

## NXG-7 Series End Mills - Speeds & Feeds

Square, Corner Radius, Ball, Corner Break Series

CONVENTIONAL MILLING													
MATERIAL	SIDE MILLING		SFM		IPT								
	ADOC	RDOC	MIN	MAX	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2	
<b>P</b>	Alloyed Steel	ADOC max	0.4 x D	300	490	0.0013	0.0020	0.0026	0.0030	0.0034	0.0039	0.0040	0.0040
	Tool Steel	ADOC max	0.4 x D	200	330	0.0012	0.0018	0.0023	0.0027	0.0031	0.0036	0.0039	0.0039
<b>M</b>	Austenitic	ADOC max	0.4 x D	300	380	0.0015	0.0023	0.0029	0.0034	0.0039	0.0045	0.0048	0.0048
	Martensitic, Ferritic	ADOC max	0.4 x D	200	260	0.0012	0.0018	0.0023	0.0027	0.0031	0.0036	0.0039	0.0039
	PH Stainless	ADOC max	0.4 x D	200	230	0.0010	0.0015	0.0019	0.0022	0.0025	0.0028	0.0029	0.0029
<b>S</b>	Co, Fe Alloys	ADOC max	0.4 x D	80	160	0.0008	0.0012	0.0015	0.0018	0.0021	0.0024	0.0026	0.0026
	Ni-Based Alloys	ADOC max	0.4 x D	80	130	0.0008	0.0012	0.0015	0.0018	0.0021	0.0024	0.0026	0.0026
	Titanium Alloys	ADOC max	0.4 x D	160	200	0.0011	0.0017	0.0021	0.0025	0.0028	0.0033	0.0036	0.0036
<b>H</b>	45 - 50 HRC	ADOC max	0.4 x D	260	460	0.0013	0.0020	0.0026	0.0030	0.0034	0.0039	0.0040	0.0040
	> 50 HRC	ADOC max	0.4 x D	230	390	0.0010	0.0015	0.0019	0.0022	0.0025	0.0028	0.0029	0.0029

- All posted speed and feed parameters are suggested starting values that may be increased or decreased
- For tools >3D reach, reduce feed rate by 20-30%
- For corner break end mills, increase IPT by 15%

HIGH EFFICIENCY MILLING (HEM)													
MATERIAL	SIDE MILLING		SFM		IPT								
	ADOC	RDOC	MIN	MAX	1/4	3/8	1/2	5/8	3/4	1			
<b>P</b>	Carbon Steel	3 x D	0.1 x D	500	1440	0.0021	0.0033	0.0041	0.0047	0.0053	0.0059		
	Alloyed Steel	3 x D	0.1 x D	400	1150	0.0018	0.0027	0.0035	0.0041	0.0046	0.0054		
	Tool Steel	3 x D	0.1 x D	300	1080	0.0016	0.0025	0.0031	0.0036	0.0040	0.0046		
<b>M</b>	Austenitic	3 x D	0.1 x D	300	830	0.0018	0.0027	0.0035	0.0041	0.0046	0.0054		
	Martensitic, Ferritic	3 x D	0.1 x D	200	580	0.0014	0.0022	0.0028	0.0033	0.0037	0.0043		
	PH Stainless	3 x D	0.1 x D	200	510	0.0012	0.0018	0.0023	0.0027	0.0030	0.0034		
<b>K</b>	Gray Cast	3 x D	0.1 x D	400	1080	0.0021	0.0033	0.0041	0.0047	0.0053	0.0059		
	Nodular	3 x D	0.1 x D	370	1010	0.0018	0.0027	0.0035	0.0041	0.0046	0.0054		
	Ductile	3 x D	0.1 x D	370	940	0.0014	0.0022	0.0028	0.0033	0.0037	0.0043		
<b>S</b>	Co, Fe Alloys	3 x D	0.1 x D	80	580	0.0014	0.0022	0.0028	0.0033	0.0037	0.0043		
	Ni-Based Alloys	3 x D	0.1 x D	80	290	0.0009	0.0015	0.0018	0.0022	0.0025	0.0029		
	Titanium Alloys	3 x D	0.1 x D	170	430	0.0013	0.0020	0.0026	0.0030	0.0034	0.0040		
<b>H</b>	45 - 50 HRC	3 x D	0.1 x D	270	1010	0.0016	0.0025	0.0031	0.0036	0.0040	0.0046		
	> 50 HRC	3 x D	0.1 x D	230	870	0.0012	0.0018	0.0023	0.0027	0.0030	0.0034		

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HEM SPEED FACTOR									
RDOC/D1	0.5%	1.00%	1.50%	2.00%	4.00%	5.00%	8.00%	10.00%	
Speed Multiplier	SFM	2.15	2.11	2.07	1.48	1.11	1.07	1	
Feed Multiplier	IPT	1.65	1.53	1.47	1.41	1.35	1.29	1	

TECHNICAL