



# 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 Registered Quality 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](http://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
- Cryogenic Dewar manufacturing experts
- Vaporless cleaning to Medical Oxygen requirements
- Manufacturing precision punch and cutting dies
- Welding to ASME Section IX specifications
- Hydrostatic testing, balancing
- Various repair, fabrication, and sub-assembly manufacturing and management

For 50 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 11/2017

<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Nakamura-Tome CNC Multi-process machining System	WTW-150	5	4 turret, dual spindle, robot operated machining system for production unattended manufacturing, 13-axis control, 1800ipm rapids, .0002" accuracy, 1000psi thru-spindle coolant
MAZAK Multiplex CNC Multi-process machining system	6200Y	6	Dual Spindle, dual turret, robot operated machining system for production unattended manufacturing, 8-axis 1200 imp rapids, 0.0002" accuracy
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 38mm CNC Swiss-Turn	SR-38	2	9-axis CNC Swiss-Turn Screw machine for high production machining 0.0002" accuracy
Enshu CNC Horizontal Machining Center (Auto pallet changer)	GE480	3	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
Matsuura CNC Horizontal (11) pallet changer Machining Center	H+300	1	4 axis, 400mm, 11 pallet system, 2200 ipm xyz, 20,000 rpm & 30hp, +-.0002" positioning accuracy, 1.5 sec tool change, Fanuc High Precision Contour Control, 1000psi thru-spindle coolant
Kiwa CNC Horizontal (8) pallet changer Machining Center	KNH-426X	2	4 axis, 500mm, 6 pallet system, 1900 ipm xyz, 14,000 rpm & 30hp, +-.0002" positioning accuracy, 1.5 sec tool change, 1000psi thru-spindle coolant



<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Mori Seiki CNC Machining Center (Auto pallet changer)	SV-50	2	3 ½ axis ready, 37"x18" pallets, 32"x20" travel, 1400 imp xyz rapids, 10,000 rpm & 30 hp, ± 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
Fanuc Robodrill Machining Center (Robot tended 2)		8	5-axis , 24"x14" table 2600 imp xyz rapids, 24,000 rpm & 20 hp, ± 0.0002" positioning accuracy, .7sec tool change; fully robotic unattended machining
Kellenberger CNC 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	4	4 station, 5-axis machining center, 18"x30" table
Hitachi Seiki CNC Machining Center	VK45	1	3 ½ axis ready, 44" x 19.1" table, 30" x 18" x 18" travel, positioning accuracy ± 0.0003"
Okuma CNC Lathe	LB3000EX	2	Live Tooling, 23" length between centers & 14.6" O.D., machining tolerance ± 0.0003"
Okuma CNC Lathe	LB4000EX	2	15" chuck 31" length between centers, 23" swing, machining tolerance ± 0.0002"
Daewoo CNC Lathe	10HC	1	22" length between centers & 11 ½" O.D., 14" O.D. on lengths up to 6", machining tolerance ± 0.0003"
Hitachi Seiki CNC Lathe	2000SY	1	Main and sub-spindle machine with Bar feeder for unattended multi-process Machining, +-.0003" accuracy



<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Hitachi Seiki CNC Lathe	HT25SM	1	22" length between centers & 11 1/2" O.D. 14" O.D. on lengths up to 6", machining tolerance $\pm 0.0003$ "
Bridgeport CNC Milling Machine	Series II	1	38" by 15" table, 29 1/2" by 14 1/2" travel, 15" capable
Bridgeport CNC Milling Machine	Series I	1	34" by 13" table, 25" by 12" travel, 15" height capable
Blanchard Surface Grinder		1	36" O.D., maximum height 13 1/2", machining tolerance $+0.0001$ "
Grisetti Cylindrical Grinder		1	36" length on centers, 12" O.D. maximum, grinding tolerance $\pm 0.0001$ "
Mazak AJAX Engine lathe with programmable, digital readout		1	Maximum 36" length on centers, 10" O.D. max., machining tolerance $\pm 0.0002$ "
Mazak AJAX Engine lathe with programmable, digital readout		1	Maximum 100" length on centers, 10" O.D. max., machining tolerance $\pm 0.0002$ "
Mazak AJAX Engine lathe with programmable, digital readout		2	Maximum 60" length on centers, 10" O.D. max., machining tolerance $\pm 0.0002$ "
FORTUNE 2060 Engine Lathe with programmable, digital readout		1	Maximum 60" length on centers, 37" swing, machining tolerance $\pm 0.0002$ " 112" between centers
Bridgeport Manual Milling Machine	J	5	
Sunnen Manual Honing Machine		1	
Sunnen CK-21 CNC Vertical Hone		1	3/4" to 8" Bores, 3/4" to 12" Stroke Length, Automatic Size & Taper Control
NuGier 80 Ton Hydraulic		1	



<u>Make</u>	<u>Model</u>	<u>Quantity</u>	<u>Comments</u>
Panasonic CNC Robot Welders	MIG/TIG	2	
60 Ton die testing press		1	
Pexto 16 gauge shear		1	
Miller Syncrowave 250 TIG Welder		1	
Miller Syncrowave 350 MIG Welder		1	
Brown & Sharpe CMM		3	Fully programmable, 24" x 24" x 16" xyz Renishaw Auto Indexable Probe

### **\*\*Software Systems\*\***

Solid Works CAD modeling system

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

Visual Enterprise ERP manufacturing management system

Total control of all aspects of the manufacturing cycle from quotation through shipment with on state-of-the-art 1000 base-T, 16 workstation networked system. True Finite Capacity Planning with automatic equivalent resource substitution to ensure the most efficient loading of our manufacturing resources for on-time delivery at the lowest possible cost