Machining Facilities

Machining Centers

Makino Machining Complex (MMC)
48 pallet management system, Makino Advanced Systems (MAS-A5) cell controller software. Incorporating 1x A55E horizontal machining center, 1x A51NX horizontal machining center and 2x A51 horizontal machining centers.

Makino a55e 4 Axis Horizontal Machining Center
22.0” x 22.0” x 23.6” X, Y, Z Travel
137 Tool Automatic Tool Changer, 14,000 RPM, 30HP Spindle motor
Renishaw laser tool measurement system, Touch probe

Makino a51 4 Axis Horizontal Machining Center
22.0" x 22.0" x 23.6" X, Y, Z Travel, 1,969 IPM Rapid Traverse Rate,
134 Tool Automatic Tool Changer 14,000 RPM, 30HP Spindle motor
Renishaw laser tool measurement system, Touch Probe

Makino a51 Horizontal Machining Center
22.0" x 22.0" x 23.6" X, Y, Z Travel, 2,360 IPM Rapid Traverse Rate
134 Tool Automatic Tool Changer, 14,000 RPM, 30HP Spindle motor
Renishaw laser tool measurement system, Touch Probe

Makino a51nx Horizontal Machining Center
22.0” x 25.2” x 25.2” X, Y, Z Travel, 2,362 IPM Rapid Traverse Rate,
219 Tool Automatic tool changer, 14,000 RPM , 30HP Spindle motor
Renishaw laser tool measurement system, Touch Probe

Makino Machining Complex2 (MMC2)
24 Pallet management system, Makino Advance Systems (MAS-A5) cell controller software. Incorporating 2x A61NX horizontal machining center.

Makino a61nx Horizontal Machining Center
28.7" x 25.6" x 31.5" X, Y, Z Travel, 2,362 IPM Rapid Traverse Rate
134 Tool Automatic Tool Changer, 14,000 RPM Spindle motor
Renishaw laser tool measurement system, Touch Probe

Makino a61nx Horizontal Machining Center
28.7" x 25.6" x 31.5" X, Y, Z Travel, 2,362 IPM Rapid Traverse Rate
218 Tool Automatic Tool Changer,14000 RPM Spindle Motor
Renishaw laser tool measurement center, Touch Probe PRO 6 Controller.

Makino a66 Horizontal Machining Center
31.5" x 27.6" x 25.2" X, Y, Z Travel, 1,575 IPM Rapid Traverse Rate, 14,000 RPM 30 HP Spindle Motor, 60 Tool Automatic Tool Changer
Renishaw MP10 Touch Trigger Probe System, Touch probe

(3) Makino DA300 5-Axis Vertical Machining Center
X=520mm, Y=620mm, Z=500mm travel, 2362 Rapid Traverse Rate, 20,000 RPM HSK-A63 Spindle Motor, 118 Tool Automatic Tool Changer
Renishaw laser tool measurement center, Touch Probe PRO 6 Controller.

(3) Matsuura MX-520 5-Axis Vertical Machining Centers

20,000 RPM BT40 Maxia Spindle, 520 mm x 350 mm travel
60 Tool Automatic Tool Changer
Renishaw laser tool measurement center, Touch Probe

(2) Haas UMC-500SS 5-Axis Vertical Machining Centers

15,000 RPM Spindle, 520 mm x 350 mm travel
70 Tool Automatic Tool Changer
Renishaw laser tool measurement center, Touch Probe

(4) Haas VF-2SS 3-Axis Vertical Machining Centers

30 x 16 Table Travel, 12,000 RPM, 25 Tool Automatic tool changer
Renishaw Probe System,

Multitasking Machines

Super NTMX (5-axis Mill Turn)

Bar Feeder, Parts Catcher, Tool Magazine Capacity: 48 tools
Upper Tool Spindle: Max. Rotation speed: 12,000 min^{-1}, High Precision B-axis head
Lower Left/Right Spindle: Max. Rotation speed: 5,000 min^{-1}, Bar capacity dia.: ∅51mm
Lower Turret: Dodecagonal 24- station turret
Max. Turning Diameter: ∅200mm Max. Turning Length: ∅780mm

2 Citizen L32-1M10 Swiss Machines

Turning Centers

Nakamura SC250 Turning Center

2" Bar Capacity, 20 HP Spindle Motor, 8" Chuck Capacity, 50 - 5,000 RPM, 11.81" Maximum Turning Diameter, Fanuc 21iTA Controls, Iemca VIP 70 Automatic Magazine Barfeed

Nakamura SC300 Turning Center

2.79" Round Collet Capacity, 20 HP Wide Range Motor, 10" Chuck Capacity, 35 - 3,500 RPM, 13.77" Maximum Turning Diameter, Fanuc 21-TB Controls, SMW THW Model 265-71 Three-Jaw Power Chuck

Production Robotics

(2) M20iA Fanuc Robots

35kg payload, 1813mm reach, 6 axis industrial robot

(7) UR10 Universal Robots

10kg payload, 1300mm reach, 6 axis collaborative robots

(2) **UR20 Universal Robots**

25kg payload, 1750mm reach, 6 axis collaborative robots

Manual Machines

2 Lagun FTV-2 Vertical Milling Machines
9" x 48" Table, 3,000 RPM, Variable Speed Power Feed, Acurite III 3-Axis DRO

Takisawa Web TSL-800D Gap Bed Engine Lathe
14" x 40" Rated Capacity, 20" Swing in Gap, 1,800 RPM, 1.5" Hole thru Spindle

Inspection Equipment

Automated Inspection Cell
Fanuc M710ic /50 Robot with 100 pallet management system

Brown & Sharpe ONE Shop Floor CMM Model #7107
27.6" x 39.4" x 25.6" Measuring Range, FBII Control System, Geometric Thermal Temperature Compensation, Renishaw PH10T Probe head and TP20 Probe, PC DMIS Cad Software, probe rack.

Brown & Sharp Global Performance: Silver Edition
19.6” x 27.5” x 19.6” measuring range.
DC240C Control System
TesaStar-Sm probe head with scanning capabilities
Probe rack, PC-DMIS CAD++ Software

Brown & Sharpe Global S Scan +
47.2” x 59” x 39.3” Measurement Range
TesaStar-Sm probe head with scanning capabilities
Probe rack, PC-DMIS CAD++ Software

Sprint CNC 250 Vision Center
Dimensions (XYZ): 28x21.75x31.5”
Measuring Range: 12x6x6”
Camera: High resolution color CCD with 768x494 pixel array

Brown & Sharpe Gage 2000 RefleX Coordinate Measuring Machine
18" x 20" x 16" Measuring Range, Touch Trigger Probe

Rahn Grey Granite Surface Plate
24" x 36" x 4" with Stand

Starrett Grade A Surface Plate
36” x 36” x 6” with stand

Starrett MV70 Height Gage Master
12" Range

Assorted Inspection Equipment
Vernier Calipers, Plug Gages, Gage Pins, Depth Micrometers, Outside Micrometers

CAD/CAM Systems

Virtual Gibbs CAM System Software - 9 Seats
Milling - 2, 2.5 and Simple 3 Axis with Simple 4th Axis Positioning
5-Axis multi-tasking machining
Turning - 2 Axis Turning
Rotary Axis Milling
Volumill 3D

Espirit Cam – 1 seat
Swiss Machining

SolidSurfacer
Solid Modeling and 3 Axis Surface Machining
Export, Import, Repair and Machining of Solid Models from Many CAD Sources, Including Parasolid, SAT Files, IGES, DXF, Point list, Solidworks, Solid Edge part, and step Files.

Solidworks Premium
Modeling
Creating Prints
DWGeditor
Photoview 360

Solidworks Inspection Software

High QA Inspection Software

PC-DMIS CAD++ Offline Programing Seat

Parts Finishing

Royson 6C – Vibratory finishing machine
6 cubic feet capacity
Royson 4L-C Vibratory finishing machine
3.5 cubic feet capacity
16x16x36 inside dimensions

BV 2 DR Bowl Vibratory finishing machine
2 cubic feet capacity
Dimensions: 30x10x36

Gosiger KP30 Vacuum Solvent Washing System

MOPA 30 Watt Laser Engraver

Business System

TR Systems PC Workstations

JobBoss Job Control Software

UniPoint Quality Software

Instagate Internet Modem

Facility

New Building August 2012

22,000 Square Feet

2 Loading Docks