

Filtration System

Background

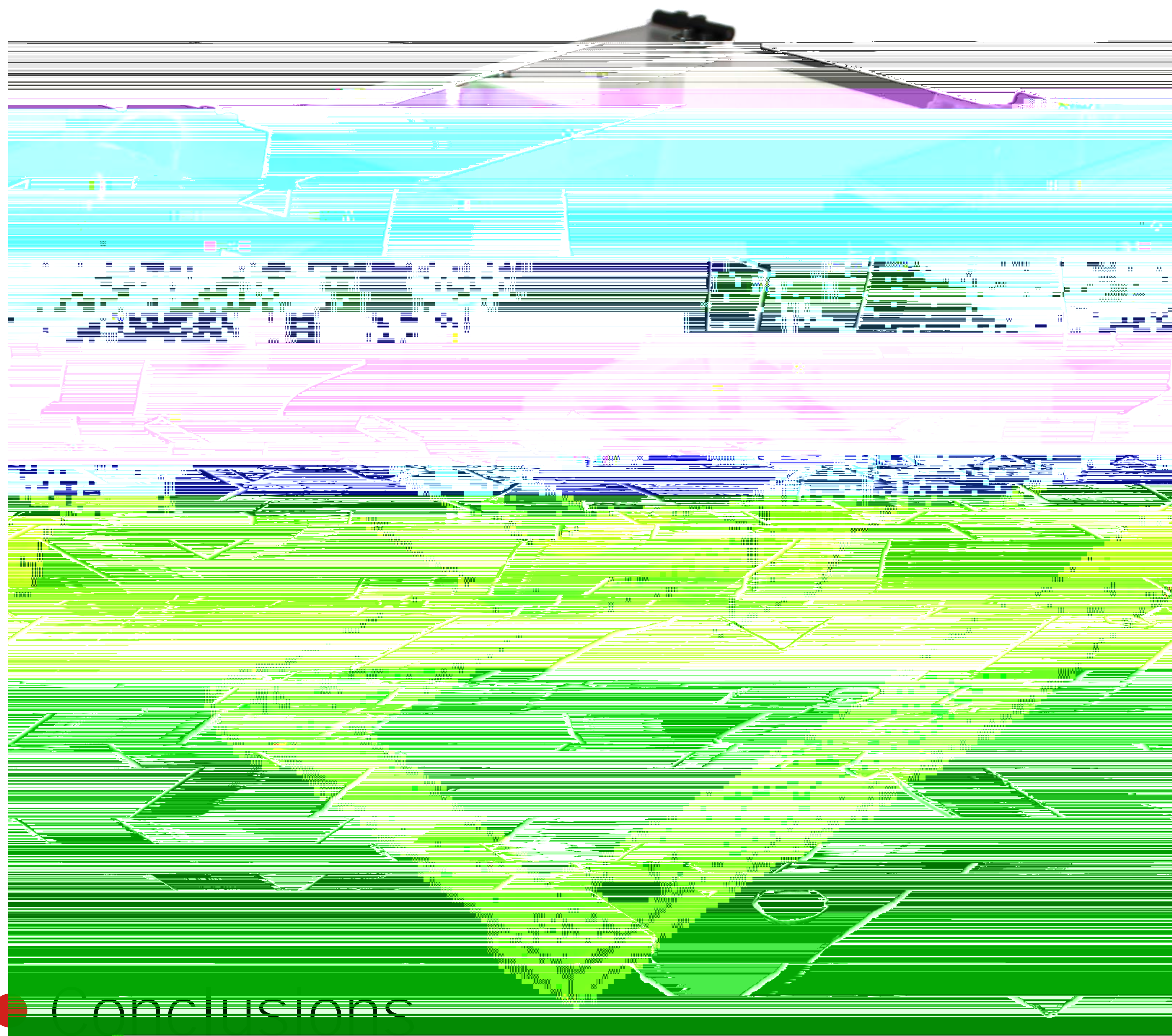
The TSCD-II from Terumo BCT makes sterile connections between plastic tubing in blood banking & cell therapy manufacturing environments. Particles are generated when a heated copper wafer cuts through PVC tubes, which must be minimized in a cleanroom environment.

| | | |
|---------|--------|-------|
| 0.5 | 1 | 5 |
| 352,000 | 83,200 | 2,930 |

ISO7 Cleanroom Standards

The Device Shall:

- Conform to ISO7 cleanroom Standards by filtering particles of 0.5 microns and above
- Reduce the percentage of particulates emitted by the machine
- Have a filter lifetime indicator
- Not complicate or impede the welding process



Using the device, particulates are reduced by 67%

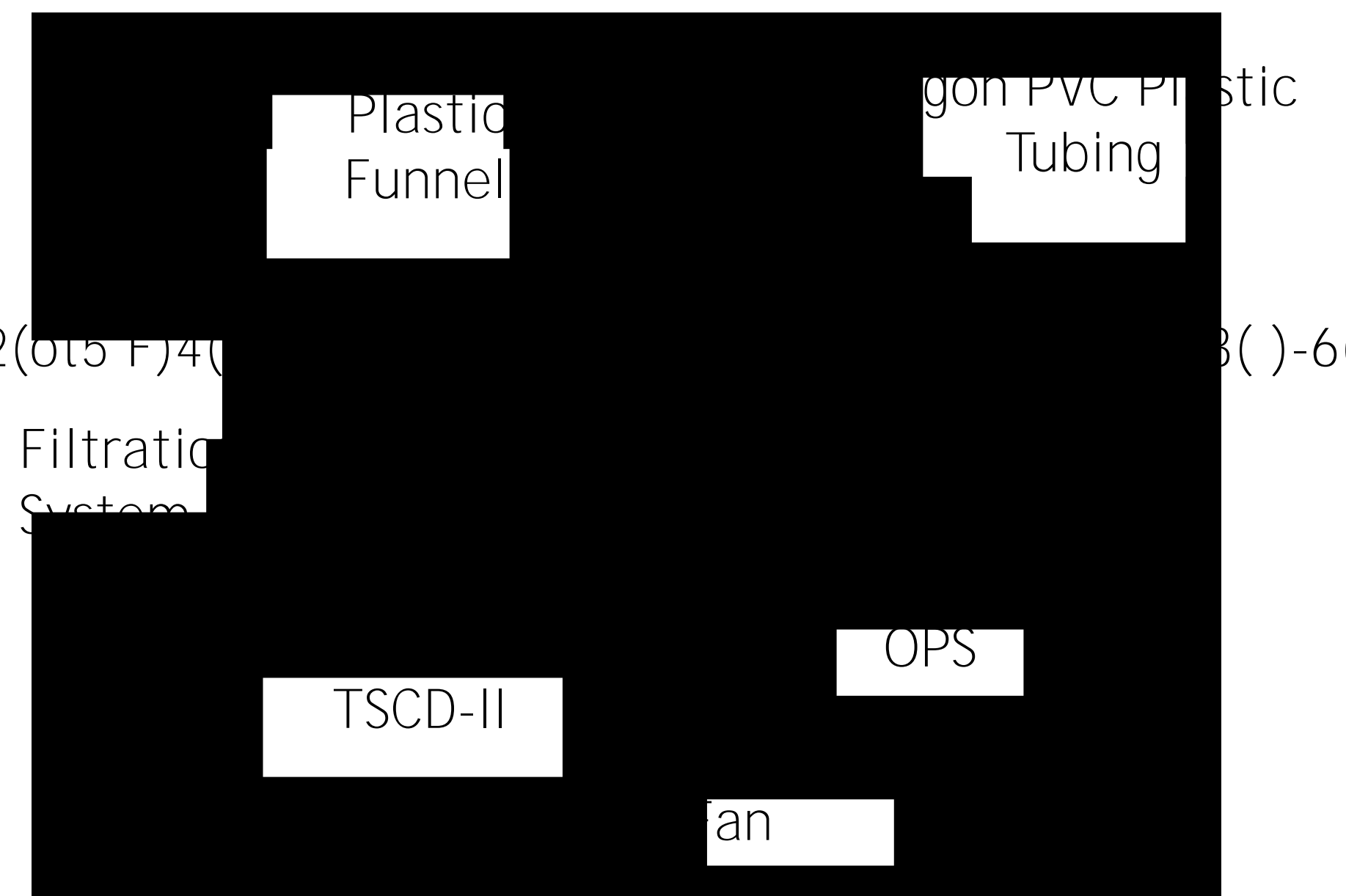
Compatible with 66 welds per hour in a 1 m³ room

The device costs \$193 in materials

Data used to assess particulates from the welder analyzed particulates of .5 microns and above

Device adds two additional steps to the welding process

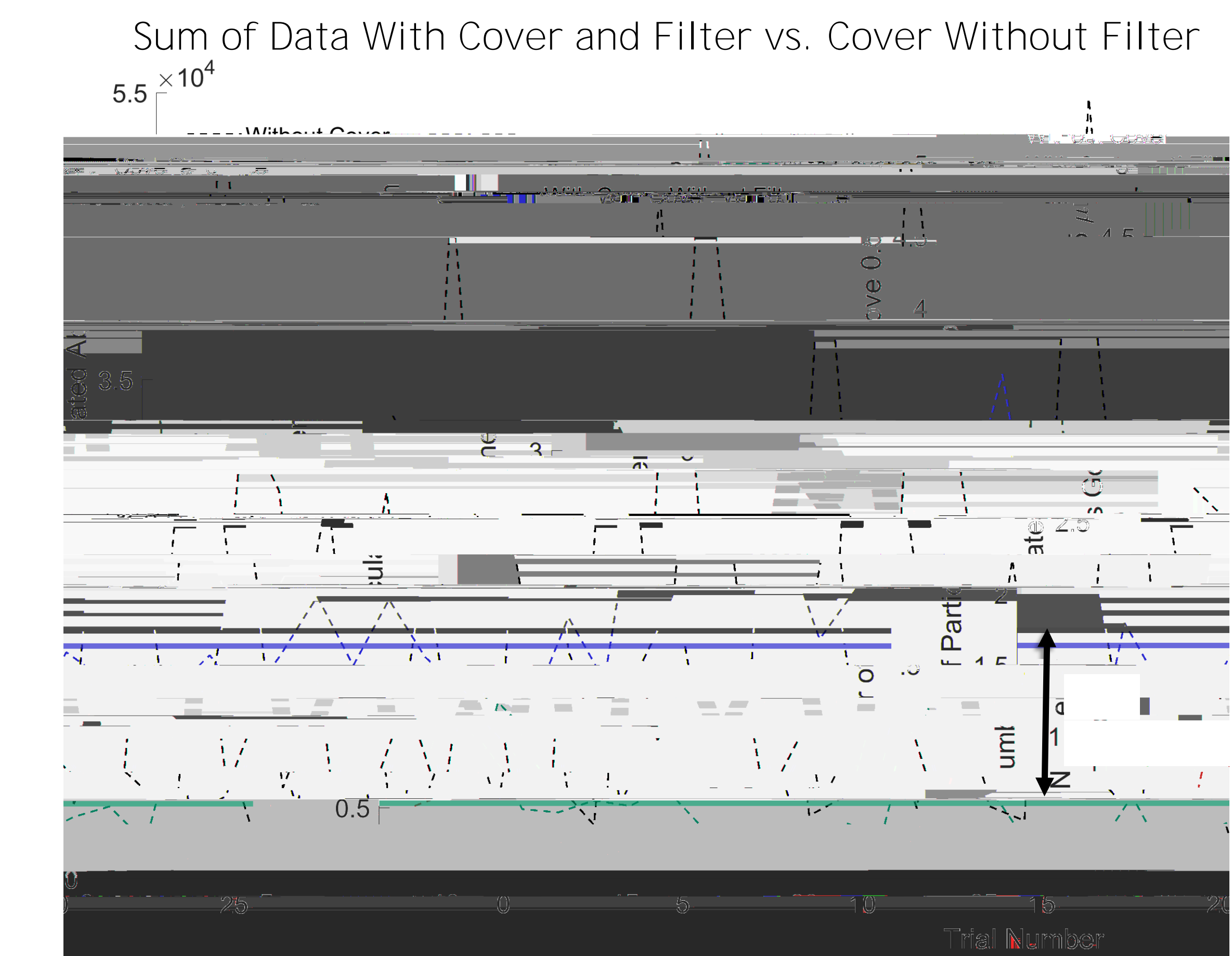
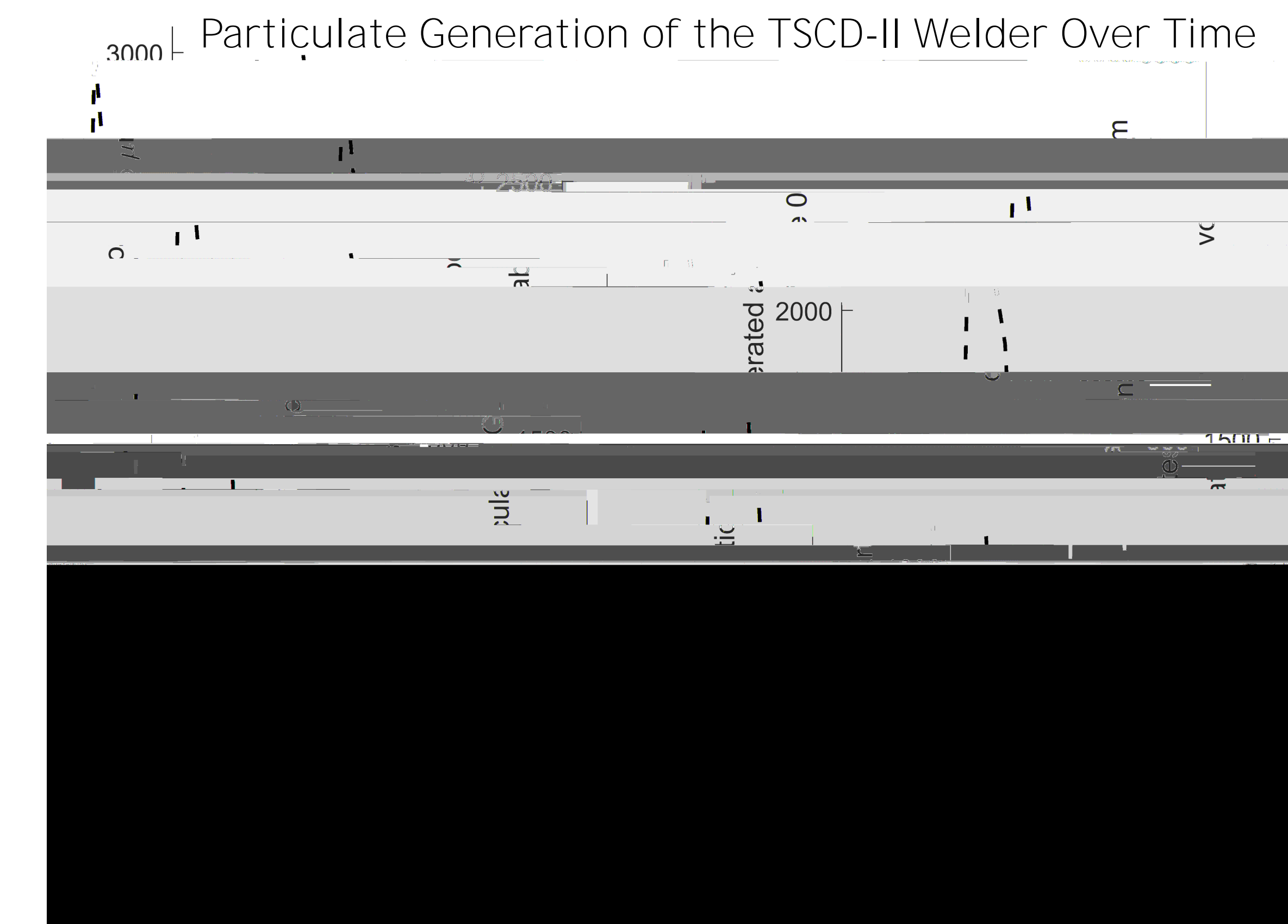
The device can be easily removed from the welder



Testing Setup

The Optical Particle Sizer Spectrometer (OPS) will run tests over the welding clamps and at the exhaust of the filter to determine the percent reduction in particulates emitted.

Data Analysis



Special thanks to Geoff Uhl, Robert DuBois, Daria Kotys-Schwartz, Julie Steinbrenner, Shelly Miller, Victoria Lanaghan, Pat Maguire, Lauren McComb, Greg Potts, Chase Logsdon, Andy Kain, Mark Eaton, Jenn Boggs and Lauren Darling.