



ZS-Handling

Innovation.
Made in Regensburg.














„NUMBER ONE“ IN CONTACTLESS ULTRASOUND HANDLING



PRODUCT OVERVIEW 2021

Processes

Applications

														
Loading and unloading														
Conveying														
Gripping														
Inspection														
Sorting														
Separating														
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Our range of services / content

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Preface

We are pleased to be able to offer you an extended range of products in the latest edition of our product overview. We are sure that we also have the right solution for your task. If you cannot use one of our standard products, please contact us and we will find a way to realize your ideas.

Take advantage of our competence, that is characterized by qualified employees, a distinctive service concept and our unique technology.

Your ZS-Handling Team



Who we are

ZS-Handling GmbH is a company founded in 2006 that develops systems and equipment for industrial handling technology based on ultrasonic air bearing technology. We offer products for non-contact gripping, conveying, loading and unloading, inspecting, sorting and separating of workpieces. Our application areas include films, glass, lenses, medical technology, packaging, wafers & chips, battery and fuel cells and many more.

We are internationally active and sell our contactless handling systems worldwide.

Development and production take place at the Regensburg site in Bavaria.

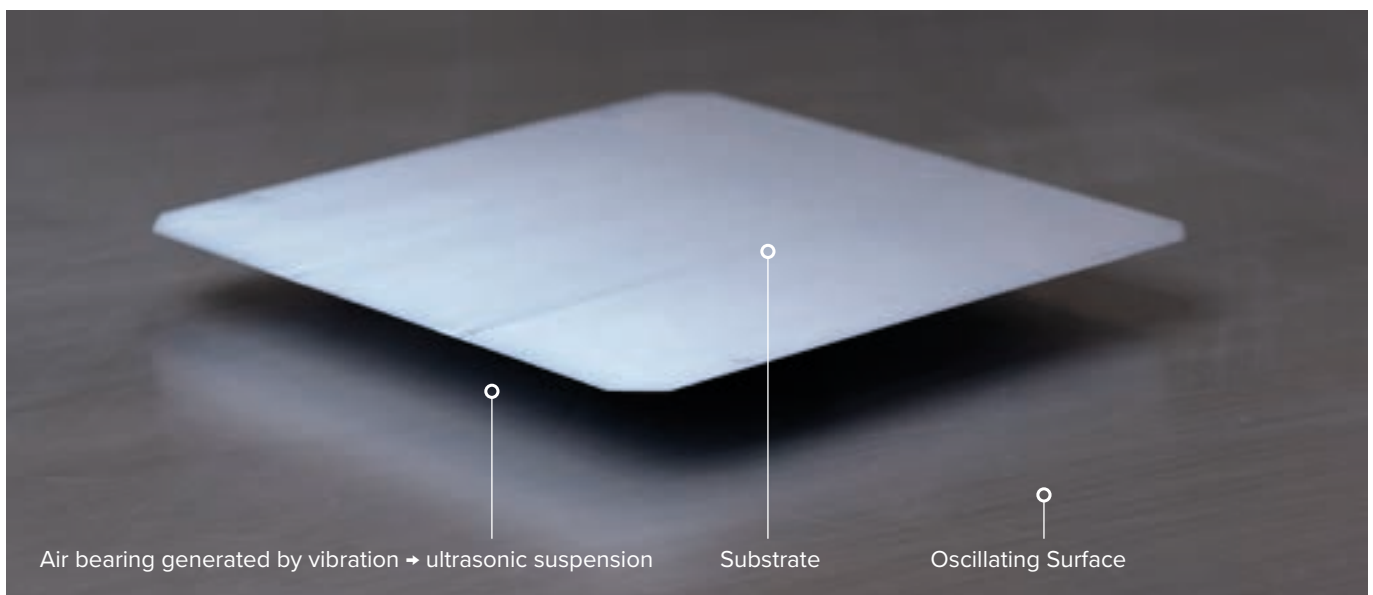
Our Technology

How does ultrasonic technology work?

The handling systems from ZS-Handling use an ultrasonic bearing that can be used in any atmospheric process. The so-called sonotrode is caused to vibrate and creates a supporting gas film (air or process gas). The substrate floats on the resulting gas film at a distance of approx. 50-150 μ m. By exploiting buoyancy forces through optional underpressure, substrates can also be handled from above.

Technical basics

The physics of the ultrasonic bearing results from fluid dynamics and not from acoustic principles. The pressure in the gap between the workpiece and the vibrating surface increases due to the cyclic compression and decompression of the thin gas film. The vibrations are not transmitted into the substrates and do not lead to any impact on the substrate material.



Advantages of ultrasonic bearing technology

- High clean room classes
- No damage, micro-scratches, micro-cracks or contamination
- No air turbulences
- High positioning accuracy and flatness, even with form-labile substrates
- No compressed air generation with complex and cost-intensive air treatment required
→ reduced energy consumption
- Easy cleaning and practically no maintenance

The development of our standard products is based on years of experience and proven techniques. Therefore, we offer products with defined sizes for special applications.

Due to the wide range of applications of ultrasonic technology, we can offer non-contact end-effectors and table systems for different materials and sizes. In combination with negative pressure, handling from above is possible even at high accelerations.

The ultrasound has a very uniform effect over the entire product surface, so that even substrates with a labile shape can be held.

The modular design of our products allows the combination with other products or the construction of complete cells and systems.

On request, we also develop products that differ from the standard specifications and thus offer a comprehensive range of special solutions as well.



LeviWafer-Gripper / Double-Paddle



LeviSolar-Gripper



MicroLevi-Gripper



OptoMicroMed-Gripper

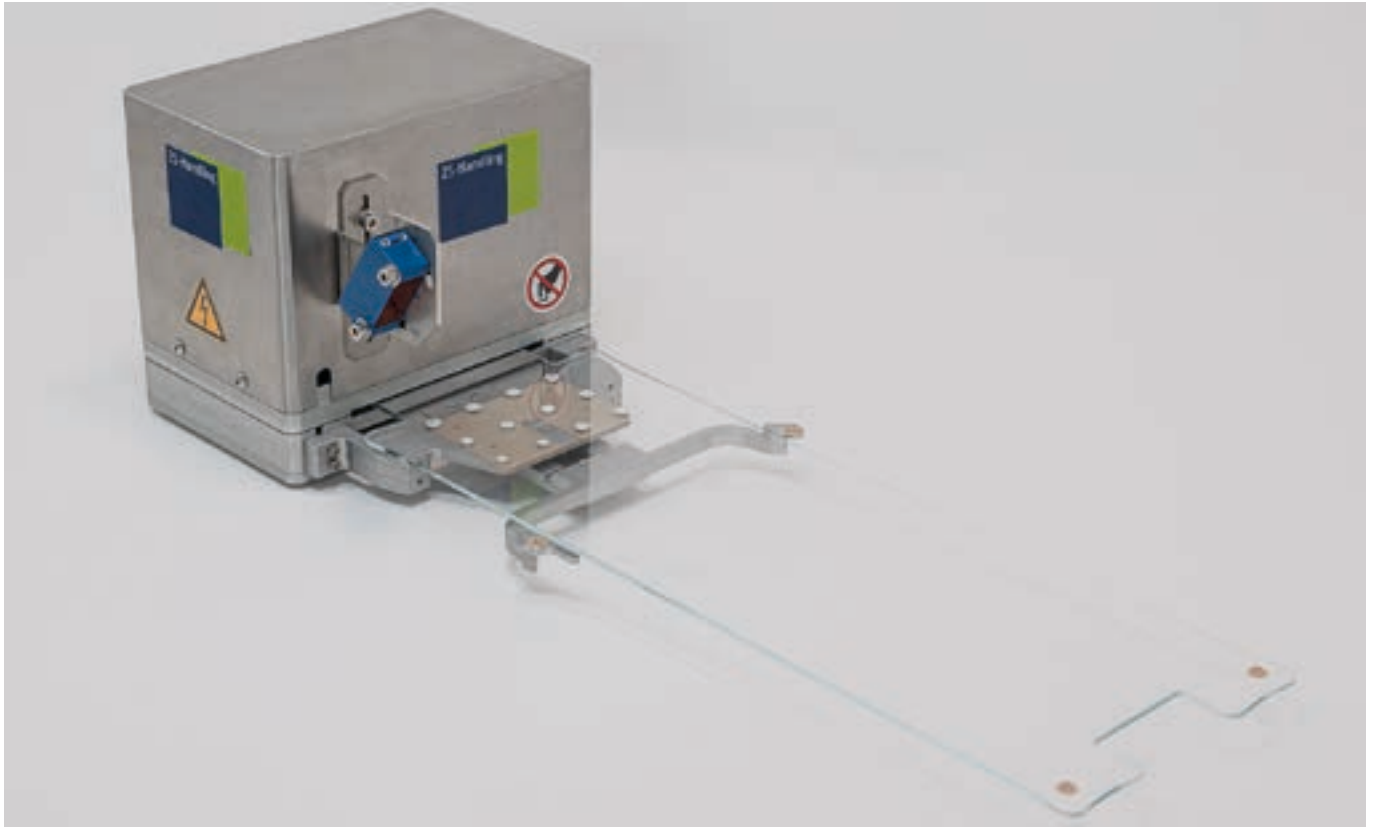


UltraLevi-Desk



Our standard products at a glance

LeviWafer-Gripper / Single-Paddle



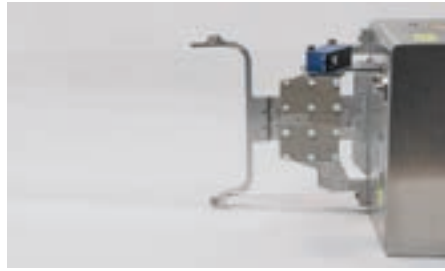
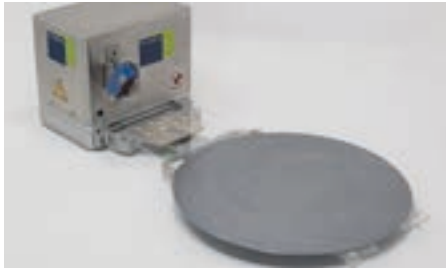
Short description

With the LeviWafer-Gripper, it is possible to lift and transport wafers without contact. In combination with the transport, loading and unloading of stacks and cassettes is also possible. The gripper uses ultrasonic bearing technology to keep the wafer at a distance, thus enabling contactless transport.

In addition to micro-scratches and -cracks, contamination by particles is avoided since no nozzles or air lines are necessary without compressed air.

Highlights

- Contactless pickup
- No micro-scratches, micro-cracks, or particles
- Suitable for standard cassettes
- Low energy consumption
- Customizable according to customer specifications



Gripper			
Variant:	Single-Paddle	Single-Paddle	Single-Paddle
Paddle ø [mm]:	150	200	300
Product name:	WG-BH-D0150-GI-PS	WG-BH-D0200-GI-PS	WG-BH-D0300-GI-PS
Order number:	15-122-000001	15-122-000002	15-122-000003

Technical data			
Dimensions (L x W x H)[mm]:	279/158/112	329/158/112	434/158/112
Paddle width / thickness [mm]:	69/3,6	69/3,6	85/5,3
Weight [g]:	~ 1.800	~ 1.830	~ 2.050
Supply voltage:	24 V DC	24 V DC	24 V DC
Side stops for centering:	2x fix, 2x adjustable (pneumatic)	2x fix, 2x adjustable (pneumatic)	2x fix, 2x adjustable (pneumatic)
Mechanical interface:	customizable adapter plate	customizable adapter plate	customizable adapter plate
Operating pressure:	-0,5 - 3 bar	-0,5 - 3 bar	-0,5 - 3 bar
Material Sonotrode:	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)
Power consumption:	< 50 W	< 50 W	< 50 W

Intended Use			
Substrates:	silicon, SiC, GaP, GaAs, glass, sapphire	silicon, SiC, GaP, GaAs, glass, sapphire	silicon, SiC, GaP, GaAs, glass, sapphire

Operating Conditions			
Temperature:	20 - 40 °C	20 - 40 °C	20 - 40 °C
Humidity:	20 - 50 %	20 - 50 %	20 - 50 %

Optional Accessory			
Service Module: 20-100-000009	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Special Versions			
With Vacuum (thickness of paddle approx. 10-15 mm)			
- for topside gripping			
- for higher flatness of thin wafers			
Other paddle shapes			

Processes



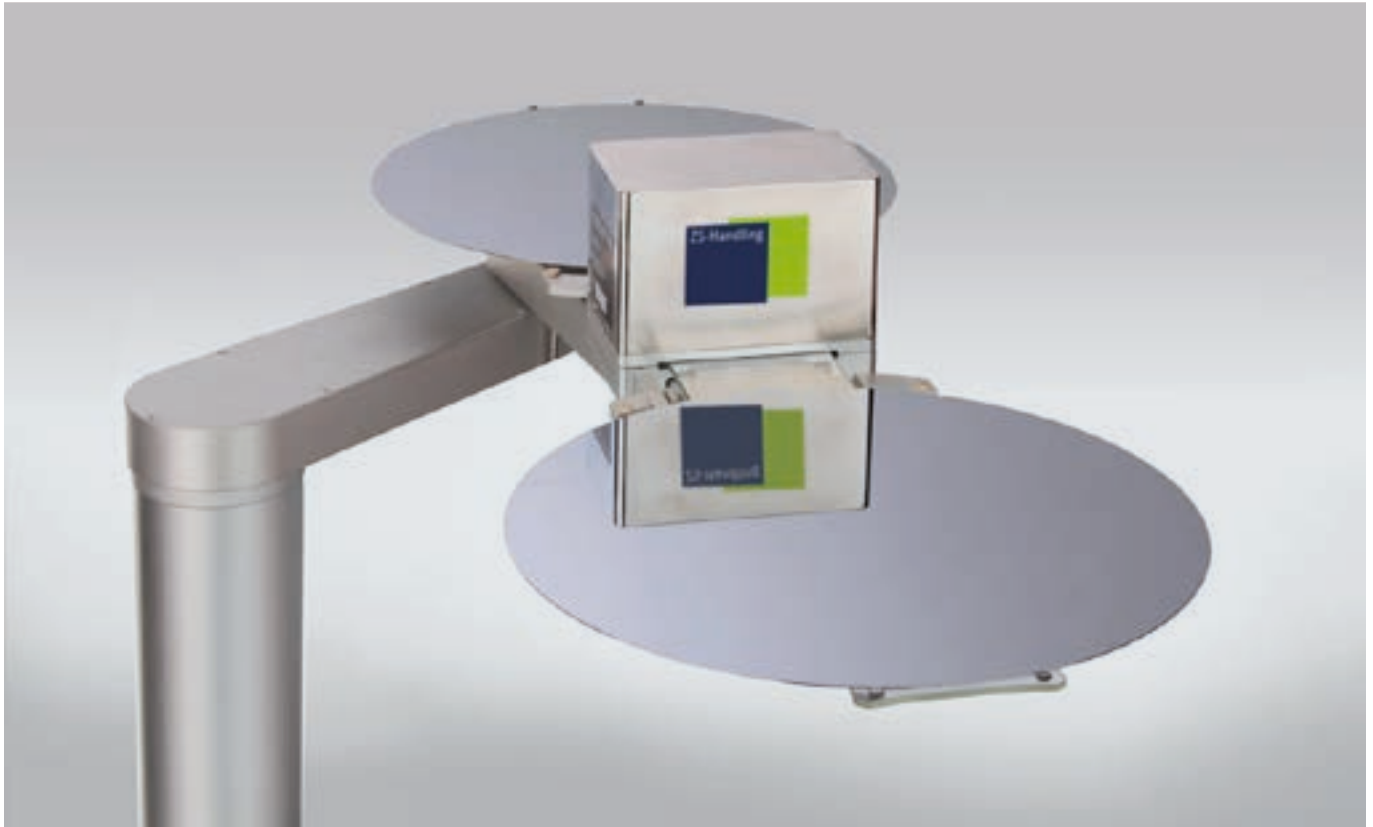
- Loading and unloading
- Gripping

Applications



- Wafers & Chips

LeviWafer-Gripper / Double-Paddle



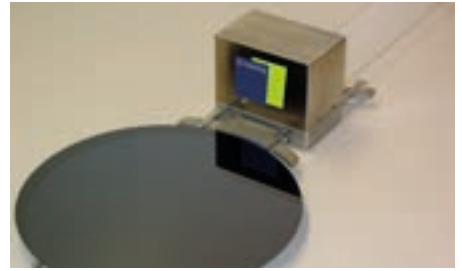
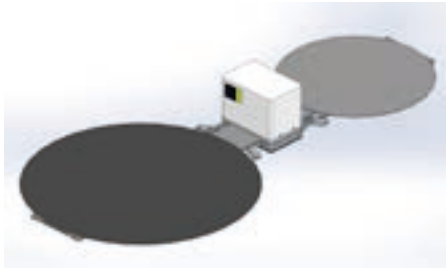
Short description

The surrounding air or process gas is compressed by the ultrasound which generates repulsive forces. The contactless gripper thus keeps the wafer at a distance and enables transport without any contact. This prevents damage such as micro-scratches and micro-cracks or contamination.

The LeviWafer-Gripper is available for different wafer sizes. The side stops serve as support to keep the wafer in position even during lateral acceleration.

Highlights

- Contactless pickup
- No micro-scratches, micro-cracks, or particles
- Suitable for standard cassettes
- Low energy consumption
- Customizable according to customer specifications



Gripper			
Variant:	Double-Paddle	Double-Paddle	Double-Paddle
Paddle ø [mm]:	150 / 150	200 / 200	300 / 300
Product name:	WG-BH-D0150D0150-GI-PS	WG-BH-D0200D0200-GI-PS	WG-BH-D0300D0300-GI-PS
Order number:	15-122-000004	15-122-000005	15-122-000006

Technical data			
Dimensions (L x W x H)[mm]:	474 / 158 / 112	574 / 158 / 112	784 / 158 / 112
Paddle width / thickness [mm]:	69 / 3,6	69 / 3,6	85 / 5,3
Weight [g]:	~ 2.000	~ 2.050	~ 2.400
Supply voltage:	24 V DC	24 V DC	24 V DC
Side stops for centering:	4x fix, 4x adjustable (pneumatic)	4x fix, 4x adjustable (pneumatic)	4x fix, 4x adjustable (pneumatic)
Mechanical interface:	customizable adapter plate	customizable adapter plate	customizable adapter plate
Operating pressure:	-0,5 - 3 bar	-0,5 - 3 bar	-0,5 - 3 bar
Material Sonotrode:	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)	glass (quartz glass, anodized aluminium, tefloncoated aluminium on request)
Power consumption:	< 50 W	< 50 W	< 50 W

Intended Use			
Substrates:	silicon, SiC, GaP, GaAs, glass, sapphire	silicon, SiC, GaP, GaAs, glass, sapphire	silicon, SiC, GaP, GaAs, glass, sapphire

Operating Conditions			
Temperature:	20 - 40 °C	20 - 40 °C	20 - 40 °C
Humidity:	20 - 50 %	20 - 50 %	20 - 50 %

Optional Accessories			
Service Module: 20-100-000009	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Special Versions

With Vacuum (thickness of paddle approx. 10-15 mm)

- for topside gripping
- for higher flatness of thin wafers

Other paddle shapes

Processes



- Loading and unloading
- Gripping

Applications



- Wafers & Chips

LeviSolar-Gripper



Short description

When gripping the wafer from the top, a combination of underpressure and ultrasound is used. The underpressure provides the attraction of the wafer, and the ultrasound with its repelling effect keeps the workpiece at distance. Thus, there are no contact points between the wafer and the gripper, and gentle handling is ensured which reduces the breakage rate.

The LeviSolar-Gripper is available for different wafer sizes. The side stops serve as support to keep the wafer in position even during lateral acceleration.

Highlights

- Contactless topside gripping
- No micro-scratches or micro-cracks
- No contamination from particles
- Low energy consumption



Gripper	
Variant:	Wafer M2 & M2+
Product name:	SG-TH-L0156W0156-Alan-PS
Order number:	15-111-000001

Technical data	
Dimensions (L x W x H)[mm]:	201 / 166 / 182
Weight [g]:	~ 2.900
Supply voltage:	24 V DC
Side stops for centering:	4x, adjustable for M2 / M2+ (pneumatic)
Mechanical interface:	4x M5 Screws
Operating pressure:	4 bar (max. 5 bar)
Material Sonotrode:	Aluminium anodized
Power consumption:	< 60 W

Intended Use	
Substrates:	Silicon wafer M2 / M2+ other sizes on request (156,75 ±0,25 mm / 157,35± 0,25 mm)
Clean room class:	ISO 6

Operating Conditions	
Temperature:	20 - 40°C
Humidity:	20 - 50 %

Optional Accessories	
Air-Sword:	16-210-000001
Service Module:	20-100-000009

Processes



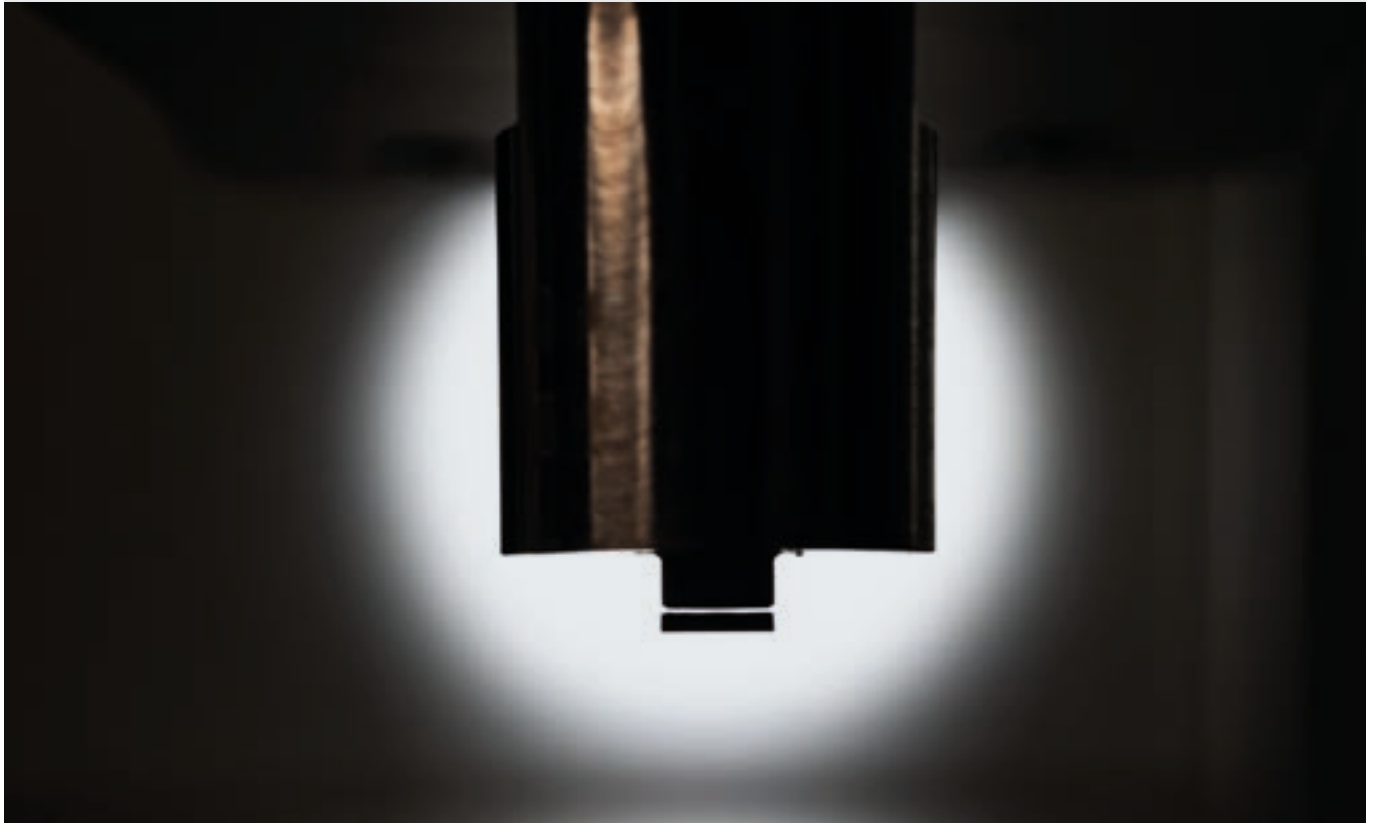
- Loading and unloading
- Gripping
- Sorting
- Separating

Applications



- Wafers & Chips

MicroLevi-Gripper



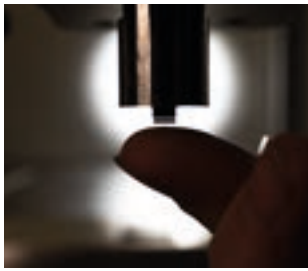
Short description

Our ultrasonic bearing technology enables sensitive substrates to be picked up and placed without touching the gripper. Through a combination of vacuum and ultrasound, attractive and repulsive forces act simultaneously on the workpiece and keep it at a distance even when gripping from above. As a result, no contamination or micro-scratches can occur on the small part.

The MicroLevi gripper can be combined with tips of different sizes. Due to the small dimensions, the self-centering of the workpieces is guaranteed, so that no supporting side stops are required, and high-precision positioning is possible. The gripper can be moved sideways and swiveled. In addition, slight misalignments of the component can be compensated for during pickup.

Highlights

- Contactless topside gripping
- Self-centering of the workpiece
- High-precision pick and place
- No damages or particles
- No air turbulence
- Low energy consumption



Gripper

Variant:	Gripper for small parts
Product name:	DG-TH-P100-PI-WS
Order number:	10-550-331200

Technical data

Dimensions (L x W x H)[mm]:	152 / 63 / 160
Weight [g]:	~ 600
Supply voltage:	24 V DC
Side stops for centering:	none – optionally purchaseable
Mechanical interface:	adjustable adapter plate
Operating pressure:	30 – 500 mbar
Material Sonotrode:	depends on the gripper tip
Power consumption:	< 5 W

Intended Use

Substrates:	dies, chips, foils, glasses, optical lenses, etc
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Operating Conditions

Temperature:	5 - 45°C
Humidity:	20 - 50 %

Necessary Accessories

At least one Gripper Tip	16-210-999999
Sizes: ~4x4 - 20x20 mm:	

Optional Accessories

Pressure control:	40-750-000012
Pressure measuring film:	33-200-000019
Service Module:	20-100-000009
Side stops:	16-602-999999

Processes



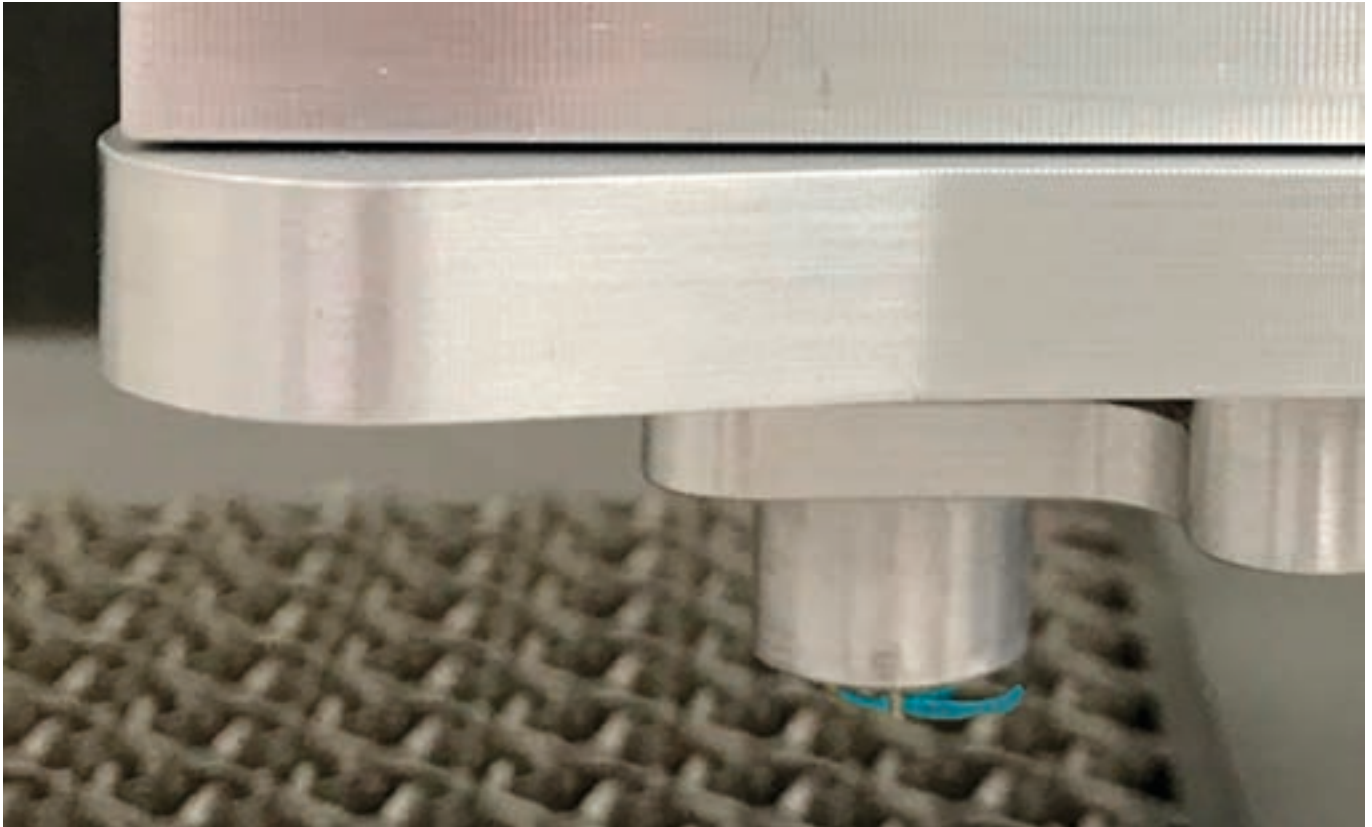
- Loading and unloading
- Gripping
- Sorting
- Separating

Applications



- Foil
- Glass
- Lenses
- Medical Technology

OptoMicroMed-Gripper



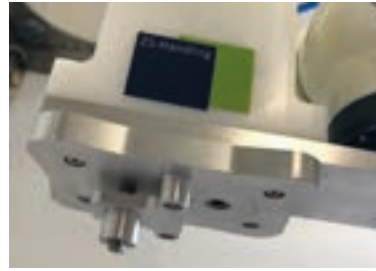
Short description

The OptoMicroMed-Gripper supports the medical technology, especially the manufacturing of lenses. Our product is able to grip and deposit intraocular lenses without contact.

Lifted by a combination of vacuum and ultrasound, the lens is held contactless at the bottom of a special designed sonotrode tip. This prevents micro-scratches and contamination. Besides from gripping and (un)loading, the gripper can be used for sorting and singulating.

Highlights

- Suitable for different diopters
- Customizable according to customer specifications
- Compatible with all usual robot systems
- Suitable for clean rooms



Gripper

Variant:	Gripper for medical lenses
Product name:	LG-TH-P100-PI-FS
Order number:	15-111-000004

Technical data

Dimensions (L x W x H)[mm]:	152 / 63 / 185
Weight [g]:	~ 700
Supply voltage:	24 V DC
Side stops for centering:	included
Mechanical interface:	adjustable adapter plate
Operating pressure:	30 – 500 mbar
Material Sonotrode:	depends on the gripper tip
Power consumption:	< 5 W

Intended Use

Substrates:	medical lenses and small parts, e.g. intraocular lenses
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Operating Conditions

Temperature:	5 - 45°C
Humidity:	20 - 50 %

Necessary Accessories

At least one Gripper Tip	16-210-99999
Sizes depending on diopters	

Optional Accessories

Pressure control:	40-750-000012
Pressure measuring film:	33-200-000019
Service Module:	20-100-000009

Processes



- Loading and unloading
- Gripping
- Sorting
- Separating

Applications



- Lenses
- Medical Technology
- Wafers & Chips

UltraLevi-Desk



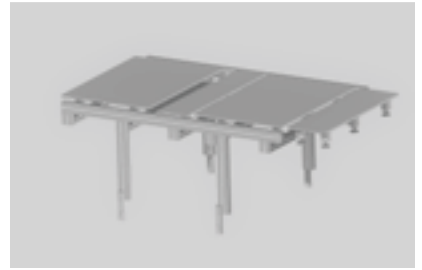
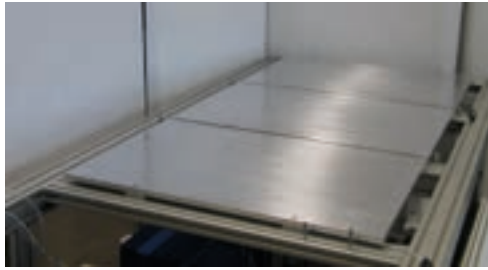
Short description

With the UltraLevi-Desk it is possible to transport and (un)load substrates without contact. Our patented technology makes the workpieces float on the surface of the ultrasonic table. The substrate is kept at a distance, which prevents micro-scratches and other damage. By avoiding compressed air, particle contamination and air turbulence can also be prevented because no nozzles or air lines are needed. Furthermore, high flatness of the substrate is guaranteed, also for flexible materials.

The UltraLevi-Desk can be combined with other systems and can also be realized as a conveyor unit.

Highlights

- No damage or particles
- High Flatness of the substrate
- Extendable
- Recesses for inspection systems or cutting units
- Customizable according to customer specifications



Desk		
Variant:	Floating Table	Floating Table (1000x1000)
Product name:	FT-BH-LxxxxWxxxx-Alan-WS	FT-BH-L1000W1000-Alan-WS
Order number:	15-222-xxxxxx	15-222-000002

Technical data		
Dimensions (L x W x H)[mm]:	xxx / xxx / 100-135 L&W as desired from 300 to 1000	1000 / 1000 / 120
Thickness sonotrode [mm]:	approx.. 10-15	15
Number of feet:	depending on application and size	4 - height adjustable
Weight [kg]:	depending on application and size	~ 65
Supply voltage:	230 V AC	230 V AC
Operating pressure:	30 – 500 mbar	30 – 500 mbar
Material Sonotrode:	anodized aluminium (Alan), alternative: tefloncoated aluminium (Altf) or stainless steel (SS)	anodized aluminium (Alan), alternative: tefloncoated aluminium (Altf) or stainless steel (SS)
Power consumption:	max. 200 W	max. 200 W

Intended Use		
Substrates:	foils, glasses, wafers, etc..	foils, glasses, wafers, etc..

Operating Conditions		
Temperature:	5 - 45°C	5 - 45°C
Humidity:	20 - 50 %	20 - 50 %

- Special Versions**
- With frequency monitoring and readjustment incl. 1 temperature sensor, temperature cable and cable to digital electronics, useful for tables > 0.25 m² and variable table temperature (e.g. heated substrate, solar radiation, etc.)
 - With integrated cooling system
 - With integrated heating system
 - With negative pressure to keep the substrate completely flat
 - With lateral drive for conveying substrates
 - With recesses for inspection systems, cutting units or similar
 - With uninterruptible power supply (UPS)

Processes



- Conveying
- Inspection

Applications



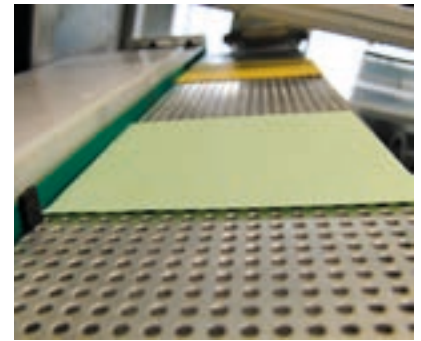
- Battery and fuel cell
- Foil
- Glass
- Medical Technology
- Packaging
- Wafers & Chips

In addition to our standard products, we also offer special solutions in order to be able to respond specifically to customer wishes and their applications.

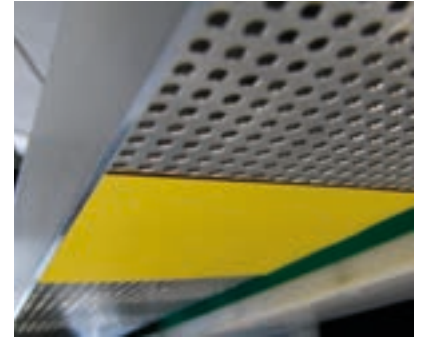
No clear standard can be defined for these systems in terms of their properties and for this reason they have to be individually adapted, which makes each product unique.

By using our unique technology and adapting it precisely to your specifications, our special solutions create a major competitive advantage for you. We are equipped for batch sizes of one piece.

Our competent employees look forward to new projects and tasks which we solve exclusively for you. Contact us and we will find a way to realize your ideas.



LinearLevi-Conveyor



LinearOverhead-Transport



RobotOverhead-Gripper



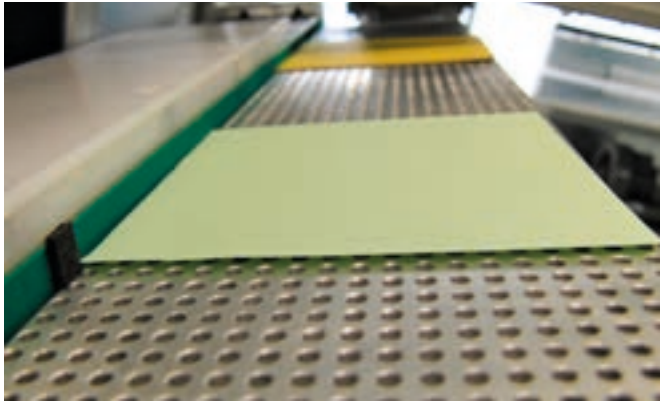
Modular Waferhandling-System



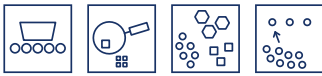
LeviRoll

Our special solutions at a glance

LinearLevi-Conveyor



Processes



Applications



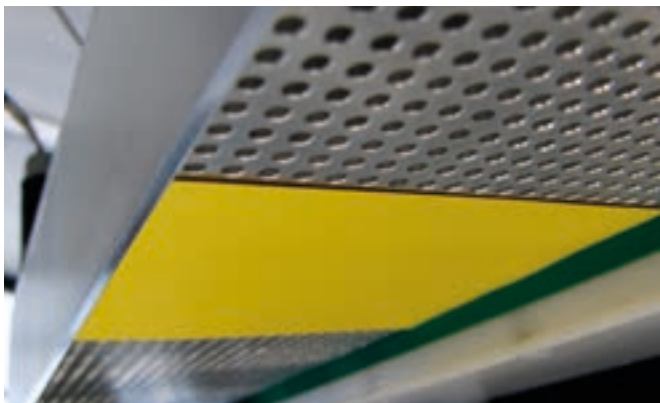
Short description

The LinearLevi-Conveyor enables the contactless transport of sensitive materials. With the LinearLevi-Conveyor, the workpieces can be guided along defined lines without any points of contact and without the use of compressed air. Due to the Ultrasonic Suspension Technology, the substrate is kept at a distance, which prevents micro-scratches and contamination. During the transport, a high flatness also on flexible substrates is provided.

Highlights

- High flatness of the workpiece
- Possibility of heating/cooling sections
- No compressed air necessary
- Available in different lengths
- Customizable according to customer specifications

LinearOverhead-Transport



Processes



Applications



Short description

With the LinearOverhead-Transportsystem it is possible to lift and transport sensitive materials contact-free from above.

The Transport-System uses negative pressure together with ultrasound, which enables contactless linear transport of components on the top side. With this system, the workpieces can be lifted from above and guided along defined lines. Besides the linear transport, the topside conveyor can be combined with other systems to provide inspecting and sorting, as well as singulation of the substrate.

Highlights

- Contactless overhead lifting
- No damage of the substrate
- No air turbulences
- Available in different lengths
- Customizable according to customer specifications

RobotOverhead-Gripper



Processes



Applications



Short description

With the RobotOverhead-Gripper it is possible to lift sensitive materials contactless from above by means of a robot. Besides from gripping, it can be used for (un)loading, sorting and singulating.

The substrate is kept at a distance, which enables contactless transport and prevents micro-scratches and contamination. Our technology allows a high flatness of the substrate during the handling process.

Highlights

- Contactless topside gripping
- High flatness of the substrate
- Different dimensions
- Safety hooks can be fitted as an option
- Customizable according to customer specifications

Modular Waferhandling-System



Processes



Applications



Short description

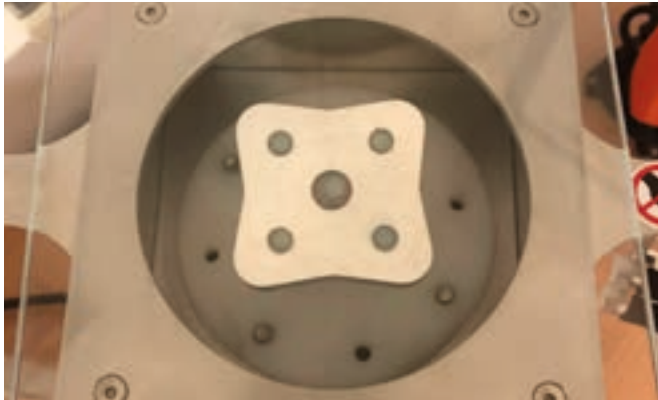
The Modular Waferhandling-System facilitates all possible handling processes of wafers. Loading and unloading, conveying, gripping, inspecting, sorting and singulating can be realized in one system.

Our Ultrasonic Suspension Technology keeps the wafer at a distance the whole time and therefore prevents micro-scratches and contamination.

Highlights

- Modular Design
- Suitable for clean rooms
- Customizable according to customer specifications
- Linking various processes in one system

UltraLevi-Chuck



Processes



Applications



Short description

With the UltraLevi-Chuck the substrate is held without surface contact. By using underpressure, very thin, unstable workpieces can be additionally smoothed.

Our technology is suitable for both clean rooms and high temperature environments. By using underpressure, the chuck can also hold the workpiece from above. The chuck enables inspection, alignment and centering as well as marking and reading operations of a workpiece. It is primarily used for handling (coated) wafers and glass.

Highlights

- No surface contact
- No damage or contamination
- No use of compressed air necessary
- High flatness of the substrate

LeviRoll



Processes



Applications



Short description

With the LeviRoll it is possible to lift, redirect and transport sensitive and flexible glass, foils and packaging. Our technology generates a thin air film between the substrate and the surface of the roll, which allows the contactless roll-to-roll transport of workpieces. Therefore, micro-scratches and contamination can be prevented.

The application can be delivered in different versions. For example, combinations with the UltraLevi-Desk for contactless transport are possible.

Highlights

- Contactless transport
- Different lengths available
- Suitable for different web tension
- Customizable according to customer specifications, for example with inspection systems

If required, our accessories can be combined with our standard and special products or just purchased individually. The products are adapted for your individual applications and the highest quality is ensured.

Our additional products support defined processes and enable contactless handling of your workpieces.

Ensure unique production and cost advantages by using ultrasonic bearing technology. Simply contact us and we will individually adapt the selected accessories to your specifications.

Our Accessories at a glance

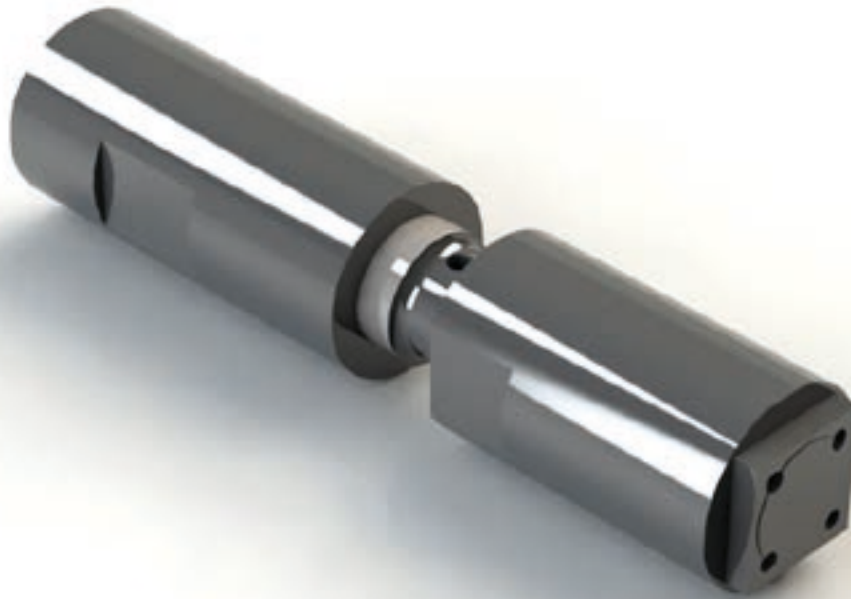
ZS-Handling – Standard Accessories:

- Gripper Tips
- Air-Sword
- Service Module
- LinearLevi-Inspection-Module

ZS-Handling – further Accessories:

- Temperature control / frequency adjustment
- Pressure control unit
- Pressure measuring film

Gripper Tips



Short description

The standard tips for the MicroLevi-Gripper range from 4x4 mm to 20x20 mm. Other gripper tips also with rectangular or round shapes as well as smaller and larger dimensions are available on request depending on the application.

The gripper tip consists of a visible sonotrode and a counterweight in the housing. The lowest part of the tip is precisely matched to the component to enhance the self-centering effect and thus ensure high positioning accuracy.

Depending on the application, components of different sizes can also be gripped with the same tip.

Order number	Size [mm]	Weight [g]	a [mm]	b [mm]	Ø c [mm]
16-110-000002	4 x 4	30-50	24,1	4	15
16-110-000003	6 x 6	30-50	24,1	6	15
16-110-000005	10 x 10	30-50	25,5	10	15
16-110-000007	20 x 20	30-50	20,6	20	17

Processes

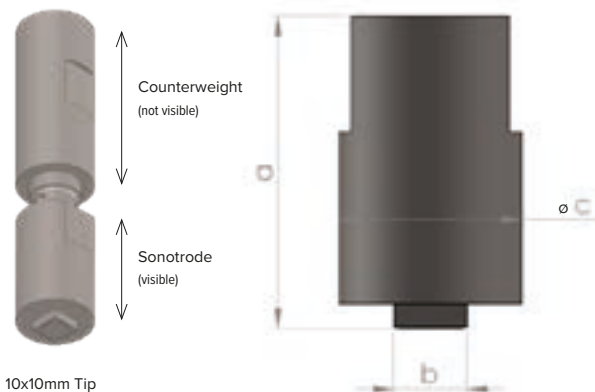


Applications



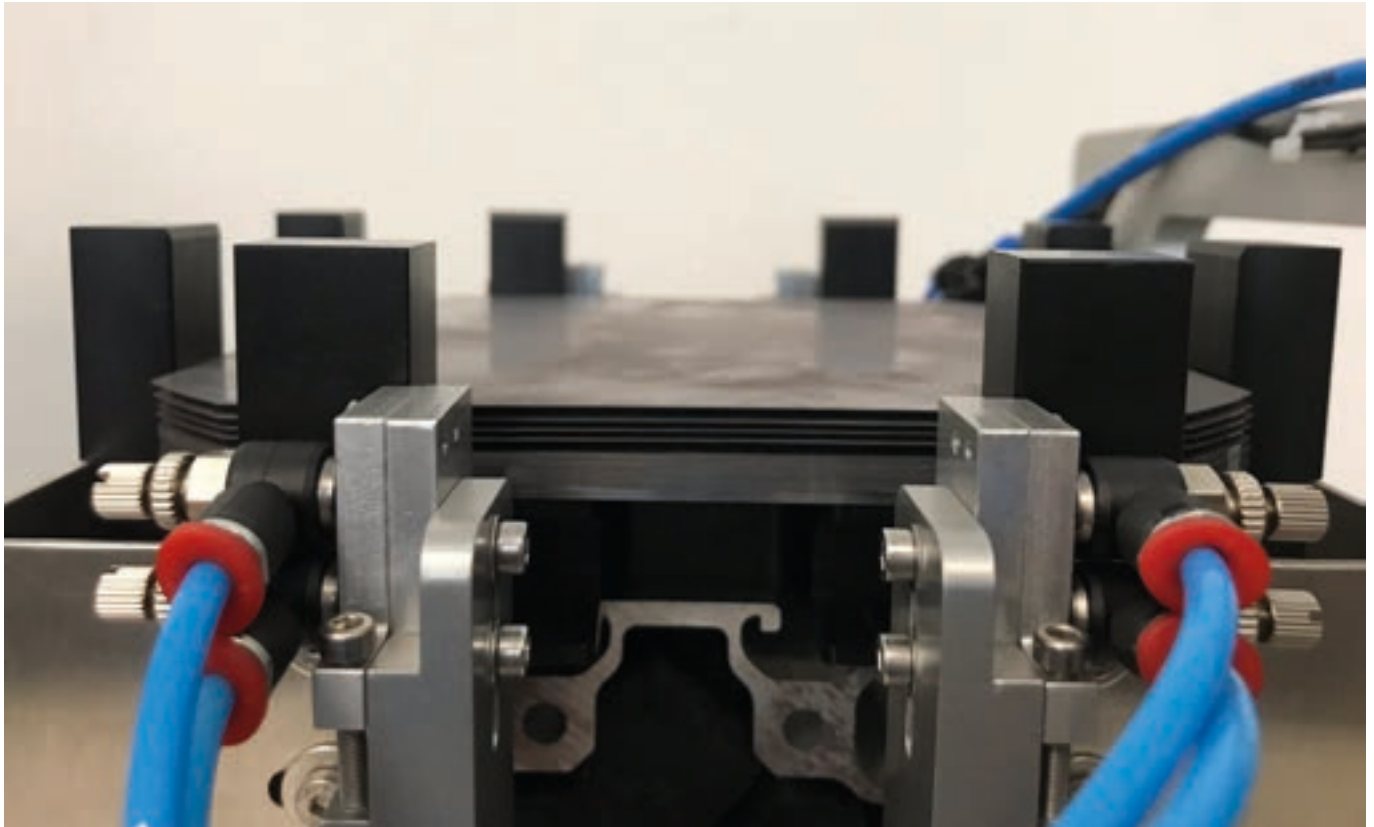
Highlights

- Contactless topside gripping
- Self-centering of the workpiece
- High-precision pick and place
- No damage or particles
- No air turbulence



10x10mm Tip

Air-Sword



Short description

The Air-Sword is used for the separation of sensitive substrates, such as wafers from a stack.

By using several compressed air nozzles, which are placed on the sides of the stack, the compressed air evenly fans out the stack. This then allows a single substrate to be picked up, preventing adhesions and the accidental removal of additional substrates.

Highlights

- Uniform fanning out and separation of substrates in the stack
- Suitable for different substrates and sizes
- With sensors for monitoring

Further versions

- Air-Sword Self-Mounting Set (without frame)
Order number: 16-210-000002
- Air-Sword Mini Self-Mounting (without frame, without sensors)
Order number: 16-210-000003



Processes



Applications



Service Module



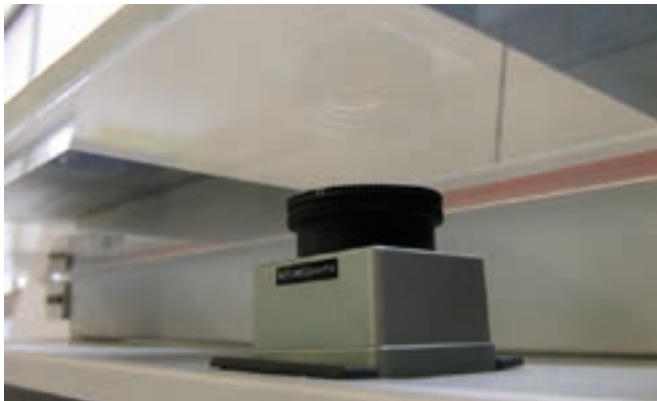
Short description

The service module is used to simplify the setting of the parameters of the ultrasound electronics. With the handy device, the oscillation amplitude of the sonotrode as well as the parameter settings of the digital electronics can be displayed, manually changed and customized. Service and test activities are thus possible without an additional control and errors can be found more easily. Furthermore, a service module can be used for different ultrasonic systems.

Highlights

- Easy adjustment of amplitude and ultrasound parameters
- Simplified service and quick testing
- Simplified error identification
- Can be used for several systems

LinearLevi-Inspection-Module



Short description

The substrate is kept at a distance, which prevents any points of contact. There is the opportunity to subsequently sort the substrates according to the inspection results. The system can be delivered in different versions and can be combined with different products.

Highlights

- Extendable
- Various sizes
- No particles due to no air turbulence
- Double-sided inspection possible
- High flatness, also for flexible substrates
- Customizable according to customer specifications

Processes



Applications



Website

You can easily find individual product flyers in the download area of our website.

If you want to stay up to date and are interested in technical articles, you can click through our online news section.

Do you have any questions about our systems and technology?

We have answered frequently asked questions for you in the FAQ section.

Start your career at ZS-Handling and send us your job application quickly and easily by using our contact form.

„NUMBER ONE“ IN CONTACTLESS ULTRASOUND HANDLING

Applications Processors Products Company Download

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LeviWahr-Gripper	DE FR IT ES
LeviColar-Gripper	DE FR IT ES
LinearLevi-Conveyor	DE FR IT ES
LinearLevi-Inspectionmodule	DE FR IT ES
LinearOverhead-Transport	DE FR IT ES
Modular Waferhandling-System	DE FR IT ES
OptiMicroMed-Gripper	DE FR IT ES
RobotOverhead-Gripper	DE FR IT ES
MicroLevi-Gripper	DE FR IT ES
LeviRoll	DE FR IT ES
UltraLevi-Desk	DE FR IT ES
Contactless Handlingsysteme	DE FR IT ES

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On our YouTube channel you will find interesting videos about our products and applications.

Innovative Technology: Ultrasonic Suspension



Our handling systems use the ultrasonic suspension technology to apply the handling forces to the work-piece 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.

Our Products

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

Applications



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

Processes



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



Special solutions

Plant engineering

Feasibility studies

Research projects

Our Competences

Special solutions

If our standard products do not fully cover your requirements, we can also customize all products as special solutions. Please contact us and we will be happy to make you an appropriate offer.

Plant engineering

From all standard products or adapted special products, we can also design complete systems for you on request. From the design study to prototype construction to the finished system with many modules. In addition to mechanical production, we have all competences under one roof to be able to supply you with a turnkey system including control system. Contact us and we will provide you with the right offer for your requirements.

Feasibility studies

Before an order to build a system is placed, a feasibility study is often carried out to check whether the requirements and wishes can be implemented. Together with you, we derive strategies and measures from the specified goals. In addition to a risk-opportunity assessment, this will lead to a time and measures plan as well as a resource plan, which will be documented.

Research projects

As an innovative medium-sized company, we have already been able to successfully implement many national and international research projects. If you are interested in new and innovative developments, please contact us. We offer our services for both industrially and publicly funded projects.



ZS-Handling


**Innovation.
Made in Regensburg.**

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.



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