Anilox

GTT 2.0

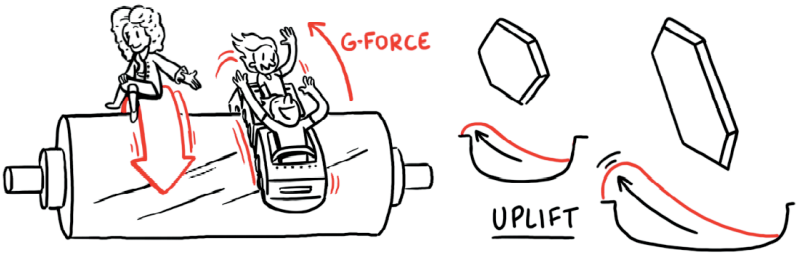
Consistency, printability and profitability. Apex GTT 2.0 offers printers the total package for all of their printing needs.

As a printer, you want to deliver the best possible quality. Or better, you want the best quality CONSISTENTLY, print after print, order after order.

Until recently, the answer to that dilemma wasn't exactly clear. So, first things first, let's talk through the foundation of the flexographic process, the ANILOX, and the physics behind what is ACTUALLY going on inside the cells.

G-force

Thanks to our friend Isaac Newton and his laws of Rotation, we know for a fact that as a cylinder rotates around a fixed point, even at the same speed, angular acceleration occurs. Before we get too bogged down in the physics, the one factor that is most important to APEX is the "G-force" created by angular acceleration.



Let's take a closer look at the surface of an anilox and apply Newton's second law of rotation to a conventional anilox cell. As the anilox rotates, the ink inside each cell is pushed backwards colliding with the back-cell wall. This results in the ink rising from the cells creating a bubble effect on the surface of the anilox.

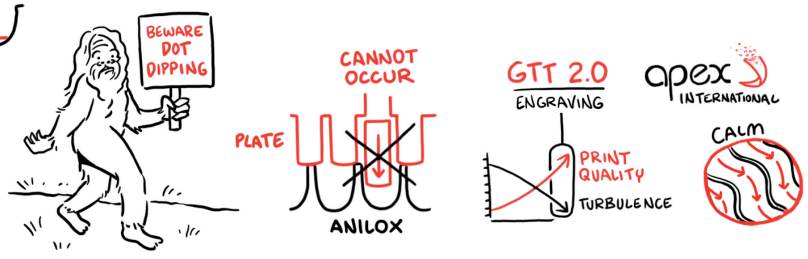
Long cells suffer even more from this same law due to the increased cell length because long cells have a larger area of ink that is forced toward the back wall.

Uplift is created by the forces acting on the liquid. All cell-based engravings create turbulence on the surface that is simply not optimal for process dot printing.

Dot dipping

The industry myth that "dot dipping" is occurring within the anilox cells is impossible. Physics can prove that the amount of pressure required to force one plate dot to enter into an anilox cell while the adjacent dot remains in contact with the anilox surface simply cannot occur.

For optimal print quality, the anilox surface needs to maintain the lowest possible level of liquid turbulence. This is now possible with the GTT 2.0 engraving from Apex International, which has evolved to give a calm liquid surface, and much more.



Thanks to the wave-based flow of ink on the anilox surface, liquid up-lift created by angular acceleration is now a thing of the past. The new, improved engraving ensures up to 50 % reduction of cell wall surface area across the anilox, at the same time decreasing the required channel depth by an average of 25%.

GTT 2.0®

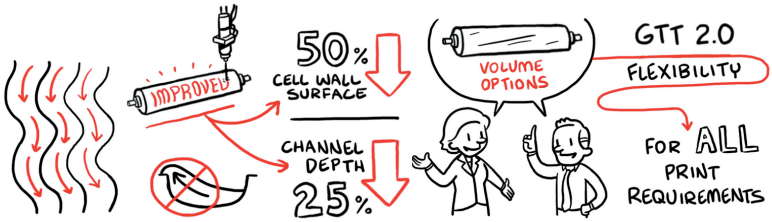
NEXT GENERATION ANILOX TECHNOLOGY

Consistency with GTT 2.0

Additional volume options for GTT

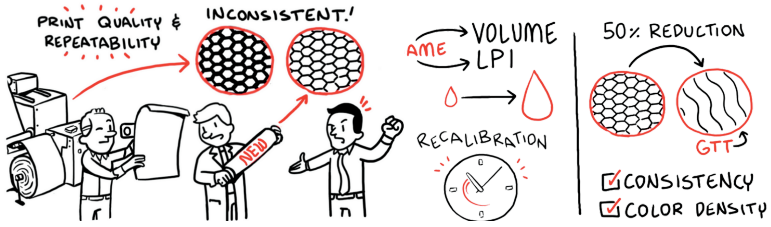
During the evolution of GTT 2.0, Apex has listened to the industry and added additional volume options for GTT. This makes the benefits of GTT available to those who historically could not get the correct color on press and now gives printers the flexibility they need to allow them to use GTT 2.0 for all print requirements.

This change has also allowed Apex the opportunity to revisit the standard GTT profiles and fine tune them. Beyond print quality, printers need the repeatability from anilox to anilox AND during daily production.



Inconsistency

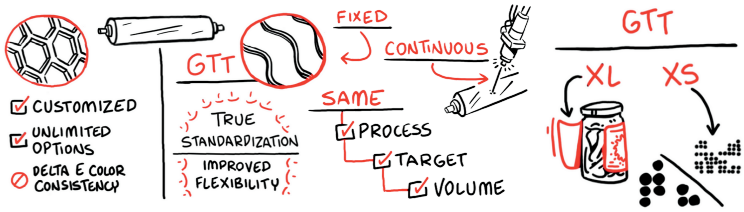
Say you want to install a new anilox. Well, the natural variability in the manufacturing process associated with pulse lasers used in all cell-based engravings can create inconsistency in cell depth and cell wall thickness. As a result, the same volume and LPI of cell can transfer a different amount of ink and create a need for process recalibration and loss of valuable press time between anilox installations.



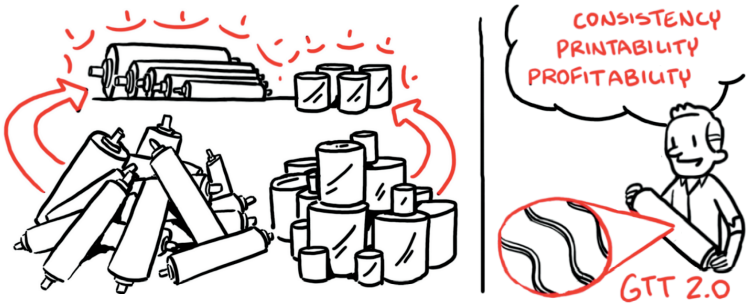
In addition, as an anilox wears down, micron by micron and over time, GTT engravings exhibit much greater levels of print consistency and color density compared to conventional anilox engraving largely due to the 50% reduction in wall surface area. Put simply, all cell based anilox rolls are customized and made to order, resulting in virtually unlimited options for conventional engravings and making anilox to anilox delta E color consistency almost impossible. However, with the GTT 2.0 engravings from Apex, True Standardization with Improved Flexibility becomes possible.

Tightest tolerances in the industry!

Because of GTT's fixed engraving pattern and the use of a continuous laser, Apex has the same engraving process with the same target at the same volume EVERY time with the tightest tolerances of any anilox in the industry today.



From GTT XL for high opacity white printing to GTT XS for superfine and high-definition process work, GTT 2.0 can replace your entire stockpile of conventional anilox with a handful of GTT sizes, and significantly reduce the number of ink recipes required to achieve pantone colors.



From consistency to printability to profitability, GTT 2.0 from Apex offers printers the total package for all of their printing needs.

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NEXT GENERATION ANILOX TECHNOLOGY

For more information on Apex GTT Laser engraved anilox rolls please contact your local Apex representative or visit www.apexinternational.com