Instruction Manual

Block Incubator
WSC-2610
MyMiniBLOCK

3rd Edition
April 19, 2024

Made in Tokyo
ATTO
Supporting Life Research

Table of contents

Introduction

Thank you for purchasing ATTO Corporation's block incubator "WSC-2610". This instruction manual (i.e. this document) is delivered to you together with the system so that you can make full use of the system.

Not only those of you who use this system for the first time, but also those who have used it before, should read this document carefully to understand the contents.

If you use this system for the first time, please read this document from the beginning in serial order.

In addition to how to use it, this document contains information related to maintenance, guarantee and services as well. Please keep it handy all the time to make its full use.

If you have any inquiries on your purchased product or the instruction manual, please feel free to contact us. (Please refer to the back cover.)

About this manual

Before using the product, please read this document carefully. After reading it, please be sure to keep it for your future reference. When you relocate this system, be sure to attach this document to it.

If there is any defect in this document such as misplaced or missing pages, or if this document is lost or tainted, we will replace it with a new one. Please take a moment to contact the distributor you purchased the product from or our company's customer service department (please refer to the back cover). At that time, please inform us of your product name and type. This document was created with our most careful attention; however, should you find any queries, errors or omissions, please inform our company's customer service department (please refer to the back cover).

Safety precautions

To use this system safely, it is a must to operate it properly. Do not use this product until you read this document carefully and understand the content sufficiently. Precautions on usage and safety described in this document are applied to the use of this system only for the specified purpose of use. Do not use this system for any other purpose than described here, or do not use this system by any other method than described here. If you use this system for any other purpose or by any other method than described in this manual, you will be held responsible for all necessary safety measures as operator.

If you operate the system for the first time, you need to be given instructions from an experienced operator with proper knowledge, and to understand its principle and method. Not only people who operate the system for the first time but people who have ever used it after receiving professional education should keep this instruction manual handy to make its effective use. In order to prevent any electric shock caused by the system or any damage to the system, please understand and follow the correct operation method shown in this manual.

If you have questions or concern related to the principle of maintenance or inspection, feel free to contact our company (please refer to the back cover).

Safety symbols

To use this system safely and maintain the safe status, the following symbols are indicated in the instruction manual and on the system's main unit. Please note the meaning of each symbol and observe each item.

Symbol	Description
⚠Danger	This symbol indicates emergent danger, such as death or heavy injury caused by ignoring the symbol and mishandling the system.
⚠Warning	This symbol indicates possibility of danger, such as death or injury, caused by ignoring the symbol and mishandling the system.
⚠Caution	This symbol indicates possible occurrence of physical damage caused by ignoring the symbol and mishandling the system.
	This symbol indicates prohibition.
	This symbol indicates an important matter.
	This symbol indicates a tip related to the operation.

Operation precautions

These are precautions for preventing fire, electric shock and other accident or failure. Read and understand the information well, and be sure to observe it.

⚠Danger

Power supply connection 	Do not use a deformed or corroded electrode terminal, AC adapter, power cable whose insulation coating is peeled off, or damaged power cable. Do not connect to this system any power supply other than the power supply attached to this system. Before operating this system, check and confirm that there is no damage to it. Otherwise, it may catch fire or cause electric shock due to loose connection. If there is any damage, stop using this system and contact our company (please refer to the back cover). After use, be sure to turn off the power switch and disconnect it from the outlet. When disconnecting AC adapter from the outlet, be sure to turn off the power switch, and then disconnect it by holding the AC adapter instead of pulling the cable.
Not wet hand 	When handling this system, keep your hands dry. Do not touch AC adapter or connection terminal with wet hands. If you do, electric shock or failure may be caused. If the power supply part or AC adapter gets wet, do not use it. If you do, electric shock or failure may be caused. If wetted, stop using it and contact our company (please refer to the back cover).
Main Unit 	Do not put any foreign object into this system. If you do, electric shock or failure may be caused. If the external surface of this system gets wet, do not use it. If you do, electric shock or failure may be caused. When using it, wipe moisture off the surface and dry it.
Maintenance 	If an error occurs or if there seems to be an error or failure while this system is being used, stop using it immediately. If you find any defect at the time of inspection, do not use this system. If you do, electric shock or defect may be caused. While this system is in use, check if there is any error, such as abnormal sound or smoking, or and see if any liquid leakage by regular visual inspection. If you find an error, failure or defect, stop using it and contact our company (please refer to the back cover).
Heat Alert 	Deleterious substance, dangerous substance, or carcinogenic material may be used for preparation of buffer solution, staining or decoloring operation. Do not allow its direct contact to human body. If you do, fatal accident or body injury, like burn, may be caused. When using chemicals, protect your body with gloves and a mask. Carefully read and observe precautions on handling attached to the chemicals.

⚠Caution

Installation 	Do not install the system on an unstable table, tilted place or a heavily vibrating place. Install it on an experimental table with horizontal, stable and solid surface. Otherwise, electric shock due to falling or liquid leakage may be caused. Do not put any object on this system. If you do, electric shock due to falling may be caused.
Main Unit 	This system is not of explosion-proof structure. Install it at the place where there is no exposure to fire or combustible gas. When taking this system out of a low-temperature room for use, take measures against dew condensation before moving it. If condensation is seen, dry it completely. Otherwise, electric shock or failure may be caused.
Transfer 	While this system is in operation, do not touch any parts other than operation panel, nor move it. Electric shock may be caused by leakage of Running buffer solution. Also, electric cords may get entangled and the system may fall. When moving this system, be sure to turn off the power switch and disconnect AC adapter, and then disconnect all wiring cables.
Maintenance 	When you execute maintenance or cleaning, be sure to turn off the switch of the power supply and disconnect all lead wires. To maintain good performance and safety of this product, please ask us for periodical maintenance, inspection and calibration (please refer to the back cover).
No disassembly 	Do not disassemble or modify this system. Do not remove the external cover. Interior adjustment or repair of this product should be made by our engineers. If adjustment or repair needs to be done, please ask us for it (please refer to the back cover). Our company will not accept any responsibility for any accident or failure caused by disassembly or modification done by yourself.
Sticker 	Do not peel off the warning stickers. They indicate a dangerous section of this system. If it is peeled off or cannot be read due to stain, please contact us (please refer to the back cover).

Warning

AC adapter 	Do not use the power supply part and AC adapter of this system for any other purpose. If you do, failure or accident may be caused. We will not accept responsibility for any accident or failure caused by using the power supply and AC adapter of this system for any other system than this system. If this system is used outside Japan, prepare the conversion adapter complying with the standards of the country where you use it. If a non-standard adapter is used, heat generation or ignition may occur. If you have any inquiries, please contact us or our sales agency (please refer to the back cover)

Information

Sticker 	The name plate sticker shows important information for maintenance and management of the product. Do not peel it off.

Notices

Application

This system is physical and chemical equipment for research. It is not medical equipment. Therefore, it cannot be used for medical practices, such as medical care-related judgment or treatment effect checking.

Export

Export of certain services or cargos is controlled by the foreign exchange law and the government decree or ministerial ordinance of foreign trade control law of Japan. This product is subject to such regulations.

Even if the product is not pertinent to the government decree, it is necessary to submit the document to the customs office to that effect. If the product is pertinent, it is necessary to obtain the export license from the Ministry of Economy, Trade and Industry and submit the license to the customs office.

When you export our company's product, please contact the distributor or our company's customer department in advance.

(Please refer to the back cover)

Trademarks / copyright

1 Overview

This chapter explains purpose and principle of this system.

1.1 Purpose

This equipment is to heat and incubate a sample in higher than room temperature. 0.2 mL, 0.5 mL, 1.5 mL, 2 mL, 15 mL, 50 mL tubes and 10 mm cuvette are applicable.

1.2 Principle

This equipment heats aluminum block that contains samples by inner heater, and with microprocessor regulation it controls heater ON/OFF.

2 Inspection when unpacking the product

This chapter explains items to be checked when unpacking the product and configuration of equipment.

2.1 Inspection at unpacking

When you receive the product, check if the main unit and the accessories are properly packed and there is no damage.

If you find any defect or damage, please contact the distributor you purchased the product from or our company immediately (please refer to the back cover).

Carry out the inspection at the time of unpacking within one week after you receive the product.

After one week elapses, damage or parts shortage may not be recovered.

2.2 Equipment configuration

This product consists of main unit and accessories.

Main Unit (Block incubator MyMiniBLOCK, WSC-2610)

Type	WSC-2610
Code	4002610
Main unit	MyMiniBLOCK

Accessories

Name	Quantity
AC adaptor	1
Block replacement tool	1
Spanner for exchange of block	1
Manual	1

Optional blocks

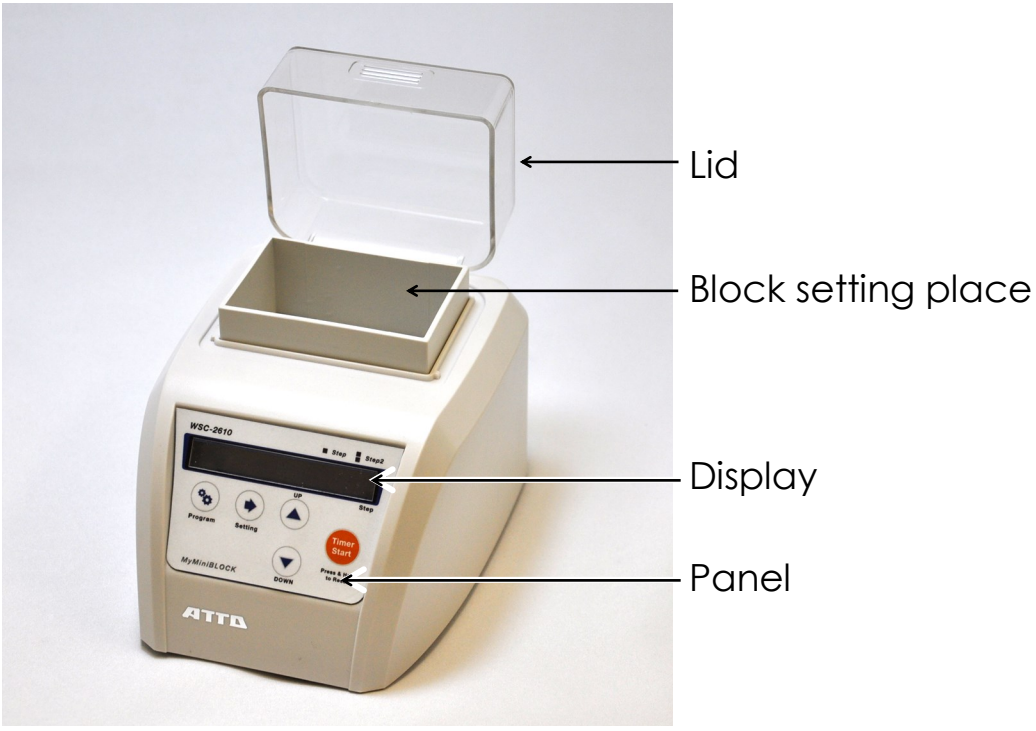
Code	Name
4002640	Block for 40pcs x 0.2mL Microtubes, WSC-2610
4002641	Block for 24pcs x 0.5mL Microtubes, WSC-2610
4002642	Block for 15pcs x 1.5mL Microtubes, WSC-2610
4002643	Block for 15pcs x 2.0mL Microtubes, WSC-2610
4002644	Block for 8x12.5x12.5x32mm Cuvette, WSC-2610
4002645	Block for 4pcs x 15mL Centrifuge tube, WSC-2610
4002646	Block for 2pcs x 50mL Centrifuge tube, WSC-2610

3 Name and function

This chapter explains name and function of each part.

3.1 System configuration

(1) Main unit

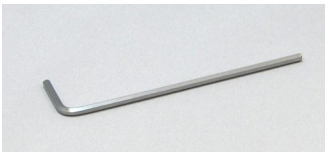


(2) Accessories

AC adaptor

Block replacement tool

Spanner



(3) Optional blocks

Code	Name
4002640	Block for 40pcs x 0.2mL Microtubes, WSC-2610
4002641	Block for 24pcs x 0.5mL Microtubes, WSC-2610
4002642	Block for 15pcs x 1.5mL Microtubes, WSC-2610
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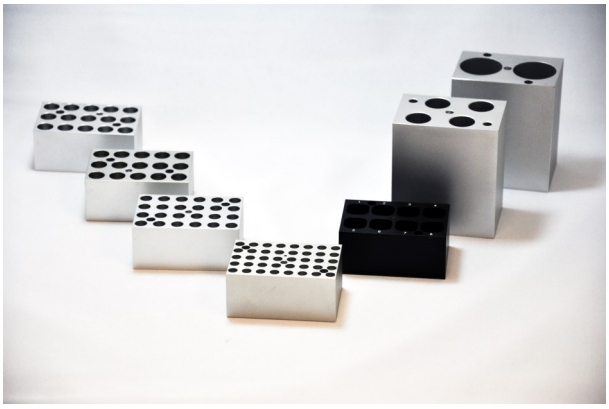
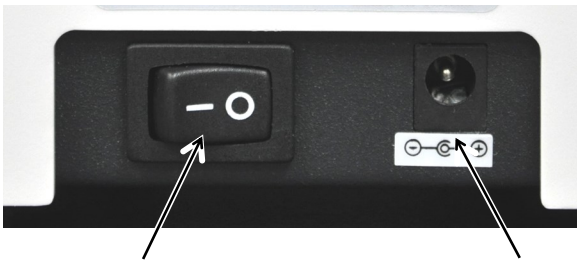
4002646	Block for 2pcs x 50mL Centrifuge tube, WSC-2610



3.2 Main unit

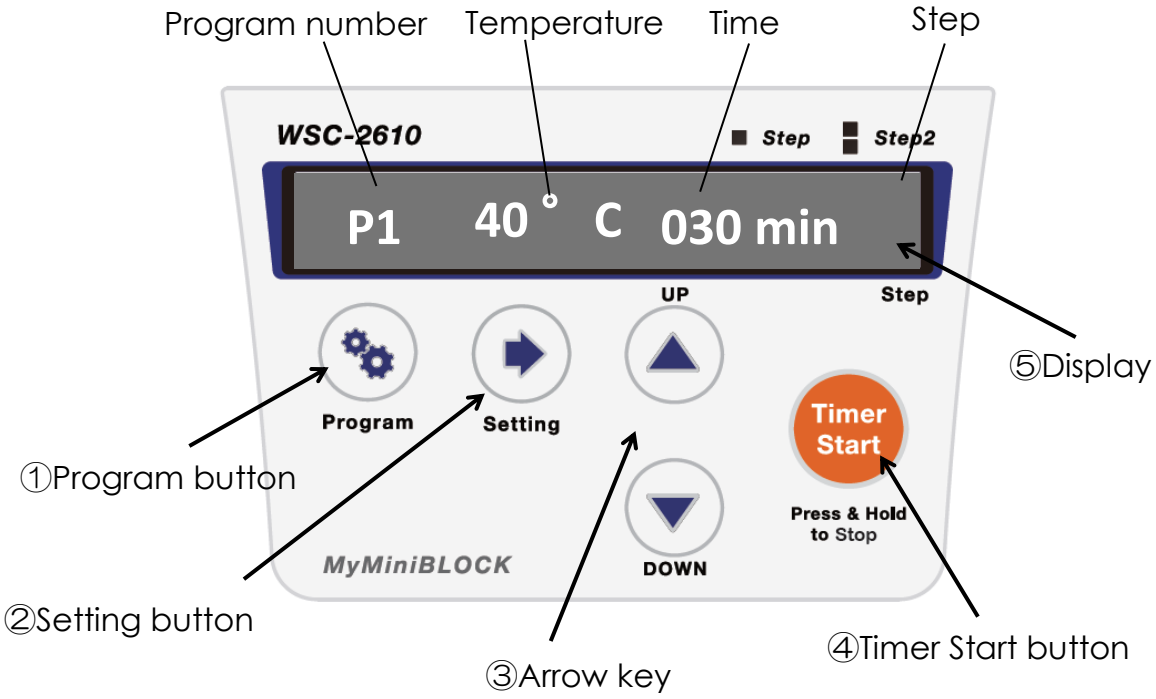
(1) Rear of main unit

Power switch and power connector are located in rear of main unit. Power connector is connected with AC adaptor of standard accessory.



①Power Switch　　②Power connector

(2) Panel



①Program button

Default programs（P１～P９）are selected.

Program number can be changed by pushing the button.

②Setting button

Setting temperature and timer.

Cursor moved by pushing the button.

③Arrow key

Setting temperature and timer values.

Temperature and timer values are changed by pushing the button.

④Timer Start button

By pushing this button, the device starts the operation and heating to reach to the setting temperature. The timer will be started automatically when it reaches at the setting temperature.

Press and hold the button to stop, it will get back to room temperature.

*** Note: If you need to control starting timing of incubating after temperature reaches to setting temperature, please set the temperature with **SETTING button and arrow keys** (don't push the timer start button yet), so that it will wait for pushing the timer start button manually after temperature reaches to setting temperature displaying [OK] with buzzer sound.***

⑤Display

Displaying program number, current temperature, time (remained time, countdown) and step.

3.3 Accessory

AC adaptor

AC adaptor for using at 100V to 240V.

It supplies DC24V to power unit.

AC Plug

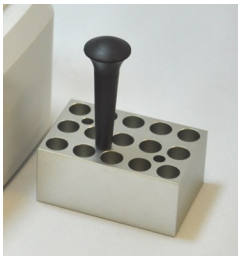
Connect to power socket

DC plug

Connect to power connector of main body

Block replacement tool

Use for replacement of blocks.



Spanner

Use for fixing blocks on the main body.

4 Preparation

This chapter explains preparation before using the product.

4.1 Installation environment

Use this system in the environment described below.

Environment	Inside a room only

⚠Warning

Do not install the product in combustible gas atmosphere. It is not of explosion-proof structure, so the product may cause explosion or fire. Install it in an environment that does not contact combustible gas.
Do not install the product in corrosive gas environment. This is because it can cause corrosion of conductor or inside this product or contact failure of connector, which may lead to malfunction, failure or fire.
Do not install the product in environment with much dust or dirt. Dust or dirt may get attached to the product, which can cause electric shock, fire or failure.

⚠Caution

Do not use the product at a place where there is strong magnetic field or electric field around, or a place where there is much waveform strain of input power supply or noise. Malfunction may be caused.
Do not install the product where it is exposed to direct sunlight, where temperature suddenly changes, or where humidity is high. If dew condensation occurs, do not use this product.
This system cannot be used outdoors. It is designed so that safety and performance can be ensured under the environmental conditions; ambient temperature 5°C - 40°C, relative humidity 5% - 90% (no dew condensation).

4.2 Installation

1. Make sure that power switch is off(O).
2. Connect AC cable to power connector of the main body.
3. Connect AC plug of AC cable to power socket.

Power is OFF(O)

Connect to power socket

4. Set a block on the block setting place.
5. Fix the block with fixing screws by spanner.

Spanner

Fixing screws

5 Operation

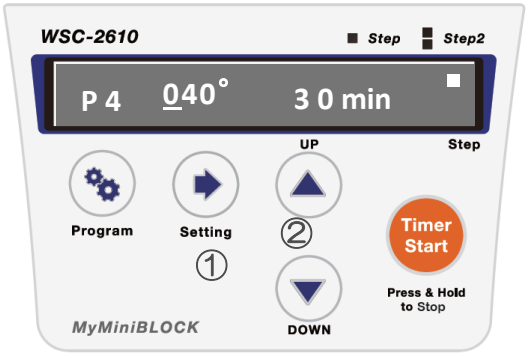
This chapter explains operation of block incubator.

5.1 Change of timer unit

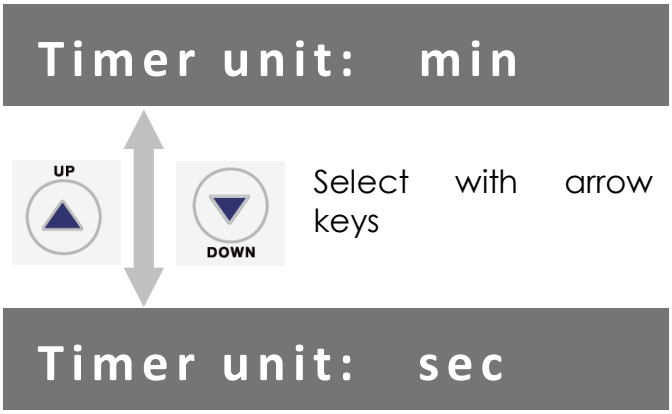
Timer unit is selectable from [min] and [sec].

1. Turn on the main power switch.
   It sounds a buzzer and displays「System Setting」.
2. Push setting button(①).
3. When cursor appears, press and hold the setting button more than 2sec.(①)
4. Display is changed into the setting display of time unit.
5. Select 「min 」or「sec 」with arrow keys(②).
6. Complete the setting by pushing the setting button(①).

※Timer unit is changeable in each program steps. It will be changed of the currently selected program (step) timer unit .



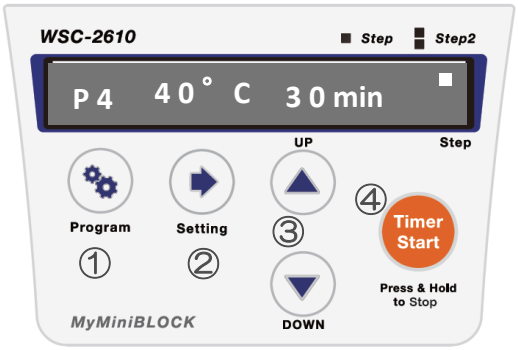
Press and hold the setting button

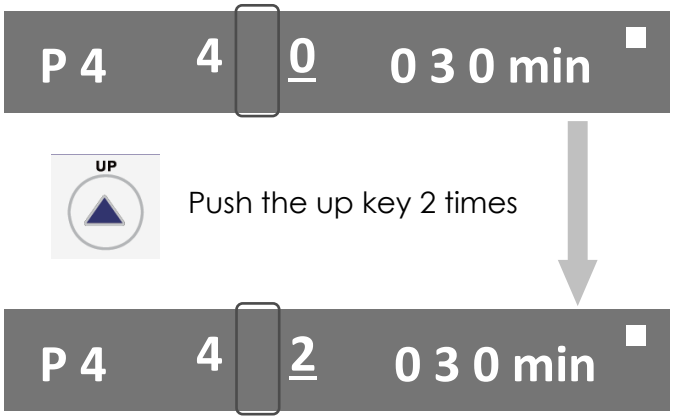


5.2 Setting of temperature, timer & running

Each program can set temperature and timer for 2 setting steps.

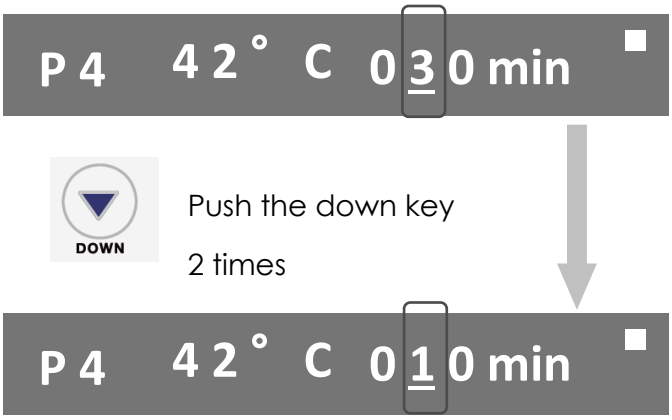
1. Turn the power on.
   「System Setting」 is displayed with a buzzer.
2. Push program button, and select the program from P1～P9(①).
3. Push setting button, and move a cursor by pushing setting button(②).
4. Set a temperature with arrow keys(③).
   ※It can change the number value on the cursor.





5. Move the cursor by setting button to timer display(②).
6. Set the appropriate time with arrow keys(③).

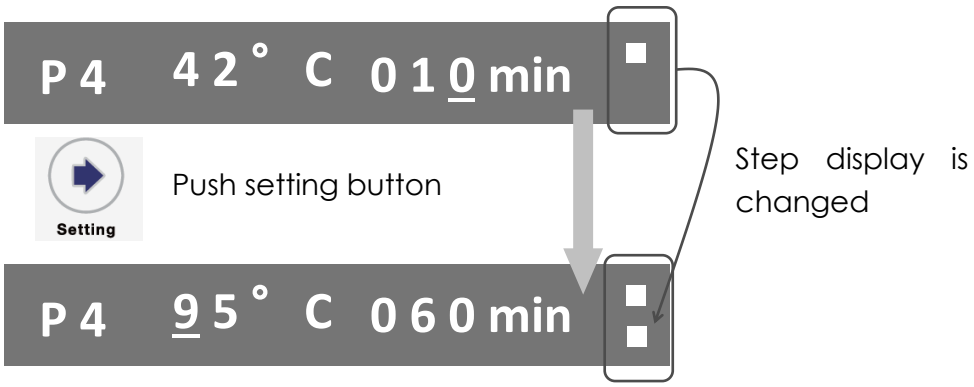
※When the minimum timer, it will display「000 min」, and keep the setting temperature (STANDBY status).



7. The first setting step for temperature and timer is completed. Then set for the next (secondary) setting step.
   ※If secondary setting step is not required, just keep the first setting.
   ※After 10 sec, it displays「HEAT」with blinking to start heating.

⇒Skip the steps to page 11.

8. Move the cursor to the end of right side on the display with setting button(②).
9. It will be changed into the display for secondary temperature and timer setting by pushing the setting button again(②).



10. Set for the secondary temperature and timer with setting and arrow buttons same as the first setting.
11. After completion, just wait until display change.

After 10 sec, it displays「HEAT」with blinking to start heating.

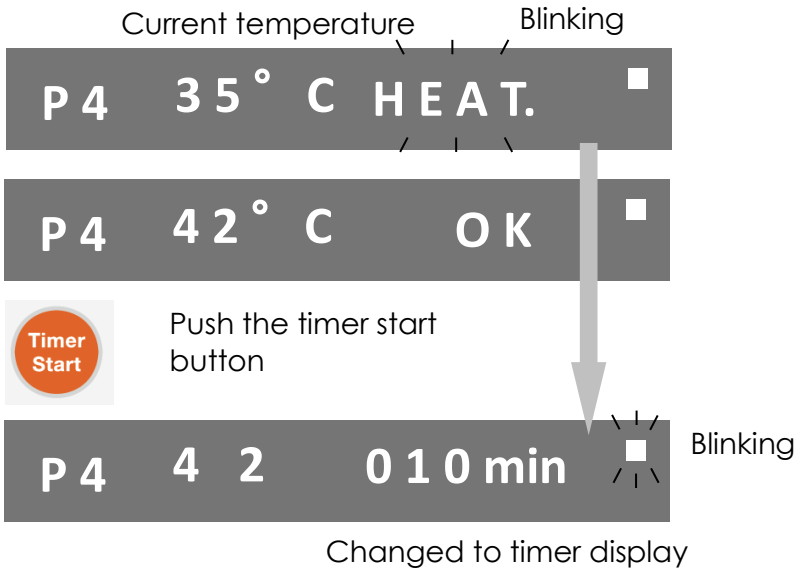
※For resetting of setting values, push the setting button again.

12. When it reaches to setting temperature, the display is changed from 「HEAT.」 to 「OK」with buzzer.
13. Timer is started with buzzer by pushing timer start button(④).

※Timer is countdown method, the remained time will be displayed.

※When timer is started, step display blinks.

※Press and hold the timer start button to stop the operation, and temperature will be back to room temperature.



14. After completion of step1 with buzzer, it will move to step 2 temperature setting operation automatically blinking「HEAT.」.

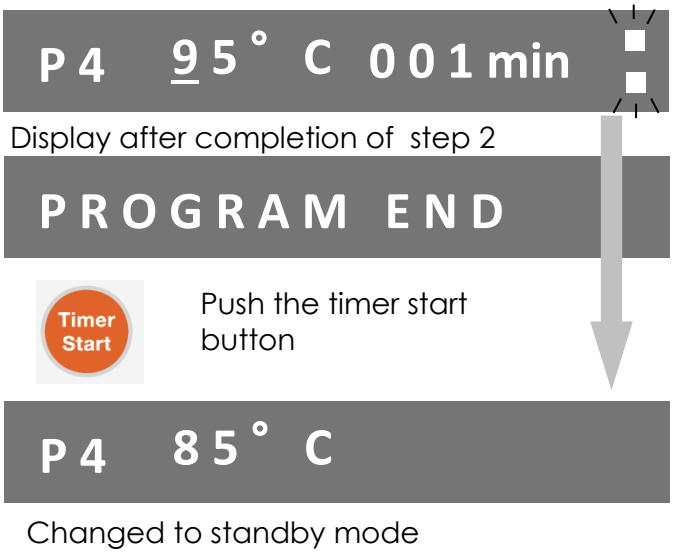
15. When it reaches to setting temperature of step 2, it will start the timer automatically, and blink two indicators of step on the right side.

16. When all operation is completed, buzzer sounds「Pi—」「Pi—」「Pi—」 and display 「PROGRAM END」.

※heater will be off and return to room temperature.

17. When timer start button is pushed, the display is changed to standby mode.

※This model doesn't have cooling function. If setting temperature is lower than device temperature, heater turns to be off.



When you terminate • • •

18. When the device is operating, press and hold the timer start button to stop.

※When the device is waiting, no time is displayed.

19. Turn off the power switch on the rear side.

Power OFF

5.3 Temperature calibration

The temperature of the instrument has been calibrated before leaving factory. But if there is deviation between the actual temperature and the displayed temperature due to some reasons, you can calibrate the temperature as the following steps.

Notes: The instrument uses double temperatures adjustment to ensure its veracity. This means it is linearly calibrated on 40℃ and 100℃ two points. The temperature veracity will be within ±0.5℃ after the double temperature adjustment.

The circumstances temperature should be lower than 35℃.

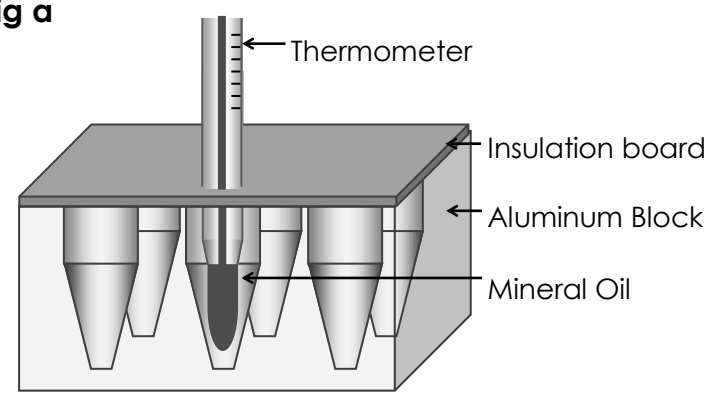
Adjustment methods as follows:

After the startup of the instrument, it enters waiting interface. Make sure the temperature in display is below 35℃. If the temperature is higher than 35℃, you should wait until the temperature is below 35℃.

Inject olefin oil into one of the cone-shaped wells, and then put a thermometer into this well (Make sure the precision of the thermometer should be within 0.1℃ and the temperature ball should be absolutely immerged into the cone-shaped well). Refer to Fig a.

Note: The temperature can be corrected only after the instrument reaches the set temperature for 20 minutes to ensure the precise of the temperature.

Fig a



6 Trouble shooting

When you have a trouble on using of this device, contact ATTO with serial number on the rear side of the device.

6.1 Trouble Shooting

Symptom	Cause	Remedy
No display	It has a trouble in connection of power cable.	Ensure that the power cable is connected properly without looseness.
It sounds alarm with「OPEN」displaying.	It has a trouble with sensor or connection.	Stop using it immediately and contact ATTO (please refer to the back over)
It sounds alarm with「SHORT」displaying.	Short of sensor	Stop using it immediately and contact ATTO (please refer to the back over)
Heating is not operated.	It has a trouble with heater part.	Stop using it immediately and contact ATTO (please refer to the back over)
No responding against pushing of buttons.	It has a trouble with button connection.	Stop using it immediately and contact ATTO (please refer to the back over)

7 Maintenance

This chapter explains maintenance, inspection cleaning, and maintenance such as response to operation failure of equipment.

7.1 Cleaning

⚠Warning When cleaning of the device, do not use corrosive detergent or materials.

Aluminum block

When aluminum block has a dirty, wipe the block with soft cloth putting on neutral detergent or alcohol very gently, and wait until it becomes dry completely.

⚠Warning Just after using heated block, the block may be still hot.
Wait for a while it becomes normal temperature for cleaning.

⚠Warning Execute the cleaning of the aluminum block after detach of block from the main body.

Main body

When cleaning of main body, wipe it with soft cloth putting on diluted neutral detergent by water very gently.

⚠Warning Execute the cleaning of the main body after power switch off and disconnect an AC adaptor.

AC adaptor

When cleaning of AC adaptor, wipe it with soft cloth putting on diluted neutral detergent by water very gently, and wait until it becomes dry completely.

⚠Warning Execute the cleaning of AC adaptor after disconnect the AC adaptor from power socket.

7.2 Inspection

Periodical maintenance and inspection can prevent failure or accident, and you can use the equipment safely. The inspection period varies depending on frequency and time of use, but we recommend that you execute inspection periodically for maintaining good performance.

If you find any error of defect as a result of the inspection shown below, please contact us (please refer to the back cover).

Main body

Check visually to confirm that there is no damage, deformation or corrosion on the terminal part of electrode connector.

⚠Warning When carrying out the inspection of power supply part, disconnect the AC adapter and turn OFF the power switch.

AC adaptor

Check visually to confirm that the insulation coating is not peeled off and that there is no scratch, damage or deformation.

⚠Warning When carrying out the inspection of AC adapter, pull it out from the outlet.

7.3 Maintenance • Repair

Our products come with a repair service period of 7 years from the date of delivery. Therefore, if you wish to have your product repaired, you will need to request it within this period. However, please note that we generally do not accept repair requests for products that have been in use for more than 7 years.

Furthermore, we store parts for discontinued products for a duration of 7 years after production has ceased. Please be aware that even within the repair service period, there may be cases where repair is not possible due to a lack of available parts.

We have full confidence in the quality of our products and provide them to our customers with the assurance that they can use them with peace of mind. However, depending on the usage environment and methods of use, malfunctions or defects may occur. In such cases, we recommend that you request repairs within the repair service period.

If any abnormality or failure occurs while using the unit according to this instruction manual, or if you notice any problem during your maintenance/inspection work, please contact us after checking it according to the relevant [Trouble Shooting] item.

When repair is required, please send the unit back to our Technical Service Group, in principle. If on-site repair is requested, travel expense will be required in addition to the repair cost.

Please refer to the end of Manual for enquiry details.

7.4 Warranty

ATTO Corporation warrants all its products subject to the terms and conditions set forth below.

1. This warranty covers all new products that are sold by ATTO Corporation (hereinafter called ATTO).
2. Expendable items are not covered by this agreement.
3. Claims under this warranty are limited to defects in material and workmanship of the products.
4. Malfunction and/or damage due to neglect, abuse, operation or repair contrary to specifications and/or instructions presented by ATTO are not warranted.
5. ATTO shall not be liable to consequential damage, labor, loss or expense directly or indirectly arising from use of the products.
6. Damage due to transit is not covered by this warranty.
7. The warranty period is one (1) calendar year from a date when the products are shipped from ATTO to an original purchaser.
8. This warranty is not applied to any defect that is reported to ATTO later than one (1) calendar month from a date of warranty termination.
9. ATTO Shall supply parts to replace faulty parts of defective products under this warranty, free of charge.
10. ATTO shall repair defective products under this warranty, which cannot be repaired at field, free of charge.
11. ATTO shall replace defective products under this warranty, which cannot be repaired, free of charge.
12. Freight charges for return and replacement shipments under this warranty are shared by ATTO and a purchaser, that is one way by either party and another way by another party.
13. Warranty period of repaired products and replacement products or parts is three (3) calendar months from a date when the said products or parts are

shipped from ATTO, or a remaining term of an original warranty period of the defective products, whichever lasts longer.

14. Return of the products for credit or refund is not accepted unless otherwise agreed in writing by ATTO.

8 Specification

This chapter explains specification of equipment.

8.1 Specification

Product name	***MyMini BLOCK***
Model	**WSC-2610**
Temp. setting	RT+5℃～100℃
Timer	0～999 sec or 0～999 min
Setting accuracy	≦±0.5℃(temp. of liquid in a tube)
Temp. display	0.1℃
Heating time	≦15 min (20℃→100℃)
Power	Input: 100—240V,50/60Hz
Power consumption	DC24V 48W
Dimensions	120 (L)×152 (W)×112 (H) mm
Weight	0.85 kg

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