Manufacturer of Concrete Forms Reduces Release Agent Use by 65%

MOLENAAR betonindustrie

Problem:

Molenaar Betonindustrie, a Dutch manufacturer of concrete spacers and other building products, needed to apply a release agent to moulds to prevent concrete shapes from sticking.

A spray system, operating continuously, coated the interior of the moulds as they passed under the spray bar. However, the continuous operation of the spray system resulted in significant release agent waste. The flow rate needed to be adjusted for different conveyor speeds. Operators were making this adjustment by manually changing pressure. The pressure changes affected the spray angles of the nozzles and caused coverage problems. Precise adjustment of the flow rate without compromising coverage was difficult to achieve.

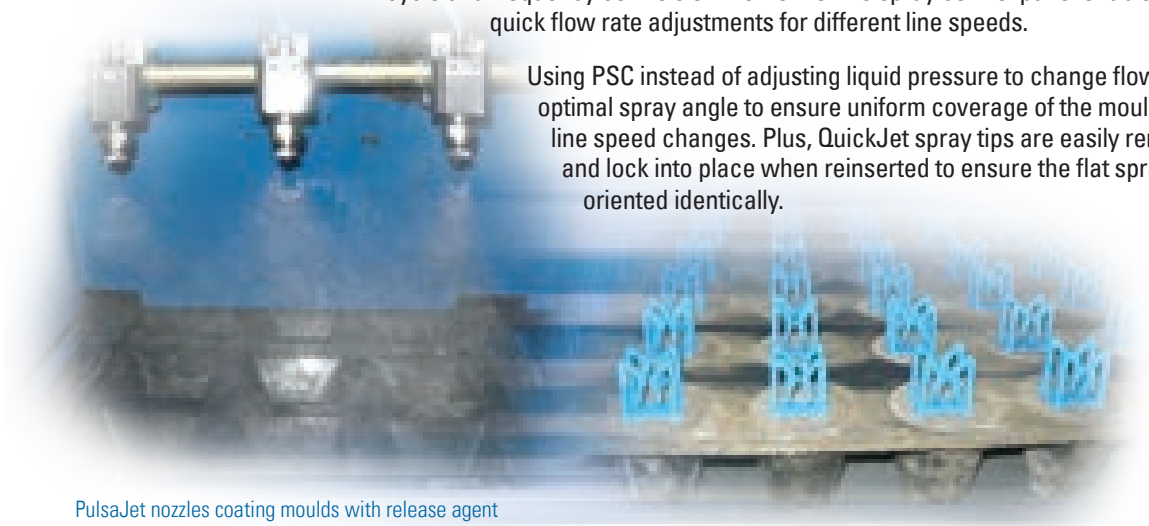
Molenaar Betonindustrie needed accurate, intermittent sprays along with the ability to adjust for different line speeds.

Solution:

Spraying Systems Co. provided an AutoJet® Modular Spray System and three PulsaJet® nozzles with QuickJet® spray tips to solve the lubrication challenge. The system includes a Model 1008 AutoJet Spray Control Panel which uses Precision Spray Control (PSC) to apply a precise volume of release agent into the concrete moulds.

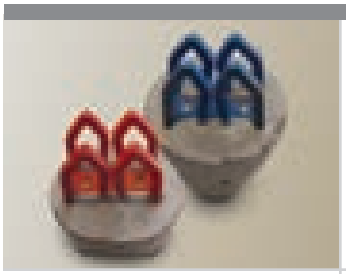
Accurate intermittent spraying ensures that only the moulds themselves are coated. Release agent waste is eliminated as is the mess created by spraying between moulds. Convenient duty cycle and frequency controls on the front of the spray control panel enable operators to make quick flow rate adjustments for different line speeds.

Using PSC instead of adjusting liquid pressure to change flow rate maintains the optimal spray angle to ensure uniform coverage of the moulds even when the line speed changes. Plus, QuickJet spray tips are easily removed for cleaning and lock into place when reinserted to ensure the flat spray pattern is always oriented identically.



PulsaJet nozzles coating moulds with release agent

Concrete spacers in moulds.



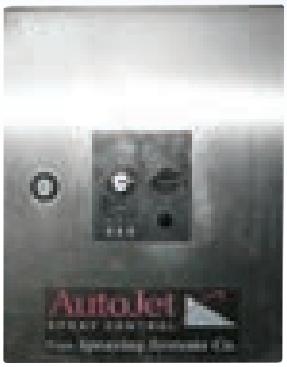
Manufacturer of Concrete Forms Reduces Release Agent Use by 65% – Continued

Results:

The AutoJet® Modular Spray System and PulsaJet® nozzles have enabled Molenaar Betonindustrie to cut its release agent use by 65% while maintaining product quality. The chemical savings offset the spray system purchase price in about 9 months.

A CLOSER LOOK AT THE SYSTEM

Three PulsaJet® nozzles precisely coat moulds with release agent.



AutoJet Spray Control Panel provides easy control of nozzle flow rate when line speed changes.

Precision Spray Control

Precision Spray Control (PSC) involves turning nozzles on and off very quickly to control flow rate. This cycling is so fast that the flow often appears to be constant. With traditional nozzles, flow rate adjustments require a change in liquid pressure, which also changes the nozzle's spray angle/coverage and drop size. With PSC, pressure remains constant enabling flow rate changes without changes in spray performance. PSC requires the use of electrically-actuated spray nozzles and an AutoJet spray controller.

Spraying Systems Co.®
Experts in Spray Technology

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