

Micro Grain Solid Carbide End Mill

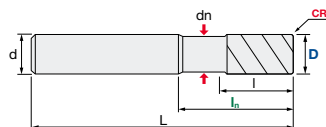
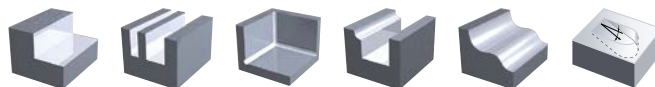


**V max**  
High Speed

**Q max**  
High Efficient

**HRC**  
55

**No. of Teeth**  
4



**Carbide**  
Micro Grain

**TH60+**  
Nano-PVD Coating

**Rake Angle**  
Negative

D 0 / -0.05 mm  
d h5  
Helix angle 45°

ID Code	Item Code	Z	D	CAM-R	l <sub>n</sub>	l	dn	L	d
EP843	EMXR-4060-18-TH	4	6	0.4	18	9	5.5	60	6
EP844	EMXR-4080-24-TH		8	0.5	24	12	7.3	75	8
EP845	EMXR-4100-30-TH		10	0.5	30	15	9.1	80	10
EP846	EMXR-4120-36-TH		12	0.5	36	18	11.0	100	12
EP847	EMXR-4160-48-TH		16	0.7	48	24	14.5	110	16
EP848	EMXR-4200-60-TH		20	0.7	60	30	18.2	125	20



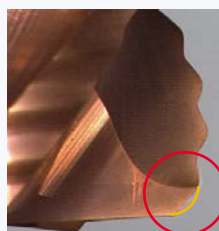
D 0 / -0.03 mm  
d h5  
Helix angle 45°

ID Code	Item Code	Z	D	CAM-R	l <sub>n</sub>	l	dn	L	d
EP849	EMXN-4060-18-TH	4	6	0.4	18	9	5.5	60	6
EP850	EMXN-4080-24-TH		8	0.5	24	12	7.3	75	8
EP851	EMXN-4100-30-TH		10	0.5	30	15	9.1	80	10
EP852	EMXN-4120-36-TH		12	0.5	36	18	11.0	100	12
EP853	EMXN-4160-48-TH		16	0.7	48	24	14.5	110	16
EP854	EMXN-4200-60-TH		20	0.7	60	30	18.2	125	20

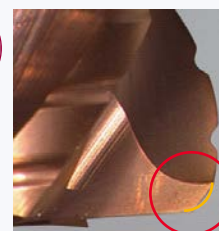
**CAM (Programming Radius)**

Special geometry is adopted on tip of square type, for chipping resistance. Please set up tool corner R with Approx Radius for both type listed in following tables.

Um die Schneide zu stabilisieren, wurde sie mit einer Schutzfase versehen. Daher sollten Sie das Werkzeug, wie in den folgenden Tabellen aufgeführt, mit einem Eckenradius (CAM) programmieren.



Type R	CAM (Approx Radius)
D 6	0.4 mm
D 8-12	0.5 mm
D 16-20	0.7 mm



Type N	CAM (Approx Radius)
D 6	0.4 mm
D 8-12	0.5 mm
D 16-20	0.7 mm

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Mirus recommendation field based on work material type		TYPE R		TYPE N	
		Process	Roughing	Roughing & Semi Finishing	
		Cutting force	less than Type N	less than conventional	
Work piece material		Surface roughness	Semi (▽ - ▽▽)	Finishing (▽▽ - ▽▽▽)	
I	Carbon Steels, Alloy Steels Cast Irons: EN-JL(GG) Ductile Cast Iron): EN-JS(GGG) (~300HB)	Side milling	●	●	
		Slotting	●	●	
		Ramping	●	●	
		2 way profiling	●	●	
		Plunging (Drilling)	●	●	
		Ramping angle	0 ~ 20° recommendable (max 30°)	0 ~ 15° recommendable (max 20°)	
II	Tool Steels Alloy Steels (30~45HRC)	Side milling	●	●	
		Slotting	●	●	
		Ramping	●	●	
		2 way profiling	●	●	
		Plunging (Drilling)	○	●	
		Ramping angle	0 ~ 10° recommendable (max 15°)	0 ~ 7° recommendable (max 10°)	
III	Tool Steels Pre-Hardened Steels (45~55HRC)	Side milling	●	○	
		Slotting	○	×	
		Ramping	●	○	
		2 way profiling	○	○	
		Plunging (Drilling)	×	×	
		Ramping angle	0 ~ 3° recommendable (max 5°)	0 ~ 3° recommendable (max 5°)	
IV	Stainless Steels (20~40HRC)	Side milling	×	●	
		Slotting	×	○	
		Ramping	×	○	
		2 way profiling	×	○	
		Plunging (Drilling)	×	×	
		Ramping angle	×	0 ~ 3° recommendable (max 5°)	
V	Heat Resisting Steels Titanium, Inconel Nickel & Cobalt Alloys	Side milling	×	○	
		Slotting	×	○	
		Ramping	×	○	
		2 way profiling	×	○	
		Plunging (Drilling)	×	×	
		Ramping angle	×	0 ~ 3° recommendable (max 5°)	

● = Good – recommendable  
○ = Possible  
× = Not good – not recommendable

