

User manuals for  
HD camera systems

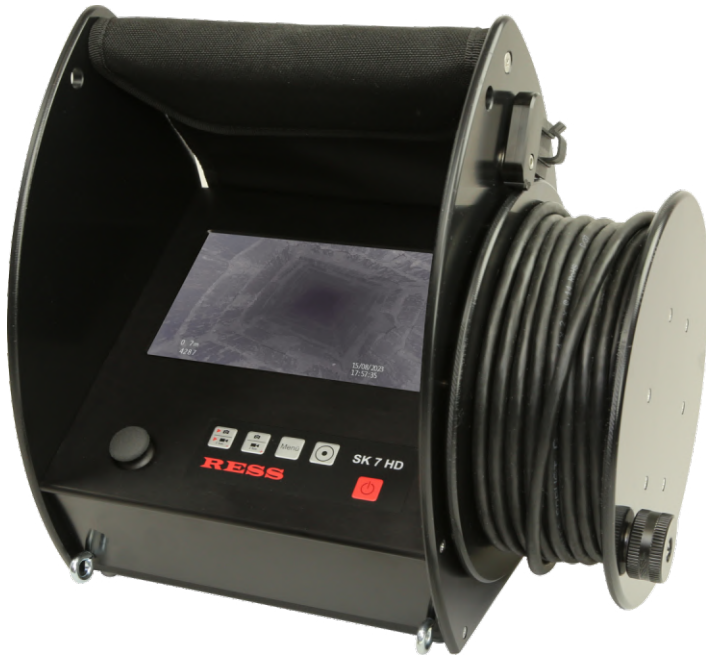




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## Manual HD Monitor SK7



# Summary of the contents

## HD Monitor SK7

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# HD Monitor SK7

Art.-no. 2850

## 1. Delivery contents

- HD Monitor SK7
- 20 meter camera cable
- Power supply
- SD card
- Carrying straps
- Sun protection

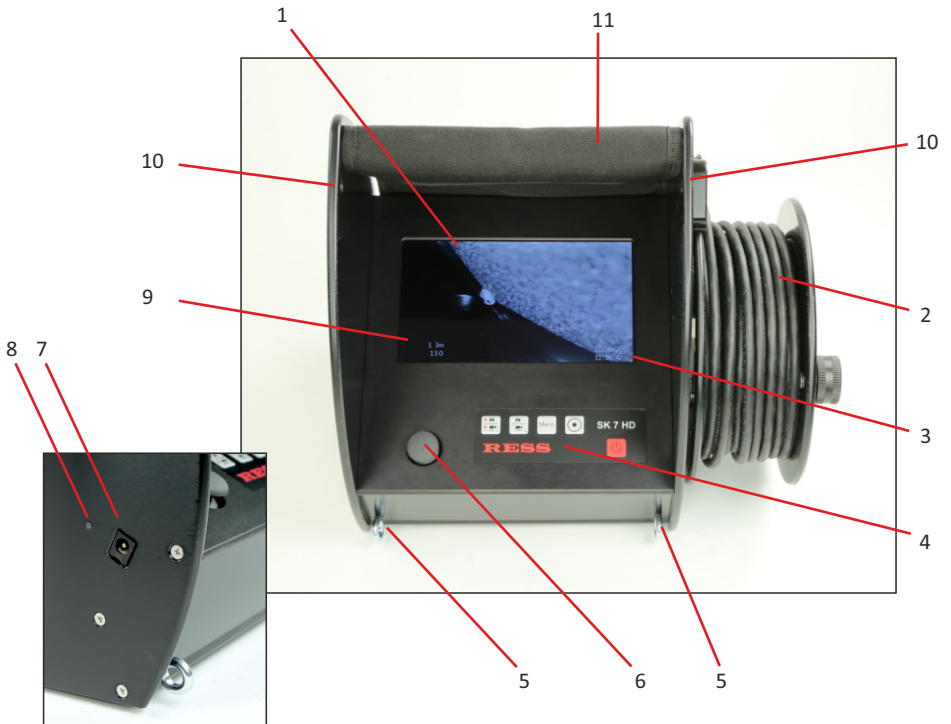
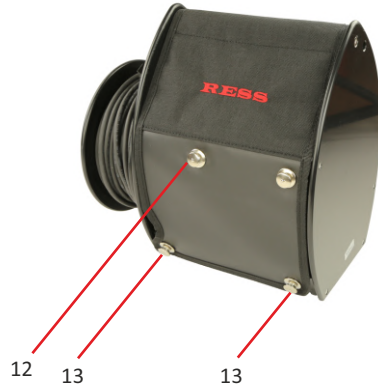


## 2. Safety Notes

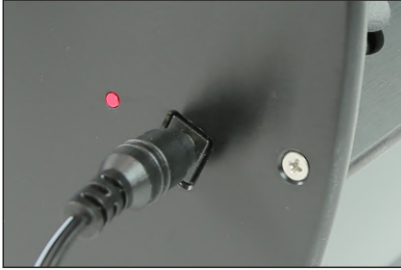
- The video inspection system is not waterproof!
- The video inspection system is not for use in the medical field!
- Any kind of reparations on inside of the unit, must be carried out, exclusively by qualified staff!  
(If required, contact the RESS-customer service)
- The video inspection system must be switched off after it has been used!
- To clean the monitor and the housing, please use a damp, clean cloth to prevent scratches! We recommend a microfibre cloth.
- Please avoid contact with water of any kind.
- Please avoid collisions at any time! (use strap)
- Do not use the inspection system near a strong magnetic field!
- Avoid temperatures above 40 degrees Celsius. Only accomplish an inspection if heating is switched off!
- This product has a certificate of conformity according to the guidelines 2014/30/EU.

### 3.1 Overall view

- 1 Monitor
- 2 Revolving cable reel
- 3 Timedisplay
- 4 Control keys
- 5 Loop to connect the carrying strap
- 6 Joystick control
- 7 Charging socket
- 8 LED charging indicator
- 9 Voltage display/Meter counter
- 10 Gap to connect the carrying strap
- 11 Sun protection
- 12 SD-Cardslot (behind sun protection)
- 13 Buttons to open the compartment



## 3.2 Start-up



When the camera system is delivered, the battery is not fully charged. The inspection camera must be charged first. Information about the LED charging indicator can be found on page 10.



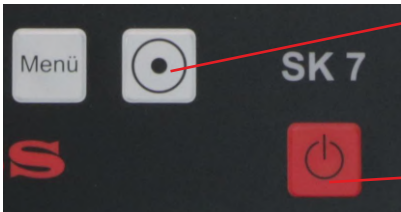
Connect the jack of the camera to the 8-pin connector on the camera head. Please make sure that the groove guide of the plug matches with the socket. Screw the plug with the threaded screw tight.

The monitor only starts when the camera head is connected.



The fixing brake clamps the cable to prevent an unwinding during an inspection or transporting. Always clamp the cable with the fixing brake, before letting go of the cable during an inspection.

The meter counter will start automatically as soon as you begin to unroll the cable. With the zero button (1) the counter can be reset to zero anytime.



1. The value of the digital meter count can be reset to zero at any time during the inspection using the push button.

Please note that tolerances in length measurement may occur, depending on how the cable is coiled.

2. On/Off button

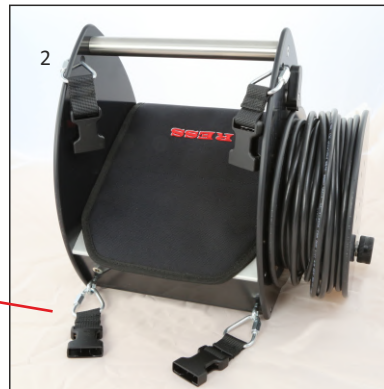


### 3.3 Start-up: Carrying strap

The buckles (1) can be removed...  
... and remain on the device.



The carabines (2) must be threaded in the lower loops and the upper holes. Make sure, that the screwing is pointed outwards. Otherwise it can disturb the correct function of the sun protection.



#### ***Shoulder strap (optional accessory)***

art. no. 92519-20

The shoulder strap can be connected with the upper buckles.



So both strap-systems can be changed as needed.

## 4. Working with the device



- Button 1: Selection of photo memory  
Selection of video memory (press 2 sec.)
- Button 2: Photo storage  
Video recording (press 2 sec.)
- Button 3: System settings
- Button 4: Reset meter counter
- Button 5: On/Off switch

### Button functions

Use the On/Off button (5) to power the camera system on and off.

Button 2 is used to save photos (a camera icon will appear); you can view the saved photos by pressing button 1. In playback mode, use buttons 1 and 2 (-/+ ) to scroll through your stored photos.

To record a video, press and hold button 2 for two seconds. Recording will start automatically, and a stopwatch will appear on the display. Press the button again to stop recording.

Press and hold button 1 for two seconds to view the recorded video. The most recently recorded video will play automatically. Use -/+ to scroll through the video storage.

Press the Menu button (3) to return to live mode. Individual photos and videos can only be deleted via a PC using the SD card. The entire SD card can be erased through the menu.

Button 4 resets the digital meter counter to zero.

### Power supply

A power adapter is included in the scope of delivery. The device can be operated either with the battery or via a power outlet. When purchased new, the battery is pre-charged. However, it should be charged via the charging socket (7) before first use. The battery level is shown on the display when the device is switched on. A fully charged battery allows for approximately 4 hours of operation. Charging takes about 3 hours. If you do not use the device for an extended period of time, you should check the battery before using it again. A minimum voltage must be restored in order to operate the device, even when connected to mains power.

Always make sure to switch off the device after an inspection to avoid unnecessary battery drain! Press and hold button 5 for 3 seconds.

### LED-Indicator Light (6)

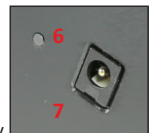
Green LED: Battery full/OK – An "A" appears before the percentage on the display, indicating battery operation.

Green LED and message "Warn" on display: Battery low – battery should be charged.

Green LED and message "Empty" on display: Battery empty – the device will shut down shortly.

LED flashing red/green: No camera head connected – restart the monitor with the camera head connected.

LED flashing red: Device cannot be switched on – charge the device.



### Power adapter connected:

Red LED: Battery OK – charging in progress. An "L" appears before the percentage on the display. Operation possible.

Red LED and message "Warn" on display: Battery low – operation possible. Battery is charging.


Red LED and message "Empty" on display: Battery empty – operation possible. Battery is charging.

LED flashing red and LCD does not start: Battery empty – device is charging slowly. A minimum voltage must be restored for operation via mains power.

Green LED: Charging complete.

## 5. System settings (button 3)

By pressing the “Menu” button again, you select the highlighted menu item.

Use “-” or “+” to open the corresponding submenu. 

Settings	
PICTURE	▶
<b>LANGUAGE</b>	▶
Time Setting	▶
<b>Time Osd</b>	ON ▶
Format	▶
Software Version	20220405
Loop recording	300S ▶
Default Setting	▶

### After accessing the system settings (3)

The active setting is always highlighted in blue.

Picture	Brightness, contrast, and color settings
Language	Language setting
Time Setting	Setting date and time
Time OSD	Show/hide date and time on display
Format	Complete deletion of the SD card
Software Version	Software version number
Loop recording	Setting video length from 60–300 seconds Can be adjusted using “+/-” After the set duration, a new recording is automatically started.
Default setting	Reset all settings to factory defaults
Press again	Return to live view

PICTURE	
<b>BRIGHTNESS</b>	60
CONTRAST	60
COLOR	30
RESET	

### Picture Settings

Brightness	Adjust Brightness
Contrast	Adjust Contrast
Color	Adjust Color
Reset	Reset All Settings

Time Setting
2025 / 07 / 14 11 : 12 : 39

### Time Setting

Press “-” to increase the value, and “+” to decrease it.

Press “Menu” to scroll through the next field.

The input is only saved once you have scrolled through to the end and the settings menu reappears.



If no input is made for 8 seconds, the system returns to the live image.

## 6. Memory card



The SD card slot is located on the back of the monitor behind the sunshade. Release the upper left button (12) to access it. An SD card is included in the scope of delivery, which can be used to store photos and videos.



Insert the SD-card with the writing at bottom until you hear a "click". Now the SD-card is locked and ready to be used. To remove, please push the SD-card until you hear a "click" again. The card will pop out automatically. Now it can be connected to a reading device (not supplied).

## 7. Technical data

Monitor:	7" TFT color screen 156 x 86 mm
Storage media:	SD card
Video recording duration:	max. 5 minutes
Data volume:	1 foto - 1280 x 720 Pixel - approx. 95 KB 1 video length 5 minutes - 1280 x 720 Pixel - approx. 50 MB
Power supply:	Battery lithium-ion, 6200 mAh
Voltage monitoring:	LCD display
Operating time:	approx. 4 hours
Charging time:	approx. 3 hours
Camera cabel:	20 m with 8-pin connector
	Temperature range: -40 to +60 °C
Fuse:	Fine fuse T6.3A – L250V
Overall dimensions:	approx. 307 x 285 x 200 mm (WxHxD)
Weight:	approx. 4,5 kg



## Manual HD Monitor FM5 Pro



# Summary of the contents

## HD Monitor FM5 Pro

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# HD Monitor FM5 Pro

Art.-no. 2840

## 1. Delivery contents

- HD Monitor FM5
- Power supply
- SD card



## 2. Safety Notes

- The video inspection system is not waterproof!
- The video inspection system is not for use in the medical field!
- Any kind of reparations on inside of the unit, must be carried out, exclusively by qualified staff!  
(If required, contact the RESS-customer service)
- The video inspection system must be switched off after it has been used!
- To clean the monitor and the housing, please use a damp, clean cloth to prevent scratches! We recommend a microfibre cloth.
- Please avoid contact with water of any kind.
- Please avoid collisions at any time! (use strap)
- Do not use the inspection system near a strong magnetic field!
- Avoid temperatures above 40 degrees Celsius. Only accomplish an inspection if heating is switched off!
- This product has a certificate of conformity according to the guidelines 2014/30/EU.



### 3. Overall view

- 1 5" LC display
- 2 Fuse
- 3 8-pin connector socket for camera cable
- 4 Charging status LED
- 5 Charging socket
- 6 SD card slot
- 7 Push button for camera head control
- 8 System query
- 9 On/Off switch
- 10 Control keys

6 The SD card slot is on the right hand side of the device



## 4. Start-up



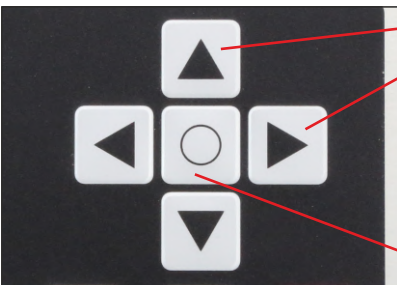
Connect the 8-pin plug of the cable to the socket on the monitor. Tighten the connection by hand.



Connect the 8-pin socket at the end of the camera cable to the camera head. Tighten the connection by hand. The monitor will only start if a camera head is connected.



By using the on/off switch the whole camera system is put into use.



Movements are controlled over the arrow buttons.

Button for system query

## 5. Working with the device



- Taster 1: Selection of photo memory  
Selection of video memory (press 2 sec.)
- Taster 2: Photo storage  
Video storage (press for 2 sec.)
- Taster 3: System settings
- Taster 4: On/Off switch

### Functions of the buttons

By using the on/off switch (4) the whole camera system is put into use. Pressing button 2 saves photos (a camera icon appears), which can be viewed again by pressing button 1. In playback mode, you can scroll through your saved photos using buttons 1 and 2 (-/+).

If you want to record a video, press and hold button 2 for two seconds. The recording will then start automatically and a stopwatch will appear on the display. Pressing the button again stops the recording. You can view the video recording using button 1. Press and hold it again for 2 seconds. The most recently recorded video will appear first and play automatically. Use the -/+ buttons to scroll through the video storage.

Pressing the Menu button (3) returns you to live mode. Individual photos and videos can only be deleted from the SD card using a PC. The entire card can be deleted via the menu.

### Power supply

Before using the monitor for the first time, it must be fully charged. The charging process takes approximately 1.5 hours. When fully charged, the battery life is around 2 hours, depending on the connected camera head. To view the voltage indicator on the display, a camera head must be connected. The battery level is shown on the left as a percentage.

**Advice:** Never forget to turn the camera off (6) at the end of an inspection, to avoid discharging the battery unnecessarily! Press the button for 2 seconds.

### Charging battery:



The monitor can be operated either via the battery or the power adapter. When the power adapter is connected, an "L" appears in front of the percentage display. The device can be used while the battery charges simultaneously. The status LED lights up red during charging. Once the battery is fully charged, it turns green.

While the camera is in operation, the display continuously shows the current battery level as a percentage. The battery must be recharged at the latest when "Battery warning" appears. At that point, approximately 15 minutes of operating time remain.


### Fuse:



Next to the socket on the front side, there is a screw behind which a fuse is located. This fuse protects the Li-ion battery. Removing it disconnects the battery from the electronics. This can be useful in the event of a service case.

## 6. System settings (button 3)

By pressing the “Menu” button again, you select the highlighted menu item.

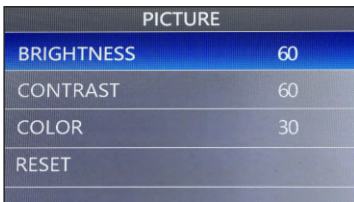
Use “-” or “+” to open the corresponding submenu. 



### After accessing the system settings (3)

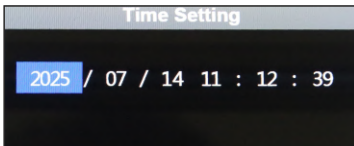
The active setting is always highlighted in blue.

Picture	Brightness, contrast, and color settings
Language	Language setting
Time Setting	Setting date and time
Time OSD	Show/hide date and time on display
Format	Complete deletion of the SD card
Software Version	Software version number
Loop recording	Setting video length from 60–300 seconds Can be adjusted using “+/-” After the set duration, a new recording is automatically started.
Default setting	Reset all settings to factory defaults
Press again	Return to live view



### Picture Settings

Brightness	Adjust Brightness
Contrast	Adjust Contrast
Color	Adjust Color
Reset	Reset All Settings



### Time Setting

Press “-” to increase the value, and “+” to decrease it.

Press “Menu” to scroll through the next field.

The input is only saved once you have scrolled through to the end and the settings menu reappears.



If no input is made for 8 seconds, the system returns to the live image.

## 7. Memory card



The SD-card slot is on the top of the Handset. The delivery contents an SD-card, where photos and movies are saved onto.



Insert the SD-card with the writing on top until you hear a "click". Now the SD-card is locked and ready to be used. To remove, please push the SD-card until you hear a "click" again. The card will pop out automatically. Now it can be connected to a reading device (not supplied).

## 8. Technical data

Monitor:	5" TFT color screen 102 x 73 mm
Storage media:	SD card
Video recording duration:	max. 5 minutes
Data volume:	1 foto - 1280 x 720 Pixel - approx. 95 KB 1 video length 5 minutes - 1280 x 720 Pixel - approx. 50 MB
Power supply:	Battery lithium-ion, 3100 mAh
Voltage monitoring:	LCD display
Operating time:	approx. 2 hours
Charging time:	approx. 1,5 hours
Fuse:	Fine fuse T6.3A – L250V
Overall dimensions:	approx. 135 x 220 x 73 mm (WxHxD)
Weight:	approx. 1,1 kg
Casing:	Synthetic material / Powder-coated aluminum
Connector:	8-pin

## 9. Accessories

### Protective Bag FM5 Pro/Pro HD

Art.-no. 26041

1.



After sliding the monitor into the protective case, close the bottom using the hook-and-loop fastener.

Now you can unfold the sunshade and secure it with the snaps.



2.



To release the snaps, simply pull on the cap...

3.



... and place the sunshade over the display as protection.

4. Hook the belt into the ears.  
Be careful, that the longer side will  
be hooked into the upper ears.



5. Now you can hold it in front of the body.



## Manual HD Monitor FM7





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# HD Monitor FM7

Art.-Nr. 2830

## 1. Delivery contents

- HD Monitor FM7
- Power supply



## 2. Safety Notes

- The video inspection system is not waterproof!
- The video inspection system is not for use in the medical field!
- Any kind of reparations on inside of the unit, must be carried out, exclusively by qualified staff!  
(If required, contact the RESS-customer service)
- The video inspection system must be switched off after it has been used!
- To clean the monitor and the housing, please use a damp, clean cloth to prevent scratches! We recommend a microfibre cloth.
- Please avoid contact with water of any kind.
- Please avoid collisions at any time! (use strap)
- Do not use the inspection system near a strong magnetic field!
- Avoid temperatures above 40 degrees Celsius. Only accomplish an inspection if heating is switched off!
- This product has a certificate of conformity according to the guidelines 2014/30/EU.

### 3. Overall view

- 1 7" LC Display
- 2 cable socket / charging socket
- 3 8-pin connector socket for camera cable
- 4 charging status LED
- 5 on/off switch
- 6 charging socket



## 4. Start up



Connect the 8-pin plug of the cable to the socket on the monitor. Tighten the connection by hand.



The device is switched on and off using the push button. Please note that the camera head or the cable reel must be connected first. The entire system must be started together. The push button needs to be pressed a bit deeper, which helps prevent accidental shutdowns during inspection.

## 5. Working with the device

### Power supply

Before using the monitor for the first time, it must be charged. The charging process takes approximately 1.5 hours. When the battery is fully charged, the operating time is about 2 hours. To see the voltage indicator on the display, a camera head must be connected. The battery level is shown on the left as a percentage.

### Charging the battery



The monitor can be operated either via the battery or the mains charger. When the charger is connected, an "L" appears in front of the percentage indicator. The device can be used while the battery is charging at the same time. The status LED lights up red during charging and switches to green once the battery is fully charged.

While the camera is in operation, the display continuously shows the current battery level as a percentage. The battery must be recharged at the latest when "Battery Warning" appears. At that point, you have approximately 15 minutes of operating time remaining.

### Fuse



Next to the socket on the front side, there is a screw behind which a fuse is located. This fuse protects the Li-ion battery. If it is removed, the battery is disconnected from the electronics. This is useful in case of a service situation.

**Important:** Always replace the fuse with the same type and rating to ensure safe operation.

## 6. Technical data

Connection:	8-pin
Dimensions:	approx. 180 x 130 x 42 mm (W x H x D)
Weight:	approx. 765 g
Housing:	plastic
Monitor:	7" HD LCD TFT display (154 x 86 mm)
Power Supply:	lithium-ion 3200 mAh
Fuse:	fine fuse T6.3A – L250V
Operating Time:	approx. 2 hours
Charging Time:	approx. 1.5 hours

## 7. Accessories

### Protective Bag FM7 HD

Art.-no. 28011



Insert the flap into the pocket!  
Otherwise, the magnet won't hold.



## Manual HD Rotary-Ball-Camera



# Summary of the contents

## HD Rotary-Ball-Camera

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# HD Rotary-Ball-Camera

Art.-no. 2638

## 1. Delivery contents

- HD Rotary-Ball-Camera



## 2. Safety Notes

- **Never rotate or stop the camera head of the Rotary-Ball-Camera by hand! This will cause enormous damage to the mechanics!**
- The HD pan-tilt camera Pro is not waterproof. Avoid contact with water!
- The camera head is not approved for use in medical applications!
- Internal work on the camera head may only be carried out by qualified personnel (contact Resse customer service if needed).
- Do not clean the camera head with aggressive cleaning agents!
- Protect the camera head from heavy impacts.
- Operating temperature range: -10 to +40 °C
- Perform camera inspections only when the heating system is turned off!
- This product complies with the 2014/30/EU directive, according to the declaration of conformity.



### 3. Start-up



Connect the socket of the camera cable to the plug on the camera head. Hand-tighten the screw connection. Only switch on the monitor once everything is connected. The system must be started as a complete unit; otherwise, no video signal will be received. The Rotary-Ball-Camera is controlled using the arrow keys on the FM5 Pro monitor. The SK7 uses joystick control.

### 4. Technical data

Modular unit:	CCD
Lens:	3,6 mm
Diameter:	56 mm
Length:	153 mm
Lighting:	15 SMDs
Weight:	326 g
Sharpness zone:	from 10 cm
Operating voltage:	12 Volt
Light sensitivity:	0,8 Lux
Pan range:	0° - 90°
Rotation range:	endless
Connection:	8-pin plug

## 5. Camera Accessories

### Protection Basket

Art.-no. 25782



Slide the protection basket, with the guard brackets facing forward, over the housing of the pan-tilt camera until it reaches the stop ring. Then carefully secure it with the screw.

**Caution:** Do not overtighten the locking screw, as this could damage the housing of the pan-tilt camera!

### Viper Connector

Art.-no. 2563

1.



Connect the viper connector with the M10 thread to a reel or a rod.

2.



Connect the camera head with the bayonet jack

3.



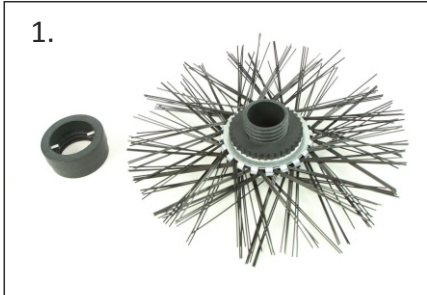
The Rotary-Ball-Camera must be pushed into the aluminum sleeve. Pass the cable through the cable slot and firmly lock.

4.



# Centering for Rotary-Ball-Camera

Art.-no. 2658



First, screw the star insert into the threaded fitting.



Screw the upper part on about 2 turns and feed the camera cable through.



First, screw the plug of the camera cable onto the camera head. Then insert the upper part of the cable gland into the groove. Only now tighten the lower part, making sure that the locking pins engage properly.



## Push sleeve for pan-tilt camera

Art.-no. 2657



The push sleeve is an ideal accessory for lined chimneys. The camera head glides along the chimney wall on the stainless steel rails.

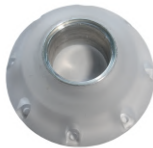
The push sleeve is slid over the camera head up to the stop ring and hand-tightened with the screw.

At the same time, the protective cage can remain attached to the camera head, ensuring the entire camera head is fully protected.



## Reflector

Art.-Nr. 2568



For the ball- and rotary-ball-camera

## Repair-Kit



Suitable for the ball camera, the rotary ball cameras and miniature camera head RS29.2

2 glass panels, 1 x silicon glue

Art.-no.: 2542

1 glass panel

Art.-no.: 25421

## HD camera cable

20 meter, 8 pin  
Art.-no. 2655

10 meter, 8 pin  
Art.-no. 2652



## Meter-marker, self-sticking

2 x 1 up to 20 m     Art.-no. 2594

1 x 1 up to 40 m     Art.-no. 25941

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	1	2	3	4
5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20

## Chimney roller guide

For chimney head, flat     Art.-no. 0043



For chimney-door, angled     Art.-no. 0042



## Manual HD Camera Head MK29



# Summary of the contents

## HD Camera Head MK29

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5. Accessory	page 42

# 1. Delivery contents

## *HD Camera Head MK29*

Art.-no. 2636



# 2. Safety Notes

- The camera head is not waterproof!
- The camera head is not for use in the medical field!
- Warranty is void when camera head has been open manually!
- Do not use aggressive cleanser for cleaning!
- Please avoid collisions at any time!
- Do not use the inspection system near a strong magnetic field!
- Avoid temperatures above 40 degrees Celsius. Only accomplish an inspection if heating is switched off!
- This product has a certificate of conformity according to the guidelines 2014/30/EU



### 3. Start-up



Connect the socket of the camera rod (or cable) to the plug on the camera head. Hand-tighten the screw connection. Only switch on the monitor once everything is connected. The system must be started as a complete unit; otherwise, no video signal will be received.

The camera head is splash-resistant, not waterproof. It is well sealed but can only withstand a limited amount of moisture. Make sure not to push it through large puddles of water, as this may cause damage to the camera head.

After each inspection, dry the camera head with a cloth to ensure no moisture remains on it. Due to capillary action, moisture could otherwise penetrate into the head.

### 4. Technical data

Modul unit:	LCD
Lens:	2,5 mm
Diameter:	29 mm
Length of Head:	65 mm
Length:	appr. 185 mm
Lighting:	15 SMDs
Weight:	appr. 113 g
Sharpness zone:	from 1 cm
Operating voltage:	12 Volt
Field of view:	130°
Connection:	12-pin plug

## 4. Accessory for MK29

### Protection

Art.-no. 2598



1. Make sure that the frame is on the right side.



2. Loosen the screw as far as possible. Slide the sleeve from behind onto the camerhead.



3. Push the protection until the limit stop. Now fasten screw by hand, until a small gap is left. Clean the camera lense with a soft cloth.

## Centering adapter

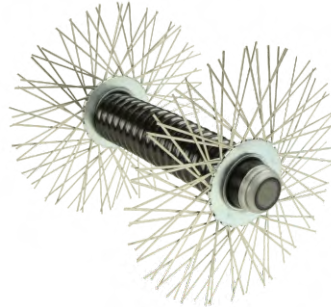
Art.-Nr. 26591

For use of the mini camera head in larger cross-sections

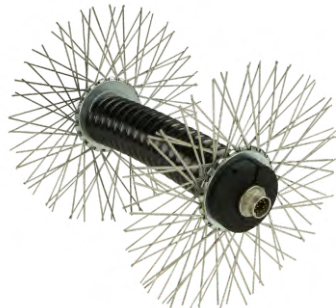
Delivery contents:  
1x centering adapter  
1x hose piece



Slide the guide star all the way to the front stop of the camera head. Then slide on the hose piece.



Now position the second guide star behind the hose piece and in front of the centering adapter. Then tighten the screw until everything is securely in place.



## Manual HD Camera Vipers



# Summary of the contents

## HD Camera Viper

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# HD Mini-Camera Viper

Art.-Nr. 2860

## 1. Delivery contents

- HD-Mini-Camera Viper  
with 20 m fiberglass rod  
and integrated digital meter counter



## 2. Safety Notes

- The plugs of the Camera-Viper are not waterproof! Please avoid contact with water of any kind.
- The video inspection system is not for use in the medical field!
- Any kind of reparations on inside of the unit, must be carried out, exclusively by qualified Staff!  
(If required, contact the RESS-customer service)
- During unwinding the rod, do not place your fingers between the spokes of the viper!
- Please avoid collisions at any time! (use strap)
- Do not use aggressive cleanser for cleaning!
- Do not pull the GFK-rod over a sharp edge!
- Only clean the GFK-rod while connected with the camera head, to avoid moisture and dirt getting into the connections.
- Never submerge the entire reel in water
- Do not expose the fiberglass rod to high heat. Keep in mind that high temperatures can develop in vehicles during summer.
- According to the declaration of conformity, this product complies with directive 2014/30/EU.

### 3. Special Instructions

The GFK-rod is exclusively for leading and for the power supply of the camera heads. It should never be used as a sweeping rod or as a pull rope!

The pan-tilt camera is not designed for use with the mini camera reel. Although it provides image and light, it cannot be controlled. Additionally, the rod is not strong enough to push the heavy camera head upward.

### 4. Start-up

Before using the unit, please control if it has been damaged or if it is dirty. Particular the connectors and the thread have to be dry and clean. The connection and disconnection of the respective components of the system must always be carried out, without power supply!



To connect, align the arrow on the bayonet jack with the arrow on the bayonet plug. Then mount the camera head onto the end of the GRP rod and secure it using the union nut.



Also connect the socket and plug at the handle by inserting them straight and tightening the connection by hand.

The reel is equipped with a safety lock to prevent the rod from unwinding on its own. To release the drum, pull the red button upward and rotate it a quarter turn to lock it in place.

## 5. Inspection

Please do not pull or push the GFK-rod over sharp edges! Never fall below the minimum bending radius to avoid the GFK-rod of snapping. Always wear working gloves to prevent injuries. Always hold the rod close to the attachment point, otherwise it can break. By reeling the rod in, it should be cleaned using a damp, clean cloth, to prevent dirtying the drum.

### Touch control field



The reel features a digital meter counter, which is displayed on the screen. The counter can be reset at any time during the inspection by tapping the reset field. This is useful if you want to perform a relative measurement. This is possible in both directions.

Please note that a 100% accurate meter reading cannot be guaranteed, and minor deviations must be tolerated (depending on the winding quality of the GRP rod – approx. 10%).

## 6. Technical data

Weight:	approx. 2.0 kg
Drum diameter:	32 cm
GRP rod:	Length: 20 meters, $\varnothing$ 4.5 mm
Integrated signal lines:	4 x 0.3 mm <sup>2</sup>
Meter counter:	Incremental encoder
Connections:	Camera head: 12-pin
	Cable connection: 8-pin





# Troubleshooting

## Fault

The monitor cannot be switched on.

LED flashes red (no charger connected)

LED blinks with charger connected

No image is displayed and the camera head lighting does not turn on.

When switching on the device, no image appears on the monitor and the message „CAM?“ is shown.

When switching on the device, no image appears on the monitor and the LED flashes red/green.

In case of malfunctions during recording or playback of a video sequence

The device does not record at all.

Plugs are very difficult to turn.

## Solution

The battery voltage may be too low. The monitor requires a minimum voltage in order to start. Charge the battery. It may take a few minutes before you can switch the monitor on again. A full charging cycle takes approximately 3 hours.

Battery is empty – the device needs to be charged.

Even with the power adapter connected, the battery now requires a minimum charge level to function again. It will charge slowly. Time required: approx. 45 minutes until the minimum voltage is restored.

Switch the monitor off and on again. The camera head must be started together with the monitor, otherwise it will not be recognized.

The monitor is not receiving a video signal. Switch the monitor off again and check the connector to the camera head. If that does not resolve the issue, there is likely a cable break.

The monitor is not receiving a video signal. Switch the monitor off again and check the connector to the camera head.

Switch the monitor off and on again.

Check whether an SD card is inserted in the device. The LCD monitors support cards up to 32 GB.

Clean the threads of the connectors and check for damage.

## Safety note

Always be fully aware of your safety! At all times!

## Tips for the inspection

### Inspection of a default

To determine if the chimney has a default, hold the camera vertical in the centre of the chimney at its lowest cleaning door. You will see the light on the monitor. Lead the camera in a circular motion through the chimney. With a little practice, you will be able to determine the default and its direction. A precise localization you can achieve from the attic.

### Inspection in the attic or on the rooftop

After switching the device on, gently lower the camerahead into the chimney. By using a cable with marks, you can see how deep the camera is inside. The cable has been made for this use, so even if you use the full length, it will carry the weight of the camera easily. A roller-stand can come in quite handy in this situation. It is available as an accessories (chimney door Art.-No.: 0042 / chimney cap Art.-No.:0043)

### Care and service

- Please clean on a regular base. Do not use aggressive cleanser of any kind!
- Please avoid contact with water at all times and of any kind!
- By reeling the rod back in, it should be cleaned using a damp, clean cloth to prevent dirtying the drum.

**Attention: Warranty is void when camera head or monitor has been open manually.**

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