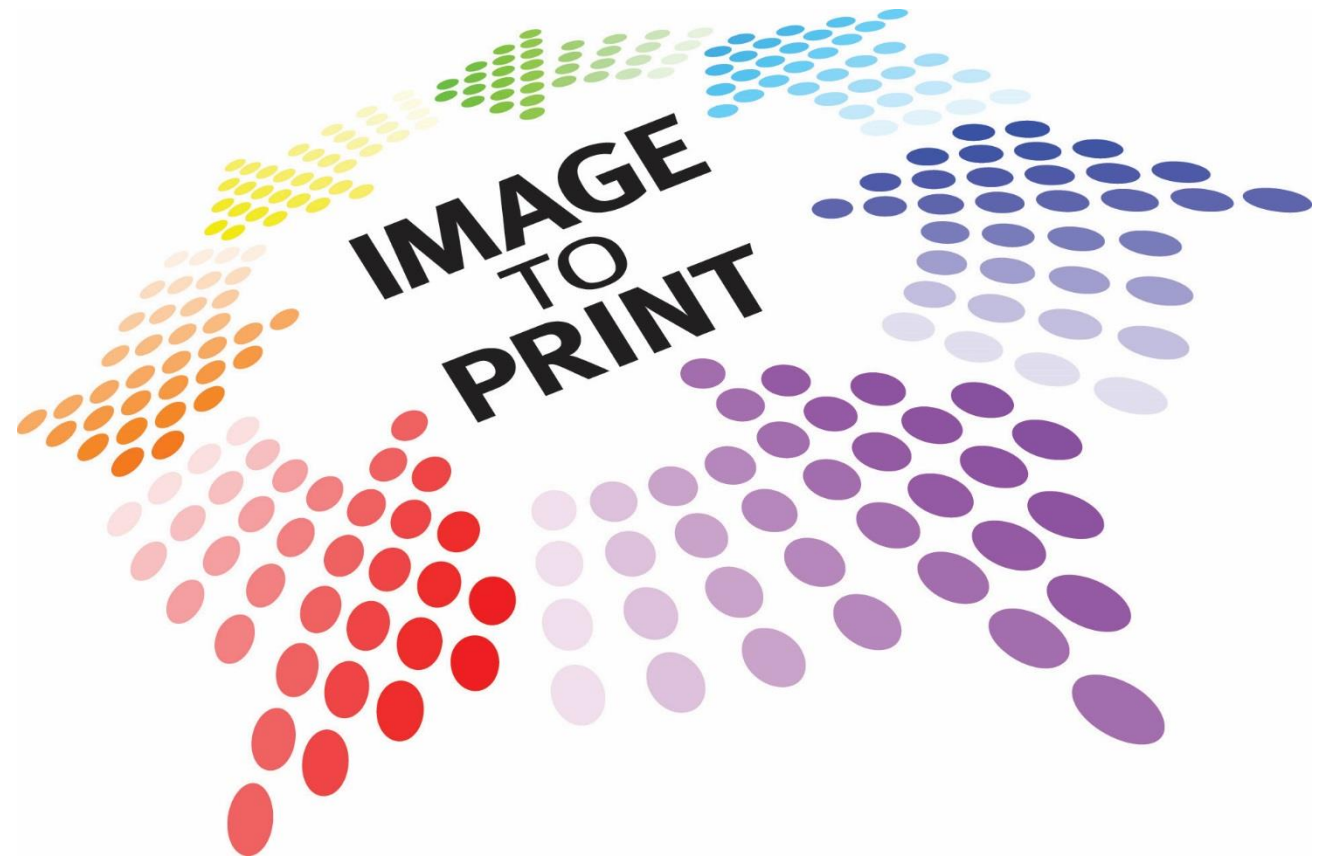


# PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

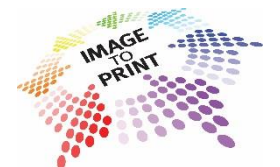
20 / 21 March 2019  
Jakarta, Indonesia



# PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

HOSTED BY:

**janoschka**



## PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

Anilox technology for economic and sustainable flexo print production

André Huber

Key Account Manager, Zecher





# Experience

First regular engraved anilox roller with an angle of 45° use in flexo printing (developed by Kurt Zecher)

First laser engraved ceramic anilox roller

Market leader with the biggest anilox production world wide

1948

1951

1985

1989


2011

2019

Founded by Kurt Zecher as a workshop dedicated to galvanising and other surface treatments

Thanks to it's high quality. Statistics confirm Zechers market leadership

Environment, the installation of two block-type thermal power stations confirms our commitment to the sustainable use of energy



# About us

An international manufacturer of engraved anilox rollers and sleeves for the printing sector



**175**  
Employees

**12.000**  
Anilox rollers



Designed,  
developed and  
made in Germany

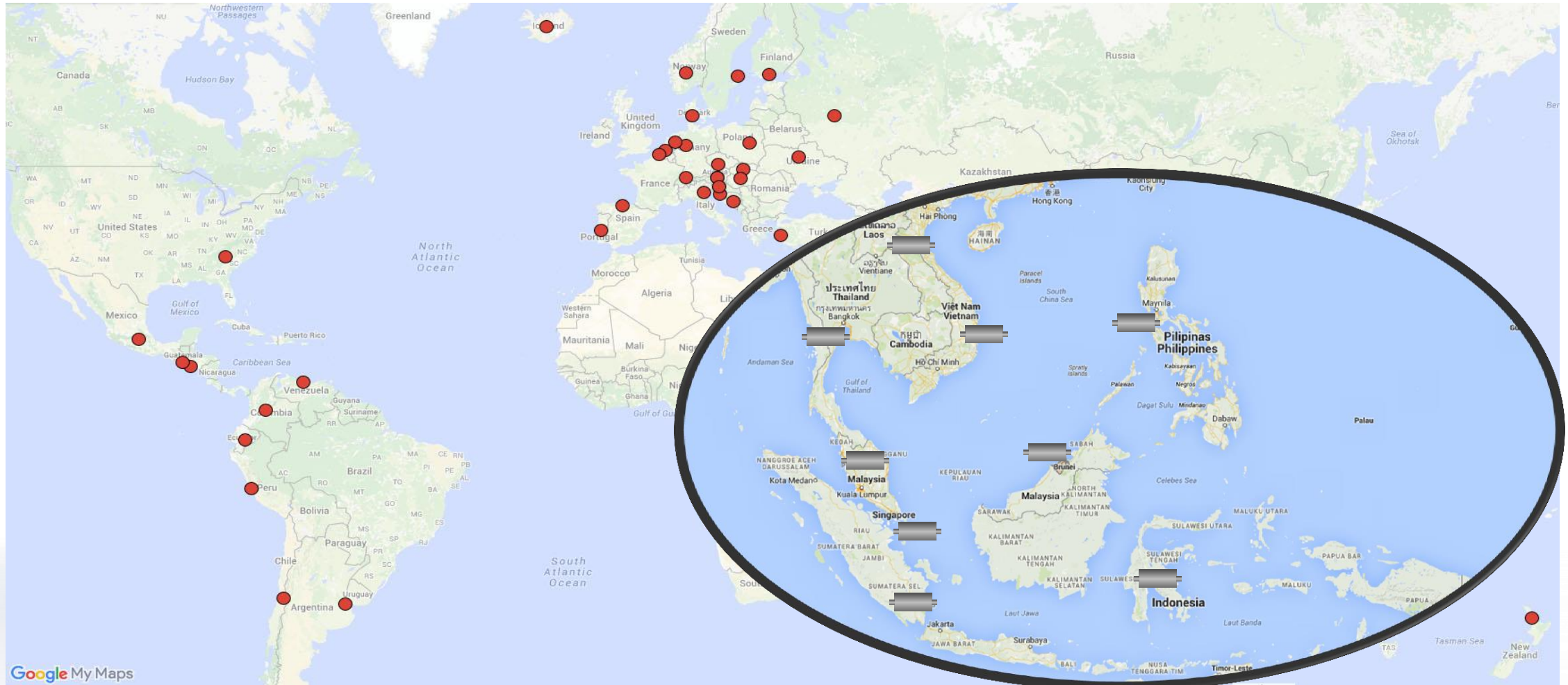
**70**  
Countries




**23 Mio.**  
Turnover



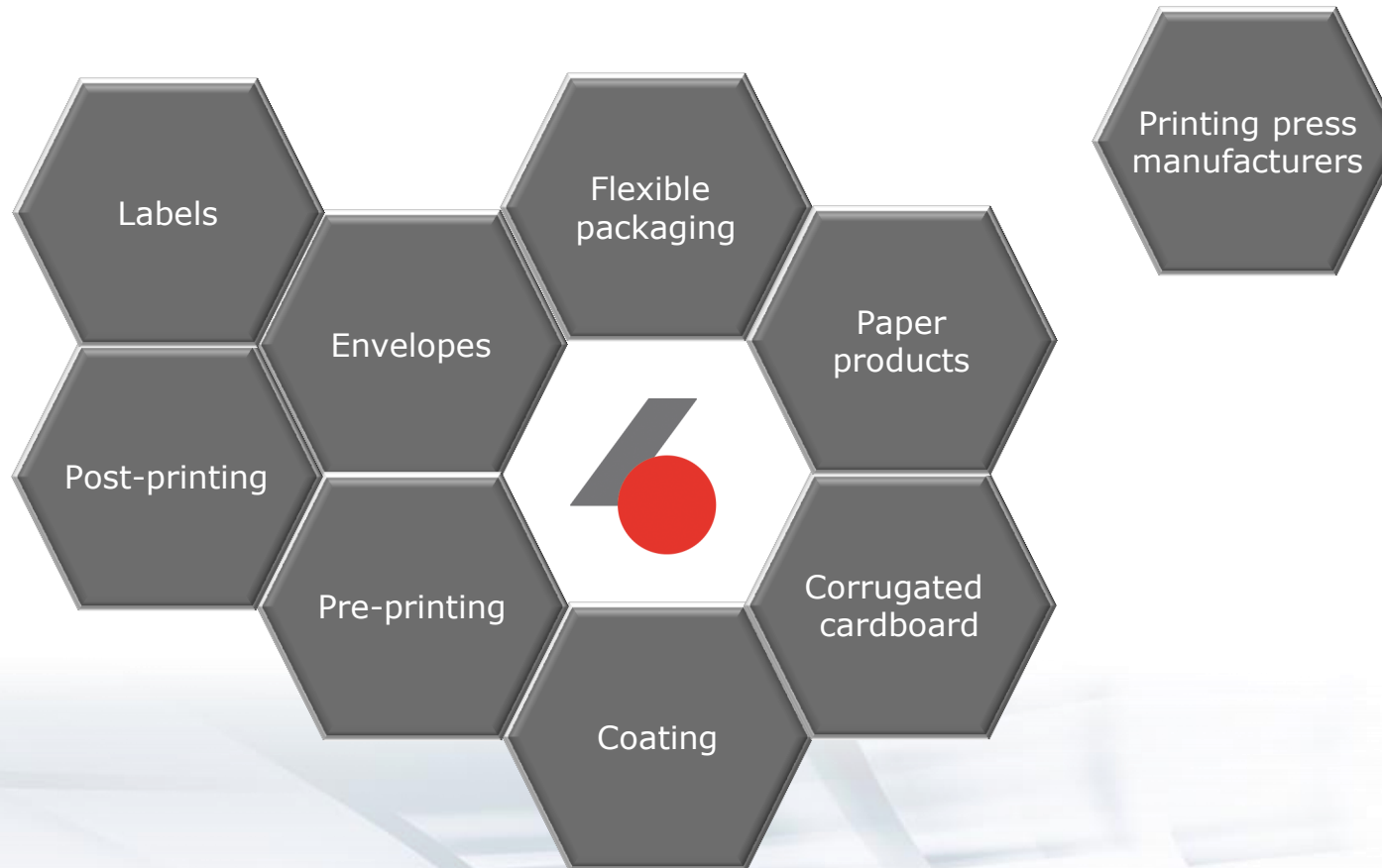
# Zecher partner agencies worldwide in over 70 countries



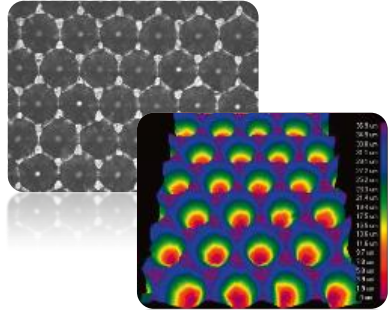


A decorative graphic consisting of a grey parallelogram and a red circle.

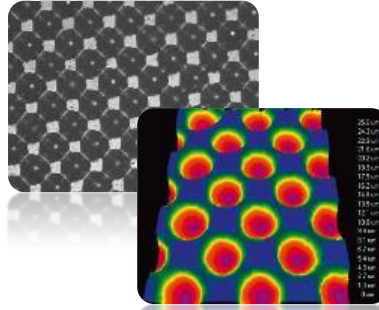
We are a certified, widely recognised supplier to printing press manufacturers and printers



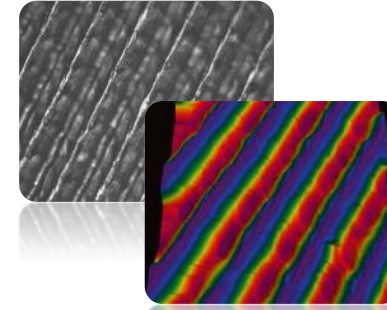
# Engraving technologies



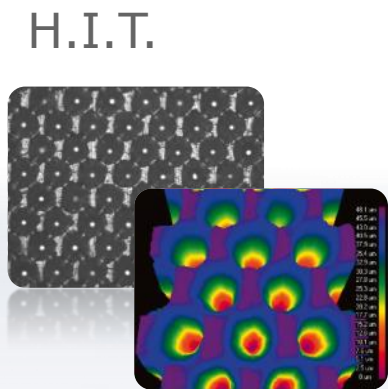
Hexa 60°



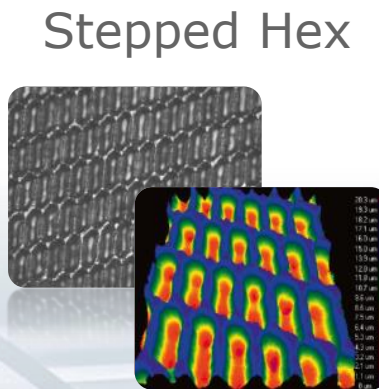
Diamond 45°



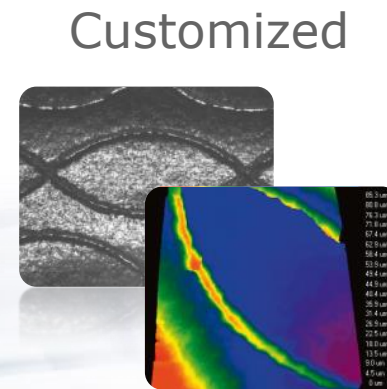
Trihelical



H.I.T.



Stepped Hex



Customized

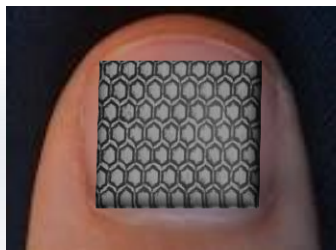


# Engraving technologies

Engraving is among others characterized by the number of lines = **cells per cm**

Currently we can produce from 10 L/cm up to 1.000 L/cm

with	10 l/cm	a cell is	1 mm large	- in Lines/cm <sup>2</sup> meaning	100 cells/cm <sup>2</sup>
with	100 l/cm	a cell is	100 µm large	- in Lines/cm <sup>2</sup> meaning	10.000 cells/cm <sup>2</sup>
with	200 l/cm	a cell is	50 µm large	- in Lines/cm <sup>2</sup> meaning	40.000 cells/cm <sup>2</sup>
with	340 l/cm	a cell is	29 µm large	- in Lines/cm <sup>2</sup> meaning	115.600 cells/cm <sup>2</sup>
with	400 l/cm	a cell is	25 µm large	- in Lines/cm <sup>2</sup> meaning	160.000 cells/cm <sup>2</sup>
with	500 l/cm	a cell is	20 µm large	- in Lines/cm <sup>2</sup> meaning	250.000 cells/cm <sup>2</sup>
with	1000 l/cm	a cell is	10 µm large	- in Lines/cm <sup>2</sup> meaning	1.000.000 cells/cm <sup>2</sup>

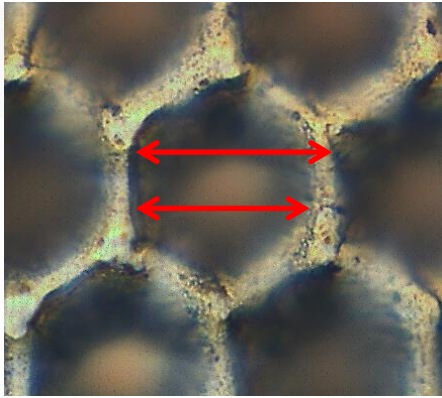


160.000 cells/cm<sup>2</sup>

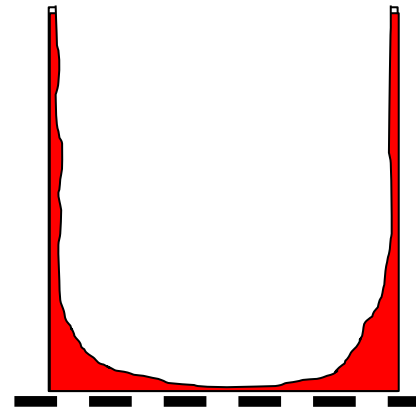
# Engraving optimization

Improved ink release by optimized cell shapes

Cell width =  $25\text{ }\mu\text{m}$   
Cell opening =  $20\text{ }\mu\text{m}$

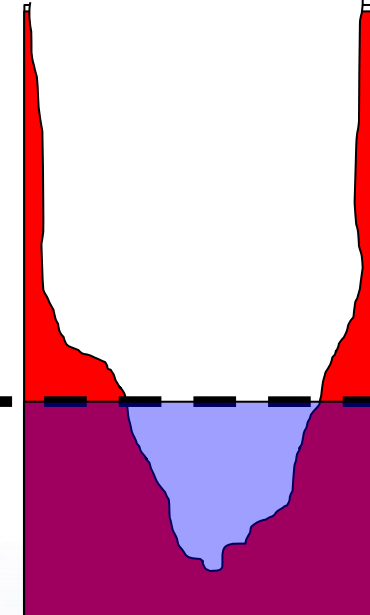


400 L/cm  
 $4,5\text{ cm}^3/\text{m}^2$



Identical  
cell width  
 $25\text{ }\mu\text{m}$

400 L/cm  
 $6,0\text{ cm}^3/\text{m}^2$

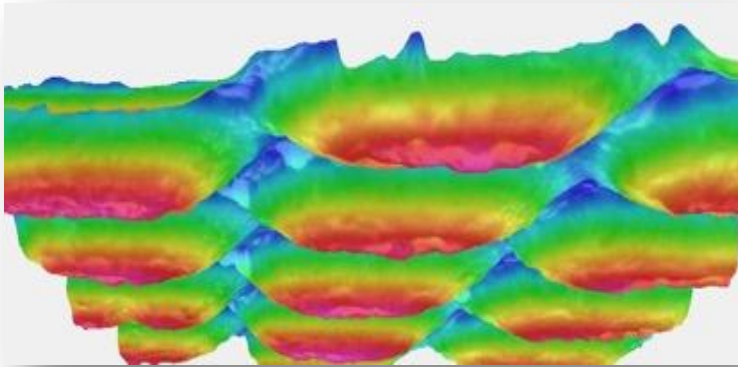


Note!

volume increase can  
only be achieved whilst  
having disadvantages  
concerning cell depth!

# Revolution of the Anilox Technology „today – tomorrow“

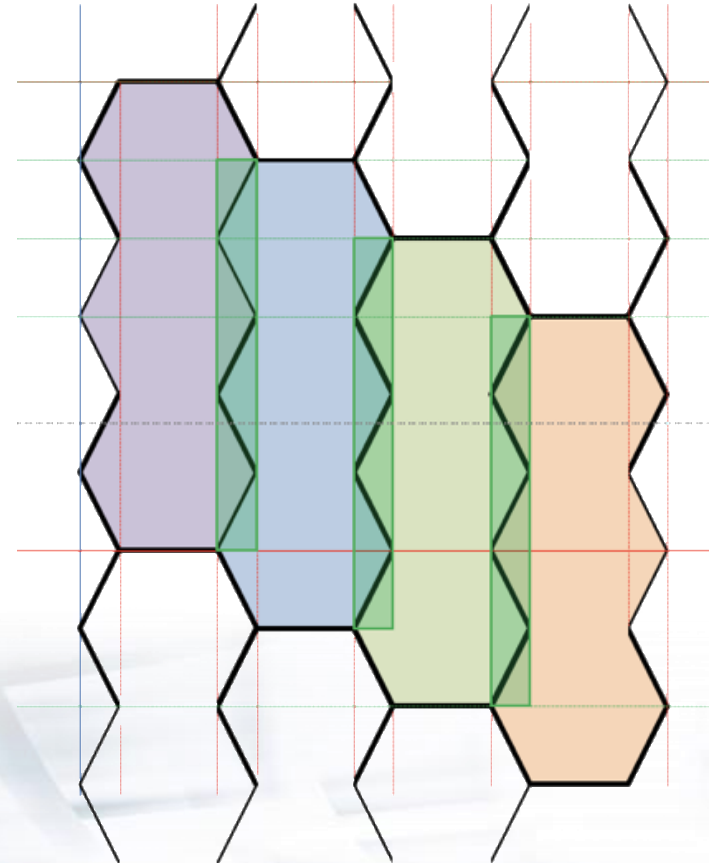
## The defined Long Cell – SteppedHex (Zecher patent!)



Example SteppedHex engraving to visualize the cell form, enlarged view, 3D-picture Micro Dynamics

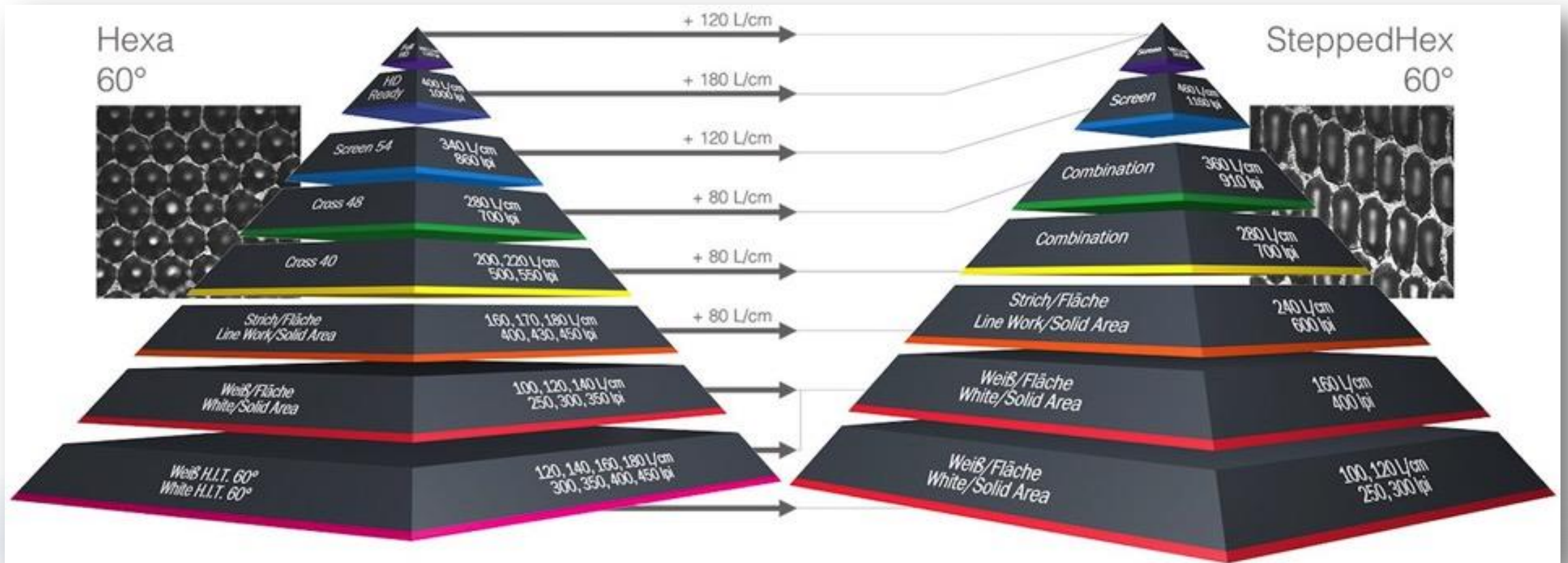


Cross section of the cell. The cell shape looks like a "bath" through the 3-cell connection



# Revolution of the Anilox Technology „today – tomorrow“

**SteppedHex** as a technical alternative to the Standard **Hexa 60°**



SteppedHex unique cell combination

# Revolution of the Anilox Technology „today – tomorrow“

Easy orientation (in comparison to all other engraving systems available on the market):

- Easy switch from **Hexa60°** to **SteppedHex** by using this table
- 6 fixed resolution steps to assist easily a standardization

Standard Hexa60°		SteppedHex
Resolution +/- 460 L/cm		580 L/cm
Resolution +/- 400 L/cm		
Resolution +/- 340 L/cm		460 L/cm
Resolution +/- 280 L/cm		360 L/cm
Resolution +/- 200 L/cm		280 L/cm
Resolution +/- 160 L/cm		240 L/cm
Resolution +/- 80-120 L/cm		160 L/cm
Resolution +/- 60 L/cm		100/120 L/cm

# Cost and process optimization for economic and sustainable flexo print production

- **Managable anilox specifications**
  - „lean library“
- **Easier handling**
- **Reduction of costs**









# Quality

## Sustainability at Zecher → Production based

The thermal spraying department of company Zecher is certificated based on  
DIN EN ISO 9001 since 2004

### Long-term aspect:

Certification of whole company based on „DIN EN ISO 9001“ standard



A graphic element consisting of a red circle and a grey triangle pointing towards it.

# Summary

- Leader in anilox technology
- Global partner agencies
- First level support worldwide
- R&D, Application and Claim Management
- One production site → sustainable and high quality level
- Certified and economic production processes
- Traceability of each production step
- Highly skilled and motivated employees
- **Our priority: you our customers**



Please do not hesitate to contact us, if you have any queries

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Tel: +49 5251 17460 | [contact@zecher.com](mailto:contact@zecher.com) | [www.zecher.com](http://www.zecher.com)