

TORQUEPRO

USER MANUAL

INTRODUCTION

Proper maintenance and repair will bring long life to this product. Keep the instruction for use handy for your reference. Accidents that occur by not following the instruction for use manual is not Saeshin's responsibility. Products' appearance or specification is subject to change without notice. The user is responsible for the operation and maintenance of this product. When informing the model, serial number, breakage condition and contact detail will be necessary in order for Saeshin to provide consultation. Fabricate, repair or process prosthetics, dental fillings, orthodontic devices, etc.

Design and specification of the product can be subject to bechanged without notice for improving the quality.

WARRANTY

SAESHIN guarantees our product for 1 year from invoice date, and product warranty means that SAESHIN has responsibility of defective material or operation failure. The product warranty does not cover user's misuse, wrong installation, inappropriate maintenance and repair, and normal wear of consumables such as bearings, spindle, gear, and motor. To check the warranty requires the operating condition, environment information, serial number of the product and stamped invoice. The warranty will be performed as repairs or exchanges by manufacturer's judgement and analysis of product.

Exception of warranty

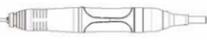
- User's misuse or improper use and treatment
- Use the product with incorrect input voltage (AC voltage)
- Drop the device during setting, moving, using
- Use the not recommended consumables or accessories
- Malfunction after repairing the product at the not recommended repair shop
- Normal wear of the consumables such as ball bearing, gear, chuck, spindle case ass'y, motor
- Faulty by Act of God

PRODUCT SPECIFICATION

Control Box

| | | |
|---|-----------------------------|-------------------------|
|  | Model Name | TORQUEPRO(AEU-16SS-120) |
| | Input | AC 120V, 50/60Hz |
| | Fuse | AC 120V, 5A |
| | Power Consumption | 16W |
| | Maximum Load Current | 2A |

Handpiece

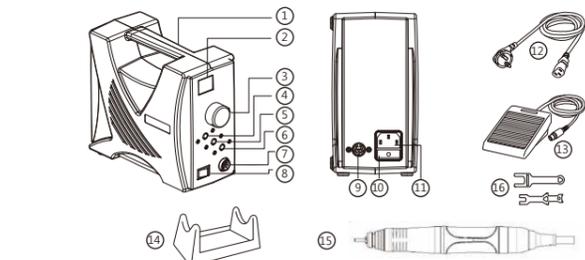
| | | |
|--|-----------------------------|-------------------|
|  | Model Name | H180 |
| | Max. RPM | 50,000 rpm |
| | Torque | 8.0 N-cm |
| | Bur Replacement Type | Collet Chuck Type |
| | Bur Dimension | Φ2.35 mm |
| | Motor Type | BLDC Type |

<Classification of equipment>

- Type of protection against electric shock - Control Box : Class II appliance
- Handpiece : Class III construction
- Foot Controller : Class III construction

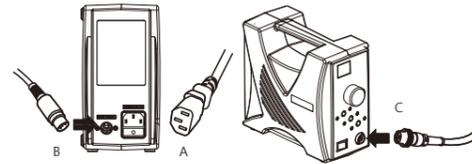
PART NAME

* Please check if all items are included.



| | | | |
|------------------------|--------------------------|-----------------------------|----------------|
| 1 Control Box | 2 RPM Display Box | 3 Speed Dial (Limit Button) | 4 Motor Button |
| 5 Hand/Foot Button | 6 Forward/Reverse Button | 7 Motor Connector | 8 Power Switch |
| 9 Foot Pedal Connector | 10 Fuse Box | 11 Power Connector | 12 Power Cord |
| 13 Foot Pedal | 14 Handpiece Stand | 15 Handpiece | 16 Wrench |

SETTING & OPERATION



 - Please make sure that power is off when connecting the motor and foot pedal. (Otherwise, it might cause malfunction.)

- Check the power of the control box is OFF.
A-Connect the power cord.
B-Connect the foot control pedal to the foot pedal connector.
C-Connect the handpiece to the handpiece connector.
- Put the speed dial on the control box at '0'
- Check the collet chuck is well-locked by turning the handpiece handle or trying to pull out the bur.
- Hold the handpiece with one hand and turn on the control box power with the other hand.



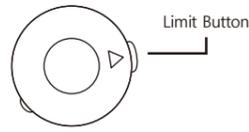
POWER ON (I)
Turn on the power switch. With beep sound, the power switch lights green and shows a number on the rpm display box.



POWER OFF (O)
The green light on the power switch and the lights of the buttons go off. The numbers on the rpm display box is disappears.

- Select whether controlling by hand or foot on the Hand/Foot button. Pushing each time, it changes from hand to foot.
- Choose the rotation direction by FORWARD / REVERSE button as pushing each time changes from Right to Left.
- Set the speed by turning the speed dial.

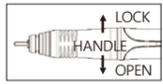
※ Limit button function



This button is used to limit the maximum speed.
* If maximum speed is set to 50,000 rpm Limited maximum value is 40,000 rpm. Push the limit button and turn the speed control dial fully. Maximum value is increased to 50,000 rpm.

- Operating : controlling by Hand  Operating : controlling by Foot 
Push the Hand/Foot button to select the Hand mode. Check if the handpiece works properly while pushing the motor button and adjusting the speed dial of the control box. Press the motor button again to stop the motor.
Push the Hand/Foot button to select the Foot mode. Check if the handpiece works properly while pressing the foot pedal and adjusting the speed dial of the control box. The speed can be changed within a range of speed preset by the speed of the control box. The speed will increase by stop pushing on the pedal.
- In case of overload
In case of overload, after 3 seconds, control box stops and shows Error (E1) with beep sound. To release, push motor button when working by hand or take off foot from the pedal in case of working by pedal.

SUGGESTION FOR MAINTENANCE

- Keep the handpiece surroundings clean.
- Remove any dust on handpiece with a smooth cloth with alcohol and avoid getting wet inside.
 - Do not apply oil or water to the unit when cleaning. as this may cause the bearings to be damaged or cause corrosion of the inner-parts.
- Air cleaning is acceptable, but air pressure may negatively affect the handpiece.
- insertion and pulling out the bur
Open the chuck turning handle in an open direction. Chuck is released and bur can be removed. Turn the handle in a lock direction until you hear a click sound. Chuck is locked and bur is in the correct position.

 - When turning in a lock direction too strongly the handpiece handle and motor part may become disassembled. Do not disassemble except by a skilled person as it may cause damage to the unit.

FUSE REPLACEMENT

Check the fuse if the control box doesn't work. It may be necessary to change it. Contact the dealer or the manufacturer for more information.

CHECK POINT IN CASE OF PROBLEM

If the product does not work after checking, please contact the dealer or manufacturer.

| Condition | Check point | Solution (Remedy) |
|-----------------------------|--|---|
| RPM display doesn't appear. | Check if the control box connected well with outlet. Check if the control box connected well with outlet. | Check if the power cord connected well from outlet to connector. Ask the dealer or manufacturer. |

| Condition | Check point | Solution (Remedy) |
|---------------------------|---|---|
| Buttons are not working | Check if it doesn't work after beep sound. | Ask the dealer or manufacturer. |
| Handpiece heats up | The handpiece is warm | It heats up when it is used continuously. Take a break until the heat disappear. |
| | The handpiece is hot | When it's used with overload continuously, it heat up. If it's not used with overload and heats up, ask the dealer or manufacturer. |
| Handpiece doesn't rotate. | Check if the chuck is open. (occur E1 error) | Lock the chuck. |
| | Check if handpiece is well connected in the connector. (occur E0 error) | Connect the handpiece again to the connector and if it continuously, shows E0 contact the dealer or manufacturer. |

ERROR CODE

In case of overload, breakage, motor coil burning, motor stops, control box shows an error code on rpm display box. From this function, the reason of the breakage or faulty conditions of each part can be noticed:

| Error code | Cause | Releasing | Action |
|------------|--|---|--|
| E0 | Caused by abnormal operation of the motor Handpiece connect error | | Check the power cord and motor connector if connected properly. Close the chuck and turn the power on again. If is not solved, please contact the dealer or manufacturer. |
| E1 | Over current error Over-current error occurs in case of using for a long time on overload, operating with open collet chuck, wrong assembling after disassemble, or trouble with bearings or motor. | Push the motor button or the foot pedal | Check if the chuck is open. Close the chuck and turn the power on again. If it runs normally, error message will disappear. Contact the manufacturer in case of same error message is repeated. Restart the control box after 10 minutes in a cool place. If the same error occurs contact the manufacturer. |

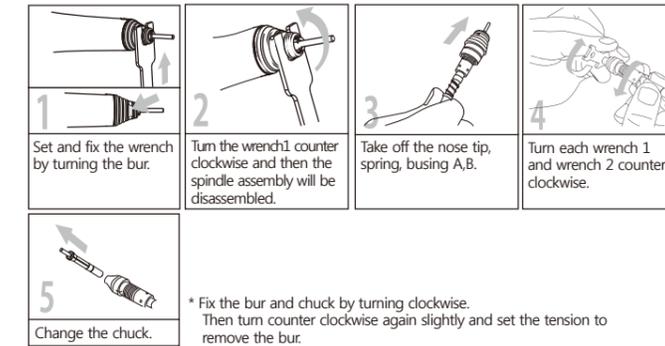
For your safety, Keep to the following

- Bur
※ Bur dimension: 2.35mm
※ Minimum fitting length of bur: 10mm
※ When chuck is locked, the maximum projection length of bur is more than 35mm. Use the bur ISO standard and avoid using a rusty or bent bur which can cause excessive wear of the bearings. Keep a safe speed and precautions recommended by the bur manufacturer.
- Be careful not to drop the handpiece as it may be damaged or broken. In case that it is dropped, check if the bur is bent or that any excessive heat is generated while carefully operating it.
- If any problem occurs in handpiece, only use after repairing.
- Make sure that the switch is off before putting the power plug in the socket, in order to avoid unexpected injury caused by a sudden start.
- Circuit breaker is provided to protect the motor. It is actuated when an overload occurs which the motor cannot stand. Always use this product within allowable load range.
- Do not open the chuck while operating.
- Keep a bit-bur in the collet chuck of the handpiece after using.
* If the handpiece is kept without bur or bit bur, the collet chuck may shrink from the environment condition and may affect some spare parts.
- Do not put the handpiece down before it stops completely.
- Be sure to pull out the power cord before detaching the control box.
- Use only specified voltage.
- Use only accessories suitable for this product.
- Follow the manufacturer's recommended instructions for bur speeds for various applications.
- Wear proper protective clothes and equipment, including a dust mask and safety goggles. Use a proper suction unit and a ventilator.
- Keep the workplace clean as debris around the workplace can cause an accident.
- Memory
Memory saves the conditions of direction and hand/foot selection when turning the power off. Therefore, be careful when turning the power on.
- Do not work in a dangerous place. Do not use the control box in a humid place.
- The handpiece and foot pedal can only be used with a Saeshin control box.
- Do not touch the signal input, signal output or other connectors and the patient simultaneously.
- Check for any troubles, including vibration of bur, at low speeds, and at high speeds.
- Operate the volume dial of the control box slowly.
- Turn the power off or set the RPM at zero and to change a bur.
- Do not turn the power on in control box when the collet chuck of handpiece is open. (E1 error)

- Do not use with a damaged or faulty power cord, plug, and outlet. It may cause danger of fire and/or electric shock. Contact the manufacturer.
- When unplugging the power cord, do not touch with wet hand. Do not use with a loose power plug which can cause danger of electric shock and/or fire.
- Do not use loose power cord, it may cause electric shock and fire.
- Do not bend the power cord excessively and do not press-down with a heavy object as this may cause electric shock and/or fire.
- Do not place near of heated equipment, candles or cigarettes which can cause a fire.
- Do not leave children unattended in any room where this product has been installed.
- Type of protection against electric shock : Class I equipment
- This equipment is not suitable for use in the presence of flammable anesthetics or oxygen.
- Use only a grounded conductor. Breakage or electric leak may cause danger of electric shock. For grounding, inquire with an electrician or manufacturer.
- In case of using extension cord, do not use many electrical equipment at one time. As it may cause fire and/or electric shock.
- Do not place or set up the product in a humid, rainy or snowy location. As it may cause the danger of electric shock and/or fire.
- Do not drop or damage the handpiece. In case of malfunction, dropping, drowning, do not use and contact the manufacturer. (If may cause vibration of the bur, overheating, or damage to the bearings.)
- Use the products in properly as per the instruction manual and do not use products not recommended by the manufacturer as it may cause injury or property loss.
- Saeshin is not responsible for any accident caused by not following the instruction manual.
- Use a power cord that has the appropriate rating for the product.

| Operating condition | Place of Use | Indoor Use |
|---------------------------------|---|--------------------|
| | Altitude of Use | Up to 2,000m |
| | Applicable Pollution degree of intended environment | Pollution degree 2 |
| | Temperature (°C) | 10~30 |
| Transport and Storage condition | Relative humidity (%) | 10~80 |
| | Atmospheric pressure (hPa) | 700~1,060 |
| | Temperature (°C) | -20~60 |
| | Relative humidity (%) | 10~90 |
| | Atmospheric pressure (hPa) | 500~1,060 |

CHANGE COLLET CHUCK



- Set and fix the wrench by turning the bur.
- Turn the wrench 1 counter clockwise and then the spindle assembly will be disassembled.
- Take off the nose tip, spring, bushing A,B.
- Turn each wrench 1 and wrench 2 counter clockwise.
- Change the chuck.
* Fix the bur and chuck by turning clockwise. Then turn counter clockwise again slightly and set the tension to remove the bur.

| Symbol | Meaning | Symbol | Meaning |
|---|---|---|-----------------------------|
| I | On (Power) | O | Off (Power) |
|  | Manufacturer |  | Consult Instruction For Use |
| EC REP | EU Representative |  | General Warning Sign |
| SN | Serial Number |  | Alternating Current |
|  | Fuse | CE | CE Marking |
|  | This product should not be mixed with other commercial waste for disposal | | |

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| <p>Manufactured by. SAESHIN SAESHIN PRECISION CO., LTD. 52, Secheon-ro 1-gil, Dasa-eup, Dalseong-gun, Daegu, Korea Tel. 82-53-587-2341 / Fax. 82-53-580-0999 대구광역시 달성군 다사읍 세천로 1길 52 (성서5차산업단지) Tel. 053-587-2345 / Fax. 053-580-0918 www.saeshin.com / traus@saeshin.com</p> | <p>EC REP MERIDIUS MEDICAL EUROPE LIMITED Unit 3D, North Point House North point Business Park New Mallow Road CORK, T23AT2P, Ireland +353 212066448</p> <p>Distributed by. Aseptico Inc. 8333 216th St SE, Woodinville, WA, USA www.aseptico.com, Tel - 425.487.3157</p> |
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