





Series 5V0S																	
Material Group	A		B														
	ap	ae	ap	ALTIN		Recommended feed per tooth (IPT=inch/th) for side milling (A). For slotting (B), reduce IPT by 20%.											
				Cutting Speed — vc SFM		D1 — Diameter											
					min	max	frac.	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	
						dec.	.1880	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000		
P	1	1.25 x D	0.5 x D	1 x D	490	–	660	IPT	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	2	1.25 x D	0.5 x D	1 x D	460	–	620	IPT	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	3	1.25 x D	0.5 x D	1 x D	390	–	520	IPT	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	4	1.25 x D	0.5 x D	0.75 x D	300	–	490	IPT	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039
	5	1.25 x D	0.5 x D	1 x D	200	–	330	IPT	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	6	1.25 x D	0.5 x D	0.75 x D	160	–	250	IPT	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028
M	1	1.25 x D	0.5 x D	1 x D	260	–	330	IPT	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	2	1.25 x D	0.5 x D	1 x D	200	–	260	IPT	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	3	1.25 x D	0.5 x D	1 x D	200	–	260	IPT	.0008	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028
K	1	1.25 x D	0.5 x D	1 x D	390	–	520	IPT	.0014	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	2	1.25 x D	0.5 x D	1 x D	360	–	460	IPT	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	3	1.25 x D	0.5 x D	1 x D	330	–	430	IPT	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
S	1	1.0 x D	0.3 x D	0.3 x D	160	–	300	IPT	.0011	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	2	1.0 x D	0.3 x D	0.3 x D	70	–	130	IPT	.0006	.0008	.0010	.0012	.0014	.0016	.0018	.0020	.0025
	3	1.25 x D	0.5 x D	1 x D	160	–	260	IPT	.0009	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	4	1.25 x D	0.5 x D	1 x D	150	–	210	IPT	.0008	.0011	.0014	.0017	.0019	.0022	.0025	.0028	.0033
H	1	1.25 x D	0.5 x D	0.75 x D	260	–	460	IPT	.0010	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039

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.

Series 5V0T																
Material Group	A		B													
	ap	ae	ap	ALTIN		Recommended feed per tooth (IPT=inch/th) for side milling (A). For slotting (B), reduce IPT by 20%.										
				Cutting Speed — vc SFM		D1 — Diameter										
					min	max	frac.	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	
						dec.	.2500	.3130	.3750	.4380	.5000	.6250	.7500	1.000		
P	1	1.25 x D	0.5 x D	1 x D	490	–	660	IPT	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	2	1.25 x D	0.5 x D	1 x D	460	–	620	IPT	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	3	1.25 x D	0.5 x D	1 x D	390	–	520	IPT	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	4	1.25 x D	0.5 x D	0.75 x D	300	–	490	IPT	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039
	5	1.25 x D	0.5 x D	1 x D	200	–	330	IPT	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	6	1.25 x D	0.5 x D	0.75 x D	160	–	250	IPT	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028
M	1	1.25 x D	0.5 x D	1 x D	260	–	330	IPT	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	2	1.25 x D	0.5 x D	1 x D	200	–	260	IPT	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	3	1.25 x D	0.5 x D	1 x D	200	–	260	IPT	.0010	.0013	.0015	.0017	.0019	.0022	.0024	.0028
K	1	1.25 x D	0.5 x D	1 x D	390	–	520	IPT	.0018	.0023	.0027	.0031	.0035	.0039	.0043	.0050
	2	1.25 x D	0.5 x D	1 x D	360	–	460	IPT	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	3	1.25 x D	0.5 x D	1 x D	330	–	430	IPT	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
S	1	1.0 x D	0.3 x D	0.3 x D	160	–	300	IPT	.0015	.0020	.0023	.0026	.0029	.0034	.0038	.0046
	2	1.0 x D	0.3 x D	0.3 x D	70	–	130	IPT	.0008	.0010	.0012	.0014	.0016	.0018	.0020	.0025
	3	1.25 x D	0.5 x D	1 x D	160	–	260	IPT	.0012	.0016	.0018	.0021	.0023	.0027	.0030	.0036
	4	1.25 x D	0.5 x D	1 x D	150	–	210	IPT	.0011	.0014	.0017	.0019	.0022	.0025	.0028	.0033
H	1	1.25 x D	0.5 x D	0.75 x D	260	–	460	IPT	.0014	.0018	.0020	.0023	.0026	.0030	.0033	.0039

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.

Solid End Milling

Series 5VNS														
		A		B		ALTIN			Recommended feed per tooth (IPT=inch/th) for side milling (A). For slotting (B), reduce IPT by 20%.					
Material Group		ap	ae	ap	Cutting Speed — vc			D1 — Diameter						
					min		max	frac.	1/4	3/8	1/2	5/8	3/4	1
							dec.	.2500	.3750	.5000	.6250	.7500	1.000	
P	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
	3	0.75 x D	0.5 x D	0.75 x D	390	-	520	IPT	0.0015	.0023	.0029	.0034	.0038	.0046
	4	0.75 x D	0.5 x D	0.5 x D	300	-	490	IPT	0.0014	.0020	.0026	.0030	.0033	.0039
	5	0.75 x D	0.5 x D	0.75 x D	200	-	330	IPT	.0012	.0018	.0023	.0027	.0030	.0036
	6	0.75 x D	0.5 x D	0.5 x D	160	-	250	IPT	.0010	.0015	.0019	.0022	.0024	.0028
M	1	0.75 x D	0.5 x D	0.75 x D	260	-	330	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	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
K	1	0.75 x D	0.5 x D	0.75 x D	390	-	520	IPT	.0018	.0027	.0035	.0039	.0043	.0050
	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
S	1	0.75 x D	0.3 x D	0.3 x D	160	-	300	IPT	.0015	.0023	.0029	.0034	.0038	.0046
	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
H	1	0.75 x D	0.5 x D	0.5 x D	260	-	460	IPT	.0014	.0020	.0026	.0030	.0033	.0039

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 accordingly on >1/2" diameter.