

# Machine Tool Facilities

## CNC SWISS MACHINES

### (1) Citizen C-16

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 11-Axis, 5/8" Ø turning capacity x 7.87" long per chucking
- Simultaneous front drilling, outer diameter machining, and back drilling
- 22 live and stationary tools
- Iemca Automatic Bar Loader
- Purchased new in 2003

### (1) Citizen M-20

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 11-Axis, 3/4" Ø turning capacity x 12.5" long per chucking
- Simultaneous front drilling, outer diameter machining, and back drilling
- 24 live and stationary tools
- Iemca Automatic Bar Loader
- Purchased new in 2004

### (1) Citizen M-32

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 11-Axis, 1-1/4" Ø turning capacity x 12.5" long per chucking
- Simultaneous front drilling, outer diameter machining, and back drilling
- 24 live and stationary tools
- Iemca Automatic Bar Loader
- Purchased new in 2000

### (3) Citizen L-25

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 7-Axis, 1" Ø turning capacity x 10" long per chucking
- Simultaneous front drilling, outer diameter machining, and back drilling
- 20 live and stationary tools
- Iemca Automatic Bar Loader
- Purchased new in 1998, 1999, and 2000

## TURNING / MILLING CENTERS

### (1) Nakamura Tome WT-15

Super High Speed Turning / Milling Center

Contouring, Threading, Milling, Slotting, Cross Work ( Drilling, Off-center Drilling, Tapping, Reaming ), End Work, Boring

8-Axis, 7.5" Ø standard cutting, 2" Ø bar cutting, 15.75" cutting length

A single CNC machine with the productivity of two CNC lathes, this machine can run completely unmanned. It can simultaneously machine with both spindles and features automatic part transfer from first to second operations  
Twin Turrets, 12 live and stationary tools on each

Parts conveyor, Chip conveyor, parts catcher

LNS Automatic Bar Loader

Purchased New 2006

### (2) Mazak Multiplex 6200Y

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 8-Axis, 10.24" Ø standard cutting, 2" Ø bar cutting, 20.87" cutting length for shaft work, 7.09" cutting length for chucking work
- A single CNC machine with the productivity of two CNC lathes, this machine can run completely unmanned. It can simultaneously machine with both spindles and features automatic part transfer from first to second operations
- Twin Turrets, 12 live and stationary tools on each
- Parts conveyor, Chip conveyor, Parts catcher
- LNS Automatic Bar Loader
- Purchased new in 2000 and 2003

### (1) Mazak Super Quick Turn 250 MSY

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 6-Axis, 11.81" Ø standard cutting, 3" Ø bar cutting, 21.18" cutting length for shaft work
- A single CNC machine that can simultaneously machine with dual spindles and features automatic part transfer from first to second operations
- 12 live and stationary tools
- Chip conveyor, Parts catcher
- Purchased new in 2003

**(1) Mazak Super Quick Turn 15 MY**

- Contouring, Threading, Milling, Slotting, Cross Work (Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 4-Axis, 11.81" Ø standard cutting, 2" Ø bar cutting, 22.56" cutting length for shaft work
- A single CNC machine that can simultaneously machine with dual spindles and features automatic part transfer from first to second operations and rapid traverse
- 12 live and stationary tools
- Parts conveyor, Chip conveyor, Parts catcher
- LNS Automatic Bar Loader
- Purchased new in 1996

**(1) Mazak Nexus 200 MY**

- Contouring, Threading, Milling, Slotting, Cross Work ( Drilling, Off-center Drilling, Tapping, Reaming), End Work, Boring
- 4-Axis, 11.81" Ø standard cutting, 2" Ø bar cutting, 22.56" cutting length for shaft work
- A single CNC machine that can simultaneously machine with dual spindles and features automatic part transfer from first to second operations and rapid traverse
- 12 live and stationary tools
- Parts conveyor, Chip conveyor, parts catcher
- LNS Automatic Bar Loader
- Purchased new in 2006

**(1) Mazak Quick Turn 20 Lathe**

- 2 – Axis, 12.0" Ø standard cutting, 3" Ø bar cutting, 20.08" cutting length for shaft work
- Chip conveyor
- Purchase new in 1997

## VERTICAL MACHINING CENTERS

### (1) Kitamura 3XI / 2009

- High Speed Machining
- Contouring, Threading, Milling, Slotting, Drilling, Tapping, Reaming, Boring
- Programmable 4th Axis (Rotary)
- X-Axis Travel 30.0" Y-Axis Travel 17.9" Z-Axis Travel 18.1"
- Rapid traverse X-Axis and Y-Axis 1,969 inches per minute, Z-Axis 1,417 inches per minute
- 10,000 RPM Spindle
- 134 pounds of torque
- 30-Station Automatic Tool Changer
- Table Load 1,102 pounds
- Automatic Chip Conveyor
- Purchased in 2010

### (1) Kitamura 3XI

- High Speed Machining
- Contouring, Threading, Milling, Slotting, Drilling, Tapping, Reaming, Boring
- Programmable 4th Axis (Rotary)
- X-Axis Travel 30.0" Y-Axis Travel 17.9" Z-Axis Travel 18.1"
- Rapid traverse X-Axis and Y-Axis 1,969 inches per minute, Z-Axis 1,417 inches per minute
- 10,000 RPM Spindle
- 134 pounds of torque
- 30-Station Automatic Tool Changer
- Table Load 1,102 pounds
- Automatic Chip Conveyor
- Purchased new in 2001

### (1) Kitamura 3X

- High Speed Machining
- Contouring, Threading, Milling, Slotting, Drilling, Tapping, Reaming, Boring
- Programmable 4th Axis (Rotary)
- X-Axis Travel 30.0" Y-Axis Travel 17.9" Z-Axis Travel 18.1"
- Rapid traverse X-Axis and Y-Axis 1,181 inches per minute, Z-Axis 945 inches per minute
- 10,000 RPM Spindle
- 134 pounds of torque
- 20-Station Automatic Tool Changer
- Table Load 1,100 pounds
- Automatic Chip Conveyor
- Purchased new in 1998

## CNC / EDM FAST HOLE DRILLING MACHINES

### (1) Current EDM CT300

- Drills straight or angled holes .004" Ø to .256" Ø
- Drilling depth up to 300 times the electrode diameter
- 3 axes and 9 coordinate systems with automatic part referencing
- X-Axis Travel 12", Y-Axis Travel 8", Z-Axis Travel 12"
- Purchased new in 2001

## PRODUCTION SAWING

### (1) Marvel PA10/3 Automatic Band Saw

- High Speed Production Sawing
- Multiple Bar Bundle Cutting
- ± .002 accuracy part to part
- 10" Round
- 8" x 11 ½ " Rectangle
- Purchased new in 2007

## MACHINE TECHNOLOGY'S MANUAL MACHINES

### (1) Bridgeport Vertical Mill

### (2) Hardinge 5-C Chucker Lathes

### (1) Webb 60" x 17" Engine Lathe