

# WHERZ

Z-PRO Ultimate Machining Taps.  
Yamawa can solve your tapping problem on medium hard carbon and alloy steels.

# Z-PRO

*Ultimate Machining Taps*

ANSI



## Product Features



Roll Taps for Carbon Steels of Medium Hardness

**MHRZ**

HSS-Co

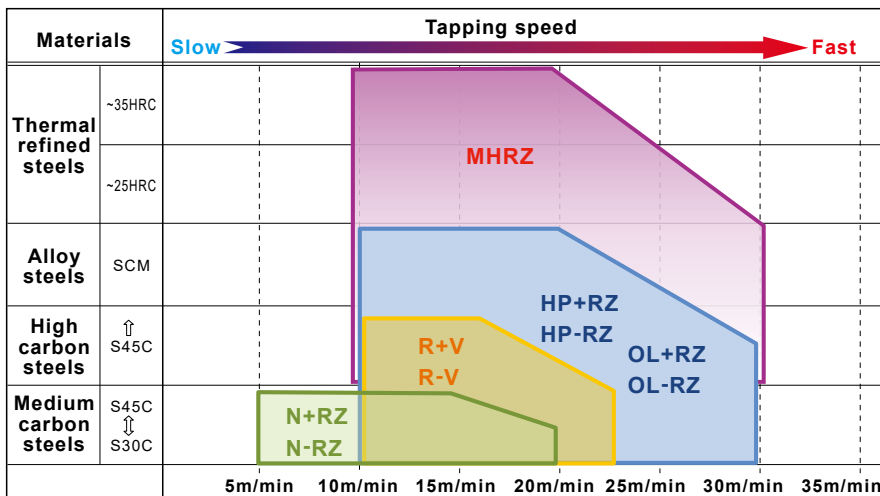
Coating

2~4

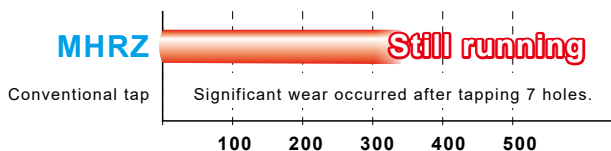


### Features

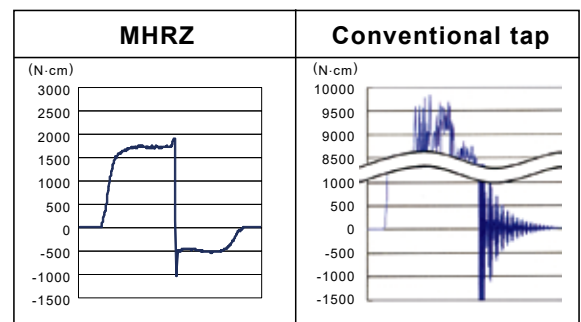
- We realized a reduction of tapping torque by introducing our original specifications and design.
- Made from excellent wear-resistant material and special coating techniques have dramatically improved the durability of the tool.
- Consistent tapping on thermal refined materials with hardness up to 35HRC is achieved.
- Water soluble tapping fluid is recommended when using MHRZ roll taps.



## Tapping Data / Comparison of tapping torque

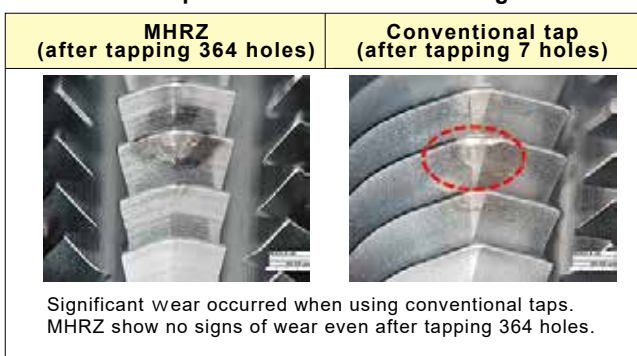


Size	1/4-20UNC
Workpiece Material	4140
Material Hardness	34HRC
Bored Hole Length	Φ0.23inch
Tapping Length	2D(0.5inch)
Tapping Speed	70sfm
Tapping Fluid	Water soluble oil emersion x 20
Tapping Machine	FANUC α-T10C

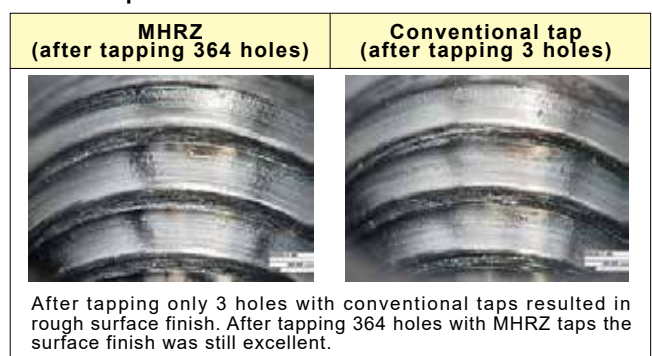


Our MHRZ taps have made it possible to tap 4140 material with hardness of 35HRC. This material was considered difficult to be processed with roll taps because of the high tapping torque.

### Comparison of the surface edge

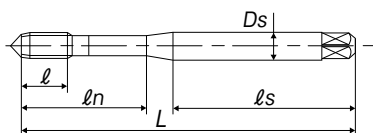


### Comparison of the internal thread surface

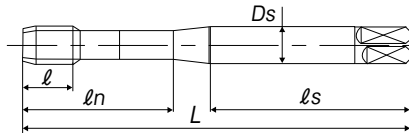


# Shape and Dimensions

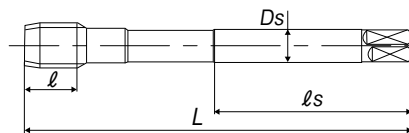
[Type1]



[Type2]



[Type3]



Size	Class	Code	Chamfer	L (inch)	l (inch)	ln (inch)	ls (inch)	Ds (inch)	Lobe	Type
No.10-24UNC	H6	5110103039	4P	2.756	0.354	0.945	1.654	0.194	5	1
No.10-24UNC	H6	5111103039	2P	2.756	0.354	0.945	1.654	0.194	5	1
No.10-32UNF	H6	5110103041	4P	2.756	0.354	0.945	1.654	0.194	5	1
No.10-32UNF	H6	5111103041	2P	2.756	0.354	0.945	1.654	0.194	5	1
1/4-20UNC	H7	5110103058	4P	3.15	0.433	1.181	1.713	0.255	5	1
1/4-20UNC	H7	5111103058	2P	3.15	0.433	1.181	1.713	0.255	5	1
1/4-28UNF	H6	5110103062	4P	3.15	0.433	1.181	1.713	0.255	5	1
1/4-28UNF	H6	5111103062	2P	3.15	0.433	1.181	1.713	0.255	5	1
5/16-18UNC	H8	5110103071	4P	3.543	0.472	1.378	1.831	0.318	6	2
5/16-18UNC	H8	5111103071	2P	3.543	0.472	1.378	1.831	0.318	6	2
5/16-24UNF	H7	5110103074	4P	3.543	0.472	1.378	1.831	0.318	6	2
5/16-24UNF	H7	5111103074	2P	3.543	0.472	1.378	1.831	0.318	6	2
3/8-16UNC	H8	5110103082	4P	3.937	0.512	1.535	2.028	0.381	8	2
3/8-16UNC	H8	5111103082	2P	3.937	0.512	1.535	2.028	0.381	8	2
3/8-24UNF	H7	5110103085	4P	3.937	0.512	1.535	2.028	0.381	8	2
3/8-24UNF	H7	5111103085	2P	3.937	0.512	1.535	2.028	0.381	8	2
7/16-14UNC	H9	5110103098	4P	3.937	0.512	-	2.008	0.323	8	3
7/16-14UNC	H9	5111103098	2P	3.937	0.512	-	2.008	0.323	8	3
7/16-20UNF	H8	5110103101	4P	3.937	0.512	-	2.008	0.323	8	3
7/16-20UNF	H8	5111103101	2P	3.937	0.512	-	2.008	0.323	8	3
1/2-13UNC	H9	5110103111	4P	4.331	0.591	-	2.205	0.367	8	3
1/2-13UNC	H9	5111103111	2P	4.331	0.591	-	2.205	0.367	8	3
1/2-20UNF	H8	5110103115	4P	4.331	0.591	-	2.205	0.367	8	3
1/2-20UNF	H8	5111103115	2P	4.331	0.591	-	2.205	0.367	8	3
9/16-12UNC	H10	5110103126	4P	4.331	0.709	-	2.205	0.429	8	3
9/16-12UNC	H10	5111103126	2P	4.331	0.709	-	2.205	0.429	8	3
9/16-18UNF	H9	5110103129	4P	4.331	0.709	-	2.205	0.429	8	3
9/16-18UNF	H9	5111103129	2P	4.331	0.709	-	2.205	0.429	8	3

Number of oil grooves : 1/4 and smaller = 5, 5/16 =6, 3/8 and larger = 8  
 For 1/4 and smaller, external centers of 2P 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.

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JQA-EM3465