

CNC Machining | Fabrication | Welding | Design Engineering

# **Capability Summary**



# **CNC Machining**

- **CNC Integrated Turning/Milling** Size Range: 1/4"-2.5" dia. thru, 10" chuck
- **CNC Vertical Milling with CNC Rotary Tables** Size Range: 64" x 32"
- **CNC Horizontal Milling with Pallet Changers** Size Range: 20" x 20"
- **CNC Turning with Bar Feeders** Size Range: 3" dia thru, 16" dia x 30"L chuck
- **CNC Automated Precision Sawing**
- **Automated Robotic Loading/Unloading System**
- **Manual Turning**

Size Range: 30"diameter x 60" Long

**Manual Milling** 

Size Range: 60" x 120"

Material Types: Stainless Steel, Carbon Steel, Aluminum, Brass, Bronze, Plastics, and some Specialty Materials

# Welding

- **Robotic Welding System** 120" x 60" dual table with Integrated Rotary Positioners and Multiple Auxiliary Axes
- 24 Welding Machines MIG, TIG, SMAW
- **Certified Welding -** Comply with all applicable Domestic and International welding codes for structural fabrication.

### **Fabrication**

**Laser Cutting** 

4000-Watt Fiber Laser (5' x 10' table) w/ Fully Automated Load/Unload System

**Materials and Thickness Capabilities** 

Mild Steel (Up to 1")

Stainless Steel (Up to 1/2")

**Aluminum** (Up to 1/2")

- **CNC Press Brake** (Up to 250 ton x 12')
- CNC Tube Plasma (12" x 3/4" wall)
- **CNC Plasma Cutting** (5' x 10' x 1-1/4" max)
- **CNC Flame Cutting** (5' x 10' x 2" max)
- **CNC Shearing** (1/4" x 10')
- **CNC Pipe Rolling** (5.5" x 0.120" Tube, 4" Sch. 40
- **CNC Angle Rolling** (4" x 4" x 1/2" Angle)
- **Pipe Bending** (Up to 2" Pipe)
- **Automated Precision Sawing**

# **Design Engineering**

- **Concept to Full Production**
- 2D/3D Modeling Design SolidWorks, SolidCAM, Autodesk
- **Full Integration of Mechanical Components -**Motors, Electronics, Circuit Boards, Controls
- **Project Consultation & Management**
- "Design-For-Manufacturing" Engineering Review
- **3D Scanning and Reverse Engineering Available**

# **3D Printing**

### Printer Properties

**Process** Fused Filament Fabrication, Continuous Filament Fabrication **Build Volume** 330 x 270 x 200 mm (13 x

**Build Volume** 330 x 270 x 200 mm (13 x 10.6 x 7.9 in)

**Print Bed** Kinematic coupling — flat to within 80  $\mu m$ 

**Laser** In-process inspection, active print calibration, bed leveling

**Extrusion System** Second-generation extruder, out-of-plastic and out-of-fiber detection

#### Materials

**Plastics Available** Onyx, Onyx FR, Onyx ESD, Nylon White

**Fibers Available** Carbon fiber, fiberglass, Kevlar®, HSHT fiberglass

**Tensile Strength** 800 MPa (25.8x ABS, 2.6x 6061-T6 Aluminum

**Tensile Modulus** 60 GPa (26.9x ABS, 0.87x 6061-T6 Aluminum)

### Part Properties

**Layer Height** 100 μm default, 50 μm minimum, 250 μm maximum **Infill** Closed cell infill: multiple geometries available

# **Finishing**

- **Powder Coating** (25'L x 12'H x 10'W)
- **Sandblasting** (25'L x 12'H x 10'W)
- Wet Spray Systems (25'L x 12'H x 10'W)
- Finishing (Consortium)

Electropolish

**Anodize** 

**Heat Treating** 

Grinding

**All Plating Types** 

With over 25 years of experience in the manufacturing industry, Ashland Technologies, Inc. has created a one stop shop model that is uniquely positioned to service the needs of many industries.

Offering multiple services all in house, our team can turn any idea into a finished product. We are one of the few companies that can oversee an entire project from prototype to production!

# **Assembly & Fullfilment**

- 40,000sf Dedicated Assembly/Testing Facility
- Complete Fulfillment Logistics to End Users

**Direct Drop Shipment** 

Warehousing & Inventory Management Customer Supplied Instructions/Manuals Arranging Transportation Services

### • Scope of Assembly Services

**Electrical Wiring** 

Circuit Board Integration

Motors and Drives Install and Testing

Software Integration and Testing

UL Certification (3rd Party) Available

Hydraulic/Pneumatic Integration

Hardware Kits

Graphics Dev/Printing/Application

Lighting installation and testing

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