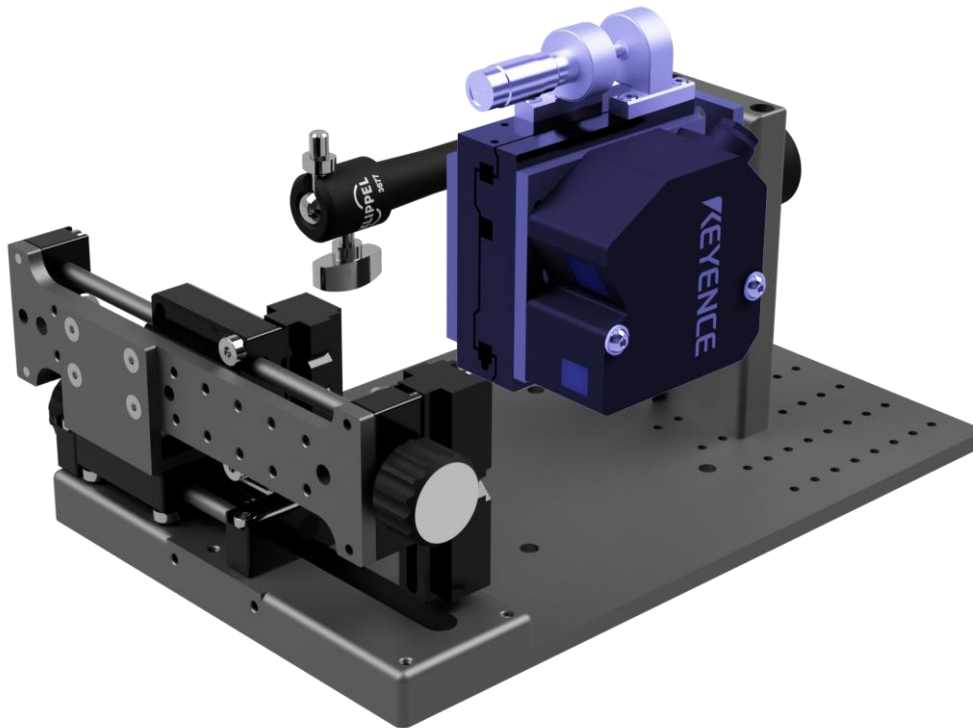


## FEATURES



- Compact, transportable, multifunctional transducer measurement platform
- For Micro Speaker, Headphones, Tweeter and any transducer up to 100 g
- Solid but adjustable mounting of laser displacement sensors and measurement microphones
- Different DUT clamping options available with different brackets
- Optimized for KEYENCE LK-H052 Laser sensor, could be used with a wide range of other laser sensors
- Accurate horizontal & vertical laser positioning on the DUT
- Accurate laser distance adjustment with optional available TRANSLATION STAGE
- Can be modified to a Vacuum Stand to fix loudspeakers during measurement and adjust its height close to the glass cover of the vacuum chamber
- Can be used to fix loudspeakers at the SCN turntable during Scanning Vibrometer measurements or other RnD measurement tasks

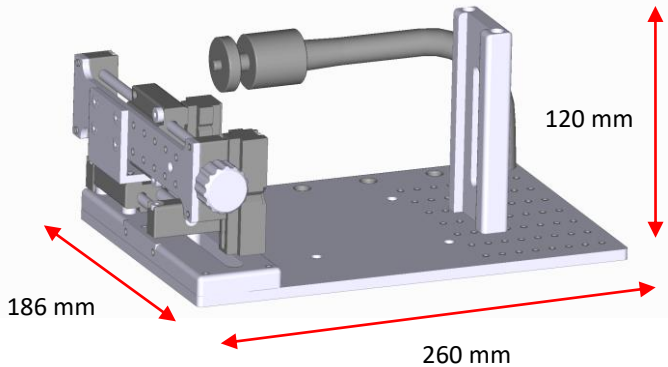
PLEASE NOTE: the TRANSLATION STAGE with micro adjustment and Laser Sensor Head illustrated in blue are not included in the MICRO SPEAKER CLAMPING package.

Article numbers	2211-003; 2211-004
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**CONTENT**

- 1 Function..... 3
- 2 Application field for Micro speaker clamping ..... 4
- 3 Vacuum Stand ..... 6
- 4 Application field for Vacuum Stand..... 7

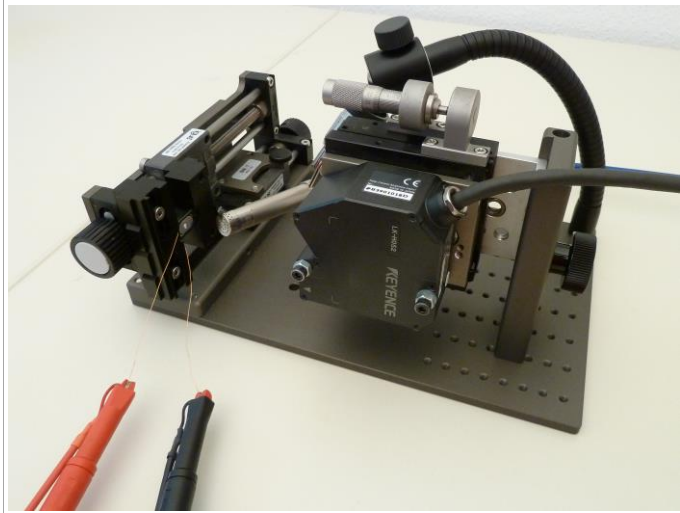
**1 Function**

<b>Dimensions (without laser, mic and DUT)</b>	260 x 185 x 120 mm ( 10.24 x 7.28 x 4.72 inch)			
<b>Weight (without laser, mic and DUT)</b>	< 1.80 kg			
<b>Finish</b>	anodized aluminum & plastics			
<b>Material</b>	<ul style="list-style-type: none"> <li>• aluminum</li> <li>• stainless steel</li> <li>• POM – plastic (Polyoxymethylene) for brackets</li> <li>• SHT-Polymer plastic for linear actuator</li> </ul>			
<b>Clamping travel</b>	0 – 135 mm			
<b>External dimensions</b>	width	260 mm		
	depth	186 mm		
	height without laser	120 mm		
	max. height with laser	170 mm		
<b>Accessories (included)</b>	3/8" Gooseneck (mic holder)	Klippel article number	2400-223 (former 2400-217)	
	Swivel Head / Ball Joint	Klippel article number	2400-226 (former 2400-216)	
	<i>Included accessories are shown in the picture above.</i>			
<b>Accessories (not included)</b>	Keyence LK-H052 Laser Sensor Set	Klippel article number	2103-200	
	Keyence LK-H022 Laser Sensor Set	Klippel article number	2103-100	
	Keyence LK-H082 Laser Sensor Set	Klippel article number	2103-300	
	<i>The Micro Speaker Clamping is optimized for LK-H052 usage, but works with LK-H022, LK-H082 and others as well.</i>			
	Translation Stage	Klippel article number	2300-001	
	Microphone	Different microphones can be used depending on the application. See specification "A4 – Microphones" for available microphones.		
	Microphone Clamp	All Klippel offered mic sets have the dedicated mic clamp included. For separate mic clamps see specification "A4 – Microphones".		
<i>Not included accessories are marked blue in the picture at the first page.</i>				

## 2 Application field for Micro speaker clamping

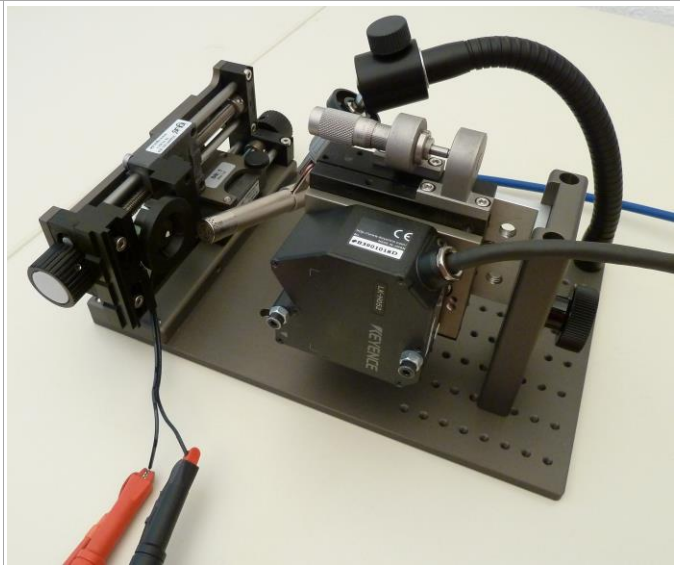
Micro Speaker Clamping with:

- Microspeaker
- Microphone
- Laser KEYENCE LK-H052
- Translation Stage



Micro Speaker Clamping with:

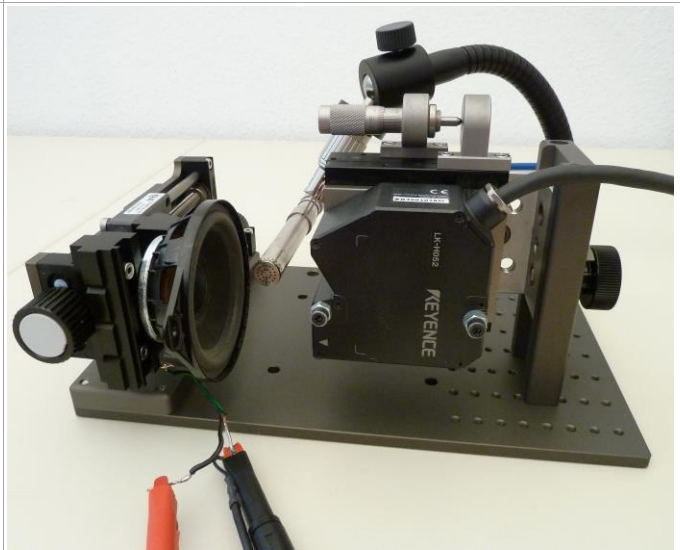
- Speaker ( $\varnothing$  3,8 cm, 35 g)
- Microphone
- Laser KEYENCE LK-H052
- Translation Stage



Micro Speaker Clamping with:

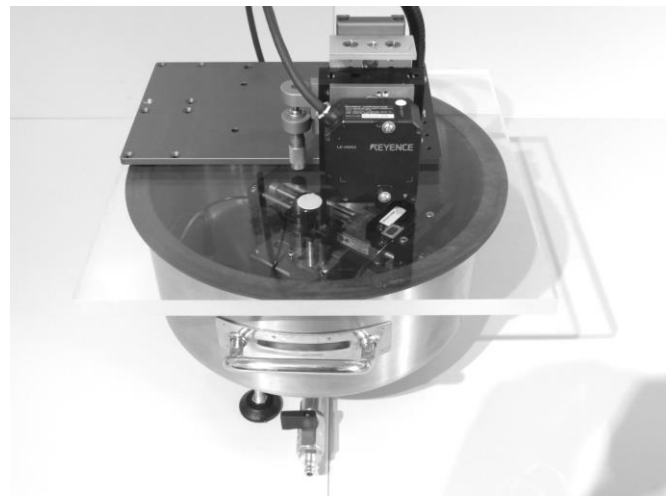
- Speaker ( $\varnothing$  8 cm, 105 g)
- Microphone
- Laser KEYENCE LK-H52
- Translation Stage

Depending on size, shape, material, and weight of the DUT customized clamping brackets could be helpful. The brackets can be easily exchanged.



Micro Speaker Clamping with Vacuum Chamber:

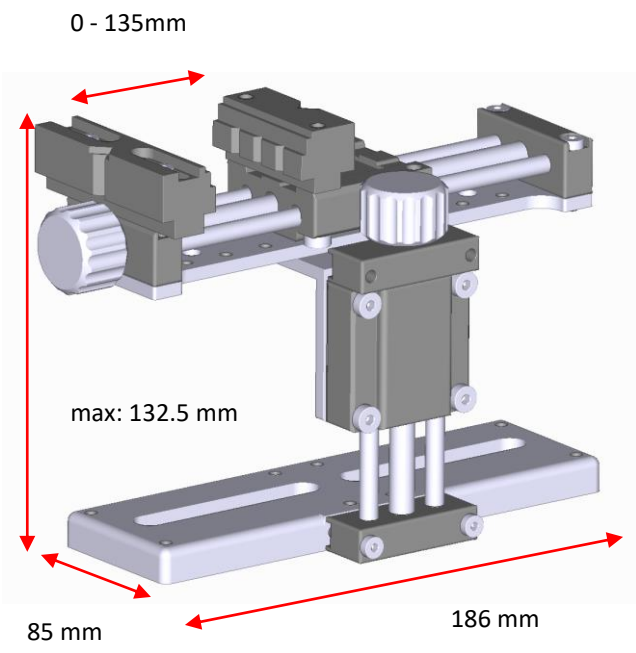
- The Vacuum Stand can be used to adjust the distance between DUT inside the Vacuum Chamber and the glass plate (Laser Sensor outside).
- The platform from the Micro Speaker Clamping can be used to place the laser sensor above the DUT at the Vacuum Chamber.



### 3 Vacuum Stand

(Modification of the Micro Speaker Clamping or available on its own)

<b>Function</b>		
<b>Dimensions (without DUT)</b>	185 x 85 x 135 mm (7.28x 3.35 x 5.31inch)	
<b>(without DUT)</b>	< 0.65 kg	
<b>Finish</b>	anodized aluminum & plastics	
<b>Material</b>	<ul style="list-style-type: none"> <li>• aluminum</li> <li>• stainless steel</li> <li>• POM – plastic (Polyoxymethylene) for brackets</li> <li>• SHT-Polymer plastic for linear actuator</li> </ul>	
<b>Clamping travel</b>	0 – 135 mm	
<b>Height travel</b>	58 to 132.5 mm over ground	
<b>External dimensions</b>	width	186 mm
	min. depth	72 mm
	max. depth	92 mm
	min. height	116 mm
	max. height	132.5 mm



#### 4 Application field for Vacuum Stand

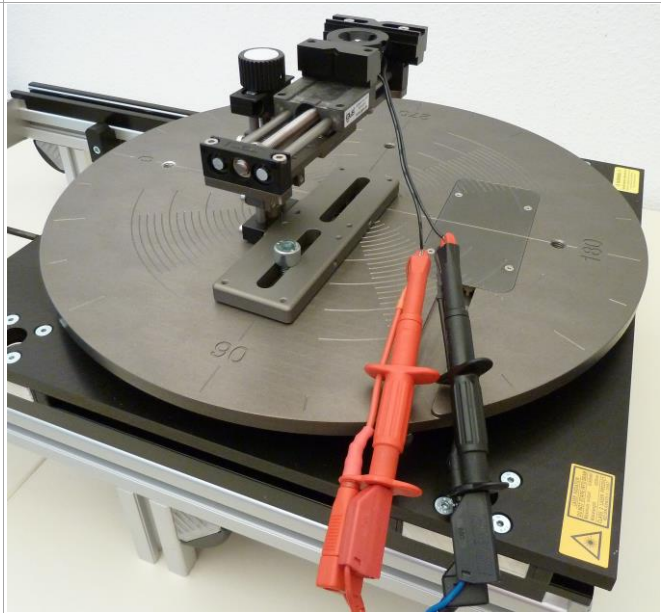
Vacuum Stand in the vacuum pot with:

- Micro Speaker  
Height adjusted to glass plate for laser measurements from outside



Vacuum Stand mounted on the Scanning Vibrometer turntable:

- For DUT clamping during Scanning Measurements and
- All other RnD measurements for small sized speaker if the Scanning Vibrometer is used as Laser stand.



Find explanations for symbols at:

<http://www.klippel.de/know-how/literature.html>

Last updated: November 27, 2023

