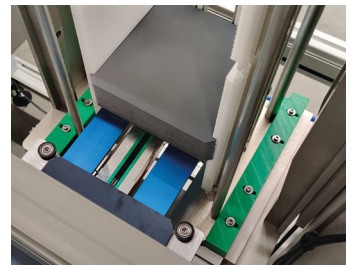
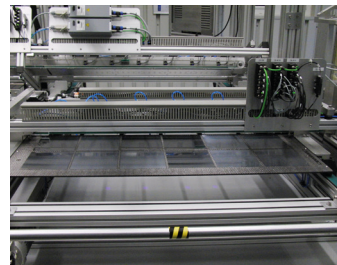
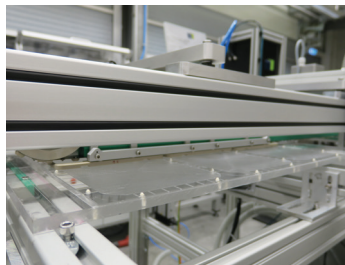
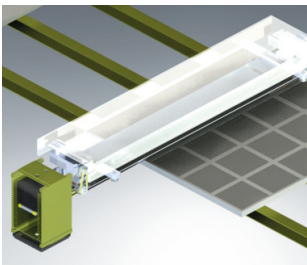


# Levi-Loader



## CONTACTLESS PICK & PLACE OF SOLAR WAFERS

With the Levi-Loader, several solar wafers can be picked up and transported simultaneously without any contact. Precise positioning of wafers on the matrix tray by linear motors or belts with pins is possible as well.



### Significantly reduced breakage rate of solar wafers

When gripping the wafers from above, a combination of vacuum and ultrasound is used. While vacuum provides an attracting effect on the wafers, the repulsive force of ultrasound keeps the distance between the Levi-Loader and its workpiece.

This eliminates the possibility of damage to the sensitive solar wafers in form of micro-scratches, micro-cracks or particle contamination. Therefore, the breakage rate of solar wafers can be significantly reduced by non-contact handling. The number of wafers being handled at the same time is variable and individually adjustable which allows very high throughput rates to be achieved.

### Features of the Levi-Loader:

- Non-contact loading and unloading
- Simultaneous handling of multiple solar wafers
- Very high throughputs feasible
- No contamination and no micro-cracks
- Precise positioning of the wafers on the tray
- Individually adaptable

### Applications



### Contact and Sales:

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under <https://www.zs-handling.de>



Innovative Technology:

# Ultrasonic Suspension



Our handling systems use the ultrasonic suspension technology to apply the handling forces to the workpiece and can be used in all atmospheric processes.

Vibration generators with separate power electronics generate a compressed air film with repulsive forces. Process combinations enable the generation of attracting forces.

The surrounding air or process gas is compressed by the ultrasound. This allows components to be lifted and guided along defined paths without contact. In combination with negative pressure, workpieces can also be gripped on the upper side - without touching them.

The ultrasonic suspension technology requires less energy than other non-contact handling technologies.

## **We at ZS-Handling have a mission:**

*to enable our customers to handle sensitive products in production and for testing purposes without contact.*

## **We make parts float.**

*Since 2006, we have been developing, producing and selling components and special machines for users in Europe, North America and Asia.*

## **Our Products**

LeviSolar-Gripper  
 LeviWafer-Gripper  
 MicroLevi-Gripper  
 ManuLevi-Gripper  
 OptoMicroMed-Gripper  
 RobotOverhead-Gripper  
 UltraLevi-Chuck  
 UltraLevi-Desk  
 LinearLevi-Conveyor  
 LinearOverhead-Transport-System  
 LinearLevi-Inspektions-Module  
 Modulares Waferhandling-System  
 Levi-Roll  
 Levi-Loader

**zs-handling.com**

## **Applications**



- Battery and fuel cell
- Foil
- Glass
- Lenses
- Medical Technology
- Packaging
- Wafers & Chips

## **Processes**



- Loading and unloading
- Conveying
- Gripping
- Inspection
- Sorting
- Separating