



FACILITIES LIST

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5-AXIS MILL-TURN:

- (1) Mori Seiki NT-1000-ZSM Multi-Axis CNC Machining Center, 12,000 5-Axis Milling Spindle with 76 Position Tool Changer, 6,000 RPM and 2.5" Bar Capacity Main and Sub-Spindles, Automatic Bar Feeder

CNC MILLING:

- (3) DMG-MORI MillTap 700 Vertical Machining Centers, 25,000 rpm, 4th-axis, 27" X 16" X 15" Z
- (1) Roku-Roku HC 548 Graphite Vertical Machining Center, 4 Axis, 32,000 RPM, Blum Laser Toolsetter - X 18", Y 14", Z 10" Travel
- (1) Cincinatti Sabre 2000 Vertical Machining Center (80" x 30" travel, 10,000 RPM, 21 Tools, 15 HP)
- (1) Cincinatti Sabre 1000 Vertical Machining Center (40" x 20" travel, 8,000 RPM, 21 Tools, 15 HP)
- (2) Fanuc RoboDrill 21iD Vertical Machining Center, 4-Axis, 24,000 RPM, Renishaw Laser Toolsetter, - 20"x16"x13"
- (1) Matsuura MC-600V Vertical Machining Center, 7,000 RPM Dual Range 16"x24"x18" travels
- (1) Daewoo DMV-500 Vertical Machining Center, 10,000 RPM 19"x40"x24" travels
- (3) Haas CNC 5C-Indexing Head (Integrated with CNC Machines)
- (1) Light Machines BenchMan-XT V.M.C., 4-AXIS, 45,000 RPM, 6.5"x12"x8"

CNC TURNING:

- (1) Hardinge Elite MS-27 CNC Lathe with 8,000 rpm spindle and subspindle, 16-position turret with live tooling, and magazine type automatic bar feeder.
- (2) Omniturn CNC turning attachment on Hardinge DSM Lathe, with pneumatic collet closer and 24" automatic bar feed.

WIRE EDM:

- (4) Mitsubishi MD+PRO III, 5 axis, linear motors, .004-.012 wire, 16" X 12" Y x 8.7" Z
- (1) Mitsubishi FA10S, 6 axis, fast auto-threading, .004-.012 wire, 10" X 14" Y x 7.8" Z
- (1) Mitsubishi MD+PRO II, 5 axis, fast auto-threading, .004-.012 wire, 13" X 10" Y x 8.6" Z

CNC SINKER EDM:

- (1) DrillMate 430i, 4-axis CNC 'Hole Popper' Fast-Hole EDM, .004"-.250" dia., w/auto electrode/guide changer
- (1) Mitsubishi EA8-PV Micro-Hole EDM, 1,000 psi flushing, 6 pos guide changer, 16 pos tool changer
- (1) Agietron ADVANCE, 26 Position Toolchanger, 7 Ra finish, C-axis, 64 Amp P/S, 30"x20"x14" Stroke
- (5) Agie-Elox MONDO Star 20 CNC, 4 Position Toolchanger, C-axis, 40 Amp P/S, 10"x12"x10" Stroke
- (1) Agie-Elox MONDO 20 CNC, with C-axis, 40 Amp Power Supply, 10"x12"x10" Stroke

CNC GRINDING:

- (2) Chevalier Smart B818, Full 3-Axis, 8" x 18" chuck, with variable speed spindle.
- (1) Unison Model 2000, Full 3-Axis, 6" x 18" chuck, with variable speed spindle.
- (1) Harig 618 EZ-SURF CNC Surface Grinder, 6" x 18" chuck, with creep feed option

GRINDING:

- (1) Harig Autostep III Surface Grinders, 6"x18" Chucks, Modified for .000 050 Downfeed Increment
- (4) Brown & Sharpe 510 & 612 Manual Surface Grinders with 6"x12" Chucks
- (1) Boyer Schulz Challenger 2A Hydraulic Surface Grinders with 6"x18" Chucks
- (1) Newbould motorized indexing fixture with bed and tail stock, .000 050 TIR spindle





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TOOLROOM:

- (2) Bridgeport Vertical Milling Machine, rebuilt, with Prototrak 2-axis CNC Retrofit
- (1) Do-All Vertical Band Saw
- (1) Kalamazoo Horizontal Band Saw
- (1) Cadillac 14"x28" Toolroom Lathe
- (3) Lapmaster 15" dia. automatic lapping machines
- (1) Sweco 3.0 cu. ft. Vibratory Deburring Machine
- (1) Grav-I-Flow C-4-454 Gyra-Finish Centrifugal Deburring Machine

INSPECTION and QUALITY EQUIPMENT:

- (1) Keyence IM-6225 Instant Measurement System (4" x 8" capacity, .5 micron accuracy!)
- (1) Hexagon 4.5.4 SF Shop Floor Hardened CMM, w/PC-DMIS CAD software and SPC interface
- (1) OGP Smart Scope Flash 200 Automated Video Inspection System, with 8" x 8" x 6" Travel, .000040 Resolution,
- (1) Ram Optical Sprint Video Inspection System, 25X-480X Magnification, .000040 resolution
- (1) Heidenheim Linear Height Gage with .000 005 resolution
- (2) Brown & Sharpe Digit-Hite Plus Electronic Height Gages, 0"-24" Capacity, .0001 Accuracy
- (1) Brown & Sharpe Data-Stat SPC Mini-Processor
- (1) Mitutoyo DP-3DX, SPC Digimatic Mini-Processor
- (11) Assorted Electronic Micrometers and Indicators for use with above SPC Mini Processors
- (1) Mitutoyo SurfTest 201 Profilometer Surface Finish Gage
- (3) Jones & Lamson 14" Optical Comparators, 10X-100X, Reflection, DRO's
- (10) 20X-40X Binocular Stereo Microscopes with Fiber Optic Illuminators
- (18) Granite Surface Plates, 12"x18" thru 24"x36"
- (1) Sets, Webber 1" square "Croblox" Gage Blocks
- (1) Rahn Surf-O-Meter, with Mahr .000020" Indicator
- (1) Galileo Rockwell Hardness Tester

INSPECTION SOFTWARE:

- (1) DataMyte SPC electronic data collection system
- (1) MINITAB for Windows (Release 14) SPC Software.
- (1) QI Macros SPC Software.

CAD-CAM SOFTWARE:

- (1) Mastercam Vers. X10, 3D Programming System, Direct Wired to CNC Machines
- (1) Mastercam Wire Vers. X10, 3D Programming System for Wire EDM Machines
- (1) SolidWorks Office Premium, Solid Modeling Software with advanced FEA capability

BUSINESS SOFTWARE:

- (1) "M1" by ECI: Fully Integrated ERP System, Including Job Costing, Scheduling, Data Collection, Lead Management, Quoting and Estimating, Purchasing, Inventory, Accounts Payable, Accounts Receivable, General Ledger, and Payroll
- (1) ASI DATAMYTE "DataMetrics" SPC process monitoring and control system.

