

MICROFORM®

FOR LIGHTNING STRIKE PROTECTION

Lightning strikes are inevitable, and for aircraft and wind turbines they are exceptionally dangerous. For specialized applications such as lightning strike protection, Wallner Expac manufactures its MicroForm® line of precision engineered micromeshes.

One purpose of expanded metal is to protect- and for aircraft and wind turbines it is critical. Modern aircraft and wind turbines are replacing fiberglass with carbon fiber to save weight, fuel, capture more energy from low wind, extend its lifetime, and for its recyclability. However, it is also quite electrically conductive.



Since MicroForm® is a fine mesh that is slit and stretched from a single coil of metal instead of being manufactured from individual woven or welded strands, it is easily stretched over complex surfaces and embedded within the surface composite layers of an aircraft or blades and nacelle of a wind turbine. Its pattern uniformity provides excellent conductivity to effectively dissipate and direct the current to an exit point instead of penetrating the sublayers, protecting critical avionics and equipment.



MICROFORM® FOR LIGHTNING STRIKE PROTECTION EXPANDED METAL PARAMETERS

- ◇ LWD openings from 0.050"–0.125" (1,270 μm –3,175 μm)
- ◇ Base metal thickness: 0.002"–0.015" (50.8 μm –812.8 μm)
- ◇ Metals: Aluminum, Copper, and more
- ◇ Options include slitting, flattening, and more

All specifications are adjustable to meet your requirements including specific weight, open area percentage, openings per square inch, thickness, and more.

(909) 481-8800

California ♦ Georgia ♦ Texas

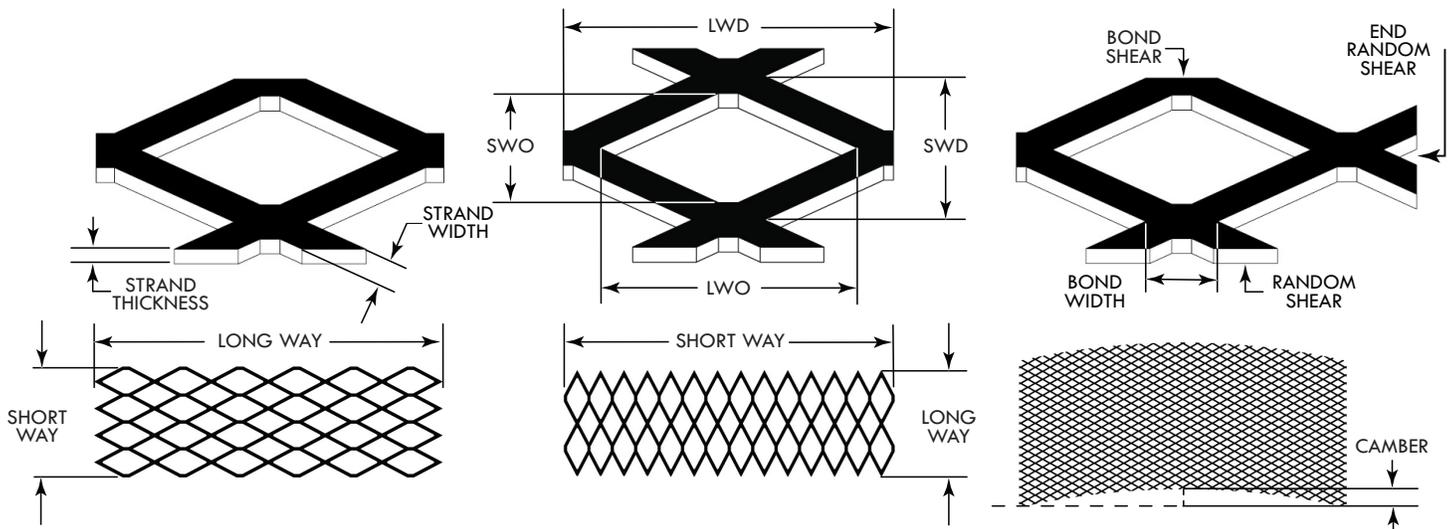
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Precision Engineered
Expanded Metals Manufactured by

 **WALLNER EXPAC**
ENGINEERS • INNOVATORS • MANUFACTURERS
AN EMPLOYEE-OWNED COMPANY



CAPABILITIES AND PARAMETERS



THE WALLNER EXPAC ADVANTAGES

Not all meshes are created equal. Our Shear-Form® service of manufacturing expanded metal yields no waste while providing a high surface area-to-volume ratio, pattern uniformity, and has no points or welds that can separate— all crucial for strong and lightweight material vital for mission-critical applications.

By its very nature, expanded metal has a large open area percentage and high strength-to-weight ratio, both of which can be optimized to meet the application's needs. Engineered to precise specifications in our ISO-9001 climate-controlled environment, MicroForm® is manufactured in coils or sheets and our tooling facility provides post-production services. Our scalable manufacturing lines and responsiveness allow us to rapidly create product with tunable parameters including specific weight to meet customer specifications. Because we design and build our own expanders, we can tightly control the manufacturing process and fine tune all specifications.

SERVICES AND CAPABILITIES

Our state-of-the art, on-site tooling facilities fully support our manufacturing with post-production services including:

- ◇ Wire EDM
- ◇ Surface and OD grinding
- ◇ Precision inspection equipment
- ◇ CNC machining, lathes, radial drills
- ◇ Annealing, Stamping, Forming, Flattening
- ◇ Slitting, Anodizing, Welding
- ◇ Engineering & Design

ADDITIONAL USES FOR MICROFORM®

- ◇ Microfiltration
- ◇ Battery Technologies, Anode, Cathode
- ◇ Airbag Filters
- ◇ EMI/RFI Shielding
- ◇ Mist Elimination, Dust Collection
- ◇ Speaker Grilles, Acoustics
- ◇ Screens- Doors, Windows
- ◇ Baskets, Containers, Sifters
- ◇ Medical
- ◇ Plumbing
- ◇ Modeling & Craft Wire
- ◇ Food Processing

