

# EMI Gaskets: Waterjet Cut with Added Value

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EMI gaskets that are made of electrically conductive silicones provide environmental sealing, thermal insulation, and shielding against electromagnetic interference (EMI). Gasket fabricators who convert sheet materials have a choice of cutting methods, including die cutting and waterjet cutting. Die cutting is fast and precise, but it requires tooling. The cost of a die can be difficult to justify for low volumes of EMI gaskets, but waterjet cutting is a tool-less process with distinct advantages.

## **Waterjet Cutting**

Recently, Elasto Proxy installed a new waterjet cutter at our Montreal-area headquarters. This gantry-style machine has a large cutting table and supports parts nesting for more efficient material usage, an important consideration with more expensive elastomers. This new equipment complements another pure waterjet cutter and two abrasive waterjet machines that mix water with a garnet abrasive. Elasto Proxy USA in Greenville, South Carolina, also has a waterjet cutter.

By sourcing EMI elastomers in low minimum order quantities (MOQs), Elasto Proxy is getting even greater value from its equipment. There's no tooling to wait for or pay for, but buyers of EMI gaskets still don't want to purchase more materials than they need. Many EMI silicones are silver-filled, and the price of this precious metal recently reached all-time highs. As a tool-less fabrication process, waterjet cutting is well-suited for prototyping and low-to-medium volume production.

There are other advantages to waterjet-cut EMI gaskets as well. Because cuts aren't limited by tooling, engineers can change their

designs without discarding existing dies. Waterjet cutting isn't as fast as die cutting, but its highly-pressurized stream of water can create complex and intricate shapes. That's important for EMI gaskets that require precise holes for fasteners, or that require notches or other specialized features.

## **Added Value**

As a value-added fabricator, Elasto Proxy can source EMI sheet materials with electrically conductive adhesives for peel-and-stick installation. In addition to flat gaskets, waterjet equipment can convert EMI extrusions, including D-shapes, P-shapes, solid rectangles, and hollow tubes. For EMI O-rings, solid cord materials can be cut and then bonded together with an electrically conductive adhesive. Elasto Proxy can also supply compression-molded EMI gaskets in low-to-medium volumes.

In addition to EMI silicones, waterjet equipment can cut industrial rubber products such as bulb trim, edge trim, solid profiles, and sponge profiles. Whether it's for door seals, window seals, or EMI gaskets, waterjet cutting's smooth, clean edges are easy to bond into finished products. Buyers like the ability to source all their rubber products and materials from a single supplier, especially one that also offers value-added services like warehousing, kitting, and custom packaging.

As engineers pack more electronics into smaller spaces, electromagnetic interference can disrupt or degrade performance. For low to medium volumes of EMI gaskets, including prototypes, waterjet cutting can provide a gasket fabricator with a competitive edge. The edge of a metal die may be sharp, but waterjet equipment's high-pressure stream can cut through tooling costs and help save money on materials.

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