

Energy-Efficient. Space-Saving. Ultra-Stable. REIDEN RX10 with EPUMENT® Mineral Casting.

Market-leading 5-axis machining center is based on a machine bed made of vibration-damping and environmentally friendly material from RAMPF

Wangen (Göppingen), Germany, May 6, 2024. Minimize moving parts, maximize rest mass – the design principle of the 5-axis machining center RX10 has been impressively put into practice by Reiden Technik AG. For this market-leading machine, EPUMENT® mineral casting from RAMPF Machine Systems provides a vibration-damping and energy-efficient machine bed.



“Space-saving marvel” – this is how customers describe the RX10 in view of its compact appearance and yet very large machining area. The 5-axis machine for milling and turning is designed for optimal space utilization, with the ergonomic arrangement of the control elements ensuring best operability, even in the tightest of spaces.

“Just as impressive is our DDT Double Drive Technology spindle concept,” emphasizes Daniel Lustenberger, Head of Marketing & Sales at the Swiss machine tool manufacturer Reiden Technik AG. “While the standard version is equipped with a motor spindle variant generating a speed of 16,000 rpm and a maximum torque of 135 Nm, our patented DDT drive concept achieves up to 18,000 rpm and 291 Nm.”

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Stay cool – with EPUMENT® mineral casting



A further benefit of REIDEN RX10 is the active temperature control of the machine bed and stand. Thanks to the energy-optimized cooling unit, the closed system can be operated continuously, even overnight or during downtimes. In addition, the machine can be run at ambient temperatures and therefore offers a very high level of geometric accuracy, also under difficult conditions.

This is made possible by 200 meters of cast-in temperature control lines in the machine bed made of EPUMENT® mineral casting from RAMPF Machine Systems. “The integrated line system ensures effective dissipation of process heat and thus thermally stable production processes, which guarantee maximum precision and quality,” says Daniel Lustenberger.

Kacper Lasetzki, Sales Manager at RAMPF Machine Systems, explains – “EPUMENT® is cold cast into molds and cures at room temperature, which means that almost all functional elements can be installed before casting. This reduces both the amount of post-processing work and the delivery time.”

Maximum vibration damping. Sustainably produced and recyclable.

EPUMENT® mineral casting ensures maximum dynamic stability of the frame structure for ultra-fast and high-precision machines. Comparative measurements of the logarithmic decrement as a damping parameter show that mineral casting has eight to ten times higher material damping than gray cast iron and welded constructions.

In addition to the unrivalled damping properties, the low CO₂ footprint of EPUMENT® mineral casting is also a decisive competitive advantage. Thanks to cold casting and the extremely high casting accuracy, up to 75 percent primary energy is saved compared to gray cast iron, and CO₂ emissions are 4.5 times lower. In addition, RAMPF mineral casting can be recycled as normal construction waste for fillers or soil stabilization.

Kacper Lasetzki – “We have been working successfully with Reiden Technik AG for over 17 years. The company has an outstanding reputation as a manufacturer of intelligent, customer-specific solutions in mechanical engineering. We are proud to contribute to this success both as a development partner and with our innovative machine bed material.”

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RAMPF Machine Systems supplies the machine beds for the REIDEN RX10 as a complete system. For this, the two-part machine bed is bonded using RAMPF's in-house joining and bonding technology.

Key facts

- 5-axis machining center RX10 from Reiden Technik AG
 - o Very small footprint with large machining area
 - o DDT Double Drive Technology drive concept with speed of 18,000 rpm and maximum torque of 291 Nm
 - o Active temperature control of machine bed and stand for 24/7 operation

- EPUMENT[®] mineral casting
 - o Outstanding vibration damping for ultra-fast and high-precision machines
 - o High degree of functional integration – cold casting process enables direct integration of sensors, actuators etc. in machine bed
 - o Resource-saving production, environmentally friendly disposal, recyclability

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www.rampf-group.com



RAMPF Machine Systems GmbH & Co. KG, based in Wangen (Göppingen), Germany, is the leading supplier and development partner for system solutions, trunk machines, and basic machines, as well as multi-axis positioning and moving systems based on high-precision machine beds and machine bed components made from alternative materials.

The portfolio of high-performance materials includes mineral casting, ultra-high performance concrete (UHPC), natural hard stone, mineral casting ULTRALIGHT Flow, and steel composite constructions. These materials provide a solid basis for ultra-precise and high-performance machine beds and machine bed assemblies.

The full range of services provided by the company includes everything from engineering to production, as well as assembly, system solutions, customer-specific multi-axis positioning and moving systems, and basic machines – from single-piece to series production in customized supply chain solutions.

Using innovative casting, grinding, and lapping processes, as well as high-performance assembly and testing equipment in temperature-controlled production environments, exceptional accuracy of machine bases and basic machines is guaranteed.

RAMPF Machine Systems is a company of the international **RAMPF Group** based in Grafenberg, Germany.

Published by:
RAMPF Machine Systems GmbH & Co. KG
Daimlerstrasse 18 - 26
73117 Wangen (Göppingen), Germany
T +49.7161.95889-0
F +49.7161.95889-29
E machine.systems@rampf-group.com
www.rampf-group.com

Your contact for images and further information:
Benjamin Schicker
RAMPF Holding GmbH & Co. KG
Albstrasse 37
72661 Grafenberg, Germany
T +49.7123.9342-1045
F +49.7123 9342-2045
E benjamin.schicker@rampf-group.com