

# CAST CH

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

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

# CAST CH

**Z-PRO**

*Ultimate Machining Taps*





Tapping speed depending on materials

Cast irons <b>10~30</b> (m/min)	Ductile cast irons <b>10~30</b> (m/min)	Aluminum alloy castings <b>15~50</b> (m/min)	Zinc alloy castings <b>15~50</b> (m/min)	Magnesium alloy die castings <b>15~50</b> (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 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 5m/min	10m/min	15m/min	20m/min	30m/min	50m/min	High 100m/min
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)

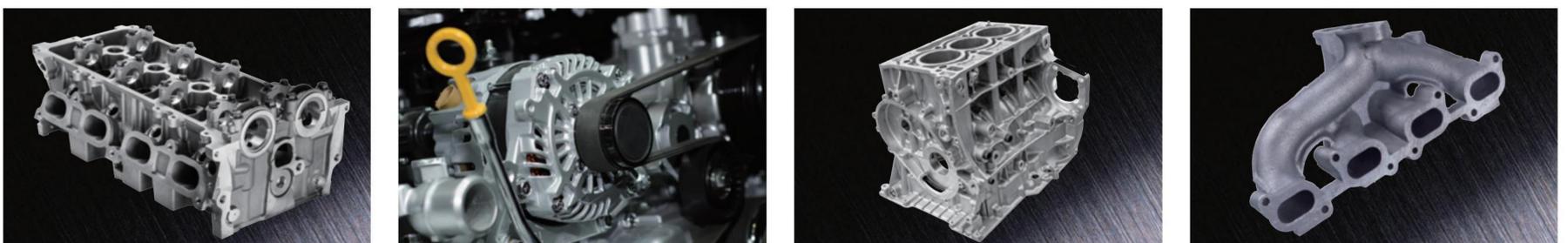
Recommended Range (Dark Blue) Processable Range (Light Blue)

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

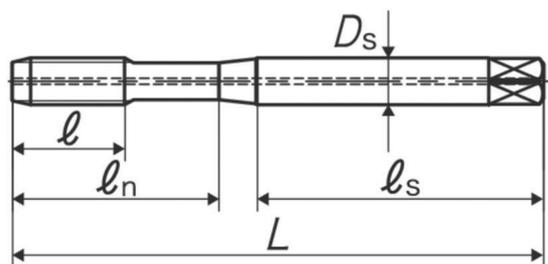
Used extensively in the machining of cast iron and aluminum alloys for parts in automotive components, construction machinery, machine tools and more. Reduces chip remnants and improves durability!

### Examples of Machined Parts

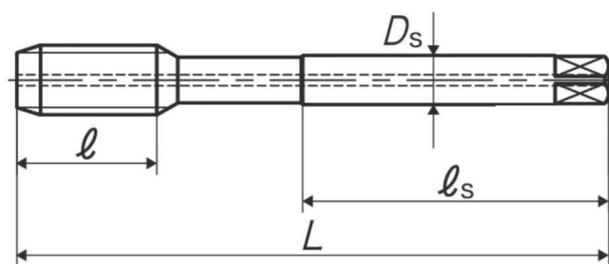


# Shape and Dimensions

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

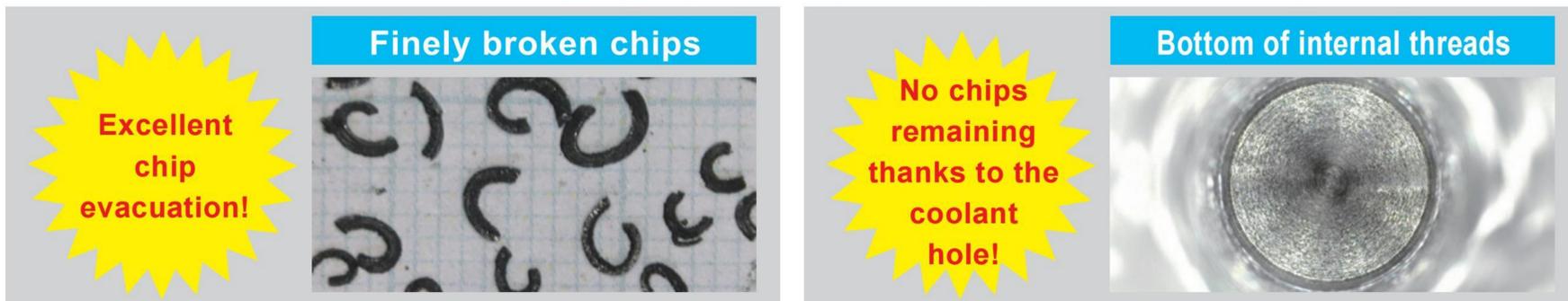
\*Specific Distribution Items (Made to order products)

## Internal Tapping Data

### Tapping conditions

Workpiece material	FCD450	Tapping machine	Vertical Machining Center
Tapping speed	30m/min	Tapping fluid	Water soluble cutting fluid

**CAST CH M12×1.75 1.5P** Tapping length : 24mm (Blind hole) Internal lubrication pressure : 3MPa



**CAST CH M6×1 1.5P** Tapping length : 12mm (Blind hole) Internal lubrication pressure : 1.5MPa



## Market Tapping Data

Size	Chamfer	Tapping conditions									Tool life (Holes)	Result
		Workpiece material	Hole shape	Bored hole size (mm)	Tapping length (mm)	Tapping Machine	Tapping direction	Tapping speed (m/min)	Feed	Tapping fluid		
M6×1	3P	FC250	Blind hole	5.1	12	MC	Vertical	15	Fully synchronous	Water-soluble (internal supply)	8,000	The conventional product required replacement after 500 holes. Tapping speed increased from 5 m/min ⇒ 15 m/min.
M20×2.5	3P	FC250	Through hole	17.5	36	MC	Vertical	15	Fully synchronous	Water-soluble (external supply)	4,800	Even after 4,800 holes, the tapped thread surface remains excellent. Continuous tapping possible
M8×1.25	1.5P	FC300	Blind hole	6.8	13	MC	Horizontal	30	Fully synchronous	Water-soluble (external supply)	6,600	Approximately 3× longer tool life than conventional products
M8×1.25	1.5P	FCD450	Blind hole	6.8	16	MC	Horizontal	30	Fully synchronous	Water-soluble (internal supply)	33,000	Approximately 2× longer tool life than conventional products
M16×2	1.5P	FCD450	Blind hole	14	32	MC	Horizontal	30	Fully synchronous	Water-soluble (internal supply)	6,600	Tapping speed increased from 15 m/min ⇒ 30 m/min. Continuous tapping possible
M10×1.25	3P	FCD600	Blind hole	8.8	30	MC	Vertical	15	Fully synchronous	Water-soluble (internal supply)	3,600	Chipping problem improved on the full thread section compared with conventional products
M12×1.75	1.5P	FCD600	Blind hole Through hole	10.3	20	MC	Vertical	20	Fully synchronous	Water-soluble (external supply)	5,500	Tapping possible at approximately 2× the speed of conventional products
M10×1.25	1.5P	AC4C	Blind hole	8.8	20	MC	Vertical	20	Fully synchronous	Water-soluble (external supply)	27,000	Previous chipping problem has been improved

### 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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