

SELF-CLEANING SPRAY NOZZLES

Blocked spray nozzles cause production down time, rework and scrap.
Prevention requires time consuming maintenance.
The answer? Self Cleaning Nozzles!!



Benefits!

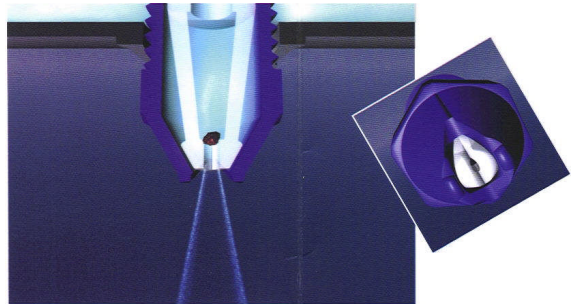
1. Permanently better spray results.
2. Consistent quality products.
3. Less rework or scrap.
4. Less maintenance.
5. Less equipment down time.
6. Longer life than common nozzles.
7. Water and chemical saving.
8. Quick lock system for all spray units.

S.C. Nozzles have a large flow opening in the nozzle compared to conventional spray nozzles. The spray pattern is achieved through the patented flexible inner spring nozzle. As soon as enough flow plus pressure is available, the inner nozzle is pushed in the direction of flow opening for a correct, perfect spray pattern.

Here's how the S.C. Nozzles Work!

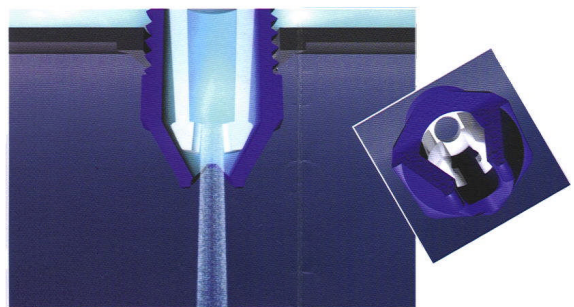
Residual Particle Blocks The Nozzle

A floating particle blocks the nozzle and spray pattern becomes non uniform.



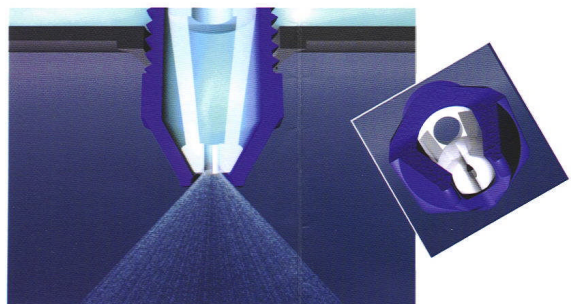
The Flush/Cleaning Process

The blockage reduces the pressure on the inner nozzle and the spring action retracts the inner spray nozzle, the opening becomes bigger. The big flow opening enables the particle to flush out. This can also be achieved by shut down and start up of the pumps or with reduction of the pump pressure should the automatic decrease in pressure be insufficient.



Normal Spray Procedure

The increasing fluid flow and pressure pushes the inner nozzle back into the spray position. The structured opening responsible for the flow rate of the nozzle produces the spray pattern for the normal spray procedure.



In the following 3 situations the nozzles will self clean.

1. Self active by particle blockage during the spray process.
2. Automatically by shut down and start up of the pumps because of pressure reduction.
3. Specifically through reducing pump pressure to under 0,4 bar, which will flush all nozzles.

Through this cleaning and flushing feature the maintenance work is greatly reduced, daily manual cleaning of a process line can be changed to weekly or longer. The risk of rework or scrap is minimal and the unpredictable down time which also presents safety hazards for the operator on hot processes are reduced.

Due to the self-cleaning effect of the S.C.Nozzles smaller flow rates can be chosen when fresh water rinsing, which saves water and reduces effluent. Because of the increased production safety, wet process modules can be fitted with fewer nozzles meaning lower purchase costs.

Perfect Spraying Pays!

Abb.1

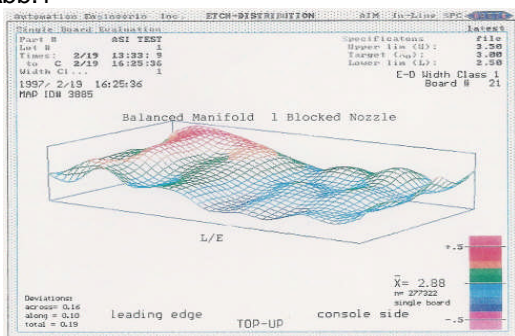


Abb.3

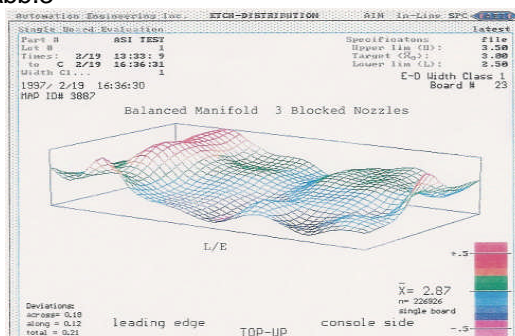


Abb.2

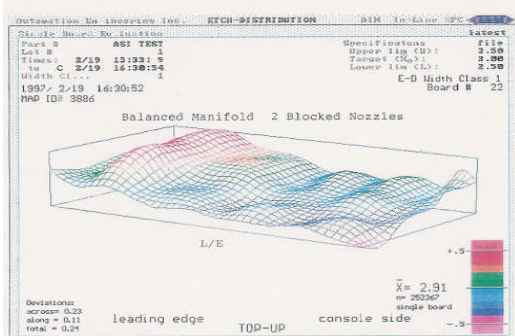
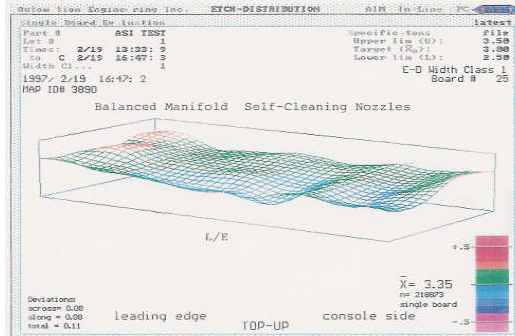


Abb.4 Results with cleared S.C.Nozzles



Poor etch results achieved already with 1 to 3 blocked nozzles, refer illustrations 1 to 3.

Good distribution with S.C.Nozzles, refer illustration 4, the blockage is removed through self activation.

Old, worn out nozzles lead to loss in quality. Standard nozzles must be replaced at least once a year. S.C.Nozzles have proved up to 5 times longer quality spraying. A timely controlled nozzle control has advantages and pays.

Where can S.C.Nozzles be used?

In all wet process module units where polypropylene nozzles are suitable. The S.C.Nozzle can be supplied with various nozzle barrels and flow rate cross section. Adapters can be used should the application not be possible. To enable the inner nozzle to move from the passive to the spray position a fluid amount of 3 l/min and a pressure of at least 1 bar is needed. A pressure enhancer insert is available for units which do not comply with these requirements.

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| Material: | Polypropylene |
| Flow rate to activate: | 3 l/min, 1,5 l/min with pressure enhancer |
| Maximal operating temperature: | up to 50°C standard, high temperature available. |
| Activation pressure: | 0,7 bar |
| Maximum operating pressure: | 5 bar |
| Fitting types: | see price list |



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