









For sizes M14 and larger, please use a tapping speed 30% lower than pictured above.

# **Product Features**

A little longer is better! A semi-long shape allows for more efficient external lubrication and achieves excellent machining results.

## Improved torque reduction!

The combination of a unique thread relief and a coating that maximizes the benefits of surface treatments results in reduced torque and improved welding-resistance.



## **Optimized flute shape!**

A slightly wider flute means a higher volume of lubricant can be applied, resulting in improved lubricity and cooling abilities.



## **Optimized for medium-hard steels!**

Adopting a tool material suitable for the work materials in combination with a special coating means EHRZ is suitable for medium-hard steels up to 40HRC as well as stainless steels.

## Tapping conditions: EHRZ G8 M6X1 B

Workpiece material	SCM440(40HRC)
Bored hole size	<b>Φ</b> 5.53mm
Tapping length	12mm
Machine	Vertical Machining Center
Tapping speed	20m/min
Feed	Fully synchronized feed
Tapping fluid	Water soluble tapping fluid (1:20 diluted solution)

#### Initial torque data

(N·cm) EHRZ **Conventional product** 800 700 600 500 400 300 200 100 600 -500 400 300 200 100 -100 -200 -300 -400 -100 -200 -300 -400 EHRZ has a 20% lower torque compared to conventional products! Conventional Excessive wear after 990 holes





## **Tapping Data**

#### Tapping conditions: EHRZ G8 M12X1.25 B Conventional product Excessive wear after 200 holes Workpiece material SCM440(40HRC) Can still continue **NEW** EHRZ 50 100 150 200 250 300 350 (Holes) 0 Bored hole size **Φ**11.4mm Torque data after 360 holes tapped (N·cm) Wear after 360 holes tapped **Tapping length** 24mm 300 2500 2000 Machine Vertical Machining Center 1500 1000 Tapping speed 20m/min 500 Fully synchronized feed Feed -500 -1000 Water soluble tapping fluid (1:20 diluted solution) -1500 Tapping fluid -2000

# Tapping range



Tapping conditions (Fully synchronous feed)					Processable	range			
Tapping speed (m/min)	5	10	15	2	0 2	25 3	0 3	5 4	0
Carbon steels (40HRC)									
Alloy steels (40HRC)									
Unhardened steels									
Stainless steels									

\*For stainless steels, insoluble tapping fluid is recommended. For sizes M14 and larger, please use a tapping speed 30% lower than pictured above.



## Shape and dimensions

## TYPE:1







Size	Class	Code	Chamfer	L (mm)	l (mm)	ℓn (mm)	Ds (mm)	ℓs (mm)	TYPE	MSRP(JPY)
M6×1	<u> </u>	1120101055	4P	80	11	30	6	45	1	4,950
	Go	1121101055	2P							4,950
M8×1.25	6	1120101064	4P	90	12	-	6.2	46	2	6,690
	60	1121101064	2P							6,690
M9×1	G8	1120101065	4P	90	12	-	6.2	46	2	7,360
WOAT	60	1121101065	2P							7,360
M10×1.5	G8	1120101078	4P	100	13	-	7	51	2	8,300
WTU*1.5	60	1121101078	2P							8,300
M10×1.25	G8	1120101079	4P	100	12	-	7	51	2	8,300
101041.25	60	1121101079	2P		10					8,300
M10×1	<u> </u>	1120101080	4P	100	12	-	7	51	2	9,130
	60	1121101080	2P		15					9,130
M12×1.75	G8	1120101088	4P	110	15	-	8.5	56	2	11,700
	90	1121101088	2P							11,700
M12×1.5	G8	1120101089	4P	110	15	-	8.5	56	2	11,700
	90	1121101089	2P							11,700
M12×1.25	G8	1120101090	4P	110	15	-	8.5	56	2	11,700
WI12^1.25		1121101090	2P							11,700
M12×1	G8	1120101091	4P	- 110	15	-	8.5	56	2	13,500
		1121101091	2P							13,500
M14×2	G10	1120101100	4P	110	18	-	10.5	56	2	16,500
		1121101100	2P							16,500
M14×1.5	G9	1120101102	4P	110	18	-	10.5	56	2	16,500
		1121101102	2P							16,500
M14×1.25	G9	1120101103	4P	110	18	-	10.5	56	2	19,800
		1121101103	2P							19,800
M16×2	G10	1120101114	4P	110	18	-	12.5	56	2	20,400
		1121101114	2P							20,400
M16×1.5	G9	1120101116	4P	110	18	-	12.5	56	2	20,400
		1121101116	2P							20,400

Number of oil grooves: M6=5, M8=6, M10 and over=8

For size M6 with chamfer length 2P the convex center is cut off.

#### 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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