



creating  
**a lasting  
impression**

# about us

## THE COMPANY

Based in Manchester, England Cheshire Anilox Technology manufacture laser engraved ceramic Anilox rollers and sleeves designed to improve print quality and reduce operational costs for flexographic printers. With more than 23 years servicing the Flexographic printing industry, Cheshire have a wealth of experience in supplying effective solutions for the most challenging metering conditions including, UV, HD flexo and heavy adhesive applications.

Cheshire Anilox Technology has distribution locations in Europe, North America, South America, Asia and Africa.

## Complete in-house manufacture

Cheshire Anilox rolls are produced entirely in house. This allows us to manufacture standard and custom rollers more efficiently and cost-effectively while maintaining the highest quality. Quality is closely monitored in all aspects of manufacture to ensure absolute consistency of each roll from end to end. This also gives us the flexibility of developing specialized manufacturing processes and meet tight delivery times.

## TECHNOLOGIES

### Most advanced Fibre Laser Technology for unparalleled control and consistency

Cheshire Anilox Technology uses the most advance laser technology with state of the art optics that provide unparalleled control of the beam for high line screen engravings with consistent cell geometry and improved ink release properties.

Our powerful 500 watt fibre lasers come with custom pulse which can produce unlimited cell designs allowing Cheshire Anilox Technology to develop new engravings for exceptional print quality, improved consistency and higher line screen definition.

### Triplex Pro 200 Plasma Coating System – The hardest ceramics in the market

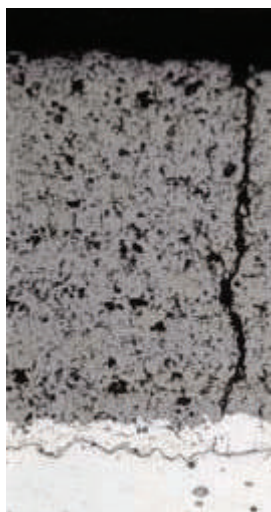
The ceramic coating represents a critical part of the Anilox roller as it affects the consistency of the engraving and most importantly its longevity. There are hundreds of variables in the plasma spray process which determine the coating quality. By using the latest and most sophisticated fully automated system for coating application, Cheshire Anilox Technology controls the critical parameters in the plasma process to achieve a consistent, extremely dense and wear resistant ceramic.

Most common failures are often caused by excessive wear, corrosion, high temperatures, or a combination of the three. Our specialty high dense coatings will help to minimize or even prevent these common failures.



Cheshire Anilox Technology offers a full range of thermally sprayed surface treatments that work to extend the life of your rollers and, ultimately, maximize the efficiency of your processes.

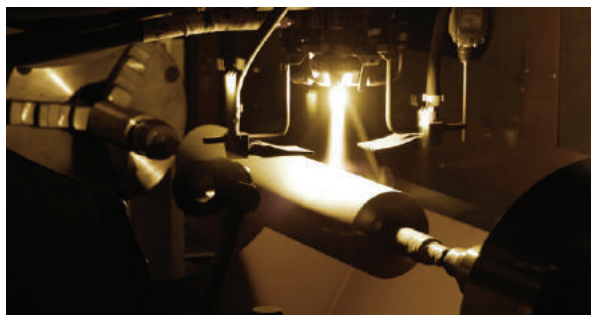
Our high performance non-stick coatings are specially engineered to provide the highest density and hardness available in the market and include a nickel chromium superalloy barrier for exceptional corrosion protection. The extremely compact and low porous superalloy is specially designed to resist a wide range of severely corrosive environments such as pitting and crevice corrosion. It has significantly high tensile, yield and anti-corrosive characteristics at high temperatures.



High Porous conventional Ceramic

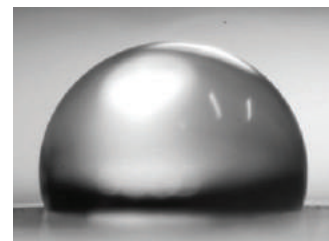


Low Porous <1% Cheshire High Performance ceramic



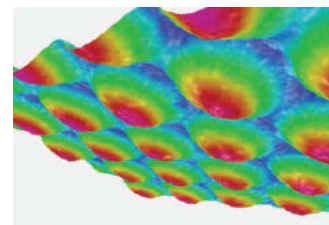
After the ceramic coating process all rollers are treated with

**SealTec®** a highly advanced sealant specially developed by Cheshire Anilox Technology to reduce porosity to extraordinary low levels (<0.5%) and offer the maximum protection against corrosion. The vacuum infiltrated sealant penetrates extremely fine porosity and deposit a barrier film on the cell walls, lowering the coating surface tension. Its hydrophobic and oliophobic characteristics maximize the evacuation of ink from the cells and provide a stronger shield to the Anilox metallic base.



### Volume Control and ensuring repeatability

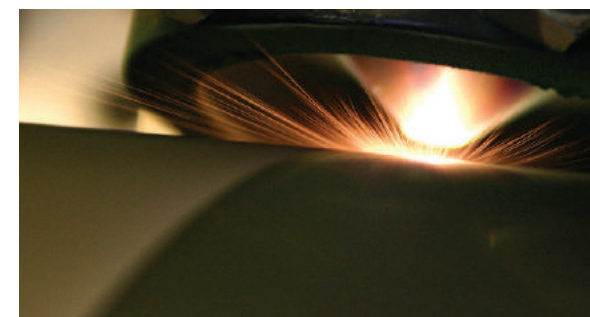
Having the proper cell volume is absolutely necessary to accurate colour reproduction. Cheshire can produce consistent cell volume because uses the most advance scanning



interferometry measurement technology. This is a Digital Microscopic system that uses a series of reflective light waves on a sub-micron level, capturing cross sections of the engravings and composing a 3-D image of the cell resulting in a true volumetric measurement. It is the most accurate way of measuring the cell volume.

Each roller's screen parameters and interferometer volumetric readings are saved in our data base under the unique roll number to guarantee repetition.

All our Anilox rollers are issued with a Quality Protocol which is sent with every roller.





# our global network

around the world

## UNITED KINGDOM

ANGOLA

ALGERIA

ARGENTINA

AUSTRALIA

BELARUS

BELGIUM

CANADA

CHILE

CHINA

COLOMBIA

CROATIA

EGYPT

FINLAND

FRANCE

GERMANY

GREECE

HONG KONG

INDIA

ISRAEL

ITALY

MEXICO

NEW ZEALAND

POLAND

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ROMANIA

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SOUTH AFRICA

SPAIN

SWEDEN

SWITZERLAND

THAILAND

TURKEY

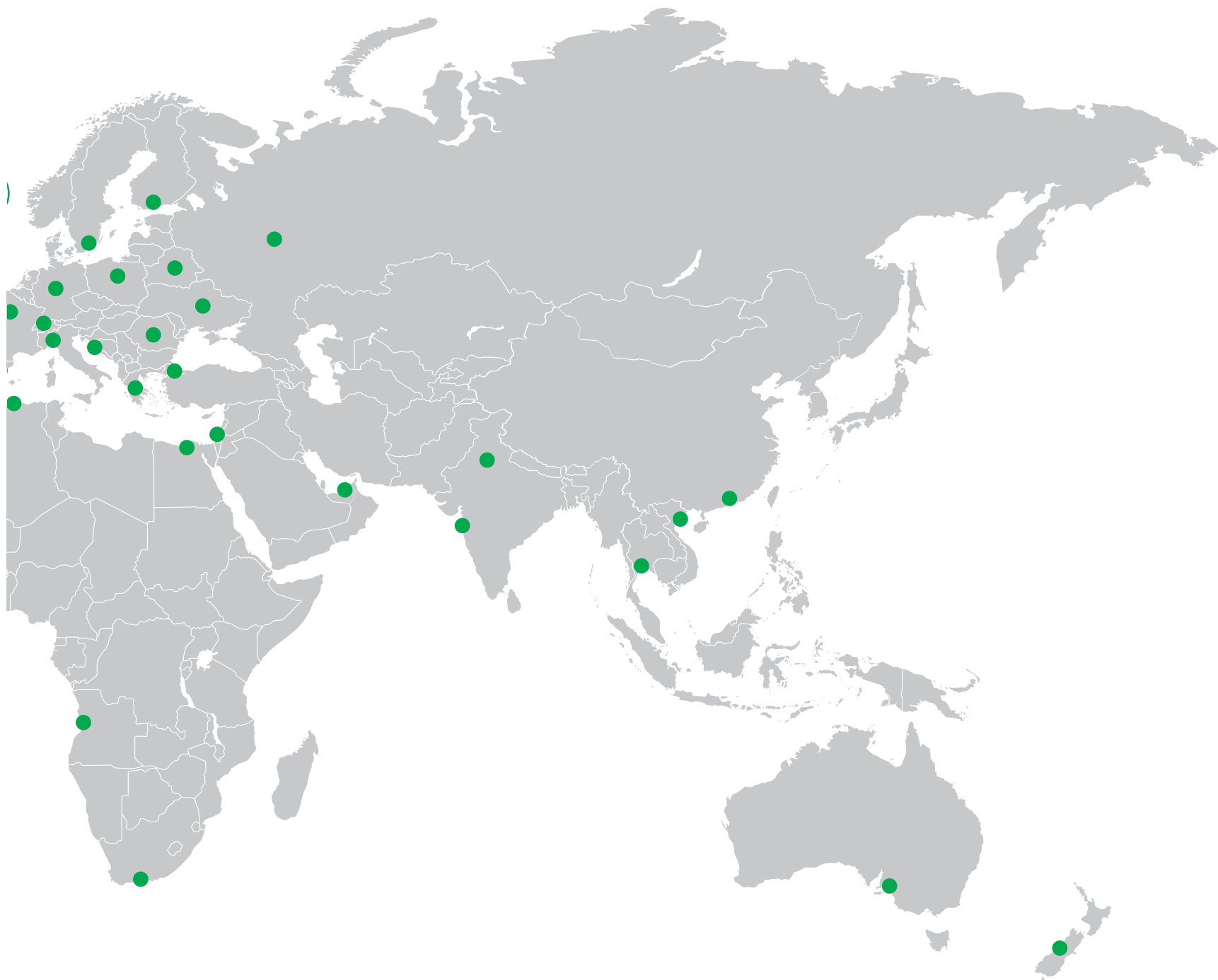
U.A.E

UKRAINE

U.S.A.

VIETNAM





# MaxFlo+

## Advance Anilox Technology

The concept of using channel engravings to improve ink transfer efficiency is not a new one. Channels have been used for many years as an effective means of increasing the ink flow within the Anilox improving transfer efficiency. However ink film consistency and uniformity was always more difficult to control in conventional channel engravings. The real challenge is to design a channel that can effectively control the volume of ink transferred as well as maximize ink evacuation from the Anilox. MaxFlo+ has accomplished both.

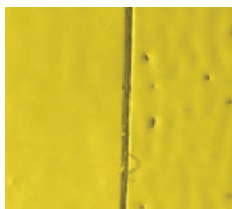
### How does it work?

MaxFlo+ is a channel engraving that radically improves the ink flow within the Anilox engraved structure. There is no individual closed-up cells but a continuous cell structure which has 50% less land area than 60° conventional engravings. This offers a more efficient and finer ink distribution to the plate. More ink surface area is in contact with the plate which maximizes its inking in a more uniform way. Engraving depth is shallower than conventional closed-cell engravings which greatly improves ink evacuation from the Anilox.



MaxFlo+ engraving.

The channel provides a constant flow of ink to the plate. No air is trapped as the roll surface re-enters the blade chamber to be re-inked. The channel gives the air and ink an escape route; this results in less agitation of the ink and reduction of foaming.

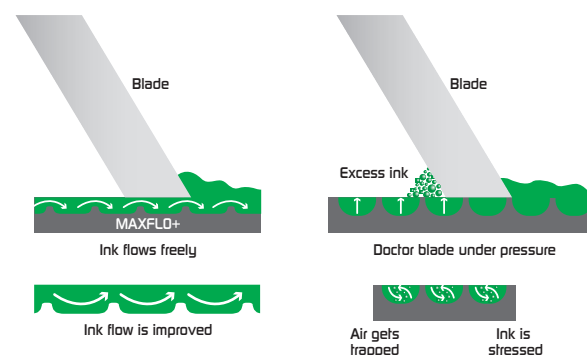


Ink laydown with MaxFlo+ and hexagonal engraving.

A more consistent, smoother and pin-hole free lay down of ink is delivered.

With closed-cell configuration air gets trapped with every rotation causing turbulence within the ink. This turbulence causes micro foaming and uneven laydown of ink to the plate and substrate. Micro foaming will be seen as pin holing in the print.

With MaxFlo+ the ink constantly flows through the Anilox cell structure with less agitation and aeration.



Tests have demonstrated that ink transfer is vastly improved by as much as 30% compared to 60 degrees hexagonal engravings.

### Improved ink release and superior print quality

Customers are reporting an average increase in colour densities of up to 10% compared to conventional engravings. Uniformity of coverage, reduction of pin holing and smooth and cleaner vignettes perfectly fading out to zero are other reported benefits of MaxFlo+.

The secret of the superior ink densities achieved with MaxFlo+ lies in the smoothness of the ink distribution and the absence of voids which is the main factor that reduces measured ink density.

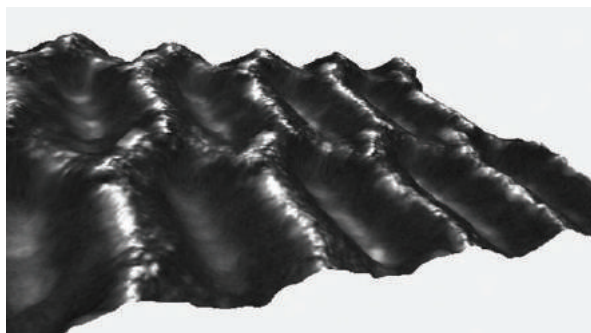
Because of improved ink transfer the Anilox screen counts are higher which increases image definition and sharpness. Cell openings are smaller which more efficiently support the high light dots preventing dot dipping and delivering outstanding image fidelity and clarity.

Increased ink flow within the Anilox greatly reduces known plate ink starvation offering a much more uniform ink coverage at higher speeds without loss of colour density.

## Greater print consistency, greater transfer control

Because each individual cell is linked, the design avoids the uneven transfer sometimes encountered when using straight cut channels. Ink reticulation is slowed and held in reservoirs ensuring a consistent ink transfer at any speed without colour drop-off.

Higher ink transfer efficiency from Anilox to plate allows print production with low pressure ensuring consistent quality in every run from start to finish which is critical when adopting fixed palette or HD flexographic techniques.



## Fewer Anilox specifications

One of the main advantages of MaxFlo+ is its versatility. Higher ink release at high line counts increases the Anilox adaptability of covering more print applications with one specification. Anilox inventory is significantly reduced, making Anilox standardization and streamlining of the printing process easier.

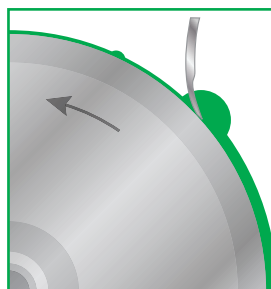
Fewer Anilox specifications means reduced make-ready times and changeovers which will bring significant cost savings in ink and doctor blades.

## Elimination of UV spitting

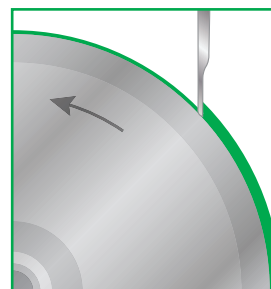
Improved ink flow reduces ink build up behind the doctor blade which causes the blade to lift causing spitting.

As the excess ink hydroplanes and builds up behind the blade, the blade starts to flex. This allows ink to pass underneath the blade and transfer to the plate and substrate.

With MaxFlo+ the ink build up is reduced as the ink can freely flow through the channel as the roller rotates, eliminating the pressure to the blade.



Anilox engraved with a hexagonal engraving.



Anilox engraved with MaxFlo+.

SCREEN RANGE/ TYPE	200- 500LPI	600- 900LPI	1000- 1200LPI	1300- 1600LPI
<b>Max</b> Heavy solids & High Opacity white	●			
<b>Medium</b> Solids and Medium text/line		●		
<b>Combination</b> Tone & block colour			●	
<b>Fine</b> 150/175LPI Process				●
<b>Ultrafine</b> 200LPI + Ultrafine Process/HD print				●

## Easier to clean and keep clean

The cleaning characteristics of MaxFlo+ along with our SealTec® treatment are proven to be superior to conventional engravings. Its shallower engraving depth and open channel structure makes the cleaning easier and faster as there are no deep or narrow cell bottoms to trap ink or coatings.

### MaxFlo+ Benefits for Labels

- Radical reduction of pin-holing and mottling
- Improvement in ink density
- Fewer Anilox specifications
- Reduction of make ready times and production downtime
- Elimination of UV spitting



### MaxFlo+ Benefits for Corrugated

- Fluting reduction
- Improved image quality
- Significant solid ink density increase
- Fast and easier clean-up



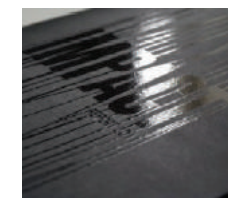
### MaxFlo+ Benefits for Flexible Packaging

- Improved quality of solids and whites
- Higher speeds without ink starvation
- Excellent print quality, perfect to move gravure work to flexo



### MaxFlo+ Benefits for Coating rollers in offset

- Higher gloss levels
- Finer varnish laydown with significant reduction of orange peel
- Elimination of foaming
- Fast and easier clean-up



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