

TPO / EPO 18

Work material	Brinell Hardness HB	Grades	Cutting Speed Vc (SFM)	Feed per tooth fz (ipt)	
				MJ	AJ
Low carbon steels (1018, 1045 etc.)	~ 650	AH725	330 ~ 820	.003 ~ .008	-
High carbon steels (1045, 1055 etc.)	650 ~ 300		330 ~ 750	.003 ~ .006	-
Alloyed steels (4140, 4340 etc.)	150 ~ 300		330 ~ 590		
Tool steels (H13, D2 etc.)	~ 300				
Stainless steels (304, 316 etc.)	-	AH140	295 ~ 590	.003 ~ .008	-
Grey cast irons (CLASS 25-40 etc.)	150 ~ 250	AH725	460 ~ 820	.003 ~ .009	-
Ductile cast irons (65-45-12 etc.)					
Aluminum alloys (Si < 13%)	-	KS15F	980 ~ 3300	-	.002 ~ .010
Aluminum alloys (Si ≥ 13%)			330 ~ 650		
Heat-resisting alloy (Inconel 718, Ti-6Al-4V etc.)	-	AH725	65 ~ 120	.003 ~ .006	-

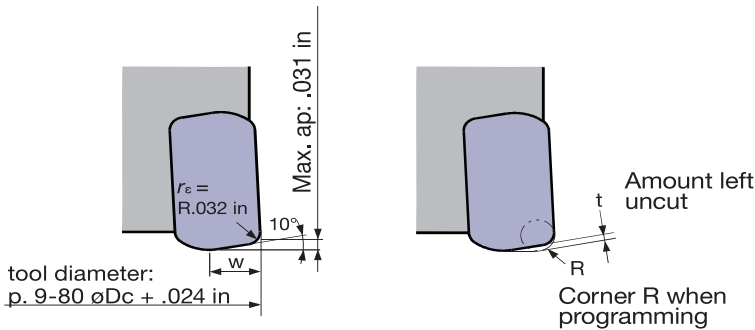
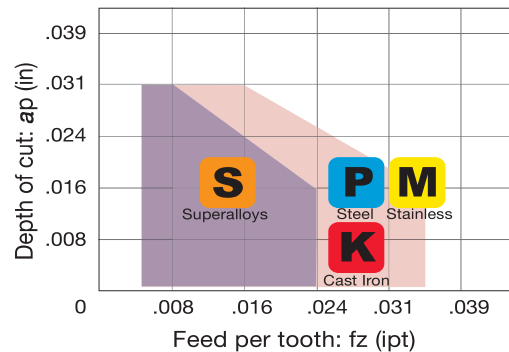
- To remove excessive chip accumulation use an air blast.
- When chips stick to the cutting edges (aluminum machining), use a water soluble cutting fluid.
- When interrupted cutting or cutting a casting skin, the cutting feed (fz) should be reduced to below the values shown in the above table.
- Cutting conditions are limited by machine power and material rigidity. When the cutting width or depth is large, set Vc and fz below the recommended values and check the machine vibration and spindle load.

Cautionary points when using HJ inserts

HJ type inserts are designed for high feed machining. Please note the following when using HJ inserts:

1. The peripheral shape of HJ insert differs from that of other inserts (MJ, AJ). However the same insert pocket can be used.
2. When using HJ inserts, all the inserts on the cutter body must be HJ type. Do not use other types of inserts (MJ and AJ types) with HJ inserts on the same cutter body.
3. When using CAD/CAM, program it as a radius cutter. The table below shows the corner R in programming and the uncut area (t).
4. With HJ inserts, the tool diameter is equal to the diameters shown on p. 9-80 $\phi Dc + .024$ in

TungRec 07 type HJ inserts Standard conditions



Max. depth of cut max ap (in)	Main cutting edge length W (in)	Amount left uncut t (in)	Corner R when programming
.031	.118	.016	R .020
		.012	R .039