Rowmark

Laser Setting Reference Guide

Laser Setting Recommendations

The laser settings and recommendations in this document are for reference purposes only and are provided by Rowmark to our customers as a courtesy. This guide is intended to offer a starting point however, adjustments may be necessary to achieve your optimal result as differences in equipment will inevitably cause different results.

MATERIAL

MetalGraph Plus™	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	50	70	500	2	50	40	400	1
Trotec - 60 watt	60	90	500	2	90	5	400	1
Universal - 40watt	60	80	500	1	90	5	400	1

Color Cast Acrylics	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	50	70	500	2	50	15	400	3
Trotec - 60 watt	70	80	500	1	70	5	400	3
Universal - 40watt	70	80	500	2	80	5	400	3

Frosted Acrylics	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	50	70	500	2	50	15	400	3
Trotec - 60 watt	70	80	500	1	70	5	400	3
Universal - 40watt	70	80	500	2	80	5	400	3

LaserMax®	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	40	80	500	1	50	40	400	1
Trotec - 60 watt	60	100	500	1	90	5	400	1
Universal - 40watt	60	80	500	1	80	5	400	1

LaserMark®	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	40	80	500	1	50	40	400	1
Trotec - 60 watt	60	100	500	1	90	5	400	1
Universal - 40watt	60	80	500	1	80	5	400	1

Reverse **LaserMark®**	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	40	80	500	2	50	40	400	1
Trotec - 60 watt	60	100	500	2	90	5	400	1
Universal - 40watt	60	80	500	2	80	5	400	1

FlexiColor® & FlexiBrass®	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	40	75	600	1	15	30	400	1
Trotec - 60 watt	60	100	500	1	20	5	400	1
Universal - 40watt	45	80	500	1	30	5	400	1

Textures	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	80	60	400	2	50	40	400	2
Trotec - 60 watt	80	60	500	2	90	5	400	2
Universal - 40watt	80	60	500	2	80	5	400	2

Granites Deluxe™	Raster Power	Raster Speed	PPI	Passes	Vector Power	Vector Speed	Hz or PPI	Passes
Epilog - 60 watt	40	80	500	1	50	40	400	1
Trotec - 60 watt	60	100	500	1	90	5	400	1
Universal - 40watt	60	80	500	1	80	5	400	1

Rowmark Lasering Recommendations

- **Bottom Up Engraving -** Change the orientation of your laser to begin engraving from the bottom of the material upwards. This simple process will minimize the amount of residue being exhausted over previously engraved material which can re-deposit on the warm core and make clean up difficult. You can change the orientation of your laser to bottom up engraving from the advanced tab in your print driver.

- **PPI –** Lowering the number of pulse firings per inch, particularly when engraving larger text or objects, will help keep the material cooler minimizing warp tendencies. Setting your PPI at 400 for photo engraving will also minimize the 'banding effect' often experienced in photo engraving.

- **Vector Cutting –** When your application will permit, Rowmark recommends leaving the protective masking in place when performing vector cuts. This will minimize burn residue and clean up efforts. Ensure laser is properly focused to ensure clean, smooth cuts. PPI's over 400 when used in vector cutting are also a root cause of tacky edges.

- **Soft Focus –** When lasering reverse engraveable materials, a second pass with a soft focus can create a smoother 'glass like' finish. Focus your laser to your material, run the first raster pass. Then drop your laser out of focus .020" to run the second pass.

Rowmark Lasering Recommendations (cont.)

- **Reds & Blues –** Laserable materials with heavy color concentrated caps can offer some challenges in achieving a sharp white raster result. Once again, using the 'bottom up' engraving method will minimize the re-distribution of color residue to the white. Increasing power in 5% increments can be helpful and frequently multiple passes will be required to achieve your optimal result.

- **Cleaning –** While experienced customers may have some success using alternative cleaners, Rowmark strongly recommends cleaning with mild dish soap and warm water. Damaged caused by the use of alternative cleaning solvents is solely the responsibility of the user.

- **Air Assist -** Commonly used in vector cutting applications to remove heat and combustible gases from the cutting surface. By directing a constant stream of air across the cutting surface, possible flaming and scorching are reduced.

- **Safety –** While offering these guidelines as a starting point for laser engravers, we need to recognize that all machines and fabrication circumstances vary from shop to shop. Common practice will reinforce the engraving basics: Most laserable acrylics can be engraved at high speed with the power adjusted according to the wattage of your laser. Some will require multiple passes. Cutting acrylic is best achieved using relatively slower speed and higher power. This combination allows the laser to melt the edges of the acrylic and produce a polished edge. Always remember … acrylics are flammable … NEVER leave your laser unattended when vector cutting materials.

Laser Equipment Resources

- **GCC America – Walnut, CA -** www.**gcc**world.com/
- **Preco Golden Laser – Somerset, WI -** precogoldenlaser.com
- **Universal Laser Systems – Scottsdale, AZ -** www.**uls**inc.com/
- **Epilog Laser Systems – Golden, CO -** www.**epiloglaser**.com/
- **SEI Lasers – Bergamo, Italy -** www.**sei**spa.com/eng/index.html
- **Trotec Laser Systems – Wels, Austria -** www.**troteclaser**.com/
- **Vision Engraving Systems – Phoenix, AZ -** www.**visionengraver**s.com/
- **Vytek – Littleton, MA -** www.**vy-tek**.com/