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Combinations

Zubehör
Accessories
Accessoires

Hei-SHAKE

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Translation of the original instructions

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Traduction de la notice originale

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About this document

This document describes the assembly and correct use of the optionally available accessory parts for devices belonging to the Heidolph Scientific Products GmbH Hei-SHAKE series.

For a detailed description of the available accessory parts as well as of the offered packages, please visit our website www.heidolph.com.

Typographic conventions

Standardized symbols, signal words and highlighting elements are used in this document to warn of hazards and to identify important information or rather special text contents.

Symbol	Signal word / explanation
	Warning symbols in combination with a signal word indicate dangers: DANGER Indicates an immediate dangerous situation. Failure to respect the indications will result in death or serious injury.
	WARNING Indicates a potential danger. Failure to respect the indications will result in serious injuries.
	CAUTION Indicates a potential hazard which, if not avoided, damage to property and minor to moderate injuries can occur.
	Mandatory signs are used to indicate important and useful information on handling a product. This information is used to ensure operational safety and to maintain the value of the product.

Copyright protection

This document is protected by copyright and is intended for use by the purchaser of the described products only. No transfer to third parties, reproduction in any form, including excerpts, and by any means, as well as utilization and/or disclosure of the contents is permitted without the prior written consent of Heidolph Scientific Products GmbH. Any violation is subject to compensation for damage.

California Residents

Important information for California residents regarding Prop 65. Please visit www.P65Warnings.ca.gov for more information.

General safety instructions

Before commissioning and using the described accessory parts, familiarize yourself with all the safety regulations and occupational safety guidelines applicable at the place of use and observe them at all times.

Only operate the described accessory parts if they are in faultless technical condition.

If there is missing or misleading information on the described accessory parts or on occupational safety, contact the responsible safety specialist.

Only use the described accessory parts as intended and rectify malfunctions or faults on the product immediately.

Intended use

For detailed information on the intended use of the accessory parts, please see the corresponding product descriptions.

Compliant use

The compliance of each individual application must always be evaluated by the user. Any additional measures necessary to ensure compliance are always the responsibility of the user.

Reasonably foreseeable misuse

Additional measures may be necessary for use under conditions or for purposes deviating from the intended use, and/or specific guidelines and safety regulations must be observed. Compliance with and implementation of all relevant directives and safety measures for the respective field of application is the sole responsibility of the operator.

All risks resulting from improper use are borne solely by the operator.

The described accessory parts may only be operated by authorized and instructed personnel. Training and qualification of the operating personnel as well as ensuring that the described accessory parts are handled responsibly are the sole responsibility of the operator!

Residual risk

The described accessory parts have been designed and manufactured in accordance with the state-of-the-art technical standards and the recognized safety regulations at the time of the development. Nonetheless, there are certain residual risks associated with the described accessory parts during their setup and use, as well as during maintenance, repair and cleaning work.

These are identified and described at the appropriate points in this document.

Other regulations

In addition to the notes and instructions in this document, observe all other applicable regulations such as laboratory and workplace guidelines, hazardous substances ordinances, recognized rules of safety engineering and occupational medicine as well as particular local regulations!

Noncompliance will invalidate any warranty claims against Heidolph Scientific Products GmbH.

The operator is solely liable for all damage resulting from unauthorized changes or modifications to the described accessory parts, from the use of unapproved or non-genuine spare parts, or from disregarding the safety instructions and hazard warnings or the manufacturer's instructions!

Platform 2000 for Hei-SHAKE Orbital Core

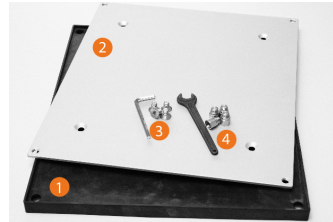
Intended use

Platform 2000 is used to extend the usable area of Hei-SHAKE Orbital Core platform shakers with standard platform 1000.

Scope of delivery

The standard scope of delivery of the accessory [Platform 2000] consists of the following components:

- 1 × rubber mat [1]
- 1 × base plate [2], aluminum
- 4 × countersunk head screw with matching 5 mm Allen key [3]
- 4 × threaded pin with matching wrench SW 13 [4]



Conversion of platform 1000 (standard) to platform 2000 (upgrade kit)



Place the device on a clean, stable work surface.



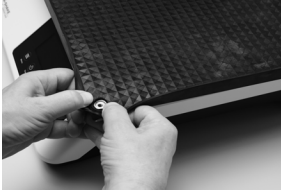
Pull the rubber mat off the four threaded pins (no tools are required for this operation).



Remove the four threaded pins and the standard base plate and screw the base plate 2000 on the device, using the four countersunk head screws supplied.



Screw the four threaded pins supplied into the threaded holes provided for this purpose on the mounted platform 2000.



Place the rubber mat 2000 on it, pull the holes of the rubber mat over the four threaded pins (no tools are required for this work step). Make sure that the rubber mat is flush with the edges of the base plate.

Image on the right: Hei-SHAKE Orbital Core with installed upgrade kit.



Make sure that the contact surfaces of the two base plates are clean and dry! Use the supplied keys or your own suitable tools for installation. Tighten all eight screws with normal hand force.

Removal of platform 2000 on platform 1000 is carried out in reverse order. Store all supplied tools and all disassembled parts in a safe place for reuse.

Technical data platform 2000

Usable area (W × D)	390 × 340 mm
Weight	approx. 3 kg

Multi-tier design 1000 for Hei-SHAKE Unimax 1010

Intended use

The [Multi-tier design 1000] is used for parallel processing of samples on two levels with devices of type Hei-SHAKE Unimax 1010. Any other use is deemed to be not as intended!

The following figure shows a bi-level setup on a device of type Hei-SHAKE Unimax 1010 (the shown flasks and clamps are for illustrative purposes only and can be purchased as optional accessory. Detailed information on available accessories can be found on our website at www.heidolph.com/platform-shakers/accessories):



Scope of delivery

The standard scope of delivery of the accessory [Multi-tier design 1000] consists of the following components:

- four (4) stay bars
- eight (8) clamping screws
- one (1) perforated platform (universal perforation)

Setup, Positioning

- Place the lower perforated platform [1] on the shaking platform [2] of the basic device.
- Route the four stay bars [3] with the threaded side downwards through the holes of the lower perforated platform and screw the stay bars in the retaining holes of the shaking platform provided for this purpose.
- Fix the four clamping screws [4] on the stay bars at the desired height. Make sure that all clamping screws are attached at the same height. The grooves of the stay bars are used for orientation and secure fixation of the clamping screws.
- Assemble the upper perforated platform by inserting the four stay bars parallelly in the four holes of the perforated platform.
- Push the upper perforated platform downwards until reaching the clamping screws.
- Before assembling further accessories (clamps, flasks, etc.) and before using the multi-tier design, check the correct alignment of the upper perforated platform:



Maximum load



WARNING

Please note the following indications regarding the permissible load of the accessories associated with the basic device to avoid personal injuries and/or damage to property caused by splashing fluids, falling or tilting of the setup!

When using the upper platform (upper perforated platform), a shaking frequency of more than 180 rpm is not allowed (settings at the basic device!).

A load of no more than 2.4 kg may be applied to the upper platform.

Generally, the total load has to be distributed in that way that a higher load acts on the lower platform than on the upper one. It is generally not permitted to use the upper platform alone! If done so, the center of gravity of the setup shifts upwards and there is an increased risk of tilting!

Processing of samples in different vessels: Place larger flasks on the lower platform and use the upper platform preferably for small flasks with a volume of no more than 1000 ml.

When configuring the setup, please consider the permissible total load of the basic device (flasks + clamps + samples + setup!).



PRACTICAL TIP

The aforementioned maximum values and restrictions refer to the maximum permissible load (2.4 kg on the upper perforated platform, 2.6 kg on the lower one) under the most unfavorable conditions (increased vibrational potential, for example due to one large vessel on the upper perforated platform, several small vessels on the lower one).

The lower the total load and the more homogeneous the load distribution is (several small vessels instead of one large vessel on the upper perforated platform), the higher the speed on the basic device can be chosen.

The ideal setting must be determined and defined by the user in individual cases. It is not possible to give a general manufacturer recommendation for the different scenarios due to the application-specific parameters.

Technical Specifications multi-tier design

Max. load	upper platform until 2.4 kg lower platform: defined by permissible load of the basic device
Footprint (W × D)	300 × 270 mm
Height of the stay bars	240 mm
Weight	approx. 1 kg

Holder for separatory funnels for platforms with universal perforations

Intended use

The flexible [holder for separatory funnel] serves as secure fixation of separatory funnels with a volume of up to 500 ml on a perforated platform with universal perforation.

Any other use is deemed to be not as intended!

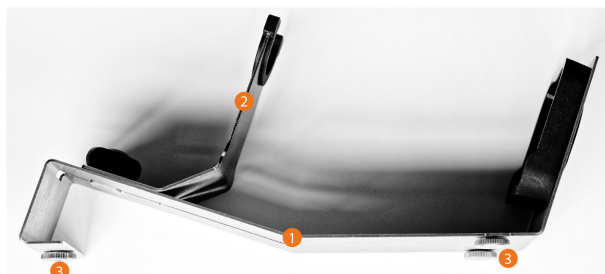
Scope of delivery

The standard scope of delivery of the accessory [holder for separatory funnels] consists of the following components:

- Head profile [1]
- Gliders [2]
- Three knurled nuts [3]

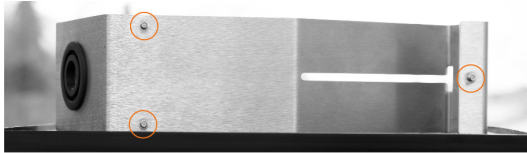


The holder is delivered in a pre-assembled way:

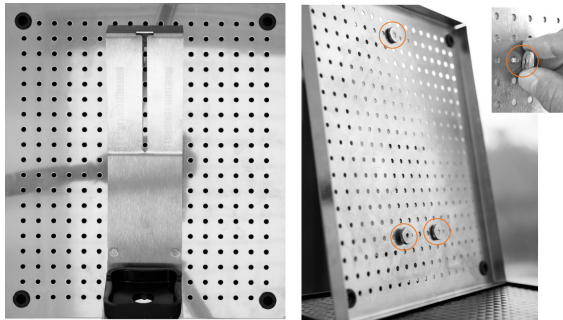


Assembly

Three press-fit threaded bolts are located on the bottom of the head profile. These are arranged in such a way that the head profile can be screwed in parallel to the edges of the perforated platform:



- First, remove the three knurled nuts from the press-fit threaded bolts.
- Place the head profile in the desired orientation in such a way on the perforated platform that all three press-fit threaded bolts on the bottom of the head profile grip into the three holes of the perforated platform (figure on the left).
- Keep the perforated platform in a vertical position and screw the head profile with the three knurled nuts (hand-tighten) from below on the perforated platform (figure on the right):

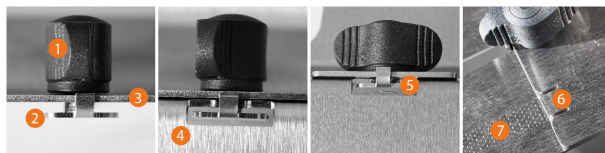


Depending on the used separatory funnels and on the size of the perforated platform, several holders can be arranged in parallel on one perforated platform.

Always ensure that the holders are positioned as symmetrical as possible on the perforated platform. Always place individual holders in the center.

Afterwards, the glider can be mounted in two working positions (small/large separatory funnels up to max. 500 ml) on the head profile:

- Release the thumbscrew [1] turning them one to two times counter-clockwise.
 - Do not remove the thumbscrew completely from the clamping plate! A distance of a few millimeters between the clamping plate [2] and the base plate [3] is sufficient for insertion in the guide [4] of the head profile. The glider must only be moved in both directions in the groove.
- Slide the clamping plate [2] of the glider in the guide [4] of the head profile.
- Lightly tighten the clamping plate [2] with the thumbscrew [1] [5] (turn clockwise).
 - The two lugs slightly turned downwards [6] grip into the recesses [7] of the head profile and thus ensure a secure hold.



Mounting position for small separatory funnels

For small to medium separatory funnels, mount the glider in such a way that the silicone lip [1] faces inward and is thus positioned closer to the silicone contact surface of the head profile:



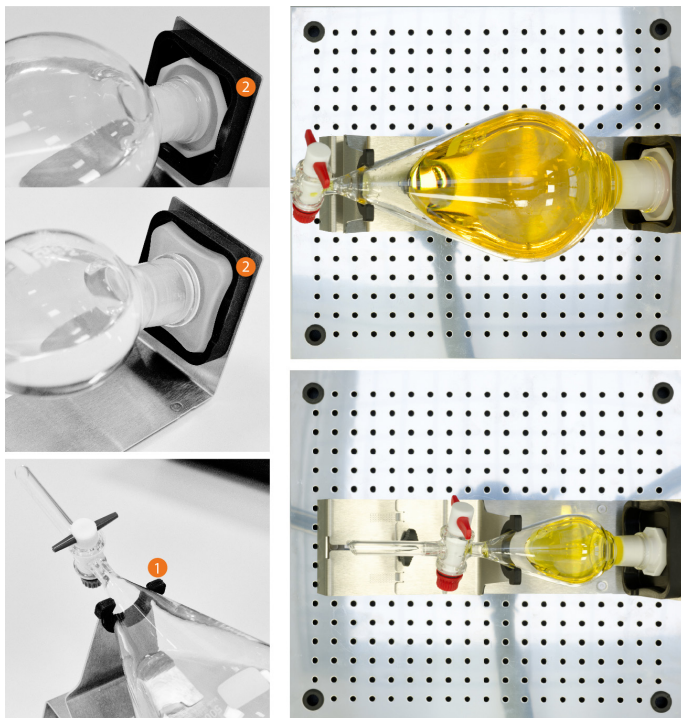
Mounting position for large separatory funnels up to 500 ml

For larger separatory funnels, mount the glider in such a way that the silicone lip [1] faces outward and is thus positioned further away from the silicone contact surface of the head profile:



Insert separatory funnels

Release the clamping plate and position the glider forward. Put the bung of the separatory funnel in a flat way on the silicone contact surface [2] of the head profile and slide the glider until the neck of the separatory funnel is securely counter-mounted with slight pressure in the silicone lip [1]:



In this position, hand-tighten the clamping plate with the thumbscrew.

Load limits

CAUTION

High speeds carry the risk that the shaker or mixer on which the setup is mounted moves on the work bench because of excessive vibrations and in the extreme case falls down from it.



- Before switching on the shaker or mixer, ensure that the speed is in position zero (if necessary, see operating instructions supplied with the device).
- After switching on the shaker or mixer, increase the speed gradually and observe the behavior of the device. Adjust the speed if the device begins to move on the work bench due to a vibration load being too excessive.

The achievable speed (shaking frequency) primarily depends on the used shaker or mixer as well as on the number and the size of the moved separatory funnels.

Moreover, the surface finish of the work bench (roughness, cleanliness) affects the possible speed to a significant degree.

The ideal setting must be determined and defined by the user in individual cases. It is not possible to give a general manufacturer recommendation for the different scenarios due to the application-specific parameters.

Special cleaning instructions

The holder for separatory funnels can be rinsed under running water for cleaning purposes. Stubborn medium residues can be removed with standard and non-abrasive household cleaners.

The holder for separatory funnels can be disinfected with standard disinfectants and sterilized in the autoclave (max. 15 minutes at 134 °C!).

Observe additional information given in section "General cleaning instructions" on page 31.