

# Equipment List

## HORIZONTAL MILLING MACHINES

- 1 - HS-4 CNC Horizontal Mill  
(3) Axis Programmable  
50 Taper 5000 RPM  
Table Size 40" x 146" 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 6000 RPM Spindle  
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 6000 RPM Spindle  
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" Programmable Rotary Table  
Fully Enclosed
- 1 - Devlieg CNC Boring Mill  
(2) Axis Programmable  
50 Taper 1800 RPM  
Glass Scales - X 60" – Y 40" Travel
- 1 - Devlieg 43H-72 Spiramatic Boring Mill  
With .002 (2) Axis Digital Readouts  
Table Size 35" x 72"  
X 72" – Y 42" Travel
- 1 - Devlieg 3A-48 Boring Mill  
With .0001 (2) Axis Digital Readouts  
X 48" – Y 36" Travel
- 1 - Devlieg 43H-48 Boring Mill  
With .0001 (2) Axis Digital Readouts  
X 48" – Y 36" 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 Twin Spindle Vertical Machining Center  
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 Twin Spindle Vertical Machining Center  
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 - 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
- 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  
25 Tools  
X 40" – Y 20" Travel  
4th and 5th Axis Capability  
Fully Programmable Trunion
- 1 - Haas MDC-500 CNC Machining Center  
Dual Workpiece Changer  
Probing Capability  
X 24" - Y 16" Travel
- 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
- 4 - Trak DPM5 Milling Machine  
Prototrak SM – CNC  
(3) Axis Controlled Glass Scales  
X 40" – Y 20" Travel
- 8 - Trak DPM7V Milling Machine  
Prototrak VM – CNC  
(3) Axis Controlled Glass Scales  
X 60" – Y 20" Travel  
X 60" – Y 20" Travel
- 1 – Trak DPM3 Milling Machine  
Prototrak VM-CNC  
(3) Axis Controlled Glass Scales  
X 36" – Y 18" Travel
- 1 - Haas TM – 2  
3 Axis – CNC  
10 Tool Changer  
4th Axis Capability  
X 40" – Y 16" Travel
- 3 - 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
- 2 - Alliant Milling Machine  
(2) Setup with Prototrak MX2 - CNC  
(1) Setup with Prototrak A.G.E.3 - CNC  
X 30" – Y 12" 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 2014 by Infinity Rebuild  
(Okuma Authorized Rebuilder)
- 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
- 2 - Trak TRL 24605X - CNC Lathe  
Prototrak SX CNC Controller  
24" Diameter Capacity X 60" Max Length
- 1 - Trak TRL1840CSS - CNC Lathe  
Prototrak LX3 Controller  
18" Diameter Capacity X 40" Max. Length
- 1 - Do-All Model LS 1660 - Heavy Duty Turning Lathe  
16" Swing 60" Centers with Taper Attachment  
With .0005 (2) Axis Digital Readouts  
16" Diameter Capacity X 60" Max. Length
- 1 - Toshiba TUE 150 CNC Vertical Turning Lathe  
New 2016  
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
- 7 - Doosan Puma GT2100 – CNC Lathe  
New 2016  
15.35 Diameter Capacity X 22.12 Max Length  
12 Tool Changer  
Auto Door
- 1 - Webster-Bennet VTL  
Manual with Readouts  
72" Swing
- 1 - Trak TRL1745P - CNC Lathe  
Prototrak LX2 Controller  
17" Diameter Capacity X 45" Max. Length
- 1 - Trak TRL 1840CSS-CNC Lathe  
Prototrak Controller  
18" Diameter Capacity X 40" Max. Length
- 1 - Sharpe 1640 - Lathe  
16" Diameter Capacity X 40" Max. Length
- 1 - Haas DS30SSY - CNC Mill/Turn  
Dual Spindle Hand Off  
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
- 1 - Do-All Model 1780 - Lathe  
17" Diameter Capacity X 80" Max. Length
- 1 - Do-All Model LD 1340 - Engine Lathe  
Collet Attachment  
13" Diameter Capacity X 40" Max. Length

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## GRINDERS

- 4 - Okamoto Model 6-18 Linear Surface Grinder  
18" Magna-Lock Vari-Mag Chuck
- 1 - Okamoto 12" x 14" Surface Grinders  
Magna-Lock Vari-Mag Chuck
- 1 - Okamoto Model #OGM-12-24U  
I.D. - O.D. Grinder  
12" O.D. x 28" Length
- 1 - Jones & Shipman Model 1310  
I.D.-O.D. Grinder  
8" O.D. x 18" Length
- 1 - Parker Majestic  
O.D. Grinder  
Rebuilt 2010  
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  
Automatic Auto Sizer  
3" x 20" Wheel with Autodresser
- 1 - Blom 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
- 3 - Chevalier 6" x 18" Surface Grinder  
Walker Magnetic Chuck
- 1 - 84" Blanchard Rotary Surface Grinder  
Model 42-72-84  
Rebuilt 2016  
84" Chuck Diameter  
86" Swing  
42" Wheel Diameter  
24" Height Under Wheel  
Polytech Conveyor System With Tank
- 1 - Model 20 Blanchard Grinder  
Swing 36"  
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  
Rebuilt 2009
- 3 - 3 Moore Jig Grinder  
.00005 Digital Readouts
- 2 - G18 Moore Jig Grinder  
Complete with All Tooling &  
High Speed Grind Tools  
.00005 Digital Readouts  
Rebuilt 2016

# 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 - Do-All Heavy Duty Vertical Band Saw Model 36-2 with Blade Welder
- 1 - Wilton Model 8020 Heavy Duty Vertical Band Saw with Blade Welder
- 4 - Wilton Model 4200 Belt And Disc Finishing Machine
- 4 - Roll - In Band Saw And Disc Finishing Machine
- 1 - Jet Cold Saw Model JCS-3150 Ferrous or Non-Ferrous Material 12" Capacity
- 1 - Spartan Model 812N Cut Off Saw

## 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 CP302 Wire Welder
- 1 - Miller Model 330 A/BP 1987 AC AD Heli Arc Welding Machine Steel & Aluminum Capable
- 2 - Model Millermatic #200 Wire Feed Welder Steel or Aluminum
- 1 - Model Hobart Aluminum Wire Feed Welding Gun
- 1 - Model Miller CP-200 Wire Welder
- 1 - 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
- 1 - Zeiss (Spectrum) CMM  
6 Probe Change Rack  
Fully Programmable X 38" - Y 64"  
Calypso
- 1 - Zeiss (Eclipse) CMM  
5 Probe change rack  
Fully Programmable X 27" - Y 27"  
Calypso
- 1 - Brown & Sharpe Global CMM 555  
Renishaw PH10 T Motorized Probe Head  
Renishaw TP20 Touch Trigger Probe  
Calypso Fully Programmable
- 1 - Brown & Sharpe Model 2000 CMM With  
Renishaw Multi-Position Tip Probe
- 3 - Brown & Sharpe Model 600  
Micro-Hite Gage with Printout
- 1 - Brown & Sharpe Model 900  
Micro-Hite Gage with Printout
- 1 - Fowler Trimos V Plus  
24" Electronic Height Gage
- 1 - Fowler Trimos V Plus  
40" Electronic Height Gage
- 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
- 1 - Brown & Sharpe Reflex Manual CMM  
Renishaw Multi-Position Tie Probe
- 1 - Scherr Tomic Comparator  
(2) Axis  
Powered Protractor Ring w/ Readouts  
10x & 20x Magnification
- 1 - Micro-Vu Optical Comparator  
Spectra 14"  
Q16 DRO  
3x, 6x, 12x Magnification
- 2 - Micro-Vu Qubix Vision System, DCC & Manual  
21 - 115x Magnification
- 1 - Faro Prime Articulating Arm  
8 Ft. Portable CMM  
Faro CAM2 Measuring Software
- 2 - Mantis - Vision Engineering  
Viewing Systems  
2x, 4x, 6x, 8x 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
- 11 - 18" x 24" Granite Surface Plates/Inspection Grade
- 9 - 24" x 36" Granite Surface Plates/Inspection Grade
- 1 - 36" x 48" Starret Pink Surface Plates/  
Inspection Grade
- 3 - 48" x 72" Starret Crystal Pink Surface Plate

# Equipment List

## INSPECTION EQUIPMENT CONTINUED

- 2 - Mitutoyo 211 Surf Test Surface Finish Analyzer
- 2 - Mitutoyo SJ-201 Surf Test Surface Finish Analyzer
- 2 - 48" x 72" Granite Surface Plates
- 2 - Wilson Rockwell Hardness Testers
- 1 - Starrett Rockwell Hardness Tester
- 0"- 42" OD micrometers---1" - 12" ID micrometers---blade, anvil, thread, point, and groove micrometers---precision v-blocks---height gages---.000050 - .0001 indicators---precision cylinder squares---precision angle and sine plates---dial and digital calipers 0-24" measurement capability---verniers 0-50" measurement capability---precision bench centers---thread gages---Myer pin gages---gage balls---precision levels, Deltronics pin sets---Concentricity gages---Tri-micrometers---Sunnen bore gages

## ADDITIONAL EQUIPMENT

- 1 - Stratasys Dimension 1200es 3D Printer  
ABSplus production-grade thermoplastic material  
10x10x12 Build Envelope  
.010in or .013in layer thickness
- 1 - Telesis ProStation laser workstation  
FQ=10 CDRH class I fiber  
full enclosure and filtration system
- 1 - Mitsubishi Wire EDM  
FX10K  
X 31.49" - Y 22.63" - Z 8.64"
- 1 - Mitsubishi Wire EDM  
MV2400 - ST  
X 23.6" - Y 15.7" - Z 16.7"
- 1 - Mitsubishi EDM Drill  
ED - 2000M  
X 11.8" - Y 7.8" - Z 7.8"
- 1 - Agie Charmilles Die-Sinking RAM EDM  
X - 19.685" - Y 15.748" - Z 15.748"
- 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
- 2 - Custom Designed and Built Mobile Hydraulic Test Stand w/ High/Low pressure capabilities
- 2 - Custom Designed and Built Stationary Hydraulic Test Stand  
PLC for Programmable Cycles and High/Low Pressure Settings
- 1 - 7 Tank Hot Black Oxide System  
Fully Ventilated and Insulated Tanks  
36" X 36" X 36"  
Dedicated Overhead Crane  
Installed 2016
- 1 - Zetalase Vereo  
Laser Marking System  
Fiber Solid State  
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



# 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
- 1 - Cress Electric Heat Treat Furnace 601K  
Separate Draw Furnace
- 1 - Cress Electric Heat Treat Furnace C1222012  
Separate Draw Furnace
- 3 - CAT 5000 lb. Lift Truck
- 1 - Yale 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 Stroker Hone Complete  
Gaging and Accessories
- 3 - Empire Sand or Glass Bead  
Blasting Machine 25" x 30" x 35" Capacity
- 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.