



Do you need...?

State-of-the-Art Machining Capabilities

Old World craftsmanship meets New World technology in our modern manufacturing facility

- * 13-Axis robotic machining for highly unattended manufacturing of complex items
- * In-house tooling design and manufacturing by our skilled toolmakers
- * True 4 and 5-axis machining capability
- * Micro hole drilling to .0004" diameter
- * Virtual Gibbs CAD/CAM system / Solid Surfacing
- * Total Computer Control of all phases of manufacturing with our Visual Manufacturing ERP System / Visual Quality System

World Class Quality/Responsive Service

- * AS9100D / ISO 9001:2015 Certified Quality Management System
- * Innovative customer inventory management
- * Sub-assembly manufacturing and management

If you answered yes to these questions we can help you in the following areas: (see our website at www.microtool.com for more details)

- CNC turning and milling of precision component machine parts with up to 13 axis systems
- Swiss turning of medical/aerospace components
- Robotic automation design and integration for our in house needs
- Robotic vision system integration
- Micro hole drilling to .0004" diameter for medical orifice flow systems
- Manufacturing precision punch and cutting dies
- Hydrostatic testing
- Various repair, fabrication, and sub-assembly manufacturing and management

For over 58 years we have provided our customers with precision machining and fabrication in a timely and cost-effective manner with the highest level of quality. Whether it be a small medical device, turbo-machinery blading, or 8 ft. long 500lb. precision shaft we have the expertise needed. We invite your inquiries and would be happy to quote any of your manufacturing needs. If you have any questions please feel free to call on us at our 45,000 sq. ft. facility located in Lehigh Valley Industrial Park IV.

FACILITIES LIST

Rev 9/2023

<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Nakamura-Tome CNC Multi-process machining System	WTW-150	3	4 turret, dual spindle, robot operated machining system for production unattended manufacturing, 13-axis control, 1800ipm rapids, .0002" accuracy, 1000psi thru-spindle coolant, up to 2" diameter Bar feed capacity
Nakamura-Tome CNC Multi-process machining System	WT-150	2	Dual Spindle, dual turret machining system for production for unattended manufacturing, 1800ipm rapids, .0002" accuracy, 1000psi thru-spindle coolant, up to 2" diameter Bar feed capacity
MAZAK Multiplex CNC Multi-process machining system	6200Y	5	Dual Spindle, dual turret, robot operated machining system for production unattended manufacturing, 8-axis 1200ipm rapids, 0.0002" accuracy, up to 2" Diameter bar feed capacity, Gantry robot Load/unload up to 8" diameter
MAZAK Hyperquadrex Multi-process machining system	SY250	1	Dual Spindle, dual turret, robot operated machining system for production unattended manufacturing, 8-axis 1200ipm rapids, 0.0002" accuracy, up to 2.625" Diameter bar feed capacity
STAR 16mm CNC Swiss-Turn	SA-16RQ	1	5-axis CNC Swiss-Turn Screw machine For high production machining. 12,000rpm Main spindle, 16mm diameter capacity 0.0002" accuracy
STAR 20mm CNC Swiss-Turn	SA-20RQ	4	6-axis CNC Swiss-Turn Screw machine For high production machining. 12,000rpm Main spindle, 20mm diameter capacity 0.0002" accuracy
STAR 32mm CNC Swiss-Turn	SV-32	1	8-axis CNC Swiss-Turn Screw machine For high production machining. 12,000rpm Main spindle, 32mm diameter capacity 0.0002" accuracy



<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
STAR 38mm CNC Swiss-Turn	SR-38	1	9-axis CNC Swiss-Turn Screw machine for high production machining 0.0002" accuracy
Enshu CNC Horizontal Machining Center (Auto pallet changer)	GE480	5	4 axis. 500mm pallets, 1800 imp xyz rapids, 15,000 rpm & 30hp, ± 0.0002 " positioning accuracy, 1.5 sec tool change, Fanuc High Precision Contour Control with high speed data server for high speed machining of complex surfaces, 1000psi thru-spindle coolant (30x30x30")
Kiwa CNC Horizontal (8) pallet changer Machining Center	KNH-426X	1	4 axis, 500mm, 6 pallet system, 1900 ipm xyz, 14,000rpm & 30hp, ± 0.0002 " positioning accuracy, 1.5 sec tool change, 1000psi thru-spindle coolant (26x26x26")
OKUMA CNC Machining Center (Auto pallet changer)	MF-46VA	2	3 axis ready, 30"x18" pallets, 30"x18" travel, 1575ipm xyz rapids, 12,000 rpm & 15 hp, ± 0.0002 " positioning accuracy, 1.5 sec tool change, High Precision Contour Control, 1000psi thru-spindle coolant
Fanuc Robodrill Robotic Attended Machining Center	Alpha-T21i	3	5-axis , 24"x14" table 2600ipm xyz rapids, 24,000 rpm & 20 hp, ± 0.0002 " positioning accuracy, .7sec tool change; Fanuc LR Mate robot for loading/unloading lights out manufacturing
Fanuc Robodrill Vertical Machining Center	Alpha-T21i	7	5-axis , 24"x14" table 2600ipm xyz rapids, 24,000 rpm & 20 hp, ± 0.0002 " positioning accuracy, .7sec tool change; fully robotic unattended machining
Fanuc Robodrill Vertical Machining Center	Alpha-T21i	1	3-axis , 24"x14" table 2600ipm xyz rapids, 24,000 rpm & 20 hp, ± 0.0002 " positioning accuracy, .7sec tool change; fully robotic unattended machining



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Fanuc RoboMate Vertical Machining Center	Robomate	2	3-axis, 20"x14" table 1800ipm xyz rapids, 12,000 rpm & 20 hp, $\pm 0.0002''$ positioning accuracy, .7sec tool change
Toyoda Vertical Machining Center	AQ1050	3	4 th -axis indexer, 47"x20" table, 15,000rpm 20hp, $\pm .0002''$ positioning accuracy
Kellenberger CNC Cylindrical Grinder	Kel-Vista	1	Universal OD/ID CNC grinder 0.1 micrometer resolution, 40" between centers, Glass scales, .000050" grinding tolerance
Deckel DMU60	DMU60	1	Simultaneous 5 axis machining in 20" cube
Haas CNC Machining Center	VF-3	1	4 station, 5-axis machining center, 18"x30" table
Okuma CNC Lathe	LB3000EX	3	Live Tooling, 23" length between centers & 14.6" O.D., machining tolerance $\pm 0.0003''$
Okuma CNC Lathe	LB4000EX	2	15" chuck 31" length between centers, 23" swing, machining tolerance $\pm 0.0002''$
Hwacheon CNC Lathe	CT160	1	8" chuck, 10" swing live tooling lathe with C-axis, Machining tolerance $\pm .0002$
Blanchard Surface Grinder		1	36" O.D., maximum height 13 1/2", machining tolerance $+0.0001''$
Grisetti Cylindrical Grinder Elite M1000		1	36" length on centers, 12" O.D. maximum, grinding tolerance $\pm 0.0001''$
Kellenberger Cylindrical Grinder		1	39" length on centers, 12" O.D. maximum, grinding tolerance $\pm 0.0001''$
Mazak AJAX, Shortbed Engine Lathe		1	Maximum 36" length on centers, 10" O.D. max., machining tolerance $\pm 0.0002''$
Mazak AJAX, Longbed Engine Lathe		1	Maximum 100" length on centers, 10" O.D. max., machining tolerance $\pm 0.0002''$



<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Mazak AJAX Engine lathe		1	Maximum 60" length on centers, 10" O.D. max., machining tolerance ± 0.0002 "
FORTUNE 30120 Engine Lathe		1	Maximum 60" length on centers, 37" swing, machining tolerance ± 0.0002 " 112" between centers
FORTUNE 2060 Engine Lathe 1		1	Maximum 60" length on centers, 20" swing, machining tolerance ± 0.0002 "
American Engine Lathe		1	Maximum 120" length on centers, 24" swing, machining tolerance ± 0.0002 "
Victor Engine Lathe		1	Maximum 54" length on centers, 24" swing, machining tolerance ± 0.0002 "
Logan Engine Lathe		1	Maximum 24" length on centers, 14" swing, machining tolerance ± 0.0002 "
Rambudi Manual Milling Machine		1	Vertical & Horizontal heads, 11"x52" table machining tolerance ± 0.0002 "
Sharp Manual Milling Machine Model VH3		1	Vertical & Horizontal heads, 12"x54" table machining tolerance ± 0.0002 "
Eisen Manual Milling Machine		2	Vertical head, 9"x42" table, machining tolerance ± 0.0002 "
Bridgeport Manual Milling Machine, Model J		4	Vertical head, 9"x42" table, machining tolerance ± 0.0002 "
Sunnen Manual Honing Machine Model MBB-1650		1	.350" to 6.50" bores, up to 16" stroke length
Sunnen Horizontal Honing Machine Model ML3500/4000		2	.125" to 2.00" bores, .236" to 6.70" stroke length, automatic size control
Sunnen CK-21 CNC Vertical Hone		1	$\frac{3}{4}$ " to 8" Bores, $\frac{3}{4}$ " to 12" Stroke length, Automatic Size & Taper Control
NuGier 80 Ton Hydraulic		1	
60 Ton die testing press		1	



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Pexto 16 gauge shear		1	
Miller Syncrowave 250 TIG Welder		1	
Miller Syncrowave 350 MIG Welder		1	

****Software Systems****

Solid Works CAD modeling system version 2022

Virtual Gibbs CAD/CAM & Solid Surface Package

Lathe, Mill, and Advanced Mill modules; True Solids package; Import and machine Solid models in ParaSolids, IGES & DXF formats as well as the ability to quickly create solids from blueprint geometry; post process to all of our CNC machine tools

Part Marker Advanced CAM software

Infor Visual Enterprise ERP manufacturing management system

Total control of all aspects of the manufacturing cycle from quotation through shipment with our state-of-the-art (16) workstation networked system. True Finite Capacity Planning to ensure the most efficient loading of our manufacturing resources for on-time Delivery.

****Coordinate Measuring Machines (CMM's)****

(2) Brown & Sharpe CMM	Fully programmable, 24" x 24" x 16" xyz Renishaw Auto Indexable Probes, Hexagon Metrology PC-DMIS software
(2) Global S Blue CMM	Fully programmable, 36" x 36" x 24" xyz Renishaw Auto Indexable SCANNING Probes, Hexagon Metrology PC-DMIS software