SIMPLE METHODS

for

GREAT SCIENCE

The Old 3-D Way (To Be Avoided)

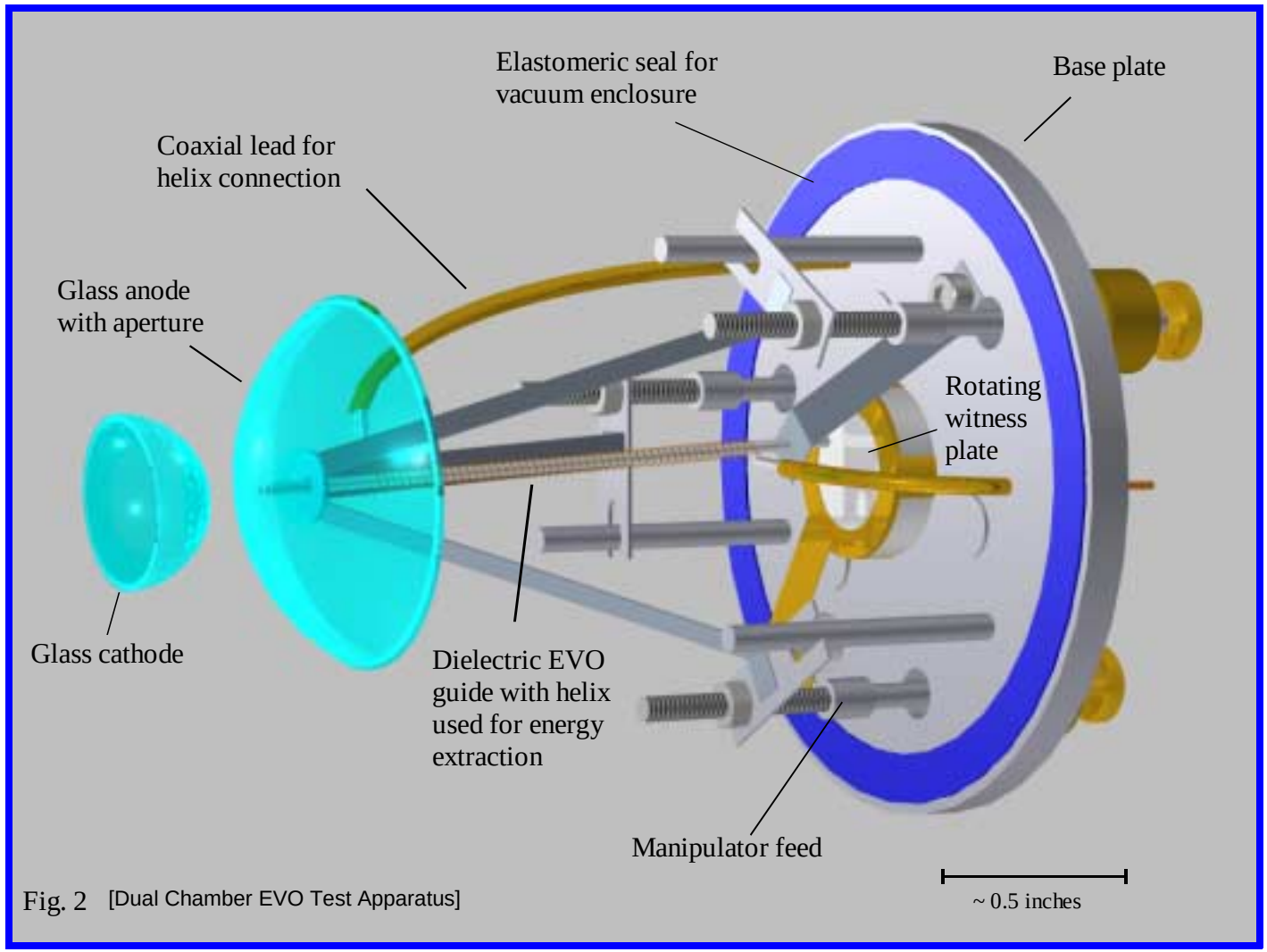


Fig. 2 [Dual Chamber EVO Test Apparatus]

A Simpler 2-D Layout For All EVO Work

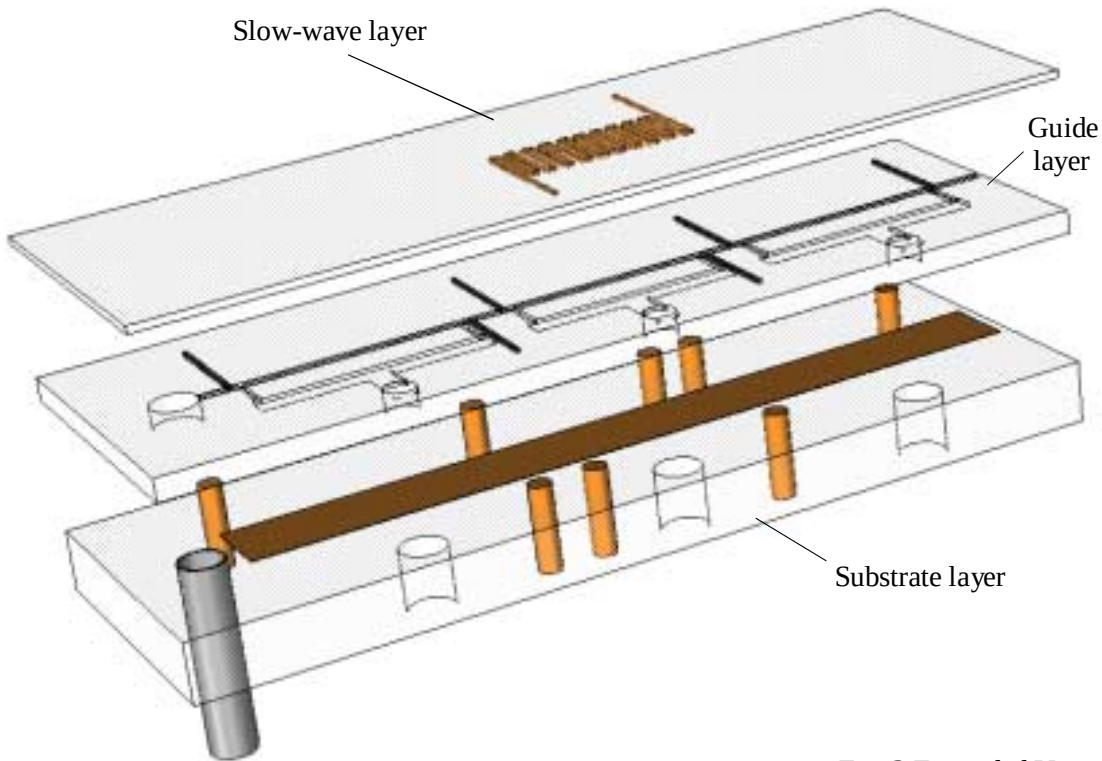


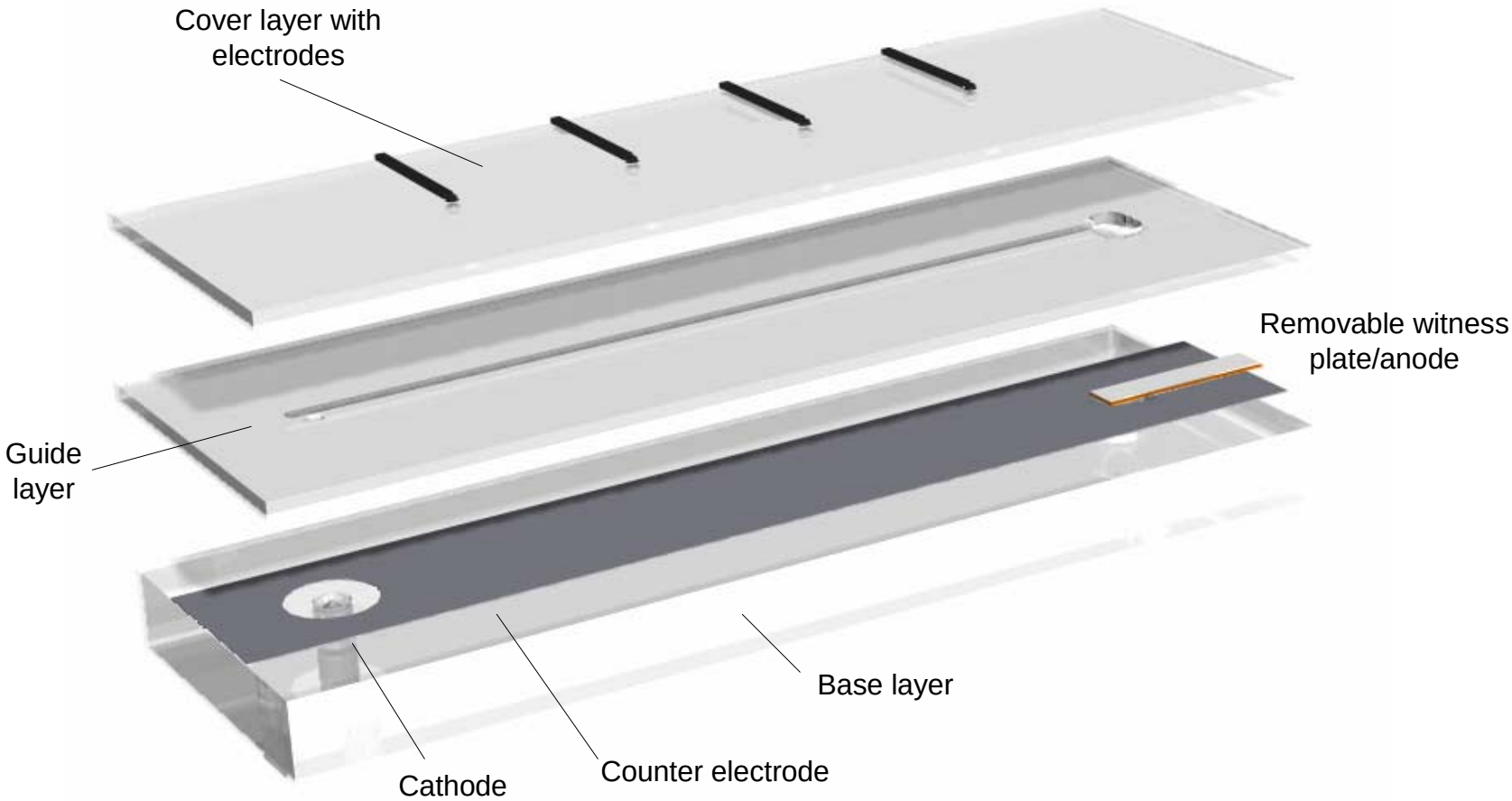
Fig. 3 Expanded View

Electric Power Generation

EVO Thrust Generation

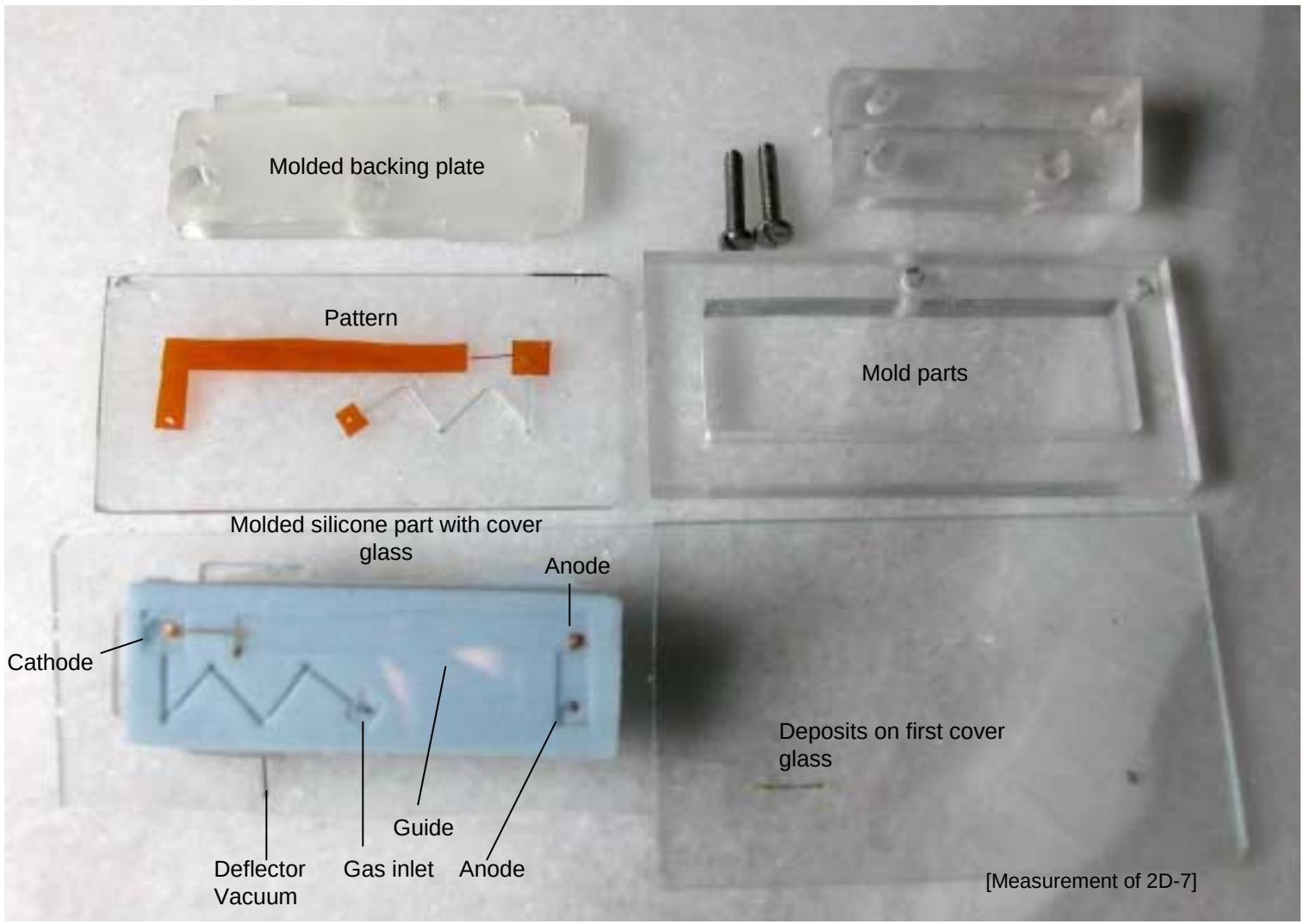
EVO Projectile Launching

Variation on 2-D Layout

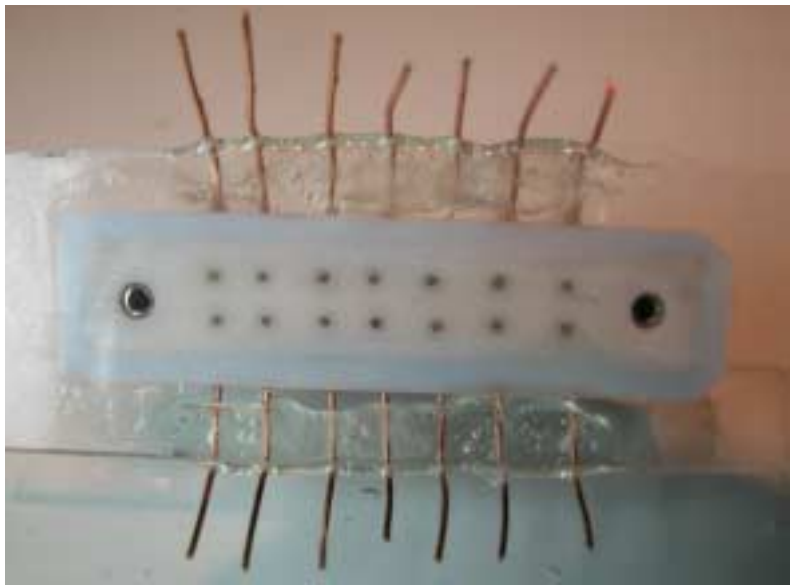


[Transverse Optical Oscillator]

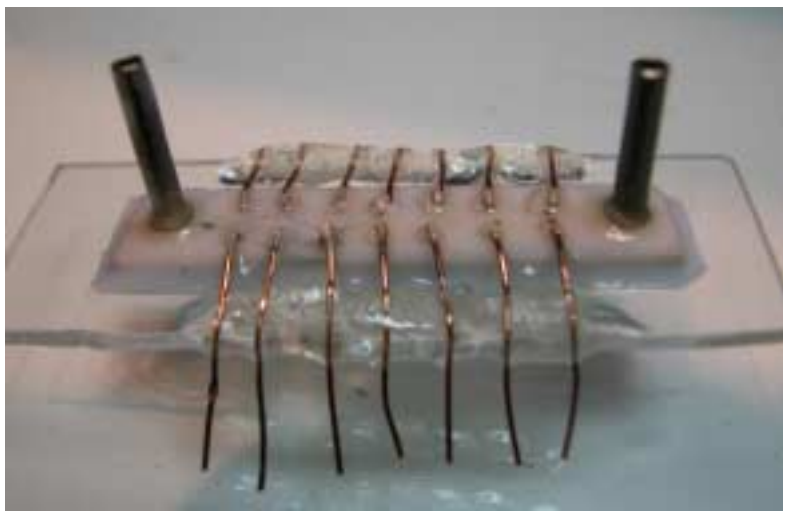
Photo of Molded Elastomer Test Layout



Ceramic 2-D Layout EVO Experiment



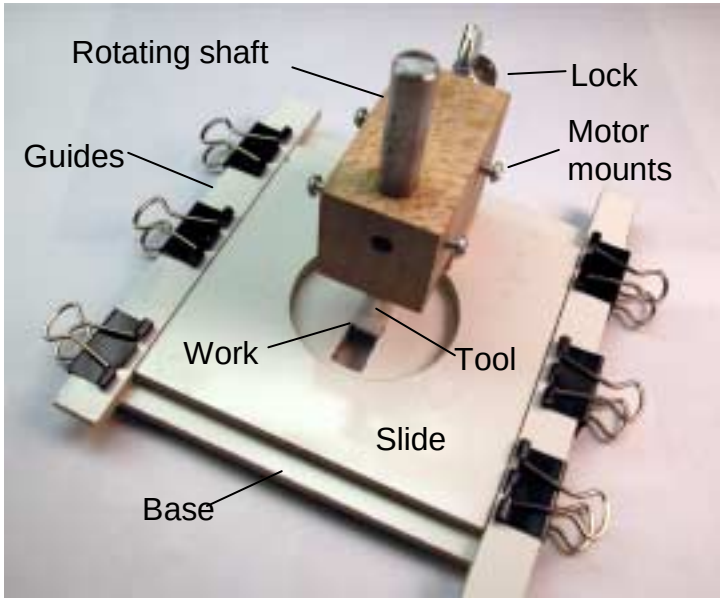
Ceramic EVO experiment with EVO source on right and anode on left with 14 leads brought out of the active region for whatever purpose is needed. Device is about 1 inch long.

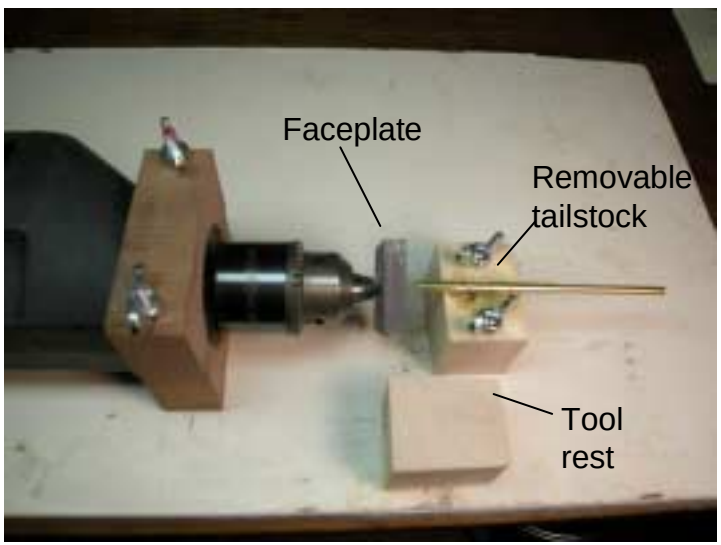


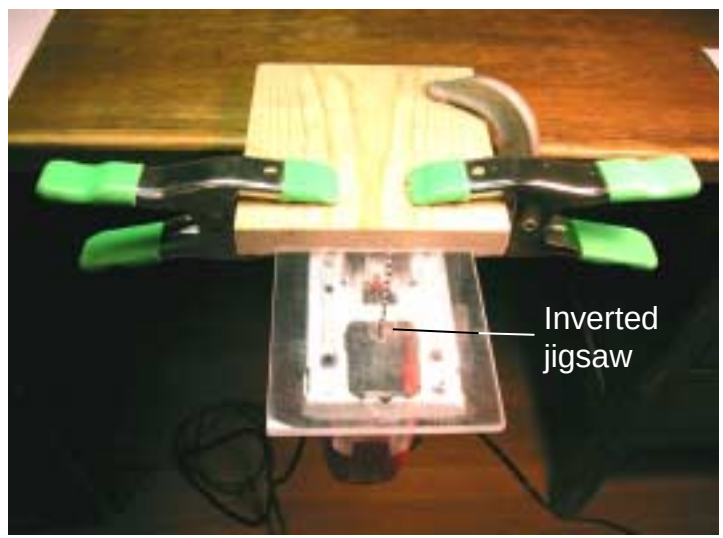
Reverse side of above experiment showing both cathode gas inlet line and anode vacuum line. Leads are temporarily attached to metal terminals with conductive cement. Entire experiment can be lifted off glass cover plate then modified and replaced without harming the elastomer seal.

[To Hawkins on Simple EVOs]

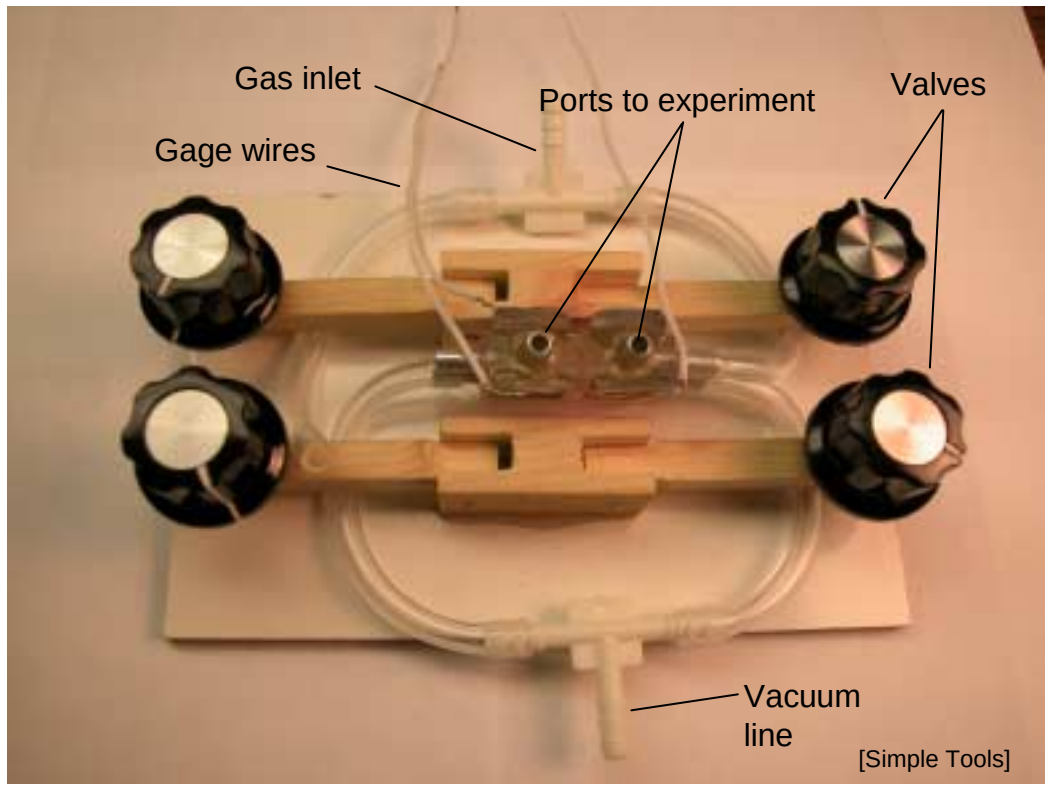
First Generation Machine Tools



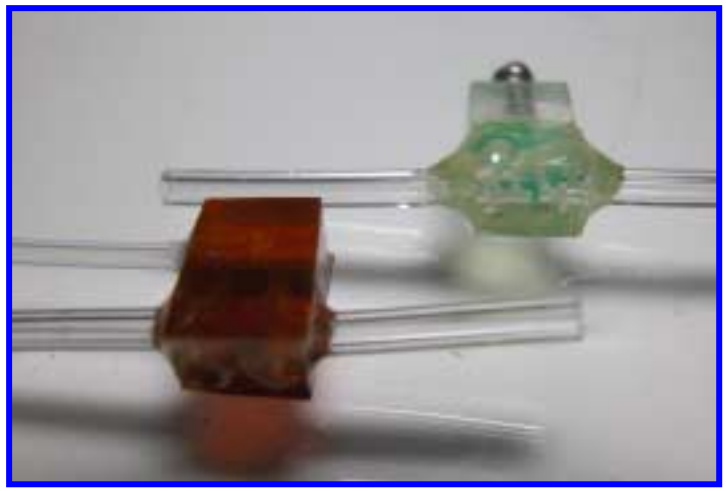




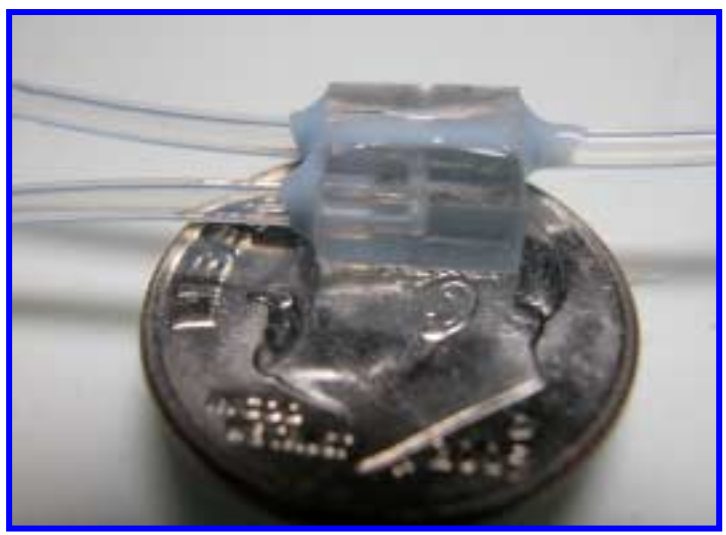
FIRST GENERATION SIMPLE VALVES AND VACUUM GAGES



EARLY PNEUMATICALLY CONTROLLED VALVES

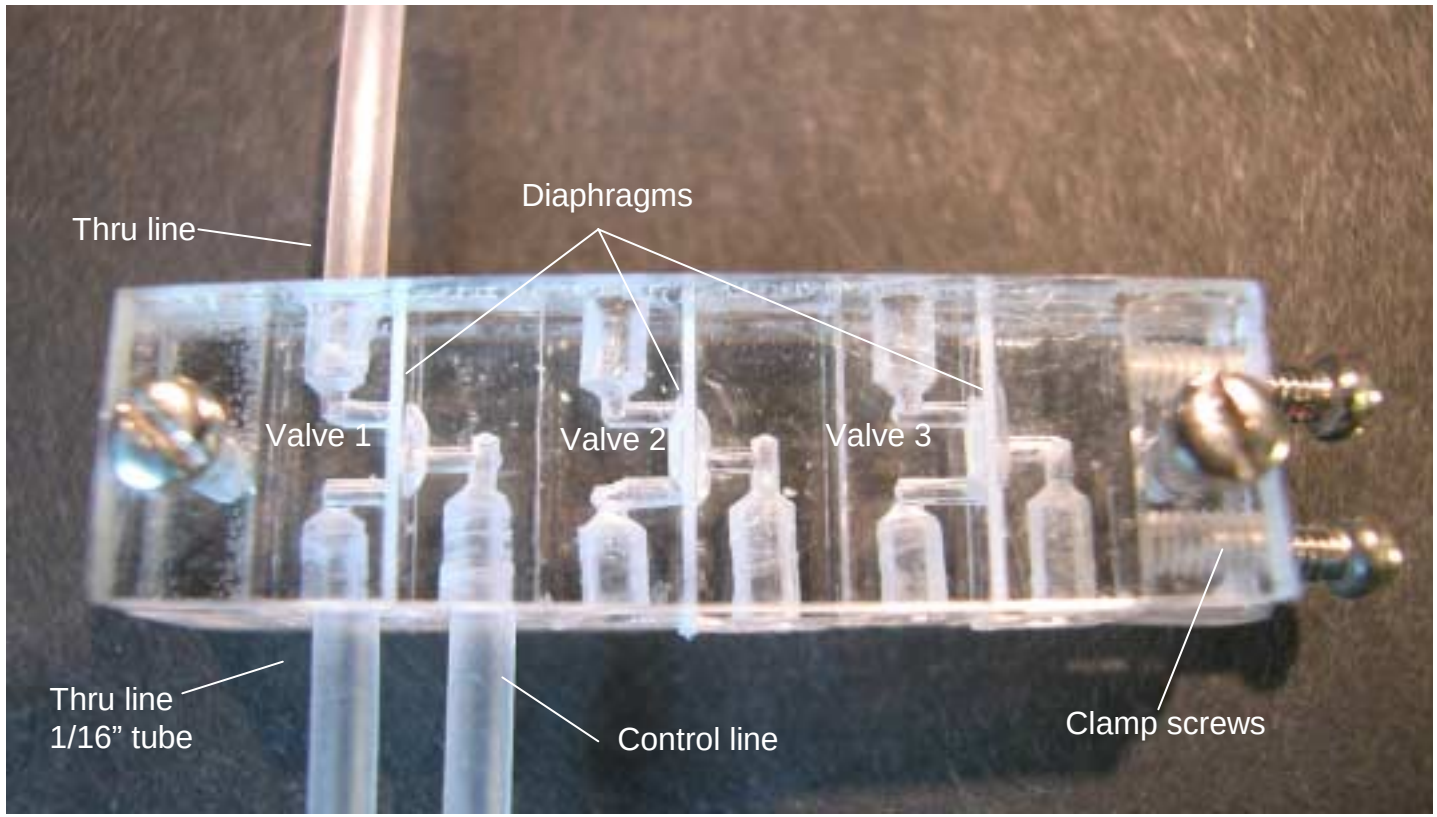


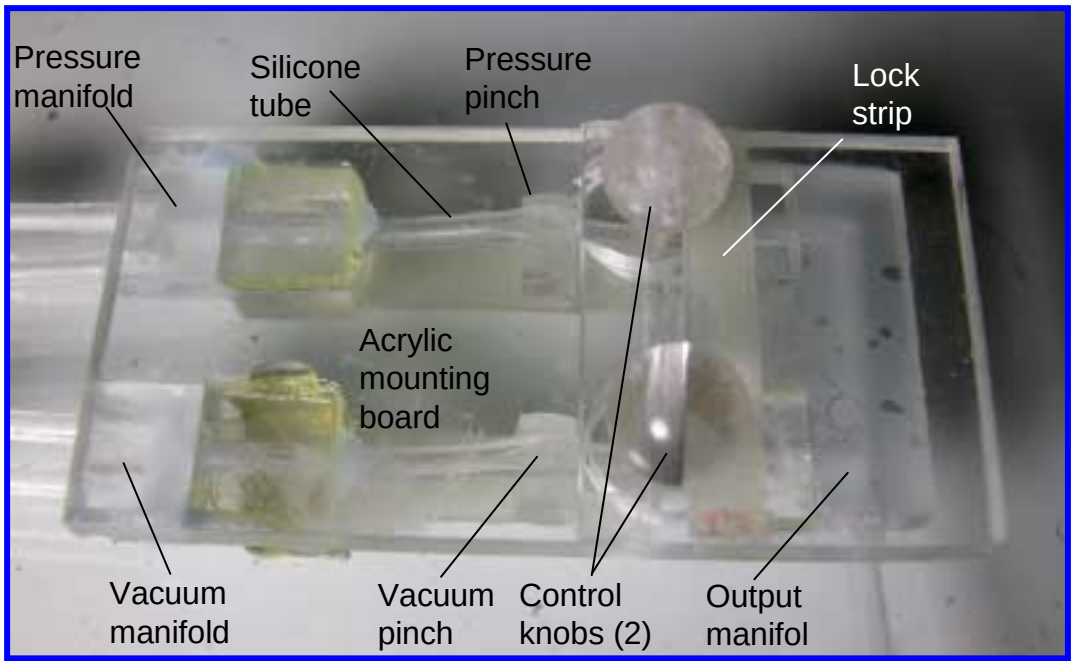
Pneumatically operated valve and controlled leak used to set gas pressure in various regions of experiments. The valves are 0.2 inches long with 1/16-inch diameter connection tubes.

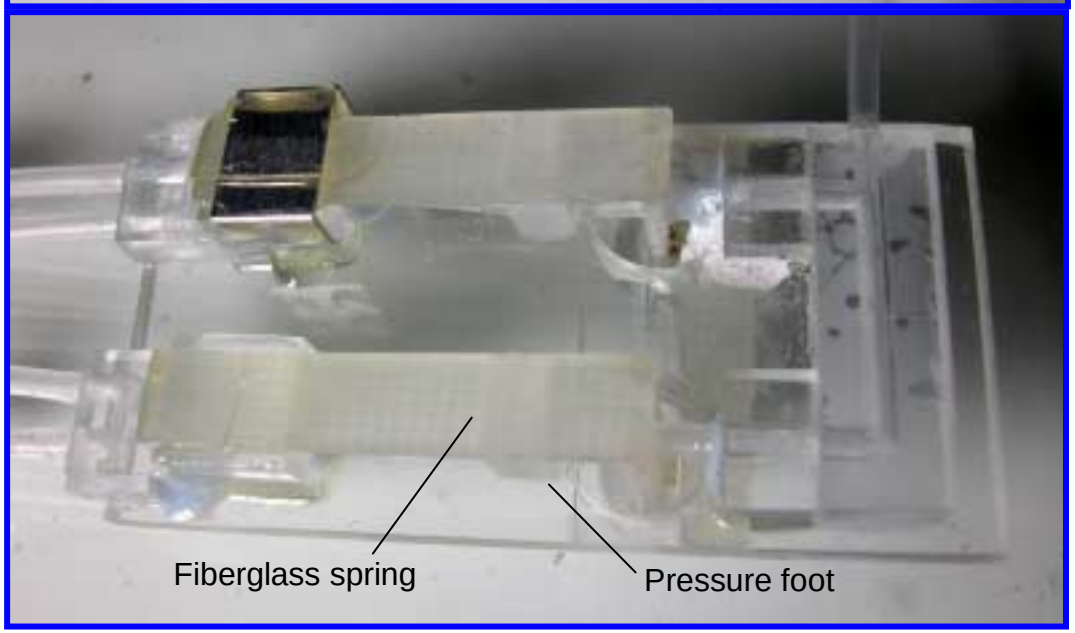


Pneumatically controlled vacuum valve used to isolate vacuum system from atmosphere to a lower pressure limit of 10-4 torr.

Diaphragm Valve 3 Stack

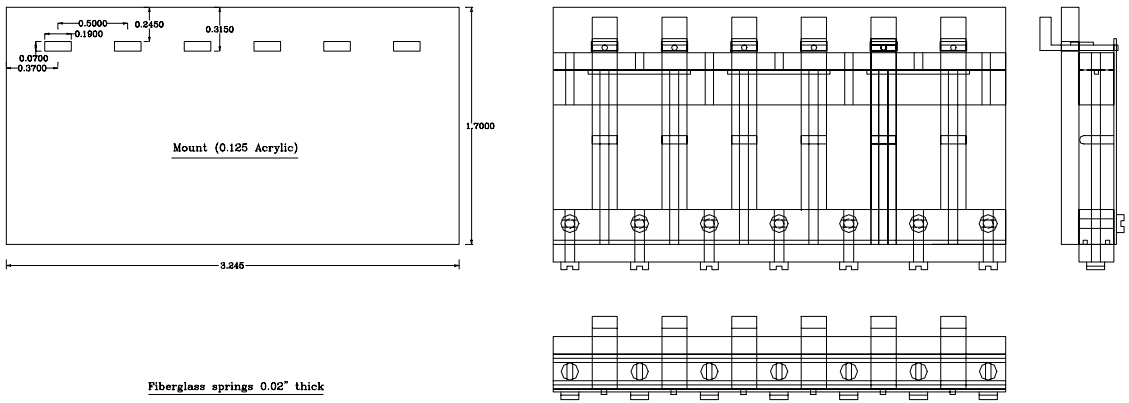


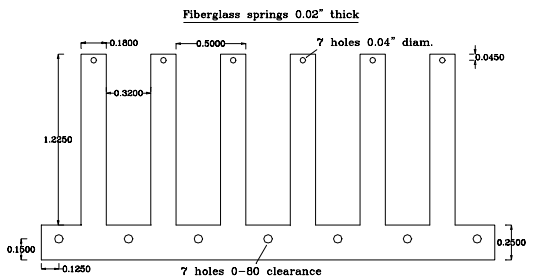




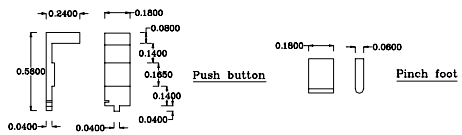
3 WAY PINCH VALVE

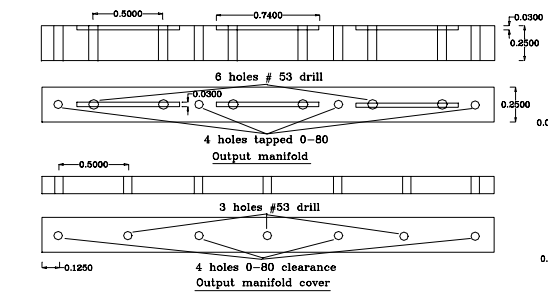
SIX PINCH VALVE BLOCK

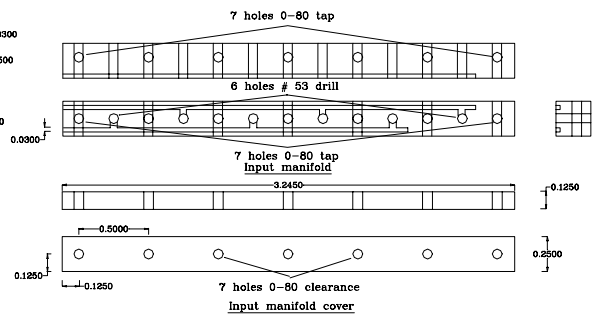


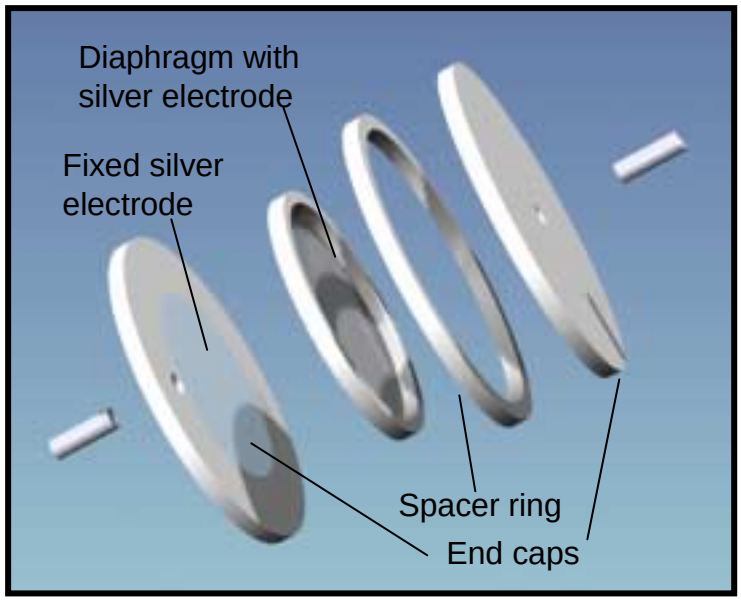


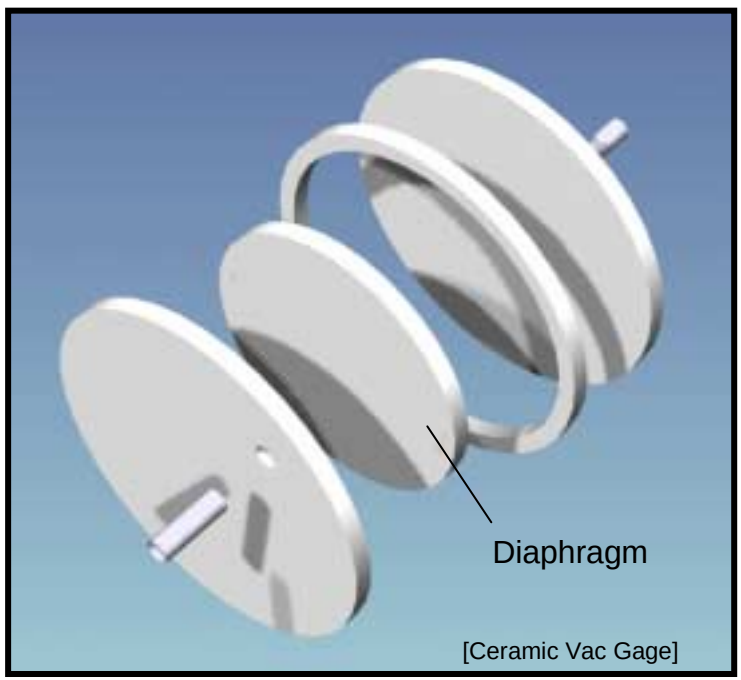
[Six Pinch Valve Block] 2/28/06



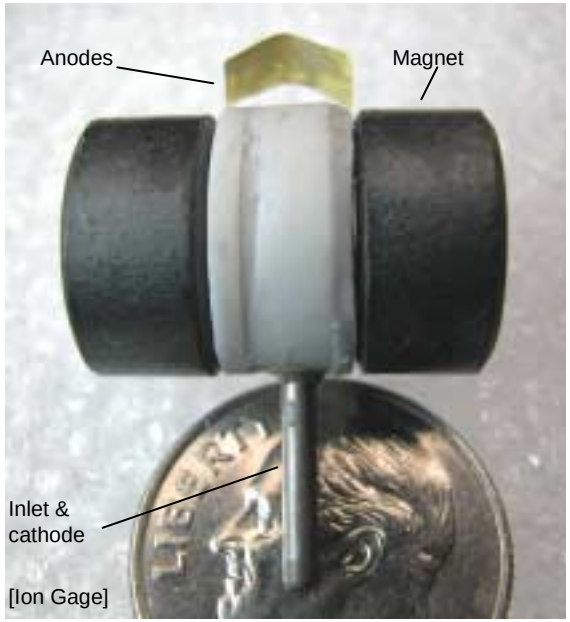




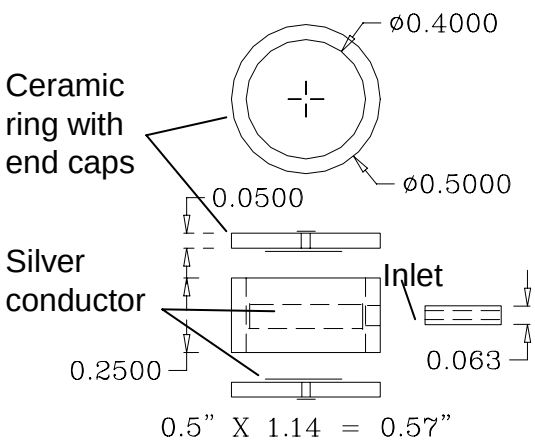




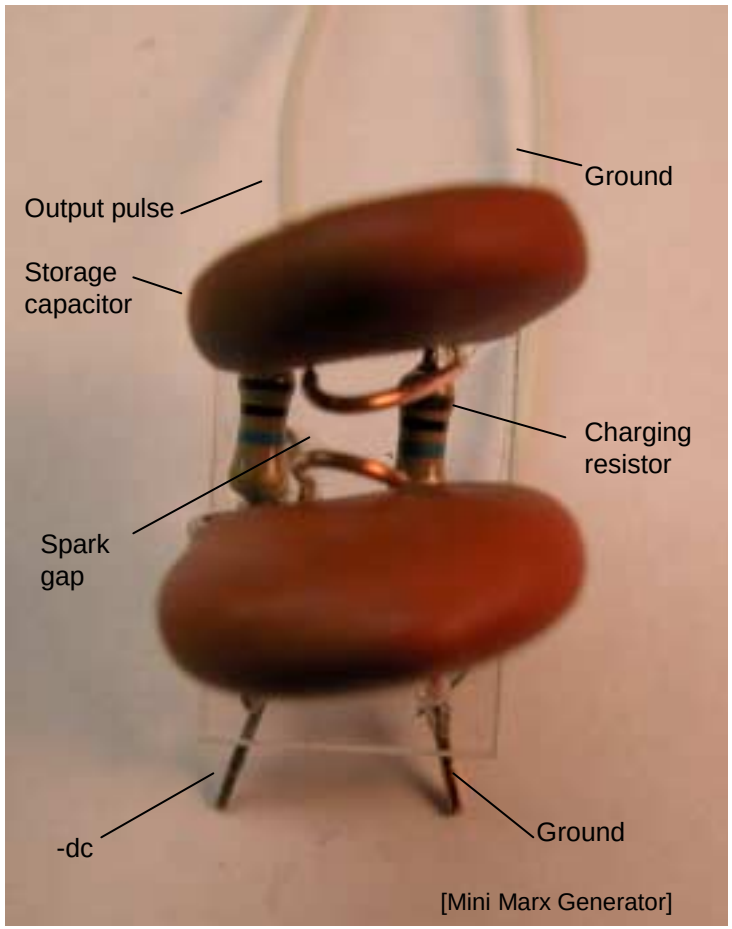
DIAPHRAGM TYPE, CERAMIC VACUUM GAGE

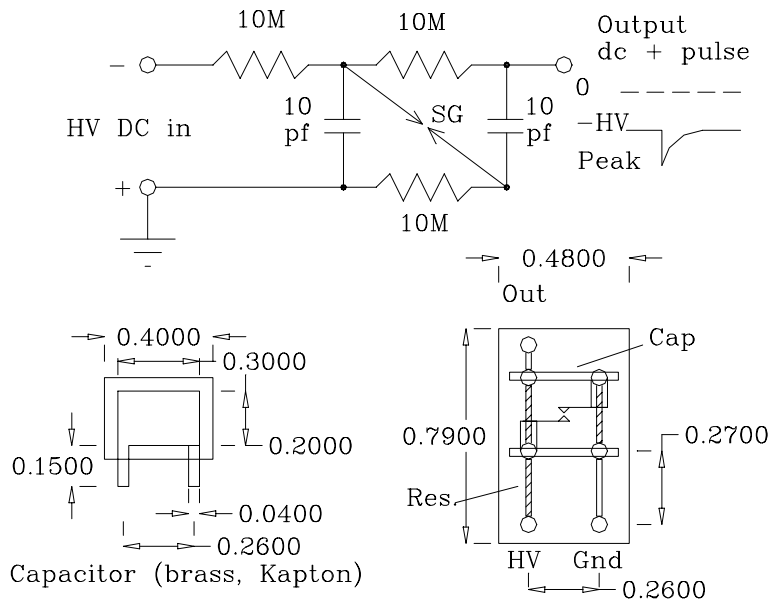


Penning Type, Ceramic Vacuum Gage for Low Pressures



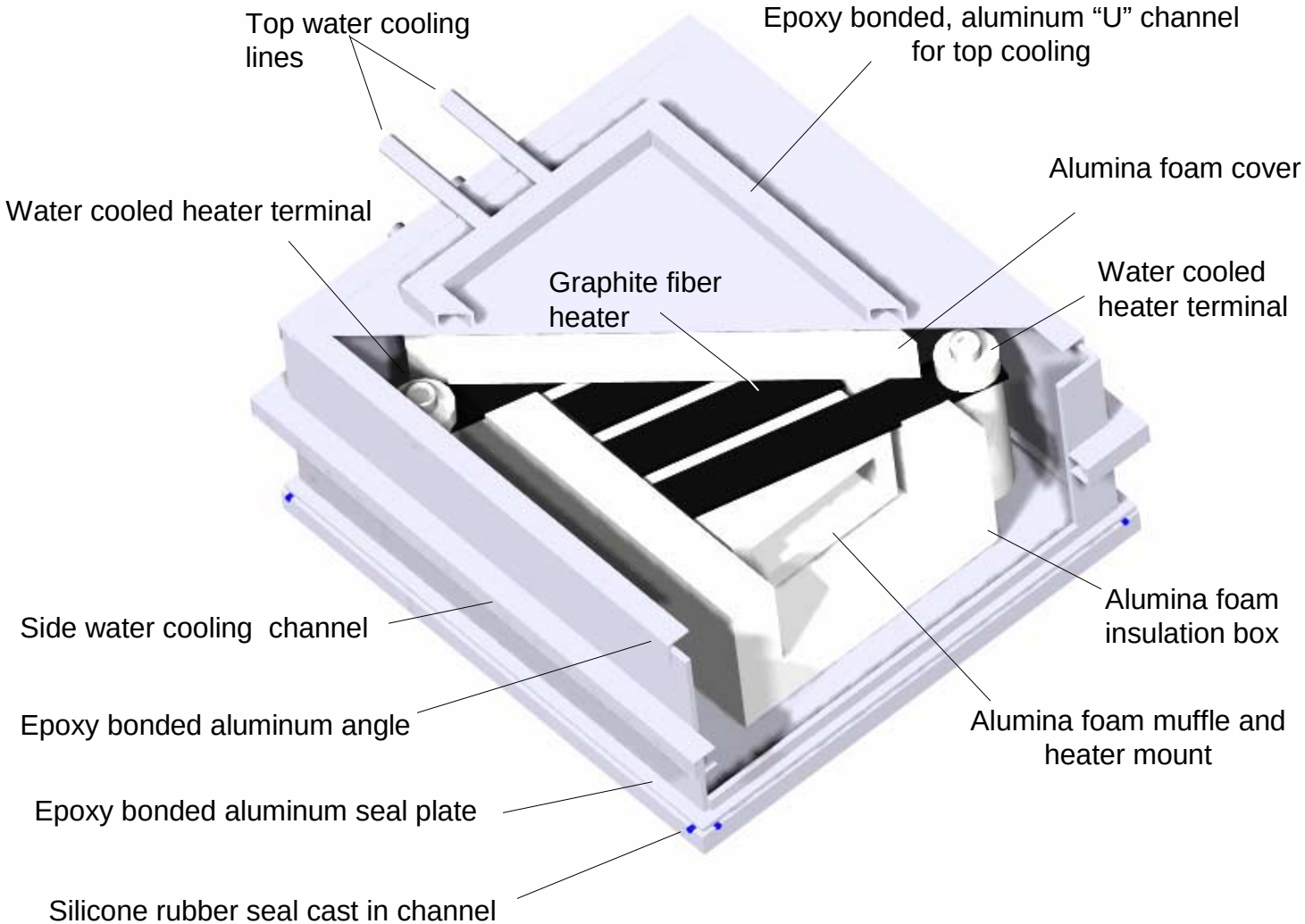
MINI-MARX, 1 NANOSECOND PULSE GENERATOR



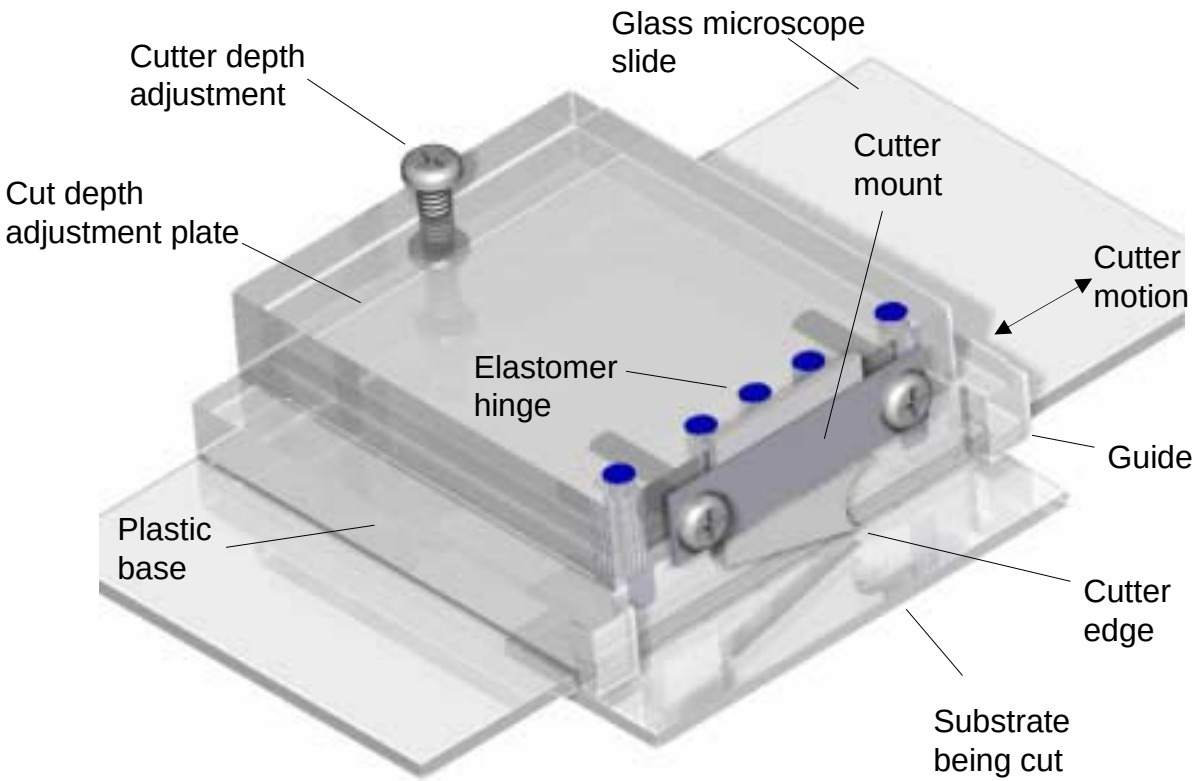


PROPANE KILN FOR CONE 6 FIRING

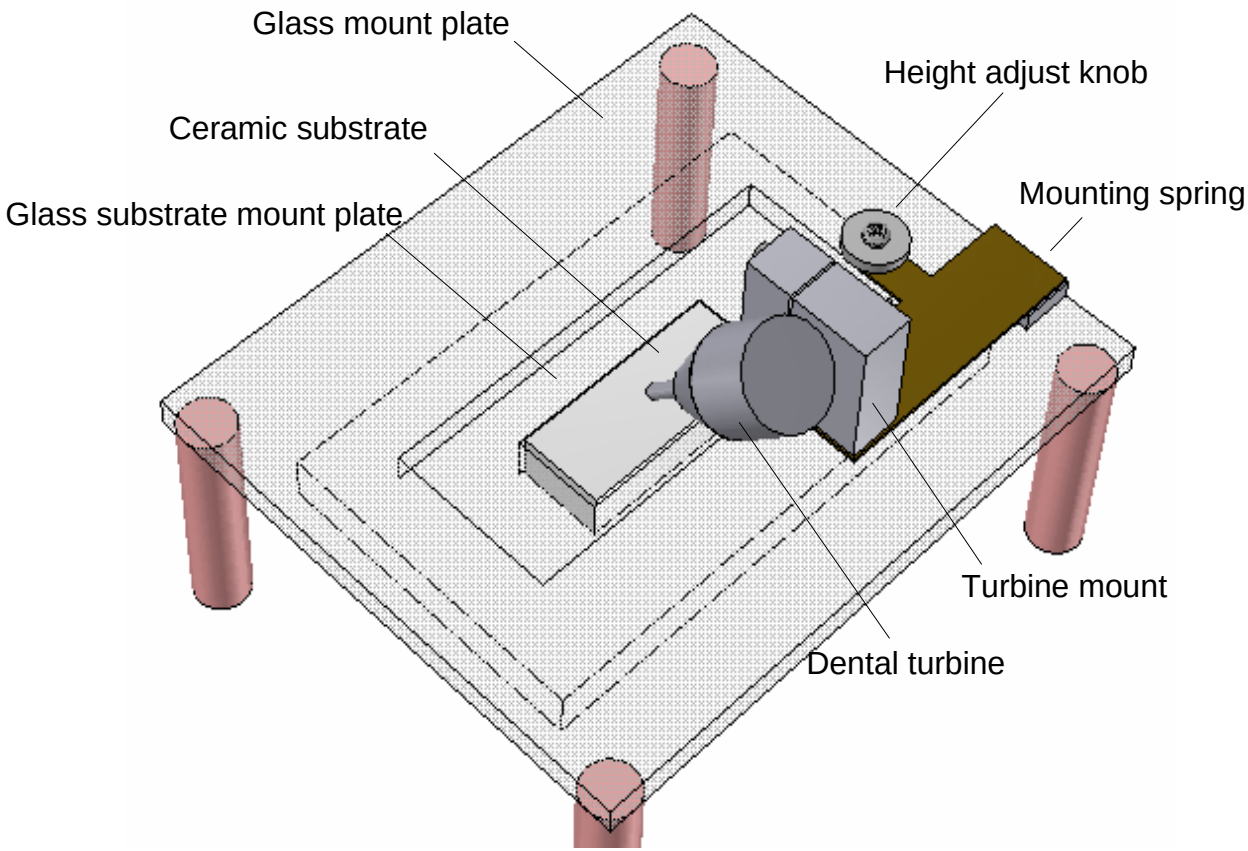
Sectional Drawing of Low-Pressure, Reducing Kiln



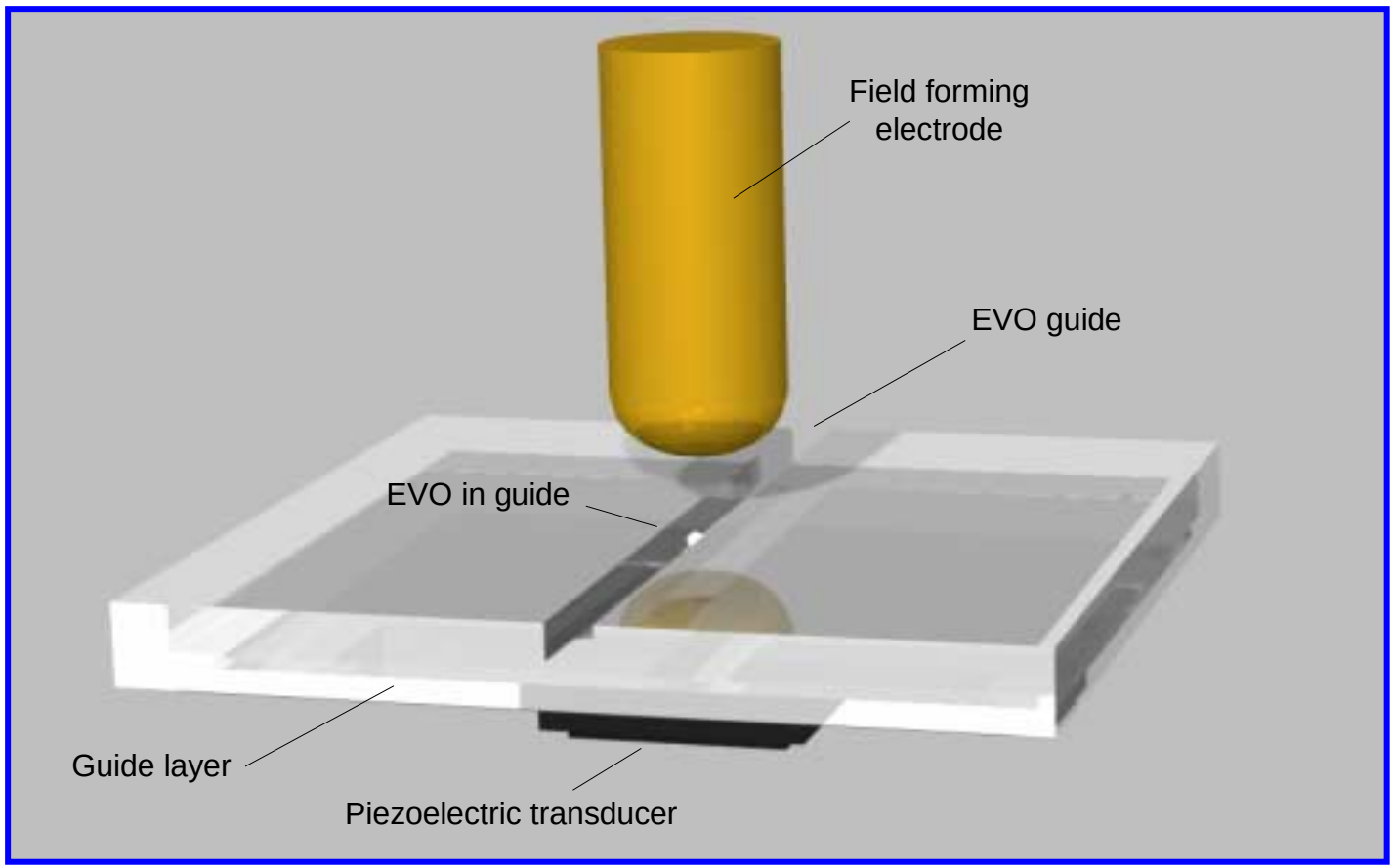
CUTTER FOR EVO GUIDES



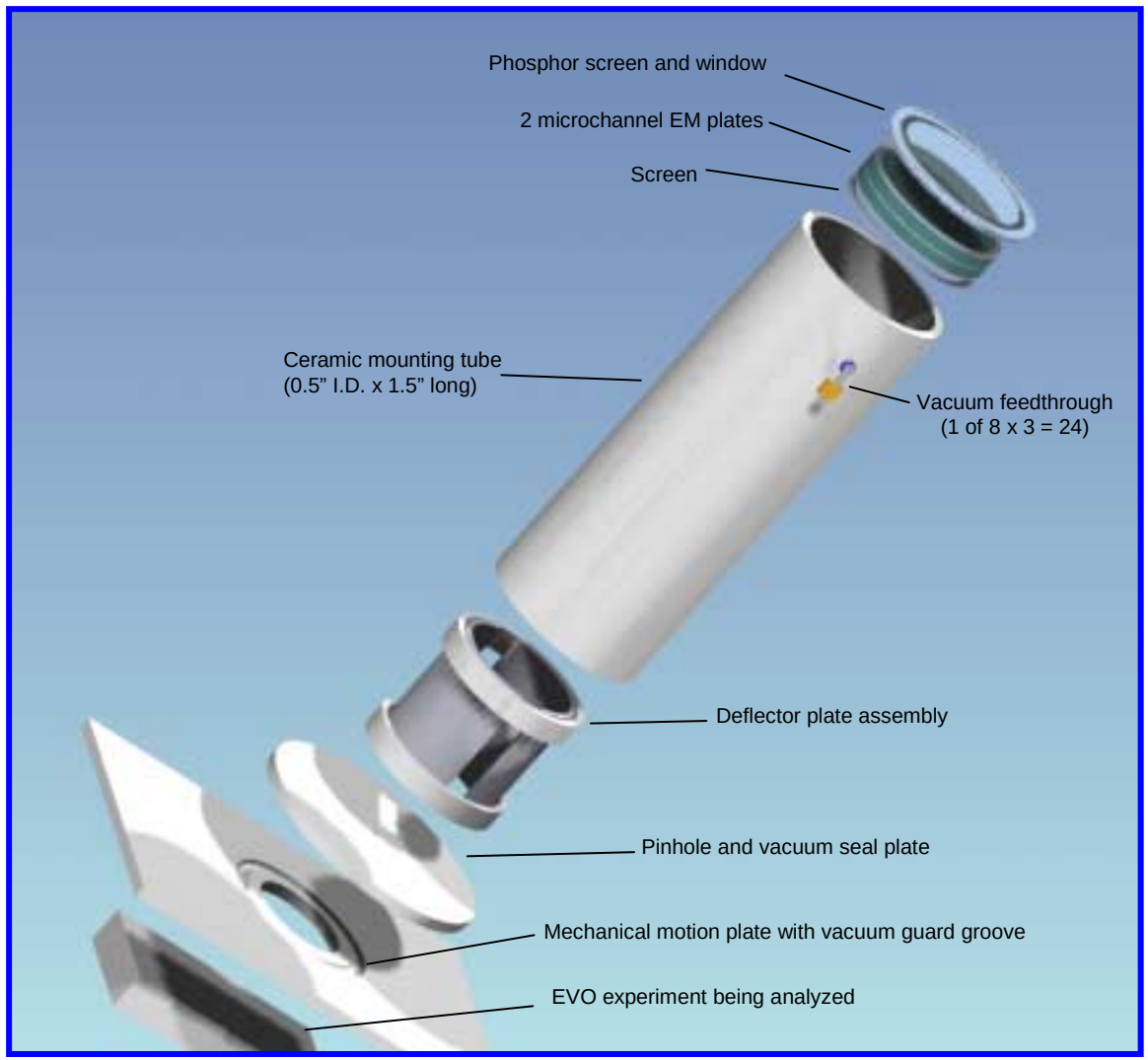
DENTAL TURBO CUTTER



PROPULSION FORCE MEASUREMENT



PHC FOR 2-D LAYOUT



Electronic Things To Do

1. Generation of EVOs at low gas pressure using the short pulse, Mini Marx generator.
2. Demonstration of guide action in isolating active regions of operation at different pressures.
3. Peak current readings into anode collectors.
4. Conversion from white to the *black EVO* mode induced by gas pressure change.
5. Electron charge reduction effects of EVO format in both white and black modes.
6. Flight time measurements at various gas pressures using both scope and delay line methods.
7. Real time Picoscope measurements in the ultra short time realm.
8. Phosphor light output from EVO excitation as enhanced display device.
9. Deflection sensitivity measurements.
10. High speed switching and memory using time delay line for proof of speed.
11. Generation and detection of terahertz signals using the wiggler and deflection amplifier combination.
12. FEL type of light generation using self-made wiggler technique.
13. Demonstration of selective boring action using deflection into different materials.
14. Velocity measurement of material projected from EVO boring action.

ENERGY

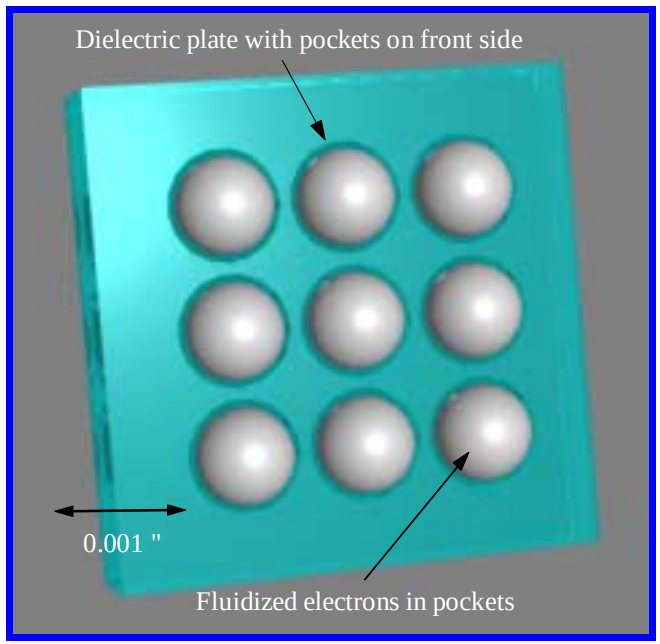
Generation of dc, millimeter wave and light power using oscillating EVO.

PROPULSION

Show EVO thrust by both piezoelectric transducer and optical fringe measurements.

WEAPON

Penetrate thick metal and decompose EVO within various materials.



PROPULSION PLATE

- Light generation
- Infrared heat generation
- Direct current generation
- Static thrust generation
- Dynamic thrust generation to 0.9 light velocity
- Refrigeration from Peltier effect
- Water condensation from air