

## FACILITIES LIST



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**Registered government contractor- CCR Registered Cage Code 3AV26**

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### **Mastercam 2018 (two seats), AutoCad, Solidworks**

- NEW 2D/3D MILLING FEATURES
- DESIGN IMPROVEMENTS
- POWERFUL TURNING AND MILL-TURN ENHANCEMENTS
- MACHINE CLOUD AND COROPLUS
- STREAMLINED WORKFLOW

**2** (2000) Johnford SV-24 VMC (600mm) with 4<sup>th</sup> Axis attachment

**2** (2010) Twin Horn VH 1010 (1000mm) VMC with 4<sup>th</sup> Axis attachment

**1** (2010) Twinhorn VA 500 (500mm) VMC with 4<sup>th</sup> Axis attachment

**1** (2013)TongTai/Topper TNL-100TLSB+Y CNC Turning Center 8" Main 6" Sub

**1** Miyano (1995) ATS 45S CNC Turning Center with live Tooling and sub spindle, 8" Main

1 Kitamura(2007) HX250iF (250MM) Horizontal machining Center, Twin Pallet, Full contouring

1 TongTai (2016) SH-4000P (400mm) Horizontal Machining Center, Twin Pallet, Full Contouring

1 Bridgeport Milling machine

1 Kent Surface Grinder with Auto feed.

Vertical and horizontal saws, drill presses, Do All Vertical, Surface grinders,

**Quality assurance is what Fitz does better than others and is the core of how we maintain daily operations.**

### **Inspection Equipment-Quality Control**

1 Brown & Sharp 24" Micro Hite height gage

1 Tesa- Hite Micro height gage 24"

1 Comparator

1 Brown & Sharp CMM

Thread gages

Surface Plates, Surface gages.

A full complement of Calipers, Micrometers, Surface Gages, Gage Pin Sets, Gage Blocks, Indicators, Bore Gages, Rings and Thread Gages.

### **CNC Vertical Machining Centers**

#### **2 Twinhorn VH-1010**



Fanuc Oi-MC & 320 Meters Memory Fanuc 15 HP Spindle Motor  
AC Digital Servo & Spindle Drivers Spindle CAT-40 with 8000 RPM  
PCMCIA Slot for Memory Expansion Arm Type 24 Tool ATC

Helical Interpolation & Custom Macro B Pitch Error Compensation  
Hardened Ground Box Ways on X,Y & Z Auto Lubrication System  
Meehanite Cast Iron Bed, Base & Headstock Fully Enclosed Splash Guard  
Heat Exchanger for Electrical Cabinet Spindle Air Blast & Cutting Air Blast  
Automatic Power off (M30) Spindle Air Curtain  
Roll Out Coolant Tank & Chip Tray RS232 Interface  
Fanuc Operating & Maintenance Manual Operating & Electrical Manuals  
4th Axis Interface Cable only Ready Hand Held Coolant & Air Nozzle  
One Year Machine Parts Warranty Two Year Control Warranty  
Travel X Axis - 39.76 (1010mm)  
Travel Y Axis - 19.69 (500mm)  
Travel Z Axis - 20.47 (520mm)  
Rapid Feed Rate X & Y Axis - 945ipm  
Rapid Feed Rate Z Axis - 945ipm  
Cutting Feed Rate - 315ipm (8000mm/min)  
Positioning X, Y & Z Axis - 0.0001/12 (0.005mm / 300mm)  
Repeatability X, Y & Z Axis - 0.0001 ( 0.003mm)  
Table Dimension - 47.24 x 17.72 (1200mm x 450mm)  
Maximum Loading - 990 lb (450Kg)  
Spindle Motor - FANUC AC Spindle Motor il 8 / 8000  
Spindle Speed - 8000Rpm (Opt. 12000Rpm)  
Servo Drive Motor X & Y Axis - Fanuc 12 / 3000is  
Servo Drive Motor Z Axis - Fanuc 22 / 3000is  
Distance from Spindle Nose to Table - 4.72 25.59 (120 650mm)  
Distance from Spindle to Column - 21.26 (540mm)  
ATC - Swing Arm Type Random, Shortest Path, Bi-Directional  
Maximum Tool Weight - 15.4 lb (7.0kg)  
Maximum Tool Length - 11.81 (300mm)  
Maximum Tool Diameter - 3.14 (80mm)  
Floor Space L x W x H - 99 x115 x106 (2508mmx2900mmx2700mm)  
Power Requirement - 220V, 3 Phase, 60Hz, 30kVA, 75Amp  
Machine Weight - 11,770 lb (5350 kg)  
Spindle Speed 12000RPM (included Spindle Oil Refrigeration Unit)  
Chain Type Chip Conveyor & Cart  
Spindle Oil Refrigeration Unit  
Coolant Through Spindle Without Extra Tank & 300PSI Pump  
Coolant Through Spindle With Filter System, Extra Tank & 300PSI Pump  
4th Axis Interface with Servo Drive & Power/Signal Cable  
4th Axis Complete with Manual Tailstock + Install (Tanshing VRNC-210)

X: 39.76 "      Table-W: 17.72 "  
Y: 19.69 "      Table-L: 47.24 "  
Z: 20.47 "      Control: CNC (GE FANUC OIMC)  
Power: 15 hp      Dimensions: 115" x 99" x 106"  
RPM: 8000      Weight: 11,770 lb  
# ATC: 24

## 1 TWINHORN 500 VMC



Twinhorn VA-500 VMC  
Fanuc Oi-MC Control  
Travels: 19.6" x 15.75" x 17.72"  
Table Size: 27.5" x 15.7"  
8,000 RPM  
Bt-40 Taper  
16 Station Automatic Tool Changer- Side Arm  
Remote Jog Handle  
Roll Out Coolant Tank & Chip Tray  
RS232 Interface  
Hardened Ground Box Ways on X,Y & Z  
Electrics: 220V, 3 Phase, 60 Hz

## 2 Johnford SV-24 Vertical Machining Centers



Model SV-24  
Brand JOHNFORD  
Type Vertical Machining Centers

Control CNC  
X 23.6 inch  
Y 19.7 inch  
Z 24 inch  
Power 10 hp  
RPM 8000  
ATC 24  
TableW 18 inch  
TableL 31 inch

### Horizontal Machining Centers

#### 1 Tongtai SH -4000P



Longitudinal Travel X-Axis	20"
Cross Travel Y-Axis	20"
Vertical Travel Z-Axis	20"
Spindle Center to Table Top	3.15" Min / 23.2" Max
Spindle Nose to Table Center	2.75" Min / 22.8" Max
Table Height from Floor	43.3"

#### **Pallet**

Pallet Working Surface	15.7" x 15.7"
Max Workload on Pallet	880 lbs. each
Table Surface	Qty 25 – M16 Holes
Max Workpiece Size (Ø / height)	21.65" x 31.5"
B-Axis Contour Positioning (full 4th axis)	.001°

### **Spindle**

Spindle Motor	50HP / 35HP 30 min. / 25HP cont. (built-in)
Spindle Taper	Big Plus CAT-40 / BT-40 / HSK-63A
Spindle Drive System	Integral Motor
Spindle Speed	0 – 15,000 RPM
Spindle Torque	184 ft./lbs. @ 980 RPM
Spindle Bearings	Hybrid Ceramic with Air/Oil Mist Lubrication

### **Automatic Tool Changer (Standard)**

Number of Tools	60
Tool Selection	Random
Tool Change Time	1.4 sec. Tool to Tool
Chip to Chip Time	2.6 sec. Chip to Chip avg.
Max Tool Diameter	3.15" with Adjacent Tools 6.6" without
Max Tool Weight	26.4 lbs.
Max Tool Length	11.8"

### **APC Unit**

Type	Rotary (0 – 180°)
Change Time	5.9 sec.
Rotation Method	Servo Motor
Pallet Clamping Method	Ball Lock Cones – 37,400 lbs. Clamp Force

### **Ballscrews and Axis Motors**

X-Y-Z Ballscrew Diameter	40mm (1.57") x 16mm Pitch
Ballscrew Type	Class 3 Double Nut Pre-loaded
Ballscrew Mounting Type	Pre-tensioned/Double Anchored
X-Y-Z-B Servo Motor HP	5.2 – 9.0 – 5.2 – 2.1 HP
Servo Motor Mounting	Direct Coupled

### **Feeds**

Rapid Traverse Rate X, Y, Z	2,362 IPM
X, Y, Z Acceleration	1G

Cutting Feed Rate	0.01 – 787 IPM
Positioning Accuracy	± .0002" Full Stroke
Repeatability	± .0001"
<b>General</b>	
Coolant Tank Capacity	120 Gallons
Machine Weight	23,000 lbs.
Floor Space	209" x 69" x 107"
Machine Power Source	208/220 Volts, 3 Phase 150 Amps*

### 1 Kitamura HX250



Kitamura

Model:

HX250iF 2APC

Specifications:

#### Standard Specifications

##### (1) Table

Table Work area (width x length)  
inch) 254 x 254 mm ( 10 x 10

Table Indexing

B-Axis 0.001°

Max. Work Size

Ø 350 x 400 mm  
(13.78 x 15.75 inch)

Load Capacity

100Kg (220 pounds)

##### (2) Travel

X Axis

305 mm (12.0 inch)

Y Axis

305 mm (12.0 inch)

Z Axis

330 mm (13.0 inch)

B Axis

360°

Distance from Table surface to spindle center  
inch)

60 ~ 365 mm (2.4 ~ 14.4

Distance from Table center to spindle nose  
inch)

60 ~ 390 mm (2.4 ~ 15.4

(3) Spindle		
Spindle Taper		NST NO.30
Spindle Speed		150 - 15,000 min -1
Directory specified by a 5-digit S code		
(4) Feed		
Rapid Feed	X, Y And Z Axis (Auto)	48,000 mm/min. (1889.8
inch/min.)	(Manual)	15,000 mm/min. (590.6
inch/min.)		
Cutting Feed	X, Y And Z Axis	0-15,000 mm/min. (0-
590.6 inch/min.)		
(5) Auto Tool Changer (ATC)		
Tool Storage Capacity		40 Tools
Tool Selection Method		Random, Tool Identified
at Magazine		
Tool Shank		MAS BT30
Max. Tool Size		Ø 50 x 200 mm (Ø2 x 7.9
inch)		
-Two neighboring tool pots should be empty:		Ø 75 x 200 mm (Ø3 x 7.9
inch)		
Max. Tool Weight (with tool holder)		2Kg (4.4 pounds)
Tool Change Time		1.2 Second
(6) Motor		
Spindle Motor (12 min. Ratio)		AC 7.5 KW (AC 10 HP)
(Continuous Operation)		AC 5.5 KW (AC 7.4 HP)
Coolant Motor		AC 0.73 KW (1.0 HP) (50 Hz)/1.21 KW (1.6 HP)
(60 Hz)		
ATC Motor		AC 0.4 KW (AC 0.54 HP)
Lubrication Motor		AC 5 W (AC 1/150 HP)
(7) Machine Weight with NC		4,600 Kg (10,120 pounds)
(8) Electric Power Source		
Main Circuit	Three Phase current	AC 200/220 V
transformer, this is secondary voltage.)		(If the machine has a
		Frequency 50/60 Hz
Control Circuit		Single Phase Current AC
100 V		(Made from AC 200/220
V by a transformer.)		
Direct Current		DC 24 V

## CNC TURNING



## 1 Tongtai TNL-100TLSB+Y Sub-Spindle Turning Center



<b>Item / Model</b>	<b>TNL-100TLSB</b>
Chuck Size (in.)	8 Front / 6 Rear
Swing Over Bed (in.)	15.7
Swing Over Cross Slide (in.)	12.2
Sub Spindle Travel (in.)	23.6
Main Spindle Bar (in.)	2
Main Spindle HP	20
Main Spindle RPM	30-4500 (8" chuck)
Sub Spindle Bar (in.)	1.37
Sub Spindle HP	10 Integral
Sub Spindle RPM	5
# of Turrets	1
Turret Tools	12
True Slant Bed (degrees)	90°
C-Axis Live Tools	Standard
Y Axis	Optional +/- 2"
Guide Ways	Linear (Box opt.)
Weight (lbs.)	11,220

### 1 MIYANO ATS-45S

Chuck Size: 8 "	Swing: 22 "
Bar Capacity: 1.6 "	Machining Length: 15 "
Power: 20 hp	Tailstock: Yes
Max RPM: 4000 rpm	Control: CNC (Fanuc OT)
Turning Dia: 8 "	

