

**BO21**

**EN**

**OPERATING MANUAL**  
VIDEOSCOPE



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## Notes regarding the operating manual

### Symbols

**Danger!**

Warns of a hazard which can lead to injuries.

**Caution!**

Warns of a hazard which can lead to damage to property.

The current version of the operating manual can be found at:  
[www.trotec.de](http://www.trotec.de)

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The only party responsible for determining measured results to be valid, drawing conclusions and deriving actions is the user! TROTEC® accepts no claims of warranty for the correctness of the determined measured values or measured results. Further, TROTEC® accepts no liability whatsoever for possible mistakes or damage which have been caused by utilising the determined measured results. © TROTEC®

## Information about the device

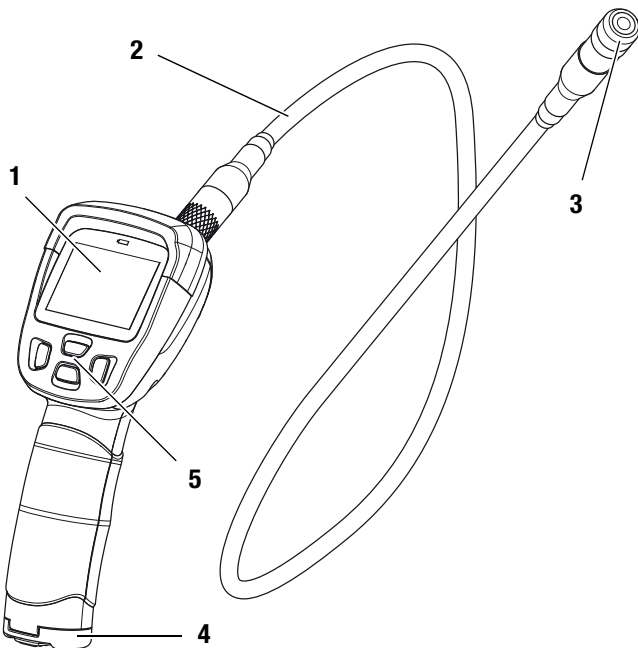
### Description of the device

The videoscope serves f.i. for inspecting concealed machine components or poorly or inaccessible hollows.

The camera is connected to the device via a flexible gooseneck probe.

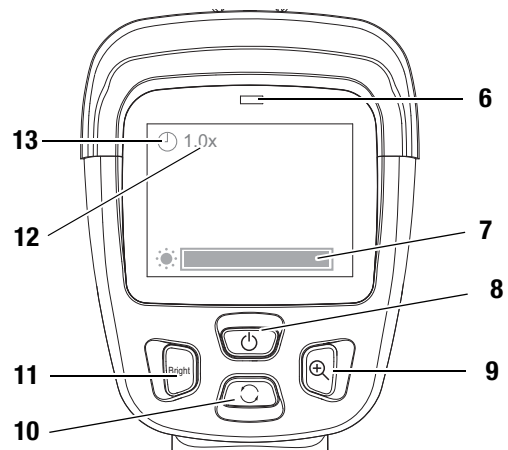
The probe is water-proof and can be immersed in water along with the camera head, e.g. to check whether there are any objects underneath the surface (e.g. for leak detection or drainage or sanitary work).

### Device depiction



No.	Operating element
1	Display
2	Gooseneck probe
3	Camera
4	Battery compartment
5	Operating elements

## Display and operating elements



No.	Operating/display element
6	Battery status indication
7	LED brightness indication
8	Power button
9	Zoom button
10	Image rotation button
11	Brightness button
12	Enlargement factor indication
13	Image rotation indication

## Technical data

Model:	B021
Weight:	584 g
Dimensions (H x W x D):	240 mm x 160 mm x 100 mm
Display:	2.4 inch digital LC colour display resolution 480*234 pixels Frame rate 30 fps
Camera diameter:	17 mm
Length of the gooseneck probe:	1 m
Range of vision:	5 to 15 cm
Field of vision:	68 °
Zoom:	2x
Operating temperature:	-10 °C to 50 °C
Storage temperature:	-10 °C to 50 °C
Type of protection (gooseneck probe and camera head):	IP 67
Power supply:	4 x Alkaline LR6 AA, 1.5 V batteries

## Scope of delivery

- 1 x Videoscope B021
- 4 x Alkaline LR6 AA, 1.5 V batteries
- 1 x Accessory kit with mirror, hook and magnet attachment
- 1 x Getting started guide

## Safety

**Carefully read the operating manual before using the device and keep it within reach!**

- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- 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 with a tool.
- Observe the storage and operating conditions (see chapter Technical data).

### Intended use

Only use the device for the visualization of objects. To use the device for its intended use, only use accessories and spare parts which have been approved by TROTEC®.

### Improper use

Do not use the device in potentially explosive areas. Never use the device on persons or animals. TROTEC® accepts no liability for damages resulting from improper use. In such a case, entitlements to a warranty are forfeited. 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



#### Danger!

Keep a sufficient distance away from sources of heat.



#### Danger!

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



#### Danger!

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



#### Danger!

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



#### Caution!

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



#### Caution!

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

## Transport and storage

### Transport

Use a suitable bag to transport the device.

### Storage

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

- Dry,
- Protected from dust and direct sunlight,
- With a plastic cover to protect it from invasive dust, if necessary.
- The storage temperature is the same as the range given in the chapter Technical data.
- When storing the device for a long time, remove the batteries.
- Preferably use the supplied case to store the device.

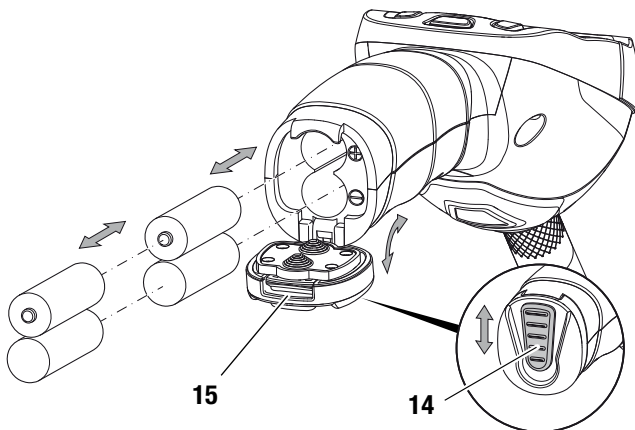
## Operation

### Inserting the batteries



#### Caution!

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



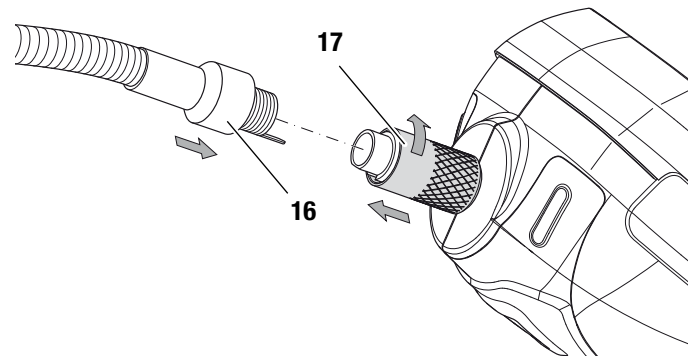
1. Slide the switch (14) down.
  - The battery compartment's lock is released.
2. Open the cover (15) of the battery compartment.
  - Remove any used batteries.
3. Insert the batteries with correct polarity.
4. Close the cover (15) again.
  - The switch (14) snaps into place and the battery compartment is locked.

### Connecting the gooseneck probe



#### Caution!

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



1. Connect the gooseneck probe (16) to the device (17). To do so, insert the probe's detent pin into the corresponding recess at the plug of the camera housing until they are connected in a way preventing rotation.
2. The device port (17) comes with a screw joint. Connect it to the gooseneck probe.

### Switching on and off

- Press the Power button (8) for approx. 2 seconds.
  - The display switches on.
  - The device is ready for operation.
- Press the Power button (8).
  - The device switches off.

### Aligning/moving the camera

- Move the gooseneck probe into the desired position.
- If required, you can rotate the camera image on the display by 180°. To do so, press the Image rotation button (10).
- Press the Image rotation button (10) again.
  - The display shows the image without 180° rotation.
- For underwater photos the gooseneck probe can be immersed. Make sure that the device itself does not make contact with water, otherwise it might be damaged.

### Setting the camera lighting

- Press the Brightness button (11) until the desired level of illumination is set at the camera head.
  - The Brightness indication (7) displays the current setting.

### Setting the zoom factor

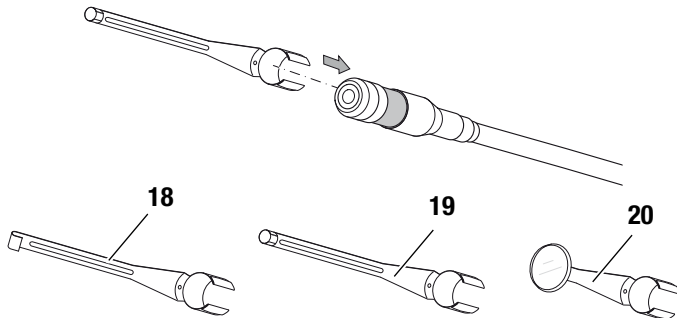
- Press the Zoom button (9) until the desired zoom level is set.
  - The Enlargement factor indication (12) displays the current value.
  - The value range is between 1.0 and 2.0.

## Using accessories

The accessories include 3 attachments for the camera head:

- hook (18) (for recovery or taking samples)
- magnet (19) (for withdrawing ferromagnetic metal parts)
- mirror (20) (side-view adapter)

If required, these attachments can be fastened to the camera head.



## Maintenance and repair

### Battery change

Change the batteries, when the Battery status indication (6) is illuminated in red or the device can no longer be switched on. See Inserting the batteries on page 4.

### Cleaning

Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners. Only use 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



In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and Council of 27th January 2003 concerning old electrical and electronic equipment. At the end of its life, please dispose of this instrument in a manner appropriate to the relevant legal requirements.

In the European Union, batteries 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 Council of 6th September 2006 concerning batteries and accumulators. Please dispose of batteries in a manner appropriate to the relevant legal requirements.

## Declaration of conformity

in accordance with the EC Low Voltage Directive 2006/95/EC and the EC Directive 2004/108/EC about electromagnetic compatibility.

Herewith, we declare that the videoscope B021 was developed, constructed and produced in compliance with the named EC directives.

The  $\text{C} \in$  marking is found on the rear of the device.

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