LPGX High Feed Milling

Optimized For Efficiency!

Features：

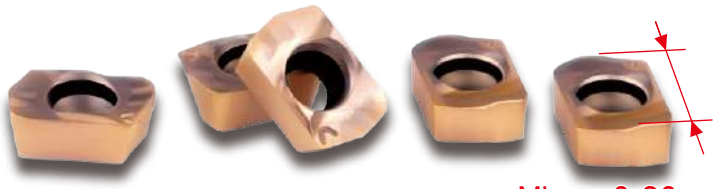
◎ Productivity- High feed rates with axial depth of cut up to 0.5mm.

◎ High Feed Milling- Increase chip removal capability and productivity.

◎ Low cutting resistance and outstanding anti-vibration for high efficiency milling.

◎ Small diameter 10~16mm are offered, for all components and small mold high feed machining.

◎ There are two inscribed circle diameter 1.2mm, providing customer with programming.



Micro=6.26mm

Stable Machining with Greater Chatter Resistance!

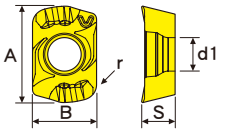
MILLING- S45C

Performance Test

HIGH EFFICIENCY & HIGH FEED MILLING INSERT

LPGX Carbide Insert Size :

P	Alloy Steels	◎	◎	◎	◎		◎ : First Recommend ○ : Second Recommend — : NO Recommend
M	Stainless Steels	◎	◎	◎	◎		
K	Cast Iron	◎	◎	◎	◎		
N	Aluminum Alloys	—	—	—	—		F : Finishing S : Semi Finishing M : Medium R : Roughing
S	High Temp Alloys	◎	○	◎	◎		
H	Hardened Steels	◎	○	◎	—		

Insert	Order No.	Grade					Dimension (mm)					Drawing
		CM6223	CM6232	CM6233	CM6243		A	B	S	r	d1	
High Feed Face Milling & Copy Milling【Single-Sided Inserts】.												
K	LPGX0102-SG	●		●	●		6.26	4.19	2.19	1.0	2.2	
	LPGX0102-MG		●	●	●		6.26	4.19	2.19	1.0	2.2	
NEW												

G Grinding Grade

Special cutting edge design effectively reduce cutting resistance.

Chip Breaker		Application
SG (Grinding)	Semi Finishing	· Sharp cutting edge design suitable for semi-finishing steel, stainless steel and difficult-to-cut materials.
MG	Medium	· Low cutting resistance design, suitable for medium machining steel, stainless steel and cast iron.

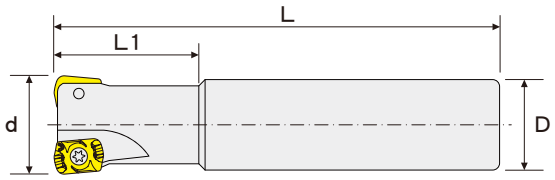
Milling Insert Grades :

Grade Type	Coating Type	Features	Application	Work Material						Industry Area
				P	M	K	N	S	H	
CM6223	PVD	· High wear resistance.	· Continuous finishing cutting. · For hardened steel and cast iron.	◎	◎	◎	—	◎	◎	· Mold & die. · Hardened parts. · Aircraft parts.
CM6232	PVD	· Wear resistance . · Impact resistance.	· Medium finishing. · For carbon steel, alloy steel, stainless steel and high temperature alloy.	◎	◎	◎	—	○	○	· Auto parts. · Machinery parts. · Aircraft parts.
CM6233				◎	◎	◎	—	◎	◎	
CM6243	PVD	· High impact resistance. · High toughness.	· Roughing or interrupted cutting. · For carbon steel, alloy steel, stainless steel and high temperature alloy.	◎	◎	◎	—	◎	—	· Auto parts. · Machinery parts. · Aircraft parts.

◎ : First Recommend ○ : Second Recommend — : NO Recommend

LPGX-Small Dia. Φ10~16mm

High Feed Milling Cutters :

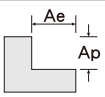


▶ELP

Order No.	Dimensions (mm)				Teeth	Insert	Screw	Wrench
	d	L1	L	D				
ELP01-02010-080L	10	20	80	10	2	LPGX0102..	MS1804A	ETF06
ELP01-02010-080L-C	10	20	80	10	2			
ELP01-03012-080L	12	20	80	12	3			
ELP01-03012-080L-C	12	20	80	12	3			
ELP01-04016-090L	16	20	90	16	4			
ELP01-04016-090L-C	16	20	90	16	4			

※ Product number end in -C are coolant-through design.

Cutting Condition Table :

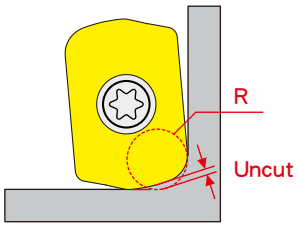
Material	Carbon Steels	Hardened Steels	Stainless Steels	Cast Iron	High Temp Alloys
Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
Hardness	HRC<40	HRC40~50	—	HRC<30	HRC<30
Vc	100~250m/min	50~100m/min	100~180m/min	120~250m/min	50~100m/min
fz (mm)	0.2~0.7	0.2~0.5	0.2~0.6	0.2~0.7	0.2~0.4
Ap (mm)	0.2~0.5	0.2~0.3	0.2~0.4	0.2~0.5	0.2~0.3
Remarks	※ Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ Cutting formula : S = Vc × 1000 / D / π (3.14) F = fz × Z × S

CNC

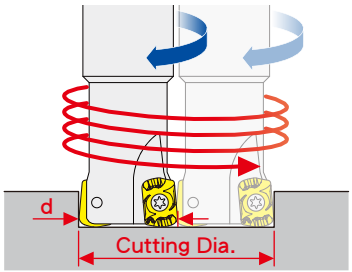
CNC Operation :

Programming R



Input. R	Uncut
1.2 mm	0.17 mm

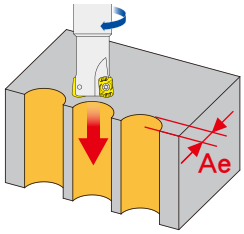
Helical Milling



Max Cutting Dia. (mm)	Min Cutting Dia. (mm)
(d×2) — 2	(d×2) — 3.5

※ Use climb milling.

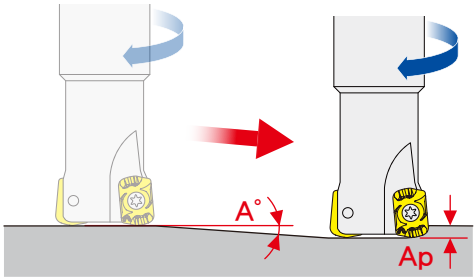
Plunge Milling



Max Ae
1.7 mm

※ Reduce feed per tooth to fz ≦ 0.2mm when plunging.

Ramping



Cutter Dia.	tan (A°)	Max Ramping Angle
10 mm	0.052	3.0°
11 mm	0.044	2.5°
12 mm	0.035	2.0°
16 mm	0.021	1.2°
17 mm	0.017	1.0°

※ Reduce feed rate 30% when ramping.

CMTec / 2022-01-2K-VER.01

100%

MADE IN TAIWAN

CHIN MING PRECISION TOOLS CO., LTD.

Head Office : TEL/ 886-6-7940726 FAX/ 886-6-7941217

Taipei Branch : TEL/ 886-2-29043033 FAX/ 886-2-29030963

JingLi(Xiamen)Cutting Hardware : TEL/ 002-86-5926-155335~7

Overseas Sales E-Mail : telesales@cmtools.com.tw