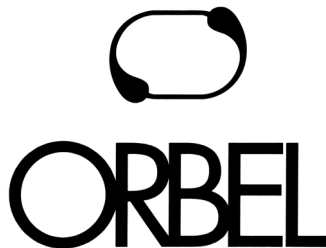


REEL-TO-REEL



“At Orbel we capitalize on the strengths of our employees and vendors for the benefit of our customers.”



Orbel specializes in reel-to-reel precision etched parts for a wide spectrum of industrial customers in the following markets:

- Automotive
- Automotive Aftermarket
- Medical
- Aviation/Aerospace
- Compliance Engineering
- Metalworking
- Computer Technology
- Electronics
- Electrical
- Design and Product Engineering

Orbel's technical expertise includes:

1. Strip and foil prior to stamping into an individual component or a coil of stamped parts.
2. Capabilities for runs as narrow as 0.25 inches up to 26" (660mm) wide.
3. Light gauge specialist: Orbel can produce materials as light as 0.001 inches thick with a variety of coatings that include:
 - Copper
 - Tin (bright and matte)
 - Silver
 - Gold
 - Zinc
 - Lead
 - Cobalt
 - Copper Oxide
 - Nickel (sulfate and sulfamate)
 - Tin/Lead (60/40 and 90/10; bright and matte)

Base materials for parts/products onto which plating is deposited include:

- Beryllium Copper
 - Brass
 - Copper
 - Nickel and Alloys
 - Phosphor Bronze
 - Stainless Steel
 - Steel
4. A high-speed silver line that uses 99.99 percent pure silver anodes. This production line accepts wide as well as die width material.
 5. A complete in-house analytical lab for process solution verification and maintenance.
 6. A lot traceability system throughout the plant down to each individual coil processed.

ORBEL CORPORATION

Innovators in Photo Chemical Milling and Electroplating
2 Danforth Drive / Easton, PA 18045
610-829-5000 / Fax 610-829-5050 / www.orbel.com
ISO 9001:2000

Specializing in medium to high volume processing for the electrical and electronic industries.

Deposit	Appearance	Specifications	Process
Copper	Matte	MIL-C-14550 ASTM-B-734	Strip/Foil/Stampings
Nickel			
Nickel Sulfate	Matte	QQ-N-290	Strip/Foil/Stampings
Nickel Sulfamate	Matte (Low Stress)	MIL-P-27418	
Silver	Satin	QQ-S-365	Strip/Foil/Stampings
Tin/Tin Alloys			
Tin	Bright/Matte	MIL-T-10727 ASTM-B-545	Strip/Foil/Stampings
90/10	Bright/Matte	MIL-P-81728	
60/40	Bright/Matte	MIL-P-81728	

Substrates Electroplated

- Beryllium Copper
- Copper
- Copper Alloy
- Phos Bronze
- Brass
- Nickel Silver
- Nickel Iron
- Steel
- Stainless Steel

Strip Capability

Base Metal Thickness 0.001" (0.03mm) to 0.100" (2.60mm)
 Width: 0.125" to 26.00"
 Weight: 1 to 4,000 pound coils

Stampings

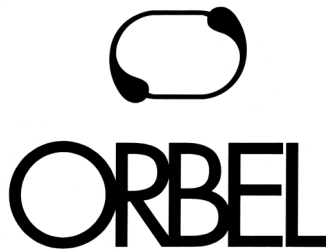
- Base Metal from 0.005" to 0.040"
- Width to 8"

Testing

- X-Ray Fluorescence ASTM-B-568
- Steam Age ASTM B-678
- Adhesion ASTM B-571
- Solderability Mil 202-208

Support Equipment/Services

- Pickup and Delivery in Service Area
- Custom Packaging
- Warehousing
- Paper/Plastic Interleave
- Rewinding on Spools & Cores
- Custom Core
- Cutting



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