KOR5™ DS • 5 FLUTES • 3 X D • APPLICATION DATA

		F 29 A													
	Side Milling (A)				KC643M			Recommen	ded feed per	tooth (IPT =	inch/th) for s	ide milling (A)).		
				Cutting Speed — vc						D1 - Diamet	ter				
Mater			Α		SFM		frac.	1/4	3/8	1/2	5/8	3/4	1		
Grou	ıp	ар	ae	min		max	dec.	.2500	.3750	.5000	.6250	.7500	1.0000		
	0	3 x D	0.1 x D	500	-	1440	IPT	.0022	.0033	.0041	.0047	.0053	.0059		
	1	3 x D	0.1 x D	500	_	1440	IPT	.0022	.0033	.0041	.0047	.0053	.0059		
	2	3 x D	0.1 x D	460	-	1370	IPT	.0022	.0033	.0041	.0047	.0053	.0059		
P	3	3 x D	0.1 x D	400	-	1150	IPT	.0018	.0027	.0035	.0041	.0046	.0054		
	4	3 x D	0.1 x D	300	-	1080	IPT	.0017	.0025	.0031	.0036	.0040	.0046		
	5	3 x D	0.1 x D	200	-	720	IPT	.0015	.0022	.0028	.0033	.0037	.0043		
	6	3 x D	0.1 x D	170	-	540	IPT	.0012	.0018	.0023	.0027	.0030	.0034		
	1	3 x D	0.1 x D	300	-	830	IPT	.0018	.0027	.0035	.0041	.0046	.0054		
M	2	3 x D	0.1 x D	200	_	580	IPT	.0015	.0022	.0028	.0033	.0037	.0043		
	3	3 x D	0.1 x D	200	_	510	IPT	.0012	.0018	.0023	.0027	.0030	.0034		
	1	3 x D	0.1 x D	400	-	1080	IPT	.0022	.0033	.0041	.0047	.0053	.0059		
K	2	3 x D	0.1 x D	370	-	1010	IPT	.0018	.0027	.0035	.0041	.0046	.0054		
	3	3 x D	0.1 x D	370	-	940	IPT	.0015	.0022	.0028	.0033	.0037	.0043		
	1	3 x D	0.1 x D	170	-	650	IPT	.0018	.0027	.0035	.0041	.0046	.0054		
s	2	3 x D	0.1 x D	80	-	580	IPT	.0015	.0022	.0028	.0033	.0037	.0043		
	3	3 x D	0.1 x D	80	-	290	IPT	.0010	.0015	.0018	.0022	.0025	.0029		
	4	3 x D	0.1 x D	170	-	430	IPT	.0013	.0020	.0026	.0030	.0034	.0040		
н	1	3 x D	0.1 x D	270	-	1010	IPT	.0017	.0025	.0031	.0036	.0040	.0046		
	2	3 x D	0.1 x D	230	_	870	IPT	.0012	.0018	.0023	.0027	.0030	.0034		

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. Side milling applications - for longest reach (L3) tools, reduce Ae by 30%. For better surface finish reduce feed per tooth.

KOR5 DS • 5 FLUTES • 3 X D • ADJUSTMENT FACTOR TABLE FOR FEED 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.

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

Calculation example:

$$\label{eq:application:D1=1} \begin{split} & \text{Application: D1} = 1"; \\ & \text{S4 material group;} \\ & \text{Ae } 0.1" \ (\text{Ae} = 10\% \ D) \\ & \text{Cutting data recommendation: } 400 \ \text{SFM;} \\ & \text{Ex} = 0.0040 \ \text{IPT} \\ & \text{Adjustment coefficients: Ae} = 0.05" \ \text{equals } 5.00 \ \%; \\ & \text{Kv} = 1.07; \ \text{KFz} = 1.29 \end{split}$$

Final cutting data recommendation:

Vc new = 400 SFM * 1.07 = 428 SFM FZ new = .0040 IPT * 1.29 = .0052 IPT

	Ae/D1	0.50%	1.00%	1.50%	2.00%	4.00%	5.00%	8.00%	10.00%
Speed factor	Kv	2.15	2.11	2.07	1.48	1.11	1.07	1.04	1.00
Feed factor	KFz	1.65	1.53	1.47	1.41	1.35	1.29	1.18	1.00



KOR5™ DS • 5 FLUTES • 5 X D • APPLICATION DATA

		Side M	illing (A)		KC643M			Recommended feed per tooth (IPT = inch/th) for side milling (A).									
				Cutting Speed - vc						D1 - Diamete	er						
	erial		Α		SFM		frac.	1/4	3/8	1/2	5/8	3/4	1				
Gr	oup	ар	ae	min		max	dec.	.2500	.3750	.5000	.6250	.7500	1.0000				
	0	5 x D	0.05 x D	500	-	1770	IPT	.0029	.0044	.0054	.0063	.0070	.0078				
	1	5 x D	0.05 x D	500	_	1770	IPT	.0029	.0044	.0054	.0063	.0070	.0078				
	2	5 x D	0.05 x D	460	-	1680	IPT	.0029	.0044	.0054	.0063	.0070	.0078				
P	3	5 x D	0.05 x D	400	-	1420	IPT	.0024	.0037	.0046	.0055	.0062	.0072				
	4	5 x D	0.05 x D	300	-	1330	IPT	.0022	.0033	.0041	.0048	.0054	.0062				
	5	5 x D	0.05 x D	200	-	890	IPT	.0020	.0029	.0037	.0044	.0049	.0058				
	6	5 x D	0.05 x D	170	-	660	IPT	.0017	.0024	.0031	.0036	.0040	.0045				
	1	5 x D	0.05 x D	300	_	1020	IPT	.0024	.0037	.0046	.0055	.0062	.0072				
M	2	5 x D	0.05 x D	200	-	710	IPT	.0020	.0029	.0037	.0044	.0049	.0058				
	3	5 x D	0.05 x D	200	-	620	IPT	.0017	.0024	.0031	.0036	.0040	.0045				
	1	5 x D	0.05 x D	400	-	1330	IPT	.0029	.0044	.0054	.0063	.0070	.0078				
K	2	5 x D	0.05 x D	370	-	1240	IPT	.0024	.0037	.0046	.0055	.0062	.0072				
	3	5 x D	0.05 x D	370	_	1150	IPT	.0020	.0029	.0037	.0044	.0049	.0058				
	1	5 x D	0.05 x D	170	-	800	IPT	.0024	.0037	.0046	.0055	.0062	.0072				
s	2	5 x D	0.05 x D	80	-	710	IPT	.0020	.0029	.0037	.0044	.0049	.0058				
	3	5 x D	0.05 x D	80	-	350	IPT	.0013	.0019	.0025	.0029	.0033	.0039				
	4	5 x D	0.05 x D	170	-	530	IPT	.0017	.0027	.0034	.0040	.0045	.0053				
н	1	5 x D	0.05 x D	270	-	1240	IPT	.0022	.0033	.0041	.0048	.0054	.0062				
	2	5 x D	0.05 x D	230	-	1060	IPT	.0017	.0024	.0031	.0036	.0040	.0045				

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. Side milling applications - for longest reach (L3) tools, reduce Ae by 30%. For better surface finish reduce feed per tooth.

KOR5 DS • 5 FLUTES • 5 X D • ADJUSTMENT FACTOR TABLE FOR FEED 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.

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

Calculation example:

Final cutting data recommendation:

Vc new = 500 SFM * 1.38 = 690 SFM FZ new = .0053 IPT * 1.09 = .0058 IPT

	Ae/D1	0.50%	1.00%	1.50%	2.00%	4.00%	5.00%
Speed factor	Kv	2.00	1.97	1.93	1.38	1.03	1.00
Feed factor	KFz	1.27	1.18	1.14	1.09	1.05	1.00

KOR6™ DT • 6 FLUTES • 3 X D • APPLICATION DATA

		200															
		Side M	filling (A)				Recommended feed per tooth (IPT = inch/th) for side milling (A).										
					KCSM15				D1 – D	iameter		·					
Mat	A Cutting Speed — vc Material SFM						frac.	3/8	1/2	5/8	3/4	1					
	guo	ар	ae	min	J	max	dec.	.3750	.5000	.6250	.7500	1.0000					
	0	3 x D	0.1 x D	500	_	1440	IPT	.0033	.0041	.0047	.0053	.0059					
	1	3 x D	0.1 x D	500	-	1440	IPT	.0033	.0041	.0047	.0053	.0059					
	2	3 x D	0.1 x D	460	-	1370	IPT	.0033	.0041	.0047	.0053	.0059					
P	3	3 x D	0.1 x D	400	_	1150	IPT	.0027	.0035	.0041	.0046	.0054					
	4	3 x D	0.1 x D	300	-	1080	IPT	.0025	.0031	.0036	.0040	.0046					
	5	3 x D	0.1 x D	200	-	720	IPT	.0022	.0028	.0033	.0037	.0043					
	6	3 x D	0.1 x D	170	_	540	IPT	.0018	.0023	.0027	.0030	.0034					
	1	3 x D	0.1 x D	300	-	830	IPT	.0027	.0035	.0041	.0046	.0054					
M	2	3 x D	0.1 x D	200	_	580	IPT	.0022	.0028	.0033	.0037	.0043					
	3	3 x D	0.1 x D	200	_	510	IPT	.0018	.0023	.0027	.0030	.0034					
	1_	3 x D	0.1 x D	400	-	1080	IPT	.0033	.0041	.0047	.0053	.0059					
K	2	3 x D	0.1 x D	370	-	1010	IPT	.0027	.0035	.0041	.0046	.0054					
	3	3 x D	0.1 x D	370	-	940	IPT	.0022	.0028	.0033	.0037	.0043					
	1_	3 x D	0.1 x D	170	-	650	IPT	.0027	.0035	.0041	.0046	.0054					
s	2	3 x D	0.1 x D	80	-	580	IPT	.0022	.0028	.0033	.0037	.0043					
	3	3 x D	0.1 x D	80	-	290	IPT	.0015	.0018	.0022	.0025	.0029					
	4	3 x D	0.1 x D	170	_	430	IPT	.0020	.0026	.0030	.0034	.0040					
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	2	3 x D	0.1 x D	230	_	870	IPT	.0018	.0023	.0027	.0030	.0034					

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.

Side milling applications - for longest reach (L3) tools, reduce Ae by 30%. For better surface finish reduce feed per tooth.

KOR6 DT • 6 FLUTES • 3 X D • ADJUSTMENT FACTOR TABLE FOR FEED CALCULATION

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 = IPT * KFz

	Ae/D1	0.50%	1.00%	1.50%	2.00%	4.00%	5.00%	8.00%	10.00%
Speed factor	Kv	2.15	2.11	2.07	1.48	1.11	1.07	1.04	1.00
Feed factor	KFz	1.65	1.53	1.47	1.41	1.35	1.29	1.18	1.00

Calculation example:

Cardinator example: A material group; Ae 0.1" (Ae = 10% D) Application: D1 = 1"; S4 material group; Ae 0.1" (Ae = 10% D) Cutting data recommendation: 400 SFM; $fz = 0.0040 \; \text{IPT}$ Adjustment coefficients: Ae = 0.05" equals 5.00 %; Kv = 1.07; KFz = 1.29

Final cutting data recommendation:

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					KCSM15				D1 —	Diameter						
			Α	Cu	tting Speed -	- vc				Diameter						
Mat	laterial SFM						frac.	3/8	1/2	5/8	3/4	1				
Group		ар	ae	min		max	dec.	.3750	.5000	.6250	.7500	1.0000				
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s	2	5 x D	0.05 x D	80	-	710	IPT	.0029	.0037	.0044	.0049	.0058				
	3	5 x D	0.05 x D	80	-	350	IPT	.0019	.0025	.0029	.0033	.0039				
	4	5 x D	0.05 x D	170	-	530	IPT	.0027	.0034	.0040	.0045	.0053				
н	1	5 x D	0.05 x D	270	-	1240	IPT	.0033	.0041	.0048	.0054	.0062				
"	2	5 x D	0.05 x D	230	-	1060	IPT	.0024	.0031	.0036	.0040	.0045				

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