



NÜVE SANAYİ MALZEMELERİ İMALAT VE TİCARET A.Ş.

NB 5 / NB 9 / NB 20

WATER BATHS

USER'S MANUAL



Dear Nüve User,

We would like to take this opportunity to thank you for preferring this Nüve product. Please read the operating instructions carefully and keep them handy for future reference.

Please detain the packing material until you see that the unit is in good condition and it is operating properly. If an external or internal damage is observed, contact the transportation company immediately and report the damage. According to ICC regulations, this responsibility belongs to the customer.

While you are operating the instrument please;

1. obey all warning labels,
2. do not remove warning labels,
3. do not operate damaged instrument,
4. do not operate instrument with a damaged cable,
5. do not move instrument during operation.

In case of a problem contact your Nüve agent for an authorized service or maintenance.

The validity of the guarantee is subject to compliance with the instructions and precautions described in this manual.

Nüve reserves the right to improve or change the design of its products without any obligation to modify previously manufactured products.

Information contained in this document is the property of Nüve. It may not be duplicated or distributed without our permission.

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WARRANTY CERTIFICATE

1. Nüve warrants that the equipment delivered is free from defects in material and workmanship. This warranty is given for a period of two years. The warranty period begins from the delivery date.
2. Warranty does not apply to parts normally consumed during operation or general maintenance or any adjustments described in the operating instructions provided with the instrument.
3. Nüve does not accept any liability in case where the goods are not used in accordance with their proper intent.
4. The warranty may not be claimed for damages incurred during the shipment, for damages resulting from improper handling or use, abuse, fire, liquid spillage, tampering or unauthorized repairs by any persons, use of defective or incompatible accessories, exposure to abnormally corrosive conditions, use of the product in non-standard environmental conditions, including but not limited to failure to meet requirements of ambient temperature, lubrication, humidity or magnetic field influences, from the defects in maintenance, negligence, bad functioning of auxiliary equipment, in the case of force majeure or accident and incorrect power supply.
5. Any injury, loss or damage caused; due to a failure resulting from negligence of the instructions given in this manual; is beyond the scope of the warranty conditions.



BEFORE OPERATING THE INSTRUMENT THIS MANUAL SHOULD BE READ CAREFULLY.



THE VALIDITY OF THE GUARANTEE IS SUBJECT TO THE OBSERVATION OF THE INSTRUCTIONS AND PRECAUTIONS DESCRIBED IN THIS MANUAL.

INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF NÜVE. IT MAY NOT BE DUPLICATED OR DISTRIBUTED WITHOUT PERMISSION.

PLEASE REGISTER ONLINE TO VALIDATE YOUR WARRANTY:

To register your warranty online, please visit our webpage www.nuve.com.tr and fill in the “Warranty Registration Form”.

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1. INTRODUCTION

1.1. USE AND FUNCTION

NB 5, NB 9 and NB 20 Water Baths accurately control the temperatures of samples and commonly used in microbiology, research and industrial laboratories. They offer excellent temperature control of liquid producing a uniform and stable heating environment for the applications. They provide temperatures between 5°C above the ambient temperature and 99.9°C for procedures where temperature uniformity and stability are important. The homogeneous temperature distribution in the tank is ensured by means of the heaters which are placed around chamber.

The baths are equipped with the timer and they are controlled by a PID microprocessor controlled system to ensure precise temperature control. Two digital displays situated on the user-friendly control panel display the temperature and time values.

All components which are exposed to liquid are made of high grade stainless steel to resist corrosion.

**The NB Series Water Baths are manufactured according to the following standards:
EN 61010-1, EN 61000-6-3, EN 50419.**

This device is in compliance with WEEE Regulation.

If the warnings mentioned in this manual are not considered, NUVE will not be responsible from their results.

1. TECHNICAL SPECIFICATIONS

2.1. TECHNICAL SPECIFICATIONS TABLE

TECHNICAL SPECIFICATIONS	NB 5	NB 9	NB 20
Temperature Range	Ambient temperature + 5°C / 99.9°C		
Temperature Sensor	Fe-Const.		
Control System	Programmable PID Microprocessor		
Temperature Set and Display Sensitivity	0.1°C		
Temperature Uniformity (<40°C)	± 0.2°C		
Temperature Fluctuation	± 0.1°C		
Timer	1 min – 99.9 hours + Hold position		
Delayed Start Timer	1 min - 99.9 hours		
Power Supply	230 V, 50 / 60 Hz		
Power Consumption	600 W	700 W	1500 W
Tank Volume (Liters)	6	9.5	21
Useful Volume (Liters)	4	7	15
Internal Material	Stainless Steel		
External Material	Epoxy-Polyester Coated Steel		
Internal Dimensions (WxDxH) (mm)	150x300x150	240x300x150	500x300x150
External Dimensions (WxDxH) (mm)	240x400x275	325x400x275	595x400x275
Net / Packed Weight (kg)	7 / 8	8 / 9	11 / 13

2.2. OPTIONAL ACCESSORIES

K 04 290 Plexiglass lid for NB 5 (resists up to 60°C)

K 52 010 Stainless steel lid for NB 5

K 04 286 Plexiglass lid for NB 9 (resists up to 60°C)

K 52 007 Stainless steel lid for NB 9

K 04 289 Plexiglass lid for NB 20 (resists up to 60°C)

K 52 003 Stainless steel lid for NB 20

K 52 008 Lid with 4 holes for NB 9 (Hole dia 95 mm)

K 52 005 Lid with 4 holes for NB 20 (Hole dia 95 mm)

K 52 006 Lid with 6 holes for NB 9 (Hole dia 95 mm)

K 52 014 Lid with 8 holes for NB 9 (Hole dia 95 mm)

A 08 051 Tube rack 52xØ13 mm, wide 70 mm

A 08 050 Tube rack 30xØ16 mm, wide 70 mm

A 08 021 Tube rack 27xØ18 mm, wide 70 mm



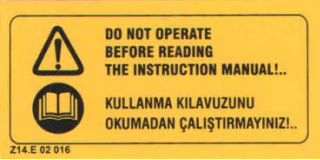







A 08 049 Tube rack 12xØ30 mm, wide 70 mm

2. PRECAUTIONS AND LIMITATIONS ON USE

The user shall pay attention to the following:

- Do not operate the instrument for purposes other than its main purpose.
- The instrument should only be used by authorized and trained staff after the instruction manual has been read carefully. Only authorized technical staff can handle the product in case of a failure.
- Only original spare parts and original accessories supplied by Nüve should be used.
- Electricity line is suitable for the power of device and correctly grounded power supply should be used.
- The set temperature should not destroy the structure of the samples without user's notice.
- The boiling points of the samples should be higher than the set temperature.
- The samples which may liquefy and expand should not be in a sealed container.
- Liquids which may expand during heating should not overflow from their containers.
- The materials which will be subject to heating should not be combustible, explosive, heat susceptible, flammable, adhesive and fusible.
- Ensure that the vapors and gases generated during the operation are not harmful to human health and flammable or explosive.

3. SYMBOLS AND LABELS

	<p>Symbol in the operating instructions: Attention, general hazard area.</p> <p>This symbol refers to safety relevant warnings and indicates possibly dangerous situations.</p> <p>The non-adherence to these warnings can lead to material damage and injury to personal.</p>
	<p>Symbol in the operating instructions: This symbol refers to important circumstances.</p>
<p>Labels on the product:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"><div style="text-align: center;"><p> F2x4A 250V ~ NB 5 Fuse (2x4A)</p></div><div style="text-align: center;"><p> F2x5A 250V ~ NB 9 Fuse (2x5A)</p></div><div style="text-align: center;"><p> F2x10A 250V ~ NB 20 Fuse (2x10A)</p></div><div style="text-align: center;"><p>Earthed Wall Sockets</p></div><div style="text-align: center;"></div></div>	

4. INSTALLATION

6.1. ENVIRONMENTAL CONDITIONS

The instrument is designed to operate safely under the following conditions:

- Indoor use only
- Ambient temperature: 5°C to 40°C
- Maximum relative humidity for temperature up to 31°C: 80%
- Maximum altitude: 2000 m
- Temperature for maximum performance: 15°C / 25°C

6.2. HANDLING AND TRANSPORTATION

All handling and transportation must be carried out by using proper equipment and experienced staff. The instrument must be supported underneath and never be turned upside down.

6.3. UNPACKING

Remove the cardboard box packing and the second nylon wrapping around the instrument. Ensure that no damage has occurred during transportation. The below mentioned are provided with the instrument, please check them;

- 1 ea. user's manual and warranty
- 1 ea. electrical cable
- 1 ea. perforated grid

6.4. MAINS SUPPLY

The instrument requires 230 V, 50 / 60 Hz.

Please make sure that the supplied mains matches the required power ratings which are written on the name of plate of the instrument located at the back of the instrument.



Always plug-in the instrument to correctly grounded sockets.



A supply fitted with a circuit breaker should be used for protection against indirect contact in case of isolation fault.

6.5. POSITIONING

- Check that the positioning is suitable for the users.
- Check that the instrument is stable on its four pedestals.
- Check that the user will be able to follow up the operation even when he deals with something else.
- Check that the positioning of the device prevents interference with other equipment in the near surrounding.

6.6. GENERAL PRESENTATION



TANK

TEMPERATURE SENSOR

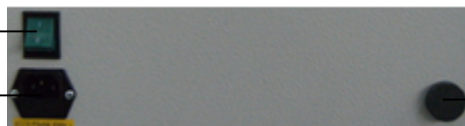
GRID

DISPLAY AND CONTROL PANEL

Figure 1

ON / OFF SWITCH

SUPPLY INPUT AND
FUSES



WATER DISCHARGE
LINE

Figure 2

6.7. CONTROL PANEL

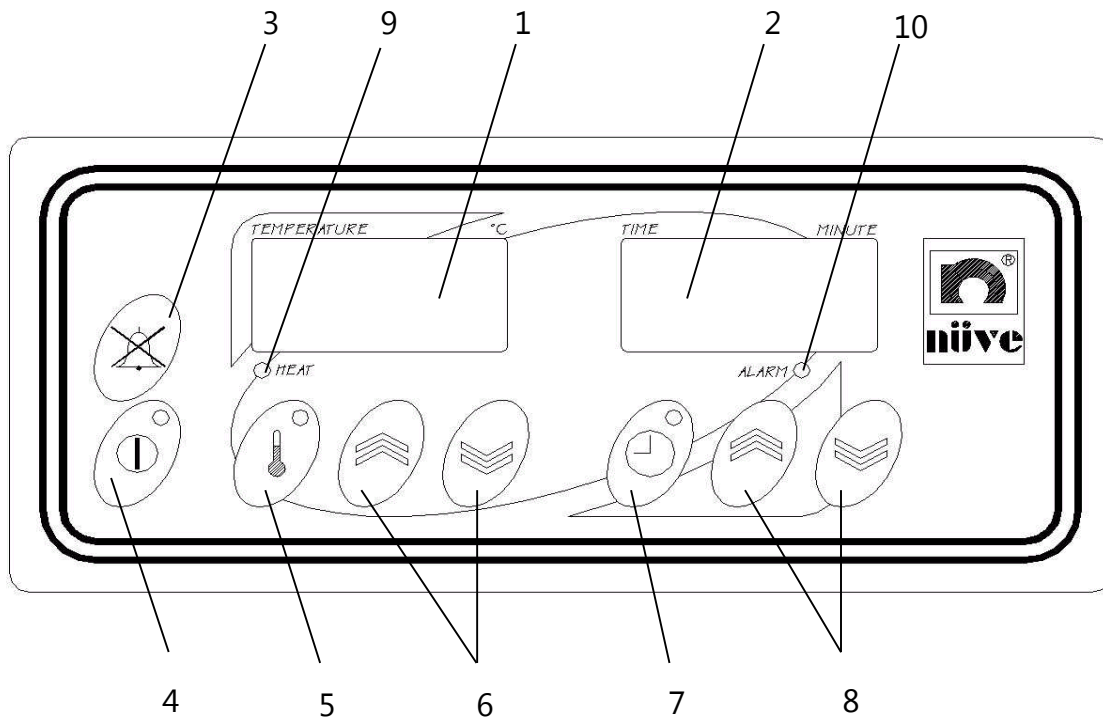


Figure 3

- 1- Temperature Display:** This display shows the tank temperature during the operation and the set temperature value during programming. The error codes are also shown on this display.
- 2- Time Display:** This display shows the elapsed time during the operation and the set value during programming.
- 3- Alarm Mute Key:** This key is used to mute the alarm which sounds when the program ends and if any failure occurs during the operation.
- 4- Start / Stop Key:** This key is used to start the program or to stop the running program manually.
- 5- Temperature Set Key:** This key is used to set the temperature.
- 6- Temperature Value Increase / Decrease Keys:** These keys are used to increase or decrease the values on the temperature display.
- 7- Time Set Key:** This key is pushed to set the time. (01 minute – 99.9 hours and Hold position) The number after the decimal point is multiplied by 6 minutes to find the real time. For instance, 54.7 = 54 hours 42 minutes.
- 8- Time Value Increase / Decrease Keys:** These keys are used to increase or decrease the values on the displays.
- 9- Heat) Led:** This led flashes during heating process.
- 10- Alarm Led:** It turns on when the program ends and if any failure occurs during the operation.

6.8. PRIOR TO OPERATION

- Plug-in the instrument to correctly grounded sockets.
- Turn on the device by power switch.
- See that the microprocessor control system is activated.
- Learn the function of the control and display panel (See Section 5.7).

6.8.1. FILLING THE TANK

Fill the tank with distilled water or liquid up to the maximum line MAX (see Figure 4). Undesired problems may occur if you fill up to the level lower than the max level.

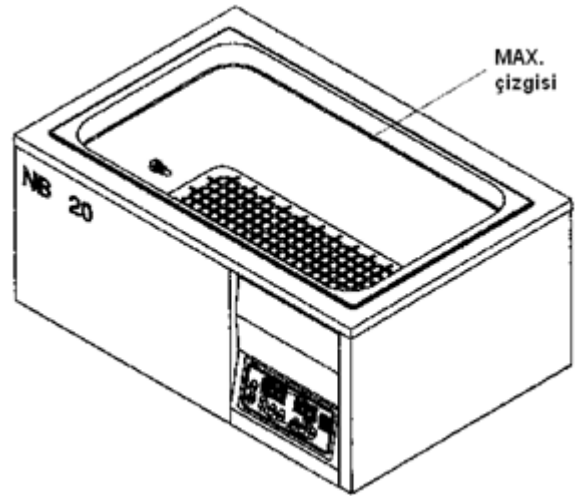


Figure 4



Make sure that the filled liquid is not flammable or explosive at the operation temperature.



Do not run the device unless distilled water or liquid is filled up to max line.











Add distilled water if the level drops below the "MAX" line during the operation


7. OPERATING PRINCIPLES

7.1. PROGRAMMING



Push the temperature set key.

	<p>Set the temperature by pushing the value increase/decrease keys on the temperature adjustment side.</p>
	<p>Push the temperature set key again to save the temperature value.</p>
	<p>Push the time set key.</p>
	<p>See “t in” on the temperature display. Set the time value by pushing the value increase/decrease keys on the time adjustment side (01 minute to 99 hours 54 minutes or Hold)</p>
	<p>Push the time set key again to save the settings.</p>
	<p>See “dly” on the temperature display. Set the delay time, after which the program starts, by pushing the value increase/decrease keys on the time adjustment side (01 minute to 99 hours 54 minutes)</p>
	<p>Push the time set key again to save the settings.</p>
	<p>Push the start/stop key to start the program.</p>

 During the operation of the program, the time starts to count up after the instrument has reached to the set temperature

7.2. COMPLETION OF OPERATION

- Ensure that the program is over.
- Take the samples out at the end of the operation.
- Take precautions while handling the samples after the operation as they can be hot.
- Remove the undesirable effects occurred during the operation after the tank has been completely emptied.
- You may leave the bath at stand-by or switch it off.



Check the liquid level in the tank during long operations and refill to the max line if necessary.

8. PERIODIC MAINTENANCE AND CLEANING

8.1. PERIODIC MAINTENANCE

The instrument does not require any periodical maintenance.

8.2. CLEANING

- Clean the device when the chamber is at room temperature after disconnecting the power cable.
- Clean the device with a damp cloth to remove dirt and dust.
- Use liquid detergent to remove tough dirt.
- Take precautions while handling chemical cleaners. Please be aware of the undesirable effects of the chemicals and be careful while applying them.
- Check the external condition of the device regularly and ensure any rust spots that may develop are removed.

9. DISPOSAL MANAGEMENT CONCEPT

The currently valid local regulations governing disposal must be observed. It is in the responsibility of the user to arrange proper disposal of the individual components.

All parts which may comprise potentially infectious materials have to be disinfected by suitable validated procedures (autoclaving, chemical treatment) prior to disposal. Applicable local regulations for disposal have to be carefully observed.

The instruments and electronic accessories (without batteries, power packs etc.) must be disposed off according to the regulations for the disposal of electronic components.

Batteries, power packs and similar power source have to be dismantled from electric/electronic parts and disposed off in accordance with applicable local regulations.

10. TROUBLESHOOTING

If the device fails to operate, please check the followings:

- The power switch is on;
- The fuse is not blown;
- The plug is plugged-in properly;
- The plug is not defective;
- The mains supply is present.

10.1. ERROR CODES

In case of below written failures, related error code are shown on the display.

OFL: The temperature in the tank exceeds 100.5°C and/or the temperature sensor (Fe-Const) endings are broken. Contact to an authorized technical help.



If an error occurs, please contact with an authorized Nüve agent to seek technical help.

10.2. FUSE REPLACEMENT

The fuses shall always be replaced by the authorized personnel.

11. ELECTRICAL CIRCUIT DIAGRAM

11.1. NB 5 / NB 9 / NB 20 ELECTRICAL CIRCUIT DIAGRAM

