



## EQUIPMENT LIST

### CNC TURNING CENTERS

#### 8-12 inch Turning (30 machines)

- **DMG Mori, NLX2500/700, CNC Livetool Lathe** with CELOS control, 4,000 rpm spindle, 10,000 rpm livetools, 3.125" bar capacity, 14.4" turning capacity, 27.7" turn length, ChipBlaster high pressure coolant and mist collector system, auto door, 12 station turret, programmable tailstock, 34.7 h.p., 2015 model.
- **DMG Mori, NLX2500/700, CNC Livetool Lathe** with CELOS control, 4,000 rpm spindle, 10,000 rpm livetools, 3.125" bar capacity, 14.4" turning capacity, 27.7" turn length, ChipBlaster high pressure coolant and mist collector system, auto door, 12 station turret, programmable tailstock, 34.7 h.p., 2015 model.
- **DMG Mori, NLX2500/700, CNC Livetool Lathe** with CELOS control, 4,000 rpm spindle, 10,000 rpm livetools, 3.125" bar capacity, 14.4" turning capacity, 27.7" turn length, ChipBlaster high pressure coolant and mist collector system, auto door, 12 station turret, programmable tailstock, 34.7 h.p., 2015 model.
- **DMG Mori, NLX2500/700, CNC Livetool Lathe** with CELOS control, 4,000 rpm spindle, 10,000 rpm livetools, 3.125" bar capacity, 14.4" turning capacity, 27.7" turn length, ChipBlaster high pressure coolant and mist collector system, auto door, 12 station turret, programmable tailstock, 34.7 h.p., 2015 model.
- **Kitako-Shimada, HS4200n, CNC Multi-Spindle Lathe** with Fanuc 18iT 4-axis control, equipped with 4 A2-6 Spindles, 4500rpm, 20 h.p., 7.8" turning capacity, 2013 model.
- **Kitako-Shimada, HS4200n, CNC Multi-Spindle Lathe** with Fanuc 18iT 4-axis control, equipped with 4 A2-6 Spindles, 4500rpm, 20 h.p., 7.8" turning capacity, 2013 model.
- **Mori Seiki, NLX2500Y/700, CNC Lathe** with MSX-853 IV Control, equipped with live tooling (6000 rpm), 4" travel Y-axis, 3.125 bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 4' autoloader LNS barfeed, 40.0 h.p., 2012 model.
- **Mori Seiki, NLX2500Y/700, CNC Lathe** with MSX-853 IV Control, equipped with live tooling (6000 rpm), 4" travel Y-axis, 3.125 bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 4' autoloader LNS barfeed, 40.0 h.p., 2012 model.
- **Mori Seiki, NL2500Y/700, CNC Lathe** with MAPPS II operating system, equipped with live tooling (6000 rpm), 4" travel Y-axis, 3.125" bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 40.0 h.p., 2006 model.
- **Mori Seiki, NL2500Y/700, CNC Lathe** with MAPPS II operating system, equipped with live tooling (6000 rpm), 4" travel Y-axis, 3.125" bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 40.0 h.p., 2006 model.
- **Mori Seiki, NL2500MC/700, CNC Lathe** with MAPPS II operating system, equipped with live tooling (6000 rpm), 3.125" bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 40.0 h.p., 2005 model.
- **Mori Seiki, NL2500MC/700, CNC Lathe** with MAPPS II operating system, equipped with live tooling (6000 rpm), 3.125" bar capacity, 14.0" turning capacity, high-pressure coolant and mist collector system, automatic doors, 40.0 h.p., 2005 model.
- **Mori-Seiki, ZL 200BMC 500, CNC Lathe** with FANUC 16TC control, five axis turning center with live tooling on upper and lower turrets, parts catcher, IEMCA Bar Feeder, 2.125" bar capacity, 9" dia. turning capacity, 2002 model.
- **Mori-Seiki, SL 253BMC 500, CNC Lathe** with FANUC 16TC control, equipped with live tooling, parts catcher, IEMCA Bar Feeder, 2.625" bar capacity, 12" dia. turning capacity, 2001 model.
- **Mori-Seiki, SL 250BMC 500, CNC Lathe** with MSC-518 control, equipped with live tooling, 2.625" bar capacity, 12" dia. turning capacity, 1997 model.
- **Mori-Seiki, SL 250B-500, CNC Lathe** with FANUC 16TF control, 25 h.p., 2.625" dia. thru spindle, 12" dia. turning capacity, 2000 model.
- **Mori-Seiki, CL-203A, CNC Lathe** with FANUC MSG 803 control, 20 h.p., 2" dia thru spindle, 9" dia turning capacity, 1999 model.
- **Mori-Seiki, SL 200BMC, CNC Lathe** with FANUC 16TC control, equipped with live tooling, 20 h.p., 2.625" dia. thru spindle, parts catcher, 9" turning capacity, 1999 model.

- **Mori-Seiki, SL-250B, 500, CNC Lathe** with FANUC 18T control, 25 h.p., 2.625" dia. thru spindle, 12" dia. turning capacity, 1999 model.
- **Mori-Seiki, SL-250B, 500, CNC Lathe** with FANUC 18T control, 30 h.p., 2.625" dia. thru spindle, 12" dia. turning capacity, 1999 model.
- **Mori-Seiki, SL-25B, 500, CNC Lathe** with FANUC 16T control, 25 h.p., 2.500" dia. thru spindle, 12" dia. turning capacity, 1997 model.
- **Mori-Seiki, L2, 500, CNC Lathe** with FANUC 21T control, 25 h.p., 2.500" dia. thru spindle, 12" dia. turning capacity, 1997 model.
- **Mori-Seiki, CL-20A, CNC Lathe** with FANUC MF-T8 control, 15 h.p., 2.625" dia. thru spindle, 9" dia. turning capacity, 1995 model.
- **Mori-Seiki, SL-25B, 500, CNC Lathe** with FANUC 16T control, 25 h.p., 2.500" dia. thru spindle, 12" dia. turning capacity, 1996 model.
- **Hitachi-Seiki, HTG-25 600, CNC Lathe** with Seicos LIII control, 25 h.p., 2.500" dia. thru spindle, 14" dia. turning capacity, 1996 model.
- **Hitachi-Seiki, HTG-25 600, CNC Lathe** with Seicos LIII control, 25 h.p., 2.500" dia. thru spindle, 14" dia. turning capacity, 1996 model.
- **Hitachi-Seiki, HT-20 SII, CNC Lathe** with Multi-Seiki control, 20 h.p., 2" dia. thru spindle, 9" dia. turning capacity, 1995 model.
- **Hitachi-Seiki, HT-23 SII, CNC Lathe** with Multi-Seiki control, 25 h.p., 2.500" dia. thru spindle, 12" dia. turning capacity, 1995 model.
- **Mori-Seiki, AL-20, CNC Lathe** with FANUC OT control, 10 h.p., 1.375 dia. thru spindle, 6" dia. turning capacity, 1990 model.
- **Hitachi-Seiki, HT-20, CNC Lathe** with FANUC 10TF control, 15 h.p., 1.750" dia. thru spindle, 9" dia. turning capacity, 1987 model.

### 15-20 inch Turning (3 machines)

- **Mori Seiki, SL403C/800, CNC Lathe** with MSX-500 control, MAPPS IV Interface, A2-15 spindle nose, 7.25" thru spindle, 24.4" dia. Turning capacity, high pressure coolant and mist collector system, auto door, 12-tool turret, 1500rpm 2spd 40 h.p., 2011 model.
- **Mori-Seiki, SL-403B/800, CNC Lathe** with MSX-501T control, 50 h.p., 4.625" dia. thru spindle, 24" dia. turning capacity, 12-tool turret, 2005 model.
- **Mori-Seiki, SL-400B, 900, CNC Lathe** with FANUC 16TC control, 50 h.p., 4.625" dia. thru spindle, 24" dia. turning capacity, 10-tool turret, 1999 model.



## EQUIPMENT LIST (Cont'd)

### CNC MACHINING CENTERS

#### 50-Taper HMC (9 machines)

- **DMG Mori NHX6300, Horizontal Machining Center**, CELOS control, 120-tool magazine, 24.8 X 24.8 working surface, 35.4 X 31.5 X 38.6 travels, 8,000 rpm, 50 h.p., 2015 model.
- **Mori-Seiki NH6300DCG/50, Horizontal Machining Center**, MSX-701 III, 24.8 X 24.8 working surface, 35.4 X 31.5 X 38.6 travels, 8,000 rpm, 50 h.p., 2012 model.
- **Mori-Seiki NH6300DCG/50, Horizontal Machining Center**, MSX-701 III, 180-tool magazine, 24.8 X 24.8 working surface, 35.4 X 31.5 X 38.6 travels, 8,000 rpm, 50 h.p., 2010 model.
- **Mori-Seiki NH500DCG/50, Horizontal Machining Center**, MSX-701 III, 19.7 X 19.7 working surface, 25.6 X 23.6 X 28.7 travels, 8,000 rpm, 30 h.p., 2009 model.
- **Mori-Seiki NH500DCG/50, Horizontal Machining Center**, MSX-701 III, 19.7 X 19.7 working surface, 28.7 X 28.7 X 33.5 travels, 8,000 rpm, 30 h.p., 2011 model.
- **Mori-Seiki NH500DCG/50, Horizontal Machining Center**, MSC-701 III, 19.7 X 19.7 working surface, 25.6 X 23.6 X 28.7 travels, 15,000 rpm, 30 h.p., 2009 model.
- **Mori-Seiki, NH500DCG/50, Horizontal Machining Center**, MSX-501 III control, 19.7 X 19.7 working surface, 25.6 X 23.6 X 28.7 travels, 8,000 rpm, 30 h.p., 2008 model.
- **Mori-Seiki, NH5000/50, Horizontal Machining Center**, MSX-501 III control, 19.7 X 19.7 working surface, 25.6 X 23.6 X 28.7 travels, 15,000 rpm, 30 h.p., 2007 model.
- **Mori-Seiki, SH-500/50, Horizontal Machining Center**, MSC-502 control, 19.7 X 19.7 working surface, 24.8 X 23.6 X 25.6 travels, 10,000 rpm, 30 h.p., 2002 model.

#### 50-Taper VMC (4 machines)

- **Mori-Seiki NV7000/50, Vertical Machining Center**, MSX-711 IV, MAPPS IV Interface, 66.9 X 29.9 table, 60.6 X 29.9 X 26.0 travels, 60-tool magazine, 10,000 rpm, OMP60 Renishaw probe, ChipBlaster EV-13DA and MistBlaster, 2011 model.
- **Mori-Seiki, MV55/50 Vertical Machining Center** with MSC-501 FANUC control, 35h.p., Shuttle Type Auto Pallet Changer, 22 X 22 X 40 travels, 55 X 20 table, X,Y,Z optical scales, Renishaw NC-1, 2 speed geared headstock, 60-tool magazine, 6000 rpm, ChipBlaster high pressure coolant system, helical interpolation and synchronized tapping, 2001 model.
- **Mori-Seiki, MV55/50 Vertical Machining Center** with MSC-501 FANUC control, 30 h.p., 2 speed geared headstock, 30-tool magazine, 6000 rpm, 22 X 22 X 40 travels, ChipBlaster high pressure coolant system, helical interpolation and synchronized tapping, 2000 model.
- **Hitachi-Seiki, VK65L, CNC Vertical Machining Center**, Seicos Mill control, 25 h.p., 2 speed geared headstock, 30-tool magazine, Renishaw Probe System, 28 X 28 X 63 travels, 5000 rpm spindle, 1995 model.

#### 40-Taper VMC (8 machines)

- **Mori-Seiki, MV40B CNC Vertical Machining Center**, FANUC 16MF control, dual 18 X 28 table Pallet Changer System, Renishaw Probe System, Renishaw Tool Setter, 16 X 20 X 30 travels, 8000 rpm, 10 h.p., 20-tool magazine, 1996 model.
- **Mori-Seiki, MV-40E, Vertical Machining Center**, MSC-500 control, 22 X 16.1 X 18.1 travels, 8,000 rpm, 10 h.p., 20-tool magazine, 2000 model.
- **Mori-Seiki, MV-40E, Vertical Machining Center**, MSC-500 control, 22 X 16.1 X 18.1 travels, 8,000 rpm, 10 h.p., 20-tool magazine, 2000 model.
- **Mori-Seiki, SV500/40 Vertical Machining Center** with MSC-501 MA FANUC control, 30 h.p., 20 X 20 X 31.5 travels, 10,000 rpm, 24-tool magazine, ChipBlaster high pressure coolant system, helical interpolation and synchronized tapping, 2000 model.

- **NTC-Toyama, CMC-VS4J, High Speed Machining Center** with dual 16 X 21 table Pallet Changer System, 14 X 16 X 20 travels, 12,000 rpm, 21-tool magazine, 10 h.p., ChipBlaster high pressure coolant system, 1999 model.
- **Mori-Seiki, SV50 CNC Vertical Machining Center**, FANUC 18M control, 20 X 20 X 31.5 travels, 10,000 rpm, 30 h.p., 20-tool magazine, ChipBlaster high pressure coolant system, 1997 model.
- **Mori-Seiki, MV40B CNC Vertical Machining Center**, FANUC 21M control, Renishaw Probe System, Renishaw Tool Setter, 16 X 20 X 30 travels, 8000 rpm, 10 h.p., 20-tool magazine, Pallet Changer System, 1997 model.
- **Hitachi-Seiki, VK45, CNC Machining Center**, Seicos control, 10 h.p., 2 speed geared headstock, 20-tool magazine, Renishaw Probe System, 18 X 20 X 32 travels, 6000 rpm spindle, 1992 model.

### **32mm Collet Drill & Tap Centers (5 machines)**

- **Brother, TC-S2A-O, Drill-Tap Machining Center**, 15 X 32 table, 11 X 14 X 27 travels, 16,000 rpm, 14-tool magazine, 8 h.p., 2000 model.
- **Brother, TC-324, Drill-Tap Machining Center** with dual 16 X 20 table Pallet Changer System, 12 X 14 X 20 travels, 10,000 rpm, 14-tool magazine, 6.5 h.p., 1999 model.
- **Brother, TC-324, Drill-Tap Machining Center** with dual 16 X 20 table Pallet Changer System, 12 X 14 X 20 travels, 10,000 rpm, 14-tool magazine, 6.5 h.p., 1999 model.
- **Brother, TC-324, Drill-Tap Machining Center** with dual 16 X 20 table Pallet Changer System, 12 X 14 X 20 travels, 10,000 rpm, 14-tool magazine, 6.5 h.p., 1998 model.
- **Brother, TC-229, Drill-Tap Machining Center**, 11 X 14 X 19 travels, 10,000 rpm, 14-tool magazine, 6.5 h.p., 1998 model.



## EQUIPMENT LIST (Cont'd)

### SUPPORT MACHINERY

- **Cincinnati Centerless Grinder**, Model 220-8, .375 – 4.500" capacity, 20 h. p.
- **Clausing Colchester**, 17 X 80 Engine Lathe, taper attachment, Anilam Digital Readouts, 1989 model.
- **2-lagun Vertical Mills**, 3 h. p., 10 X 16 X 44, Anilam Digital Readouts, power feeds, 1989 model.
- **11- Clausing Drill Presses**, up to 22" capacity, with tapping attachments.
- **Amada CM100CNC Production Cut Off Saw**, CNC control, Incline table, .600 - 4.000" capacity, 2015 model.
- **Amada CM100CNC Production Cut Off Saw**, CNC control, Incline table, .600 - 4.000" capacity, 2006 model.
- **Amada HA250 Production Cut Off Saw**, 10 X12 capacity, 1989 models.
- **Amada HA400W Production Cut Off Saw**, fully automatic, 16 X 16 capacity, 1998 model.
- **Amada HFA400W Production Cut Off Saw**, programmable and automatic, 16 X 16 capacity, 1999 model.
- **Roto-Finish Vibratory Finishing Machine**, 5 cu. ft. capacity, self-unloading.
- **Grob Band Saw**, Model 4V-18
- **Kalamazoo Cut-off Saw**, Model 13AW
- **Brown & Sharpe Surface Grinder**, Model 818
- **Harig Surface Grinder**, Model 612
- **Torit Dust Collection System**, Model VS-550
- **Wells Index Mill**, Model 887
- **3 Bridgeport Mills**
- **Harrison Engine Lathe**, Model M400 16"
- **Standard Modern**, 28" Radial Drill Press
- **Thermolyne Furnace**, Model 3F1856
- **Roper Whitney Press Brake/Bender**, Model 412A.
- **Shear.**
- **Taylor Winfield Spot Welder**, 150 K.V.A..
- **Wean United Spot Welder**, 200 K.V.A..
- **Federal Spot Welder**, 150 K.V.A.
- **Precision Metal Works Production Spray Washer**, Model 812C High-Pressure, Multi-Stage, 2012
- **Precision Metal Works Production Spray Washer**, Model 612 High-Pressure, Multi-Stage, 2009
- **Custom Leak/Pressure Testers**



## **EQUIPMENT LIST (Cont'd)**

### **INSPECTION EQUIPMENT**

- **Zeiss G2 Contura CNC Coordinate Measuring Machine**, 40 X 63 X 24, RDS with XXT scanning heads capable of stylus lengths up to 11.811", Multi sensor rack with carrier and tip sockets, Calypso software
- **Zeiss Spectrum CNC Coordinate Measuring Machine**, 28 X 40 X 24, RDS w/ TP20 Rack, Calypso Software
- **Mitutoyo BRIGHT-M710 Coordinate Measuring Machine**, 28 x 40 x 24, MCOSMOS Software
- **Mitutoyo B706 Manual Coordinate Measuring Machine**, 28 X 24 X 18, Renishaw PH8TP2 Probe System, MCOSMOS Software
- **OGP 14" Optical comparator**, 10X & 20X magnification, 6" X 12" range, 55lb. capacity
- **Mitutoyo Optical Comparator**, Model PH14, 10X magnification, 8" x 4" 100lb. capacity, Quadra-Chek 200 readout with glass scales
- **Micro-Vue 14" Optical Comparator**, 16 bit micro process computer, .0001 resolution 10x thru 30x lens
- **(2) Mitutoyo Laser Scan Micrometers**, Model LSM-9506, measuring range from .02-2.36" with a resolution of .000002", V-Block roller slide with adjustable work piece holder. Programmable with audible sound and GO/NOGO limits
- **(3) Edmunds Accu-Touch air gages**, various air plugs and master settings rings
- **(3) Edmunds Accu-Setter air columns**, various air plugs and master settings rings
- **Mitutoyo MeasurLink SPC**, connected to air gage for real time data collection
- **Trimos and Fowler digital height Gages 0-36"**
- **Wilson Model 4 JR Rockwell hardness tester**, 1999 model
- **Oxford model 730**, Plating/Painting thickness measurement capability with Eddy current probe and Magnetic Induction probe. Can measure Zinc, Anodize, Chrome and paint over various substrates
- **Multiple Mitutoyo Profilometers**, SJ201/ SJ 210's, and SJ401/ SJ410's, Reads Ra, Ry, Rz, Rq, Rt, Rp, Rmax (JIS/ISO or DIN)
- **Pocket Surf by Mahr/Federal Portable Profilometer**, Read RMS, RA, Rg, Rz, Ry
- **Dial Bore Gauges 0-6.5"**
- **Bore Micrometers 0-12"**
- **O. D. Micrometers 0-24"**
- **O.D. Groove Micrometers 0-7"**
- **Dial and Electronic Calipers, 0-48"**
- **Intra-Mics From .800"-2.000" .002 increments**
- **Electronic Inside Diameter Bore Gage System**
- **Master Set Rings**
- **Misc. – Pin Gauges**, Height Gauges thru 18", Granite Surface Plates, Bench Centers, Ringmasters, Gauge Blocks, Granite Angle Plates, I.D. Groove Calipers, Go/No Go Plug Gages