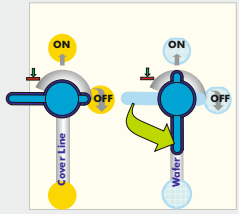


# VACUUM-BOX


## OPERATING INSTRUCTION -ABSTRACT-

**ATTENTION!**  
ONLY OPERATE WITH  
CONNECTED RETURN LINE  
RETURN LINE MUST LEAD  
BACK TO PROCESS BASIN

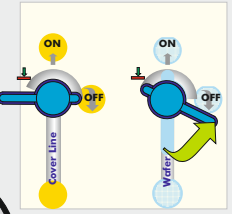

**fig. 1a**



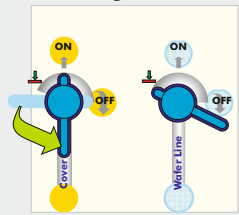
**Wafer ON**

- apply the wafer with light pressure (use the silicet press-assistance)
- put the selector switch downward, (pressure switch mode) 
- put the wafer valve switch into the shown position (fig.1a)
- the pump and the orange LED is switched off
- the wafer is sucked in
- put the wafer valve into the shown position (fig.1b)

**fig. 1b**

**fig. 2a**

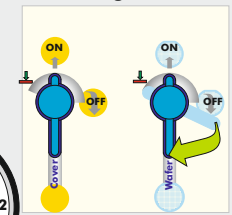



**Cover ON**

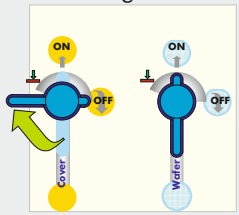
- apply the cover with light pressure
- put the cover valve into the shown position
- the pump and the orange LED is switched off
- the cover is sucked in
- put the wafer valve into the shown position (fig. 2b)

**the Wafer Holder is ready for operation**

**fig. 2b**

**fig. 3a**



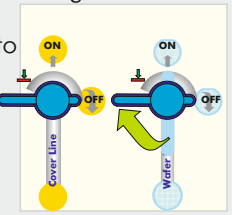
**Cover OFF**

- put the cover valve into the shown position
- the cover is released
- remove the cover

**Wafer OFF**

- put the wafer valve into the shown position
- the wafer is released
- remove the wafer


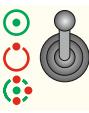
**fig. 3b**




In case of Wafer Holder BASIC application, please proceed according to fig. 1a and fig. 3b

### Cleaning:

If process medium should have been sucked in, respective pumped during the process, the Wafer Holder and the Vacuum Box has to be cleaned as follows:

1. Turn the wafer and cover valve into the shown position 
2. Put the return line of the Vacuum-Box into the rinse basin. Attend that liquid, respectively the nitrogen are riskless drained. The connection to the rinse basin has to be kept until the rinse process is finished.
3. Put the Wafer Holder without wafer and cover, approx 2 cm below the screw connections of the tubes into the rinse basin.
4. Turn the selector switch upward into the shown position. Continuous operation mode. 
5. Rinse with DI-water approx 3 - 4 minutes.
6. Pick up the Wafer Holder out of the rinse basin. Dry running approx. 1 minute.

7. Uncouple the couplings from the Vacuum-Box.
9. Deposit the Wafer Holder.
8. Connect the delivered cleaning connection (Y-connector) with the blue and yellow coupling of the Vacuum-Box.
9. Pick up the tube end out of the rinse basin and connect the tube end of the cleaning connection with the nitrogen link of your plant system. Max. flow pressure: 0,5 bar (7,25 psi)!
10. Dry with nitrogen approx 2 - 3 minutes until yellow LED lapsed. Attend that the nitrogen is riskless drained!
11. Turn the selector switch into the central position. Pump OFF 
12. Uncouple the cleaning connection at the Vacuum-Box.

## OPERATING INSTRUCTIONS for Wafer Holder PLUS E with a Vacuum-Box

**For the operation of the Vacuum-Box please read the appropriate operating instruction!**

**Application:** electrochemical etching

### **Description:**

- The Wafer Holder is equipped with four Norprene/Viton connecting tubes (dimension 6,4x3,2 mm).
- The vacuum tube with the blue coupling is connected with the space between the wafer and the sealing lip; the vacuum tube with the yellow coupling is connected with the space between the cover and the vacuum sealing lip.
- The third tube (without coupling) is connected with the protected area behind the wafer and cares for the necessary pressure compensation. In every case this connection tube has to be held open to guarantee a connection to the atmospheric pressure.
- The fourth tube conducts the power supply cable of the contact pins

### **Wafer:**

*Before first use, the positioning pins (PTFE-pins) possibly have to be adapted to the scope of the wafer. Adapt the notches of the pins carefully with a sharp blade to the wafer scope*

- Do not use wafers which show markings, qualifications or similar unevenness within the contact-area of the vacuum-sealing lips. In case of non-observance, leakages can occur during the process.

### **Cleaning:**

- Clean the vacuum sealing lips and the cover with detergent and DI water. Don't use dissolver!

### **Wafer ON:**

- Turn up the selector switch (pressure switch mode).
- Center up the wafer on the vacuum sealing lips. Use the positioning pins. Press the wafer evenly within the range of the sealing lips. The wafer must cover the sealing lip completely.
- Turn the wafer valve of the Vacuum-Box into the shown position (fig. 1a) "Wafer ON".  
The wafer is sucked in. The vacuum is developed. The pump and the orange LED is switched off.
- Turn the wafer valve into the shown position (fig. 1b)

### **Cover ON:**

- Apply the cover loosely on the sealing lip and shift it into the notch of the upper positioning pins.
- Press the cover gently concentric. Don't deform the sealing lip during positioning the cover!
- Turn the cover valve of the Vacuum-Box into the shown position (fig. 2a) "Cover ON".  
The cover is sucked in.
- Turn the wafer valve into the shown position (fig. 2b). The Wafer Holder is ready for operation.

### **Cover OFF:**

- Turn the cover valve of the Vacuum-Box into the shown position (fig. 3a) "Cover OFF".  
The cover is released. Remove the cover.

### **Wafer OFF:**

- Turn the wafer valve of the Vacuum-Box into the shown position (fig. 3b) "Wafer OFF"
- The wafer is released.
- Remove the wafer with our vacuum tool, with a vacuum wand or usual tweezers.

**For easy handling we recommend our Silicet Vacuum Tool and our Silicet Press Assistance**