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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

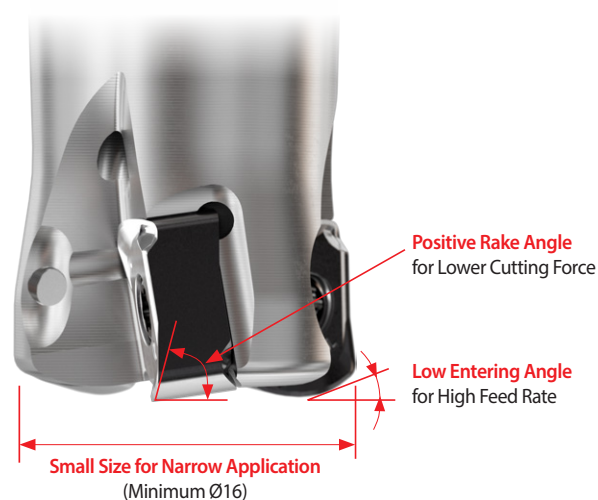
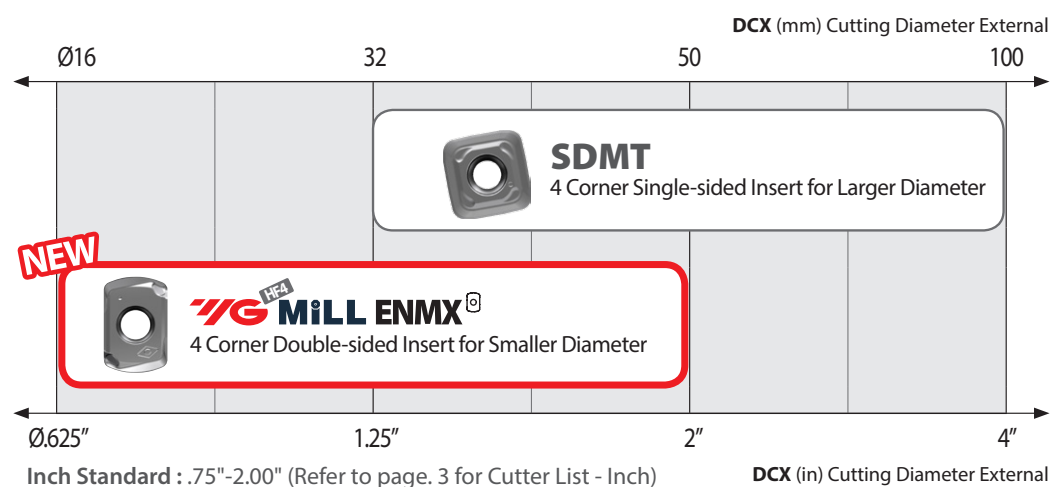
- Thick and Reinforced insert
- Wide Flank for strong clamping

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

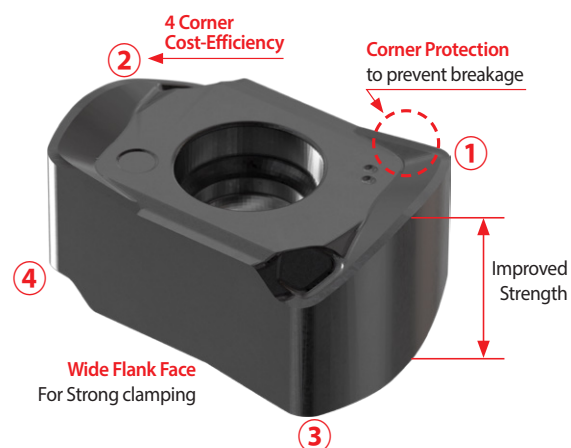
- Diameter Range : 16~50mm (.750"-2.0")
- Double-sided Insert with 4 Corners
- Wide Flank Face with Reinforced Insert Shape
- Positive Rake Angle & Low Entering Angle
- 2 Insert Geometries



ENMX[®] General
Carbon Steel
Low Alloy Steel



ENMX[®]-TR
Reinforced Edge
High Alloy Steel
Hardened Steel
Cast Iron



Advantages

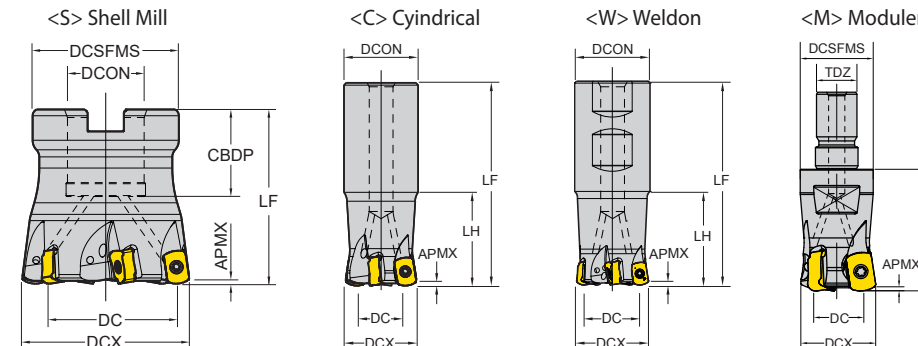
- Narrow application Available (Minimum Ø16)
- High Versatile Machining
- High Cost-Efficiency
- Rigid Clamping on Insert Seat
- Prevent Breakage on Machining
- High Feed Rate Available with Low Cutting Force

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

High Feed Milling



Cutter List - Metric

APMX	Designation	EDP 1700..	DC	DCX	ZEFP	LF	Type	DCON /TDZ	LH	CBDP	DCSFMS	Unit:mm
0.9	EHF-ENMX06-D16Z2C16-L100	0644	9.0	16	2	100	Cylindrical	16	30	-	-	●
	EHF-ENMX06-D16Z2C16-L150	0645	9.0	16	2	150		16	50	-	-	●
	EHF-ENMX06-D17Z2C16-L100	0674	10.0	17	2	100		16	20	-	-	●
	EHF-ENMX06-D17Z2C16-L150	0473	10.0	17	2	150		16	20	-	-	●
1	EHF-ENMX06-D20Z3C20-L130	0463	12.6	20	3	130		20	50	-	-	●
	EHF-ENMX06-D20Z3C20-L160	0646	12.6	20	3	160		20	80	-	-	●
	EHF-ENMX06-D21Z3C20-L150	0475	13.6	21	3	150		20	20	-	-	●
	EHF-ENMX06-D21Z3C20-L200	0476	13.6	21	3	200		20	20	-	-	●
	EHF-ENMX06-D25Z4C25-L140	0647	17.6	25	4	140		25	60	-	-	●
	EHF-ENMX06-D25Z4C25-L180	0464	17.6	25	4	180		25	80	-	-	●
	EHF-ENMX06-D25Z4C25-L250	0648	17.6	25	4	250		25	120	-	-	●
	EHF-ENMX06-D26Z4C25-L150	0479	18.6	26	4	150		25	30	-	-	●
	EHF-ENMX06-D26Z4C25-L200	0480	18.6	26	4	200		25	30	-	-	●
	EHF-ENMX06-D32Z5C32-L150	0649	24.6	32	5	150		32	70	-	-	●
	EHF-ENMX06-D32Z5C32-L200	0465	24.6	32	5	200		32	100	-	-	●
0.9	MHF-ENMX06-D16Z2M08	0691	9.0	16	2	23	Modular	M08	-	-	13	●
	MHF-ENMX06-D18Z2M08	0730	11.0	18	2	23		M08	-	-	13	●
	MHF-ENMX06-D20Z3M10	0692	12.6	20	3	30		M10	-	-	18	●
	MHF-ENMX06-D25Z4M12	0693	17.6	25	4	35		M12	-	-	21	●
	MHF-ENMX06-D32Z5M16	0694	24.6	32	5	42		M16	-	-	29	●
	MHF-ENMX06-D35Z5M16	0695	27.6	35	5	42		M16	-	-	29	●
	MHF-ENMX06-D40Z6M16	0732	32.6	40	6	42		M16	-	-	29	●
	MHF-ENMX06-D42Z6M16	0696	34.6	42	6	42		M16	-	-	29	●
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	ZEFP	LF	Type	DCON /TDZ	LH	CBDP	DCSFMS	Unit:inch
.04	EHF-ENMX06-D06Z5Z2W0625-L500I	0759	.31	.625	2	5	Weldon	.625	1.25	-	-	●
	EHF-ENMX06-D07Z5Z3W075-L500I	0669	.46	.75	3	5		.75	2.00	-	-	●
	EHF-ENMX06-D100Z4W100-L550I	0670	.71	1	4	5.5		1	2.50	-	-	●
	EHF-ENMX06-D125Z5W125-L600I	0671	.96	1.25	5	6		1.25	3.00	-	-	●
.04	FHF-ENMX06-D150Z6S050I	0672	1.21	1.5	6	1.575	Shell Mill	.5		.75	1.34	●
	FHF-ENMX06-D200Z6S075I	0673	1.71	2	6	1.969		.75		.75	1.57	●
	FHF-ENMX06-D300Z10S100I	0760	2.71	3.00	10	2.48		1.00		1.024	2.835	●
	MHF-ENMX06-D06Z5Z2M08	0761	.31	.625	2	1	Modular	M08			.512	●
.04	MHF-ENMX06-D0705Z2M08	0762	.41	.705	2	1		M08			.512	●
	MHF-ENMX06-D075Z3M10	0763	.46	.75	3	1.25		M10			.709	●
	MHF-ENMX06-D083Z3M10	0764	.54	.83	3	1.25		M10			.709	●
	MHF-ENMX06-D100Z4M12	0765	.71	1.00	4	1.5		M12			.827	●
	MHF-ENMX06-D1125Z4M12	0766	.83	1.125	4	1.5		M12			.827	●
	MHF-ENMX06-D125Z5M16	0767	.96	1.25	5	1.75		M16			1.142	●
	MHF-ENMX06-D1375Z5M16	0768	1.08	1.375	5	1.75		M16			1.142	●
	MHF-ENMX06-D150Z6M16	0769	1.21	1.50	6	1.75		M16			1.142	●

Screw : TP082507 Wrench : TPWFTP08

* To ensure the optimized performance, please apply appropriate torque value when tightening screws: 1.2 N*m (10.6 lbf*in)

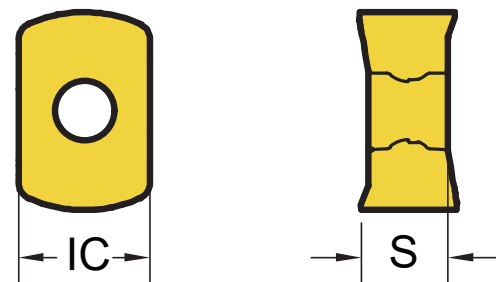
Product List - Milling Insert

Milling - Insert

ENMX

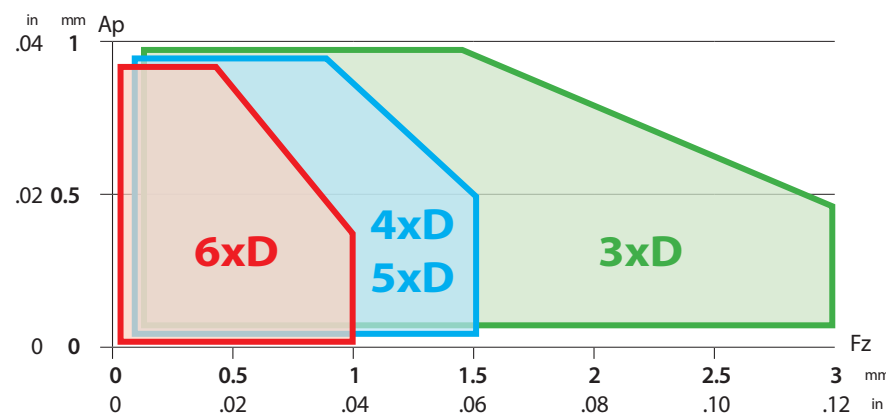
High Feed Negative (4 Corners)

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



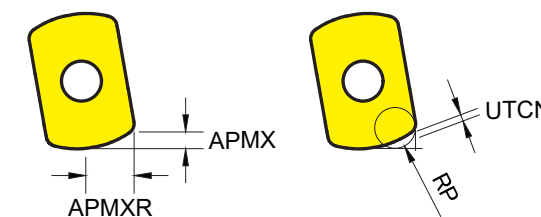
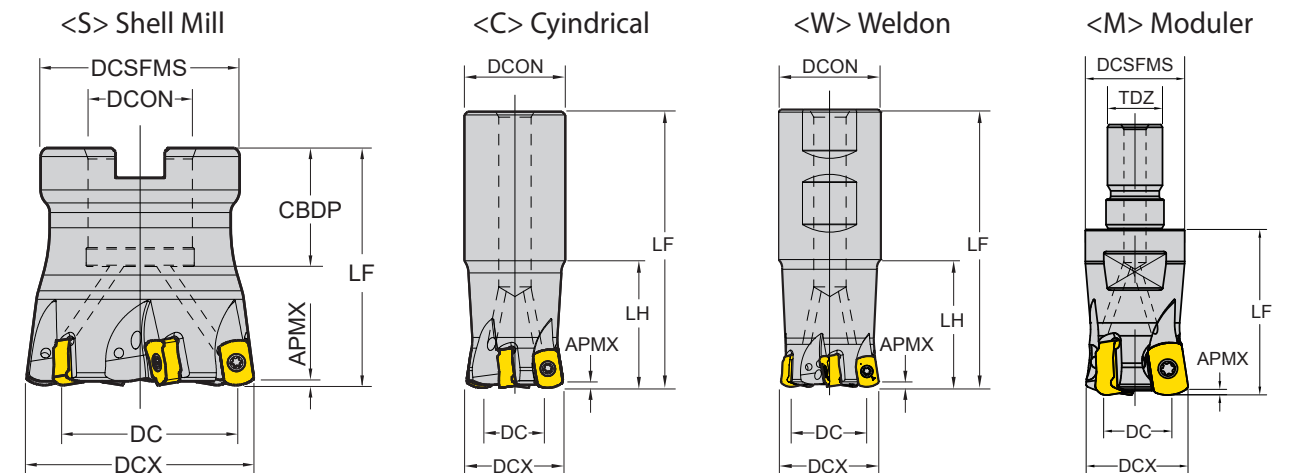
Geometry Type	Designation	EDP (YG602)
ENMX General Carbon Steel Low Alloy Steel	ENMX 0604	12000474
ENMX -TR Reinforced Edge High Alloy Steel Hardened Steel Cast Iron	ENMX 0604 - TR	12000459

Feed per tooth & Depth of Cut (Alloy Steel)



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

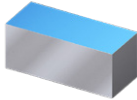
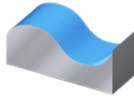
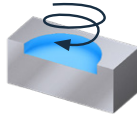
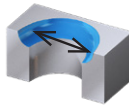
Technical information



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)

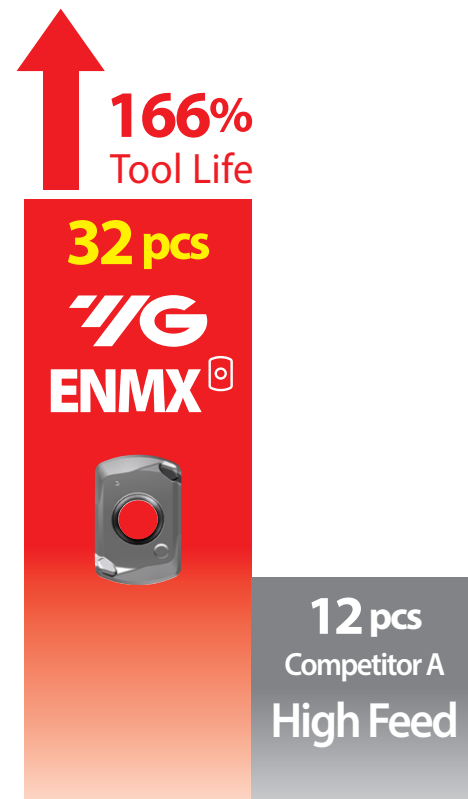
Unit: mm (inch)

									
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
ZEFP (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
ZEFP (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

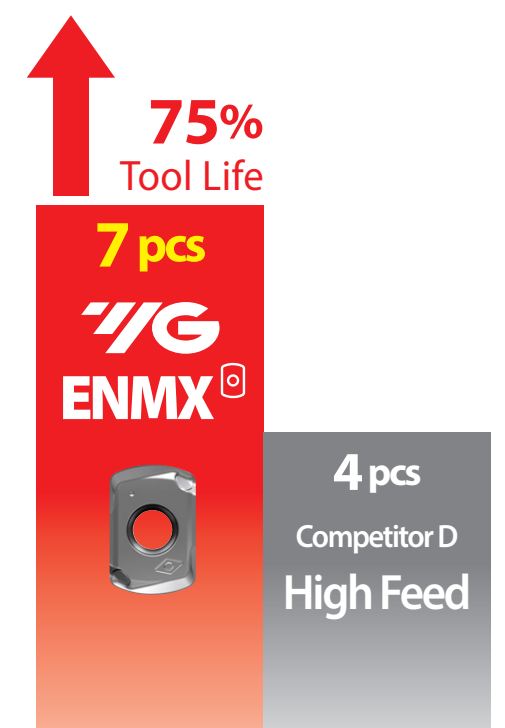
P **Tool Steel 1.6565**
JIS SNCM447 DIN 40NiCrMo6 AISI 4340

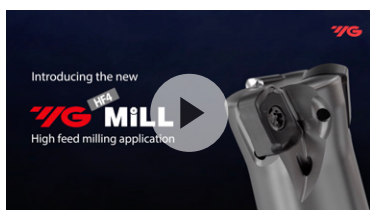
	YG	Competitor C
Designation	ENMX 0604	High Feed
Chipbreaker	TR	General
Grade	YG602	P Grade
Cutter Dia	25 mm	20 mm
ZEFP (Effective number of edge)	4	4
Vc (Cutting Speed)	150 m/min (492.13 ft/min)	
Fz (Feed per tooth)	0.39 mm/tooth (.015 in/tooth)	
Ap (Depth of Cut)	0.5 mm (.019 in)	
Tool Life	20 pcs +100%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