

KNT Capability Statement

CORE COMPETENCIES

KNT Manufacturing is a World Class Manufacturer of Precision Machined Components. 137,000 square foot manufacturing factory, equipped with over 120 state-of-the-art CNC Machines, premium welding services, and a Zeiss centered CMM Inspection Laboratory. We offer short to long production volumes as well as prototype & one-off builds, and reverse engineering services.

Our CNC milling machines and turning centers are computer-controlled and can produce complex precision parts exponentially faster than human-controlled machines. They are also generally more consistent and precise than traditional lathes and drill presses. Our CNC turning centers and milling machines are state-of-the-art and are operated by the most highly trained technicians.

CORE CAPABILITIES

- Machining (Light and Heavy)
- Turning, Milling, Boring, Drilling, Broaching, Line Boring
- Welding – Steel, Stainless, Aluminum, Cast
- Full Range of Materials from Plastic to Exotics (Titanium/Inconel)
- All Metals and Alloys, Shapes Including Channel, Angle, Beam, Tubes and Plate

Light Value-Added Manufacturing

- Clean Room Assembly/Sub-assembly/Kitting
- Tooling, Jig & Fixture Manufacturing

Secondary Processing

- Cleaning, Plating, Paint, Heat Treatment

KEY OFFERINGS:

- Dedicated department for rapid prototype manufacturing
- World class OTD metrics 98-99% OTD
- World class Quality with a QPPM <320/12 months
- High production supplier with wide open capacity + burst capacity
- CNC Milling 3, 4, & 5 Axis
- CNC Tool Room
- Lathe with Live Tooling
- CNC Vertical Milling 3, 4, & 5 Axis
- CNC Tool Room Lathe with Live Tooling
- Full Manual Machine Shop
- Surface Grinding
- Certified Precision Welding Ferrous and Non Ferrous
- Pressure Test / Flow Testing Capabilities / Leak testing/
 - Leak test, flow test, pressure test

KNT Capability Statement

Experience, Precision, & Customer Satisfaction

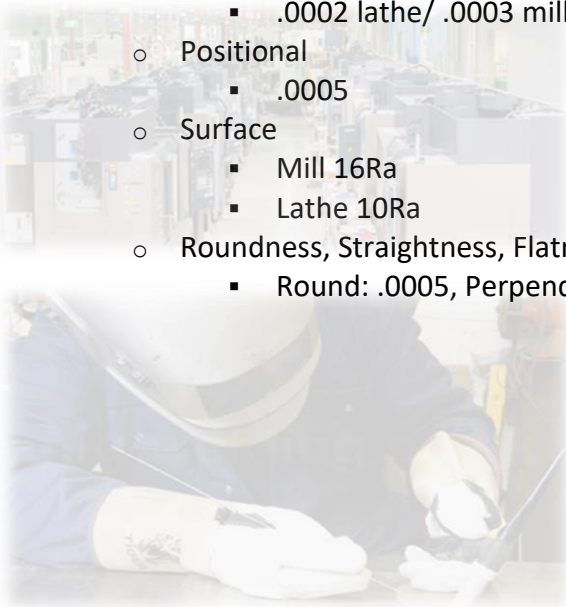
Our state of the art laboratory is environmentally controlled to $20^{\circ}\text{C} \pm 1^{\circ}\text{C}^{\circ}$ assuring you the highest standard of accuracy and reliability. All of our equipment is state of the art Zeiss CMM Units.

Our Quality Team offers a complete line of CMM first article contract inspection services, including inspection and certification of production tooling, gaging and fixtures. With a wealth of standards at our disposal, the team is capable of performing part & fixture measurements of all types, complexities, accuracies and resolutions.

5 Axis Machining Bonus Capability

In addition to our numerous machines, we have added a MAZAK Series Variable Axis 500-5X which has a unique highly-rigid and built-in tilting rotary table which allows work pieces with complex contours and features to be finished in just a single machine setup. It has tremendous weight capacity and increases machining accuracy while reducing cycle time. With 5-axis simultaneously controlled machining the Variable axis is ideal for aerospace components as well as prismatic parts in steel and aluminum which offers the following characteristics.

- Simultaneous 5-axis control
- Table tilts up to 150° (A-axis)
- Table rotates up to 380° (C-axis)
- Minimal thermal distortion – cooled ball screws and spindle
- CNC Accuracy
 - Diameter – external / internal
 - $.0002$ lathe/ $.0003$ mill
 - Positional
 - $.0005$
 - Surface
 - Mill 16Ra
 - Lathe 10Ra
 - Roundness, Straightness, Flatness
 - Round: $.0005$, Perpendicularity: $.0005$, Flatness: $.0002$



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Machining Tolerance Capabilities:

- Maximum Tolerances
 - MILL: +/- .0002
 - LATHE +/- .0002
- Max Dimensions – diameter, length, width, height
 - MAX DIMENSION: 59.8 X 49.2 X 53.1
- Mill Capability
 - MIN DIMENSIONS: .0625 X .0625 X .0625
 - MAX DIMENSIONS: 59.8 X 49.2 X 53.1
- Lathe Capability
 - MIN LATHE DIAMETER: .0625
 - MIN SCREW MACHINE DIAMETER: .03125
 - MAX DIAMETER: 78.78
 - MAX LENGTH: 51.1
- 5-Axis Milling/Lathe
 - 28.34 X 17.71 (MAAM)
- Largest Footprint machining
 - 59.8 X 49.2
- Smallest footprint machining
 - .062 X .062
- Welding Capabilities
 - Aluminum, Stainless steel,
 - Aluminum, Stainless Steel, Copper, Titanium, Inconel, Steel
 - Specific welding techniques...TIG, MIG
 - Ultra Clean Capability
 - Ventilation Hoods
 - 5 Welding Stations
- Surface / Finish Treatments
 - Max Surface Finish Ra
 - MACHINE FINISH: Ra 2
 - DEBURR FINISH: Ra 4
 - Plating types – Anodizing, Chromium, Nickel, Electro polish
 - Anodize, hard anodization, sulfuric anodization, nickel, silver, alodine
 - Painting types -
 - Paint, powder coat, textured paint
 - Cleaning types – Blasting
 - Etch clean, electro polish, IPA Cleaning