

# Conductive Coating Spray Operations

## Fully Automated Conductive Coating of Plastic Housings

Chomerics operates full-service facilities for the application of conductive coatings to our customers' plastic housings. Available as a stand-alone service, this operation is fully integrated with our Cho-Form® automated gasket dispensing operations. As a result, it provides a major logistical advantage that saves time and cost by minimizing part handling and eliminating unnecessary shipments.

## High-Speed, 6-Axis Robotic Spray System

Our fully-automated robotic spray technology applies Chomerics' performance proven conductive paints, or customer-supplied coatings, to PC, ABS, Noryl, PVC and PPO substrates. Set up as a continual process, the system delivers completed parts within one hour of the cycle start. Process repeatability is extremely high, with uniform coating to  $C_{pk}$  values of 1.3 or greater.

Multi-cavity capacity provides high part density, for production throughput unique to the conductive coating industry. To illustrate the speed and economics of our paint spray operation, for a part approximately 2 x 5 inches (51 x 127 mm) in size, a typical application line can produce over 6 million parts per year.

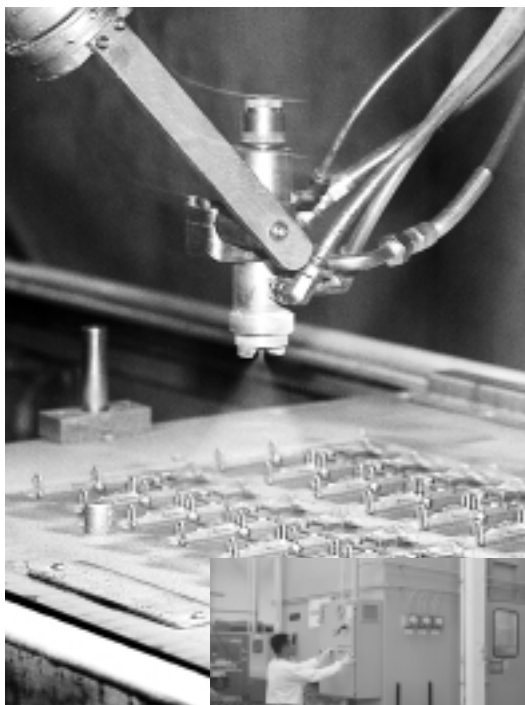
## Advanced Coatings

The CHO-SHIELD® conductive coatings used in our spray operations are chosen for their compatibility with Cho-Form gasketing materials and their excellent adhesion to a variety of substrates found in commercial applications. Among the coatings routinely used are CHO-SHIELD 2052, 2054, 2056, and 610.

## Clean Separations, Ultra-Thin Paint Layers

Our proprietary mask design produces exceptionally clean paint edges. The result is a conductive coating layer that is both functionally and cosmetically optimized.

The spray technology is sufficiently reliable to hold as little as 0.0008 inch (0.02 mm) thickness for CHO-SHIELD 2056 coating, on up to 0.0015 inch (0.038 mm) for CHO-SHIELD 2052



Our 6-axis spray technology holds paint thickness to an ultra-thin 0.0008 inch (0.02 mm), for minimal overspray losses and waste.



Continuous processing with multi-cavity trays delivers completed parts within 1 hour of cycle start, and very high yields

and other materials, for shielding effectiveness >75 dB. In addition to freeing valuable design space in the device, the extremely thin CHO-SHIELD 2056 layer is cost-effective in achieving desired shielding levels with minimal overspray losses and increased production throughput.

## Optimizing the Paint Mask

Through experience, Chomerics has identified several design considerations that produce superior results for conductive coating operations. In particular, mask cut-off features should incorporate bends that optimize spray accuracy by reducing or eliminating overspray transition zones.

Our Applications Engineering department provides valuable mask design assistance that improves efficiency and elevates yields.

## Choose stand-alone paint application, or subsequent EMI shielding plus contract manufacturing

When metallizing plastic housings is sufficient for EMI shielding purposes, Chomerics provides these painting operations as a stand-alone service. In other cases, Chomerics manages the entire supply chain from housing acquisition, through conductive coating, EMI gasket application, and secondary assembly steps to produce completed shielded housing assemblies.

Our robotically dispensed Cho-Form gasketing technology is described on the following pages. Supply chain management and contract manufacturing are discussed on page 6.

Chomerics' conductive coating operations include facilities in Woburn, Massachusetts, Guadalajara, Mexico, and São Paulo, Brazil, with additional locations in process.