

# Speeds and Feeds



## How To Use This Chart:

Select your material in the ISO colored chart

2) Start with the recommended SFM (Vc) and feed (inch/tooth). Adjust the SFM and/or feed rate based on your cutting conditions.

Calculated RPM may exceed the maximum RPM of the cutter body. **WARNING** Never exceed the maximum RPM rating of the cutter body.

## HS6NP - Haas Sq Shoulder 6 Negative Positive

Workpiece Material	Condition	Insert Grade	Hardness HB	Cutting Data											Starting Feed Per Tooth				
				HP30			HMP20			HMP35		HK25		HN25				Finishing	Medium Cut
				Starting SFM			Starting SFM			Starting SFM		Starting SFM		Starting SFM					
				a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D	a <sub>e</sub> / D			
				1/1   3/4	1/5	1/1   3/4	1/5	1/1   3/4	1/5	1/1   3/4	1/5	1/1   3/4	1/5						
P Steel	Unalloyed Steel	0.15% C annealed	125	853	984	804	935	853	984						0.0098				
		0.45% C annealed	190	738	836	689	804	738	836										
		0.45% C tempered	250	689	787	656	754	689	787										
		0.75% C annealed	270	607	689	574	656	607	689										
	Low-alloyed Steel	0.75% C tempered	300	558	640	525	623	558	640						0.0092				
		annealed	180	738	836	689	804	738	836										
		tempered	275	607	689	574	656	607	689										
	High-Alloyed Steel and Tool Steel	tempered	300	558	640	525	623	558	640						0.0087				
annealed		350	476	541	443	525	476	541											
M Stainless Steel	Stainless Steel	hardened and tempered	200	426	492	410	476	426	492						0.0069				
		Ferritic/Martensitic	200			410	476	426	492										
		Martensitic	240			344	394	361	426										
		Austenitic	180			426	508	459	525										
K Cast Iron	Grey Cast Iron	Austenitic/Ferritic	240			344	394	361	426					0.0108					
		Perlitic/Ferritic	180			886	1033			1050	1214								
	Ductile Cast Iron	Perlitic/Martensitic	260			525	623			623	722								
		Ferritic	160			607	705			722	836								
	Malleable Cast Iron	Perlitic	250			410	476			476	558								
		Ferritic	130			738	853			869	1000								
N Non-Ferrous	Aluminum Alloys Wrought	Perlitic	230			492	574			574	672			0.0084					
		Perlitic	230			492	574			574	672								
	Cast Aluminum Alloys	Cannot be hardened										4936	5691						
		hardened										4018	4658						
	Copper and Copper Alloys (bronze/brass)	≤ 12% Si, not hardened										1771	2034						
		≤ 12% Si, hardened										1427	1656						
	Copper and Copper Alloys (bronze/brass)	> 12% Si, not hardened										722	836						
		machining steel, PB> 1%										558	640						
Copper and Copper Alloys (bronze/brass)	CuZn, CuSnZn										689	804							
	CuSn, Pb-free copper, electrolytic copper										1263	1460							

