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# Operating instructions test stand Shore

## SAUTER TI-HEA, TI-HED

V. 1.0  
01/2024  
GB



PROFESSIONAL MEASURING

TI-HE-BA-e-2410



# SAUTER TI-HEA, TI-HED

V. 1.0 01/2024

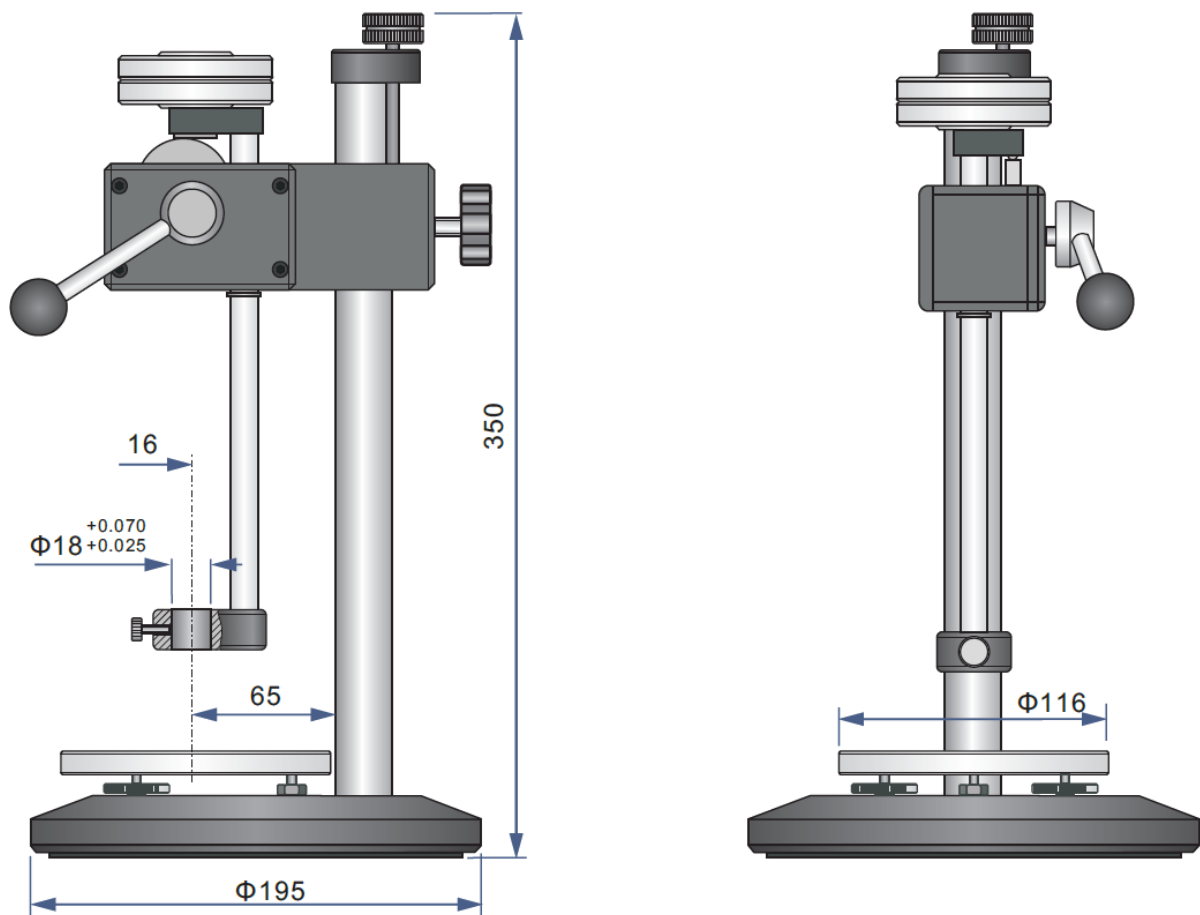
## Operating instructions test stand Shore

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## 1 Technical data

SAUTER	TI-HEA, TI-HED
Function	Attachment of a Shore hardness tester HE from SAUTER for stationary series testing
Lever movement	18 mm
Max. Sample thickness	60 mm
Measuring table diameter	116 mm
Height adjustment	Adjusting screw
Table adjustment	3-point support
Net weight	5.6 kg TI-HEA (11 kg with additional weight TI-HE)



## 2 Device overview

### 2.1 Scope of delivery

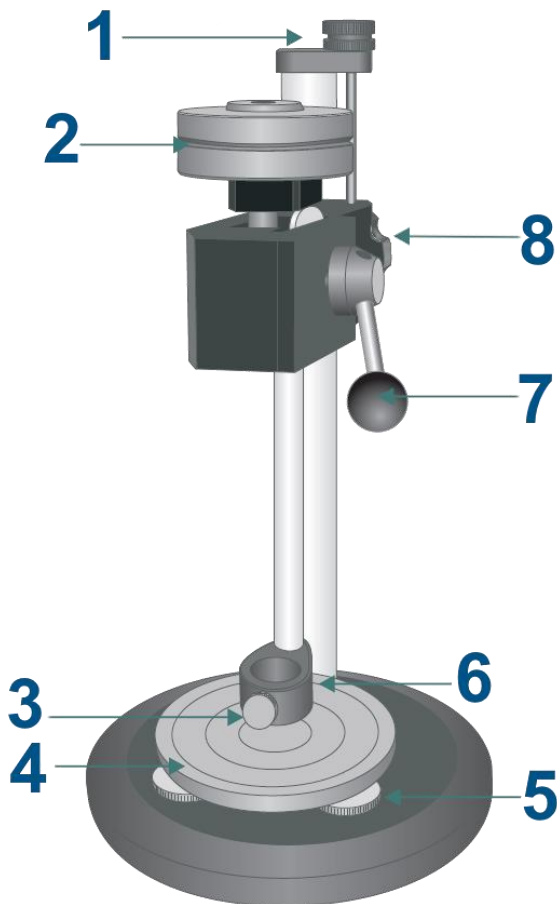
#### 2.1.1 TI-HEA

- Test bench TI-HEA

#### 2.1.2 TI-HED

- Test bench TI-HEA
- Additional weight TI-HE

### 2.2 Control elements



SAUTER	Function
1	Height adjustment
2	Weight -TI-HEA: without additional test weight TI-HE from SAUTER -TI-HED: with additional test weight TI-HE from SAUTER
3	Locking screw
4	Measuring plate
5	Levelling screws
6	Measuring instrument holder
7	Lever
8	Locking screw

### 3 Basic information (general)

#### 3.1 Intended use

Only use the test stand to attach a Shore hardness tester.

To use the test stand as intended, only use the HE hardness tester from SAUTER and tested accessories or tested spare parts from SAUTER.

The test stand is used in conjunction with the HEA/HED Shore hardness testers to perform reproducible/recurring measurements. Due to its design, it is particularly suitable for supporting stationary series tests in production in the area of plastic hardness.

Measured variable	SAUTER measuring device (not included in the scope of delivery)	Test bench	Additional test weight
Shore A	HEA 100	TI-HEA	-
Shore D	HED 100	TI-HEA	TI-HE (4.5kg)

#### 3.2 Improper use

Do not use the test stand in potentially explosive atmospheres or for measurements in liquids or on live parts.

Unauthorised structural changes, additions or conversions to the appliance are prohibited.

#### 3.3 Warranty

Warranty expires with

- Non-observance of our specifications in the operating instructions
- Use outside the described applications
- Modification of the test bench
- Mechanical damage and damage caused by media, liquids, natural wear and tear
- Improper installation
- Overloading the test bench

## 4 Basic safety instructions

### 4.1 Observe the notes in the operating instructions



Read the operating instructions carefully before commissioning/using the appliance, even if you already have experience with SAUTER appliances. Always keep the instructions in the immediate vicinity of the appliance.

### 4.2 Staff training

The appliance may only be used by persons who have read and understood the operating instructions, in particular the chapter on safety.

### 4.3 Security

#### WARNING

##### **Risk of injury due to overridden functions of the protective devices!**

Overridden functions of the protective devices can lead to serious injuries.

- Never override the functions of the safety devices.
- Never test with overridden protective devices.
- Never tamper with protective devices.
- Observe all safety instructions.
- Check the correct function of the moving parts
- Check that all parts are screwed tight.

#### WARNING

##### **Risk of injury from falling parts!**

Falling parts can cause serious injuries.

- Only use suitable and technically sound lifting gear.
- Use lifting gear with sufficient lifting capacity.
- Fasten individual parts and larger assemblies carefully using lifting gear.
- Secure individual parts and larger assemblies with lifting gear.
- Ensure that the hoist cannot cause any danger.
- Lift individual parts and larger assemblies slowly.

#### WARNING



##### **Risk of injury when handling in the test room!**

There is a risk of injury when handling in the test room during operation. Your hands and arms can be trapped and crushed.

- Never handle anything in the test room during a test.
- Make sure that you do not pinch your fingers between the measuring device and the test stand. Risk of injury!
- Do not allow the lever arm to move backwards, but always guide the lever arm backwards until the weight is released.
- Only work in clothing with close-fitting sleeves.
- Wearing jewellery when working on the test bench is prohibited.
- Wear a hairnet if necessary.

## WARNING



### **Risk of tipping due to the use of heavy samples!**

The test system can tip over if heavy samples are inserted off-centre or due to improper behaviour.

- Ensure that the test system is stable.
- Never use the test system as a climbing aid.

## WARNING

### **• Choking hazard!**

Do not leave the packaging material lying around carelessly. It could become a dangerous toy for children.

- The appliance is not a toy and does not belong in the hands of children.
- This appliance can be dangerous if used by untrained persons.

is used improperly or not as intended! Work on the test system may only be carried out by specialists qualified for this work

## CAUTION

### **Risk of injury!**

There is a risk of injury when working on/with the test system.

- Comply with the applicable and binding national regulations on accident prevention.
- Comply with the recognised technical rules for safe and professional work.
- Comply with the regulations on health and safety when providing and using work equipment.
- Observe the company regulations such as supervisory and reporting obligations.
- Read the operating instructions completely.
- Read the operating instructions and data sheets for external components in full.
- Observe all safety instructions in the operating instructions.
- Observe all safety signs attached to the test system.
- Always wear suitable safety equipment.
- Keep a sufficient distance from heat sources.

## NOTE

- To avoid damaging the test stand, do not expose it to extreme temperatures, extreme humidity or moisture.
- Do not use harsh cleaners, abrasive cleaners or solvents to clean the test system.

## NOTE

Only one operator may work on the test system at any one time.

The operator's workstation is located in front of the test system during operation.

## **5 Transport and storage**

### **5.1 Note**

If you store or transport the test stand improperly, the test stand may be damaged. Observe the information on transporting and storing the test stand.

### **5.2 Storage**

Observe the following storage conditions when the test stand is not in use:

- Dry and protected from frost and heat.
- Protected from dust ingress with a cover if necessary.

### **5.3 Packaging/return transport**

Keep all parts in the original packaging for any necessary return transport.

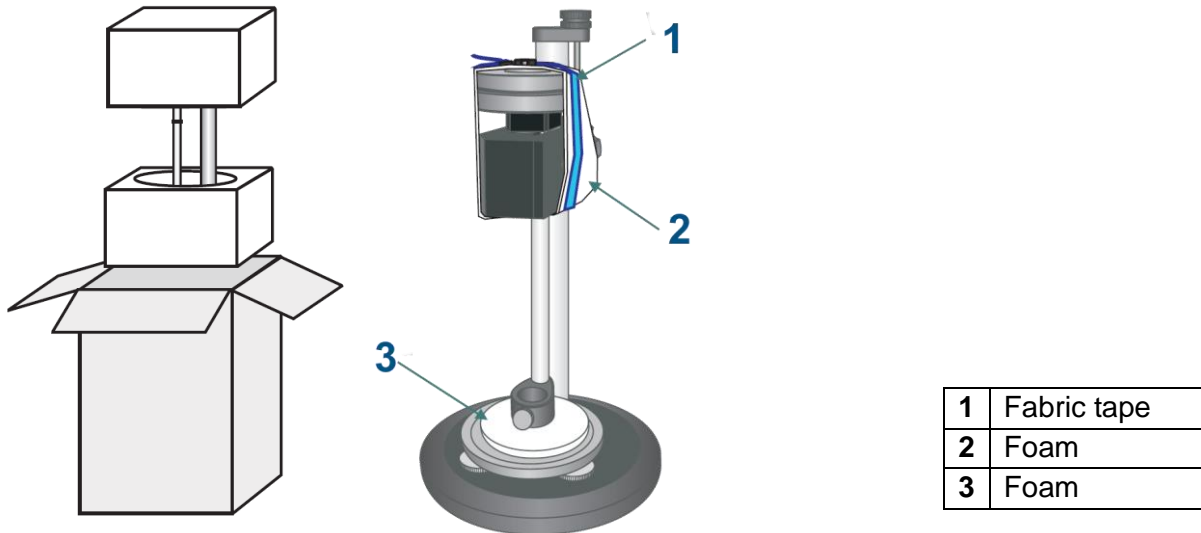
- Only the original packaging is to be used for return transport.
- Separate all loose/movable parts before despatch.
- Refit any transport locks provided.
- Secure all parts against slipping and damage.



## 6 Unpacking and commissioning

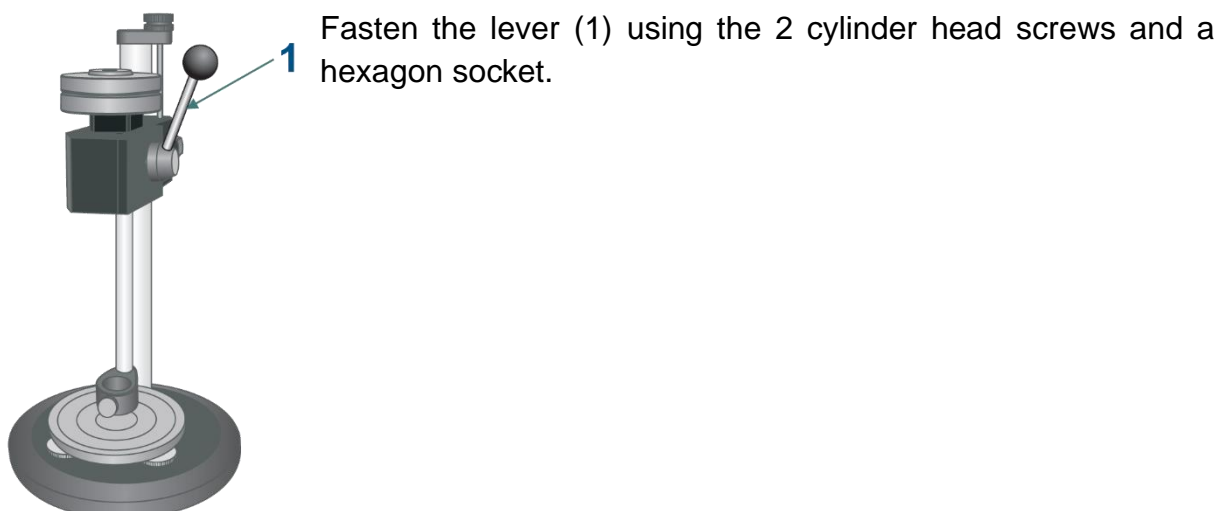
### 6.1 Unpacking

Upon receipt of the test stand, please check in advance that no transport damage has occurred and that the outer packaging, other parts or even the test stand itself have not been damaged. If any damage is evident, please notify SAUTER GmbH immediately.



Take the test stand out of the box and remove the two packaging foam inserts.

Remove the webbing, the foam plate and the foam padding.

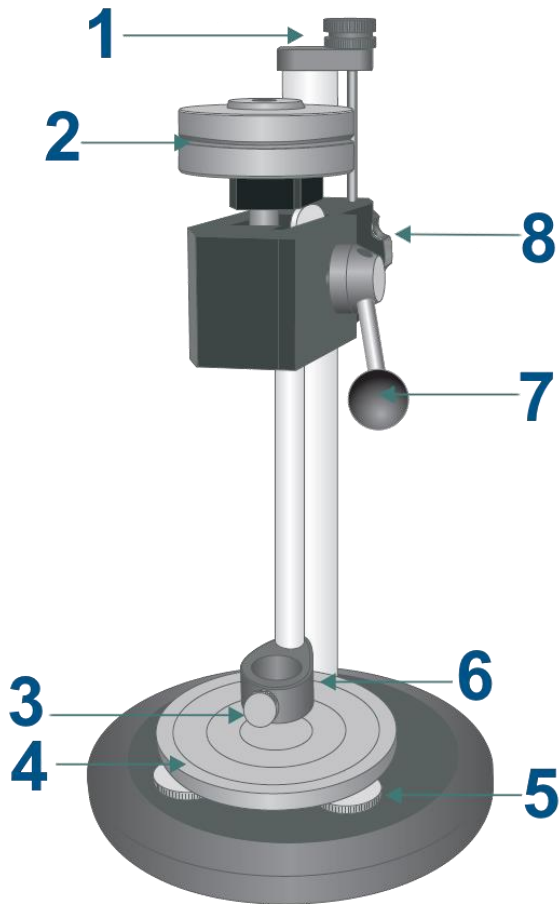


### 6.2 Initial commissioning

To ensure that the test stand functions properly, it may only be used with a SAUTER HE hardness tester.

## 7 Basic operation

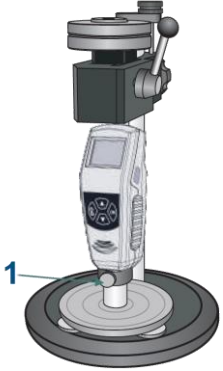
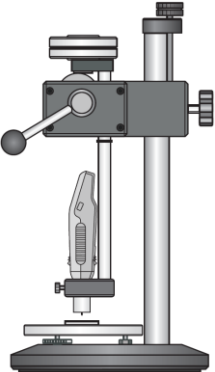
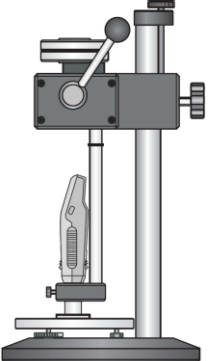
### 7.1 Operation

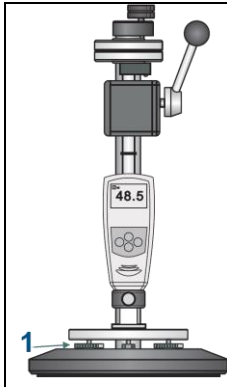


Control element	Function
1	Height adjustment
2	Weight (without additional test weight TI-HE)
3	Locking screw
4	Measuring plate
5	Levelling screws
6	Measuring instrument holder
7	Lever
8	Locking screw

### 7.2 Installation of measuring device

<p>Diagram showing the measuring instrument with the measuring plate (1) being placed on the base.</p>	<p>Screw the levelling screws all the way down into the base and place the measuring instrument holder on the measuring plate.</p>
<p>Diagram showing the measuring instrument with the handle (1) being lifted and the measuring device (2) being inserted into the holder.</p>	<p>Lift the handle (bring the measuring instrument holder down) to insert the device.</p>

	<p>Tighten the locking screw to secure the measuring device.</p>				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p style="text-align: center;">MENU</p> <p style="text-align: center;"><b>Test Setup</b></p> <p style="text-align: center;">Memory System Setup</p> </td> <td style="width: 50%; padding: 5px;"> <p style="text-align: center;">TEST MODE</p> <p style="text-align: center;">Average Mode Maximum Mode <b>Timing Mode</b></p> </td> </tr> <tr> <td style="width: 50%; padding: 5px;"> <p style="text-align: center;">TEST SETUP</p> <p style="text-align: center;"><b>Test Mode</b></p> <p style="text-align: center;">Test Times Tolerance</p> </td> <td style="width: 50%; padding: 5px;"> <p style="text-align: center;">Dwell Time</p> <p style="text-align: center;"><b>99</b></p> </td> </tr> </table>	<p style="text-align: center;">MENU</p> <p style="text-align: center;"><b>Test Setup</b></p> <p style="text-align: center;">Memory System Setup</p>	<p style="text-align: center;">TEST MODE</p> <p style="text-align: center;">Average Mode Maximum Mode <b>Timing Mode</b></p>	<p style="text-align: center;">TEST SETUP</p> <p style="text-align: center;"><b>Test Mode</b></p> <p style="text-align: center;">Test Times Tolerance</p>	<p style="text-align: center;">Dwell Time</p> <p style="text-align: center;"><b>99</b></p>	<p>Go to the menu → <b>Test Setup</b> → <b>Test Mode</b> → <b>Timing Mode</b> and set the dwell time as long as possible, e.g. 99 s. (extension of the time period for the reading lock).</p>
<p style="text-align: center;">MENU</p> <p style="text-align: center;"><b>Test Setup</b></p> <p style="text-align: center;">Memory System Setup</p>	<p style="text-align: center;">TEST MODE</p> <p style="text-align: center;">Average Mode Maximum Mode <b>Timing Mode</b></p>				
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	<p>Place a calibration block (suitable for the measuring device, Shore A or D, supplied with the HE hardness tester from SAUTER) under the measuring device on the measuring table.</p>				
	<p>Lift the handle (lower the measuring device downwards) so that the indenter of the hardness tester is pressed through the hole in the block onto the measuring table.</p>				



The measured values are now displayed on the hardness tester. Adjust the levelling screws so that the measured value is as close as possible to the imprinted value of the calibration block.

- If the setting is not completed within the set time, raise the hardness tester and lower it again to renew the setting.
- Simply set the table to the position of the maximum measured value.
- Too large or too fast an adjustment can damage the indenter (especially with type D).
- It is therefore better to carry out the presetting with the hardness tester unloaded. On the other hand, the hardness tester should be lifted and pressed down during adjustment.
- During adjustment, the indenter can create indentations on the table that do not affect the measurement applications.

## 9 Maintenance, servicing and disposal



Disconnect the hardness tester from the operating voltage before carrying out any maintenance, cleaning or repair work.

### 9.1 Cleaning

Clean the test stand with a moistened, soft, lint-free cloth. Do not use sprays, solvents, alcohol-based cleaners or abrasive cleaners, only clear water to moisten the cloth.

### 9.2 Maintenance and repair

Do not make any modifications to the test stand and do not install any spare parts. Contact SAUTER GmbH for repair or inspection.

### 9.3 Waste disposal

The operator must dispose of the packaging and test stand in accordance with the applicable national or regional legislation at the place of use.