





# Pipe and Drain inspection

## Pipe and Drain cleaning

|   |  |            |
|---|--|------------|
|  | <b>Electronic camera inspection system</b>             | <b>152</b> |
|  | <b>Drain cleaner for manual and electric operation</b> | <b>154</b> |
|  | <b>Electric drain cleaning machine</b>                 | <b>155</b> |
|  | <b>Electric pipe and drain cleaning machines</b>       | <b>156</b> |

Super light, handy camera inspection system for inexpensive inspection and damage analysis of pipes, drains, chimneys and other hollow spaces. Also for inspections after pipe cleaning jobs and before commissioning of new installations or repairs. For corded, battery and automobile operation.

|                                       |             |
|---------------------------------------|-------------|
| Pipes                                 | Ø 40–150 mm |
| Drains, chimneys, other hollow spaces |             |

## REMS Orcus 3000 – brilliant pictures in pipes and drains. Super light and handy.

### System advantage

Only **one** controller unit with TFT-colour display for connecting the camera cable set Mini b/w and other exchangeable cable sets with optional exchangeable camera heads for different applications. Therefore inexpensive conversion possible.

### Execution

For corded, battery and automobile operation. Super light and handy. Controller unit only 0.7 kg, in micro-processing-technology. Small size: 230 x 120 x 49 mm. Can be used anywhere, also in very confined areas. Controller unit safely plugged onto cable carrier, for easy transport. Removable for best positioning during work, detachable for intensive, easy cleaning of cable set. Optional pivoted cable carrier for easy reeling of push cable. Voltage supply 230 V or 110 V AC, 50–60 Hz, 15 W, electronically controlled. Carrying case for controller unit, voltage supply and accessories. Voltage supply automobile 12 V DC, 15 W, Voltage box 12 V / 230 V, 50–60 Hz, 50 W, as combined voltage supply for battery and mains power with integrated rapid charger, as accessory.

### Controller unit with TFT-colour display

5.6" colour display with modern TFT technology, 142 mm diagonal display, 320 x 240 Pixel. Buttons for adjusting the brightness of the colour display and the intensity of the LED's in the colour camera head. Full picture, partial picture, scroll function. Sturdy shock resistant plastic housing. Splash-proof, also when cover is opened. Video output connection Composite-Video PAL for transmitting the colour signals, for connecting PC, laptop, video recorder, video printer, colour TV and others, for easy documentation of inspection results.

### Exchangeable camera head b/w

Special high resolution camera black and white with CCD sensor, 290,000 pixel, and 8 ultra bright, red LED's with adjustable lighting intensity up to 800 mcd and condensed lighting angle for brilliant pictures at steadily bright illumination. Few light required due to very high luminous sensitivity (0.3 Lux). Fixed focus and special lens with 90° wide angle, also for recognizing smallest details. Particularly small, rounded camera head Ø 30 mm, water proof down to 20 m (2 bar/0.2 MPa/29 psi) and highly flexible slide springs, tapered towards the push cable, for effortless forward feed also through several pipe bends. Camera head with sturdy, fast-to-change protection cap in high-strength polyacryl with built-in mineral glass pane. Adapter to push cable.

### Exchangeable camera head S-Colour

Special high resolution colour camera with CCD sensor, 3 x 320,000 pixel, and 4 ultra bright, white LED's with adjustable lighting intensity up to 2,400 mcd and condensed lighting angle for brilliant pictures at steadily bright illumination. Few light required due to very high luminous sensitivity (0.5 Lux). Fixed focus and special lens with 90° wide angle, also for recognizing smallest details. Particularly small, rounded camera head Ø 30 mm, water proof down to 20 m (2 bar/0.2 MPa/29 psi) and highly flexible slide springs, tapered towards the push cable, for effortless forward feed also through several pipe bends. Camera head with sturdy, fast-to-change protection cap in high-strength polyacryl with built-in mineral glass pane. Adapter to push cable.

### Exchangeable cable sets

Choice of 20 m push cable in cable carrier or 30 m push cable in pivoted cable carrier. Push cable with length marks, with connections for controller unit and exchangeable camera heads. Universal exchangeable cable sets for all REMS exchangeable camera heads. Bend-proof push cable in hybrid technology, with glass fibre core, data lines and plastic coating, very sturdy, for long service life. Rugged, powder coated, easy-to-clean cable carrier. Pivoted cable carrier for easy reeling of cable.

### Camera cable set Mini b/w

For small pipe dimensions and tight pipe bends from Ø 40 mm. Particularly small camera head with special high resolution black and white camera, with CCD sensor, 290,000 pixel, and 8 ultra bright, red SMD's with adjustable lighting intensity up to 800 mcd and condensed lighting angle for brilliant pictures at steadily bright illumination. Few light required due to very high luminous sensitivity (0.05 Lux). Fixed focus and special lens, also for recognizing smallest details. Particularly small, rounded camera head Ø 23 mm, water proof down to 20 m (2 bar/0.2 MPa/29 psi) and highly flexible slide springs, tapered towards the push cable, for effortless forward feed also through several pipe bends. Camera head with sturdy protection cap in aluminium with built-in mineral glass pane. 5 m push cable, highly flexible, with connector to controller unit.

### Centering guide

Various centering guides for larger pipe diameters, to be fixed on exchangeable camera head, as accessory.



German Quality Product



## Voltage supply for battery and mains power

Voltage box 12 V / 230 V or 110 V for voltage supply with battery or mains power with integrated rapid charger for short charging times (1 h). Impuls charger reduces memory effect for maximum battery power. For battery 12 V, 2.0 Ah. As accessory.

## Voltage supply for automobiles

Voltage supply automobile 12 V for connecting in automobiles. As accessory.

## Supply format

**REMS Orcus 3000 Set.** Electronic camera inspection system for inexpensive inspection and damage analysis. For pipes Ø 40–150 mm, drains, ditches, chimneys and other hollow spaces. Controller unit in micro processing technology, 5,6" TFT-colour display, video output connection PAL, in sturdy, shock resistant plastic housing, splash proof. Voltage supply 230 V or 110V AC, 50–60 Hz, 15 W. In sturdy carrying case. Choice of exchangeable camera heads with high resolution special camera black and white or high resolution special colour camera. Choice of 20 m push cable with length marks in cable carrier or 30 m push cable with length marks in pivoted cable carrier.

| Description             | Version  | Art.-No. |
|-------------------------|--|----------|
| <b>Set 20 b/w K</b>     | Exchangeable camera head with special high resolution black and white camera. 20 m push cable with length marks. In cable carrier.         | 173054   |
| <b>Set 30 b/w H</b>     | Exchangeable camera head with special high resolution black and white camera. 30 m push cable with length marks. In pivoted cable carrier. | 173052   |
| <b>Set 30 S-Color H</b> | Exchangeable camera head with special high resolution colour camera. 30 m push cable with length marks. In pivoted cable carrier.          | 173053   |



## Accessories

| Description   | Art.-No. |
|---|----------|
| <b>REMS Orcus 3000 Basic</b><br>Controller unit in micro processing technology, 5,6" TFT-colour display, video connection PAL, in sturdy, shock resistant plastic housing, splash-proof. Voltage supply 230 V or 110 V AC, 50-60 Hz, 15 W. In carrying bag. | 173010   |
| <b>Exchangeable camera head b/w</b><br>with special high resolution black and white camera and connection for push cable.   | 173041   |
| <b>Exchangeable camera head S-Colour</b><br>with special high resolution color camera and connection for push cable.  | 173042   |
| <b>Camera cable set Mini b/w</b><br>Particularly small camera head with special high resolution black and white camera. 5 m push cable, highly flexible, with connection for controller unit. For small pipe dimensions and tight pipe bends from Ø 40 mm.  | 173200   |
| <b>Exchangeable cable set 20 K</b><br>20 m push cable with length marks, with connections for controller unit and camera head. In cable carrier.  | 173043   |
| <b>Exchangeable cable set 30 H</b><br>30 m push cable with length marks, with connections for controller unit and camera head. In pivoted cable carrier.  | 173044   |
| <b>Centering guide Ø 62 mm, pair</b>  | 173015   |
| <b>Centering guide Ø 100 mm, pair</b>   | 173014   |
| <b>Protection cap</b> with mineral glass pane   | 173126   |
| <b>Extension cable</b> controller unit / camera-cable-set, 1.2 m long   | 173019   |
| <b>Battery 12 V, 2.0 Ah</b>   | 571510   |
| <b>Voltage box 12 V / 230 V</b><br>combined voltage supply for battery or mains power with integrated rapid charger. Connecting cable to controller unit.   | 173100   |
| <b>Voltage supply automobile 12 V</b>   | 173017   |



# REMS Mini-Cobra

Drain cleaner for manual and electric operation

Proven hand unit for quick application to remove pipe blockages in kitchen, bath, toilet.

For pipes  $\varnothing$  20–50 (75) mm  
For cables  $\varnothing$  6, 8, 10 mm

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

## Execution

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 an easy-running, ergonomic hand crank, or electric through a normal, slow rotating drill with stepless drive or standard screw driver. Hexagon adapter for electric drive located in the drum cover.



German Quality Product

## Supply format

**REMS Mini-Cobra.** Drain cleaner for pipes  $\varnothing$  20–50 (75) mm, with hand crank and hexagon adapter for standard drive unit (electric slow rotating drill with stepless drive or screw driver). For drain cleaning cables  $\varnothing$  6, 8 and 10 mm. Cable drum in shock-proof, glass-fibre reinforced plastic. Quick-action chuck. Cable 8 x 7.5 m. In cardboard box.

|  |          |  |
|--|----------|--|
|  | Art.-No. |  |
|  | 170010   |  |



## Accessories

| Description                    | Size      | Art.-No. |  |
|--------------------------------|-----------|----------|--|
| Drain cleaning cable           | 8 x 7.5 m | 170200   |  |
|                                | 10 x 10 m | 170205   |  |
| Drain cleaning cable with core | 8 x 7.5 m | 170201   |  |



# REMS Mini-Cobra A

Electric drain cleaning machine

Electric drain cleaning machine with automatic feed-forward and reverse. For effortless and quick application to remove pipe blockages in kitchen, bath, toilet.

For pipes  $\varnothing$  20–50 (75) mm  
 For cables  $\varnothing$  8, 10 mm

**REMS Mini-Cobra A – quick removal of blockages. With automatic feed-forward and reverse.**

### Execution

Compact unit of drive machine and cable drum. Handy, light. Only 5,2 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. Easy insertion of cable directly through strainers in sinks and drains.

### 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, maintenance-free gear with safety slipping clutch. Universal motor, 620 W, high-torque forward and reverse at low speed. Stepless, electronic speed control. The speed between 0 and 550 rpm is controlled by pressing the tip switch steplessly (acceleration switch).



### Supply format

**REMS Mini-Cobra A.** Electric drain cleaning machine with automatic feed-forward and reverse, for pipes  $\varnothing$  20-50 (75) mm. For drain cleaning cables  $\varnothing$  8 and 10 mm. Drive unit with maintenance-free gear, universal motor 230 V or 110 V, 50–60 Hz, 620 W, high-torque forward and reverse at low speed. Safety tip switch. Stepless, electronic speed control (acceleration switch). Cable drum in shock-proof, glass-fibre reinforced plastic. Cable with core 8x7.5 m. In cardboard box.

|  |          |  |
|--|----------|--|
|  | Art.-No. |  |
|  | 170020   |  |



### Accessories

| Description                    | Größe     | Art.-No. |
|--------------------------------|-----------|----------|
| Drain cleaning cable with core | 8 x 7.5 m | 170201   |
| Drain cleaning cable           | 10 x 10 m | 170205   |



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 ( $\varnothing$  1/2–10")  
 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.

**Execution**

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. 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. 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 158–159), also fit into pipe and drain cleaning machines of other makes.



German Quality Product



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. Choice of cable and tool set 16 or/and 22.

| Description        | Version   | Art.-No. |
|--------------------|---|----------|
| <b>Set 16</b>      | 6 cable sections 16 x 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 x 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  | 172011   |
| <b>Set 16 + 22</b> | 6 cable sections 16 x 2.3 m in cable carrier, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator, 5 cable sections 22 x 4.5 m in cable carrier, straight auger 22, retrieving auger 22, funnel auger 22, toothed cross-blade borer 22/35, cable joint separator, 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 (1/2–10"). Drive unit with maintenance-free belt drive, capacitor motor 230 V, 50 Hz, 1050 W, right and left-hand rotation, guide hose. Choice of cable and tool set 32 or cable and tool sets 22 and 32 or 16 and 22.

| Description        | Version   | Art.-No. |
|--------------------|---|----------|
| <b>Set 32</b>      | 4 cable sections 32 x 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 x 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, 4 cable sections 32 x 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> | 6 cable sections 16 x 2.3 m in cable carrier, straight auger 16, bulbous auger 16, toothed blade borer 16/25, cable joint separator 16, 5 cable sections 22 x 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, 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   |

Pipe and drain cleaning tools see page 158–159.



| Description  | Size     | Art.-No. |
|--|----------|----------|
| <b>Cable and tool set 16</b><br>consisting of 6 cable sections 16 x 2.3 m in cable carrier, straight auger 16, bulbous auger 16, bulbous 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><br>consisting of 5 cable sections 22 x 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><br>consisting of 4 cable sections 32 x 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><br>with cable 8 x 7.5 m, with bulbous head   |          | 170011   |
| <b>Adapter drum REMS Cobra 32/8</b><br>with cable 8 x 7.5 m, with bulbous head   |          | 170012   |
| <b>Clamping jaws 16 (set)</b><br>for REMS Cobra 32 for clamping drain cleaning cables Ø 16 mm  |          | 174101   |
| <b>Pipe and drain cleaning cable</b><br>for pipe-Ø 10–50 (75) mm   | 8x7.5 m  | 170200   |
| for pipe-Ø 25–100 mm   | 16x2.3 m | 171200   |
| for pipe-Ø 50–150 mm   | 22x4.5 m | 172200   |
| for pipe-Ø 50–250 mm   | 32x4.5 m | 174200   |
| <b>Pipe and drain cleaning cable</b><br>(6 pieces) in cable carrier<br>for pipe-Ø 25–125 mm  | 16x2.3 m | 171201   |
| <b>Pipe and drain cleaning cable</b><br>(5 pieces) in cable carrier<br>for pipe-Ø 50–150 mm  | 22x4.5 m | 172201   |
| <b>Pipe and drain cleaning cable</b><br>(4 pieces) in cable carrier<br>for pipe-Ø 50–250 mm  | 32x4.5 m | 174201   |
| <b>Pipe and drain cleaning cable S</b><br>With thick special spring steel<br>for high stability, e.g. during root cutting, milling, chain knocking<br>for pipe-Ø 25–125 mm   | 16x2 m   | 171205   |
| for pipe-Ø 50–150 mm   | 22x4 m   | 172205   |
| for pipe-Ø 50–250 mm   | 32x4 m   | 174205   |
| <b>Pipe and drain cleaning cable with core</b><br>prevents clogging of pipe<br>and drain cleaning cable with dirt<br>for pipe-Ø 25–125 mm  | 16x2.3 m | 171210   |
| for pipe-Ø 50–150 mm   | 22x4.5 m | 172210   |
| <b>Pipe and drain cleaning cable with core</b><br>(5 pieces) in cable carrier<br>for pipe-Ø 50–150 mm  | 22x4.5 m | 172203   |
| <b>Pipe and drain cleaning cable with core</b><br>(4 pieces) in cable carrier<br>for pipe-Ø 50–250 mm  | 32x4.5 m | 174203   |
| <b>Cable reduction 22/16</b><br>for connecting individual cables of different sizes  | 22/16    | 172154   |
| <b>Cable reduction 32/22</b><br>for connecting individual cables of different sizes  | 32/22    | 174154   |
| <b>Cable carrier (empty)</b>   | 16       | 171150   |
|  | 22       | 172150   |
|  | 32       | 174150   |
| <b>Cable joint separator</b><br>for releasing the safety lock  | 16       | 171151   |
|  | 22/32    | 172151   |



# REMS Cobra 22/32

Accessories for REMS Cobra 22, REMS Cobra 32 and other makes

| Description  | Size   | Art.-No.   |  |
|--|--|--|--|
| <b>Straight auger</b><br>for exploring the obstruction to withdraw a sample. Clearing of solid blockages caused by e.g. textiles, paper, kitchen waste   | 16<br>22<br>32   | 171250<br>172250<br>174250   |  |
| <b>Bulbous auger</b><br>for minor obstructions caused by textiles and papers. Flexible, facilitates advancement in tight bends.  | 16<br>22<br>32   | 171265<br>172265<br>174265   |  |
| <b>Funnel auger</b><br>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<br>22<br>32   | 171270<br>172270<br>174270   |  |
| <b>Retrieving auger</b><br>with extended, specially angled grappling arms. Used to recover cables left in the pipe. Not suitable for boring operations.  | 16<br>22<br>32   | 171275<br>172275<br>174275   |  |
| <b>Serrated blade borer</b><br>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<br>22/35<br>22/45<br>32/55   | 171280<br>172280<br>172281<br>174282   |  |
| <b>Serrated cross-blade borer</b><br>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<br>16/35<br>22/35<br>22/45<br>22/65<br>32/45<br>32/65<br>32/90<br>32/115 | 171290<br>171291<br>172290<br>172291<br>172293<br>174291<br>174293<br>174295<br>174296 |  |
| <b>Forked cutter</b><br>to remove moderate to severe silting or persistent grease contamination. Made of hardened spring steel.  | 16   | 171305   |  |
| <b>Cross-forked cutter</b><br>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><br>Versatile use, e.g. for removal of slurries and for mincing (crushing) of root infested pipe. Made of hardened spring steel.  | 22/65<br>32/65<br>32/90  | 172305<br>174305<br>174306   |  |
| <b>Root cutter</b><br>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<br>32/65<br>32/90  | 172310<br>174310<br>174311   |  |
| <b>Chain knocker, smooth rings</b><br>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<br>22<br>32   | 171340<br>172340<br>174340   |  |
| <b>Chain knocker, spiked links</b><br>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<br>22<br>32   | 171341<br>172341<br>174341   |  |
| <b>Guide gloves, pair</b><br>for secure gripping and guiding of pipe and drain cleaning cables   |  | 172610   |  |
| <b>Riveted guide glove, left</b><br><b>Riveted guide glove, right</b><br>for secure gripping and guiding of pipe and drain cleaning cables. Fully leather, inner surface riveted.  |  | 172611<br>172612   |  |

