TM INDUCTION HEATING · GENERATOR

EXTRATHERM 10/20

User manual for the EXTRATHERM 10 and EXTRATHERM 20 induction heater. Read this manual carefully before installation and operation.

Valid for EXTRATHERM 10 and EXTRATHERM 20 · air-cooled and water-cooled.



NOTE

Check the delivery for possible damage caused by transport without delay. Should damage be detected, please inform the carrier immediately. As our products are subject to continuous improvement, we reserve the right to make changes.

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QUALITY

ISO 9001:2015 · ID 9000001589

1 Safety

The operating instructions should always be followed when using an induction heater. TM Induction Heating shall not be held liable for damages caused by improper handling or by use which does not comply with the designated purpose.

1.1 PRECAUTIONS

It is a prerequisite that the operator is authorised to use the heater and is familiar with the safety precautions. To prevent danger or damage to the induction heater or workpiece, follow these guidelines:

- All repairs must be carried out by a distributor of TM Induction Heating.
- Use original spare parts only.
- Protect the heater from water or very high humidity.
- To ensure proper operation of the device, provide the device with the latest software updates.

1.2 SYMBOLS & SIGNS


Danger. In case of non-compliance, death or injury might occur.


Warning of hazardous electrical voltage.


Warning of magnetic field during operation.


Warning of radio frequency.


Warning of hot surface.


Prohibited for persons with pacemakers or implanted defibrillators.


Prohibited for persons with metallic implants.


Carrying of metallic parts or watches prohibited.


Wear safety gloves.


Wear safety shoes.

1.3 INSTRUCTIONS

- The user should have an appreciation of the contents of this user manual, and be familiar with safe workshop practices. Follow the user manual at all times.
- Ensure that the induction heater operates at the correct supply voltage. If the heater is not supplied with a plug, changes should only be made by a suitably qualified electrician.
- Do not use or store the heater in humid environments. The heater is designed for indoor use only.
- Use proper handling equipment, appropriate for the weight of the workpiece. Never support components with a metal cable or have any hanging in the proximity of the magnetic field. Extremely high currents can flow through the cable causing it to heat up quickly, resulting in a risk of burning.
- Place the device on a stable, horizontal surface.
- Keep a minimum distance of 3 meters (118") to surrounding objects.
- Use only in well ventilated areas.
- Do not heat objects containing oil, grease or similar substances. Prevent possible generation of fumes and smoke.
- Do not inhale fumes or smoke from heated parts.
- The Flexible Inductor is designed to handle maximum temperatures of 300°C / 572°F.

2 Installation

2.1 UNBOXING

- Remove the packaging.
- Check the contents of the delivery:

1. EXTRATHERM 10/20 Generator	The induction heater.
2. Temperature probe	Magnetic temperature sensor.
3. Heat-resistant gloves	Personal protective equipment.
4. User manual(s)	This manual and the inductor manual.
5. Flexible Inductor / Fixed Inductor	At least one coil is included.

2.2 SET-UP FOR OPERATION

Install the device at a suitable installation site.

> **Operating conditions:** the device is designed for use in an industrial environment with an ambient temperature of -10°C to 40°C (14°F to 104°F) and an atmospheric humidity between 5% and 95%, non-condensing. The device is intended for indoor use only.

- Check the device and any accessories for visible damage. The device must always be transported in the original box, also on return to the manufacturer or distributor.

> **Warning.** Danger of death, injury and damage to property due to incorrect connection of the device. Electrical connection must be carried out by a trained electrician and in compliance with all safety regulations.

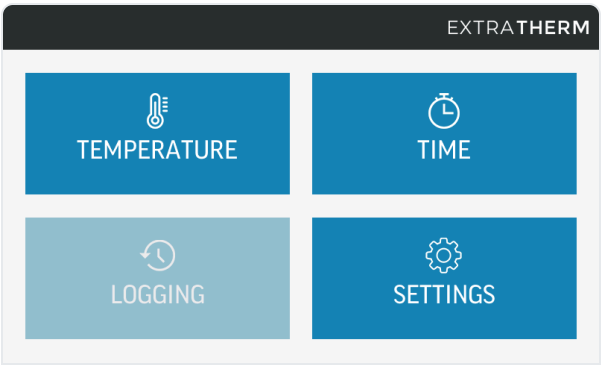
- Ensure that supply voltage and current meet the specifications. These can be found on the type plate at the back of the induction heater. Voltages may differ for customized heaters.
- Connect the device to the mains power supply. Should the power plug not fit the power supply, a suitable plug must be affixed by a qualified electrician.

2.3 INITIAL TESTING

- The main menu, also known as the Homescreen, will be shown on the display. Changes to the basic device settings can be performed. Under **Settings › User** it is possible to change Language, Date & Time, and Units of Measure.
- Insert the temperature sensor in the top input.
- Switch on the main switch, located at the front of the device.
- Connect the Flexible Inductor or Fixed Coil to the EXTRATHERM 10/20.
- The device is now ready for operation to confirm correct installation.



Connect the Flexible Inductor or Fixed Coil to the EXTRATHERM 10/20.



The Homescreen is shown after switching on.

3 Operation

3.1 PREPARING FOR THE HEATING CYCLE

The specific preparation of the heating cycle depends on the geometry of the component that needs to be heated. In many cases this also determines which type of coil (inductor) should be used. At the time of purchase, at least one coil is included with the device. Refer to the manual of the specific coil for a description of your situation. The following sections explain the adjustment options of the EXTRATHERM 10/20, regardless of the specific coil or application.

- Turn on the main switch of the device. The device powers on.
- When the main menu is displayed, choose one of the heating modes to proceed.
- For Temperature Mode, continue with 3.2. For Time Mode, continue with 3.3.

HARDWARE CONTROLS

In addition to the touchscreen display, there are 3 physical buttons.

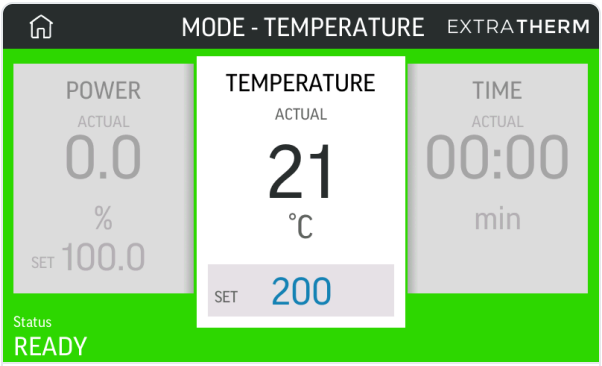
Mode	A rotary and push button. When rotated, it increases or decreases selected values. When pressed, it switches between screens.
Start	Initiates a heating cycle from the Time and Temperature screens (when Status Ready is indicated).
Stop	Stops the current heating cycle. It can also be used to go back to the previous screen (for example in the User Menu).

3.2 USING TEMPERATURE MODE

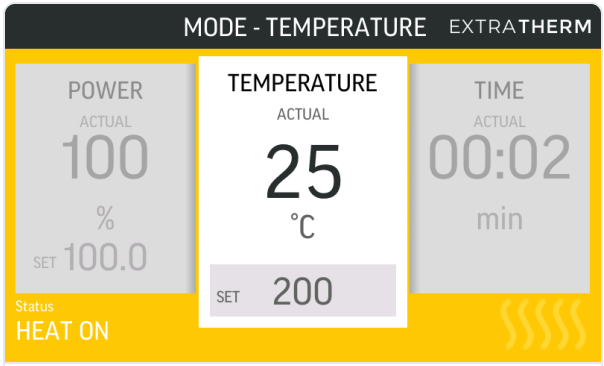
After selecting Temperature Mode from the main menu, the display shows the idle screen for this mode, recognizable by the green background and "Status Ready" in the bottom left corner. Switch from Simplified View to Detailed View by pressing the Mode button. By turning the Mode button as a dial, the user can alter the preferred temperature.

Check the placement of the temperature sensor and the application of the coil (Flexible Inductor / Fixed Inductor) before pressing Start to initiate the heating cycle. After pressing Start, the active screen is shown, recognizable by

the yellow background and "Status Heat On". Once the component reaches the set temperature, the device scales back the power output and keeps the component at the set temperature until the user presses Stop.



Temperature Mode, idle (Status Ready, green).



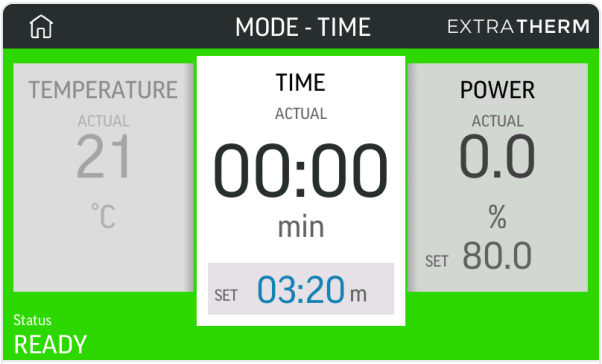
Temperature Mode, heating (Status Heat On, yellow).

> **Adjusting power output.** In Detailed View, select "Set Point" (100% by default). Turning the Mode button alters the value to influence the heating cycle.

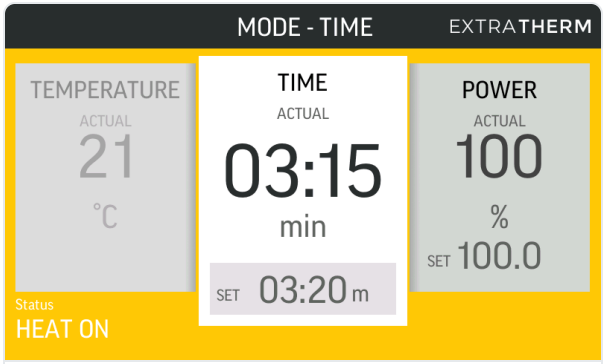
3.3 USING TIME MODE

After selecting Time Mode from the main menu, the display shows the idle screen for this mode, recognizable by the green background and "Status Ready". Switch from Simplified View to Detailed View by pressing the Mode button. By turning the Mode button as a dial, the user can alter the time duration of the heating cycle.

Check the placement of the temperature sensor and the application of the coil before pressing Start. After pressing Start, the active screen is shown (yellow background, "Status Heat On"). Once the component reaches the set time duration, the device scales back the power output and completes the heating cycle.



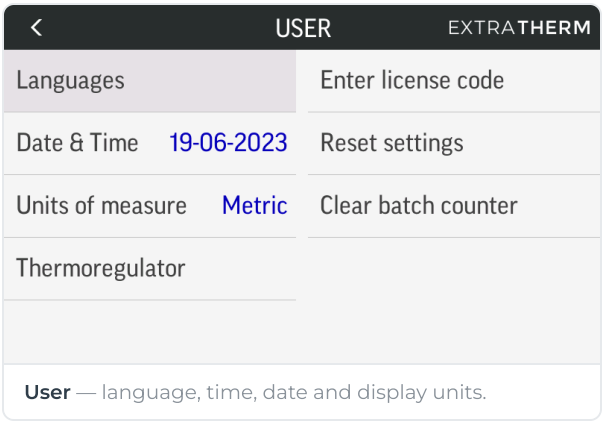
Time Mode, idle (Status Ready, green).



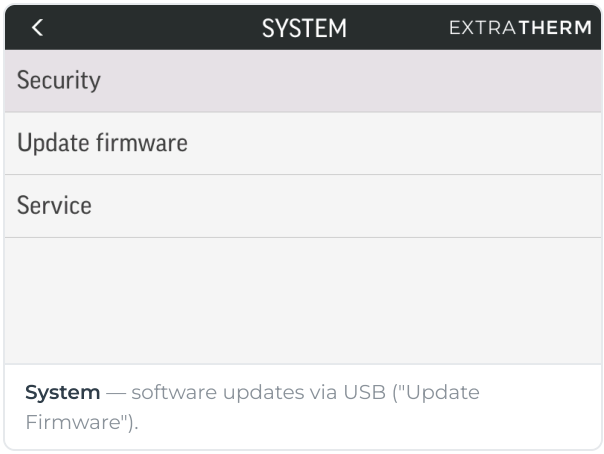
Time Mode, heating (Status Heat On, yellow).

3.4 OVERVIEW OF THE USER MENU

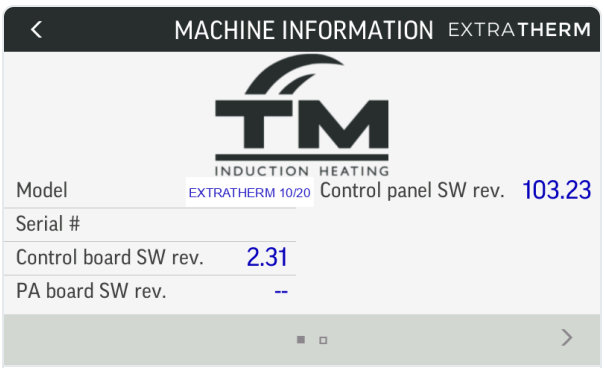
The User Menu is accessed by turning on the device, waiting for the Main Menu, and then selecting the Settings button. The main and most commonly used sections are explained below.



User — language, time, date and display units.



System — software updates via USB ("Update Firmware").



Machine Information — serial number and software versions.

User provides access to basic settings and the display of the device. **System** gives access to software updates; updates can be loaded from a USB drive after selecting "Update Firmware". **Machine Information** provides an overview of basic information including the serial number and all current software versions. In case of remote troubleshooting, it is important to share a photo of these screens.

4 Maintenance

Before every use, inspect the device and accessories for visible damage, loose parts or abnormalities. Check the power cord, plugs, switches and any exposed wiring for signs of wear or defects. Ensure that all safety features and guards are in place and functioning correctly, and that the power source matches the device requirements.

4.1 BASIC PROCEDURES

A well-defined maintenance plan is crucial to ensure the longevity, performance and safe operation of a tool designed for heating objects in industrial environments.

4.2 MAINTENANCE PLAN

1. Regular cleaning	Remove dust, debris and contaminants from the surface and components. Use a damp cloth or compressed air.
2. Inspection & component checks	Inspect for wear, damage or loose connections. Check the power cord, plug, switches and wiring; examine the temperature sensor(s); verify fuses or circuit breakers.
3. Calibration & adjustments	Periodically calibrate temperature controls, sensors and other adjustable features for accurate readings and optimal performance.
4. Training & operator awareness	Provide regular training on proper usage, maintenance and safety. Encourage operators to report unusual behavior or suspected faults.
5. Documentation & records	Keep detailed records of maintenance, replacement parts, service dates, responsible personnel and any incidents and resolutions.

4.3 REPAIR & REPLACEMENT PARTS

> **Self-repair is dangerous.** Attempting repairs without proper knowledge and expertise can result in accidents, electric shock, burns or other injuries. Self-repair may void the product warranty, and many products involve electrical components that pose electrical hazards.

In all cases, contact must be made with the manufacturer when a situation arises where the device needs to be repaired. Our Support Department is well-equipped to assist you during repairs and with sourcing the specific replacement parts you require. Refer to chapter 5, Troubleshooting, for the details needed to help with the request.

5 Troubleshooting

If you encounter technical issues, difficulties or require further assistance with your EXTRATHERM 10/20, contact our dedicated Technical Support Department.

When reaching out, please provide the following information to help expedite the troubleshooting process:

- Unit model
- Serial number
- Date of purchase
- Line voltage and frequency
- Photo or video of the device set-up, workpiece and environment

Provide a detailed description of the problem, including any error messages, unusual behavior or specific circumstances. If you have already attempted troubleshooting steps, include a summary of what you have done. This helps our team understand the situation and provide more targeted assistance.

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6 Statement of Conformity

TM Induction Heating consistently provides products that meet customer and applicable statutory and regulatory requirements. ISO 9001:2015 specifies the requirements for a quality management system.

A properly issued Declaration of Conformity has been established to ensure the quality of EXTRATHERM induction heaters. This declaration indicates that the product meets the requirements of the applicable directives. Our induction heaters are manufactured in accordance with European regulations and are CE compliant. As CE marking is a mandatory conformity marking for products sold within the European Economic Area, these declarations do not cover any regions outside Europe. However, they do ensure the quality of TM Induction Heating products.

EC DECLARATION OF CONFORMITY

Manufacturer	TM Induction Heating, Nobelstraat 14, 3846 CG Harderwijk, The Netherlands
Product	Induction heater
Type	EXTRATHERM 10 / EXTRATHERM 20
Risk assessment	EN-ISO 121.2010
Harmonized standards	Low Voltage Directive 2014/35/EU · EMC Directive 2014/30/EU
Electric safety	EN 60204-1
EMC emission	EN 55011:2016 · EN 61000-3-12:2011 · EN 61000-3-11:2017
EMC immunity	EN 61000-6-2:2019

We hereby declare that the product described above is in conformity with the applicable health and safety requirements of the EC Directive in terms of its design and type, and in the execution we have brought into circulation. This declaration ceases to be valid if any modification is made to the product without our agreement.

NAME	FUNCTION	CONFORMITY
Rik van Dijk	Director	CE · ISO 9001:2015 · ID 9000001589