**NORTEC 2026**

**Slot broaching for small diameters**

Horn is expanding its slot broaching system with new type 117 inserts, which are suitable for internal diameters from 9 mm. The tool system is sustainable thanks to the low carbide content and has an advantageous price per cutting edge. Horn has developed a new carbide blank specifically for the 117 insert family. "Development of the new carbide blank required new approaches in production and metrology. Due to the small size of the inserts, we had to make significant adjustments in handling, fixture grinding and measuring systems," says Horn Product Manager Andreas Härle. The system is suitable for numerous broaching processes such as gear broaching, polygonal broaching and the broaching of keyways.

The new system has an advantage over solid carbide broaching tools. The tool shanks enable the broaching of longer or deeper grooves. Tool lengths are 20 mm, 30 mm and 40 mm. All types offer internal coolant supply directly to the cutting zone. The shank diameters of the tool holders are 16 mm and 20 mm. Horn also offers special holders for mounting in broaching units from various manufacturers. The standard inserts are available in numerous types.

The new broaching system has already demonstrated its capability during initial applications. One user previously achieved a tool life of 120 pieces when broaching a serration in a component made of hardened steel. By switching to the new Horn system, tool life increased to 1,040 parts, while maintaining the same cutting parameters. In addition to the significantly higher tool life, production costs fell due to the lower cost per cutting edge compared to that of the previously used carbide inserts.

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Caption: Horn is expanding its slot broaching system with new type 117 inserts, which are suitable for internal diameters from 9 mm.

Source: HORN/Sauermann



Caption: The tool shanks of the new system enable the broaching of longer or deeper slots. Tool lengths are 20 mm, 30 mm and 40 mm.

Source: HORN/Sauermann

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