



*The Measure of Quality.*

# Setting a **new standard** in **flexographic** **Anilox solutions.**

Introducing **two**  
**innovations** to boost  
**your** performance:



**THE SECRET TO UNPARALLELED  
CONSISTENCY BEGINS WITH GTT.**



**HIGH-DEFINITION,  
HIGH-QUALITY PROCESS JOBS  
AND ULTRA-FINE LINE-WORK**

**GTT - Patents**

EUROPE: EP 2121339  
 USA: 8,397,633 B2  
 CHINA: ZL 200880125338.2  
 JAPAN: 5301562

Other foreign patents pending

Invented by  
 Apex International  
 Genetic Transfer  
 Technology

# The new standard in flexo

ADVANCED 

Nothing short of a revolution in flexography

## The Secret to Unparalleled Consistency Begins with GTT.

FEATURES

### OPEN SLALOM INK CHANNEL GEOMETRY

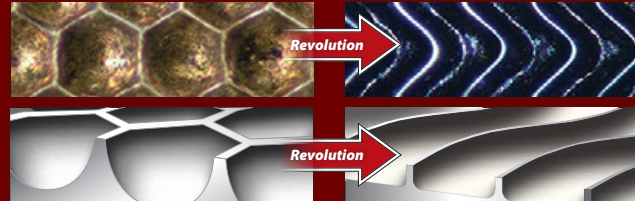
Ink flows uniformly and calmly onto plate;

### HVOF LOW-POROSITY CERAMIC

High-density, low-porosity

### CONSTANT BEAM LASER ENGRAVING

Delivers smooth, hard and precise channel walls.



Deep conventional anilox cells trap ink while cell wall surface mass reduces ink area, thus inhibiting reliable ink replenishment.

GTT channels are up to 30% shallower and land mass is reduced by more than 60% for greater ink transfer surface area and replenishment.



GTT slalom channels reduce ink stress at the doctoring phase for a more controlled ink-to-plate transfer.

BENEFITS

### IMPROVED PRINTABILITY

Print stronger solids with less mottling & pinholing; sharper and finer type; tighter reverses; finer, cleaner plate screens, less dot gain;

### ENHANCED REPEATABILITY

Job after job, year after year, GTT delivers predictable and repeatable print results;

### GREATER PROFITABILITY

Let GTT boost your bottom line with savings in time and better print quality.

### REAL WORLD PROOF

#### 60° Hex cell anilox

##### JOB TYPE

Combo

##### SUBSTRATE

Film

##### INK

Solvent-based

##### ANILOX SCREENS

360 LPI | 140 L/cm

##### VOLUME

5.0 BCM | 7.8 cm<sup>3</sup>/m<sup>2</sup>

##### PLATE SCREENS

85 LPI | 32 L/cm

##### REMARKS

Dot gain, mottling and haloing present; overall muddy appearance.



#### GTT<sup>FLEX</sup>

##### JOB TYPE

Combo

##### SUBSTRATE

Film

##### INK

Solvent-based

##### GTT SIZE

GTT<sup>FLEX</sup> L'

##### PLATE SCREEN

85 LPI | 32 L/cm

##### REMARKS

Precise dot holdout; tighter reverses; less pinholing; haloing eliminated.



## FUTURE FLEXO COLOUR MATRIX



### Efficient - High Quality Cost saving Production









# ographic Anilox solutions.

CONVENTIONAL  **UltraCell+ Anilox Rolls**

## Conventional anilox. Unconventional quality.

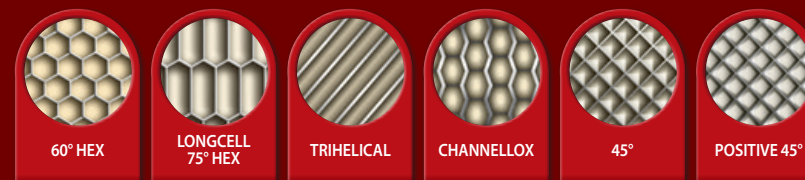
FEATURES

- ADVANCED GEOMETRY** UltraCell+ cell shallow-profile geometry;
- SUPERHARD HYBRID CERAMIC** High-density, low-porosity Cr2O3-TiO2 ceramic;
- INNOVATIVE LASER PROCESS** UltraMelt Multi-phase laser engraving;
- CORROSION BARRIER** Thick, impermeable protective layer;
- QUALITY CONTROL** Rigorous Laser Interferometric Cell-Volume Verification for every roll.

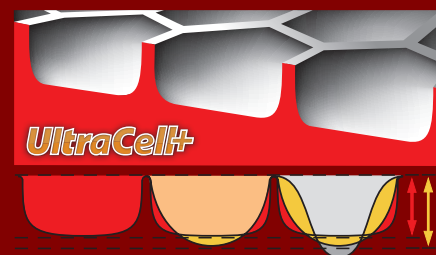
BENEFITS

- PRINTING PRECISION**  
Improved Solid, Fine-Line and Process Printability;
- VALUE**  
Greater Ink Release, Faster Clean-Up;
- INKING EFFICIENCY**  
Low-porosity Ceramic and shallow Geometry enable more complete and consistent ink release to plate;
- DURABILITY** Increased Score Resistance and Corrosion Resistance.

Apex is your one-stop shop for all anilox engravings.



Cell geometry comparison showing relative anilox cell depths.



UltraCell+:  
25% to 30% less depth than CO<sub>2</sub>  
at equal volume.

## The Apex Difference.

**A History of Consistency.** For over 25 years, Apex International has been committed to serving the printing industry through innovation. Now the world's largest anilox solutions provider offers these key benefits as part of our commitment to technical innovation and the development of the most consistent anilox solutions on the market today:

**Industry Partnerships.** There is a reason that the top suppliers in the printing industry have chosen to align with Apex on key research projects and trials. Our products make their products better!

**Technical Competence.** Engineers and industry tradesmen with decades of experience not only contribute to the development of our technologically advanced products, but they also stand ready to show you how to integrate state-of-the-art metering solutions into your process with on-site demonstrations and training.

**At Apex, we think globally while acting locally.**

**Commitment to Research & Development.** No other anilox company invests more capital into the development of advancements in anilox technology.

**Global Footprint.** With five production facilities on four continents and sales offices serving 80 countries across the globe, Apex International has a superior understanding of global industry trends and technological advancements. And that knowledge is translated into every product we manufacture.

## Excessive Blade Wear, Short Plate Life, Spitting and Consistency Issues?

**IDENTIFY THE CAUSE – MINIMIZE THE COST**

Apex International has established the Apex Anilox Appraisal Program (AAA), a free service aimed at addressing costly and avoidable printing challenges. Apex will provide a free, on-site appraisal and present troubleshooting options drawing on our global technical resources.

Visit:  
[discover.apex-groupofcompanies.com/aaa](https://discover.apex-groupofcompanies.com/aaa)  
to register for your free appraisal.

Let us prove it by visiting [www.apex-groupofcompanies.com/aaa](https://www.apex-groupofcompanies.com/aaa) to schedule a free, on-site appraisal.

# Nine secrets every flexography professional should know about Apex.

## 1 Why is Apex the first choice in anilox?

Because Apex speaks anilox – fluently. In over 80 countries, Apex delivers superior quality and service to a fast-growing customer base. Not only did Apex pioneer the original 60 degree hexcell engraving and patent the revolutionary GTT engraving, but also enable high-performance flexo through advances in laser technology, ceramics and metallurgy. From materials to manufacturing processes, Apex has set the standard in anilox performance.

## 2 What is the Apex Total Quality Commitment?

Apex stands firmly behind all our products and services and guarantees customer satisfaction. **Quality isn't our goal, it's our requirement.** Our dedication is evident in these accomplishments:

- Multi-point 3D laser interferometric quality control/assurance for every single roll;
- Deployment of absolute state-of-the-art laser engraving technology and heavy machinery;
- Finest-quality metallurgy: ceramics, stainless steel, nickel and hybrids;
- The only anilox manufacturer to develop and manufacture dedicated sleeve technologies.

## 3 How can UltraCell+ anilox technology help me print better?

**UltraCell+** cell geometries are wider and shallower than CO<sub>2</sub> and conventional YAG laser-engraved rolls – up to 30% shallower. Combined with **UltraCell+**'s unrivaled cell precision and ultra low-porosity ceramic, our innovations deliver these benefits to you:

**PRINTABILITY** Finer line screens without ink upgrades; More thorough and precise ink release from anilox to plate – with less cell plugging/clogging;

**DOWNTIME** Faster and easier clean-up with less blade wear;

**PROFITABILITY** Better protection against harsh cleaners and contaminants.

## 4 What are the five key UltraCell+ technologies that create a better anilox roll?

There are five critical components of each and every **UltraCell+** anilox roll that positively differentiate it from all others in today's tough, real-world conditions:

**GEOMETRY** Advanced "shallow-profile" cell geometry delivers better, more consistent performance on press;

**COMPOSITION** Exclusive 99.9% CrO<sub>2</sub> High-Density/Non-Wetting ceramic enabling superior ink release;

**ENGRAVING** Proprietary UltraMelt™ laser engraving process resulting in extremely low porosity (less than 1% after engraving);

**QUALITY** Multi-point quality assurance of anilox cell volume specifications;

**PROTECTION** Superior corrosion barrier that protects against harsh cleaners.

## 5 How can GTT benefit me today – and tomorrow?

Print more - with less. Turbocharge your presses and realize immediate benefits. In four key categories of commercial printing, **GTT** outshines conventional engravings:

**STANDARDIZATION** Slash your anilox inventory. **How?** Because one **GTT** cylinder often performs the tasks of two - or more - conventional aniloxes;

**PRINTABILITY** Whether solids, screens or linework, **GTT** can reduce or eliminate mottling, pinholing, haloing and dot gain while delivering stronger and denser solids, crisper and finer type and lines, and extended CMYK color gamut/Pantone™ simulation;

**DOWNTIME** Imagine leaving your cylinders on-press for job after job; imagine using just one ink station for combo jobs; imagine far fewer deep cleanings; imagine slashing makeready time;

**PROFITABILITY** Would you like to run your press faster, use fewer rolls per job, spend less on ink, enjoy longer roll/sleeve lifespan? See if **GTT** can help your bottom line.

## 6 What are GTT's three key innovative features

To fully appreciate the differences between **CONVENTIONAL ANILOX** and **GTT** surfaces, consider these three scientific breakthrough features unleashed only in **GTT**:

**GEOMETRY** **GTT**'s patented Open Slalom Ink Channel geometry replaces closed-cell geometry which traps ink, and instead employs the efficiency of hydraulic kinetics - freeing your ink to flow calmly and transfer evenly to the plate;

**COMPOSITION** Our new superhard hybrid ceramic layer features the highest density and lowest porosity in the industry for incredible ink release to plate - plus superior longevity, scoreresistance and easier cleaning;

**ENGRAVING** Our ConstantBeam laser-engraving process replaces conventional pulsed engraving beams, greatly reducing uneven ceramic roughness and recast. Smooth, hard and precise channel walls emerge which serve to release ink better and extend cylinder life.

## 7 How can I decide if GTT is the best solution for me?

First, ask yourself if the jobs you run - and those you aspire to run - require the high-quality/ high-definition precision, long-run repeatability, and ink-station reduction that **GTT** can deliver. Second, consult with an Apex representative who will help you determine whether **GTT** can meet your goals. If you determine **GTT**'s benefits exceed your actual needs, Apex offers our world-class conventional anilox cylinder: **UltraCell** and **UltraCell+**. Apex pioneered these superfine anilox screens with our UltraMelt laser technology and superhard ceramic. But whether you choose **GTT** or **UltraCell**, you can count on Apex quality, precision and reliability.

## 8 What are GTT "sizes"? Why are there only a few?

Now you can stop worrying about the sheer multitude of possible line/volume anilox combinations needed to run your jobs. Since each **GTT** "size" covers the range of two or more conventional aniloxes, most printers only need two or three **GTT** "sizes" to perform all printing tasks. So instead of calculating complex BCM/LPI, L/cm and cm<sup>3</sup>/m<sup>2</sup> formulae, just analyse the type of job you're going to print and select the appropriate **GTT** size. For example: for extreme opacity, use "XL"; for solid and screen combos, use "L"; midrange and vignette, use "M" or "S"; superfine line/dot work, use "XS." It's really that simple.

## 9 Will GTT work with my presses, plates and inks? What about "high performance" flexo?

Based on tough, real-world shop conditions in over 10,000 installations across the globe, **GTT** is proven to work with all presses, inks and plates in all facets of flexo. Increasingly, OEMs and printers are demanding **GTT** for their new presses because of **GTT** superiority and flexibility. Many older presses spring to life with **GTT**. In fact, ink manufacturers are developing more cost-effective inks optimized to take advantage of **GTT**'s ability to run thinner, lower-viscosity inks. **GTT** is ideally suited to High Performance flexography.



[www.apex-groupofcompanies.com](http://www.apex-groupofcompanies.com)

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