



Equipment List

CNC Machining / Milling

- (2) 5-Axis Hwacheon D2
 - Travel - X 25.5", Y 19.6", Z 19.6"
 - Automated - Robot tended
 - Omron TM-12 6-Axis Robot
 - In machine measurement and probing
- Hwacheon Vesta 1000+
 - Travel - X 39.4", Y 21.6", Z 19.6"
 - In machine measurement and probing
- Haas DM-1
 - Travel - X 20.0", Y 16.0", Z 15.5"
- 5-Axis Haas DT-2
 - Travel - X 28.0", Y 16.0", Z 15.5"
 - 5-Axis Table

Turning / Mill-Turn

- Citizen M532 VIII Swiss Turning Center
 - Up to 38mm (1.5") Stock
 - 12 Ft Bar Feeder
 - 10 Axis (X1, Y1, Z1, B1, X2, Y2, Z2, X3, Y3, Z3)
- Nakamura MX-100 Mill-Turn Center
 - Up to 2.5" Bar Fed, Up to 6" Chuck
 - 6 Ft Bar Feeder

EDM

- Makino Edge 2i
 - Travel - X 11.8", Y 9.8", Z 9.8"
 - Ultra-fine finish circuitry

Stamping

- Bruderer BSTA 200-60 (30T) High Performance Stamping Press
 - Up to 2400 SPM
 - Integrated In Process Vision Measurement

Quality

- Zeiss O-Inspect 322 coordinate measuring machine (CMM)
 - Touch probe and optical measurements
- Micro-Vu Vertex 341 automated precision measurement system
- Micro-Vu SOL 165 precision measurement system
- Mark-10 ESM303 force test stand
- Mark-10 M5-5 force gage
- Buehler Mini-Met 1000 sample grinder/polisher
- Surface finish measurement equipment
- Microscope inspection stations
- Various pins/gauge sets

Grinding

- Mitsui MSG-200MH precision grinder
 - Travel - X 12.0", Y 6.0"
 - Fine feed options
- 24" x 36" Surface Plate
- Various Indicators/gauges

Additive Manufacturing

- Stratasys F170
- MakerBot Method-X carbon fiber
 - FDM capabilities
 - Materials: ABS, nylon carbon fiber, others, soluble support
- CleanStation SRS soluble support removal system

CAD/CAM Software

- SolidWorks
- Fusion 360
- Translators able to accept most native formats

Other

- Various ultrasonic parts washers and other cleaning capabilities
- Omron/Adept SCARA assembly robot

