

S920 Series



Thread Endmills for Threading

- Provide ISO M and UN thread mills.
- A thread mills is suitable for cutting various sizes of diameter.
- Large diameter thread can be machined with low power machine.
- ANAX smooth coating.

銑牙刀, 適用銑牙加工

- 提供 ISO M 牙及 UN 牙銑牙刀
- 單一銑牙刀可加工不同的外徑尺寸牙紋
- 抗震不等分割刃與不等螺旋設計
- 含矽平滑塗層

Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Helix 螺旋角	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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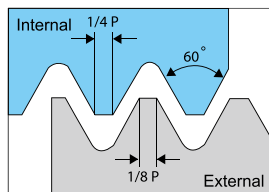
S920 Series for Thread milling 適用銑牙加工

	Thread mill · 3F / 4F / 5F (ISO Metric) 銑牙刀 · 3 刃 / 4 刃 / 5 刃 (ISO 牙)	ETSNM	Ø0.72-Ø9.9	10~15°	ANAX	●	●	●		○	○	B206
	Thread mill · 3F (ISO Metric) 銑牙刀 · 3 刃 (ISO 牙)	ETTNM	Ø1.5-Ø15.9	10~15°	ANAX	●	●	●		○	○	B206
	Thread mill · 3F / 4F (American UN) 銑牙刀 · 3 刃 / 4 刃 (UN 牙)	ETSNU	Ø3.31-Ø14.4	10~15°	ANAX	●	●	●		○	○	B207
	Thread mill · 3F / 4F (ISO Metric) 銑牙刀 · 3 刃 / 4 刃 (ISO 牙)	ETMNM	Ø3.9-Ø11.9	10~15°	ANAX	●	●	●		○	○	B208
	Thread mills with coolant hole · 3F / 4F (ISO Metric) 銑牙刀含內冷卻孔 · 3 刃 / 4 刃 (ISO 牙)	ETMCM	Ø3.9-Ø11.9	10~15°	ANAX	●	●	●		○	○	B208
	Thread mill · 3F / 4F (American UN) 銑牙刀 · 3 刃 / 4 刃 (UN 牙)	ETMNU	Ø3-Ø17	10~15°	ANAX	●	●	●		○	○	B209
	Drill/Thread mill · 2F 銑牙刀 · 鑽孔 & 螺紋銑削 · 2 刃	ETDNM	Ø4.2-Ø8.5	26°	UNICO			●				B211

S920 - Thread mill · 3F / 4F / 5F (ISO Metric)

銑牙刀 · 3 刃 / 4 刃 / 5 刃 (ISO 牙)

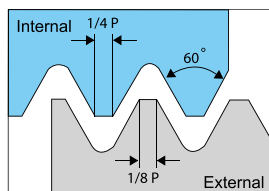
ETSNM Series (ISO Metric)



Tolerance class : 6H

Order No. 訂購編碼	Size	Pitch	No. of Threads	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (z)
ETSNM30072025A	M1	0.25	1	0.72	0.25	2.75	42	4	3
ETSNM30091025A	M1.2	0.25	1	0.91	0.25	3.25	42	4	3
ETSNM30105030A	M1.4	0.30	1	1.05	0.30	3.80	42	4	3
ETSNM30120035A	M1.6	0.35	1	1.20	0.35	4.35	42	4	3
ETSNM30130035A	M1.7~M1.8	0.35	1	1.30	0.35	4.85	42	4	3
ETSNM30152040A	M2	0.40	1	1.52	0.40	6	42	4	3
ETSNM30240050A	M3	0.50	1	2.40	0.50	9	42	4	3
ETSNM30315070A	M4	0.70	1	3.15	0.70	12	50	4	3
ETSNM40480100A	M6	1.00	1	4.80	1.00	18	60	6	4
ETSNM40590125A	M8	1.25	1	5.90	1.25	25	75	6	4
ETSNM50820150A	M10	1.50	1	8.20	1.50	32	75	10	5
ETSNM50990175A	M12	1.75	1	9.90	1.75	38	75	10	5

ETTNM Series (ISO Metric)



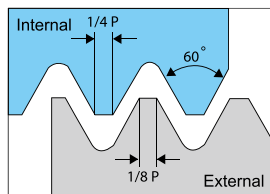
Tolerance class : 6H

Order No. 訂購編碼	Size	Pitch	No. of Threads	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (z)
ETTNM30150040A	M2	0.40	3	1.5	1.20	4.4	50	6	3
ETTNM30190045A	M2.5	0.45	3	1.9	1.35	5.6	50	6	3
ETTNM30240050A	M3	0.50	3	2.4	1.50	6.5	50	6	3
ETTNM30310070A	M4	0.70	3	3.1	2.10	8.7	50	6	3
ETTNM30400080A	M5	0.80	3	4.0	2.40	10.8	50	6	3
ETTNM30480100A	M6	1.00	3	4.8	3.00	12.5	50	6	3
ETTNM30650125A	M8	1.25	3	6.5	3.75	16.6	60	8	3
ETTNM30820150A	M10	1.50	3	8.2	4.50	20.8	75	10	3
ETTNM30990175A	M12	1.75	3	9.9	5.25	25.0	75	10	3
ETTNM31190200A	M16	2.00	3	11.9	6.00	33.0	75	12	3
ETTNM31590250A	M20	2.50	3	15.9	7.50	41.3	100	16	3

* Customized specification available.

S920 - Thread mill · 3F / 4F (American UN) 銑牙刀 · 3 刃 / 4 刃 (UN 牙)

ETTNU Series (American UN)



Tolerance class : 2B



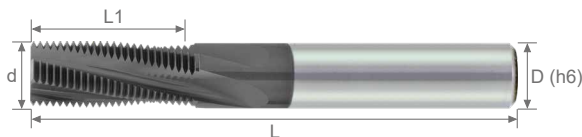
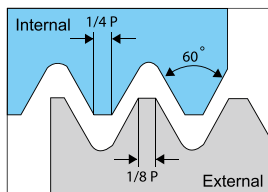
Order No. 訂購編碼	TPI	Thread		No. of Threads	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (z)
		UNC	UNF							
ETTNU30331036A	36		8-36UNF	3	3.31	2.12	8.8	50	4	3
ETTNU30257032A	32	6-32UNC		3	2.57	2.38	7.3	50	4	3
ETTNU30322032A	32	8-32UNC	10-32UNF	3	3.22	2.38	10.1	60	6	3
ETTNU30520028A	28		1/4-28UNF	3	5.2	2.72	14	60	6	3
ETTNU30355024A	24	10-24UNC		3	3.55	3.18	10.4	60	6	3
ETTNU30665024A	24		5/16-24UNF	3	6.65	3.18	16.7	60	8	3
ETTNU30485020A	20	1/4-20UNC	7/16-20UNF	3	4.85	3.81	13.7	60	6	3
ETTNU30795020A	20		7/16-20UNF	3	7.95	3.81	24	60	8	3
ETTNU30595018A	18	5/16-18UNC		3	5.95	4.23	16.5	60	6	3
ETTNU30690016A	16	3/8-16UNC		3	6.9	4.76	21	60	8	3
ETTNU30795014A	14	7/16-14UNC		3	7.95	5.44	23.5	60	8	3
ETTNU30930013A	13	1/2-13UNC		3	9.3	5.86	27	80	10	3
ETTNU30995012A	12	9/16-12UNC		3	9.95	6.35	29	80	10	3
ETTNU31150011A	11	5/8-11UNC		3	11.5	6.93	33	80	12	3
ETTNU41440010A	10	3/4-10UNC		3	14.4	7.62	42	110	16	4

* Customized specification available.

S920 - Thread mill · 3F / 4F

銑牙刀 · 3 刃 / 4 刃 (ISO 牙)

ETMNM Series (ISO Metric)



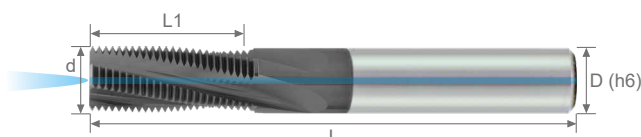
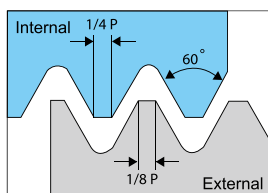
Tolerance class : 6H



Order No. 訂購編碼	Size	Pitch	No. of Threads	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (z)
ETMNM30390100A	M6	1.00	12	3.90	12.00	50	6	3
ETMNM30390075A		0.75	16	3.90	12.00	50	6	3
ETMNM30580125A	M8	1.25	13	5.80	16.25	60	6	3
ETMNM30590100A		1.00	16	5.90	16.00	60	6	3
ETMNM30770150A	M10	1.50	14	7.70	21.00	60	8	3
ETMNM30770125A		1.25	16	7.70	20.00	60	8	3
ETMNM30790100A		1.00	20	7.90	20.00	60	8	3
ETMNM40870175A	M12	1.75	14	8.70	24.50	75	10	4
ETMNM40940150A		1.50	16	9.40	24.00	75	10	4
ETMNM40990100A		1.00	24	9.90	24.00	75	10	4
ETMNM40990200A	M14	2.00	14	9.90	28.00	75	10	4
ETMNM41120150A		1.50	19	11.20	28.50	75	12	4
ETMNM41190200A	M16	2.00	16	11.90	32.00	100	12	4
ETMNM41190150A		1.50	22	11.90	33.00	100	12	4

* Customized specification available.

ETMCM Series (ISO Metric)



(with internal coolant)

Tolerance class : 6H



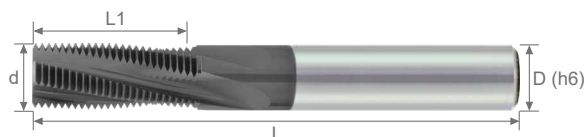
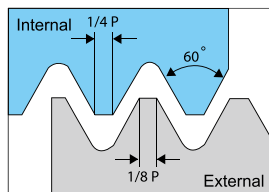
Order No. 訂購編碼	Size	Pitch	No. of Threads	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (z)
ETMCM30390100A	M6	1.00	12	3.90	12.00	50	6	3
ETMCM30390075A		0.75	16	3.90	12.00	50	6	3
ETMCM30580125A	M8	1.25	13	5.80	16.25	60	6	3
ETMCM30590100A		1.00	16	5.90	16.00	60	6	3
ETMCM30770150A	M10	1.50	14	7.70	21.00	60	8	3
ETMCM30770125A		1.25	16	7.70	20.00	60	8	3
ETMCM30790100A		1.00	20	7.90	20.00	60	8	3
ETMCM40870175A	M12	1.75	14	8.70	24.50	75	10	4
ETMCM40940150A		1.50	16	9.40	24.00	75	10	4
ETMCM40990100A		1.00	24	9.90	24.00	75	10	4
ETMCM40990200A	M14	2.00	14	9.90	28.00	75	10	4
ETMCM41120150A		1.50	19	11.20	28.50	75	12	4
ETMCM41190200A	M16	2.00	16	11.90	32.00	100	12	4
ETMCM41190150A		1.50	22	11.90	33.00	100	12	4

* Customized specification available.

S920 - Thread mill · 3F / 4F (American UN)

銑牙刀 · 3 刃 / 4 刃 (UN 牙)

ETMNU Series (American UN)



Tolerance class : 2A/2B



Order No. 訂購編碼	TPI	Thread			No. of Threads	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (z)
		UNC	UNF	UNEF						
ETMNU30300036A	36		No.8		12	3.0	8.5	50	4	3
ETMNU30330032A	32		No.10	No.12-3/8"	14	3.3	11.1	50	4	3
ETMNU30380028A	28		No.12, 1/4"	7/16", 1/2"	13	3.8	11.8	50	4	3
ETMNU30460028A	28		1/4"	7/16, 1/2"	14	4.6	12.7	60	6	3
ETMNU40920028A	28			7/16", 1/2"	25	9.2	22.7	75	10	4
ETMNU30290024A	24	No.10	5/16", 3/8"	9/16"-11/16"	10	2.9	10.6	50	4	3
ETMNU30350024A	24	No.12	5/16", 3/8"	9/16"-11/16"	11	3.5	11.6	50	4	3
ETMNU30570024A	24		5/16", 3/8"	9/16"-11/16"	15	5.7	15.9	60	6	3
ETMNU30740024A	24		3/8"	9/16"-11/16"	18	7.4	19.1	60	8	3
ETMNU41190024A	24			9/16"-11/16"	27	11.9	28.6	100	12	4
ETMNU30390020A	20	1/4"	7/16", 1/2"	3/4"-1"	10	3.9	12.7	50	4	3
ETMNU40850020A	20		7/16", 1/2"	3/4"-1"	18	8.5	22.9	75	10	4
ETMNU40990020A	20		1/2"	3/4"-1"	20	9.9	25.4	75	10	4
ETMNU51590020A	20			3/4"-1"	30	15.9	38.1	100	16	5
ETMNU30520018A	18	5/16"	9/16", 5/8"	11/16"-1 11/16"	12	5.2	16.9	60	6	3
ETMNU41130018A	18		9/16", 5/8"	11/16"-1 11/16"	21	11.3	29.6	100	12	4
ETMNU41190018A	18		5/8"	11/16"-1 11/16"	23	11.9	32.5	100	12	4
ETMNU30670016A	16	3/8"	3/4"		12	6.7	19.1	60	8	3
ETMNU41590016A	16		3/4"		24	15.9	38.1	100	16	4
ETMNU40760014A	14	7/16"	7/8"		13	7.6	23.6	60	8	4
ETMNU41870014A	14		7/8"		24	18.7	44.4	100	20	4
ETMNU40890013A	13	1/2"			13	8.9	25.4	75	10	4
ETMNU41030012A	12	9/16"	1"-1 1/2"		14	10.3	29.6	100	12	4
ETMNU51990012A	12		1"-1 1/2"		24	19.9	50.8	100	20	5
ETMNU41100011A	11	5/8"			14	11.0	32.3	100	12	4
ETMNU51350010A	10	3/4"			15	13.5	38.1	100	16	5
ETMNU41520009A	9	7/8"			16	15.2	45.2	100	16	4
ETMNU41700008A	8	1"			16	17.0	50.8	100	20	4

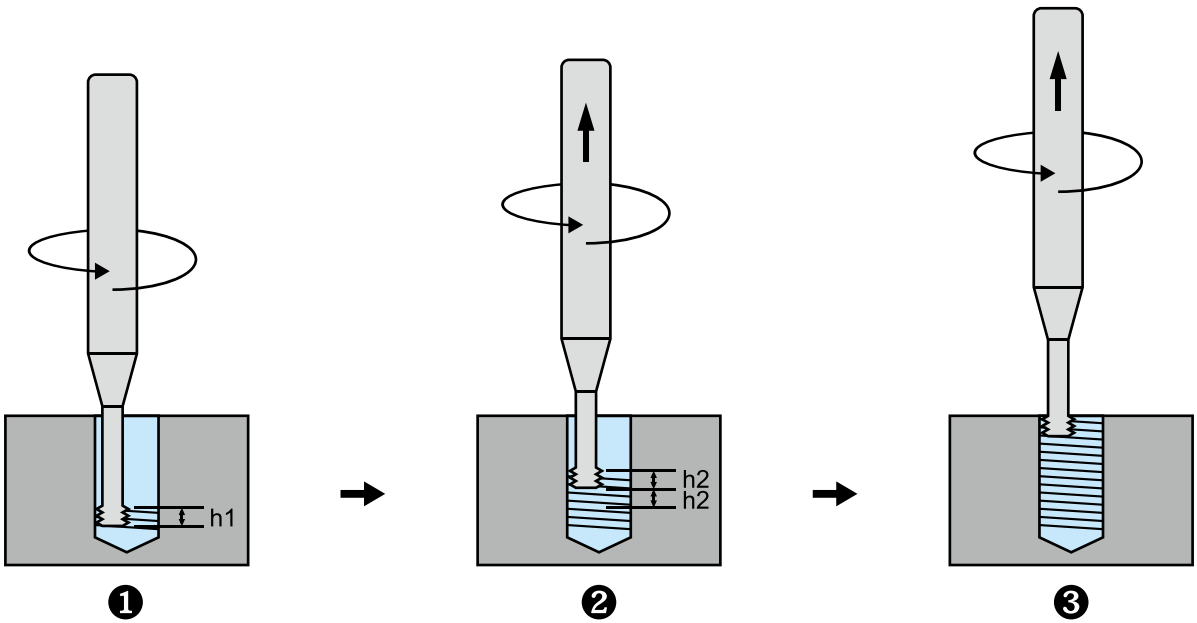
* Customized specification available.

Recommended Cutting Conditions

Work Material	for ETTNM		for ETMNM	
	Vc (m/min)	Feed (mm/t)	Vc (m/min)	Feed (mm/t)
Carbon Steel / Alloy Steel	60 ~ 90	0.02 ~ 0.08	50 ~ 70	0.02 ~ 0.07
Stainless Steel	60 ~ 90	0.02 ~ 0.08	50 ~ 70	0.02 ~ 0.07
Cast Iron	50 ~ 100	0.03 ~ 0.10	50 ~ 100	0.03 ~ 0.10
Aluminum Alloy	50 ~ 100	0.02 ~ 0.06	50 ~ 70	0.03 ~ 0.10
High Temperature Alloy	20 ~ 60	0.01 ~ 0.03	20 ~ 60	0.01 ~ 0.03
Hardened Steel	30 ~ 60	0.01 ~ 0.03	25 ~ 50	0.01 ~ 0.05

※ To choose uncoated tool for aluminum materials machining.

ETTNM Cutting method



- ① Machine h1 distance at the bottom of the hole and move the tool to the center of the hole. (h1 = 3 Pitch)
- ② Machine h2 distance while moving in Z axial direction.
- ③ Repeat operation ② to finish the hole.

Remark

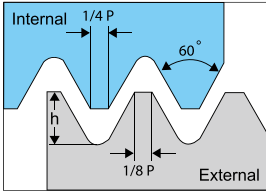
h2 value set :

- 1. for Machining General materials, h2 = 3 Pitch.
- 2. for Machining Heat resistant alloys or High hardness material, h2 = 1 Pitch.

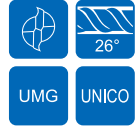
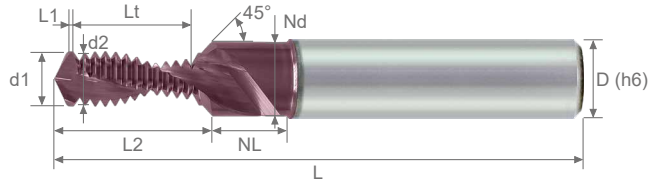
S920 - Drill/Thread mill · 2F

銑牙刀 - 鑽孔 & 螺紋銑削 · 2 刃

ETDNM Series (ISO Metric)



Tolerance class : 6g / 6H



Order No. 訂購編碼	Size (Coarse)	Pitch	No. of Threads	d1	d2	Lt	L1	L2	Nd	NL	L	D	h	Coating
ETDNM20420080U	M5	0.80	12	4.2	4.00	9.60	0.8	11.9	5.7	6.1	55	6	0.46	●
ETDNM20050100U	M6	1.00	11	5.0	4.85	11.00	1.0	13.7	6.6	9.5	60	8	0.58	●
ETDNM20680125U	M8	1.25	11	6.8	6.45	13.75	1.3	17.1	9.0	16.8	75	10	0.72	●
ETDNM20850150U	M10	1.50	12	8.5	8.08	18.00	1.5	22.1	11.0	11.6	80	12	0.87	●
ETDNM20420080	M5	0.80	12	4.2	4.00	9.60	0.8	11.9	5.7	6.1	55	6	0.46	
ETDNM20050100	M6	1.00	11	5.0	4.85	11.00	1.0	13.7	6.6	9.5	60	8	0.58	
ETDNM20680125	M8	1.25	11	6.8	6.45	13.75	1.3	17.1	9.0	16.8	75	10	0.72	
ETDNM20850150	M10	1.50	12	8.5	8.08	18.00	1.5	22.1	11.0	11.6	80	12	0.87	

* Maximum chamfering depth = (Nd - d1) × 0.5

Recommended Cutting Conditions

Work Material	HB	Strength (N-mm)	Vc (m/min)	Drilling f (mm/rev)		Thread milling fz (mm)		
				≤ 6mm	≤ 12mm	≤ 6mm	≤ 12mm	
K Grey Cast Iron	≤150	≤500	55 ~ 85	0.07 ~ 0.105	0.105 ~ 0.154	0.014 ~ 0.035	0.035 ~ 0.07	
	150 ~ 300	500 ~ 1000	55 ~ 85	0.07 ~ 0.105	0.105 ~ 0.154	0.014 ~ 0.035	0.035 ~ 0.07	
N Short Chips, Brass, Bronze	≤200	≤700	70 ~ 280	0.07 ~ 0.210	0.042 ~ 0.070	0.021 ~ 0.042	0.042 ~ 0.07	
	Aluminium, Cast Alloy (Si<10%)	≤180	≤600	70 ~ 280	0.07 ~ 0.175	0.175 ~ 0.210	0.021 ~ 0.042	0.042 ~ 0.07
	Aluminium, Cast Alloy (Si≥10%)	≤180	≤600	70 ~ 280	0.07 ~ 0.175	0.175 ~ 0.210	0.021 ~ 0.042	0.042 ~ 0.07
	Thermoplastics	-	-	40 ~ 80	0.07 ~ 0.175	0.175 ~ 0.210	0.021 ~ 0.042	0.042 ~ 0.07

Operating method

