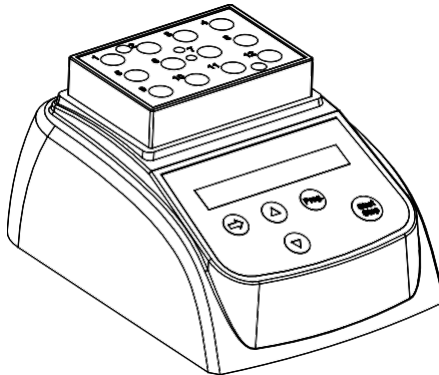


INCUBATOR

Operations Manual

Rev B



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hygiena

Foreword

Thank you for purchasing the Digital Dry Block Incubator (INCUBATOR). This manual contains function and operating instructions. In order to use INCUBATOR properly, please read this manual carefully before use.

Opening Check

Please check the Instrument with the packing list when you first open the instrument packing case. If you find there is something wrong with the Instrument, contact Hygiena.

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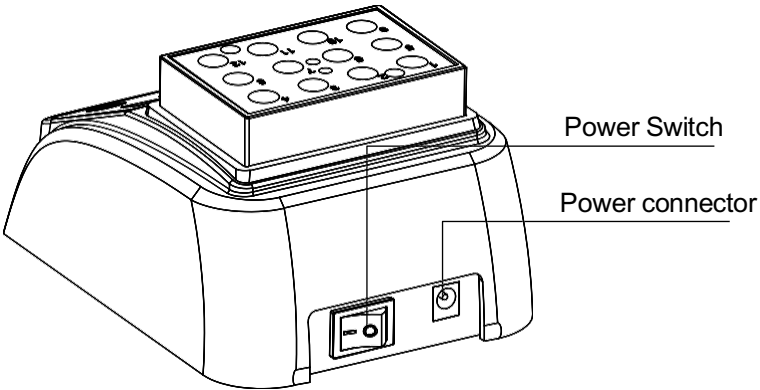
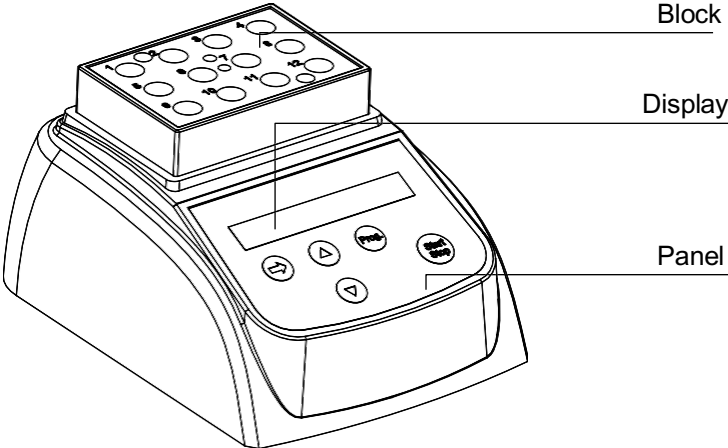
1 Introduction

Before starting up this incubator for the first time, please read the rest of this operations manual.

1.1 Contents

Incubator	1pcs
Adapter	1pcs
Wrench	1pcs
Operations manual	1pcs
Certification	1pcs

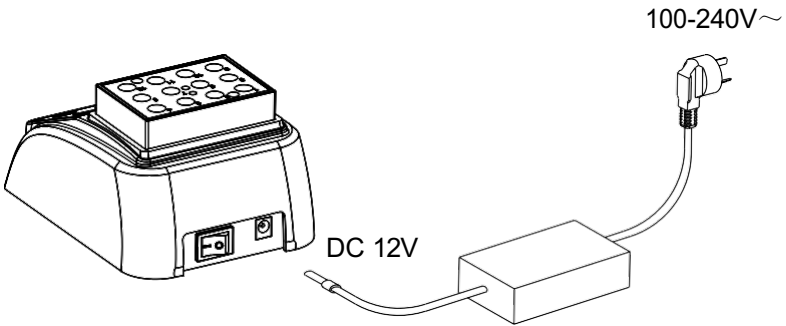
1.2 Structure Description



1.3 Installing the device

1.3.1 Place the incubator onto a level , horizontal surface.

1.3.2 Connect incubator to power cord, and connect power cord to main power supply.



1.3.3 Power on the main switch. The incubator is ready to operate when the display becomes visible.

2 Technical data

Model	INCUBATOR
Power supply	DC12V
Power	35 W
Temperature range	RT+5 °C ~ 80 °C
Timing range	1sec ~ 999sec or 1min ~ 999min
Accuracy of the temperature	≤± 0.5°C
Display accuracy	0.1°C
Heating time (from 20 °C to 80 °C)	≤12min
Ambient temperature	5°C ~ 35°C
Dimensions (W×D×H)	110mm×150mm×80mm
Weight	0.5 kg

3 Safety precautions



This product is for indoor use only.



Read the Manual carefully before operation.



The operator should not open or repair the Instrument, which will result in loss of repair guarantee or could cause an accident. If there is some wrong with the Instrument, contact Hygienea.



The Instrument should be operated in an environment with low temperature, little dust, no water and no sun or strong lamp. The area should have good airflow, no corrosive gas or strong disturbing magnetic field, far away from central heating, camp stove and other hot resource.



Power switch is on the rear of the device, push "I" to power on the device, and push "O" to power off the device.



Power connector is on the rear of the device, DC12V input, inside is "+", outside is "-".



Power off when not in use. Pull off the connector plug and cover it with a cloth or plastic paper to prevent from dust for extended non-use.

4. Operation guide

4.1 Control elements

START/STOP---- start or stop the procedure

PROG----- select various programs

----- for setting the temperature and the time

➡ -----move the cursor

4.2 Create a new program

Press "PROG." key to select various programs, from P1 to P9 default. For examples, select P8, then press **➡** key to move the cursor, press key to set new value. Users can set first temperature and time, then second temperature and time. The sign "■" is first temperature and time, the sign "■" is the second temperature and time.

P8 50.0 003min ■

First temperature and time

P8 40.0 006min ■■

Second temperature and time

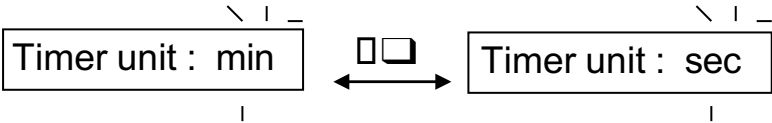
IN ~8 seconds, the curse will disappear, exiting the setting interface.

P8 36.2 °C NOTOK

➡ Room temperature

4.3 Min or sec

At setting interface, the timer unit can select either Minute or Second. Press **➡** key for 2 seconds.



Then press to select min or sec. Press **➡** key to confirm.

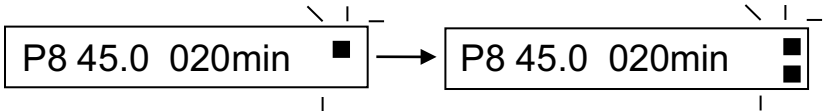
4.4 Run and Stop

4.4.1 Press “PROG.” key to select the program.

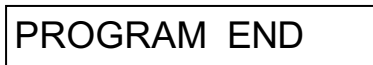
4.4.2 The instrument starts to heat automatically according to the previous set temperature. It shows “NOTOK” on the display. When it reach the target temperature, it shows “OK” at the display. Then press START/STOP key to run.



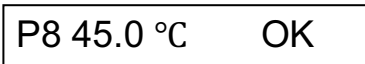
When the first timing at the first temperature is complete, the second temperature automatically begins.



4.4.3 When the second time reaches 0, the buzzer alarms and the display will read “PROGRAM END”. The second temperature will be maintained. Press any key to return, or press the START key to run again.



Press any key



Press START to run again

4.4.4 Press “START/STOP” key for 1 second to stop the program.

4.5 Temperature calibration

The temperature of the instrument has been calibrated at the factory. If there is deviation between the actual temperature and the displayed temperature due to some reasons, attempt the following:

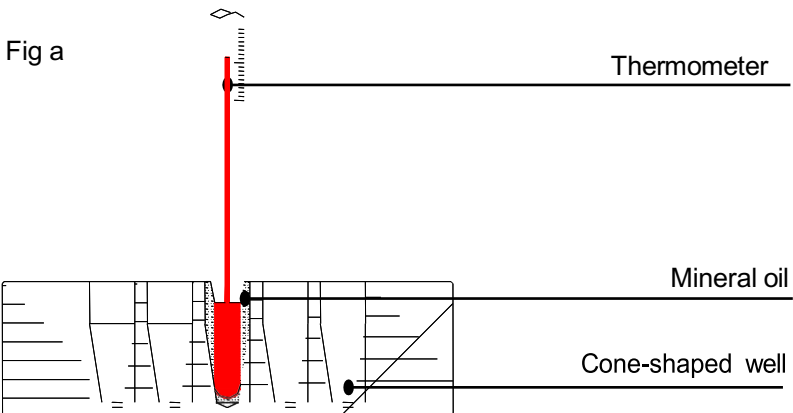
Notes: The Instrument uses double temperatures adjustment to ensure its veracity. This means it is linearly calibrated on 40 °C and 80 °C (two points). The temperature veracity will be within ± 0.5 °C after the double temperature adjustment. The ambient temperature should be lower than 35 °C.

Adjustment methods as follows:

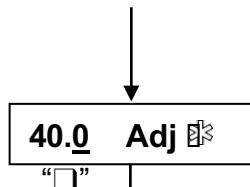
4.5.1 After the startup of the Instrument, it enters standby mode. Make sure the temperature in display is below 35 °C. If the temperature is higher than 35 °C, you should wait until the temperature is below 35 °C.

4.5.2 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 °C and the temperature ball should be absolutely immersed into the cone-shaped well). See Fig a.

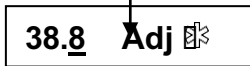
Note! The temperature can be corrected only after the instrument reaches the set temperature for 20 minutes.



4.5.3 Press “□” and “□” key simultaneously, practical temperature shows 20.5, and rises to 40.0 at once. At the same time the sign “*” flickers. When the practical temperature reaches 40.0, the sign “ADJ” and “*” flicker together.

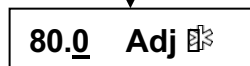


4.5.4 After 20 minutes, the actual temperature of Thermometer is 38.8 °C, then press “□” or “□” key to amend the display value to 38.8, then press “start” key to confirm.



The temperatures will rise to 80.0 °C automatically and “*” will flicker.

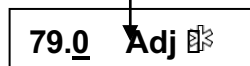
Press “start”



4.5.5 When the practical temperature reaches 80.0, the sign “ADJ” and “*” flicker together.

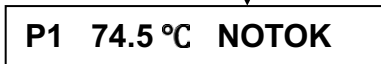
“□”

4.5.6 After 20 minutes, the actual temperature of Thermometer is 79.0 °C. Press “□” or “□” key to amend the display value to 79.0, then press “start” key to confirm.



Press “start”

4.5.7 Then the screen returns to the display as seen to the right.



After Temperature calibration, the temperature displayed is the same as the practical temperature of block.

Note! During Temperature calibration, press “□” and “□” key simultaneously to cancel the calibration. The system keeps the former calibration.

5 Maintenance and cleaning



Block wells should be cleaned with a cloth dampened with alcohol.

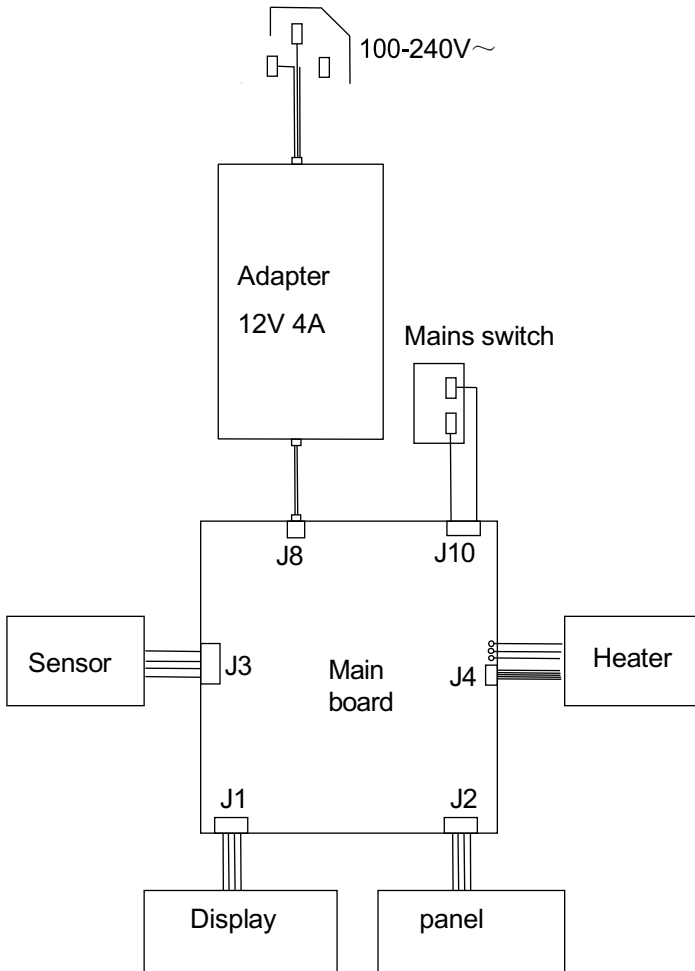


Power off when cleaning the Instrument. When cleaning the well, don't drop cleaning liquid in the well. Do not use corrosive cleaning liquid.


6 Troubleshooting

Error	Cause	Solution
No display	No main power connection. Power failure.	Plug in main cable on both sides. Check the fuse
“OPEN” in the display with alarm	Broken sensor or loose contact of the module	Contact service.
“SHO” in the display with alarm	The sensor is short	Contact service.
No heating of the block	Heater failure	Contact service.
Press invalid	Keyboard failure	Contact service.

Appendix 1 Wiring Diagram for Incubator



Packing List

No	Item	Type	QTY
1	Incubator	INCUBATOR	1
2	Adapter	12V 4A	1
3	Wrench		1
4	Operation manual		1
5	Certification		1