

EN

OPERATING MANUAL
VIDEOSCOPE



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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:



B026



<https://hub.trotec.com/?id=43623>

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.
- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Protect the device from permanent direct sunlight.
- Only use the device in de-energized facilities and objects. For reasons of safety, de-energize all plant components and objects prior to every inspection.
- Before using the measuring probes and camera heads, de-energize any circuits located in walls.
- Before using the measuring probes and camera heads in metal pipes inside a wall, have an authorised specialist company carry out a check to ensure that the metal pipes are not electrically charged.
- For reasons of safety, do not use the measuring probes and camera heads for inspections in moving parts.
- 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.
- Observe the storage and operating conditions (see 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.

Foreseeable misuse

Do not use the device in potentially explosive areas. Do not use the control unit with display underwater. Never use the device on persons or animals.

Any unauthorised changes, modifications or alterations 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

Electric shock due to contact with live parts! Do not touch any live parts. Secure neighbouring live parts by covering them or by switching them off.



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 60°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

Lithium-ion batteries might catch fire in case of overheating or damage. Ensure a sufficient distance to heat sources, do not subject lithium-ion batteries to direct sunlight and make sure not to damage the casing. Do not overcharge lithium-ion batteries. Only use smart chargers that switch off automatically when the battery is fully charged. Charge lithium-ion batteries in due time before they are discharged completely.



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 videoscope B026 serves for inspecting concealed machine components and poorly accessible or inaccessible hollows.

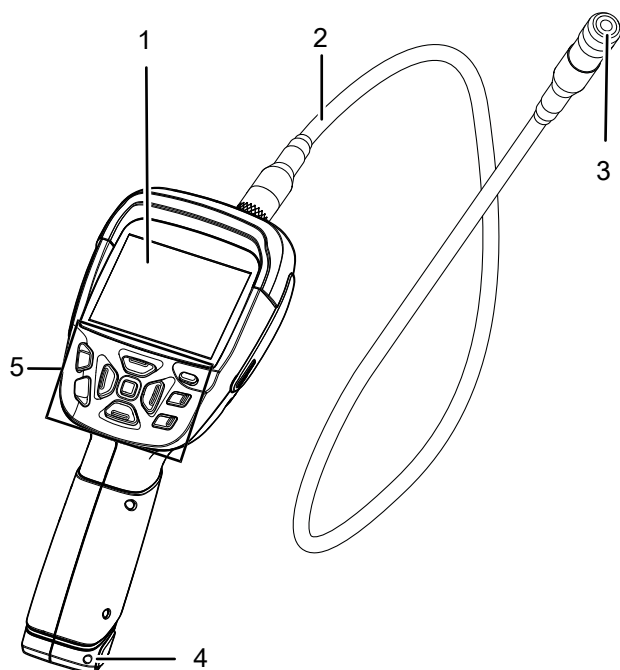
The camera is connected to the device via a flexible gooseneck probe.

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).

The device has the following features:

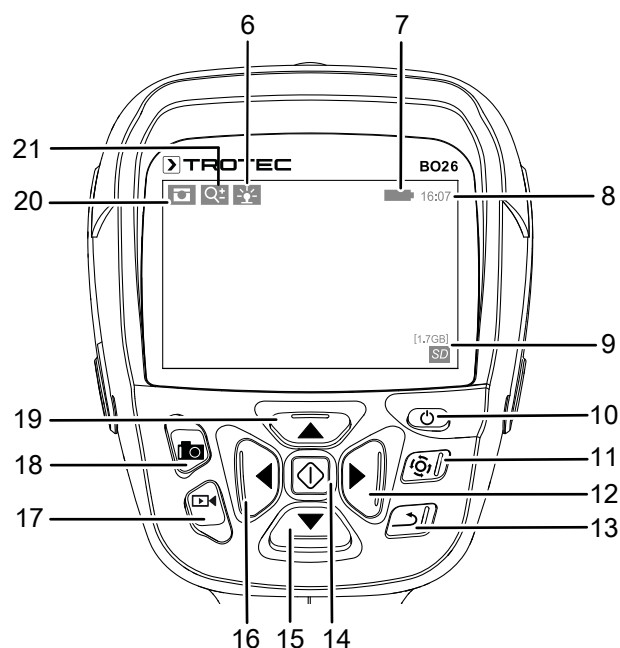
- high-resolution camera
- operator software for control of functions
- recording function for pictures and videos, storage on an SD card
- USB interface for data transmission

Device depiction

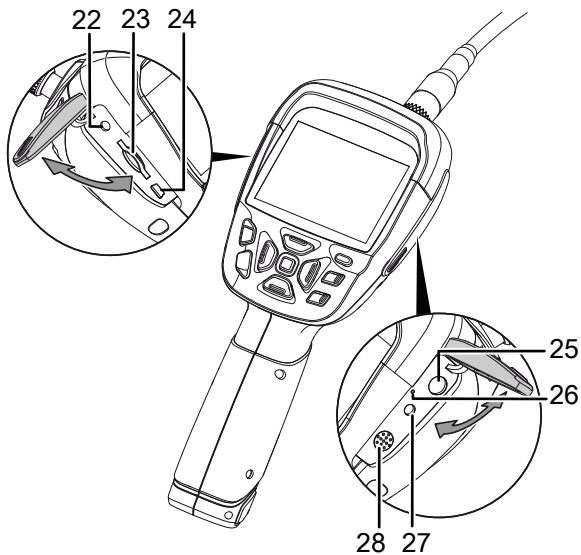


No.	Operating element
1	Display
2	Gooseneck probe
3	Camera
4	Battery compartment
5	Operating elements

Display and operating elements



No.	Operating/display element
6	Brightness indication
7	Battery status indication
8	Time indication
9	SD card indication
10	Power button
11	Image rotation button
12	Right button
13	Back button
14	Menu button
15	Down button
16	Left button
17	Video button
18	Photo button
19	Up button
20	Photo/video indication
21	Zoom indication



No.	Operating element
22	TV out
23	SD card slot
24	USB interface
25	Charger connection
26	Reset opening
27	Headphone connection
28	Speaker

Technical data

Parameter	Value
Model	B026
Weight (incl. battery)	approx. 840 g
Dimensions (length x width x height)	255 mm x 85 mm x 110 mm
Display	3.5 in digital LC colour display (320 x 240 pixels) frame rate 30 fps
Storage	on SD card (up to 32 GB, not included in the scope of delivery)
Video (format, resolution)	MP4/AVI/3GP (640*480)
Photo (format, resolution)	JPEG (640*480)
TV output	PAL, NTSC
Diameter of the standard camera head	17 mm
Length of the gooseneck probe	100 cm
Focus	approx. 5 cm to 15 cm
Image rotation	0 to 360° (5°, 15°, 45°, 90° adjustable)
Zoom	3-fold (digital)
Operating temperature	0 °C to 50 °C with <80 % RH
Storage temperature	0 °C to 50 °C with <80 % RH
Type of protection (gooseneck probe and camera head)	IP 67
Type of protection of control unit	IP 54
Power supply	1 x Li-ion battery 3.7 V charger DC 5 V/2000 mA

Scope of delivery

- 1 x Device B026
- 1 x gooseneck probe 1 m
- 1 x 3.7 V Li-ion battery
- 1 x Transport case
- 1 x Accessory kit with 45° mirror, hook and magnet attachment
- 1 x Video cable (RCA)
- 1 x USB cable
- 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

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 complies with the values specified in the Technical data
- When storing the device for an extended period of time, remove the battery/batteries.

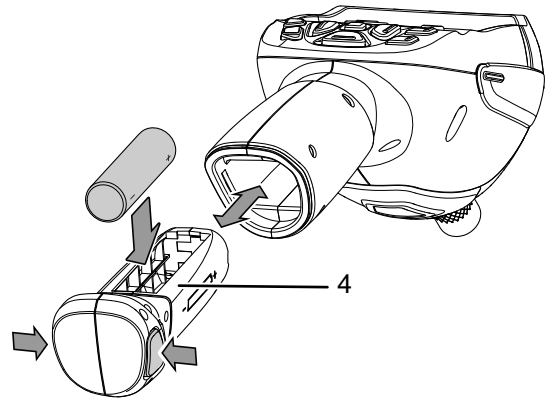
Operation

Inserting the battery

Note

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

1. Press the two buttons on the left and right side of the handle and pull the battery compartment (4) out of the device.
2. Insert the battery into the compartment with correct polarity.



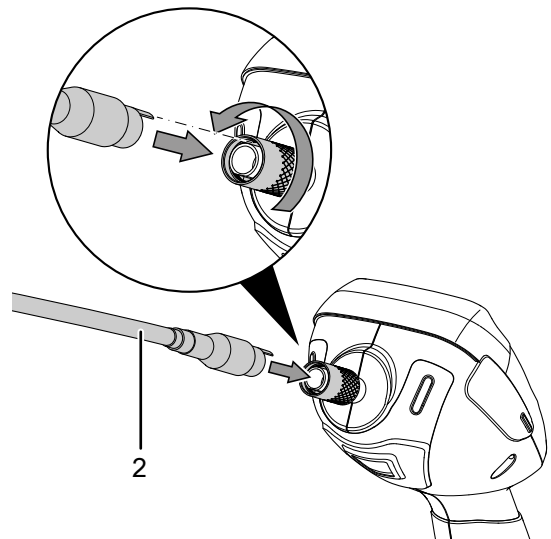
3. Push the battery compartment back into the device until it engages completely.

Connecting the gooseneck probe

Note

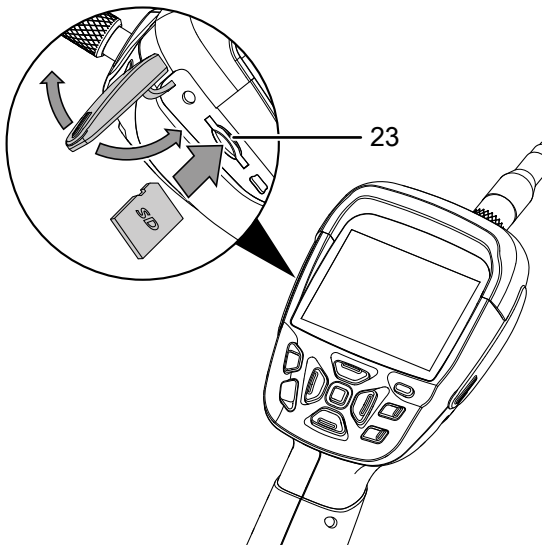
Make sure that the surface of the device is dry and the device is switched off.

1. Connect the gooseneck probe (2) to the device connection. In doing so, make sure that you first insert the pin on the probe carefully into the corresponding recess on the device side to prevent accidental turning of the contacts.
2. The device port comes with a screw joint. Connect it to the gooseneck probe.



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 (23).
3. Slightly press down the SD card until it engages.



4. Close the rubber tab.

Switching on and off

1. Press the Power button (10) for approx. 3 seconds until the logo appears.
 - ⇒ The device starts. It takes a few seconds until the display is switched on and the device ready for operation.
2. Press the Power button (10) for approx. 2 seconds to switch the device off.
 - ⇒ The display will be deactivated and the system is shut down.

Aligning / moving the camera

1. Move the gooseneck probe (2) into the desired position.
2. Align the camera image. Press the image rotation button (11) until the camera image is oriented as desired.
3. 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.

Speaker

The device is equipped with an integrated speaker (28). The device can thus play a video file with sound.



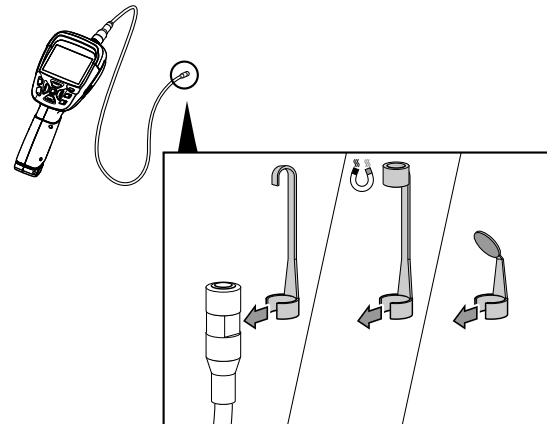
Info

You must first record a video with sound. To record a video with sound, a headset with microphone (not included in the scope of delivery) must be plugged into the headphone connection (27).

Using accessories

The accessories include 3 attachments for the camera head:

- hook (for recovery or taking samples)
- magnet (for withdrawing ferrous metal parts)
- mirror (bent, expands the lateral field of vision)



Taking a picture

1. Press the photo button (18).
 - ⇒ The picture is taken and saved on the SD card.

Recording a video

1. Press the video button (17).
 - ⇒ After approx. 5 seconds, recording of the video starts.
 - ⇒ The photo/video indication (20) switches to video and flashes on the display.
 - ⇒ The video runtime is displayed.
2. Press the video button (17) again to stop recording.
 - ⇒ Recording is stopped.
 - ⇒ The video is saved on the SD card.



Info

If you want to record a video with sound, plug a headset with microphone into the headphone connection (27) before starting the recording.

Setting the zoom

1. Press the Up (19) or Down button (15) until the desired zoom is set.
 - ⇒ A scale on the screen indicates the current zoom level.

Setting the LED brightness

1. Press the Left (16) or Right button (12) until the desired brightness is set.
 - ⇒ A scale on the screen indicates the current brightness level.

Main menu

1. Press the Menu button (14) to open the main menu of the software.
⇒ The main menu will be displayed.

The following menu items are available in the main menu:

Menu item	Function
<i>Mode</i>	Viewing and deleting photos and videos
<i>Language</i>	Setting the menu language (11 languages to choose from)
<i>TV output</i>	Setting the TV format for video output (PAL/NTSC)
<i>Time Date</i>	Setting date format, date and time
<i>Automatic shutdown</i>	Settings for automatically switching the device off
<i>SD card</i>	Formatting the SD card
<i>Image rotation</i>	Presetting the rotation angle by pressing the image rotation button (11)
<i>Product information</i>	Information about the device

1. Use the arrow buttons (12, 15, 16, 19) to navigate within the main menu.
2. Use the Menu button (14) to open a submenu or to confirm your selection.
3. Use the back button (13) to return to the previous menu.

Setting date, time and date format

1. Within the main menu, navigate to the submenu *Time Date* and confirm your selection by pressing the Menu button (14).
⇒ The *Date and time* submenu will be displayed. You can choose from the following menu items:

Menu item	Function
<i>Setting the date</i>	Opens the submenu for setting the date. Using the Right (12) and Left button (16), you can switch between the day, month and year display. Using the Down (15) and Up (19) button, you can modify the corresponding value. Using the Menu button (14), you can confirm your selection.
<i>Setting the time</i>	Opens the submenu for setting the time. Using the Right (12) and Left button (16), you can switch between the hour and minutes display. Using the Down (15) and Up (19) button, you can modify the corresponding value. Using the Menu button (14), you can confirm your selection.
<i>Date format</i>	Opens the submenu for setting the date format. Using the Down (15) and Up (19) button, you can select the desired format. Using the back button (13), you can confirm your selection.

Viewing recordings

1. Press the Menu button (14).
⇒ The main menu will be displayed.
2. Press the Left (16) or Right button (12) until the *Mode* menu is displayed.
3. Use the Down button (15) to select the photo or video menu item and confirm your selection with the Menu button (14).
⇒ The different recordings will be displayed on the screen.
4. Select a recording and press the Menu button (14) to view a picture or play a video and, if required, to pause.
5. Press the Back button (13) to leave the screen.
⇒ The selection list of the recordings is displayed.
6. Press the Back button (13) again to return to the main menu.

Advanced picture settings

If you view a previously taken photo, you can display information regarding the photo, zoom in/out or delete it. To do so, please proceed as follows:

1. View the photo as described above.
⇒ The photo is displayed.
2. Press the Menu button (14).
⇒ The submenu for pictures will be displayed. You can choose from the following menu items:

Menu item	Function
<i>Photo information</i>	Display extended information about the photo
<i>Deact. information</i>	Disable the information display
<i>Select photo mode</i>	Zoom mode: Having selected the zoom mode and by pressing the Back button (13), you can zoom in or out using the Down (15) and Up (19) buttons Motion mode: Having selected the motion mode and by pressing the Back button (13), you can move the image section using the arrow buttons.
<i>Delete photo</i>	Deleting a file
<i>Exit</i>	Exit the submenu

Delete pictures/videos

1. Via the menu item *Mode*, you can view a list of all saved photos or videos, as described above.
⇒ The list of photos or videos is displayed.
2. Press the image rotation button (11).
⇒ The submenu for deleting will be displayed.
3. Using the Down (15) or Up (19) button, navigate to the menu item *Select*.
4. Confirm the menu item *Select* by pressing the Menu button (14).
⇒ The list of photos or videos is displayed again.
5. Using the Down (15) or Up (19) button, navigate to the photo or video that you want to delete.
6. Select the photo or video by pressing the Menu button (14).
⇒ Within the list, the photo or video is framed in red.
7. If desired, select additional photos or videos as described before.
8. Press the image rotation button (11).
⇒ The submenu for deleting will be displayed.
9. Using the Down (15) or Up (19) button, navigate to the menu item *Delete selection*.
10. Confirm the menu item *Delete selection* by pressing the Menu button (14).
⇒ The selected photos or videos are deleted.

Watch videos via an external screen

For playback on a screen, the videoscope must be connected with the video output (22) and the screen via the video cable. You can adapt the output format to the video standard of the screen in the main menu. In the submenu *TV Output*, the following options are available:

Menu item	Function
<i>Deactivate</i>	Deactivates the TV Output
<i>PAL</i>	Activates the video format PAL (e.g. in Western Europe, Australia, New Zealand and in parts of Asia)
<i>NTSC</i>	Activates the video format NTSC (e.g. in the USA, Canada, Mexico and Japan)

Errors and faults

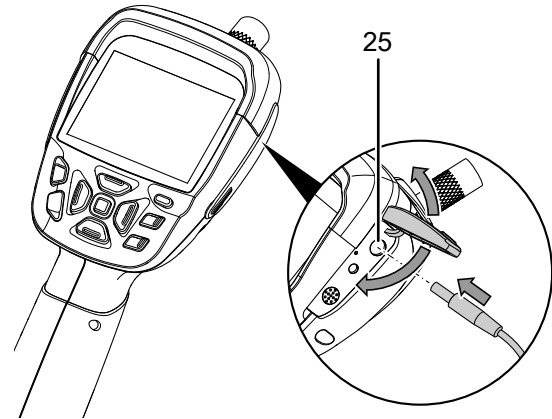
The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

Fault	Cause	Solution
The device does not switch on.	No battery is installed.	Make sure that the battery is installed.
	The battery is not installed properly.	Make sure that the battery is installed properly.
	The battery is empty.	Make sure that the battery is new or charged sufficiently.
Device did not record pictures/videos.	No SD card inserted.	Insert an SD card.
	SD card is full.	Delete files no longer needed to free up storage space.
	The device switched off during recording.	Terminate the recording before the battery has run empty.
SD card cannot be read.	Problem with SD card.	Make sure that the SD card is not damaged and the storage space does not exceed 32 GB.
	System has crashed.	Restart the system.
Camera image is too bright or too dark.	Camera light is set too bright or too dark.	Set the camera light correctly (see Chapter Operation).
Camera light does not work, no image being displayed.	The battery is not charged sufficiently.	Recharge the battery.
	Communication error between camera and device.	Check the connection between gooseneck probe and device.
	The camera is damaged.	Please contact the Trotec customer service.
The recorded video stutters.	The SD card transfer speed is too low.	Use another SD card with higher transfer speed.

Maintenance and repair

Charging the battery

Charge the battery when the battery status indication (7) flashes red or the device can no longer be switched on. To do so, connect the charger to the mains and the charger cable to the charger (25) connection.



Note

To avoid damages to the battery, only use the charger included in the scope of delivery for charging the battery.

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.

Trotec GmbH

Grebbener Str. 7
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

info@trotec.com

www.trotec.com