

09/25/2023

## **Solukon launches Powder Collection Unit for Metal SFM-PCU**

*Large parts that inevitably require automated depowdering are becoming the trend in powder-based 3D printing. As a result, increasingly large quantities of powder accrue during depowdering. At the same time, more and more parts created using additive manufacturing are going into series production. Solukon is launching the solution: an automated powder collection unit for safe, fast powder handling after depowdering. At Formnext 2023, the new product will be on display for the first time.*

With innovations like the Digital-Factory-Tool, a sensor and interface kit whose data can be integrated into the digital dashboard of 3D printers, the depowdering specialist Solukon has already demonstrated an ability to think beyond its core business. This time, Solukon has taken on the challenge of making further improvements to powder handling in Solukon systems and after the depowdering process. After all, when it comes to larger depowdering systems and use in serial production, especially with the SFM-AT1000-S, significant quantities of powder accrue. With the Solukon Powder Collection Unit (SFM-PCU for short), a fully automated powder collection solution for metal powder, Solukon makes powder handling immediately after depowdering simpler and safer.

### **How the powder collection unit works**

During automated depowdering in accordance with Solukon SPR® technology, the powder collects in the hopper at the bottom of the Solukon SFM-AT1000-S.

With the help of the integrated vacuum conveyor system, the SFM-PCU vacuums up the powder at a sensor-monitored transfer point. It then goes through a hose and is gently transported into a large container. From there, the contaminated material can be transferred through a neutral interface to a recycling station or the like, where it is made available for further printing processes. The container is rollable and can be exchanged during the process. The filling level inside the container is scanned by a sensor and can also be checked through large inspection windows. Thanks to the direct digital connection to the Solukon depowdering system, users always have a real-time overview of the process status.



### **The benefits of the vacuum conveyor**

When the SFM-PCU is integrated into the system, users no longer have direct contact to the powder material during depowdering: the powder remains in a closed system at all times. "This makes it possible to meet the most stringent occupational health and safety requirements and achieve a new milestone on our path towards a dust-free factory," said Benedikt Lutzenberger, an employee in the Product Care department and head of the SFM-PCU powder collection unit project. Since the powder no longer has to be ejected manually, larger quantities of powder can be transported away more quickly, making the depowdering process even more efficient. Emptying and subsequently cleaning the Solukon depowdering system is also easier.

The powder collection unit is designed for a particularly high volume of powder, which makes it the ideal peripheral for Solukon systems in both the large part segment (SFM-AT1000-S and depending on the application, SFM-AT800-S as well) and for automated serial production. Since the container at the unit has a substantial volume of over 100 liters, one peripheral unit can be coupled to up to three single-material Solukon systems.

### **Why Solukon relies on Piab**

Inside its new powder conveying unit, Solukon relies on a vacuum conveyor from the Swedish company Piab. The conveyor used in the SFM-PCU is highly efficient, reliable and easy to service. It meets all of Solukon's requirements and expectations. Piab is the market leader in the vacuum conveyor sector, but Solukon has even more reasons to place its trust in the company. In the polymer sector, Solukon has used Piab conveyors in the SFP770, its automated unpacking and cleaning station, for many years. "Piab has already proved itself to be a highly competent and reliable partner for powder conveyors in the SFP770 project," said Benedikt Lutzenberger.

### **The Solukon powder collection unit live for the first time at Formnext 2023**

Solukon is launching the SFM-PCU powder collection unit at Formnext 2023 from November 7-10. The Solukon team looks forward to welcoming you at Booth 12.0, D42. The new powder conveying unit will be connected to a Solukon SFM-AT1000-S. Solukon will also have an enhanced version of the SFM-AT350 with extensive new features at the booth, as well as an SFM-AT800-S with robot integration at the neighboring booth of postprocessing automation experts Rivelin Robotics.



## **Figures:**

Figure 1: The SFM-PCU by Solukon

## **Über Solukon**

### **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.

### **Solukon Maschinenbau GmbH**

Contact Marketing/PR: Marina Haugg, Marketing & PR Manager  
Email: [m.haugg@solukon.de](mailto:m.haugg@solukon.de)  
Web: [www.solukon.de](http://www.solukon.de)