

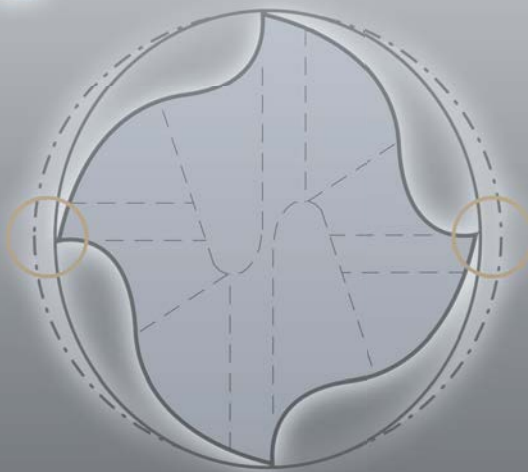
Epoch Turbo High Feed Radius

Pencil Neck - 4-Flute Corner Radius End Mill

Extremely High Cutting Efficiency · Low r.p.m. - High Feed

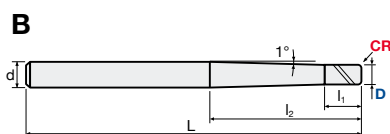
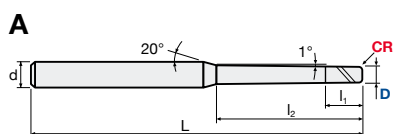
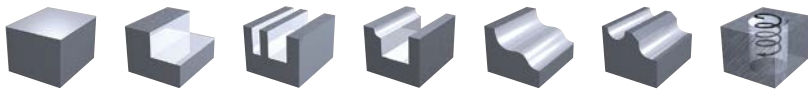
D2mm ~ D6mm

- ***High Feed Milling of Materials $\leq 60\text{HRC}$***
- ***Special Oval Flute Shape:***
- ***Reduced Vibration even in Deep Cutting Operations***
- ***More Stability: Neck Angle $\theta = 1^\circ$***



EPOCH TURBO PENCIL NECK

Q max High Efficient	▽ Roughing	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 60	No. of Teeth 4
--------------------------------	----------------------	-----------------------------	-------------------------	------------------	--------------------------



Carbide Micro Grain	TH45+ Nano-PVD Coating	Rake Angle Negative
-------------------------------	----------------------------------	-------------------------------

Helix Angle	R Tol. [mm]	d Tol.
45°	+/- 0.015	h5

ID Code	Item Code	D	CR	l_2	l_1	θ	L	d	Type
EP589	ETMP-4020-12-05	2	0.5	12	3	1°	70	6	A
EP590	ETMP-4020-16-05			16					
EP591	ETMP-4020-20-05			20					
EP592	ETMP-4030-18-08	3	0.8	18	4.5		80		
EP593	ETMP-4030-24-08			24					
EP594	ETMP-4030-30-08			30					
EP595	ETMP-4040-24-10	4	1.0	24	6		90		
EP596	ETMP-4040-32-10			32					
EP597	ETMP-4040-40-10			40					
EP598	ETMP-4050-30-12	5	1.2	30	7.5		100	8	
EP599	ETMP-4050-40-12			40					
EP600	ETMP-4050-50-12			50					
EP601	ETMP-4060-40-15	6	1.5	40	9		100		B
EP602	ETMP-4060-55-15			55					
EP603	ETMP-4060-67-15			67					

Cutting Conditions | Schnittwerte | Condizioni di taglio | Condiciones de Corte | Conditions de coupe | Valores de corte: Page 4-5

EPOCH TURBO PENCIL NECK | Recommended Cutting Conditions

RECOMMENDED CUTTING CONDITIONS

1. Use a highly rigid and accurate machine as possible.
2. These conditions are for general guidance; in actual machining conditions adjust the parameters according to your actual machine and work-piece conditions.
3. If the rpm available is lower than recommended please reduce the feed rate to the same ratio.

EMPFOHLENE SCHNITTBEDINGUNGEN

1. Benutzen Sie für die Bearbeitung jeweils die Maschine mit der höchsten Genauigkeit und der höchsten Stabilität.
2. Die angegebenen Schnittwerte stellen eine generelle Empfehlung dar. Die Werte sollten immer an die jeweilige Bearbeitung, deren Form und die verwendete Maschine angepasst werden.
3. Ist die Ihnen verfügbare Drehzahl niedriger als der in der Tabelle angegebene Wert, sollte der Vorschub im gleichen Verhältnis reduziert werden.

CONDIZIONI DI TAGLIO RACCOMANDATE

1. Usate centri di lavoro più precisi e rigidi possibile
2. Le condizioni di taglio sono valori generali. Per ottimizzare il processo di lavoro rispettate le geometrie dello stampo e la macchina disponibile.
3. Quando i giri della macchina disponibili sono più bassi rispetto al valore espresso regolate l'avanzamento con lo stesso rapporto.

CONDICIONES DE CORTE RECOMENDADAS

1. Utilizar la máquina más rígida y precisa posible.
2. Las condiciones de corte de la tabla son una orientación general. Para un trabajo específico hay que ajustar las condiciones en función de la geometría de la pieza, el resultado esperado y el tipo de máquina que vamos a utilizar.
3. Si las rpm máximas de la máquina son inferiores, hay que ajustar el avance en proporción a las mismas.

CONDITIONS DE COUPE RECOMMANDÉES

1. Utiliser une machine aussi rigide et fiable que possible.
2. Ces conditions sont indicatives : en utilisation, ajuster les conditions en fonction de la machine et de la pièce usinée.
3. Si la rotation possible est inférieure à celle recommandée, ajuster l'avance dans la même proportion.

CONDIÇÕES DE CORTE RECOMENDADAS

1. Use uma máquina rígida e o mais precisa possível.
2. Estas condições são para orientação geral, em condições de maquinação real ajustar os parâmetros de acordo com a sua máquina e com as condições das peças a maquinar.
3. Se o número de rotações disponível na máquina for menor do que o recomendado por favor reduza avanço na mesma proporção.

ATTENTION

- Be careful of the newly developed flute shape when measuring tool diameter or oscillation.
- The bit is designed with a smaller outer diameter connected to end slave flutes.
- When measuring tool diameter or oscillation, measure the main flutes.

ZUR BEACHTUNG

- Bitte beachten Sie die Schneidengeometrie beim Messen von Werkzeugdurchmesser oder Oszillation.
- Der Fräser hat einen geringeren Außendurchmesser, verbunden mit den vorderen Sekundärschneiden.
- Für die Vermessung von Werkzeugdurchmesser / Oszillation sind die Hauptschneiden relevant.

ATTENZIONE

- Prestare attenzione alla nuova geometria dei taglienti durante la misurazione del diametro utensile o del run-out.
- Per determinare il diametro dell'utensile od il run-out, misurare i taglienti principali.

ATENCIÓN

- Tenga en cuenta la nueva geometría de los labios de la herramienta cuando mida el diámetro o el salto.

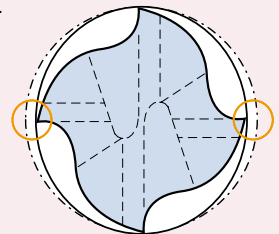
- Los labios secundarios están diseñados con un diámetro menor.
- Al medir diámetro de la herramienta o el salto, hay que medir los labios principales.


ATTENTION


- Faites attention à la forme de la dent développée pour cet outils, lors de la mesure du diamètre de l'outil ou de l'oscillation.
- Les dents secondaires sont légèrement en retrait des dents principales, ce qui donne un diamètre inférieur.
- Lors de la mesure du diamètre ou de l'oscillation, appliquer ces mesures aux dents principales.


ATENÇÃO


- Ter em atenção a nova geometria da navalha, quando se medir o diâmetro ou oscilação da ferramenta.
- As navalhas mais recolhidas estão desenhadas para um diâmetro mais pequeno
- Aquando da medição do diâmetro ou oscilação da ferramenta, medir as navalhas principais.





 **Note:** For finishing and precise tool definition for the CAM system please download DXF data (QuickFinder), or contact your local MOLDINO Tool staff for more details.

 **Nota:** Per lavorazioni di finitura e per una precisa e corretta definizione del profilo dell'utensile per l'utilizzo CAM si prega di richiedere file DXF tramite QuickFinder o rivolgendosi al personale MOLDINO Tool.

 **Remarque :** Pour les opérations de finition et une définition précise de l'outil dans votre système FAO, demandez nous le fichier DXF des outils, téléchargez les via notre logiciel QuickFinder, ou contactez votre interlocuteur commercial pour plus de détails.












 **Achtung:** Bitte laden Sie sich für die Schlichtbearbeitung und die präzise Definition der Werkzeuge die DXF Daten herunter (QuickFinder) oder wenden Sie sich an Ihren MOLDINO Anwendungstechniker.

 **Nota:** En procesos de acabado y para una más precisa definición de la herramienta en el sistema de CAM por favor solicite los ficheros DXF (QuickFinder), o póngase en contacto con MOLDINO Tool para obtener más detalles.

 **Nota:** Para o acabamento e precisão assim como melhor definição da ferramenta para o sistema CAM por favor solicite dados DXF (QuickFinder), ou entre em contato com sua equipe de ferramentas MOLDINO local para obter mais detalhes.

EPOCH TURBO PENCIL NECK | Recommended Cutting Conditions

		D 2 / CR 0.5						D 3 / CR 0.8					
		Application Field						Application Field					
		In	Standard	High Speed	High Depth	Low Load	Finish	In	Standard	High Speed	High Depth	Low Load	Finish
I	Cast Iron Carbon Steels Alloy Steels HB150~250	V_c (m/min)	75	126	75	94	182		75	125	75	95	180
		n (min ⁻¹)	12,000	20,000	12,000	15,000	29,000		8,000	13,300	8,000	10,100	19,100
		f_z (mm)	0.112	0.112	0.051	0.086	0.02		0.189	0.189	0.086	0.146	0.03
		V_f (mm/min)	5,380	8,960	2,460	5,180	1,860		6,050	10,050	2,760	5,890	2,060
		a_p (mm) / In	12	0.135	0.108	0.27	0.135	18	0.216	0.173	0.432	0.216	
		a_p (mm) / In	16	0.115	0.092	0.23	0.115	24	0.184	0.147	0.368	0.184	0.05 ~ 0.1
II	Tool Steels HRC25~35	a_p (mm) / In	20	0.075	0.06	0.15	0.075	30	0.12	0.096	0.24	0.12	
		a_e (mm)		0.5			0.05		0.7			0.08	
		V_c (m/min)	69	113	69	88	151		70	110	70	90	150
		n (min ⁻¹)	11,000	18,000	11,000	14,000	24,000		7,400	11,700	7,400	9,500	15,900
		f_z (mm)	0.103	0.102	0.048	0.077	0.01		0.173	0.173	0.081	0.129	0.02
		V_f (mm/min)	4,510	7,370	2,110	4,300	1,230		5,110	8,090	2,400	4,920	1,370
III	Pre-Hardened Steels HRC35~45	a_p (mm) / In	12	0.135	0.108	0.243	0.135	18	0.216	0.173	0.389	0.216	
		a_p (mm) / In	16	0.115	0.092	0.207	0.115	24	0.184	0.147	0.331	0.184	0.05 ~ 0.1
		a_p (mm) / In	20	0.075	0.06	0.135	0.075	30	0.12	0.096	0.216	0.12	
		a_e (mm)		0.5			0.05		0.7			0.08	
		V_c (m/min)	63	101	63	88	119		65	100	65	85	120
		n (min ⁻¹)	10,000	16,000	10,000	14,000	19,000		6,900	10,600	6,900	9,000	12,700
IV	Hardened Steels HRC45~55	f_z (mm)	0.080	0.080	0.040	0.061	0.01		0.135	0.135	0.067	0.103	0.02
		V_f (mm/min)	3,200	5,120	1,600	3,400	730		3,730	5,720	1,860	3,690	820
		a_p (mm) / In	12	0.135	0.095	0.216	0.135	18	0.216	0.151	0.346	0.216	
		a_p (mm) / In	16	0.115	0.081	0.184	0.115	24	0.184	0.129	0.294	0.184	0.05 ~ 0.1
		a_p (mm) / In	20	0.075	0.053	0.12	0.075	30	0.12	0.084	0.192	0.12	
		a_e (mm)		0.5			0.05		0.7			0.08	
V	Hardened Steels HRC55~60	V_c (m/min)	50	80	50	65	90		50	80	50	65	90
		n (min ⁻¹)	8,000	12,700	8,000	10,300	14,300		5,300	8,500	5,300	6,900	9,500
		f_z (mm)	0.080	0.080	0.040	0.056	0.01		0.135	0.135	0.067	0.095	0.01
		V_f (mm/min)	2,560	4,060	1,280	2,310	460		2,860	4,590	1,430	2,610	510
		a_p (mm) / In	12	0.095	0.068	0.162	0.095	18	0.151	0.108	0.259	0.151	
		a_p (mm) / In	16	0.081	0.058	0.138	0.081	24	0.129	0.092	0.221	0.129	0.05 ~ 0.1
		a_p (mm) / In	20	0.053	0.038	0.09	0.053	30	0.084	0.06	0.144	0.084	
		a_e (mm)		0.5			0.05		0.7			0.08	
		V_c (m/min)	50	70	50	60	70		50	70	50	60	70
		n (min ⁻¹)	8,000	11,100	8,000	9,500	11,100		5,300	7,400	5,300	6,400	7,400
		f_z (mm)	0.032	0.032	0.019	0.024	0.01		0.054	0.054	0.033	0.041	0.01
		V_f (mm/min)	1,020	1,420	610	910	280		1,140	1,600	690	1,040	320
		a_p (mm) / In	12	0.068	0.054	0.095	0.068	18	0.108	0.086	0.151	0.108	
		a_p (mm) / In	16	0.058	0.046	0.081	0.058	24	0.092	0.074	0.129	0.092	0.05 ~ 0.1
		a_p (mm) / In	20	0.038	0.03	0.053	0.038	30	0.06	0.048	0.084	0.06	
		a_e (mm)		0.5			0.05		0.7			0.08	

						
	Standard condition (Low revolution, High feed)	Standard-Schnittwerte (Niedrige Drehzahl, hoher Vorschub)	Condizioni base (basso numero di giri, alto avanzamento)	Condiciones de desbaste Condicio- nes estándar (Pocas revoluciones, Alto avance)	Conditions standard (Faible rotation, Hautes avances)	Condições de desbaste condicio- nes estándar (baixa rotação, alto avanço)
	High speed condition (High revolution, High feed)	Hochgeschwindigkeits- Schnittwerte (Hohe Drehzahlen, hoher Vorschub)	Condizioni per alta velocità (alto numero di giri, alto avanzamento)	Condiciones de alta velocidad (Altas revoluciones, Muy Alto Avance)	Conditions haute vitesse (Hautes rota- tions, Hautes avances)	Condições de alta velocidade (alta rotação, alto avanço)
	High depth of cut condition (Low revolution, High depth of cut)	Schnittwerte für Bear- beitungen mit großen Eingriffstiefen (Geringe Drehzahlen, hohe Eingriffstiefe)	Condizioni in caso di alta profondità di passata (basso numero di giri, alta profondità di taglio)	Condiciones de gran a_p (Pocas revoluciones, Gran pasada axial)	Conditions pour usinages hautes profondeurs (Faible rotation, Haute profondeur de coupe)	Condições de grande a_p (baixa rotação, alta profundidade a_p)
	Low load condition (Medium revolution, High feed)	Schnittwerte für Maschinen mit gerin- ger Antriebsleistung (Mittlere Drehzahlen, hoher Vorschub)	Basse condizioni di sforzo (numero di giri medio, alti avanzamenti)	Condiciones de bajo esfuerzo (Revoluciones medias, Alto avance)	Conditions pour faible charge (Rotation moyenne, Hautes avances)	Condições de baixo esforço (rotação média, alta avanço)
	Finishing Condition	Schlicht-Bearbeitungen	Condizioni di finitura	Condiciones de acabado	Conditions de finition	Condição de acabamento

EPOCH TURBO PENCIL NECK | Recommended Cutting Conditions

D 4 / CR 1.0						D 5 / CR 1.2						D 6 / CR 1.5					
Application Field						Application Field						Application Field					
In						In						In					
Standard	High Speed	High Depth	Low Load	Finish		Standard	High Speed	High Depth	Low Load	Finish		Standard	High Speed	High Depth	Low Load	Finish	
V_c	75	124	75	96	180	V_c	75	126	75	94	181	V_c	75	124	75	94	179
n	6,000	9,900	6,000	7,600	14,300	n	4,800	8,000	4,800	6,000	11,500	n	4,000	6,600	4,000	5,000	9,500
f_z	0.266	0.266	0.122	0.205	0.04	f_z	0.332	0.333	0.152	0.257	0.05	f_z	0.420	0.420	0.192	0.324	0.06
V_r	6,380	10,530	2,920	6,240	2,170	V_r	6,380	10,640	2,920	6,160	2,190	V_r	6,720	11,090	3,070	6,480	2,280
a_p 24	0.27	0.216	0.54	0.27		a_p 30	0.324	0.259	0.648	0.324		a_p 40	0.375	0.3	0.75	0.375	
a_p 32	0.23	0.184	0.46	0.23	0.05 ~ 0.1	a_p 40	0.276	0.221	0.552	0.276	0.05 ~ 0.1	a_p 55	0.225	0.18	0.45	0.225	0.05 ~ 0.1
a_p 40	0.15	0.12	0.3	0.15		a_p 50	0.18	0.144	0.36	0.18		a_p 67	0.15	0.12	0.3	0.15	
a_e	1				0.1	a_e	1.3				0.12	a_e	1.5				0.15
V_c	70	111	70	90	150	V_c	71	110	71	90	149	V_c	70	109	70	90	151
n	5,600	8,800	5,600	7,200	11,900	n	4,500	7,000	4,500	5,700	9,500	n	3,700	5,800	3,700	4,800	8,000
f_z	0.243	0.243	0.114	0.182	0.03	f_z	0.304	0.304	0.143	0.228	0.04	f_z	0.384	0.384	0.180	0.288	0.05
V_r	5,450	8,560	2,550	5,250	1,450	V_r	5,470	8,510	2,570	5,200	1,440	V_r	5,680	8,910	2,660	5,530	1,540
a_p 24	0.27	0.216	0.486	0.27		a_p 30	0.324	0.259	0.583	0.324		a_p 40	0.375	0.3	0.675	0.375	
a_p 32	0.23	0.184	0.414	0.23	0.05 ~ 0.1	a_p 40	0.276	0.221	0.497	0.276	0.05 ~ 0.1	a_p 55	0.225	0.18	0.405	0.225	0.05 ~ 0.1
a_p 40	0.15	0.12	0.27	0.15		a_p 50	0.18	0.144	0.324	0.18		a_p 67	0.15	0.12	0.27	0.15	
a_e	1				0.1	a_e	1.3				0.12	a_e	1.5				0.15
V_c	65	101	65	85	119	V_c	64	101	64	85	119	V_c	64	100	64	85	121
n	5,200	8,000	5,200	6,800	9,500	n	4,100	6,400	4,100	5,400	7,600	n	3,400	5,300	3,400	4,500	6,400
f_z	0.190	0.190	0.095	0.144	0.02	f_z	0.238	0.238	0.119	0.181	0.03	f_z	0.300	0.300	0.150	0.228	0.04
V_r	3,950	6,080	1,980	3,930	870	V_r	3,900	6,080	1,950	3,900	870	V_r	4,080	6,360	2,040	4,100	920
a_p 24	0.27	0.189	0.432	0.27		a_p 30	0.324	0.227	0.518	0.324		a_p 40	0.375	0.263	0.6	0.375	
a_p 32	0.23	0.161	0.368	0.23	0.05 ~ 0.1	a_p 40	0.276	0.193	0.442	0.276	0.05 ~ 0.1	a_p 55	0.225	0.158	0.36	0.225	0.05 ~ 0.1
a_p 40	0.15	0.105	0.24	0.15		a_p 50	0.18	0.126	0.288	0.18		a_p 67	0.15	0.105	0.24	0.15	
a_e	1				0.1	a_e	1.3				0.12	a_e	1.5				0.15
V_c	50	80	50	65	90	V_c	50	80	50	64	90	V_c	51	79	51	64	90
n	4,000	6,400	4,000	5,200	7,200	n	3,200	5,100	3,200	4,100	5,700	n	2,700	4,200	2,700	3,400	4,800
f_z	0.190	0.190	0.095	0.133	0.02	f_z	0.238	0.238	0.119	0.166	0.02	f_z	0.300	0.300	0.150	0.210	0.03
V_r	3,040	4,860	1,520	2,770	550	V_r	3,040	4,850	1,520	2,730	540	V_r	3,240	5,040	1,620	2,860	580
a_p 24	0.189	0.135	0.324	0.189		a_p 30	0.227	0.162	0.389	0.227		a_p 40	0.263	0.188	0.45	0.263	
a_p 32	0.161	0.115	0.276	0.161	0.05 ~ 0.1	a_p 40	0.193	0.138	0.331	0.193	0.05 ~ 0.1	a_p 55	0.158	0.133	0.27	0.158	0.05 ~ 0.1
a_p 40	0.105	0.075	0.18	0.105		a_p 50	0.126	0.09	0.216	0.126		a_p 67	0.105	0.075	0.18	0.105	
a_e	1				0.1	a_e	1.3				0.12	a_e	1.5				0.15
V_c	50	70	50	60	70	V_c	50	71	50	60	71	V_c	51	70	51	60	70
n	4,000	5,600	4,000	4,800	5,600	n	3,200	4,500	3,200	3,800	4,500	n	2,700	3,700	2,700	3,200	3,700
f_z	0.076	0.076	0.046	0.057	0.02	f_z	0.095	0.095	0.057	0.071	0.02	f_z	0.120	0.120	0.072	0.090	0.02
V_r	1,220	1,700	730	1,090	340	V_r	1,220	1,710	730	1,080	340	V_r	1,300	1,780	780	1,150	360
a_p 24	0.135	0.108	0.189	0.135		a_p 30	0.162	0.13	0.227	0.162		a_p 40	0.188	0.15	0.263	0.188	
a_p 32	0.115	0.092	0.161	0.115	0.05 ~ 0.1	a_p 40	0.138	0.11	0.193	0.138	0.05 ~ 0.1	a_p 55	0.113	0.09	0.158	0.113	0.05 ~ 0.1
a_p 40	0.075	0.06	0.105	0.075		a_p 50	0.09	0.072	0.126	0.09		a_p 67	0.075	0.06	0.105	0.075	
a_e	1				0.1	a_e	1.3				0.12	a_e	1.5				0.15

REMARKS ETM-P

- Cutting conditions of taper (1°) version same like as straight type (ETM). Surface, tolerance and tool life will improve.
- Due to 1° taper neck (more stability) it's possible to increase **f_z** by 10 ~ 20% max. **OR a_p** by 3 ~ 7% max.
- f_z** ↗ = keep **V_c**, **a_p**, **a_e** →
- a_p** ↗ = keep **V_c**, **f_z**, **a_e** →

ANMERKUNGEN ZU ETM-P

- Die Schnittwerte für die konische Version (1°) sind mit denen der geraden Version (ETM) identisch – bei erhöhter Oberflächenqualität, Präzision und Werkzeug-Lebensdauer.
- Die größere Stabilität des 1°-Konus ermöglicht eine Erhöhung des **f_z**-Wertes um maximal 10 ~ 20% **ODER** des **a_p**-Wertes um maximal 3 ~ 7%.
- f_z** ↗ = **V_c**, **a_p**, **a_e** beibehalten →
- a_p** ↗ = **V_c**, **f_z**, **a_e** beibehalten →

NOTE

- Mantenere le condizioni di taglio della versione pencil (1°) come quelle del tipo standard (ETM). Ciò migliorerà precisione, qualità superficiale e durata utensile.
- In funzione della conicità di 1° (maggior stabilità) è possibile aumentare **f_z** del 10 ~ 20% **o in alternativa a_p** del 3 ~ 7%.
- f_z** ↗ = mantenere **V_c**, **a_p**, **a_e** →
- a_p** ↗ = mantenere **V_c**, **f_z**, **a_e** →

OBSERVACIONES ETM-P

- Las condiciones de corte de la versión cónica (1°) son idénticas a las de la versión recta (ETM). La superficie, la tolerancia y la vida de la herramienta van a mejorar.
- Debido al cuello cónico de 1° (mayor estabilidad) es posible aumentar la **f_z** entre 10 y un 20 % máximo **o la a_p** entre 3 y un 7 % máximo.
- f_z** ↗ = mantener **V_c**, **a_p**, **a_e** →
- a_p** ↗ = mantener **V_c**, **f_z**, **a_e** →

REMARQUES ETM-P

- L'utilisation des mêmes paramètres de coupe pour la version renforcée (1°) que pour la version droite (ETM) amènera une meilleure qualité surfacique, de meilleures tolérances et une durée de vie accrue.
- Grâce au renfort conique de 1° (meilleure stabilité), il est possible d'augmenter **f_z** de 10~20% max. **OU l'a_p** de 3~7% max.
- f_z** ↗ = mêmes **V_c**, **a_p**, **a_e** →
- a_p** ↗ = mêmes **V_c**, **f_z**, **a_e** →

NOTAS ETM-P

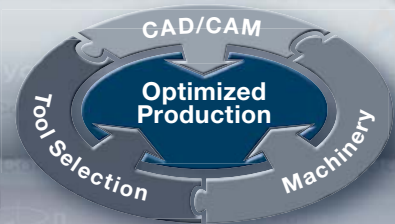
- As condições de corte do cone de um (1°) são as mesmas do tipo cilíndrico (ETM). Mas a superfície, tolerância e tempo de vida da ferramenta irá melhorar.
- Devido à respiga 1° (mais estabilidade) é possível aumentar **f_z** em 10~20% máx. **Ou aumentar a_p** em 3~7% máx.
- f_z** ↗ = manter **V_c**, **a_p**, **a_e** →
- a_p** ↗ = manter **V_c**, **f_z**, **a_e** →

The electronic MOLDINO Tool product catalogue

Quickly find the tools you need for best performance in machining

P50QF PRODUCTION50[®] QuickFinder

www.production50.com



P50QF | Production50 QuickFinder

The Quickly-Finding Software for Tools and Tool Accessories

- Real-time search with catalogue browser
- Cutting conditions calculation with project planning
- Shop system
- Online update

Die Software zum schnellen Finden von Werkzeugen und Zubehör

- Suche in Echtzeit mit Katalog-Browser
- Schnittwerte-Berechnung mit Projektierung
- Bestellsystem
- Online-Update
- Komplett in Deutsch & Englisch

Function Buttons
Funktions-Schaltflächen

QuickFinder Help:
Details of tools etc.
QuickFinder Hilfe:
Werkzeugdetails usw.

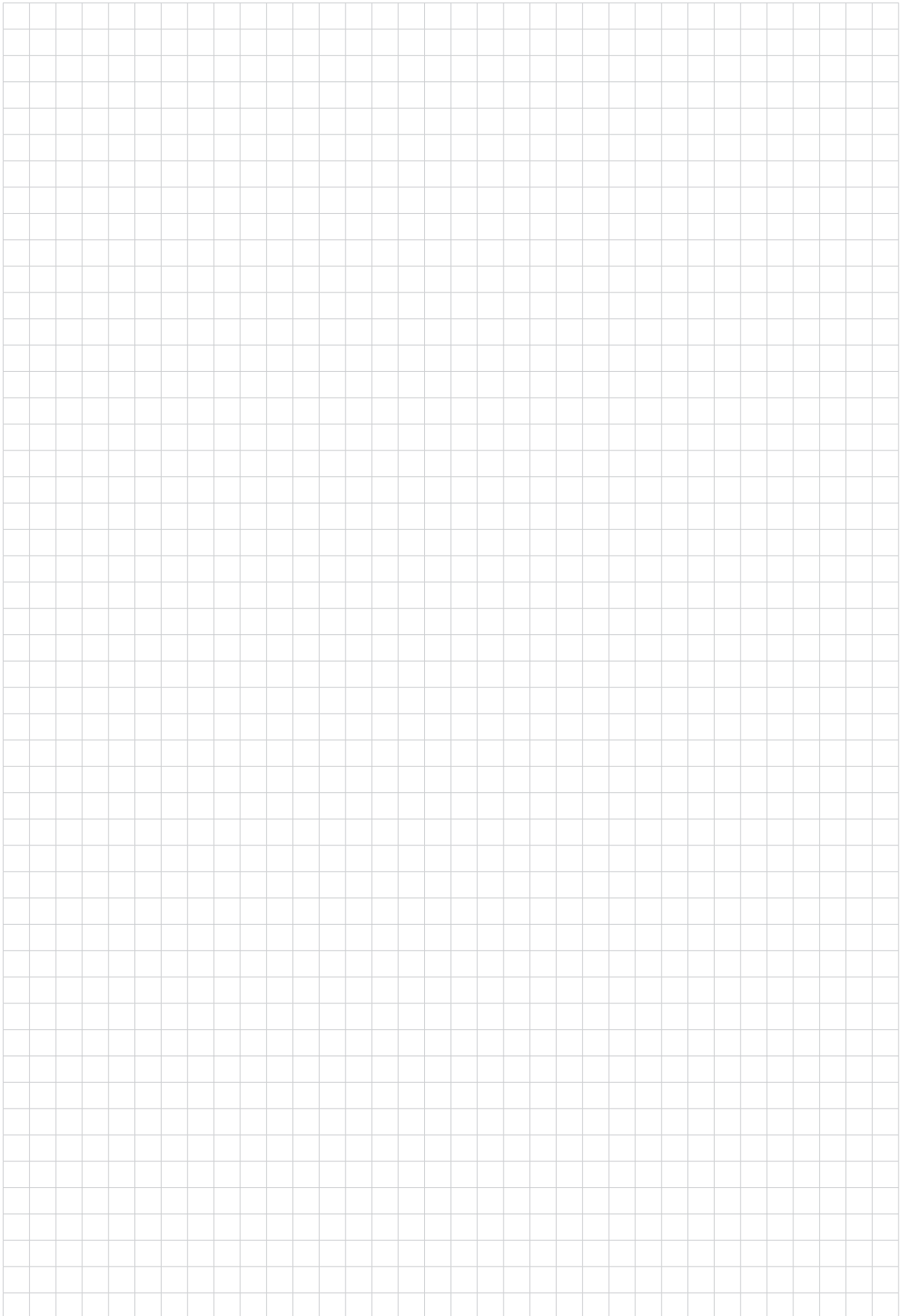
Filtering by contour shape
Gefiltert nach Bearbeitungs-Kontur

Additional search parameters
Zusätzliche Parameter-Suche

Selected product
Ausgewähltes Produkt

ID code	Item code	Z	ØD	ØH	CR	Ln	s	I	Ødn	L	Ød	Grade	Inserts1	Inserts2	Inserts3
EP697	ETMP-4040-40-10	4	4	1	40	1	6	10	90	8					
EP370	ETMP-4050-12	4	5	1.2	15	1	10	70	6						
EP598	ETMP-4050-30-12	4	5	1.2	30	1	7.5	90	6						
EP599	ETMP-4050-40-12	4	5	1.2	40	1	7.5	100	8						
EP600	ETMP-4050-50-12	4	5	1.2	50	1	7.5	110	8						
EP371	ETMP-4050-15	4	6	1.5			12	90	6						
EP379	ETMLN-4060-30-15	4	6	1.5	30	1	9	5.7	75	6					
EP380	ETMLN-4060-42-15	4	6	1.5	42	1	9	5.7	90	6					
EP381	ETMLN-4060-54-15	4	6	1.5	54	1	9	5.7	100	6					
EP601	ETMP-4060-40-15	4	6	1.5	40	1	9	100	8						
EP602	ETMP-4060-55-15	4	6	1.5	55	1	9	110	8						
EP603	ETMP-4060-67-15	4	6	1.5	67	1	9	125	8						
EP372	ETMP-4030-20	4	8	2			16	100	8						
EP382	ETMLN-4080-40-20	4	8	2	40	1	12	7.6	85	8					
EP383	ETMLN-4080-60-20	4	8	2	60	1	12	7.6	100	8					
EP384	ETMLN-4080-72-20	4	8	2	72	1	12	7.6	120	8					
EP373	ETMP-4100-20	4	10	2			20	110	10						

Download: www.moldino.eu/quickfinder



Always up to date: Please check our P50 QuickFinder



Attentions on Safety

1. Cautions regarding handling

- (1) When removing the tool from its case (packaging), be careful that the tool does not pop out or is dropped. Be particularly careful regarding contact with the tool flutes.
- (2) When handling tools with sharp cutting flutes, be careful not to touch the cutting flutes directly with your bare hands.

2. Cautions regarding mounting

- (1) Before use, check the outside appearance of the tool for scratches, cracks, etc. and that it is firmly mounted in the collet chuck, etc.
- (2) When preparing for use, be sure that the inserts are firmly mounted in place and that they are firmly mounted on the arbor, etc.
- (3) If abnormal chattering, etc. occurs during use, stop the machine immediately and remove the cause of the chattering.

3. Cautions during use

- (1) Before use, confirm the dimensions and direction of rotation of the tool and milling work material.
- (2) The numerical values in the standard cutting conditions table should be used as criteria when starting new work. The cutting conditions should be adjusted as appropriate when the cutting depth is large, the rigidity of the machine being used is low, or according to the conditions of the work material.
- (3) Cutting tools are made of a hard material. During use, they may break and fly off. In addition, cutting chips may also fly off. Since there is a danger of injury to workers, fire, or eye damage from such flying pieces, a safety cover should be attached when work is performed and safety equipment such as safety goggles should be worn to create a safe environment for work.
- (4) There is a risk of fire or inflammation due to sparks, heat due to breakage, and cutting chips. Do not use where there is a risk of fire or explosion. Please caution of fire while using oil base coolant, fire prevention is necessary.
- (5) Do not use the tool for any purpose other than that for which it is intended.

4. Cautions regarding regrinding

- (1) If regrinding is not performed at the proper time, there is a risk of the tool breaking. Replace the tool with one in good condition, or perform regrinding.
- (2) Grinding dust will be created when regrinding a tool. When regrinding, be sure to attach a safety cover over the work area and wear safety clothes such as safety goggles, etc.
- (3) This product contains the specified chemical substance cobalt and its inorganic compounds. When performing regrinding or similar processing, be sure to handle the processing in accordance with the local laws and regulations regarding prevention of hazards due to specified chemical substances.

“MOLDINO” is a registered trademark of MOLDINO Tool Engineering, Ltd. in Japan.

Specifications for the products listed in this catalog are subject to change without notice due to replacement or modification.

MOLDINO Tool Engineering Europe GmbH

Itterpark 12 · 40724 Hilden · Germany · Phone +49 (0) 21 03-24 82-0 · Fax +49 (0) 21 03-24 82-30
E-Mail info@moldino.eu · Internet www.moldino.eu
© 2020 by MOLDINO Tool Engineering Europe GmbH · 3rd Edition · Printed in Germany