



## Equipment List

### MACHINING

- 1 FIDIA K199 High Speed 5-Axis CNC Machining Center, 46 HP Spindle, 79" X 49" Table, 70"(X) X 35.5"(Y) X 33"(Z) Travel, HSK63A/E Spindle, 42-Station Tool Magazine, 24,000 RPM Spindle, 1,181 In/Min Feed Rate, 880 PSI Through the Spindle Coolant, Digital Inspection Probe, Laser Tool Probe Pre-Set, FIDIA C20 Controller, 15,430 Lb. Table Capacity.
- 1 DMG Model DMU125P High Speed 5-Axis CNC Machining Center, 35 HP Spindle, 39" round table, 49" (X) X 35" (Y) X 31" (Z) Travel, Cat 50 Spindle, 60-Station Tool Magazine, 10,000 RPM Spindle, 2,000 In/Min Feed Rate, 800 PSI Through the Spindle Coolant, Renishaw Probe Laser Tool Setter, Heidenhain Mill Plus 530 Controller, 2,200 lb. Table Capacity.
- 1 OKK Model HM-1600 Horizontal CNC Boring Mill, 25,000 lbs. table capacity, travel: (X) 94.5" x (Y) 65.0" x (Z) 68.9"
- 1 Giddings & Lewis Model PC-50 Horizontal CNC Boring Mill, 40/60 HP, 10 TO 4,000 RPM Spindle, Travel 98.42" X 82.67" X 62", 60-station Tool Changer, 1,000 PSI through the spindle coolant, 25,000 Lb. Maximum Table Load.
- 1 OKK Model HM-1250S Horizontal CNC Machining Center with Pallet Changer, 50/40 HP, 8,000 RPM Spindle, Pallet 49.21" X 49.21", Travel 66.93" X 55.12" X 48.82", 360.000° indexing, 116-station Tool Magazine, Laser Probe Tool Setter, 1,000 PSI through the spindle coolant, Maximum Work Piece 11,000 lb.
- 1 OKK Model HM-100S Horizontal CNC Machining Center with Pallet Changer, 40/33.5 HP, 12,000 RPM Spindle, Pallet 39.4" X 39.4", Travel 55.12" X 43.31" X 39.37" And 360 Degree 1° index, Maximum Work Piece Height 50", 60-station Tool Magazine, 1,000 PSI through the spindle coolant, 5,510 Lb. Maximum Load On Pallet.
- 1 Makino A77 Horizontal CNC Machining Center, Dual 25"X25" Pallets, 31.5"X29.5"X30.3" TRAVELS, HSK 100 spindle taper, 40 ATC, 10,000 RPM Max, 1,000 PSI through the spindle coolant, True 4th axis, 2,645 LB Table Capacity.
- 1 Makino V56 Vertical CNC Machining Center, SGI-3 Control, 25 HP, 20,000 RPM Spindle, 15 Station Tool Changer, Blum Laser Tool Setter, Table Travel 35.4" X 21.6" X 17.7".
- 1 OKK VM5-II Vertical CNC Machining Center, 25 HP, CAT 40 Taper, 20 Station Tool Changer, 41.34" X 22.05" Table, 40" (X) x 20" (Y) x 20" (Z) Travel, 394 In/Min. Feed Rate, 20,000 RPM, 1,000 PSI Through-The-Spindle Coolant, Mitsubishi Controller and Renishaw Laser Setter, 1760 Lb. Table Capacity.
- 1 OKK VB53 Vertical CNC Machining Center, 20,000 RPM, Table Travel 40" x 20"
- 1 Makino SNC 64 Vertical CNC Machining Center, 23" X 15-3/4" X 15-3/4" Travel, 20,000 RPM, 7.5 HP Spindle, 15 Station Tool Changer, 18" Maximum Work Piece Height.
- 1 Makino SNC106 Vertical CNC Machining Center, CAT 40 taper, 5 HP, 15,000 RPM Spindle, 39.4" X 23.6" x 15.75" Travels, 43.3" X 23.6" Table, 30 Station Tool Changer, Maximum Weight 2,205 Lbs.
- 1 Makino S56 Vertical CNC Machining Center, HSK 63A taper, 20 HP, 20,000 RPM Spindle, 35.4" X 19.7" 17.7" Travels, 39.4" X 19.7" Table, 20 Station Tool Changer, Laser Tool Setter, Makino Professional 3 Control, Maximum Weight 1,102 Lbs.
- 2 YCM NSV102A Vertical CNC Machining Centers, CAT 40 Tapers, 30 HP, 12,000 RPM & 15,000 RPM Spindles, 30 Station Tool Changers, 25.5" X 44" Tables, 40" X 23.6" X 23.6" Travels, 1,000 PSI Through the Spindle Coolant, 2,200 Lb. Table Capacities.
- 1 YCM WV108A Vertical CNC Machining Center, CAT 40 Taper, 30 HP, 15,000 RPM, 32 Station Tool Changer, 51.18" X 32.28" Table, Travels 44" X 30" X 5.91" To 33.47" In Z, 1,000 PSI Through the Spindle Coolant, 2,645 Lb. Table Capacity.
- 1 YCM WV108B Vertical CNC Machining Center, CAT 50 Taper, 30 HP, 10,000 RPM, 32 Station Tool Changer, 51.18" X 32.28" Table, Travels 44" X 30" X 30" In Z, 1,000 PSI Through the Spindle Coolant, 2,645 Lb. Table Capacity.
- 2 YCM NTV-158B Vertical CNC Machining Center, HSK100A Taper, 40 HP, 15,000 RPM, 32 Station Tool Changer, 64.96" X 29.92" Table, Travels 60.24" X 30" X 27.56" Z, 1,000 PSI Through the Spindle Coolant, 4,400 Lb. Table Capacity.



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- 1 Hurco VMX50 Vertical CNC Machining Center, CAT 40 Taper, 24 HP, 10,000 RPM Spindle, 24 Station Tool Changer, 26" X 59" Table, 50" X 26" X 24" Travel, 300 PSI Through the Spindle Coolant, 3,000 Lb. Table Capacity.
- 1 Hurco BCM 4020 Vertical CNC Machining Center, 40" x 20" x 24" envelope, Hurco Ultimix Twin Screen Control, 24 Station Tool Changer, 8,000 RPM.
- 2 Hurco VMX42S Vertical CNC Machining Centers, 40 Taper, 24 HP, 10,000 RPM Spindles, with 1,000 PSI Through the Spindle Coolant, 42" X 24" X 24" Travels, 50" X 24" Table, 24 Station Tool Changers, Hurco Ultimix Software, Workload Capacities 3,000 Lbs., (1) Of These Machines Has 4<sup>th</sup> Axis.
- 1 Okuma Captain I370-M CNC Turret Lathe with live tooling, 16.53" Swing Over Saddle, 19.68" Maximum Work Piece Length, 3,800 RPM, 30 HP, Maximum Turning Diameter 13.38".
- 1 Mitsubishi MV4800 wire cutting EDM Machining Center, 31.5" x 23.6" x 20.1" Travel, Maximum Work Piece Dimensions 53.1" x 43.3" x 20.0" Height and 6,600 Lbs.
- 1 Mitsubishi FX20K wire cutting EDM Machining Center, 19.6" X 13.7" Travel, Maximum Work Piece Dimensions 41.3" X 31.4" X 11.6" Height and 1,760 Lbs.
- 2 Charmilles Roboform 40 CNC Sinker EDM, 19.7" X 15.7" Travel, 48" X 32" Tank, Maximum Electrode 220 Lbs., Maximum Work Piece Dimensions 39.37" X 27.55" X 14.56" Height and 2,200 Lbs.
- 1 Charmilles Roboform 84 CNC Sinker EDM, 128 Amp., 31.5" X 23.6" X 19.68" Travel, 21.26" X 53.15" X 41.73" Tank, Maximum Electrode 771 Lbs., Maximum Work Piece 9,240 Lbs.
- 2 AgieCharmilles FORM 400 CNC Sinker EDM, 140 Amp., 35.43" x 27.56" x 19.68" Travels, 71.42" x 47.83" x 27.56" Tank, Maximum Work Piece 6,613 Lbs.

### HEAT TREAT

- 1 Electric Heat Treat Furnace 12" x 12" x 18" Capacity, Controlled Nitrogen Atmosphere
  - 1 Stress Relieving Furnace 30" x 30" x 48" envelope, 2,000 lb. Capacity, 1,000°F Maximum Temperature.
- ### INSPECTION
- 1 Zeiss Eclipse Coordinate Measuring Machine, 40"X64"X24" Measuring Envelope, 3,500 Pound Capacity, Renishaw PH10T Articulating Head, CMM-Manager Software with Model Checking Capabilities.
  - 1 Faro Arm Portable CMM, 4 Ft. Range with Micro Processor and CAD Software.

### ASSEMBLY

- 1 100-Ton, Walter Reis Hydraulic Spotting Press, 61" x 87" Platen
- 1 40-Ton, Walter Reis Hydraulic Spotting Press, 35" X 47" Platens (Die Size Thru the Bars), 4" Diameter Tie Bars, Top Platen Swivels 90°, Bottom Platen Slides Out and Pivots Up.
- 1 3-Ton Hydraulic Spotting Press, 17" X 29" thru the Tie Bars, 2" Diameter Tie Bars.

### Engineering

Servers and Work Stations supporting our CAD-CAM system capable of transferring 3D CAD data to our machining centers using the following software: Kubotek, Pro-e, Solidworks, Unigraphics, Master Cam, Work NC, Power Mill plus assorted model viewers and Flow3D solidification simulation software.

### LIFTING

- 1 20-Ton Bridge Crane; (2) 10-ton Bridge Cranes: (1) 6-Ton Bridge Crane; (2) 2-Ton Bridge Cranes; (1) 15,300 lb. Hyster Model S150 Fork Lift

### SAMPLING

- 1 1100-Ton to 610-Ton Plastic Injection Molding Machines
- 1 Davis-Standard Plastic Extruder, Model 2.5 PMIV