

# **ANILOX SCREEN AND VOLUME REFERENCE**

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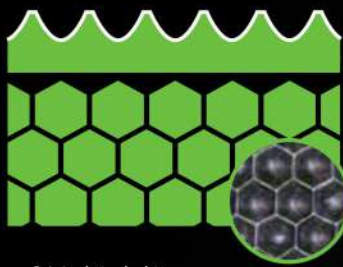
## RECOMMENDED INK VOLUME RANGES (BCM/in<sup>2</sup>)

TYPE OF WORK	SCREEN LPI IMPERIAL	OC	HV	HG	HD
		OPTICELL	HIGH VOLUME	HIGH GRAPHIC	HIGH DEFINITION
		MIN - MAX	MIN - MAX	MIN - MAX	MIN - MAX
↑ COATINGS, HEAVY LINE & SOLIDS ↓	65	34.0 - 42.0			
	80	22.0 - 31.5			
	100	17.0 - 21.0	18.6 - 35.8		
	120	15.5 - 18.0	16.9 - 30.2		
	140	13.0 - 16.5	14.3 - 26.6		
	150	11.0 - 13.0	12.1 - 20.0	13.5 - 19.4	
	165	10.0 - 12.0	10.9 - 17.5	12.1 - 18.3	
	180	9.0 - 11.0	9.9 - 16.1	11.0 - 16.7	
	200	8.0 - 9.5	8.7 - 14.2	9.5 - 14.5	
	220	7.0 - 8.5	7.7 - 13.0	8.9 - 13.5	
↑ LINE & TYPE ↓	250	6.8 - 7.5	7.4 - 12.1	8.3 - 12.6	
	280	6.3 - 6.9	6.7 - 10.5	7.2 - 11.0	10.0 - 13.8
	300	5.3 - 5.8	5.7 - 8.8	6.1 - 9.3	9.3 - 12.8
	330	4.2 - 5.4	5.2 - 8.5	5.5 - 8.7	8.9 - 12.4
	360	3.9 - 5.0	4.8 - 7.2	4.9 - 7.6	8.0 - 11.1
	400	3.8 - 4.5	4.2 - 6.6	4.5 - 6.9	6.7 - 9.2
	440		4.0 - 6.3	4.3 - 6.6	6.0 - 8.4
	500		3.4 - 5.4	3.4 - 5.7	5.1 - 7.1
	550		3.2 - 4.8	3.2 - 5.0	4.8 - 6.7
	600		2.1 - 4.2	2.8 - 4.3	4.5 - 6.2
↑ VIGNETTES FINE TYPE ↓	660		1.9 - 3.9	2.5 - 4.0	3.9 - 5.6
	700		1.7 - 3.5	2.3 - 3.7	3.7 - 5.1
	800		1.5 - 3.2	2.1 - 3.4	3.0 - 4.2
	900		1.3 - 2.3	1.8 - 3.0	2.8 - 3.8
	1000		1.1 - 2.1	1.3 - 2.4	2.5 - 3.5
	1100		1.0 - 1.9	1.2 - 2.3	2.3 - 3.2
	1200		0.9 - 1.7	1.1 - 1.9	2.1 - 2.8
	1300		0.8 - 1.6	1.0 - 1.7	1.8 - 2.5
	1400		0.8 - 1.5	0.9 - 1.6	1.6 - 2.2
	1500		0.7 - 1.4	0.8 - 1.5	1.4 - 2.0
↑ PROCESS ↓	1600			0.7 - 1.4	1.2 - 1.8
	1800			0.7 - 1.3	1.1 - 1.7
	2000			0.7 - 1.2	1.0 - 1.6

Imperial - Lines Per Square Inch (LPI)

# OC

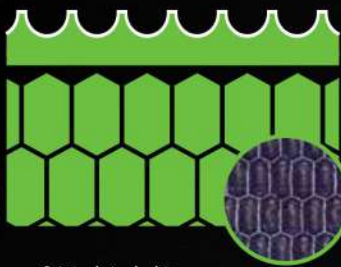
OPTCELL 60°



- Original single-hit laser technology
- Parabolic beam profile
- Deeper cells with lower cell counts to achieve volume
- **Thermally treated** cells to extend roll life
- Cost effective
- Good for all printing and coating applications
- Good performance for all markets from corrugated, carton, paper and film substrates
- **65-400 cells per inch range**
- **3.8-42 BCM volume range**

# HV

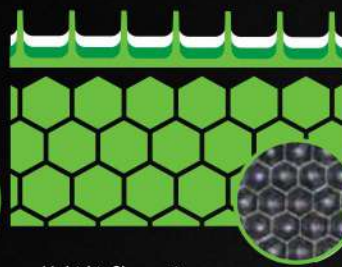
HIGH VOLUME 70°



- Original single-hit laser technology
- "U" shaped cell profile
- Shallower cells with higher cell counts to achieve volumes
- Custom extended 70 degree cell design
- Improved plate and doctor blade support
- **Thermally treated** for longer roller life
- Improved ink circulation
- Improved performance for all markets from corrugated, carton, paper and film substrates
- **100-1500 cells per inch**
- **0.7-35.8 BCM volume range**

# HG

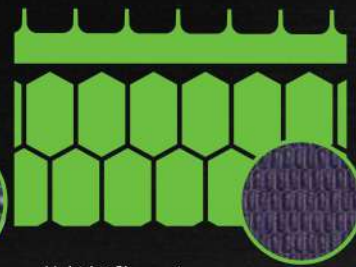
HIGH GRAPHIC 60°



- Multi-hit fiber optic laser technology
- "U" shaped cell profile
- Custom bitmap cell design
- Deeper cell profiles
- Higher cell counts per volume specification
- Excellent support for High Graphics process and combination plate applications
- Improved performance for all markets from carton to paper and film substrates
- **150-2000 cells per inch**
- **0.7-19.4 BCM volume range**

# HD

HIGH DEFINITION 75°



- Multi-hit fiber optic laser technology
- "U" shaped cell profile
- Custom bitmap cell design
- Longer cell shape
- Shallower cells to achieve volumes
- Higher cell counts per volume specification
- Improved ink circulation
- Improved doctor blade support
- Ultimate support for High Definition process and combination plate applications
- Improved performance for all markets from carton to paper and film substrates
- **280-2000 cells per inch**
- **1.0-13.8 BCM volume range**

## OPTIMIZING ROLLERS FOR PEAK PRINT QUALITY

Today's typical anilox roller is laser engraved with microscopic "ink wells" called cells. The shape, size and depth of these cells impact how ink is transferred from the roller to the plate. By selecting the optimum range for the job within these key specs you can

greatly enhance your efficiency and quality. Our ANAR representative will be happy to assist you in determining the condition and best application of your roller inventory and make recommendations for improved print quality and process efficiency.

### CELL VOLUME

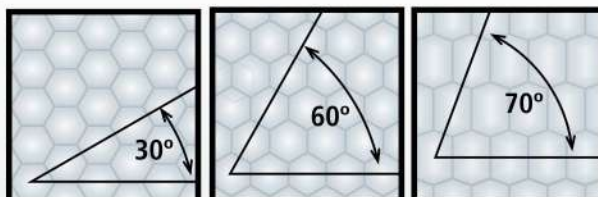
Measured in billions of cubic microns (BCM) per square inch, the volume of ink which a roller can hold affects

**the density, crispness and overall tonal range possible for the image.** Lower anilox roll volumes transfer a thinner film of ink which enables more tonal range, best image quality and greater efficiency. However color density is reduced due to the thinness of the layer of ink. As roller volumes increase you get higher density, but you'll also see more dot gain and fill-in of type and lines.

### CELL SHAPE

Closed cell technology gives the press operator the optimum control of ink film to the plate. Equal-

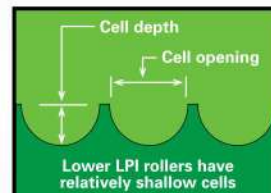
sided hex (60°) or (30°) cells have been the industry standard. New laser technology now makes more open cell designs possible, such as 70° hex and 30° hex channeled shapes. These geometries allow ink to better circulate and refresh in the cells and allow for higher cell counts at similar volumes.



### CELL COUNT

This refers to the number of cell lines per inch (LPI) along the engraving axis.

Low LPI cell counts have a shallower cell depth compared to the opening at the top of the cell, making



control of the ink film more difficult. Higher cell counts give you greater ink control and more consistent ink film transfer. They also provide more support for plates and doctor blades.

