

CAST CH

Z-PRO

Ultimate Machining Taps

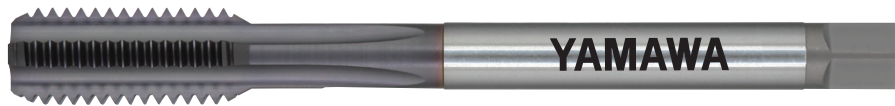


**Straight Fluted
Taps for Cast Iron
with Coolant Hole**

Ideal for tapping aluminum castings, cast irons and more!!



Cast Iron 10~30 (m/min)	Ductile cast Iron 10~30 (m/min)	Aluminum alloy castings 15~50 (m/min)	Zinc alloy castings 15~50 (m/min)	Magnesium alloy die castings 15~50 (m/min)
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Product Features

- Overall Length : Adopts a "semi-long" shape suitable for machines and ensuring proper tool projection!
- Cutting edge shape : A unique blade shape improves chip breaking and ejection!
Suitable for tapping cast iron, ductile cast iron and aluminum castings at medium to high speeds (~50m/min).
- Coolant Hole : Adopts an optimal coolant hole diameter for internal lubrication tapping.
Improved chip ejection capabilities allows for stable continuous tapping.

Product System Table

Workpiece Materials		Tapping speed						
		Low	10m/min	15m/min	20m/min	30m/min	50m/min	High
Cast Iron	Cast Iron	FC-HT	N-CT FC	CAST CH		HFICT-P		
	Ductile Cast Iron							
Non-Ferrous Metals	Aluminum, Aluminum Castings	LA-HT					HFACT-P HFACT-B	
	Brass, Brass Castings			N-CT LA				

Tapping Conditions (Fully Synchronized Feed)

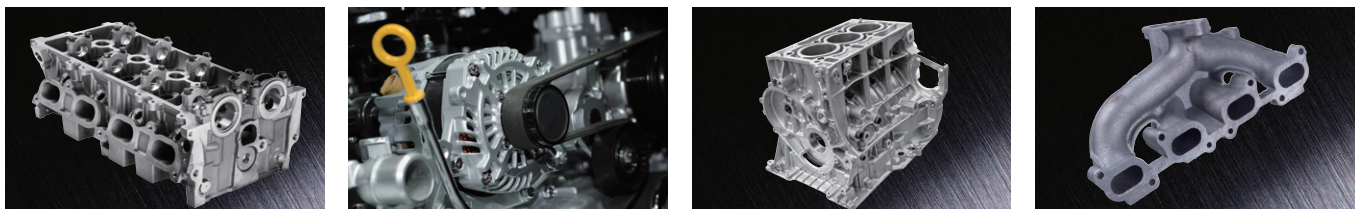
Recommended Range Processable Range

Tapping Speed (m/min)	5	10	20	30	40	50	60
Cast Iron (FC)							
Ductile Cast Iron (FCD)							
Aluminum Castings (AC)							
Aluminum Die Castings (ADC)							

Applications

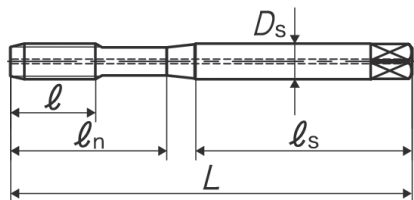
Used extensively in the machining of cast iron and aluminum alloys for parts in automotive components, construction machinery, machine tools and more. Reduces chip remnants and improves durability!

Examples of Machined Parts

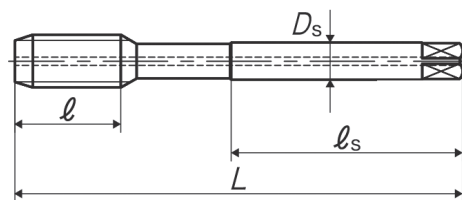


Shape and Dimensions

TYPE:1



TYPE:2



Size	Class	Code	Chamfer	L (mm)	l (mm)	ln (mm)	ls (mm)	Ds (mm)	No. of flutes	TYPE	MSRP(JPY)
M6X1	P3	1214101055	C (3P)	80	15	30	45	6	3	1	4,770
		1215101055	E (1.5P)								4,770
M8X1.25	P3	1214101064	C (3P)	90	19	-	46	6.2	3	2	6,290
		1215101064	E (1.5P)								6,290
M10X1.5	P4	1214101078	C (3P)	100	23	-	51	7	4	2	7,940
		1215101078	E (1.5P)								7,940
M10X1.25	P3	1214101079	C (3P)	100	23	-	51	7	4	2	7,940
		1215101079	E (1.5P)								7,940
M10X1	P3	1214101080	C (3P)	100	23	-	51	7	4	2	9,420 *
		1215101080	E (1.5P)								9,420 *
M12X1.75	P4	1214101088	C (3P)	110	26	-	56	8.5	4	2	10,400
		1215101088	E (1.5P)								10,400
M12X1.5	P4	1214101089	C (3P)	110	26	-	56	8.5	4	2	10,400
		1215101089	E (1.5P)								10,400
M12X1.25	P5	1214101090	C (3P)	110	26	-	56	8.5	4	2	10,400
		1215101090	E (1.5P)								10,400
M14X2	P4	1214101100	C (3P)	110	26	-	56	10.5	4	2	14,200
		1215101100	E (1.5P)								14,200
M14X1.5	P4	1214101102	C (3P)	110	26	-	56	10.5	4	2	14,200
		1215101102	E (1.5P)								14,200
M16X2	P4	1214101114	C (3P)	110	26	-	56	12.5	4	2	18,500
		1215101114	E (1.5P)								18,500
M16X1.5	P4	1214101116	C (3P)	110	26	-	56	12.5	4	2	18,500
		1215101116	E (1.5P)								18,500
M18X2.5	P5	1214101128	C (3P)	125	33	-	64	14	4	2	23,300
		1215101128	E (1.5P)								23,300
M18X1.5	P4	1214101130	C (3P)	125	33	-	64	14	4	2	23,300
		1215101130	E (1.5P)								23,300
M20X2.5	P5	1214101141	C (3P)	140	33	-	71	15	4	2	33,600
		1215101141	E (1.5P)								33,600
M20X1.5	P4	1214101144	C (3P)	140	33	-	71	15	4	2	33,600
		1215101144	E (1.5P)								33,600
M22X2.5	P5	1214101156	C (3P)	140	33	-	71	17	4	2	40,500
		1215101156	E (1.5P)								40,500
M22X1.5	P4	1214101158	C (3P)	140	33	-	71	17	4	2	40,500
		1215101158	E (1.5P)								40,500
M24X3	P5	1214101167	C (3P)	160	37	-	82	19	4	2	49,400
		1215101167	E (1.5P)								49,400
M24X1.5	P4	1214101170	C (3P)	160	37	-	82	19	4	2	49,400
		1215101170	E (1.5P)								49,400

*Specific Distribution Items (Made to order products)

Tapping Data

Tapping conditions: CAST CH M12X1.75 E (1.5P)

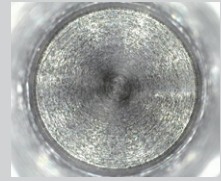
Workpiece material	FCD450
Tapping speed	30m/min
Tapping length	24mm
Machine	Vertical Machining Center
Tapping fluid	Water soluble cutting fluid
Internal lubrication pressure	3MPa

Comparison of remaining chips

Conventional product Remaining chips



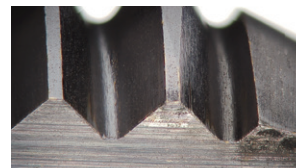
CAST CH No remaining chips



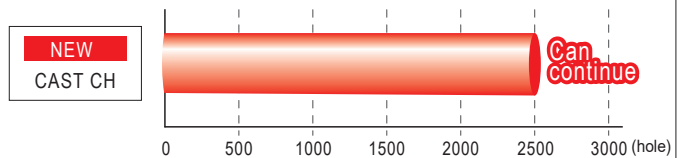
Tapping conditions: CAST CH M6X1 E (1.5P)

Workpiece material	FCD450
Tapping speed	30m/min
Tapping length	12mm
Machine	Vertical Machining Center
Tapping fluid	Water soluble cutting fluid
Internal lubrication pressure	1.5MPa

Minimal tool wear



**After 2,500
holes tapped
Continuous tapping
possible**

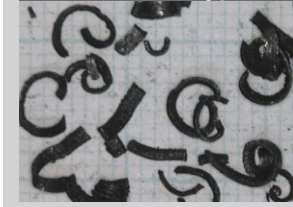


Tapping conditions: CAST CH M12X1.75 E (1.5P)

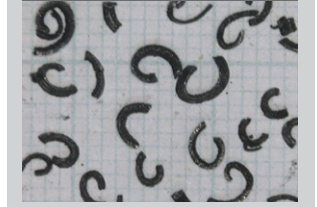
Workpiece material	FCD450
Tapping speed	30m/min
Tapping length	24mm
Machine	Vertical Machining Center
Tapping fluid	Water soluble cutting fluid
Internal lubrication pressure	3MPa

Comparison of chip breakage

Conventional coating product



CAST CH



**Chips are broken up and chip ejection is improved,
enabling high-quality tapping!**

FCD700 can be tapped with great results at tapping speeds up to 30m/min!

Warning

- ◆Tools may shatter during use. Wear safety eye cover or eye glasses to avoid injury during tapping.
- ◆Use tools under the proper tapping condition.
- ◆Never wear gloves during turning operations as the gloves may get caught in the tools.
- ◆Wear safety shoes to avoid foot injury by the falling tools.
- ◆When attaching tools to the machine, fasten firmly to avoid chatter and run-out.
- ◆Fasten the workpiece firmly so it never moves during the tapping operation. Never use worn tools or damaged tools.
- ◆Take a special care to prevent fire during machining. High temperature during tapping can cause a fire.

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