



Manual test bench

TVQ



PROFESSIONAL MEASURING

Original version

Operating instructions Manual test bench 7kN with quick adjustment

Version 1.0
2025-07
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SAUTER

Sauter TVQ

Operating instructions Manual test bench 7kN with quick adjustment

Version 1.0 2025-07

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1 Technical data

SAUTER model	TVQ
Max. force	7 kN
Operating temperature	10°C to 35°C
Relative humidity	15% to 80% humidity
Weight	29 kg
Dimensions	1060x480x500 mm (LxWxH)
Thread	M12
Max. tests per borehole	5000

2 Declaration of conformity

The current EC/EU declaration of conformity can be found online at:

<https://www.kern-sohn.com/shop/de/DOWNLOADS/>

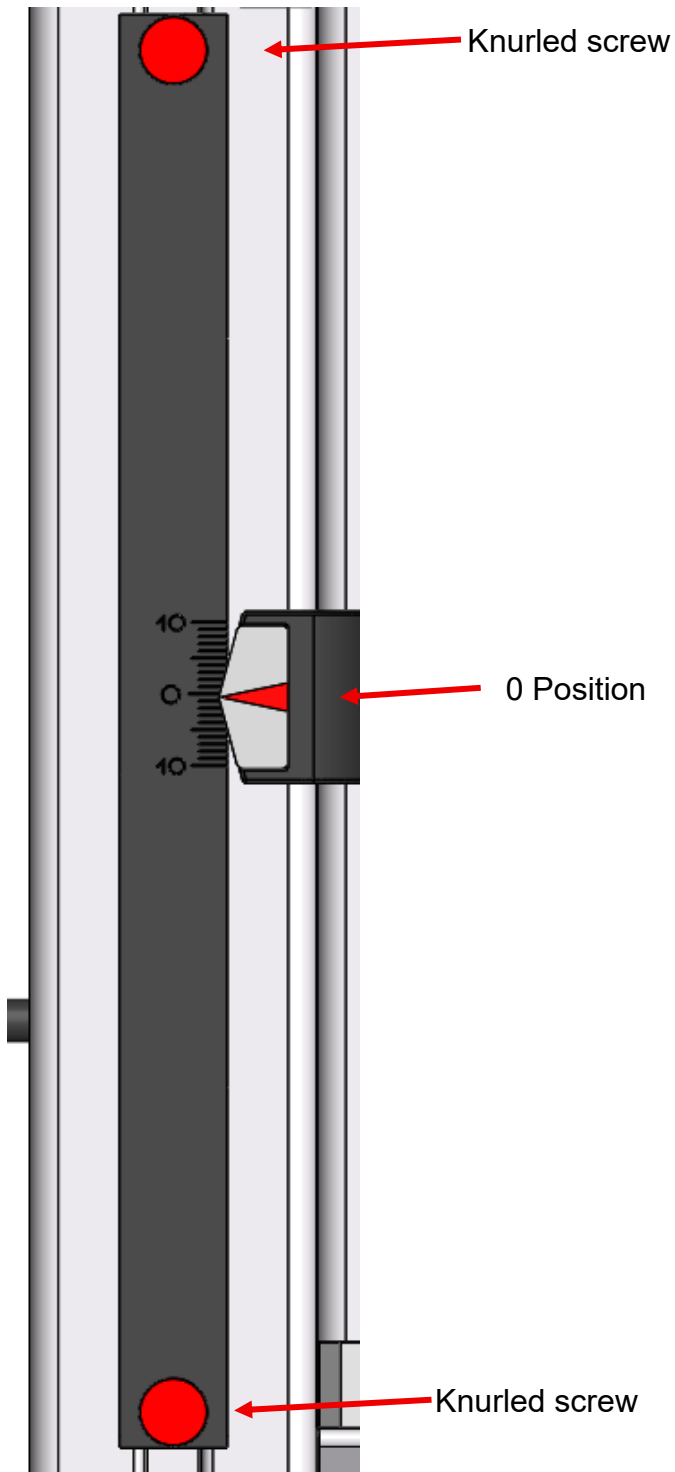
3 Overview of the device

3.1 Scope of delivery

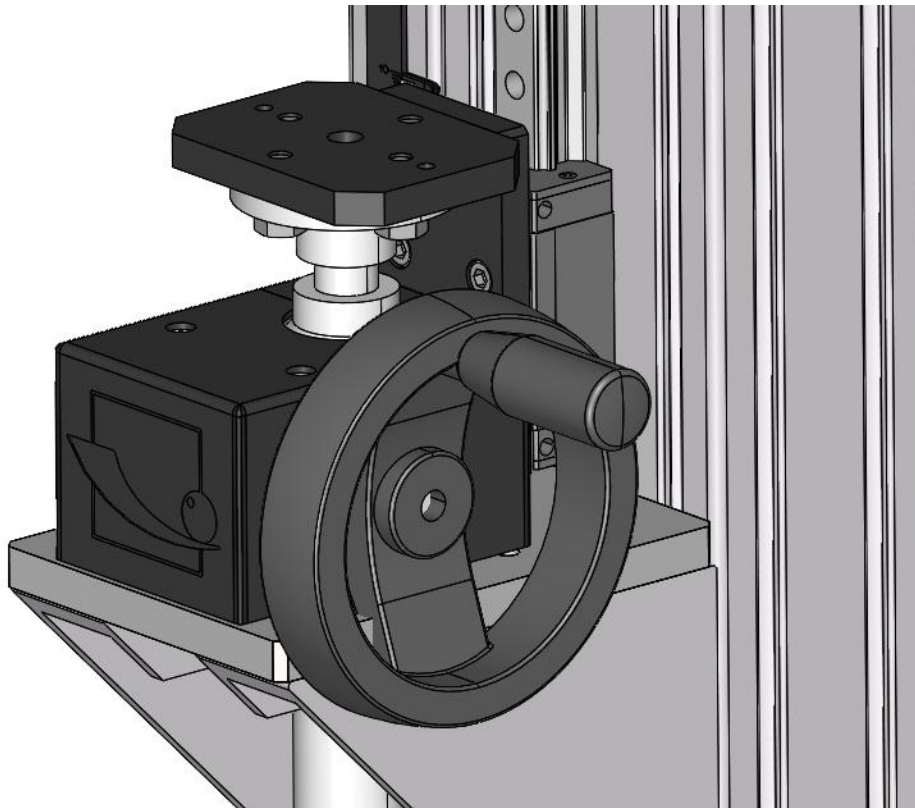
- TVQ
- Operating instructions
- M12x30 cylinder head screw

3.2 Operation

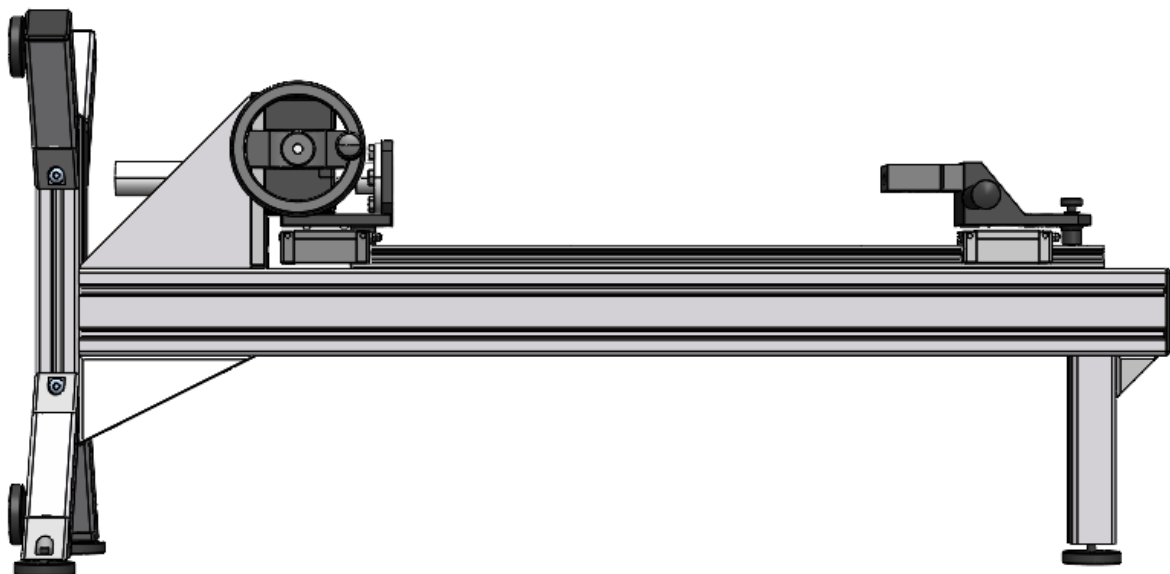
To measure length, the red arrow must be set to the 0 position before starting the test. Once the desired 0 position has been reached, the two knurled screws are loosened slightly. This allows the scale to be moved up or down until the 0 reaches the same height as the arrow. Then both knurled screws are tightened again.



The stroke is generated by means of the handwheel. The trapezoidal threaded spindle moves 0.8 mm per revolution. The maximum force is 7 kN. The maximum stroke is 100 mm.

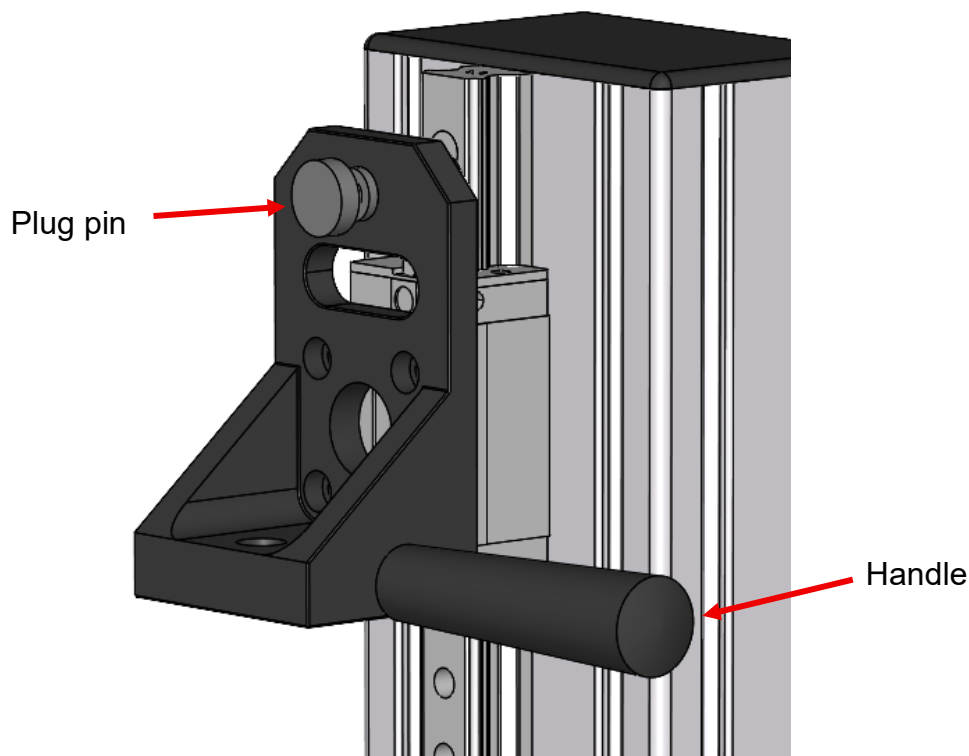


The test bench can also be operated horizontally. The adjustable feet can be leveled.



The crossbeam can be easily adjusted in height using a quick-adjust mechanism. The handle can be screwed on either side.

- 1) Hold the crossbeam with one hand on the handle
- 2) Pull out the plug pin with the other hand
- 3) Move the crossbeam to the desired position
- 4) Insert the pin into the holes provided in the guide rail



The measuring cell is screwed to the crosshead using the enclosed M12x30 screw.

ATTENTION:

Each hole in the guide rail can be loaded with a maximum force of 7 kN up to a maximum of 5000 times!

3.3 Dimensions

1060x480x500 mm (LxWxH)

Basic information (general)

3.4 General information on warning notices

Warning notices are used in this operating manual to warn you of possible personal injury or property damage in certain situations.

Signal word	Description
DANGER	Failure to observe this warning will result in serious injury, permanent disability (e.g., loss of a limb), or death of the user or third parties.
WARN	Failure to observe this warning may result in serious injury, permanent disability (e.g., loss of a limb), or death of the user or third parties.
CAUTION	Failure to observe this warning may result in minor injury or temporary impairment to the user or third parties (e.g., minor cuts).
NOTE	Failure to observe this warning may result in property damage.

Symbols in warning notices :

Symbol	Meaning
Warning signs	Warning signs warn you of hazards that could potentially cause personal injury. The symbol indicates the type of hazard.
	Indicates general hazards or a hazardous location
	Warning of falling loads
	Warning of suspended loads
	Warning of hand injuries
	Warning of tipping hazard

Symbol	Meaning
Mandatory sign	Mandatory signs prescribe measures that you must take to prevent personal injury or property damage. The symbol indicates the necessary actions or items required to prevent damage.
	Indicates a mandatory action

3.5 Intended use

Use the test bench exclusively for compression and tensile tests. During the test, the test bench should be stable and operated by only one person.

The device should be stored in a dry environment.

Each hole in the guide rail can be loaded with a maximum force of 7 kN up to 5000 times!

If you have any questions, please contact SAUTER or visit our website [at www.sauter.eu](http://www.sauter.eu).

3.6 Improper use

The measuring device is not to be used for medical purposes. Please note that a maximum force of 7 kN must not be exceeded. If this is exceeded, there is no warranty for breakage, wear, or the smooth functioning of the test bench.

3.7 Warranty

The warranty shall be void in the event of

- Failure to observe our specifications in the operating instructions
- Use outside the described applications
- Mechanical damage and damage caused by media, liquids, natural wear and tear
- Improper installation
- Improper assembly
- Exceeding the maximum specified force
- Exceeding the permissible number per hole at maximum force

4 Basic warnings and safety instructions

4.1 Observe the instructions in the operating manual



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

4.2 Training of personnel

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

4.3 Safety

⚠ WARNING	
	Read all safety instructions and directions. Failure to follow the safety instructions and directions may result in electric shock, fire, and/or serious injury. Keep all safety instructions and instructions for future reference. • Make sure that there are never any people or objects under the load, as they could be injured or damaged! • Do not operate the system in potentially explosive rooms or areas, and do not set it up there. • Do not operate the system in a corrosive atmosphere. • Do not immerse the system in water. Do not allow liquids to penetrate the interior of the device. • The system may only be used in a dry environment and under no circumstances in rain or at a relative humidity above the operating conditions. • Protect the system from permanent direct sunlight. • Do not expose the system to strong vibrations. • Do not remove any safety signs, stickers, or labels from the device. Keep all safety signs, stickers, and labels in a legible condition. • Do not open the device.

⚠ WARNING	
	Choking hazard! Do not leave the packaging material lying around carelessly. It could become a dangerous toy for children. • The device is not a toy and should be kept out of the reach of children. • This device can be dangerous if used improperly or for purposes other than those intended by untrained persons! Observe the personnel qualifications!

⚠ WARNING	
	Risk of injury due to disabled safety device functions! Disabled safety device functions can lead to serious injury. • Never disable the functions of the protective devices yourself or allow third parties to do so. • Never perform tests with disabled protective devices. • Never tamper with protective devices. • Observe all safety instructions.

⚠ WARNING	
	Risk of injury from falling parts! Falling parts can cause serious injury. • Only use suitable and technically sound lifting equipment. • Use lifting equipment with sufficient load capacity. • Secure individual parts and larger assemblies carefully with lifting equipment. • Secure individual parts and larger assemblies with lifting equipment. • Ensure that the lifting equipment does not pose any danger. • Lift individual parts and larger assemblies slowly.

⚠ WARNING	
	Risk of injury when working in the test chamber! There is a risk of injury when working in the test room while the test system is in operation. Your hands and arms could become trapped and crushed. • Never handle items in the test chamber while the test system is running. • Never handle items in the test room during a test.

⚠ WARNING	
	Risk of tipping when using heavy specimens!



The test system may tip over if heavy specimens are placed off-center or if improper handling occurs.

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

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 for accident prevention.
- Comply with the recognized technical rules for safe and proper working practices.
- Comply with the regulations on safety and health protection when providing and using work equipment.
- Observe company regulations such as supervision and reporting obligations.
- Read the operating instructions thoroughly.
- Read the operating instructions and data sheets for external components in full.
- Observe all safety instructions in the operating manual.
- Observe all safety signs affixed to the test system.
- Always wear suitable safety equipment.
- Keep a sufficient distance from heat sources.

! NOTE

- To avoid damage to the test system, do not expose it to extreme temperatures, extreme humidity, or moisture.
 - Do not use harsh cleaners, abrasives, or solvents to clean the test system.
 - Only one operator may work on the test system at any one time.
- The operator's workplace is located in front of the test system during operation.

5 Transport and storage

5.1 Note

Improper storage or transport of the device may result in damage. Observe the information on transporting and storing the device.

5.2 Transport

Transport the test bench on a trolley or with two people to ensure the safe transport of both people and the test bench.

5.3 Storage

When the device is not in use, observe the following storage conditions:

- dry and at a e protected from frost and heat
- the storage temperature corresponds to the technical data

5.4 Packaging/return transport

Returns are only possible within the limits of the general terms and conditions Keep all parts of the original packaging for any necessary return transport.

- Only use the original packaging for return transport
- Before shipping, disconnect all connected cables and loose/movable parts
- Reattach any transport locks that may have been provided
- Secure all parts against slipping and damage.

6 Unpacking and commissioning

6.1 Unpacking



In the event of a return, please note the information in the chapter "Packaging/Return Transport."

Upon receipt of the device, you should first check that no transport damage has occurred and that the outer packaging, the housing, other parts, or even the device itself have not been damaged. If any damage is apparent, please notify SAUTER GmbH immediately.

6.2 Initial commissioning

To ensure that the test bench is in good working order, it must be inspected thoroughly before use and checked for any damage caused during transport.

7 Maintenance, servicing, and disposal

7.1 Cleaning

Clean the device with a damp, soft, lint-free cloth. Make sure that no moisture penetrates the housing. Do not use sprays, solvents, alcohol-based cleaners, or abrasive cleaners; only use clear water to moisten the cloth.

7.2 Maintenance , and repair

Contact the manufacturer for repairs or device inspection.

The holes in the guide rail can wear out. Once all the holes are worn out from daily use, the guide rail must be replaced by the manufacturer.

7.3 Disposal



Old devices and accessories do not belong in household waste.

The disposal of packaging and the device must be carried out by the operator in accordance with the applicable national or regional laws of the user's location.

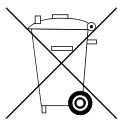
The device consists of various components and materials, such as:

- Plastic (housing)
- Metal

Improper disposal of the device can have harmful effects on humans and the environment.

Proper and environmentally friendly disposal can prevent harmful effects and allow raw materials to be recovered.

Disposal of rechargeable and non-rechargeable batteries:



Rechargeable batteries and batteries do not belong in household waste.

The disposal of rechargeable and non-rechargeable batteries must be carried out by the operator in accordance with the applicable national or regional laws of the user location.

8 Battery Act

Note in accordance with the Battery Act (BattG):

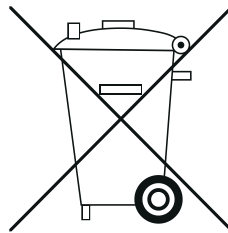
INFORMATION



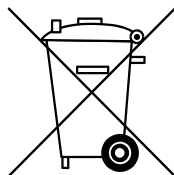
- The following information applies to Germany.

In connection with the sale of batteries and rechargeable batteries, we as a retailer are obliged under the Battery Act to inform end users of the following:

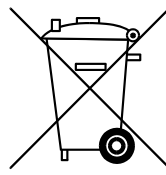
- End users are legally obliged to return used batteries and rechargeable batteries.
- Batteries and rechargeable batteries can be returned free of charge to municipal collection points or retailers after use. The batteries/rechargeable batteries must have reached the end of their normal service life, otherwise precautions must be taken to prevent short circuits.
- The return option is limited to batteries and rechargeable batteries of the type that we carry or have carried in our range, as well as to the quantity that end users normally dispose of.
- A crossed-out trash can means that you must not dispose of the batteries or rechargeable batteries in household waste under any circumstances. Old batteries or rechargeable batteries may contain harmful substances that can harm people and the environment if not disposed of properly.



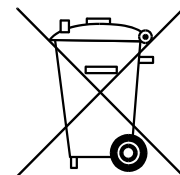
- Batteries containing harmful substances are marked with a symbol consisting of a crossed-out trash can and the chemical symbol (Cd = cadmium, Hg = mercury, or Pb = lead) of the heavy metal that is decisive for classification as harmful.



Cd



Hg



Pb