# KANSAS STATE

### Technology Development Institute

### Machining/Fabrication Capabilities

### **Bodor P3015T Fiber Laser**



- 6kW laser capable of cutting 3/4" steel and 1/2" aluminum
- Dual 5' x 10' exchange tables
- 7" diameter tube capacity

### HAAS UMC1000SS Meltio Hybrid



- X-Axis- 40" Y-Axis- 20" Z-Axis- 20"
- 30 hp up to 12,000 rpm
- Metal 3D printing with 1200W laser head to process 0.8-1.2 mm DIA wire feedstock

### HAAS ST-25Y CNC Lathe



- Y-Axis and Live Tooling
- 3" bar capacity
- 22.5" max cutting length

#### OMAX 60120 Waterjet



- 5 axis head allows cuts up to 60 degrees off vertical
- 5' x 10' bed
- Cuts a wide variety of materials

### HAAS UMC500SS Universal Machining Center



- X-Axis- 24", Y-Axis- 16", Z-Axis- 16"
- 15.7 diameter platter
- 30hp up to 12000 rpm

#### IPG 2000XR Fiber Laser Welder



- 2000 watts of laser power
- Welds stainless steel, carbon steel, aluminum, titanium, nickel, and copper alloys

Visit our website to view our other capabilities!



### RMT B-Genius 10-200 Press Brake



- 200 tons with 10' bed
- Automatic crowning compensation
- 5 axis back gauge
- Bend 1/2" steel capacity

### HAAS VF-6SS Vertical CNC Machining Center



- X-Axis- 64", Y-Axis- 32", Z-Axis- 30"
- 64" x 28" with a 4000lb capacity
- 30hp up to 12000 rpm

### **Other Capabilities**

- Knuth Turnado280/1500 Manual Lathe
- Knuth ABS 300 Vertical Cut Off Saw
- Bridgeport Knee Mill
- Acer Lathe
- 50 ton Piranha Ironworker
- MIG/TIG Welding and Oxy-Acetylene Cutting Torch
- Modular Welding Table & Fixtures
- Sand Blast Booth
- Parts Washer
- Vibratory Deburring Machine
- Powder Paint Booth
- Other machining and fabrication equipment

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### KANSAS STATE Technology NIVERSITY

## **Development Institute**

### Additive Manufacturing Capabilities

### Stratasys J850



- Build Volume: 19.3" x 15.3" x 7.9" in
- Polyjet printing precisely jets and then UV cures ultra-thin layers of liquid resin to create highly detailed, full-color, multimaterial parts with smooth surfaces used for final prototype models.



### Formlabs Form 3, 3BL, and 4





- Build Volumes: 5.7" x 5.7" x 7.3" up to 13.2" x 7.9" x 11.8"
- SLA printing uses UV light to selectively cure layers of liquid resin creating highly detailed and smooth parts. The wide range of resins available produce functional parts with desired characteristics such as tough, flexible, clear, heat resistant, or rigid that mimic production materials.

#### **Stratasys F170** Raise 3D Pro 2 & Pro 3 Plus **Terabot 4**







- Build Volumes: 10" x 10" x 10" up to 36" x 36" x 39.3"
- FDM printing is the type of printing most seen in homes, offices, and schools. These printers melt plastic filament from a spool, and deposit it onto a build platform in layers. They are most useful for making cost effective prototypes, and have the ability to print with PLA, ABS, and other common printing filaments.

### **Markforged Mark Two**



- Build Volume: 12.6" x 5.2" x 6"
- In addition to standard FDM capabilities, this printer also lays continuous fibers within each layer to reinforce the printed part giving it similar strength to a part made of aluminum.

### **Formlabs Fuse 1**



- Build Volume: 6.5" x 6.5" x 11.8"
- SLS printing uses a laser to selectively melt powder layer by layer, forming a durable part that is then pulled from a vat of unfused loose powder. Thus, no support structures are needed.

### **JuggerBot 3D Tradesman P3-44**



- Build Volume: 36" x 48" x 48"
- Extrusion rates up to 15 lbs/hr
- Pellet 3D printing is much like FDM printing, and is useful for creating large tools, fixtures, prototypes, and even end use parts.

### Hexagon Absolute Arm 8525



- 7-axis arm with 2.5m reach
- This arm uses a point probe or laser scanner to precisely measure objects for quality inspection and reverse engineering. The points gathered from the object are processed to create a 3D CAD file.