



Robotics: paint application

Atomizer Upgrades Improves spray pattern control



Reduce waste and save money with spray pattern control

The latest ABB Atomizers improve spray pattern control using a Dual Shaping Air (SA) Structure. This pattern control function results in a drastic reduction in paint consumption by making it possible to easily adapt the width of the pattern to the exact size of object being painted.

In the real world

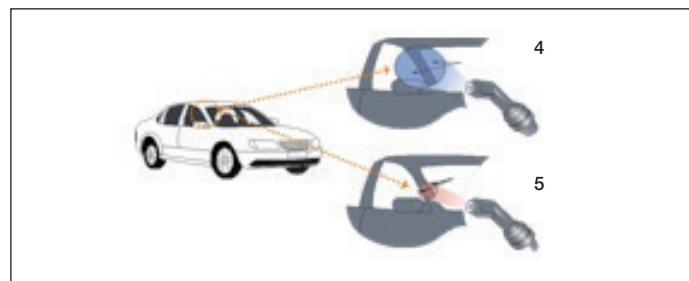
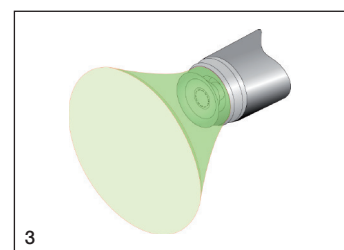
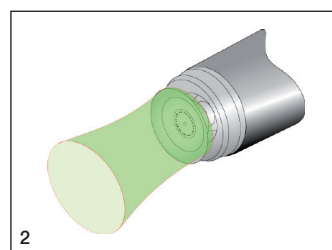
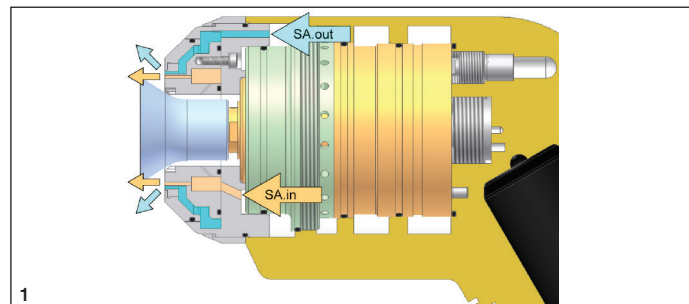
After an atomizer upgrade, a customer in the real world saw a reduction in paint waste from 22-25% depending on the object being sprayed^{*2}.

Upgrade from RB926 to RB951

Paint Consumption		Reduction in paint waste	Spraying Object
RB926	RB951		
314g	244g	22 %	Bumper
1,328g	994g	25 %	Car Body

Selections of Upgrading Atomizers

ABB provides a wide selection of atomizer upgrades—making it easy to select the right model for the needed application. These ABB Atomizers carry over the same TCP and weight for easy upgrading. In addition to improved spray pattern control, these upgrades include other advantages such as high fluid flow capability and easy maintenance.



1 Pattern Control Function, Dual SA Structure^{*1} | 2 Small Pattern for Narrow Area | 3 Large Pattern for Wide Area | 4 Wide pattern wasted paint | 5 Controlled pattern conserved paint

^{*1} Cross section diagram of 40mm SA ring
^{*2} Only reference under specific conditions

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Comparisons Conventional and Upgrading Atomizers

Conventional Model						
						
Product Name	RB926-TD	RB926-MC	Cartridge Bell System	G1 COPEs BELL		
Upgrading Model						
						
Product Name	RB951-TD	RB1000-SAD	RB951-eMC*1	RB951-CBS	RB1000-WSC	RB1000-EXT
Pattern Control Function	Yes	Yes	Yes	Yes	Yes	N/A*2
High Fluid Flow Rate	No	Yes	No	No	Yes	No
High Efficient Motor	Yes	Yes	Yes	Yes	Yes	Yes
Anti-Dewing System ³	No	Yes	No	No	Yes	Yes
Tool Center Point	Same	Different	Different	Same	Different	Same
Weight	Same	Different	Different	Same	Different	Same
Others				*4	*4	*5

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Selections of Dual SA rings

ABB provides several sizes of SA rings to accommodate a variety of spray object shapes.*6

No	Size of SA ring	Suitable for
1	30mm	Interior car body and small parts
2	40mm	Bumper and small parts
3	50mm	Bumper and medium size parts
4	70mm	Exterior car body and large parts

- *1 eMC is able to exchange valves independently, the valve unit has transparent cover for periodical check of an indicator for valve replacement, which improves ease of maintenance significantly.
- *2 RB1000-EXT has dual SA structure, however it is not recommended to use the pattern control function. RB1000-EXT increases transfer efficiency by newly designed electrodes instead.
- *3 Anti-dewing system prevents dew condensation over most of the operating window, however an air heater may be required in case the turbine air consumption is extremely high.
- *4 DCL port can be disassembled to clean the inside.
- *5 Electube works to prevent paint contamination around electrodes.
- *6 Some atomizers can only use certain size SA rings, please ask ABB the details.

For more information please contact:

www.abb.com/robotics

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