Feeds and Speeds Calculation[1]

- **Speed for hole/milling operations**

$$n = \frac{V_c \times 1000}{D \times \pi}$$

Where,

$n =$ rev/min (rpm)

$V_c =$ Cutting speed $\left({}^{m}/_{min}\right)$

$D =$ Tool Diameter (mm)

- **Tool Feed for milling operations**

$$V_f = f_z \times Z_n \times n$$

Where,

$V_f =$ Table Feed $\left({}^{m}/_{min}, F - Code\right)$

$f_z =$ Feed per Tooth (mm)

$Z_n =$ Number of Teeth

$n =$ rev/min (rpm)

- **Tool Feed for hole operations**

$$V_f = f_n \times n$$

Where,

$V_f =$ Table Feed $\left({}^{m}/_{min}, F - Code\right)$

$f_n =$ Feed per Revolution (mm)

$n =$ rev/min (rpm)

- **Speed for lathe operations (Drilling, Tapping, Reaming)**

$$n = \frac{V_c \times 1000}{D \times \pi}$$

Where,

$n =$ rev/min (rpm)

$V_c =$ Cutting speed $\left({}^{m}/_{min}\right)$

$D =$ Tool Diameter (mm)

[1] Goldenberg, Joseph & James V. Valentino, Introduction to Computer Numerical Control. Prentice Hall. Upper Saddle River, New Jersey, 07458.