

With the greatest technology we attain,
With the best quality we achieve,
MTL supports your manufacturing.



Questions & Answers

Q : The punch in our upward burring tool became defective earlier than expected. Why?

A : There are three possible reasons as shown below.

1. The pre-punching size is too large.

If a prehole is too large, the formed edge will not stretch enough to obtain a required extrusion. A smaller extrusion tends to capture the piercing punch. It is very probable a worksheet traverses while the extrusion holding the punch.

→ Confirm if the prepunch size is correct. List of prehole sizes for our standard tools (M3, M4, M5, M6) is found in TOOLING MANUAL. For customized tools, the size is found in the assembly drawing which we sent with the product.

2. The tool station is too small for stainless steel.

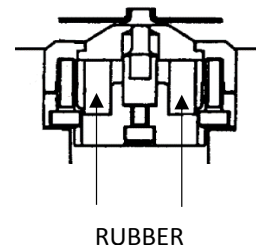
Compared to other materials in the same thickness, stainless steel holds the punch more strongly. So MTL proposes larger stations that could strip a sheet off the piercing punch more powerfully.

→ Try a larger tool to ensure a sufficient stripping force.

3. The rubber is not functional anymore.

Stripping force is largely contributed by the rubber, which sits in the assembly surrounding the piercing punch. If the rubber loses elasticity, the tool fails to strip the worksheet off the punch.

→ The rubber is consumable. Replace with a new one constantly to protect your punches.



Another solution - coating!

Apply TICN Coating to the piercing punch.

The friction will drastically reduce between the punch and an extrusion.

The coat is also effective to prevent build-up edge over the punching surface.

Apply TIC Coating to the stripper.

The slippery surface will help a smooth traverse of the worksheet and prevent scratching.

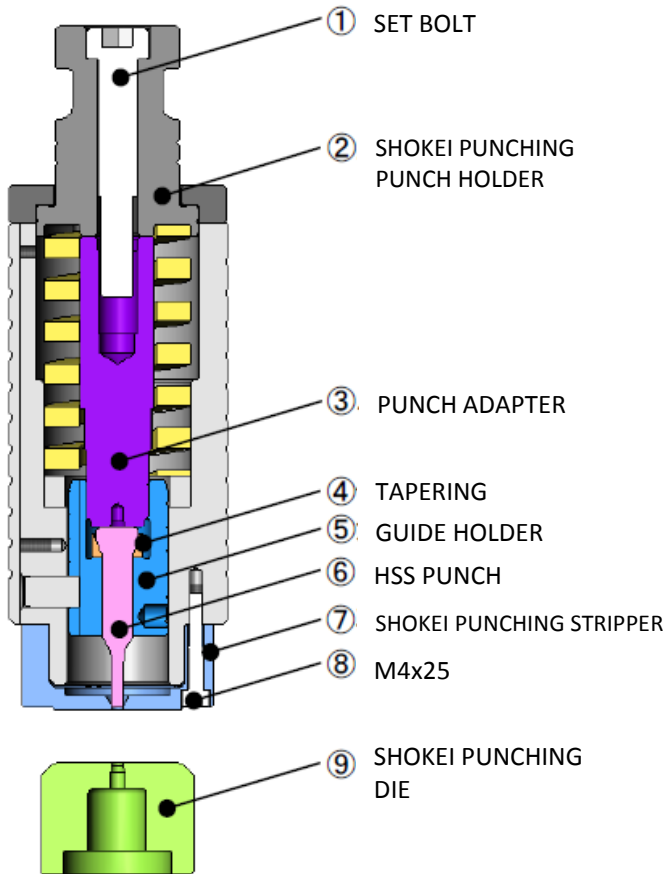
Coating is a good solution to keep your metal sheet a better quality.

Have you been in trouble with creation of a burring extrusion in a thick sheet or prepunching for flat tapping?
 Have you been bothered by an early damage of punches in your hybrid system?

Try this - SHOKEI PUNCHING ASSEMBLY

The SHOKEI PUNCHING assembly makes possible a stable operation of small hole piercing, which has broken many punches. The tool is particularly good at creation of smaller holes than sheet thickness.

Structure



Capable

A hole can be as small as..

Sheet thickness x 0.6

For soft steel, AL
 Allowable: 1.6 - 6.0

Sheet thickness x 1.1

For stainless steel
 Allowable: 2.2 - 6.0

Recommended clearance:

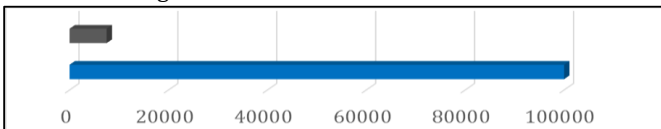
20%-25% to thickness
 For soft steel, AL

25%-30% to thickness
 For stainless steel

* Clearance shall be 0.5 or larger.

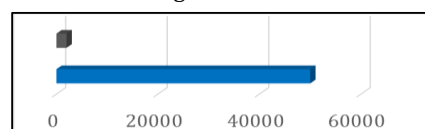
Endurance

Φ3.6 +CL0.7 against SPHC t6.0



Continuous operation of over 100,000 hits is possible.

Φ3.3 +CL0.7 against SUS304 t3.0



Continuous operation of over 50,000 hits is possible.

** NOTE **

SHOKEI PUNCHING ASSEMBLY is not designed for nibbling but for solo punching.
 The punch cannot be sharpened. The die has a margin of 1.0mm for sharpener.
 For a longer service life, it is recommendable to use a lubricant oil and a felt to the tool.

MURATA TOOL, LTD.

Address 881-1 Ichihashi, Komono-cho, Minokamo-shi, Gifu 505-0056 JAPAN

TEL: +81-574-27-3000

FAX: +81-574-27-3535

EMAIL: mtl@muratec.co.jp

URL: <http://www.muratec.co.jp/tool/>

