

Kurt J. Lesker[®]
Company

DEPOSITION MATERIALS & SERVICES



Kurt J. Lesker® Company

Since 1954 the Kurt J. Lesker Company has expanded with the vacuum deposition market to offer products in every area of deposition for every application. The Kurt J. Lesker Materials Group applies the vacuum deposition experience acquired over 50 years to provide the quality materials required for today's demanding PVD applications. During this time, we have developed knowledge and expertise with many products including, sputtering systems, vacuum chambers, cathodes, pumps, fluids, hardware and deposition materials allowing us to be our customers' primary vacuum supplier.



As the company grows, the materials group continues to expand our product offering to meet the evolving needs of our customers. Today, we offer virtually every configuration of sputtering target and evaporation source. We strive to have the right products in stock for quick delivery at competitive prices manufactured to a high standard of quality. Our material offering includes well over 1,000 different metals, alloys, and ceramics totaling over 100,000 inventoried items in locations around the world.



Capabilities

As new technologies evolve and emerge our customers demand new materials, larger sizes, higher volumes, and higher quality standards. To support these new requirements investments have been made towards larger production equipment, facilities upgrades, and more stringent quality systems.

Metals & Alloys

Our 30,000 sq ft manufacturing facility is fully equipped with the latest production equipment to fabricate single parts or high volumes. Kurt J. Lesker Company has the flexibility to manufacture target sizes as small as 1" diameter, as large as 16" diameter, and planar targets to virtually any size. In addition to sputtering targets, a wide range of pellets and pieces are also available for evaporation processes. Our capabilities allow us to meet the needs of the smallest volume R&D user to the largest production operation. We offer virtually every metal and alloy fabricated to our customers' unique specifications. A wide range of purities are available for many materials. Various processing methods make it possible to tailor composition, grain size, and other critical material characteristics to meet customer requirements.



Target Sizes

From 1" to 16" Diameter

Planar up to 150" Long & 90" Wide



Ceramics

The Kurt J. Lesker Company continues to expand process capabilities in ceramic manufacturing to meet the evolving requirements for these demanding products. In-house powder synthesis capabilities, utilizing various chemical techniques, give us the ability to manufacture custom stoichiometries for both R&D and production material requirements. Proprietary mixing and sintering methods yield homogeneous, high density products ideally suited for PVD applications. Hot pressing is also utilized to enhance the variety of ceramics that can be offered.

Unique Compounds

**Oxides, Nitrides, Carbides, Intermetallics,
Custom Compositions, and More**





In Stock

Gold, Silver, Platinum, and Palladium

Precious Metals

Our unique offering of precious metal products protects our customers from daily market price fluctuations by locking in the price on the day the order is placed. Inventory management tools allow us to stock a variety of precious metal products in standard target configurations, as well as, pellet, shot, and wire for evaporation. Shipments are packaged per order in the quantities our customers require, allowing them to purchase as much or as little as they need. Because of the high value of these materials we offer a convenient reclaim service for precious metal scrap. Credit is applied quickly to customer accounts which can be used to fund their next purchase. Kurt J. Lesker Company understands that these high cost materials require tight controls and close management. Our goal is to make precious metal purchases as easy as possible for our customers.

Evaporation Materials

In addition to materials used in sputtering applications, we also serve a large number of customers which utilize evaporation techniques to deposit thin films. We currently stock a wide variety of evaporation materials in various sizes, shapes and quantities, available for immediate shipment. The range of materials offered is extensive, including pure metals, precious metals, standard alloys, oxides, nitrides, and fluorides. The materials can be packaged for the small quantity user, as well as the large volume production customer.



Shapes

Pellets, Pieces, Canes, Clips, Coils, Wires, and Foils

Evaporation Sources

As a complement to the extensive offering of evaporation materials, a wide range of thermal evaporation sources are available to our customers. Hundreds of boat sources with differing geometries and capacities make it easy to find a source that is ideally suited to coat numerous materials onto substrates of many configurations. Many materials prove troublesome for evaporation and may require a different style of evaporation source. In addition to boat sources, alternative sources such as filaments, baskets, box heaters, and heaters with crucibles may be the solution to evaporating these more difficult materials. A wide range of products are available to ship from stock with your evaporation materials or as replacements.



Available In

Tungsten, Molybdenum, Tantalum, and with Alumina Coating

Electron Beam Crucible Liners

Electron beam crucible liners form a thermal barrier between the material and the water-cooled hearth. This insulation maintains a higher temperature within the deposition material allowing for faster deposition rates while reducing the power required to deposit films. In addition to a thermal barrier, crucible liners protect the hearth and allow for quick change of materials, reducing down-time for cleaning. Depending on the material being deposited, different crucible liner materials may be better suited for extended life and reduced contamination. An extensive offering of crucible liners are available in various sizes and materials to fit nearly every application and electron beam gun design.

Available In

Graphite, Fabmate®, Intermetallic, Tungsten, Molybdenum, Tantalum, Alumina, and Boron Nitride



Services

Inventory

The Materials Group stocks more than 100,000 products. These items are inventoried in various locations around the world and can often be shipped the same day. Our extensive inventory allows our customers to place orders for not only material requirements, but all of their vacuum needs.

100,000 Items in Stock

Targets, Backing Plates, Evaporation Materials, Electron Beam Crucible Liners, Filaments, Baskets, Rods, Boats, Boxes, Crucible Heaters, and Crucibles



Sputter Target Bonding

Our newly renovated bonding production area and in-house backside metallization adds value to sputtering target materials while decreasing cost and lead-time. Experienced bonding technicians inspect and bond materials in virtually any size or configuration to customer supplied backing plates or backing plates manufactured to customer specifications.

Indium is the preferred material for bonding sputtering targets due to a high thermal conductivity, and is highly efficient at drawing heat away from the target. Indium is more malleable than other bonding solders, therefore reducing the likelihood of cracking.

Elastomer bonds are ideally suited for low melt point target materials, temperature sensitive compounds, and targets that have either low density or are especially fragile.

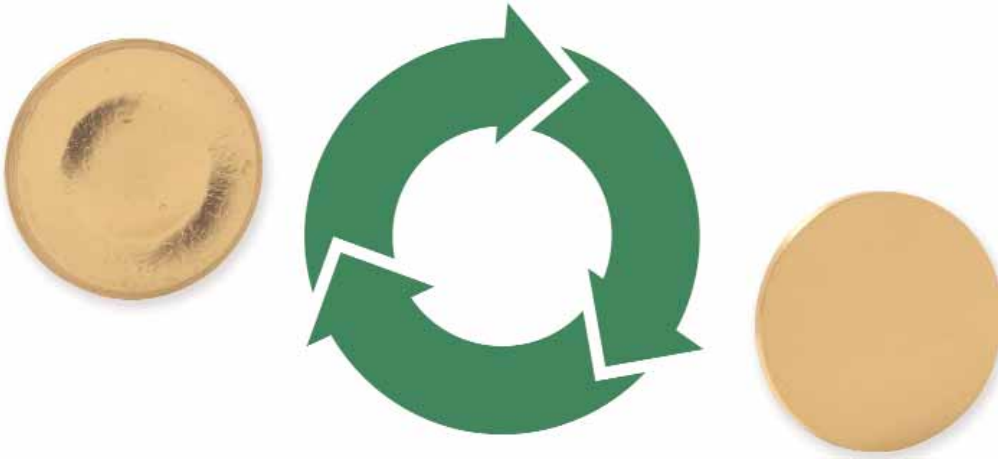
Bonding Services

Indium and Elastomer



Precious Metal Reclaim

Kurt J. Lesker Company offers a complete precious metal reclaim program, designed to reduce replacement target costs. Spent sputtering targets and precious metal scrap can be reclaimed and the resulting credit applied towards a customer's account. This credit can be used towards the purchase price of a replacement precious metal product or to purchase other Kurt J. Lesker products and/or services offered.



Accepting

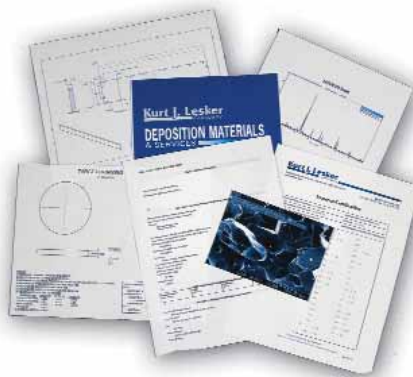
Gold, Platinum, and Palladium

Quality

At the Kurt J. Lesker Company quality is our highest priority. Our ISO 9001:2008 certification ensures that product quality is never compromised. All of our products undergo the requisite level of quality control inspection and all materials are shipped with a certificate of analysis and material safety data sheet. We employ numerous analytical techniques at various stages in the process to ensure that the products meet our quality standards and perform in the demanding applications which they are used.

Test Methods

**GDMS, ICP, SEM, XRD,
Particle Size Analysis**



GLOBAL VACUUM PRODUCT LINES

VACUUM MART™ DIVISION

Vacuum Valves & Hardware

- Flanges, Components, & Fasteners
- Gate & Angle Valves
- OFHC Copper Gaskets
- Bellows, Tubing, & Seals
- Semiconductor, PV, & FPD Process Valves

Feedthroughs

- Power & High Voltage
- Viewports (Optical Feedthrough)
- Coaxial & Instrumentation
- Thermocouple
- Ferro-Magnetic Fluid Rotary Drives
- USB

Vacuum Pumps & Accessories

- New & Remanufactured
- Rotary Vane & Piston
- Scroll & Diaphragm
- Screw & Roots Blowers
- Turbo & Diffusion
- Cryogenic & Ion
- Traps & Filters
- Complete Offering of Pump Repair Services

Vacuum Fluids

- Full Line of Mechanical Pump Oils
- Fomblin® PFPE - Inert PFPE
- Galden® PFPE - Heat Transfer Fluid
- Vacuum Greases, Sealants, & Solvents
- Pump Oil with R/O Additives
- Silicon Diffusion Pump Oils
- Pump Oil Recycling

Pressure Measurement

- Analog & Digital Active Gauges
- Pressure Indicators & Controllers
- Wide-Range Gauges
- Multi-Gauge Controllers
- Replacement Gauge Tubes
- MKS Baratrons®

Sample Manipulation & Motion

- Rotary & Linear Motion
- Linear Positioners
- Wobble Sticks & Port Aligners
- XYZ Manipulators
- Multi-Axis Manipulators
- Sample Transfer Probes
- Sample Heating & Rotation
- Motion Control
- Sample Distribution Center

Vacuum Services

- Full Line Pump Repair/Rebuild Services
- Pump Oil Recycling
- Technical Information
- Technical Consulting
- Decontamination
- Magnetron Cathode Service
- Contract Manufacturing

PROCESS EQUIPMENT™ DIVISION

Deposition Sources

- Torus® Magnetron Sputtering Sources
- Electron Beam Evaporation
- Organic Material Sources
- Electron Beam Sources
- Ion Sources
- Thermal Evaporation Sources

Process Instrumentation

- Film Thickness
- Mass Flow Controllers
- RF & DC Power Supplies
- Pulsed DC Power Supplies
- Power Supplies for Evaporation

System Components & Custom Engineered Solutions

- Turnkey & Partial Build Solutions
- Comprehensive Engineering Design Support
- Chambers, Frames, & Mounting Structures
- High Temperature & Bakeout Heater Assemblies
- Heater Power Supplies
- Substrate Load Locks & Transfer Vessels

Vacuum Systems

- Thin Film Deposition Systems
- Cluster Tools
- Box Coaters
- General PVD Systems
- Computerized Systems
- Combinatorial Systems
- Organic Material Deposition Systems
- R&D Sputter Tools
- Vacuum Furnaces & Ovens
- Atomic Layer Deposition (ALD)
- Drum Coaters
- In-line & Linear Systems
- R2R Systems

MATERIALS™ DIVISION

Deposition Materials

- Sputtering Targets
- Precious Metals & Reclaim
- Evaporation Pieces
- Thermal Evaporation Sources
- E-Beam Crucible Liners
- Bonding Service
- Backing Plates
- Ceramic Materials Manufacturing (CMM)

MANUFACTURING™ DIVISION

Vacuum Chambers & Components

- Standard SS Cylindrical, D-Shaped, Spherical, & Box Chambers
- Standard Pyrex® Glass Bell Jars & Cylinders
- Standard Building Blocks to Customize Your System
- Custom Chambers
- Array of Finishes & Materials
- Easily Build Your Own Chamber with the Custom Chamber Configurator On-line

Manufacturing & Fabrication

- State-of-the-Art CNC Machining
- Mechanical, Manufacturing, & Industrial Engineering
- Computer Based Scheduling & Routing
- CAD, CAM, & FEA Software
- Coordinate Measuring Machine Inspection (CMM)
- UHV Compatible Cleaning Process

We have a network of representatives around the world ready to service the international vacuum community.

Visit our website to find the representative nearest you, or contact our International Sales Department.

www.lesker.com/locations

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