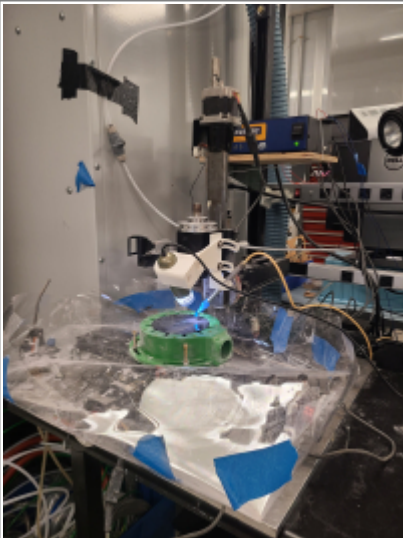


# Crystalmark Etching Tool

| Crystalmark   |
|---|
|  |
| <b>Tool Type:</b> Etching Tool  |
| <b>Location:</b> Microfluidics Lab  |
| <b>Description:</b> [SOMETHING]   |
| <b>Manufacturer:</b> CrystalMark  |

## About

The CrystalMark Etcher is located in the Microfluidics Lab on the middle table by the Haas CNC in 3430. It is attached to the [Sherline CNC Diamond Drill](#).

It uses air pressure and aluminum oxide abrasive to cut or etch patterns in materials such as glass or silicon. The kerf of the cuts are 700 microns.

Patterns and pre-programmed holes can be uploaded via .dxf files to a program called **insert program here**, and holes can also be added manually.

## Safety Concerns

Inhaling large amounts of aluminum oxide can be hazardous. It is recommended to wear a mask and eye protection when using the CrystalMark.

## Training Documentation

[CrystalMark SOP](#)

## Example Cuts



Contour cut in 0.5mm SI wafer



Whole pieces cut from wafer

## Detailed Specifications

- Stepper motor mounts and couplers on X-, Y- and Z-axes
- 70-2800 RPM continuously variable by electronic speed control
- Maximum CNC travel positioning speed: 22 in/min
- Max clearance (table to spindle): 8.00" (203 mm)
- Travel axes x,y,z: 8.65" (220 mm), 5.00" (127 mm), 6.25" (159 mm)
- CNC Stepper motor holding torque: 136 oz-in

## Reference Documentation

Work in progress

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