

# Fox Valley Tool & Die, Inc.

Design & Build - Tool & Die - Jig & Fixture - EDM - CNC Machining

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## Equipment List

### *QUALITY ASSURANCE*

- (1) Zeiss Accura 1200/3000/1000 Coordinate Measuring Machine  
Measuring Range X axis=47.2" x Y axis=118.1" x Z axis=39.4" with Calypso CNC Software
- (1) Zeiss Duramax 500/500/500 Coordinate Measuring Machine  
Measuring Range X axis=19.7" x Y axis=19.7" x Z axis=19.7" with Calypso CNC Software
- (1) Zeiss Accura 1200/2400/1000 Coordinate Measuring Machine  
Measuring Range X axis=47.2" x Y axis=94.5" x Z axis=39.4" with Calypso CNC Software
- (1) Zeiss Micura 500/500/500 Coordinate Measuring Machine  
Measuring Range X axis=19.7" x Y axis=19.7" x Z axis=19.7" with Calypso CNC Software
- (1) Zeiss PRISMO Super Accuracy VAST 900/1500/700 Coordinate Measuring Machine  
Measuring Range X axis=35" x Y axis=59" x Z axis=27.5" with Calypso, Dimension, and Holos CNC Software
- (1) Brown & Sharpe Global Image 9-12-8 DCC Coordinate Measuring Machine  
Measuring Range X axis=35" x Y axis=47" x Z axis=31" PC-DMIS CAD++ software  
Renishaw TP 200 and SP 600 probe systems
- (1) Brown & Sharpe Global Advantage 7-10-7 DCC Coordinate Measuring Machine  
Measuring Range X axis=27.5" x Y axis=39.5" x Z axis=27.5" PC-DMIS CAD++ software  
Renishaw SP 25 probe systems
- (1) RAM Optical Sprint MVP 400 Optical Measuring Machine  
Measuring Range X axis=18" x Y axis=18" Z axis=12"
- (1) RAM Portable OVP w/ video to VGA converter  
6.5:1 motorized parfocal zoom lens w/ 2x auxiliary lens
- (1) OMIS II Series Optical Measurement Inspection System (O.V.P.)  
4"x8"x8" travel, connected to high-resolution color camera
- (1) Romer Infinite Series Portable CMM Model 7525  
With 8 ft. measuring range and scanning capability. It is capable of using either PCDMIS or CALYPSO software.
- (1) Romer Infinite Series Portable CMM Model RA7530SI  
With 9ft. measuring range with integrated Scanner Probing and scanning capability.
- (2) Parlec Presetter Series 1850TMM Toolsetter  
Uses Smart Camera technology for tool measuring & presetting. Max. Dia.: 420 mm Maximum Length: 500mm
- (4) IM-7000 Series Image Dimension Measurement System  
with Automatic Data Recording and Inspection Reports

## ***CAD/CAM SYSTEMS***

AutoCAD, Pro/Engineer, SolidWorks, and Teksoft (See *CAD DATA TRANSFER Information Sheet.*)

## ***LASER ENGRAVING***

- (1) Keyence MD-X1500 3-axis Hybrid Laser Marker  
Capable of a 4.92" x 4.92" x 1.65" marking area

## ***MULTI-TASK MACHINE***

- (2) Mazak Integrex i400ST  
26.0" Diameter Swing x 60.0" long, Travel of X axis=24.21" x Y=10.24" x Z=62.40" B axis=240° C axis=360°  
3300 RPM main spindle, 4000 RPM secondary spindle, 12,000 RPM Rotary Tool Spindle with 110 tool changer
- (1) Mazak Integrex 200-3ST  
26.0" Diameter Swing, Travel of X axis=22.83" x Y axis=6.3" x Z axis=41.14" B axis=225° C axis=360°  
5000 RPM Headstock Spindle, 12,000 RPM Rotary Tool Spindle, 80 Tool capacity, plus 9 Station Turret

## ***5 AXIS MACHINING CENTER***

- (3) Mazak Variaxis I-800 , Palletech System w/ (52) 20" square pallets  
Travel of X axis=28.7" x Y axis=33.4" x Z axis=22.0" C axis rotation=360° A axis tilt=150° Maximum work piece diameter 29"  
10,000 RPM with high pressure coolant through

## ***4 AXIS HORIZONTAL MACHINING CENTER***

- (1) Mazak Nexus 10800 Horizontal Machining Center  
Travel of X axis=66.93" x Y axis=55.12" x Z axis=60.04" Maximum work piece diameter 80.71"
- (2) Kitamura HX500A Horizontal Machining Center  
Travel of X axis=34.3" x Y axis=28" x Z axis=26"
- (1) Mazak Nexus 6000 Horizontal Machining Center  
Travel of X axis=31.5" x Y axis=31.5" x Z axis=31.5"
- (2) Mazak Nexus 5000 Horizontal Machining Center  
Travel of X axis=28.74" x Y axis=28.74" x Z axis=31.5"
- (3) Mazak FH-6800 Horizontal Machining Center  
Travel of X axis=41.3" x Y axis=31.5" x Z axis=34.6" Maximum work piece diameter 41.34"
- (1) Mazak PFH-5800 Horizontal Machining Center  
Travel of X axis=28.74" x Y axis=28.74" x Z axis=29.13"

## ***4 AXIS VERTICAL MACHINING CENTER***

- (4) Mazak VCN570C Vertical Machining Center  
Travel of X axis=41.3" x Y axis=22.4" x Z axis=20.1"
- (9) Mazak Nexus VCN-510C Vertical Machining Center

Travel of X axis=41.3" x Y axis=20.0" x Z axis=20.0" 3-D High Speed Software, Cylindrical Interpolation Software  
With High Accuracy Nikken Rotary table.

- (1) Mazak FJV 60/160 Vertical Machining Center  
Travel of X axis=165.0" x Y axis=55.1" x Z axis=23.0"
- (3) Mazak FJV 60/120 Vertical Machining Center  
Travel of X axis=126.0" x Y axis=55.1" x Z axis=20.0"
- (4) Mazak FJV 35/80 Vertical Machining Center  
Travel of X axis=78.7" x Y axis=31.4" x Z axis=20.0"
- (1) Mazak FJV 35/60 Vertical Machining Center  
Travel of X axis= 59" x Y axis=31.5" x Z axis=23.0"

## ***HORIZONTAL BORING BARS***

- (1) Toshiba BTH-110-R18 Horizontal Boring Bar  
Travel of X axis=100" x Y axis=80" x Z axis=60" x W=20" with a 55" x 71" programmable rotary table
- (1) Toshiba BTD-11B-P4 Horizontal Boring Bar  
Travel of X axis=100" x Y axis=64", includes 48" programmable Troyke turn table
- (1) Toshiba BTD-110.R16 Horizontal Boring Bar  
Travel of X axis=78" x Y axis=59" x Z axis=57" x W=19.7" with a 55" x 63" programmable rotary table

## ***CNC LATHES***

- (1) Mazak Quick Turn Nexus 400II  
33" swing x 80.0" between centers, 5.5" diameter maximum bar feed capacity
- (2) Mazak Quick Turn Nexus 500-II  
46" swing x 120.0" between centers, 4.0" diameter maximum bar feed capacity
- (1) Mazak Slant Turn 50N Lathe  
26" swing x 120.0" between centers, 3-1/2" diameter maximum bar feed capacity
- (2) Mazak Slant Turn 450 Lathe  
22" swing x 60.0" between centers, 3" diameter maximum bar feed capacity
- (1) Mazak Quick Turn 350-II MY Lathe  
29" swing x 60.0" between centers, 4" diameter maximum bar feed capacity
- (1) Mazak Nexus QTN 300 Lathe  
16.5" swing x 40.0" between centers, 2.0" diameter maximum bar feed capacity
- (1) Mazak Quick Turn 250 Lathe  
24.0 swing x 22.0" between centers, 3.0 diameter maximum bar feed capacity

## ***EDM MACHINERY***

- (2) Mitsubishi MV4800 Advanced Wire E.D.M Machine  
X axis = 31.5" Y axis = 23.6", maximum height 20.1", 4 axis independent U-V Submersible
- (1) Mitsubishi MV2400R Advance Wire E.D.M.  
X axis = 23.6" Y axis = 15.7", maximum height 12.2", 4 axis independent U-V Submersible
- (2) Mitsubishi FA10S Advance Wire E.D.M. Machine - fine wire capable (004" diameter)

- X axis= 9.0" x Y axis=14.0", maximum height 8.00", 4 Axis independent U-V Submersible
- (1) Mitsubishi FA20S Advance Wire E.D.M. Machine – fine wire capable (.004" diameter)  
X axis= 41.3" x Y axis=31.5", maximum height 11.6", 4 Axis independent U-V Submersible
- (2) Mitsubishi FA30V Wire E.D.M. Machine - large capacity machine  
X axis= 29.5" x Y axis=19.6", maximum height 26.50", 4 Axis independent U-V Submersible
- (1) Mitsubishi FA10V Wire E.D.M. Machine  
X axis=9.0" x Y axis=14.0", maximum height 8.0", 4 Axis independent U-V
- (3) Mitsubishi EA28V Sinker E.D.M. Machine - X axis= 25.6" x Y axis=17.7", Z axis=13.8",  
C axis (true 360,000 position in 4th axis). Maximum work piece size: 41.3" x 29.9" x 13.8"
- (1) Mitsubishi Vx-20 Sinker E.D.M. Machine  
X axis=19.7" x Y axis=13.8" x Z axis=13.8", C axis (true 360,000 position 4th axis)  
Maximum work piece dimensions = 35.4" x 26.8" x 12.2", 16 tool capacity
- (1) VERSAMAX FDH56 Small Hole Sinker E.D.M. Machine  
X axis = 23.6" Y axis = 19.7" Z axis = 17.7" Capable of drilling hole diameters .012" to .120" in Harden Steel
- (1) Current MT30 Small Hole Sinker E.D.M. Machine  
X axis=30" x Y axis=15" x Z axis=16" Capable of drilling hole diameters 0.006" to 0.250" in Harden Steel
- (1) Current FT\_3000M Small Hole Sinker E.D.M. Machine  
X axis=30" x Y axis=15" x Z axis=16" Capable of drilling hole diameters 0.006" to 0.250" in Harden Steel
- (1) Roku Roku HC-658I Graphite/Hard Milling Machine  
X axis=23" x Y axis=19.5" x Z axis=15.5"

## ***WATERJET CUTTING***

- (1) I-6012 Integrated Flying Bridge System w/ 87,000 PSI pump and articulated cutting head, Dynamic Waterjet  
Workspace envelope will support part sizes less than 6 ft. by 12 ft, with thicknesses up to 8".
- (1) WMC2-4040 Waterjet Machining Center w/ (2) 87,000 PSI pumps & articulated cutting heads, Dynamic Waterjet  
Workspace envelope will support part sizes less than 12 ft. by 12 ft, with thicknesses up to 8".

## ***MANUAL LATHES***

- (2) Engine Lathes  
Maximum capacity of 14" Dia. x 40"

## ***SAWS***

- (2) Kasto WinPro AC5.6 CNC Saws  
Cutting range 22.05" Cutting range flat height x width 22.05 x 22.05 "  
Smallest dimension to be cut and shortest length of cut-off piece 0.39 "
- (1) KastOmicut U 2.6 Manual Saw  
Cutting range 90° 6.3" / 10.24" / 12.2 x 10.24" / 6.3 x 6.3" / 10.24 x 10.24"  
Cutting range +/- 45° 9.06" / 7.87 x 10.24" / 7.87 x 7.87"  
Cutting range + 60° 5.9" / 5.51 x 6.3" / 5.51 x 5.51"
- (2) Horizontal Manual Saws  
Maximum capacity 20.0" x 20.0" square or 20.0" diameter

## ***HONING MACHINE***

- (1) #MBC1804 Sunnen Honing Machine with Automatic Sizing  
1/16" Dia. - 6-1/2 Dia. honing capacity, and internal-external honing capacity

## ***JIG GRINDERS***

- (2) S55-600 HI-CUT CNC Hauser Jig Grinding Machine  
Travel of X=51" Y=31" and W=25" w/ rotary table
- (1) S40-600 HI-CUT CNC Hauser Jig Grinding Machine  
Travel of X=25.5" Y=18.0" and W=19.5" w/ rotary table
- (1) #3 Moore AGS-3 CNC Continuous Path Jig Grinder  
Travel of X=17.5" and Y=10.5"

## ***GRINDERS***

- (1) Tschudin PL-155 O.D./I.D. Cylindrical Grinder w/ Full CNC Control  
20" Diameter Swing, 60" between centers, 600 lb. Capacity, Marposs Gaging System  
20" O.D. Wheelhead, 10 hp Motor, High Frequency Cartridge Type ID Spindle  
*Both O.D. Wheelhead and I.D. Spindle are mounted on indexable turret for reduced set up and changeover time.*
- (1) Shigjiya Seiki O.D./I.D. Cylindrical Grinder  
Maximum capacity 10.5" Dia x 40" between centers
- (10) Various Okamoto surface grinders manual & automatic  
Maximum capacity 21" x 48", w/ capabilities of optical wheel dressing
- (4) Okamoto ACC 24.40 CA1 Precision Surface Grinders  
Maximum capacity 24" x 40" x 20" under the wheel
- (1) Mitsui 250 HMD Graphite Surface Grinder  
Maximum capacity 20" x 9.5"
- (2) Okamoto Precision Rotary Grinder  
Maximum capacity 31.50" Dia x 11.00" Overall Height

FVT&D also has complete facilities for diamond polishing and ultrasonic polishing.

## ***PUNCH PRESSES***

- (1) 400 Ton Straight Side Pacific Hydraulic Punch Press
- (2) 250 Ton OBS Pacific Hydraulic Punch Press
- (7) 220 Ton Komatsu Punch Press
- (1) 165 Ton Komatsu Punch Press
- (2) 330 Ton Komatsu Punch Press

*(See Printable Press Specifications link on home page for a detailed listing.)*

## ***PRESS BREAK***

- (1) Safan CNC Controlled Servo Electronic Press Brake Model: 100-3100 NS  
Maximum tonnage: 110 Maximum working length: 122" Maximum stroke upper beam: 11.81"

## ***FURNACE & HEAT TREATING EQUIPMENT***

- (1) Radiant Tube Batch Furnace  
Max chamber capacity 30" x 48"x 30"
- (1) Electra Heating Furnace (with atmosphere control) & Re-circulating Box  
Max chamber capacity 15" x 21"x 36" @ 1850 F°

## ***STRESS RELIEVING***

- (1) META-LAX Model 1300 Stress Relief and Wire Conditioning Machine
- (4) Miscellaneous Furnances with maximum capacity of 42" x 72" x 42"

## ***WELDING / FABRICATING***

- (1) Genesis Versa FT, Robotic Weld Cell  
Table size 36" x 80"

Welding capabilities include all types of plain carbon steels, alloy steels, stainless steels, tool steels, aluminum alloys, brass and bronze alloys, magnesium alloys, titanium alloys, cast iron alloys and copper base alloys using GTAW, GMAW, FCAW, SMAW and oxy-fuel techniques.