



# BHR PIPE CLEANING MACHINE

User's manual - Use and Maintenance  
Drain Cleaning & Inspection Equipments

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*Dear Customer, thank you for choosing a KAMMAK Company.*

## MANUAL

This manual is a safe guide for the use of the unit. Please read it carefully in all its parts before use.

This manual contains important information for the proper working and use of the equipment.

KAMMAK reserve the right to introduce any future changes without notice or replacement.

## PRELIMINARY INSPECTION

Upon receipt of the equipment, take it out from the carton and check it is in perfect condition. Also check that the data on the rating plate correspond to required ones. For any problem, immediately contact the supplier specifying the kind of fault.

In case of doubts about the safety of the machine, do not use it.

## DESCRIPTION

The unit is fitted with flow reverser. Particularly recommended for difficult pipe cleaning treatments, they work in complete safety and autonomy enabling the operator to carry out other works at the same time.

High-speed rotator with connectable cable sections.

The unit are equipped with special fittings to clean the pipes.

Units are supplied ready to use, in strong carton boxes with related user's manual.

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## 1 - REGULATIONS – CE MARK

### Declaration of Conformity

The pumps are in conformity with the following European Directives, Laws and Regulations:  
Machinery Directive 2006/42/EC



### QUALITY

KAMMAK equipments are manufactured with high-quality acid-resistant materials and submitted to severe operating tests.

Follow these instructions to avoid any operating and servicing problems.

## 2 - THE ADVANTAGES OF THE UNIT

Time increase foreign matter, pollution, usually present in pipes, thus reducing flow rate and efficiency.

To restore the original plant performance it is necessary to carry out pipe cleaning with specific products and equipments.

The flow reverser device attacks scale on both sides, thus making pipe cleaning particularly effective and fast (as the normal dissolving action is combined with the detachment in flakes of scale, which is made friable by the double attack), even when pipe are almost totally obstructed.



### 3 - TECHNICAL FEATURES

#### BHR PIPE CLEANING MACHINE

<b>Motor</b>	220-230 V - 750W
<b>Speed</b>	1420 RPM
<b>Degree of protection</b>	Ip44
<b>Working Range</b>	Ø 50 – Ø 200 mm
<b>Max Working Length</b>	60 m
<b>Weight</b>	20 kg (only machine)
<b>Flow reverser</b>	Manual

\* Data referred to the pump body outlet.

### 4 - CUSTOMER SERVICE

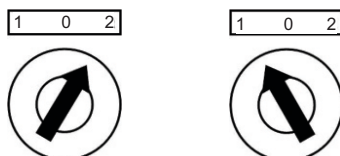
**For enquiries on spare parts, please specify serial number of pump (shown on product and carton).**

### 5 - USE

#### 5.1 - HOW TO PREPARE THE UNIT

1. Position the machine approx. 50 – 80 cm in front of the opening of the pipe you wish to clean.
2. **IMPORTANT:** The protecting cap must be installed on the guiding bolts. Afterwards, the guide hose must be connected to the protecting cap so the latch bolt locks.
3. Insert the drain cable into the machine, install suitable tool, insert the drain cable into the pipe. **IMPORTANT:** Guide the drain cable only with the supplied special safety glove.
4. Release the handle and push the drain cable further into the pipe. Repeat this process until you feel resistance; this means you have reached the blockage.
5. Pull the drain cable out of the machine (30 cm) until the drain cable is prestressed into a bend (working bend).
6. Set the machine to turn clockwise "2" at the On/Off switch.
7. Press the handle and press the drain cable against the blockage using the working bend. When the drain cable has moved into the pipe so far that the working bend is relieved, pull the drain cable out of the machine and form a new working bend.
8. Repeat this process until the blockage has been removed.

If the tool or drain cable becomes fastened to the blockage, release the handle and switch the machine to turn anti-clockwise "1".



## 5.2 - FUNCTIONING

Switch on the unit.

Ensure that valve is in the 0 position.

The unit have :

22 mm Cable Sections - 5 x 4.6 m  
16 mm Cable Sections - 5 x 2.2 m  
Cable carriers for each size cable  
Straight Auger 16 & 22 mm  
Retrieving Auger 16 & 22 mm  
Funnel Auger 16 & 22 mm  
Bulbous Auger 16 & 22 mm  
Toothed Blade Borer 16 & 22 mm  
Cable Joint Seperator 16 & 22  
1 Pair of guide gloves  
Case for each tool set

## 6 - SAFETY INSTRUCTIONS

- Avoid using the unit in rooms where there are liquids, gases, flammable powders or with risk of explosion.
- Before plugging in the unit to the outlet, make sure the switch is off.
- The outlet must be suitable for the plug of the unit. Do not use non CE-marked defective outlets.
- Use (CE) approved extensions, only if necessary.
- Do not use plug adapter. Do not carry out any modifications to the plug nor to the electrical cable.
- Unit shall always kept in perfect efficiency.
- During maintenance operations, check the switch is off and the plug is not connected.
- All maintenance operations must be carried out by the authorized Technical Assistance Service.
- Only use KAMMAK original spare parts.
- Do not carry out any modifications to the unit if not authorized by Technical Department (ask for written authorization).
- Keep children and unauthorized persons away from the unit.
- Keep the unit out of reach of children and unauthorized persons.
- Do not use the unit if tired or under the effect of alcohol, medicines or drugs.
- When using the unit, wear overalls, do not wear jewellery, keep hair away from the pump.
- It is necessary to use Individual Protection Equipment (IPE).

**WARNING:** The pipe cleaning machines are only designed for short term operation and may therefore only be used for maximum continuous of 15 minutes (15 minutes work / 45 minutes break)

## 7 - SPARES DIAGRAMS

### BHR PIPE CLEANING MACHINE

P.S.: For enquiries on spare parts, please specify always if needed for the model BHR.



22 mm Cable Sections  
5 x 4.6 m



16 mm Cable Sections  
5 x 2.2 m



Cable carriers for each  
size cable



1 Pair of guide gloves  
& Case for each tool set



Straight Auger 16 & 22 mm



Retrieving Auger 16 & 22 mm



Funnel Auger 16 & 22 mm



Bulbous Auger 16 & 22 mm



Toothed Blade Borer 16 & 22 mm



Cable Joint Separator 16 & 22 mm

## 8 - DIRECTIONS FOR DISPOSAL

In accordance with the WEEE directive 2002/96/EC on waste electrical and electronic equipment, the pump, when no longer used, shall be disposed of in a RAEE – WEEE collection centre authorized for disposal of waste electrical and electronic equipment, or directly contact your dealer.



## 9 - WARRANTY TERMS AND AFTER-SALE ASSISTANCE CONDITIONS

KAMMAK guarantee that the equipments sold are free from designing, manufacturing and material defects, under normal operating conditions and according to the directions contained in the instructions manual supplied with the equipment.

In compliance with the directive 1999/44/CE valid in the EEC countries, the warranty rights apply only to the purchaser.

KAMMAK, placed in Bursa - Turkey, guarantee the equipments against any conformity defects appearing within 12 (twelve) months from the purchase date, even when warranty operations have been carried out during this period, if only proved by a document.

The warranty covers all components of the equipment and provides for the repairing or, if necessary, the free replacement of those parts that, according to your Dealer, have conformity defects.

The warranty does not cover the aesthetic parts and the parts subject to wear and tear, nor does it cover all damages or failures whose cause is not due to the manufacturer, such as: transport, wrong installation or maintenance, tampering, sudden changes of electric voltage and/or hydraulic pressure, thunderbolts, corrosions, excess of humidity, accidental bumps or events beyond our control.

The warranty is valid only if the equipments have been installed, used and properly maintained according to all directions supplied by KAMMAK in the instructions manual attached to the equipment.

Should any conformity defects of the product be found during the warranty period, the Customer shall notify the Dealer to agree upon the terms of repairing and/or replacing of the product.



### PRECAUTIONS

Only use "KAMMAK" chemicals in order to ensure good working and avoid damaging the equipments.

Once the lifetime of the pump has expired, do not dispose of it with household waste. The pump must be recycled in authorized centres and can be assimilated to a household appliance.



During handling lift the pump and do not drag it in order to avoid damages to the tank.

Temperature of the descaling solution must never exceed 60 °C.

Flexible hoses and fittings can be damaged in time; make sure to check the seal whenever using the pump, as indicated in the pump preparation instructions.



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