

**BW05**

**EN**

**OPERATING MANUAL**  
BRAKE FLUID TESTER



**Table of contents**

Notes regarding the operating manual..... 2

Safety ..... 2

Information about the device..... 4

Transport and storage..... 4

Operation ..... 4

Maintenance and repair ..... 6

Disposal ..... 6

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



BW05



<https://hub.trotec.com/?id=41277>

**Notes regarding the operating manual**

**Symbols**



**Warning of electrical voltage**

This symbol indicates dangers to the life and health of persons due to electrical voltage.



**Warning**

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



**Caution**

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

**Note**

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



**Info**

Information marked with this symbol helps you to carry out your tasks quickly and safely.



**Follow the manual**

Information marked with this symbol indicates that the operating manual must be observed.



**Wear protective equipment**

Information marked with these symbols indicates that you should wear your personal protective equipment.



**Safety**

**Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.**



**Warning**

**Read all safety warnings and all instructions.**

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.**

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- This appliance is not a toy. Keep away from children and animals. Do not leave the device unattended during operation.
- Never immerse the entire device in a liquid. Only the measuring probe is intended to be immersed.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device.
- Never charge batteries that cannot be recharged.
- Different types of batteries and new and used batteries must not be used together.
- Insert the batteries into the battery compartment according to the correct polarity.
- Remove discharged batteries from the device. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
- Remove the batteries from the device if you will not be using the device for a longer period of time.
- Never short-circuit the supply terminal in the battery compartment!
- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!

- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Only use the device, if sufficient safety precautions were taken at the surveyed location (e.g. when performing measurements along public roads, on building sites etc.). Otherwise do not use the device.
- Observe the storage and operating conditions (see Technical data).
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.

### Intended use

Only use the device BW05 for determining the water content of type DOT3, DOT4 and DOT5.1 brake fluids.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

### Foreseeable misuse

Do not use the device in potentially explosive atmospheres or for measurements at live parts.

Trotec accepts no liability for damages resulting from improper use. In such a case, any warranty claims will be voided.

Any unauthorised modifications, alterations or structural changes to the device are forbidden.

### Personnel qualifications

People who use this device must:

- have read and understood the operating manual, especially the Safety chapter.

### Residual risks



#### Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!

Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



#### Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



#### Warning

Be careful when handling acids such as brake fluid!

If you are unsure whether or not a liquid has a corrosive effect, wear suitable protective equipment consisting of eye protection, protective clothing, protective gloves and safety boots in any case.



#### Warning

Risk of suffocation!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



#### Warning

The device is not a toy and does not belong in the hands of children.



#### Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



#### Caution

Keep a sufficient distance from heat sources.

#### Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

#### Note

Do not use abrasive cleaners or solvents to clean the device.

## Information about the device

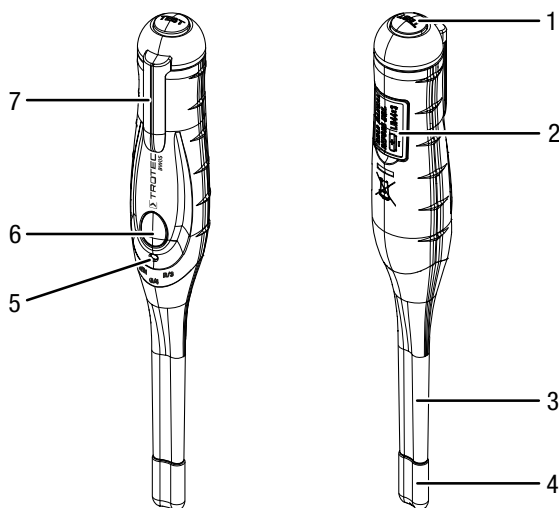
### Device description

The device BW05 can be used to determine the water content of type DOT3, DOT4 and DOT5.1 brake fluid.

The water content is an indicator of the condition of the brake fluid and thus of the braking system.

The brake fluid condition can be quickly read and interpreted using the 3-colour LED.

### Device depiction



No.	Designation
1	TEST button
2	Battery compartment with screw-on lid
3	Measuring probe
4	Measuring electrodes with protective cap
5	Measuring mode LED
6	Indicator LED
7	Clip

### Technical data

Parameter	Value
Model	BW05
Brake fluids	DOT3, DOT4, DOT5.1
Operating conditions	0 °C to 40 °C with < 80 % RH
Storage conditions	-10 °C to +50 °C with < 80 % RH
Power supply	3 x 1.5 V, LR44
Dimensions	25 mm x 25 mm x 167.5 mm
Weight	approx. 32 g

### Scope of delivery

- 1 x Measuring device BW05
- 3 x 1.5 V LR44 batteries
- 1 x Quick guide

## Transport and storage

### Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

### Transport

Make sure that the protective cap is attached to the measuring probe.

### Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- the storage temperature complies with the values specified in the Technical data

## Operation

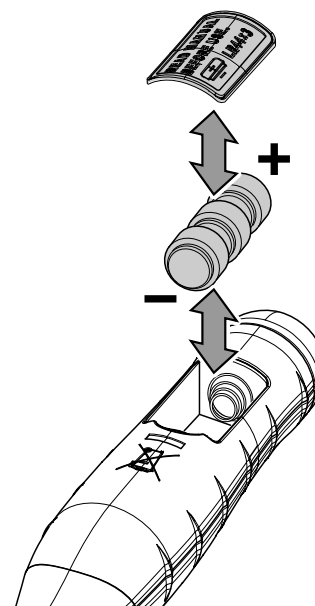
### Inserting the batteries

Insert the supplied batteries into the device before first use.

### Note

Make sure that the surface of the device is dry and the device is switched off.

1. Open the battery compartment.
2. Insert the batteries (3 x LR44 button cells) into the battery compartment with correct polarity.

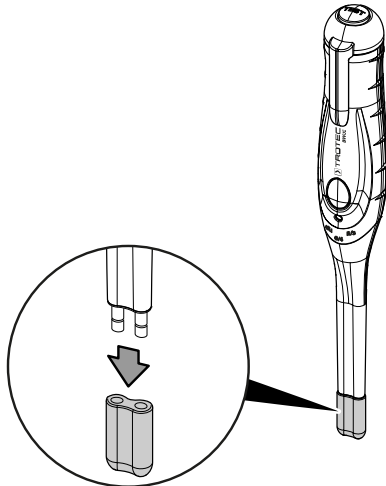


3. Reattach the cover to the battery compartment.

## Removing the protective cap

The measuring electrodes are protected from external influences by means of a protective cap.

1. Prior to every measurement pull the protective cap off the measuring electrodes.  
Make sure that both measuring electrodes are free from dirt and residual fluid.



2. After every measurement put the protective cap back on the measuring electrodes.

## Setting the measuring mode

The measuring device can be used to measure the water content of 3 different types of brake fluids.

Type	Measuring mode LED
DOT3	red
DOT4	green
DOT5.1	orange

1. Press the *TEST* button (1) to switch the device on.  
⇒ The measuring mode LED (5) indicates the currently selected measuring mode.
2. Press the *TEST* button (1) for approx. 5 s.  
⇒ The indicator LED (6) briefly lights up in all 3 colours.  
⇒ The measuring mode LED (5) flashes in the colour of the currently selected measuring mode.
3. Press the *TEST* button (1) to switch between the measuring modes.
4. Wait a moment until the measuring mode LED (5) stops flashing.  
⇒ The measuring mode LED (5) indicates the selected measuring mode.

## Measuring

The indicator LED (6) is able to show 3 different brake fluid conditions:

Indicator LED	Water content	Brake fluid condition
green	< 1.5 %	Brake fluid is in good condition.
yellow	1.5 % to 3 %	Brake fluid is still OK but should be checked regularly.
red	> 3 %	Brake fluid must be exchanged immediately; risk of a braking system failure.

Proceed as follows to check the water content of the brake fluid:

1. Press the *TEST* button (1) to switch the device on.
2. Check whether the measuring mode set corresponds to the type of brake fluid to be tested.
3. Immerse the measuring probe in the brake fluid. Make sure that the measuring electrodes are completely surrounded by brake fluid and that the measuring probe does not touch the walls of the fluid reservoir.
4. Wait for approx. 3 s.  
⇒ The indicator LED (6) shows the condition of the brake fluid.

### Switching the device off

The device switches off automatically if no button was pressed for approx. 20 s.

1. Briefly press the *TEST* button (1) twice to switch the device off.  
⇒ The measuring mode LED (5) goes out.
2. Clean the measuring probe and electrodes with a cloth and wipe them dry.
3. Put the protective cap (4) on the measuring electrodes.

### Maintenance and repair

#### Battery change

A battery change is required when the indicator LED (6) lights up red three times and the device turns off, or when the device can no longer be switched on (see chapter Inserting the batteries).

#### Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

#### Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

### Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

#### Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (2013/3113) and the Waste Batteries and Accumulators Regulations 2009 (2009/890), power tools that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

Trotec GmbH

Grebbener Str. 7  
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

✉ [info@trotec.com](mailto:info@trotec.com)

[www.trotec.com](http://www.trotec.com)