



HARVI II TE • Application Data • **METRIC**

Material Group					KCPM15A - KCSM15A		Recommended Feed per Tooth (Fz=mm/th) is for Side Milling. For Slotting Reduce Fz by 20%																							
	Side Milling		Slotting		Cutting Speed Vc m/min		D1 - Diameter																							
	Ap	Ae	Ap	Min	Max	mm	4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0											
P	P0	1.5xD	0.5XD	1.25xD	150	200	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136										
	P1	1.5xD	0.5XD	1.25xD	150	200	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136										
	P2	1.5xD	0.5XD	1.25xD	140	190	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136										
	P3	1.5xD	0.5XD	1.25xD	120	160	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125										
	P4	1.5xD	0.5XD	1.25xD	90	150	Fz	0.024	0.030	0.036	0.043	0.049	0.054	0.059	0.069	0.077	0.084	0.091	0.097	0.107										
	P5	1.5xD	0.5XD	1.25xD	60	100	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100										
M	P6	1.5xD	0.5XD	1.25xD	50	75	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078										
	M1	1.5xD	0.5XD	1.25xD	90	115	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125										
K	M2	1.5xD	0.5XD	1.25xD	60	80	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100										
	M3	1.5xD	0.5XD	1.0xD	60	70	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078										
	K1	1.5xD	0.5XD	1.0xD	120	150	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136										
S	K2	1.5xD	0.5XD	1.0xD	110	140	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125										
	K3	1.5xD	0.5XD	1.0xD	110	130	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100										
	S1	1.5xD	0.3XD	0.75xD	50	90	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125										
	S2	1.5xD	0.3XD	0.75xD	25	50	Fz	0.014	0.018	0.021	0.025	0.029	0.032	0.035	0.041	0.046	0.051	0.055	0.059	0.067										
	S3	1.5xD	0.5XD	0.75xD	25	40	Fz	0.014	0.018	0.021	0.025	0.029	0.032	0.035	0.041	0.046	0.051	0.055	0.059	0.067										
H	S4	1.5xD	0.5XD	1.25xD	50	60	Fz	0.017	0.023	0.028	0.034	0.040	0.045	0.049	0.057	0.064	0.071	0.076	0.082	0.092										
	H1	1.5xD	0.5XD	1.0xD	80	140	Fz	0.024	0.030	0.036	0.043	0.049	0.054	0.059	0.069	0.077	0.084	0.091	0.097	0.107										
	H2	1.5xD	0.2XD	1.0xD	70	120	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078										

NOTE:

Those guidelines may require variations to achieve optimum results.

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 diameters greater than 12mm.

For tools with reach >4.5xD, reduce fz by 30% and use low range of cutting speed as starting condition.

Higher slotting DOC possible with proper pull-out protection, tool holder, machine setup & coolant flow.

HARVI II TE • Application Data • Adjustment Factor Table • **METRIC**

Adjustment Factor Table for Feed and Speed Calculation.

	Ae/D	2%	4%	5%	8%	10%	12%	20%	30%	40%	50%	100%
Speed Factor	Kv	2.1 - 3.6	1.6 - 3	1.6 - 2.5	1.6	1.4	1.38	1.3	1.2	1.1	1	1
Feed Factor	KFz	3.58	2.56	2.3	1.84	1.67	1.54	1.25	1.09	1.02	1	0.9
phi [°]		16.26	23.07	25.84	32.86	36.87	40.54	53.13	66.42	78.46	90.00	180.00

NOTE:

These calculations are for roughing / semi-finishing cuts when used with the recommended base fz.

For light finishing cuts requiring improved surface quality it is recommended to reduce the base fz approximately 50% and then apply these factors.

For an Ae/D ratio of 5% or less there is range given for speed factor Kv, which allows the user to either be more conservative at the lower value or more aggressive with the higher value.

This can also be considered based on machinability of the material, from difficult to free cutting.

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

$Vc_{new} = Vc * Kv$
 $Fz_{new} = Fz * KFz$

Calculation Example:

Application:

D1= 12.0 mm
 Material Group P5

Cutting data recommendation:


Ae= 20% of D
 Vc= 80 m/min
 Fz= 0.062 mm/th
 Kv= 1.30
 KFz= 1.25

Adjustment coefficient:


Final cutting data recommendation:

$Vc_{new} = 80 * 1.30 = 104$ m/min
 $Fz_{new} = 0.062 * 1.25 = 0.0775$ mm/th


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Material Group	Helical Interpolation / Ramping 0° - 15°			Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (fz = mm/z) for Helical Interpolation and Ramping - Zef=2														
		KCPM15A - KCSM15A			mm	D1 - Diameter													
		Cutting Speed Vc				4,6-7,6	5,8-9,5	6,9-11,4	8,1-13,3	9,2-15,2	9,2-15,2	11,5-19,0	13,8-22,8	16,1-26,6	18,4-30,4	20,7-34,2	23,0-38,0	28,8-47,5	
		m/min				4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0	
P	P0	1,25 x D1	150	200	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136	
	P1	1,25 x D1	150	200	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136	
	P2	1,25 x D1	140	190	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136	
	P3	1,25 x D1	120	160	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125	
	P4	1,25 x D1	90	150	Fz	0.024	0.030	0.036	0.043	0.049	0.054	0.059	0.069	0.077	0.084	0.091	0.097	0.107	
	P5	1,25 x D1	60	100	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100	
M	P6	1,25 x D1	50	75	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078	
	M1	1,25 x D1	90	115	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125	
K	M2	1,25 x D1	60	80	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100	
	M3	1,0 x D1	60	70	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078	
	K1	1,0 x D1	120	150	Fz	0.031	0.040	0.048	0.057	0.066	0.073	0.079	0.091	0.102	0.111	0.119	0.125	0.136	
S	K2	1,0 x D1	110	140	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125	
	K3	1,0 x D1	110	130	Fz	0.021	0.027	0.032	0.038	0.044	0.049	0.053	0.062	0.070	0.077	0.083	0.089	0.100	
	S1	0,75 x D1	50	90	Fz	0.026	0.033	0.040	0.047	0.055	0.061	0.067	0.077	0.087	0.096	0.104	0.111	0.125	
	S2	0,75 x D1	25	50	Fz	0.014	0.018	0.021	0.025	0.029	0.032	0.035	0.041	0.046	0.051	0.055	0.059	0.067	
H	S3	0,5 x D1	25	40	Fz	0.014	0.018	0.021	0.025	0.029	0.032	0.035	0.041	0.046	0.051	0.055	0.059	0.067	
	S4	1,25 x D1	50	60	Fz	0.017	0.023	0.028	0.034	0.040	0.045	0.049	0.057	0.064	0.071	0.076	0.082	0.092	
H	H1	1,0 x D1	80	140	Fz	0.024	0.030	0.036	0.043	0.049	0.054	0.059	0.069	0.077	0.084	0.091	0.097	0.107	
	H2	1,0 x D1	70	120	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.044	0.051	0.057	0.063	0.067	0.071	0.078	



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Material Group	Helical Interpolation / Ramping 15° - 30°			Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (fz = mm/z) for Helical Interpolation and Ramping - Zef=2														
		KCPM15A - KCSM15A			mm	D1 - Diameter													
		Cutting Speed Vc				4,6-7,6	5,8-9,5	6,9-11,4	8,1-13,3	9,2-15,2	9,2-15,2	11,5-19,0	13,8-22,8	16,1-26,6	18,4-30,4	20,7-34,2	23,0-38,0	28,8-47,5	
		m/min				4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0	25.0	
	Max Depth	Min	Max																
P	P0	1,25 x D1	150	200	Fz	0.023	0.030	0.036	0.043	0.050	0.055	0.059	0.068	0.076	0.083	0.089	0.094	0.102	
	P1	1,25 x D1	150	200	Fz	0.023	0.030	0.036	0.043	0.050	0.055	0.059	0.068	0.076	0.083	0.089	0.094	0.102	
	P2	1,25 x D1	140	190	Fz	0.023	0.030	0.036	0.043	0.050	0.055	0.059	0.068	0.076	0.083	0.089	0.094	0.102	
	P3	1,25 x D1	120	160	Fz	0.019	0.025	0.030	0.036	0.041	0.046	0.050	0.058	0.065	0.072	0.078	0.083	0.094	
	P4	1,25 x D1	90	150	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.045	0.051	0.058	0.063	0.068	0.073	0.080	
	P5	1,25 x D1	60	100	Fz	0.016	0.020	0.024	0.029	0.033	0.037	0.040	0.046	0.052	0.058	0.062	0.067	0.075	
K	P6	1,25 x D1	50	75	Fz	0.013	0.017	0.020	0.024	0.028	0.031	0.033	0.038	0.043	0.047	0.050	0.053	0.059	
	K1	1,0 x D1	120	150	Fz	0.023	0.030	0.036	0.043	0.050	0.055	0.059	0.068	0.076	0.083	0.089	0.094	0.102	
	K2	1,0 x D1	110	140	Fz	0.019	0.025	0.030	0.036	0.041	0.046	0.050	0.058	0.065	0.072	0.078	0.083	0.094	
S	K3	1,0 x D1	110	130	Fz	0.016	0.020	0.024	0.029	0.033	0.037	0.040	0.046	0.052	0.058	0.062	0.067	0.075	
	S1	0,75 x D1	50	90	Fz	0.019	0.025	0.030	0.036	0.041	0.046	0.050	0.058	0.065	0.072	0.078	0.083	0.094	
	S2	0,75 x D1	25	50	Fz	0.010	0.013	0.016	0.019	0.022	0.024	0.026	0.031	0.035	0.038	0.042	0.045	0.051	
	S3	0,5 x D1	25	40	Fz	0.010	0.013	0.016	0.019	0.022	0.024	0.026	0.031	0.035	0.038	0.042	0.045	0.051	
	S4	1,25 x D1	50	60	Fz	0.013	0.017	0.021	0.026	0.030	0.034	0.037	0.043	0.048	0.053	0.057	0.061	0.069	
H	H1	1,0 x D1	80	140	Fz	0.018	0.022	0.027	0.032	0.037	0.041	0.045	0.051	0.058	0.063	0.068	0.073	0.080	
	H2	1,0 x D1	70	120	Fz	0.013	0.017	0.020	0.024	0.028	0.031	0.033	0.038	0.043	0.047	0.050	0.053	0.059	

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Material Group	Helical Interpolation / Ramping 30° - 45°			Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (fz = mm/z) for Helical Interpolation and Ramping - Zef=2													
		KCPM15A - KCSM15A			D1 - Diameter													
		Cutting Speed Vc m/min			4,6-7,6	5,8-9,5	6,9-11,4	8,1-13,3	9,2-15,2	9,2-15,2	11,5-19,0	13,8-22,8	16,1-26,6	18,4-30,4	20,7-34,2	23,0-38,0	28,8-47,5	
		Max Depth	Min		Max	mm	4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	18.0	20.0
P	P0	1,25 x D1	150	200	Fz	0.019	0.024	0.029	0.034	0.040	0.044	0.048	0.055	0.061	0.067	0.071	0.075	0.082
	P1	1,25 x D1	150	200	Fz	0.019	0.024	0.029	0.034	0.040	0.044	0.048	0.055	0.061	0.067	0.071	0.075	0.082
	P2	1,25 x D1	140	190	Fz	0.019	0.024	0.029	0.034	0.040	0.044	0.048	0.055	0.061	0.067	0.071	0.075	0.082
	P3	1,25 x D1	120	160	Fz	0.015	0.020	0.024	0.028	0.033	0.037	0.040	0.046	0.052	0.058	0.062	0.067	0.075
	P4	1,25 x D1	90	150	Fz	0.014	0.018	0.022	0.026	0.030	0.033	0.036	0.041	0.046	0.051	0.055	0.058	0.064
	P5	1,25 x D1	60	100	Fz	0.013	0.016	0.019	0.023	0.026	0.029	0.032	0.037	0.042	0.046	0.050	0.053	0.060
K	P6	1,25 x D1	50	75	Fz	0.011	0.013	0.016	0.019	0.022	0.024	0.027	0.031	0.034	0.038	0.040	0.043	0.047
	K1	1,0 x D1	120	150	Fz	0.019	0.024	0.029	0.034	0.040	0.044	0.048	0.055	0.061	0.067	0.071	0.075	0.082
	K2	1,0 x D1	110	140	Fz	0.015	0.020	0.024	0.028	0.033	0.037	0.040	0.046	0.052	0.058	0.062	0.067	0.075
S	K3	1,0 x D1	110	130	Fz	0.013	0.016	0.019	0.023	0.026	0.029	0.032	0.037	0.042	0.046	0.050	0.053	0.060
	S1	0,75 x D1	50	90	Fz	0.015	0.020	0.024	0.028	0.033	0.037	0.040	0.046	0.052	0.058	0.062	0.067	0.075
	S2	0,75 x D1	25	50	Fz	0.008	0.011	0.013	0.015	0.017	0.019	0.021	0.025	0.028	0.031	0.033	0.036	0.040
	S3	0,5 x D1	25	40	Fz	0.008	0.011	0.013	0.015	0.017	0.019	0.021	0.025	0.028	0.031	0.033	0.036	0.040
H	S4	1,25 x D1	50	60	Fz	0.010	0.014	0.017	0.021	0.024	0.027	0.029	0.034	0.038	0.042	0.046	0.049	0.055
	H1	1,0 x D1	80	140	Fz	0.014	0.018	0.022	0.026	0.030	0.033	0.036	0.041	0.046	0.051	0.055	0.058	0.064
	H2	1,0 x D1	70	120	Fz	0.011	0.013	0.016	0.019	0.022	0.024	0.027	0.031	0.034	0.038	0.040	0.043	0.047

HARVI II TE • Application Data • **INCH**

Material Group					Recommended Feed per Tooth (IPT=Inch/th) is for Side Milling . For Slotting Reduce Fz by 20%																	
			KCPM15A - KCSM15A																			
			Cutting Speed Vc																			
	Side Milling		Slotting		SFM		Fraction	D1 - Diameter														
Ap		Ae		Ap		Min	Max	dec.	1/8	5/32	3/16	7/32	1/4	9/32	5/16	3/8	1/2	5/8	3/4	1	1 1/4	
P	P0	1.5xD	0.5XD	1.25xD	490	660		IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054	
	P1	1.5xD	0.5XD	1.25xD	490	660		IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054	
	P2	1.5xD	0.5XD	1.25xD	460	620		IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054	
	P3	1.5xD	0.5XD	1.25xD	390	520		IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053	
	P4	1.5xD	0.5XD	1.25xD	300	490		IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044	
	P5	1.5xD	0.5XD	1.25xD	200	330		IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043	
M	P6	1.5xD	0.5XD	1.25xD	160	250		IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032	
	M1	1.5xD	0.5XD	1.25xD	300	380		IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053	
	M2	1.5xD	0.5XD	1.25xD	200	260		IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043	
K	M3	1.5xD	0.5XD	1.0xD	200	230		IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032	
	K1	1.5xD	0.5XD	1.0xD	390	490		IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054	
	K2	1.5xD	0.5XD	1.0xD	360	460		IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053	
S	K3	1.5xD	0.5XD	1.0xD	360	430		IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043	
	S1	1.5xD	0.3XD	0.75xD	160	300		IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053	
	S2	1.5xD	0.3XD	0.75xD	80	160		IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029	
	S3	1.5xD	0.5XD	0.75xD	80	130		IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029	
	S4	1.5xD	0.5XD	1.25xD	160	200		IPT	0.0005	0.0007	0.0008	0.0010	0.0012	0.0014	0.0016	0.0019	0.0023	0.0028	0.0031	0.0036	0.0039	
H	H1	1.5xD	0.5XD	1.0xD	260	460		IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044	
	H2	1.5xD	0.2XD	1.0xD	230	390		IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032	

NOTE:

Those guidelines may require variations to achieve optimum results.

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 diameters greater than 1/2".

For tools with reach >4.5xD, reduce fz by 30% and use low range of cutting speed as starting condition.

Higher slotting DOC possible with proper pull-out protection, tool holder, machine setup & coolant flow.

HARVI II TE • Application Data • Adjustment Factor Table • **INCH**

Adjustment Factor Table for Feed and Speed Calculation.

	Ae/D	2%	4%	5%	8%	10%	12%	20%	30%	40%	50%	100%
Speed Factor	Kv	2.1 - 3.6	1.6 - 3	1.6 - 2.5	1.6	1.4	1.38	1.3	1.2	1.1	1	1
Feed Factor	KFz	3.58	2.56	2.3	1.84	1.67	1.54	1.25	1.09	1.02	1	0.9
phi [°]		16.26	23.07	25.84	32.86	36.87	40.54	53.13	66.42	78.46	90.00	180.00

NOTE:

These calculations are for roughing / semi-finishing cuts when used with the recommended base fz.

For light finishing cuts requiring improved surface quality it is recommended to reduce the base fz approximately 50% and then apply these factors.

For an Ae/D ratio of 5% or less there is range given for speed factor Kv, which allows the user to either be more conservative at the lower value or more aggressive with the higher value.

This can also be considered based on machinability of the material, from difficult to free cutting.

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

$$Vc_{new} = Vc * Kv$$

$$Fz_{new} = Fz * KFz$$


Calculation Example:

Application: D1= 0.5000"
 Material Group P5
 Ae=0.1 20% of D1
 Cutting data recommendation: Vc= 265 SFM
 Fz= 0.00250 IPT
 Adjustment coefficient: Kv= 1.30
 KFz= 1.25


Final cutting data recommendation:

Vc new= 265 * 1.30 = 344.5 SFM
 Fz new= 0.0025 * 1.25 = 0.003125 IPT


HARVI II TE • Application Data • **INCH**

Material Group	Helical Interpolation / Ramping 0° - 15°			Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (IPT = Inch/th) for Helical Interpolation and Ramping - Zef=2													
		KCPM15A - KCSM15A			D1 - Diameter													
		Cutting Speed Vc			mm	.144 - .238	.179 - .296	.216 - .356	.251 - .415	.288 - .475	.323 - .534	.359 - .594	.431 - .713	.575 - .950	.719 - 1.188	.863 - 1.425	1.150 - 1.900	1.437 - 2.375
		SFM				0.1250	0.1563	0.1875	0.2188	0.2500	0.2813	0.3125	0.3750	0.5000	0.6250	0.7500	1.0000	1.2500
	Max Depth	Min	Max															
P	P0	1,25 x D1	490	660	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P1	1,25 x D1	490	660	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P2	1,25 x D1	460	620	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P3	1,25 x D1	390	520	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	P4	1,25 x D1	300	490	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044
	P5	1,25 x D1	200	330	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
M	P6	1,25 x D1	160	250	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032
	M1	1,25 x D1	300	380	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	M2	1,25 x D1	200	260	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
K	M3	1,0 x D1	200	230	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032
	K1	1,0 x D1	390	490	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	K2	1,0 x D1	360	460	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
S	K3	1,0 x D1	360	430	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
	S1	0,75 x D1	160	300	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	S2	0,75 x D1	80	160	IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029
	S3	0,5 x D1	80	130	IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029
	S4	1,25 x D1	160	200	IPT	0.0005	0.0007	0.0008	0.0010	0.0012	0.0014	0.0016	0.0019	0.0023	0.0028	0.0031	0.0036	0.0039
H	H1	1,0 x D1	260	460	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044
	H2	1,0 x D1	230	390	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032

HARVI II TE • Application Data • **INCH**

Material Group	Helical Interpolation / Ramping 15° - 30°			Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (IPT = Inch/th) for Helical Interpolation and Ramping - Zef=2													
		KCPM15A - KCSM15A			D1 - Diameter													
		Cutting Speed Vc			dec	.144 - .238	.179 - .296	.216 - .356	.251 - .415	.288 - .475	.323 - .534	.359 - .594	.431 - .713	.575 - .950	.719 - 1.188	.863 - 1.425	1.150 - 1.900	1.437 - 2.375
		SFM				Min	Max	0.1250	0.1563	0.1875	0.2188	0.2500	0.2813	0.3125	0.3750	0.5000	0.6250	0.7500
P	P0	1,25 x D1	490	660	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0036	0.0040	0.0041
	P1	1,25 x D1	490	660	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0036	0.0040	0.0041
	P2	1,25 x D1	460	620	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0036	0.0040	0.0041
	P3	1,25 x D1	390	520	IPT	0.0006	0.0008	0.0009	0.0011	0.0013	0.0014	0.0016	0.0019	0.0024	0.0028	0.0032	0.0037	0.0040
	P4	1,25 x D1	300	490	IPT	0.0005	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0028	0.0032	0.0033
	P5	1,25 x D1	200	330	IPT	0.0005	0.0006	0.0007	0.0009	0.0010	0.0012	0.0013	0.0015	0.0019	0.0023	0.0025	0.0030	0.0032
K	P6	1,25 x D1	160	250	IPT	0.0004	0.0005	0.0006	0.0007	0.0009	0.0010	0.0011	0.0013	0.0016	0.0018	0.0021	0.0023	0.0024
	K1	1,0 x D1	390	490	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0036	0.0040	0.0041
	K2	1,0 x D1	360	460	IPT	0.0006	0.0008	0.0009	0.0011	0.0013	0.0014	0.0016	0.0019	0.0024	0.0028	0.0032	0.0037	0.0040
S	K3	1,0 x D1	360	430	IPT	0.0005	0.0006	0.0007	0.0009	0.0010	0.0012	0.0013	0.0015	0.0019	0.0023	0.0025	0.0030	0.0032
	S1	0,75 x D1	160	300	IPT	0.0006	0.0008	0.0009	0.0011	0.0013	0.0014	0.0016	0.0019	0.0024	0.0028	0.0032	0.0037	0.0040
	S2	0,75 x D1	80	160	IPT	0.0003	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0013	0.0015	0.0017	0.0020	0.0022
	S3	0,5 x D1	80	130	IPT	0.0003	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0013	0.0015	0.0017	0.0020	0.0022
	S4	1,25 x D1	160	200	IPT	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0012	0.0014	0.0018	0.0021	0.0023	0.0027	0.0029
H	H1	1,0 x D1	260	460	IPT	0.0005	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0028	0.0032	0.0033
	H2	1,0 x D1	230	390	IPT	0.0004	0.0005	0.0006	0.0007	0.0009	0.0010	0.0011	0.0013	0.0016	0.0018	0.0021	0.0023	0.0024

HARVI II TE • Application Data • **INCH**

Material Group	Helical Interpolation / Ramping 30° - 45°	 KCPM15A - KCSM15A		Min - Max Diameter for Helical Interpolation	Recommended feed per tooth (IPT = Inch/th) for Helical Interpolation and Ramping - Zef=2													
		Cutting Speed Vc			D1 - Diameter													
		SFM			.144 - .238	.179 - .296	.216 - .356	.251 - .415	.288 - .475	.323 - .534	.359 - .594	.431 - .713	.575 - .950	.719 - 1.188	.863 - 1.425	1.150 - 1.900	1.437 - 2.375	
		Max Depth	Min		Max	dec	0.1250	0.1563	0.1875	0.2188	0.2500	0.2813	0.3125	0.3750	0.5000	0.6250	0.7500	1.0000
P	P0	1,25 x D1	490	660	IPT	0.0006	0.0007	0.0009	0.0010	0.0012	0.0014	0.0015	0.0018	0.0022	0.0026	0.0029	0.0032	0.0032
	P1	1,25 x D1	490	660	IPT	0.0006	0.0007	0.0009	0.0010	0.0012	0.0014	0.0015	0.0018	0.0022	0.0026	0.0029	0.0032	0.0032
	P2	1,25 x D1	460	620	IPT	0.0006	0.0007	0.0009	0.0010	0.0012	0.0014	0.0015	0.0018	0.0022	0.0026	0.0029	0.0032	0.0032
	P3	1,25 x D1	390	520	IPT	0.0005	0.0006	0.0007	0.0009	0.0010	0.0011	0.0013	0.0015	0.0019	0.0023	0.0025	0.0030	0.0032
	P4	1,25 x D1	300	490	IPT	0.0004	0.0006	0.0007	0.0008	0.0009	0.0010	0.0012	0.0013	0.0017	0.0020	0.0022	0.0025	0.0027
	P5	1,25 x D1	200	330	IPT	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0012	0.0015	0.0018	0.0020	0.0024	0.0026
K	P6	1,25 x D1	160	250	IPT	0.0003	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0013	0.0015	0.0016	0.0019	0.0019
	K1	1,0 x D1	390	490	IPT	0.0006	0.0007	0.0009	0.0010	0.0012	0.0014	0.0015	0.0018	0.0022	0.0026	0.0029	0.0032	0.0032
	K2	1,0 x D1	360	460	IPT	0.0005	0.0006	0.0007	0.0009	0.0010	0.0011	0.0013	0.0015	0.0019	0.0023	0.0025	0.0030	0.0032
S	K3	1,0 x D1	360	430	IPT	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0012	0.0015	0.0018	0.0020	0.0024	0.0026
	S1	0,75 x D1	160	300	IPT	0.0005	0.0006	0.0007	0.0009	0.0010	0.0011	0.0013	0.0015	0.0019	0.0023	0.0025	0.0030	0.0032
	S2	0,75 x D1	80	160	IPT	0.0003	0.0003	0.0004	0.0005	0.0005	0.0006	0.0007	0.0008	0.0010	0.0012	0.0014	0.0016	0.0017
	S3	0,5 x D1	80	130	IPT	0.0003	0.0003	0.0004	0.0005	0.0005	0.0006	0.0007	0.0008	0.0010	0.0012	0.0014	0.0016	0.0017
	S4	1,25 x D1	160	200	IPT	0.0003	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0011	0.0014	0.0017	0.0019	0.0022	0.0023
H	H1	1,0 x D1	260	460	IPT	0.0004	0.0006	0.0007	0.0008	0.0009	0.0010	0.0012	0.0013	0.0017	0.0020	0.0022	0.0025	0.0027
	H2	1,0 x D1	230	390	IPT	0.0003	0.0004	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0013	0.0015	0.0016	0.0019	0.0019