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Solukon delivers the SFP770 combined unpacking and cleaning station for plastic parts to a German automotive manufacturer

The BMW Group has integrated the postprocessing system from Solukon as part of the expansion of the industrial system park on its Additive Manufacturing Campus.

With the SFP770, the BMW Group unpacks and cleans prototype parts made of polyamide on the Additive Manufacturing Campus in Oberschleissheim, Germany.

SFP770: Unpacking and cleaning in one system

Globally, the SFP770 is a one-of-a-kind postprocessing system. It consists of a combined automated unpacking and blasting unit for surface cleaning and finishing with ionized compressed air for SLS parts. The station is compatible with the EOS P 700, FORMIGA P 110 and EOS P 500 (with adapters for the latter two) systems and encompasses the 3D printer's entire build box.

In the SFP770, cleaning occurs in the following process:

1. Loading

The build box of the EOS P 770 is placed in the system by a lift truck.

2. Unpacking

A vibrating sieve cover is placed over the inserted build box, which then rotates gently overhead following an optional programmable process, gradually unpacking the components. The loose powder is extracted from the sieve cover directly and without contamination, and then conveyed to a recycling unit.

3. Transferring

Once the unpacking process is complete, the build box rotates towards the basket and opens the sieve cover. The sieve cover now functions as a slide and the parts are slipped carefully into the basket. If necessary, the automatic transfer process can be paused to manually remove certain components that should not be cleaned automatically.

4. Cleaning

The basket rotates in the direction of the blasting unit and begins turning. The cleaning process with glass bead blasts and ionized air is fully automated and removes residual powder. Users can easily program online process parameters such as rotation angle, blast intensity, distance and basket rotation.



In the product video, Solukon shows how polymer parts can be unpacked and cleaned with full automation in just a few minutes.

The advantages of the Solution postprocessing system

“Because so many process parameters can be programmed, the SFP770 achieves the best cleaning results, regardless of the part material and without any manual intermediate steps. Our system offers another advantage: parts of different shapes and sizes can be cleaned at the same time,” said CEO and CTO Andreas Hartmann of Solukon, summarizing the main advantages of the postprocessing system for plastic parts.

It significantly increases the level of flexibility in prototype postprocessing. “Especially for companies with a very high part output, the SFP770 is the perfect cleaning and unpacking station. It can completely unpack and clean a fully loaded build box with an assembly space of 150 liters in only 30 minutes, which is why it can handle several jobs per day,” explained Andreas Hartmann.

For all these reasons, the Additive Manufacturing Campus decided to integrate and validate the postprocessing system into its production line.

Presented at Formnext Connect in 2020, the SFP770 continues to establish itself on the market with its delivery to the BMW Group. In addition, the pilot customer, who received the first SFP770 three years ago, has now successfully put his second system into operation.

Figures:

Figure 1: The combined unpacking and cleaning station SFP770

Figure 2: Cross-section of the SFP770

About Solukon

Solukon Maschinenbau GmbH is a German high-quality supplier of powder removal and processing systems for metal and polymer additive manufacturing. Founded in 2015 by Andreas Hartmann and Dominik Schmid, the company, located in Augsburg, has extensive experience in the development of AM systems and related peripheral equipment, and offers a full range of industrial powder processing systems. Since 2022 Solukon offers an intelligent software for automated depowdering of laser-melted metal parts as exclusive licensee, the SPR-Pathfinder®. Solukon products meet the highest



functionality and safety standards and are approved for safe and reliable removal of tough-to-handle and reactive materials such as titanium and aluminum.

Solukon is present on four continents. The systems are trusted by leading manufacturers of 3D-printing systems, like EOS, SLM Solutions and AMCM, by institutions like NASA and Cern as well as by companies like Siemens and Ariane Group.

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