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## LOCATION



***APPi is located in Florida in Northwest Miami ½ mile South East of State Road (SR9).***

***14000 NW 19<sup>th</sup> Avenue  
Opa Locka, FL 33054***



## **CORPORATE INFORMATION**

<b>Company Name</b>	<b>APPi (Aero Precision Products, Inc.)</b>
<b>Contact</b>	14000 Northwest 19th Avenue Opa Locka (Miami), Florida, 33054 (305) 688-2565  <a href="mailto:sales@appiusa.com">sales@appiusa.com</a> <a href="http://www.appiusa.com">www.appiusa.com</a>
<b>Ownership:</b>	Closed Corporation, State Of Florida Established in 1966
<b>President</b>	Paul R. Fournier

## **OUR CORPORATE AIM**

***To continually improve our products and services so our customers, employees, and business partners will receive superior value and share in our successes.***



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## OUR VISION

*To be recognized by our customers and our industry as the highest quality manufacturer.*

*We will achieve this through a total commitment to our customers.  
We will anticipate and exceed their expectations through innovation,  
mastery of craft and continuous improvement.*

*Our passion for technology and operational excellence will drive us  
to provide products and services of matchless quality and unquestioned value.*

*We will also empower our employees—our most precious resource.  
We will develop our people professionally while fostering an environment that inspires high  
levels of commitment and contribution.*

## OUR VALUES

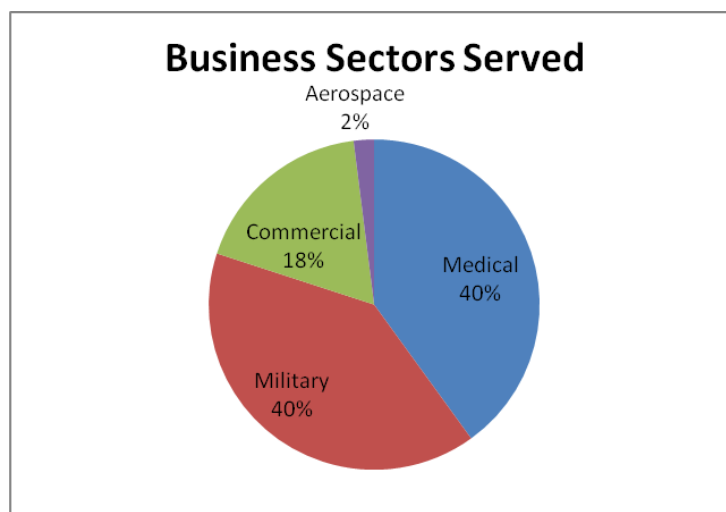
***Adhering To a High Sense of Honor and Integrity***  
*Making realistic commitments, and delivering on our promises*

***Striving For Excellence***  
*Continuously improving processes to set new standards of quality*

***Making Customer Satisfaction Our Top Priority***  
*Anticipating and exceeding the expectations of our customers*

***Investing In Our Human Resources***  
*Supporting teams while training, developing and recognizing our people.*

## Business Sectors



## **BUILDING FACILITIES**

### **MACHINING DIVISION**

*Machine Shop, Engineering, Precision Tube Fabrication, Plasma Coating with Metallurgical Laboratory.*

### **PROBES AND SMALL TUBING ASSEMBLIES**

*A facility dedicated to the manufacture of small, complex single and multi-lumen piercing and probe assemblies, with a vacuum furnace for batch brazing and heat treating of stainless and exotic metal, and a continuous belt furnace for brazing metal assemblies in a hydrogen atmosphere.*

### **SHEET METAL DIVISION**

*Sheet Metal Fabrication, Laser Cutting, Engineering, Stamping, Welding, Assembly, Testing, Plating, Silk Screen, and Painting.*

### **ASSEMBLY**

*Located just behind our main building, the Assembly area consists of 8200 square foot of manufacturing space, along with additional office area. We are currently using the facility to produce assemblies, subassemblies and for additional storage.*

### **INFRASTRUCTURE and EMERGENCY SYSTEMS**

*Our buildings are constructed of concrete block (CBS); the buildings are durable, quiet, and energy-efficient. APPI has a fully automatic emergency generator system capable of operating all essential functions until electrical service can be restored.*

### **UTILITIES**

*Single and three phase electrical power and compressed air services in all buildings. The plant is air conditioned throughout. APPI has both city water and well water, with company owned water treatment systems.*

### **FACILITY**

<b>Buildings -All Plants</b>	<b>Square Footage</b>
Administrative and Engineering	3,500
Shop Area	34,270
<b>Total Working Area</b>	<b>37,770</b>
Storage Area	
Inside	4,166
Outside	23,242
<b>Total Storage Area</b>	<b>27,408</b>
Total Working and Storage Area	65,178
Parking Lot	1,000
<b>Total Facilities with Parking Lot</b>	<b>66,178</b>

## **MANUFACTURING CAPABILITIES**

### **CAPABILITIES**

*Manufacturing capabilities include: Precision Machining of a wide variety of metals and plastics, Sheet Metal Fabrications and Forming, Metal Finishing, Precision Probes and small Tubing Assemblies, Nickel Brazing and Vacuum Heat Treating, Plasma Coatings; Assembling OEM products, and Product Design assistance and Manufacturing Engineering.*

*Our expertise in these many areas can provide you with a single responsible manufacturing source who can accept the job from start to finish.*

*Our computer integrated processing and automated CNC machining systems, plus the experience of our personnel, enables us to provide the highest quality parts delivered on-time.*

### **Engineering Assistance**

*APPi Engineering can provide a full range of Engineering Services from process design assistance through manufacture of finished parts and assemblies. We also can test and evaluate or assist in suggestions of changes for your product to reduce cost, or upgrade it for added performance, reliability and appearance.*

### **Production Capabilities**

*The following disciplines are performed under our control and supervision, to insure the best possible customer services.*

- ◆ *Precision Machining, Grinding*
- ◆ *Precision Fabricated Probes and Small Tube Assemblies*
- ◆ *Precision Formed, Punched, Stamped, Welded & Laser Welded Sheet Metal Fabrications*
- ◆ *Nickel Brazing and Vacuum Heat Treating*
- ◆ *Laser Cutting*
- ◆ *Plasma-Flame Sprayed, Hard Faced Metal & Ceramic Coatings*
- ◆ *Electrical Discharge Machining (EDM) Sinker EDM*
- ◆ *Wire-Cut EDM*
- ◆ *Laser Marking*
- ◆ *Finishing, Grinding, & Polishing, Laser Marking on Metals & Plastics*
- ◆ *Painting-Wet and Powder Coating*
- ◆ *Plating, Silk-Screening, Pad Printing*
- ◆ *RF Shielding*
- ◆ *Contract R & D Engineering*



## QUALITY ASSURANCE

### Commitment

*APPi will deliver defect-free, competitive products and services, on time, to all customers. Quality will be the primary consideration in all our decisions.*

### Specifications

**Our Quality Assurance System Conforms To:**

AS9100:2009RVC  
ISO 9001-2008  
NADCAP Accredited  
ANSI/ASQ Z1.4  
ITAR

Quality Management System  
Quality Management System  
In Chemical Processing  
Sampling Procedures and others as required  
ITAR REGISTERED



### Qualifications

*APPi is accredited or source approved by many of the major aerospace, electronics, accessory and high technology companies. Our processing methods results are in full compliance with the pertinent Military/Federal, ANSI, and proprietary specifications.*

### QUALITY MANUAL

*Our Quality Manual is available upon your request.*

### **INSPECTION EQUIPMENT**





## Quantity

**1 BROWN & SHARPE TESA-VISION OPTICAL MEASURING SYSTEM-** An innovative vision measuring system with measurement range of 300 mm x 200 mm (X-Y) x 150 mm (Z-Axis) and 5 position docking station and touch probe.

**1 BROWN & SHARPE ONE- SHOP FLOOR COORDINATE MEASURING MACHINE (CMM)**

This CMM is built to work on the shop floor for first piece inspection, layout inspection, tool set-up or as a flexible gage. It utilizes a compact, indexable probe that can be rotated through an infinite number of positions for complete flexibility in measuring complex components.

**1 BROWN & SHARPE GLOBAL ADVANTAGE 575 CMM** with Tesastar-M Motorized Probe Head, and Leitz LSP-X1 Scanning Probe.

**1 BROWN & SHARPE MICRO-HITE 3D CMM** with Tesastar-I Probe Head.

**1 BROWN & SHARPE TESA SCAN 50+ PROFILE GAGING SYSTEM**

**We use various inspection devices including:**

I.D. Gages, Air Gage, Special Gages, Working Blocks, Thread Gage Systems, Digital Calipers, Height Gages, Micrometers, Thread Plug Gages, Thread Ring Gages, Surface Plates, Metallographic, and Thickness Gages.



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## COMPUTER SYSTEMS

### **IBM RISC 6000 7025-F40**

*Customer Management, Estimating, Purchasing, Financials, Inventory with Bar Coding, Production Control with Loading and Scheduling, and automated Labor Reporting run on our IBM RISC. This System 6000 7025-F40 features a unique interactive graphics function providing a comprehensive management tool for planning, scheduling and controlling our entire manufacturing operation.*

### **CAD/CAM AND COMPUTER INTEGRATION**

#### **CENTRAL COMPUTER SYSTEM**

*At APPi we strive to make full use of the competitive advantage that computer integration can provide. All operating areas are linked to a central network which operates in real time to provide information on orders, processes, and materials.*

#### **SOLID WORKS, AND OTHER COMPUTER AIDED DESIGN SYSTEMS**

*Provides our Engineers with a revolutionary approach to mechanical design automation based on a unique, parametric, feature-based solid modeling technology. Our CAD systems provide full associability among all engineering disciplines, tying together the entire design-through-manufacturing of a part or product. This enables APPi to develop manufacturing processes concurrently, and to easily evaluate multiple design alternatives, resulting in better designed processes, produced faster and at a lower cost.*

#### **CAM NETWORKING**

*Every Engineer is provided with a powerful desktop computer which is networked to a central server for technical data and to the central production control system for direct access to operational data as needed. Each CNC machine receives control information directly from the engineering network. Part programs are down loaded and up-loaded with complete data integrity and management control. The current part programs are always available for review and update by the Engineer or Programmer.*


#### **CAD LIBRARY**

*We have developed an extensive CAD library of standard tooling used throughout the plant. This library enables the Engineer or Programmer to quickly and accurately plan the production process, which results in more effective use of available tooling, and reduced set-up times. We have added advanced 3-D to our present CAD library and have created one additional seat for CAD/CAM networking.*



## COMPUTER SYSTEMS

Some of the services we provide our customers are as follows:

- \* **Electronic Data Interchange (EDI).** *Your direct electronic transmission, computer to computer, of purchase orders, shipping notices, invoices or drawings to APPI via magnetic media, modem, or FTP site. Solid CAD models as well as DXF or IGES format are used as basic data for CNC programs assuring exact reproduction of the concept or design.*
  
  - \* **Interactive MRP Planning** *from our customer's production data, either electronic or paper, we will plan your requirements and submit them to you for approval or directly input the production releases to our system for on-time deliveries.*
- 
- \* **Early Supplier Involvement (ESI)** *Our Engineers will take an active part from the conceptual phase of a part design to aid in troubleshooting all production phases, through final assembly. We will offer the sharing of our knowledge and expertise to improve your position in the market place.*
  
  - \* **Scheduling:** *Forward Finite Global Scheduling Performed Nightly with Kitting of Assemblies and Kanban JIT pulls to scheduled Customer Deliveries per their MRP Reports.*



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## MACHINING

### MACHINING CENTERS

Quantity

- 1 **Kitamura Mycenter-2Xi** Sparkchanger Vertical Machining Center with Integrated Nikken 4<sup>th</sup> Axis Rotary, Table Capacity 14" x 22.1", Spindle Speed 40 to 15,000 RPM, Positioning Accuracy  $\pm 0.003$  mm ( $\pm 0.00012$ ") /full stroke.
- 2 **Kitamura Mycenter-2Xi** Sparkchanger Vertical Machining Center Table Capacity 14" x 22.1", Spindle Speed 40 to 20,000 RPM, Positioning, Accuracy  $\pm 0.003$  mm ( $\pm 0.00012$ ") /full stroke.
- 5 **Kitamura Mycenter-3XiF** Sparkchanger Vertical Machining Center, Table Capacity 17.9" x 30" Spindle Speed 20 to 20,000 RPM, Positioning Accuracy  $\pm 0.002$  mm ( $\pm 0.00008$ ") /full stroke.
- 1 **YCM FX380A**, 5 Axis Vertical Machining Center, 12,000 RPM, 30 HP Spindle, X-Axis Travel 27.56", Y-Axis Travel 20.47", Z-Axis Travel 18.90" Positioning Accuracy To .00039" Repeatability Accuracy: 0.00028".



- 1 **Mazak FJV-20**, Hi-Speed CNC Vertical Machining Center, Table Capacity 31" x 18" x 22", 35-12000 RPM, 30 HP Spindle, 1181 IPM Traverse, Positioning Accuracy to .0001.
- 1 **Enshu JE-60** High Performance Horizontal Machining Center, Pallet Shuttle System Table Capacity 15.70" X 15.70", 60-13,000 Rpm, 41 Hp Spindle, 1181 IPM Traverse, Positioning Accuracy To .0001.



## MACHINING

### TURNING CENTERS

#### Quantity

- 1 **Mori Seiki NZ2000T2Y**, Multi Axis Mill/Turn Center, Live Tools and C- & Y-Axis, 2-1/2" Bar Feed Capacity, 6-5/16" Diameter Chucking Capacity, 10.2" long Between Centers, Positioning Accuracy to .0001, with Sub Spindle.
- 1 **Mori Seiki NL1500 SY**, Multi Axis Mill/Turn Center, Live Tools and C- & Y-Axis, 1-1/2" Bar Feed Capacity, 6-5/16" Diameter Chucking Capacity, 19.6" long Between Centers, Positioning Accuracy to .0001, with Sub Spindle.
- 1 **Mori Seiki SL-15MC**, CNC Mill-Turn Center, With C Axis Contouring, 1-5/8" Bar Feed Capacity, 6-5/16" Diameter Chucking Capacity, 23-13/32" Long Between Centers, Positioning Accuracy to .0001.
- 2 **Doosan Puma TT1800SY** Horizontal Multi – Axis with twin opposed Spindles Two Upper/lower Turrets, Y –Axis and left/right spindles. X1, X2, Y-Axis high rigidity roller –type LM guideway, High Precision Built in spindle motor.



- 1 **Citizen M16Y Swiss-Type 10-Axis Turning Center** 5/8" Bar Feed Capacity, Synchronous Guide Bushing, 32 Bit Controller, Hydrostatic Bar Feed.
- 1 **Citizen M16 Swiss-Type 9-Axis Turning Center** 5/8" Bar Feed Capacity, Synchronous Guide Bushing, 32 Bit Controller, Hydrostatic Bar Feed.
- 2 **Citizen M32Y Swiss-Type 10-Axis Turning Center**, 1-1/4" Bar Feed Capacity, Synchronous Guide Bushing, 32 Bit, 32 Bit Controller, Hydrostatic Bar Feed.



## **MACHINING (Continued)**

### **Sawing Equipment**

*Circular Cold Saw (Capacity 6-3/8 x 2-3/8 )*

*Automatic Power Bandsaw, 10" X 15" Capacity, Bundled Bar, & Shapes, Delta Rockwell*

*Table Saw, 2" Capacity*

*Dura Abrasive Cutoff Saw*

### **Secondary Turning Equipment Includes:**

*Hardinge Precision Chuckers, Hardinge Second Operation Lathes, Speed Lathes for Polishing and Deburring.*

### **MILLING EQUIPMENT**

**3** *Bridgeport Vertical Milling Machines, Digital Readouts, Power Feeds and complete Machine Attachments*

### **Precision Grinding Equipment**

**1** *Okamoto Precision External CNC Cylindrical Grinder, 8"x20" between centers.*

**1** *Sunnen Honing Machine, Mandrels And Supplies For .060 To 1.500" Diameters*

**1** *Brierley Model ZB-32 Precision Drill Grinder 1-1/4" Cap.*



## **TOOLING AND PROTOTYPE SHOP**

**TOOLING FABRICATION, MAINTENANCE AND PROTOTYPE DEVELOPMENT ARE ACCOMPLISHED IN A SEPARATE FACILITY DEDICATED TO PRODUCTION SUPPORT.**

**The Tool shop has the staff and equipment to accomplish the more difficult manufacturing challenges. Tool Room Equipment Includes:**

**Milling Equipment:**

*Bridgeport Milling Machines*

**Turning Equipment:**

*Tool Room Gap Lathe 14" X 48"*

**Grinding Equipment:**

*Surface Grinders*

*Deadtru Centerless Grinder*

**Secondary Grinding Equipment:**

*Tool Sharpening*

*Relief Grinding*

*Drill Grinder*

**Sawing Equipment-Band Saw:**

*Band Saw And Circle Attachment*

**Heat Treat Equipment:**

*Electric Furnace with Automatic Controls*

*H.T. and Temper Furnace*

*Quenching Medium*

*Vacuum, Batch and Continuous Belt Furnaces*

**Electrical Discharge Equipment (EDM):**

*Sodick Wire and Sinker*

**Miscellaneous Equipment**

*Drake 40 Ton Hydraulic Die Press*



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## Electrical Discharge Equipment

### **1 Sodick Wire EDM VZ300L –Precision Wire EDM**

X - Axis Travel	13.78" (350 mm)
Y - Axis Travel	9.84" (250 mm)
Z - Axis Travel	8.66" (220 mm)
U, V Axis Travel	3.15" x 3.15" (80 x 80 mm)
Wire Diameter Range (min ~ max)	0.004" ~ 0.012" (0.10 ~ 0.30 mm)
Work Tank Dimensions (W x D)	31.89" x 25.59" (810 x 650 mm)
Maximum Workpiece Weight	1,102 lbs (500 kg)
Distance From Floor to Table Top	35.43" (900 mm)

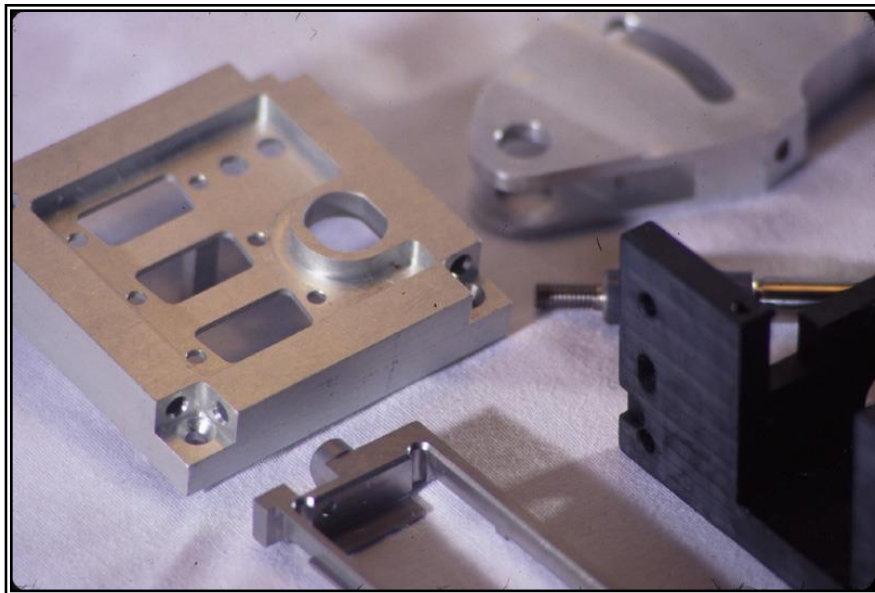
### **1 Sodick Sinker EDM AD30L 3 Axis Linear Motor Driven Die Sinker EDM**

X - Axis Travel	12.59" (320 mm)
Y - Axis Travel	7.87" (200 mm)
Z - Axis Travel	9.84" (250 mm)
Work Tank Dimensions (W x D x H)	35.23" x 22.99" x 11.33" (895 x 584 x 288 mm)
Maximum Workpiece Weight	1,212 lbs (550 kg)
Distance From Floor to Table Top	35.43" (900 mm)

*With complete in-house Tool room and Programming Facilities.*

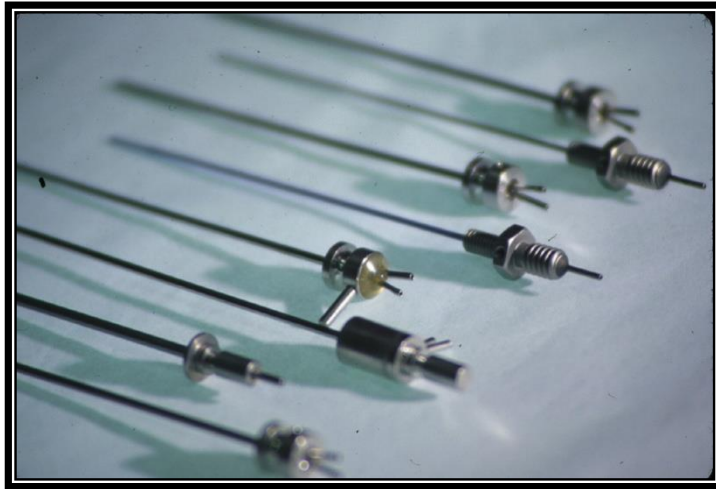
*Your source for :*

***Prototype Parts, Extrusion Dies, Gears, Punch & Die Components, Mold Inserts, Gages and Templates.***

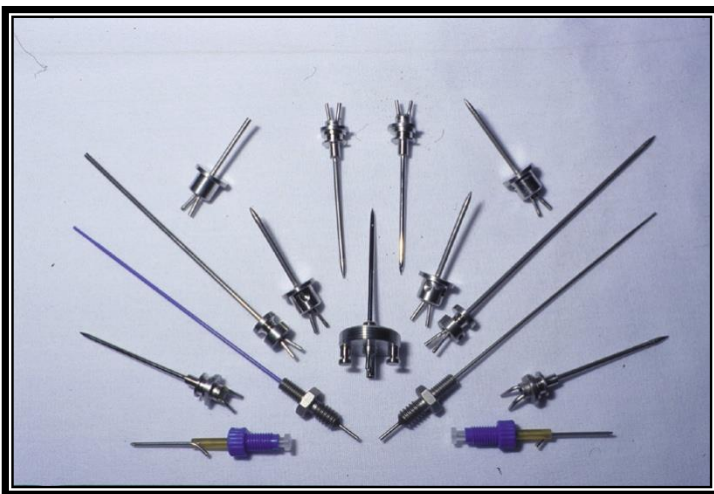


## PRECISION TUBE FABRICATION

***APPi has established a separate facility for the fabrication, finishing and testing of small high precision tubing assemblies. We develop and manufacture a large variety of small, complex Single and Multi-Lumen Piercing and Probe Assemblies for chemical and medical instrument OEM manufacturers.***



***Specially trained personnel use equipment designed and sized just for the manufacture of small parts. We have the expertise and equipment to assist in the design, prototyping and production of metal, plastic components and finished assemblies. Currently, we produce both reusable and disposable assemblies for use in laparoscopy, particle sampling and hematology.***



***All work is performed in a clean, well lit area under high magnification. Specialty processes such as forming, swaging, electrical discharge machining, assembly, brazing, heat treating, polishing, micro-blasting, lapping and ultrasonic cleaning, are performed on a routine basis.***



## **PRECISION TUBE FABRICATION**

*Listed below is a partial list of the equipment used in the tubing assembly area.*

*Polishing Lathes  
Rotary Swaging Machines  
Forming Presses  
CNC Precision Drilling Equipment  
Special Point and Face Grinding Machines  
Ultra Precision Centerless Grinding Systems  
Micro-Flo Hone Systems  
Ultrasonic Cleaners  
Micro Tube Benders  
Bench Polishing Heads  
Stereo Microscopes  
Magna-Lights  
Vacuum, Batch and Continuous Belt Furnaces*

*In addition to the standard tools used in tubing fabrication, many special fixtures and modified machines are also in use to effect special results.*

*APPi has also developed an expertise to provide complete assemblies that include electron beam welding, and diffusion bonding using gold, nickel, silver or other alloys, brazed in a hydrogen atmosphere or vacuum furnace.*

*These assemblies can be finished to the customer's specification, whether it calls for a ground or lapped mechanical finish, polished or micro-blasted hand finishing technique, or specialty coatings, including Teflon.*



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## **SHEET METAL FABRICATION**

### **CNC PUNCH EQUIPMENT**

#### ***Quantity***

*2 Amada Vipros 358 King Turret Punch Presses, 58 station, 4 of which are auto indexstations, accepts a maximum 4-1/2" diameter hole with AP100 Off-Line programming system, for greater accuracy and efficiency.*



### **SHEARING AND CUTTING EQUIPMENT**

*1 Automatic Power Shear 10' x 10 gage, Pin Gage Cincinnati System.*



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## SHEET METAL FABRICATION



### **INSERTION EQUIPMENT**

#### **Quantity**

- 1 Haeger 824 One Touch Hardware Insert Machine-Tonnage to 16,000 lbs, Throat depth 24", Four (4) Automatic Feed System. Ability to go from inserting one fastener type to another in 5 seconds. Allows one-time handling of parts with multiple fasteners. PC-based Touch-Screen and Operator Interface. Nikon Camera with Insertion Logic 'Auto-Picture-Load'. Full Color pictorial aids of operator functions for fast and easy set-up. Confirms the fastener count with an audible signal and counts completed parts.
- 2 Haeger 824 Window Touch-3 Hardware Insert Machine-Tonnage to 16,000 lbs, Throat depth 24". Single Touch Part Handling-reduces part Handling by 75%, Ability to go from inserting one fastener type to another. Full-color pictorial aids of operator functions for fast and easy set-up. Allows one-time handling of parts with multiple fasteners. Eliminates Incorrect length of stud/standoff Installation. Eliminates Missing Fasteners, and Fasteners Installed in the wrong hole. Nikon Camera with Insertion Logic 'Auto Picture Load'. Offline Programming.

### **WELDING EQUIPMENT**

- 2 Dynasty 300 DX Tig Welders with Torch
  - 2 Sciaky 3 Phase Spot & Stud Welder 150 KVA
  - 1 Miller Matic Challenger MIG Welder
  - 2 Gas Welders/Harris Oxygen/Acetylene
- Assorted Welding Jigs, Fixtures, Tables And Finishing Equipment



### **BUFFING, POLISHING & FINISHING EQUIPMENT**

- 1 Steelmaster Prima W209 Deburring/Finishing Machine. 36" W Capacity deburring/Finishing with 0-6" Thickness Opening and 15-45 FPM conveyor w/ Digital Readout.
- 1 Vertical Belt Sander/ 4" Width Belt, Porter Cable
- 2 Vertical Belt Sanders/ 1" Wheel Capacity, Delta-Porter
- 2 Polishing Lathes/ 24" Center/Center, Schaubli
- 1 Haeger HP6-Tonnage 12,000lbs, 18" Throat depth.



## LASER CUTTING

### **LASER CUTTING SYSTEM**

**AMADA LC 1212 ALPHA IV NT with FANUC AF 4000 Controls with maximal laser output of cw 4000 W.**

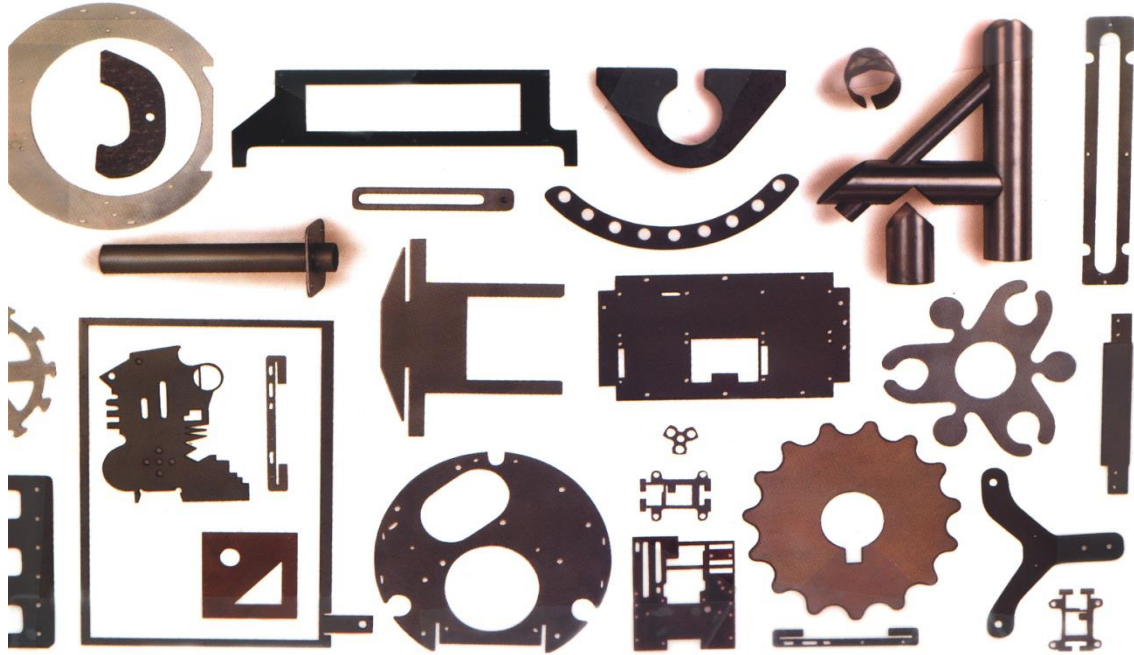
Technical data	LC-1212 ALPHA IV NT
Maximum traverse range with automatic readjustment	(X) 1270, (Y) 1270, (Z) 300 mm (X) 2540, (Y) 1270, (Z) 300 mm
Maximum sheet thickness	9.0 mm
Maximal Table loading weight	210 kg
Cutting speed	0-20 m/min
Positioning speed	X-, Y- axis: 80 m/min Z-axis: 60 m/min
Positioning accuracy	±0.01 mm/500 mm
Repeatable Positioning accuracy	±0.005 mm

- **NO TOOLING REQUIRED, NO TOOL CHANGES**
- **GREATER ACCURACY**-Capable of .002 accuracy. Cuts Metals or Plastics
- **BEST APPLICATION-INTRICATE CONTOURS**-Can Make Any Shape
- **EXCEPTIONAL STAINLESS STEEL CUTTING CAPABILITIES**



## LASER CUTTING

**Lasers Deliver...**



**When Others Can't Cut It...**



## METAL FINISHING



*APPi has the capability to fabricate parts or assemblies from start to finish. Reflected in our pricing and delivery is a complete part or product manufactured in-house, including all secondary operations such as Plating, Painting, Pad Printing & Silk Screening. A finished product ordered from one supplier.*

*APPi's finishing equipment and processes are of the newest technology, in accordance with our policy to continually upgrade, improve & expand our facilities so that we can provide you, our customer, with a one-stop, responsible supplier who maintains absolute inspection integrity on every job. As a one source supplier, we decrease lead times and minimize your paper work and related costs. We try our best to make the buyer/supplier relationship uncomplicated and effective.*



### **PLATING**

*APPi's Plating Department occupies over 3600 SF and is equipped with automated and manual processing equipment for plating aluminum, steel, copper, and stainless steel parts. Systems include process and rinse tanks, rectifiers, heated temperatures controls, sequential stepping hoists, ventilation hoods, fume scrubbers, and water conservation systems.*



**Automated Electroless Nickel Line**



## METAL FINISHING



We have operated this facility for over 40 years applying specialized metal finishes to our manufactured components. Our parts are utilized by the medical, communications, electronic, military and commercial industries all over the world. We are continually adding to our existing ability to perform a secondary operation in-house. We often add new processes so that we can continue to give our customers the advantage of a finished product from ONE supplier.

### **PLATING PROCESSES AVAILABLE**

- **Electroless Nickel**  
*RoHs Compliant*

*Per Mil-C-26074- On Aluminum, Steel, & Stainless Steel.*
  
- **Electro Deposited Black Nickel**  
*RoHs Compliant*

*Per Mil-P-18317 on Aluminum.*
  
- **Chromate Conversion**  
*NADCAP Accredited*  
*RoHs Compliant (Type 2)*

**Type 1** *Per MIL-DTL-5541 Hexavalent Chromium on Aluminum, Gold & Clear Chromate Conversion.*

**Type 2** *Per MIL-DTL-5541 Non- Hexavalent Chromium RoHS Compliant, on Aluminum, and Clear Chromate Conversion.*
  
- **Zinc**  
*RoHs Compliant (Clear Zinc)*

*Per ASTM-B-633 Clear or Yellow -Electrodeposited on Iron and Steel.*
  
- **Anodize**  
*NADCAP Accredited*  
*RoHs Compliant*

**Per Mil-A-8625 Type II & Type III (Hardcoat Anodize) Class I & II; On Aluminum; Clear, Gold, Brown, and Black as Standards, custom colors are available.**

**Per MIL-A-63576 Aluminum Anodize impregnated with Teflon.**
  
- **Passivation**  
*RoHs Compliant*

*Per QQ-P-35C- To remove Iron on Stainless to reduce corrosion. The process cleans and adds protective film.*
  
- **Electro Polish**  
*RoHs Compliant*

*Is the electrolytic removal of metal to improve the visual appearance of the part for Aluminum, Steel & Stainless Steel.*



## METAL FINISHING

### **PAINTING –Wet & Powder**

*2 Completely Enclosed 8'x 40' Paint Booths With Dust Free Filtered Air Make-Up And Exhaust System. Equipped With The Following:*

- 2 Nordson Electrostatic Powder Spray System*
- 1 Convection Walk-In 6'x8'x8' Gas Bake Oven w/Auto. Temperature Controls.*
- 1 Air Conditioned 14'x40' Paint and Chemical Storage Warehouse*
- 7 Twin Shelf Paint Racks*
- 12 Adjustable Shelf Roller Paint Racks*
- 4 Pressure Agitated Feed Tank, Devilbiss OM 6084, 2 Gals*
- 3 Devilbiss HVLP Spray Guns*

**STANDARD PAINT FINISHES-** Enamels-Polyurethane, Enamels-Air Dry & Bake, Epoxies Textured Vinyl, and Military Specification.

**PAINT COLORS-**All Standard Colors And Specials-Available, Mixed To Order.

*Painting System And Quality Meet: Mil Specifications, IBM Approved Standards, Industrial Standards.*

### **LASER MARKING SYSTEM**

#### ***Laser Marking - The Mark of Excellence***

#### ***Flexible and Fast***

*Whether it's metal, plastic, glass, ceramic, or wood - there is hardly a material that cannot be marked by laser. So for numerous OEM's, in the electronics industry, the automotive or medical technology sectors, flexible, simple permanent text marking to circumferential logo marking with lasers has long since become the preferred method of identifying parts. Ask us about out Laser Marking abilities.*



### **SILK-SCREEN DEPARTMENT**

*Silk-Screens Can Be Made From Customer Prints Or Artwork. Process Is Controlled From Assembly Of The Frame To The Completed Part. Silk-Screening Process Is Direct Photo Sensitive Emulsion. Silk-Screening Performed on 3 Micro Adjust Back Lighted Screen Tables.*

### **PAD PRINTING DEPARTMENT**

**2 Pad Print Machines:** 1 color, maximum print area 63x40mm (2.5x15").



## PLASMA COATINGS

### **A WORD ABOUT PLASMA COATINGS:**

Plasma Coating is an exclusive process utilizing a special flame spraying system which can melt powdered metal or ceramics at temperatures up to 30,000 degree Fahrenheit. These molten particles can be sprayed on virtually any base material. Operating techniques can provide precision uniform coatings up to 1/8" thick that are tough, long wearing and corrosion resistant. Coated parts are obviously lower in cost, easier and faster to produce than the same part from solid material.

Plasma's solid lubricant coatings such as nickel, copper, indium, aluminum or bronze can solve many high speed or heat generating problems that rule out liquid lubricants. There are those plasma ceramic coatings which utilize the hardness of alumina and zirconia. Some are used as thermal heat barriers, electrical barriers, or for long wearing and corrosion resistant surfaces to highly reactive materials.

If your coated parts have precision machined features, APPI has developed the expertise in grinding, lapping, and polishing of sprayed coatings to provide finishes in the low micro inch range 2 - 6 rms, flatness to 1 light band, and tolerances to .0001.

In general, APPI is recognized for our expertise in the plasma field for the quality of our coatings.

### **PLASMA EQUIPMENT**

Metco Plasma Flame Spray System: Model 6me-EI With Dual Powder Feed Unit; Water-Wash, Exhaust Booth; 1200 Amps Capacity; Plasma Gases used include Hydrogen, Helium, Nitrogen, Argon.

### **COATINGS AVAILABLE**

All Metals	Copper
Aluminum	Iron Oxide
Aluminum Oxide	Moly & Nickel
Ceramics	Stainless Steel
Cermets	Titanium Dioxide
Chrome	Zirconium

### **PREPARATION**

Zero Blast And Peen, Re-circulating Grit Blasting System, Grinding And Turning Machinery.

### **INSPECTION AND TESTING EQUIPMENT**

Complete Facilities Including Tooling, Inspection, Gauging, A Metallurgical Laboratory And Related Materials.

### **INDUSTRIAL**

The benefits of plasma coated parts in a product are attested by the numerous applications using this process. plasma reduces wear and maintenance, upgrades product performance and reliability, extends operating life which permits product warranties to be extended. Plasma coatings' advantages can give your product that competitive edge!



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## **ASSEMBLY**

*The ability to produce Machined components, Sheet Metal fabricated parts, and Precision Probes, plus perform most secondary operations in-house, makes APPI your logical choice for the production of small or medium sized assemblies.*

*Our manufacturing capabilities combined with exceptional Engineering talent enables us to offer you completed assemblies and subassemblies with the quality of each component tightly controlled, and technical assistance in redesigns or minor engineering changes.*

### **EQUIPMENT**

*540 Square Feet Of Formica Top Work Bench Area, Water, Cleaning and Testing Sinks, Compressed Air Services, 110 & 220/60, Single And Three Phase Electricals.*

### **MECHANICAL ASSEMBLY EQUIPMENT**

*Portable Pneumatic Screw Drivers And Nutsetters  
Deburring, Hi-Speed Air And Electric Grinders, Sanders  
Bench Belt Sanders  
Drill Presses  
Arbor Presses, Manual And Air Operated  
Swivel Base, Assembly Vises  
Inspection Go/No Go Gauges  
Fixtured, Powered Rotary Tables For Automated Fastening, or Crimping  
Torque Wrenches And Screw Drivers  
Assorted Hand Assembly And Deburring Tools  
Assembly Jigs And Fixtures Are Designed And Produced In Our Shop  
Sub-Assembly And Final Assembly Stations  
Packing Stations packaging to your specifications*

### **ELECTRICAL ASSEMBLY AND REPAIR EQUIPMENT**

*Oscilloscope, Digital Readout  
Various "Vom's", "Dvm's"  
Solder Ports  
Heat Guns  
Soldering Irons  
Resistance And Capacitor Decade Boxes  
DC Power Supplies  
Signal Generator  
Coil Winders*



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