



SAESHIN

# ***traus*** B110/B111

## INSTRUCTION MANUAL



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- Product components
- Names of each part of the main unit
- Buttons on the operation panel
- How to connect each part
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- Operation Procedure
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- Symbols






Please read this before starting work.

This user manual is intended to ensure correct installation and use of the product.

To get the most out of this product and ensure its long life, use it carefully before installing or using it.

Please read.

especially  me  ,  Special attention is requested for content marked with the symbol.

<Classification of equipment>

- Types of protection against electric shock
  - Main unit: Class II device
  - Handpiece: Class III structure
  - Foot controller: Class III structure
- Not suitable for environments exposed to oxygen or with flammable substances such as anesthetics in the air.
- Classification by operating mode: continuous operation with intermittent load

**Design and product specifications may change without notice to improve quality.**



## Introduction

Please read this manual regarding the instructions for handling method, maintenance and inspection prior to use and store it in a place where users can read it anytime.

This manual is for any users to install and operate appropriately in order to have the long term usage with the equipment.

Please pay special attention to the  ,  and  signs in order to prevent any risks.

### <Classification of equipment>

- Type of protection against electric shock
  - Control Box: Class II appliance
  - Handpiece: Class III construction
  - Foot Controller: Class III construction
- Not suitable with any flammable gas containing oxygen or gas anesthetic.
- Types of the operation mode: Products with any occasional overloading operations.

**Product design and specification can be changed without any notice  
for quality improvement.**



## caution



### caution

- It is designed with a dual power structure for user convenience. If the product does not turn on, check that both the 'power switch' on the back and the 'body ON/OFF button' on the side are turned on. (Refer to 'Names of each part of the main unit')
- If you are not using the product for a long time (more than 12 hours), turn off the power switch on the back as well. It may cause a fire or accident.
- Do not operate the handpiece with the collet chuck open. It may cause damage to the handpiece.
- Do not open the collet chuck while the handpiece is operating.
- To reduce the risk of accidental operation of the product, make sure the power switch is turned off before connecting the power cord.
- A circuit breaker is installed to protect the motor. Circuit breakers trip when the motor experiences an overload that it cannot withstand. Work without tripping circuit breakers.
- When storing the product, keep the burr fixed to the collet chuck.
- Stop the handpiece and change the direction of rotation.
- Do not use deformed burs. It may cause malfunctions or accidents.
- Do not use in hazardous or humid locations.
- Wear proper clothing and always wear protective equipment. Be sure to wear a dust mask and safety glasses to protect your eyes when working, and use an appropriate inhaler and ventilator.
- Do not disassemble or modify the product arbitrarily. It may cause an accident.
- Use only handpieces and foot controllers appropriate for the main unit.
- Check for problems such as excessive bur vibration, poor speed control, etc.
- Operate the speed control dial gently.
- Stop the handpiece and then replace the bur.
- Be careful not to drop the product. It may cause a malfunction. If the product is dropped, operate it carefully to check whether the burr is bent or excessive heat is generated.
- If a problem occurs with the product, use it after repairing it.
- Do not place the handpiece on the floor until the handpiece has come to a complete stop.
- Use the appropriate voltage for the product.
- Use accessories appropriate for your product.
- Please follow the user manual to ensure appropriate speed for various purposes.
- Wear appropriate protective equipment (dust mask, safety glasses, etc.) between uses.
- Keep the area you use clean. Foreign substances can cause accidents.
- Do not touch the power cord or handpiece connector with wet hands.
- Do not excessively bend the power cord or press it with a heavy object. It may cause fire or electric shock.
- Keep the product away from superheaters, candles, lighters, etc. It may cause a fire.
- When using a power strip, do not use many electrical appliances at once. There is a risk of fire or electric shock.
- Monitoring is necessary to prevent use by children, the mentally and physically weak, etc. Do not leave children alone in the room where the product is installed.
- Do not use a damaged power cord or handpiece connector and contact the manufacturer. It may cause fire or electric shock.



## Precaution



## Caution

- The product has been produced with two power sources for user's convenience. If the product doesn't turn on, make sure both 'Power Switch' on the back and 'Controller ON/OFF Button' on the side are both on.  
(Refer to 'Component Names')
- If the product is not being used for a long time (12+ hours), please make sure to turn the Power Switch off on the back as well. It could be a reason on fire or accident.
- Do not operate it as the Handpiece's Collet-chuck is open. It can cause damage to the Handpiece.
- Do not open the Collet-chuck as the Handpiece is operating.
- Check if the Power Switch is off before you connect the Power Cord to minimize the danger of a sudden operation.
- A circuit breaker is installed for the motor protection. The breaker will work when there is overheat that the motor can't handle. Please operate in the range that the breaker will not be in use.
- Please store the product as the Bur is attached to the Collet-chuck.
- Change the rotate direction when the Handpiece is stopped.
- Do not use the modified Bur. It could cause a breakdown or an accident.
- Do not use in dangerous places or humid places.
- Always wear appropriate outfit and protection gear. You must wear the protection goggle with a mask, and use an appropriate inspirator and a ventilator.
- Do not disassemble or amend the product on your own. It could be a reason of an accident.
- Please only use appropriate Handpiece and Foot Controller for the main product.
- Please check the problems such as excessive vibration of a Bur, and malfunction of speed control.
- Please gently control the Speed Control Dial.
- Please change the Bur when the Handpiece is stopped.
- Be careful not to drop the product. If the product is dropped, make sure it does not produce excessive heat and or if the Bur is bent, as you operate the product very gently.
- If the product causes troubles, please use it after getting it fixed.
- Do not put the Handpiece down until it is completely stopped.
- Use appropriate voltage.
- Use appropriate accessories.
- Follow the operation manual for appropriate speed for multiple purposes.
- Equip appropriate production equipment (dirt mask, protection goggle, tec.)
- Keep the user environment clean. Dirt can cause accidents.
- Do not touch the Power Cord or Handpiece Connector with wet hands.
- Do not over bend the Power Cord or press it with the heavy object. It can cause a fire or an electric shock.
- Do not place the product near heater, candle, lighter, etc. It can cause a fire.
- Do not use excessive number of electronics on the multi-tap. It can cause a fire or an electric shock.
- "This appliance can be used by children aged from 8 years and above and person with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in safety way and understand the hazards involved."  
"Children shall not play with the appliance."  
"Cleaning and user maintenance shall not be made by children without supervision."
- "If the supply cord is damaged, it must be replaced by the manufacturer, its service agent of similarly qualified persons in order to avoid hazard."



## Product Features & Advantages

### ■ B110

- Convenient power button
- Type used on knees/feet
- Sensor type BLDC handpiece 'H180' applied
- Maximum rotation speed 50,000 rpm (maximum rotation speed can be changed / 40,000 rpm ~ 50,000 rpm)
- Maximum torque 7.0 N·cm
- Rotation direction selectable (forward/reverse)
- Uses standard burr  $\Phi 2.35\text{mm}$
- Collet chuck type burr fastening method
- Auto cruise function
- Overload prevention function

### ■ B111

- Convenient power button
- Type used on knees/feet
- DC handpiece 'H160' applied
- Maximum rotation speed 45,000 rpm
- Maximum torque 4.5 N·cm
- Rotation direction selectable (forward/reverse)
- Uses standard burr  $\Phi 2.35\text{mm}$
- Collet chuck type burr fastening method
- Auto cruise function
- Overload prevention function





## Features & Benefits

### ■ B110

- Convenient Power Switch
- Knee/Foot Type Pedal
- Sensor Type BLDC Hand Piece with 'H180' applied
- Maximum Rotation 50,000 rpm (Options to change the maximum RPM / 40,000 rpm <-> 50,000 rpm)
- Maximum Torque 7.0 N-cm
- Forward/Reverse Selector Switch (F/R)
- Standard Bur  $\Phi 2.35\text{mm}$
- Method for connecting any Collet-chuck type Bur
- Auto-cruise Function
- Prevention for Overloading

### ■ B111

- Convenient Power Switch
- Knee/Foot Type Pedal
- DC Type Hand Piece with 'H160' applied
- Maximum Rotation 45,000 rpm
- Maximum Torque 4.5 N-cm
- Forward/Reverse Selector Switch (F/R)
- Standard Bur  $\Phi 2.35\text{mm}$
- Method for connecting any Collet-chuck type Bur
- Auto-cruise Function
- Prevention for Overloading



## Product components

### ■ B110

· Please check the product components.

①



②



③



④



⑤



⑥



⑦



No.	Components
One	Body unit (B110)
2	Handpiece (H180)
3	foot controller
4	power cord
5	handpiece stand
6	2 types of spanners
7	Bracket for wall attachment
8	Bracket fixing screw and 2 other types

## Components

### ■ B110

· Please check the list for the components



No.	Components
One	Control Box (B110)
2	Handpiece (H180)
3	Foot Controller
4	Power Cord
5	Handpiece Stand
6	Wrench (2 Types)
7	Adhesive Wall Mount Bracket
8	Screws, Bolts, Nuts



## Product components

### ■B111

· Please check the product components.

①



②



③



④



⑤



⑥



No.	Components
One	Body Unit (B111)
2	Handpiece (H160)
3	foot controller
4	power cord
5	handpiece stand
6	Bracket for wall attachment
7	Bracket fixing screw and 2 other types



# Components

## ■B111

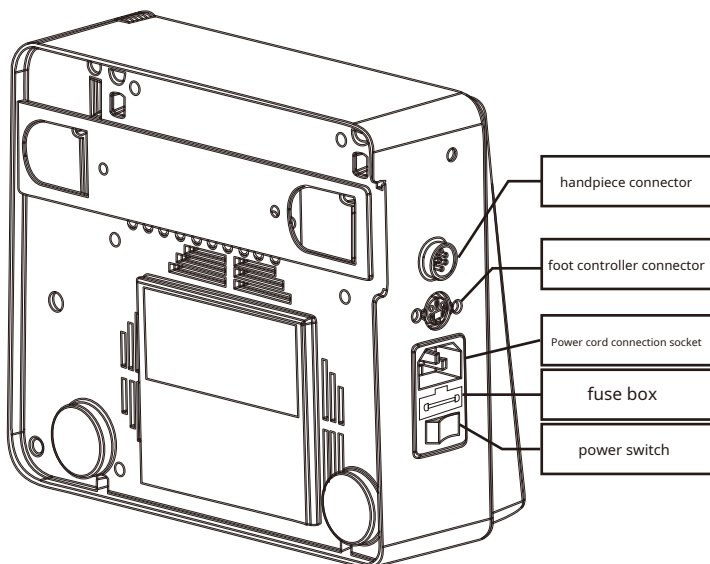
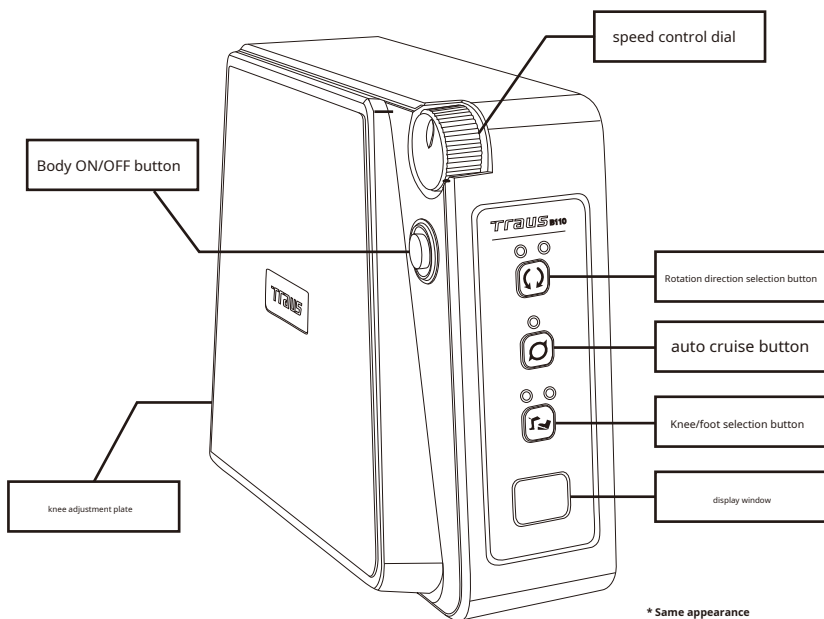
· Please check the list for the components



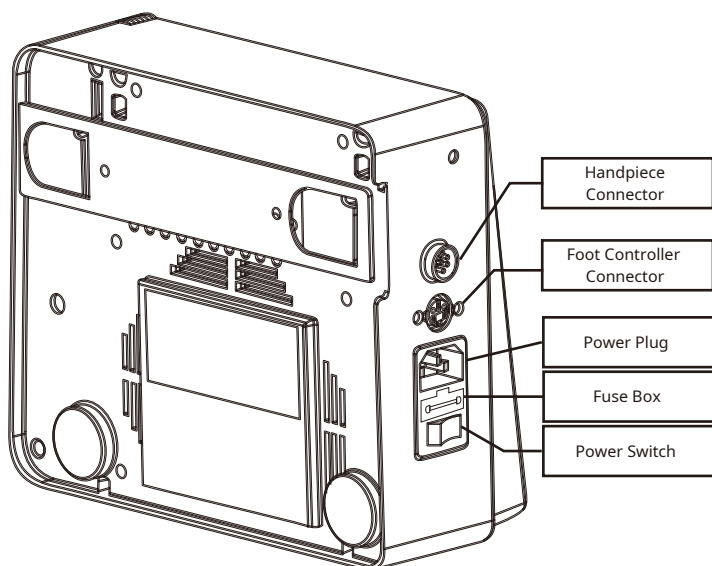
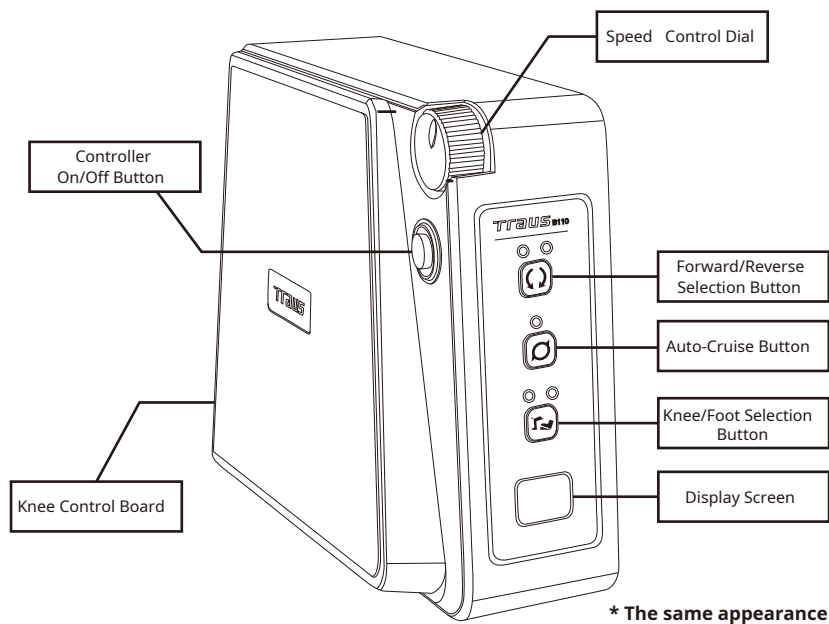
No.	Components
One	Control Box (B111)
2	Handpiece (H160)
3	Foot Controller
4	Power Cord
5	Handpiece Stand
6	Adhesive Wall Mount Bracket
7	Screws, Bolts, Nuts



## Name of each main unit part



## Component Names





## Buttons on the operation panel

### ■ Speed control dial:

Used to control speed.

Turning it counterclockwise increases the speed, and turning it clockwise decreases the speed.

#### • How to set B110 maximum RPM

When turned counterclockwise from the default state, it can be set up to 40,000 rpm. If you press and hold the speed control dial for about 1 second, you will hear two beeps, and if you further turn it counterclockwise, you can set it up to 50,000 rpm. When the speed control dial is pressed at a maximum setting of 50,000 rpm, a beep sounds once and the speed returns to a setting of 40,000 rpm.

### ■ Rotation direction selection button:

This button selects the rotation direction as forward or reverse.

### ■ Auto cruise button:

This button fixes the speed of the handpiece.

With the auto cruise function activated, drive the handpiece at the desired speed. Hold it for about 3 to 5 seconds and the speed will be fixed with a beep sound. To disengage, turn off the auto cruise button or press the knee stabilizer or foot controller once.

### ■ Knee/foot selection button:

This button selects the handpiece movement as knee or foot.

- Knee: Press the knee adjustment plate button to drive the handpiece.

- Foot: Press the foot controller to drive the handpiece.

### ■ Display window:

- Number of revolutions: Indicates the number of revolutions (RPM). ×1,000 of the number shown is the actual number of rotations.

- Error code: Indicates the error when an error occurs.

### ■ Power switch (rear of product):

Used to turn the power on or off.

- | : Power on

- O: Power off

### ■ Body ON/OFF button (product side):

Used to turn the main unit on or off when the power switch on the back of the product is turned on.

When you press the button, the lamp lights up and the main unit turns on. If you press the button again, the lamp will turn off and the main unit will turn off.



- Only works when the power switch is on.

### ■ Knee adjustment plate:

This button operates the handpiece when the knee/foot selection button is selected.





## Control Panel Diagram/Buttons

### ■ Speed Control Dial:

Use this dial to control the speed.

Speed increases when rotated counter clockwise, and decrease clockwise.

#### • B110 How to set Max RPM

A max of 40,000 rpm can be set up when rotate the counter clockwise from the default. If you press the Speed Control Dial for about a second, you will hear two beeping sounds, and you can go up to 50,000 rpm if you rotate more counter clockwise. When it's set up to 50,000 rpm, if you press the dial again, you will hear one beeping sound and the product will be back to 40,000rpm.

### ■ Forward/Reverse Selection Button:

A button that can select the rotate direction to counter clockwise or clockwise.

### ■ Auto Cruise Button:

A button that keeps the speed of the Handpiece fixed.

Please operate the Handpiece in the speed you want as the auto cruise feature is activated. If you keep it for about 3-5 seconds, the speed will be fixed with a beeping sound. If you want to deactivate this feature, please turn off the Auto-Cruise Button or press the Foot Controller once.

### ■ Knee/Foot Selection Button:

The button that makes you choose to operate the Handpiece by knee or foot.

- Knee: Operate the Handpiece by pressing Knee Control Board Button.

- Foot: Operate the Handpiece by pressing the Foot Controller.

### ■ Display Screen:

- Rotate count: Display RPM. Actual rotation count is displayed number x 1,000.

- Error code: Display error when it is detected.

### ■ Power Switch (Rear):

Use to turn the product on/off

- | : Power is on.

- O: Power is off

### ■ Controller ON/OFF Button(Side):

Used to turn the product on/off when the Power Switch(Rear) is on.

Press this button once to turn the lamp and the product on. Press once more to turn the lamp and the product off.



- Only available when the Power Switch is off.

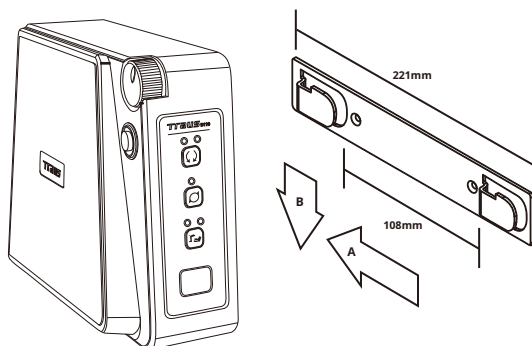
### ■ Knee Controller:

The button that operates the Handpiece when you select Knee/Foot Selection Button to knee.



## How to connect each part

### ■ Installation of wall bracket



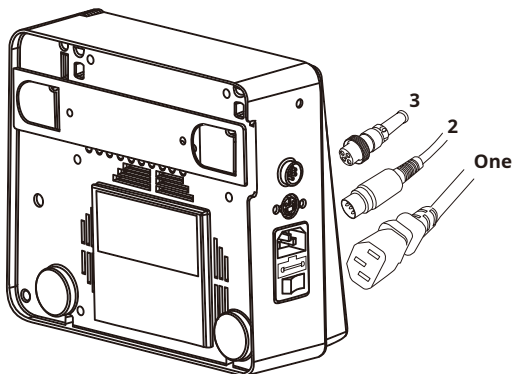
1. Securely attach the wall attachment bracket to the lower side of the workbench using bolts at an appropriate location at the user's knee height as shown in the picture.



- Be careful not to let the head of the bolt protrude beyond the bracket surface.

2. After checking the hole location, attach the main unit to the attached bracket without shaking in the direction shown (A -> B).

### ■ Main unit connection



1. Connect the power cord to the power cord connection socket.



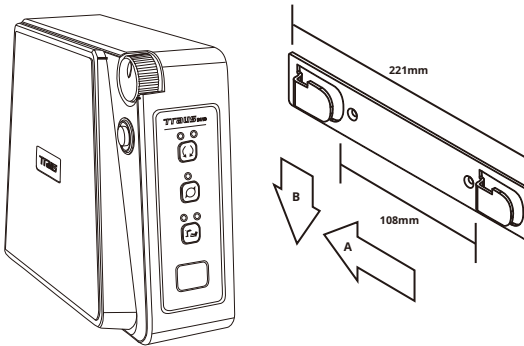
- Before connecting the power cord, make sure the power switch is turned off.

2. Connect the foot controller cord.
3. Connect the handpiece cord.



## Set Up of Control Box

### ■ Installation for Adhesive Wall Mount Bracket



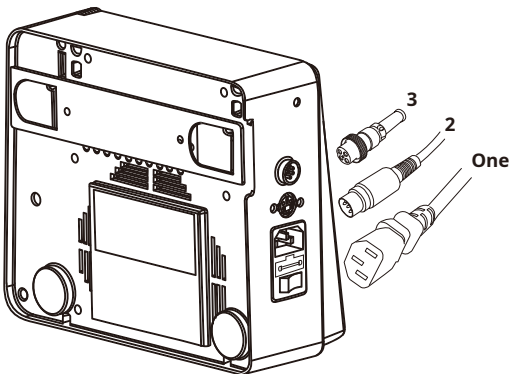
1. Refer to the image and attach the adhesive Wall Mount Bracket to the bottom surface within the user's knee height by the Bolts provided.



- Please do not let the bolt head stick out from the Bracket's surface.

2. Make sure the hole is placed correctly and attach the Control Box to the Bracket by the direction from A -> B as shown from the image above.

### ■ Installation for Control Box



1. Plug in the Power Cord to the Power Plug.



- Make sure that the Power Switch is off before connecting the Power Cord.

2. Connect the Foot Controller Cord.
3. Connect the Handpiece Cord.

# ■ Burr insertion

1. Turn the handle to open the handpiece chuck.



2. Insert the bur into the front end of the handpiece.



3. Turn the handle to lock the handpiece chuck.

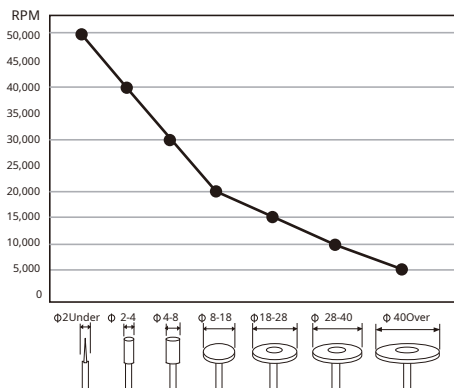


※ The method of connecting the handpiece burr is the same regardless of the type of handpiece.



- Be sure to lock the chuck before use. It may cause damage to the handpiece.
- Check that the burr is not damaged.
- Check the dimensions of the bur. (Burr dimension:  $\Phi 2.35\text{mm}$ )

※ Below is the allowable speed according to burr size. (Allowable speed may vary depending on the material and type of bur.)



## ■ Bur Set Up

1. Rotate the Handpiece handle and open the chuck.



2. Insert the Bur into the Handpiece.



3. Rotate the Handpiece handle and close the chuck.



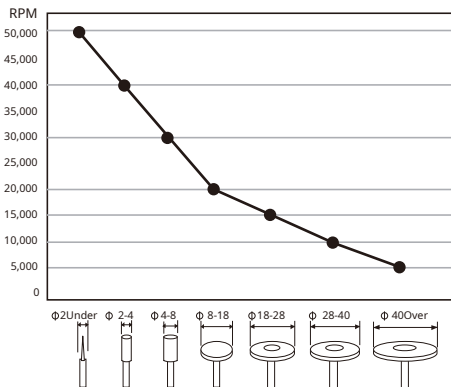
※ Connecting Handpiece Bur is same regardless of any Handpiece types.



- Close the chuck before using the Handpiece. It may cause the damage.
- Check if the Bur is not damaged.
- Check the size of Bur. (Bur dimension:  $\Phi 2.35\text{mm}$ )

※ The chart below shows the eligible rpm per Bur size.

(Speed may be different due to the Bur's materials and types.)





## How it works

1. Hold the handpiece with one hand and turn on the power switch on the back of the main unit with the other hand.  
(When you turn on the power switch, the green light on the power switch lights up.)
2. Press the main unit ON/OFF button on the side to turn on the main unit.  
(When the main unit is turned on, the button lights up green with a beep sound, and RPM appears on the display window.)
3. Press the rotation direction selection button to select the rotation direction. When the left light turns on, reverse direction is selected, and when the right light turns on, forward direction is selected.
4. Press the knee/foot selection button to select the control method. When the left light is on, the knee is selected, and when the right light is on, the foot is selected.

### ■ How to operate when knee is selected

5. Turn the speed control dial to adjust to the desired speed.
6. Drive the handpiece while adjusting the knee adjustment plate. (It moves within the set range.)
7. When the knee adjustment plate is removed, the handpiece stops.

### ■ How to operate when foot is selected

5. Turn the speed control dial to adjust to the desired speed.
6. Drive the handpiece while adjusting the foot controller. (It moves within the set range.)
7. When you release the foot controller, the handpiece stops.

### ■ Auto cruise function

This function fixes the speed of the handpiece.

With the auto cruise function activated, drive the handpiece at the desired speed. Hold it for about 3 to 5 seconds and the speed will be fixed with a beep sound. To disengage, turn off the auto cruise button or press the knee stabilizer or foot controller once.

### ■ Last memory function

This function saves the settings when the power is turned off.

When the power is turned off, the knee/foot, rotation direction, and auto cruise status are saved.



- Check the settings status when turning on the power. There is a risk of accident.
- B110 additionally stores the RPM when the handpiece was last operated.

### ■ Overload prevention function

If the handpiece is overloaded, a beep sounds after about 5 seconds, error code 'E1' appears on the display, and the handpiece stops working.

To release, press the knee adjuster or foot controller once.



## Operation Procedure

1. Grab the Handpiece with one hand and use the other hand to turn the Power Switch(Rear) on. (When the Power Switch is on, the green lamp on the switch will lit.)
2. Turn the product on by pressing Controller ON/OFF Button(Side).  
(When the product is on, the green lamp on the button will be lit with a beeping sound, and the RPM will be displayed on the screen.)
3. Choose the rotation direction by pressing Forward/Reverse Selection Button. When the left light is on, it's counter clockwise, and when the right lamp is on, it's clockwise.
4. Choose the control method by pressing Knee/Foot Selection Button. When the left light is on, knee is selected, and when the light lamp is on, foot is selected.

### ■ How to operate when knee is selected.

5. Use Speed Control Dial to choose ideal speed.
6. Operate Handpiece as you control the Knee Control Board. (It will operate within the range.)
7. When you unattach the Knee Control Board, the Handpiece stops.

### ■ How to operate when foot is selected.

5. Use Speed Control Dial to choose ideal speed.
6. Operate Handpiece as you control the Foot Controller. (It will operate within the range.)
7. When you unattach the Foot Controller, the Handpiece stops.

### ■ Auto Cruise Feature

A feature that keeps the speed of the Handpiece fixed.

Operate the Handpiece in your ideal speed as you have the auto cruise feature activated. If you keep it for 3-5 seconds, the speed will be fixed with a beeping sound. If you want to deactivate, press the button one more time or press the Knee Control Board or Foot Controller once.

### ■ Last Memory Feature

A feature that stores the last condition when the power turns off.

Control Box saves the set up (Knee/Foot, Rotation direction, Auto-Cruise selection) at the time it was turned off.



- Check the set up when you turn it on. It cause an accident.
- B110 saves RPM additionally at the time you operated the Handpiece finally.

### ■ Overheat Prevention Feature

When the Handpiece is overheated, it will be automatically turned off after about 5 seconds when the error code E1 is displayed on the screen with a beeping sound.

If you wish to deactivate, press the Knee Control Board or Foot Controller once.

■ Error code

-B110

Error code	cause	action
<b>E0</b>	<ul style="list-style-type: none"> <li>· Poor handpiece connection</li> <li>· Abnormal operation of the motor</li> </ul>	<ul style="list-style-type: none"> <li>· Check that the power cord and handpiece cord are connected correctly.</li> <li>· Turn the power back on.</li> <li>· If the issue is not resolved, contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Overload of handpiece</li> </ul>	<ul style="list-style-type: none"> <li>· Press the knee adjuster or foot controller once.</li> <li>· Operate after cooling in a cool place for about 10 minutes.</li> <li>· If the issue is not resolved, contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Operates with chuck open</li> </ul>	<ul style="list-style-type: none"> <li>· Use after closing the chuck of the handpiece.</li> </ul>
<b>E1</b>	<ul style="list-style-type: none"> <li>· Poor handpiece assembly</li> <li>· Bearing defect</li> <li>· Motor failure</li> </ul>	<ul style="list-style-type: none"> <li>· Contact the manufacturer.</li> </ul>

- B111

Error code	cause	action
<b>E1</b>	<ul style="list-style-type: none"> <li>· Overload of handpiece</li> </ul>	<ul style="list-style-type: none"> <li>· Press the knee adjuster or foot controller once.</li> <li>· Operate after cooling in a cool place for about 10 minutes.</li> <li>· If the issue is not resolved, contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Operates with chuck open</li> </ul>	<ul style="list-style-type: none"> <li>· Use after closing the chuck of the handpiece.</li> </ul>
	<ul style="list-style-type: none"> <li>· Poor handpiece assembly</li> <li>· Bearing defect</li> <li>· Motor failure</li> </ul>	<ul style="list-style-type: none"> <li>· Contact the manufacturer.</li> </ul>



## ■ Error Code

-B110

Error Code	Cause	Action
<b>E0</b>	<ul style="list-style-type: none"> <li>· Faulty connection of Handpiece</li> <li>· Abnormal operation of Motor</li> </ul>	<ul style="list-style-type: none"> <li>· Check if the power cord or the Handpiece cord is connected correctly.</li> <li>· Turn the power on again.</li> <li>· If is not solved, please contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Handpiece overheat</li> </ul>	<ul style="list-style-type: none"> <li>· Press the Knee Control Board or Foot Controller once.</li> <li>· Please cool the product down for about 10 minutes at cold place before re-operation.</li> <li>· If is not solved, please contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Operate with open chuck</li> </ul>	<ul style="list-style-type: none"> <li>· Please operate after closing the Handpiece's chuck.</li> </ul>
<b>E1</b>	<ul style="list-style-type: none"> <li>· Faulty Handpiece assembly</li> <li>· Faulty Bearing</li> <li>· Faulty Motor</li> </ul>	<ul style="list-style-type: none"> <li>· Please contact the manufacturer</li> </ul>

- B111

Error Code	Cause	Action
<b>E1</b>	<ul style="list-style-type: none"> <li>· Handpiece overheat</li> </ul>	<ul style="list-style-type: none"> <li>· Press the Knee Control Board or Foot Controller once.</li> <li>· Please cool the product down for about 10 minutes at cold place before re-operation.</li> <li>· If is not solved, please contact the manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>· Operate with open chuck</li> </ul>	<ul style="list-style-type: none"> <li>· Please operate after closing the Handpiece's chuck.</li> </ul>
	<ul style="list-style-type: none"> <li>· Faulty Handpiece assembly</li> <li>· Faulty Bearing</li> <li>· Faulty Motor</li> </ul>	<ul style="list-style-type: none"> <li>· Please contact the manufacturer</li> </ul>



## Product maintenance

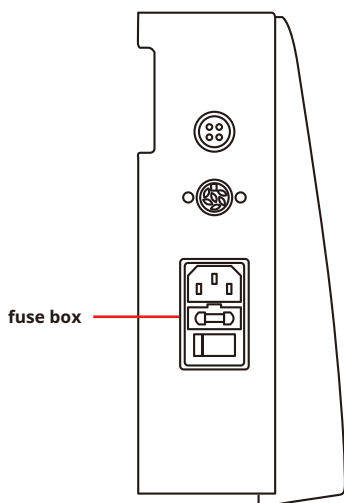
1. Keep the area around the handpiece clean.
2. Wipe off dust on the handpiece with alcohol and avoid moisture around the handpiece.



- Do not use oil on the product and do not clean it with water.
- Lubricating the inside of the bearing may cause damage to the bearing.

3. Air cleaning is possible, but air pressure may affect the handpiece or motor.
4. When storing the product, keep the burr fixed to the collet chuck.

### ■ Fuse replacement



Take out the fuse box, replace the fuse, and then put it back in the correct location.

- AC 100-120 V: 5 A fuse
- AC 220-240 V: 2 A fuse



## Maintenance

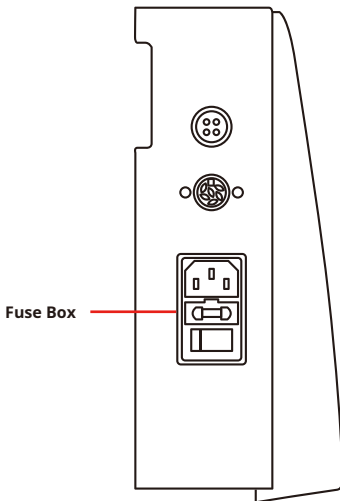
1. Please keep the area of Handpiece clean.
2. Remove the dust with alcohol and avoid any humid conditions for the Handpiece.



- Do not use oil on the product. Do not clean with water.
- Lubricating the inside of Bearing with oil may damage the product.

3. Air cleaning is possible but it may affect the Handpiece or Motor with the air pressure.
4. Store the product with the bur placed into the collet chuck.

### ■ Fuse Exchange

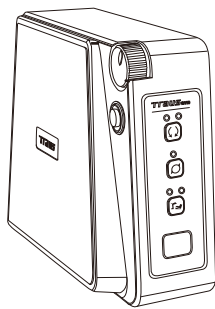


Take out the Fuse Box to exchange the Fuse and place back to where it was before.

- AC 100-120 V: 5 A Fuse
- AC 220-240 V: 2 A Fuse




### ■ Main unit


	model name	B110	B111
	Voltage	AC 100 V, 50/60 Hz AC 110-120 V, 50/60 Hz AC 220-240 V, 50/60 Hz	
	fuse	AC 100-120 V: 5 A AC 220-240 V: 2 A	
	Power Consumption	16W	24W
	maximum load current	2A	

### ■ Handpiece

\*B110 only

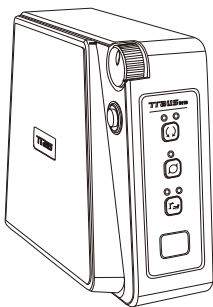
	model name	H180
	Maximum rotation speed (RPM)	50,000 rpm
	talk	7N·cm
	Burr replacement type	Collet chuck type
	Burr dimensions	Φ2.35mm
	motor type	BLDC type

\*B111 only

	model name	H160
	Maximum rotation speed (RPM)	45,000 rpm
	talk	4.5 N·cm
	Burr replacement type	Collet chuck type
	Burr dimensions	Φ2.35mm
	motor type	DC type


## Specification

### ■ Control Box


	Model	B110	B111
	Voltage	AC 100 V, 50/60 Hz AC 110-120 V, 50/60 Hz AC 220-240 V, 50/60 Hz	
	Fuse	AC 100-120 V: 5 A AC 220-240 V: 2 A	
	Electric Energy Consumption	16W	24W
	Max. Overloading Current	2A	

### ■ Handpiece

\* B110 USE ONLY

	Model	H180
	Max. RPM	50,000 rpm
	Torque	7N·cm
	Bur Type	Collet-chuck Type
	Bur Dimension	Φ2.35mm
	Motor Type	BLDC Type

\* B111 USE ONLY

	Model	H160
	Max. RPM	45,000 rpm
	Torque	4.5 N·cm
	Bur Type	Collet-chuck Type
	Bur Dimension	Φ2.35mm
	Motor Type	DC Type



## Product Warranty

Sesshin warrants its products for one year from the invoice date, and product warranty refers to the manufacturer's liability that may arise from materials or workmanship. The warranty does not cover user misuse, incorrect installation, improper maintenance or repair, or normal wear and tear of wear and tear parts such as bearings, spindles, gears or rotors. To verify warranty, we ask for product usage conditions or environmental information, along with the product's serial number and stamped invoice. The warranty is fulfilled through repair or exchange at the manufacturer's product analysis or discretion.

### Warranty exclusion clause

User misuse and improper use and handling In case of  
incorrect use of electrical specifications

Dropped during installation, movement or use.

If a malfunction occurs due to use of consumable parts or accessories not specified by the manufacturer. If the malfunction occurs due to repair at a place other than the manufacturer or a repair shop designated by the manufacturer. Normal wear and tear of consumable parts (ball bearings, gears, chucks, spindle case assembly, rotor) etc.) Damage and breakdown due to natural disasters

Environmental conditions of use	Temperature (°C)	10~30
	humidity (%)	10~80
	Barometric pressure (hPa)	700~1,060
Transport/storage conditions	Temperature (°C)	- 20~60
	humidity (%)	10~90
	Barometric pressure (hPa)	500~1,060



# Warranty

Saeshin covers any defects in product or workmanship under normal use during the warranty period (1 year). During the Warranty Period, Saeshin will repair or replace at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance. However the Warranty excludes any products caused by misuse of product, incorrect installation, inappropriate maintenance and repair from users by using improper bearing, spindle, gear and other parts.

- Warranty Exclusions within the Warranty Period**
- Failure to comply with the manufacturer's written instructions
  - Failure to correctly adjust electricity voltage to the manufacturers stated requirements
  - Damage whether accidental, willful or intentional
  - Use of unauthorized parts or accessories
  - Use of unauthorized service, repairs and alterations
  - Normal wear and tear (Ball bearing, Gear, Chuck, Spindle case A'ssy, Armature etc)
  - Act of God

Conditions for Operations	Temperature (°C)	10~30
	Humidity (%)	10~80
	Atmospheric Pressure (hPa)	700~1,060
Shipment/Storage Conditions	Temperature (°C)	- 20~60
	Humidity (%)	10~90
	Atmospheric Pressure (hPa)	500~1,060



## Symbol mark



On (power)



manufacturer



EU Authorized Representative

S.N.

Serial Number



fuse



When discarded, this product should not be mixed with general commercial waste.



Off (power)



Please refer to the user manual.



common warning signs



Class 2 device



A.C















CE marking





## Symbols

	ON (Power Switch)		OFF (Power Switch)
	Manufacturer		Refer to Instruction
	EU Representative		General Warning Sign
	Serial Number		Class II Appliance
	Fuse		Alternating Current
	Do not dispose with standard industrial waste materials.		CE Marking



**MEMO**

A large, empty rectangular area with rounded corners, intended for writing a memo. The area is light gray and occupies most of the page below the header.



## MEMO

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# traus



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