

									Se	eries 4\	/05 • L	ists 4V0	5 4V45									
		ap aet										2										
		А		В	Т	IALI	N	Α	LTI	N		Rec	ommen					h/th) fo		nilling	(A).	
					Cutting	Sno	ed – vc	Cutting	Sne	ed – vc				ror s	siottiiig		Diame		70.			
Ma	terial					SFIV		, ,	SFN		frac.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1-1/4
	oup	ар	ae	ар	min		max	min		max	dec.	.1250	.1880	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000	1.250
	1	1.25 x D	0.5 x D	1 x D	490	-	660	490	-	660	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
	2	1.25 x D	0.5 x D	1 x D	460	-	620	460	-	620	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
P	3	1.25 x D	0.5 x D	1 x D	390	-	520	390	_	520	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	4	1.25 x D	0.5 x D	0.75 x D	300	-	490	300	_	490	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049
	5	1.25 x D	0.5 x D	1 x D	200	_	330	200	_	330	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	6	1.25 x D	0.5 x D	0.75 x D	160	_	250	160	_	250	IPT	.0005	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028	.0036
	1	1.25 x D	0.5 x D	1 x D	260	_	330	260	_	330	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
М	2	1.25 x D	0.5 x D	1 x D	200	-	260	200	_	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	3	1.25 x D	0.5 x D	1 x D	200	<u> -</u>	260	200	_	260	IPT	.0005	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028	.0036
	1	1.25 x D	0.5 x D	1 x D	390	-	520	390	_	520	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
K	2	1.25 x D	0.5 x D	1 x D	360	<u> - </u>	460	360	_	460	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	3	1.25 x D	0.5 x D	1 x D	330	-	430	330	_	430	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	1	1.0 x D	0.3 x D	0.3 x D	160	-	300	160	_	300	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
s	2	1.0 x D	0.3 x D	0.3 x D	70	-	130	70	_	130	IPT	.0004	.0006	.0008	.0010	.0012	.0014	.0016	.0018	.0020	.0025	.0031
	3	1.25 x D	0.5 x D	1 x D	160	-	260	160	_	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	4	1.25 x D	0.5 x D	1 x D	150	-	210	150	_	210	IPT	.0005	.0008	.0011	.0014	.0017	.0019	.0022	.0025	.0028	.0033	.0042
Н	1	1.25 x D	0.5 x D	0.75 x D	260	-	460	260	-	460	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049

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.

									Ser	ies 4V05	• Lis	ts 4V1	4V65									
		a										0										
			A	В		TIAL	.N	A	ALTI	N		Re	comme					ch/th) f		milling	(A).	
					Cutting	Spe	ed – vc	Cutting	Spe	ed — vc					0.044	0 1 //	– Diam		/ 0.			
Ма	terial					SFN	1		SFIV	I	frac.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1-1/4
G	roup	ap	ae	ар	min		max	min		max	dec.	.1250	.1880	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000	1.250
	1	2 x D	0.25 x D	0.5 x D	490	_	660	490	_	660	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	
	2	2 x D	0.25 x D	0.5 x D	460	-	620	460	_	620	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
Р	3	2 x D	0.25 x D	0.5 x D	390	_	520	390	_	520	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	4	2 x D	0.25 x D	0.4 x D	300	_	490	300	_	490	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049
	5	2 x D	0.25 x D	0.5 x D	200	-	330	200	_	330	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	6	2 x D	0.25 x D	0.4 x D	160	_	250	160	_	250	IPT	.0005	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028	.0036
١.,	1	2 x D	0.25 x D	0.5 x D	260	_	330	260	_	330	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
M	2	2 x D	0.25 x D	0.5 x D	200	-	260	200	_	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	3	2 x D	0.25 x D	0.5 x D	200	_	260	200	_	260	IPT	.0005	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028	.0036
ĸ	2	2 x D	0.25 x D 0.25 x D	0.5 x D	390 360	_	520 460	390 360	_	520 460	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
^	3	2 x D	0.25 x D	0.5 x D	330	_	430	330	_	430	IPT	.0007	.0009	.0013	.0020	.0023	.0026	.0029	.0034	.0030	.0036	.0037
	1	2 x D	0.25 x D	0.5 x D	160		300	160	_	300	IPT	.0007	.0009	.0012	.0020	.0018	.0021	.0023	.0027	.0038	.0036	.0046
	2	2 x D	0.15 x D	0.2 x D	70	_	130	70	_	130	IPT	.0007	.0006	.0008	.0020	.0023	.0020	.0029	.0034	.0020	.0025	.0037
S	3	2 x D	0.15 x D	0.2 x D	160		260	160	_	260	IPT	.0004	.0009	.0012	.0016	.0012	.0021	.0023	.0018	.0020	.0023	.0046
	4	2 x D	0.25 x D	0.5 x D	150	_	210	150	_	210	IPT	.0005	.0008	.0012	.0014	.0017	.0019	.0023	.0027	.0028	.0033	.0040
н	1	2 x D	0.25 x D	0.4 x D	260	_	460	260		460	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0022	.0030	.0033	.0039	.0042

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.





Application Data • Series 4V05 4V0T • VariMill I™

									Serie	es 4V0	5 • List	s 4V25 4	V65								
		ap												5							
		A	١	T	IALI	N	,	ALTI	N		F	Recomm	ended 1	eed pe	r tooth	(IPT=ir	nch/th)	for side	milling	(A).	
				Cutting	Spe	ed — vc	Cutting	Spe	ed — vc						D1	– Diar	neter				
1	terial				SFM			SFN	1	frac.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1-1/4
G	roup	ар	ae	min		max	min		max	dec.	.1250	.1880	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000	1.250
	1	2.5 x D	0.1 x D 490 - 660 490 - 660 0.1 x D 460 - 620 460 - 620							IPT IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
	2	2.5 x D			390 - 520 390 - 520						.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
Р	3	2.5 x D			390 - 520 39					IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	4	2.5 x D						-	490	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049
	5 6	2.5 x D	0.1 x D	160		250	200 160	_	330	IPT IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	1	2.5 x D	0.1 x D	260	_	330	260	_	250 330	IPT	.0005	.0008	.0010	.0020	.0015	.0017	.0019	.0022	.0024	.0028	.0057
м	2	2.5 x D	0.1 x D	200	_	260	200	_	260	IPT	.0007	.0009	.0013	.0020	.0023	.0026	.0029	.0034	.0030	.0046	.0046
IVI	3	2.5 x D	0.1 x D	200	_	260	200		260	IPT	.0005	.0008	.0012	.0013	.0015	.0021	.0023	.0027	.0030	.0030	.0036
Н	1	2.5 x D	0.1 x D	390	_	520	390	_	520	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
к	2	2.5 x D	0.1 x D	360	_	460	360	_	460	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
Γ.,	3	2.5 x D	0.1 x D	330	_	430	330	_	430	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	1	2.5 x D	0.06 x D	160	-	300	160	_	300	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
Γ.	2	2.5 x D	0.06 x D	70	-	130	70	-	130	IPT	.0004	.0006	.0008	.0010	.0012	.0014	.0016	.0018	.0020	.0025	.0031
S	S		_	260	160	-	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046		
	4					210	IPT	.0005	.0008	.0011	.0014	.0017	.0019	.0022	.0025	.0028	.0033	.0042			
Н	1	2.5 x D	0.1 x D	260	-	460	260	_	460	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049

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.

						Ser	ies 4V0T						
		ap ap ap											
		,	A.	В		ALTIN				for sid	d per tooth (I e milling (A). , reduce IPT	•	
					C.4	ting Speed -					01 – Diamete	er	
					Cut	SFM	– vc	frac.	1/2	5/8	3/4	1	1-1/4
	erial oup	ар	ae	ар	min		max	dec.	.5000	.6250	.7500	1.000	1.250
	1	1.25 x D	0.5 x D	1 x D	490	-	660	IPT	.0035	.0039	.0043	.0050	.0062
	2	1.25 x D	0.5 x D	1 x D	460	-	620	IPT	.0035	.0039	.0043	.0050	.0062
Р	3	1.25 x D	0.5 x D	1 x D	390	_	520	IPT	.0029	.0034	.0038	.0046	.0057
	4	1.25 x D	0.5 x D	0.75 x D	300	-	490	IPT	.0026	.0030	.0033	.0039	.0049
	5	1.25 x D	0.5 x D	1 x D	200	-	330	IPT	.0023	.0027	.0030	.0036	.0046
	6	1.25 x D	0.5 x D	0.75 x D	160	-	250	IPT	.0019	.0022	.0024	.0028	.0036
	1	1.25 x D	0.5 x D	1 x D	260	-	330	IPT	.0029	.0034	.0038	.0046	.0057
М	2	1.25 x D	0.5 x D	1 x D	200	_	260	IPT	.0023	.0027	.0030	.0036	.0046
	3	1.25 x D 1.25 x D	0.5 x D 0.5 x D	1 x D	200 390	_	260 520	IPT IPT	.0019	.0022	.0024	.0028	.0036
К	2	1.25 x D	0.5 x D	1 x D	360	_	460	IPT	.0035	.0039	.0043	.0046	.0062
	3	1.25 x D	0.5 x D	1 x D	330	_	430	IPT	.0029	.0034	.0030	.0046	.0037
	1	1.0 x D	0.3 x D	0.3 x D	160		300	IPT	.0023	.0027	.0030	.0036	.0040
	2	1.0 x D	0.3 x D	0.3 x D	70	_	130	IPT	.0029	.0018	.0020	.0025	.0037
S	3	1.0 x D	0.5 x D	1 x D	160	_	260	IPT	.0023	.0010	.0020	.0025	.0046
	4	1.25 x D	0.5 x D	1 x D	150	_	210	IPT	.0022	.0025	.0028	.0033	.0042
Н	1	1.25 x D	0.5 x D	0.75 x D	260	_	460	IPT	.0026	.0030	.0033	.0039	.0049

NOTE: Side milling applications — for longest reach (L3) tools, reduce ae by 30%.

Slot milling applications — for longest reach (L3) tools, reduce ap by 30%.

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.



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					Se	eries 4VP5 •	Lists 4V	15 4V65						
		apj												
		,	A.	В		TIALN		Red		d feed per For slotting			or side mill 0%.	ing (A).
					Cur	tting Speed —	- VC				D1 — D	iameter		
					Ou	SFM	VO	frac.	1/4	3/8	1/2	5/8	3/4	1
Mate		ар	ae	ар	min		max	dec.	.2500	.3750	.5000	.6250	.7500	1.000
	1	0.75 x D	0.5 x D	0.75 x D	500	-	650	IPT	.0018	.0027	.0035	.0039	.0043	.0050
	2	0.75 x D	0.5 x D	0.75 x D	450	-	625	IPT	.0018	.0027	.0035	.0039	.0043	.0050
P	3	0.75 x D	0.5 x D	0.75 x D	400	-	525	IPT	.0015	.0023	.0029	.0034	.0038	.0046
· ·	4	0.75 x D	0.5 x D	0.5 x D	300	-	475	IPT	.0014	.0020	.0026	.0030	.0033	.0039
	5	0.75 x D	0.5 x D	0.75 x D	200	-	325	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	6	0.75 x D	0.5 x D	0.5 x D	150	-	225	IPT	.0010	.0015	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	260	_	330	IPT	.0015	.0023	.0029	.0034	.0038	.0046
M	2	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	3	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0010	.0015	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	390	_	520	IPT	.0018	.0027	.0035	.0039	.0043	.0050
K	2	0.75 x D	0.5 x D	0.75 x D	360	-	460	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	3	0.75 x D	0.5 x D	0.75 x D	330	-	430	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	1	0.75 x D	0.3 x D	0.3 x D	150	-	275	IPT	.0015	.0023	.0029	.0034	.0038	.0046
s	2	0.75 x D	0.3 x D	0.3 x D	70	-	130	IPT	.0008	.0012	.0016	.0018	.0020	.0025
	3	0.75 x D	0.5 x D	0.75 x D	160	-	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	4	0.75 x D	0.5 x D	0.75 x D	150	-	210	IPT	.0011	.0017	.0022	.0025	.0028	.0033
Н	1	0.75 x D	0.5 x D	0.5 x D	260	_	450	IPT	.0014	.0020	.0026	.0030	.0033	.0039

NOTE: Side milling applications — for longest reach (L3) tools, reduce ae by 30%.

Slot milling applications — for longest reach (L3) tools, reduce ap by 30%.

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.

						Series 4VPT						
		ap) ae.		ap I								
		A	A.	В		ALTIN			foi	r side millir g (B), reduc	e IPT by 20	•
						Cutting Speed — vc SFM			4 (0		iameter	
Mate	arial					2LM		frac.	1/2	5/8	3/4	1
Gro		ар	ae	ар	min		max	dec.	.5000	.6250	.7500	1.000
	1	0.75 x D	0.5 x D	0.75 x D	500	-	650	IPT	.0035	.0039	.0043	.0050
	2	0.75 x D	0.5 x D	0.75 x D	450	_	625	IPT	.0035	.0039	.0043	.0050
Р	3	0.75 x D	0.5 x D	0.75 x D	400	_	525	IPT	.0029	.0034	.0038	.0046
	4	0.75 x D	0.5 x D	0.5 x D	300	_	475	IPT	.0026	.0030	.0033	.0039
	5	0.75 x D	0.5 x D	0.75 x D	200	_	325	IPT	.0023	.0027	.0030	.0036
	6	0.75 x D	0.5 x D	0.5 x D	150	_	225	IPT	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	260	_	330	IPT	.0029	.0034	.0038	.0046
M	2	0.75 x D	0.5 x D	0.75 x D	200	_	260	IPT	.0023	.0027	.0030	.0036
	3	0.75 x D	0.5 x D	0.75 x D	200	_	260	IPT	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	390	_	520	IPT	.0035	.0039	.0043	.0050
K	2	0.75 x D	0.5 x D	0.75 x D	360	_	460	IPT	.0029	.0034	.0038	.0046
	3	0.75 x D	0.5 x D	0.75 x D	330	_	430	IPT	.0023	.0027	.0030	.0036
	1	0.75 x D	0.3 x D	0.3 x D	150	_	275	IPT	.0029	.0034	.0038	.0046
s	2	0.75 x D	0.3 x D	0.3 x D	70	_	130	IPT	.0016	.0018	.0020	.0025
	3	0.75 x D	0.5 x D	0.75 x D	160	_	260	IPT	.0023	.0027	.0030	.0036
	4	0.75 x D	0.5 x D	0.75 x D	150	_	210	IPT	.0022	.0025	.0028	.0033
Н	1	0.75 x D	0.5 x D	0.5 x D	260	_	450	IPT	.0026	.0030	.0033	.0039

NOTE: Side milling applications — for longest reach (L3) tools, reduce ae by 30%.

Slot milling applications — for longest reach (L3) tools, reduce ap by 30%.

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.





					Sei	ries 4VN5	Lists 4V	/15 4V6	5					
		api aer												
		Į.	4	В		TIALN		Red		d feed per For slotting				ng (A).
ĺ					Cutt	ing Speed -	— vc					iameter		
						SFM		frac.	1/4	3/8	1/2	5/8	3/4	1
Mat Gro		ар	ae	ap	min		max	dec.	.2500	.3750	.5000	.6250	.7500	1.000
	1	0.75 x D	0.5 x D	0.75 x D	500	-	650	IPT	.0018	.0027	.0035	.0039	.0043	.0050
	2	0.75 x D	0.5 x D	0.75 x D	450	-	625	IPT	.0018	.0027	.0035	.0039	.0043	.0050
P	3	0.75 x D	0.5 x D	0.75 x D	400	_	525	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	4	0.75 x D	0.5 x D	0.5 x D	300	_	475	IPT	.0014	.0020	.0026	.0030	.0033	.0039
	5	0.75 x D	0.5 x D	0.75 x D	200	_	325	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	6	0.75 x D	0.5 x D	0.5 x D	150	-	225	IPT	.0010	.0015	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	260	-	330	IPT	.0015	.0023	.0029	.0034	.0038	.0046
M	2	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	3	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0010	.0015	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	390	-	520	IPT	.0018	.0027	.0035	.0039	.0043	.0050
K	2	0.75 x D	0.5 x D	0.75 x D	360	-	460	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	3	0.75 x D	0.5 x D	0.75 x D	330	_	430	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	1	0.75 x D	0.3 x D	0.3 x D	150	-	275	IPT	.0015	.0023	.0029	.0034	.0038	.0046
s	2	0.75 x D	0.3 x D	0.3 x D	70	-	130	IPT	.0008	.0012	.0016	.0018	.0020	.0025
	3	0.75 x D	0.5 x D	0.75 x D	160	-	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	4	0.75 x D	0.5 x D	0.75 x D	150	-	210	IPT	.0011	.0017	.0022	.0025	.0028	.0033
Н	1	0.75 x D	0.5 x D	0.5 x D	260	-	450	IPT	.0014	.0020	.0026	.0030	.0033	.0039

NOTE: Side milling applications — for longest reach (L3) tools, reduce ae by 30%. Slot milling applications — for longest reach (L3) tools, reduce ap by 30%.

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.

						Ser	ies 4VP0							
		ap		i do			1							
		ļ	A.	В		TIALN		Re			tooth (IPT g (B), reduc		or side milli 0%.	ing (A).
					Cutt	ing Speed -	— vc				D1 — D	iameter		
Mate			ı			SFM		frac.	1/4	3/8	1/2	5/8	3/4	1
Gro		ap	ae	ар	min		max	dec.	.2500	.3750	.5000	.6250	.7500	1.000
	1	0.75 x D	0.5 x D	0.75 x D	490	-	660	IPT	.0018	.0027	.0035	.0039	.0043	.0050
	2	0.75 x D	0.5 x D	0.75 x D	460	-	620	IPT	.0018	.0027	.0035	.0039	.0043	.0050
P	3	0.75 x D	0.5 x D	0.75 x D	390	-	520	IPT	.0015	.0023	.0029	.0034	.0038	.0046
				0.5 x D	300	-	490	IPT	.0014	.0020	.0026	.0030	.0033	.0039
				0.75 x D	200	-	330	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	_	0.75 x D 0.5 x D 0.75 x D 0.5 x D 0.75 x D 0.5 x D	0.5 x D	160	-	250	IPT	.0010	.0015	.0019	.0022	.0024	.0028	
	1	0.75 x D	0.5 x D	0.75 x D	260	-	330	IPT	.0015	.0023	.0029	.0034	.0038	.0046
M	2	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	3	0.75 x D	0.5 x D	0.75 x D	200	-	260	IPT	.0010	.0015	.0019	.0022	.0024	.0028
	1	0.75 x D	0.5 x D	0.75 x D	390	-	520	IPT	.0018	.0027	.0035	.0039	.0043	.0050
K	2	0.75 x D	0.5 x D	0.75 x D	360	-	460	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	3	0.75 x D	0.5 x D	0.75 x D	330	-	430	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	1	0.75 x D	0.3 x D	0.3 x D	160	-	300	IPT	.0015	.0023	.0029	.0034	.0038	.0046
s	2	0.75 x D	0.3 x D	0.3 x D	70	-	130	IPT	.0008	.0012	.0016	.0018	.0020	.0025
Ť	3	0.75 x D	0.5 x D	0.75 x D	160	_	260	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	4	0.75 x D	0.5 x D	0.75 x D	150	_	210	IPT	.0011	.0017	.0022	.0025	.0028	.0033
Н	1	0.75 x D	0.5 x D	0.5 x D	260	-	460	IPT	.0014	.0020	.0026	.0030	.0033	.0039

NOTE: Side milling applications — for longest reach (L3) tools, reduce ae by 30%.

Slot milling applications — for longest reach (L3) tools, reduce ap by 30%.

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 parallel rest are based on ideal conditions. For smaller taper machining centers, please adjust parameters accordingly on >1/2" diameter.



Solid End Milling

									Ser	ies 4V00)								
		ap					(A							L				
		А		В		TIALN				Recom					ch/th) fo PT by 20	r side mi)%.	lling (A).		
					Cutting	Speed	I — vc						D1	- Diar	neter				
	terial					SFM		frac.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1-1/4
Gr	oup	ap	ae	ap	min		max	dec.	.1250	.1880	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000	1.250
	1	1.25 x D	0.5 x D	1 x D	490	-	660	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
	2	1.25 x D	0.5 x D	1 x D	460	_	620	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
Р	3	1.25 x D	0.5 x D	1 x D	390	-	520	IPT IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	5	1.25 x D	0.5 x D	0.75 x D	300 200	-	490 330	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049
	6	1.25 x D	0.5 x D	0.75 x D	160	_	250	IPT	.0005	.0008	.0012	.0018	.0015	.0021	.0023	.0027	.0030	.0030	.0046
	1	1.25 x D	0.5 x D	1 x D	260		330	IPT	.0003	.0000	.0015	.0013	.0013	.0017	.0019	.0022	.0024	.0026	.0057
м	2	1.25 x D	0.5 x D	1 x D	200	_	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	3	1.25 x D	0.5 x D	1 x D	200	_	260	IPT	.0005	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028	.0036
	1	1.25 x D	0.5 x D	1 x D	390	_	520	IPT	.0009	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050	.0062
Κ	2	1.25 x D	0.5 x D	1 x D	360	-	460	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
	3	1.25 x D	0.5 x D	1 x D	330	-	430	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	1	1.0 x D	0.3 x D	0.3 x D	160	-	300	IPT	.0007	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046	.0057
s	2	1.0 x D	0.3 x D	0.3 x D	70	-	130	IPT	.0004	.0006	.0008	.0010	.0012	.0014	.0016	.0018	.0020	.0025	.0031
	3	1.25 x D	0.5 x D	1 x D	160	-	260	IPT	.0006	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036	.0046
	4	1.25 x D	0.5 x D	1 x D	150	-	210	IPT	.0005	.0008	.0011	.0014	.0017	.0019	.0022	.0025	.0028	.0033	.0042
Н	1	1.25 x D	0.5 x D	0.75 x D	260	-	460	IPT	.0007	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039	.0049

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.

