



Cross hole chamfering and deburring cutter

# X tool cutter

- ◇X tool cutter can chamfer and deburr cross hole, slot, etc
- ◇Corresponds to cross holes such as inclined and curved surfaces
- ◇Processing with 1 pass from machined hole side and 2 pass from side hole side
- ◇Insert is made of carbide, long life
- ◇Insert replacement can be easily with one screwdriver only



**MADE IN JAPAN**

**KREUZ CO.,LTD.**

# What is X tool cutter ?



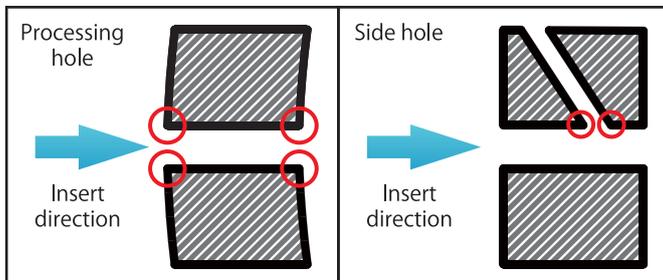
- ◇Tools for chamfering cross holes with machine tools
- ◇Processable from the machined hole side or from the side hole side
- ◇Supply compressed air or coolant to the tool center for use
- ◇Lineup of 2 types according to the hole diameter to be inserted

## Available in 2 types

type	BN type	UF type
shape		
how to use	Align the hole and tool axis 	Offset the tool axis relative to the hole 

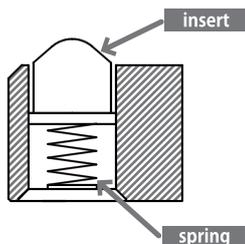
When using  
For BN type, select tool diameter smaller than tool hole diameter by 0.2 ~ 0.4 mm  
(Example)  
Machining hole diameter  $\Phi$  10 mm, use tool diameter  $\Phi$  9.6 ~  $\Phi$  9.8 mm

## Can be used both side



Condition criteria  
Tool tip dia.  $\Phi$  10mm  
Rotation speed 2,000rpm  
Feed speed 0.2mm/rev  
Pressure 0.2MPa

## Excellent responsiveness



- ◇Cutting while the insert projects and retracts
- ◇Responsiveness is superior due to the structure that the spring pushes the chip directly
- ◇There is no chance of getting caught even if different shapes, inclined surface, key groove, long hole are processed
- ◇The tip of the tip has a guide shape, so it will not scratch the insertion hole

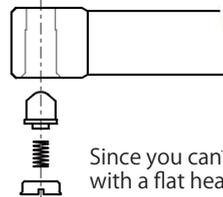
## Better chips discharge



By supplying compressed air or coolant to the center through part, there is no chipping of chips in the chip sliding part, and stable quality can always be obtained

In the case of a machine tool having no center through mechanism, You can use it if you install high jet holder (for air) made by Showa Seiki.

## Long life insert, Easy to change



The chip is made of carbide, long life

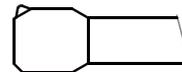
Since you can exchange chips just by removing the cap with a flat head screwdriver, you can work easily

## 1pass or 2 pass

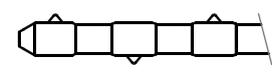
Process hole <1pass>	Side hole <2pass>
When the main spindle is passed through the hole with forward rotation, deburring on the front and back is completed	When reciprocating the spindle with forward rotation and reverse rotation respectively, the deburring on the front and back is completed

## Drill end, Simultaneous multiple holes

For drill ends, it is possible to manufacture shapes according to the application such as diagonal chips, multiple chips at the same time for multiple holes (BN type only)



for Drill end



for Multiple hole

## Lineup

BN type		$\Phi$ 4.0 ~ $\Phi$ 14.0 (0.1mm pitch)
UF type		$\Phi$ 16.0 ~ $\Phi$ 55.0 (1mm pitch)

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