

# NACHI

## 卓越性能、让世界为之转动

The Performance moves the world

新一代革新丝锥  
New Innovative Taps

# Hyper Z

SERIES

NEW

集NACHI技术之大成的新一代革新丝锥、诞生。  
在低~中速领域、有超群稳定性及凌驾于涂层丝锥的超长寿命。

New style of innovative Taps taken full advantage of NACHI Technologies.  
Realize longer tool life than coated taps at low and middle speed.

## 请务必体验看看这个令人惊艳的性能

Please feel free to experience this marvelous performance.

# HyperZ Series

ZSP / ZPO



## 集NACHI技术之大成的新一代革新丝锥, 诞生!

- 运用了NACHI所拥有的材料开发技术、热处理、研磨技术等
- 根据由齿轮刀具及拉刀加工技术得知的机械加工原理及磨损分析, 采用了最佳形状设计, 寿命波动小实现稳定加工
- 在低速~中速领域里发挥了优异的高性能, 寿命是无涂层丝锥的2~3倍, 其超长加工寿命也凌驾了涂层丝锥。

### New style of innovative taps crystallized of the best NACHI technology

- Using the NACHI owned material development technology, heat treatment, grinding technology.
- According the mechanical processing principle and wear analysis of the gear cutting tool and broach processing technology, using the best shape design, small fluctuations in life to achieve stable processing
- Played a superior and efficient performance in the field of low-medium speed, 2x~3x life than non-coated taps. Its long processing life also surpasses the coating taps.

## 在低速~中速领域里有着出类拔萃的高稳定及长寿命。

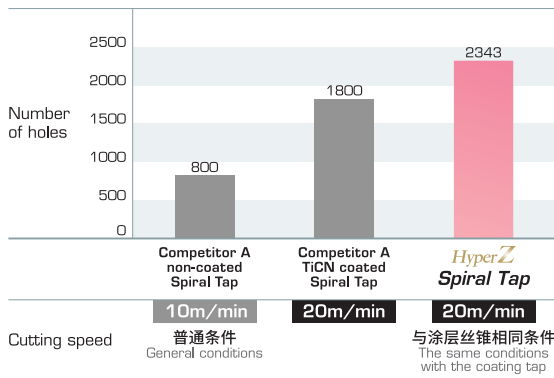
In the low to medium speed field with outstanding high stability and long life.

## 在一般无涂层丝锥的2倍切削速度下, 有2.5倍以上的加工寿命。更有超越其他品牌涂层丝锥的超长加工寿命

In 2 times cutting speed of the general non-coated tap, there are more than 2.5 times tool life. There are long tools life of the coating taps over other brands.

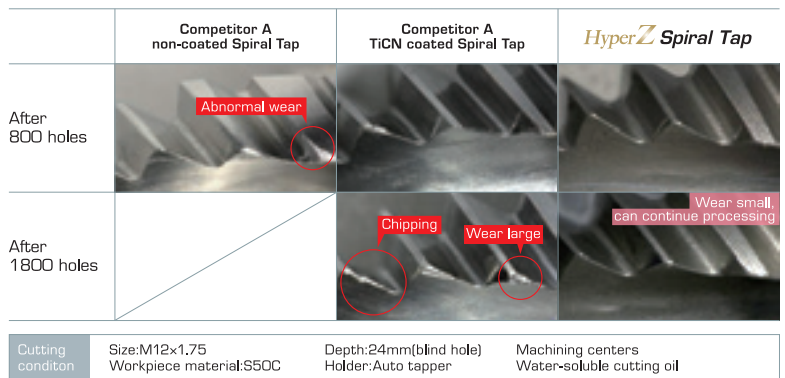
### 加工寿命比较

Compare machining life



### 损伤比较

Comparison of wear



## 凌驾于涂层丝锥的高稳定性及压倒性的超长加工寿命

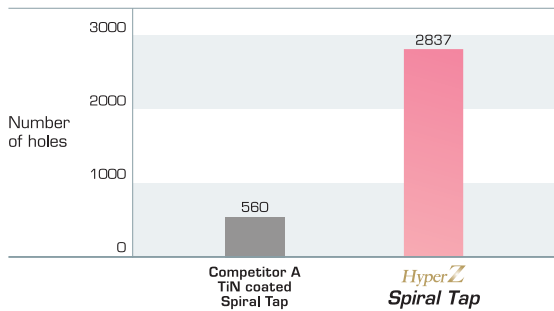
Compared to other brands of coated taps have high stability and overwhelming the long processing life

## 与其他品牌涂层丝锥相比, 无崩刃、无异常磨损, 实现了压倒性的长加工寿命。

Compared with other brand coated tap, no chipping, no abnormal wear, and to achieve an overwhelming long processing life.

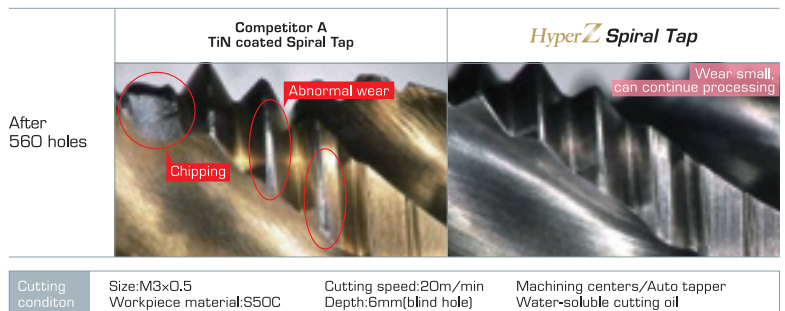
### 加工寿命比较

Compare machining life



### 损伤比较

Comparison of wear



## 通孔专用的螺尖丝锥在中低速领域也有优异的加工寿命表现

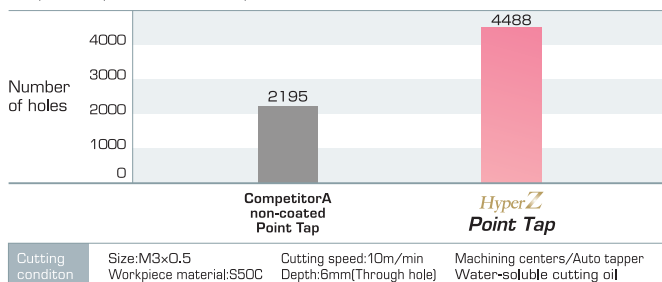
Point taps for through-holes also have excellent tool life performance in medium- and low-speed field.

## 通孔专用的螺尖丝锥其寿命是无涂层丝锥的2倍以上, 也有凌驾于涂层丝锥的超长寿命。

The life of point taps is 2x as high as that of the non-coated taps, and is longer the that of the coating taps.

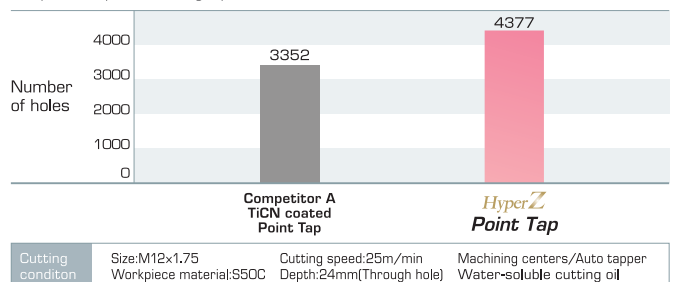
### 与其他品牌 无涂层丝锥比较

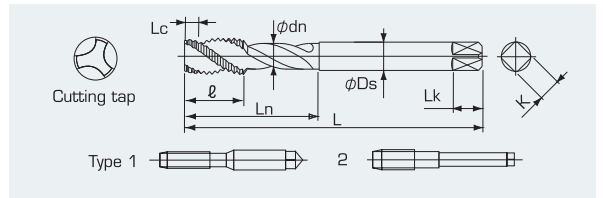
Compare Competitor non-coated taps



### 与其他品牌 涂层丝锥比较

Compare Competitor coating taps





LIST 6850 Order ZSP Code No.

Unit:mm

记号 Code No.	公称 Thread size	等级 Grade		咬合部 Chamfer Lc (P)	全长 Full length L	攻丝长度 Tapping length ℓ	沟槽数 Flutes	柄径 Shank diameter Ds	颈下长 Neck long Ln	颈径 Neck diameter dn	型式 Type
3M0.5R	M3×0.5	REG	P1	2.5	46	5.6	3	4.0	20	2.35	1
3M0.5R+1		REG+1	P2								
3M0.5R+2		REG+2	P3								
3M0.35R	M3×0.35	REG	P1	2.5	46	4.4	3	4.0	20	2.55	1
3M0.35R+1		REG+1	P2								
4M0.7R	M4×0.7	REG	P2	2.5	52	8.1	3	5.0	23	3.15	1
4M0.7R+1		REG+1	P3								
4M0.7R+2		REG+2	P4								
4M0.5R	M4×0.5	REG	P1	2.5	52	6.1	3	5.0	23	3.35	1
4M0.5R+1		REG+1	P2								
5M0.8R	M5×0.8	REG	P2	2.5	60	9.4	3	5.5	26	4.05	1
5M0.8R+1		REG+1	P3								
5M0.8R+2		REG+2	P4								
5M0.5R	M5×0.5	REG	P1	2.5	60	6.1	3	5.5	26	4.35	1
5M0.5R+1		REG+1	P2								
6M1R	M6×1	REG	P2	2.5	62	12.0	3	6.0	29	4.75	1
6M1R+1		REG+1	P3								
6M1R+2		REG+2	P4								
6M0.75R	M6×0.75	REG	P2	2.5	62	9.2	3	6.0	29	5.05	1
6M0.75R+1		REG+1	P3								
6M0.5R	M6×0.5	REG	P1	2.5	62	6.1	3	6.0	29	5.35	1
6M0.5R+1		REG+1	P2								
8M1.25R	M8×1.25	REG	P2	2.5	70	15.4	3	6.2	33	6.55	2
8M1.25R+1		REG+1	P3								
8M1.25R+2		REG+2	P4								
8M1R	M8×1	REG	P2	2.5	70	12.4	3	6.2	27	6.75	2
8M1R+1		REG+1	P3								
8M0.75R	M8×0.75	REG	P2	2.5	70	9.2	3	6.2	24.5	7.05	2
8M0.75R+1		REG+1	P3								
10M1.5R	M10×1.5	REG	P2	2.5	75	18.9	3	7.0	37	8.25	2
10M1.5R+1		REG+1	P3								
10M1.5R+2		REG+2	P4								
10M1.25R	M10×1.25	REG	P2	2.5	75	15.7	3	7.0	33	8.55	2
10M1.25R+1		REG+1	P3								
10M1R	M10×1	REG	P2	2.5	75	12.4	3	7.0	27	8.75	2
10M1R+1		REG+1	P3								
10M0.75R	M10×0.75	REG	P2	2.5	75	9.2	3	7.0	25	9.05	2
10M0.75R+1		REG+1	P3								
12M1.75R	M12×1.75	REG	P3	2.5	82	22.4	3	8.5	42	9.95	2
12M1.75R+1		REG+1	P4								
12M1.75R+2		REG+2	P5								
12M1.5R	M12×1.5	REG	P2	2.5	82	20.9	3	8.5	40	10.25	2
12M1.5R+1		REG+1	P3								
12M1.25R	M12×1.25	REG	P2	2.5	82	17.2	3	8.5	35	10.55	2
12M1.25R+1		REG+1	P3								
12M1R	M12×1	REG	P2	2.5	82	13.5	3	8.5	33	10.75	2
12M1R+1		REG+1	P3								

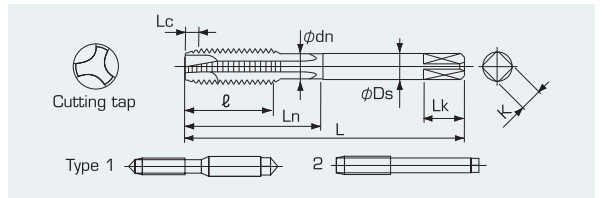
### 基准切削速度及切削油

Reference cutting speed and cutting oil

工件材质 Workpiece material	Cutting Speed(m/min)										
	结构钢 Structural steel	低碳素钢 Low carbon steel	中碳素钢 Medium carbon steel	高碳素钢 High carbon steel	合金钢 Alloy steel		高硬度钢 High hardness steel	不锈钢 stainless steel	铸铁 cast iron	铸铁 cast iron	铝合金 Aluminum alloy
	SS	S15C	S40C	S50C	SCM, SCr	SCM, SCr	30~40HRC	SUS	FC	FCD	AC, ADC
	~200HB	~200HB	~200HB	~200HB	~200HB	20~30HRC	30~40HRC				
ZSP	5~20	5~20	5~20	5~20	5~20	5~10	-	-	-	5~20	10~25
ZPO	8~25	10~25	6~25	6~25	6~25	5~10	-	-	8~20	6~25	10~30
建议切削油剂 Recommended cutting oil	极压活性型非水溶性 水溶性 Extreme pressure activity of non - water - soluble cutting oil Water-soluble cutting oil							水溶性 Water-soluble cutting oil			

1.此表为一般情形下的基准数值, 根据使用条件的不同来调整切削条件 2.此表以攻丝长度2Dc(螺纹公称的两倍径)为基准

1.This table is the standard value under normal circumstances. Please adjust the cutting conditions according to the conditions of use.  
2.The table is based on the tapping length 2Dc (twice the thread diameter)



LIST 6852 Order **ZPO** Code No.

Unit:mm

记号 Code No.	公称 Thread size	等级 Grade		咬合部 Chamfer Lc (P)	全长 Full length L	攻丝长度 Tapping length ℓ	沟槽数 Flutes	柄径 Shank diameter Ds	颈下长 Neck long Ln	颈径 Neck diameter dn	型式 Type
3MO.5R	M3×0.5	REG	P2	5	46	10.0	3	4.0	18	2.4	1
3MO.5R+1		REG+1	P3								
3MO.5R+2		REG+2	P4								
3MO.35R	M3×0.35	REG	P1	5	46	8.0	3	4.0	18	2.4	1
3MO.35R+1		REG+1	P2								
4MO.7R	M4×0.7	REG	P2	5	52	12.5	3	5.0	18	3.1	1
4MO.7R+1		REG+1	P3								
4MO.7R+2		REG+2	P4								
4MO.5R	M4×0.5	REG	P2	5	52	10.0	3	5.0	18	3.1	1
4MO.5R+1		REG+1	P3								
5MO.8R	M5×0.8	REG	P2	5	60	14.5	3	5.5	25	4.0	1
5MO.8R+1		REG+1	P3								
5MO.8R+2		REG+2	P4								
5MO.5R	M5×0.5	REG	P2	5	60	10.0	3	5.5	25	4.0	1
5MO.5R+1		REG+1	P3								
6M1R	M6×1	REG	P2	5	62	17.0	3	6.0	28	4.8	1
6M1R+1		REG+1	P3								
6M1R+2		REG+2	P4								
6MO.75R	M6×0.75	REG	P2	5	62	14.0	3	6.0	28	4.8	1
6MO.75R+1		REG+1	P3								
6MO.5R	M6×0.5	REG	P2	5	62	10.0	3	6.0	28	4.8	1
6MO.5R+1		REG+1	P3								
8M1.25R	M8×1.25	REG	P3	5	70	22.0	3	6.2	-	-	2
8M1.25R+1		REG+1	P4								
8M1.25R+2		REG+2	P5								
8M1R	M8×1	REG	P2	5	70	17.0	3	6.2	-	-	2
8M1R+1		REG+1	P3								
8MO.75R	M8×0.75	REG	P2	5	70	14.0	3	6.2	-	-	2
8MO.75R+1		REG+1	P3								
10M1.5R	M10×1.5	REG	P3	5	75	27.0	3	7.0	-	-	2
10M1.5R+1		REG+1	P4								
10M1.5R+2		REG+2	P5								
10M1.25R	M10×1.25	REG	P3	5	75	22.0	3	7.0	-	-	2
10M1.25R+1		REG+1	P4								
10M1R	M10×1	REG	P2	5	75	17.0	3	7.0	-	-	2
10M1R+1		REG+1	P3								
10MO.75R	M10×0.75	REG	P2	5	75	14.0	3	7.0	-	-	2
10MO.75R+1		REG+1	P3								
12M1.75R	M12×1.75	REG	P4	5	82	32.0	3	8.5	-	-	2
12M1.75R+1		REG+1	P5								
12M1.75R+2		REG+2	P6								
12M1.5R	M12×1.5	REG	P3	5	82	28.0	3	8.5	-	-	2
12M1.5R+1		REG+1	P4								
12M1.25R	M12×1.25	REG	P3	5	82	23.0	3	8.5	-	-	2
12M1.25R+1		REG+1	P4								
12M1R	M12×1	REG	P2	5	82	19.0	3	8.5	-	-	2
12M1R+1		REG+1	P3								

形式1 为凸出尖端  
Form 1 is protruded tip

**柄部四角處尺寸**

The square pillar size of the shank

柄径 Shank diameter Ds	凸出尖端长 The square pillar of shank	
	K	Lk
4.0	3.2	6.0
5.0	4.0	7.0
5.5	4.5	7.0
6.0	4.5	7.0
6.2	5.0	8.0
7.0	5.5	8.0
8.5	6.5	9.0

**凸出尖端长**

Protruded tip length

尺寸 Size	长度 Length
M3	(1.5)
M4	(2.0)
M5	(2.5)
M6	(3.0)

凸出尖端长为参考值  
The protruded tip length is the reference value

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