VSC206

EN

OPERATING MANUAL
VIDEOSCOPE

TROTEC

TRT-BA-VSC206-TC-003-EN

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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.

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

VSC206

https://hub.trotec.com/?id=41280

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.
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

- Do not use the device in potentially explosive rooms.
- Do not use the device in aggressive atmosphere.
- 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.

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, 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

Hazardous electric current
Work on the electrical components must only be carried out by an electrically skilled person or an authorised specialist company.

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 of electrical voltage
Before any work on the device, remove the mains plug from the mains socket and the battery from the device! Hold onto the mains plug while pulling the power cable out of the mains socket.

Warning of explosive substances
Do not expose the battery to temperatures above 45 °C! Do not let the battery come into contact with water or fire! Avoid direct sunlight and moisture. There is a risk of explosion!

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
To prevent water damages to the device, please observe the different types of protection of the housing and the gooseneck probe.
The housing is splash-proof (IP54), the gooseneck probe can be immersed in water (IP67, 1 m / 30 min).

Note
Using the device continuously over several hours causes an increased heat generation in the LEDs in the probe tip. To increase the lifetime of both the LEDs and the imaging sensor we recommend allowing the device to cool down at ambient temperatures for at least 10 to 15 minutes with the power switched off after a long period of use.

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

Information about the device

Device description

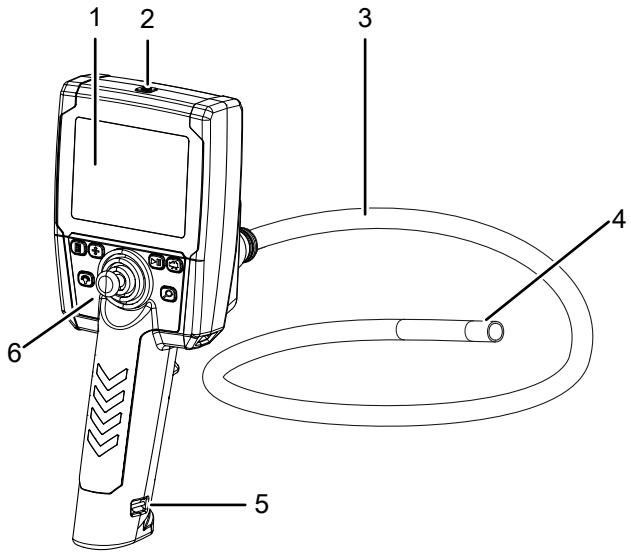
The device VSC206 serves for inspecting concealed machine components and poorly accessible or inaccessible hollows.

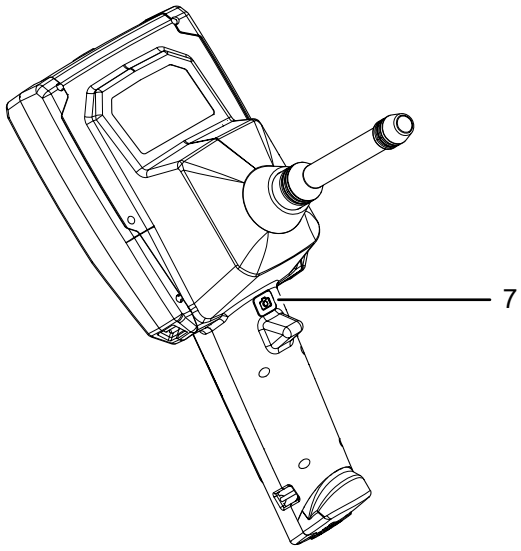
A high-resolution camera and a moveable camera head with an adjustable, bright LED illumination are available for the display and capturing/recording of images and videos.

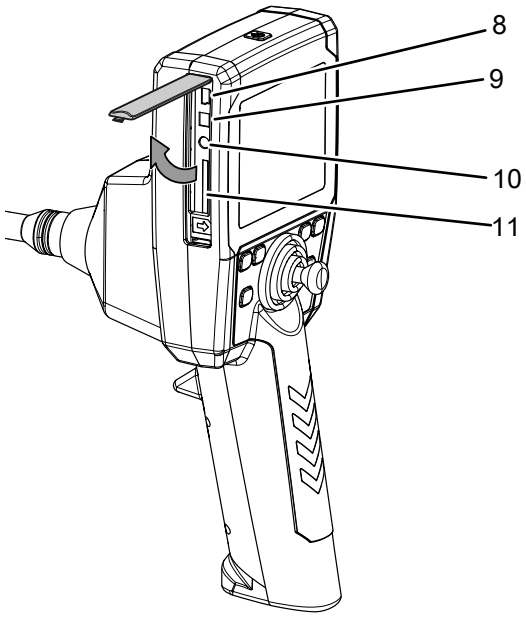
The device's functions can be controlled via an integrated operator software.

The recordings and measurements can be stored on an SD card and transmitted via a USB interface.

Device depiction

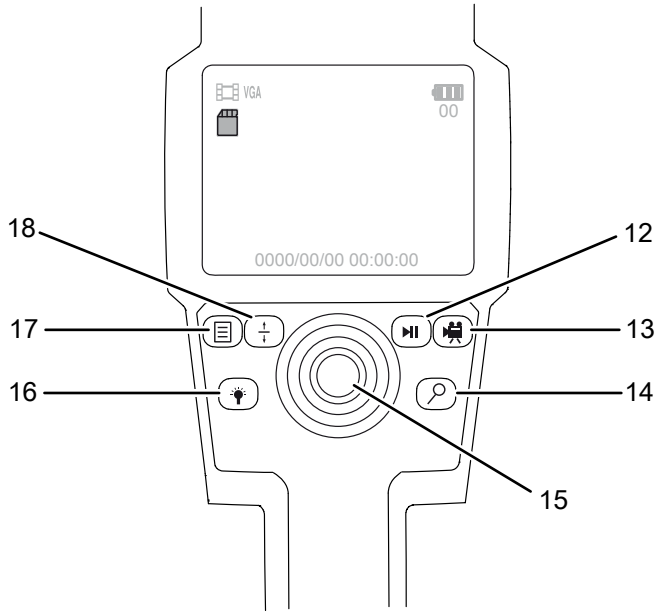






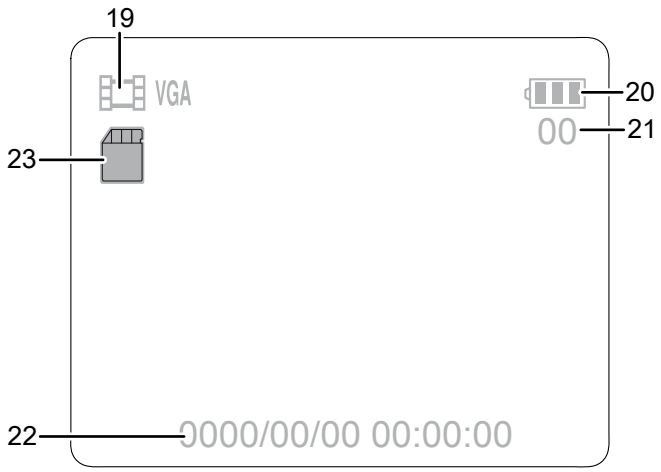
No.	Designation
1	Display
2	Power button
3	Probe cable
4	Camera head with 4-way articulation
5	Battery compartment with battery holder
6	Operating elements with joystick
7	Photo/OK button
8	USB interface
9	Power adapter connection
10	AV output
11	SD card slot

Control panel



No.	Designation
12	Play button
13	Video button
14	Zoom button
15	Joystick
16	Brightness button
17	Menu button
18	Up/Down button

Display



No.	Display element	
19	Image Mode	current image mode (photo/video)
20	Battery	battery state of charge
21	Zoom	current zoom factor
22	Time/date stamp	indicates the current date/time
23	SD card	SD card inserted

Technical data

Parameter	Value	
Model	**VSC206**	
Article number	3.510.009.630	
System	Type of lighting	6 white LEDs (colour temperature 5,000 to 6,000 K)
	Luminous intensity	40,000 lux
	White balance	Default setting ex works
	Brightness control	Manually adjustable
	LCD display	3.5 inch TFT LCD (640 x 480 px [VGA])
	Memory	Slot for removable SD card (max. 32 GB)
	File formats	JPEG image format, AVI video format
	Power supply	4 x LR6 AA, 1.5 V or 4 x Ni-MH batteries, 1.2 V; power adapter (input: AC 100 V to 240 V, 50/60 Hz, 0.2 A, output: DC 5 V, 1.0 A)
	Operating time	≤ 2 h
Probe	Dimensions	Length 2 m, ø 6 mm
	Design	Exterior: stainless steel wire mesh for high torsional stability, inner layer: polyurethane on steel spiral
	Bending	up / down / left / right ≈ 120°
	Type of protection	IP67 (water-proof to 1 m / 30 min)
Camera	Image sensor	CMOS
	Resolution	350,000 pixels
	Field of vision	90°
	Camera head	Stainless steel with titanium coating
	Zoom	5x digital
Control software	Operator guidance	Simple interactive menu control, menu navigation via joystick
	Available menu languages	German, English, French
	Software functions	System settings, video settings, memory functions
Ambient conditions	Temperature	-10 °C to +50 °C
	Humidity	< 90 % RH
	Type of protection (housing)	IP54
Physical characteristics	Construction	ABS housing with integrated bumpers
	Dimensions	265 x 100 x 125 mm
	Weight	590 g (incl. batteries)

Scope of delivery

- 1 x Videoscope VSC206
- 4 x NI-MH batteries, 1.2 V
- 1 x Transport case
- 1 x Power adapter
- 1 x Battery charger with mains plug
- 1 x Quick guide
- 1 x SD card
- 1 x LCD cleaning cloth

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

For transporting the device, use the transport case included in the scope of delivery in order to protect the device from external influences.

The supplied Li-ion batteries are subjects to the requirements of dangerous goods legislation.

Observe the following when transporting or shipping Li-ion batteries:

- The user may transport the batteries by road without any additional requirements.
- If transport is carried out by third parties (e.g. air transport or forwarding company), special requirements as to packaging and labelling must be observed. This includes consulting a dangerous goods specialist when preparing the package.
  - Only ship batteries if their housing is undamaged.
  - Mask open terminals with tape and pack the battery in a way that it cannot move inside the packaging.
  - Please also observe any other national regulations.

Storage

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

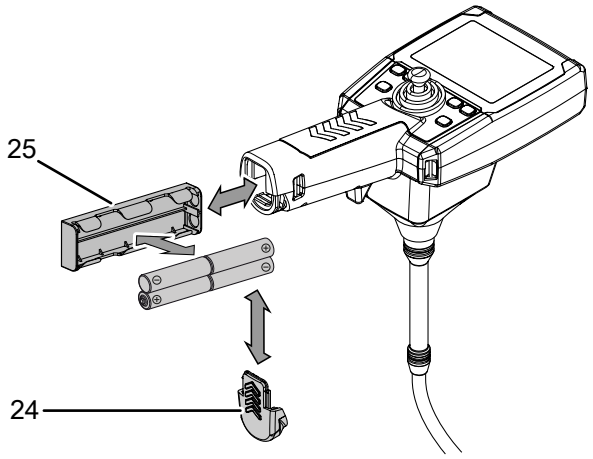
- dry and protected from frost and heat
- protected from dust and direct sunlight
- For storing the device, use the transport case included in the scope of delivery in order to protect the device from external influences.
- The storage temperature is the same as the range given in the Technical data chapter.
- When storing the device for an extended period of time, remove the batteries.

Operation

Inserting the batteries

Note

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



1. Remove the cover (24) from the battery compartment by sliding it in the direction of the arrow.
   ⇨ The cover is firmly attached to the battery compartment.
2. Take out the battery holder (25).
   ⇨ Remove any used batteries.
3. Insert the batteries in the battery holder with correct polarity.

Note

Alternatively, the device can be operated with the power adapter connected. For this purpose, connect the supplied power adapter with the connector (9).

Note

Only use the supplied power adapter or a power adapter with identical specifications! An unsuitable power adapter can cause damage to the device!

Inserting the SD card

1. Open the rubber tab on the left side of the device.
2. Insert the SD card in the SD card slot (11).
3. Slightly press down the SD card until it engages.
4. Close the rubber tab.

Switching on and off

1. Briefly press the Power button (2).
   ⇨ The display is switched on.
   ⇨ The device is ready for operation.
2. Press the Power button (2) for approx. 3 seconds.
   ⇨ The device switches off.

Aligning/moving the camera

Info

Please note that the surface of the netting at the probe exterior may fray over time depending on the mechanical stress (e.g. when in contact with sharp-edged objects). This does not constitute a defect of the device but normal wear and tear, which cannot be avoided.

1. Use the joystick (15) to move the camera (4) in the desired direction.

Taking a picture

1. Press the Up/Down button (18) to switch into photo mode.
   ⇨ A camera symbol is displayed in the top left corner while in photo mode (19).
2. Press the Photo/OK button (7).
   ⇨ The picture is taken.

Recording a video

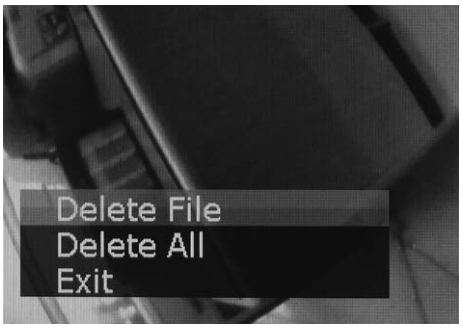
1. Press the Up/Down button (18) to switch into video mode.
   ⇨ A video symbol is displayed in the top left corner while in video mode (19).
2. Press the video button (13).
   ⇨ The videoscope switches to recording mode.
   ⇨ The recording is started.
3. Press the video button (13) again.
   ⇨ The recording is stopped.

Viewing recordings

1. Press the Play button (12).
   ⇨ The videoscope switches to picture view.
2. Press the Up/Down button (18).
   ⇨ The different recordings will be displayed on the screen.
   ⇨ Press the Zoom button (14) to see a preview of up to six pictures/videos. Press the Zoom button (14) again to exit the preview mode.
   ⇨ Press the Play button (12) to play a video or, if necessary, to pause.
3. Press the video button (13).
   ⇨ The picture view is stopped.
   ⇨ The videoscope switches back to recoding mode.

Deleting pictures or videos

1. Press the Play button (12).
   ⇨ The videoscope switches to picture view.
2. Press the Up/Down button (18) or the brightness button (16) until the desired recording is displayed.
3. Press the Menu button (17).
   ⇨ The submenu *Delete* will be displayed.



4. Select the desired setting:
   ⇨ Press *Delete File* to delete the file.
   ⇨ Press *Delete All* to delete all files.
   ⇨ Press *Exit* to cancel the process.
5. Press the Photo/OK button (7).
   ⇨ The submenu *Delete File* will be displayed.

6. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The selected action is executed.
   ⇨ The videoscope switches to picture view.

Software

Setting the resolution

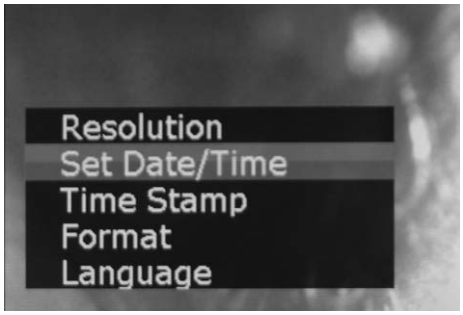
1. Press the Menu button (17).
   ⇨ The selection menu will be displayed.

2. Select the menu item *Resolution* by use of the Up/Down button (18).
3. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The submenu *Resolution* will be displayed.

4. Use the Up/Down button (18) to select the desired resolution:
   ⇨ Press *QVGA* to set a high resolution.
   ⇨ Press *D1* to set a normal resolution.
5. Confirm the selection by pressing the Photo/OK button (7).

Setting the date and time

1. Press the Menu button (17).
   ⇨ The selection menu will be displayed.

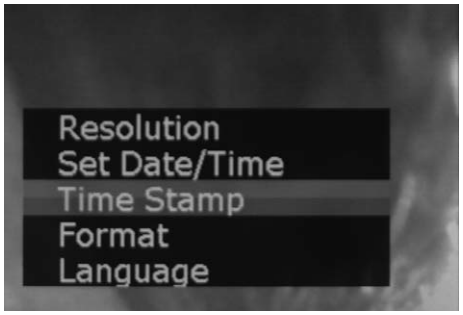


2. Select the menu item *Set Date/Time* by use of the Up/Down button (18).
3. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The submenu *Set Date/Time* will be displayed.
   ⇨ The date is indicated in year/month/day format.

4. Use the Up/Down button (18) or the Brightness button (16) to select the desired year.
5. Press the Zoom button (14).
   ⇨ The field for the month is now enabled.
   ⇨ The settings are made as described for the year.
6. Repeat steps 4. and 5. until time and date are set.
7. Press the Photo/OK button (7).
   ⇨ The settings will be saved.

Setting the time stamp

1. Press the Menu button (17).
   ⇨ The selection menu will be displayed.

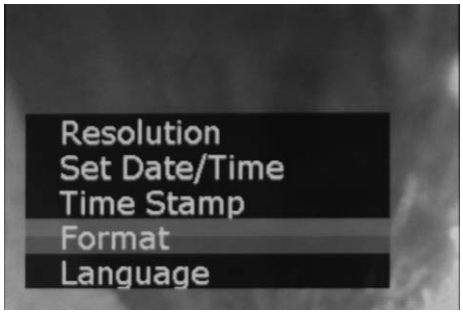


2. Select the menu item *Time Stamp* by use of the Up/Down button (18).
3. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The submenu *Time Stamp* will be displayed.

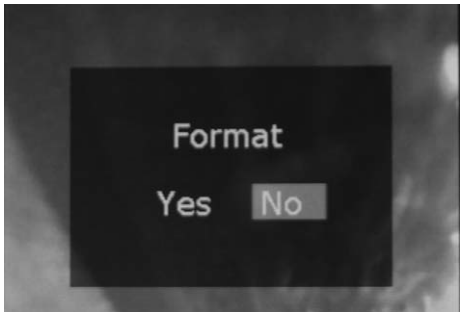
4. Use the Up/Down button (18) to select the desired setting:
   ⇨ Press *On* to enable the time stamp.
   ⇨ Press *Off* to disable the time stamp.
5. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The time stamp will be set and the selection menu will be displayed.

Formatting an SD card

1. Press the Menu button (17).
   ⇨ The selection menu will be displayed.



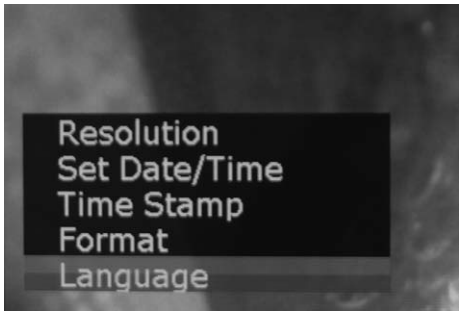
2. Select the menu item *Format* by use of the Up/Down button (18).
3. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The submenu *Format* will be displayed.



4. Use the Up/Down button (18) to select the desired setting.
   ⇨ If you press *Yes*, the SD card will be formatted.
   ⇨ If you press *No*, the SD card will not be formatted.
5. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The process will be executed and the selection menu will be displayed.

Set language

1. Press the Menu button (17).
   ⇨ The selection menu will be displayed.



2. Select the menu item *Language* by use of the Up/Down button (18).
3. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The submenu *Language* will be displayed.

4. Use the Up/Down button (18) to select the desired language.
5. Confirm the selection by pressing the Photo/OK button (7).
   ⇨ The desired language will be set and the selection menu will be displayed.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

For repairs or device testing, contact the manufacturer.

Maintenance and repair

Charging the battery

Charge the battery when the battery indication (20) flashes red. Only use the supplied power adapter or a power adapter with identical specifications for charging the batteries!

Info
You can supply the device with electricity via the power adapter. To do so, connect the cable of the supplied power adapter to the corresponding connection (9).

Alternatively, you can use spare batteries (type see technical data).

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, 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. For further return options provided by us please refer to our website www.trotec24.com.

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.

Li-Ion

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.

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