

Equipment List

CNC Equipment

Vertical Mills

- 1 Mazak Variaxis C-600 W / 5-Axis capability 2 pallet changer X 25" x Y 21" x Z 21" B -30 +120 C 360
- 3 Mazak VCN 530C Vertical Machining Center with Smooth Control 20" x 50" Table Travels 15,000 RPM Spindle W/ 4th axis capability
- 3 Mazak VCN 510C Vertical Machining Center with Matrix Control 20" x 50" Table Travels 2,000 RPM Spindle.
- 1 Haas VF-9/50 Vertical Machining Center, 84" x 40" x 36" Travels
- 2 Haas CNC VF-6 Vertical Machining Center, 64" X 32" X 30" Travels W/ 4th axis capability
- 1 Mazak VTC-250/50 taper with Matrix Control 26" x 69" Travels.Mazak 3D.
- 1 Haas VF-2SS Vertical Machining Center, 16" x 30" x 20" Travels 12,000 RPM SpindleWith Collaborative Cobot Robot Loader System.
- 1 Haas Mini VMC Vertical Machining Center 16" x 12"x 10" Travels W/ 4th axis capability

Horizontal Mills

- 1 Mazak Nexus 8800-II Horizontal Machining Center w/ Matrix Control
- X = 55", Y = 47", and Z = 52" travel, 1 degree indexing, 50 HP. 8,000 RPM spindle 1,000 PSI thru spindle coolant, w/ 120 tool capacity
- 1 Mazak FH-680 CNC Horizontal Machining Center w/ Fusion 640M control
- 6,000 rpm 50 taper, W/ through spindle coolant, Travels X= 42", Y 32", Z, 32" W/120 tool capacity.
- 1 Mazak HCN 4000 Horizontal Machining Center w/ Matrix Control X = 22", Y = 20", and Z = 20" travel, 12,000 rpm spindle w/ 60 tool capacity.
- 2 Mazak Model HTC-400 CNC Horizontal Machining Center w/ Fusion 640M CNCcontrol, 1 Deg. Pallet positioning, through spindle coolant, X = 22", Y = 20", and Z = 20" travel, w/ 30 tool capacity, 10,000 rpm spindle

Horizontal Mills (W/ Pallet Tech)

1 – Haas EC-400 Full 4th axis rotary, through spindle coolant, X = 22", Y = 25", and Z = 22" travel, W/ 100 tool capacity, 15,000 RPM Spindle 7 pallets total

Lathes

- 1 Haas SL-20 CNC Lathe, 10" x 20" (max), 20" Swing, 20-hp, 50-4,000 rpm,8" Chuck,
- 1 Mazak Nexus 640 quick turn CNC Lathe 6,000 rpm, 6" Chuck
- 1 Haas DS 30 SSY Dual spindle CNC Lathe 16" x 23" 30-hp, 4,00 rpm w/ live Tooling and Y-axis capabilities.
- 1 Okuma Model Captain L370M CNC Lathe, Live Tooling w/Hennig Chip Conveyor,

See the bottom of this page for a list of CNC Equipment located at our parent company.

Manual Equipment

Mills

- 4 Sharp TMV Mill, 10" X 50" table, w/ Prototrak Retrofit 1 Cleveland Mill, 10" X 50" w/ Prototrak Retrofit
- 1 Bridgeport, 9" X 42" w/ digital readouts
- 1 Trak Bed Mill, 9" x 49" table, w/DPM RX2 w/ 3-axis CNC control
- 2 Bridgeport 2 HP Vertical Milling Machine 9" x 42" table powered w/ Acu-Rite DRO 200S

<u>Lathes</u>

- 1 Sharp 16 x 40 Lathe w/ digital readout
- 1 Summit 18 x 80 w/ 4" thru bore & Newall C80 DRO
- 1 Sharp 1340VS 13 x 40 Lathe

Boring mills

- 1 Giddings & Lewis 5" Horizontal Boring Mill, (rebuilt in 1998) 108", w/ 12' table & Lucas Air Lift Rotary Table 4' x 5'
- 1 Shibaura Horizontal Boring Mill 41" x 35 ½" w/ digital readouts

EDM Equipment

Wire EDM

1 – Agie/Charmilles Cut 2000S Wire EDM w/ Dual Heads, (Travel X=350mm, Y=250mm, Z=256mm) Wire diameters range from .006 - .010 diameter. Programming is supported by Esprit Wire.

- 2 Sodick ALN 600G I Groove Wire EDM (Travel X=23.62,Y=15.75,Z=13.78) Wire Diameters range from .006-.012. Programmed by Esprit
- 2 Mitsubishi FA 10 S Advance Wire EDM (Travel X=13.8,Y=9.8,Z=8.7) Wire Diameters range from .004-.01. Programmed By Esprit

CONV. EDM

- 1 Sodick AL40G CNC Die Sinker Machine (Travel X=15.7,Y=11.8,Z=10.6)
- 1 2022 Sodick K3HS Hole Popper (Travel X=11.81,Y=15.75,Z=11.81) Hole sizes drilled .012 Steel only,.020,.030,.040,.060

Grinding Equipment

Wet Grinding

- 2 Chevalier Wet Grinders 16" × 40"
- 2 Chevalier Wet Grinders 8" × 18"

Surface Grinding

- 1 Parker Majestic Freedom CNC Surface Grinder 8"× 15"
- 18 Parker Majestic Manual Surface Grinders 6" × 12"

Jig Grinding

- 1 Fosdick/LeBlond CNC Jig Grinder 20"× 48"
- 2 Moore CNC Jig Grinders 20" × 40" & 10' x 20"
- 1 Moore Manual Jig Grinder 10" × 20"

Cylindrical Grinding

- 1 Myford Cylindrical Grinder 10.5" length Max Ø = 4"
- 1 Kellenberger OD Grinder 18" length $\max \emptyset = 9$ "
- 1 Heald OD / ID Grinder 12" length max OD \emptyset = 12" max ID \emptyset = 7"

Heat Treating Equipment

6 – Heat Treat Furnaces with internal temperatures up to 2200F with capacity of up to 10" x 18" x 19"

QC Equipment

- 1 Zeiss O-Inspect 322 CMM, 300mm x 200mm x 200mm (Vision and Touch Probe Capabilities)
- 1 Faro Edge W/9' reach 7 axis Portable CMM
- 2 Trimo's 24" Height Gage

- 1 Fully equipped QC room W/ Challenger Granite Surface Plate, 4' X 8', Grade A 1 Starrett Surface Plate, 24" X 36", Grade AA
- 1 Wilson Hardness Tester
- 1 Set Starrett Micrometers to 36" 1 Set Bore Micrometers to 12"
- 1 Set pin gages .003 to 1.000 + /-
- 1 Brown & Sharpe Reflex 343 CMM
- 1 Sic-Marking L-Box Laser Engrave
- 3 Optical Comparators

Wire Assembly

2,000 SQ. FT. of assembly space

4 – Wire assembly stations w/ soldering, crimping w/testing and label printing capabilities.

Mechanical Assembly

10,000 SQ. FT of assembly space

- 6 Assembly stations fully equipped for custom mechanical assembly w/ 5,000 SQ. Ft. dedicated space.
- 1 Customer specific product stations W/ prepping, gluing, and assembly stations.
- 1 Custom fabricated enclosure assembly area.

Fabrication Equipment

Crane, Fork truck Capacity

- 1 Progressive 10 Ton Electric Overhead Traveling Crane, Floor Controlled, 56' Span, Class C Duty
- 1 Heyster 8000 lb ForkLift Truck, Model h80C, LP Gas
- 2 4000 lb Mitsubishi Fork Trucks

Welding equipment

- 2 Miller Syncrowave 250 Welders w/ Bernard Water Cooling System. 1 Precision Tig 375 Welder
- 3 Miller DialArc 250 AC/DC Welders w/Cable & Rod Holders
- 1 Miller Model XMT 300 CC/CV/DC Inverter Arc Welder with S22A wire feeder and XRA ExtendReach Wire Feed for aluminum welding, cable & guns, & misc.

- 2 Lincoln Model [™] 300/300 and 400/400 IdealArc Welders w/ Cable & Rod Holders 1 Lincoln Procut 60, MillerMatic 200 Welder, and Miller Model Imsn-521 2.5KVA Spot Welder w/ E-16 Timer
- 1 Miller Dimension 400 w/ DVC DM@ Dual Wire Feeder, Dual Cables and Guns
- 1 MILLER ELECTRIC TIG Welder: Syncrowave 300, AC/DC, Power Source Only, 300 A
- 2 LightWELD XR Extended Range Handheld Laser Welding & Cleaning machine with fully enclosed booth. capable of welding Stainless steel, mild steel, galvanized steel, aluminum up to 6.35 mm, copper up to 2 mm and dissimilar metals
- 1 Miller Dimension 452 w/ 24V Constant Speed Wire Feeder
- 2 Welding Positioners: 1 Gullco Model GP-150-005-B, w/ 12" Turntable; 1 Preston Easton Model PA15HD4-33, w/ 24" dia Turntable, capacity approx 600#
- 1 Phoenix Weld Wire Dry Ovens (3), type 300#, 1000 watts; (1) type 900#, 2300 watts

Weld Certifications

AWS B2.1-1-234, 2006 AWS B2.1-8-212, 2001

Misc. Equipment

- 1 Blanchard Grinder 36" table capacity 1 Parker Majestic Surface Grinder
- 1 60 Ton L&J Obi Punch Press
- 1 Lindberg Atmosphere Heat Treat Box Furnace 1 S-36 Flex Arm Tapping Machine
- 1 40 Ton HD Press
- 1 2021 Eaton Polar Air 75 Hp. VSD rotary screw air compressor
- 1 2012 Eaton Polar Air 50 Hp. VSD rotary screw air compressor
- 1 Sunnen Precision Hone, 1-1/2" spindle, Model MBB1290D, w/ set of dedicated tooling

Saws

- 1 Marvel Model 8-MK#1 Vertical Band Saw
- 1 2016 DoAll Automatic Horizontal Band Saw, Model DC-280 NC 1 DoAll Vertical Band Saw w/ 16" throat
- 1 DoAll 3.5 HP 12" dia. blade Chop Saw 1 W.F. WELLS AC-7 Band Saw

Parent Company CNC Equipment

The following equipment is located at our parent company 30 minutes from our headquarters.

Vertical Mills

- 3 Mazak VCN 530C Vertical Machining Center with Smooth Control 20" x 50" Table Travels 15,000 RPM Spindle W/ 4th axis capability
- 10 VTC-200C Vertical Machining Center Fusion 640M control Table Travels 65.3" X 20.00" X 20.00"12,000 RPM Spindle
- 2 VTC-300C Vertical Machining Center Fusion 640M control Table Travels 65.3" X 30.00" X 20.00"10,000 RPM Spindle W/ Independent 4th axis (Indexer)
- 1 1 Mazak VCN 700D Vertical Machining Center with Smooth Control 27" x 60" Table Travels 15,000 RPM Spindle

Vertical Mills (W/ Pallet system)

- 1 AJV-35/80 Vertical Machining Center Fusion M+ control Table Travels 78.7" X 31.5" X 20.0" 5,000 RPM Spindle, Dual Pallets
- 7 FJV-35/80 II Vertical Machining Center Fusion M+ control Table Travels 78.7" X 31.5" X 23.0" 10,000 RPM Spindle, Dual Pallets

Horizontal Mills (W/ Pallet Tech)

2 – Mazak HCN 5000/50 Horizontal Machining Centers w/Smooth G Control X = 31", Y = 28", and Z = 28" travel, 10,000 rpm spindle w/ 120 tool capacity. 14 pallets each 28 pallets total

Mill/Turn

- 1 Mazak Integrex 300SY W/ FUSION 640 Control Travels, 40 X 21 (10" Chuck) 10,000 RPM Spindle W/Bar Feeder & Vacuum unloader
- 1 Mazak Integrex 300-4ST W/Matrix Control Travels, 60 X 21 (10" Chuck) 4,000 RPM Spindle W/ Bar Feeder & Robot
- 1 Mazak Integrex I-200S W/Smooth Control Travels, 40 X 12 (8" Chuck) 4,000 RPM Spindle W/ Bar Feeder & Robot
- 1 Mazak Integrex i-630V/6 W/Smooth Control Travels, 56 x 41 x 41 (41" Turning Capability) Full 5-Axis milling capability.

Lathes

1 – Mazak QTN-250-II Nexus CNC Lathe 24" x 10" 4,000 rpm, 10" Chuck

- 1 Mazak QTN-350-II Nexus CNC Lathe 47" x 16" 5,000 rpm, 10" Chuck, Bar Feeder
- 1 Mazak SQT-200MS W/ Fusion 640 Control CNC Lathe 47" x 16" 3,300 rpm, 12" Chuck

Cylindrical Grinding

2 – Kellenberger OD ,ID & Face Grinders W/ Heidenhain controls 45".0 X 24.6" (19" Swing) 28,000,42,000 & 60,000 RPM

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