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YG-1 PRODUCTS!!
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HF4 **YG MILL**

New HIGH FEED 4 Corner Milling Series

ENMX **MINI HIGH FEED**

for Narrow and Long Reach Application

ENMX is Reliable

- Thick and Reinforced insert
- Wide Flank for strong clamping

ENMX is Economical

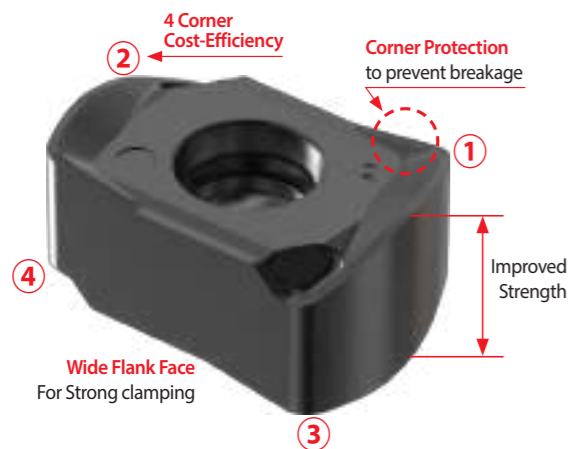
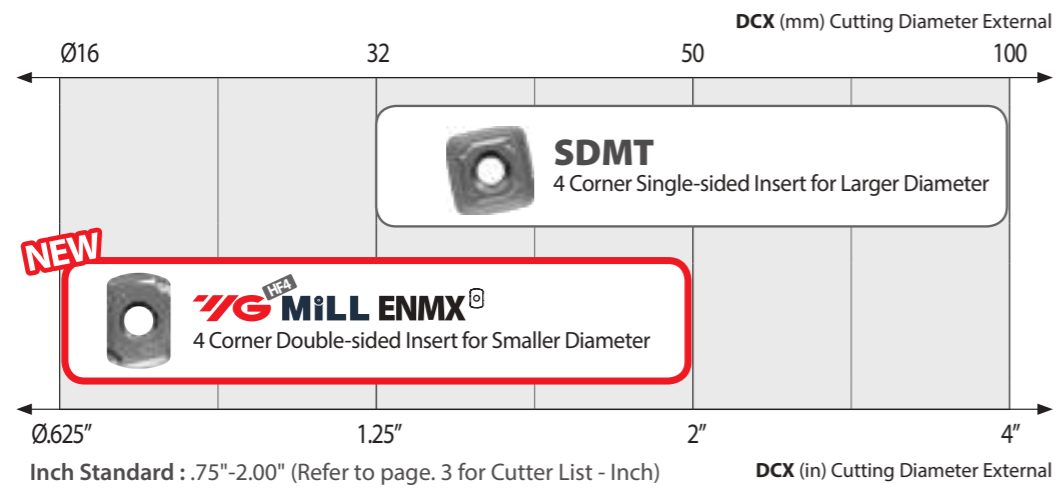
- Double-sided insert

High feed Milling

P Steel and **K** Cast Iron



NEW High Feed Milling Series for Small Size



Application

- High Feed Milling, Profiling, Face Milling, Ramping, Plunging, Helical Interpolation

Features

- Diameter Range : 16~50mm (.750"-2.0")
- Double-sided Insert with 4 Corners
- Wide Flank Face with Reinforced Insert Shape
- Positive Rake Angle & Low Entering Angle
- 2 Insert Geometries



Advantages

- Narrow application Available (Minimum Ø16)
- High Versatile Machining
- High Cost-Efficiency
- Rigid Clamping on Insert Seat
- Prevent Breakage on Machining
- High Feed Rate Available with Low Cutting Force

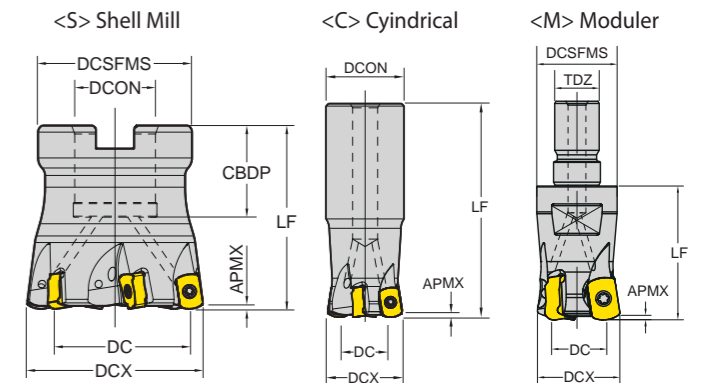
Benefits

- Expand machining ability with High Versatility & Small Diameter Ability
- Boost up productivity with High Feed Rate
- Safe Machining with Rigidity and Strong Insert Shape

Product List - Milling Cutter

Milling - Cutter - High Feed Milling

ENMX



Cutter List - Metric

APMX	Designation	EDP 1700..	DC	DCX	ZEP	LF	Type	DCON	CBDP	DCSFMS	Water	
0.9	EHF-ENMX06-D16Z2C16-L100	0644	9.0	16	2	100	Cylindrical	16	-	-	●	
	EHF-ENMX06-D16Z2C16-L150	0645	9.0	16	2	150		16	-	-	●	
	EHF-ENMX06-D17Z2C16-L100	0674	10.0	17	2	100		16	-	-	●	
	EHF-ENMX06-D17Z2C16-L150	0473	10.0	17	2	150		16	-	-	●	
1	EHF-ENMX06-D20Z3C20-L130	0463	12.6	20	3	130		20	-	-	●	
	EHF-ENMX06-D20Z3C20-L160	0646	12.6	20	3	160		20	-	-	●	
	EHF-ENMX06-D21Z3C20-L150	0475	13.6	21	3	150		20	-	-	●	
	EHF-ENMX06-D21Z3C20-L200	0476	13.6	21	3	200		20	-	-	●	
	EHF-ENMX06-D25Z4C25-L140	0647	17.6	25	4	140		25	-	-	●	
	EHF-ENMX06-D25Z4C25-L180	0464	17.6	25	4	180		25	-	-	●	
	EHF-ENMX06-D25Z4C25-L250	0648	17.6	25	4	250		25	-	-	●	
	EHF-ENMX06-D26Z4C25-L150	0479	18.6	26	4	150		25	-	-	●	
0.9	EHF-ENMX06-D26Z4C25-L200	0480	18.6	26	4	200	25	-	-	●		
	EHF-ENMX06-D32Z5C32-L150	0649	24.6	32	5	150	32	-	-	●		
	EHF-ENMX06-D32Z5C32-L200	0465	24.6	32	5	200	32	-	-	●		
	1	MHF-ENMX06-D16Z2M08	0691	9.0	16	2	23	Modular	M08	-	-	●
		MHF-ENMX06-D18Z2M08	0730	11.0	18	2	23		M08	-	-	●
		MHF-ENMX06-D20Z3M10	0692	12.6	20	3	30		M10	-	-	●
		MHF-ENMX06-D25Z4M12	0693	17.6	25	4	35		M12	-	-	●
		MHF-ENMX06-D32Z5M16	0694	24.6	32	5	42		M16	-	-	●
MHF-ENMX06-D35Z5M16		0695	27.6	35	5	42	M16		-	-	●	
MHF-ENMX06-D40Z6M16	0732	32.6	40	6	42	M16	-		-	●		
MHF-ENMX06-D42Z6M16	0696	34.6	42	6	42	M16	-		-	●		
1	FHF-ENMX06-D40Z6S16	0482	32.6	40	6	40	Shell Mill		16	18	37	●
	FHF-ENMX06-D50Z6S22	0471	42.6	50	6	50			22	25	42	●

Screw : TP082507 Wrench : TPWFTP08

Cutter List - Inch

APMX	Designation	EDP 1700..	DC	DCX	ZEP	LF	Type	DCON	CBDP	DCSFMS	Water
.04	EHF-ENMX06-D075Z3W075-L500I	669	.46	.75	3	5	Weldon	.75	-	-	●
	EHF-ENMX06-D100Z4W100-L550I	670	.71	1	4	5.5		1	-	-	●
	EHF-ENMX06-D125Z5W125-L600I	671	.96	1.25	5	6		1.25	-	-	●
.04	FHF-ENMX06-D150Z6S050I	672	1.21	1.5	6	1.575	Shell Mill	.5	.75	1.34	●
	FHF-ENMX06-D200Z6S075I	673	1.71	2	6	1.969		.75	.75	1.57	●

Screw : TP082507 Wrench : TPWFTP08

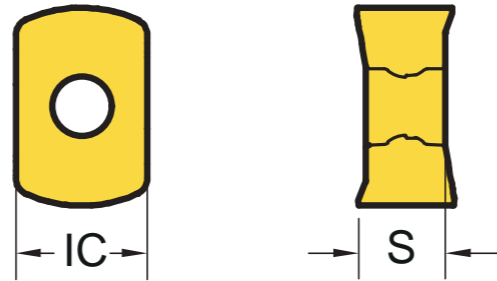
Product List - Milling Insert

Milling - Insert

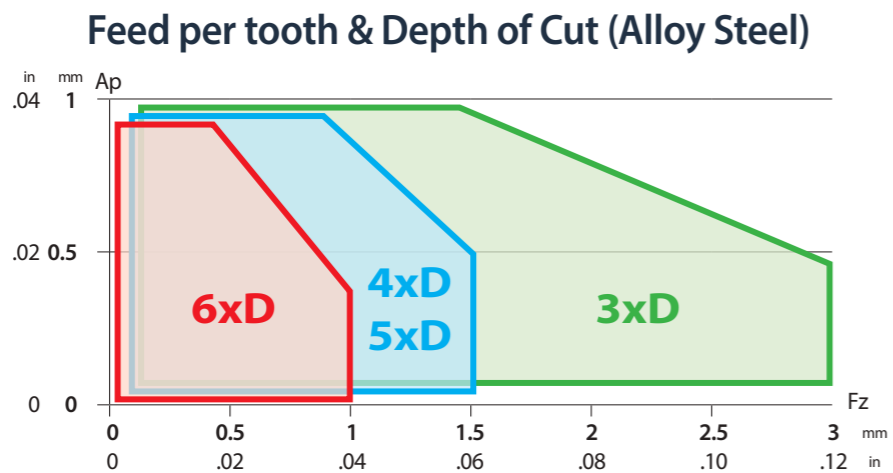
ENMX

High Feed Negative (4 Corners)

- Insert size (IC): 6.3 mm
- Thickness(S) : 4.21 mm

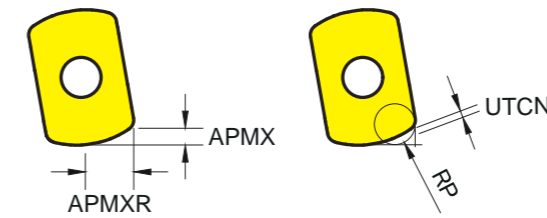
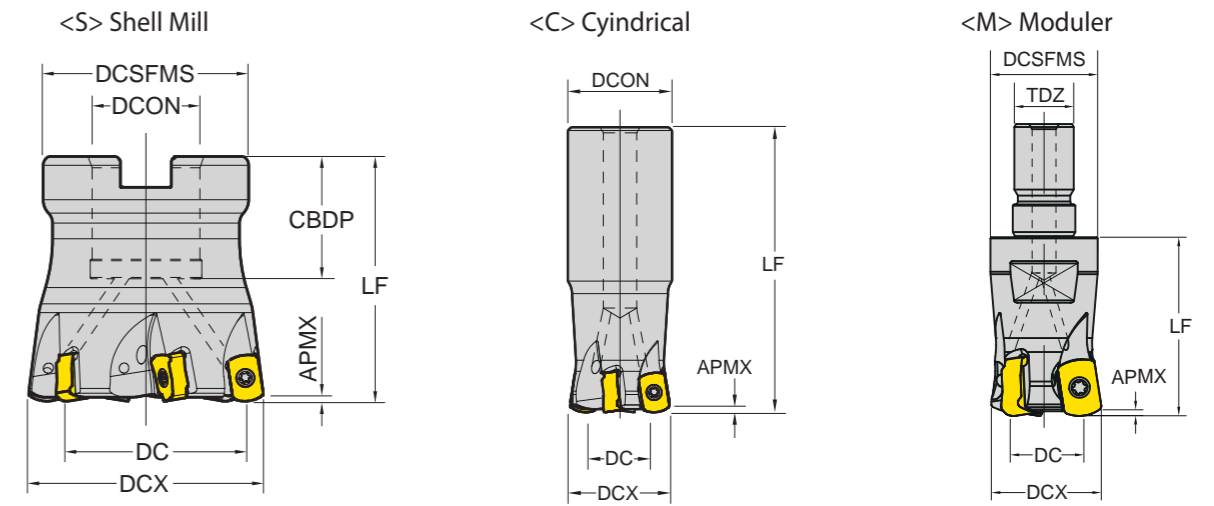


Geometry Type	Designation	EDP (YG602)
ENMX General Carbon Steel Low Alloy Steel	ENMX 0604	12000474
ENMX -TR Reinforced Edge High Alloy Steel Hardened Steel Cast Iron	ENMX 0604 - TR	12000459



Cutting Speed			Vc (m/min.)		Vc (ft/min.)		Cutting Speed			Vc (m/min.)		Vc (ft/min.)	
ISO	VDI	Sub Group	YG602				ISO	VDI	Sub Group	YG602			
			Min	Max	Min	Max				Min	Max	Min	Max
P	1~5	Non-Alloyed Steel	140	380	460	1250	K	15~16	Grey Cast Iron	120	250	390	820
	6~9	Low-Alloyed Steel	120	300	390	980		17~18	Nodular Cast Iron	130	220	430	720
	10~11	High-Alloyed Steel	70	150	230	490		N	21~30	Non-Ferrous Metals (Al)	-	-	-
M	12~13	Ferritic & Martensitic	120	200	390	660	S	31~37	Superalloys & Titanium	25	45	80	150
	14	Austenitic Stainless Steel	130	250	430	820	H	38~41	Hard Materials	40	80	130	260

Technical information



Unit: mm (inch)

Programmed Corner Radius RP	Uncut Thickness UTCN	Overcut
2 (.079)	0.31 (.012)	0 (.000)
2.5 (.098)	0.18 (.007)	0.18 (.007)
3 (.118)	0.07 (.003)	0.36 (.014)

Unit: mm (inch)

General	Plunging	Ramping	Profiling	Helical Interpolation	Enlarge Hole				
External Cutter Diameter	Maximum Depth of Cut	Maximum Radial Depth of Cut	Maximum Ramping Angle(°)	Programmed Corner Radius	Uncut Thickness	Minimum Cutting Diameter	Maximum Cutting Diameter	Helical Interpolation Pitch	Enlarge Width
DCX	APMX	APMXR	RMPX	RP	UTCN	Diameter	Diameter	Pitch	Ae
16 mm (.625 in)	0.9 (.035)	3.5 (.137)	3.6°	R2.0 (R.079)	0.3 (.011)	21 (.817)	30 (1.171)	0.9 (.035)	12.5 (.487)
20 mm (.75 in)	1 (.039)	3.7 (.145)	3.3°	R2.0 (R.079)	0.31 (.012)	29 (1.067)	38 (1.421)	1 (.039)	16.3 (.604)
25 mm (1.00 in)	1 (.039)	3.7 (.145)	2.2°	R2.0 (R.079)	0.31 (.012)	39 (1.567)	48 (1.921)	1 (.039)	21.3 (.854)
32 mm (1.25 in)	1 (.039)	3.7 (.145)	1.5°	R2.0 (R.079)	0.31 (.012)	53 (2.067)	62 (2.421)	1 (.039)	28.3 (1.104)
40 mm (1.50 in)	1 (.039)	3.7 (.145)	1.1°	R2.0 (R.079)	0.31 (.012)	69 (2.567)	78 (2.921)	1 (.039)	36.3 (1.354)
50 mm (2.00 in)	1 (.039)	3.7 (.145)	0.8°	R2.0 (R.079)	0.31 (.012)	89 (3.567)	98 (3.921)	1 (.039)	46.3 (1.854)

Success Story

P Carbon Steel 1.1121
JIS S10C DIN CK10 AISI 1010

	YG	Competitor A
Designation	ENMX 0604	High Feed
Chipbreaker	TR	General
Grade	YG602	P Grade
Cutter Dia	16 mm	16 mm
ZAFP (Effective number of edge)	2	2
Vc (Cutting Speed)	100 m/min (328.08 ft/min)	90 m/min (295.27 ft/min)
Fz (Feed per tooth)	0.58 mm/tooth (.022 in/tooth)	0.42 mm/tooth (.016 in/tooth)
Ap (Depth of Cut)	0.5 mm (.019 in)	0.2 mm (.007 in)
Tool Life	32 pcs +166% Tool Life	12 pcs



P Carbon Steel 1.0503
JIS S45C DIN C45 AISI 1045

	YG	Competitor B
Designation	ENMX 0604	High Feed
Chipbreaker	TR	General
Grade	YG602	P Grade
Cutter Dia	20 mm	20 mm
ZAFP (Effective number of edge)	3	3
Vc (Cutting Speed)	188 m/min (616.79 ft/min)	157 m/min (515.09 ft/min)
Fz (Feed per tooth)	1.5 mm/tooth (.059 in/tooth)	0.8 mm/tooth (.031 in/tooth)
Ap (Depth of Cut)	0.5 mm (.019 in)	
Tool Life	3 pcs +200% Tool Life	1 pc



Success Story

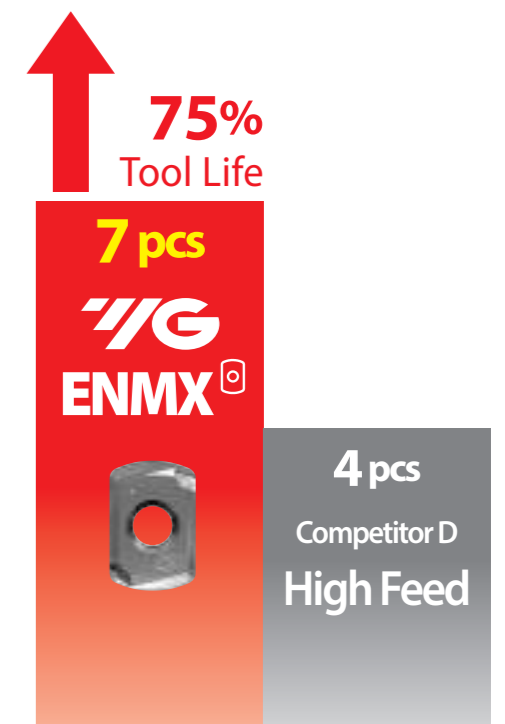
P Tool Steel 1.6565
JIS SNCM447 DIN 40NiCrMo6 AISI 4340

	YG	Competitor C
Designation	ENMX 0604	High Feed
Chipbreaker	TR	General
Grade	YG602	P Grade
Cutter Dia	25 mm	20 mm
ZAFP (Effective number of edge)	4	4
Vc (Cutting Speed)	150 m/min (492.13 ft/min)	
Fz (Feed per tooth)	0.39 mm/tooth (.015 in/tooth)	
Ap (Depth of Cut)	0.5 mm (.019 in)	
Tool Life	20 pcs +100% Tool Life	10 pcs



P Alloy Steel 1.6565
JIS SNCM447 DIN 40NiCrMo6 AISI 4340

	YG	Competitor D
Designation	ENMX 0604	High Feed
Chipbreaker	GN	General
Grade	YG602	P Grade
Cutter Dia	20 mm	20 mm
ZAFP (Effective number of edge)	3	3
Vc (Cutting Speed)	180 m/min (590.55 ft/min)	
Fz (Feed per tooth)	0.66 mm/tooth (.025 in/tooth)	
Ap (Depth of Cut)	0.5 mm (.019 in)	
Tool Life	7 pcs +75% Tool Life	4 pcs





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YG HF4 Mill ENMX tools at work.

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