

RENSSI®

DRAIN CLEANING EQUIPMENT

SAFETY MANUAL

CHAIN KNOCKERS

Jobsite Health & Safety is a first priority matter here at Renssi®. To extend this priority to our customers and end-users, we have created this extensive Safety Manual for you to rely on when working with our products.

WARNING!

These instructions are for your own, personal safety. Always make sure that you have read and understood these instructions carefully before using Renssi® Tools.



SAFETY INFO
READ BEFORE USE OF TOOL





Table of Contents General Safety

Informations and Safety Symbols	4-5
Grinding & Cleaning Techniques and options	6
Grinding without lubrication	7
Grinding with water	7
Important before you begin	8
Different types of connectors	9
Shaft-attachment of Chain Knockers	10
Maintenance Practical Tips & Advice	11

To watch practical demonstration videos, or to download a digital copy of this manual, please visit <http://renssi.com/#safety-manuals>

Please note that demonstration videos, where available, are not intended as a replacement or alternative to this Safety Manual.

INFORMATIONS AND SAFETY SYMBOLS



DANGER -

Risk of serious injury, follow instructions.



DANGER –

Risk of serious injury from rotating parts.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

ALWAYS use personal protective equipment when operating our grinding and cleaning chains and other tools. Suitable PPE equipment includes Safety Overalls or other protective clothing and footwear and the following:



ALWAYS wear standardized eye protection when using the chains to prevent epoxy or other dust and debris from irritating your eyes.



ALWAYS wear suitable hearing protection when using the chains and operating equipment to prevent damage and hearing loss.



ALWAYS wear a suitable ventilation mask/respirator when using the chains to prevent any epoxy resin or other dust and debris being inhaled or consumed. Inhaling these toxins and particles can cause occupational asthma or epoxy dermatitis.



ALWAYS wear suitable cut-resistant work gloves (preferably cut resistance level 3 or higher) when using the chains to prevent any and all hand injuries. Any open wounds, injuries or skin irritations should be covered at all times to avoid contact with epoxy resins or other dust and debris.



READ INSTRUCTIONS CAREFULLY

ALWAYS REMEMBER!

Dust produced when working with chains can be dangerous to your health. It can be inflammable or explosive.

Make sure the drain pipe have been completely opened and ventilated to stop any gas forming in the lateral drain where the work takes place.

Before any assembly, use or replacement of any parts or before maintenance procedures, unplug the rotating equipment, milling machine or hand drill from its power socket.

SAFETY INFO

FAILURE TO COMPLY MAY LEAD TO SERIOUS INJURY INCLUDING ELECTRIC SHOCK OR INJURY FROM ROTATING PARTS.



DRAIN CLEANING PRODUCTS

CHAIN KNOCKERS

For the general cleaning process of pipes these are highly regarded as the go-to choice for most technicians.

MATERIALS: Steel Chains, Carbide Tips

PIPE TYPE: Cast Iron, Concrete



OVERSHOT PIPE CUTTER

This tool is engineered for situations where you overshoot the liner. Cutting off the excess liner is a breeze with our Overshot Cutter. Centrifugal force formed by spinning the tool pushes out stainless steel blades that cut the pipe.

MATERIALS: Aluminium body, Hardened steel blades

PIPE TYPE: Liner inside pipes



LATERAL CUTTERS WITH CENTERING AXLE

These tools are used in opening a lateral connection after lining. Carbide bits on the tool cut the liner material effectively while drilling through the liner.

MATERIALS: Steel body, Carbide bits

PIPE TYPE: Cast Iron



USING GRINDING CHAINS WITH WATER (Wet grinding)

GRINDING CHAINS ARE ONE OF THE MOST EFFICIENT WAYS TO CLEAN PIPES.

As a technique, it is highly recommended to use water when cleaning pipes with the chains. Water flushes out all debris while you work and therefore prevents excess build-up of debris or blockages resulting from such build-up.



USING GRINDING CHAINS WITHOUT WATER (Dry grinding)

WHEN THERE IS A POSSIBLE RISK OF WATER DAMAGE CAUSED BY CRACKS OR HOLES IN THE DRAINS, THE CORRECT METHOD FOR CLEANING IS DRY GRINDING.

This method is based on using vacuums to suck debris and waste from the drain during the grinding process. All without water. For example, kitchen lines often have blockages that require cleaning a line with holes in it so this requires the cleaning process to be done without water.



BEFORE YOU BEGIN THE CLEANING PROCESS WITH RENSSI® CHAIN KNOCKERS

**Prior to starting the cleaning process,
ALWAYS CHECK the following:**

When attaching a grinding chain, always make sure that the shaft's power source is switched off and unplugged to avoid the risk of electric shock and/or any serious personal injury.



1 Based on job demand, choose the correct chain size. The right size of chain can be determined by the diameter of the pipe you are about to clean with +25%.



2 Thoroughly check the chain to verify that it is in good condition and that the carbide tips have not significantly worn off.



3 Make sure you have chosen the right length Shaft for the job you are about to work on.

SAFETY INFO

**NEVER ROTATE THE TOOLS OUTSIDE OF PIPE!
DO NOT USE WITH HYDRAULIC ROTATOR!**



- 4** Thoroughly check the Shaft to verify that it is **in good condition**, and that the outer casing of the shaft is the correct length. Use a sharp knife or cutters to cut off a piece of the outer casing at the end of the shaft. When done, you can attach the chain to this peeled area of the shaft.



- 5** For short distance pipes / jobs, Chain knockers can be powered by a hand drill for a maximum working length of 10 meters. For longer distances we highly suggest you use a dedicated milling machines. Recommended driving rpm for the shaft / chain is 2000 rpm.



- 6** When using a hand drill, attach the Shaft socket to the shaft and make sure that the screws are tightened correctly.

CHAIN KNOCKER SHAFT ATTACHMENT



1 Loosen the screws on both sockets on the chain. Bring the shaft / cable through both sockets.



2 Check that both ends of the chain are aligned so that the chain is not twisted in any way. Double-check that the shaft/cable is protected by outer casing where required.



3 Measure the chain knocker so that it fits to its actual size.



4 Firmly tighten ALL screws.



5 Let's start to work!



Suggested rotators for our tools

- Renssi® RCM-10 Cleaning Machine
- Renssi® RCM-25 Cleaning Machine
- Renssi® RCM-36 Cleaning Machine
- Bosch GSB 21-2 RCT Professional Impact Drill

Suggested grease for

Shell Gadus S2 V100 2 Multi-Purpose Lithium Grease
Specifications: DIN 51502 : K2K-30

MAINTENANCE OF THE TOOLS & PRACTICAL TIPS

CARING FOR THE FLEXIBLE SHAFT

The flexible shaft is pre-treated with lithium grease and the casing in-place prior to shipping. Always inspect the condition and apply grease between the flexible shaft and its outer casing when required. If necessary, remove the shaft / cable from its casing for treatment. When the casing has been replaced, rotate manually for a few rounds to ensure even lubing. Always inspect the flexible shaft before each use. Should you find weak points or damaged parts of the shaft, use angle grinder to cut off the damaged part of the cable. This should be done outside in a clear area where sparks created by the grinder won't cause issues. Always attach the cable to a jackstand for cutting in order to avoid potential hand damage.

INSPECTING CHAINS

The Chain Knockers are made of high quality steel, with yellow passivate coating, and will not rust. You are advised to pay close attention to the condition of the carbide tips on the chains. If more than 50% of the carbide tips look worn, it is advisable to replace the chain for maximum performance.

FASTENER SCREWS

Should you be unable to securely tighten the screws on the sockets due to worn out HEX-socket heads, replace the fastener screws immediately. Otherwise, a grinding tool can detach from the hub during reinstatement and fall into the pipe. To double-check the attachment of the tool, use Renssi Securing Ring. More so, when using shaft sockets, make sure you feed the shaft through the socket completely so that the outer casing of the cable reaches all the way to the base of the shaft socket to protect the cable. Fasten securely.

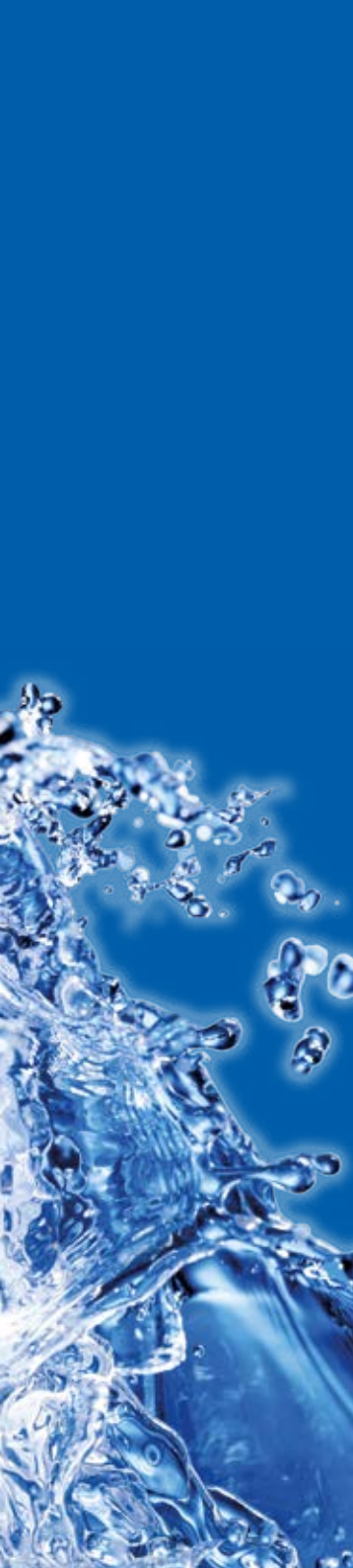
ADDING A VISUAL MARKER FOR SAFETY

Attach a visual tape marker to the outer casing of the cable. Take a measure and place it approx. 50 centimeters from the end point of the cable. The mark will indicate the chains' location and helps preventing possible injuries caused when the chain is removed from the drain. Always make sure that the rotator is stopped and chain has stopped before removing it from the drain.

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Renssi Finland Oy

Lautamiehenkatu 1
20780 Kaarina FINLAND
info@renssi.com
www.renssi.com

MADE IN FINLAND 