

## One idea for punch press tool !

Countermeasures against the breakage of the cutting edge of the narrow type punch

High Quality &amp; Technology For The Future

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## NEWS

**We recommend the punch press tool when punching the Pre-hole of burring or the like with the punch of which cutting edge is narrower than the material thickness.**

### Estimation of processable punch cutting edge diameters

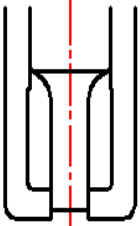
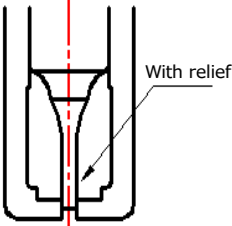
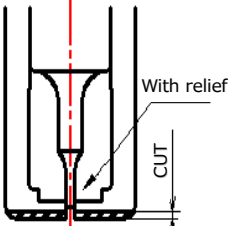
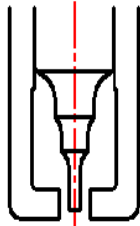
(In case of Thick turret tooling)

	Cutting edge of narrow type (less than $\phi 3\text{mm}$ )	
	Guaranteed punch diameter	processable punch diameter
Mild Steel	$1.0 \times \text{Material thickness}$	$0.65 \times \text{Material thickness}$
Aluminum	$1.0 \times \text{Material thickness}$	$0.4 \times \text{Material thickness}$
Stainless	$2.0 \times \text{Material thickness}$	$1.2 \times \text{Material thickness}$

(\*1) It can be processed, but we can not guarantee the durability.

### Anti-breakage punch press tools

(In case of Thick turret tooling)

standard type	narrow type	super narrow type	"open-end" type
Described in our catalog	Described in our catalog	Custom-made	Custom-made
			
Cutting edge form when the punch is not narrow type (more than $\phi 3\text{mm}$ ).	Narrow type cutting edge form (less than $\phi 3\text{mm}$ ) <ul style="list-style-type: none"> <li>■ The effective cutting edge length is 30% shorter than that of the standard type.</li> <li>■ With guide relief</li> </ul>	It is applied to the cutting edge which is less than $\phi 1\text{mm}$ or width $1\text{mm}$ . <ul style="list-style-type: none"> <li>■ Effective cutting edge length = material thickness + <math>4\text{mm}</math> (with exceptions)</li> <li>■ Guide is closed-end. (with relief)</li> <li>■ The punch overall length is <math>2\text{mm}</math> shorter than the standard length.</li> <li>■ The die cutting edge length is <math>1\text{mm}</math>.</li> <li>■ It is designed depending on material thickness.</li> </ul>	It is effective when the cutting edge dimension is smaller than the guaranteed punch diameter. <ul style="list-style-type: none"> <li>■ Effective cutting edge length = material thickness + <math>4\text{mm}</math> (with exceptions)</li> <li>■ It is designed depending on material thickness.</li> <li>■ It is not recommended when the material thickness is less than <math>0.6\text{mm}</math> because it may be possible that the sheet metal is pulled in between the cutting edge and the guide.</li> </ul>

We can produce punches of special specifications which are effective to prevent the punch body from moving by making the guide clearance narrow and embracing the cutting edge, increase the punch strength by eliminating the part of the cutting edge where can be reground and making the punch length shorter, or the like.

\* "the punch taking countermeasure against the breakage of the cutting edge" is made to order. Please inquire us processing conditions (material thickness, material, or the like).

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