

OPERATING AND MAINTENANCE INSTRUCTIONS

INDUCTION HEATING SYSTEM T-HOTBOX MODEL HTR-02

Carefully read this manual before using T-HotBox HTR-02!

These operating and maintenance instructions are supplied by BETAG Innovation by BEULENTECHNIK AG, jointly with BEULENTECHNIK spol. s r. o. BETAG Innovation by BEULENTECHNIK AG reserves the right to modify these operating and maintenance instructions without prior notification to correct typographical errors, inaccuracies and/or improvements to the equipment.

Any such modifications will be published in subsequent releases of these operating and maintenance instructions. BETAG Innovation by BEULENTECHNIK AG does not accept any responsibility for any direct, indirect, exceptional, unforeseeable and/or subsequent damage caused by the use or inability to use the T-HotBox HTR-02 and/or this documentation.

BEULENTECHNIK spol. s r. o. Sterboholska 44/1307 102 00 Prague 10 Czech Republic BETAG Innovation by BEULENTECHNIK AG Chaltenbodenstrasse 21 8834 Schindellegi Switzerland www.betaginnovation.com

All rights reserved

Second edition 01/2023

CONTENT

WARNINGS AND PRECAUTIONS	3
GENERAL INFORMATION ON T-HOTBOX HTR-02	5
KEY TECHNICAL PARAMETERS	6
PACKAGING	6
UNPACKING	6
STORAGE CONDITIONS	7
INSTALLATION	7
OPERATION AND CONTROL OF THE EQUIPMENT	8
TERMINATION OF EQUIPMENT OPERATION	9
USE OF INDIVIDUAL WORKING TOOLS	10
SMALL HEAT PEN AND MICRO HEAT PEN	11
HEAT BLOCK	
C BLOCK	14
APPLICATION LIMITATIONS	15
OPERATIONAL ENVIRONMENT	15
HANDLING	
MAINTENANCE	15
PREVENTIVE MAINTENANCE	16
ERROR MESSAGES / PROTECTIVE SYSTEM	16
SPECIAL MAINTENANCE	17
EMERGENCY	17
WARRANTY	18
DISASSEMBLY - WASTE DISPOSAL	18
TROUBLESHOOTING	19
STANDARD, OPTIONAL ACCESSORIES	20
COPYRIGHT	20

WARNINGS AND PRECAUTIONS

CAUTION! Danger of electrical accident!



Persons using a cardiac pacemaker or any other kind of electronic or metallic surgical implant, or persons with a heart condition must not operate the mobile induction heater or come near the induction heater when operated.

T-HotBox HTR-02 is designed for professional use in the car repair industry. It is not intended for home use. It can be used in both vehicle repair shops and garages. Any other use or use of the equipment contrary to the operating and maintenance instructions may result in an injury to the operator and/or damage or destruction of the equipment.

Only qualified personnel may carry out the electrical connection of the T-HotBox with mains supplies in compliance with applicable regulations.

Any personnel operating the equipment must possess thorough knowledge of and practical experience in the use of an induction heater, as well as in methods of heating metal vehicle components without damaging nearby parts. Operators must acquaint themselves with and understand these operating and maintenance instructions prior to using the induction heater.

Unauthorised persons shall not be allowed to enter the area where metal vehicle parts are heated. Only one authorised person may operate the induction heater at any one time.



Do not use the T-HotBox HTR-02 if the tool cable/mains cable insulation is damaged or if the tool damaged! Evidence of damage could be ruptured core, tool crack or visible core winding.

WARNING!

Always use protective goggles with side shields or protective facial shields. Use dry, thermally resistant gloves and dry working clothes. Metal heats up very quickly with a risk of burns to fingers and palms when removing objects from hot metal surface.

Do not touch working parts of the equipment during heating.

Allow cooling period before handling parts or equipment.

The induction heater heats nearby metal objects very quickly and can cause serious burns or even ignite clothing. Bear that in mind and make sure that the operator's clothing is free of any metal objects, such as wristwatches, jewellery, necklaces, keys, belt buckles, coins, metal buttons, zippers, etc.

Do not use the induction heater in an environment containing conductive dust, high ambient humidity, high levels of moisture and/or in an explosive environment.

Do not place the equipment on flammable surfaces or in their vicinity.

Always make sure to have a filled fire extinguisher nearby. Always use a type of fire extinguisher suitable for extinguishing materials that may be present in the working area.

Flammable objects and materials must be placed at a sufficient distance from the working area where the induction heater is used

Do not use the equipment near degreasing, cleaning and/or painting facilities.

Corresponding respiratory protection must be chosen and used to protect the operator against the effects of dangerous gases, fumes and/or particles released by melting adhesive under heat. Respiratory masks provide protection against respiratory risks: fumes or gases, aerosols and airborne dust. A suitable mask and a filter are to be used in accordance with the specific toxic product and its concentrations. Filters must be replaced frequently.

Always have a trained watchperson nearby. Fumes and gases released by heating of materials can lower oxygen level and cause an injury or death.

When heating, especially in cases when heating galvanised, cadmium plated, varnished or blackened sheet metal, fumes may be generated. Ensure adequate ventilation and extraction of heating fumes from the working area. Use a suitable respirator in case of insufficient extraction.

It is very dangerous to heat containers and tanks, in which liquids and gases were stored before the heating. Do not heat aerosol containers or paint containers. The heat generated by the induction heater may cause the containers to explode.

WARNING!

Do not use the induction heater near airbags. The heat generated by the induction heater may ignite the airbag propellant and unexpected airbag activation. Ascertain the accurate location of any airbag in the repaired vehicle using the corresponding vehicle manual.

When installing, checking or maintaining the equipment, always disconnect it from the main supply.

Do not use cables with damaged insulation, insufficient cross-section or loose connectors. Avoid placing cables near heat sources, oils and grease, or sharp edges. Replace all cables with damaged insulation for new ones.

The induction heater contains parts with movable power supply. Always consider uneven weight distribution of the induction heater. Always follow safety procedures preventing the occurrence of hazardous situations.

Keep proper footing and balance at all times.

The equipment must always be placed in a way ensuring sufficient air supply to the built-in fan. Ventilation apertures must be kept clean.

The working area must be clean and well lit.

The equipment is fitted with overheating protection. Working tools do not have this protection. **Allow cooling period!** The equipment also contains several additional protection systems.

Do not leave the equipment unattended if switched on. Unplug induction heater from the power supply outlet or cord when not in use.

GENERAL INFORMATION ON T-HOTBOX HTR-02

The microprocessor-controlled T-HotBox HTR-02 is designed for heating of metal parts of vehicles without damaging adjacent components. It is easily portable, powered by a single-phase 230 V/50 Hz net. It is highly versatile and suitable for a broad range of applications. Depending on accessories.

- Paintless dent repair (PDR)
- Heating of rusted bolts and nuts
- Heating of rusted bolts and nuts on the suspension or steering
- Removing striping, emblems, decals, foils and other applications

T-HotBox HTR-02 is designed to heat up all magnetic conductive materials using concentrated magnetic field at the end of the inductor. The magnetic field alternates at a frequency of approx. 50 kHz. The magnetic field creates eddy currents in the material with electric resistance causing the material to heat up. Generally, it applies that the more easily magnetized a substance is, the greater the heat developed in it. That is why induction heater heats ferrous metals and their alloys readily, but has no effect on glass, plastics, wood, cloth and other non-conductive materials. It is not recommended to apply the device to aluminium. The induction heater heats up brass, aluminium and its alloys considerably less than steel.

This equipment is manufactured in accordance with the following regulations and guidelines:

2014/35/EU Low voltage Directive(LVD)

2014/30/EU Electromagnetic Compatibility Directive (EMC)

93/68/EEC CE Marking Directive 2006/42/EC Machinery Directive (MD)

2011/65/EU Restriction of Hazardous Substances Directive (RoHS)

- EN 55011:2016, EN 55014-1:2017, EN 55014-2:1997+A1+A2+AC, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61000-6-2:2005+AC:2005, EN 61000-6-4:2007+A1:2011
- EN 60204-1:2018, EN 60335-1:2012/AC:2014+A11:2014, EN 60519-3:2005, EN 62233:2008+AC:2008
- EN IEC 63000:2018

KEY TECHNICAL PARAMETERS

INPUT:				
Voltage	230V~ <u>+</u> 10% / 120V~ <u>+</u> 10% / 100V~ <u>+</u> 10%			
Frequency	50/60 Hz			
Fuse	T 6,3 A			
Power (max.)	1100 VA / 550 VA / 550 VA			
Power Factor	> 0,95			
OUTPUT:				
Voltage (max.)	250 V rms / 130 V rms / 110 V rms			
Frequency	50 kHz			
Power (max.)	1000 W / 500 W / 500W			
UNIT:				
Dimensions	210×110×115 mm (with handle)			
Weight	1.3 kg (unit only)			
Ambient temperature	5-40 °C			
Relative air humidity	< 90 %			
Note: Information in this manual is not hinding reflecting the continuous development				

Note: Information in this manual is not binding reflecting the continuous development of the product, its technical parameters, dimensions and weight.

PACKAGING

The induction heater itself is packaged in a plastic case. Individual working tools are packaged separately in paper boxes.

When requested it is possible to pack the device and tools in a plastic foil and wooden overseas crate, including strapping (if the crate is to be shipped in a container).

The equipment must be packaged and secured for transportation in a manner ensuring protection from moisture and vibrations during transport. It is recommended to use an inner polyethylene packaging with a welded seam for longer transport routes or extended storage of the equipment. The outer packaging must be rigid enough and labelled with shipment signs and marks "Fragile", "Avoid moisture" etc. If packed in this manner and secured against shifting, the equipment can be transported using all common enclosed means of transport. Vibrations during transport must not exceed values prescribed by relevant shipping tests.

UNPACKING

- Remove individual parts of the wooden crate (if used)
- Remove the strapping
- Remove the device from the plastic case
- Remove individual tools from their paper boxes
- Check the delivery for completeness according to the delivery bill
- Visually check the device and tools for any signs of damage incurred during transport

- If the delivery is not complete or if any of the components is damaged, contact the equipment supplier
- When returning the equipment to the supplier for repairs, it must be placed in the original packaging

WARNING!

Keep the packaging materials – wood, nails, plastic parts, paper packaging, etc. – out of the reach of children, as it may be a source of risk.

Separate packaging materials and dispose of it in accordance with relevant regulations.

STORAGE CONDITIONS

Store the device and its accessories in a dry, covered place, under temperatures between -5 °C and +60 °C. Do not place the equipment near heat sources. When handling the equipment, pay extra attention to avoiding shock, even to packaged device and tools as that could cause damage.



The case of the induction heater complies with enclosure protection rating IP 21. It is therefore not permitted to use the equipment in a humid environment.

INSTALLATION

Open the box, remove the induction heater and accessories and check for completeness.

NOTE!

The induction heater and tools can be switched on only after attaining the ambient temperature. Wait at least 30 minutes, i.e. after all condensation on the box and electronic components of the equipment evaporates.

Pay attention to avoid damage to connector on the front and back panels when handling the induction heater and tools.

NOTE!

Before connecting the induction heater to the power supply, make sure that the voltage and frequency of the local power supply network, including the circuit breaker (min. 16 A, type B) conform to the standard CEI EN 6024/1 as well as the data on the type plate of the device, and that the electrical installations have been made in accordance with the relevant regulations. Electrical safety of the equipment is secured by using a three-conductor power cord with a protective conductor.

NOTE!

Installation and the first switching on of the induction heater must be carried out by a qualified person in accordance with the relevant regulations and instructions contained in this manual.

Before every use of the equipment, check correct setting and proper condition of the equipment.

Switching on: Turn the main switch on front panel to the ON position. Red light in switch will light up, indicating that the device is under power. The machine prepared for work will emit standby sound signal double beep every 5 seconds. It is possible to turn off the standby sound signal if you turn on the device with control knob set on the position 4s.

Switching off: Turn the main switch to the OFF position to turn the induction heater and the working tool off. Unplug the power cord from the power socket. Detach the tool connecting cable.

WARNING!

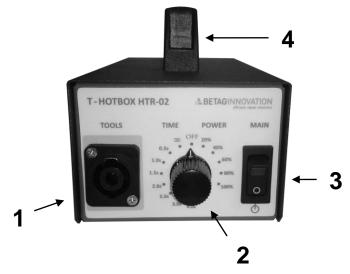
Any breach of the above instructions may put the T-HotBox PRO HTR-04 operator at risk and/or cause damage to property.



Should the user modify, adjust, or change the device or any of its accessories in any way, or integrate it in another device, the manufacturer shall be relieved of any responsibility and the user must remove the CE marking from the equipment.

OPERATION AND CONTROL OF THE EQUIPMENT

Please see also our YouTube channel and look for T-Hotbox PDR. www.youtube.com/user/BETAGInnovation



Nr.	PART NAME			
1	CONNECTOR FOR TOOL CABLE			
2	TIME/POWER CONTROL KNOB			
3	MAIN SWITCH WITH RED LIGHT			
4	HANDLE			

Select a suitable working tool depending on the job to be performed and connect it to the induction heater using the tool cable. One end of the tool cable is plugged to the working tool and the other to the "TOOLS" socket on the front panel of the device.



Only use working tools which are made for the T-Hotbox!

Using the rotary control knob on the front panel select the desired time or output power:

Time mode:

Positions on the left side of the control knob correspond to the output time when the machine is working on 100% of power. You can select the duration time in the range of: 0.5s, 1s, 1.5s, 2s, 2.5s, 3s, 4s and infinity (∞). If you press the button and keep pressing it, the device will switch off heating after the selected time has passed. If you release the button and press again the time will count again from the beginning.

Power mode:

Positions on the right side of the control knob correspond to the output power of the machine. In this mode the machine is working over infinite time. You can select from percentage values of power: 20%, 40%, 60%, 80%,100%.

Place the working tool near the place or object to be heated. Heating starts after the control button on the working tool is pressed. Simultaneously, the machine will start producing quick tone switching sound. In power mode or infinity time (∞) the working tool will continue to heat the material for as long as the button remains depressed. Use individual working tools in accordance with instructions provided in the chapter "Use of individual working tools" below.

If an audible alarm sounds (continuous speaker sound), release the control button immediately. The equipment switches off automatically in certain cases using the overload protection, see chapter "Error messages / Protective systems"

TERMINATION OF EQUIPMENT OPERATION

After completion of work, turn the main switch to the off position. Leave the device and the tool(s) used to cool sufficiently, for at least 25 to 30 minutes. Then unplug the power cord from the socket. Unplug the working tool cable. Place the device and working tools in to the plastic case.

USE OF INDIVIDUAL WORKING TOOLS

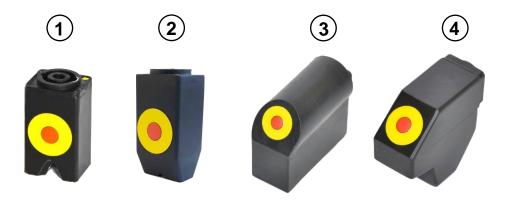
Device is equipped with one of the following working tools, depending on order of set or additional orders of tools from customer side.



Each tool is designed for specific work, and it is not recommended to use tool for different purpose then it was designed. Any other use or use of the equipment contrary to the operating and maintenance instructions may result in an injury to the operator and/or damage or destruction of the equipment/tool.



Paintless dent removing (PDR) tools like Small Heat Pen, Micro Heat Pen or Very Small Heat Pen are designed for short and intensive heating periods, using them for different application like heating of rusty bolts, nuts, etc. can lead in to burn of internal tool winding, thus destructed tool/equipment.



Nr.	PART NAME	
1	SMALL HEAT PEN	
2	MICRO HEAT PEN	
3	HEAT BLOCK (Available only for 230V)	
4	C BLOCK (Available only for 230V)	

Explanation of usage and limitations for above mentioned tools are stated on following pages.

Device could be equipped with also with other tools like Heat Pad, for sticker removing or Nut Releaser with Air Coils for removing rusted nuts. Please check all possible tools variants with your local dealer.

SMALL HEAT PEN AND MICRO HEAT PEN





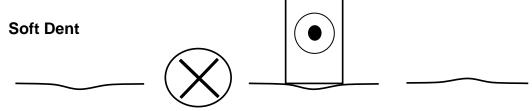
The Small Heat Pen and Micro Heat Pen are designed to heat "only" a small, concentrated area of a sheet metal. The power button is located directly on the tool itself. It is ideal for the heating of small areas on a car body. Its main "only" purpose is the removal or reduction of small, shallow dents or blemishes without damaging the paint. Although the risk of damaging the paint is very high, if the heating is done too long. It can also be a helpful tool to any PDR (paintless dent removal) technician as with it he can bring up general lower areas with it.

The main difference between Small Heat Pen and Micro Heat Pen is the area of heating located on the sheet metal under the tool. Micro Heat Pen has this area approx. 3.5 times smaller, thus the heating is more concentrated, and this creates faster thermal change in metal, which helps to reduce repair time.

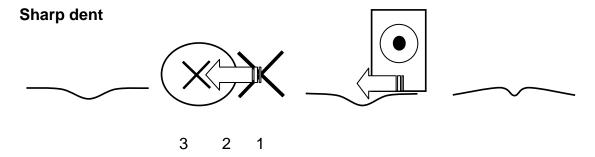
In the dent removal application, the concentrated heat will expand the metal and bring it up. This only works on soft dents. In some cases, the dent can reappear once the metal has cooled off.

The following must be made aware of:

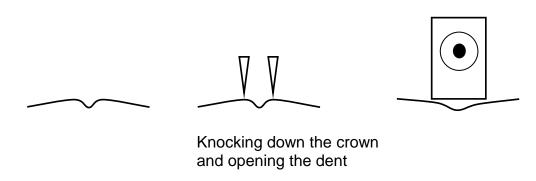
- Don't push down with the tool during the operation, as this might create a larger dent, since the metal is soft once it is heated.
- Don't heat too long. As this might and will burn the paint. It is best to test it first on a similar panel. Normally 0.5 sec setting and even 0.7 sec. is ideal. But there might be the case that even at this setting that the paint might be damaged, due to the way the material is build up beforehand. We don't take any responsibility for any paint damage!
- It doesn't work on a negative curved area.
- It doesn't work on an area which has a glued brace behind it.
- If the dent is too large, there is the risk that the dent becomes larger. In this case, stop immediately! If this occurs, you can first let it cool off before trying it again. First start heating on the side and then slowly move into the centre with impulse heating.



Heat in the middle. This is always the ideal area to heat. First try at a low time setting and then increase the time setting the more experience you get.



With sharper dents the process is more difficult. As in most cases the metal is stretched or elongated. First it is best to heat on the side with a short impulse heating. Once you see the metal coming up you can move with some quick impulses and heatings to the centre of the dent. If the metal goes down, then the dent is simply to sharp, or there might be a negative curve, or there might be a brace behind it, or maybe you pushed down while heating the metal. If the metal comes up the centre of the dent remains. Possible now is to reopen the dent with a knock down and to heat the metal again to bring it up.



This process may have to be repeated several times. In most cases with a sharp dent the centre can't be removed.

It is recommended first to practice on a panel, in order to get used to the quick heating. Also try not to push down the tool onto the metal because this can also cause a larger dent.

CAUTION!



There is a risk of paint damage due to overheating. It depends on the build-up of the paint. BEULENTECHNIK (BETAG Innovation) AG don't take any responsibility for this. It is best first to test it on a similar panel with the exact same paint material build up. There is always a rest risk at hand.

Shrinking or hardening of the metal is also possible. Try either on the top side as well as the bottom side. After the heating cool of the area to stiffen the material. The most efficient way is to do this with a longer heating time, as this will also increase the risk of burning the paint.

HEAT BLOCK



This tool is designed predominantly for heating of large surfaces. It is also suitable for releasing and removing car glass glued to the body, or even mounted in rubber (side and rear windows), removal of paint or general use. The Heat Block provides high heating output and as such enables rapid and accurate heating of a large area, as configured by the power output setting. The speed of heating depends on the type of metal and its thickness. The tool is initiated using the button on the slanted surface of its body.

It can be used to remove rear and side windows, without damaging the glass. By removing the glass this way, it is possible to reuse it, as the adhesive is detached from the painted part. The adhesive stays intact. It is recommended to use successively inserted plastic wedges when removing a glass, to protect the adjacent painted surfaces. Extra attention must be paid particularly to the first wedge inserted at the beginning. It is also recommended to place a tape around the perimeter of the glass to reduce further the risk of damage to paint when removing the glass. When removing a glass, do not put too much pressure on the glass as it may break. This applies namely to the windscreen, which is laminated.

Paint can be easily removed by applying the tool directly on the surface. This makes the paint removal very easy, especially on underbody coating. Try to move evenly over the surface so as not to create any deformation of the surface through the heat. Many adhesives and mats can be removed quickly and easily.

The Heat Block can also be used to heat up metal needing to be straightened. The Heat Block can be used on a bull bench or in connection with the Flatliner. It is easier to shape heated metal.

If the power of the T-Hotbox PRO is lowered, the Heat Block can be used to remove any foil, sticker, or decal, fast and easily.

WARNING!



Always follow the Original Equipment Manufacturer (OEM) guidelines for heating steel and high strength steel.

CAUTION!

Heat Block cannot be used continuously more than twenty minutes, when tool power is pre-set to its maximum value. It must be allowed to cool at least twenty minutes. Do not warm painted surfaces directly with the T-Hotbox PRO set to maximum power for more than 1 second at a time.

C BLOCK



The working tool C Block with a dedicated power push button is a general heating tool. It is useful for quick and intensive heating of various surfaces and vehicle components. Its narrow design makes it especially suitable for use in difficult to access places with limited space. This heavy-duty tool is most often used to loosen rusty nuts and bolts, it can also be used to loosen glued bolts. The heating output can be precisely directed to target only the desired rusty nut or bolt, without the need to heat up the complete joint. It is not necessary to heat the component to reach red colour to loosen it, as considerably lower temperatures often suffice. The working part of the C Block is provided with a heat shield, protecting the tool from heating up while determining the distance from the heated component. Careful touching of the heated nut or bolt with another part of the tool reduces the heat stress to the tool, extending its service life.

The C Block ensures a quick heating of any part to assist in the removal. For instance, the steering joint nut: it can be heated without too much heat propagating into the surrounding metal. It also enables the user to heat nuts on the steering knuckle joints without damaging the protective rubber. The C Block can also be used to loosen corroded brake line joints. So there are many applications for this tool.

Only use the C-Block which are made for the T-Hotbox and are designated with a yellow point near the connection plug of the tool.

CAUTION!



We do not recommend heating up the hydraulic lines of the break, because of boiling point of the oil in lines.



Do not move with the C-block around the surface of the nut (bolt) while heating, otherwise you can destroy heat shield. Heat shield protecting the tool against heat stress, which can cause destructive damage to the tool.



C Block cannot be used continuously more than one minute, when tool power is pre-set to its maximum value or infinite time. It must be allowed to cool at least one minute!

APPLICATION LIMITATIONS

This equipment is designed and manufactured, in its construction and dimensions, for heating of metal objects by means of induction. Any other use, incorrect procedures, use on other than recommended materials, and/or incorrect operational mode settings can place the operator at risk and/or cause damage to material and the induction heater.

The manufacturer does not accept any responsibility for any injury and/or material damage caused by improper or incorrect use of the equipment.

OPERATIONAL ENVIRONMENT

Operational temperature range: 5-40 °C Operational relative humidity range < 90%

HANDLING

CAUTION!

Handle the induction heater with care and ensure its stable positioning on a flat, non-flammable surface when in use. Always operate the induction heater using the indicated handle.

The induction heater is fitted with a flexible power cord and a cable connecting the working tools. Proceed with care to avoid dangerous situations. Before you start heating, check that the induction heater is in a level and stable position.

MAINTENANCE

The induction heater is designed to require very little maintenance. The internal space of the induction heater should be cleaned by a trained specialist depending on the frequency of use and the dustiness of the working environment.

If the equipment is transported frequently, it should be checked by a trained specialist depending on the frequency of transports and any loose mechanical components inside the cabinet tightened as necessary. Any lose connections can cause short circuit inside the device.

NOTE!

Never remove the cabinet cover and do not interfere with the internal components in any way. Always contact your local dealer or importer.



Removal of the cover by an unauthorised person invalidates any T-HotBox PRO HTR-02 warranties.

PREVENTIVE MAINTENANCE

Avoid any mechanical damage to the control panel and connectors when transporting the equipment. The connector must be kept dry and clean at all times. If the connector become soiled, clean them with isopropyl alcohol and dry out.

Maintenance should take place regularly, once a week or more frequently, depending on operational conditions.

Check the condition of all cables and the induction heater frequently. If necessary, replace cabled with new ones.

Order nr. 3672 – Standard T-Hotbox cable 1.3 m long Order nr. 3441 – Extended T-Hotbox cable 3 m long

Check the induction heater and remove dust and dirt that may settle on certain parts of the equipment, especially the ventilation apertures.

Proper maintenance ensures reliable and fault-free operation of the equipment.

ERROR MESSAGES / PROTECTIVE SYSTEM

The equipment is provided with a protective system designed to prevent damage/destruction of the equipment. Malfunctions are indicated by constant tone signal of the speaker. If the malfunction occurs repeatedly, contact your local dealer or importer. A list of protections and errors:

Constant tone signal while working

Output power exceeded. Release the control button immediately.

The constant tone signal will be terminated when the button is released.

This is internal overcurrent protection of the device. It is possible to resume work afterwards. If the error persists after several attempts to work, switch the device off and wait 20 minutes until it cools down.

The constant tone signal will not be terminated after the releasing the button. Possible damage to the internal circuitry. If the error persists after next start of the device, contact your local dealer or importer

Constant tone signal while not working

Fan failure: Check the cleanliness around the fan, equipment vents and ensure sufficient air supply. If the error persists, contact your local dealer or importer.

Overheating of the heat sink: Switch the device off immediately and wait approximately 20 minutes until it cools down sufficiently. It is possible to restart work afterwards.

Damaged internal circuitry: Contact your local dealer or importer

Protection by a safety fuse:

The device contains an internal replaceable fuse, which is part of the system prevention of damage or destruction of the equipment. The fuse is high probably burned down, when all these three conditions are true:

- Device is switched on (Shining red light in the switch)
- Fan is not working (Rotor does not rotate)
- Device is not emitting standby sound signal (Double beep every 5 seconds)

Main incoming power lead wire is protected by fuse F1 which is located inside of the device. **This fuse can be changed only by certified person at service center**. Type of protective fuse and its breaking current value is situated on a printed circuit board near the fuse holder. The fuse value is also presented in table "KEY TECHNICAL PARAMETERS".

SPECIAL MAINTENANCE

Any repairs, when required, must be performed by a qualified person only, using original spare parts and in accordance with the relevant regulations and instructions provided in this manual.

CAUTION!

Replacing equipment parts for other than original spare parts and any modifications or alterations of the induction heater relieve the manufacturer of any liability and responsibility for any injury to operators and/or material damage.



Any modifications or alterations invalidate any equipment warranties!

EMERGENCY

In case of fire, use suitable extinguishers in accordance with relevant regulations.



Never use water-based fire extinguishers as the induction heater may still be live.

WARRANTY

The supplier guarantees the induction heater to be free of fault for 12 months from the date of dispatch.

The warranty does not cover:

- the replacement of safety components designed to break/burn in case of induction heater overload
- the use of other than original spare parts
- any damage caused by improper handling, tempering with the equipment by a third party, and/or use of the induction heater for purposes other than for which it has been designed
- any damage caused during transport

CLAIMS

The user may claim a defect of the equipment before expiration of the warranty period. Any such claim must be made in writing, indicating the following:

- date of delivery subject to the malfunction (equipment batch number)
- description of the malfunction.
- whether the equipment was used under operational conditions as per technical specifications.
- the actual application of the induction heater, specification of the heated material, tool used.
- date and circumstances under which the malfunction occurred.
- any documentation and/or photos necessary for successful processing of the claim.

Failure to observe the above conditions entitles the induction heater supplier to reject the claim.

The supplier carries the costs of accepted claims. The claimant shall carry the costs of a rejected claim.

The post-date indicated on the claim letter received by the supplier shall serve as the claim date.

The user shall send the damaged or faulty part to the supplier upon request, at the user's cost. The induction heater must be carefully packaged and labelled for shipping. The relevant costs will be reimbursed to the user for all accepted claims

DISASSEMBLY - WASTE DISPOSAL

The manufacturer or the supplier of the induction heater (electrical equipment) is responsible for the discharge of duties specified in the Act No. 229/2014 Sb. of the Czech Code, on waste management, as amended, in its section on waste electrical and electronic equipment, in particular Part 8, Section 37, letters f, g, h, i, j, k, l, m, n, and o. This Act conforms with the Directive 2012/19/EU of the European Parliament

and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).

The manufacturer (the final vendor) notifies the purchaser (consumer) that:

- 1) the electrical equipment must not be disposed of along with normal household waste; it must be placed at a dedicated container or be handed to a specialised recycling centre.
- 2) after decommissioning, the electrical equipment will be dismantled, and its components reused as spare parts or recycled.
- 3) the electrical equipment does not contain hazardous substances harmful to human health and/or the environment.

The manufacturer (final vendor) notifies the purchaser (consumer) that the product is subject to the duty of collection of waste electrical and electronic equipment directly at the point of sale unless another manner of collection is announced in writing at the time of sale. The collection of waste electrical and electronic equipment is free of charge and may not be conditioned by a purchase of any new equipment. The same quantity is collected as had been sold.

TROUBLESHOOTING

Possible malfunctions and recommended remedies

Description of malfunction	Likely cause	Remedy
The induction heater cannot be switched on	Faulty power supply connection	Check the power supply connection and mains voltage Check the power switch on the front panel
No heating	The tool connecting cable is incorrectly connected or is faulty	Check tool cable connection. Replace damaged tool cable Try another tool
The induction heater is correctly connected but the target is not heated	Secured electronic components overheated	Wait to cool off and reinitiate work
The induction heater emits constant tone signal while working (Tool button pressed)	Internal overcurrent protection	Possible to resume work afterwards Wait to cool off and reinitiate work
The induction heater emits constant tone signal all the time (Tool button not pressed)	Internal overheating protection or damaged internal circuitry	Wait to cool off and reinitiate work If the error persists, contact your local dealer or importer

STANDARD, OPTIONAL ACCESSORIES

(Range depends on selected set)

Power cord (Coupled to a device), length 4.7 m, nominal cross-section 3×1 mm² Tool cable, length 1.2 m, nominal cross-section 3×2.5 mm² and shielding, with two plugs

Small heat pen / Micro Heat pen / C Block (Tool depends on set)

Plastic case for device and accessories

Operating and maintenance instructions

COPYRIGHT

These operating and maintenance instructions or any of the parts thereof may not be copied, reproduced, reissued, and/or digitised without prior written consent of BETAG Innovation by BEULENTECHNIK AG, BEULENTECHNIK spol. s r. o. BETAG Innovation by BEULENTECHNIK AG, BEULENTECHNIK spol. s r. o. have made every effort to ensure that information in this manual is complete and correct. If in any doubt, please contact representatives of BEULENTECHNIK AG. Any responsibility of BETAG Innovation by BEULENTECHNIK AG for errors in this manual is limited to the correction of such errors and the abovementioned consulting services. The manual will be updated from time to time in harmony with the development of the T-HotBox HTR-02.

These operating and maintenance instructions are intended for qualified and duly trained personnel and the customer accepts all responsibility for its use.

BEULENTECHNIK spol. s r. o. Sterboholska 44/1307 102 00 Prague 10 Czech Republic

BETAG Innovation by BEULENTECHNIK AG Chaltenbodenstrasse 21 8834 Schindellegi Switzerland www.betaginnovation.com

All rights reserved

Second edition 01/2023

DECLARATION OF COMPLIANCE

A copy of the CE Declaration of conformity is available at http://www.betaginnovation.com/



