## **Equipment & Automation**

FZE researches and invests in the latest technology and features for equipment purchases. With the rapid advancement in machine technology the company buys equipment that will be technologically appropriate for several years. In addition, availability of service personnel and replacement parts is considered prior to purchase. FZE avoids purchasing equipment from manufacturers or dealers who may not have the parts or personnel to service the machines when necessary. Machine up-time, compatibility with current equipment and match to job requirements are driving factors. FZE will occasionally procure newer used equipment and has had good success after a thorough review of the equipment, its features and the maintenance records.

Following is a summary listing of key equipment located within our 60,000 sq ft modern facility:

# **Vertical Machining Centers**

#### -OKK 820V

32" x 76" Table, 35 HP, CAT50 18" Rotary 4th Axis

#### -Daewoo DVC500

Twin Pallet - High Speed Index Table 20 HP, Two 22" x 34" Pallet Tables

#### -(6) Haas VF3

18" x 48" Table, 15 HP, w/Probes 12" Rotary 4th Axis

### -(2) Haas MDC-500

Twin High Speed 18"x13" Pallets 10 HP, 15,000RPM, 4th axis, thru cool

#### -Haas VM3

40" X 26" X 25", 30 HP, 12,000 RPM w/Probe, 12" Rotary 4th Axis

#### -Haas VF4SS

50" X 20" X 25", 30 HP, 15,000 RPM w/Probe, 12" Rotary 4th Axis

### -Haas VF5/40

50" X 26" X 25", 30 HP, w/Probe 12" Trunnion 5 Axis Rotary





### Bar Feed Lathes & Swiss T/C

### -Daewoo Puma 300 MSB

3" Bar Capacity Sub-spindle w/Live Tooling 4' Magazine Bar Feeder

### -Daewoo Puma 230 MSB

1 11/16" Bar Capacity Sub-spindle w/Live Tooling 12' Bar Feeder



### (2) Doosan Puma2600SY

Sub-spindle w/Live Tooling Multi-Axis, 2.65" Dia x 12' bar feeder and Doosan Cobot



#### (2) Doosan TT1800SY

Twin-spindle, Twin 24 Tool Turrets Multi-Axis, 2.65" Dia x 12' bar feeder and Doosan Gantry Robot + Cobot



### -Hanwha XD32/38II

1.50" Dia Bar Capacity 7 Axis Swiss Turning Center Sub-spindle w/Live Tooling 9" Sliding Head Stock Stroke 12' Magazine Bar Feeder



1.05" Dia Bar Capacity 8 Axis Swiss Turning Center Sub-spindle w/Live Tooling 8" Sliding Head Stock Stroke 12' Magazine Bar Feeder

#### -Hanwa ML32HP

1.25" Dia Bar Capacity

### -(2) Hanwa ML26HP

1.00" Dia Bar Capacity

#### -Hanwa ML20HP

.75" Dia Bar Capacity All are equipt with: 6 Axis Swiss Turning Center Sub-spindle w/Live Tooling 8.265" Sliding Head Stock Stroke 12' Magazine Bar Feeder

#### Nomura NN32YB

32 mm Swiss Lathe 16 tool capacity 12' bar feeder



#### Nakamura WT-150

Twin-spindle, Twin 24 Tool Turret Multi-Axis, 2" Dia w/4' bar feeder

### CNC Lathes



#### Doosan Puma400

18" Chuck, 2 Axis, 40" CC Daewoo Puma 12S

# 12" Chuck, 2 Axis, 30" CC

### Daewoo Lynx 200

8" Chuck, 2 Axis, 20" CC

#### (3) Haas SL30 & SL20

12" Chuck, 2 Axis, 30" CC

#### **Hwacheon HI-EC031**

10" Chuck, 4 Axis, 24" CC Live Mill/Drill Tooling

### **Horizontal Machining Centers -OKK HM600**

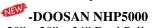
32" x 30" x 30" Dual Pallet 12,000 rpm spindle

40 HP - 50 taper, 60 ATC

#### **-OKK HM80**

40" x 34" x 34" Dual Pallet 12,000 rpm spindle

40 HP - 50 Taper, 60 ATC



29" x 29" x 34" Dual Pallet 15,000 rpm spindle, Hi-Press Coolant 50 HP - 40 Taper, 60 ATC

### **Beamer Fiber Marking Laser**



# **SST Finishing Lines**

SST Electro-Polishing SST Passivation

### **Inspection Equipment**

**-Quality Laboratory** 

-(2) Sheffield Discovery CMM's D-28 & D12

#### Kevence IM7030T

**Instant Measuring Vision Syste** 

### - 14" J&L Optical Comparator

- Granite Tables W/Ht. Gages
- Many, Many Hand Gages, Mics, etc.

### Miscellaneous

(2) CNC 12" Autosaws

Cylindrical Grinder 12" Dia x 40"CC

(1) Vertical Broach

(3) Horizontal Broaches

Welding & Fabricating

Electric Stress Relieving Oven

Knee Mills, Drill Presses

Abrasive Polishing Equipment

Central Tooling Set-up Area

Assembly / Sub-Assembly Area

Finished Goods Inventory for Blanket Orders and Kanban systems.



