Precision Processing of Advanced Materials
LASER PROCESSING

After a merger with our sister company, Laser Services, Inc., Accumet’s full-service materials processing solutions includes planar laser cutting, rotary laser cutting, laser drilling, laser welding, laser hermetic sealing, laser ablation, and laser marking/etching/engraving. Accumet’s highly skilled, experienced, and knowledgeable laser machining staff are able to operate modern laser machining equipment and help customers who are new to laser machining, transitioning from traditional mechanical methods, or who are leveraging laser machining to provide cutting-edge products and services to their customers.

Laser Cutting

Our various laser cutting machines are able to rapidly and accurately cut a wide range of materials with incredible accuracy and with minimal fixturing and retooling.

Laser Welding & Hermetic Sealing

Laser energy can be used to create extremely precise and consistent welding seams for a variety of weld types, including butt, lap, and fillet joints using conduction welding, laser spot welding, and deep penetration welding. Laser welding typically doesn’t require additional material or flux, and can be used to create hermetic seals with appropriate materials.

Rotary Laser Cutting and Marking

Accumet is tooled up and ready to conduct laser rotary cutting and marking/etching of tubes of all sizes and material types. Our process is ultra-clean and delivers debris-free results.

Count on us for precision lasered:

- Hybrid electronic package parts
- Lead frames
- Base plates
- Die pedestals and tabs
- Production jigs and fixtures
- Mechanical masks and templates
- Retainers
- Medical implants
- Helicopter armor, jet engine and aerospace components
- Stainless steel encoder disks
- Gold wire cutting
- Promotional products
- Printed Circuit Boards (PCBs)
- Thin-film, thick-film, and flexible circuit substrates
- Fine metal screens and filters
- Ceramic packages
- Electronic enclosures
- Foils
- Adhesive Preforms

We offer many of the same services as traditional CNC milling, water-jet cutting, plasma cutting, or electron beam cutting shops, but with much greater precision, speed, and flexibility. Laser cutting can be performed on a wide range of sheet and material thicknesses, and the extremely small kerf width of the laser enables the tightest tolerances.
LAPPING, POLISHING & MACHINING

Accumet has been providing lapping and polishing services for the most demanding applications for nearly half a century. Accumet expert technicians are able to offer an array of grinding, lapping, polishing, and machining services for pre-processing and post processing of most types of materials.

Lapping

Lapping employs abrasive materials and precision mechanical motion to work base engineering materials and control material surface, thickness, flatness (camber), and parallelism. This is especially important for microelectronic, aerospace, medical, and industrial applications that require large batches of near identical substrates and parts. The lapping process can be controlled to within micron-level tolerances to precise customer requirements.

Lapping Experience:
- Microelectronic ceramic substrates
- Thin-film and thick-film substrates
- Metal parts with flat surfaces
- Medical Components

Polishing

Polishing is a step beyond lapping that helps to refine the surface finish of a material. As some applications are limited by the surface condition of engineering materials (i.e. microelectronics), polishing can be used to precisely control finish and thickness for applications from ceramic substrates to optical glass and metals.

Polishing Experience:
- Low to high power RF/Microwave devices
- High-power DC devices
- Low-loss DC/RF/Microwave devices
- Optics

Diamond Cutting and Scribing

Accumet is able to offer high precision diamond cutting, scribing, dicing, and diamond-machined edge/bevels and chamfers for virtually all ceramic materials and a variety of exotic engineering materials.

Cutting and Scribing Experience:
- Plated electronics substrate dicing
- Wafer dicing
- Ceramic beveling
MATERIAL SUPPLY & SERVICES

We source, stock, process, and validate the most advanced medical device and microelectronics materials.

**Metal & Metal Alloys**
- Kovar®
- Mild Steel
- Molybdenum
- Nitinol
- Stainless Steel
- Steel
- Superalloys
- Tantalum Zircaloy
- Aluminum
- Bronze
- Cobalt
- Cold Rolled Steel
- Germanium
- Hardened Steel
- Hot Rolled Steel
- Mild Steel
- Molybdenum
- Silver
- Stainless Steel
- Steel
- Tantalum
- Tungsten

**Thin Metals & Foils**
- Aluminum Foil
- Brass Foil
- Copper Foil
- Gold Foil
- Nickel Foil
- Titanium Foil
- Hastelloy Foil
- Invar Foil
- Inconel Foil
- Nitinol Foil
- Stainless Steel Foil
- Silver

**Ceramics & Minerals**
- Alumina (90% - 99.9%)
- Aluminum Nitride (AIN)
- BeO
- Black Ceramic
- Ceramics
- Ferrite
- Green Ceramic
- LTCC / HTCC
- Piezo Ceramic
- Yttria Stabilized Zirconia

**Epoxy, Adhesive, & Solder Preforms**
- Conductive Epoxy
- Epoxy Preforms
- Frozen Epoxy
- Solder Preforms

**Adhesives**
- Adhesive Preforms
- Adhesive Tape

**Laminates, Fabrics, & Composites**
- Duriod®
- Flex Circuits
- FR4
- G10, G11
- Garolite
- Kevlar®
- Felt
- Teflon®
- Fiberglass
- Polyester
- Rigid Foam and Foam Core
- Ripstop Nylon
- Carbon Fiber
- Microwave Absorber Materials
- ECCOSORB®

**Natural Materials & Glasses**
- Mica
- Paper/Cardboard
- Quartz
- Sapphire
- Silica
- Silicon
- Wood
- Aerogel
- Fused Silica
- Glass

**Plastics, Polymers, & Rubber**
- Acrylic
- Lexan
- Lucite
- Mylar®
- Polycarbonate
- Styrene
- Ethylene
- Delrin
- Durometer Silicone Rubber
- Adhesive Backed Silicone
- Reinforced Silicone Rubber
- Fiber Reinforced Rubber
- Polymers
- Flex Circuits
- Hydrogel
- Kapton®

Visit our website to download design guidelines and technical briefs, and to request application support and pricing.

WWW.ACCUMET.COM