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ABB introduces world's first digital connected paint atomizer, potentially saving millions of dollars for user

New solution combines state-of-the-art hardware with ABB Ability™ digital offering to achieve breakthrough paint performance.

- The first connected, sensor-equipped, robotic paint atomizer allows for real-time smart diagnostics and precise paint control to optimize painting quality.
- Turnkey solutions to increase uptime and ensure zero quality defects.
- Increases transfer efficiency by 10%, reduces internal atomizer waste during color changes by 75%, and reduces compressed air consumption by 20% which can collectively save millions of dollars.
- Doubles time between manual cleaning for externally charged atomizer.

ABB launched at automatica 2018 in Munich the ABB Ability™ Connected Atomizer, which will – for the first time – allow automakers to optimize painting quality in real time during application rather than following a quality inspection after painting is completed.

The paint shop is one of the most expensive parts of automotive manufacturing, with costly raw materials and high energy consumption. Undercoat, paint or sealant errors can be especially costly and are often only discovered during post-paint inspection.

The new solution begins with ABB's state-of-the-art paint atomizer, whose design increases paint transfer efficiency and reduces paint waste by 75% between today's frequent color changes. The innovative design also doubles the operating time between manual cleaning from two to more than four hours for the externally-charged atomizer, meaning the system is easier to maintain and can stay online and productive longer without over-spray contamination. The entire ABB painting system offers an environmentally friendly turnkey solution that provides real-time analysis and improved diagnostics in order to increase uptime and ensure zero quality defects.

The real breakthrough for this solution however, comes from connecting the sensor-equipped atomizer to the ABB Ability™ digital offering, which allows for real-time smart diagnostics and precise paint control. This new level of digitalization supports robot users' transition towards the factory of the future. By monitoring the condition of key atomizer components such as bell cups, air motors and shaping air ring, as well as variables such as acceleration, pressure, vibration and temperature, paint transfer efficiency can be boosted by up to 10% while the paint is being applied. This also eliminates the need for costly downtime for repainting or touchups.

“Even in mature, heavily automated industries like automotive, digitalization is creating new low-hanging fruit—opportunities for automakers to sharpen their operations in ways never before possible,” says Per Vegard Nersteth, Managing Director Robotics at ABB. “Even incremental improvements in high-cost activities like paint can have a significant multiplier effect. ABB Ability™ allows us to help our customers discover and make the most of these emerging opportunities.”

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Availability

The ABB Ability™ Connected Atomizer RB 1000i is available for order today.

Further information for editors:

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