

NEW LAUNCH

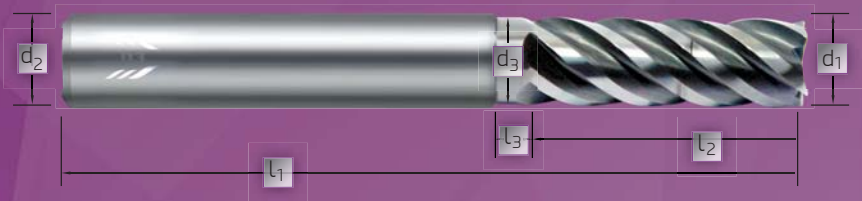
THE FUTURE IS NOW!



Introducing the Future of Machining - Premium 5 Flute Endmill with Chipbreaker for New Generation Milling.



Material Group



Conventional Milling :

- Normally 1xd Axial Reach during Slotting
- High heat development on the Tool & Component
- Difficult chip evacuation
- High radial forces

NTC Mill :

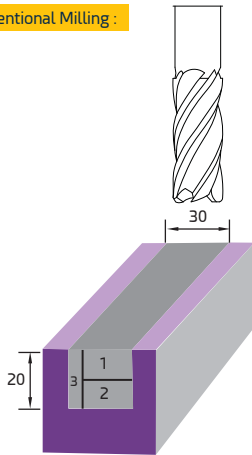
- Upto 5xd Milling with increased slot width
- Reduced tool contact
- Less heat development on the Tool & Component
- Highly reduced machining time
- Increased Tool Life

	d ₁	d ₂	d ₃	l ₂	l ₁	l ₃	a _p	z	HA Alcrona
	mm	mm	mm	mm	mm	mm	mm		Item Code
3xd	6.00	6	5.80	18	62	7.0	25	5	NTCA 0310P 0600
	8.00	8	7.80	24	68	6.0	30	5	NTCA 0310P 0800
	10.00	10	9.80	30	80	5.0	35	5	NTCA 0310P 1000
	12.00	12	11.80	36	93	9.0	45	5	NTCA 0310P 1200
	16.00	16	15.80	48	108	7.0	55	5	NTCA 0310P 1600
5xd	6.00	6	5.8	30	78	7.0	30	5	NTCA 0510P 0600
	8.00	8	7.8	40	90	6.0	40	5	NTCA 0510P 0800
	10.00	10	9.8	50	100	5.0	50	5	NTCA 0510P 1000
	12.00	12	11.8	60	120	9.0	60	5	NTCA 0510P 1200
	16.00	16	15.8	80	149	70	80	5	NTCA 0510P 1600

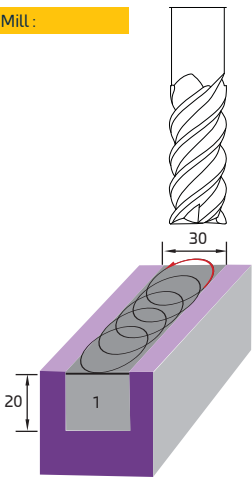
Application Parameters

Benefits:

Conventional Milling :



N-TC Mill :



Even a relatively small slot, such as one about 30 mm wide, traditionally might have required three or four passes. Trochoidal milling can save time by removing the material in one continuous pass.

Formula

$$h_m = f_z \times \sqrt{\frac{ae}{d_1}} \text{ [mm]}$$

- h_m Average chip thickness [mm]
- f_z Feed per tooth [mm]
- a_e Width of cut [mm]
- d_1 Cutting diameter [mm]

3xd	Material Group	Strength	ap	ae		Ø6	Ø8	Ø10	Ø12	Ø16
P	<500N/mm2	3xd	0.24xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	380	380	380	380	380	
				v_f (mm/min)	3025	3025	3025	3025	3025	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<750N/mm2	3xd	0.24xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	340	340	340	340	340	
				v_f (mm/min)	2707	2707	2707	2707	2707	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<900N/mm2	3xd	0.24xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	300	300	300	300	300	
				v_f (mm/min)	2389	2389	2389	2389	2389	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<1100N/mm2	3xd	0.2xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	230	230	230	230	230	
				v_f (mm/min)	1831	1831	1831	1831	1831	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<1400N/mm2	3xd	0.2xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	150	150	150	150	150	
				v_f (mm/min)	1194	1194	1194	1194	1194	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	33 HRC	3xd	0.16xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	60	60	60	60	60	
				v_f (mm/min)	478	478	478	478	478	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	45 HRC	3xd	0.16xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	40	40	40	40	40	
				v_f (mm/min)	318	318	318	318	318	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	<1600N/mm2	3xd	0.16xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	25	25	25	25	25	
				v_f (mm/min)	199	199	199	199	199	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
M	<900N/mm2	3xd	0.2xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	220	220	220	220	220	
				v_f (mm/min)	1752	1752	1752	1752	1752	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
M	>900N/mm2	3xd	0.2xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	150	150	150	150	150	
				v_f (mm/min)	1194	1194	1194	1194	1194	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
5xd	Material Group	Strength	ap	ae		Ø6	Ø8	Ø10	Ø12	Ø16
P	<500N/mm2	5xd	0.20xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	266	266	266	266	266	
				v_f (mm/min)	2118	2118	2118	2118	2118	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<750N/mm2	5xd	0.20xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	238	238	238	238	238	
				v_f (mm/min)	1895	1895	1895	1895	1895	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<900N/mm2	5xd	0.20xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	210	210	210	210	210	
				v_f (mm/min)	1672	1672	1672	1672	1672	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<1100N/mm2	5xd	0.17xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	161	161	161	161	161	
				v_f (mm/min)	1282	1282	1282	1282	1282	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
P	<1400N/mm2	5xd	0.17xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	105	105	105	105	105	
				v_f (mm/min)	836	836	836	836	836	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	33 HRC	5xd	0.13xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	42	42	42	42	42	
				v_f (mm/min)	334	334	334	334	334	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	45 HRC	5xd	0.13xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	28	28	28	28	28	
				v_f (mm/min)	223	223	223	223	223	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
H	<1600N/mm2	5xd	0.13xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	18	18	18	18	18	
				v_f (mm/min)	139	139	139	139	139	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
M	<900N/mm2	5xd	0.17xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	154	154	154	154	154	
				v_f (mm/min)	1226	1226	1226	1226	1226	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	
M	>900N/mm2	3xd	0.17xd	f_z (mm)	0.030	0.040	0.050	0.060	0.080	0.080
				v_c (m/min)	105	105	105	105	105	
				v_f (mm/min)	836	836	836	836	836	
				h_m (mm)	0.045	0.060	0.075	0.090	0.120	