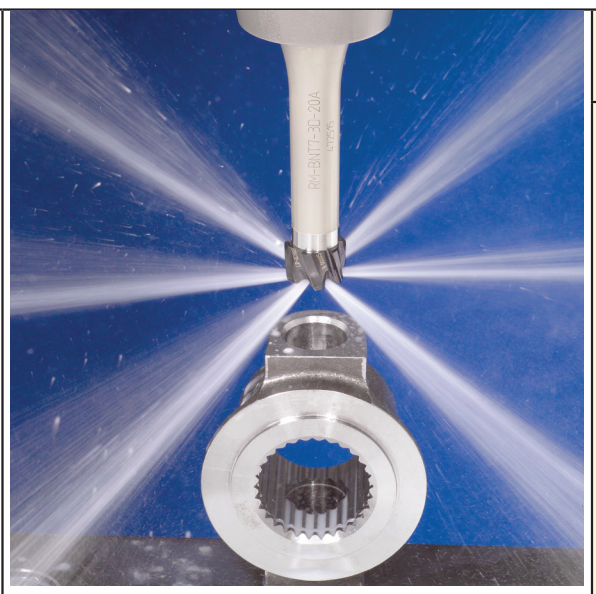
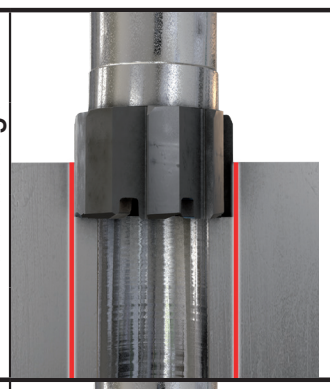
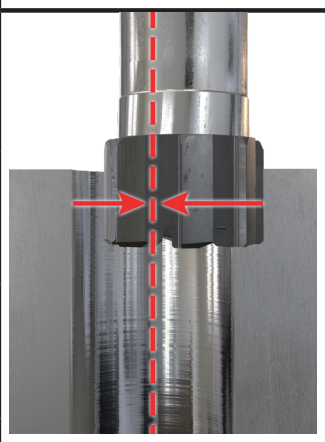


Problem			Solutions: Cutting Data/ Allowance			Tool; Toolholder						Workpiece	Machine			Machining Process			
			Feed fZ	Spindle speed min^{-1}	Diameter allowance	Geometry angle	Runout maximum 5µm	Wear check / Change insert	Optimize tool length and diameter	Floating chuck GFIS	ADJ chuck FineFit/RC RING	Workpiece fixture / Pressure	Coolant mixture	Coolant pressure	Angle error / Centic error / Axis deviation	Spindle speed on entry	Entry geomerty / Chamfer / Oblique surface at entry	Feed in and out same	Chip evacuation
Hole too large		Vibration	●			●						●	●	●		●	●		
		Runout error					●			●	●								
		Built up edge	●	●	●			●								●			
		Diameter allowance			●														●
Hole too small		Tool wear						●				● ●	● ●	● ●			●		
		Compression of material				●		●				● ●					●	●	
		Compression of clamping			●	●													
		Diameter allowance			●														
Tapered hole		Deformation by clamping			●							● ●							
		Unequal wall thickness			●	●													
		Machine					●		●	●	●				●				
		Chip flow											●	●					●
Hole shows chatter marks		Vibration	●	●	●	●		●	●			●	●	●		●	●		
		Rumout error					●		●	●	●				●				
Insufficient surface		Vibration	●	●		●		●	●			●	●			●	●		
		Built up edge	●	●				●					●	●					
		Runout error					●			●	●								
		Cutting geometry						●	●										●
		Machine										●	●		●				
Retraction marks		Built up edge	●	●			●	●	●	●	●		●		●		●		
		Compression of material			●	●		●	●	●	●	●					●	●	
		Compression of clamping																	
Slight defect in shape / noncircular hole		Tool wear			●			●											●
		Chip flow			●								●	●					●
		Machine				●	●	●	●	●	●				●		●	●	●
		Compression of clamping			●							●							