Small Volume Plating System & Handheld Substrate Holder

nb technologies
consulting engineers

For optimizing electroplating solutions NBT has designed a testing cell for volumes less than three liters. Working with such small quantities during the development process of electrolytes or etchants allows the variation of different compounds without wasting large amounts of material.

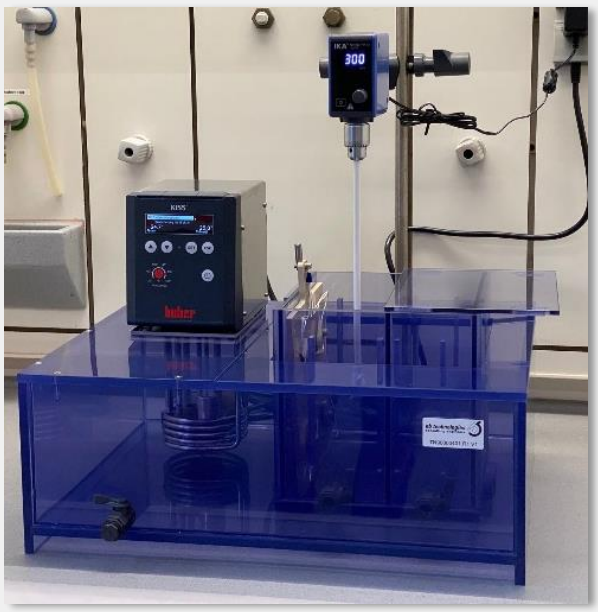
The cell is made of transparent PVC and resistant to various chemicals. It has two chambers each with a separate drain tap.

If temperature controlling (up to 60°C) is required, the cell fits in a special heating bath.

The substrate holder made of PEEK can be construed for different wafer sizes (e. g. 100 mm SEMI standard). The backside of the wafer stays dry using closed-cell EPDM foam. The edge exclusion on the front side is less than 5 mm. There are options for front side and backside contacts.

For electroplating applications insoluble anodes (platinized titanium) or specific soluble anodes (e. g. Ni, Cu, Sn) can be used.

It is possible to integrate a high-power LED field with light control unit for light induced plating (LIP).



Applications

- Wet chemical processes e. g. etching
- Electroplating
- Anodization
- Porosification of silicon

Main benefits

- Single side/backside dry processing
- Substrate holders for changing the wafer size or contacting configuration
- Light induced or supported processes

October 2025

Headquarters Bremen

NB Technologies GmbH
Fahrenheitstr. 1
D-28359 Bremen
Germany

Phone: +49 (0) 421 2445810
Mail: info@nb-technologies.de

Site Cologne / Marsdorf

NB Technologies GmbH
Rheinische-Allee 3c
D-50858 Köln
Germany

Phone: +49 (0) 2234 20035 00

nb-technologies.de

Small Volume Plating System & Handheld Substrate Holder

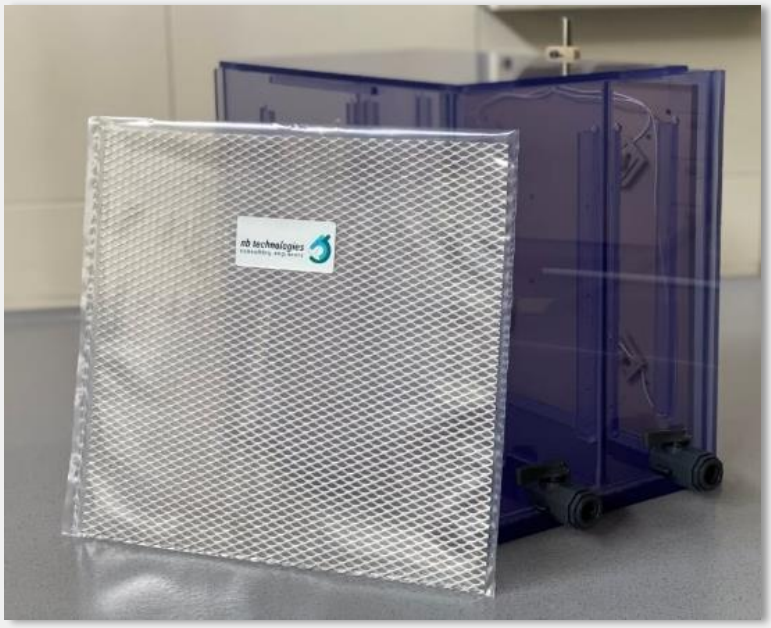
nb technologies
consulting engineers

Small volume test cells

For substrates up to 200 mm
Outer dimensions (incl. valves and fittings):
- w 240 mm x l 295 mm x h 210 mm

Weight: 2.2 kg
Volume:
- Tank 1: max 4.4 l, for operation 3.4 l
- Tank 2: max 3.4 l, for operation 2.6 l

Material: transparent PVC; PVC valves

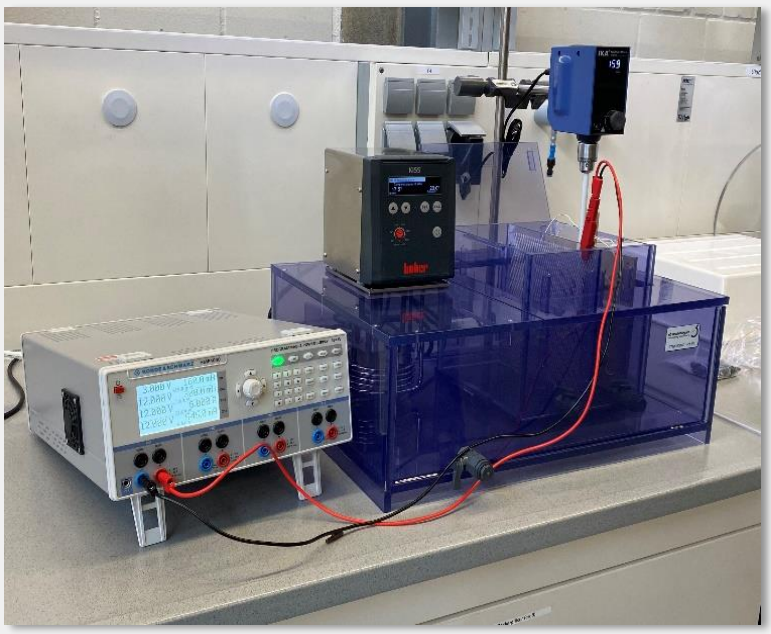


Heating bath

Temperature control:	up to 60°C
Permissible ambient temp.:	5°...40°C
Power supply:	230V~ 50/60Hz
Current max.:	10 A
Heating capacity:	2 kW

Recommended heating fluid: 15 l Water
Outer dimensions (incl. valves and fittings):
- w 520 mm x l 450 mm x h 350 mm

Materials: transparent PVC; PVC valves; stainless steel heating tubes



Handheld substrate holders

For substrates up to 200 mm
Outer dimensions (incl. handle and screws):
- w 193 mm x l 243 mm x h 24 mm

Weight: 470 g
Wafer geometry:
- 100 mm, 150 mm, 200 mm SEMI
- 125 mm PV square
- 156 mm PV square
- Or custom design

Materials: PEEK; gold contacts

October 2025

Headquarters Bremen

NB Technologies GmbH
Fahrenheitstr. 1
D-28359 Bremen
Germany

Phone: +49 (0) 421 2445810
Mail: info@nb-technologies.de

Site Cologne / Marsdorf

NB Technologies GmbH
Rheinische-Allee 3c
D-50858 Köln
Germany

Phone: +49 (0) 2234 20035 00

nb-technologies.de