



## **VERTICAL C.N.C. MACHINING CENTERS**

- (1) Mazak, V815, 5-Axis, 10,000 RPM, 120" x 31.8 "x 24", 50 HP, 30 Tool ATC, Fanuc 18 I Control
- (1) Mazak, V815, 5-Axis, 12,000 RPM, 120" x 31.8 "x 24", 50 HP, 30 Tool ATC, Fanuc 18 I Control
- (1) Mori Seiki, MV-80, 4-Axis, 98" x 32" x 29", 40 Tool (#50) ATC, Fanuc 11MB Control
- (1) Mazak, V-20, 4-Axis, 75" x 36" x 30", 40 Tool (#50) ATC, Fanuc 6MB Control
- (1) Mazak FJV-25, 3-Axis, 12,000 RPM, 22" x 40" x 16", 30 HP, 21 Tool ATC, Mazatrol Control
- (1) Mazak FJV-20, 3-Axis, 12,000 RPM, 22" x 16" x 16", 30 HP, 21 Tool ATC, Mazatrol Control
- (1) Mazac SVC 2000/120", 4-Axis, 12,000 RPM, 120" x 20"x 20", 30 HP, 30 Tool ATC, Mazatrol Control
- (1) Mazac SVC 2000/200", 4-Axis, 12,000 RPM, 120" x 20"x 20", 30 HP, 30 Tool ATC, Mazatrol Control
- (1) OKK, PCV-40, 3-Axis, 10,000 RPM, 16" x 22" x 16" , 18 Tool ATC, Mitsubishi Control
- (2) OKK PCV-55, 3-Axis, 8,000 RPM, 26" x 22" x 46", 20 Tool (#50) ATC, Mitsubishi Control
- (1) OKK PCV-60, 3-Axis, 6,000 RPM, 26" x 22" x 46", 20 Tool (#50) ATC, Mitsubishi Control
- (2) Hurco KM5P, 4-Axis, 3,500 RPM, 31" x 14", 5 HP, M.T.C., Ultimax 3/486 Control
- (2) Hurco BMC-40, 3-Axis, 8,000 RPM, 47" x 20" x 24", Ultimax 3/486 Control
- (1) Hurco VMX50, 3-Axis, 10,000 RPM, 50" x 26" x 24", Ulitmax Control
- (1) Hurco VMX64, 3-Axis, 10,000 RPM, 60" x 32" x 26", Ulitmax Control
- (1) Hurco VMX42, 4-Axis, 10,000 RPM, 42" x 24" x 20", Ulitmax Control
- (6) Hurco VM-1, 3-Axis, 8,000 RPM, 26" X 14" X 18", Ultimax Control
- (2) Mazak Ultra 550 Horizontal, 5-Axis, 7,000 RPM, 42" X 26" X 30", 57 HP, 40 Tool ATC, Mazatrol Control
- (1)YCM XV-1020 Vertical Machining Center, 10,000 RPM, 40" x 20.4" x 21.2", 30 HP, 24 Tool ATC
- (1) YCM TV-188B Vertical Machining Center, 10,000 RPM, 70" x 33" x 29", 30 HP, 24 Tool ATC
- (1) Mazac VARIAXIS 630, 5-Axis, 12,000 RPM, 27" x 28" x 20", 30 HP, 80 Tool ATC, Mazatrol Control

## **HORIZONTAL C.N.C. MACHINING CENTERS**

- (1) Mitsubishi M-H60D Horizontal, 4-Axis,10,000 RPM, 39.4" x 31.5" x 31.5", 30 HP, 24.75 " Sq Pallet, 60 Tool ATC
- (1) Mitsubishi M-H60E Horizontal, 4-Axis, 12,000 RPM, 39.4" x 31.5" x 31.5", 30 HP, 24.8" Sq Pallet, 80 Tool ATC
- (8) Mitsubishi M-H40 Horizontal, 4-Axis, 12,000 RPM, 30 HP, 15.8" Sq. Pallets, 60 Tools
- (2) Mazak Ultra 550 Horizontal, 5-Axis, 7,000 RPM, 42" X 26" X 30", 57 HP, 40 Tool A.T.C, Mazatrol Control
- (2) OKK HM800S Horizontal, 4-Axis, 12,000 RPM, 50 HP, 800 mm Pallet, 60 Tool ATC

## **C.N.C. TURNING CENTERS**

- (1) Mori-Seiki SL-7 with Fanuc 6T Control; 12 Station Tool Changer, 36" x 62"
- (2) Mori-Seiki SL-35 with Fanuc 10T Control; 10 Station Turret, 23.6", swing x 32"; 3½" dia. bar capacity, 40 HP
- (1) Mori-Seiki SL-3 with Fanuc 6T Control; 8 Station Tool Changer, 16" x 20"
- (1) Mori-Seiki SL-I Fanuc 6T Control; 8 Station Tool Changer with Bar Feed; 10" x 12"
- (1) Hwacheon 21 HS with Fanuc O.T.C. Control; 1¼" Bar Feeder, 12 Station Tool Changer; 11" x 16", 15 HP
- (1) Okuma-Cadet L1420 12 Station Tool Changer; OSP5020L Control W/Graphics; 14" x 50"
- (1) YCM GT-250A 4,500 RPM, 20 HP, 12 Station Tool Changer, 22" x 13.7"

## **MILLING/TURNING CENTER, MULTITASKING**

- (1) Mazac Quick Turn Nexus 350M, 4,000 RPM, 12 Position Drum Turret, Mazatrol Nexus 350 Control, 10" x "63
- (1) Mazac Quick Turn Nexus 100MSY
- (1) Mazak, Integrex 200-II SY, 5-Axis, with 10,000 RPM-20 HP Milling Spindle & Sub-Spindle, 30 HP, 21.25" Max. Swing, 40 Tool ATC, Mazatrol Control
- (1) Mori-Seiki ZL-250, 7 Axis, Dual Turret-Dual Spindle, Live tooling with parts catcher, 35 HP, 28" max diameter x 16", Magazine Bar Feeder

## **CNC GRINDERS**

- (2) CNC Mitsubishi Cylindrical Grinder, with Marposs Auto-Gauging System, 12.6" Swing X 19.7"



## QUALITY

Our Quality Assurance Program meets or exceeds ISO9002/AS9100/QS9000 standards. Approved as F.A.A. Repair Station #MJ2R007L. Instruments certified and traceable to the N.I.S.T.

- Brown & Sharpe CMM, Global 7.10.7 Advantage, PC-DMIS,
- Brown & Sharpe CMM, Global Image 122210, PC-DMIS, 47" X 87" Y x 39" Z
- Brown & Sharpe CMM, Mistral #7105, PC-DMIS, 26" X 39" Y 18" Z
- Mitutoyo DCC CMM, Model BHN305 with Geopak, 12" x 20" x 11"
- Faro PCMM 182
- Bendix Cordax CMM, Model #1810, 40" X, 31.5" Y, 27.5" Z
- (2) Laser Micrometer .010-2.00 Range +/- .00001 repeatability, Non-Contact W/Electronic Feedback
- Deltronic Optical Comparator, with MPG-I
- Bausch & Lomb Microscopes
- Rockwell Hardness Testers
- Multiple 24" Micro Electronic Height Gauges
- Complimentary measuring tools and gages
- Multiple Granite Surface Plates

## BUSINESS CONTROL CAPABILITY

- Visual ERP Network System is installed and implemented to allow our associates and our customers the benefit of real-time business information.

## ENGINEERING CAPABILITIES

We utilize the following formats of engineering data:

- Unigraphics
- AutoCAD
- SurfCAM
- Para-Solids, IGES, STEP, & DXF Files
- Solidworks
- CATIA V5

## SURFACE GRINDING

- (1) Okumota, 22" x 48"
- (1) Okumota, 12" x 24"
- (3) Brown & Sharpe 6" x 18"
- (1) Brown & Sharpe 12" x 36"
- (2) Boyer Schulz 6" x 18"
- (1) Farrel Drill Grinder, 1-GA
- (1) Pratt & Whitney Diaform Wheel Dresser

## O.D. & I.D. GRINDING & HONING

- (2) Jones & Shipman Universal, 10" x 36" centers
- (1) Cincinnati #2 Centerless Grinder, Model EA
- (1) Karstens Universal, 14" x 40"
- (1) Sunnen Honing Machine, 2" Capacity

## EDM EQUIPMENT

- (1) Mitsubishi DWC90HA, 5-Axis Wire
- (1) Mitsubishi CX20, 5-Axis Wire
- (1) Mitsubishi BA-24, 5-Axis Wire
- (1) Mitsubishi EA12E, 5-Axis Wire

## FABRICATING SUPPORT EQUIPMENT

- (1) DoAll 2012-2A contour band saw
- (1) DoAll C1216A automatic cut-off saw
- (1) Pexto 36" shear
- (1) Johnson cut-off saw
- (1) Pat Mooney PMI-20 cut-off miter saw

## WELDING EQUIPMENT & CAPABILITIES

- Miller 600 AMP with wire feed, - MIG
- Miller Aerowave 300 AMP AC-DC inert gas
- (2) Miller 300/BP AC-DC inert gas – TIG
- Miller model CP/SUS – MIG
- Lincoln 300 AMP – ARC
- Miller spot welder, 2 KVA
- Rex spot welder 20 KVA
- Victor- Acetylene
- Lincoln 225 – MIG
- Automatic profile torch cutting machine 4" max. thickness
- Applicable specifications: MIL-STD-1595A; MIL-STD-5021; AWS D 1.1
- Material groups; IIA, IV
- Tool and Die Steel Welding

## HEAT TREATMENT

- (1) L&L, Industrial Electric Furnace, Model XL-124
- (1) KH Huppert, Model 5700, Tempering Oven

## JIG GRINDING & BORING

- (1) #3 Moore Jig Grinder, for hole and slot grinding
- (1) #2 Moore Jig Borer



# Equipment List

## **PRESSES**

- (1) Federal #51, 60 ton
- (1) KRAS Transfer Molder, Model VSKO-63
- (1) Niagara 75 ton
- (1) Enterpac 75 ton
- (1) Drake Press

## **LATHES**

- (1) Monarch with tracer, 36" swing, 60" centers
- (2) Howa with taper attachment, 17" swing, 60" centers
- (1) Hardinge 9" turret/chucker; HC auto threading unit, 6" dia., 1-5/32" hole
- (1) Harrison 18" swing 60" Centers

## **DRILL PRESSES**

- (1) HPC, 7' Radial Arm, 18" dia. Column
- (1) Csepel, 3' Radial Arm, 14" dia. Column
- (1) Powermatic, Column, 24" x 36" table
- (2) Clausing, Column, 18" x 24" table
- (1) Lealand-Gifford, Model #2, 6 Spindle

## **DEBURRING**

- (2) Burr-King, Rotary finishers
- (2) Sweco, Model FM-3, Vibrodyne
- (1) COMCO Inc. Micro Blaster, dry grit
- (1) Econoline RA-36-1, 22" x 23" x 36", dry grit
- (1) Trinco, Model 36, 22" x 23" x 36"
- (1) UNI-Blaster, SB-4, 24" x 24" x 46", dry grit

## **SUPPORT & HANDLING EQUIPMENT**

- Fork Lifts to 10,000# capacity plus a full accompaniment of hoists & special racks
- JIB & Gantry cranes up to 10,000# capacity
- Over Head Cranes up to 15,000# capacity