**SEPTEMBER 2023 | EMO HANNOVER**

**Superfinishing of bores**

At EMO 2023 in Hannover, Horn is presenting an innovative extension for the Supermini system in the field of ultra-fine machining. The precision tool manufacturer has added a variant with a precision-ground rake face to the Supermini system especially for ultra-fine machining of bores. Due to precision grinding of the cutting edge, it is free from notches when magnified approximately 200 times. The tool system can be used from an inside diameter of 0.3 mm (0.012"). The sharp insert geometry enables process reliability even with very small infeed and cutting feed rates. The specially developed coating is suitable for stainless steels, non-ferrous metals and other metallic materials.

The insert of the Supermini Type 105 system requires only one tool holder for well over 1,000 insert variants. This applies equally to left-hand and right-hand versions. The carbide inserts are available in coated and uncoated versions in different grades for every application including hard machining up to 66 HRC. The patented droplet shape of the cross-section has a vibration-damping effect and delivers excellent repeatability when changing the insert. Internal coolant supply to the insert increases tool life, enhances cutting performance and improves chip removal. Horn offers the tools with elements for face clamping. This allows, for example, the insert to be changed easily without having to remove the holder from the machine.

**History Horn Supermini:**

In 1989, HORN launched the technically superior Supermini system at the world's largest metalworking trade show, EMO in Hannover, Germany. After considerable technical development, it was possible to successfully manufacture precision internal grooving tools for bores down to 5 mm (0.197") in diameter. The Supermini system was born and over time became one of Horn's most successful products. In addition, the Supermini system was the first precision tool to benefit from Horn's own in-house coatings.

*1,957 characters incl. spaces*



**Photo caption:** Horn offers the Supermini tools with elements for face clamping.

Source: Horn/Sauermann



**Photo caption:** The insert of the Supermini Type 105 system requires only one tool holder for well over 1,000 insert variants.

Source: Horn/Sauermann

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