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Cutting machine with interchangeable head

RCP

20, 25

Operator's manual

Contents

Contents

1 Foreword

This operator's manual contains information and procedures for the safe operation and maintenance of your WACKER machine. In the interest of your own safety and to prevent accidents, you should carefully read through the safety information, familiarize yourself with it and observe it at all times.

This operator's manual is not a manual for extensive maintenance and repair work. Such work should be carried out by WACKER Service or authorized specialists.

The safety of the operator was one of the most important aspects taken into consideration when this machine was designed. Nevertheless, improper use or incorrect maintenance can pose a risk. Please operate and maintain your WACKER machine in accordance with the instructions in this operator's manual. Your reward will be troublefree operation and a high degree of availability.

Defective machine parts must be replaced immediately!

Please contact your WACKER representative if you have any questions concerning operation or maintenance.

We expressly reserve the right to make technical modifications – even without special notice – which aim at further improving our machines or their safety standards.

2 Introduction

2.1 Means of representation for this operator's manual

Warning symbols

This operator's manual contains safety imformation of the categories: DANGER, WARNING, CAUTION, NOTICE.

They should be followed to prevent danger to life and limb or damage to equipment or improper service.

DANGER
This warning notice indicates hazards that result in serious injury or even death.
▶ Danger can be avoided by the following the actions mentioned.

WARNING
This warning notice indicates hazards that can result in serious injury or even death.
▶ Danger can be avoided by the following the actions mentioned.

CAUTION
This warning notice indicates hazards that can result in minor injury.
▶ Danger can be avoided by the following the actions mentioned.

NOTICE
This warning notice indicates hazards that can result in material damage.
▶ Danger can be avoided by the following the actions mentioned.

Notes

Note: Complementary information will be displayed here.

Instructions

▶ This symbol indicates there is something for you to do.

1. Numbered instructions indicate that you have to carry out something in a defined sequence.

■ This symbol is used for lists.

2.2 WACKER representative

Depending on your country, your WACKER representative is your WACKER Service, your WACKER affiliate or your WACKER dealer.

You can find the addresses in the Internet at www.wackergroup.com.

The addresses of the WACKER main locations are located at the end of this operator's manual.

2.3 Described machine parts

This operator's manual is valid for different machine parts from a product range. Therefore some figures can differ from the actual appearance of your machine. It is also possible that the descriptions include components which are not a part of your machine.

Details for the described machine types can be found in the chapter *Technical Data*.

3 Safety information

3.1 Principle

State of the art

This machine has been constructed with state-of-the-art technology according to the recognized rules of safety. Nevertheless, when used improperly, dangers to the life and limb of the operator or to third persons or damage to the machine or other materials cannot be excluded.

Proper use

The machine may only be used for cutting reinforcing steel.

The diameter and tensile strength of the reinforcing steel that may be processed with the machine are dependent on the machine design. Please refer to the chapter *Technical Data* for information concerning your machine.

Worksites are construction sites and operations which fabricate reinforcements or process reinforcing iron. The machine may only be used for legal and permitted purposes.

The machine must not be used for processing the following materials:

- Wires
- Pipes
- Plastics
- Wood

Its proper use also includes the observance of all instructions contained in this operator's manual as well as complying with the required service and maintenance instructions.

Any other use is regarded as improper. Any damage resulting from improper use will void the warranty and the liability on behalf of the manufacturer. The operator assumes full responsibility.

Structural modifications

Never attempt to modify the machine without the written permission of the manufacturer. To do so will endanger your safety and the safety of other people! In addition, this will void the warranty and the liability on behalf of the manufacturer.

Especially the following are cases of structural modifications:

- Opening the machine and the permanent removal of components from WACKER.
- Installing new components which are not from WACKER and not equivalent to the original parts in design and quality.
- Installation of accessories which are not from WACKER.

It is no problem to install spare parts from WACKER.

It is no problem to install accessories that are available in the WACKER product range of your machine. Please refer to the installation regulations in this operator's manual.

Requirements for operation

The ability to operate the machine safely requires:

- Proper transport, storage and setup.
- Careful operation.
- Careful service and maintenance.

Operation

Operate the machine only as intended and only when in proper working condition.

Operate the machine in a safety-conscious manner with all safety devices attached and enabled. Do not modify or disable any safety devices.

Before starting operation, check that all control and safety devices are functioning properly.

Never operate the machine in a potentially explosive environment.

Maintenance

Regular maintenance is required in order for the machine to operate properly and reliably over time. Neglected maintenance work can make the machine dangerous to use.

- Strictly observe the prescribed maintenance intervals.
- Do not use the machine if it requires maintenance or repairs.

Malfunctions

If you detect a malfunction, you must shut down and secure the machine immediately.

Eliminate the malfunctions that impair safety immediately!

Have damaged or defective components replaced immediately!

For further information, refer to chapter *Troubleshooting*.

Spare parts, accessories

Only use spare parts and accessories from WACKER. Non-compliance will exempt the manufacturer from all liability.

Exclusion of liability

WACKER will refuse to accept liability for injuries to persons or for damage to materials in the following cases:

- Structural modifications.
- Improper use.
- Improper handling.
- Use of spare parts and accessories not produced by WACKER.

Operator's manual

Always keep the operator's manual near the machine or near the worksite for quick reference.

If you have misplaced the operator's manual or require an additional copy, contact your WACKER representative or download it from the Internet (www.wackergroup.com).

Always hand over this operator's manual to other operators or to the future owner of the machine.

Country-specific regulations

Observe the country-specific regulations, standards and guidelines in reference to accident prevention and environmental safety, for example those pertaining to hazardous materials and wearing protective gear.

Complement the operator's manual with additional instructions taking into account the operational, regulatory, national or generally applicable safety guidelines.

Operator's controls

Always keep the operator's controls of the machine dry, clean and free of oil or grease.

The function of the operator's controls must not be manipulated or rendered ineffective.

Cleaning

Always keep the machine clean and be sure to clean it each time you have finished using it.

Do not use gasoline or solvents. Danger of explosion!

Checking for signs of damage

Inspect the machine when it is switched off for any signs of damage at least once per work shift.

Do not start the machine if there is visible damage or defects.

Have any damage or defects eliminated immediately.

3.2 Qualification of the operating personnel

Operator qualifications

Only trained personnel are permitted to start and operate the machine. The following rules also apply:

- You are physically and mentally fit.
- You have received instruction on how to independently use the machine.
- You have received instruction in the proper use of the machine.
- You are familiar with required safety devices.
- You are authorized to start machines and systems in accordance with the standards governing safety.
- You have been assigned to work on the machine by your company.

Incorrect operation

Incorrect operation or misuse by untrained personnel can endanger the health and safety of the operator and also cause machine and material damage.

Operating company responsibilities

The operating company must make the operator's manual available to the operator and ensure that the operator has read and understood it.

Work recommendations

Please observe the recommendations below:

- Work only if you are in a good physical condition.
- Work attentively, particularly as you finish.
- Do not operate the machine when you are tired.
- Carry out all work calmly, circumspectly and carefully.
- Never operate the machine under the influence of alcohol, drugs or medication. This can impair your vision, reactions and your judgment.
- Work in a manner that does not endanger others.

3.3 Protective gear

Work clothing

Clothing should be appropriate, i.e. should be close-fitting but not restrict your movement.

When on construction sites, do not wear long hair loosely, loose clothing or jewelry including rings. These objects can easily get caught or be drawn in by moving machine parts.

Personal protective gear

Wear personal protective gear to avoid injuries or health hazards:

- Non-skid, hard-toed shoes.
- Work gloves made of durable material.
- Overalls made of durable material.
- Hard hat.
- Ear protection.
- Face protection (optional).
- Eye protection.
- Breathing protection in the case of dusty ambient air (optional).

3.4 Transport

Switching off the machine

Before you transport the machine, switch it off and pull the plug out of the plug receptacle. Allow the motor to cool down.

Transporting the machine

Transport the machine in the carrying case supplied.

Secure the carrying case on the transport device against tilting, falling or slipping.

3.5 Operating safety

Work environment

Familiarize yourself with your work environment before you start work. This includes e.g. the following items:

- Obstacles in the work and traffic area.
- Load-carrying capacity of the ground.
- The measures needed to cordon off the construction site from public traffic.
- The measures needed to secure walls and ceilings.
- Options available in the event of an accident.

Safety in the work area

When working with the machine especially pay attention to the following points:

- Electric lines or pipes in work area.
- Gas lines or water lines in the work area.

Checks before starting work

Check the following points before beginning work:

- Condition of tools.
- Machine settings.
- Connection value of the machine.

Starting the machine

Observe the safety information and warning notices located on the machine.

Never attempt to switch on a machine that requires maintenance or repairs.

Switch on the machine as directed in the operator's manual.

Vertical stability

Always make sure that you maintain a safe distance when working with the machine. This applies particularly when working on scaffoldings, ladders, etc.

Caution with movable parts

Keep your hands, feet and loose clothing away from moving machine parts.

No persons endangered

Be sure that no persons are endangered by flying parts or flying chips.

Switching off the machine

Switch off the engine and pull the plug out of the plug receptacle in the following situations:

- Before breaks.
- If you are not using the machine.
- If you are changing the tool.

Before storing the machine, wait until it has completely stopped running.

Store the machine or put it down in such a way that it cannot tilt, fall down or slip.

Storage location

Store the machine after operation at a sealed off and dry location inaccessible to children.

3.6 Safety during the operation of hand machines

Safe working with hand machines

Secure loose workpieces with suitable methods.

While working, as a rule hold the machine on the provided handles with both hands.

3.7 Safety during the operation of electric appliances

Specific regulations for electrical appliances

Observe the safety information provided in the brochure *General Safety Rules* which is included in the scope of delivery of your machine.

Also observe the country-specific regulations, standards and guidelines in reference to accident prevention in connection with electrical equipment and machines.

Electric power supply for electrical appliances of class rating II

Note: The rated voltage is indicated on the nameplate of your machine.

The machine may only be connected to an electric power supply with all machine parts in proper working condition. Take special notice of the following machine parts:

- Plug.
- Power cable over the entire length.

The machine may only be connected to an electric power supply whereby the connector of the grounded conductor (PE) is intact.

Electrical appliances of class rating II have a strengthened or double insulation (protective insulation). They have no connection to the grounded conductor.

Note: Observe the respective national safety regulations!

Extension cable

The machine may only be operated with undamaged extension cables!

Only use extension cables with grounded conductor and correct connection of the grounded conductor to the plug and coupling (only for machines of class rating I).

Only use extension cables which are suitable for use at construction sites: Average rubber hose H05RN-F or better – WACKER recommends H07RN-F or a country-specific equivalent design.

Immediately replace damaged extension cables (e.g. tears in the sheathing) or loose plugs and couplings.

Protecting the power cable

Do not use the power cable to pull or lift the machine.

Do not unplug the power cable by pulling on the cable.

Protect the power cable from heat, oil and sharp edges.

If the power cable is damaged or the plug is loose, have it replaced immediately by your WACKER representative.

Protecting from moisture

Protect the machine against rain, snow or any other forms of moisture. This could cause damage or malfunctions.

Protecting from high temperatures

Do not expose the machine to temperatures which are over 70 °C. Otherwise the insulation current conducting parts can be damaged.

3.8 Safety during the operation of hydraulic machines

Hydraulic oil

Hydraulic oil is harmful to health.

Wear safety glasses and safety gloves when handling hydraulic oil.

Avoid direct skin contact with hydraulic oil. Remove hydraulic oil from the skim immediately with soap and water.

Make sure that no hydraulic oil comes gets in the eyes or on the body. See a physician immediately if hydraulic oil gets into the eyes or is swallowed.

Do not eat and drink while handling hydraulic oil.

Make sure to have extreme cleanliness. Contamination of the hydraulic oil with dirt or water can cause premature wear or failure.

Dispose of left over and spilled hydraulic oil according to the applicable regulations for environmental protection.

3.9 Maintenance

Maintenance work

Service and maintenance work must only be carried out to the extent described in these operating instructions. All other procedures must be performed by your WACKER representative.

For further information, refer to chapter *Maintenance*.

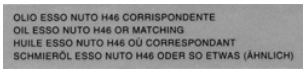
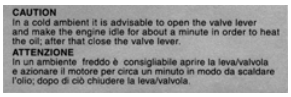
Disconnecting the machine from the electric power supply

Before carrying out service or maintenance work, pull the plug out of the plug receptacle in order to disconnect the machine from the electric power supply.

3.10 Labels

Your machine has adhesive labels containing the most important instructions and safety information.

- Make sure that all the labels are kept legible.
- Replace any missing or illegible labels.

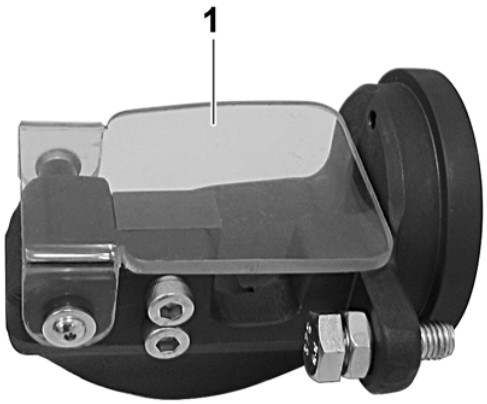
Labels	Description
	Wear safety glasses. Wear hard hat. Follow operator's manual. Wear ear protection. Wear protective gloves. Wear non-skid, hard-toed shoes.
	Max. workpiece diameter.
	Only use hydraulic oil of type HLP-ISO-46 (e.g. ESSO NUTO H46), refer to chapter *Technical data*.
	**WARNING** Danger due to cutting. **WARNING** Flying chips.
	Warm up machines at temperatures under 5 °C.

3.11 Safety devices

WARNING
Danger of injury due to open moving parts.
- ► Only operate the machine with properly installed and functioning safety devices.
- ► Do not modify or remove safety devices.

Protective hood

A protective hood is installed for some machine designs.



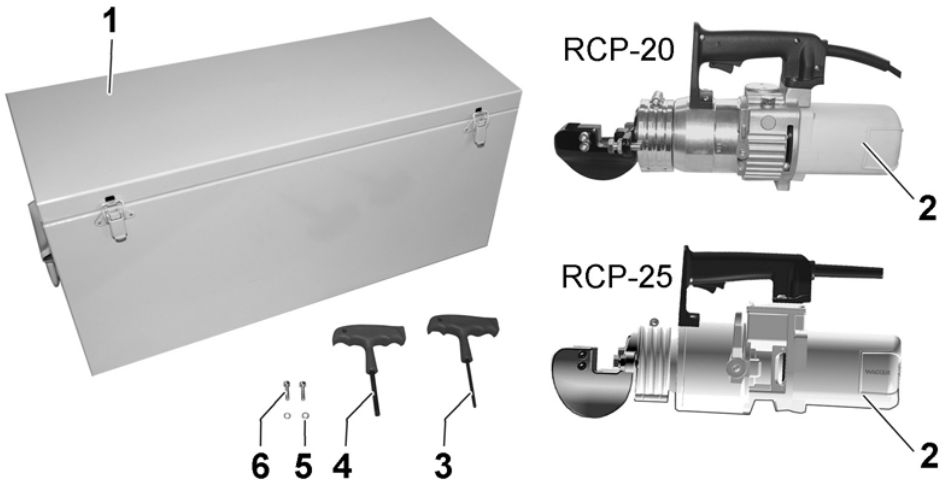
Item	Designation
1	Protective hood

4 Scope of delivery

Machine with cutting head

The machine is delivered fully assembled.

The scope of delivery includes:



Item	Designation
1	Carrying case
2	Cutting machine
3	4 mm Allen wrench
4	6 mm Allen wrench
5	Spring washer (2 pieces)
6	Allen screw (2 pieces)
	Operator's Manual (without illustration)
	Spare parts catalog (without illustration)
	General safety information (without illustration)

Only one cutting machine is included in the scope of deliver.

5 Description

5.1 Application

The machine is used for cutting reinforcing steel at construction sites and operations which fabricate reinforcements or process reinforcing iron.

The diameter and tensile strength of the reinforcing steel that may be processed with the machine are dependent on the machine design. Please refer to the chapter *Technical Data* for information concerning your machine.

5.2 Functionality

Principle

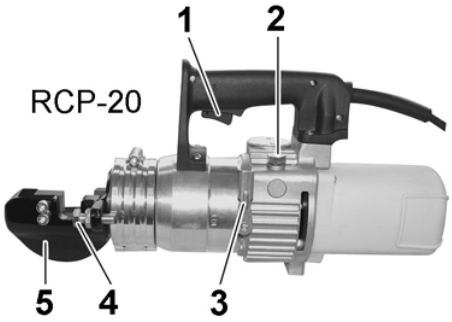
An electric motor drives a piston with thrust bolt forwards via a gear pump.

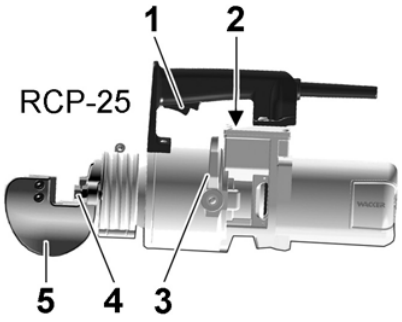
A valve opens at the end of the forward movement and releases the pressure. A spring presses the piston back in the original position.

In cutting operating the thrust bolt moves a moveable knife against a fixed knife in the cutting head.

In idle a valve is opened via the pressure release lever. The thrust bolt does not make a movement.

5.3 Components and operator's controls





Item	Designation
1	ON/OFF switch
2	Oil filler neck
3	Pressure release lever
4	Stop screw
5	Cutting head
	Protective hood (without illustration)

ON/OFF switch

Switching on the machine

Turn on the machine with the ON/OFF switch. As long as the ON/OFF switch is pressed, the machine runs in cutting operation or idle, depending on the setting of the pressure release lever.

Switching off the machine

If the ON/OFF switch is released, the motor stops. In cutting operation the movable knife stops in the current position.

Continuing the cutting movement after stop

If the ON/OFF switch is pressed again after a stop in the cutting operation, the knife continues its movement until the original position.

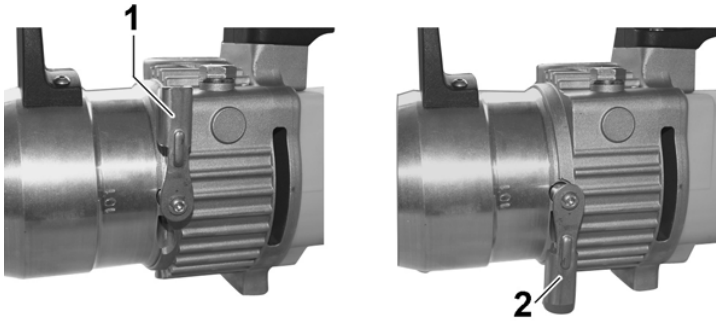
Oil filler neck

The oil filler neck is used for filling and emptying the hydraulic oil tank.

A screw plug with sealing ring seals the opening in the oil filler neck.

Pressure release lever

Select operating mode cutting operation or release/idle with the pressure release lever.



Item	Designation
1	Cutting operation ("I")
2	Release/Idle ("0")

Operating mode cutting operation

When the ON/OFF switch is pressed the machine completes a complete cutting movement and returns to the original position.

Release/Idle operating mode

When the ON/OFF switch is pressed, the machine runs without performing a cutting movement.

If the knife jams, the cutting movement can be interrupted. For this the machine has to be switched off and the pressure release lever has to be switched to the position Release/Idle. The knife moves into the original position.

Cutting head

One fixed knife and one movable knife are installed in the cutting head. Cutting of the workpiece is done by shearing off.

The cutting head is fastened to the machine with a collar. The cutting head can be removed. Instead of the cutting head, a bending head (accessory) can be installed on the machine.

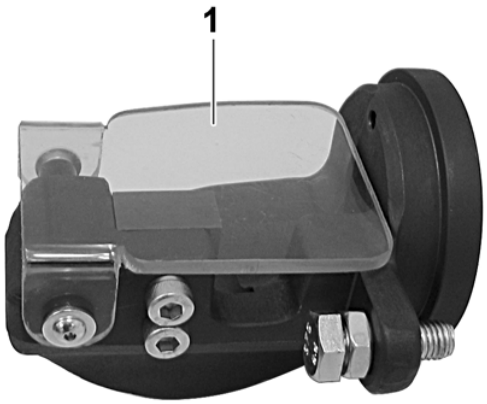
Stop screw

The stop screw must be set to the diameter of the workpiece before cutting.

If the stop screw is properly adjusted, the machine cuts the workpiece in a right angle without canting.

Protective hood

A protective hood is installed on the cutting head for some machine designs.



Item	Designation
1	Protective hood

Close the protective hood before cutting to avoid injuries.

6 Transport

WARNING
Improper handling can result in injury or serious material damage.
- ▶ Read and follow all safety instructions of this operator's manual, see chapter *Safety information*.

Transporting the machine

The machine must be transported in the carrying case supplied.

1. Pull the plug from the plug receptacle.
2. Close the protective hood (only installed on some machine designs).
3. Place the machine in the carrying case.
4. Wind up the power cable and place in the carrying case.
5. Store both Allen wrenches in the carrying case.
6. Close carrying case.
7. Place the carrying case on or into a suitable means of transport.
8. Secure the carrying case against falling over and down or sliding.

7 Operation

WARNING
Improper handling can result in injury or serious material damage.
- ▶ Read and follow all safety instructions of this operator's manual, see chapter *Safety information*.

WARNING
Movable knives.
Body parts could be cut off.
- ▶ Do not touch the cutting head when the motor is running.
- ▶ Close protective hood (if there is one).

7.1 Prior to starting the machine

After unpacking, the machine is ready for operation.

Plug

The machine comes with a country-specific plug as a standard equipment.

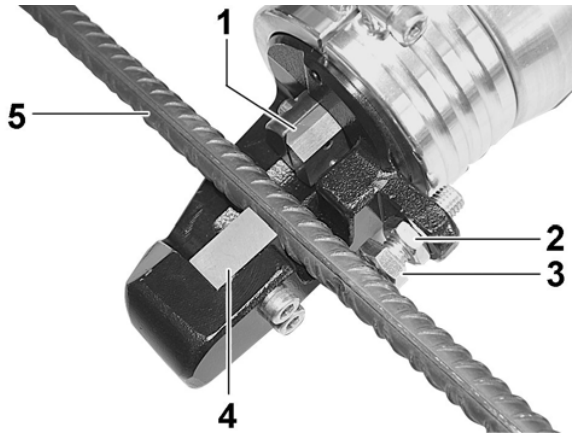
Carrying out checks

- ▶ Check if mains or power distribution on the construction site have the correct operating voltage (see nameplate of the machine or chapter *Technical Data*).
- ▶ Check if mains or power distribution on the constructions site are protected in accordance with current standards and regulations.

7.2 Adjusting the machine

WARNING
Starting the machine.
Danger of injuries from uncontrolled starting of the machine.
▶ Remove the plug from the plug receptacle before all work on the machine.

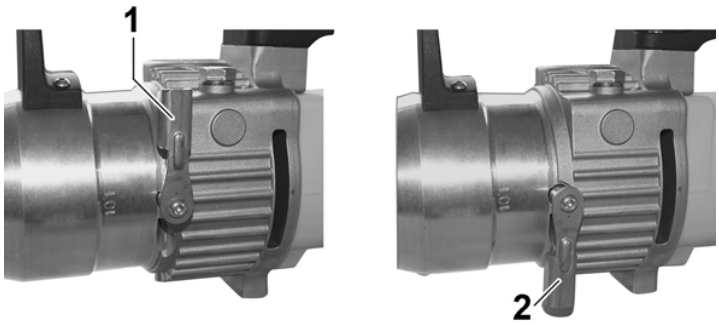
Adjusting the stop screw



Item	Designation
1	Movable knife
2	Jam nut
3	Stop screw
4	Fixed knife
5	Workpiece
	Protective hood (without illustration)

1. Set the pressure release lever in the Release/Idle position.
2. Open the protective hood (only installed on some machine designs).
3. Loosen jam nut.
4. Place the workpiece on the fixed knife.
5. Set the stop screw so that the workpiece is perpendicular to the axis of the machine.
6. Tighten the jam nut.

Selecting the operating mode



Item	Designation
1	Cutting operation ("I")
2	Release/Idle ("0")

- ▶ Position the pressure release lever upwards, to start the cutting operation.
- ▶ Position the pressure release lever downwards, to start idle.

7.3 Starting up

NOTICE
Worn out knives.
Premature wear of the machine.
- ▶ Before beginning work check the sharpness of the knife visually.
- ▶ Change worn out knives.

Connecting the machine to the power supply

NOTICE
Electrical voltage.
Incorrect voltage can cause damage on the machine.
- ▶ Check if the voltage of the current source corresponds with the information of the machine, see chapter *Technical Data*.

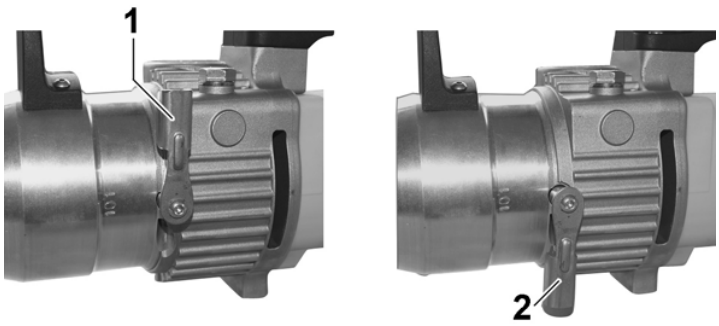
CAUTION
Electrical voltage.
Danger due to short circuit.
- ▶ Check power cable for signs of damage.

1. If required, connect the machine to a permitted extension cable.

   Note: See chapter *Technical data* for the permitted lengths and cross-section areas of extension cables.
2. Insert the plug into the plug receptacle.

Running the machine in idle

Note: If the machine is exposed to an ambient temperature under 5 °C, warm up in idle approx. 1 minute before beginning work on the machine.



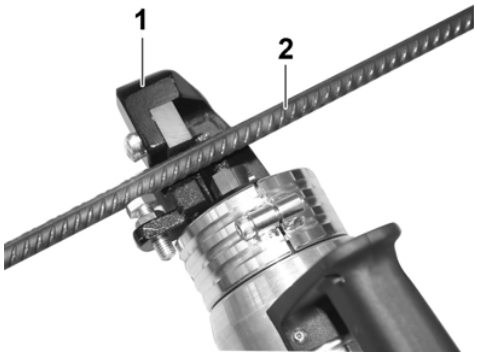
Item	Designation
1	Cutting operation ("I")
2	Release/Idle ("0")

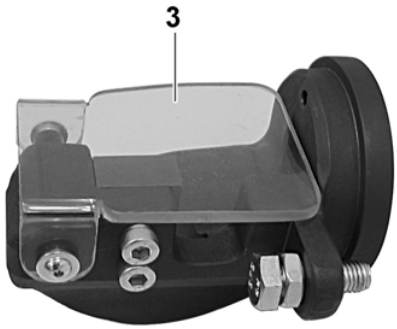
1. Set the pressure release lever in the Release/Idle position.
2. Press and hold ON/OFF switch.
   The machine runs in idle.
3. Release the ON/OFF switch to turn off.

Cutting

WARNING
Injuries from insufficiently guided or uncontrolled machine.
Body parts could be cut off.
- ▶ If the machine is guided to the workpiece, the machine must always be held tight with both hands and stand securely.
- ▶ If the machine is on a stable foundation, hold the machine with one hand on the handle and hold the workpiece with the other hand.

NOTICE
Incorrect placement.
Premature wear of the knife.
- ▶ Make sure that the stop screw is adjusted to the diameter of the workpiece.
- ▶ Make sure that the cutting head and workpiece are perpendicular to each other.





Item	Designation
1	Cutting head
2	Workpiece
3	Protective hood

1. Set pressure release lever in cutting operation position.
2. Open the protective hood (only installed on some machine designs).
3. Guide the workpiece in the cutting head.
4. Close the protective hood.
5. Press and hold ON/OFF switch.
6. If the knife again is in the original position, release the ON/OFF switch.

7.4 Decomissioning

Switching off the machine

1. Release ON/OFF switch.
2. Set the pressure release lever in the Release/Idle position.
   The knife moves into the original position.
3. Pull the plug from the plug receptacle.

Cleaning the machine

CAUTION
Electrical voltage.
Danger of electrocution!
- ▶ Make sure when cleaning that no water gets into the machine. Do not clean machine under running water or with a high pressure cleaner.

1. Free the cutting head of cutting residues with suitable tools.
2. Wipe the housing with a damp and clean cloth.

8 Maintenance

WARNING
Improper handling can result in injury or serious material damage.
- ▶ Read and follow all safety instructions of this operator's manual, see chapter *Safety information*.

WARNING
Electrical voltage.
Injuries from electrocution.
- ▶ Remove the plug from the plug receptacle before all work on the machine.

8.1 Maintenance schedule

Task	Daily before operation	As required	Every 2 years
Check power cable for perfect condition – if power cable is defective, have it replaced.	■		
Visual inspection of all parts for damage.	■		
Check knife for wear – if necessary, replace knife.	■		
Check screws on machine for tightness – if necessary, tighten them.		■	
Check the hydraulic oil tank level for power loss or leaking hydraulic oil – if necessary add hydraulic oil.		■	
Change hydraulic oil.			■

Notify your WACKER contact in case of maintenance work which you cannot or may not complete yourself.

8.2 Maintenance work

Work in the workshop

Perform maintenance work in a workshop on a workbench. This has the following benefits:

- Protection of the machine of contamination on the construction site.
- A level and clean work surface makes work easier.
- There is a better overview over small parts and they are not lost as easily.

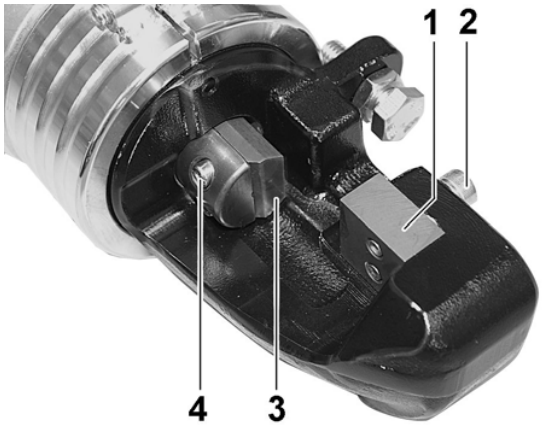
8.2.1 Visual inspection for damage

Checking the machine

WARNING
A damaged machine part or power cable can result in personal injury caused by electric current.
- ▶ Do not operate a damaged machine.
- ▶ Have a damaged machine repaired immediately.

- ▶ Check all machine parts for damage or cracks.

8.2.2 Changing the knife



Item	Designation
1	Fixed knife
2	Fastening screw (2 pieces)
3	Movable knife
4	Fastening screw with spring washer (2 pieces)

Performing preparations

1. Pull the plug from the plug receptacle.
2. Open the protective hood (only installed on some machine designs).

Changing the fixed knife

1. Unscrew both fastening screws on the fixed knife.
2. Changing fixed knife.
3. Tighten fixed knife with both fastening screws.

Changing the movable knife

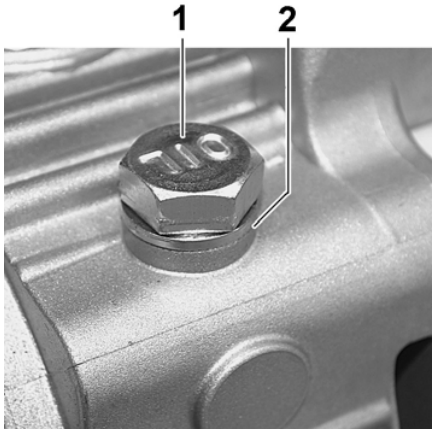
1. Unscrew both fastening screws on the movable knife and remove with the spring washers.
2. Changing movable knife.
3. Tighten movable knife with both fastening screws and spring washers.

8.2.3 Checking the hydraulic oil level

WARNING
Hot hydraulic oil.
Injury by scalding.
- ▶ Do not open the screw plug on the oil filler neck as long as the hydraulic oil is hot.
- ▶ Let machine cool off.

CAUTION
Hydraulic oil under pressure.
Squirting hydraulic oil can penetrate the skin.
- ▶ Only unscrew the screw plug on the oil filler neck if the thrust bolt is completely extended.
- ▶ Wear safety glasses and protective gloves.

NOTICE
Wrong hydraulic oil.
Damage to machine.
- ▶ Only fill with hydraulic oils which are specified for the machine in the chapter *Technical Data*.



Item	Designation
1	Screw plug
2	Oil filler neck

Performing preparations

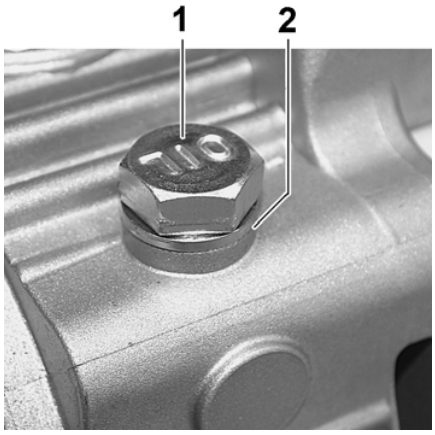
1. Completely extend the thrust bolt. For this press the ON/OFF switch.
2. Pull the plug from the plug receptacle.
3. Remove any dirt around the screw plug.

Checking the hydraulic oil level

1. Place the machine so that the oil filler neck points vertically upward.
2. Open the screw plug on the oil filler neck slowly and carefully.
   Hold a cloth over the oil filler neck with the second hand for protection against escaping hydraulic oil.
3. Unscrew the screw plug on the oil filler neck and remove with sealing ring.
4. Check if the hydraulic oil reaches to the lower edge of the oil filler neck.
   If necessary, fill with hydraulic oil up tot the lower edge of the oil filler neck.
5. Screw in the screw plug with sealing ring in the oil filler neck and tighten.

8.2.4 Changing the hydraulic oil

Change hydraulic oil when it is lukewarm. The oil then flows easier.



Item	Designation
1	Screw plug
2	Oil filler neck

Draining out the hydraulic oil

WARNING
Hot hydraulic oil.
Injury by scalding.
- ▶ Do not open the screw plug on the oil filler neck as long as the hydraulic oil is hot.
- ▶ Let machine cool off.

CAUTION
Hydraulic oil under pressure.
Squirting hydraulic oil can penetrate the skin.
- ▶ Only unscrew the screw plug on the oil filler neck if the thrust bolt is completely extended.
- ▶ Wear safety glasses and protective gloves.

Note: The work area should be covered with a waterproof sheet to protect the floor (protection of the environment).

Performing preparations

1. Have a suitable collecting container ready.
2. Completely extend the thrust bolt. For this press the ON/OFF switch.
3. Pull the plug from the plug receptacle.

Draining out the hydraulic oil

1. Place the machine so that the oil filler neck points vertically upward.
2. Open the screw plug on the oil filler neck slowly and carefully.
   Hold a cloth over the oil filler neck with the second hand for protection against escaping hydraulic oil.
3. Unscrew the screw plug on the oil filler neck and remove with sealing ring.
4. Hold the machine with the oil filler neck over the collection container and drain hydraulic oil.
5. Set the pressure release lever in the Release/Idle position.
6. When the thrust bolt is completely retracted drain the remaining hydraulic oil in the collection container.

Note: Dispose of hydraulic oil according to the applicable regulations for environmental protection.

Filling with hydraulic oil

NOTICE
Wrong hydraulic oil.
Damage to machine.
- ▶ Only fill with hydraulic oils which are specified for the machine in the chapter *Technical Data*.

Filling with hydraulic oil

1. Place the machine so that the oil filler neck points vertically upward.
2. Fill with hydraulic oil up to the lower edge of the oil filler neck.
3. Screw in the screw plug with sealing ring in the oil filler neck and tighten.

Distribute the hydraulic oil

1. Insert the plug into the plug receptacle.
2. Run the machine in cutting operation approx. 3 times back and forth. For this press the ON/OFF switch.
3. Completely extend the thrust bolt.
4. Pull the plug from the plug receptacle.

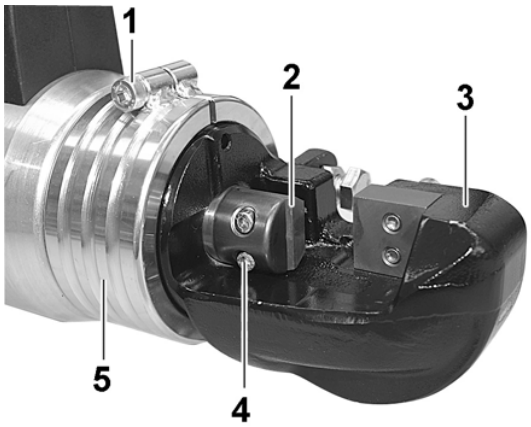
Top up with hydraulic oil

1. Place the machine so that the oil filler neck points vertically upward.
2. Unscrew the screw plug on the oil filler neck and remove with sealing ring.
3. Fill with hydraulic oil up to the lower edge of the oil filler neck.
4. Screw in the screw plug with sealing ring in the oil filler neck and tighten.

8.3 Installing and removing the cutting head

WARNING
Starting the machine.
Danger of injuries from uncontrolled starting of the machine.
▶ Remove the plug from the plug receptacle before all work on the machine.

Removing the cutting head

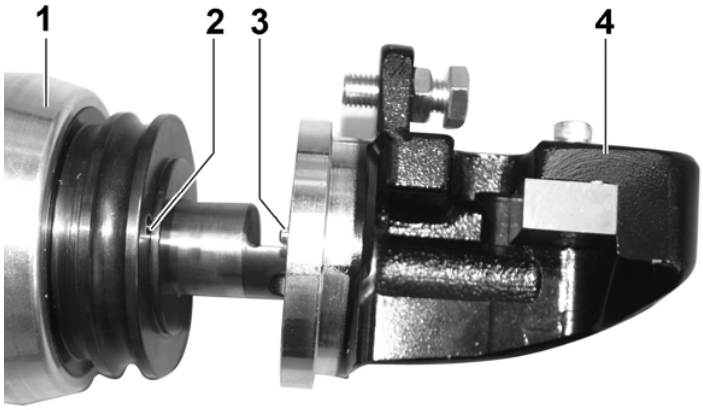


Item	Designation
1	Fastening screw
2	Movable knife
3	Cutting head
4	Fastening screw (2 pieces)
5	Collar

1. Unscrew both fastening screws on the movable knife and remove with the spring washers.
2. Removing the movable knife.
3. Unscrew the fastening screw on the collar.
4. Remove collar.
5. Remove cutting head towards the front.

Installing the cutting head

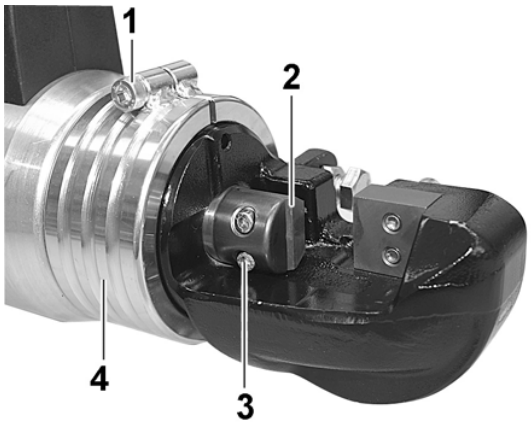
Sliding the cutting head



Item	Designation
1	Machine
2	Bore
3	Locating pin
4	Cutting head

1. Place the cutting head on the machine so that when sliding on, the locating pin on the cutting head engages into the hole on the machine.
2. Slide the cutting head to the stop.

Fastening the cutting head



Item	Designation
1	Fastening screw
2	Movable knife
3	Fastening screw (2 pieces)
4	Collar

1. Put the collar on.
2. Turn and tighten the fastening screw on the collar.
3. Tighten movable knife with both fastening screws and spring washers.

9 Troubleshooting

Potential faults, their causes and the respective remedies are listed in the following table.

Malfunction	Cause	Remedy
Workpiece jammed or slipped.	Stop screw is set incorrectly.	Adjust the stop screw.
Machine not in operation.	Input voltage too high or too low.	Provide correct voltage; if necessary use an extension cable with sufficient cross section.
	Power cable interrupted.	Check power cable, have it replaced if defective.
Thrust bolt moves out incompletely or unevenly.	Insufficient hydraulic oil in the hydraulic oil tank.	Check oil level, fill with hydraulic oil if necessary.
	Cold hydraulic oil.	Warm up machine for approx. 1 minute.
Thrust bolt does not move back completely.	Dirt and cutting residue in the cutting head.	Clean cutting head.
Hydraulic oil is leaking out.	Sealing ring on the oil filler neck is damaged.	Check sealing ring, change if necessary.
	Leak on the hydraulic cylinder, hydraulic oil tank or screwed connections.	Have the machine repaired.

Notify your WACKER contact in case of malfunctions you cannot or may not remedy yourself.

10 Disposal

10.1 Disposal of the machine

Your machine contains many valuable raw materials which should be disposed and recycled in an environmentally friendly manner.

During disposal of the machine observe the country-specific rules and regulations, e.g. the European Directive for obsolete electrical and electronic devices.

	Do not dispose of the machine in household rubbish. It must be disposed at a recycling facility.

11 Accessories

11.1 General notes

The following accessories are offered for the machine.

For more information on the individual accessories, visit the following website: www.wackergroup.com.

11.2 Bending head

11.2.1 Safety

Proper use

The bending head may only be used for bending reinforcing steel. The bending head must be installed on a machine with interchangeable head, which is suitable for it.

The diameter and tensile strength of the reinforcing steel that may be processed with the machine are dependent on the machine design. Please refer to the chapter *Technical Data* for information concerning your machine.

Worksites are construction sites and operations which fabricate reinforcements or process reinforcing iron.

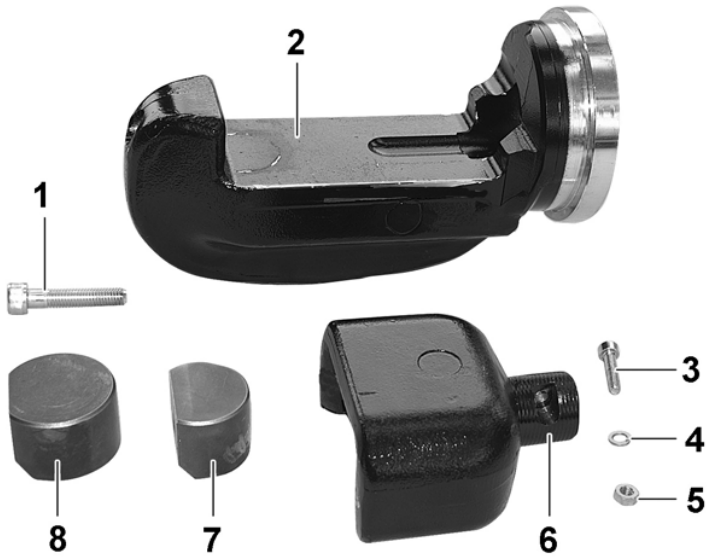
The beinding head must not be used for processing the following materials:

- Wires
- Pipes
- Plastics
- Wood

Its proper use also includes the observance of all instructions contained in this operator's manual as well as complying with the required service and maintenance instructions.

Any other use is regarded as improper. Any damage resulting from improper use will void the warranty and the liability on behalf of the manufacturer. The operator assumes full responsibility.

11.2.2 Scope of delivery



Item	Designation
1	Fastening screw
2	Bending head
3	Fastening screw
4	Spring washer
5	Nut
6	Movable die
7	Small molding piece
8	Large molding piece

11.2.3 Description

Application

The bending head can be installed on a machine with interchangeable head. In the installed condition the bending head can be used to bend reinforcing steel. Using the two exchangeable molding pieces, two different bending radii can be set.

Functionality

The workpiece must be placed between the molding piece and the die for bending.

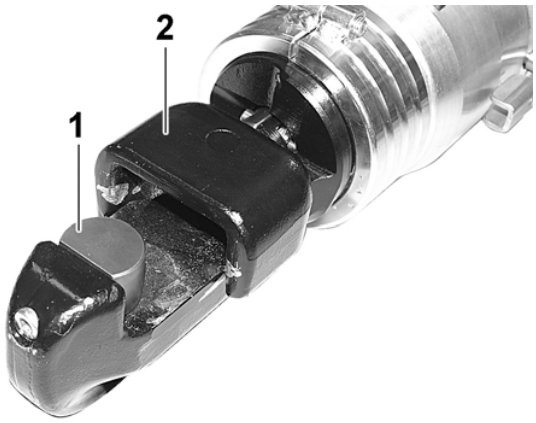
In the forward movement the die bends the workpiece around the molding piece. At the end of the reverse movement the die releases the workpiece.

The bending angle is dependent on the path that the die makes during the forward movement.

If the die moves completely forward, the smallest possible bending angle is made.

Any desired larger angle can be bent when the forwards movement is interrupted by releasing the ON/OFF switch. If the pressure release lever is set in the Release/Idle position, the die returns to the original position.

Components and their function



Item	Designation
1	Molding piece
2	Movable die

The molding piece is permanently screwed onto the bending head. The size of the molding piece determines the bending radius.

The die is permanently screwed onto thrust bolt of the machine and moves with the thrust bolt.

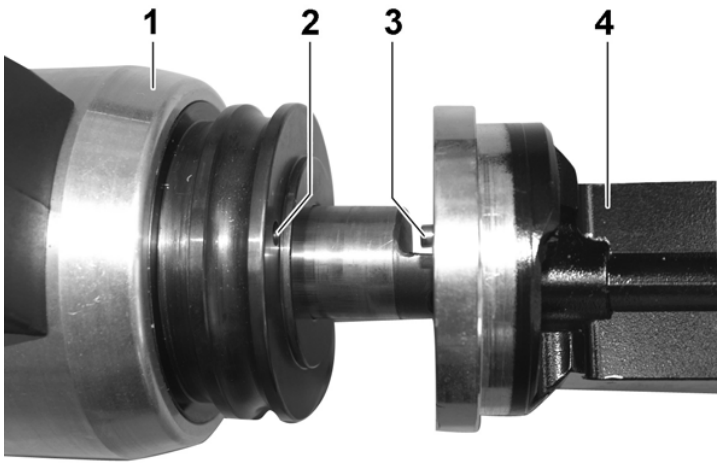
11.2.4 Operation

WARNING
Starting the machine!
Danger of injury with uncontrolled start up.
- ▶ Before all work on the machine and on accessories, remove the plug from the plug receptacle.

Installing the bending head

Before the bending head can be installed on the machine, the cutting head must be removed, see *8.3 Installing and removing the cutting head* (page 38).

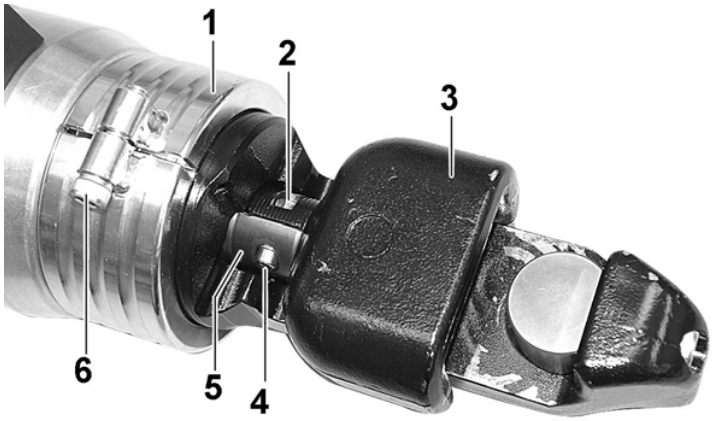
Sliding the bending head



Item	Designation
1	Machine
2	Bore
3	Locating pin
4	Bending head

1. Place the bending head on the machine so that when sliding it on, the locating pin on the bending head engages into the bore on the machine.
2. Slide the bending head to the stop.

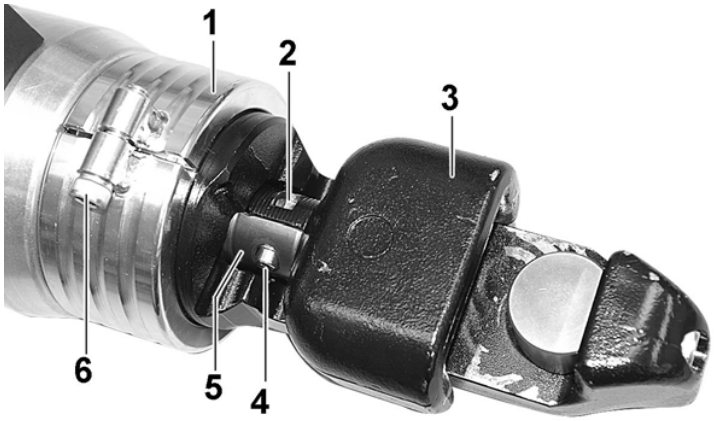
Fastening the bending head



Item	Designation
1	Collar
2	Nut
3	Die
4	Fastening screw
5	Thrust bolt
6	Fastening screw

1. Put the collar on.
2. Turn and tighten the fastening screw on the collar.
3. Tighten the die with the fastening screw, spring washer and nut onto the thrust bolt.

Removing the bending head



Item	Designation
1	Collar
2	Nut
3	Die
4	Fastening screw
5	Thrust bolt
6	Fastening screw

1. Unscrew the fastening screw on the thrust bolt and remove with spring washer and nut.
2. Remove die.
3. Unscrew the fastening screw on the collar.
4. Remove collar.
5. Remove bending head towards the front.

Changing the molding piece

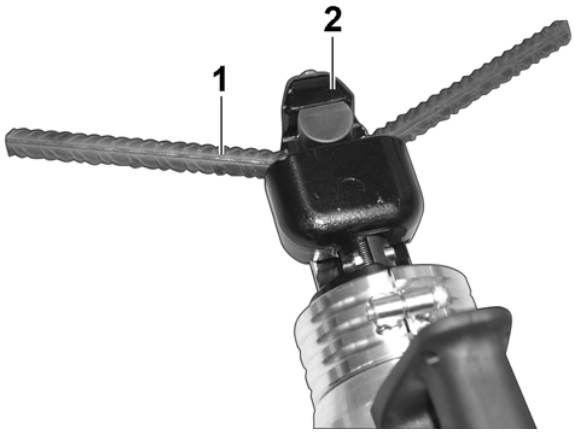
Item	Designation
1	Molding piece
2	Fastening screw

1. Screw out the fastening screw.
2. Remove molding piece.
3. Place another molding piece on. When doing so make sure that the slanted edge on the molding piece is aligned downwards.
4. Tighten the molding piece with the fastening screw.

Bending the workpiece

WARNING
Movable tool.
Body parts could be crushed.
► Do not touch the bending head when the motor is running.

WARNING
Injuries from insufficiently guided or uncontrolled machine.
Body parts could be crushed.
► Hold the machine with one hand and guide the workpiece into the bending head with the other hand.



Item	Designation
1	Workpiece
2	Bending head

1. Set pressure release lever in cutting operation position (here: bending operation).
2. Guide workpiece between the molding piece and the die in the bending head.
3. Press and hold the ON/OFF switch until the desired bending angle has been reached.
   - If the smallest possible bending angle should be made:

     Hold down the ON/OFF switch until the die is completely retracted.
   - If the another bending angle should be made:

     Release the ON/OFF switch when the desired bending angle is reached and set the pressure release lever into the Release/Idle position.
4. When the die has completely retracted, remove the workpiece from the bending head.

11.2.5 Technical data for accessories

P-20/25 bending head

Designation	Unit	HB-20	HB-25
Installation on the cutting machine		RCP-20	RCP-25
Length x Width x Height	mm	190 x 125 x 90	220 x 290 x 130
Weight	kg	5.3	8.5
Min. bending radius on the inside of the workpiece	mm	18	
Bending angle	°	180-65*	180-80*
Max. allowable tension strength of the workpiece	N/mm^2	750	
Max. allowable diameter workpiece	mm	20	25

* The smallest possible bending angle depends on the diameter and tensile strength of the workpiece.

12 Technical data

12.1 RCP-20/25 - 230

Designation	Unit	RCP-20	RCP-25
Item no.		0610201	0610203
Length x Width x Height	mm (in)	385 x 180 x 240 (15.2 x 7.1 x 9.5)	405 x 170 x 250 (15.9 x 6.7 x 9.8)
Operating weight	kg (lb)	13.7 (30.2)	13.9 (30.6)
Rated voltage	V	230 1~	
Rated frequency	Hz	50	
Rated power consumption	W	1,400	
Rated current consumption	A	6.8	
Class rating		II	
Protection class		IP 20	
Engine speed	rpm	14,000	
Operating temperature	°C (°F)	-20 to +50 (-4 to +122)	
Hydraulic oil, specification		HLP-ISO-46	
Hydraulic oil, fill quantity	l (gal)	0.6 (0.2)	
Max. compressive force	t	30	40
Opening/closing time of the tool	s	5	5.5
Max. allowable tension strength of the workpiece	N/mm^2	750	
Max. allowable diameter work-piece	mm (in)	20 (0.79)	25 (0.98)
Protective hood		—	—
Sound power level L_{WA} in cutting operation	dB(A)	102	
Sound pressure level at operator's station L_{PA} in cutting operation	dB(A)	94	

12.2 RCP-20/25 - 115

Designation	Unit	RCP-20	RCP-25
Item no.		0610215	0610216
Length x Width x Height	mm (in)	385 x 180 x 240 (15.2 x 7.1 x 9.5)	405 x 170 x 250 (15.9 x 6.7 x 9.8)
Operating weight	kg (lb)	13.7 (30.2)	13.9 (30.6)
Rated voltage	V	115 1~	
Rated frequency	Hz	50	
Rated power consumption	W	1,300	
Rated current consumption	A	11.0	
Class rating		II	
Protection class		IP 20	
Engine speed	rpm	14,000	
Operating temperature	°C (°F)	-20 to +50 (-4 to +122)	
Hydraulic oil, specification		HLP-ISO-46	
Hydraulic oil, fill quantity	l (gal)	0.6 (0.2)	
Max. compressive force	t	30	40
Opening/closing time of the tool	s	5	5.5
Max. allowable tension strength of the workpiece	N/mm^2	750	
Max. allowable diameter work-piece	mm (in)	20 (0.79)	25 (0.98)
Protective hood		■	■
Sound power level L_{WA} in cutting operation	dB(A)	102	
Sound pressure level at operator's station L_{PA} in cutting operation	dB(A)	94	

12.3 RCP-20/25 - 120

Designation	Unit	RCP-20	RCP-25
Item no.		0610202	0610204
Length x Width x Height	mm (in)	385 x 180 x 240 (15.2 x 7.1 x 9.5)	405 x 170 x 250 (15.9 x 6.7 x 9.8)
Operating weight	kg (lb)	13.7 (30.2)	13.9 (30.6)
Rated voltage	V	120 1~	
Rated frequency	Hz	60	
Rated power consumption	W	1,300	
Rated current consumption	A	11.0	
Class rating		II	
Protection class		IP 20	
Engine speed	rpm	14,000	
Operating temperature	°C (°F)	-20 to +50 (-4 to +122)	
Hydraulic oil, specification		HLP-ISO-46	
Hydraulic oil, fill quantity	l (gal)	0.6 (0.2)	
Max. compressive force	t	30	40
Opening/closing time of the tool	s	5	5.5
Max. allowable tension strength of the workpiece	N/mm^2	750	
Max. allowable diameter work-piece	mm (in)	20 (0.79)	25 (0.98)
Protective hood		■	■
Sound power level L_{WA} in cutting operation	dB(A)	102	
Sound pressure level at operator's station L_{PA} in cutting operation	dB(A)	94	

12.4 Extension cable

Refer to the following table for the required cross-section area of cable for a designated extension.

Note: Refer to the nameplate or the chapter *Technical data* (via the item number) for the type designation and voltage rating of your machine.

Voltage [V]	Extension [m]	Cross-section area of cable [mm^2]
115	< 27	1.5
	< 45	2.5
	< 72	4
	< 107	6
120	< 28	1.5
	< 47	2.5
	< 75	4
	< 111	6
230	< 88	1.5
	< 146	2.5

Extension cable for the US market:

Machine	Voltage [V]	Extension [ft]	Cross-section area of cable [AWG]
RCP-20 RCP-25	115	< 79	16
		< 125	14
		< 197	12
		< 308	10
	120	< 82	16
		< 128	14
		< 203	12
		< 322	10
	230	< 253	16
		< 400	14
		< 492	12

Example

You utilize a RCP-20/230 and want to use an extension cable with a length of 50 m (164 ft).

The machine has an input voltage of 230 V.

According to the table, the extension cable must feature a cross-section area of 1.5 mm^2 (AWG 16).

EC Declaration of Conformity

Wacker Construction Equipment AG, Preußenstraße 41, 80809 München certifies that the construction machines:

Category

Cutting machine with interchangeable head

Type		RCP-20	RCP-25
Machine type number		0610201 0610202 0610215	0610203 0610204 0610216
Operating weight	kg	13.7	13.9

fulfill the requirements of the following directives:

98/37/EC

2004/108/EC

EN 61000

2006/95/EC

ppa Otto

Dr. Stenzel

Head of Research and Development

VDE Prüf- und Zertifizierungsinstitut

VDE VERBAND DER ELEKTROTECHNIK
ELEKTRONIK INFORMATIONSTECHNIK e.V.

C E R T I F I C A T E

Registration-Number: 6236/QM/06.97

This is to certify that the company

Wacker Construction Equipment AG
Wacker-Werke GmbH & Co. KG

at the following locations

Head Office Munich
Preußenstraße 41
80809 Munich

Production plant Reichertshofen
Karlsfeld logistics centre
Sales regions with all branches all over Germany

has implemented and maintains a
Qality **M**anagement **S**ystem for the following scope:

Machine manufacture
Construction machines

This Q System complies with the requirements of

DIN EN ISO 9001:2000

and the requirements of the German and international Road Traffic Act.

This Certificate is valid until 2009-06-05.

VDE Testing and Certification Institute
Certification

Date: 2006-05-30

63069 Offenbach, Merianstraße 28
Telefon: +49 (0) 69 83 06-0, Telefax: +49 (0) 69 83 06-555
E-Mail: vde-institut@vde.com, http://www.vde-institut.com

The VDE Testing and Certification Institute is accredited by DAR Accreditation Bodies according to DIN EN ISO 17020 and DIN EN ISO 45012 and notified in the EU under ID.No. 0366.

TGA-ZM-09-92-00
KBA-ZM-A 00021-97

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