

Facilities List

CNC MACHINING CENTERS

DMG Mori DMU 65FD monoBLOCK

5 AXIS MILL/TURN
SIEMENS 840D CONTROL
RENISHAW PART PROBING
BLUM LASER PROBE
1160 PSI THRU TOOL COOLANT
18,000 RPM 47 HP Spindle
1,200 RPM C-AXIS
1574 I.P.M. RAPID
60 TOOLS
28.9" x 25.6" x 22" Milling Capacity
Ø25.6" x 19.7" Turning Capacity

Mori Seiki NV5000B

MAPPS MSG-501iMB CONTROL & DATA SERVER
w/ HPCC-AI for HIGH SPEED 3D MACHINING
12,000 RPM 30 HP
1,653 I.P.M. RAPID
30 TOOLS
40.2" x 20.1" x 20.1"

Mori Seiki NV5000α1B/40 4 axis

MAPPS II MSG-501 CONTROL & DATA SERVER
w/ HPCC-AI for HIGH SPEED 3D MACHINING
14,000 RPM 30 HP
1,653 I.P.M. RAPID
30 TOOLS
40.2" x 20.1" x 20.1"

Mori Seiki SV50 3½ axis

3½ AXIS RESOLUTION = 0.001° INDEX
FANUC 18M CONTROL
10,000 RPM 30 HP
1,270 I.P.M. RAPID
20 TOOLS
31.5" x 20" x 20"

Mori Seiki MV55 3½ axis

3½ AXIS RESOLUTION = 0.001° INDEX
FANUC 0M CONTROL
4,000 RPM 15 HP
30 TOOLS
40.1" X 21.6" X 21"

Mori Seiki SV40

3 AXIS
FANUC 18M CONTROL
12,000 RPM 30 HP
1,270 I.P.M. RAPID
30 TOOLS
23.6" x 16.9" x 18.1"

Mori Seiki NH4000 DCG 6CPP 4 axis

6 PALLET HORIZONTAL MANUFACTURING CELL
MAPPS IV CONTROL W/ PART PROBING SYSTEM
1000 PSI THRU TOOL COOLANT
14,000 RPM 30 HP
1,968 I.P.M. RAPID
180 TOOLS
22" x 22" x 24.8"

(2) Mori Seiki MV40b

3 AXIS
FANUC 16M CONTROL
12,000 RPM
20 TOOLS
31.5" x 16.1" x 20"

Mori Seiki MV40a

3 AXIS
FANUC 10M CONTROL
8,000 RPM
20 TOOLS
23.6" x 16.1" x 20"

Mori Seiki MV40b 3½ axis

3½ AXIS RESOLUTION = 0.001° INDEX
FANUC 10M CONTROL
8,000 RPM
20 TOOLS
31.5" x 16.1" x 20"

Mori Seiki MV40m 3 AXIS

FANUC 0M CONTROL
8,000 RPM
20 TOOLS
22" X 16" X 18"

Mori Seiki MV40b 4 axis

4th AXIS RESOLUTION = 0.001°
FANUC 16M CONTROL
12,000 RPM 20 TOOLS 31.5" x 16.1" x 20"

Mori Seiki MVjr 3 AXIS

FANUC 10M CONTROL
6,000 RPM
16 TOOLS
22" X 16" X 18"

• Exceptional inventory of cutting tools, tooling, and fixturing equipment for CNC department.

Facilities List

CNC MACHINING CENTERS

Hurco VM20

WINMAX CONVERSATIONAL CONTROL
10,000 RPM 20 HP
600 I.P.M. RAPID
20 TOOLS
40" x 20" x 20"

(2) TRAK DPM-SX3 Bed Mill

(Southwestern Industries)
3 AXIS
5,000 RPM 5 HP
33" X 17" X 23.5"

CNC TURNING CENTERS

Mori Seiki CL25b

2 AXIS CHUCKER
FANUC 18T CONTROL
12" CHUCK / 3.60" Ø THRU
2,800 RPM 25 HP
10 STATION TURRET
CAPACITY: 17.7"

Mori Seiki SL25b

2 AXIS
FANUC 10T CONTROL
10" CHUCK / 2.65" Ø THRU
LIVE CENTER
3,500 RPM 20HP
10 STATION TURRET
CAPACITY: 10.0" Ø x 24.6"

TRAK TRL-2460V Lathe

(Southwestern Industries)
2 AXIS 12" & 15" CHUCKS / 4.09" Ø THRU
1,800 RPM 15 HP
CAPACITY: 24.0" Ø x 60.0"

WIRE EDM

Fanuc 0iD-10" 6 axis

FANUC 310is WA CONTROL
"A" AXIS, FULLY PROGRAMMABLE (Turn & Burn)
SUBMERGED / AUTO THREADING
14.5" x 10.6" x 10"
U-V +/- 2.364"

Fanuc 0i

FANUC 18i W CONTROL
SUBMERGED / AUTO THREADING
12.6" x 8.7" x 7.1"
U-V +/- 2.364"

Fanuc 1i

FANUC 18i W CONTROL
SUBMERGED / AUTO THREADING
20.5" x 14.6" x 16"
U-V +/- 2.364"

EDM DRILL

Sodick K1C Small Hole Drilling EDM

0.0098" Ø to 0.118" Ø (0.25mm Ø to 3.0mm Ø)
7.87" x 11.8" x 11.8"

Facilities List

CNC PROGRAMMING

Programming Department consists of eight workstations on a network equipped with DNC file transfer.

MASTERCAM X9 (4 SEATS)

- LEVEL 1-3 MILL (2D & 3D)
- LATHE
- WIRE EDM (4 axis)
- MISC. TRANSLATORS (currently including):
SolidWorks SLDPRT, X_T, SAT, STP, IGS, DWG, DXF.

hyperMILL CAD/CAM by OPENMIND

- Full 5 axis MILL/TURN

BRIDGEPORT EZ-CAM

- 3 AXIS EZ-MILL
- 4 AXIS EZ-MILL
- CONTOURING
- EZ-EDM
- EZ-TURN
- EZ-EGS Engraving

All workstations have access to:

HEWLETT PACKARD COLOR PLOTTER (“E” SIZE DRAWINGS 34” x 44”)

KONICA MINOLTA MULTIFUNCTION (“B” SIZE DRAWINGS 11” x 17”)

NUMEROUS LASERJET PRINTERS

NETWORK TO MACHINE TOOL FILE TRANSFERS VIA CIMCO DNC NETWORK

Internet file transfers are accepted in several formats including:

.SLDPRT	.SAT	.IGS	.DXF
.STP (export as solids)	.X_T (Parasolids)	.PDF	.DWG

Please note that desired file format is governed by planned method of manufacture.

Contact us to discuss what format is best suited for your project: 978.948.3778

Facilities List

MANUAL LATHES

Mori Seiki Engine lathe
DIGITAL READOUT
8" CHUCK: 2 ¼" Ø THRU
CAPACITY: 16" Ø x 48"; 24" Ø GAP

(3) Hardinge HLV Toolmakers lathes
DIGITAL READOUT
6" CHUCK: 1.1" Ø THRU
ENGLISH / METRIC
CAPACITY: 10" Ø x 24"

Mori Seiki Engine lathe
DIGITAL READOUT
6" CHUCK: 2" Ø THRU
CAPACITY: 16" Ø x 36"

Victor S2040G Engine lathe
DIGITAL READOUT
15" CHUCK: 3.12" Ø THRU
ENGLISH / METRIC
CAPACITY: 18 ½" Ø x 40"; 26" Ø GAP

MANUAL MILLING

(8) Bridgeport milling machines
DIGITAL READOUT
3,000 RPM
POWER FEED
30" x 9" x 5"

GRINDERS

Chevalier FSG-2A1224H surface grinder
Automatic X,Y axis
DIGITAL READOUT
12" x 24"

Harig 618 surface grinder
3,600 RPM
6" x 18"

Harig 612 surface grinder
3,600 RPM
6" x 12"

Okamoto ACCUGAR 124N surface grinder
Automatic X,Y axis
DIGITAL READOUT
12" x 24"

Okamoto PFG-450B surface grinder
Automatic X,Y axis
6" x 18"

Facilities List

MISC. SHOP EQUIPMENT

(2) Clausing drill press
VARIABLE SPEED
20" x 20" x 1/2" Ø

Sunnen hone
1/8" - 1 1/2" Ø

Amada HA-250W horizontal bandsaw
SEMI-AUTOMATIC
1 1/4" BLADE
CAPACITY: 10" Ø

DoAll 3613-20 vertical bandsaw
3hp / 36"

DoAll Model ML vertical bandsaw
15.75"

Pexto 12V4F shear
12 GA x 48"

Zero BNP55-6
PNEUMATIC SAND BLASTER
43" x 24" x 30"

Sweco FMD34A
VIBRATORY TUMBLER
3 CUBIC FOOT - BOWL
5 HP

Gardner Denver
ROTARY SCREW AIR COMPRESSOR
25 HP

Champion 25
AIR COMPRESSOR
W/ AIR CHILLER
25 HP

Jib crane
ELECTRIC HOIST
CAPACITY: 1 TON

High speed sensitive drill press
.010" Ø - .040" Ø

Clearing 220 B1 punch press
22 TON

HYD-MECH horizontal bandsaw
1" BLADE
CAPACITY: 8.25" Ø; 7.75" Sq.; 7.75" x 10.5" Rect.

Trinco MLD 30
PNEUMATIC SAND BLASTER
30" x 21" x 23"

Centrifugal Disc Finisher
5 LITER - BOWL

Ultramatic Portaburr Model 3
VIBRATORY TUMBLER
3 CUBIC FOOT - TUB
3/4 HP

AirTek CT220 Air Dryer
SMART CYCLE COLD TRAP

ASSEMBLY

Clean Room
8' x 10' SOFT-WALL
CLASS 1000

Facilities List

INSPECTION EQUIPMENT

Zeiss Contura G2 RDS 7/10/6 CMM

27.5" x 39.3" x 23.6" (700mm x 1000mm x 600mm)

Active Scanning

Measurement Accuracy 1.8 + L/300 (micron)

Brown & Sharpe Micro-Hite 900

36" ELECTRONIC HEIGHT GAGE

ACCURACY: 0.0002" (0.0045mm)

REPEATABILITY: $\pm 2s = 0.0001$ " (0.003mm)

MAX. PERPENDICULARITY ERROR: 0.00048" (0.012mm)

MISC. ACCESSORIES & PROBES

Trimos V1004+ 48.6" height gage

RESOLUTION: 0.00005"

ACCURACY: 0.00012" (0.003mm)

Trimos V304+ 21" height gage

RESOLUTION: 0.00005"

ACCURACY: 0.00012" (0.003mm)

Fowler / Trimos 12" height gage

RESOLUTION: 0.0001"

Leica S8 APO Stereo Microscope

10 \times - 80 \times ZOOM (8:1 APOCHROMATIC)

INTEGRATED PHOTO/VIDEO

RESOLUTION: 300 Lp/mm

Fowler / Bowers digital bore gages

.2500" \varnothing THROUGH 8.0000" \varnothing

RESOLUTION: 0.00005" / 0.001mm

Standard dial bore gages

.2400" \varnothing THROUGH 12.1250" \varnothing

RESOLUTION: 0.0001"

Mitutoyo digital micrometer set

0" THROUGH 3"

RESOLUTION: 0.00005"

Mitutoyo 24" digital calipers

RESOLUTION: 0.0005" / 0.01mm

(2) Granite surface plates

48" x 36"

Numerous sets of gage pins

.0060" \varnothing THROUGH 1.0000" \varnothing

0.001 INCREMENTS

PLUS & MINUS

(8) Granite surface plates

MISC. SIZES FOR IN PROCESS INSPECTION

AT WORK AREAS

Brown & Sharpe Reflex 343 CMM

14" x 16" x 12" (356mm x 406mm x 305mm)

VOLUMETRIC PERFORMANCE= 0.0004" (0.010mm)

REPEATABILITY= 0.00016" (0.004mm)

Brown & Sharpe 18" height gage

RESOLUTION: 0.0005"

Mitutoyo 24" height gage

RESOLUTION: 0.001"

Dorsey Benchmark 16H

Optical Comparator w/ edge detection

Quadra-Chek 200

Lynx Stereo Dynascopic Microscope

7.0 \times - 40 \times ZOOM (5.7:1)

Micrometer set

1" THROUGH 18"

RESOLUTION: 0.0001"

Starrett blade micrometer set

0" THROUGH 2"

RESOLUTION: 0.0005"

Starrett Master Level

Granite surface plate

36" x 36"

(3) Fowler gage block sets

0.1000" THROUGH 4.0000"

Large assortment of Deltronic pins

0.0001 INCREMENTS

Mitutoyo SurfTest 211

SURFACE ROUGHNESS TESTER

MEASURING RANGE:

Ra, Rq: 2-1600 μ inch (0.05-40 μ m)

Rz, Ry: 10-6400 μ inch (0.3-160 μ m)

- Large assortment of miscellaneous inspection equipment.