# Precision dispensing: Automated color application for emblems

**The preeflow eco-PEN300 1 component dispenser ensures optimum processes and low material consumption in automated applications.**

They can be found everywhere: on steering wheels and radiator grills in cars, excavators and tractors, on coffee machines, refrigerators and other household appliances. But also, as jewelry on handbags, keys and smartphones: multicolored painted emblems made of metal or plastic. Manual production is difficult, expensive and time consuming.

**Complex surfaces, complex challenges**

Applications as a partial coating, whether opaque, transparent or colored, as well as flat or shaped surfaces are complex to apply. During emblem production, the colored lacquers are dosed into the recess of the metal or plastic moulds. The challenge is both the exact dispensing and the optimum viscosity adjustment of the materials to be dispensed. The thickness of the coating is important in order to keep the excess material low or to prevent post-processing. The coating must neither be too viscous nor too liquid, otherwise the lacquer will run too little or too much. The curing time also plays a key role in ensuring that the material is optimally distributed in the recess.

The automotive industry places particularly high demands on the supplier in terms of quality and design. In addition, interior emblems are often coated with polyurethane for a more pleasant feel after the painting process. Previously, the complete painting process was often carried out by hand, followed by polishing of the component and removal of excess lacquer. This meant a great deal of effort during production, which was very labor-intensive and time-consuming.

**Automated job: repeat accuracy**

preeflow’s Spanish distributor, Dotest, has developed an automated system with which the coating of emblems can be applied perfectly and with constant process parameters. Two robotic systems, each with two preeflow eco-PEN300 1 component dispensers in combination with the eco-CONTROL EC200-K dispensing controller, ensure repeatable material application, for example with a three-color logo for installation in a steering wheel. The components are pre-mixed and filled into cartridges: lacquer, solvent and hardener (accelerator). The preeflow eco-PEN300 1 component dispenser takes over the task of precise and absolutely repeatable dispensing from the cartridges. In the Dotest application, the precision volume dispenser applies one color after the other in two steps via the desktop robot. A precise application of lacquer is achieved in a very short time - without splashes, protrusions or irregularities. And therefore, without time-consuming post-processing. The shape of the lacquer application can be precisely pre-programmed into the robotic system, so that even curved shapes and larger surfaces pose no problem. The individual composition of the equipment ensures low material cost on the one hand and high product quality on the other. Batches of complexly shaped and multicolored emblems of excellent design can therefore be produced at low cost.

**The preeflow eco-PEN300 1 component dispenser**

The preeflow eco-PEN300 1 component dispenser itself is a rotating, pressure-tight displacement system. Thanks to the ViscoTec endless piston principle, aqueous to pasty liquids are conveyed perfectly. The dispenser consists of a self-sealing rotor and stator, whereby the controlled rotary motion of the rotor displaces the material. This creates the delivery in the stator, which can take place without transformation of the material nor reverse movement. preeflow’s dispensing pump guarantees a clean, controlled material cut or material separation without dripping. Independent of fluctuations in viscosity, a clean, process-reliable dosage is therefore achieved. Find out more about the preeflow dispensers at www.preeflow.de

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Pictures:



preeflow eco-PEN300 1 component dispenser and eco-CONTROL EC200-K dispensing controller in a dispensing system for lacquer application on emblems.



Application examples – Picture source Shutterstock, only for editorial usage

Microdispensing in perfection!

preeflow® is a brand name powered by ViscoTec Pumpen- u. Dosiertechnik GmbH. ViscoTec primarily deals in systems required for conveying, dosing, applying, filling and emptying medium to high-viscosity fluids. The headquarters of the technological market leader is in Töging (upper Bavaria, near Munich). In addition, ViscoTec has subsidiaries in the USA, in China, Singapore and in India and employs about 200 people worldwide. Established in 2008, preeflow® ensures precise, purely volumetric dispensing of liquids in the smallest of quantities. preeflow® products are appreciated worldwide, not to mention because of their unique quality - Made in Germany. An international distribution network offers professional service and support in all areas of preeflow® dosing systems. The various fields of application include, among others, automotive, electrical and electronics industry, medical technology, aerospace, renewable energies, electrical and hybrid technology and measurement and sensor technology. The complete preeflow® portfolio can be easily integrated due to standardized interfaces. Worldwide more than 20,000 preeflow® systems are working in semi- or fully-automated dosing applications - to the user’s and customer's complete satisfaction.

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