

# Equipment List

## HORIZONTAL MILLING MACHINES

- 1 - HS-4 CNC Horizontal Mill
  - (3) Axis Programmable
  - 50 Taper Spindle 5000 RPM
  - Table Size 40" x 146"
  - 38 Tool Changer
  - Table Load Capacity 25,000 lbs.
  - Glass Scales - X 150" – Y 66" Travel
  
- 1 - Olympia Horizontal CNC Boring Mill
  - (4) Axis Programmable
  - 50 Taper Spindle 3000 RPM
  - Table size 48" x 100"
  - Table Load Capacity 33,000 lbs.
  - Glass Scales - X 102" – Y 79" Travel
  
- 1 - EC-1600 Horizontal CNC Mill
  - (3) Axis Programmable
  - 50 Taper Spindle 6000 RPM
  - 40 Tool Changer
  - Table Load Capacity 10,000 lbs.
  - Glass Scales - X 60" – Y 42" Travel
  
- 2 - EC -1600 Horizontal CNC Mill
  - (4) Axis Programmable with Rotary Table
  - 50 Taper Spindle 6000 RPM
  - 40 Tool Changer
  - Table Load Capacity 10,000 lbs.
  - Glass Scales - X 60" – Y 42" Travel
  
- 1 - Tarus MBX 92-150 CNC Gun Drilling Machine
  - w/ Second Spindle for Milling, Drilling & Tapping
  - Min. Drilling Size: .1875" dia.
  - Max. Drilling Size: 2.5" dia. Drilling Depth: 90"
  - Table Size: 60" x 72"
  - 42" Magnetic Programmable Rotary Table
  - Fully Enclosed
  
- 1 - Kitamura Mycenter HX400iG - **NEW 2020**
  - CNC Horizontal Machining Center
  - (4) Axis Programmable
  - Dual Pallet 15.75" x 15.75"
  - 150 Tool Changer
  - 15,000 RPM
  - 1,000 P.S.I. programmable coolant
  - X 24" x Y 24" x Z 24" Travel
  
- 1 - Devlieg CNC Boring Mill
  - (2) Axis Programmable
  - 50 Taper Spindle 1800 RPM
  - Glass Scales - X 60" – Y 40" Travel
  
- 1 - Haas HS-IRP CNC
  - (4) Axis Horizontal Mill
  - Dual 16" x 16" Pallet
  - 24 Tool Changer
  - X 60" – Y 30" Travel
  
- 1 - Haas-EC-400 CNC
  - 6 Pallet Pool
  - Dual 20" x 20" Pallet
  - 70 Tool Changer
  - X 20" - Y 20" Travel
  - Probing Capability

# Equipment List

## VERTICAL MILLING MACHINES

- 1 - Chiron/Stama MC 331 Twin CNC  
High Speed Vertical Machining Center  
Twin Spindle  
Dual 4th Axis Trunion Assemblies  
Dual Workpiece Changer  
.9 Second Tool Change/42 Tools  
.75 G Acceleration  
X 31" – Y 15" Travel
- 2 - Chiron FZ12W CNC  
High Speed Vertical Machining Center  
Dual 4th Axis Trunion Assemblies  
Dual Workpiece Changer  
1.1 Second Tool Change/20 Tools  
.5 G Acceleration  
X 21" – Y 12" Travel
- 1 - Chiron DZ12K IWW CNC  
High Speed Vertical Machining Center  
Twin Spindle  
Dual 4th Axis Trunion Assemblies  
Dual Workpiece Changer  
.9 Second Tool Change/64 Tools  
1.5 G Acceleration  
X 22" – Y 13" Travel
- 1 - Chiron FZ15W CNC  
High Speed Vertical Machining Center  
Dual 4th Axis Trunion Assemblies  
Dual Workpiece Changer  
.9 Second Tool Change/20 Tools  
.75 G Acceleration  
X 21" – Y 15" Travel
- 2 - Chiron FZ08W CNC  
High Speed Vertical Machining Center  
4th Axis Trunion Assembly  
Dual Workpiece Changer  
.9 Second Tool Changer / 12 Tools  
1 G Acceleration  
X 12" – Y 10" Travel
- 1 - Brother R650X1 CNC - **NEW 2019**  
High Speed Vertical Machining Center  
Dual 4th Axis Trunion Assemblies  
Dual Workpiece Changer  
.9 Second Tool Change/22 Tools  
1 G Acceleration  
X 25.5" - Y 15.75" Travel
- 1 - Mazak VC-500A CNC -**NEW 2019**  
High Speed Vertical Machining Center  
Dual Workpiece Changer  
.9 Second Tool Change/30 Tools  
1 G Acceleration  
X 19.88" - Y 19.88" Travel
- 1 - Mori Seiki NV5000 CNC  
Vertical Machining Center  
50 Taper  
4th, 5th Nikken Trunion assembly  
High Pressure Coolant (1000 psi)
- 1 - NTC CNC Machining Center  
Model CMC-300v  
Dual Workpiece Changer  
16 Tool Changer  
X 20" – Y 12" Travel
- 1 - Haas MDC-500 CNC Machining Center  
Dual Workpiece Changer  
X 24" - Y 16" Travel  
Probing Capability
- 1 - LPM CNC Vertical Milling Machine  
Prototrak VMX - 3 Axis  
Glass Scales  
X 31" – Y 18.5" Travel
- 1 - Haas UMC 750 CNC  
5 Axis Vertical Machining Center  
40+1 Tool Changer  
Quick Change Fixturing  
X 30" – Y 22" Travel  
Probing Capability

# Equipment List

## VERTICAL MILLING MACHINES CONTINUED

- 1 - Trak DPM5V Milling Machine
  - Prototrak VM-CNC
  - (3) Axis Controlled
  - Glass Scales
  - X 40" – Y 20" Travel
  
- 1 - Trak DPM5 Milling Machine
  - Prototrak SM – CNC
  - (3) Axis Controlled
  - Glass Scales
  - X 40" – Y 20" Travel
  
- 7 - Trak FHM7 Milling Machine
  - Prototrak VM – CNC
  - (3) Axis Controlled
  - Glass Scales
  - X 60" – Y 20" Travel
  
- 2 - Haas VF-4 CNC
  - (3) Axis Vertical Machining Center
  - 4th Axis Rotary Indexer
  - 20 Tool Changer
  - X 50" - Y 20" Travel
  
- 1 - Haas VF-3 CNC
  - Super Speed Model
  - (3) Axis Vertical Machining Center
  - 4th Axis Rotary Indexer
  - 20 Tool Changer
  - X 50" - Y 20" Travel
  
- 2 - Alliant Heavy Duty Milling Machine
  - 48" Tables with Heavy Duty Head
  - X 30" – Y 12" Travel
  
- 2 - Fadal 6030 CNC
  - (3) Axis Vertical Machining Center
  - 4th Axis Rotary
  - 21 Tool Changer
  - X 60" – Y 30" Travel

# Equipment List

## LATHES

- 2 - Mori-Seiki Frontier II - CNC Lathe  
With MSC -521 Control  
16" Diameter Capacity X 16" Max. Length
- 1 - Mori-Seiki SL-15 - CNC Lathe  
10" Diameter Capacity X 20" Max. Length
- 1 - Okuma –L470 Captain - CNC Lathe  
16.50" Diameter Capacity X 49" Max. Length
- 2 - Okuma Simulturn LC40 - CNC Lathe  
Heavy Duty Twin Turret – 4th Axis  
12 Tools Upper Turret–8 Tools Lower Turret  
18" Diameter Capacity X 30" Max. Length
- 1 - Okuma Simulturn LC40 - CNC Lathe  
Heavy Duty Twin Turret – 4th Axis  
12 Tools Upper Turret–8 Tools Lower Turret  
18" Diameter Capacity X 30" Max. Length  
**Completely Re-built by Infinity Rebuild**  
(Okuma Authorized Rebuilder)
- 1 - Okuma Cadet LNC-8 - CNC Lathe  
10.24" Diameter Capacity  
X 23.23" Max Length
- 2 - Trak TRL 24605X - CNC Lathe  
Prototrak SX CNC Controller  
24" Diameter Capacity X 60" Max Length
- 2 - Trak TRL1840CSS - CNC Lathe  
(1) Prototrak LX3 Controller  
(1) Prototrak Controller  
18" Diameter Capacity X 40" Max. Length
- 2 – Okuma & Howa 2SP-25HG - CNC Lathe  
Twin Spindles  
Gantry Robot load/unload  
13.78" Diameter Capacity X 7.87" Max. Length  
**Rebuilt 2019**
- 1 - Toshiba TUE 150 - CNC Vertical Turning Lathe  
Table Diameter 57"  
Maximum Swing 78.7"  
Maximum Cutting Height 72.8"  
Maximum Load On Table 17,600 LBS  
Automatic Tool Changer  
12 Tool Changer
- 5 - Doosan Puma GT2100 - CNC Lathe  
15.35 Diameter Capacity  
X 22.12 Max Length  
12 Tool Changer  
Auto Door - Robot Ready
- 2 - Doosan Puma GT2100 - CNC Lathe  
15.35 Diameter Capacity  
X 22.12 Max Length  
12 Tool Changer  
Setup with Universal Robot Tending 2 lathes
- 1 - Webster-Bennet VTL  
Manual with Readouts  
72" Diameter
- 4 - Haas ST - 30 - CNC Lathe  
40 HP  
21" Diameter Capacity X 31.75" Max. Length
- 1 - Haas SL40 - CNC Lathe  
10 Tool Changer  
40" Diameter Capacity X 47" Max. Length
- 1 - Haas DS30SSY - CNC Mill/Turn  
Dual Spindle Hand Off Chuck  
Live Milling  
16" Diameter Capacity  
23" Max Length
- 1 - Sharpe #2680C - Lathe  
With .0005 (2) Axis Digital Readouts  
26" Diameter Capacity X 80" Max. Length  
35" Diameter Capacity in Gap X 12" Max. Length

# Equipment List

## GRINDERS

- 3 - Okamoto Linear Surface Grinder  
Model 618B  
18" Magna-Lock Vari-Mag Chuck
- 1 - Okamoto 12" x 14" Surface Grinder  
Model PFG-612  
Magna-Lock Vari-Mag Chuck
- 1 - Jones & Shipman Model 1310  
I.D. - O.D. Grinder  
8" O.D. x 18" Length
- 1 - Parker Majestic O.D. Grinder  
12" O.D. x 24" Length
- 1 - Shigiya Type G-30B  
I.D.-O.D. Grinder (Hydraulic)  
12" O.D. x 28" Length
- 1 - Landis H819 O.D. Grinder  
Marposs Auto Sizer  
3" x 20" Wheel with Autodresser
- 1 - Blohm Simplex #5 Hydraulic Surface Grinder  
Vari-Mag Chuck Rebuilt with PLC Controller  
12" x 30" Capacity
- 1 - Chevalier Model FSG 1640AD  
Hydraulic Surface Grinder  
Vari-Mag Chuck  
16" x 40" Capacity
- 2 - Chevalier 6" x 18" Surface Grinder  
Walker Magnetic Chuck
- 1 - 84" Blanchard Rotary Surface Grinder  
Model 42-72-84  
Veri-mag Chuck  
84" Chuck Diameter  
86" Grinding Diameter  
42" Wheel Diameter  
24" Height Under Wheel  
Polytech Conveyor System With Tank
- 1 - Model 20 Blanchard Grinder  
36" Grinding Diameter  
Vari-Mag Chuck
- 1 - DED-Tru Centerless Grinding Machine  
Feed Through and End Feed Capabilities

## JIG GRINDERS

- 1 - G32 Moore Jig Grinder  
Bridge Style  
X 32" - Y 20"  
.00005 Digital Readouts
- 3 - Model 3 Moore Jig Grinder  
.00005 Digital Readouts

# Equipment List

## SAWS

- 1 - HYD-Mech H-14A CNC Saw  
Bundling Capability
- 1 - HYD-Mech H12 Automatic Cut-Off Saw  
Model #H12-A  
Bundling Capability
- 1 - Wilton Model 8020  
Heavy Duty Vertical Band Saw  
with Blade Welder
- 4 - Wilton Model 4200 Belt  
And Disc Finishing Machine
- 2 - Roll - In Band Saw
- 1 - Jet Cold Saw Model JCS-3150  
Ferrous or Non-Ferrous Material  
12" Capacity

## BROACHING EQUIPMENT

- 1 - Lapointe Horizontal Key Broach  
30 Ton with 48" Travel
- 1 - Colonial Broach  
Horizontal Spline Broach  
20 Ton with 72" Travel
- 1 - Detroit Vertical Broach  
3 Pull Heads  
40 Ton with 72" Travel  
Contained within a 15' x 15' x 10' Concrete Pit
- 1 - American Horizontal Broach  
20 Ton with 48" Travel

## WELDING EQUIPMENT

- 2 - Miller Deltaweld 452 MIG Welder
- 1 - Miller Model 330 A/BP 1987 AC AD  
Heli Arc Welding Machine  
Steel & Aluminum Capable
- 1 - Model Millermatic #200 Wire Feed Welder  
Steel or Aluminum
- 1 - Hobart Aluminum Wire Feed Welding Gun
- 1 - Model Miller CP-200 Wire Welder
- 2 - Model Miller Syncrowave 351 Welder
- 1 - Koike Aronson 1N (Full CNC Controlled)  
1K – 1500G Coordinate Drive  
Flame Shape Cutting Machine  
Cutting Range 60" x 118" with Water Table  
Off-line PC for programming
- 1 - Plasma Torch  
Thermal Dynamics – Pak Master 100XL
- 4 - Complete Gas Welding Sets
- 1 - 4' x 4' Jig Table for Weldments
- 1 - 4' x 12' Jig Table  
Cast Iron for Construction of Large Weldments  
Complete with Bolt-On Clamping Capabilities
- 1 - Atlas Pipe Mate Dual Speed
- 2 - MBC BP-2 Welding Positioner/200 lb. Capacity
- 2 - Ace Smoke Eaters Model 73-601
- 1 - Ace Smoke Eater Model 73-200

# Equipment List

## INSPECTION EQUIPMENT

- 2 - Zeiss (Contura G2) CMM
  - VAST XT Scanning Head
  - 12 Probe Change Rack
  - Fully Programmable
  - X 39"- Y 47" and X 39"- Y 63"
  - Calypso Software
- 1 - Zeiss (Contura) CMM - **NEW 2020**
  - VAST XTR Gold Probe Head
  - 5 Probe Change Rack
  - Fully Programmable
  - X 39"- Y 63"
  - Calypso Software
- 1 - Zeiss (Spectrum) CMM
  - 6 Probe Change Rack
  - Fully Programmable
  - X 38" – Y 64"
  - Calypso Software
- 1 - Zeiss (Eclipse) CMM
  - 5 Probe change rack
  - Fully Programmable
  - X 27" – Y 27"
  - Calypso Software
- 1 - Brown & Sharpe Global CMM 555
  - Renishaw PH10 T Motorized Probe Head
  - Renishaw TP20 Touch Trigger Probe
  - Calypso Software
- 1 - Brown & Sharpe Model 2000 CMM
  - With Renishaw Multi-Position Tip Probe
- 1 - Fowler Trimos V Plus Electronic Height Gage
  - (1) 24" (1) 40"
- 2 - Starrett Optical Comparator Model HB 400
  - With Quadra Chek 2000 Display – 10x Magnification
- 2 - Mahr Perthometer XC20 & XC200
  - Fully Programmable to check radii and angles
  - High Precision
- 1 - Scherr Tomic Comparator
  - (2) Axis
  - Powered Protractor Ring w/ Readouts
  - 10x & 20x Magnification
- 1 - Micro-Vu Qubix Vision System, DCC & Manual
  - 21 - 115x Magnification
- 1 - Faro Prime Articulating Arm
  - 8 Ft. Portable CMM
  - Faro CAM2 Measuring Software
- 2 - Vision Engineering - Mantis Viewing System
  - 2x, 4x, 6x, 8x Magnification
- 1 - Vision Engineering - Mantis Elite
  - Stereo Microscope Visual Inspection System
  - 2X-20X magnification
- 2 - Mitutoyo Tool Makers Microscopes
  - Fiber Optics Light
- 5 - Mitutoyo Height Masters 12" with Extension Bases
- 1 - Mitutoyo Height Masters 24" with Extension Bases
- 7 - Mitutoyo Height Gages 18"
- 2 - Hawkeye Precision Borescope with One (1) Aqua Snake, Eye Video Camera
- 15 - 81 Piece A.A. Jansson/ Inspection Grade Jo-Blocks
- 3 - Brown & Sharpe Model 600
  - Micro-Hite Gage with Printout
- 1 - Brown & Sharpe Model 900
  - Micro-Hite Gage with Printout

# Equipment List

## INSPECTION EQUIPMENT CONTINUED

- 2 - Mitutoyo 211 Surf Test Surface Finish Analyzer
- 2 - Mitutoyo SJ-201 Surf Test Surface Finish Analyzer
- 1 - Wilson Rockwell Hardness Testers
- 1 - Starrett Rockwell Hardness Tester
- 2 - 48" x 72" Granite Surface Plates
- 3 - 48" x 72" Starret Crystal Pink Surface Plate
- 1 - 36" x 48" Starret Pink Surface Plates/ Inspection Grade
- 9 - 24" x 36" Granite Surface Plates/Inspection Grade
- 11 - 18" x 24" Granite Surface Plates/Inspection Grade

## ADDITIONAL EQUIPMENT

- 1 - Stratasys Dimension 1200es 3D Printer  
ABSplus production-grade thermoplastic material  
10"W x 10"D x 12"H Build Envelope  
.010" or .013" layer thickness
- 1 - QIDI X-Max Desktop 3D Printer  
Prints: PLA, ABS, TPU, PETG, Nylon, PC,  
and Carbon Fiber  
11.8" x 9.8" x 11.8" Build Size  
100-500 Micron Layer Height  
**New 2019**
- 1 - Telesis ProStation laser workstation  
FQ-10 CDRH class I fiber  
full enclosure and filtration system
- 1 - Mitsubishi MV2400-S Wire EDM  
X 23.6" - Y 15.7" - Z 16.7"
- 1 - Mitsubishi MV1200-R Wire EDM  
X 15.7" - Y 11.8" - Z 8.7"  
**New 2019**
- 1 - Mitsubishi High Speed Small-Hole EDM Drill  
Model ED - 2000MR  
X 11.8" - Y 7.8" - Z 7.8"
- 1 - Eldorado Deep Hole Drilling Machine  
High Pressure Oil – 2000 PSI  
3/4" Diameter. x 48" long Knee Type  
Digital Readout On All 3 Axis
- 1 - Surftran–Thermo Deburr System  
C-250 Thermal Energy Machine  
6 / 6" Station Thermal Combustion Chamber
- 1 - Mobile Fixture Test Stand  
Programmable Hydraulics  
Custom Designed & Built
- 2 - Stationary Fixture Test Stand  
Programmable Hydraulics  
Custom Designed & Built
- 1 - 7 Tank Hot Black Oxide System  
Fully Ventilated and Insulated Tanks  
36" X 36" X 36"  
Dedicated Overhead Crane
- 1 - Zetalase Vereo Laser Marking System  
Fiber Solid State and Full Enclosure
- 1 - Hey No. 3 Facing and Centering Machine  
Maximum Diameter 6.25" X 46"  
Minimum Diameter 0.25" X 3"  
Adjustable Walking Beam Conveyor  
for Automatic Load/Unload
- 1 - 8 Tank Fully Ventilated Clear Anodize System  
24" x 24" x 24" Tanks  
Temperature Controlled  
**Installed in 2019**



# Equipment List

## ADDITIONAL EQUIPMENT CONTINUED

- 4 - Kaeser BSD50 Air Compressor  
50 HP Rotary Screw / Air Dryer
- 2 - Hydrovane Rotary Air Compressor  
50 Horsepower / Air Dryer
- 1 - Comp Air Rotary Air Compressor  
25 Horsepower / Air Dryer
- 1 - Cress Electric Heat Treat Furnace C122012  
Separate Draw Furnace
- 3 - CAT 5000 lb. Lift Truck
- 1 - Yale 5000 lb. Lift Truck
- 1 - Toyota 5000 lb. Lift Truck
- 1 - Mitsubishi Model #XT-AS  
1000 lb Battery Operated Lift Truck
- 1 - Wesco Broach Lift 1000 lbs. Capacity
- 2 - Cuda Hot Water Parts Washer  
With Rotary Table
- 1 - Sunnen Model MBB 1690  
Power StrokerHone  
Complete Gaging and Accessories
- 1 - Vapor Honing Technologies Vapor Hone 3000  
Internal part rinse gun  
3 stage filtration system  
Internal workspace 50"W x30"D x 35"H
- 8 - 3000 CFM Smoke Eaters  
Dayton 1995 Model
- 2 - Yuasa 12" Diameter Rotary Tables for Mills
- 1 - Troyke Model P-25  
25" Precision Power Operated Rotary Table  
For Boring Mills
- 3 - Darex Drill Sharpeners Model #SP 2500  
1" Diameter Capacity
- 1 - Cast Iron 4' x 8' Keyed Precision  
Work Table, Ground Flat & Parallel
- 2 - Super Spacers With Index Plates
- 5 - Sets Devlieg Angle Plates
- 2 - Twister Speed Model #LT-1B Lapping Machine
- 1 - Hydraulics Inc. – Arbor Press 5 Ton Press
- 1 - Heavy Duty Cutter Grinder
- 1 - Excello Precision Center Lap 54" Capacity
- 8 - Pallet Jacks 1500 Pounds
- 18 - Pedestal Floor Grinders

Rotary tables--dividing head--Hartford Super Spacer--Last Word Radius Dressers--High speed attachment for surface grinder--whirligigs--tapping heads--Harding Index Unit--etchers--demagnetizers--vises, lapping plates, etc.