

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/
Medical Surgical Instruments

JIS

④-3

Z-PRO

CAST CH

Z-PRO Straight Fluted Taps for Cast Irons with Coolant Through Hole



Specification



Tapping Speeds depending on Materials

Cast irons 鑄鉄	Ductile cast irons 強靱鑄鉄	Aluminum alloy castings アルミ合金鑄物	Magnesium alloy die castings マグネシウム合金鑄物	Zinc alloy castings 亜鉛合金鑄物
10~30 (m/min)	10~30 (m/min)	15~50 (m/min)	15~50 (m/min)	15~50 (m/min)

Product Features

- Durability is improved with premium powder HSS and special coating.
- Chip ejection efficiency is improved by the unique cutting edge design that breaks up the chips. CAST CH can tap aluminum alloy castings and cast irons at medium to high speeds (up to 50m/min).
- Proper tool projection length is secured, achieving an excellent supply of cutting fluid.
- CAST CH has the most effective coolant through hole size for internal lubrication that can supply adequate cutting fluid to the chamfer part. This leads to improved welding and wear resistance, and achieves an excellent internal thread surface finish. Chips are smoothly ejected from bored holes to ensure consecutive tapping.

Tapping Data

Tapping conditions [M6×1]

Workpiece Material	FCD450
Tapping Length	12mm
Tapping Speed	30m/min
Machine Type	Machining center (Vertical)
Tapping Fluid	Water soluble cutting fluid

Conventional Product
Chips remaining



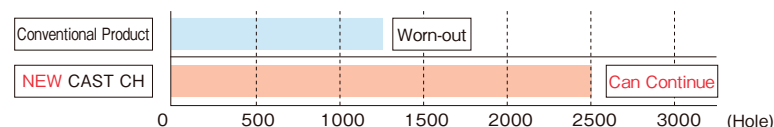
CAST CH
No chips remaining



CAST CH
Less wear



Workpiece Materials:
FCD700
Good tapping is possible even at a tapping speed of 30m/min!



Product System Table

		Tapping Speed						
		Slow	5m/min	10m/min	15m/min	20m/min	30m/min	Fast
Work Piece Material	non-ferrous materials	Copper	LA-HT (For die casting)		N-CT LA (For light alloys)			HFACT-P HFACT-B (For ultra high-speed for aluminum materials)
	Copper alloy							
Cast irons	Aluminum							
	Aluminum alloy							
	Cast irons	FC-HT (For cast iron)		N-CT FC (For cast iron)		CAST CH (For cast iron)		
	Ductile cast irons							HFICT-P (For ultra high-speed for steel)

Table of Recommended Machining Conditions

Tapping Speed	Recommended area						Processable area	
	5m/min	10m/min	20m/min	30m/min	40m/min	50m/min	60m/min	
Cast irons (FC)								
Ductile cast irons (FCD)								
Aluminum alloy castings (AC)								
Aluminum alloy Die Cast (ADC)								

Think threads with
YAMAWA

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JIS

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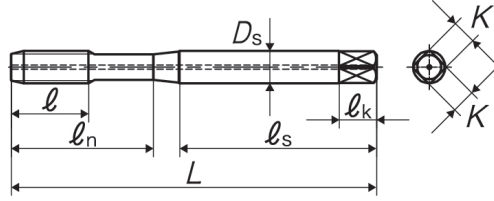
Center Drills
Centering Tools

⑪

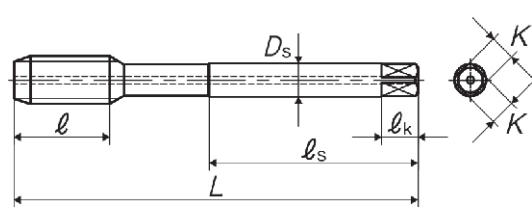
Precision Machinery/
Metal Surgical Instruments

⑫

TYPE: 1



TYPE: 2



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													
M6 × 1	P3	1214101055	C (3P)	80	15	30	45	6	4.5	7	3	1	¥ 4,770
M6 × 1	P3	1215101055	E (1.5P)	80	15	30	45	6	4.5	7	3	1	¥ 4,770
M8 × 1.25	P3	1214101064	C (3P)	90	19	-	46	6.2	5	8	3	2	¥ 6,290
M8 × 1.25	P3	1215101064	E (1.5P)	90	19	-	46	6.2	5	8	3	2	¥ 6,290
M10 × 1.5	P4	1214101078	C (3P)	100	23	-	51	7	5.5	8	4	2	¥ 7,940
M10 × 1.5	P4	1215101078	E (1.5P)	100	23	-	51	7	5.5	8	4	2	¥ 7,940
M10 × 1.25	P3	1214101079	C (3P)	100	23	-	51	7	5.5	8	4	2	¥ 7,940
M10 × 1.25	P3	1215101079	E (1.5P)	100	23	-	51	7	5.5	8	4	2	¥ 7,940
M10 × 1	P3	1214101080	C (3P)	100	23	-	51	7	5.5	8	4	2	¥ 9,420 ※
M10 × 1	P3	1215101080	E (1.5P)	100	23	-	51	7	5.5	8	4	2	¥ 9,420 ※
M12 × 1.75	P4	1214101088	C (3P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M12 × 1.75	P4	1215101088	E (1.5P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M12 × 1.5	P4	1214101089	C (3P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M12 × 1.5	P4	1215101089	E (1.5P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M12 × 1.25	P5	1214101090	C (3P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M12 × 1.25	P5	1215101090	E (1.5P)	110	26	-	56	8.5	6.5	9	4	2	¥ 10,400
M14 × 2	P4	1214101100	C (3P)	110	26	-	56	10.5	8	11	4	2	¥ 14,200
M14 × 2	P4	1215101100	E (1.5P)	110	26	-	56	10.5	8	11	4	2	¥ 14,200
M14 × 1.5	P4	1214101102	C (3P)	110	26	-	56	10.5	8	11	4	2	¥ 14,200
M14 × 1.5	P4	1215101102	E (1.5P)	110	26	-	56	10.5	8	11	4	2	¥ 14,200
M16 × 2	P4	1214101114	C (3P)	110	26	-	56	12.5	10	13	4	2	¥ 18,500
M16 × 2	P4	1215101114	E (1.5P)	110	26	-	56	12.5	10	13	4	2	¥ 18,500
M16 × 1.5	P4	1214101116	C (3P)	110	26	-	56	12.5	10	13	4	2	¥ 18,500
M16 × 1.5	P4	1215101116	E (1.5P)	110	26	-	56	12.5	10	13	4	2	¥ 18,500
M18 × 2.5	P5	1214101128	C (3P)	125	33	-	64	14	11	14	4	2	¥ 23,300
M18 × 2.5	P5	1215101128	E (1.5P)	125	33	-	64	14	11	14	4	2	¥ 23,300
M18 × 1.5	P4	1214101130	C (3P)	125	33	-	64	14	11	14	4	2	¥ 23,300
M18 × 1.5	P4	1215101130	E (1.5P)	125	33	-	64	14	11	14	4	2	¥ 23,300
M20 × 2.5	P5	1214101141	C (3P)	140	33	-	71	15	12	15	4	2	¥ 33,600
M20 × 2.5	P5	1215101141	E (1.5P)	140	33	-	71	15	12	15	4	2	¥ 33,600
M20 × 1.5	P4	1214101144	C (3P)	140	33	-	71	15	12	15	4	2	¥ 33,600
M20 × 1.5	P4	1215101144	E (1.5P)	140	33	-	71	15	12	15	4	2	¥ 33,600
M22 × 2.5	P5	1214101156	C (3P)	140	33	-	71	17	13	16	4	2	¥ 40,500
M22 × 2.5	P5	1215101156	E (1.5P)	140	33	-	71	17	13	16	4	2	¥ 40,500
M22 × 1.5	P4	1214101158	C (3P)	140	33	-	71	17	13	16	4	2	¥ 40,500
M22 × 1.5	P4	1215101158	E (1.5P)	140	33	-	71	17	13	16	4	2	¥ 40,500
M24 × 3	P5	1214101167	C (3P)	160	37	-	82	19	15	18	4	2	¥ 49,400
M24 × 3	P5	1215101167	E (1.5P)	160	37	-	82	19	15	18	4	2	¥ 49,400
M24 × 1.5	P4	1214101170	C (3P)	160	37	-	82	19	15	18	4	2	¥ 49,400
M24 × 1.5	P4	1215101170	E (1.5P)	160	37	-	82	19	15	18	4	2	¥ 49,400

※ = Specified Distribution Items. Made to order products.

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