IbX instruments HDB Digital LED Dry Bath User Manual

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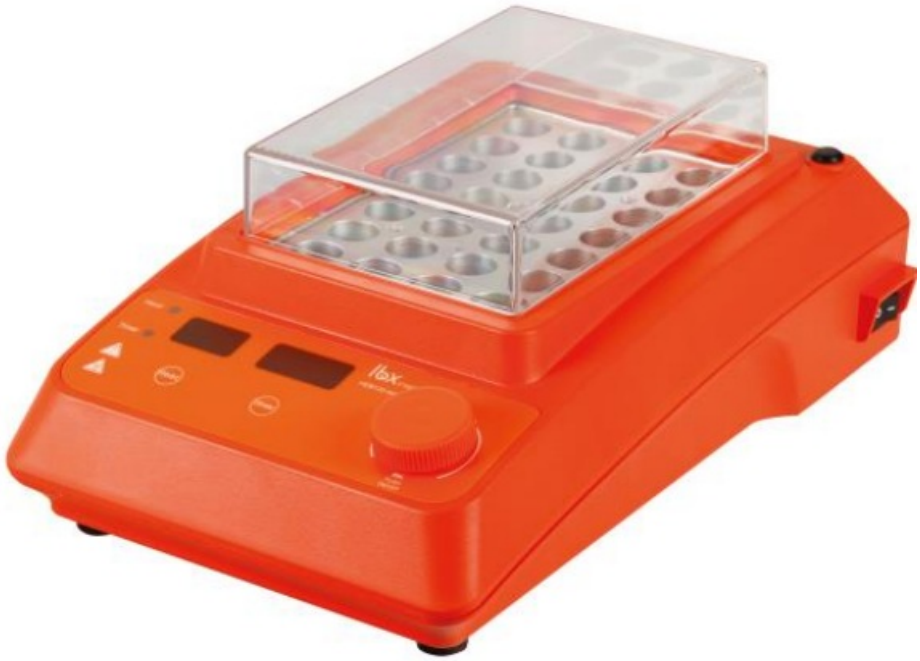


Preface

Users should read this Manual carefully, follow the instructions and procedures, and beware of all the cautions when using this instrument.

Service

In If help is needed, you can always contact your dealer or Labbox via **www.labbox.com**
Please, provide the customer service representative with the following information:

- Serial number (on the back side)
- Description of the problem
- Your contact information

Warranty

This instrument is guaranteed to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.
For claim under the warranty, please contact your supplier.

Safety Precautions

- Connect the device to an earthed power supply to ensure safety of the machine and the experiment; connect the power when the machine requires it.
- The use of this instrument in inflammable, explosive, poisonous, or highly corrosive experiments is forbidden.
- Place the dry bath on a horizontal, flat, stable table leaving 100 free mm on each side. Make sure the surface is adequate for the equipment’s weight.
- This item must only be used by previously qualified staff that has read the instructions manual and knows how to operate it.

- Do not place the device near any heat source.
- During its functioning, dangerous materials such as flammable or pathological substances must be out of the device’s safety area.
- While the machine is working, do not touch the working surface, in order to avoid burns.
- Read the instructions manual before using this device.
- When working, wear the necessary personal protective equipment to avoid the risk of:
  – Burns caused by splashing and evaporation of liquids
  – Intoxication caused by release of toxic or flammable gases.
- Set up the instrument on a spacious, stable, clean, non-slip, dry, and fireproof surface that can support the equipment’s weight. Do not operate the instrument in explosive atmospheres or with hazardous substances.
- The temperature must be set at least 50ºC below the flash point of the substances used.
- Beware of hazards due to:
  - Flammable materials or media with a low boiling temperature
  - Vessel overfilling
  - Unsafe vessels
- Process pathogenic materials only in closed vessels.
- The device and accessories shall be checked before handling prior to each use. Do not use damaged components. Safe operation is only guaranteed with the accessories included. Accessories must be securely attached to the device and cannot come off by themselves. Always disconnect the plug before assembling or disassembling accessories.
- The instrument can only be disconnected from the main power supply by pulling the plug, not the wire.
- The voltage stated on the label must correspond to the main power supply.
- Ensure that the main wire does not contact the heating base. Do not cover the device.
- Keep away from high magnetic fields.

Instructions for use

The instrument has been designed for heating liquids in schools, laboratories, industries and research purposes. It is not suitable for domestic use or for use in environments that can be hazardous for either the user or the instrument.

Inspection

Unpacking

Unpack the equipment carefully and check for any damages that may have arisen during transportation. If necessary, contact your supplier for technical support.

Note:
If there is any apparent damage on the equipment, please do not plug it into the power line.

Items list

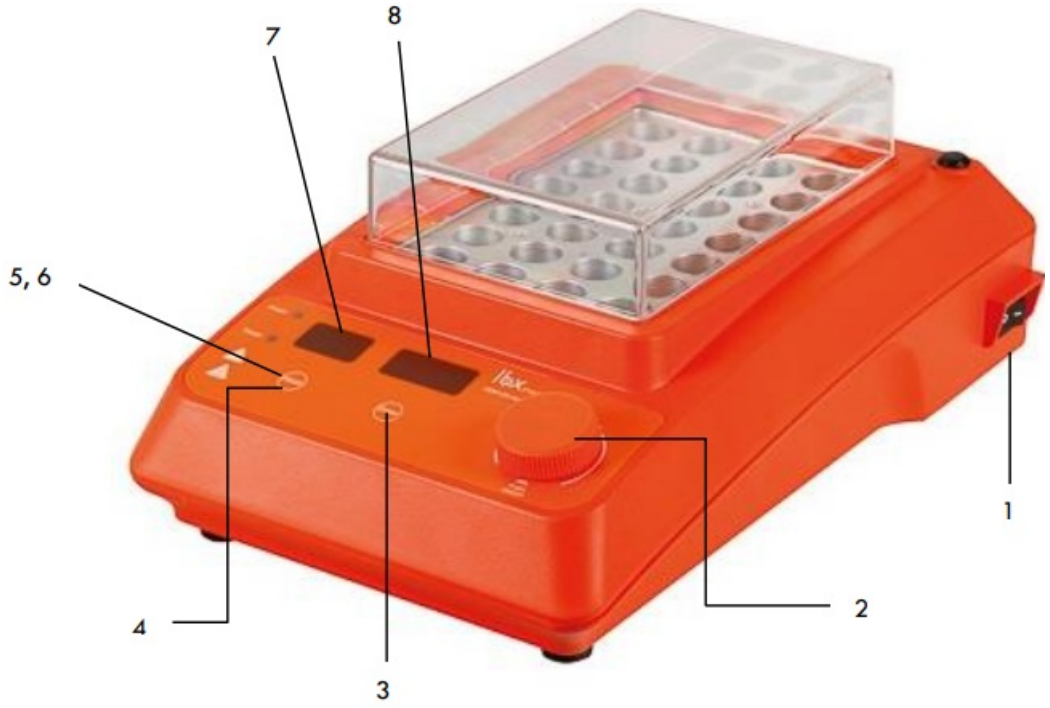
The package includes the following items:
LBX HDB120 series:

Items	Quantity
Main unit	1
Power cable	1
Instructions manual	1

Control Elements

Digital led dry bath LBX HDB series:

In the HB120-S series, the control panel is set up the following way:



1. Power
2. Parameter adjustment know
3. Time adjustment button
4. Temperature adjustment button
5. Timer LED
6. Heat LED
7. Temperature screen
8. Time screen

Trial run

- Make sure the required operating voltage and the power supply’s voltage match.
- Make sure the socket is earthed.
- Add the substance to heat in the testing tube and place it on the work plate.
- Plug in the power inlet, and turn on the “POWER” (1) switch.
- Set the target temperature with the T º button (4) and adjust it with the knob (2). You shall see the required

temperature on the screen (7)

- Set the time, with the timer button (3) otherwise, the machine will work continuously. The selected time should appear on the timing screen (8)
- Press the parameter setting knob (2) to start the heating function.
- While the device is on, the heat led (6) will be on (yellow light) and if the timer has been set, the timer led (5) will also be on.
- On the Tº display (7) working temperature shall appear. If the timer has been set, the adjusted time will show on the time display (8)
- If the heat increases and the timer is counting down, the device is working properly.

6. Handling

- Place the equipment in a plane and stable surface, leaving at least 100 mm of free space on each side. Make sure that the surface is adequate for the weight of the equipment.
- Add the substance into the testing tube and place it on the work plate.
- Plug the appliance, and turn on the “Power” switch.
- Wait until the device finishes the initializing process, the real temperature of the device will appear on the screen (7).
- After adjusting temperature and timer (if necessary), press the adjusting knob (2)
- The heat (6) and time (5) LEDS shall stay on (yellow)
- After use, the device must be turned off using the “Power” button (1) and unplugged.
- Make sure the device stays unplugged while is not being used for long periods

Note:

- Make sure that the voltage required by the equipment matches with electrical network.
- Make sure the main power cord is not in contact with the heating surface
- If the equipment is damaged, please disconnect it from the electrical network

Heat setting

- The device is controlled by digital temperature control technology, the maximum temperature is 120°C.
- Set the target temperature with the Tº button (4) and adjust it with the knob (2) to the target value. For saving this parameter press the knob (2).You shall see the working temperature on the screen (7). The device will start with the heating function

Timer setting
The device can work in accordance with the timing mode or continuous operation mode.

By default, this option will remain inactive, the device will work continuously until it’s turned off manually. In order to work with specific periods of time, proceed as follows:

- To set the timing mode, press the timer button (3), (the time display area will be flashing)(8) and will show the last setting, by default will be “00:00”.
- Rotate the parameter setting knob (2) to set the target time (min), press the parameter setting knob to save the

selected option. On the timing screen (8), the countdown will be displayed.
During operation, motion can be stopped at any time by pressing the speed/timer control knob. If the knob is pressed again, motion and timer countdown will restart. When the timer reaches zero, the unit will stop automatically.

- To set the continuous mode: Press the time switch button (3), the characters in time display area will be flashing, make sure the setting time is “00:00”, press the parameter setting knob (2) to save the changes and the timer will be disabled.
  Note: The working temperature needs to be set before the timer.

Faults

- The device does not start:
  - Check if the power line is unplugged.
  - Check if the fuse is broken or loose.
- The set temperature can’t be reached:
  - Check if the control panel has been damaged.
  - The electric resistance could be damaged.
  - If these faults are not resolved, please contact manufacturer/supplier.

Maintenance and Cleaning

- Proper maintenance can keep instruments working properly and lengthen its lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Unplug the power line while cleaning.
- Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tensides / Isopropyl alcohol
Cosmetics	Water containing tensides / Isopropyl alcohol
Food	Water containing tensides
Fuels	Water containing tensides

- Before using other cleaning or decontamination method, the user must ensure with the manufacturer that this method will not harm the instrument.
  Wear the proper protective gloves during cleaning procedures.
- The device needs to be cleaned and decontaminated before sending to repair.
- Must be sent with the original packing.
- Make sure the device is used on a clean and dry surface and that the ambience temperature is steady

Transport and storage

- Keep the device on a dry and clean place with good airing and free of corrosive gases and flammable or corrosive atmospheres.
- Ensure that the device does not get wet or hit during transport

Associated Standards and Regulations

Construction in accordance with the following safety standards
EN 6110-1 (Security standards for the measurement electric devices of control and laboratory use) **UL 3101-1** (Electric devices for laboratory purposes) **CAN/CSA C22.2 (1010-1)** **EN61010-2-10** (heating)
Construction in accordance with the following EMC standards
EN 61326-1 (Electromagnetic compatibility)
Associated EU guidelines:
EMC guidelines: **89/336/EWG** Instrument guidelines: **73/023/EWG**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested to comply with the limits for an electrical device of class A with compliance with part 15 of the FCC rules. These limits are designed to provide protection against interference when the equipment operates in a commercial environment. This equipment generate, use and can radiate radio frequency energy, therefore, if it is not installed and used in accordance with this instruction manual, it may cause interference in radio communications. Using this equipment in residential areas may cause harmful interference in this case, the user will have to correct these interferences at his own expense.

Technical characteristics

Item	Especificación
VoltaGe [VAC]	200-240
Frequency (Hz)	50/60
Power [W]	160
Block dimension [mm]	150×95
Temperature range [ºC]	Tª Amb. +5º-120ºC
Temperature view	LED
Precision	±0.5 ºC
Security temperature [ºC]	140 ºC
Timer	Si
Time range	1 – 99h59min
Operating setting	continuous / Timer
Dimensions [W x D x H mm]	175 x 290 x 85
Weight [Kg]	1.6 (without the block)
Permissible temperature	5-40 ºC
Permissible humidity	80%
Protection DIN EN 60529	IP 21

www.labbox.com

Documents / Resources

	lbX instruments HDB Digital LED Dry Bath [pdf] User Manual HDB Digital LED Dry Bath, LED Dry Bath, HDB Digital Dry Bath, Dry Bath, Bath

References

- Lab supplies - Labbox Export
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