



METRIC



### SPINDLE SPEED

$$n = V_c \times 318 \div D$$

RPM = (m/min) x 318 ÷ Ø

### TABLE FEED END MILL

$$V_f = f_z \times Z \times n$$

mm/min = Feed per Tooth x  
Number of Teeth x RPM

### FEED DRILLS

$$V_f = f_n \times n$$

mm/min = Feed per Rev. x RPM

$V_c$	Cutting Speed (m/min)
$\pi$	Pi (3.14, our Ø to Circ. ratio)
$D$	Tool Diameter (mm)
$n$	rev/min (RPM, S-Code)
$V_f$	Table Feed (mm/min, F-Code)
$f_z$	Feed per Tooth (mm)
$f_n$	Feed per Revolution (mm)
$Z$	Number of Flutes
$a_e$	Width of Cut, Radial Depth of Cut
$a_p$	Depth of Cut, Axial Depth of Cut



Download **Haas Shop Notes**, the Machinist's CNC Reference Guide, from [diy.Haascnc.com](http://diy.Haascnc.com) for more tips and formulas

