



# Pipe and Drain inspection

## Pipe and Drain cleaning

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Mobile, handy endoscope camera with radio signal transmission for low cost inspection and damage analysis of places with difficult access such as cavities, shafts, pipes etc. Documentation of photos and videos on MicroSD card. REMS CamScope S with voice recording. For battery and mains operation.

Camera head Ø 4.5/9/16 mm

**REMS CamScope – Brilliant pictures and videos of cavities, shafts and pipes. Removable controller unit. Radio signal transmission MicroSD card slot.**

**REMS CamScope S – with voice recording.**

### Design

Ultra light and handy. Hand-held unit with camera cable set only 0.3 to 0.5 kg. Can be used everywhere, free hand, over head, also in very confined spaces. Sturdy, impact-proof plastic housing with ergonomically shaped handle. On/off thumbwheel switch for continuous brightness control of the LEDs in the camera head. Power LED for indicating the operating state. Practical, removable battery holder for 4 commercially available 1.5 V, AA, LR6 batteries. Various camera cable sets can be used. Plug-screw connections for changing the camera cable sets and the push cable extensions without tools. Sturdy case for hand-held unit, camera cable set 16-1/9-1/4.5-1, push cable extension, controller unit, voltage supply/charger and accessories.

### Controller unit with TFT-LCD colour display

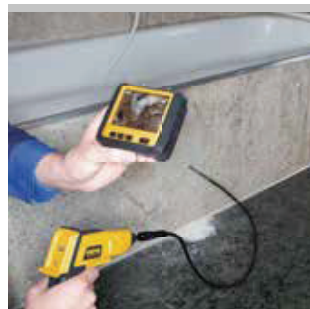
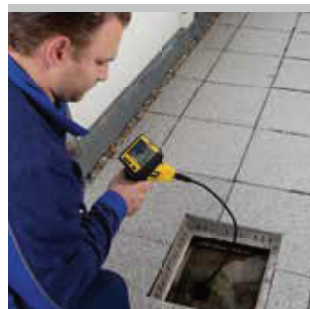
Controller unit with 3.5" colour display with state of the art TFT-LCD technology for brilliant pictures and videos, 89 mm screen diagonal, 320 x 240 pixels, removable for radio signal transmission or securely pluggable to hand-held unit for direct signal transmission by contact pins. Very light and handy: REMS CamScope only 0.14 kg, REMS CamScope S only 0.24 kg. Sturdy plastic housing, spray water protected, REMS CamScope S with rubber impact protection. Small dimensions: REMS CamScope 102 x 71 x 25 mm, REMS CamScope S 105 x 92 x 42 mm. MicroSD card slot. Photos and videos can be saved on a MicroSD card for simple documentation of the inspection result. REMS CamScope S with voice recording for easy commentary during video recording. 3x digital zoom. The date and time of the recording can be saved in the photo and video as an option. Immediate playback of saved recordings or transmission to other devices via MicroSD card. Playing of the voice recording in REMS CamScope S by external devices, e.g. PC or laptop. USB connector for direct connection to PC or laptop. Video output socket Composite-Video PAL/NTSC for connecting an external monitor. Connection for voltage supply/charger Li-Ion 100–240 V.

### Cordless and mains operation

Li-Ion technology. Controller unit with integrated Li-Ion 3.7 V, 1.2 Ah battery. Powerful and light. High energy density for approx. 2 hours continuous operation. Voltage supply 100–240 V, 50–60 Hz, 9 W, for mains operation instead of battery with integrated electronic Li-Ion charger. No memory effect for maximum battery performance.

### Exchangeable camera cable set Color

Camera cable set Color, consisting of colour camera Ø 4.5 mm, Ø 9 mm or Ø 16 mm, with CMOS sensor with dimmable white light LEDs for optimum setting of the brightness and fixed focus function for automatic picture focus, protected against occasional immersion in water (IP 67). Camera cable set Color 16-1 and 9-1 with 1 m flexible push cable and add-on mirror, add-on hook, add-on magnet. Camera cable set Color 4.5-1 with 1 m flexible push cable, ideal for inspecting small pipe bends and narrow places, e.g. odour traps, bore holes, breakthroughs. Flexible 900 mm push cable extension, connectable up to a working length of 4.5 m, as an accessory. Camera cable set Color 16-1 90°, with right-angled colour camera Ø 16 mm, 640 x 480 pixels, with 1 m flexible push cable, as an accessory.



### Supply format

**REMS CamScope Set.** Mobile, handy endoscope camera with radio signal transmission for low cost inspection and damage analysis of places with difficult access such as cavities, shafts, pipes etc. Documentation of photos and videos on MicroSD card. Handheld unit with 4 batteries 1.5 V, AA, LR6 Removable controller unit with radio signal transmission, 3.5" TFT-LCD colour display, 3x digital zoom, MicroSD card slot, USB port, video out socket PAL/NTSC, integrated Li-ion battery, 3.7 V, 1.2 Ah. 2 GB MicroSD card Voltage supply/charger Li-Ion 100–240 V, 50–60 Hz, 9 W, for controller unit. USB cable, video cable. In sturdy case. Optional with camera cable set 4.5-1, camera cable set 9-1 or camera cable set 16-1.

Description	Version	Art.-No.	
<b>Set 16-1</b>	Camera cable set Color 16-1, consisting of colour camera Ø 16 mm, 704 × 576 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Add-on mirror, add-on hook, add-on magnet	175110	
<b>Set 9-1</b>	Camera cable set Color 9-1, consisting of colour camera Ø 9 mm, 640 × 480 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Add-on mirror, add-on hook, add-on magnet	175111	
<b>Set 4,5-1</b>	Camera cable set Color 4.5-1, consisting of colour camera Ø 4.5 mm, 320 × 240 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Ideal for inspecting small pipe bends and narrow places.	175112	



Info

### Supply format

**REMS CamScope S Set.** Mobile, handy endoscope camera with radio signal transmission for low cost inspection and damage analysis of places with difficult access such as cavities, shafts, pipes etc. Documentation of photos and videos with voice recording on MicroSD card. Handheld unit with 4 batteries 1.5 V, AA, LR6 Removable controller unit with radio signal transmission, 3.5" TFT-LCD colour display, 3x digital zoom, MicroSD card slot, USB port, video out socket PAL/NTSC, integrated Li-ion battery, 3.7 V, 1.2 Ah. 2 GB MicroSD card Voltage supply/charger Li-Ion 100–240 V, 50–60Hz, 9 W, for controller unit. USB cable, video cable. In sturdy case. Optional with camera cable set 4.5-1, camera cable set 9-1 or camera cable set 16-1.

Description	Version	Art.-No.	
<b>Set 16-1</b>	Camera cable set Color 16-1, consisting of colour camera Ø 16 mm, 704 × 576 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Add-on mirror, add-on hook, add-on magnet	175130	
<b>Set 9-1</b>	Camera cable set Color 9-1, consisting of colour camera Ø 9 mm, 640 × 480 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Add-on mirror, add-on hook, add-on magnet	175131	
<b>Set 4,5-1</b>	Camera cable set Color 4.5-1, consisting of colour camera Ø 4.5 mm, 320 × 240 pixels, with dimmable white light LEDs and fixed focus function and 1 m formable push cable. Ideal for inspecting small pipe bends and narrow places.	175132	



Info

### Accessories

Description	Art.-No.	
<b>Camera cable set Color 16-1</b> , colour camera Ø 16 mm, 704 × 576 pixels, with 1 m flexible push cable. Add-on mirror, add-on hook, add-on magnet	175103	
<b>Camera cable set Color 16-1 90°</b> , right-angled colour camera Ø 16 mm, 640 × 480 pixels, with 1 m flexible push cable.	175106	
<b>Camera cable set Color 9-1</b> , colour camera Ø 9 mm, 640 × 480 pixels, with 1 m flexible push cable. Add-on mirror, add-on hook, add-on magnet	175104	
<b>Camera cable set Color 4.5-1</b> , colour camera Ø 4.5 mm, 320 × 240 pixels, with 1 m flexible push cable.	175102	
<b>900 mm push cable extension</b> , flexible, connectable up to a working length of 4.5 m	175105	



Ultra light, handy camera inspection system for inexpensive inspection and damage analysis of pipes, drains, chimneys and other hollow cavities. With electronic metering. Also for inspection after pipe cleaning work and for acceptance of new installations or repairs. Documentation of pictures and videos on SD card. Cordless and mains operation.

Camera head	Ø 25 mm
Pipe	Ø (40) 50–150 mm
Drains, chimneys, other cavities	

## REMS CamSys – Brilliant pictures and videos of pipes and drains. SD card slot. Electronic metering. Cordless and mains operation.

### System advantage

Only **one** controller unit with TFT-LCD colour display for connecting different camera cable sets for different requirements. Therefore inexpensive conversion possible.

### Design

Ultra light and handy. Can be used everywhere, even in very narrow places. Controller unit connected to the camera cable set by a 2 m connecting cable, removable for easy cleaning of the camera cable set. Various camera cable sets can be used. Plug-screw connections for changing the camera cable sets and the controller unit without tools. Sturdy case for controller unit, voltage supply/charger and accessories.

### Controller unit with TFT-LCD colour display

Controller unit with 3.5" colour display with state of the art TFT-LCD technology for brilliant pictures and videos, 89 mm screen diagonal, 320×240 pixels. Very light and handy, only 0.4 kg. Sturdy, impact-proof plastic housing, spray protected. Small dimensions: 172×121×58 mm. Keys for setting the brightness of the LEDs of the colour camera head. Full screen, 2x zoom, 4x rotation options for the picture. SD card slot. Pictures and videos can be saved on an SD card for simple documentation of the inspection result. Insertion depth of the camera is stored in the picture and the video, optionally also date and time of the recording. Pictures can be taken during video recording without impairing the video recording. Immediate playback of saved recordings or transmission to other devices with SD card. Pictures can also be taken later from the video during playback of recorded videos on the controller's colour display. USB connector for direct connection to PC or laptop. Video output socket Composite-Video PAL/NTSC for connecting an external monitor. Connection for voltage supply/charger Li-Polymer 100 – 240 V.

### Cordless and mains operation

Li-Polymer Technology. Controller unit with integrated Li-Polymer battery 3.7 V, 4.0 Ah. Powerful and light. Power supply/charger 100–240 V, 50–60 Hz, 15 W, with USB port and USB cable for connecting power supply/charger, laptop or other voltage supply. No memory effect for maximum battery performance.

### High resolution special colour camera

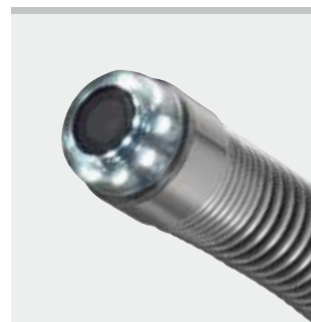
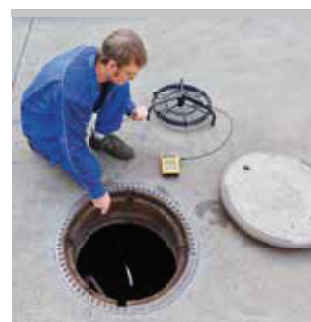
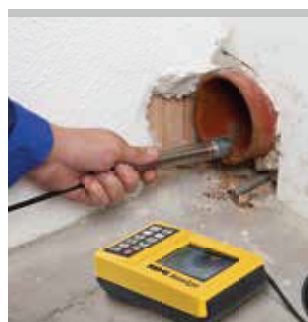
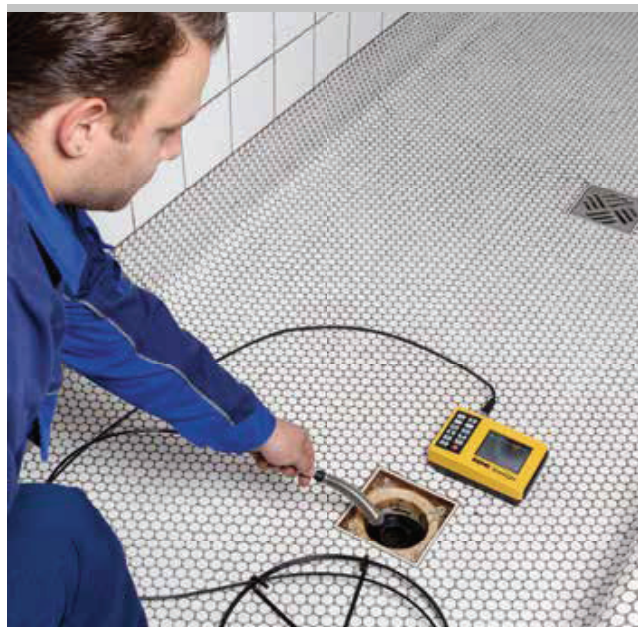
High resolution special colour camera Ø 25 mm with CMOS image sensor and 8 ultra bright, white LEDs with adjustable light intensity up to 1700 mcd and concentrated radiation angle for brilliant colour pictures with even illumination. Low light requirement due to very high light sensitivity (0.1 lux). Fixed focus and special lens with 90° wide angle, also for detecting the smallest details.

### Exchangeable cable camera sets

Camera cable sets S-Color, consisting of special high-resolution colour camera with optional **30 m push cable Ø 5.4 mm**, flexible, for Ø 50–150 mm, in hasp with electronic metre counter, **20 m push cable Ø 4.5 mm**, very flexible, for small pipe diameters and narrower bends Ø (40) 50–150 mm, in the hasp with electronic metre counter or **10 m push cable Ø 4.5 mm** with length mark, very flexible, for small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, in the cable reel, with connection for controller unit. Very small, rounded camera head Ø 25 mm, water-tight up to 20 m (0.2 MPa/2 bar/29 psi) and highly flexible sliding spring tapered towards the push cable for effortless feeding even through several pipe bends. Camera head with strong, quick-change protective cap with inserted mineral glass pane. Bend-maneuvring push cable in hybrid technology, with glass fibre core, data cables and plastic sheath, very stable, for long life. Robust, oiled-coated, easy to clean cable cage. Hasp with rotary cage for simple unwinding and winding of the push cable and integrated sensor for electronic metering. Carrying case for camera cable set as an accessory.

### Guide bodies

Various guide bodies for larger pipe diameters, firmly lockable on the camera head, as an accessory.



Info



## Supply format

**REMS CamSys Set S-Color.** Electronic camera inspection system for low-cost inspection and damage analysis. Documentation of pictures and videos on SD card with specification of date and time. Controller unit in microprocessor technology with 3.5" TFT-LCD colour display, SD card slot, USB port, video out socket PAL/NTSC, integrated Li-Polymer battery, 3.7 V, 4.0 Ah, in sturdy, impact-proof plastic housing, spray protected. 2 m connecting cable from the controller unit to the camera cable set, voltage supply/charger 100–240 V, 50–60 Hz, 15 W, SD card 4 GB, USB cable, in sturdy case. Camera cable set S-Color with high resolution special colour camera Ø 25 mm with CMOS image sensor and push cable.

Description	Version	Art.-No.	
<b>Set S-Color 10 K</b>	10 m push cable Ø 4.5 mm with length mark, very flexible, in cable reel. For small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, drains, shafts, stacks and other cavities.	175008	
<b>Set S-Color 20 H</b>	20 m push cable Ø 4.5 mm, very flexible, in the hasp with electronic metre counter. For small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, drains, shafts, stacks and other cavities.	175007	
<b>Set S-Color 30 H</b>	30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metre counter. For pipes Ø 50–150 mm, drains, shafts, stacks and other cavities.	175010	



## Accessories

Description	Art.-No.	
<b>REMS CamSys Basic-Pack.</b> Controller unit in microprocessor technology with 3.5" TFT-LCD colour display, SD card slot, USB port, video out socket PAL/NTSC, integrated Li-Polymer battery, 3.7 V, 4.0 Ah, in sturdy, impact-proof plastic housing, spray protected. 2 m connecting cable from the controller unit to the camera cable set, voltage supply/charger 100–240 V, 50–60 Hz, 15 W, SD card 4 GB, USB cable, in sturdy case.	175000	
<b>Camera cable set S-Color 10 K</b> with high resolution special colour camera Ø 25 mm with CMOS image sensor, 10 m push cable Ø 4.5 mm with length marking, very flexible, with connection for controller unit, in cable reel. For small diameters and narrower pipe bends Ø (40) 50–150 mm.	175305	
<b>Camera cable set S-Color 20 H</b> with high resolution special colour camera Ø 25 mm with CMOS image sensor and 20 m push cable Ø 4.5 mm, flexible, in the hasp with electronic metering and connection for controller unit. For small diameters and narrower pipe bends Ø (40) 50–150 mm.	175306	
<b>Camera cable set S-Color 30 H</b> with high resolution special colour camera Ø 25 mm with CMOS image sensor and 30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metering and connection for controller unit. For Ø 50–150 mm.	175011	
<b>Guide body Ø 62 mm S-Color/S-Color S</b> , for camera cable set S-Color/S-Color S	175057	
<b>Guide body Ø 100 mm S-Color/S-Color S</b> , for camera cable set S-Color/S-Color S	175058	
<b>Protective cap S-Color/S-Color S</b> with mineral glass pane, sealing ring, for camera cable set S-Color/S-Color S	175026	
<b>Carrying case</b> for camera cable set	175123	
<b>Case with inlay</b>	175018	



Ultra light, handy camera inspection system for inexpensive inspection and damage analysis of pipes, drains, chimneys and other hollow cavities. Self-levelling camera. Transmitter for localising camera heads. Electronic metering. Also for inspection after pipe cleaning work and for acceptance of new installations or repairs. Documentation of pictures and videos with voice recording on SD card. Cordless and mains operation.

Camera head S-Color/S-Color S	Ø 25 mm
Camera head S-Color S-N	Ø 33 mm

Pipes, drains, chimneys, other cavities	
Camera head S-Color	Ø (40) 50 – 150 mm
Camera head S-Color S	Ø 50 – 150 mm
Camera head S-Color S-N	Ø 70 – 150 mm

**REMS CamSys 2 – Brilliant pictures and videos of pipes and drains. Voice recording Self-levelling camera. Transmitter for localising camera heads. SD card slot. Electronic metering. Cordless and mains operation.**

## System advantage

Only **one** controller unit with TFT-LCD colour display for connecting different camera cable sets for different requirements. Therefore inexpensive conversion possible.

## Design

Ultra light and handy. Can be used everywhere, even in very narrow places. Controller unit connected to the camera cable set by a 2 m connecting cable, removable for easy cleaning of the camera cable set. Various camera cable sets can be used. Plug-screw connections for changing the camera cable sets and the controller unit without tools. Sturdy case for controller unit, voltage supply/charger and accessories.

## Controller unit with TFT-LCD colour display

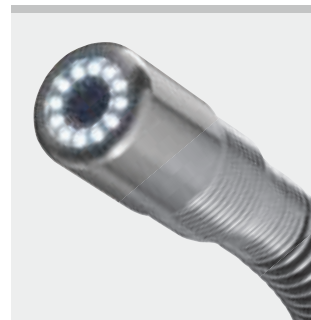
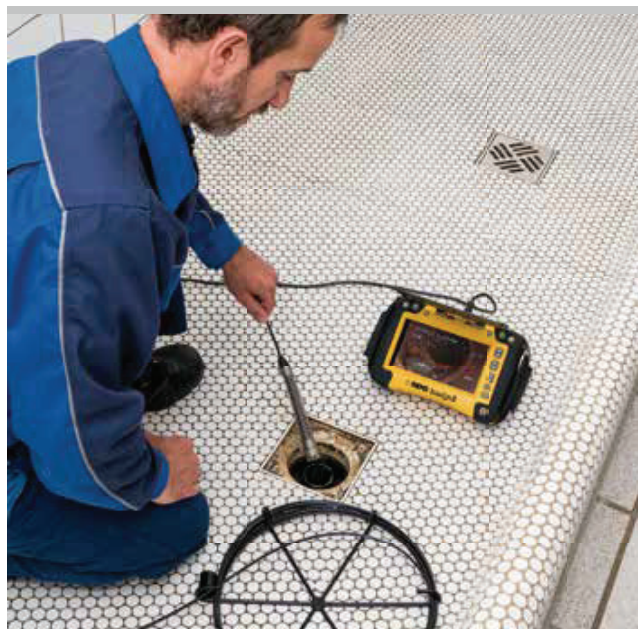
Controller unit with 7" colour display with state of the art TFT-LCD technology for brilliant pictures and videos, 178 mm screen diagonal, 720 × 480 pixels. Very light and handy, only 1.3 kg. Sturdy, impact-proof plastic housing, spray protected, glare protection. Integrated stand for different angles of inclination of the screen. Ergonomic grips with soft-grip and adjustable clamping bands, keys for picture and video, for one-hand operation by right and left handers. Small dimensions: 270 × 164 × 70 mm. Keys for setting the brightness of the LEDs of the colour camera head. Full screen, 2x zoom, 4x rotation options for the picture. Adjustable automatic switch-off. SD card slot. Pictures and videos with voice recording can be saved on an SD card for simple documentation of the inspection result. Insertion depth of the camera is stored in the picture and the video, optionally also date and time of the recording. Pictures can be taken during video recording without impairing the video recording. Immediate playback of saved recordings or transmission to other devices with SD card. Pictures can also be taken later from the video during playback of recorded videos on the controller's colour display. USB connector for direct connection to PC or laptop. Video output socket Composite-Video PAL/NTSC for connecting an external monitor. Connection for voltage supply/charger 100 – 240 V.

## Cordless and mains operation

Li-Polymer Technology. Controller unit with integrated Li-Polymer battery 3.7 V, 7.6 Ah. Powerful and light. Power supply/charger 100–240 V, 50–60 Hz, 15 W, with USB port and USB cable for connecting power supply/charger, laptop or other voltage supply. No memory effect for maximum battery performance.

## High resolution special colour camera

High resolution special colour camera with CMOS image sensor and ultra bright, white light emitting diodes (LEDs) with adjustable light intensity up to 1700 mcd and concentrated radiation angle for brilliant colour pictures with evenly bright illumination. Low light requirement due to very high light sensitivity (0.1 lux). Fixed focus and special lens with 90° wide angle, also for detecting the smallest details.



Info



Exchangeable cable camera sets

Camera cable set S-Color, consisting of a special high resolution colour camera Ø 25 mm with 20 m push cable Ø 4.5 mm, very flexible, for small pipe diameters and narrower bends Ø (40) 50–150 mm, in the hasp with electronic metering or 10 m push cable Ø 4.5 mm with length mark, very flexible, for small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, in the cable reel. Camera cable set S-Color S, consisting of a special high resolution colour camera Ø 25 mm with 30 m push cable Ø 5.4 mm, flexible, for Ø 50–150 mm, in the hasp with electronic metering and 33 kHz transmitter for localising the camera head. Camera cable set S-Color S-N, consisting of a special high resolution colour camera Ø 33 mm with 30 m push cable Ø 5.4 mm, flexible, for Ø 70–150 mm, in the hasp with electronic metering, 33 kHz transmitter for localising the camera head and self-levelling camera for upright pictures and videos. Connection for controller unit. Very small, rounded camera head, water-proof up to 20 m (0.2 MPa/2 bar/29 psi) and highly flexible sliding spring tapered towards the push cable for effortless feeding even through several pipe bends. Camera head with strong, quick-change protective cap with inserted mineral glass pane. Bend-manoeuvring push cable in hybrid technology, with glass fibre core, data cables and plastic sheath, very stable, for long life. Robust, powder-coated, easy to clean cable cage. Hasp with rotary cage for simple unwinding and winding of the push cable and integrated sensor for electronic metering. Carrying case for camera cable set as an accessory.

Guide bodies

Guide body S-Color/S-Color S and S-Color S-N Ø 62 mm and Ø 100 mm, for greater pipe diameters, can be locked to camera head S-Color/S-Color S or S-Color S-N, as an accessory.

Tracker

REMS Explorer for localising a camera head with a 33 kHz transmitter, for determining the position of damages or the course of a pipe, as an accessory.



Supply format

**REMS CamSys 2 Set S-Color.** Electronic camera inspection system for low-cost inspection and damage analysis. Documentation of pictures and videos with voice recording on SD card with specification of date and time. Controller unit in microprocessor technology with 7" TFT-LCD colour display, SD card slot, USB port, video out socket PAL/NTSC, integrated Li-Polymer battery 3.7V, 7.6 Ah, in sturdy, impact-proof plastic housing, spray protected, glare protection, stand. 2 m connecting cable from the controller unit to the camera cable set, voltage supply/charger 100–240 V, 50–60 Hz, 15 W, SD card 4 GB, USB cable, video cable, in sturdy case. Camera cable set S-Color with high resolution special colour camera with CMOS image sensor and push cable.

Description	Version	Art.-No.	
<b>Set S-Color 10 K</b>	High resolution special colour camera Ø 25 mm, 10 m push cable Ø 4.5 mm with length mark, very flexible, in the cable reel. For small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, drains, shafts, stacks and other cavities.	175301	
<b>Set S-Color 20 H</b>	High resolution special colour camera Ø 25 mm, 20 m push cable Ø 4.5 mm, very flexible, in the hasp with electronic metering. For small pipe diameters and narrower pipe bends Ø (40) 50–150 mm, drains, shafts, stacks and other cavities.	175302	
<b>Set S-Color S 30 H</b>	High resolution special colour camera Ø 25 mm, 33 kHz transmitter for localising the camera head, 30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metering. For pipes Ø 50–150 mm, drains, shafts, stacks and other cavities.	175303	
<b>Set S-Color S-N 30 H</b>	High resolution special colour camera Ø 33 mm, self-levelling, 33 kHz transmitter for localising the camera head, 30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metering. For pipes Ø 70–150 mm, drains, shafts, stacks and other cavities.	175304	





Description	Art.-No.	
<b>REMS CamSys 2 Basic-Pack</b> Controller unit in microprocessor technology with 7" TFT-LCD colour display, SD card slot, USB port, video out socket PAL/NTSC, integrated Li-Polymer battery, 3.7 V, 7.6 Ah, in sturdy, impact-proof plastic housing, glare protection, stand, spray protected. 2 m connecting cable from the controller unit to the camera cable set, voltage supply/charger 100–240 V, 50–60 Hz, 15 W, SD card 4 GB, USB cable, video cable, in sturdy case.	175300	
<b>Camera cable set S-Color 10 K</b> High resolution special colour camera Ø 25 mm, 10 m push cable Ø 4.5 mm with length mark, very flexible, in the cable reel. For small diameters and narrower pipe bends Ø (40) 50–150 mm.	175305	
<b>Camera cable set S-Color 20 H</b> High resolution special colour camera Ø 25 mm, 20 m push cable Ø 4.5 mm, very flexible, in the hasp with electronic metering. For small diameters and narrower pipe bends Ø (40) 50–150 mm.	175306	
<b>Camera cable set S-Color S 30 H</b> High resolution special colour camera Ø 25 mm, 33 kHz transmitter for localising the camera head, 30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metering. For Ø 50–150 mm.	175307	
<b>Camera cable set S-Color S-N 30 H</b> High resolution special colour camera Ø 33 mm, self-levelling, 33 kHz transmitter for localising the camera head, 30 m push cable Ø 5.4 mm, flexible, in the hasp with electronic metering. For Ø 70–150 mm.	175308	
<b>Guide body Ø 62 mm S-Color/S-Color S,</b> for camera head S-Color/S-Color S	175057	
<b>Guide body Ø 100 mm S-Color/S-Color S,</b> for camera head S-Color/S-Color S	175058	
<b>Guide body Ø 62 mm S-Color S-N,</b> for camera head S-Color S-N	175343	
<b>Guide body Ø 100 mm S-Color S-N,</b> for camera head S-Color S-N	175339	
<b>Protective cap S-Color/S-Color S</b> with mineral glass pane, sealing ring, for camera head S-Color/S-Color S	175026	
<b>Protective cap S-Color S-N</b> with mineral glass pane, sealing ring, for camera head S-Color S-N	175330	
<b>REMS Explorer</b> , tracker for localising a camera head with a 33 kHz transmitter	175312	
<b>Carrying case</b> for camera cable set	175123	
<b>Case with inlay</b>	175323	







# REMS Pull-Push

Suction and pressure cleaning device

Proven, reliable suction and pressure cleaning device for fast clearance of blockages.

## REMS Pull-Push – fast clearance of blockages.

High pressing force by front, adjustable handle.

Optimum adaptation to the cleaning task by 2 sleeves:

Short sleeve for wash basins and baths, long sleeve for toilets.



Info



## Supply format

**REMS Pull-Push.** Suction and pressure cleaning device for fast clearance of blockages. With short and long sleeve. In a box.

	Art.-No.	
	170300	

# REMS Mini-Cobra

Drain cleaner for manual and electric operation

Proven, handy device for the fast unblocking of pipes, e.g. for kitchens, bathrooms and toilets.

For pipes	Ø 20–50 (75) mm
For cables	Ø 6, 8, 10 mm

## REMS Mini-Cobra – by hand or electric. Indispensable to remove small blockages.

### Design

Simple, robust, practical design. Handy, light. Only 2.9 kg. Easy operation also in traps and tight bends. Easy insertion of cable directly through strainers in sinks and drains. Locking of cable by quick-action chuck.

### Drain cleaning cables

Cables in high quality spring steel. Specially hardened. Highly flexible for effortless feed-forward in tight bends. Cable end with bulbous head (sink strainer head), thus easy to bend.

### Cable drum

In hot-galvanized spring steel. Specially hardened. Highly flexible for effortless feed-forward in tight pipe bends. Cable end with bulbous head. Corrosion-resistant cable drum in shock-proof, glass-fibre reinforced plastic prevents pollution of the environment. Ventilation of the cable drum interior enables self-drying of cable. View to cable at all times.

### Drive

By hand with easy action, easy grip crank handle or with suitable electric drill/ with suitable electric screwdriver, speed ≤ 300 rpm. Hexagon adapter for electric drive located in the drum cover.



German Quality Product



Info



## Supply format

**REMS Mini-Cobra.** Pipe cleaning device for pipes Ø 20–50 (75) mm, with crank handle and hexagonal driver for electric drill/screwdriver. For drain cleaning cables Ø 6, 8 and 10 mm. Cable drum in shock-proof, glass-fibre reinforced plastic. Quick-action chuck. Cable Ø 8 mm × 7.5 m long. In a carton.

	Art.-No.	
	170010	

## Accessories

Description	Ø × Length	Art.-No.	
Drain cleaning cable	8 mm × 7.5 m	170200	
	10 mm × 10 m	170205	
Drain cleaning cable with core	8 mm × 7.5 m	170201	



Electric pipe cleaning device with fast switchover.  
For effortless and quick application to remove  
pipe blockages in kitchen, bath, toilet.

For pipes	Ø 20–50 (75) mm
For cables	Ø 8, 10 mm

**REMS Mini-Cobra S – Fast clearance of pipe  
blockages. Ultra fast reversal of direction  
of spiral feed/return by fast switchover.**

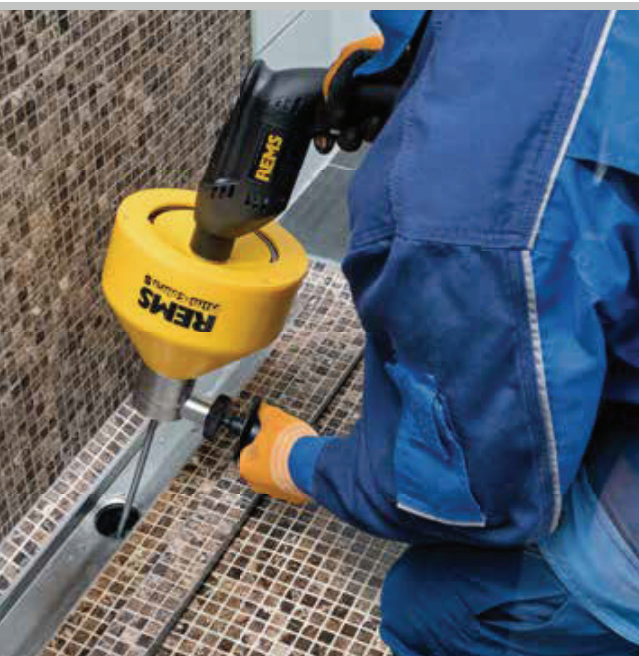
**Design**  
Compact unit of drive machine and cable drum. Handy, light. Only 5.7 kg.  
Combined thrust and grip handle for controlling the automatic feed-forward  
and reverse and for safe holding of the unit. Easy operation also in traps  
and tight bends.

**Fast switchover**  
For easy operation and fast clearance of pipe blockages. Ultra fast reversal  
of direction of spiral feed/return by fast switchover also under full load without  
changing the motor's direction of rotation, avoids looping of the spirals when  
suddenly encountering resistance from pipe blockages, for long life of the spirals  
(Patent EP 3 059 022).

**Drain cleaning cables**  
Drain cleaning cables in high quality spring steel. Specially hardened. Highly  
flexible for effortless feed-forward in tight pipe bends. Cable end with bulbous  
head (sink strainer head), thus easy to bend. Drain cleaning cables with core in  
high quality spring steel prevents ingress of dirt and generation of long fibres in  
the cable windings.

**Cable drum**  
Corrosion resistant cable drum in shock-proof, glass-fibre reinforced plastic  
prevents pollution of the environment. Ventilation of the cable drum interior  
enables self-drying of cable. View of the cable at any time.

**Drive**  
Proven drive unit with hexagon mount. Enormously powerful. Robust, mainte-  
nance-free gear with safety slipping clutch. Universal motor, 630 W, high-torque  
forward and reverse at low speed. Stepless, electronic speed control. The  
speed between 0 and 950 rpm is controlled by pressing the tip switch steplessly  
(acceleration switch).



German Quality Product



Patent EP 3 059 022



Supply format

**REMS Mini-Cobra S.** Electric pipe cleaning device with fast switchover, for  
pipes Ø 20–50 (75) mm. For drain cleaning cables Ø 8 and 10 mm. Drive unit  
with maintenance-free gear, universal motor 230 V or 110 V, 50–60 Hz, 630 W,  
high-torque forward and reverse at low speed. Safety tip switch. Stepless,  
electronic speed control (acceleration switch) between 0 and 950 rpm.  
Cable drum in shock-proof, glass-fibre reinforced plastic. Cable Ø 8 mm,  
with core, 7.5 m long.

Description	Art.-No.	
REMS Mini-Cobra S, in a carton	170022	
REMS Mini-Cobra S Set, in sturdy steel case.	170023	

Accessories

Description	Ø × Length	Art.-No.	
Drain cleaning cable with core	8 mm × 7.5 m	170201	
Drain cleaning cable	10 mm × 10 m	170205	
Steel case		185058	





Handy, robust, compact machines for versatile use in pipe and drain cleaning. High-speed rotator with connectable cable sections. Proven technology.

For pipes  $\varnothing$  20–250 mm

For pipe and drain cleaning cables  $\varnothing$  8, 16, 22, 32 mm

All pipe and drain cleaning cables and tools can also be used for other makes.

## REMS Cobra – clear pipe – easy and fast.

**High-speed rotator with cable sections for work length up to 100 m. Effective chain knocking and milling up to 740 rpm. Closed drive spindle protects motor and drive against dirt and water.**

### High speed rotator with connectable cable sections

High-speed rotator, 740 rpm (REMS Cobra 22) resp. 520 rpm (REMS Cobra 32), with cable sections for effective fast operation, e.g. during chain knocking or milling. Under difficult conditions also, e.g. roots and hard incrustations. Cable sections to be connected as needed up to 70 m (REMS Cobra 22) resp. 100 m (REMS Cobra 32) work length. No unnecessary rotating of long pipe and drain cleaning cables.

### Design

Robust, practical, splash-proof. Maintenance-free. Small in size. Favourable weight, drive unit REMS Cobra 22 only 19 kg, drive unit REMS Cobra 32 only 24 kg. Machine frame made of distortion-free cast aluminium with protective covers in shock-proof plastic material. REMS Cobra 22 with holders for part spirals 16 and 22 for fixing the part spirals to the machine frame when changing spirals. Chucking system which is located outside the machine housing with straight through undivided drive spindle for the pipe and drain cleaning cable. This enables a complete seal of the machine interior against dirt and water. Connecting cable with integrated personal protection switch (PRCD). Guide hose prevents excess rotation of pipe and drain cleaning cables and pollution of the environment. Legs with rubber caps guarantee a safe, floor-protecting stand.

### High-performance pipe and drain cleaning cables

Specially hardened. Highly flexible for effortless feed-forward in tight pipe bends. Rapid action coupling for fast extension and shortening. T-groove coupling with safety lock through spring-loaded thrust pin. Manual feed-forward for sensitive operation. Standard pipe and drain cleaning cable for universal pipe and drain cleaning jobs, highly flexible, specially suited for tight or several consecutive pipe bends. Pipe and drain cleaning cable S with thicker special spring steel for very difficult to remove obstructions, e.g. root cutting. Drain cleaning cables with weather-proof and temperature resistant plastic core prevents drain cleaning cable from dirt and generation of long fibres in the cable windings. Drive through REMS Cobra 22, REMS Cobra 32 or drive machines of other makes.

### Clamping jaws for cable drive

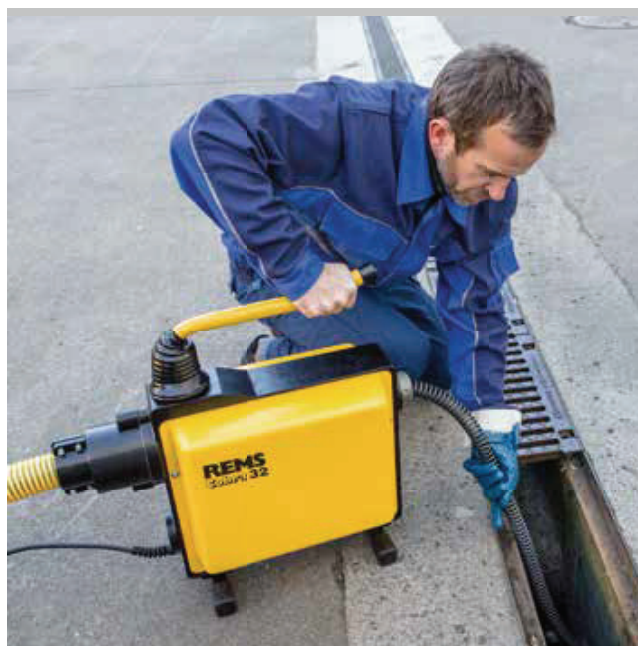
Clamping jaws in high-grade hardened steel, resistant to wear and precise fit. Instant and exact clamping and opening of pipe and drain cleaning cables allow optimum control, power transmission and operating safety. REMS Cobra 22: Choice of pipe and drain cleaning cables  $\varnothing$  16 mm and 22 mm, without changing the clamping jaws. Pipe and drain cleaning cable  $\varnothing$  8 mm with adapter drum 22/8 and integrated clamping jaws, as accessory. REMS Cobra 32: Choice of drain cleaning cables  $\varnothing$  22 and 32 mm, without changing the clamping jaws. Drain cleaning cables  $\varnothing$  16 mm with clamping jaws 16, as accessory. Pipe and drain cleaning cable  $\varnothing$  8 mm with adapter drum 32/8 and integrated clamping jaws, as accessory.

### Drive

Powerful, quiet running capacitor motor with high torque, 750 W (REMS Cobra 22), 1050 W (REMS Cobra 32), right and left-hand rotation. Full transmission of motor power by a slipping-proof maintenance-free toothed belt drive. Straight through closed drive spindle. Permanently lubricated, maintenance-free roller bearings. Fast and secure run and stop of pipe and drain cleaning cable through strong, centrally located pressing lever provides central power input. Lever doubles as a carrying device without awkward locking.

### Pipe and drain cleaning tools

Large variety of pipe and drain cleaning tools (page 224–225), also fit into pipe and drain cleaning machines of other makes.



German Quality Product

Tested by electrosuisse»



Info



Straight through closed drive spindle protects motor and drive against dirt and water.

## Supply format

**REMS Cobra 22 Set.** Electric pipe and drain cleaning machine for pipes Ø 20–150 mm. Drive unit with maintenance-free belt drive, capacitor motor 230 V, 50 Hz, 750 W, right and left-hand rotation, guide hose. Personal protection switch (PRCD). Choice of cable and tool set 16 or/and 22. In a carton.

Description	Version	Art.-No.	
<b>Set 16</b>	5 cable sections 16 × 2.3 m in cable carrier, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator, 1 pair of guide gloves, steel case for tool set	172010	
<b>Set 22</b>	5 cable sections 22 × 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator 22/32, 1 pair of guide gloves, steel case for tool set	172011	
<b>Set 16 + 22</b>	5 cable sections 16 × 2.3 m in cable carrier, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator, 5 cable sections 22 × 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator 22/32, 2 pairs of guide gloves, steel case for each tool set	172012	



## Supply format

**REMS Cobra 32 Set.** Electric pipe and drain cleaning machine for pipes Ø 20–250 mm (½–10"). Drive unit with maintenance-free belt drive, capacitor motor 230 V, 50 Hz, 1050 W, right and left-hand rotation, guide hose. Personal protection switch (PRCD). Choice of cable and tool set 32 or cable and tool sets 22 and 32 or 16 and 22. In a carton.

Description	Version	Art.-No.	
<b>Set 32</b>	4 cable sections 32 × 4.5 m in cable carrier, straight auger 32, retrieving auger 32, funnel auger 32, toothed cross-blade borer 32/45, cable joint separator 22/32, 1 pair of guide gloves, case for tool set	174010	
<b>Set 22 + 32</b>	5 cable sections 22 × 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator 22/32, 4 cable sections 32 × 4.5 m in cable carrier, straight auger 32, retrieving auger 32, funnel auger 32, toothed cross-blade borer 32/45, cable joint separator 22/32, 2 pairs of guide gloves, steel case/ case for each tool set	174011	
<b>Set 16 + 22</b>	5 cable sections 16 × 2.3 m in cable carrier, 2 clamping jaws 16, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator 16, 5 cable sections 22 × 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator 22/32, 2 pairs of guide gloves, steel case for each tool set	174012	



## Accessories

Description	Art.-No.	
<b>REMS Cobra 22 drive unit</b> with guide hose	172000	
<b>REMS Cobra 32 drive unit</b> with guide hose	174000	
<b>Pipe and drain cleaning tools</b> see page 224–225.		





Description	Size	Art.-No.	
<b>Cable and tool set 16</b> consisting of 5 cable sections 16 × 2.3 m in cable carrier, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator, 1 pair of guide gloves, steel case for tool set		172050	
<b>Cable and tool set 22</b> consisting of 5 cable sections 22 × 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator, 1 pair of guide gloves, steel case for tool set		172051	
<b>Cable and tool set 32</b> consisting of 4 cable sections 32 × 4.5 m in cable carrier, straight auger 32, retrieving auger 32, funnel auger 32, toothed cross-blade borer 32/45, cable joint separator 22/32, 1 pair of guide gloves, case for tool set		174050	
<b>Adapter drum REMS Cobra 22/8</b> with cable Ø 8 mm × 7.5 m long, with bulbous head		170011	
<b>Adapter drum REMS Cobra 32/8</b> with cable Ø 8 mm × 7.5 m long, with bulbous head		170012	
<b>Clamping jaws 16 (pack of 2)</b> for REMS Cobra 32 for clamping drain cleaning cables Ø 16 mm		174101	
<b>Pipe and drain cleaning cable</b> for pipe-Ø 10–50 (75) mm for pipe-Ø 25–125 mm for pipe-Ø 50–150 mm for pipe-Ø 50–250 mm	8 × 7.5 m 16 × 2.3 m 22 × 4.5 m 32 × 4.5 m	170200 171200 172200 174200	
<b>Pipe and drain cleaning cable</b> (5 pieces) in cable carrier for pipe-Ø 25–125 mm	16 × 2.3 m	171201	
<b>Pipe and drain cleaning cable</b> (5 pieces) in cable carrier for pipe-Ø 50–150 mm	22 × 4.5 m	172201	
<b>Pipe and drain cleaning cable</b> (4 pieces) in cable carrier for pipe-Ø 50–250 mm	32 × 4.5 m	174201	
<b>Pipe and drain cleaning cable S</b> With thick special spring steel for high stability, e.g. during root cutting, milling, chain knocking for pipe-Ø 25–125 mm for pipe-Ø 50–150 mm for pipe-Ø 50–250 mm	16 × 2 m 22 × 4 m 32 × 4 m	171205 172205 174205	
<b>Pipe and drain cleaning cable with core</b> prevents clogging of pipe and drain cleaning cable with dirt for pipe-Ø 25–125 mm for pipe-Ø 50–150 mm for pipe-Ø 50–250 mm	16 × 2.3 m 22 × 4.5 m 32 × 4.5 m	171210 172210 174210	
<b>Pipe and drain cleaning cable with core</b> (5 pieces) in cable carrier for pipe-Ø 50–150 mm	22 × 4.5 m	172203	
<b>Pipe and drain cleaning cable with core</b> (4 pieces) in cable carrier for pipe-Ø 50–250 mm	32 × 4.5 m	174203	
<b>Cable reduction 22/16</b> for connecting individual cables of different sizes	22/16	172154	
<b>Cable reduction 32/22</b> for connecting individual cables of different sizes	32/22	174154	
<b>Cable carrier (empty)</b>	16 22 32	171150 172150 174150	
<b>Cable joint separator</b> for releasing the safety lock	16 22/32	171151 172151	



Description	Size	Art.-No.	
<b>Straight auger</b> for exploring the obstruction to withdraw a sample. Clearing of solid blockages caused by e.g. textiles, paper, kitchen waste	16 22 32	171250 172250 174250	
<b>Bulbous auger</b> for minor obstructions caused by textiles and papers. Flexible, facilitates advancement in tight bends.	16 22 32	171265 172265 174265	
<b>Funnel auger</b> for textile and paper obstructions in particular. Especially useful for cleaning larger diameter pipes. Also be used as a recovery tool for cables left in the pipe.	16 22 32	171270 172270 174270	
<b>Retrieving auger</b> with extended, specially angled grappling arms. Used to recover cables left in the pipe. Not suitable for boring operations.	16 22 32	171275 172275 174275	
<b>Serrated blade borer</b> for boring out greasy or heavily silted pipes, e.g. drains of washing machines, dishwashers. Riveted to the connector (not soldered or welded), so as to prevent any deformation of the hardened spring steel blades.	16/25 22/35 22/45 32/55	171280 172280 172281 174282	
<b>Serrated cross-blade borer</b> Universal use for obstructions of all kinds, including incrustations, e.g. limescale deposits on the inside of the pipe. Riveted to the connector (not soldered or welded), so as to prevent any deformation of the hardened spring steel blades. Operation with pipe and drain cleaning cable S recommended.	16/25 16/35 22/35 22/45 22/65 32/45 32/65 32/90 32/115	171290 171291 172290 172291 172293 174291 174293 174295 174296	
<b>Forked cutter</b> to remove moderate to severe silting or persistent grease contamination. Made of hardened spring steel.	16	171305	
<b>Cross-forked cutter</b> to remove moderate to severe silting or persistent grease contamination. Made of hardened spring steel. Operation with pipe and drain cleaning cable S recommended.	16	171306	
<b>Serrated forked cutter</b> Versatile use, e.g. for removal of slurries and for mincing (crushing) of root infested pipe. Made of hardened spring steel.	22/65 32/65 32/90	172305 174305 174306	
<b>Root cutter</b> specially designed for root infested pipe. Hardened, replaceable ring-type saw, cutting to front and rear. Operation with pipe and drain cleaning cable S recommended.	22/65 32/65 32/90	172310 174310 174311	
<b>Chain knocker, smooth rings</b> for final pipe and drain cleaning for removal of grease deposits and incrustations, e.g. limescale deposits on the inside of the pipe. For sensitive pipes, e.g. plastic.	16 22 32	171340 172340 174340	
<b>Chain knocker, spiked links</b> for final pipe and drain cleaning for removal of grease deposits and incrustations, e.g. limescale deposits on the inside of the pipe. For cast and concrete pipes.	16 22 32	171341 172341 174341	
<b>Guide gloves, pair</b> for secure gripping and guiding of pipe and drain cleaning cables		172610	
<b>Riveted guide glove, left</b> <b>Riveted guide glove, right</b> for secure gripping and guiding of pipe and drain cleaning cables. Fully leather, inner surface riveted.		172611 172612	

