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Solukon launches New Depowdering System SFM-AT850: The Next Benchmark for Depowdering Large Metal Parts

Compact, intelligent and designed for large and heavy parts: With the new SFM-AT850 depowdering system, Solukon is expanding its portfolio. Once the current batches have been delivered, the new system will replace the SFM-AT800-S and SFM-AT1000-S models. As the next generation, the SFM-AT850 sets a new benchmark for the automated depowdering of complex metal parts, offering an even higher load capacity. Solukon is also unveiling the SFM-AT850-E variant with ultrasonic excitation. The SFM-AT850 depowdering system will celebrate its world premiere at Formnext 2026.

With the SFM-AT850, Solukon Maschinenbau is presenting the next generation of its automated depowdering systems for complex metal parts produced using the Laser Powder Bed Fusion process. The machine combines a broad range of part sizes with a compact design, enabling the efficient, reliable and reproducible removal of powder from a wide variety of geometries.

Compact depowdering system for parts weighing up to 1,000 kg measuring up to 800 mm in height

The SFM-AT850 can accommodate parts weighing up to **1,000 kg**, which is an increase of 700 kg and 100 kg, respectively, compared with the predecessor models, with dimensions of up to **650 × 650 x 800** mm. At the same time, its overall dimensions are smaller than those of the SFM-AT800-S. This saves space in production and improves the ratio of footprint to usable chamber volume.

Metal 3D printing has developed dynamically in recent years, particularly in the large-format parts segment. The increasing production of large and heavy parts, including serial production, and the dense packing of build plates with numerous parts are raising the demands placed on post-processing. With the SFM-AT850, Solukon is responding specifically to this development. Its load capacity of up to 1,000 kg and optimized chamber volume make it an ideal complement to large-format flagship printers such as the EOS M 4 ONYX and the NXG XII 600 from Nikon SLM Solutions.

A key feature of the SFM-AT850 is its **front-top** loading concept, which is also used in the SFM-AT1000-S and SFM-AT1500-S. When the roof is opened, the upper door frame folds upward with it. This allows even large and heavy parts to be flexibly loaded into the machine at the height of the rotation plate. There is no need to thread the parts in from above, which significantly facilitates crane loading.

SFM-AT850-E Version with ultrasonic excitation for gentle depowdering

Ultrasonic excitation is particularly well suited for highly intricate lattice structures, such as those found in medical parts, and for very long internal channels. This exceptionally gentle form of excitation has already proven its effectiveness in Solukon's smaller SFM-AT350-E system for medium-sized parts and is now also available as an option for the new SFM-AT850 depowdering system in the SFM-AT850-E version. "Automated depowdering using ultrasonics has proven itself in recent years and established itself as a genuine alternative to pneumatic excitation. With the new SFM-AT850-E, this gentle and noiseless depowdering method is now also available to our customers for larger parts," says Andreas Hartmann, CEO/CTO of Solukon.

Intelligent Depowdering with SPR-Pathfinder®

For more than a decade, Solukon technology has shaped and defined the depowdering market. The SFM-AT850 is the latest testament to durable, reliable machine engineering combined with the highest depowdering quality and intelligent features. As a matter of course, Solukon's latest system is also compatible with the unique SPR-Pathfinder® software. Based on the part's CAD file, the software calculates the perfect sequence of movements, which the machine then executes.

The advantage: As early as the design phase, users can use the software to check whether their geometry can be depowdered and obtain an accurate estimate of the depowdering time. Design for Depowdering is thus becoming a firmly established step in the additive manufacturing process chain.

Ease of use and ergonomics

The SFM-AT850 uses the proven principle of Smart Powder Recuperation technology, SPR®: Programmable two-axis rotation and vibration excitation make the powder flowable, allowing it to flow out of even the most complex channels. For reactive materials such as aluminum or titanium, the SFM-AT850 can be inertized using protective gas. **New features include two additional compressed-air connections and two additional protective-gas connections on the rotation plate**, which can be used, for example, for an additional blow-off system on the rotation plate. The powder can either be collected in a compatible container or safely and automatically discharged using the compatible SFM-PCU powder collection station.

The SFM-AT850 is operated via a **new, large portrait-format display** that can be positioned flexibly. The glove ports are ergonomically positioned at an ideal height and have been enlarged. The inside of the SFM-AT850's door is clad in stainless steel, preventing powder from adhering to the door interior.

Comprehensive new features in machine software

The SFM-AT850 also marks a major step toward greater ease of use and improved production planning in the area of machine software. Different user levels with different access rights can be set up on the depowdering system.

"For example, in a production environment, it may make sense to prevent every user from changing the basic settings of the Solukon machine. With different user levels, we can tailor operation of the Solukon machine even more closely to our customers' needs," says Andreas Hartmann.

In addition, individual cleaning programs, including both SPR-Pathfinder® programs and custom-programmed ones, can now be managed and assigned directly on the machine with greater ease. Remote maintenance will also be available for the first time on the SFM-AT850.

Optional long swivel arm for parts up to 1,050 mm in height

For particularly tall parts, the SFM-AT850 is optionally available with a long swivel arm. This enables the depowdering of parts up to 1,050 millimeters in height, making it ideally suited for parts printed using an AMCM M 4K, for example.

SFM-AT850 to Be Unveiled at Formnext 2026

At Formnext, Solukon will present the SFM-AT850 to the public for the first time. The system will be available to order starting with Formnext and is expected to be delivered by the end of Q3 2027. The predecessor models, SFM-AT800-S and SFM-AT1000-S, will be phased out in parallel once the current batch has been delivered.

Experience the SFM-AT850 and the next benchmark in industrial depowdering live at booth D58 in Hall 12.0. The SFM-AT350-E for medium-sized parts will also be on display at the booth. The Solukon team looks forward to your visit.

About Solukon

Solukon Maschinenbau GmbH is a German high-quality supplier of powder removal and processing systems for metal and polymer additive manufacturing. In 2015, Solukon presented the world's first system for automated depowdering. Founded by Andreas Hartmann and Dominik Schmid, the Augsburg-based company 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 has also been offering the world's first and unique intelligent software for automated simulation and (pre-)calculation of the depowdering of laser-melted metal parts, 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 has established itself as the market leader in the field of industrial powder removal with its powder removal systems for metal.