Technologies
for microsystems
Process units
Wafer holder systems

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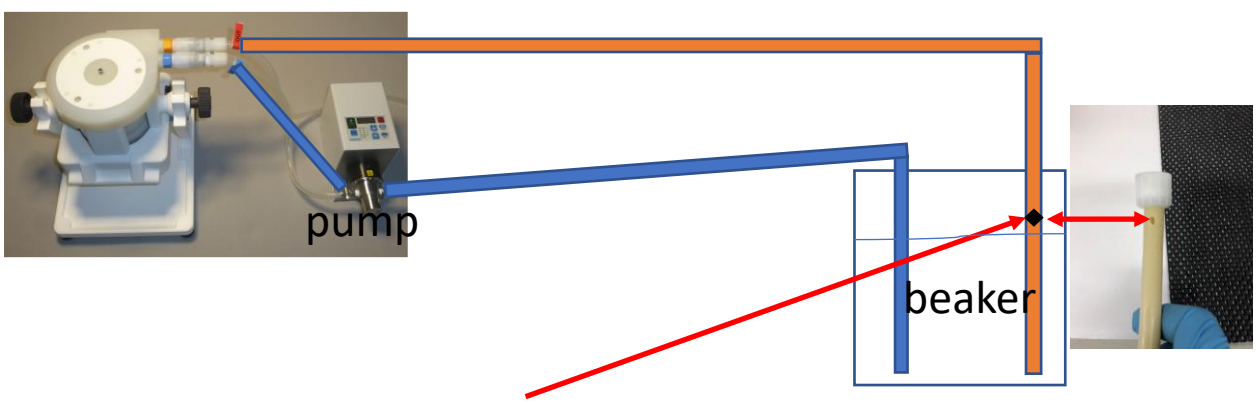
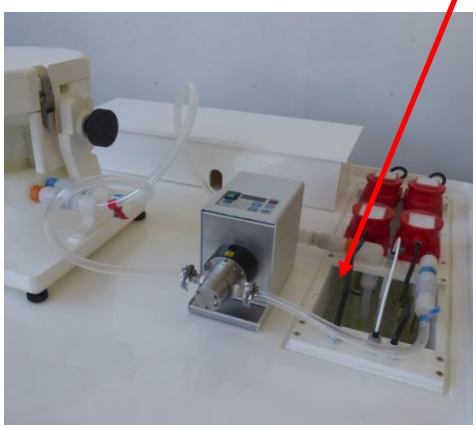
Operating instruction Silicet Plating Unit

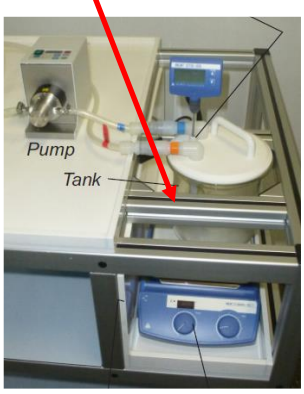
1. Set up the unit for electroplating

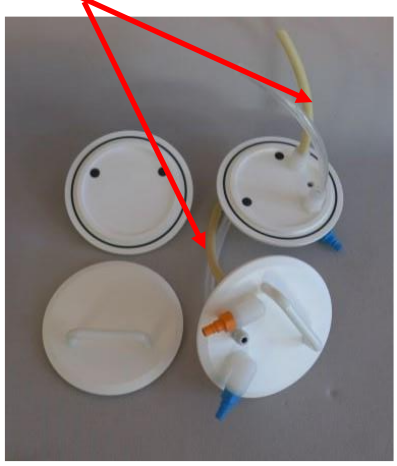
Unpack the package:
1 pcs. plating unit
1 pcs. wafer holder
2 pcs. tubes with quik connection to the unit
1 pcs. tube pump to beaker/tank
1 pcs. universal tool
1 pcs. imbus tool for distance adjustment
1 pcs. entclipser
We recommend to test the operation with DI water firstly.



Solution flow







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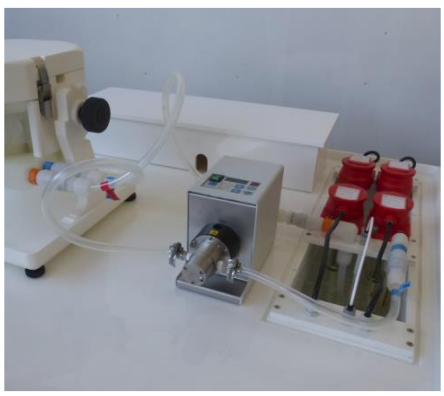
Operating instruction Silicet Plating Unit
2. Electroplating of wafers

Filling of the electrolyte in the beaker or tank
Set up temperature of the plating electrolyte, if required

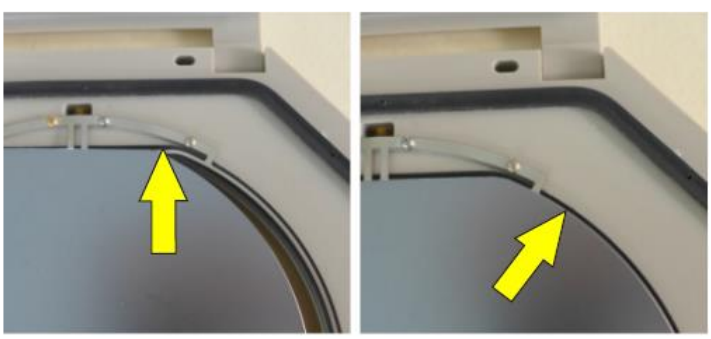
Ensure all couplings and tubing are connected tightly

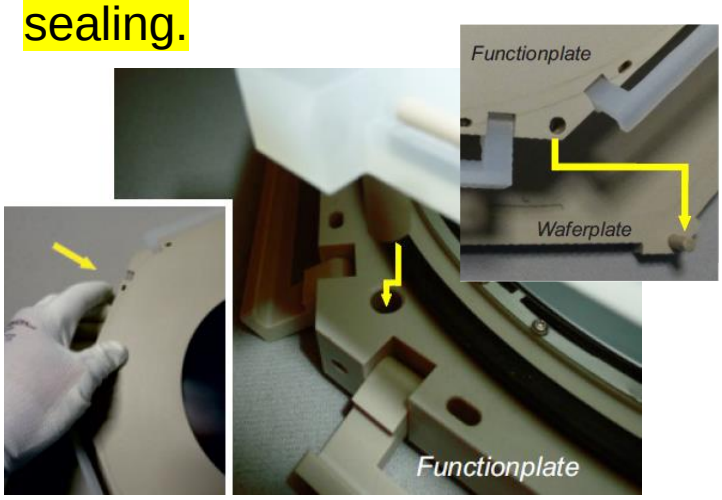


a) Prepare the wafer
- dry, after plasma clean
- wet, after acid dip and DI water rinse

Please ensure the sealing lips are clean before loading the wafer.

Place the wafer on the current ring of the function plate. The wafer position is essential for perfect electrical contact and sealing.





Combine the wafer plate with the function plate by use the position pins to fit in the position holes of the function plate. Press both together.

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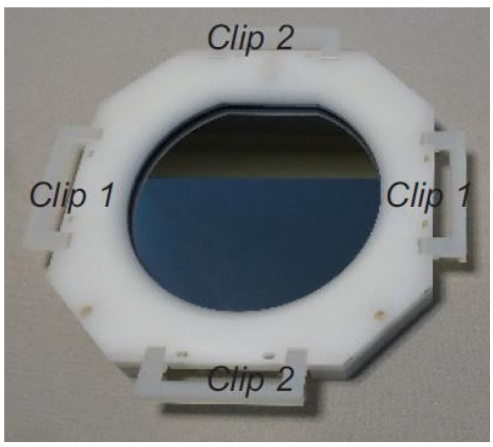
2. Electroplating of wafers

a) Prepare the wafer

Close opposite clips until you can hear a click and the clip is tightly closed.



The wafer is ready for processing, either direct to the plating unit or via acid pre dip and DI water rinse.

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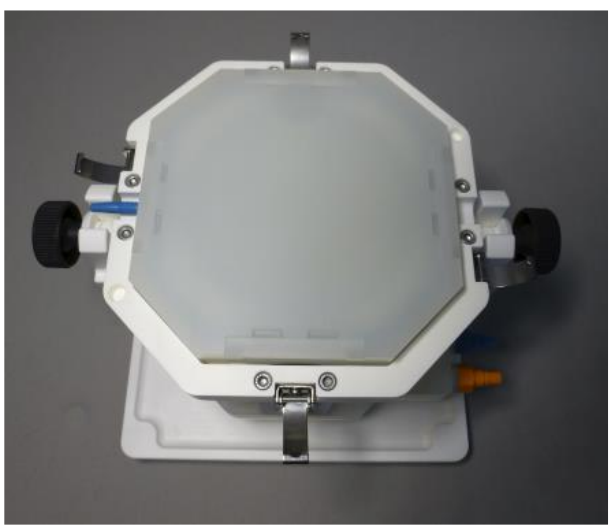
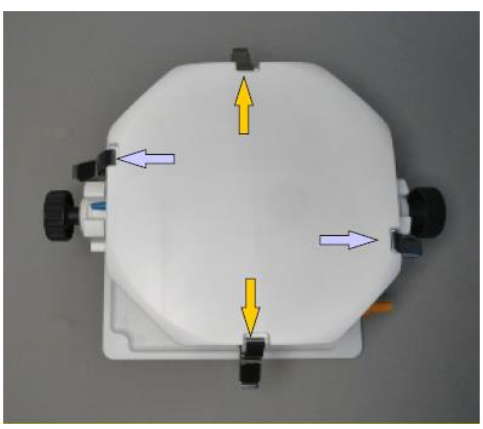
b) add the cassette with wafer in the unit

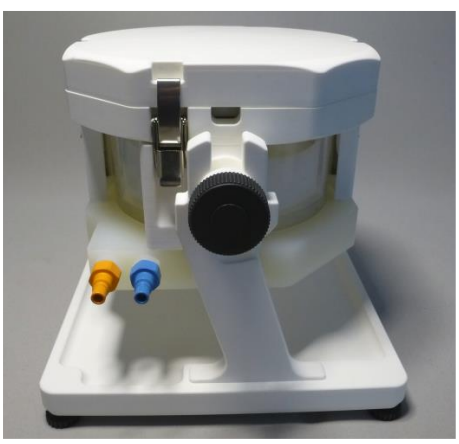
Open the unit cover, if shiedling plate required add the shiedling plate, afterwards the cassette in unit. The cassette out of center could cause leaking.



Close the cover, the position pin‘s of the cover fit in the unit top



Close the fasteners, opposite at the same time, to prevent tilt of the cassette .



Close or open the fasteners to release the cover in position 0° only.

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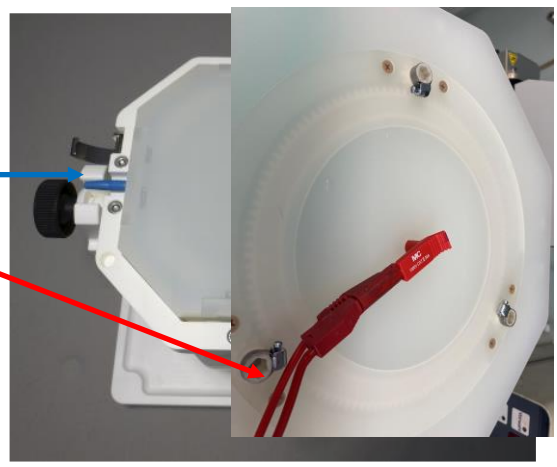
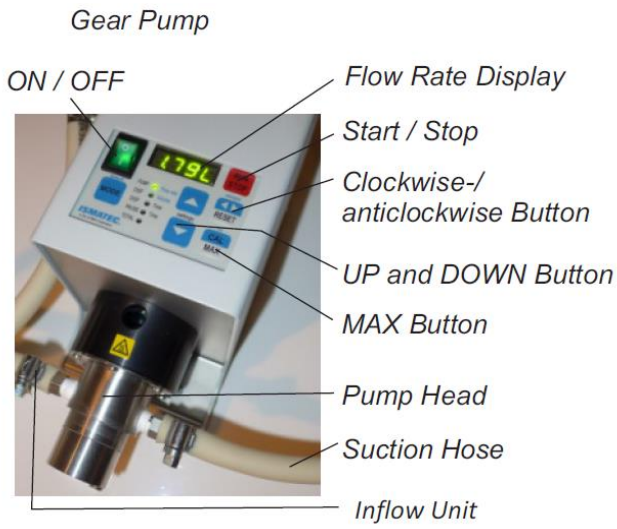
c) Start plating

Connect the cathode and anode cable to the rectifier



Change to 120° position, In this position the outlet is on top and air released quickest

Switch on the pump in forward mode, may increase speed to have a fast filling.



Check in the glass window if all air is released, you can move the vessel to check.

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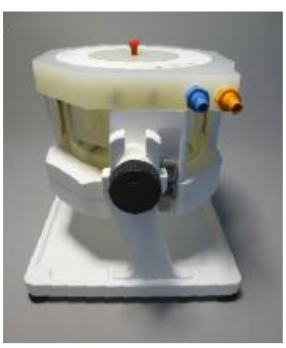
c) Start plating

Switch on the rectifier for electroplating

Position for plating

120°, standard
Fill electrolyte

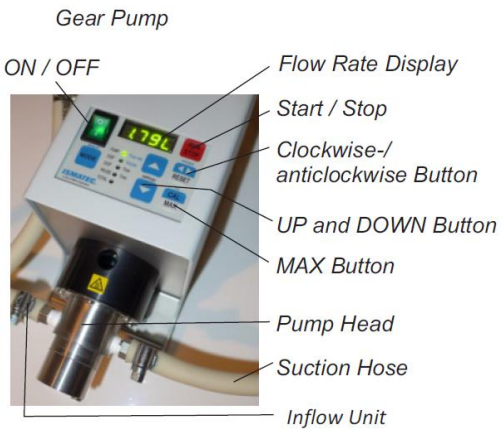


180°, for low efficiency plating process

0°, load/unload
Plating with very Low current, unfill

d) Stop plating

Switch off the rectifier, change to 0° position. Change pump to reverse mode. The inlet is from the orange tube now, the hole in the tube suck air and the unit get empty. It is not necessary to empty the complete unit, if air on the glass tube is visible the cassette with wafer can be removed already.
Also the next wafer could start quicker.



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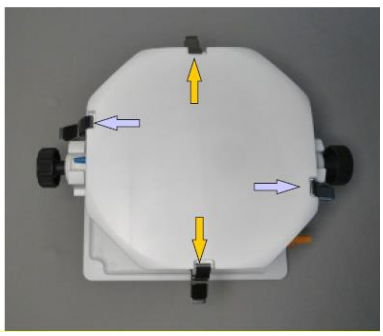
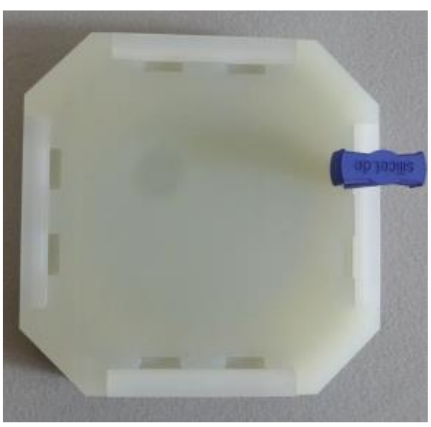
d) remove the cassete with wafer from the unit

Remove the cathode cable, open fastener and remove the unit cover, remove the cassette



Rinse wafer and the front of the cassette. The wafer and holder could be dried already

e) remove the wafer from the cassete



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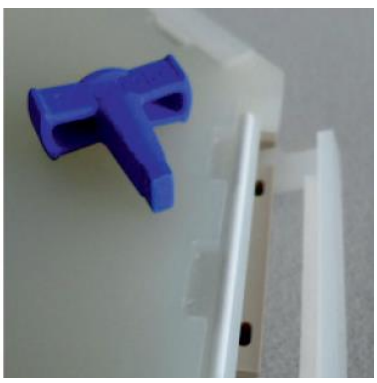
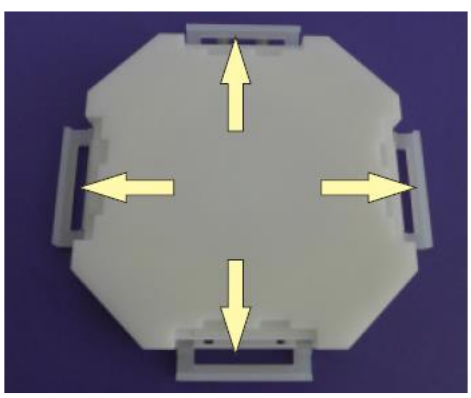
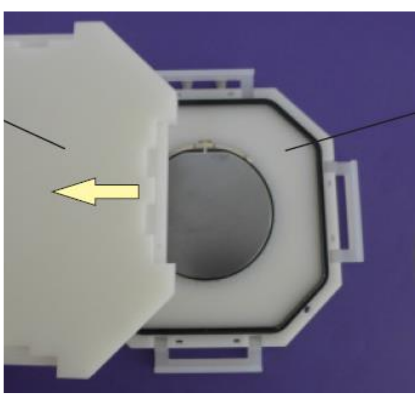
e) remove the wafer from the cassette

Use the Siilicet opener to open the clips, like closing use open opposite clips first.







Remove the wafer from the cassete, if there was no drying process after rinse the wafer should be dried now.