

Info sheet sewer cleaning nozzles with hardened nozzle inserts



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Requirements for the user

Every person involved in the assembly, commissioning and operation of the tool has to...

- be familiar with the cleaning work environment and have specialist knowledge;
- be appropriately trained and instructed in the use of the product;
- read and understood the information sheet and in particular the „Safety“ chapter.

If the personnel do not have the necessary knowledge, they must be trained and instructed. If necessary, this can be done by the manufacturer of the drain cleaning tool. Only the maintenance and repair work described in this information sheet may be carried out by users who meet the specified requirements.

Any other maintenance and repair work may only be carried out by qualified specialist personnel from the manufacturer.

Safety instructions



- The tool may only be operated in closed pipes. Non-compliance can cause serious injuries and damage to property



- During operation, no one may be in the pipes or at the ends of the pipes. Non-compliance can cause serious injuries.



- The maximum working pressure according to the technical information must be observed! Failure to comply may result in the nozzles bursting.



- The product may only be operated with correct and error-free hose connections.



- Cleaning areas (shaft, inlet, etc.) must be adequately secured during operation, including construction and clean-up work.



- The dirty water must not be discharged into streams or rivers.



- Before each start-up, the proper condition of the product must be checked. Defects must be remedied before commissioning.



- Secure hose lines so that they cannot be damaged during operation.



- Only the accessories provided and approved by R+M/Suttner may be used.



- It is forbidden to carry out any other conversions or modifications to drain cleaning nozzles. Only parts authorized by the manufacturer may be used. The manufacturer is not liable for damage that has arisen in connection with unauthorized modifications to the product.



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General safety instructions

- **high pressure water jets**

Defects or improper operation of the product can create hazards from pressurized splashing water. Before operating, make sure that the product is in perfect condition. Sharp jets of water can cause serious injuries, even limbs being severed. Failure to follow the safety instructions can result in death or serious injury!

- **toxic fumes**

Toxic fumes may be present in ducts. Wear the prescribed protective equipment such as gas masks, gas detectors and rescue harnesses. Inhaling toxic fumes or air contaminated with particles can cause death or serious injury due to particles penetrating the lungs!

- **high pressure water jets**

The course of the line (plans) must be known at the start of work so that the nozzle can be prevented from exiting at the end of the line. Possible exit points are to be monitored by auxiliary personnel.

- **falling parts**

In the area of the open shafts, objects can fall into the shaft onto people below. When inserting the products, never stand directly under the chute opening. Secure the access to the shaft against possibly falling parts. Do not throw any tools or objects down the shaft. Do not enter shafts that are in danger of collapsing. People could be buried. Failure to observe the safety instructions can result in death or serious injury!

- **danger of falling**

Open shafts are to be expected in the area of work with the product. Open shafts are to be signalled. Be careful where you step. Falling people can result in death or serious injuries!

- **hand injuries**

When handling the product, there is a risk of hand injuries due to pinching or abrasions. Wear gloves when working. Be careful where you grab the product. Carry heavy equipment in pairs. The consequences can be bruises, abrasions or even the amputation of limbs.

- **sharp objects**

When manipulating the product, there is a risk of hand injuries from sharp edges. Wear gloves when working. Be careful where you grab the product. Cut injuries to the hands or other parts of the body can result.

- **risk of falling**

Lines and other objects on the floor are to be expected in the area of work with the product. Be careful where you step. Keep the operational area tidy. Falls from stumbling can result in injury

- **damage**

Never jump the tool (manually pull back the hose and then let it shoot). Damage can be the result.

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Due to the water jets directed backwards, the sewer cleaning nozzles have a high tractive force. Thanks to the built-in nozzle inserts, the efficiency is increased enormously compared to directly drilled nozzles. In addition, the service life is increased many times over. To ensure a long service life, the nozzles are made of wear-resistant and hardened stainless steel with a high wall thickness.

Operation area:

- Maintenance rinses
- To remove sludge deposits and blockages

Operating instructions:

Make sure that no dirt gets into the nozzle when screwing it onto the pressure hose. Particles can clog the inserts.

Preparatory work:

It makes sense to clarify a few points before use. Knowledge of the following points are helpful in the preparation:

- Line routing
- Inside diameter of the pipe or duct to be machined
- Material quality of the channel to be processed
- Type of contamination in the pipe
- Intended flushing direction → It is recommended to work against the flow direction
- Any slope of the channel to be processed
- Possibilities of access to the canal

Operation:

1. Measure the length of the pipe to be cleaned (mark on the hose) and check this during cleaning.
2. Insert the tool into the pipe to be cleaned.
3. Slowly increase the pressure to the desired working pressure at the nozzle or open the shut-off device, for example the shut-off gun or the foot valve.
4. Gently move the nozzle to the end of the area to be cleaned.
5. Slowly retract the nozzle to clear the pipe and flush loose debris to the well.
6. After completing the cleaning work, close all manhole covers again



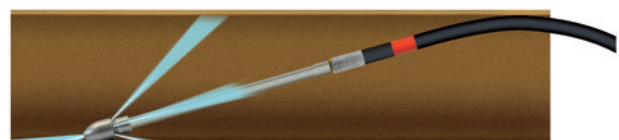
DANGER!

The maximum working pressure must not be exceeded under any circumstances, there is a danger to life! If nozzles burst, pipe walls can be breached and parts can be thrown out at high speed.



DANGER!

The nozzle can turn in larger pipes. You should therefore use a safety tube, otherwise death or serious injuries may result.



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As you pull back the nozzle, keep the water flowing without pressure. This prevents dirty water from getting inside the nozzle through the nozzle inserts.

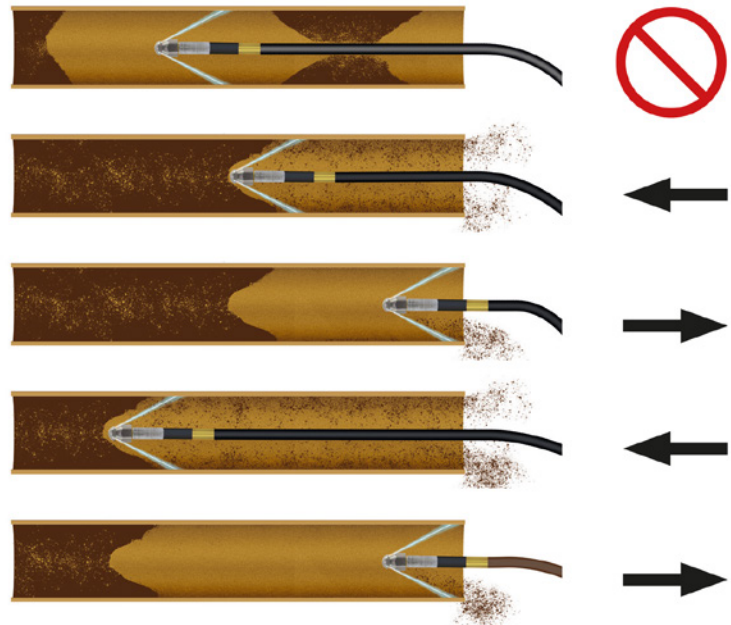
The nozzle inserts must be checked visually for blockages after each use. After the check, the nozzles must be preserved with a biodegradable oil.

In the case of heavily contaminated pipes, it is recommended that the tool be withdrawn at regular intervals. In this way you avoid blockages caused by shards and detached material

After usage:

After completing the cleaning work, the following points must be observed:

1. Check the nozzle inserts for clogging. This works best if you still have the nozzle on the hose and check whether water comes out with each nozzle use.
2. Disassemble the nozzle from the hose.
3. Rinse the nozzle with fresh water.



Replacing nozzle inserts instructions

To ensure optimal water flow, all nozzle inserts are glued in place with Loctite.

1. Calculate the required ceramic inserts or refer to the manufacturer's table.
2. Heat the nozzle around the nozzle insert.
3. Unscrew the nozzle insert and clean the nozzle thread.
4. Coat the new nozzle insert with Loctite and screw it in.
5. Tighten the nozzle insert hand-tight.
6. Allow Loctite to harden for at least 24 hours.



ATTENTION!

The high working pressure can wash out the threads. Always glue nozzle inserts in place with Loctite.