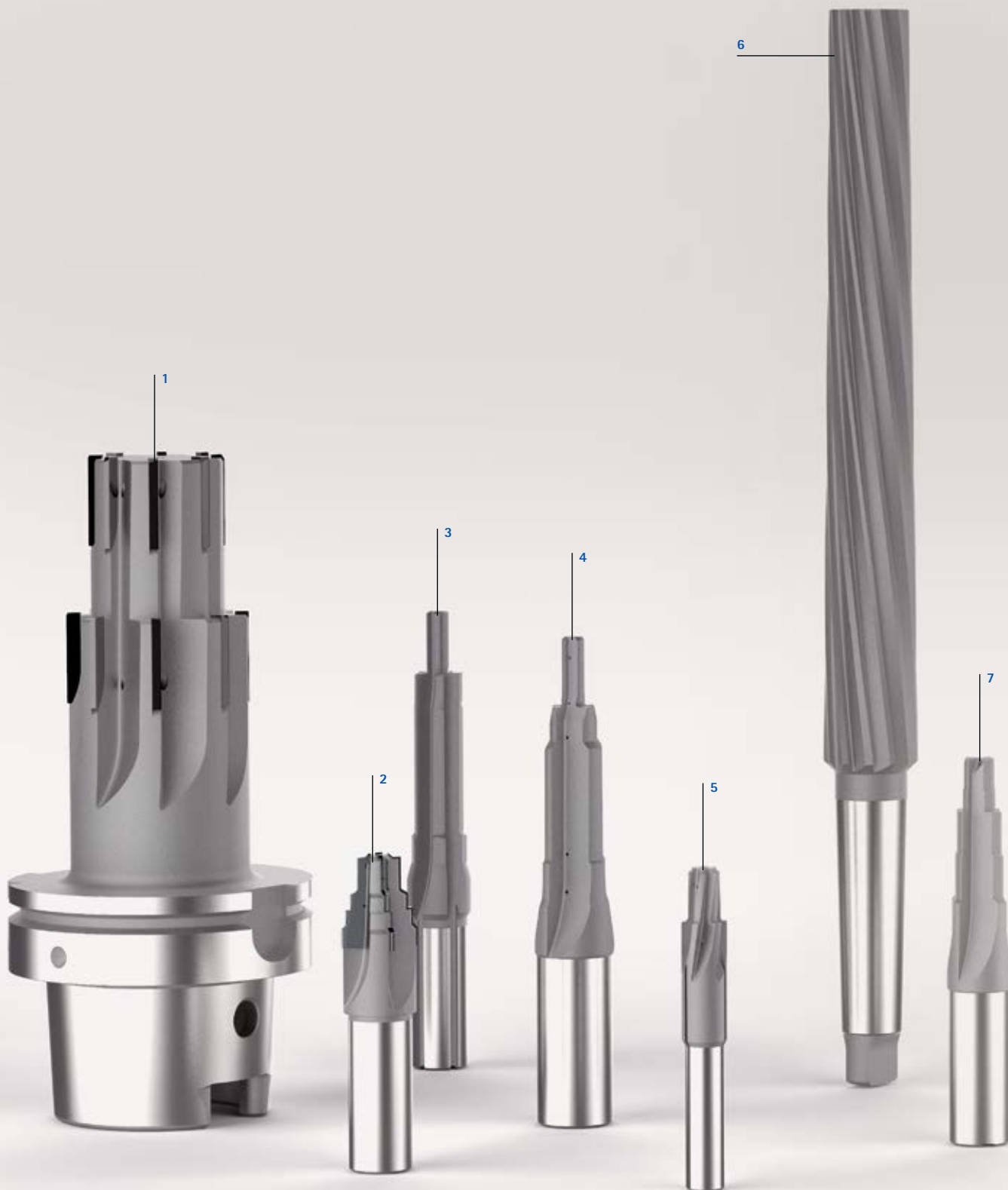
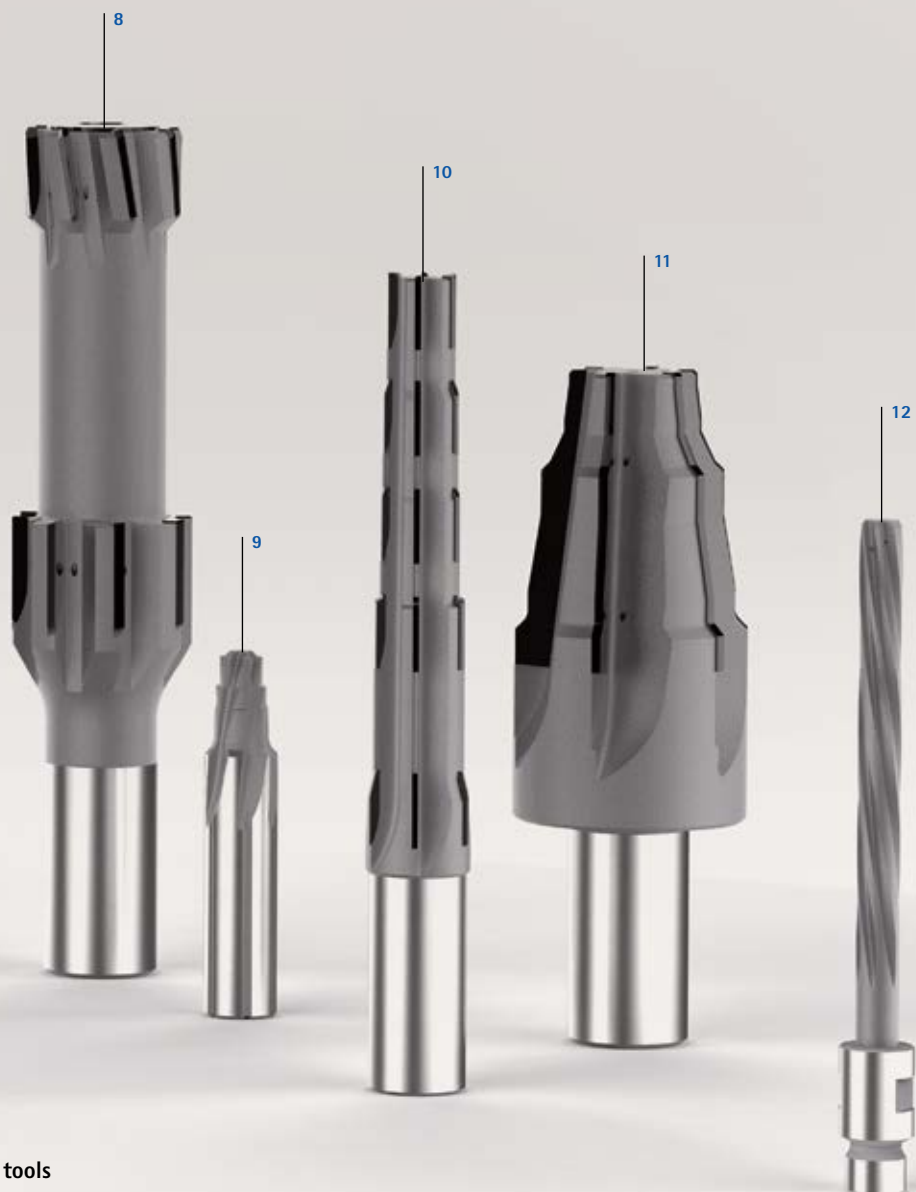


# CUSTOM SOLUTIONS

## Multi-bladed reamers





### Custom solutions solid carbide tools

- 1 Two-step custom tool with brazed cutting edges for machining a hydraulic housing made of EN-GJS-500-7
- 2 Multi-stepped coated solid carbide custom tool with chamfer and radius machining for a steel cylinder holder
- 3 Coated solid carbide step reamer for machining the injector bore in a cylinder head
- 4 Coated solid carbide step reamer for fine machining the contour of the spark plug bore in EN-GJL-250
- 5 Two-step solid carbide step reamer with additional chamfer machining for a high-pressure pump made of stainless steel
- 6 HSS machine taper reamer with MK shank
- 7 Solid carbide step reamer with VA geometry for machining a stainless steel valve block
- 8 Two-step custom reamer with brazed cermet cutting edges with combined straight and left-hand spiral fluted design
- 9 Coated multi-stepped solid carbide reamer with internal cooling on the shank for machining a rail
- 10 Step reamer with brazed half-round embedded cermet cutting edges for machining a steel nozzle holder
- 11 Coated carbide-tipped form reamer for machining special turned parts
- 12 High-performance reamer with brazed on blunt carbide head with custom connection for the aerospace industry for machining a titanium, aluminium and high-alloy steel rivet hole combination

# CUSTOM SOLUTIONS

HPR – High-Performance-Reamer



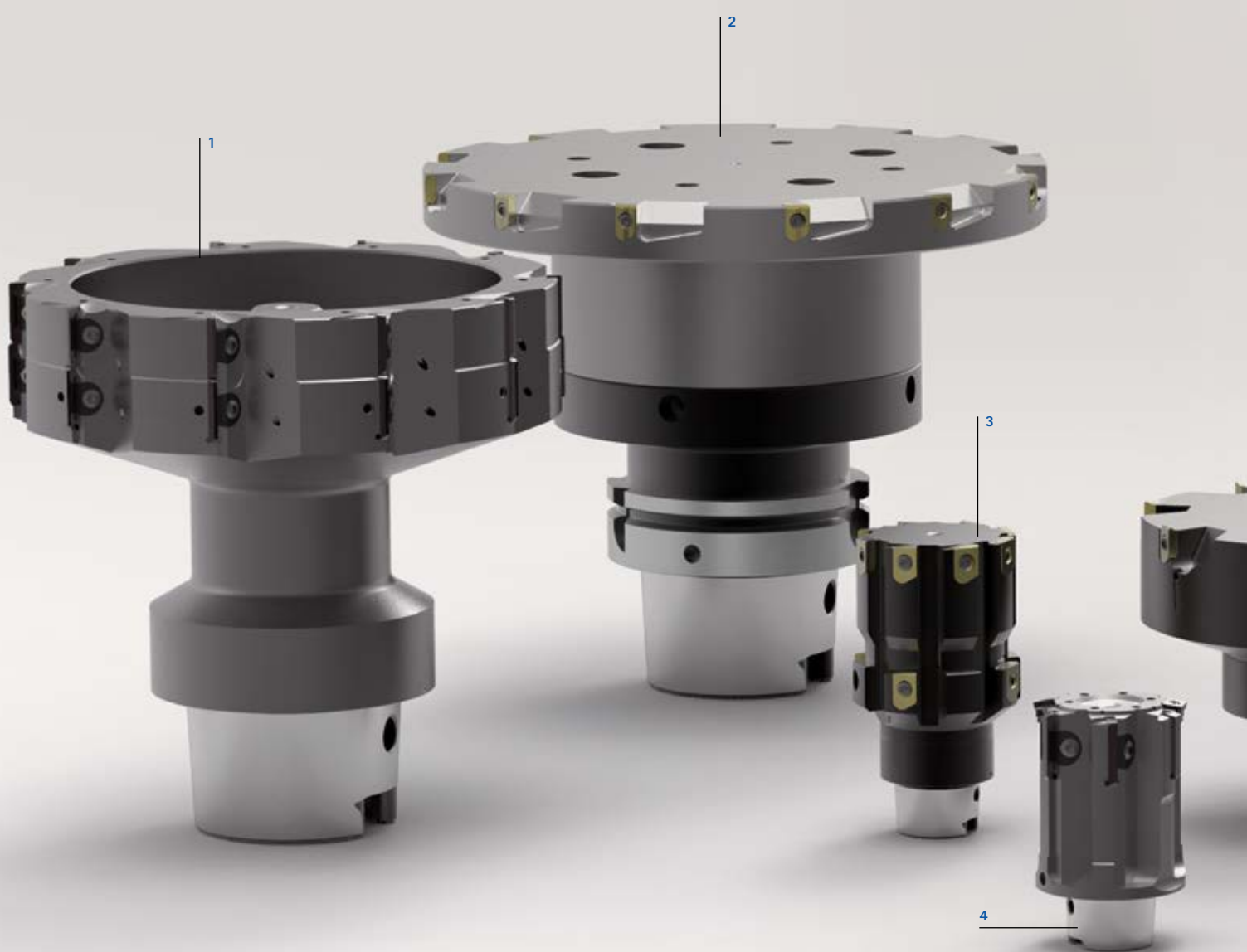


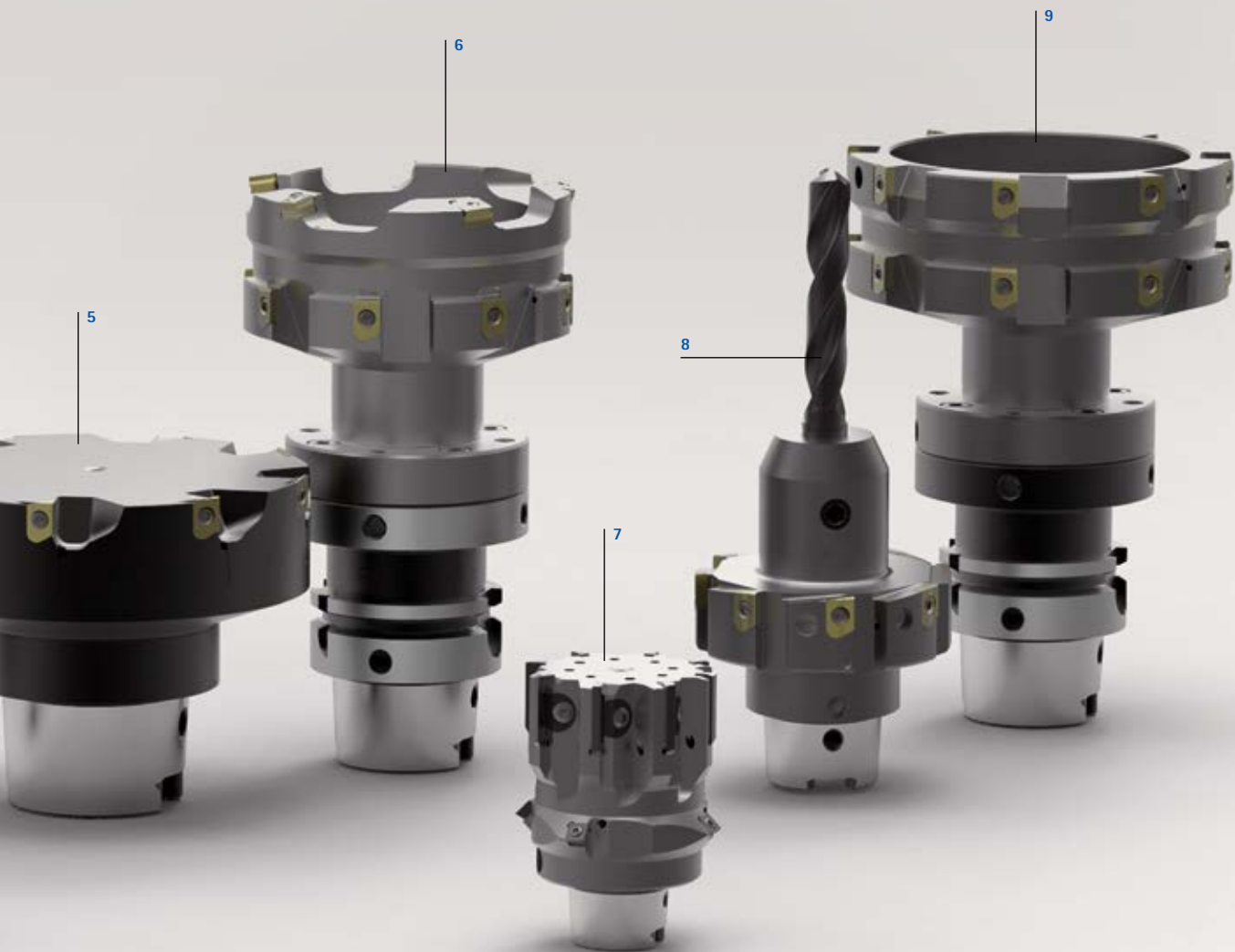
### Custom solutions HPR

- 1 Custom solution with modular HPR multiple cutting edge ring and solid carbide step reamer with additively manufactured holder with hydraulic clamping technology for internal and external clamping for valve seat machining without setting effort
- 2 Multi-stepped modular combination tool with integrated CFS connection for a fixed, brazed CPR tool, with ISO tangential inserts for pre-machining and HPR300 system for fine machining a brake calliper
- 3 Multi-stepped PCD-tipped custom tool with countersink step for machining a part in the aerospace industry
- 4 Multi-stepped HPR custom tool with HFS connection for machining the bore and contour countersink on a turbocharger made of GJL250
- 5 Multi-stepped custom tool for housing machining with tangentially arranged reaming cutting edges
- 6 Custom tool for machining a rivet bore in the aerospace industry
- 7 Right-cutting tool for blind bore machining for optimal chip removal
- 8 Multi-stepped custom tool with special cutting edge geometries and HFS connection
- 9 Custom tool in fixed design with brazed cutting edges for the stepped machining of face and chamfer transitions on the actuator bore in a brake calliper

# CUSTOM SOLUTIONS

Multi-bladed reamers for large diameters





### Custom solutions HPR300 and HPR400

- 1 Two-step HPR300 custom solution for machining the bearing bore in a gearbox housing
- 2 HPR400 with CVD-coated inserts in the diameter 160 mm for machining a differential housing with module interface that can be aligned
- 3 Two-step HPR400 tool with eight inserts for the piston bore and four inserts for the control cut on a brake calliper
- 4 Combination tool with ISO tangential inserts for pre-machining and HPR300 with PCD-tipped inserts for fine machining a brass bush
- 5 HPR400 custom tool for an axle beam made of GJS-400 with CVD custom inserts for bearing seat machining and for an axial recess
- 6 Combination tool in lightweight design with module connection that can be aligned on HSK adapter for machining a bevel wheel housing. With ISO tangential inserts for pre-machining and HPR400 system for finish machining
- 7 HPR300 with chamfer machining step
- 8 Combination tool with solid carbide drill as integrated solution and HPR400 reaming stage for machining a swivel bearing
- 9 HPR400 multi-stepped tool in lightweight design with module connection that can be aligned for machining a bevel wheel housing