



TX-STAR 不等距導程不鏽鋼

鈦合金銑刀系列

TX-STAR variable leads design End mill series

# TX-STAR



## 特點

### SPECIAL FEATURES

採用不等距導程設計，  
實現高效率且穩定的切削。

"Variable-Lead" flute design leads stable and higher efficient performance.

獨特的刃口與螺旋角溝槽設計，  
加工去屑快速俐落。

Special flute and helix angle design for deeply depth milling and remove chips more smooth.

專為難切削的不鏽鋼304與4字頭的工件所設計。

Perfect for milling all types 304 and 4 digit number stainless work piece.

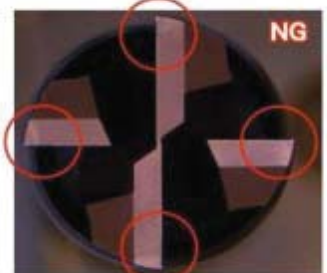
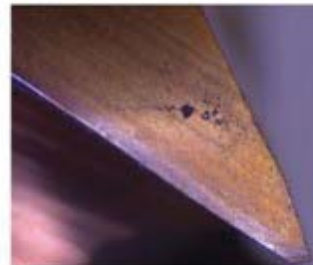
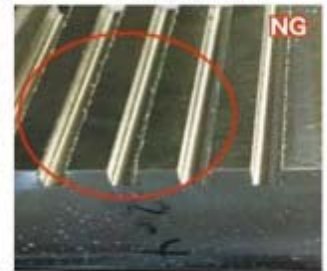
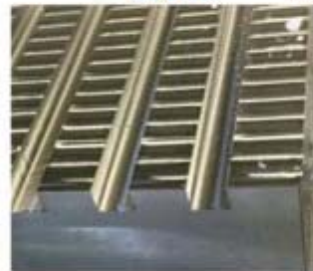
## LIFE TIME Test

### 不鏽鋼刀-壽命破壞性測試

TX-STAR

Work piece

OTHER BRAND



## 實績測試

### Benchmark test:

### TX10-SEM4100

機台 Machine: CAMPRO- By Coolant

工件 Work Piece: STAINLESS 304

轉速 Spindle Speed: 3600 RPM

進給 Feed rate: 550 mm/min

單刃切削量 Feed Rate per Tooth: 0.05mm

深度 Depth: 1D

寬度 Width: 10mm

切削方式 Milling Method: 溝銑Slot milling

TX-STAR

他社

### TX10-SEM4100





# TX-STAR 不等距導程不鏽鋼銑刀 -4刃

TX-STAR variable leads design End mill series- for all types Stainless / Titanium work piece.



## 規格表

| 編號(Number)    | 外徑(D) | 刃長(H) | 刃數(T) | 柄徑(d) | 全長(L) | 編號(Number)        | 外徑(D) | 刃長(H) | R角(R) | 刃數(T) | 柄徑(d) | 全長(L) |
|---------------|-------|-------|-------|-------|-------|-------------------|-------|-------|-------|-------|-------|-------|
| TX04-SEM 4020 | 2     | 5     | 4     | 4     | 50    | TX04-SEM 4030-r02 | 3     | 7.5   | 0.2R  | 4     | 4     | 50    |
| TX04-SEM 4030 | 3     | 7.5   | 4     | 4     | 50    | TX04-SEM 4030-r05 | 3     | 7.5   | 0.5R  | 4     | 4     | 50    |
| TX04-SEM 4040 | 4     | 10    | 4     | 4     | 50    | TX04-SEM 4040-r05 | 4     | 10    | 0.5R  | 4     | 4     | 50    |
| TX06-SEM 4020 | 2     | 5     | 4     | 6     | 50    | TX04-SEM 4040-r10 | 4     | 10    | 1R    | 4     | 4     | 50    |
| TX06-SEM 4030 | 3     | 7.5   | 4     | 6     | 50    | TX06-SEM 4050-r05 | 5     | 13    | 0.5R  | 4     | 6     | 50    |
| TX06-SEM 4040 | 4     | 10    | 4     | 6     | 50    | TX06-SEM 4050-r10 | 5     | 13    | 1R    | 4     | 6     | 50    |
| TX06-SEM 4050 | 5     | 13    | 4     | 6     | 50    | TX06-SEM 4060-r05 | 6     | 15    | 0.5R  | 4     | 6     | 50    |
| TX06-SEM 4060 | 6     | 15    | 4     | 6     | 50    | TX06-SEM 4060-r10 | 6     | 15    | 1R    | 4     | 6     | 50    |
| TX08-SEM 4080 | 8     | 20    | 4     | 8     | 60    | TX08-SEM 4080-r05 | 8     | 20    | 0.5R  | 4     | 8     | 60    |
| TX10-SEM 4100 | 10    | 30    | 4     | 10    | 75    | TX08-SEM 4080-r10 | 8     | 20    | 1R    | 4     | 8     | 60    |
| TX12-SEM 4120 | 12    | 32    | 4     | 12    | 75    | TX10-SEM 4100-r05 | 10    | 25    | 0.5R  | 4     | 10    | 75    |
| TX16-SEM 4160 | 16    | 45    | 4     | 16    | 100   | TX10-SEM 4100-r10 | 10    | 25    | 1R    | 4     | 10    | 75    |
| TX20-SEM 4200 | 20    | 50    | 4     | 20    | 100   | TX12-SEM 4120-r05 | 12    | 32    | 0.5R  | 4     | 12    | 75    |
|               |       |       |       |       |       | TX12-SEM 4120-r10 | 12    | 32    | 1R    | 4     | 12    | 75    |

## 切削條件表

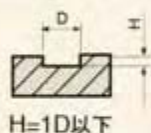
### Recommended Milling Conditions

|                                   |                                                                                           |                                  |                                                       |                                                   |          |
|-----------------------------------|-------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|---------------------------------------------------|----------|
| <b>Cutting Conditions</b><br>切削條件 | ULTRA micro grain carbide<br>used for TX-STAR<br>End mills<br>粉末微粒碳化鎢<br>不鏽鋼刀-TX-STAR/SUS | <b>Cutting Materials</b><br>被切削材 | STAINLESS<br>304 / 316 / 4字頭<br>熱處理鋼<br>鈦合金 Ti-6Al-4V | The hardness of<br>the material cut<br>被切削材<br>硬度 | HRC30-45 |
|-----------------------------------|-------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|---------------------------------------------------|----------|

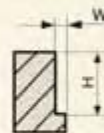
| 立銑刀刃徑<br>mm | 轉速-spindle speed<br>RPM | 進給-feed rate<br>mm/min | 立銑刀刃徑<br>mm | 轉速-spindle speed<br>RPM | 進給-feed rate<br>mm/min |
|-------------|-------------------------|------------------------|-------------|-------------------------|------------------------|
| D3.0        | 10000                   | 400                    | D3.0        | 10000                   | 400                    |
| D4.0        | 8000                    | 500                    | D4.0        | 8000                    | 500                    |
| D5.0        | 6500                    | 500                    | D5.0        | 6500                    | 500                    |
| D6.0        | 5400                    | 600                    | D6.0        | 5400                    | 600                    |
| D8.0        | 4000                    | 600                    | D8.0        | 4000                    | 600                    |
| D10.0       | 3200                    | 440                    | D10.0       | 3200                    | 440                    |
| D12.0       | 2800                    | 600                    | D12.0       | 2800                    | 600                    |
| D16.0       | 2100                    | 400                    | D16.0       | 2100                    | 400                    |
| D20.0       | 1700                    | 350                    | D20.0       | 1700                    | 350                    |

最大切削量 / Max Cutting Range.

Slot Milling- below 1D depth.



最大切削量 / Max Cutting Range.



Depth=H is within 2D  
W=0.2D