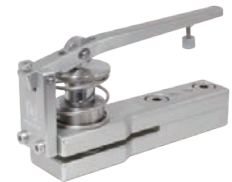


**Sales of 9,000 units worldwide**  
**Standard for precision**  
**punching that continues**  
**to support secondary battery**  
**development**

Instant delivery  
is possible!



# Handheld Electrode Punch

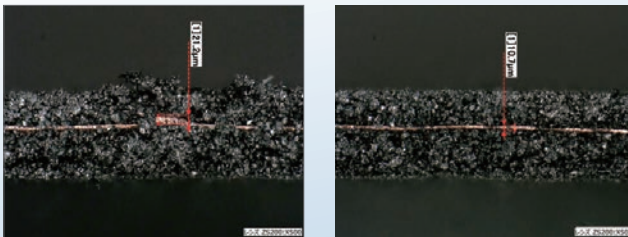
φ10,14,15,16,25 mm, etc  
 Regular sizes (\*) in stock can be  
 shipped immediately!

\* Commonly-used diameters for  
 battery development applications.  
 Please contact us for details.

Reasons to be chosen

## 1 Excellent sharpness—

Overwhelming quality due to extremely small clearance



Processed section of anode-electrode material [Total thickness:  
 175 μm, base material: Cu 10 μm]  
 (From a sample of Material Processing Test Report)

Materials actually used (partial)

Al, Cu, separator (PP, PE, etc.),  
 SUS (304, 316, etc.), Ni / Ti / Li  
 metals, various solid electrolytes

Reasons to be chosen

## 2 Excellent usability—

Ultimate compact design



Punching during visual check



Easy to operate even with gloves



Roll material can be processed  
without cutting out

(Long F100 mm type)

Reasons to be chosen

## 3 Compatible with all scenes

Punching shape and size can be ordered freely!



Punching shape	Size S	Size M	Size ML	Size L
Round (mm)	φ1.00 - 5.00	φ5.01 - 10.00	φ10.01 - 18.00	φ18.01 - 26.00
Square (mm)	1.00 - 4.00	4.01 - 8.00	8.01 - 13.00	13.01 - 22.00

\*Punching size can be specified in units of 0.01 mm.



Contents of delivery

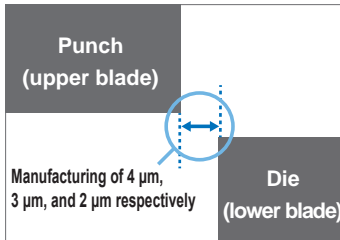
- Decorative box for storage/transport
- Maintenance kit
- Instructions manual
- Warranty card

# Electrode material precision punching tool: Decisive factor in processing accuracy

—The clearance between punch and die shall be selected in units of 1 μm.

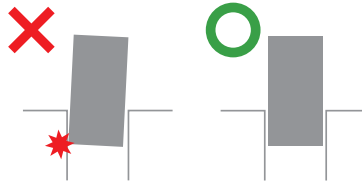
## Point 1 Optimum clearance can be selected.

The optimum clearance between punch and die shall be selected in units of 1 μm for the material and thickness of the material to be punched and the quality required. This is the decisive factor in obtaining a good processing result.

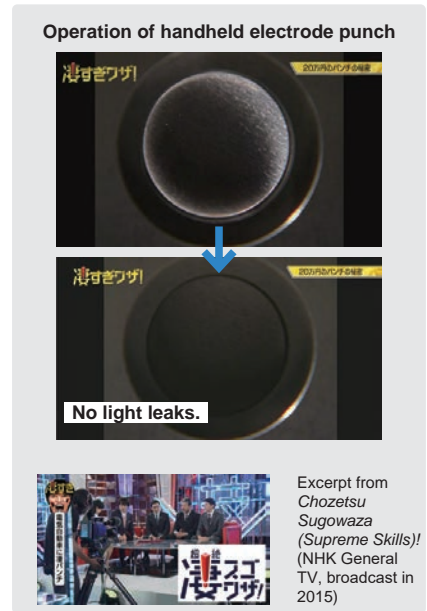


## Point 2 Operation at the true center without deviation

Accuracy of operation in which the punch strokes at true center to bottom dead center while maintaining the specified clearance is absolutely essential.



The operational accuracy of our handheld punches can usually be obtained only with a stationary jig with a four-post structure.



## Nogami's core technologies

—Secrets of overwhelming quality difference

### Core technology 1 Squareness / parallelism of 5/10,000 mm

Part precision finished with ultra-precision grinding processing technology since our foundation realizes quality of another dimension with Nogami products.



Providing reference blocks to flat-surface grinding machine manufacturers

### Core technology 2 Assembly that freely adjusts 1 μm

Assembly technology with an accumulated error of 1 μm or less, which cannot be currently achieved even with the world's most accurate processing machines. It is the key to manufacturing precision and long-life jigs.



## Customer's voice

—Unchanged support from domestic and overseas battery developers and researchers

### “Orderly edge, section, ...”

—A battery developer, French research institute

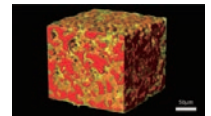


“Uniform samples can be obtained stably with a simple operation. I want to recommend this product to anyone who needs reliable and precise samples.”

### “Excellent quality”

—Assistant Professor Kodama, Hirai Sasabe Laboratory, Tokyo Institute of Technology

“Even with a very brittle solid electrolyte with a very small diameter of 0.5 mm and no binder, excellent quality without burrs or chips can be obtained.”



Extremely clear CT image

Since high-quality samples can now be obtained stably, our experimental accuracy and throughput have been greatly improved.”

“The sharpness lasts a long time. It is easy to handle. I've been using it since I was a student.”

—Battery developer, a major Japanese automobile manufacturer

Can this material be punched?

Thorough support from reliable specification selection to delivery

Which specification should I choose?

I want a quotation right away!

I want to try it out on the actual machine!

I want our product to be verified by the Nogami Lab!

First, check your desired conditions on the “Check sheet: Finalize the specifications for your handheld electrode punch”!

- ✓ In order to select the correct specifications, the necessary information can be checked without omission.
- ✓ Consultancy by e-mail or fax is available regarding product specifications to be selected, special requirements, pretest required / unnecessary, etc.