

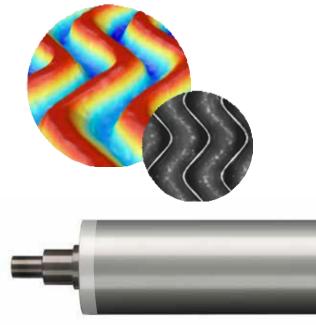
## GTT 2.0

## ANILOX CLEANING & DURABILITY ASSESSMENT

The innovation of GTT revolutionized what was possible from a single anilox engraving. The patented open channel engraving allows printers a wider range of applications capable of being printed with one anilox specification. Enabling higher plate screen resolution printing, higher ink density, and better laydown, the GTT engraving gives printers a competitive advantage in productivity.

The GTT innovation prompted the industry to look for alternative solutions in both anilox engraving and plate surface technologies. Thus, the longcell engraving was *revisited*. It was previously created and tested in 2001 and rejected by the industry due to dot gain issues. The longcell saw a rebirth to try and deliver a better ink transfer.

Though the idea was similar to GTT, the walls of longcell engravings still inhibit the free flow of ink. In this Apex analysis at a large integrated corrugator company, we have concluded that longcell engravings had both positive and negative results in cleaning and roll life, over conventional 60 degree, whereas GTT is a positive solution for ultimate profitability.



CELL ENGRAVINGS	PROS	CONS
LONGCELL	<ul> <li>Higher ink density</li> <li>Increased cell volume</li> <li>Slightly less cleaning</li> <li>Increased ink transfer for solid block areas</li> </ul>	<ul> <li>Inconsistent dot printing</li> <li>Increased ink foaming, misting, ghosting, &amp; ink spitting</li> <li>More ink usage</li> <li>Elongated walls weaken when extreme specs are required</li> <li>No clear industry fixed angle</li> </ul>
60° HEX	<ul> <li>Consistent transfer</li> <li>Good dot support</li> <li>Less foaming than longcell</li> <li>Suitable for a wide range of applications</li> <li>Industry standard angle</li> </ul>	<ul> <li>Fixed transfer color</li> <li>Specs can become extreme &amp; cause issues</li> <li>Inconsistent transfer from roll to roll</li> <li>Requires more cleaning than other cell shapes</li> </ul>
GTT 2.0	<ul> <li>Higher ink density</li> <li>Better dot, text, &amp; solid printing</li> <li>Easier cleaning</li> <li>Maximum ink mileage</li> <li>Reduced ink foaming &amp; spitting</li> <li>Fixed specs; No extreme spec options</li> <li>Reduces anilox inventory needed</li> </ul>	<ul> <li>Higher initial costs</li> <li>Operator training</li> <li>Patented technology only available through Apex International</li> </ul>



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Apex initiated a long running trial to evaluate the performance and cleaning characteristics of the Apex GTT 2.0 engraving compared to the longcell engraving available from all suppliers today.

The extended trial took place over an 8-month period at large, well-established integrated corrugated printer. Between the months of August to May, the team measured, evaluated, and compared the two anilox engravings on site working in the same conditions.

I - GTT CI4

VS.

2 - 130L/cm long cell volume 13.7

THE RESULTS WERE AS FOLLOWS: The new GTT 2.0 required only one deep clean which came after 8 months of production, whereas the longcell required a deep clean about every 3 months. GTT 2.0 was proven to require less cleaning, less downtime, and maintain its volume over a longer period of time, than the longcell geometry.

