

EHRZ

Extra-Hard
Roll Tap

Evolved Roll tap for medium hard carbon steels and alloy steels (~40HRC)!!

▪ Extra-Hard Roll Tap ▪

EHRZ

Z-PRO

Ultimate Machining Taps

JIS

Added sizes

M3×0.5/M4×0.7/M5×0.8 !





| | | | | |
|---|---|---|---|--|
| Medium carbon steels 10~30 (m/min) | High carbon steels 10~30 (m/min) | Alloy steels 10~30 (m/min) | Thermal refined steels 10~20 (m/min) | Stainless steels 5~15 (m/min) |
| 25~40HRC | | | | |

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



Product Features

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



2 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.

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

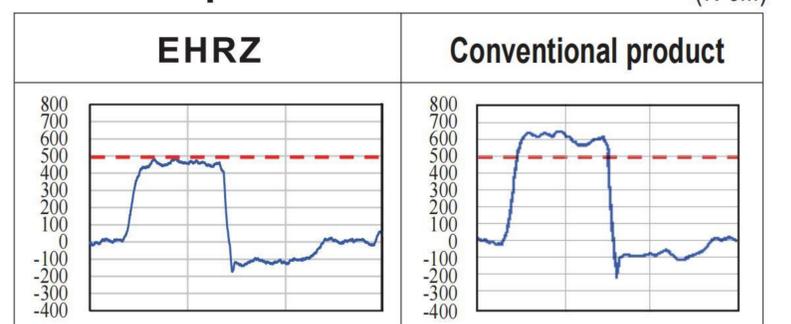


4 Optimized for medium-hard steels!
Adopting a tool material suitable for the work materials in combination with a special coating means EHRZ is suitable for medium-hard steels up to 40HRC as well as stainless steels.

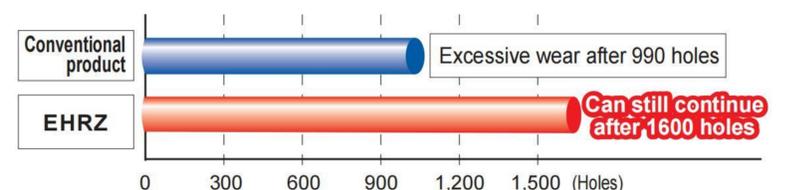
Tapping conditions: EHRZ G8 M6X1 B

| | |
|--------------------|---|
| Workpiece material | SCM440(40HRC) |
| Bored hole size | Φ5.53mm |
| Tapping length | 12mm |
| Machine | Vertical Machining Center |
| Tapping speed | 20m/min |
| Feed | Fully synchronous feed |
| Tapping fluid | Water soluble tapping fluid (1:20 diluted solution) |

Initial torque data



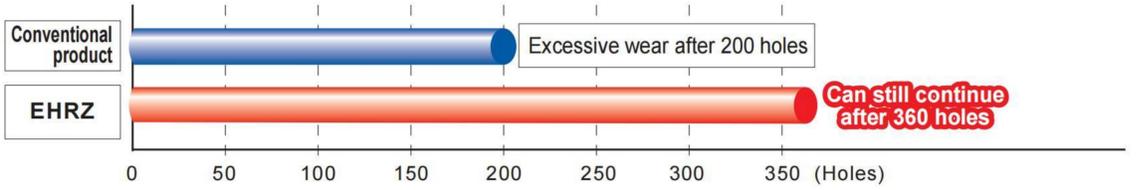
EHRZ has a 20% lower torque compared to conventional products!



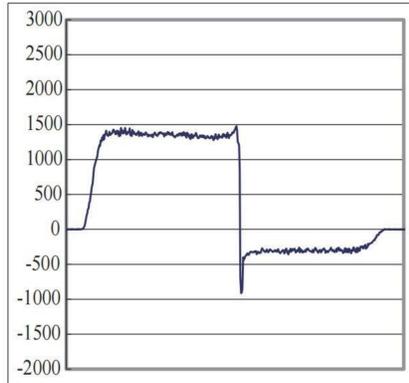
Tapping Data

Tapping conditions: EHRZ G8 M12X1.25 B

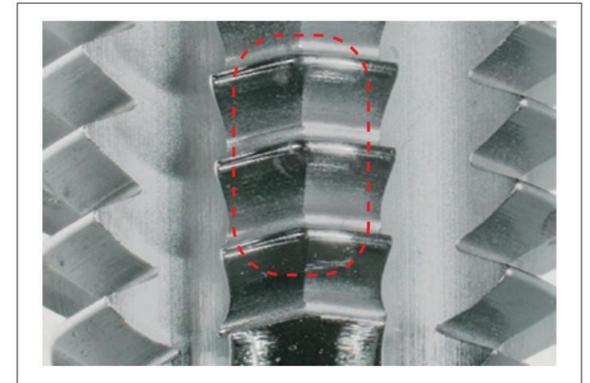
| | |
|--------------------|---|
| Workpiece material | SCM440(40HRC) |
| Bored hole size | Φ11.4mm |
| Tapping length | 24mm |
| Machine | Vertical Machining Center |
| Tapping speed | 20m/min |
| Feed | Fully synchronous feed |
| Tapping fluid | Water soluble tapping fluid (1:20 diluted solution) |



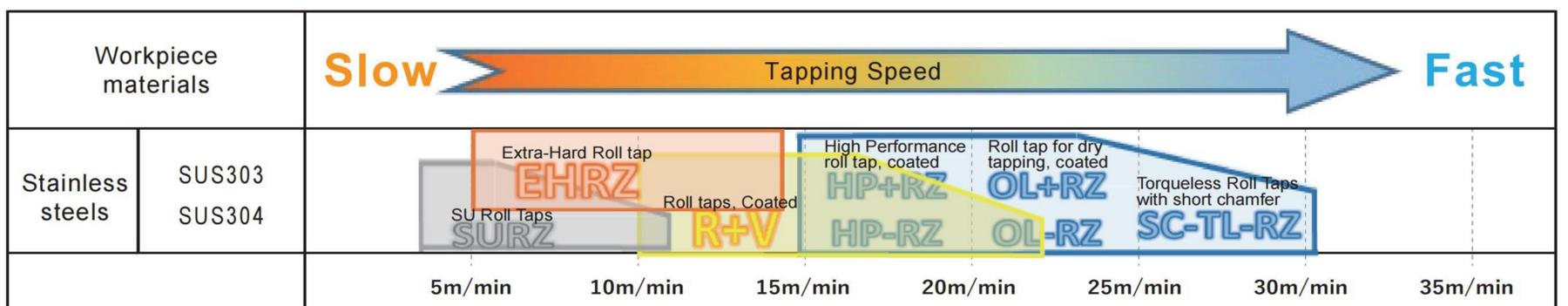
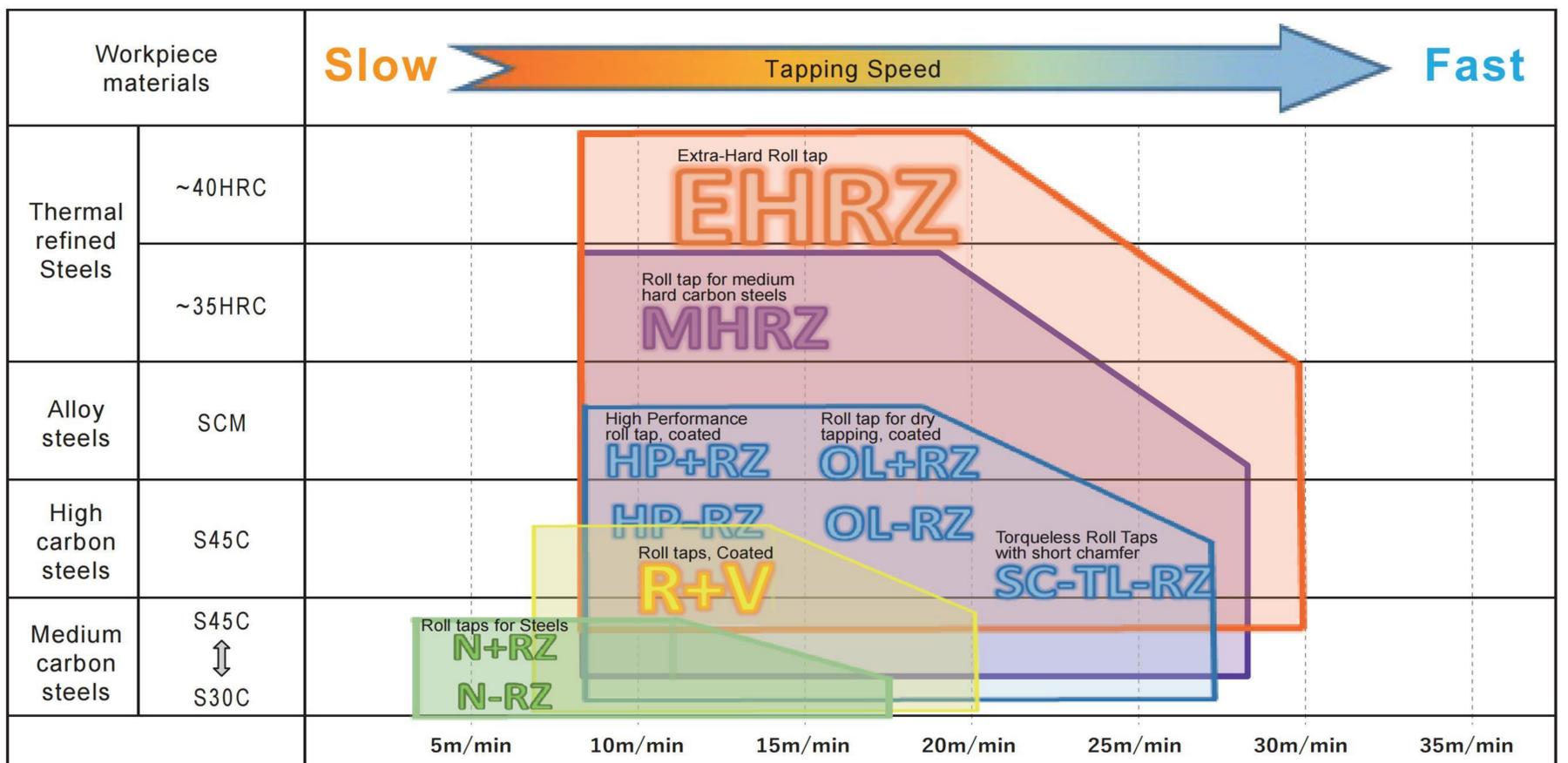
Torque data after 360 holes tapped (N·cm)



Wear after 360 holes tapped



Tapping Range

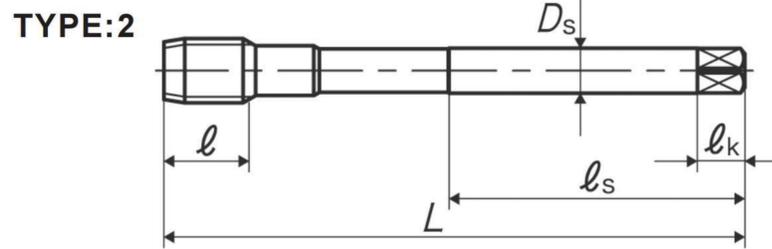
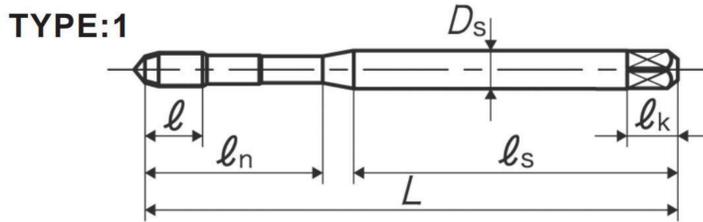


Tapping conditions (Fully synchronous feed)

| Material | Tapping speed (m/min) | Recommended range | | Processable range | | | | | |
|-----------------------|-----------------------|-------------------|----|-------------------|----|----|----|----|----|
| | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
| 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



| Size | Class | Code | Chamfer | L (mm) | l (mm) | ln (mm) | Ds (mm) | ls (mm) | TYPE | MSRP(JPY) |
|----------|-------|------------|---------|--------|--------|---------|---------|---------|------|-----------|
| M3×0.5 | G6 | 1120101035 | 4P | 56 | 5 | 18 | 4 | 32 | 1 | 4,230 |
| | | 1121101035 | 2P | | | | | | | 4,230 |
| M4×0.7 | G7 | 1120101042 | 4P | 63 | 7 | 21 | 5 | 36 | 1 | 4,350 |
| | | 1121101042 | 2P | | | | | | | 4,350 |
| M5×0.8 | G7 | 1120101049 | 4P | 70 | 9 | 25 | 5.5 | 40 | 1 | 4,620 |
| | | 1121101049 | 2P | | | | | | | 4,620 |
| M6×1 | G8 | 1120101055 | 4P | 80 | 11 | 30 | 6 | 45 | 1 | 4,950 |
| | | 1121101055 | 2P | | | | | | | 4,950 |
| M8×1.25 | G8 | 1120101064 | 4P | 90 | 12 | - | 6.2 | 46 | 2 | 6,690 |
| | | 1121101064 | 2P | | | | | | | 6,690 |
| M8×1 | G8 | 1120101065 | 4P | 90 | 12 | - | 6.2 | 46 | 2 | 7,360 |
| | | 1121101065 | 2P | | | | | | | 7,360 |
| M10×1.5 | G8 | 1120101078 | 4P | 100 | 13 | - | 7 | 51 | 2 | 8,300 |
| | | 1121101078 | 2P | | | | | | | 8,300 |
| M10×1.25 | G8 | 1120101079 | 4P | 100 | 13 | - | 7 | 51 | 2 | 8,300 |
| | | 1121101079 | 2P | | | | | | | 8,300 |
| M10×1 | G8 | 1120101080 | 4P | 100 | 13 | - | 7 | 51 | 2 | 9,130 |
| | | 1121101080 | 2P | | | | | | | 9,130 |
| M12×1.75 | G8 | 1120101088 | 4P | 110 | 15 | - | 8.5 | 56 | 2 | 11,700 |
| | | 1121101088 | 2P | | | | | | | 11,700 |
| M12×1.5 | G8 | 1120101089 | 4P | 110 | 15 | - | 8.5 | 56 | 2 | 11,700 |
| | | 1121101089 | 2P | | | | | | | 11,700 |
| M12×1.25 | G8 | 1120101090 | 4P | 110 | 15 | - | 8.5 | 56 | 2 | 11,700 |
| | | 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 |

◎ . . . New

Number of oil grooves : M3~M6=5, M8=6, M10 and larger=8
For M6 and smaller, external centers of 2 thread chamfer taps are removed.

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.

YAMAWA MFG. Co., Ltd.

Head office

Nakajima Gold bldg.13-10 Kyobashi
3chome, Chuo-ku, Tokyo 104-0031, JAPAN

Website:<http://www.yamawa.com>

YAMAWA group for Overseas

YAMAWA International Co., Ltd.



AIEHRZAE