



Feeds and Speeds for RAKU[®] TOOL CP-6070 / CP-6072



formula for calculating speed (spindle)

$$n = \frac{V_c \times 12,0001}{D_c \times \pi}$$

$$15715 \text{ [rpm]} = \frac{3084 \text{ [ft/min]} \times 12,0001}{\frac{3}{4} \text{ [in]} \times 3,14}$$

formula for calculating axis feed rate

$$V_f = n \times f_z \times z_n$$

$$334 \text{ [in/min]} = 15715 \text{ [rpm]} \times 0,0106 \text{ [in]} \times 2 \text{ [number]}$$

validated cutting data for roughing

Type	D _c [in]	z _n [number]	V _c [ft/min]	f _z [in]	n [rpm]	V _f [in/min]	a _e [in]	a _p [in]	L ₁ [in]	L ₂ [in]
torus	¾	2	3084	0,0106	15.715	334	0,394	0,787	3,386	0,787
torus	½	2	1837	0,0094	14.043	265	0,236	0,472	2,165	0,630
torus	¼	2	919	0,0091	14.043	254	0,118	0,236	0,906	0,315

validated cutting data for finishing

Type	D _c [in]	z _n [number]	V _c [ft/min]	f _z [in]	n [rpm]	V _f [in/min]	a _e [in]	a _p [in]	L ₁ [in]	L ₂ [in]
ball	¾	2	3084	0,0236	15.715	742	0,008	0,079	2,638	0,669
ball	½	2	1837	0,0236	14.043	663	0,005	0,047	2,047	0,413
ball	¼	2	919	0,0236	14.043	663	0,002	0,024	0,906	0,394

recommended cutting data for roughing

parameter	symbol	unit
radial infeed:	a _e	[in]
axial infeed:	a _p	[in]
number of teeth:	Z _n	[number]

roughing recommendation		
min.	ideal	max.
- x D _c	0.50 x D_c	0.80 x D _c
0.10 x D _c	1.00 x D_c	2.00 x D _c
1	2	4

parameter	symbol	unit
cutting speed:	V _c	[ft/min]
feed/tooth:	f _z	[in]

user specifications	
selection in the diagram	
selection in the diagram	

speed (spindle):	n	[rpm]
axis feed rate:	V _f	[in/min]

calculation by user	
calculation by user	

recommended cutting data for finishing

parameter	symbol	unit
radial infeed:	a _e	[in]
axial infeed:	a _p	[in]
number of teeth:	Z _n	[number]

finishing recommendation		
min.	ideal	max.
- x D _c	0.01 x D_c	0.10 x D _c
0,01 x D _c	0.10 x D_c	0.50 x D _c
1	2	4

cutting diameter:	D _c	[in]
tool total length:	L ₀	[in]
tool unclamping length:	L ₁	[in]
tool cutting length:	L ₂	[in]

processing specific	
processing specific	
processing specific	
processing specific	

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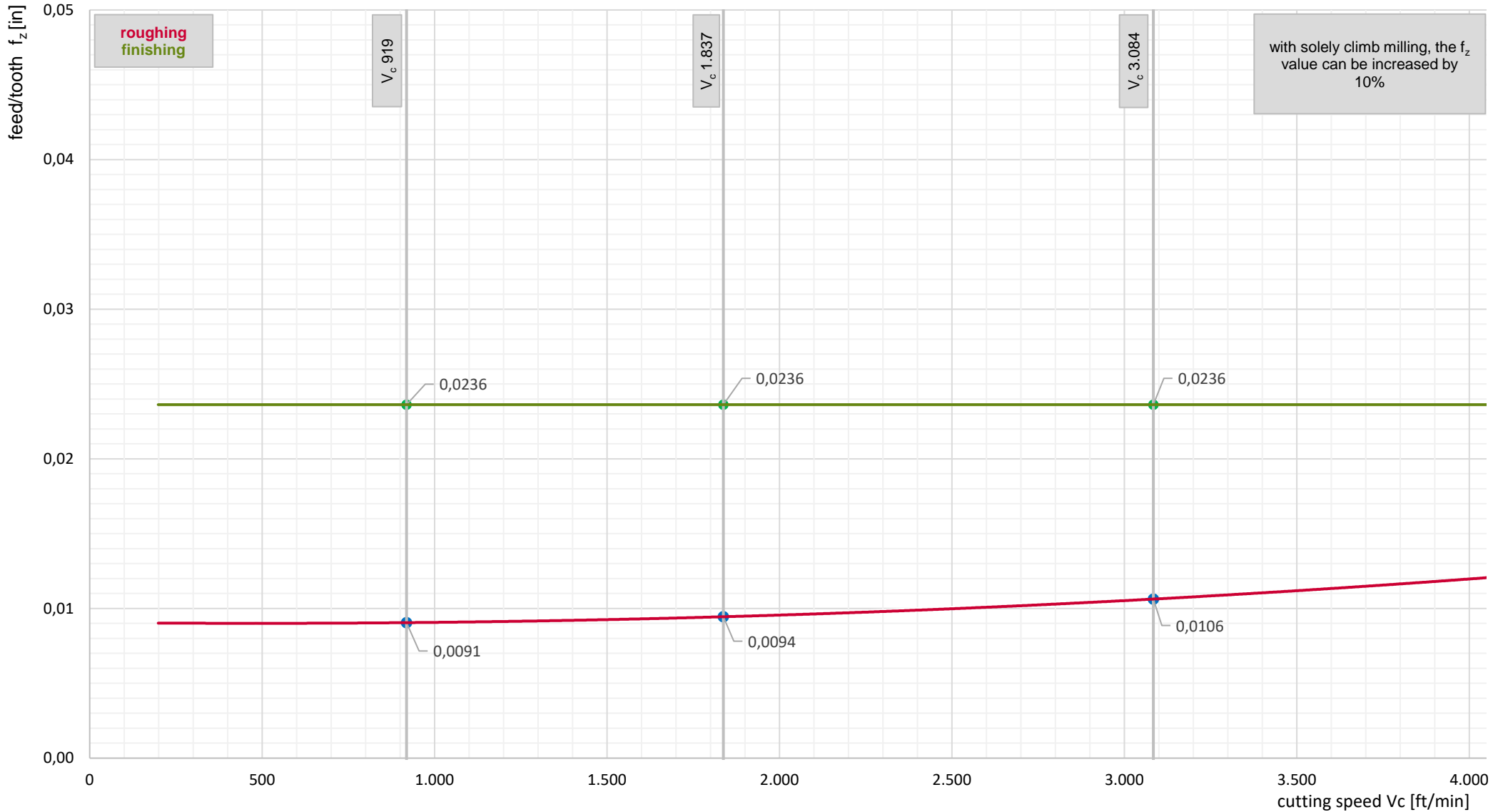
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with solely climb milling, the f_z value can be increased by 10%

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