

Material Parameters–Recommended Settings

Thunder Bolt Laser Engraver | RF 30W

Purpose & Scope:

This document provides recommended material parameters for the Thunder Bolt RF 30W laser engraver. The parameters are intended as typical starting points for standard engraving and cutting applications.

Material	Thickness (mm)	Processing	Speed (mm/s)	Min Power (%)	Max Power (%)	Air pressure value	DPI	Focus Lens
Birch Ply	/	Engraving	1000	10	50	0.5	350	2
Birch Ply	3mm	Cutting	20	10	90	1.5	/	2
Birch Ply	6mm	Cutting	5	10	90	1.5	/	2
Cherry Wood	/	Engraving	50	10	50	0.5	350	2
Cherry Wood	3mm	Cutting	20	10	90	1.5	/	2
Cherry Wood	8mm	Cutting	6	10	90	1.5	/	2
Cherry Wood	11mm	Cutting	4	10	90	1.5	/	2
MDF	3mm	Cutting	15	10	90	1.5	/	2
Acrylic	3mm	Cutting	15	10	90	1.5	/	2
Acrylic	5mm	Cutting	10	10	90	1.5	/	2
Acrylic	10mm	Cutting	2	10	90	1.5	/	2
EVA Foam	10mm	Cutting	20	10	90	1.5	/	2
Cork	3mm	Cutting	30	10	90	1.5	/	2
Bamboo	3mm	Cutting	7	10	90	1.5	/	2
Cotton Fabric	1mm	Cutting	50	10	90	1.5	/	2
Cotton Fabric	3mm	Cutting	45	10	90	1.5	/	2
Cardboard	3mm	Cutting	10	10	90	1.5	/	2
Cardboard	4mm	Cutting	7	10	90	1.5	/	2
Leather	1.5mm	Cutting	180	10	90	1.5	/	2

Material	Thickness (mm)	Processing	Speed (mm/s)	Min Power (%)	Max Power (%)	Air pressure value	DPI	Focus Lens
Leather	3mm	Cutting	20	10	90	1.5	/	2
Denim	1mm	Cutting	50	10	90	1.5	/	2
Rubber	2.3mm	Cutting	10	10	90	1.5	/	2
Delrin	1mm	Cutting	30	10	90	1.5	/	2
Delrin	3mm	Cutting	8	10	90	1.5	/	2
Delrin	5mm	Cutting	2	10	90	1.5	/	2
Melamine	1mm	Cutting	6	10	90	1.5	/	2
Paper	0.6mm	Cutting	300	10	90	1.5	/	2
Mylar	1.5mm	Cutting	20	10	90	1.5	/	2
Anodized Aluminum	/	Engraving	1000	50	50	low	350	2
Coated Metals	/	Engraving	1000	60	60	low	350	2
Ceramic	/	Engraving	1000	60	60	low	350	2
Glass	/	Engraving	1000	50	50	low	350	2
Marble	/	Engraving	1000	40	40	low	350	2
Tile	/	Engraving	1000	50	50	low	350	2

Disclaimer:

These parameters are provided as recommended values only. Actual results may vary due to material differences, environment, and machine condition. Always perform a small test before production.

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