

ROTHENBERGER

SUPERTRONIC 2000

SUPERTRONIC 2000



Bedienungsanleitung

Instructions for use

Instruction d'utilisation

Instrucciones de uso

Istruzioni d'uso

Gebruiksaanwijzing

Instruções de serviço

Brugsanvisning

Bruksanvisning

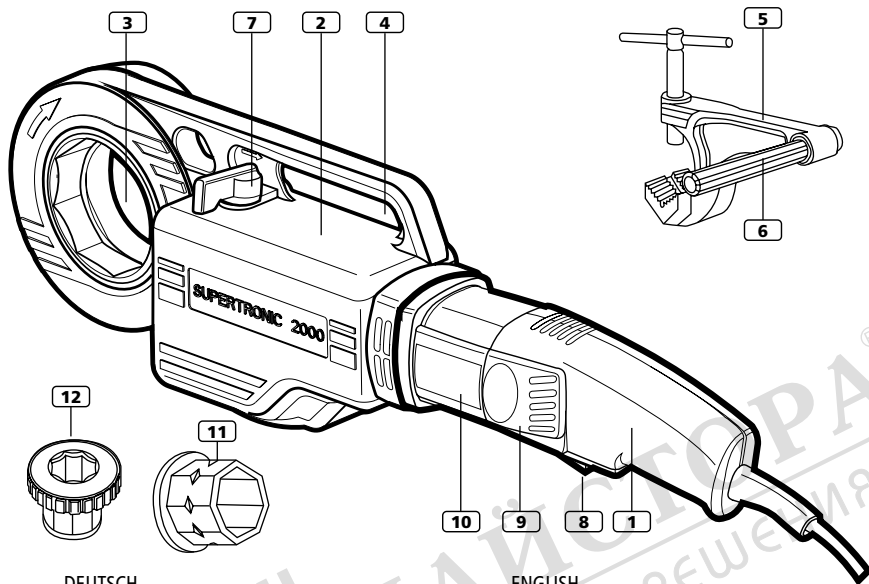
Руководство по эксплуатации

Instrukcja użytkowania



www.rothenberger.com

A Overview



DEUTSCH

- 1** Motor
- 2** Getriebegehäuse
- 3** Gewindeschneidkopfaufnahme
- 4** Aufnahme des Rohrhalters
- 5** Rohrhalter (Klemmbacken)
- 6** Anschlag
- 7** Schalter für Links-/Rechts-Lauf
- 8** Betriebsschalter
- 9** Bürstenfach
- 10** Typenetikett
- 11** Adapter Monoblok. 1/4" - 1,1/4"
- 12** Adapter Euroblok. 1/4" - 1,1/4"

ENGLISH

- 1** Motor
- 2** Gear box
- 3** Head housing
- 4** Tube fastener adjustment
- 5** Tube fastener (clamp)
- 6** Bolt
- 7** Reverse speed lever
- 8** ON switch
- 9** Brush housing
- 10** Machine identification plate
- 11** Adapter monoblok 1/4" - 1.1/4"
- 12** Adapter euroblok 1/4" - 1.1/4"

FRANÇAIS

- 1** Moteur
- 2** Boîte de vitesse
- 3** Logement des têtes
- 4** Ajustage du fixe-tube
- 5** Fixe-tube (pince)
- 6** Boulon
- 7** Levier d'inversion de la marche
- 8** Interrupteur ON/OFF
- 9** Logement des balais
- 10** Étiquette d'identification de la machine
- 11** Adaptateur Monoblok 1/4" - 1.1/4" (6,4 - 31,8 mm)
- 12** Adaptateur Euroblok 1/4" - 1.1/4" (6,4 - 31,8 mm)

ESPAÑOL

- 1** Motor
- 2** Caja de engranajes
- 3** Alojamiento de los cabezales
- 4** Ajuste del fijatubos
- 5** Fijatubos (mordaza)
- 6** Bulón
- 7** Palanca de inversión de marcha
- 8** Interruptor de marcha
- 9** Alojamiento de escobillas
- 10** Etiqueta identificativa de la máquina
- 11** Adaptador monoblok 1/4" - 1,1/4"
- 12** Adaptador euroblok 1/4" - 1,1/4"

ITALIANO

- 1 Motore
- 2 Scatola ingranaggi
- 3 Sede testine
- 4 Regolazione del dispositivo di fissaggio del tubo
- 5 Dispositivo di fissaggio del tubo (morsa)
- 6 Staffa
- 7 Leva inversione di direzione
- 8 Interruttore d'avviamento
- 9 Sede pettini
- 10 Placchetta identificativa della macchina
- 11 Adattatore monoblocco 1/4"-1 1/4"
- 12 Adattatore euroblok 1/4"-1 1/4"

PORTUGUES

- 1 Motor
- 2 Caixa de velocidades
- 3 Alojamento das cabeças
- 4 Ajuste do fixador do tubo
- 5 Fixador do tubo (braçadeira)
- 6 Cavilha
- 7 Manipulo de inversão de marcha
- 8 Interruptor de marcha
- 9 Alojamento das escovas
- 10 Placa de identificação da máquina
- 11 Adaptador monobloco 1/4"-1.1/4"
- 12 Adaptador eurobloco 1/4"-1.1/4"

SVENSKA

- 1 Motor
- 2 Växellåda
- 3 Huvudhus
- 4 Justering av rörfästning
- 5 Rörfästning (klämma)
- 6 Bolt
- 7 Backhastighetsspak
- 8 Huvudströmbrytare
- 9 Borsthus
- 10 Maskinidentifieringsplatta
- 11 Adapter monoblok 1/4 - 1 1/4 tum
- 12 Adapter euroblok 1/4 - 1 1/4 tum

POLSKI

- 1 Silnik
- 2 Przekładnia
- 3 Gniazdo głowicy gwinciarskiej
- 4 Prowadnica imadła dociskowego
- 5 Imadło dociskowe
- 6 Trzpień
- 7 Przełącznik kierunku obrotów
- 8 Włącznik
- 9 Komora szczotek
- 10 Etykieta identyfikacyjna
- 11 Konwerter monoblok 1/4"-1.1/4"
- 12 Konwerter euroblok 1/4"-1.1/4"

NEDERLANDS

- 1 Motor
- 2 Versnellingsbak
- 3 Houder van de koppen
- 4 Geleidingsstaaf van de pijpklam
- 5 Pijpklam
- 6 Bout
- 7 Draairichtingschakelaar
- 8 Aan/uit-schakelaar
- 9 Behuizing van de koolborstels
- 10 Identificatieplaatje van de machine
- 11 Adapter monoblok 1/4"-1,1/4"
- 12 Adapter euroblok 1/4"-1,1/4"

DANSK

- 1 Motor
- 2 Gearkasse
- 3 Hovedlejer
- 4 Justering af rørfiksering
- 5 Rør-fiksering (klemme)
- 6 Bolt
- 7 Gangskiftningsstang
- 8 ON-afbryder
- 9 Børstelejer
- 10 Maskinens ID-mærke
- 11 Adapter monoblok 1/4"-1,1/4"
- 12 Adapter euroblok 1/4"-1,1/4"

РУССКИЙ

- 1 Двигатель
- 2 Коробка передач
- 3 Привод
- 4 Регулятор держателя
- 5 Держатель (зажим)
- 6 Направляющая штанга
- 7 Рычаг переключения
- 8 Выключатель питания
- 9 Кожух щетки
- 10 Табличка с техническими параметрами
- 11 Адаптер моноблок 0,25–1,25"
- 12 Адаптер евроблок 0,25–1,25"

EG-Konformitätserklärung EC-Declaration of Conformity

Wir ROTHENBERGER S.A.
We Ctra. Durango-Elorrio, Km 2 • E-48220 Abadiano (Vizcaya)
(P.O. Box) 117 • E-48200 Durango (Vizcaya)
Tel. + 34 94 / 6 21 01 00 • Fax + 34 94 / 6 21 01 31

erklären in alleiniger Verantwortung, dass dieses Produkt:
declare on our sole responsibility that the product:

Produkt-Bezeichnung: SUPERTRONIC 2000
Product-Designation: (No. 71256, 71257, 71250, 71258, 71259, 71251)

Produkt-Beschreibung: Elektro-Gewindeschneidkluppe
Product-Description: Power threader

mit den Bestimmungen der Richtlinien wie aufgeführt, übereinstimmt.
is in conformity with the following regulations.

| | |
|--------------------------|------------|
| EMV - Richtlinie | 2014/30/EC |
| EG - Maschinenrichtlinie | 2006/42/EC |
| RoHS - Richtlinie | 2011/65/EU |

Angewendete nationale Normen

EN 62841-1
EN 62841-2-9

ab Herstellungsdatum:
as date of manufacture

07/2020

ROTHENBERGER S.A.



Jose Manuel Buces Martinez
Herstellerunterschrift
Manufacturer / authorized
representative signature

17.07.2020

 **ROTHENBERGER**

Intro

| | |
|--|--------------|
| DEUTSCH Bedienungsanleitung bitte lesen und aufbewahren! Nicht wegwerfen! Bei Schäden durch Bedienungsfehler erlischt die Garantie! Technische Änderungen vorbehalten! | Seite 6 |
| ENGLISH 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! | Page 13 |
| FRANÇAIS 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! | Page 20 |
| ESPAÑOL - Instrucciones originales ¡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! | Página 27 |
| ITALIANO 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! | Pagina 34 |
| NEDERLANDS Lees de handleiding zorgvuldig door en bewaar haar goed! Niet weggooiën! Bij schade door bedieningsfouten komt de garantieverlening te vervallen! Technische wijzigingen voorbehouden! | Bladzijde 41 |
| PORTUGUES Queiram ler e guardar o manual de instruções! Não deitar fora! Em caso de avarias por utilização incorrecta, extingue-se a garantia! Reservado o direito de alterações técnicas! | Pagina 48 |
| DANSK Læs betjeningsvejledningen, og gem den til senere brug! Smid den ikke ud! Skader, som måtte opstå som følge af betjeningsfejl, medfører, at garantien mister sin gyldighed! Ret til tekniske ændringer forbeholdes! | Side 55 |
| SVENSKA Läs igenom bruksanvisningen och förvara den väl! Kasta inte bort den! Garantin upphör om apparaten har använts eller betjänats på ett felaktigt sätt! Med reservation för tekniska ändringar! | Sida 62 |
| РУССКИЙ Прочтите инструкцию по эксплуатации и сохраняйте её для дальнейшего использования! В случае поломки инструмента из-за несоблюдения инструкции клиент теряет право на обслуживание по гарантии! Возможны технические изменения! | Страница 69 |
| POLSKI Przeczytaj instrukcję obsługi i zachowaj do wglądu. Nie wyrzucaj! Gwarancja nie uwzględnia usterek spowodowanych wadliwą obsługą. Zmiany techniczne zastrzeżone! | Strona 76 |

| | | |
|----------|---|-----------|
| 1 | Safety instructions | 14 |
| 1.1 | Safety in the work area..... | 14 |
| 1.2 | Electrical safety | 14 |
| 1.3 | Staff safety | 14 |
| 1.4 | Use and care of the electrical equipment..... | 15 |
| 1.5 | Maintenance..... | 15 |
| 1.6 | Special safety instructions..... | 16 |
| 2 | Technical data..... | 17 |
| 3 | Use..... | 17 |
| 4 | Periodic maintenance | 17 |
| 5 | Repair and replacement of parts..... | 18 |
| 6 | Adjustment and maintenance | 18 |
| 7 | Faults, possible causes and repairs..... | 19 |



МАГАЗИН
БАШ МАЙСТОРА
 ПРОФЕСИОНАЛНИ РЕШЕНИЯ

Symbols in this document:



Danger!

This symbol warns that the user is in danger of injury.



Attention!

This symbol warns that there is a danger of causing material or environmental damage.



Action required



Use of hearing protectors

This symbol warns that hearing protectors should be worn in order to guarantee the worker's safety.



Use of goggles obligatory

This symbol warns that goggles should be worn in order to guarantee the worker's safety.



Consult the manual or instructions book

This symbol warns that the manual should be consulted in order to avoid risks.

1 Safety instructions



Warning! Read all of the safety precautions, instructions, illustrations and specifications supplied with this electrical equipment. Failure to observe all of the instructions given below may result in electric shock, fire and/or serious injury.

Keep all of the precautions and instructions for future reference.

1.1 Safety in the work area

- a) **Keep the work area clean and well lit.** Untidy and dark areas can cause accidents.
- b) **Do not use electrical equipment in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Electrical equipment generates sparks that could set the dust or fumes alight.
- c) **Keep children and onlookers at a distance when using electrical equipment.** Distractions can cause loss of control.

1.2 Electrical safety

- a) **The electrical equipment's plug must be suitable for the electrical supply. Do not modify the plug under any circumstances. Do not use a plug adapter with earthed electrical equipment.** Unmodified plugs and the use of the corresponding sockets (230V or 110V) will reduce the risk of electric shock.
- b) **Avoid touching earthed surfaces, such as piping, radiators, chains or coolers.** The risk of electric shocks increases if the body is connected to earth.
- c) **Do not expose electrical equipment to rain or moist conditions.** Water getting into the equipment will increase the risk of electric shock.
- d) **Do not use the cord incorrectly. Never use the cord to carry, lift or unplug the electrical equipment. Keep the cord away from heat, oil, sharp edges or moving parts.** Damaged or tangled cords increase the risk of electric shock.
- e) **When using electrical equipment outside, use an extension cord which is suitable for outdoor use.** Using an extension cord which is suitable for outdoor use reduces the risk of electric shock.
- f) **If using electrical equipment in moist conditions is unavoidable, use a power supply that is protected by a Residual Current Device (RCD).** Using an RCD reduces the risk of electric shock.
- g) **If the power cord has to be replaced, it must be replaced by the manufacturer or service agent in order to avoid a safety risk.**

1.3 Staff safety

- a) **Stay alert, check what you are doing and use common sense when handling electrical equipment. Do not use electrical equipment when you are tired or under the influence**

of drugs, alcohol or medical products. One moment of distraction while handling electrical equipment can cause serious injury.

- b) **Use personal protective equipment. Always wear eye protection.** Personal protection equipment such as dust masks, non-slip shoes, helmets or ear protection used for appropriate conditions reduce personal harm.
- c) **Avoid accidental start-ups. Ensure that the switch is in the “off” position before connecting to the power supply and/or battery, picking up or moving the equipment.** Transporting electrical equipment while switched on and running is very dangerous and can cause an accident.
- d) **Remove any keys or tools before turning the electrical equipment on.** A key or a tool connected to a rotating part of an electrical equipment may cause harm.
- e) **Keep feet firmly on the ground and maintain your balance at all times.** This allows greater control of the electrical equipment in unexpected situations.
- f) **Dress appropriately. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothing, jewellery or long hair can get caught in moving parts.
- g) **Do not allow confidence gained through frequent use of the equipment to cause you to ignore the general safety principles.** One careless move can cause serious injury.

1.4 Use and care of the electrical equipment

- a) **Do not force the electrical equipment. Use the electrical equipment in a way that is appropriate for your application.** Using the electrical equipment correctly will make work better and safer at the speed for which it was designed.
- b) **Do not use the electrical equipment if you are unable to move the switch from “on” to “off” and vice versa.** Any electrical equipment that you are unable to control with the switch is dangerous and should be repaired.
- c) **Unplug the power source plug and/or remove the battery, if possible, before making an adjustment, replacing an accessory or storing the electrical equipment.** Preventative measures like this reduce the risk of starting the equipment by accident.
- d) **Keep inactive electrical equipment out of the reach of children and do not allow people who are not familiar with the equipment or with these instructions to handle them.** Electrical equipment is dangerous in the hands of untrained users.
- e) **Maintain electrical equipment and accessories. Ensure that moving parts are not misaligned or blocked, that there are no broken parts and other conditions that may affect the operation of the electrical equipment. Electrical equipment should be repaired before use, when it is damaged.** Many accidents are caused by poorly maintained electrical equipment.
- f) **Use the electrical equipment, accessories and equipment tips, etc. in accordance with these instructions, bearing in mind the work conditions and the work to be carried out.** Using the electrical equipment for applications different from those intended may provoke a hazardous situation.
- g) **Keep handles and gripping surfaces dry, clean and free of oil and grease.** Slippery handles and gripping surfaces prevent safe gripping and control of the equipment in certain situations.

1.5 Maintenance

- a) **Have your electrical equipment serviced by a qualified service technician and only use appropriate, genuine Rothenberger spare parts.** This guarantees that the safety of the electrical equipment is maintained.

1.6 Special safety instructions

This document contains important instructions for people's safety. It is intended for the user. Keep it in a safe place for future reference.

Read and follow these instructions closely every time that the test power pump is turned on:

1. Ensure that the electrical system has an appropriate RCD circuit-breaker
2. Always disconnect the SUPERTRONIC 2000 after each test and before carrying out the following operations:
 - a. Moving the SUPERTRONIC 2000 from one position to another.
 - b. For maintenance.
 - c. For accessory and part replacement.
3. Do not pull on the electric cord.
4. Never pull on the electrical supply cord to unplug it.
5. Never let unqualified people, children, adolescents, etc. or people who are not trained in the use of threading machine use SUPERTRONIC 2000.
6. To guarantee the safety of the SUPERTRONIC 2000, follow the manufacturer's instructions and only use original replacement parts, components and accessories or parts which have been authorised by the manufacturer.



7. ATTENTION: accessories and couplings are very important for the safety of the SUPERTRONIC 2000. Only use accessories and couplings which are recommended by the manufacturer..

8. Never use the SUPERTRONIC 2000 when the electrical supply cord or other important parts such as safety devices, etc. are damaged.
9. If you have to use an extension cord, the plug and connector must be waterproof.
10. Inappropriate extension cords can be dangerous.
11. The user must take all of the safety precautions mentioned in this manual into consideration. Otherwise, misuse of the equipment can cause accidents and the manufacturer assumes no responsibility if this is due to the disregard of the safety precautions mentioned here.



Do not dispose of electrical equipment with domestic waste. In compliance with the Directive 2012/19/UE of the European Parliament and its transposition to the state legislation framework in the Royal Decree 208/2005 on electrical and electronic devices and the management of their waste, the objective is to prevent the generation of this waste, to reduce its elimination and the level of danger of its components, to promote the re-use of devices and the valorisation of their waste and determine a suitable way to manage this in an aim to improve the efficiency of environmental protection.

2. Technical characteristics

| | 1/4" - 2" | 1/4" - 1.1/4" |
|---|---------------------------------------|---------------------------------|
| Type of thread:..... | BSPT (Right, Left) NPT | BSPT (Right, Left) NPT |
| Thread taper:..... | 1/16 | 1/16 |
| Threading speed: | 25 to 15 /min. | 25 to 15 /min. |
| Fast reverse speed:..... | 58 /min. | 58 /min. |
| Electric current:..... | 230 V (110 V optional) 50/60 Hz | 230 V (110 V optional) 50/60 Hz |
| Absorbed power:..... | 1.010 W (900 W)..... | 1.010 W (900 W) |
| ON switch:..... | non-blocking | non-blocking |
| Machine weight:..... | 6 Kgs..... | 6 Kgs |
| Machine size:..... | 580 x 95 x 140 mm | 580 x 95 x 140 mm |
| Tube fastener weight:..... | 1,6 Kgs..... | 1,6 Kgs |
| Weight complete set:..... | 17 Kgs..... | 16,4 Kgs |
| Size of Box:..... | 600 x 390 x 140 mm | 630 x 250 x 130 mm |
| Lw | 100 dBA | 100 dBA |
| Lp | 87 dBA | 87 dBA |
| Vibratio level..... | 3,02 m/s ² | 3,02 m/s ² |
| R (DIN 2999, BSPT), NPT/API, G (DIN ISO 228, DIN 259, BSPP) NPSM, Pg, M, BSW, UNC | | |
| Sound power level according to ISO 3744 | | |
| Vibration level according to ISO 5349 | | |

3. Use

For quick and effortless production of precise and reliable thread connncjecions to approved standards.

4. Care and maintenance

Before carrying out any job on the machine, disconnect the plug from the mains outlet.

1. Cable and plug.

Both the cable and plug should be in optimum condition. Check them at regular intervals.

2. ON switch.

Check that the machine switch unblocks automatically when finger pressure is released. In case of any anomaly, replace immediately with a new one.

3. Brushes.

Check frequently for brush wear and perfect contact with rotor. Change brushes when their length is 1/3 of original length. Use original ROTHENBERGER brushes.

4. Motor and rotor.

The carbon dust accumulated in the motor and brush housing should be removed every 100 hours. The motor's rotor should be permanently clean with a uniform surface (light bronze colour).

5. Threading heads.

Check that there are no damaged teeth on the head to be used, as thread quality could be seriously deteriorated. Keep clean of swarf to achieve top quality threading and longer life.

6. Gear box.

Change grease every 500 operating hours. After dismantling the machine, oil all mechanisms to eliminate old grease. Remove parts with dry compressed air and apply new grease with clean hands. Do not use antdissolvents. Approximately 300 grs. of grease is needed for a correct lubrication. An excessive amount of grease is not recommended as it can increase the temperature of the machine. Grease type: LGMT2 by SKF or similar. We recommend that this operation be carried out by an authorized after-sales service.

7. Dismounting the gear box.

Before dismantling the cover of the gear box, never introduce sharp objects such as tips, screwdrivers, etc. between the body and cover's connecting faces. The correct procedure is to tap the front of the octagon gently with a plastic hammer.

8. Tube fastener (clamp).

Check that the tube fastener clamp is in good condition. Replace when tube displacement occurs.

9. Machine maintenance and repair should be done by a specialist.

All repairs should be carried out by a specialist and only original parts should be used.

5. Repair and replacement of parts

The replacement of parts, servicing of the SUPERTRONIC 2000 and electrical inspection should only be carried out by official Service Centres.

6 Operating instructions

6.1 Preparation for start up

1. Do not thread without using the tube clamp.

The tube clamp should be used even when threading the smallest sizes.

2. Check that the tube clamp is perfectly mounted.

If the tube is not fastened correctly, the machine would rotate on the threading head, with the consequent risk of injury to the operator. The tube fastening bolt is left loose inside the case cover and should be screwed into its corresponding hole.

3. Check condition of ON switch.

When released of pressure, check that the ON switch unblocks automatically.

4. Use of extension cables.

Check that the cable is as thick and as short as possible. The extension cable should be for more than 15 Amp and not longer than 30 metres.

5. Do not thread without abundant and continuous lubrication.

Good lubrication will prolong the life of your machine and threading heads. It will also improve threading quality.

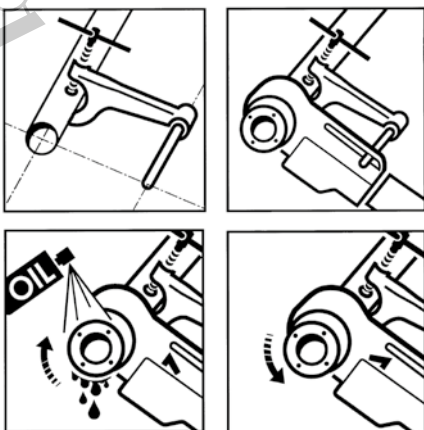
6. Always thread at working speed.

Threading from right to left should be done at the working speed indicated on the reversing gear lever in the direction of the arrow. Fast speed will only be used to unscrew the threading head from the tube. For left thread, insert the threading head at the opposite end of the machine and maintain rotation in work direction.

7. Do not change speeds during the threading operation.

When the threading operation has been completed, stop the machine and change gears to initiate reverse movement and free the tube.

6.2 Start up



1. Before carrying out any operations with the machine, first read the general safety instructions and preparations for start up.
2. Fasten the tube clamp securely and check that the machine's anchor bolt is parallel to the tube to be threaded. The bolt should extend over the end of the tube by approximately 1 or 1.5 cm.
3. Choose the threading head according to your needs and mount it in the octagonal coupling of the machine. Fit the adapter first, when using a 1.1/4" head. For right thread, insert the threading head at the front of the machine. For left thread, insert the threading head at opposite end of the machine.
4. When using the adapter, this should be directly inserted in the octagonal coupling of the machine on the same in which the threading head has been inserted (right thread: front side; left thread: opposite side) and secured by its threaded cap.

5. To insert the head into the adapter, move the mobile part of the latter counter-clockwise until it is completely inserted. This will spring back securing the head. To remove it, proceed in likewise manner.
6. Next insert the machine in the tube and make sure that it is securely guided into its housing by the tube clamp bolt.
7. Check that the reverse gear lever is correctly in place (arrow in working direction). Press the electric switch with your right hand. Rotation will start immediately. Now the head should be moved towards the tube to start the threading process by pressing on the machine.
8. As soon as threading has begun, the head should be constantly and abundantly lubricated with threading oil ROTHENBERGER.
9. Once the appropriate threading length has been achieved (the tube of the threading head should never overhang in a normal thread), stop the motor. Change the position of the reverse gear lever and start the motor. The machine will begin to unscrew the head and the tube will become free.



ATTENTION! Fast speed must only be used to unscrew the head. Never thread on fast speed.

7. Diagnosis of faults

Before carrying out any job on the machine, disconnect the plug from the mains outlet.



ATTENTION! If any additional service is needed other than those indicated below, please contact the nearest technical service station.

| | |
|--|---|
| Insufficient power | <ul style="list-style-type: none"> - Make sure that extension cable is not too long or that it does not have insufficient section. - Make sure that the right working speed is being used. - Tube clamp must be well secured (bolt parallel to tube). - Check operating condition of threading heads. - Apply plenty and continuous lubrication to threading heads. - Make sure that the tube can be screwed. |
| Off-centre threading | <ul style="list-style-type: none"> - Check position of tube fastener (shaft parallel to tube). - Check condition and quality of tube. |
| Insufficient thread length | <ul style="list-style-type: none"> - Check correct positioning of tube fastener. - Make sure that there is no obstruction between the machine and the tube fastener. |
| Poor thread quality. | <ul style="list-style-type: none"> - Check condition of teeth. - Check that there is continuous and abundant lubrication. - Check quality of tube. - Check quality of threading oil (use ROTHENBERGER oil). |
| Incorrect adjustment of threading head | <ul style="list-style-type: none"> - Use the adapter for appropriate sizes (ut to 1.1/4"). - Check that the appropriate threading head is being used (ROTHENBERGER, serie 600 or equivalent). |
| Locked Shift lever | <ul style="list-style-type: none"> - Move the machine slightly upwards and downwards. |