

# Masking - a simple solution to high-production blasting problems

## The Problem:

Some customers are inclined to dismiss the production gains inherent in abrasive blasting because they consider blasting an exclusively all-over process. When you bring up the topic of masking, many customers immediately think of tapes, adhesives, and the added labor to apply and remove them.

## The Solution:

Blasting a limited area of a part does add some complexity but, as you'll see in the following examples, masking can be integrated into most ZERO automated systems.

A well-designed fixture can both hold and mask the part during blasting, cleaning, or shot peening.

- Blasting can be controlled to strike a specific spot and leave intact a coating or other finish that should remain on a surrounding area.
- Tapes and adhesives are not the only types of masking; other types are frequently employed to control the target area in the automated blasting process, and they can be applied with surprising speed. Often they are part of the automated blasting process.

ZERO processed some parts for an auto parts manufacturer whose application called for removing rubber from a specific area of a part. In this case, the media was plastic and the cleaning objective was to remove a rubber coating. We processed the parts in a pass-through conveyor machine and designed a simple dowel jig with overlaying a metal template to precisely control the area blasted in a metal-rubber laminate gasket. With plastic media, the metal template withstands thousands of blast cycles.

In many applications, the part-holding fixture performs the masking function. A unique fixture is designed to hold the part and mask the areas to be protected from the blast stream. Only the exposed area of the part is blasted and no additional labor is expended to position the masking.



*Herb Tobben, Manager of the Sample Processing Lab for ZERO Automation, creates solutions to customer problems.*

In some automated indexing turntable cabinets, we incorporate an oscillating arm that lowers durable rubber masks onto the parts as they enter the blast chamber. The mask spins with the satellite, holding the small parts firmly against the fixture and covering the non-blast area. The masks lift off just as the parts leave the blast chamber.

In other cases, ZERO will work with mask manufacturers to design just the right caps, plugs, wraps, templates, and fixtures needed to ensure a perfect finish.

Just as the machine and set up for each job varies according to customer needs, just the right type of masking can easily be designed to achieve a customer's production and cost reduction goals.

Masking is a perfect complement to many automated high-production cleaning, peening, or finishing machines. Your ZERO distributor can arrange sample processing to help you determine the best engineered solution for your application.

## Expand Your Reference Library

Did you know that the largest selection of books on shot peening and blast cleaning are available from one source?

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- ICSP5 and ICSP6 Proceedings
- Blast Cleaning and Allied Processes by H.J. Plaster
- Shot Peening and Blast Cleaning edited by M.C. Sharma
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