PRESS INFORMATION

The best of two worlds

SIMTEK presents innovative milling tool system with monoblock performance features

Mössingen, September 10, 2024 - Until now, users have had to choose between the flexibility of a modular tool system with interchangeable cutting inserts or the high precision and power transmission of monoblock tools. With the new simmill 9W family from SIMTEK, this decision is no longer necessary in most cases. The tools in this series offer interchangeable cutting inserts that come close to monoblock tools in terms of power transmission and precision - and at a significantly lower cost.

The starting point of the simmill 9W family, which is now available in different versions, is the simmill 9W4 tool milling system, which was originally developed for a complicated component in the automotive industry and represents a significant advancement in the field of milling tools. Norbert Seifermann, CEO at SIMTEK, emphasizes: "Many industrial customers want to take advantage of the flexibility of modular milling tools, but until now this was often associated with limitations in terms of accuracy and load capacity. With the simmill 9W4 system, we now offer a powerful solution for grooving, slot and parting off milling that makes this compromise superfluous in many cases."

Development and technical details

simmill 9W4 arose from a specific requirement in the automotive industry and is the result of intensive development work. For the production of a complicated component, a tool was needed that could work precisely and stably even under difficult conditions, such as limited space with long overhang lengths. To meet these requirements, the experts from Mössingen developed a milling



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tool that uses interchangeable cutting inserts and yet achieves almost the stability and precision of a monoblock tool.

The simmill 9W4 system is based on a highly developed gearing technology that offers a number of advantages. The high stability of the gearing makes the simmill 9W4 system suitable for applications with high torques and, thanks to the ground gearing, ensures high precision in radial and axial run-out with minimal wear at the interface between the holder and cutting insert.

Advantages and possible applications

The standard range of the simmill 9W4 system is already suitable for milling depths of up to 16.5 mm, which is far beyond the capabilities of many other comparable tool solutions. The interchangeable cutting inserts are available in cutting widths from 0.5 mm to 6.0 mm. The 12 straight or cross-toothed cutting edges guarantee high cutting performance and therefore shorter main times.

The system is also impressive when used in confined spaces: The shank diameter is up to three times smaller than the diameter of the cutting insert. The integrated coolant supply contributes to a longer tool life and ensures efficient cooling.

Sustainability and resource efficiency

Another aspect that distinguishes the tool system, according to the manufacturer, is its sustainability. The durable and robust tools ensure economical and environmentally friendly production. The modular design of the tool system also significantly reduces material consumption compared to monoblock tools. While worn monoblock tools have to be completely disposed of after one or more regrindings, with the simmill 9W4 system only the actual cutting insert has to be replaced after several regrindings. This not only saves resources, but also reduces production costs and the CO2 footprint.

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The simmill 9W4 milling tool system has been continuously developed since its introduction and now includes different variants with different diameters and cutting edge geometries. In addition to simmill 9W4, the 9W1 variant is currently available

with a maximum milling depth of 9.3 mm and cutting widths of 1.2 mm to 2.5 mm. Steel and carbide toolholders are available for both variants. Numerous other versions and intermediate sizes are already being used successfully for customized solutions. "These further developments underline the flexibility of the system and its ability to close the gap between conventional interchangeable tools and monoblock tools," explains

SIMTEK

CEO

Seifermann.

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((Infobox))

Overview of the variants

The simmill 9W product family from SIMTEK combines the flexibility of modular interchangeable inserts with the precision of monoblock molds.

The SIMTEK catalog offers a wide selection of variants of the simmill 9W4 and 9W1 system. A table in the catalog makes it easier to choose the right tool.

- Information and current SIMTEK catalog as PDF download: https://download.simtek.com/docs/public/SIMTEK-
- Hauptkatalog-R25DE.pdf
 simmill 9W4 in the video:
 https://www.youtube.com/watch?v=3lk8g-FfLsU

((Infobox end))

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Fig. 1: Nobert Seifermann, released as a quote (Source: SIMTEK AG)

Caption: Norbert Seifermann: "The simmill 9W4 milling tool system closes an important gap in the market by combining the flexibility of modular exchangeable insert tools with the precision and power transmission of monoblock tools. The system is suitable for numerous industrial applications and offers users the opportunity to make their production processes more efficient and resource-saving."

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Figure 2: The simmill 9W4 tool milling system in detail (Source: SIMTEK AG) Caption: With the simmill 9W family, SIMTEK offers an innovative milling tool system that combines the flexibility of modular milling tool systems with the precision and power transmission of monoblock tools.

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Figure 3: simmill 9W4, rendered image

BU: This variant has 12 teeth and is designed for cutting depths of up to 16.5 mm.

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Figure 4: simmill 9W1, rendered image

BU: This variant has 6 teeth and is designed for cutting depths of up to 9.3 mm.

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About SIMTEK

Founded in 1994, SIMTEK Präzisionswerkzeuge GmbH, a central part of the SIMTEK Group, employs almost 600 people worldwide at six production, sales and logistics locations and is present in 46 markets around the globe. The tool specialist, headquartered in Mössingen, Swabia, develops, manufactures and sells carbide precision tools of the highest quality and performance. The extensive standard range currently includes around 11,000 tools for grooving, turning, circular milling, grooving, thread whirling and polygon milling. Tools for machining bores with a minimum diameter of 0.3 mm are just as much a part of the standard range as highly complex, multi-row side milling

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cutters with a diameter of 200 mm. Thousands of successful customer-specific individual tool developments testify to our extensive development expertise.

New to the SIMTEK Group's product range are high performance rotary tools from the in-house brand Kaestner-Tools, which impress with their precision, performance and process reliability. The tool portfolio includes drills, countersinks, reamers and milling cutters as well as special and combination tools.

Further information can be found at: www.simtek.com

Proof requested for reprints

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