

06/4250

RATCHET PIPE/CONDUIT THREADER

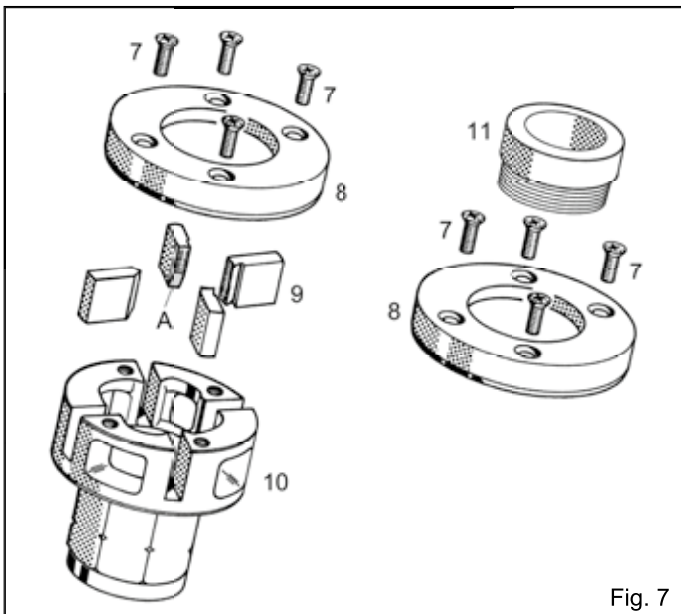
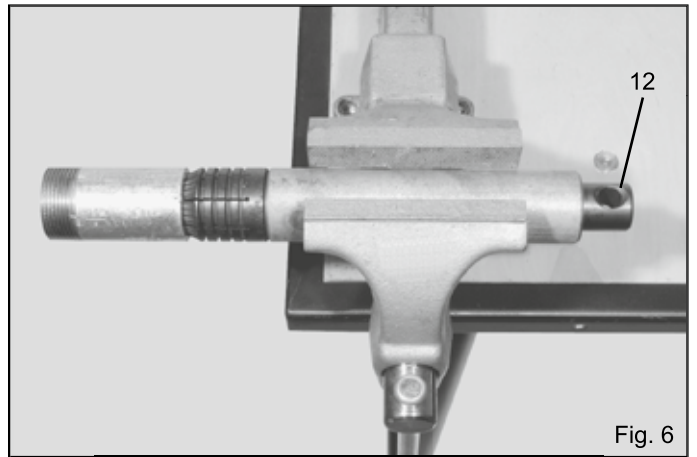
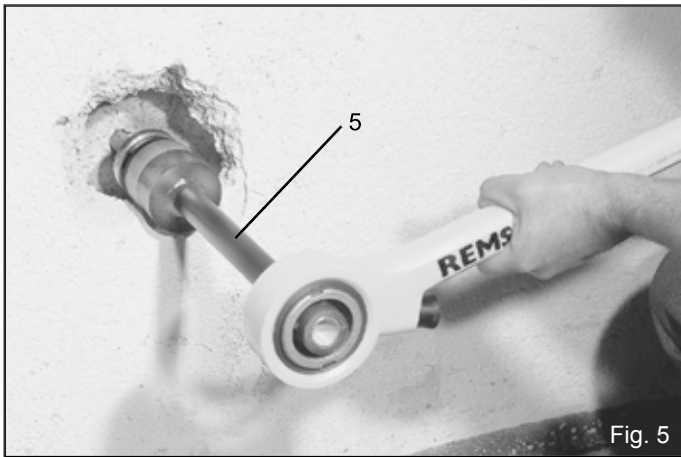
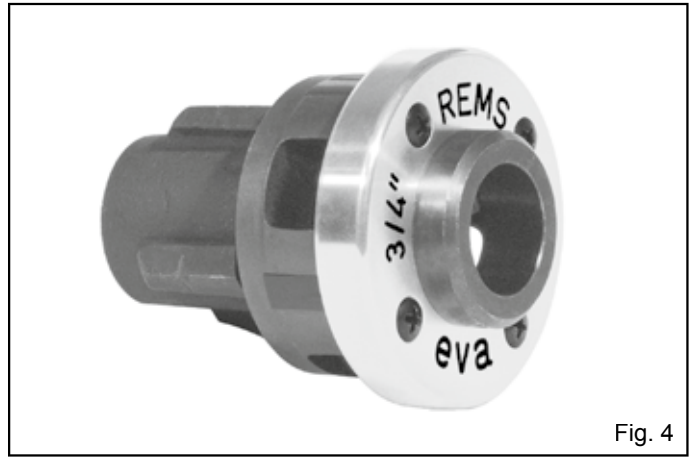
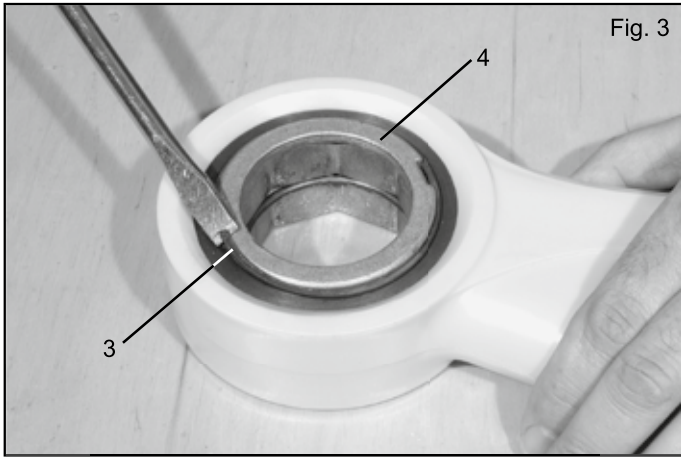
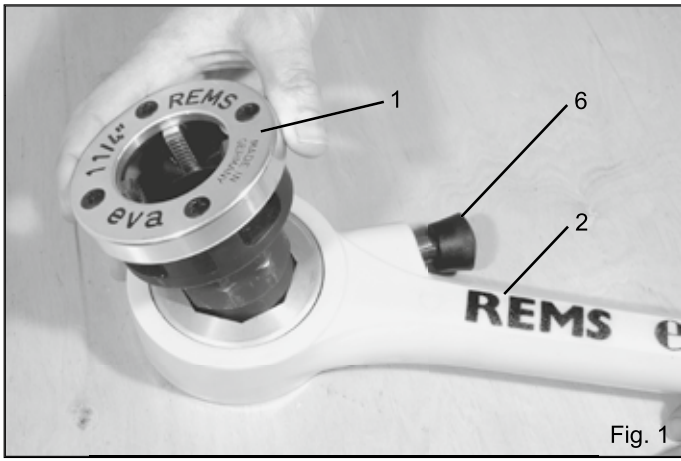


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Instruction Manual

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Translation of the Original Instruction Manual

Fig. 1–7

1 REMS quick-change die head	7 Countersunk screw
2 Ratchet lever	8 Cover
3 Retaining ring	9 REMS die
4 Stop ring	10 Die head body
5 Extension	11 Guide bushing
6 Stop bolt	12 Spindle (Nippelspanner)

General safety instructions

WARNING

Read all the safety notes, instructions, illustrations and technical data which come with this tool. Failure to heed the following instructions can lead to severe injuries.

Keep all safety notes and instructions for the future. The term "tool" used in the safety notes refers to hand-held tools.

1) Workplace

- a) Keep your workplace clean and well lit. Untidiness or poorly lit working areas can lead to accidents.
- b) Keep children and bystanders away while operating the tool. Distractions can lead to you losing control of the tool.

2) Safety of persons

- a) Be cautious, pay attention to what you are doing and use tools reasonably and responsibly. Do not use tools when you are tired or under the influence of drugs, alcohol or medicines. Just one careless moment when using the tool can lead to serious injury.
- b) Wear personal safety equipment and always wear safety glasses. Wearing personal safety equipment such as a dust mask, non-slip safety shoes, a safety helmet or ear protectors depending on the type and use of the tool reduces the risk of injuries.
- c) Avoid abnormal body posture. Make sure that you have a firm footing and keep your balance at all times. You then have better control over the tool in unexpected situations.
- d) Wear suitable clothing. Do not wear loose clothing or jewellery. Keep hair, clothing and gloves away from moving parts. Loose clothing, jewellery or long hair can get caught in moving parts.
- e) Do not give yourself a false sense of security and do not ignore the safety rules for tools even when you are very familiar with the power tool after frequent use. Careless actions can lead to serious injuries within fractions of a second.

3) Use and handling of the tool

- a) Do not overload the tool. Use the tool suitable for the work you are doing. You can work better and safer in the specified power range with the suitable tool.
- d) Keep tools out of reach of children when not in use. Do not allow persons to use the tool who are not familiar with it or have not read these instructions. Tools are dangerous when used by inexperienced persons.
- c) Take good care of tools and accessories. Check that the moving parts are working perfectly and do not jam, that no parts are broken or damaged and that the function of the tool is not impaired. Have damaged parts repaired before using the tool. Many accidents are caused by poorly maintained tools.
- d) Keep cutting tools sharp and clean. Carefully maintained cutting tools with sharp cutting edges jam less and are easier to control.
- e) Use tools, accessories and insert tools etc. according to these instructions. Take the working conditions and activity being performed into consideration. The use of tools for purposes for which they are not intended can lead to dangerous situations.
- f) Keep handles and gripping surfaces dry, clean and free from oil and grease. Slippery handles and gripping surfaces prevent safe handling and control of the tool in unforeseeable situations.

4) Service

- a) Have your tool repaired only by qualified technical personnel and only with genuine spare parts. This ensures that the safety of the tool is maintained.

Safety instructions for hand die stocks

CAUTION

Read all the safety notes, instructions, illustrations and technical data which come with this tool. Failure to heed the following instructions can lead to severe injuries.

Keep all safety notes and instructions for the future.

- Do not use the hand die stock if it is damaged. There is a danger of accident.
- Only use original REMS quick-change die heads/REMS quick-change die heads S/plug-on heads for button dies. Other die heads do not guarantee a secure fit or damage the die head holder of the hand die stock.
- Never extend the ratchet lever of the REMS Eva. Extending the ratchet lever is prohibited and will increase the risk of property damage and injuries.
- Always work with a retaining ring (3). Otherwise the die head may be pushed out of the die head holder, e.g. during start-cutting.
- Clamp short pipe sections only with REMS Nippelspanner or REMS Nippelfix. Hand die stock and/or tools can be damaged.
- Thread cutting materials in spray cans (REMS Spezial, REMS Sanitol) contains environmentally friendly but highly inflammable propellant gas (butane). Aerosol cans are pressurised; do not open by force. Protect them against direct sunlight and temperatures above 50°C. The aerosol cans can burst, risk of injury.
- Avoid intensive skin contact with thread-cutting materials because of the degreasing effect. Use skin protectors with a greasing effect or a suitable hand protection.
- Children and persons who, due to their physical, sensory or mental abilities or lack of experience and knowledge are unable to operate the hand die stock safely may not use this electric die stock without supervision or instruction by a responsible person. Otherwise there is a risk of operating errors and injuries.
- Only allow trained persons to use the hand die stock. Apprentices may only use the hand die stock when they are over 16, when this is necessary for their training and when they are supervised by a trained operative.

NOTICE

- Do not dispose of thread-cutting material undiluted in the drain system, ground water or ground. Unused thread-cutting material should be handed in to responsible disposal companies. Waste code for thread-cutting materials containing mineral oil (REMS Spezial) 120106, for synthetic materials (REMS Sanitol) 120110. Observe the national regulations.

Explanation of symbols

CAUTION

Danger with a low degree of risk which could result in minor injury (reversible) if not heeded.

NOTICE

Material damage, no safety note! No danger of injury.



Read the operating manual before starting

1. Technical Data

Use for the intended purpose

CAUTION

REMS Eva is intended for cutting pipe and bolt threads with original REMS quick-change die heads/REMS quick-change die heads S/plug-on heads for button dies. All other uses are not for the intended purpose and are therefore prohibited.

1.1. Scope of Supply

Ratchet lever, REMS quick-change die heads according to ordered set, operating instructions, steel case (carton).

1.2. Article numbers

Ratchet lever	522000
REMS dies	see REMS catalogue
REMS quick-change die heads	see REMS catalogue
Extension 300 mm	522051
Plug-on heads for button dies/intermediate rings/	
Guide bushings	see REMS catalogue
Thread cutting materials	see REMS catalogue
Nippelspanner	see REMS catalogue
Steel case for REMS quick-change die heads	526050
Steel case for REMS quick-change die heads S	526052
REMS Aquila 3B	120270
REMS Aquila WB	120250
REMS Jumbo E	120240
REMS Jumbo	120200
REMS Herkules 3B	120120
REMS Herkules Y	120130
REMS CleanM	140119

1.3. Applications

Thread diameter

Pipe thread	1/8"–2", 16–50 mm
Bolt thread	6–30 mm, 1/4"–1"

Thread types

Tapered pipe thread right and left-handed	R ISO 7-1, EN 10226 (DIN 2999, BSPT)
Pipe thread, tapered, right-handed	Taper Pipe Thread ASME B1.20.1
Pipe threads, parallel (with button die)	G (DIN ISO 228, DIN 259, BSPP) NPSM
Threads for electric conduit	M × 1.5 (DIN EN 60423, IEC)
Pipe threads, parallel (with button die)	Pg
Bolt threads (with button die)	M, BSW, UNC
Thread lengths	
Pipe threads, tapered	standard length
Pipe threads, parallel, conduit, bolt	50 mm, unlimited with reclamping
Nipples and double-nipples with REMS Nippelspanner (internal clamping)	3/8"–2"

1.4. Dimensions

REMS eva Set	670 × 180 × 93 mm (26.4" × 7.1" × 3.7")
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1.5. Weights

Ratchet lever	2.1 kg (5.3 lb)
Die heads 1/2 ... 2"	0.6 ... 1.3 kg (1.3 ... 2.9 lb)

2. Start-up

2.1. Tools

Only use original REMS quick-change dies heads, REMS quick-change die heads S, plug-on heads for button dies of the REMS eva hand die stock. Up to 1 1/4" diameter the die heads (1) fit the octagonal seat from the front of the drive unit (2) (Fig. 1). They snap-in automatically.

The die heads protrude the back of the housing. This facilitates taking the die head out of the drive unit by jolting the protruding edge against a plain surface or edge (fig. 2).

When using the die heads 1 1/2 and 2", take off retaining ring (11) with a suitable tool, e. g. screwdriver. Remove stop ring (Fig. 4), insert 1 1/2" or 2" die head and replace ring (11). Do not work without retaining ring (11). Otherwise the die head may be pushed out, e.g. during start-cutting. If one needs to change frequently between the sizes up to 1 1/4" and 1 1/2" to 2" the use of a separate ratchet lever for 1 1/2" to 2" is recommended.

⚠ CAUTION

Always work with a retaining ring (3). Otherwise the die head may be pushed out of the die head holder, e.g. during start-cutting.

If a thread is to be cut on a section of pipe protruding from the wall, the REMS quick-change die heads S of the REMS eva are used with an additional guide bushing on the cover side (Fig. 4). These can be inserted directly into the die head holder of the REMS eva. To drive the REMS quick-change die heads S in places with difficult access, e.g. in wall cavities (Fig. 5), the extension is fitted to the ratchet drive.

2.2. Thread-cutting Materials

Safety data sheets see www.rems.de → Downloads → Safety data sheets.

Use only REMS thread-cutting oils. You will have perfect threading results, long durability of dies as well as high protection of the drive unit. REMS recommends the practical and economical spray can/spray bottle.

NOTICE

REMS Spezial: High-alloyed, mineral based thread-cutting oil. **For all materials:** steel, stainless steel, non-ferrous metals, plastics. Can be washed out with water, tested by experts. Mineral oil-based thread cutting materials are not approved for drinking water pipes in different countries, e.g. Germany, Austria and Switzerland. Mineral oil-free REMS Sanitol must be used in this case. Observe the national regulations.

REMS Sanitol: Mineral oil-free, synthetic thread-cutting oil **for drinking water supplies.** Completely water-soluble. Complies with regulations: in Germany DVGW Approval No. DW-0201AS2032, in Austria ÖVGW Approval No. W 1.303, in Switzerland SVGW Approval No. 7808-649. Viscosity at –10°C: ≤ 250 mPa s (cP). Pumpable to –28°C. Easy to use. Dyed red for rinse-out inspection. Observe the national regulations.

Both types of thread-cutting oils are available in spray cans as well as in cans and barrels.

NOTICE

All REMS thread cutting materials may only be used in undiluted form!

3. Operation

3.1. Work procedure

Cut the pipe at a right angle without burr and clamp in the REMS Aquila 3B/ REMS Aquila WB vice (accessory) so that the end of the pipe is protruding approx. 10 cm from the dies. Support longer pipes with the REMS Herkules 3B/REMS Herkules WB (accessory). Wet the threading section with REMS thread cutting material from the aerosol can/spray bottle (see 2.2). Insert the selected REMS die head in the ratchet lever (see 2.1) Pull back and turn the stop bolt (6): The tip of the arrow must be pointing in cutting direction. Place the die head on the pipe, press turn the ratchet at the same time. Lubricate with REMS aerosol can/spray bottle during thread cutting. Turn the ratchet as evenly as possible at least 90°. The standard length for tapered threads is reached when the front edge of the pipe is flush with the upper edge of the dies (not top of the cover). Reset the stop bolt. Turn back the die stock with the ratchet or turn back the die head by hand.

3.2. Production of nipples and double nipples

For clamping short pieces of pipes and for the production of nipples and double nipples use REMS Nippelspanner. They are available in sizes from 3/8"–2". For clamping pipe pieces (with or without thread) with the REMS Nippelspanner the head of the Nippelspanner is expanded by turning the spindle (12) with a tool (e.g. screwdriver). This must only be done when a pipe is put on (Fig. 6).

When using the REMS Nippelspanner it must be observed that no shorter nipples are threaded than specified in the standards.

4. Maintenance

4.1. Maintenance

Keep the ratchet lever, quick-change die heads and their receptacle in the ratchet lever clean. Clean heavily soiled die heads and remove loose chips. Clean plastic parts (e.g. housing) only with REMS CleanM machine cleaner (Art. No. 140119) or a mild soap and a damp cloth. Do not use household cleaners. These often contain chemicals which can damage the plastic parts. Never use petrol, turpentine, thinner or similar products for cleaning.

4.2. Inspection/Repair

This work may only be performed by qualified personnel.

Check retaining ring (3) of proper functioning, replace if necessary. The dies of the quick-change die heads are subject to wear and need to be replaced from time to time. Blunt dies are recognized when cutting pressure increases and/or threads are ripping off despite good lubrication.

Changing the dies on the quick-change die head (Fig. 7)

1. Clamp the REMS quick-change die head in the vice with the octagonal seat.
2. Remove countersunk screws (7) and cover (8).
3. Knock out the REMS dies (9) carefully to the centre of the die head body.
4. Knock the die heads (9) with the start-cutting edge (A) **towards the bottom** into the corresponding slots to the extent that they do not protrude beyond the outer diameter of the die head body (10). The dies (9) and die head bodies (10) are numbered. Die 1 in slot 1, die 2 in slot 2, die 3 in slot 3 and die 4 in slot 4.
5. Fit the cover (8) and tighten the screws (7) lightly.
6. Carefully knock the dies (9) outwards with a soft pin (copper, brass or hard wood) until they are in contact with the edge of the cover.
7. Tighten the countersunk screws (7) firmly.

Changing the dies on the quick-change die heads S (Fig. 7)

8. Clamp the REMS quick-change die head in the vice with the octagonal seat.
9. Remove countersunk screws (7) and cover (8) with guide bushing(11) (do not remove the guide bushing).
10. Knock out the REMS dies (9) carefully to the centre of the die head body.
11. Knock the die heads (9) with the start-cutting edge (A) **towards the top** into the corresponding slots to the extent that they do not protrude beyond the outer diameter of the die head body (10). The dies (9) and die head bodies (10) are numbered. Die 1 in slot 1, die 2 in slot 4, die 3 in slot 3 and die 4 in slot 2.
12. Fit the cover (8) with guide bushing (11) and tighten the countersunk screws (7) lightly.
13. Carefully knock the dies (9) outwards with a soft pin (copper, brass or hard wood) until they are in contact with the edge of the cover.
14. Tighten the countersunk screws (7).

5. Faults

5.1. Fault: Die stock has difficulty cutting.

Cause:

- Not original REMS die heads.
- REMS dies are blunt.
- Unsuitable or insufficient thread cutting material

Remedy:

- Only use REMS quick-change die heads, REMS quick-change die heads S, REMS plug-on heads for button dies.
- Change REMS dies, see 4.2.
- Use sufficient, undiluted quantity of REMS Spezial or REMS Sanitol thread cutting material

5.2. Fault: No workable thread, thread rips off.

Cause:

- REMS dies are blunt.
- REMS dies inserted incorrectly.
- Unsuitable or insufficient thread cutting material
- Pipe material is unsuitable for thread cutting.

Remedy:

- Change REMS dies, see 4.2.
- Note the numbering of the REMS dies to the slot number of the die head body (10), see 4.2, change REMS dies if necessary
- Use sufficient, undiluted quantity of REMS Spezial or REMS Sanitol thread cutting material
- Only use approved pipes.

5.3. Fault: Thread is cut skew to the pipe axis.

Cause:

- Pipe not cut at right angle

Remedy:

- Cut pipe at right angle with REMS Tiger with guide holder and REMS special saw blade or with REMS RAS St, REMS Turbo K, REMS Cento

5.4. Fault: Pipe slips in the vice.

Cause:

- Pipe not clamped tight enough.
- Vice/die unsuitable or defective.

Remedy:

- Increase clamping pressure.
- Change vice/die. REMS Aquila 3B/REMS Aquila WB is recommended for secure clamping.

6. Disposal

The tool may not be thrown into the domestic waste at the end of use but must be disposed of properly by law.

7. Manufacturer's Warranty

The warranty period shall be 12 months from delivery of the new product to the first user. The date of delivery shall be documented by the submission of the original purchase documents, which must include the date of purchase and the designation of the product. All functional defects occurring within the warranty period, which are clearly the consequence of defects in production or materials, will be remedied free of charge. The remedy of defects shall not extend or renew the warranty period for the product. Damage attributable to natural wear and tear, incorrect treatment or misuse, failure to observe the operational instructions, unsuitable operating materials, excessive demand, use for unauthorized purposes, interventions by the customer or a third party or other reasons, for which REMS is not responsible, shall be excluded from the warranty.

Services under the warranty may only be provided by customer service stations authorized for this purpose by REMS. Complaints will only be accepted if the product is returned to a customer service station authorized by REMS without prior interference and in a fully assembled condition. Replaced products and parts shall become the property of REMS.

The user shall be responsible for the cost of shipping and returning the product.

A list of the REMS-authorized customer service stations is available on the Internet under www.rems.de. For countries which are not listed, the product must be sent to the SERVICE-CENTER, Neue Rommelshäuser Strasse 4, 71332 Waiblingen, Deutschland. The legal rights of the user, in particular the right to make claims against the seller in case of defects as well as claims due to wilful violation of obligations and claims under the product liability law are not restricted by this warranty.

This warranty is subject to German law with the exclusion of the conflict of laws rules of German International Private Law as well as with the exclusion of the United Nations Convention on Contracts for the International Sales of Goods (CISG). Warrantor of this world-wide valid manufacturer's warranty is REMS GmbH & Co KG, Stuttgarter Str. 83, 71332 Waiblingen, Deutschland.

8. Spare parts lists

For spare parts lists, see www.rems.de → Downloads → Parts lists.



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