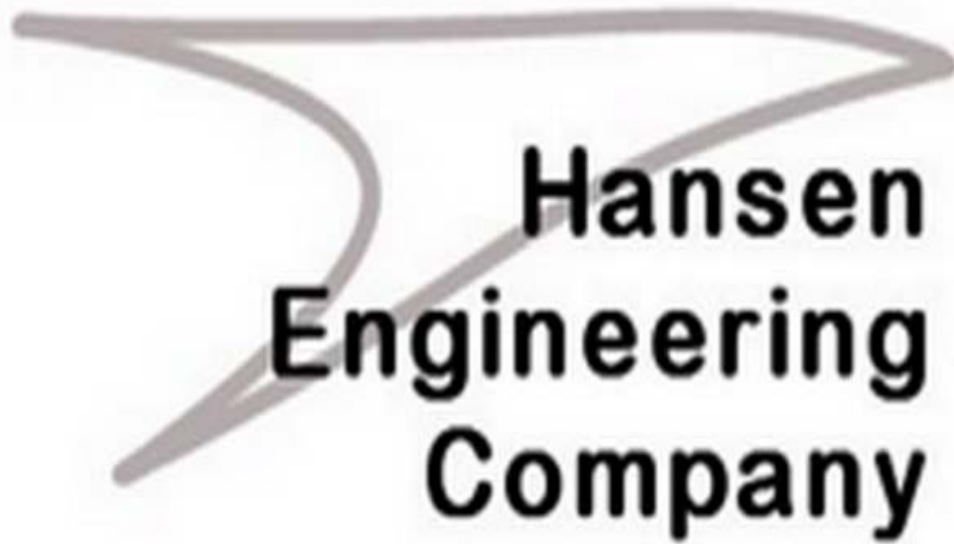
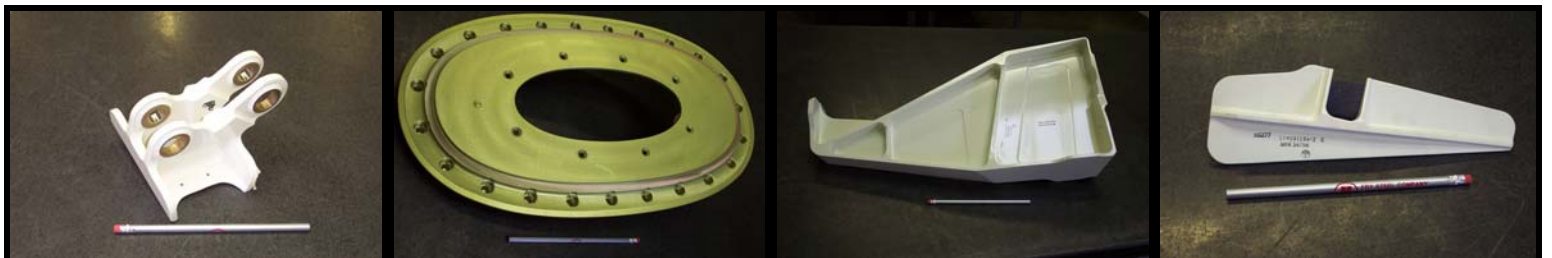
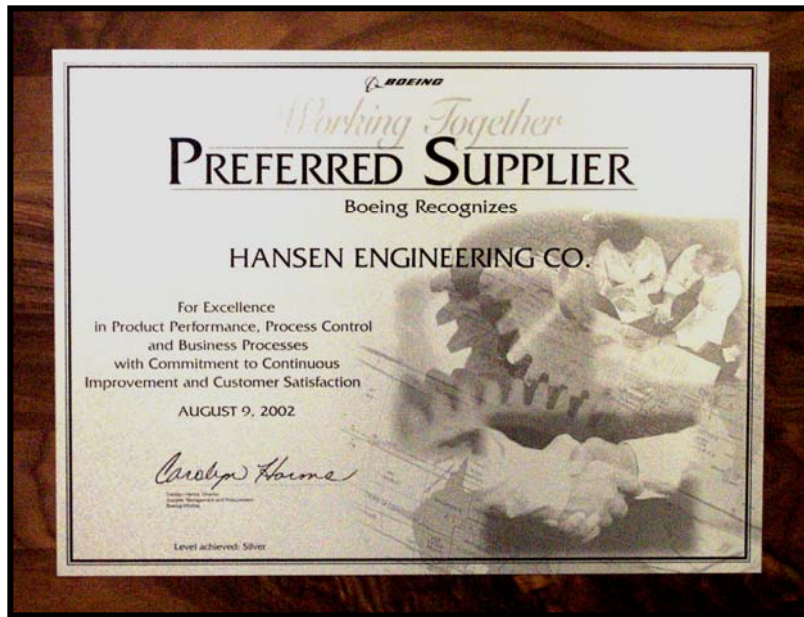


# HANSEN ENGINEERING COMPANY



Est. 1962





Hansen Engineering Company is a manufacturer of precision NC machined multi-axis parts and assemblies. HEC specializes in complex MDI surface geometry, statistical process control and electronic probing of part surfaces. Hansen is an approved ATA supplier for Boeing Wichita on the 737 Next Generation aircraft and has attained Silver status as a Boeing Preferred Supplier.

Hansen Engineering's quality system conforms to Boeing's Advanced Quality System for D1-900 Rev. A. Hansen Engineering has fully implemented Part Oriented Statistical Process Control (SPC).

Hansen Engineering has a total of 39,000 sq. ft. of manufacturing and office space located in the Los Angeles, California area. Both, the Los Angeles International Airport (LAX) and John Wayne/Orange County Airport (SNA), are in close proximity to our facility.

Hansen Engineering has approximately 50 employees and maintains two daily work shifts 5 days a week. HEC specializes in 5-axis machining from hogout, forging, extrusion and can run parts made of titanium, inconel, steel, aluminum, and most other alloys. Our capabilities include the following:

- **Machining**
  - a. 5-axis to 160 in.
  - b. 4-axis to 100 in.
  - c. 3-axis to 144 in.
- **High Speed Material Removal**
- **CNC Stretch Forming**
- **Production**
- **Tooling**
- **Sub-Assemblies**
- **CATIA/DELMIA**
- **Unigraphics**
- **Electronic Probing**
- **Statistical Process Control (SPC)**



Hansen Engineering Company is technically capable and able to produce and deliver on time. HEC is effectively managed to ensure quality and reliability. The following pages will list our current machining, mechanical engineering and support equipment as a resource for immediate use, or as a reference for placement in your active files. Hansen Engineering Company is looking forward to developing a mutually beneficial working relationship with you and your organization in the very near future.

# HANSEN'S EQUIPMENT LIST

## CNC MACHINING CENTERS

### **Mazak 1400 Vortex**

5-Axis, 50 hp Twin Pallets  
Single Spindle – 10,000 rpm  
Fully Enclosed w/ 60 Tool Changer  
X – 165.35" Y – 55.12" Z – 24.02" A/B  $\pm$  30°

### **Mazak MTV815**

5-Axis, 50 hp Twin Pallets  
Fully Enclosed w/ 60 Tool Changer  
X – 120.0" Y – 32.0" Z – 25.6" A/B  $\pm$  30°

### **Cincinnati 20AV3000**

5-Axis, 100 hp  
Single Spindle – 10,000 rpm  
X – 120.0" Y – 32.0" Z – 24.0" A/B  $\pm$  27°

### **Cincinnati 20AV3000**

5-Axis, 30 hp  
Single Spindle – 6,000 rpm  
X – 120.0" Y – 32.0" Z – 24.0" A/B  $\pm$  27°

### **Cincinnati Hydrotel**

5-Axis, 50 hp  
Single Spindle – 4,000 rpm  
X – 120.0" Y – 42.0" Z – 14.0" A/B  $\pm$  27°

### **Mazak V655**

3-Axis, 25 hp Twin Pallets  
Single Spindle – 10,000 rpm  
Fully Enclosed  
X – 80.0" Y – 25.6" Z – 25.6"

### **Mazak V655**

3-Axis, 25 hp  
Single Spindle – 6,000 rpm  
X – 80.0" Y – 25.6" Z – 25.6"

### **Mazak H800**

4-Axis, 35 hp Twin Pallets  
Single Spindle – 5,000 rpm  
Fully Enclosed  
X – 49.0" Y – 40.0" Z – 34" A/B  $\pm$  360°

### **Mazak Intergrex e1060-v8**

5-Axis, 50hp w/ 12 Pallets  
120 Automatic Tool Changer  
Expamdable to 4 Machines & 100 Pallets  
Fully Enclosed  
5000 RPM High Torque Spindle  
X – 60.04" Y – 41.73" Z – 52.95"  
B – 150° C - 360°

## CELL MANUFACTURING

### **Mazak U550**

4-Axis, 35 hp Twin Tomstones  
Single Spindle – 7,500 rpm  
Fully Enclosed  
X – 25.0" Y – 25.0" Z – 25.0" A  $\pm$  360°

### **Mazak U550**

Single Spindle – 10,000 rpm  
4-Axis, 35 hp Twin Tomstones  
Single Spindle – 7,500 rpm  
Fully Enclosed  
X – 25.0" Y – 25.0" Z – 25.0" A  $\pm$  360°

### **Hufford A-7B CNC Stretch Former**

Stretch up to 330", 30 hp  
30 Ton Capabilities  
6" & 8" Jaws w/ Adjustable Die Posts



# HANSEN'S EQUIPMENT LIST

## CONVENTIONAL MILLS

Bridgeport Vertical Mills (5)

## INSPECTION EQUIPMENT

### **DEA "Gamma" CMM**

Renishaw PH9/TP2 Probe System

Accuracy per ANSI/ASME

X - 80" Y - 40" Z - 40"

Tutor & PC-DIMIS for CMM Control

### **DEA "Global Advantage" CMM**

Renishaw PH9/TP2 Probe System

Accuracy per ANSI/ASME B89-.0005

X - 158" Y - 79" Z - 60"

Tutor & PC-DIMIS for CMM Control

### **Hemel Check Master**

Digital Readout Measuring

X - 72" Y - 38" Z - 40"

Accuracy =  $\pm 0.0005$ "

### **Bendix Cordax 1000**

Teledyne Data Entry

X - 72" Y - 38" Z - 12"

Accuracy =  $\pm 0.0005$ "

## CAI/CMM PROGRAMMING

### **Hardware:**

IBM UNIX Workstation

Dell Windows Workstations

### **Software:**

MasterCam

Unigraphics NX 4, NX 5 & NX 6

DELMIA V5R18

CATIA V5R19

CATIA V4.2.4 (Unix)

## CAD/CAM PROGRAMMING

### **Hardware:**

IBM UNIX Workstation

Windows XP Workstations

HP DesignJet 1055CM Plotter

HP Designjet Z2100 Photo Plotter

### **Software:**

Unigraphics NX 4, NX 5 & NX 6

Unimod

Full 3, 4, 5 Axis Capabilities

## SQC/SPC EQUIPMENT

### **Hardware:**

Windows XP Workstations

PC's @ all Machining Centers

Renishaw Probes

### **Software:**

EasyTalk DNC & easyDNCXP

Gage Talker SQC/SPC

QI Analyst Process Control Software

DELMIA V5R18 Inspect Software





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