



Inovatools

Depth benefits in cutting

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Deepmax is made of tough and extremely fine-grain carbides that ensure high strength and long service life. (Source: Inovatools)

Tool manufacturer based in Germany, Inovatools, says its new VHM-Deepmax deep-hole drills guarantee effective guidance and ultimately first-class hole quality even at greater drilling depths.

The new, universal VHM-Deepmax deep-hole drills (15xD to 30xD) completely replace the previous [Inovatools](#) range for deep-hole drilling. Deepmax guarantees effective guidance, providing fast and reliable removal of chips and ultimately allow for first-class hole quality even at greater drilling depths thanks to a whole host of design benefits, according to Inovatools. The company supports the metalworking industry in mould and tool construction, in the automotive and supply sectors as well as the aerospace industry with efficient [cutting solutions](#) for deep drilling.

The tool specialist notes that it uses tough and extremely fine-grain carbides that ensure high strength and long service life for the drills. Product Manager Tobias Eckerle says: "Long-standing business relationships with raw [material](#) suppliers is a prerequisite for the consistent quality of the substrate." Eckerle adds that its latest grinding technology, in-house coating and measuring guarantees high-performance, durable tools with extremely precise grinding, top surface quality and tight tolerances.

Inovatools explains that the high performance of the Deepmax, which has a drilling diameter of h7, is based on the geometry that has been adapted for this **special drilling process** and guarantees optimal chip removal in such applications. For this, the company relies on a special polishing technique to ensure that the specially developed chip grooves with a wide cross-section are extremely smooth. The front geometry with a 135° point angle is necessary for optimal centering of the drill, while ensuring ideal chip-breaking, low-cutting forces and supports quiet operation.

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GALLERY



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The four-margin design supports and stabilises the Deepmax drill in the axial direction to enable precise and vibration-free drilling with extremely low deviation from the centre. As a result, Deepmax delivers superb hole quality even with oblique outlets and cross-drilled holes. The very smooth Varocon high-performance coating that was specially developed for the application aids in fast chip flow and ensures a long tool service life.

Deepmax deep-hole drills demonstrate their performance in comparative tests, Inovatools adds. In the case of drilling into 42CrMo4 tempered steel (25xD – diameter 3.00), a conventional, deep-hole drill on the market reached a tool life of 60 m with pronounced wear marks, while the Deepmax reached a tool life of 75 m with normal wear. The comparison with 30xD (diameter 6.00) was similar; Deepmax achieved a tool life of 65 m with normal wear, while a normal tool managed a tool life of 58 m with pronounced wear marks.

Deepmax is available from stock in 15xD, 20xD, 25xD (all up to diameters of 12 mm) and 30xD (up to diameters of 10 mm) variants.