

Automotive Filter Manufacturer Cuts Rejects by 75% with Automated Spray System and Saves US\$48,000 Annually



Problem:

A manufacturer of automotive filters needed to spray a release agent into mold cavities prior to the plastic molding process. The release agent prevented the polyurethane air filter casings from sticking in the mold. The consistency of this spray application was critical to maximizing production efficiency and maintaining the product's high quality reputation in the marketplace.

The previous mold lubrication method was manual. Operators sprayed release agent into the molds using hand-held spray bottles – a costly process. In addition, the lubricant application was inconsistent and resulted in high reject rates.

Solution:

Spraying Systems Co.'s solution was an AutoJet® Modular Spray System and two 1/4JAUPMCO automatic air atomizing nozzles. The system includes a Model 2250 Spray Controller, which automates the timing and the spray pressure of the air atomizing nozzles used to spray the release agent.

Molds pass under the spray station on a large rotary table. An inductive proximity sensor senses the presence of the molds and triggers the spray sequence when the plates are positioned beneath the spray nozzles. The 2.5 second spray duration is timed with the movement of the turntable to ensure the required volume of release agent is applied without overspray.

Alarms are generated if operator attention is required for the spray system. The control panel offers multiple password protection levels to prevent accidental or unauthorized changes to the spray parameters.



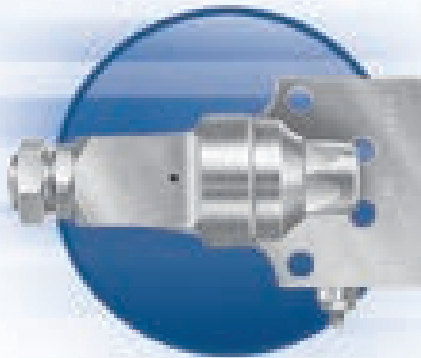


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Results:

Automating the application of the mold release agent has enabled this manufacturer to eliminate costly manual labor and reduce the reject rate by 75%. The savings are more than US\$4,000 per month and the manufacturer recouped the system cost in less than six months. The AutoJet® Modular Spray System is so effective that the manufacturer has installed it on multiple lines in several facilities.

A CLOSER LOOK AT THE SYSTEM



Two 1/4JAUPMCO automatic air atomizing nozzles are used to cover the width of the molds on the indexing turntable. The air-actuated nozzles cycle up to 180 times per minute and feature a clean-out needle to prevent nozzle plugging.



AutoJet Model 2250 Spray Controller provides closed-loop control of the liquid pressure and the atomizing air pressure to maintain a consistent application of the release agent. Spray timing is triggered by a proximity sensor which senses the presence of the mold platen.



Spraying Systems Co.®
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