**EMO 2017**

**Hall 5, Stand A54**

**EG3/EG5 for Supermini, Mini and 312**

**New coatings improve tool life**

Materials that are extremely difficult to machine can pose a significant manufacturing and financial challenge to cutting tools – particularly when it comes to small and miniature parts. To address the needs of these applications – in which tools from the Supermini product series machine holes with diameters from 0.2 mm (0.0079") – HORN has developed the EG3 and EG5 coatings.

The distinction between the two types rests in their substrates and layer thickness and they make it possible to achieve an extremely smooth layer – reducing the amount of heat that is transferred to the tool, and the cutting edge in particular, thanks to significantly lower friction. A golden wear layer provides a coating for improved wear detection.

Numerous tests, plus experience that customers have gained in practice from highly precise, reliable procedures, have confirmed the excellent performance that the new EG3 and EG5 coatings are able to achieve. In comparison to previous coatings, they achieved increases in tool life of as much as 100 percent, depending on the material.

The new coatings have been developed for the Supermini, Mini and 312 tool systems. Supermini is primarily used for boring and grooving of hole diameters ≥ 0.2 mm (0.0079"). The Mini tool system comes into play in similar processes, but for hole diameters starting from 6.0 mm (0.2362"). The triple-edged inserts of the 312 system are also used for grooving and parting off, as well as for external machining and similar machining processes involving hole diameters from 46 mm (1.8110").

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**Image caption:**

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**Image 1:** Tool life increases of as much as 100 percent can be achieved with the new coatings.

**Image credits:** Paul Horn GmbH, Nico Sauermann

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