

ORTHOVET PRO BATTERY POWERED DRILL SYSTEM

USER MANUAL



Item no. 195000

TELEPHONE +49 7461 96 580 0

www.eickemeyer.com

veterinary technology for life
Eickemeyer®

CONTENT

| | |
|--------------------------------------|-----------|
| 1. Introduction | 4 |
| General Information | 4 |
| 2. OrthoVet PRO | 6 |
| Handpiece | 6 |
| Use | 7 |
| 3. Attachments/Chucks | 9 |
| General Information | 9 |
| Jacobs Chuck | 11 |
| Quick Chuck for KIRSCHNER-Wires | 12 |
| Oscillating Saw-Chuck | 12 |
| AO-Quick Chuck | 15 |
| 4. Care and Maintenance | 15 |
| Preparation Prior to Cleaning | 15 |
| Manual Cleaning Instruction | 16 |
| Lubrication | 17 |
| Sterilisation | 21 |
| Function Control | 22 |
| Packaging, Sterilization and Storage | 22 |
| Repairs and Technical Service | 23 |
| Disposal | 23 |
| 5. Troubleshooting | 24 |
| 6. System Specifications | 25 |
| Environmental Conditions | 25 |
| Technical Data OrthoVet PRO | 25 |
| Duty Cycles/Intermittent Operation | 25 |
| 7. Ordering Information | 26 |



Warning!

This description alone does not provide sufficient background for the direct use of the product. Instruction in handling this product is highly recommended.

1. INTRODUCTION

General Information

The OrthoVet PRO Battery Powered Drill System consists of:

- Handpiece, cannulated
- Jacobs Chuck
- Quick Chuck for KIRSCHNER-Wires, cannulated
- AO-Quick Chuck
- Oscillating Saw-Chuck

Accessories

- Charging station
- Batteries
- Funnel for handpiece
- Show case for transportation
- Container
- Sterilisation Tray

Intended Use

The OrthoVet PRO is a battery-driven power tool for use in veterinary osteosynthesis involving surgical procedures such as drilling, burring, reaming, pin and wire placement, cutting of bone and hard tissue in small animals.

The keyless coupling (also used for saw blades) enables the exchange of different attachments in just a few seconds. Operation of the OrthoVet PRO is possible in clockwise and counterclockwise direction as well as in oscillation cutting operation with the saw attachment.

Safety Instructions

The surgeon has to assess whether the machine is suitable for the respective surgery on the basis of the performance limitations of the machine, the ancillary equipment and the cutting tool with respect to bone strength/anatomical situation as well as the handling of the machine, the attachment and the cutting tool. Furthermore, the contraindications for the implant must be taken into account. Please read the corresponding "surgical techniques" of the used implant system.

The OrthoVet PRO is only to be used for patient treatment after careful consultation of the instructions for use. It is recommended that an alternative system is available to use during application, as technical problems can never be completely ruled out.

The OrthoVet PRO is designed for use by physicians and trained medical personnel.

Do not use any component if damage is apparent.

Do not use any component if the packaging is damaged.

Do not use this equipment in the presence of oxygen, nitrous oxide or a mixture consisting of flammable anesthetics and air.

To ensure the proper operation of the tool, only use EICKEMEYER® original accessories.

Before the first and every subsequent use, power tools and their accessories/attachments have to run through the complete reprocessing procedure. Protective covers and foils must be fully removed before sterilization.

For the tool to function properly, EICKEMEYER® recommends cleaning and servicing it after each use in accordance with the process recommended in the chapter "Care and Maintenance". Compliance with these specifications can considerably extend the service life of the tool. Only use EICKEMEYER® oil / oil spray, (item no. 563706) to lubricate the tool. Efficiently working cutting tools are the basis for successful surgery. Therefore, it is mandatory to check used cutting tools

after every use for wear and/or damage and to replace them if necessary. We recommend using new EICKEMEYER® cutting tools for every surgery. Cutting tools must be cooled with irrigation liquid to prevent heat necrosis. The user of the product is responsible for proper use of the equipment during surgery. If the OrthoVet PRO System is used in conjunction with an implant system, make sure to consult the corresponding "Technique Guide".

The manufacturer shall assume no responsibility for damage resulting from improper operation, neglected or unauthorized maintenance of the tool.

Precautions

- To avoid injuries, the locking mechanism of the tool has to be activated before every manipulation and before placing the tool back down, i. e. the mode switch has to be in "S = STOP" position.
- The handpiece may only be operated with a fully charged battery. To do this, ensure that the battery is charged in good time. EICKEMEYER® recommend that the battery is replaced into the charger immediately after surgery.
- The batteries may never be sterilized, washed or dipped. Sterilization would destroy the battery with possible secondary damage.
- Should the machine drop on the floor and have visible defects, do not use it anymore and send it to the EICKEMEYER® service center.

Accessories/Scope of Delivery

The OrthoVet PRO Battery Drill System consists of a handpiece, one battery loading station two batteries and a range of attachments and accessories designed for the system.

Special auxiliaries such as cleaning brushes (Item no. 195011) and oil are available for cleaning and servicing the system. No oils from other manufacturers must be used. Only lubricate the power tool and the attachments when clean.

EICKEMEYER® recommends the use of the specifically designed EICKEMEYER® OrthoVet PRO Sterilisation Tray (Item no. 195087) and Container-System (Item no. 185555) to sterilize and store the system.

The following components are essential to ensure proper operation:

- Handpiece (Item no. 195001)
- Battery charging station (Item no. 195006)
- Battery (Item no. 195007)
- Funnel for handpiece (Item no. 195008)
- At least one attachment/chuck of the system (Item no. 195002, 195003, 195004 or 195005)

Please refer to the end of these Instructions for Use for an overview of the components of the system.

Storage and Transport

Please use the original packaging/show case (Item no. 195010) for dispatch and transport. If this is no longer available, please contact your EICKEMEYER® office.

Warranty

The warranty for the tools and accessories does not cover damage of any kind resulting from improper use, damaged seals or improper storage and transport. EICKEMEYER® does not accept liability for damage resulting from repairs or maintenance carried out by unauthorized sites.

2. ORTHOVET PRO

Handpiece

The handpiece (Item no. 195001) of the OrthoVet PRO drill is cannulated.

- 1 Attachment coupling
- 2 Switching pin for direction change FORWARD / STOP / REVERSE
- 3 Trigger for speed regulation
- 4 Cover lid Battery closed when the battery is inserted
- 5 Release ring for attachment
- 6 Release slide for battery housing
- 7 F = FORWARD
- 8 S = STOP
- 9 R = REVERSE



Figure 1



Figure 2

Use

Before initial use, brand-new tools and accessories must under go the entire reprocessing process and the batteries should be charged.

Inserting the Battery in the Battery Casing

To ensure sterility, the battery is inserted into the battery casing by two people, one of whom is wearing sterile garments.

1. The person with the sterile garments holds the sterile battery casing. If the casing is not opened, the same person presses the central button to unlock (Fig. 3) and the housing cover with slide (Fig. 4) in arrow direction → (Fig. 6) and opens the lid. In doing so, fold the lid outwards with the locking mechanism.

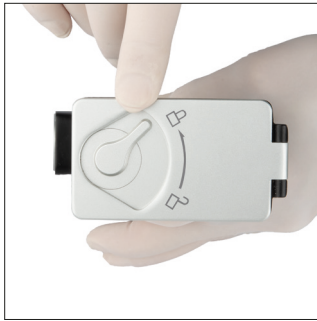


Figure 3

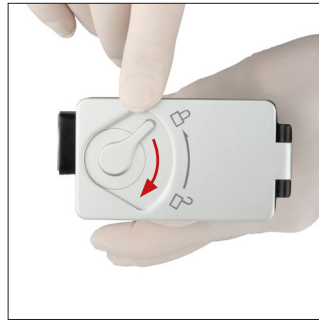


Figure 4

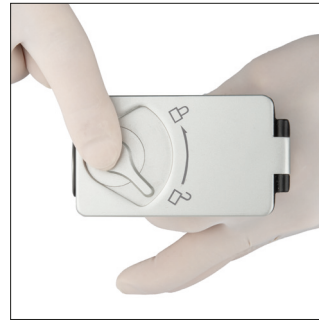


Figure 5



Figure 6

2. The person wearing the sterile garments places the sterile funnel (Item no. 195008) on the battery casing (Fig. 7) and checks if it is seated correctly (Fig. 8). The sterile cover ensures that the unsterile battery does not contact the outside of the sterile casing.



Figure 7



Figure 8

3. The person not wearing sterile garments carefully guides the unsterile battery through the sterile funnel (item no. 95008), (Fig. 8). The orientation of the battery is correct when the battery is inserted into the corresponding profile in the handpiece (Fig. 9). The same person presses it completely into the battery casing to ensure a correct seat (Fig. 10). This person may not contact the outside of the battery casing.



Figure 9



Figure 10

4. The person not wearing sterile garments grasps the sterile cover funnel (Item no. 195008) and removes it from the battery casing (Fig. 11).



Figure 11


5. The person wearing the sterile garments closes the casing lid from the outside without touching the battery or the inside of the casing (Fig. 12 + 13). After the cover has been closed, the person wearing the sterile clothing pushes the slider in the direction  until the lid locks with a click.



Figure 12



Figure 13

Precautions

Normally, one battery is sufficient for one surgery. For safety, two batteries should be kept ready ensuring fast intraoperative changing of batteries under sterile conditions if necessary.

Charging

Only charge the batteries in the OrthoVet PRO charging station (Item no. 195006).

Always fully charge batteries before use in the OR.

The battery is fully charged as soon as the indicator lamp on the socket plug has changed from BLUE to GREEN.

Storing

When not in use, always store the battery in the OrthoVet PRO charging station and switch it on. This prevents the battery from being discharged and keeps it ready for use with full charge. Never load batteries in another charging station. This would damage the batteries.

Make sure that stored batteries are stored separately and do not store with materials that can conduct electricity to prevent short circuits. This could damage the battery and cause burns due to heat.

Use

Use the battery only as intended. Use only batteries approved for this device. Only insert the battery into the handpiece immediately before using the OrthoVet PRO System. This saves energy. Due to the longer battery life an intraoperative battery change is usually unnecessary. Do not drop batteries or apply force to the batteries. This would destroy the battery and cause possible additional damage. Never use damaged or faulty batteries; they can damage the power tool.

Additional Information

Do not expose batteries to heat or fire. Avoid storage in direct sunlight. Keep the charger and the batteries clean and in a cool and dry place. Danger of fire, explosion and burns. Do not disassemble, crush, heat to over 60 °C/140 °F or burn.

Notes

For more information, see the “Care and Maintenance” section on page 15.

Please read the guidelines for the transport of Lithium-ion battery (Li-ion), for the return transport to the EICKEMEYER® Service Center.

3. ATTACHMENTS/CHUCKS

General Information

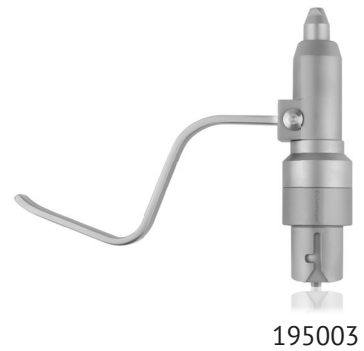
The OrthoVet PRO System offers a broad range of attachments.

Mounting the Attachments



Figure 14

Insert the attachment into the attachment coupling (Fig. 14). If the positioning pins do not lock into place right away, twist the attachment a bit to the right or left until it locks into the correct position. Check if the attachment is seated correctly by gently pulling on it.



195003



195002



195004



195005

Removing the Attachments



Figure 15

Turn the rotary ring with grooves clockwise on the handpiece and pull the attachment out from the coupling (Fig. 15).

Precautions

- To prevent injury, the power tool must be switched to “S = STOP” with the safety system during each manipulation.
- Only use original attachments and tools from EICKEMEYER®. Damage that arises from using attachments and tools made by other manufacturers is not covered by the warranty.
- If the instrument is not needed during the operation, lay down the handpiece to make sure it is stable and cannot tip over. To mount or remove attachments and cutting tools, always place the drive unit in an upright position on the sterile table.

| Item no. | Description | Maximum Speed | Torque |
|----------|--|----------------|----------|
| 195002 | Jacobs Chuck with key, cannulated, clamping range Ø 0.6 – 2.5 mm | 0 – 1,200 rpm | ≥ 3.0 NM |
| 195003 | Quick Chuck for KIRSCHNER-wires, cannulated, clamping range Ø 0.6 – 2.6 mm | 0 – 1,200 rpm | ≥ 3.0 NM |
| 195004 | AO-Quick Chuck | 0 – 1,200 rpm | – |
| 195005 | Oscillating Saw-Chuck | 0 – 16,000 rpm | ≥ 3.0 NM |

Jacobs Chuck

For tools with round shaft (Item no. 195002).

Inserting and Removing Tools

Inserting tools:

Open the jaws of the Chuck using the appropriate key (Item no. 195084) or by hand. Insert the shaft of the tool into the open drill chuck and close it by twisting the chuck. Make sure that the shaft lies central to the three jaws. Tighten the drill chuck with the key. Make sure that the teeth of the key engage correctly in the toothed rim of the chuck.

Removing tools:

Open the Chuck with the key and remove the tool.



Figure 16

Precautions

- Check the cutting tool for wear and/or damage after each use and replace if necessary.
- To ensure good fixation of the tools, make sure the toothed rims on the drill chuck and key are not worn.
- During reaming procedure, high torque values must be provided by the power tool to the reaming head to allow efficient bone removal. In cases where the reaming head suddenly is blocked, these high torque values can be transferred onto the user's hand, wrist and/or the patient's body.

In order to prevent injuries it therefore is essential that:

- The power tool is held in an ergonomical position with a firm grip.
- If the reamer/drill head blocks, release the speed trigger immediately.
- Use the Jacobs Chuck with Reverse motion only with tools that are approved for such use. Otherwise, the tool may break with subsequent damage.

Quick Chuck for KIRSCHNER-Wires

KIRSCHNER-Wires of any length with a diameter of 0.6–2.6 mm can be used with the Quick Chuck for KIRSCHNER-Wires (Item no. 195003).

1. Apply a slight amount of pressure to insert the KIRSCHNER-Wire from the front into the cannulation (Fig. 17, no. 1). The wire is held automatically.
2. Adjust the working length by pulling on the wire.
3. To affix the wire, pull the tension lever (Fig. 17, no. 2) against the tool with your little finger and ring finger. Only pull the tension lever against the tool as much as necessary. The clamping force can be varied by pulling and releasing the clamping lever.
4. Insert the wire into the bone. Apply the clamping force as long as the wire is advanced.
5. To adjust the grip on the wire, reduce the clamping force and move the tool to the desired length. Reclamp the wire by pulling on the tension lever.

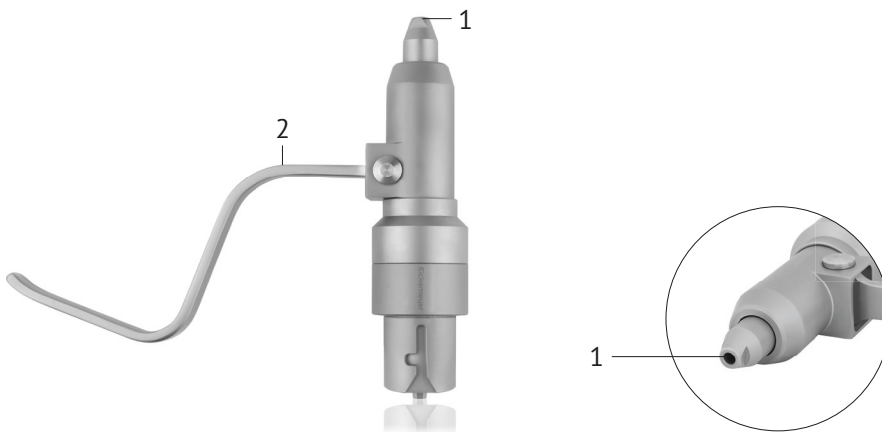


Figure 17

Oscillating Saw-Chuck

For saw blades with AESCULAP Connection (Item no. 195005).



Figure 18

Positioning the Saw Attachment

The attachment can be connected in two different positions (180° / 360°). The handpiece should be in: "S = STOP"-position. Insert the saw attachment into the handpiece and rotate the attachment in the desired position (Fig. 19 and Fig. 20).



Figure 19



Figure 20

Assembly and Disassembly of the Tools

Insert the tool/saw blade in the front of the attachment while pressing the locking knob down. Insert the saw blade in such a way that the perforated holes in the saw blade fit in the pins of the holder. Release the locking knob.



Figure 21

Precaution

To prevent injury, always grip the saw attachment with the inserted saw blade from the direction of the machine.

Change Saw Blade

1. Set the handpiece in "S = STOP"-position.
2. Press down the locking knob continuously.
3. Lift and remove the saw blade.
4. Use a slight amount of pressure to insert the new saw blade and turn it to one of the 5 desired position.
5. Place your thumb on the saw blade coupling to hold the saw blade. Insert the saw blade in such a way that the perforated holes in the saw blade fit in the pins of the holder. Release the locking knob.
6. Unlock the power tool.

Positioning the Saw Blade

The saw blade can be adjusted in the desired position vertically and horizontally at an angle of 45° (see the earlier sections "Positioning the saw attachment" and "Changing the saw blade" (Fig. 22).

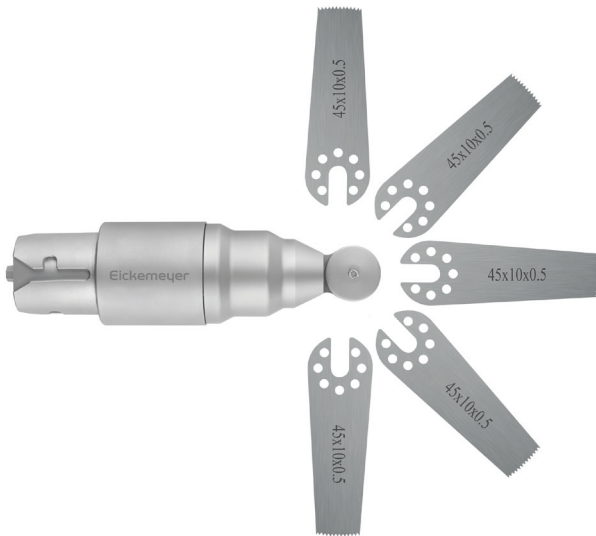


Figure 22

Using the Oscillating Saw Attachment

The saw blade must already be oscillating when the saw is applied to the bone. Do not apply strong pressure to the saw blade as this will delay the cutting process and the saw teeth will catch in the bone. Optimal saw performance is achieved by moving the power tool slightly back and forth in the plane of the saw blade so that the blade oscillates beyond the bone on both sides. Very precise cuts can be made when the saw blade is guided steadily. Imprecise cuts arise due to used blades, excess pressure or jamming the saw blade.

AO-Quick Chuck

For tools with AO-coupling (Item no. 195004).

Assembly and Disassembly Tool

To connect the tool, pull the coupling sleeve back and then introduce the tool while rotating slightly.

To disconnect, push the coupling sleeve of the attachment back and remove the tool (Fig. 23a + 23b).



Figure 23a

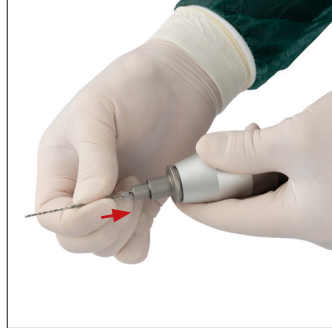


Figure 23b

4. CARE AND MAINTENANCE

Preparation Prior to Cleaning

Disassembly

Disassemble device if applicable. Remove all instruments and attachments from the handpiece and remove battery from casing of the handpiece.

Batteries and Charge Station

To clean the batteries and the charger, wipe them off with a clean, soft and lint-free cloth dampened with disinfectant or deionized water.



Warning!

Do not use solvents to disinfect the batteries. Battery poles must not contact water or solvents: danger of short circuiting!

Manual Cleaning Instruction

1. Remove debris

Use a sponge, soft lint-free cloth or soft-bristled brush to assist in removing visible soiling while moving trigger, sleeves, switches and other moving parts several times. The cleaning brush (Item no. 195011) shown below should be used to clean handpiece and attachments.



Figure 24



Precautions

- Never immerse the handpiece, lid or attachments in aqueous solutions or in an ultrasonic bath as this could decrease the service life of the system. The poles in the handpiece must not come into contact with water or solvents: Risk of short circuit!
- Under no circumstances should the handpiece and the adapter be placed in an immersion bath or in water. Inadvertently liquid that has penetrated must be removed immediately.
- Do not use pointed objects for cleaning.

2. Disinfection – spray and wipe off

Spray and wipe the device using a neutral pH enzymatic solution for a minimum of 2 minutes.

Follow the enzymatic detergent manufacturer's directions for correct temperature, water quality (i.e. pH, hardness) and concentration/dilution.

3. Clean with Detergent

Clean the device manually under running warm water using an enzymatic cleaner or detergent for a minimum of 5 minutes. Manipulate all moving parts under running water. Use a soft-bristled brush and/or soft lint-free cloth to remove all visible soil and debris. Follow the enzymatic cleaner or detergent manufacturer's instructions for use for correct temperature, water quality and concentration/dilution.

4. After disinfection

Rinse the surface under running water. It is important to ensure that the handpiece and the attachments are at an angle to prevent water from entering the coupling lugs.

ATTENTION: The cover of the battery housing of the handpiece must be closed so that the poles in the handpiece do not get caught liquid in contact.

5. Final Rinse with De-Ionized/Purified Water

Final rinse with de-ionized or purified water for a minimum of 2 minutes.

6. Dry

Dry device using a soft lint-free cloth or clean compressed air.

7. Automated Cleaning

| Step | Duration (minimum) | Cleaning instructions |
|----------------------|--------------------|---|
| Rinse | 2 minutes | Cold tap water |
| Pre-wash | 1 minute | Warm water (≥ 40 °C), use detergent |
| Cleaning | 2 minutes | Warm water (≥ 45 °C), use detergent |
| Rinse | 5 minutes | Rinse with de-ionized (DI) or purified water (PURW) |
| Thermal disinfection | 5 minutes | Hot de-ionized (DI) water, ≥ 93 °C |
| Dry | 40 minutes | ≥ 90 °C |

8. Inspect the Device

Remove all the devices from the Sterilisation Tray. Inspect the cannulations, coupling sleeves, etc. for visible soil. If necessary, repeat the manual pre-clean/automated cleaning cycle. Confirm that all parts are completely dry. Mechanical cleaning/disinfection is an additional stress for power equipment, especially for seals and bearings. Therefore, systems must be properly lubricated and regularly sent to be serviced (at least once per year).

Lubrication

The power tool and attachments should be regularly lubricated to ensure a long service life and smooth operation. It is recommended that the accessible moving parts of the handpiece, the battery casing and attachments are lubricated with 1 drop of special oil / oil spray, (Item no. 563706) distribute the oil by moving the components. Wipe off the excess oil with a cloth.

Lubricating the Handpiece (Fig. 25)

- Lubricate the trigger shafts and then press the trigger several times.
- Lubricate the attachment release buttons and then press the buttons several times.
- Lubricate the mode selector switch and then move it several times.
- Lubricate the attachment coupling.



Figure 25

Lubricating the Battery Casing (Fig. 26 and 27)

- Place oil on the seal of the cover and then evenly distribute the oil on the seal.
- Lubricate the lock and hinges, then actuate it several times.
- Lubricate the battery casing release buttons from both the outside and inside and then press the buttons several times.



Figure 26



Figure 27

Attachments/Chucks

Lubricate all moving parts of all the attachments.

Jacobs Chuck (Item no. 195002)

Lubricate the jaws and toothed rim.



Figure 28

Quick Coupling for KIRSCHNER-Wires (Item no. 195003)

Lubricate the tension lever and clamping mechanism.

Hold the Quick Coupling up and add one drop of oil into the attachment hole (Fig. 31) and on the holder of the lever (Fig. 29 + 30). Move the tension lever several times.

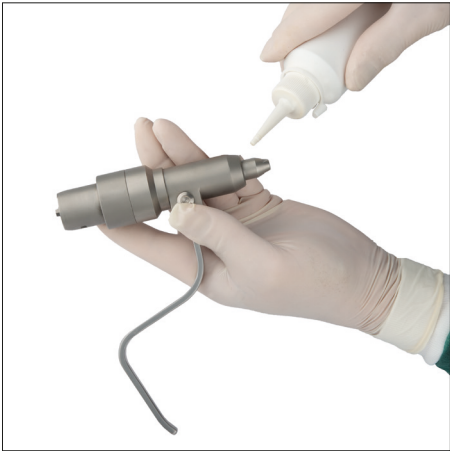


Figure 29



Figure 30



Figure 31

AO-Quick Chuck (Item No. 195004)



Figure 32



Figure 33

Oscillating Saw Attachment (Item No. 195005)

Lubricate the locking mechanism and the saw blade coupling.

Open and close the locking mechanism several times, (Fig. 34 + 35).



Figure 34



Figure 35

Precautions

- To ensure a long service life and reduce repairs the power tool and all attachments must be lubricated after each use.
- Only lubricate the power tool and attachments when clean.

Sterilisation

Sterilisation Tray

Place devices in the specially designed Sterilisation Tray for machine washing supplied by EICKEMEYER® (Item no. 195087). Dimensions load Sterilisation Tray (in mm): L 260 x W 170 x H 110

Ensure that all cannulations (handpiece and attachments), if applicable, are positioned as shown (Figure 36 + 37).

Make sure all attachments are stored as shown and fully open.

Make sure that the water can drain well from all surfaces.

Damage caused by improper processing is excluded from the warranty.

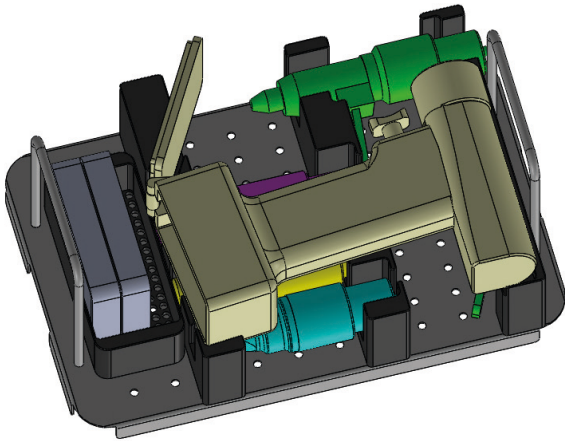


Figure 36

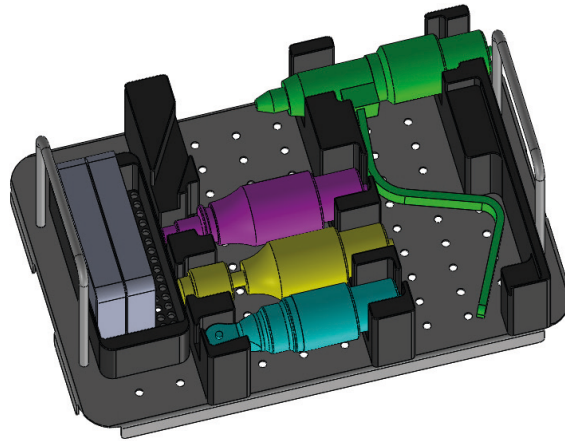


Figure 37

Note: For the Sterilisation Tray a corresponding container (Item no. 185555, Fig. 38).

- Non perforated bottom, perforated lid
- Dimensions bottom (in mm): L 312 x W 183 x H 122



Figure 38

Function Control

- Visually inspect for damage and wear.
- Check the handpiece controls for smooth operation and function.
- All movable parts should be moving smoothly. Check that the trigger does not remain blocked in the handpiece when pressing on them. Check that no residuals prevent the movable parts from moving smoothly.
- Check the coupling sleeves of the handpiece and attachments for smooth operation and check for function together with instruments such as cutting tools.
- Check instruments for correct adjustment and functioning prior to every use.

Packaging, Sterilization and Storage

Packaging

Put cleaned, dry products into the proper places in the EICKEMEYER® Sterilisation Tray (Item no. 195087) and put the Sterilisation Tray into the container (Item no. 185555). Care should be taken in order to protect implants as well as pointed or sharp instruments from contact with other objects that may damage the surface or the Sterile Barrier System.

Sterilization

Note: EICKEMEYER® recommends the use of the Sterilisation Tray (Item no. 195087) specially designed for the system.

The OrthoVet PRO System may be resterilized using validated steam sterilization methods (ISO 17665 or national standards). EICKEMEYER's® recommendations for packed devices and cases are as follows.

| Cycle type | Sterilization exposure time | Sterilization exposure temperature | Drying time |
|--|-----------------------------|------------------------------------|---------------|
| Saturated steam-forced air removal (pre-vacuum) (minimum 3 pulses) | Minimum 4 minutes | Minimum 132 °C Maximum 138 °C | 20–60 minutes |
| | Minimum 3 minutes | Minimum 134 °C Maximum 138 °C | 20–60 minutes |

Drying times generally range from 20 to 60 minutes due to differences in packaging materials (Sterile Barrier System, e.g., wraps or reusable rigid container systems), steam quality, device materials, total mass, sterilizer performance and varying cool down time.

Precautions

- The following maximum values may not be exceeded: 138 °C. Higher values can damage the sterilized products.
- Do not accelerate the cooling process.
- Hot air, ethylene oxide, plasma and formaldehyde sterilization are not recommended.

Repairs and Technical Service

- The tool should be sent to the EICKEMEYER®s office for repair if it is faulty or malfunctions.
- Contaminated products have to run through the complete reprocessing procedure before being sent to the EICKEMEYER® office for repair or technical service.
- Please use the original packaging to return equipment to EICKEMEYER® or an authorized site.
- Do not reuse defective devices.
- Faulty devices may not be used. If it is no longer possible or feasible to repair the tool it should be disposed of (refer to the following section “Disposal”).
- Other than the above-mentioned care and maintenance, no further maintenance work may be carried out independently or by third parties.
- EICKEMEYER® assumes no responsibility for damage resulting from neglected or unauthorized maintenance.

Disposal

In most cases, faulty tools can be repaired (refer to the previous section “Repairs and Technical Service”).

Precautions

- Contaminated products have to run through the complete reprocessing procedure, so that there is no danger of infection in case of disposal.
- Risk of fire, explosion and burns. Do not disassemble, crush, heat above 100 °C or incinerate the battery cells.

5. TROUBLESHOOTING

| Problem | Possible causes | Solution |
|---|---|--|
| Handpiece does not start up. | Battery is dead. | Charge the battery or replace it with a charged battery. |
| | The tool was not cooled off after sterilization. | Let the tool cool to room temperature. |
| | Mode selector switch is on "S = STOP". | Turn the mode selector on "F = FORWARD" or "R = REVERSE" position. |
| | No contact between the handpiece and the battery. | Charge the battery or replace it with a charged battery. |
| Handpiece does not have enough power. | Battery is dead. | Charge the battery or replace it with a charged battery. |
| Handpiece stops suddenly. | The handpiece has overheated (overheating protection is activated). | Wait until the handpiece has cooled down. |
| | Battery is dead. | Charge the battery or replace it with a charged battery. |
| Attachments/Chucks cannot be coupled to the unit. | The attachment coupling is blocked by deposits. | Remove solid objects with a pair of tweezers. Precaution: When removing objects, turn the mode selector switch to „S = STOP“. |
| Tool (saw blade, drill, burr etc.) cannot be coupled or only with difficulty. | Shaft geometry of the attachment or tool is damaged. | Replace the attachment or tool or send it to your EICKEMEYER® service office. |
| Oscillating Saw-Chuck vibrates too much. | The saw blade locking Mechanism is not tight. | Tighten the locking knob of the Saw blade coupling. |
| The KIRSCHNER-Wire is inserted in the handpiece and cannot be moved forward. | The KIRSCHNER-Wire was inserted from the rear. | Lock the handpiece by turning the mode selector switch to "OFF" remove the attachment, hold the drive shaft opening down and shake out the KIRSCHNER-Wire. |
| Bone and tool heat up during surgery. | Cutting edges of the tool are blunt. | Replace the tool. |
| It is difficult to close the battery casing | The battery casing seal has become dry from repeated use. | Lubricate the seal as described on page 18. |
| The trigger is difficult to move. | The trigger shaft needs to be lubricated. | Lubricate the trigger as described on page 17. |

If the recommended solutions do not work, send the power tool back to EICKEMEYER® service center.
For further technical questions or information on our services, please contact your EICKEMEYER® representative.

6. SYSTEM SPECIFICATIONS

Environmental Conditions

| | Operation | Storage |
|----------------------|---------------------------------|---------------------------------|
| Temperature | 10°C 50 °F to 40°C 104 °F | 10°C 50 °F to 40°C 104 °F |
| Humidity | 30 % 90 % | 30 % 90 % |
| Atmospheric Pressure | 500 hPa 1,060 hPa | 500 hPa 1,060 hPa |

Technical Data OrthoVet PRO

| Technical Data | |
|---|----------------|
| Continuously adjustable speed | 0 – 1,200 rpm |
| Handpiece with battery in | 970 g |
| Operating voltage | 7.2 – 14.4 VDC |
| Battery capacity | 3,000 mAh |
| Battery type | Li-Ion |
| Empty battery charging time | max. 150 min |
| Degree of protection against electrical shock | B |
| Degree of protection against the penetration of water | IPX4 |
| Noise level in operating position | ≤75 db(A) |

Technical data is subject to tolerances. Specifications are approximate and may vary from one device to another or as a result of power supply fluctuations.

Duty Cycles / Intermittent Operation

| Duty Cycles | Intermittent operation | Cycles |
|-------------------------------|------------------------|--------|
| Drilling, tapping and reaming | 60 seconds | 9 |
| Burring | 60 seconds | 3 |
| KIRSCHNER-Wire setting | 30 seconds | 6 |
| Sawing | 30 seconds | 5 |

Generally, electrical systems can heat up if in constant use. For this reason, the handpiece and the attachment should be allowed to cool for at least 60 seconds. After a certain amount of cycles (defined in the above table under “Cycles”), the handpiece and attachment should be allowed to cool for 30 minutes. If this is observed, the system will be prevented from overheating and possibly harming the patient or user. The user is responsible for the application and for turning off the system as prescribed. If longer periods of constant use are required, an additional handpiece and/or attachment should be used.

Depending on the cutting tool used and on the load applied, the heat generation of the handpiece, attachment and/or cutting tool can vary. Always control the temperature of the system to prevent overheating and possibly harming the patient or user.

7. ORDERING INFORMATION

| OrthoVet PRO Battery powered Drill System | | |
|---|---|----------|
| Item no. | Description | Quantity |
| 195000 | OrthoVet PRO Battery powered Drill System, consisting of: | |
| 195001 | OrthoVet PRO Handpiece, without adapters and battery | 1 |
| 195002 | OrthoVet PRO Jacobs Chuck Adapter, clamping range Ø 0.6 – 2.5 mm | 1 |
| 195003 | OrthoVet PRO Quick Coupling Adapter for Pins/KIRSCHNER-Wires, clamping range Ø 0.6 – 2.5 mm | 1 |
| 195004 | OrthoVet PRO Quick Coupling Adapter for AO Tools | 1 |
| 195005 | OrthoVet PRO Oscillating Saw Adapter | 1 |
| 195006 | OrthoVet PRO Battery Charging Station | 1 |
| 195007 | OrthoVet PRO Battery | 2 |
| 195084 | OrthoVet PRO Key to Jacobs Chuck Adapter | 1 |
| 195008 | OrthoVet PRO Funnel for Handpiece | 2 |
| 195010 | OrthoVet PRO Transportation Case, metal, dimensions (in mm): L 390 x W 290 x H 120 | 1 |
| 195030 | OrthoVet Saw Blade with AESCULAP Connection, dimensions (in mm): L 40 x W 15 x H 0.5 | 1 |
| 195040 | OrthoVet Saw Blade with AESCULAP Connection, dimensions (in mm): L 40 x W 5 x H 0.5 | 1 |
| 195050 | OrthoVet Saw Blade with AESCULAP Connection, dimensions (in mm): L 30 x W 7 x H 0.5 | 1 |
| 195060 | OrthoVet Saw Blade with AESCULAP Connection, dimensions (in mm): L 50 x W 14 x H 0.5 | 1 |

| Optional Accessories | | |
|----------------------|---|----------|
| Item no. | Description | Quantity |
| 196130 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 50 x W 6.5 x H 0.4 | 1 |
| 196140 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 50 x W 8 x H 0.4 | 1 |
| 196150 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 45 x W 10 x H 0.5 | 1 |
| 196165 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 39 x W 13 x H 0.5 | 1 |
| 196170 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 58 x W 10 x H 0.5 | 1 |
| 196180 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 64 x W 10 x H 0.5 | 1 |
| 196190 | OrthoVet Saw Blade AESCULAP with Connection, dimensions (in mm): L 70 x W 14 x H 0.5 | 1 |
| 195087 | OrthoVet PRO Battery Drill System Sterilisation Tray, empty | 1 |
| 185555 | Container, bottom non perforated, lid perforated, dimensions (in mm): L 312 x W 183 x H 122 | 1 |
| 563706 | AESCULAP oil spray STERILIT with lubrication and corrosion protection, 300 ml | 1 |
| 195011 | OrthoVet PRO Cylinder brush, Ø 4.0 mm, length 350 mm, pack of 3 pieces | 1 |

GERMANY

EICKEMEYER KG
Eltastraße 8
78532 Tuttlingen
T +49 7461 96 580 0
F +49 7461 96 580 90
info@eickemeyer.de
www.eickemeyer.de

SWITZERLAND

EICKEMEYER AG
Sandgrube 29
9050 Appenzell
T +41 71 788 23 13
F +41 71 788 23 14
info@eickemeyer.ch
www.eickemeyer.ch

POLAND

EICKEMEYER Sp. z o.o.
Al. Jana Pawła II 27
00-867 Warszawa
T +48 22 185 55 76
F +48 22 185 59 40
info@eickemeyer.pl
www.eickemeyer.pl

ITALY

EICKEMEYER S.R.L.
Via G. Verdi 8
65015 Montesilvano (PE)
T +39 085 935 4078
F +39 085 935 9471
info@eickemeyer.it
www.eickemeyer.it

DENMARK

EICKEMEYER ApS
Solbakken 26, Hammelev
6500 Vojens
T +45 7020 5019
info@eickemeyer.dk
www.eickemeyer.dk

NETHERLANDS

EICKEMEYER B.V.
Bellweg 44
4104 BJ Culemborg
T +31 345 58 9400
info@eickemeyer.nl
www.eickemeyer.nl

UNITED KINGDOM

EICKEMEYER Ltd.
3 Windmill Business Village
Brooklands Close
Sunbury-on-Thames
Surrey, TW16 7DY
T +44 20 8891 2007
info@eickemeyer.co.uk
www.eickemeyer.co.uk

CANADA

EICKEMEYER Inc.
617 Douro Street, Suite #205
Stratford, Ont. Canada
N5A 0B5
T +1 519 273 5558
F +1 519 271 7114
info@eickemeyervet.ca
www.eickemeyercanada.ca