Aceulap Power Systems

Acculan® 3Ti small drill GA671

Note
Keep instructions for use in Acculan® 3Ti folder!

Legend
1. Drill attachment with quick-action chuck adapter
2. Drill attachment with Jacobs chuck
3. Reamer attachment with quick-action chuck adapter
4. Kirschner wire attachment
5. Rotating sleeve
6. Small drill GA671
7. Button for counterclockwise rotation
8. Rotational speed control button
9. Safety catch
10. Locking pin
11. Cover GA675
12. Cover release button
13. Rechargeable battery GA666
14. Sterile funnel GA678
15. Kirschner wire protection sleeve GA672207
16. Coding
17. Adapter for Kirschner wire protection sleeve
18. Battery removal device GA679

Symbols on product

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Exclamation Mark]</td>
<td>Attention, see instructions for use</td>
</tr>
<tr>
<td>![Person Silhouette]</td>
<td>Classification Type BF</td>
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<tr>
<td>![Trash Can]</td>
<td>Labeling of electric and electronic devices according to directive 2002/96/EC (WEEE), see Disposal.</td>
</tr>
</tbody>
</table>

Reverse button clockwise/ counterclockwise rotation + oscillation mode switch

Motor speed control

Keep this product dry!

Maintenance label on battery (base) Notice indicating the next scheduled service (date) by international B. Braun/ Aesculap agency, see Technical Service

Maintenance label on small drill Notice indicating the next scheduled service (date) by international B. Braun/ Aesculap agency, see Technical Service
1. Safe handling

CAUTION
Federal law restricts this device to sale by or on order of a physician!

➢ To prevent damage caused by improper setup or operation and to avoid forfeiture of liability rights:
  - Use the product only according to these instructions for use.
  - Observe all safety information and maintenance advisories.
  - Only combine Aesculap products with each other.
  - Ensure that the product and its accessories are operated and used only by persons with the requisite training, knowledge or experience.
  - Keep the instructions for use accessible for all O.R. personnel.
  - Always adhere to applicable standards.
  - Follow the instructions for use of Acculan® 3Ti charger TA022160.
2. Product description

2.1 System components

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small drill</td>
<td>GA671</td>
</tr>
<tr>
<td>Kirschner wire protection sleeve</td>
<td>GA672207</td>
</tr>
<tr>
<td>Rinsing adapter</td>
<td>GA672211</td>
</tr>
<tr>
<td>Cover</td>
<td>GA675</td>
</tr>
<tr>
<td>Rechargeable battery</td>
<td>GA666</td>
</tr>
<tr>
<td>Sterile funnel</td>
<td>GA678</td>
</tr>
<tr>
<td>STERILIT® Power Systems adapter</td>
<td>GB600840</td>
</tr>
<tr>
<td>Instructions for use</td>
<td>TA011867</td>
</tr>
<tr>
<td></td>
<td>TA011936</td>
</tr>
<tr>
<td></td>
<td>TA012033</td>
</tr>
<tr>
<td>Cleaning brush</td>
<td>TA011944</td>
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2.2 Components necessary for use

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small drill</td>
<td>GA671</td>
</tr>
<tr>
<td>Rechargeable battery (charged)</td>
<td>GA666</td>
</tr>
<tr>
<td>Battery charger</td>
<td>GA677</td>
</tr>
<tr>
<td>Drill and reamer attachments</td>
<td>see</td>
</tr>
<tr>
<td></td>
<td>TA011036</td>
</tr>
<tr>
<td>Cover</td>
<td>GA675</td>
</tr>
<tr>
<td>Sterile funnel</td>
<td>GA678</td>
</tr>
</tbody>
</table>

2.3 Intended use

Note

To power acetabulum reamers, use the Acculan® 3Ti drill and reamer motor GA672.

Depending on the type and extent of the work to be performed during the implantation of a hip endoprosthesis, an intraoperative battery change may be necessary.

The small drill GA672 is used for drilling, reaming, tapping, screwing in and unscrewing of screws, and applying of Kirschner wires in bone surgery.

The attachments (accessories) allow simple and quick coupling of the respective tools. Each attachment is compatible with the respective tool set.
2.4 Operating principle

The small drill GA672 6 contains an electric motor, a rechargeable battery for power supply of the motor, and electronic circuitry for controlling its rotational speed. The motor speed can be adjusted continuously by pressing rotational speed control button 8.

The direction of rotation can be changed especially for tapping and for loosening of bone screws. To change the direction of rotation, fully press down button for counterclockwise rotation 7.

The small drill GA672 6 is fitted with a spindle cannulation to insert guide skewers or similar devices with a diameter of up to 4.0 mm. Some attachments are fitted with a cannulation of a smaller diameter.

3. Working with the small drill GA671

3.1 System set-up

3.1.1 Connecting the accessories

Combinations of accessories that are not mentioned in the present instructions for use may only be employed if they are specifically intended for the respective application, and if they do not compromise the performance and safety characteristics of the products.

- Please contact your B. Braun/Aesculap partner or Aesculap customer service with any questions in this respect.

3.1.2 Inserting the rechargeable battery

Damage to, or destruction of the rechargeable batteries due to processing!

- Do not sterilize rechargeable batteries.

Fig. 1

- Hold small drill 6 with the battery compartment upwards and attach funnel 14 (sterile), see Fig. 1.
Acculan® 3Ti small drill GA671

Note
Once after insertion of the battery, a series of acoustic blips will signal that the small drill is ready for operation.

Fig. 2
➢ Have a second person guide rechargeable battery 13 (unsterile) into the battery compartment, see Fig. 2. Observe coding 16 when doing this.

Fig. 3
➢ After insertion of the battery, have a second person remove sterile funnel 14 (unsterile), see Fig. 3.
3.1.3 Removing the rechargeable battery

Damage to the rechargeable battery caused by knocks against hard objects!

- To remove the battery, only ever knock the motor unit against the palm of the hand.

Fig. 4

- Mount cover 11 (sterile) in such a way that it engages at both cover release buttons 12, see Fig. 4.

Fig. 5
Changing the rechargeable battery intraoperatively
Battery removal device GA679 is used for intraoperative battery changes ensuring that sterile conditions are safely maintained.

Fig. 6
The rechargeable battery must be removed after the operation and prior to processing of the unit.

Note
Battery removal device GA679 can be used to facilitate the removal of the rechargeable battery, see Fig. 7!

➢ Hold small drill 6 with the battery compartment pointing upward.
➢ Simultaneously press both cover release buttons 12 at cover 11 and remove cover 11.
➢ Hold the battery compartment at its lower end, with the first two fingers and the thumb encompassing the compartment and the ring finger and small finger protruding as a cushion, see Fig. 5.
➢ In this position, remove rechargeable battery 13 from the battery compartment by knocking the unit against the palm of the hand, see Fig. 6.

Fig. 7
➢ Hold small drill 6 with the battery compartment pointing upward and remove cover 11.
➢ Mount sterile battery removal device 18.
➢ Gently shake small drill 6 with battery removal device 18 attached and the battery compartment pointing downward.
➢ The battery slides smoothly into battery removal device 18.
➢ Hand over battery removal device 18 containing the discharged rechargeable battery to an unsterile person.
➢ Insert a charged battery, see Inserting the rechargeable battery.
3.1.4 Coupling and uncoupling of attachments of small drill GA 671

- Secure small drill 6 against inadvertent activation by engaging safety catch 9.

**Note**
For further information on the small drill attachments, see TA011936!

To apply drilling wires we recommend using the special Kirschner wire chuck. This quick-action chuck adapter allows quick and easy tensioning of drilling wires.

To protect against injuries when using long drilling wires, screw in Kirschner wire protection sleeve GA672207, which is supplied with the product.

- Fig. 9
  - Slide the attachment on small drill 6 until it clicks into position, see Fig. 9.

**Uncoupling**

- Fig. 10
  - Turn rotating sleeve 5 in the direction of the arrow (clockwise when viewed from the rear end of small drill 6), see Fig. 10.
  - Remove the attachment from small drill 6.
3.2 Function checks

Note
These function checks must be carried out prior to each surgical application of the unit and after each intraoperative battery change!

- Make certain that a rechargeable battery has been installed.
- Make certain that the attachment is securely seated.
- Check that the tool is seated properly.
- Briefly run the small drill at maximum speed in clockwise and counterclockwise mode.
- Make certain that the rotational direction is correct in each case.
- Only use the device if it is in perfect condition.

3.3 Safe operation

![Risk of injury due to inadvertent activation of the motor during coupling of an attachment/tool!](⚠️)

- Secure motors that are not actually used against inadvertent activation.

![Risk of injury caused by aerosol formation or particles during reaming, cutting or drilling!](⚠️)

- Always wear eye protection when using the small drill.

Note
The low whistling noise at startup of small drill 6 is normal for this product!
3.3.1 Oscillating or tapping mode

➢ To activate the oscillating or tapping mode:
  Press and hold button for counterclockwise rotation 7 for three seconds.
  The drill issues a short acoustic signal.
➢ To activate left rotation:
  Press rotational speed control button 8 and button for counterclockwise rotation 7.
  Small drill 6 runs counterclockwise.
➢ To activate the tapping mode:
  Press rotational speed control button 8 within the first half of its travel range.
  Small drill 6 alternately runs counterclockwise and clockwise, with the clockwise angle of rotation always larger than the counterclockwise angle of rotation.
➢ To activate the oscillating mode:
  Press rotational speed control button 8 to within the second half of its travel range.
  Small drill 6 alternately runs counterclockwise and clockwise.
➢ To deactivate the oscillating or tapping mode:
  Press and hold button for counterclockwise rotation 7 for three seconds.
  The drill issues an acoustic signal.
4. Processing

Note
Observe all relevant national regulations and standards with regard to processing.

Note
For patients with Creutzfeldt-Jakob disease (CJD), suspected CJD or possible variants of CJD, observe the relevant national regulations concerning the processing of the products.

Note
Up-to-date information on processing can be found on the Aesculap Extranet at www.aesculap-extra.net

4.1 Reusable products

4.1.1 Preparation

- For mechanical cleaning/disinfecting, use ECCOS® tray GB244R with Acculan® 3Ti holders already fitted, or mount appropriate holders in a suitable tray (instructions for use TAO9721 for Aesculap ECCOS® storage system).
- Dismount all coupled components, e.g. tools (drills, saw blades, etc.), accessories (adapters, protective sleeves, etc.), tubes, cables, batteries, etc.
- Reprocess the product immediately after use.
- Pre-clean the product, if necessary.
- Put away the product in dry condition.

4.2 Cleaning/Disinfecting

CAUTION
Damage to the product due to inappropriate cleaning/disinfecting agents and/or excessive temperatures!

- Only use a cleaning/disinfecting agent that is approved for titanium, and follow the manufacturer’s instructions.
- Do not exceed the maximum allowable cleaning temperature of 55 °C.
- Only use cleaning/disinfecting agents that do not affect softeners (e.g. silicone) and follow the manufacturer’s instructions.

- Use cleaning/disinfecting agents that are suitable for the product.
- Always follow the manufacturer’s instructions regarding concentration, temperature and exposure time.
- Avoid encrustation of residues/proteins (e.g. caused by aldehyde/alcohol).
- Apply a thermal disinfecting process.
4.2.1 Mechanical cleaning/disinfecting

Pre-cleaning
➢ Use special cleaning brush (art. no. TA011944).
➢ Alternatively, connect rinsing adapter GA672211 to the cleaning/disinfecting machine and let rinsing medium flow through the cannulation.

Cleaning
➢ Place the product in its proper position in the ECCOS® storage unit immediately after use.
➢ Process the product in a single-chamber cleaning/disinfecting machine without ultrasound treatment.
   Follow the instructions provided by the manufacturer of the machine.
➢ Run the processing cycle:
   - Use an appropriate neutral, alkaline or mildly alkaline cleaning/disinfecting agent according to the manufacturer’s instructions.
   - Do not exceed the maximum cleaning temperature of 55 °C.
   - Clean for at least 3 min.
   - Neutralize if necessary.
   - Apply intermediate rinse for at least 1 min.
   - Carry out intensive final rinse with distilled, demineralized or fully desalinated water.
   - For thermal disinfecting: rinse for 5 min at 93 °C with distilled, demineralized or fully desalinated water.
   - Complete the program with a drying phase of at least 10 min at a temperature of not more than 120 °C.
➢ After completion of the mechanical cleaning/disinfecting cycle, inspect for visible debris all surfaces and places that are difficult to access.
➢ Clean manually if necessary.

Manual cleaning/disinfecting
➢ Do not clean the product by ultrasound treatment under any circumstances.
➢ Use an appropriate neutral, alkaline or mildly alkaline cleaning/disinfecting agent according to the manufacturer’s instructions.
➢ Do not immerse the product in any fluid. Allow any fluid that has penetrated the device to run out immediately.
➢ Clean all surfaces with a brush and a suitable cleaning/disinfecting agent.
➢ Remove encrusted debris with a soft nylon brush.
   Do not use harsh cleaning agents or metal brushes.
➢ Clean difficult-to-access areas with soft round plastic brushes of fitting diameter.
➢ Thoroughly brush and rinse surfaces under running water.
➢ Carry out intensive final rinse with distilled, demineralized or fully desalinated water.
➢ Inspect for visible debris all surfaces and all areas that are difficult to access. If necessary, repeat the cleaning/disinfecting process.
➢ Use a lint-free cloth or a compressed-air gun for drying the product.
➢ Make certain that difficult-to-access areas and blind holes are dried.
Control, care and inspection

Note
Aesculap recommends occasional spraying of moving parts, e.g. buttons, couplings, cover lids, etc. with Aesculap STERILIT® Power Systems Oil Spray GB600!

- Allow the product to cool down to room temperature.
- Mount STERILIT® Power Systems adapter GB6000840 (supplied with the product) on Aesculap STERILIT® Power Systems Oil Spray GB600 and spray through the cannulation of the small drill, see Fig. 13 and the drill, reamer and Kirschner wire attachments, see Fig. 14, in each case from the rear end and for approx. 1 sec.
- Inspect the product after each cleaning and disinfecting cycle to be sure it is clean, functional and undamaged.
- Check the product for any damage, atypical running noise, overheating or excessive vibration.
- Set aside the product if it is damaged.

Packaging

- Follow the instructions for use of the respective packaging and storage devices (e.g. instructions for use TA009721 for the Aesculap ECCOS® storage system).
- Insert the product in its proper position in the ECCOS® storage unit. Make certain that all cutting edges are protected. Observe the weight limit for each tray/container.
- Package trays appropriately for the sterilization process (e.g. in Aesculap sterile containers).
- Pack the product in such a way that the packaging will prevent recontamination of the product in the period between reprocessing and reuse.
Sterilization method and parameters

Damage to, or destruction of the rechargeable batteries due to processing!
- Do not sterilize rechargeable batteries.

- Remove cover, Kirschner wire protection sleeve and attachments.
- Sterilize with steam, complying with the following rule:
  Sterilization must be carried out through a validated steam sterilization process (e.g. in a sterilizer according to EN 285/ANSI/AAMI/ISO 11134-1993, ANSI/AAMI ST46-1993, and validated according to EN ISO 17665 or EN 554/ISO 13683). For the fractionated vacuum process, sterilization has to be carried out with the 134 °C/2 bar program for a minimum holding time of 5 minutes.
- When sterilizing several products at the same time in one steam sterilizer: Make certain that the maximum load capacity of the steam sterilizer, as specified by the manufacturer, is not exceeded.

Sterilization for the US market
- Sterilization of the device may be accomplished by steam.
- Aesculap does not recommend the device be sterilized by “Flash” or chemical sterilization.
- Surgical instruments may also be placed within an Aesculap rigid sterilization container (sterile container) for processing under generally accepted hospital in-use conditions.

The recommended sterilization parameters are as follows:

<table>
<thead>
<tr>
<th>Sterilization method</th>
<th>Temp.</th>
<th>Minimum exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Wrapped</td>
</tr>
<tr>
<td>Pre-vacuum</td>
<td>270–275 °F</td>
<td>4 min</td>
</tr>
</tbody>
</table>

WARNING for the US market

If this device is/was used in a patient with, or suspected of having Creutzfeldt-Jakob Disease (CJD), the device cannot be reused and must be destroyed due to the inability to reprocess or sterilize to eliminate the risk of cross-contamination!

Storage
- Store reprocessed products under conditions as germ-free as possible, in a dry, dark, cool and dust-protected room.
5. Maintenance

To ensure reliable operation, servicing has to be carried out according to the information on the maintenance label, see Fig. 15/see Fig. 16.

Such servicing must include a safety inspection acc. to 96 MPBetreibV (or equivalent). The extent of the safety control is specified in the Service Manual, which is available as a separate document.

For services to this end, please contact your national B. Braun/Aesculap agency, see Technical Service.
6. Troubleshooting list

<table>
<thead>
<tr>
<th>Malfunction</th>
<th>Cause</th>
<th>Finding</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient power output</td>
<td>Rechargeable battery not fully charged</td>
<td>-</td>
<td>Charge battery in charger GA677</td>
</tr>
<tr>
<td></td>
<td>End of service life of rechargeable battery</td>
<td>Symbol “Battery replacement recommended” illuminated on the charger</td>
<td>Have battery repaired by the manufacturer</td>
</tr>
<tr>
<td>Motor not running</td>
<td>Motor defective</td>
<td>-</td>
<td>Have motor unit repaired by the manufacturer</td>
</tr>
<tr>
<td></td>
<td>Rechargeable battery defective</td>
<td>No acoustic signal on insertion of the battery</td>
<td>Have battery repaired by the manufacturer</td>
</tr>
</tbody>
</table>
Acculan® 3Ti small drill GA671

7. Technical Service
For service, maintenance and repairs, please contact your national B. Braun/Aesculap agency.
Modifications carried out on medical technical equipment may result in loss of warranty rights and applicable licenses.

Service addresses
Aesculap Technischer Service
Am Aesculap-Platz
78532 Tuttlingen / Germany
Phone: +49 7461 95-2700
Fax: +49 7461 18-2887
E-mail: ats@aesculap.de

Or in the US:
Attn. Aesculap Technical Services
615 Lambert Pointe Drive
Hazelwood, MO 63042
Aesculap Repair Hotline
Phone: +1 800 214-3392
Fax: +1 314 895-4420

Other service addresses can be obtained from the address indicated above.

8. Accessories/Spare parts

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kirschner wire protection sleeve</td>
<td>GA672207</td>
</tr>
<tr>
<td>Cover</td>
<td>GA675</td>
</tr>
<tr>
<td>Rechargeable battery</td>
<td>GA666</td>
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<tr>
<td>Battery charger</td>
<td>GA677</td>
</tr>
<tr>
<td>Sterile funnel</td>
<td>GA678</td>
</tr>
<tr>
<td>Battery removal device</td>
<td>GA679</td>
</tr>
<tr>
<td>Rinsing adapter</td>
<td>GA672211</td>
</tr>
<tr>
<td>ECCOS® tray with holders for Acculan® 3Ti</td>
<td>GB244R</td>
</tr>
<tr>
<td>Aesculap STERILIT® Power Systems Oil Spray</td>
<td>GB600</td>
</tr>
<tr>
<td>STERILIT® Power Systems adapter</td>
<td>GB600840</td>
</tr>
<tr>
<td>Cleaning brush</td>
<td>TA011944</td>
</tr>
</tbody>
</table>

Note
For further information on the small drill attachments, see TA011936.
For further information about the Aesculap ECCOS® storage system, see TA009721!
9. Technical specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>GA671</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC voltage</td>
<td>9.6 V</td>
</tr>
<tr>
<td>Rated current</td>
<td>approx. 3 A</td>
</tr>
<tr>
<td>Max. power</td>
<td>220 W</td>
</tr>
<tr>
<td>Rotational direction</td>
<td>Clockwise/ counterclockwise rotation, oscillation</td>
</tr>
<tr>
<td>Weight (operational)</td>
<td>approx. 1.12 kg</td>
</tr>
<tr>
<td>Dimensions L x W x H</td>
<td>approx. 107 x 47 x 180 mm</td>
</tr>
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<td>IEC 60601-1-2</td>
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<td>IEC 60601-1</td>
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<tr>
<td>Classification acc. to directive 93/42/EEC</td>
<td>IIIa</td>
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</tbody>
</table>

10. Disposal

Note
The user institution is obliged to process the product before its disposal, see Processing.
Always adhere to national regulations when disposing of or recycling the product or its components!

Products carrying this symbol are subject to separate collection of electric and electronic devices. Within the European Union, disposal is taken care of by the manufacturer as a free-of-charge service.

Please contact your national B. Braun/Aesculap agency if you have any questions concerning the disposal of the product, see Technical Service.

11. Distributor in the US/Contact in Canada for product information and complaints

Aesculap Inc.
3773 Corporate Parkway
Center Valley, PA 18034
USA

<table>
<thead>
<tr>
<th>Model</th>
<th>GA666</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell type</td>
<td>NiMH</td>
</tr>
<tr>
<td>DC voltage</td>
<td>9.6 V</td>
</tr>
<tr>
<td>Nominal capacity</td>
<td>1.05 Ah</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 0.304 kg</td>
</tr>
<tr>
<td>Dimensions L x W x H</td>
<td>approx. 120 x 43 x 50 mm</td>
</tr>
<tr>
<td>EMC</td>
<td>IEC 60601-1-2</td>
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<tr>
<td>Norms</td>
<td>IEC 60601-1</td>
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<td>Classification acc. to directive 93/42/EEC</td>
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</tr>
</tbody>
</table>
CE marking according to directive 93/42/EEC
CE-Kennzeichnung gemäß Richtlinie 93/42/EWG
Marquage CE conforme à la directive 93/42/CEE
Identificación CE en conformidad con la directriz 93/42/CEE
Marchio CE conforme alla direttiva 93/42/CEE
Simbolo CE, em conformidade com a Directiva 93/42/CEE
CE-certificering conform richtlijn 93/42/EEG
CE-märkning i enlighet med direktiv 93/42/EG
Маркировка CE согласно директиве 93/42/ЕС

Technical alterations reserved
Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Sujeto a modificaciones técnicas
Con riserva di modifiche tecniche
Salvo alterações técnicas
Technische wijzigingen voorbehouden
Med reservation för eventuella tekniska ändringar
Мы оставляем за собой право вносить технические изменения

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