

ROTHENBERGER

HAND ROLL GROOVER 1" - 12"

HAND ROLL GROOVER 1" - 12"



Bedienungsanleitung
Instructions for use
Instruction d'utilisation
Instrucciones de uso
Istruzioni d'uso
Gebruiksaanwijzing
Instruções de serviço
Οδηγίες Χρήσης



100000212 ■



www.rothenberger.com

Intro

DEUTSCH

Seite 3

Bedienungsanleitung bitte lesen und aufbewahren! Nicht wegwerfen! Bei Schäden durch Bedienungsfehler erlischt die Garantie! Technische Änderung vorbehalten!

ENGLISH

Page 10

Please read and retain these directions for use. Do not throw them away! The warranty does not cover damage caused by incorrect use of the equipment! Subject to technical modifications.

FRANÇAIS

Page 17

Lire attentivement le mode d'emploi et le ranger à un endroit sûr! Ne pas le jeter! La garantie est annulée lors de dommages dus à une manipulation erronée! Sous réserve de modifications techniques.

ESPAÑOL. País de origen

Página 24

¡Por favor, lea y conserve el manual de instrucciones! ¡No lo tire! ¡En caso de daños por errores de manejo, la garantía queda sin validez! Modificaciones técnicas reservadas.

ITALIANO

Pagina 31

Per favore leggere e conservare le istruzioni per l'uso! Non gettarle via! In caso di danni dovuti ad errori nell'uso, la garanzia si estingue! Ci si riservano modifiche tecniche.

NEDERLANDS

Bladzijde 38

Lees de handleiding zorgvuldig door en bewaar haar goed! Niet weggoien! Bij schade door bedieningsfouten komt de garantieverlening te vervallen! Technische wijzigingen voorbehouden.

PORTUGUÊS

Página 45

Queiram ler e guardar o manual de instruções! Não deitar fora! Em caso de avarias por utilização incorrecta, extingue-se garantia! Reservado o direito de alterações técnicas.

ΕΛΛΗΝΙΚΑ

σελίδα 52

Παρακαλούμε διαβάστε και κρατήστε αυτές τις οδηγίες χρήσεως. Να μην τις πετάτε! Η εγγύηση δεν καλύπτει τις ζημιές που προκαλούνται από λανθασμένη χρήση της συσκευής! Υπόκειται σε τεχνικές τροποποιήσεις.



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SAFETY



WARNING

SAFETY RULES

- a) Ensure that this instruction manual is given to the user.
- b) Read this manual carefully before using the machine to guarantee safe and efficient use.
- c) Keep this manual in a place to which the operator always has access as and when he requires.
- d) Always comply with the safety precautions described in this manual in order to prevent accidents such as fire, electric shocks and injuries.
- e) Carefully read these safety precautions before using the machine and operate the machine according to the instructions.
- f) Do not use the machine in any way other than that described in this instruction manual.

Definition of DANGER and CAUTION.

This manual classifies the warning signs according to DANGER and CAUTION.

DANGER: This refers to actions which could be fatal or result in serious injury for the user if the machine is not used correctly.

CAUTION: This refers to actions which could result in injury for the user or material damage if the machine is not used correctly. Even some aspects described as CAUTION can have serious consequences under certain circumstances. You must strictly adhere to these warnings since they have a direct impact on safety.

- g) In the event of loss or damage to the instruction manual, immediately order another from our distributor or vendor.
- h) Both the parts and the specifications are subject to change without prior notice due to improvements in quality, features or safety standards. In these cases the content, photographs, illustrations, etc. in this manual could differ from the product purchased.



WARNING

1. Use the specified accessories and attachments.
 - Do not use accessories or attachments other than those specified in the instruction manual or in our catalogues. Accidents or injuries could happen.
2. Keep the workplace clean.
 - Ensure that the workplace is clean and there are no slippery surfaces, such as caused by oil.
3. Do not allow unauthorised personnel near the machine.
 - Do not allow unauthorised personnel to operate the machine.
 - Do not allow unauthorised personnel to enter the workplace, especially children. Injuries could occur.
4. Do not use the machine with force.
 - Only use the machine for the designated purpose. Work according to the capacity of the main unit in order to guarantee safe and efficient operation. Excessive force could not only damage the product but also cause accidents.
5. Wear close-fitting clothing.
 - Do not wear ties, garments with open sleeves, loose garments, accessories such as necklaces, etc., which could get caught in rotating parts.
 - When working outside it is recommended to use rubber gloves and shoes with studs. Slippery gloves and footwear can lead to injuries.
 - Cover long hair with a cap or net to prevent it from becoming caught in rotating parts.
 - Wear a safety helmet, safety footwear, etc. in accordance with the working environment.
6. Do not work in an unnatural posture.
 - Keep a firm footing and balance to avoid falling and injury.
7. Operate the machine with extreme care.
 - Always work by paying great attention to the handling of the machine, the working methods and the surrounding conditions. Carelessness could result in accidents and injury.
 - Do not work with the machine if you have low concentration levels such as when you are tired, after consuming alcohol, whilst ill, under the effects of medication, etc.
8. Carry out maintenance on a daily basis.
 - Follow the instruction manual when changing accessories and parts.
 - Keep parts used for gripping dry and clean and free from oil and grease. If they are slippery injuries could happen.
9. Check that there are no damaged parts.
 - Before using the machine, carefully check for damage to the parts.
 - Check that there are no anomalies in the adjustment of movable parts, tightening, damaged parts and other parts which affect operation.
10. For general maintenance and repairs call an authorised distributor.
 - Bear in mind that for any repair you must contact the distributor or our sales division. If repairs are carried out by unqualified or unskilled personnel, the operation of the machine will be compromised, which could lead to accidents or injury.
11. Always work with sufficient light.
 - This could otherwise lead to accidents or injury.



WARNING

About the grooving machine

- The grooving machine has been manufactured for making grooves in tubes and pipes. In order to handle the machine follow the instructions in this manual. Any other uses increase the risk of injury occurring.
- Keep your hands away from the rotating parts. Do not wear gloves which could loosen when operating the unit. Your fingers could get caught by these rotating parts.
- Do not wear loose clothing. Keep sleeves and jackets closed. Do not lean over the machine or the tube. Your clothes could get caught in the tube and cause serious injury.
- Whilst operating the machine keep your hands away from the end of the tube. This prevents the risk of injury from the sharp edges or chips.
- Whilst working on tubes at a height, all workers must wear a safety helmet. Do not allow people to walk underneath the working area.



МАГАЗИН
БАШ МАЙСТОВА
ПРОФЕСИОНАЛНИ РЕШЕНИЯ

DESCRIPTION, MAIN COMPONENTS, SPECIFICATIONS

1. Specifications

Description

- This machine makes standard grooves on installed tubes (steel, stainless steel, PVC and aluminium from 1 to 12 inches in diameter).

The 1/2 inch wrench rotates a guide screw, which inserts a grooving roller inside the tube, and rotates the grooving machine around the tube.

Specifications

Capacity depending on rollers	<ul style="list-style-type: none"> • 1" steel and stainless steel tube, SCHL 10 and 40 • 1 1/4" - 1 1/2" steel and stainless steel tube, SCHL 10 and 40 • 2" - 6" steel and stainless steel tube, SCHL 10 and 2" - 3 1/2" SCHL 40 • 4" - 6" steel and stainless steel tube, SCHL 40 • 8" - 12" steel and stainless steel tube, SCHL 10
Operation	1/2 inch wrench
Depth regulated by	Gauges
Weight	12,5 Kg

The use of rollers on carbon steel and stainless steel may contaminate the stainless steel. This could cause ferrous contamination and early tube failure. To avoid ferrous contamination, specific sets of rollers should be used exclusively for stainless steel tubes.

Standard unit

The machine is equipped with a set of grooving rollers for 2 to 6 inch diameter type 10 tubes and 2 to 3 1/2 inch diameter type 40 tubes, as well as a 1/2 inch manual wrench.

Main components

1. Regulating nut	2. Regulating locknut
3. Depth gauge	4. Guide screw
5. Roller slide	6. Roller shaft
7. Upper roller	8. Lathe screw
9. Transmission shaft	

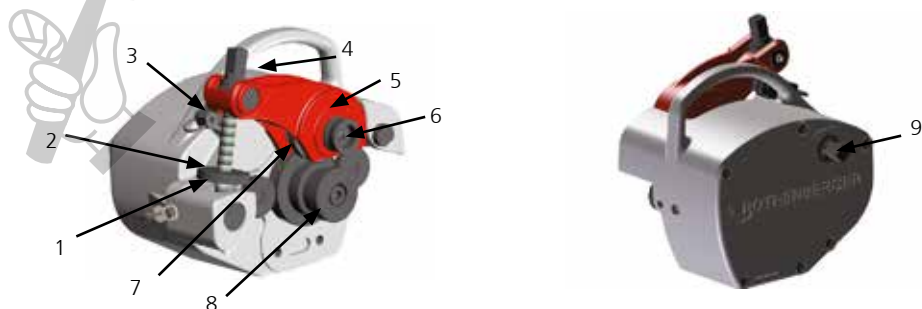


Figure 1

MACHINE PREPARATION

Preparation of the machine and the work area

- Ensure the work area is well-lit.
- Clean the work area, making sure it is dry.
- Clean any oil.
- Examine the upper roller and the lathe screw to ensure that the size is correct.
- Ensure the tube is firmly held in place and does not rotate.
- Ensure the tube clamps and hooks can bear the weight and force of the grooving machine.
- If the tube is not installed, use a vice or screw press on a tripod to hold the tube in place and make sure the whole assembly is stable.

Preparation of the tube

The tube ends must be cut at a right angle.

- Do not use a blowtorch to cut the tube.
- The tube must not be insufficiently round.
- It is necessary to grind all the welding seams, sealants and other interior or exterior seams flush in the tube over a length of at least 55 mm from the end.
- The grooving machine will trace an orbit around the tube. The machine must therefore have enough room to rotate around the tube.

Assembly of the grooving machine

- On a workbench or on the floor, rotate the locknut (see figure 2, n.2) and the regulating nut (see figure 2, n.1) anti-clockwise.
- Rotate the guide screw (see figure 2, n.4) anti-clockwise to "lift" the upper roller from the lathe screw (see figure 2, n.5).
- Place the grooving machine on the tube, leaving the guide screw accessible.
- Push the grooving machine up against the tube until it fits completely. The end of the tube should touch the edge of the lathe screw.
- Rotate the guide screw manually clockwise until the machine is secured. The grooving machine is held in position on the tube.

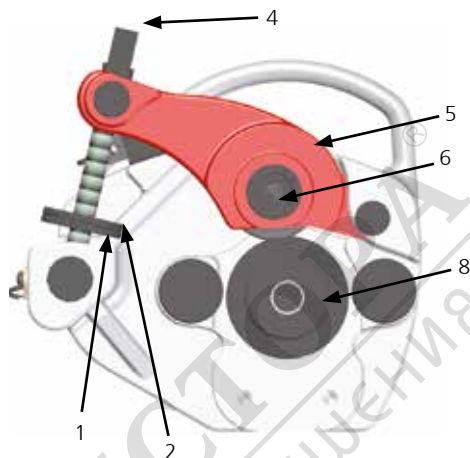


Figure 2

Adjustment of the knurling depth

- Once you have tightened the guide screw by hand and the machine is secured on the tube, position the depth gauge (see figure 3, n.3) between the machine and the regulating nut.
- Rotate the regulating nut clockwise towards the machine until the gauge is secured in place.
- Rotate the regulating locknut clockwise until it touches the regulating nut.
- Remove the depth gauge.

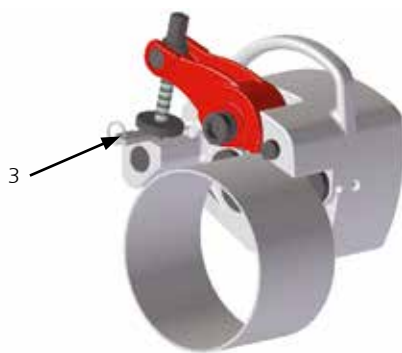


Figure 3

OPERATION

Operation of the grooving machine

The thickness of the tube wall must not exceed the aforementioned maximums.

1. Use the wrench to rotate the guide screw clockwise one and a half turns. Ensure that the tube remains flush against the edge of the lathe screw.
2. Remove the wrench from the guide screw and place it in the transmission shaft. Rotate the wrench so that the grooving machine traces an orbit once around the tube.
3. Remove the wrench from the transmission shaft and place it in the guide screw. Rotate the guide screw clockwise a half turn. If you tighten the guide screw too much or leave it too loose, the grooving machine may fall out or slip inside the tube.
4. Repeat steps 2 and 3 until the regulating nut touches the machine.
5. Remove the wrench from the guide screw and place it in the transmission shaft. Rotate the wrench so that the grooving machine makes two turns around the tube and completes the groove evenly.
6. Remove the wrench from the transmission shaft and place it in the guide screw.
7. Rotate anti-clockwise to release the tube from the grooving machine.
8. Remove the grooving machine from the tube, holding the handle firmly to avoid dropping it.

Replacement of the roller set

- On a workbench or on the floor, rotate the guide screw anti-clockwise to "lift" the upper roller (see figure 4, n.7) completely from the lathe screw (see figure 4, n.8).
- Loosen the fixing stud from the roller slide (see figure 4, n.9) and remove the roller shaft (see figure 4, n.6).
- Add lubricating grease to the pin bearing inside the upper roller.
- Remove the upper roller and the adjusting washers (see figure 4, n.10) from the roller slide.
- Loosen the screw from the lathe screw (see figure 4, n.11).
- Extract the lathe screw and the washer from the main drive shaft.
- Place the new lathe screw on the main drive shaft.
 - If the new lathe screw is for 1 or 1^{1/4} - 1^{1/2} inch tubes, secure it by tightening the screw (see figure 4, n.16).
 - If the new lathe screw is for 4 to 6 inch Sch 40 tubes, or 8 to 12 inch Sch 10 tubes (see figure 4, n.14), place the lathe screw support (see figure 4, n.12) and secure it by using the pin as a guide (see figure 4, n.13) and tightening the screws (see figure 4, n.15).
- Tighten the screw with the washer to the lathe screw.
- Add lubricating grease to the pin bearing inside the upper roller.
- Place the adjusting washers on both sides of the new upper roller and insert in the roller slide. Ensure that for upper rollers up to 6" the measuring mark is at the front.
- Align the upper roller and the washers with the hole and insert the roller shaft.
- Tighten the roller slide fixing stud and secure the roller shaft.

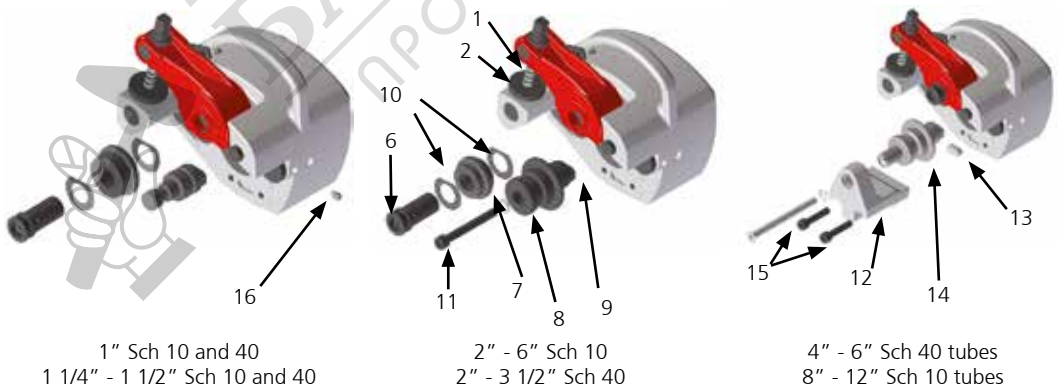



Figure 4

TROUBLESHOOTING

Problem	Possible cause	Solution
The groove is too narrow or too wide	The roller set does not correspond to the tube diameter	Replace the roller set for one which corresponds to the tube diameter
The groove zigzags The groove is not parallel to the surface of the tube end	The tube has not been cut square	Cut the tube square 
The groove diameter is not uniform throughout the entire circumference of the tube	The tube is elliptic	Use a circular tube
The tube slides or slips in the lathe screw	The lathe screw fluting is blocked by metal, worn or flat	Clean or replace the lathe screw
	Poor grooving force	Tighten the guide screw
The groove diameter is not correct	The depth has not been regulated properly	Regulate the depth using the gauges
The machine sways from side to side in the lathe screw	The machine is not properly positioned on the tube	Reposition the machine in the tube against the edge of the lathe screw
	The tube has not been cut square	Cut the tube square
	Wrong manual feeding speed, too slow	Feed the upper roller inside the tube more quickly
The machine does not knurl the tube	The tube is too thick for the machine's maximum capacity	Check the machine's capacity table
	Tube material too tough	Check the machine's capacity table

MAINTENANCE

Maintenance instructions

- The lubricator for the roller shaft must be lubricated once a month and each time the roller set is replaced.
- Add lubricating grease to the pin bearings prior to reassembling them.
- Lubricate the guide screw.
- Keep the upper rollers clean.
- Keep the guide screw clean.



Service and repairs

This grooving machine must be serviced and repaired by qualified technicians. If the machine does not operate correctly the user must contact the manufacturer for repair.