

20EPE Cutting Test Report

For Model: Spirit Models (GLS100 w, GLSPro, LSPro)

Lens: 2" & 4"

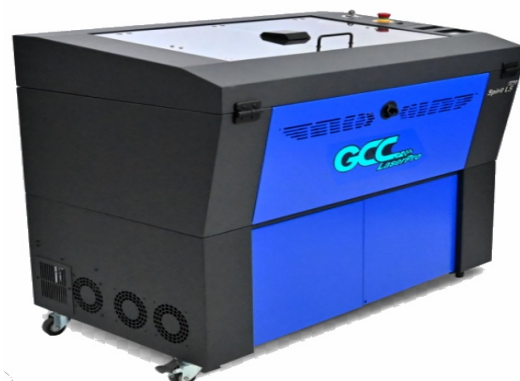
9mm · 20mm 35mm EPE 9mm EPE



9mm 2" Lens

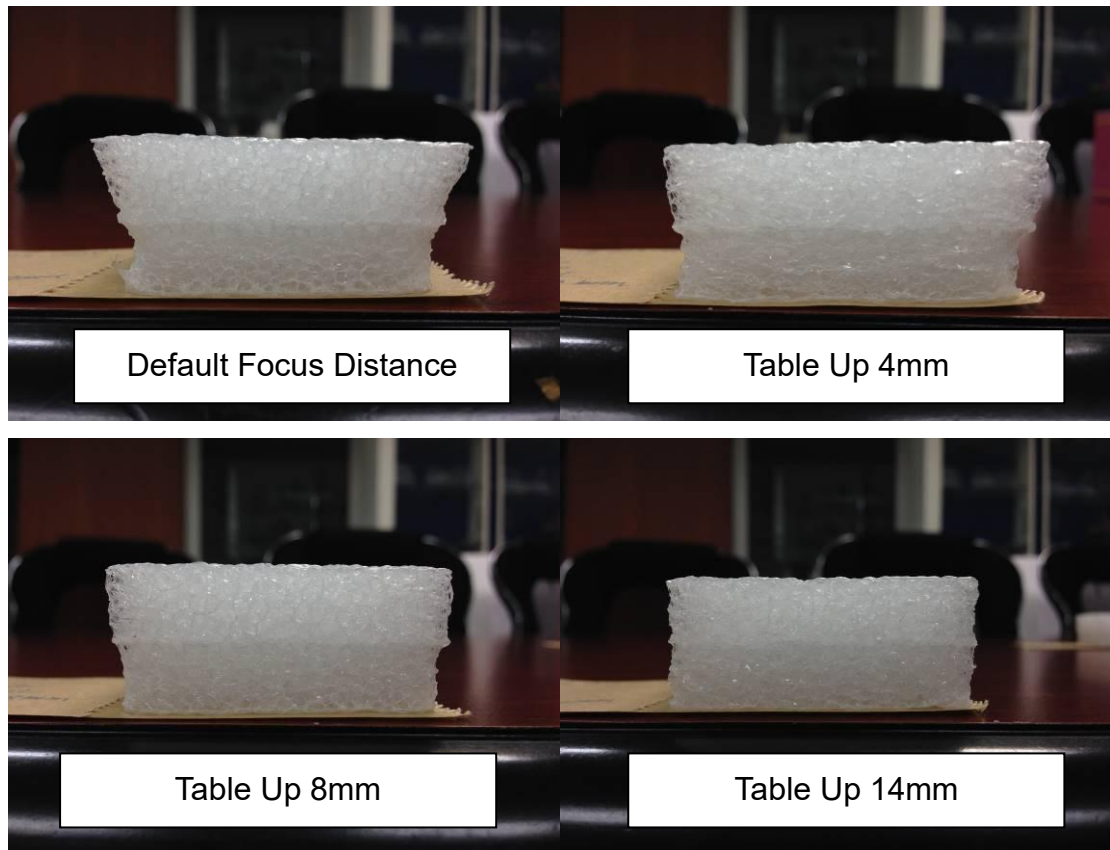
Parameter

Spirit GLS 100W			
Speed	Power	dpi	Other
10 %	100 %	500	Air Assist

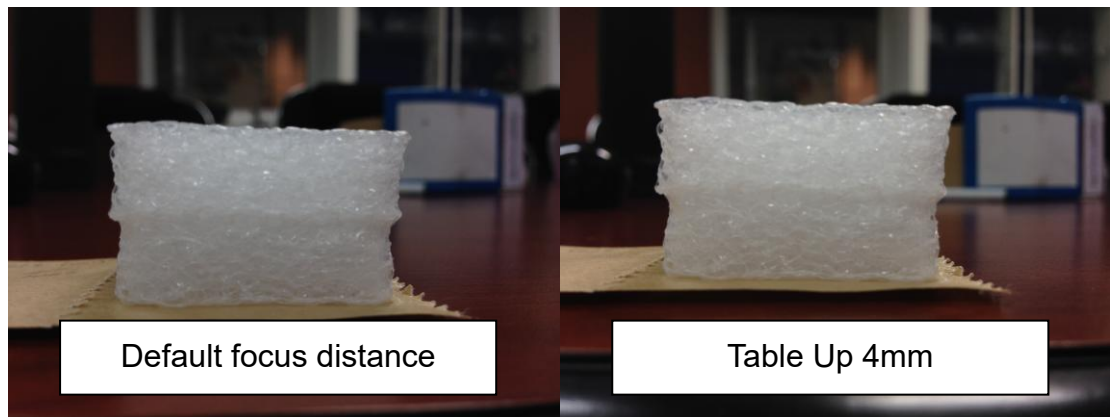


20mm EPE

2" Lens



4" Lens



2" Lens EPE Standard nozzle
14mm) 4" Lens

Cutting Foam inserts: <https://www.gccworld.com/showcase.php?act=view&id=156>

What kind of materials can a GCC LaserPro laser engraver cut or engrave?

<https://www.gccworld.com/knowledge.php?act=view&id=19>

2" & 4" Lens

Spirit GLS 100W			
Speed	Power	dpi	Other
4 %	100 %	500	Air Assist

35mm EPE

2" Lens



4" Lens

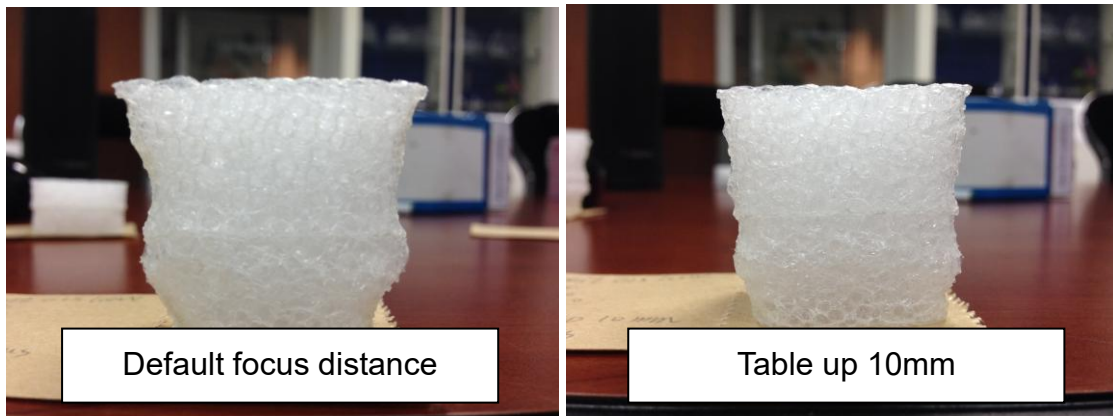


Table up 20mm



Filtrations, Laser, Rotary Engraving Machines, Supplies, Software, Support

2" Lens 3% speed 5% Speed
4" lens 20mm Parameter

4" lens 2" lens EPE · 20mm 18mm ◦
Driver scale

Spirit GLS 100W				
Speed	Power	dpi	Other	Pass
5 %	100 %	500	Air Assist	2

Laser cutting foam is a great way to create clean, precise custom shapes, toolbox inserts, and props

For best results, use laser-safe materials like EVA, polyethylene (PE), or polyurethane (PU) foam. Always avoid polystyrene (Styrofoam) and PVC foams, as they are toxic and pose a severe fire hazard.

Best Practices for Laser Cutting Foam

Material Choice: EVA foam (often found as floor mats or craft sheets) and Shadow Foam are the most popular and laser-friendly choices.

Laser Type: CO2 lasers are highly efficient and produce the cleanest cuts.

Air Assist & Extraction: Foam vaporizes when burned. Always use high air assist to prevent flare-ups and ensure you have proper ventilation or Purex fume extraction to handle the odors.

Focus & Speed: For thicker foam, you may need to drop your focal point slightly below the surface of the material rather than directly on top. Using multiple, faster passes is generally much better than using one slow, high-power pass, as it prevents the edges from burning or melting away. We recommend using a four (4) inch lens and use multiple passes to prevent flaming.

Cutting Order: If you are cutting out shapes and an outer border (like a tool insert), ensure your design software is set to cut the internal shapes first. If the main perimeter is cut first, the material will shift and ruin the accuracy of your internal cutouts.

While Cutting: do not leave machine unattended such as going out to lunch or going home as this material can easily flame. We recommend using an alarm such as GCC's SmartGUARD™ Fire Alarm (Patented). Laser engraving and cutting operation using the SmartGUARD Fire Alarm assures optimum safety. When there is a malfunction, the alarm system will be active and shut-down the operation system immediately.

Recommended Starting Settings (Baseline)

Settings will vary heavily based on your specific wattage, lens (4" lens recommended), and foam density. Always run a small test grid before committing to a full design.

CO2 Laser (e.g., 60W, 80W, 100W+) for 1/4" to 1"+ EVA Foam:

Speed: 15 mm/s to 30 mm/s

Power: 70% to 100%

Passes: 1 to 3 passes (depending on thickness and machine model)