Trotec Speedy 100

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Tool Type: “Laser Cutter”
Location: “Microfluidics lab”

Supervisor	Tool Lead
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Description: “Bright Light Cutter”
Manufacturer: “Trotec”

About

One of two laser cutters, the Trotec is located in the Innovations Workshop above its fume extractor. Both laser cutters utilize CorelDraw as a 2D sketch manager which is then imported into Trotec's specific cutting software. CorelDraw can be used to create the 2D sketch, however importing a DXF file or PDF into CorelDraw from Solidworks or other CAD packages is preferred due the CAD packages integrated features and functions.

Training Documentation

Laser Cutter Training SOP

Detailed Specifications

Work Area: 910 x 305 mm
Max Workpiece Height: 125 mm
Laser Power: 10-120 Watts

Safety Concerns

Looking directly into the laser can cause retinal damage. Confirm that the fume collection system is running whenever the laser is cutting or engraving. See list of approved materials for laser cutting, some require nitrogen gas if flammable, or could release chlorine gas if cut. NO NOT CUT NON APPROVED MATERIALS INCLUDING METALS. Laser lenses must be cleaned within ONE WEEK of time of use. If lenses has not been cleaned, clean before use to avoid damaging lenses.

Operating Procedures

1. Turn on laser cutter and fume extractor
2. Use focusing tool to set bed height based on workpiece, move laser to desired starting position
3. Launch CorelDraw and import 2D sketch as PDF or DXF. Take the time to check scale using built in page rulers
4. Set lines to be cut as RED and patterns to be engraved as BLACK. (must use true RGB red and black)
5. Select Print → Print settings
6. Within Print settings select desired laser recipe based on material and thickness, verify one click print is turned off, print order is set to inner features first, and import dimensions from CorelDraw is selected
7. Click Print
8. Navigate to Trotec software
9. Check Scale, do a dry run without laser power if necessary
10. Send job to laser cutter

Reference Documentation

Marking Tape/Paint

Operation Manual

Service Manual

Plastic Processing Guide

Job Control Software Manual

Laser cutting data