

③ Spiral Pointed Tap Series for through hole

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/
Medical Surgical Instruments

JIS

③-41

S

P

IPO

Spiral Pointed Taps for General Purpose

Specification



Tapping Speeds depending on Materials

Low carbon steels
低炭素鋼
~5
(m/min)



Blister Pack



Detailed explanation about tapping

Spiral Pointed Taps IPO
Material : HSS
M10x1.5 UNC Chamfer: 5P
Shank Diameter: 361 (ANSI Dimension)
Tap drill size 8.5mm(ref.)

A suitable surface oxide treatment is applied for soft steel.

【REMARKS】
● THIS TAP IS NOT RECOMMENDED FOR HARD TO MACHINE MATERIALS LIKE HARDENED STEELS OR STAINLESS STEELS.
● HSS TAPS MAY SHATTER DURING USE. APPLY MACHINE COVERS AND WEAR SAFETY GLASSES WHEN USING TAPS FOR CUTTING THREADS.
WHEN SETTING TOOLS AND WORKPIECES, SECURE TIGHTLY TO AVOID VIBRATION AND RUNOUT.
DO NOT USE EXCESSIVE FORCE OR LOAD AS IT MAY CAUSE THE TAP BREAK.
YAMAWA MFG. CO., LTD.
WEBSITE URL
<http://www.yamawamfg.com/en/>

Product Features

- IPO is the best tap for through holes to be used with lower cutting speed on drilling machines.
- Use for threading of the iron (SPC or SS400) products used in our daily life.
- Surface treated. Oxidization, the most suitable surface treatment for iron products.
- Suitable for internal thread cutting in small quantity, such as tapping of test pieces.
- Having spiral points in the chamfer portion, IPO ejects chips forward in the tapping direction and is for through hole use.



Tapping for through holes

How to use IPO

- Start tapping after boring holes corresponding to the thread size by using drills.
- In the case of tapping with drilling machines, recommended tapping speed is slower than 5m/min.
- During tapping, please use tapping oil.



When hand tapping, always use tap wrench



Machine tapping with drilling machine

Table for bored and drilled hole sizes

unit: mm

Size	Minor Diameter of Internal Thread Size			Drill Size	Thread Engagement
	Minimum Tolerance	Maximum Tolerance			
		6H (2nd Class)	7H (3rd Class)		
M3 × 0.5	2.459	2.599	2.639	2.6 (2.5)	74% (92%)
M4 × 0.7	3.242	3.422	3.466	3.4 (3.3)	79% (92%)
M5 × 0.8	4.134	4.344	4.384	4.3 (4.2)	81% (92%)
M6 × 1	4.917	5.153	5.217	5.1 (5.0)	83% (92%)
M8 × 1.25	6.647	6.912	6.982	6.9 (6.8)	91% (89%)
M10 × 1.5	8.376	8.676	8.751	8.6 (8.5)	86% (92%)

note1) Recommended drill sizes shown in this table are for internal threads of 7H class (3rd class), and are selected from the standard drills available in the market.

note2) Drill sizes shown in brackets in this table are for such case as the drilling has oversize cutting tendency or for internal threads of 6H class (2nd class).

[Related products]

Shank adjuster

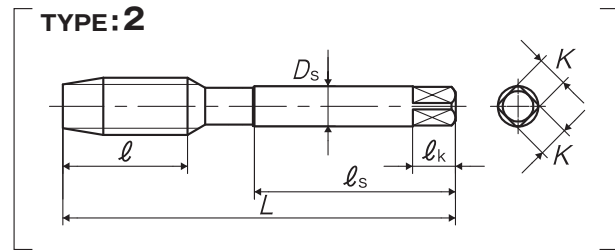
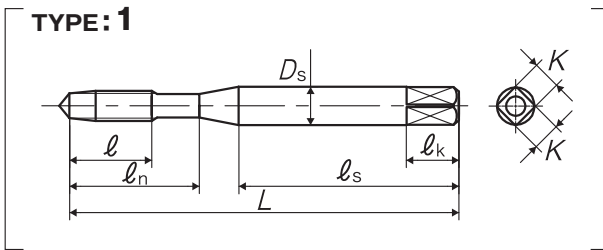
- For deep hole tapings, please use shank adjusters.
 - There is only a one touch motion required to detach and attach the I series taps (IHT/ISP/IPO) from or to the shank adjuster.
- *For details of shank adjuster, refer to ⑦-83



Obtainable from
video site shown in right

Think threads with
YAMAWA

Overall length	Thread length	Thread + Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	ℓ_s	Ds	K	ℓ_k



Blister Pack

Segment : 1E

Size	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	PI73.0GBP	5P	46	9	14	26	4	3.2	6	3	1	¥ 910
M4 × 0.7	PI74.0IBP	5P	52	11	17	29	5	4	7	3	1	¥ 950
M5 × 0.8	PI75.0KBP	5P	60	13	22	33	5.5	4.5	7	3	1	¥ 960
M6 × 1	PI76.0MBP	5P	62	15	26	33	6	4.5	7	3	1	¥ 1,010
M8 × 1.25	PI78.0NBP	5P	70	19	-	36	6.2	5	8	3	2	¥ 1,550
M10 × 1.5	PI7010OBP	5P	75	23	-	38	7	5.5	8	3	2	¥ 1,940

3

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