

# RAMPF Mineral Casting – Outstanding Vibration Damping & Sustainability

MECT 2021 – EPUMENT<sup>®</sup> machine bed material for machine tool construction, semi-conductor, laser, medical, and packaging industries

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Osaka, Japan, September 23, 2021. RAMPF Group Japan, K.K., is presenting its high-performance, vibration-damping machine bed material EPUMENT<sup>®</sup> mineral casting for the machine tool construction, semi-conductor, laser, medical, and packaging industries at MECT 2021 in Nagoya from October 20 to 23 – Booth 1B32.



Outstanding vibration damping, high degree of functional integration, sustainable and environmentally friendly production – the machine bed of this high-speed milling machine is made from RAMPF EPUMENT<sup>®</sup> mineral casting.

The epoxy resin-bonded mineral casting material EPUMENT<sup>®</sup> from RAMPF is used across the globe in vibration-damping machine beds and machine bed components in the machine tool construction, semi-conductor, laser, medical, and packaging industries, amongst others. The main advantages are:

- > Outstanding damping qualities – the machine bed structure has greater dynamic stability in ultra-fast and high-precision production machinery; comparative measurements of the logarithmic decrement as a damping parameter show that mineral casting has a material damping capacity that is eight to ten times greater than metal materials such as gray cast iron and welded constructions.
- > High degree of functional integration – the cold-casting process of EPUMENT<sup>®</sup> enables sensors and actuators to be directly integrated into the machine bed, making these so-called “intelligent machine beds” an important prerequisite for the digitization of manufacturing processes (Industry 4.0).
- > Resource-saving production, environmentally friendly disposal and recycling – the manufacture of EPUMENT<sup>®</sup> consumes up to 30 percent less primary energy than the smelting of gray cast iron and steel; machine beds and components made of mineral casting can be disposed of in the

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same way as normal construction materials and used as feedstock in road building, industrial construction, and landfill surface sealing, amongst others.

RAMPF Group Japan provides its customers with a holistic service offering, including material-specific design and engineering, production, assembly, and the construction of customized multi-axis moving systems and basic machinery.

Masafumi Yasunaga, Division Manager Machine Systems at RAMPF Group Japan – “RAMPF is the world’s biggest producer of mineral casting. We have almost three decades of experience in developing and constructing machine beds and machine bed components using this high-performance material. We look forward to presenting the enormous potential of EPUMENT<sup>®</sup> for highly dynamic mechanical engineering applications at MECT 2021 together with our distribution partner Freeman Japan.”

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[www.rampf-group.com/en-jp/](http://www.rampf-group.com/en-jp/)



The international RAMPF Group is present in Japan with a subsidiary in Osaka and sales offices Kantō and Chūkyō regions. The product portfolio encompasses:

- > Modeling & mold engineering materials for the automotive, aviation, and many more industries
- > Two-component polymer systems based on polyurethane, epoxy, and silicone
- > Mixing & dispensing systems for processing polymers
- > Machine bases, machine frames, and other structural components made of mineral casting for the tool engineering, medical technology, and semi-conductor industries

The international **RAMPF Group** stands for engineering and chemical solutions and caters to the economic and ecological needs of industry. The Group secures its presence on the international markets with 900 employees and six core competencies:

- > **RAMPF Machine Systems** based in Wangen (Göppingen), Germany, develops and produces multi-axis positioning and moving systems, trunk machines, and basic machines based on high-precision machine beds and machine bed components made from alternative materials.
- > **RAMPF Production Systems** based in Zimmern o. R., Germany, develops and produces mixing and dispensing systems for bonding, sealing, foaming, and casting a wide variety of materials. The company also offers a wide range of automation skills relating to all aspects of process engineering.
- > **RAMPF Composite Solutions** based in Burlington, Ontario, Canada, is a holistic composites supplier to companies in the aerospace and medical industries. The company offers a complete suite of services including composite part design and engineering, metal-to-composite conversion engineering, and composite manufacturing to very tight tolerances.
- > **RAMPF Eco Solutions** based in Pirmasens, Germany, develops chemical solutions for the manufacture of high-quality alternative polyols from PU and PET waste materials. This expertise is also put to use in the planning and construction of customer-specific facilities for manufacturing polyols.
- > **RAMPF Polymer Solutions** based in Grafenberg, Germany, develops and produces reactive resin systems based on polyurethane, epoxy, and silicone. Its product portfolio includes liquid and thixotropic sealing systems, electro and engineering casting resins, edge and filter casting resins, and adhesives.
- > **RAMPF Tooling Solutions** based in Grafenberg, Germany, develops and produces board and liquid materials for cutting-edge modeling and mold engineering. The range of skills includes made-to-measure services and products such as pastes, large-volume and full-size castings for Close Contour models, and prototyping systems.

RAMPF has subsidiaries in Germany, the U.S., Canada, China, Japan, and Korea.

All RAMPF companies are united under a holding company – **RAMPF Holding GmbH & Co. KG** – based in Grafenberg, Germany.

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