

Speeds and Feeds



- 1) Select your material in the ISO colored chart.
 - 2) Start with the recommended cutting speed, v_c (ft/min) and feed per tooth, f_z (in). Adjust the cutting speed and/or feed 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.

				HONP – Haas Octagon Negative Positive		
ISO	Inserts			Recommended Cutting Conditions		
	Grades	Designation	Haas PN	v_c (ft/min)	f_z (in)	
P Steel	HU30	ONM(H)X080608	02-0969	492 - 820	0.002 - 0.0118	
	HU40		02-0970	394 - 722	0.002 - 0.0118	
	MKP30		02-0972	820 - 1050	0.0039 - 0.0138	
	HMP40C		02-0973	656 - 919	0.0039 - 0.0138	
M Stainless Steel	HU30		02-0969	295 - 492	0.002 - 0.0118	
	HU40		02-0970	230 - 394	0.002 - 0.0118	
K Cast Iron	HU30		02-0969	394 - 656	0.002 - 0.0118	
	HU40		02-0970	328 - 591	0.002 - 0.0118	
	MKP30		02-0972	623 - 820	0.0039 - 0.0157	
	HMP40C		02-0973	492 - 722	0.0039 - 0.0157	
N Aluminum & Non-Ferrous	HN25A			02-0971	1476 - 2461	0.002 - 0.0079

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Feed Rate, Per Revolution (in/min)
$v_f = f_n \cdot n$

Feed Rate, Per Tooth (in/min)
$v_f = f_z \cdot n \cdot Z$

Feed Per Revolution (in/rev)
$f_n = \frac{v_f}{n}$

Feed Per Tooth (in)
$f_z = \frac{v_f}{n \cdot Z}$

Cutting Speed (ft/min)
$v_c = \frac{\pi \cdot D_{tool} \cdot n}{12}$

Spindle Speed (rev/min)
$n = \frac{v_c \cdot 12}{\pi \cdot D_{tool}}$

Material Removal Rate (in ³ /min)
$MMR = a_p \cdot a_e \cdot v_f$

Inch

Symbol	Definition	Unit
v_f	Feed rate	in/min
f_n	Feed per revolution	in/rev
f_z	Feed per tooth	in
v_c	Cutting speed	ft/min (SFM)
n	Spindle speed	rev/min (RPM)
D_{tool}	Tool cutting diameter	in
MMR	Material removal rate	(in ³ /min)
a_e	Radial depth of cut	in
a_p	Axial depth of cut	in
Z	Number of teeth/flutes	