Additive manufacturing: New generation of centrifugal mixers makes new materials for 3-D printing possible

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New era of laboratory mixing with intelligent Hauschild SpeedMixer® SMART DAC Series

FARMINGTON HILLS, MICHIGAN, VEREINIGTE STAATEN, March 21, 2022 /EINPresswire.com/ -- Additive manufacturing is a process with which thin layers of UV light-sensitive liquid polymers are solidified by using a laser. Over the last 30 years this technology has gained momentum as “3D printing” and has opened the way to rapid prototyping technology.

The materials used in Additive Manufacturing are manifold: resins and other base materials that usually contain viscous polymers, solid powders and other even biological materials that need to be processed properly. To achieve high-quality results, the mixing process is crucial.

Using a centrifugal laboratory mixer with temperature control and vacuum technology helps to accurately homogenize and dispense the materials to be used in the downstream production process.

There are five industries where additive manufacturing has already transformed from Research and Development onto the production line:

- Aerospace (production of complex parts with highest strength)
- Medical (production of functional prototypes, true-to-life anatomical models, surgical grade components...)
- Transportation (lightweight components for more efficient vehicles)

•Energy (production of on-demand, lightweight and environmentally friendly materials)
•Consumer products (quick simulation in the early product development, producing prototypes with realistic aesthetics and functionality for test markets…)

To date, there is only one manufacturer in the world of a mixer combining DAC technology, temperature control, vacuum and even the possibility of integration with robotic systems that helps all these industries to invent new materials: Hauschild Engineering. Their Hauschild SpeedMixers® have already been on the market for around 50 years. The recently introduced new generation of this mixer, the SMART DAC, now allows to mix new materials with the proven DAC technology..

The new Hauschild SpeedMixer® SMART DAC Series comes with real-time temperature control, vaccum, sensor integration, variable counter rotation, Internet of things compliance, QR-code reader, remote control and auto-programmable cooling system.


Fabio Boccola, Managing Director of Hauschild GmbH & Co KG

New capacity and higher volume

Furthermore, the industry leader increased the capacity of its Hauschild SpeedMixers®, offering more choices for specific applications. The SMART DAC series allows mixing from 250 g up to 2 kg and all SMART DAC will be available with mixing volume from 310 ml up to 2.8 liters.

> New features like the control of the jar's temperature in combination with an automatic cooling programme or the mixing under vaccum make the new SMART DAC series capable of mixing the unmixable."
>
> *Fabio Boccola, Managing Director of Hauschild GmbH & Co KG*

Fabio Boccola, Managing Director of Hauschild GmbH & Co KG explains: "Our new Hauschild SpeedMixer® SMART DAC Series is designed to be virtually maintenance free, very robust and to raise the bar on performance." Up to 20 percent more powerful versus the standard LR version, the SMART DAC features variable counter rotation, increased mixing weight and volume and allows up to 30 minutes of mixing time. The improved structure also allows mixing from 0 rpm up to maximum speed without the risk of high vibrations, offering a big advantage when, for example, a light powder is one of the components. "New features like the control of the jar's temperature in combination with an automatic cooling programme or the mixing under vaccum make the new

SMART DAC series capable of mixing the unmixable," Boccola adds.

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Vacuum robotic capabilities

For companies with highly automated laboratories and small quantities production Hauschild offers a robotic version – even with vacuum option for perfect degassing – to be easily integrated in robotic systems. Up to 500 programs with multiprogram function and up to 36 steps with acceleration and deceleration programmable for each step help to relieve laboratory employees from ineffective and boring work steps. This enormous time saving is freeing up capacities to do the work that really matters: creation of new formulations and increasing quality and variety of products.

Around 7000 innovations have already been patented worldwide using the Hauschild SpeedMixer® devices until now. The SMART DAC will facilitate the development of new processes and protocols even more. Fabio Boccola says: "Hauschild SpeedMixer® sales representatives all over the world are happy to answer any questions or to schedule a product demonstration at the customers facility using their materials. We are excited to see which ideas of new formulations and products will become reality by using our new SAMRT DACs and 3-D printing technology."

Visit us at 3D Printing & Additive Manufacturing Event | RAPID + TCT (rapid3devent.com), May 17-19, 22., booth #1347

More: www.hauschild-speedmixer.com

Youtube: https://www.youtube.com/channel/UCs9jdLhro1rPgRZ3Lr-Nu1A/videos

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