



Positronic[®]
an Amphenol company

MANUFACTURING SERVICES



MOLDING

MACHINING

PLATING

METAL FABRICATION

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MOLDING

Using both thermoplastic and thermoset plastic molding machines, the Molding department forms insulators, backshells, angle brackets, cable clamps, and other plastic connector components and accessories.



OUR SERVICES

- Precision injection molding
- Mold design and fabrication
- Engineering consultation
- Prototype testing
- Design for manufacturing
- Insert molding capability
- Robust QMS
- Ideal for interconnects, capacitor boxes, and automotive components
- Facilities located in Indonesia, Singapore, and USA

CAPABILITIES

- Plastic component sizes up to 200mm x 200mm [7.87" x 7.87"] and weight up to 150g [5.29oz]
- Precise tolerances down to 0.03mm [0.001"]
- Precision wall thicknesses and pitch down to 0.60mm [0.24"] for interconnects
- Precision wall thicknesses down to 0.30mm [0.01"] for capacitor boxes
- Mold cavitation exceeding 100 cavities

MATERIALS

- LCP
- PBT
- PPO
- Nylon

Additional materials available upon request.

EQUIPMENT

Molding Equipment

- (35+) machines from Engel, Sumitomo, Nissei, Toshiba and Multiplas
 - Horizontal injection molding from 50 to 230 ton
 - Vertical injection molding from 55 to 100 ton

Tooling Equipment

- EDM machines from Agie-Charmilles and Sodick
- CNC milling machines from Deckel Maho and Hwacheon
- Measuring machines from Mitutoyo and Smartscope
- Superdrill machines from Sodick
- Grinding machines from Mitsui, Okamoto, Jones & Shipman, Parker Majestic, and Excel
- Milling machines from ESK
- Lathes from Leblond Makino

CERTIFICATIONS

- ISO 9001 (All facilities)
- AS 9100 (USA facility)
- IATF 16949 (Asia facility)
- ISO 14001 (Asia facility)



MACHINING

Renowned for its screw machine technology, Positronic boasts nearly 180 automatic lathes. Our Machining department manufactures thousands of varieties of electrical contacts, hardware, accessories, and the like.



OUR SERVICES

- Turned contacts from size 24 down to size 0
- Various hardware components including jackscrews, rivets, spacers, small tools, knobs, and prototype parts
- Swiss cam design and production
- Facilities located in France and USA

CAPABILITIES

- Machining capability from 0.51mm [0.02"] diameter up to 15.88mm [0.63"] diameter
- Material sizes starting at 1.83mm [0.07"] in brass and phosphor bronze

MATERIALS

- Brass
- Bronze
- Leaded nickel copper
- Tellurium copper
- Beryllium copper
- Stainless steel
- Cold drawn steel
- Aluminum
- Thermocouple materials available such as copper, constantan, chromel, and alumel



EQUIPMENT

- Nearly 180 automatic lathes
 - o (126) Bechler swiss cam machines (10mm capacity)
 - o (22) Citizen 7-9 axis swiss style CNC machines (16mm capacity)
 - o (6) Davenport 5 spindle automatic screw machines (16mm capacity)
 - o (10) Imoberdorf precision transfer machines (MB4 & MB6 Models)
 - o (13) ESCO CAM & CNC
 - o (2) Tornos CNC

CERTIFICATIONS

- EN 9100 (Europe facility)
- AS 9100 (USA facility)
- ISO 9001 (All facilities)
- ISO 14001 (Europe facility)
- ISO 45001 (Europe facility)



METAL FABRICATION & STAMPING

The Metal Fab department stamps connector shells, backshells, angle brackets, cable clamps, and many metal accessories with its variety of punch presses.



OUR SERVICES

- Production of a variety of stamped components using both progressive and stage dies
- Facility located in USA

CAPABILITIES

- Material thickness range 0.25mm to 2.29mm [0.01" to 0.09"]
- Material width range 3.3mm to 152mm [0.13" to 6.00"]

MATERIALS

- Brass
- Aluminum
- Stainless steel
- Steel
- Phosphor bronze
- Beryllium copper

EQUIPMENT

- (8) Rousselle presses (36 to 70 ton)
- (1) Aida press (120 ton)



PLATING

The Positronic plating shop applies a variety of finishes to connector components prior to assembly. The Plating department verifies that plating thicknesses, adhesion, and appearances conform to US military specifications.

OUR SERVICES

- Vibratory, barrel, and rack plating
- Ideal for Mil / Aero, Telecom, and Commercial applications
- Facility located in USA

CAPABILITIES

- | | |
|-------------------------------|--|
| • Passivation | ASTM 967/967M and AMS 2700 |
| • Gold plating | ASTM B 488 and MIL-DTL-45204 Type 1/2 |
| • Zinc plating | ASTM B 633, Type 5 |
| • Zinc-nickel | ASTM B 841 and AMS 2417 (Coming Q2/3 2023) |
| • Anodize | MIL-DTL-8625, Type 2 |
| • Anodize | MIL-DTL-8625, Type 3 (Coming Q2/3 2023) |
| • Chemical conversion coating | MIL-DTL-5541, Type 2, Class 1A and 3 |
| • High phosphorous e-nickel | ASTM B 733 and AMS 2404 |
| • Low phosphorous e-nickel | ASTM B 733 and AMS 2404 |
| • Bright tin plating | ASTM B 545 |
| • Semi-bright nickel plating | AMS-QQ-N-290 and AMS 2403 |
| • Fully-bright nickel plating | AMS-QQ-N-290 and AMS 2403 |
| • Copper plating | AMS 2418 |

EQUIPMENT

- Technic spouted bed electroplater (SBE)
- Technic automated line for copper, nickel & gold.
- Technic automated line for zinc, nickel & tin
- Manual passivation, anodization & electroless nickel lines
- Bowman BA-100 XRF
- Agilent 5800 ICP

CERTIFICATIONS

- ISO 9001
- AS 9100
- NADCAP (Coming Spring 2024)

