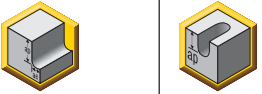



HARVI™ I TE • 4 FLUTES • APPLICATION DATA

Material Group													
	Side Milling (A) and Slotting (B)			KCSM15			Recommended feed per tooth (IPT = inch/th) for side milling (A). For slotting (B), reduce IPT by 20%.						
	A		B	Cutting Speed – vc SFM			D1 – Diameter						
	ap	ae	ap	min	max	frac. dec.	3/8	1/2	5/8	3/4	1		
P	0	1.5 x D1	0.5 x D1	1.25 x D1	490	–	660	IPT	.0030	.0037	.0043	.0048	.0054
	1	1.5 x D1	0.5 x D1	1.25 x D1	490	–	660	IPT	.0030	.0037	.0043	.0048	.0054
	2	1.5 x D1	0.5 x D1	1.25 x D1	460	–	620	IPT	.0030	.0037	.0043	.0048	.0054
	3	1.5 x D1	0.5 x D1	1.25 x D1	390	–	520	IPT	.0025	.0032	.0038	.0042	.0050
	4	1.5 x D1	0.5 x D1	1.25 x D1	300	–	490	IPT	.0022	.0028	.0033	.0037	.0042
	5	1.5 x D1	0.5 x D1	1.25 x D1	200	–	330	IPT	.0020	.0025	.0030	.0034	.0040
M	1	1.5 x D1	0.5 x D1	1.25 x D1	300	–	380	IPT	.0025	.0032	.0038	.0042	.0050
	2	1.5 x D1	0.5 x D1	1.25 x D1	200	–	260	IPT	.0020	.0025	.0030	.0034	.0040
	3	1.5 x D1	0.5 x D1	1.00 x D1	200	–	230	IPT	.0017	.0021	.0025	.0027	.0031
K	1	1.5 x D1	0.5 x D1	1.00 x D1	390	–	490	IPT	.0030	.0037	.0043	.0048	.0054
	2	1.5 x D1	0.5 x D1	1.00 x D1	360	–	460	IPT	.0025	.0032	.0038	.0042	.0050
	3	1.5 x D1	0.5 x D1	1.00 x D1	360	–	430	IPT	.0020	.0025	.0030	.0034	.0040
S	1	1.5 x D1	0.3 x D1	0.75 x D1	160	–	300	IPT	.0025	.0032	.0038	.0042	.0050
	2	1.5 x D1	0.3 x D1	0.75 x D1	160	–	260	IPT	.0020	.0025	.0030	.0034	.0040
	3	1.5 x D1	0.5 x D1	0.50 x D1	80	–	130	IPT	.0013	.0017	.0020	.0023	.0027
	4	1.5 x D1	0.5 x D1	1.25 x D1	160	–	200	IPT	.0019	.0023	.0028	.0031	.0036
H	1	1.5 x D1	0.5 x D1	1.00 x D1	260	–	460	IPT	.0022	.0028	.0033	.0037	.0042
	2	1.5 x D1	0.2 x D1	1.00 x D1	230	–	390	IPT	.0017	.0021	.0025	.0027	.0031

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
 Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
 Above parameters are based on ideal conditions. For smaller taper machining centers, please adjust parameters accordingly on >1/2" diameter.
 For tools with reach >5 x D1, reduce fz by 30%.
 Slot milling applications – for longest reach (L3) tools, reduce Ae by 30%.

HARVI I TE • 4 FLUTES • ADJUSTMENT FACTOR FOR FEED AND SPEED CALCULATION

To calculate application specific cutting data, please use Kv coefficient table to the right for adaptation of cutting speed and KFz for feed respectively.

	Ae/D	0.50%	1.00%	1.60%	2.00%	4.00%	5.00%	8.00%	10.00%	20.00%	30.00%	40.00%	50.00%
Speed factor	Kv	2.9	2.85	2.8	2	1.5	1.45	1.4	1.35	1.25	1.2	1	1
Feed factor	KFz	2.8	2.6	2.5	2.4	2.3	2.2	2	1.7	1.25	1.02	1	1

Vc new = Vc * Kv
 IPT new = IPT * KFz

Calculation example:
 Application: D1 = 1 inch;
 S4 material group;
 Ae 0.02 inch

Cutting data recommendation: 150 SFM;
 fz = 0.0033 IPT

Adjustment coefficients: Ae = 0.02 = inch equals 2.00%;
 Kv = 2; KFz = 2.4

Final cutting data recommendation:

Vc new = 150 SFM * 2 = 300 SFM
 IPT new = .0033 IPT * 2.4 = .0079 IPT

