**HORN Technologydays 2025**

**I-geometry for the Mini system**

Paul Horn GmbH has developed a chip-breaking geometry specifically for the Mini tool system types 108, 111 and 114. The sintered I-geometry is particularly aimed at machining materials with poor chip formation properties. It is suitable for copy turning, longitudinal turning, back turning and facing. Especially with shallow depths of cut in steel and stainless steels, the tool system with this geometry demonstrates its strengths in chip control. It leads to higher process stability and longer tool life. When developing the I-geometry, HORN also took into account the machining of lead-free materials. As these materials will pose a challenge in the future due to their inferior chip formation, the tool manufacturer offers inserts with small corner radii starting from 0.05 mm for small lateral infeeds. Corner radii from 0.05 mm to 0.2 mm are available from stock.

The face-mounted, screw-on, Mini-type inserts are among HORN's core products. The tool system is suitable for turning and milling applications. The precision tools have proven particularly effective for internal turning and grooving. With the low-vibration, solid carbide tool holders, the inserts produce good surface finishes even with long overhangs and ensure high process reliability. The Mini system portfolio offers inserts in various sizes for machining different internal diameters. Available also are different geometries and substrates, as well as CBN or diamond coatings.

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**photo caption:** The sintered I-geometry is particularly aimed at machining materials with poor chip formation properties.

Source: Horn/Sauermann



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