

④ Hand Tap Series

Overall length	Thread length	Thread + Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

JIS

①

Spiral Fluted Taps
(for blind hole)

②

Spiral Fluted Taps
(for through hole)

③

Spiral Pointed Taps
(for through hole)

④

Hand Taps

⑤

Cemented
Carbide Taps

⑥

Roll Taps

⑦

Special Thread Taps
Simple Inspection Tools

⑧

Pipe Taps

⑨

Thread Mills
Premium Thread Mills

⑩

Dies

⑪

Center Drills
Centering Tools

⑫

Precision Machinery/
Metal Surgical Instruments

JIS

④-125

EH-HT

Hand Taps for Hard-to-Machine Materials



Specification



Tapping Speeds depending on Materials

Thermal refined steels 調質鋼 ~5 (m/min) 35~45HRC	Tool steels 工具鋼 ~5 (m/min)
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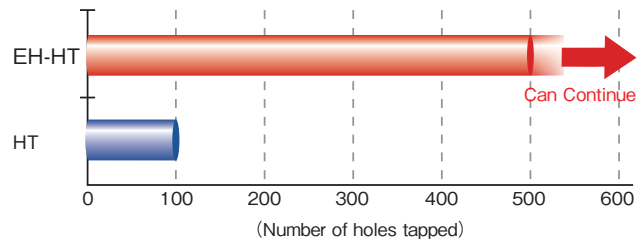
Product Features

- The EH-HT tap is suitable for tapping high hardness material from 35 to 45 HRC like high carbon steel, alloy steel forging, thermal refined material and metal mold material.
- Tool life was greatly improved by utilizing a cutting edge shape suitable for difficult cutting materials. The EH-HT taps exhibit an excellent wear resistance.
- There are two chamfer types available, 2.5P for blind hole and 5P for through hole.

Tapping Data

Tapping conditions [M6×1 P3]

Tap Used	EH-HT M6×1 5P
Workpiece Material	SCM440/Gear
Bored Hole	φ5
Tapping Length	10mm through hole
Tapping Speed	9m/min
Machinery Type	CNC vertical machining center (asynchronous)
Holder Type	With tension compression
Tapping Fluid	Insoluble cutting fluid
Holes Tapped	500 holes (can continue tapping)



Product System Table

Slow  Fast										
Work piece Material			1m/min	3m/min	5m/min	10m/min	15m/min	Work piece Material		
High Hardness Materials	60HRC ↕ 55HRC	High Hardness Materials	UH-CT (For ultra high-hardness steel)		EH-CT (For high-hardness steel)	※ Please use UH-CT and EH-CT with machine with perfect synchronous feed.		60HRC ↕ 55HRC	High Hardness Materials	
	55HRC ↕ 45HRC							55HRC ↕ 45HRC		
	45HRC ↕ 25HRC							45HRC ↕ 25HRC		
Tempered Material	45HRC ↕ 25HRC		EH-HT (For hard-to-machine materials)					45HRC ↕ 25HRC	Tempered Material	
Tool & Alloy Steel	SKS・SKD SCM・SCr		EH-PO		HC+SP HC-SP HC+PO HC-PO (For high carbon steels)			SKS・SKD SCM・SCr	Tool & Alloy Steel	
High Carbon Steel	↑ S45C							↑ S45C	High Carbon Steel	
Medium Carbon Steel	S45C ↑ S30C							S45C ↑ S30C	Medium Carbon Steel	
			1m/min	3m/min	5m/min	10m/min	15m/min			

The chart shows the processing range.

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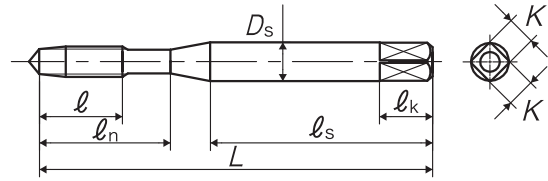
Precision Machinery/
Metal Surgical Instruments

⑫

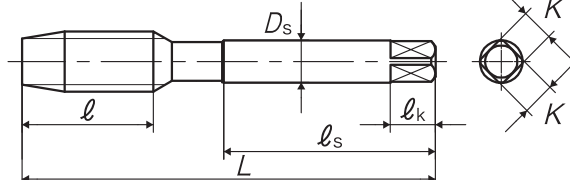
JIS

④-126

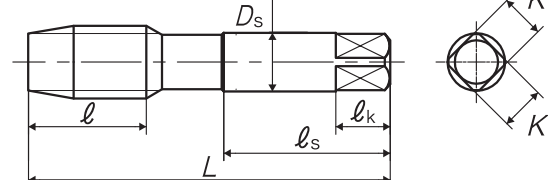
TYPE:1



TYPE:2



TYPE:3



Segment : 1B

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓ_n (mm)	ℓ_s (mm)	Ds (mm)	K (mm)	ℓ_k (mm)	No. of flutes	TYPE	MSRP
For Metric Threads													
M3 × 0.5	P3	ETHMR3.0G5	5P	46	9	14	26	4	3.2	6	3	1	¥ 1,940
M3 × 0.5	P3	ETHMR3.0G1	2.5P	46	9	14	26	4	3.2	6	3	1	¥ 1,940
M4 × 0.7	P3	ETHMR4.0I5	5P	52	11	17	29	5	4	7	3	1	¥ 1,940
M4 × 0.7	P3	ETHMR4.0I1	2.5P	52	11	17	29	5	4	7	3	1	¥ 1,940
M5 × 0.8	P3	ETHMR5.0K5	5P	60	13	22	33	5.5	4.5	7	3	1	¥ 1,960
M5 × 0.8	P3	ETHMR5.0K1	2.5P	60	13	22	33	5.5	4.5	7	3	1	¥ 1,960
M6 × 1	P3	ETHMR6.0M5	5P	62	15	26	33	6	4.5	7	3	1	¥ 2,140
M6 × 1	P3	ETHMR6.0M1	2.5P	62	15	26	33	6	4.5	7	3	1	¥ 2,140
M8 × 1.25	P4	ETHMS8.0N5	5P	70	19	-	36	6.2	5	8	4	2	¥ 2,930
M8 × 1.25	P4	ETHMS8.0N1	2.5P	70	19	-	36	6.2	5	8	4	2	¥ 2,930
M10 × 1.5	P4	ETHMS010O5	5P	75	23	-	38	7	5.5	8	4	2	¥ 3,740
M10 × 1.5	P4	ETHMS010O1	2.5P	75	23	-	38	7	5.5	8	4	2	¥ 3,740
M10 × 1.25	P4	ETHMS010N5	5P	75	23	-	38	7	5.5	8	4	2	¥ 3,740 *
M10 × 1.25	P4	ETHMS010N1	2.5P	75	23	-	38	7	5.5	8	4	2	¥ 3,740 *
M12 × 1.75	P4	ETHMS012P5	5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300
M12 × 1.75	P4	ETHMS012P1	2.5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300
M12 × 1.5	P4	ETHMS012O5	5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300 *
M12 × 1.5	P4	ETHMS012O1	2.5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300 *
M12 × 1.25	P4	ETHMS012N5	5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300 *
M12 × 1.25	P4	ETHMS012N1	2.5P	82	26	-	42	8.5	6.5	9	4	2	¥ 5,300 *
M14 × 2	P5	ETHMT014Q5	5P	88	26	-	45	10.5	8	11	4	2	¥ 7,220 *
M14 × 2	P5	ETHMT014Q1	2.5P	88	26	-	45	10.5	8	11	4	2	¥ 7,220 *
M14 × 1.5	P4	ETHMS014O5	5P	88	26	-	45	10.5	8	11	4	2	¥ 7,220 *
M14 × 1.5	P4	ETHMS014O1	2.5P	88	26	-	45	10.5	8	11	4	2	¥ 7,220 *
M16 × 2	P5	ETHMT016Q5	5P	95	26	-	48	12.5	10	13	4	2	¥ 9,650
M16 × 2	P5	ETHMT016Q1	2.5P	95	26	-	48	12.5	10	13	4	2	¥ 9,650
M16 × 1.5	P4	ETHMS016O5	5P	95	26	-	48	12.5	10	13	4	2	¥ 9,650 *
M16 × 1.5	P4	ETHMS016O1	2.5P	95	26	-	48	12.5	10	13	4	2	¥ 9,650 *
M18 × 2.5	P5	ETHMT018R5	5P	100	33	-	51	14	11	14	4	2	¥ 13,000 *
M18 × 2.5	P5	ETHMT018R1	2.5P	100	33	-	51	14	11	14	4	2	¥ 13,000 *
M18 × 1.5	P4	ETHMS018O5	5P	100	33	-	51	14	11	14	4	2	¥ 13,000 *
M18 × 1.5	P4	ETHMS018O1	2.5P	100	33	-	51	14	11	14	4	2	¥ 13,000 *
M20 × 2.5	P5	ETHMT020R5	5P	105	33	-	50	15	12	15	4	3	¥ 17,600
M20 × 2.5	P5	ETHMT020R1	2.5P	105	33	-	50	15	12	15	4	3	¥ 17,600

* = Specified Distribution Items. Made to order products.

 Think threads with
YAMAWA

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Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	TYPE	MSRP
M20 × 1.5	P4	ETHMS020O5	5P	105	33	-	50	15	12	15	4	3	¥ 17,600 ※
M20 × 1.5	P4	ETHMS020O1	2.5P	105	33	-	50	15	12	15	4	3	¥ 17,600 ※
M22 × 2.5	P5	ETHMT022R5	5P	115	33	-	55	17	13	16	4	3	¥ 22,600 ※
M22 × 2.5	P5	ETHMT022R1	2.5P	115	33	-	55	17	13	16	4	3	¥ 22,600 ※
M22 × 1.5	P4	ETHMS022O5	5P	115	33	-	55	17	13	16	4	3	¥ 22,600 ※
M22 × 1.5	P4	ETHMS022O1	2.5P	115	33	-	55	17	13	16	4	3	¥ 22,600 ※
M24 × 3	P5	ETHMT024S5	5P	120	39	-	55	19	15	18	4	3	¥ 28,100
M24 × 3	P5	ETHMT024S1	2.5P	120	39	-	55	19	15	18	4	3	¥ 28,100
M24 × 1.5	P4	ETHMS024O5	5P	120	39	-	55	19	15	18	4	3	¥ 28,100 ※
M24 × 1.5	P4	ETHMS024O1	2.5P	120	39	-	55	19	15	18	4	3	¥ 28,100 ※
M27 × 3	P5	ETHMT027S5	5P	130	39	-	60	20	15	18	4	3	¥ 39,000 ※
M27 × 3	P5	ETHMT027S1	2.5P	130	39	-	60	20	15	18	4	3	¥ 39,000 ※
M30 × 3.5	P5	ETHMT030T5	5P	135	46	-	62	23	17	20	4	3	¥ 49,600 ※
M30 × 3.5	P5	ETHMT030T1	2.5P	135	46	-	62	23	17	20	4	3	¥ 49,600 ※

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Precision Machinery/
Medical Surgical Instruments

JIS

④-127

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