

RECOMMENDED CUTTING PARAMETERS

FORMULAS

Cutting Speed $SFM = D \times .26 \times RPM$

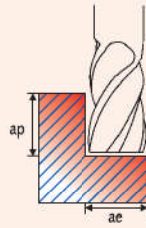
Spindle Speed $RPM = \frac{SFM \times 3.82}{D}$

Feed per Tooth $IPM = IPT \times Z \times RPM$

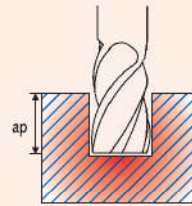
Table Feed $IPT = \frac{IPM}{Z \times RPM}$

Formula Symbols:

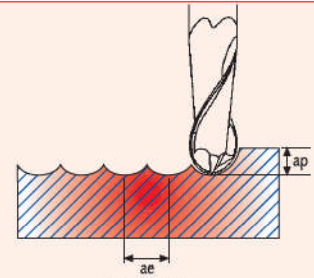
D Tool diameter
 Z No. of Flutes
 SFM Cutting Speed
 IPT Feed per Tooth
 RPM Spindle Speed
 IPM Table Feed
 π 3.1416



SIDE MILLING



SLOTING



3D MILLING

SERIES 4V00 |

Material	Application Slotting	Vc SFM	f Z - feed per tooth in inch D - Diameter in InchTiAIN						
			ap	3/16	1/4	5/16	3/8	1/2	5/8
Easy to cut stainless steels (304)	1 x D	280	0.0011	0.0014	0.0018	0.0021	0.0023	0.0025	0.0027
Moderately difficult to stainless steels	1 x D	240	0.0009	0.0012	0.0016	0.0018	0.0019	0.0021	0.0023
Difficult to cut stainless steels (316L)	1 x D	200	0.0009	0.0011	0.0014	0.0016	0.0018	0.0019	0.0021
Soft steels 1020	1 x D	500	0.0011	0.0014	0.0021	0.0021	0.0025	0.0027	0.0032
Titanium Alpha Beta Alloys (6Al4V)	0.5 x D	170	0.0005	0.0007	0.0011	0.0011	0.0014	0.0016	0.0021
Gray Cast Iron	1 x D	500	0.0011	0.0014	0.0021	0.0021	0.0025	0.0027	0.0032

For High Speed Machining or Kellering use axial equal to 5% of the diameter then multiply Speeds by 2 to 3 times.

SERIES Regular & Stub Varimill |

Material	Application Side Milling		Slotting	Vc SFM	f Z - feed per tooth in inch D - Diameter in InchTiAIN								
	ap	ae			TiAIN	5/32	3/16	1/4	5/8	3/8	1/2	5/8	3/4
Easy to cut stainless steels (304)	1.5 x D	0.5 x D	1 x D	280	0.0010	0.0012	0.0016	0.0020	0.0024	0.0026	0.0028	0.0028	0.0030
Moderately difficult to stainless steels	1.5 x D	0.5 x D	1 x D	240	0.0008	0.0010	0.0014	0.0018	0.0020	0.0022	0.0024	0.0026	0.0028
Difficult to cut stainless steels (316L)	1.5 x D	0.5 x D	1 x D	200	0.0006	0.0010	0.0012	0.0016	0.0018	0.0020	0.0022	0.0024	0.0024
Soft steels 1020	1.5 x D	0.5 x D	1 x D	500	0.0010	0.0012	0.0016	0.0024	0.0024	0.0028	0.0030	0.0031	0.0039
Titanium Alpha Beta Alloys (6Al4V)	1.5 x D	0.5 x D	1 x D	170	0.0005	0.0006	0.0008	0.0012	0.0012	0.0016	0.0018	0.0020	0.0028
Gray Cast Iron	1.5 x D	0.5 x D	1 x D	500	0.0010	0.0012	0.0016	0.0024	0.0024	0.0028	0.0030	0.0031	0.0039

SERIES 4V15 - Long Varimill |

Material	Application Side Milling		Vc SFM	f Z - feed per tooth in inch D - Diameter in InchTiAIN								
	ap	ae		TiAIN	5/32	3/16	1/4	5/8	3/8	1/2	5/8	3/4
Easy to cut stainless steels (304)	2-3 x D	0,2 x D	280	0.0009	0.0011	0.0014	0.0018	0.0022	0.0023	0.0025	0.0025	0.0027
Moderately difficult to stainless steels	2-3 x D	0,2 x D	240	0.0007	0.0009	0.0013	0.0016	0.0018	0.0020	0.0022	0.0023	0.0025
Difficult to cut stainless steels (316L)	2-3 x D	0,2 x D	200	0.0005	0.0009	0.0011	0.0014	0.0016	0.0018	0.0020	0.0022	0.0022
Soft steels 1020	2-3 x D	0,2 x D	500	0.0009	0.0011	0.0014	0.0022	0.0022	0.0025	0.0027	0.0028	0.0035
Titanium Alpha Beta Alloys (6Al4V)	2-3 x D	0,2 x D	170	0.0005	0.0005	0.0007	0.0011	0.0011	0.0014	0.0016	0.0018	0.0025
Gray Cast Iron	2-3 x D	0,2 x D	500	0.0009	0.0011	0.0014	0.0022	0.0022	0.0025	0.0027	0.0028	0.0035