

# OPERATING INSTRUCTIONS

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## BTC-Tool Controller

- Original operating instructions -



### NOTE

In case of doubt, the original German version of the operating instructions applies.

Issue date:  
Firmware:

April 2021  
R 1.5.x



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# 1 Operating principles

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Dear customers,

thank you for choosing a HS-Technik GmbH product.

This quality product „Made in Germany“ fulfils the highest requirements with regard to performance, quality and accuracy. When used correctly the product will undoubtedly perform very well for many years.

These operating instructions contain information on safety and for the operation of the BTC-Tool Controller. In addition it contains information on the dimensions and technical data. We would be happy to assist you with additional information or to answer your questions. Our technical support and our technicians would be happy to assist you.

## 1.1 Scope of delivery

- BTC-Tool Controller
- Cable for power supply
- Operating instructions

## 1.2 General information

Read the device operating manual before initial operation. **Please pay particular attention to Chapter 2 „General Safety Notes“.**

This manual should make it easier for the operator to get used to the device and of its intended application possibilities. The operating instructions include important information related to the safe and proper operation of the device. Compliance with these instructions helps you to:

- Avoid dangers
- Avoid repair costs and downtimes
- Increase the reliability and the lifespan of the product.

This manual must be read and applied by every person who is assigned to conduct work using this device.

In addition to this operating instructions the applicable regulations on accident prevention and environmental protection should be observed.



**NOTE**

After reading, keep the operating instructions in a place accessible to every operator. If you have any further questions, please feel free to contact us.

**1.3 Signs and symbols used**

The following signs and symbols will be used in this manual, or on the product:

Symbol	Explanation
	Read this operating manual
	do not dispose of with household waste
	EU conformity marking
	Registered trademark
	use only indoors
	Protection class II
	Intrinsically safe transformer
	Direct current
	Universal Recycling Symbol

## 1.4 Structure of the warnings

The warnings are structured as follows:



### **DANGER**

Indicates an immediate dangerous situation that can lead to serious or even deadly injuries and/or that could seriously damage or even destroy the device.



### **WARNING**

Indicates a potentially dangerous situation that can lead to serious injuries and/or damage to the device.



### **NOTE**

Important and useful information on using this device.

## 1.5 Technical terms and abbreviations used

Abbreviation	Meaning
°C	Degrees Celsius, temperature
AC	Alternate current
DC	Direct current
Hz	Hertz, Frequency
Li-Ion	Lithium-ion, battery technology
mNN	Meters above sea level, height
SN	Serial number
V	Volts, electrical voltage
W	Watts, electrical power

## 1.6 Intended use

This device was designed to operate battery operated screwdrivers and riveting tools and to incorporate them, if applicable, into a higher-level system.

The device may only be used for this purpose as described in this manual. Only materials that are suitable for this type of tool may be used.



### **WARNING**

Intended use also includes

- following all indications of the operating instructions and
- observance of inspection and maintenance works.

Any other use or use beyond that is considered improper use. HS-Technik GmbH is not liable for any damage resulting from this.

## 1.7 Improper use



### **DANGER**

The use of this device for other purposes is not permitted. Improper use or incorrect accessories can lead to dangers with unforeseeable consequences.

**We accept no liability for damage and malfunctions resulting from non-observance of these operating instructions and improper use.**

## 1.8 Duties of the operator

The operator committed to only allow people who are familiar with the basic regulations on work safety and accident prevention and who have been trained on how to use the device at the workplace and to work with this device.

The safety awareness of the personnel while working will be reviewed at regular intervals.

## **1.9 Duties of personnel**

Prior to its use all people who work with this device are obligated to inform themselves of the applicable workplace safety and accident prevention regulations for this device and to observe them.

## **1.10 Training of personnel**

Only trained and instructed personnel should work with this device. The responsibilities of the personnel must be clearly defined. Trainees may only work with this device under the supervision of an experienced person.

## **1.11 Guarantee and liability**

Guarantee and liability claims for personal injury and property damage are excluded, if caused by one or more of the following:

- improper use
- failure to observe these operating instructions
- improper installation, commissioning, operation and maintenance of the device
- Operating the device with defective safety devices or improperly installed, or non-functioning safety and protective devices
- Failure to observe the information in the operating instructions regarding transport, storage, assembly, commissioning, operation and maintenance of the device
- unauthorised structural modifications to the device
- improperly performed repairs
- catastrophes due to external influences and acts of God

## 1.12 Copyright

These operating instructions are intended solely for the operator and its personnel.

They contain guidelines and information which may not be fully, or partially

- reproduced
- distributed or
- otherwise shared.

The copyright of these operating instructions is retained by HS-Technik GmbH.

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**High - System - Technik**

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## 2 General safety information for power tools

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### **DANGER**

Read all the safety information, instructions, illustrations and technical data which is provided with this device. Failure to follow the instructions below may result in electric shock, fire and/or serious injury.



### **WARNING**

This device was manufactured in accordance with current state-of-the-art technology and recognised technological safety guidelines. However, its use may jeopardise the health and life of the user or third parties, or risk damage to other property.



### **WARNING**

The workplace must only be used in accordance with its intended use and in technically perfect condition.



### **NOTE**

Keep all safety information and instructions for the future.



### **NOTE**

**Only have your device repaired by qualified professional staff and only with original replacement parts which are available at HS-Technik GmbH.** This ensures that the safety of the device is maintained.

## 3 Important information about this device

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### 3.1 Function of the BTC-Tool Controller

The BTC Tool Controller is used for the operation of battery operating screwdrivers and riveting devices. It can be used both in a higher-level system as well as a „Stand-alone“ device. The BTC communicates with the tool using Wi-Fi.

A process sequences can be controlled using the BTC in which the tool only receives approval for the respective process step.

The results data for the tool are transmitted to the BTC and can be downloaded from there.

### 3.2 Structural modifications

No changes, additions or conversions to the device may be made without the approval of the manufacturer.

All conversion measures require written permission and confirmation by **HS-Technik GmbH**.



#### **WARNING**

In the event of the replacement of wear and tear parts only original replacement parts may be used.

### 3.3 Cleaning the device and disposal

Substances and materials used must be handled and disposed of properly, particularly when cleaning with solvents.



## 4 Start-up and use

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### **DANGER**

#### **Risk of injury from damaged devices**

Damaged devices can lead to injuries or damages.

- All damaged parts must be repaired before use.



#### **Risk of injury from falling devices**

Falling devices can lead to injuries or damages.

- Avoid dropping the device.

#### **Risk of injury due to improper use**

Improper use can lead to injuries or damage.

- Use the device only for the intended purposes.



### **NOTE**

Maintain your device with care. Follow the operating instructions during maintenance and cleaning.



### **NOTE**

Do not drop the device, and do not let any other objects fall onto the device. Protect it from impacts.

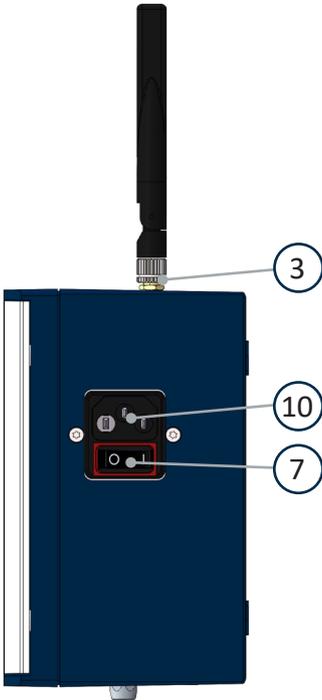
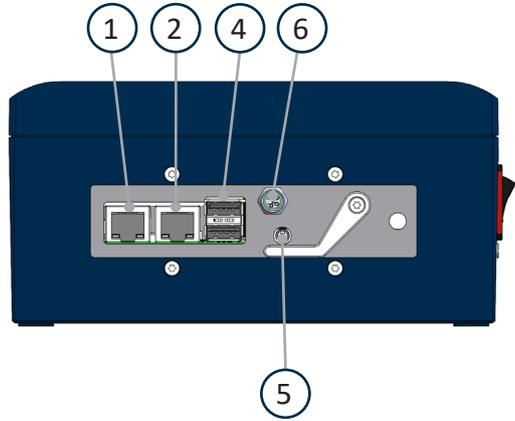


### **NOTE**

Ensure that the device does not come into contact with splashing water or oil.

## 4.1 Equipment configuration

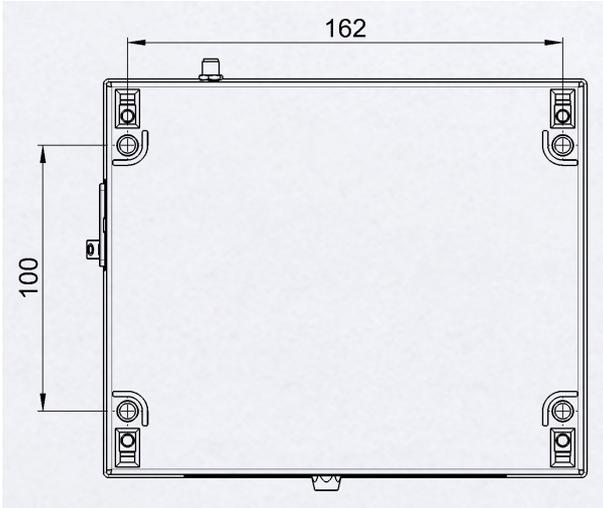
1. Ethernet connection 1 (fixed IPv4-address)
2. Ethernet connection 2 (DHCP)
3. Antenna socket with Wi-Fi antenna
4. USB port
5. Jack socket
6. BUS expansion
7. Main switch
8. Display
9. Operating buttons
10. Power supply



## 4.2 Start-up of the BTC-Tool Controller

### 4.2.1 Assembly of the BTC-Tool Controller

The BTC-Tool Controller is intended for wall mounting. This requires 4xM5 mounting screws.



Dimensions in mm  
Not shown to scale



#### **NOTE**

Please install the controller so that the connection socket is easily accessible in order to ensure a quick and safe disconnection from the network in an emergency.

## 4.2.2 Integration into the company network

### Ethernet

The HST-BTC has two Ethernet connections (RJ-45). The right one is preconfigured for DHCP, the left one has a permanent IPv4-address.

- Server IP: 192.168.100.5
- Subnet mask: 255.255.255.0
- Broadcast: 192.168.100.255

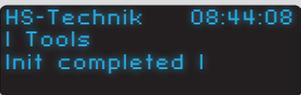
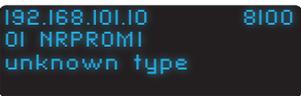
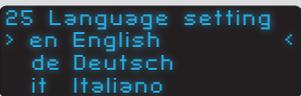
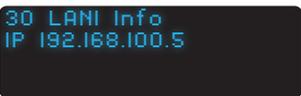
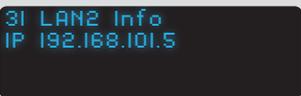
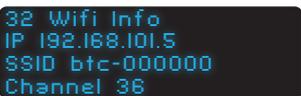
When connecting with a PC screen using the left connection with a permanent IP address is recommended. With accessories such as the socket driver set, for example, it is imperative that this connection is used.

### Wi-Fi

To connect with HS technology tools the HST-BTC creates a Wi-Fi network with a permanent IPv4-address.

- Server IP: 192.168.101.5
- Subnet mask: 255.255.255.0
- Broadcast: 192.168.101.255

### 4.3 Display notifications

	Display notification	Meaning
	Home	Displays the time
	Start page after initialization	Displays the time, number of tools and successful initialization
	Tool 1-20	Displays the tool type and the associated IP address
	Language setting	Language selection
	Info page for both Ethernet connections	Displays info and IP address for Ethernet connection 1
	Info page for both Ethernet connections	Displays info and IP address for Ethernet connection 2
	Wi-Fi page	Displays info about SSID and IP address

## 4.4 Web interface

This chapter describes the user interface of the BTC. A web browser is required in order to access the user interface, in addition the BTC must be integrated into the same network as the PC on which the web browser is running via Ethernet cable or Wi-Fi. Using one of the web browsers below is recommended:

- Mozilla Firefox
- Google Chrome
- Opera
- Apple Safari

### 4.4.1 Navigation bar

The navigation bar is displayed on the left of the web interface. On devices with a very small display, e.g. mobile devices, the navigation bar may be collapsed and can then be opened using the „Menu“ button.



Produktion

Thursday  
01.04.2021  
13:04:56

Start

Results

State

Digio

Service

Settings



Produktion

Logged on user

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„Date and Time“	This is the current date and time of the device on which the web browser is running.
„Start page“	Use this button to get to the overview of the BTC with the current work orders.
„Results“	Use this button to get to the saved results.
„Status“	Use this button to get to a status page with information on the tools currently equipped and the BTC.
„Digio“	Use this button to get to the overview page with the set expansion modules (ProfiBus, ProfiNet,...)
„Service“	Use this button to get to the password protected area with different service options.
„Settings“	Use this button to get to the password protected area with the settings for the various application modes.

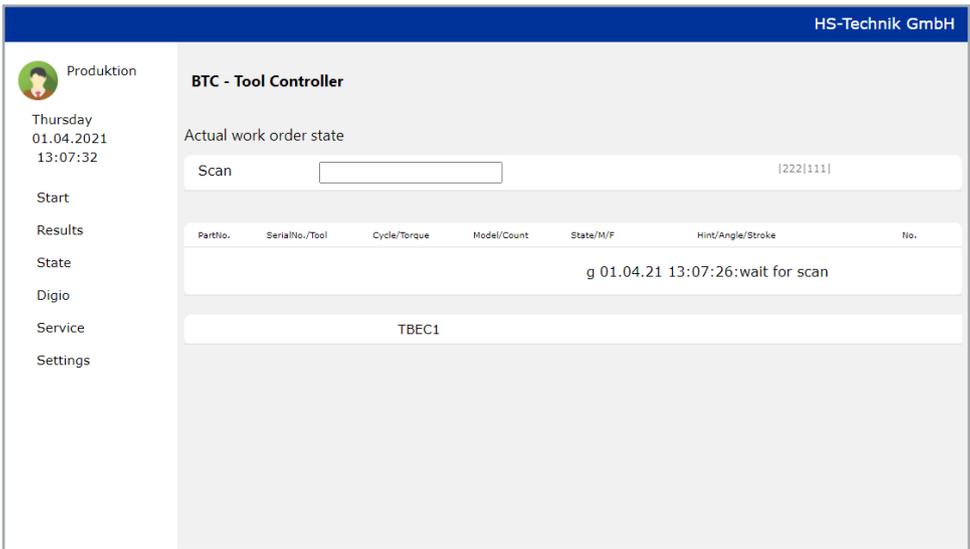
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## 4.4.2 Start page

If you are connected via the system interface you can connect to the BTC in the web browser via 192.168.100.5

If the BTC is integrated into the company network it will automatically be assigned an IP via DHCP. The IP address assigned, through which you can then get to the BTC in the web browser, can be found on the BTC display. Use the arrow keys to switch the display until „31 LAN2 Info“ appears. The IP address assigned via DHCP will be displayed in the second line.

The BTC is set to scan application in the supplied state. The start page is then displayed as in the image below.



„Scan“ Input field for manual entry of a scan code.

„|1%d%d|2%d%d|“ Presentation of the valid scan code.

„PartNo“ If a work order has been started the parts number is displayed here.

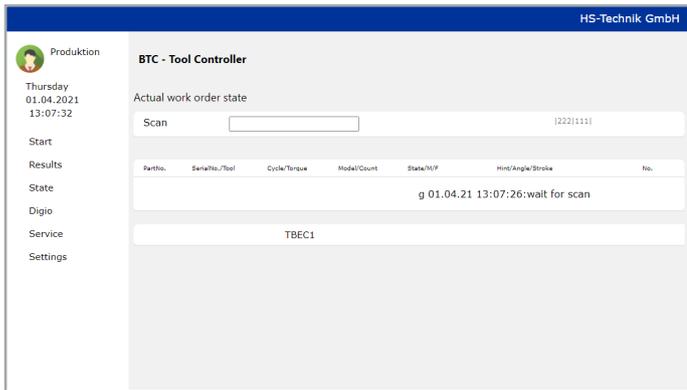
„Series No./Tool“ If a work order has been started the tool release is displayed here.

„Stroke/torque“ Stroke display (if usable)

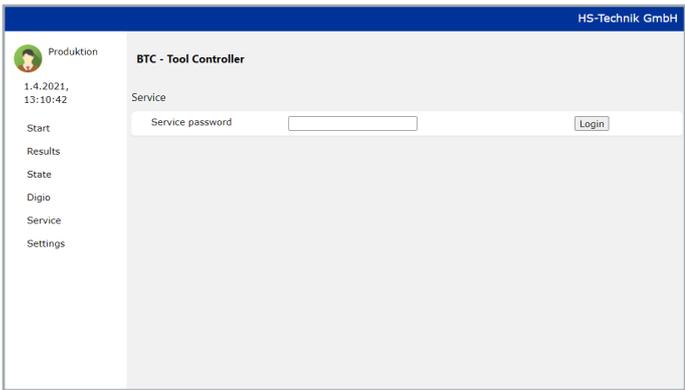
„Model/Dis.“	If a work order has been started the approved number of rivets/screws per work step is displayed here.
„Status/M“	If a work order has been started the torque, or force achieved after each individual step will be displayed here.
„Reference/Angle“	Here, either a reference to the current status or, if a work order has been started, the torque or lift achieved after each individual step will be displayed here.
„g*Date* *Time*: wait Scan“	Reference to current status.
„TBEC1“	Name of the tool configured. If multiple tools have been configured they will be displayed next to one another.

### 4.4.3 Update

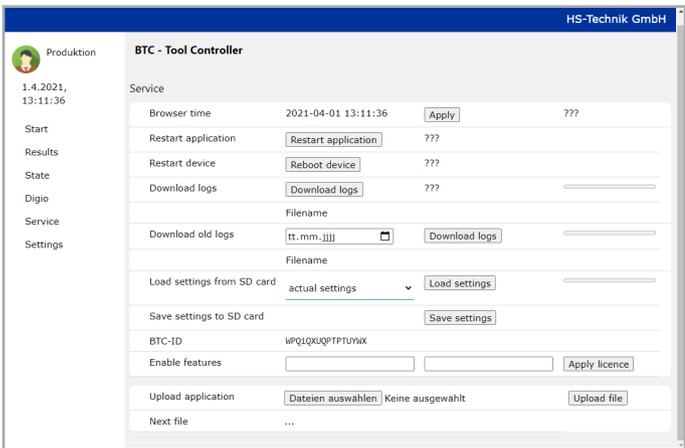
The left menu takes you back to the „Service“ page.



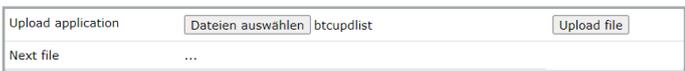
Enter your password here.



Then you will reach the „Service“ page. Upload the first file „btcpdlist“ down at the bottom under „Upload application“ using the „select file“ button.



Confirm the upload using the „upload file“ button.



These steps are repeated for the remaining files „btcpd\_a“ to „btcpd\_e“. Which file must be uploaded next is always displayed below the current upload.

Upload application	<input type="button" value="Dateien auswählen"/> Keine ausgewählt	<input type="button" value="Upload file"/>
Next file	btcupd_a	

Upload application	<input type="button" value="Dateien auswählen"/> btcupd_a	<input type="button" value="Upload file"/>
Next file	btcupd_a	

After the last file has been uploaded the „Update application“ button appears.

Upload application	<input type="button" value="Upload file"/>	<input type="button" value="Update application"/>
Next file		

The BTC completes the update and reboots.



**NOTE**

We recommend completing the update using Google Chrome because it does not work seamlessly with all browsers.



**NOTE**

If the BTC does not automatically reboot by the time the progress bar has completed it must be rebooted manually.

## 4.5 Maintenance and servicing

Apart from the regular cleaning and the visual inspection for damages the device is nearly maintenance-free.

## 4.6 Cleaning



### NOTE

Observe the following information for cleaning your device. Incorrect cleaning supplies or improper procedures when cleaning can lead to damage to the device.

Do not use any degreasing or corrosive cleaning supplies and no water. Do not spray any cleaning supplies, solvents or easily flammable materials into the openings of the housing!



## 5 Storage

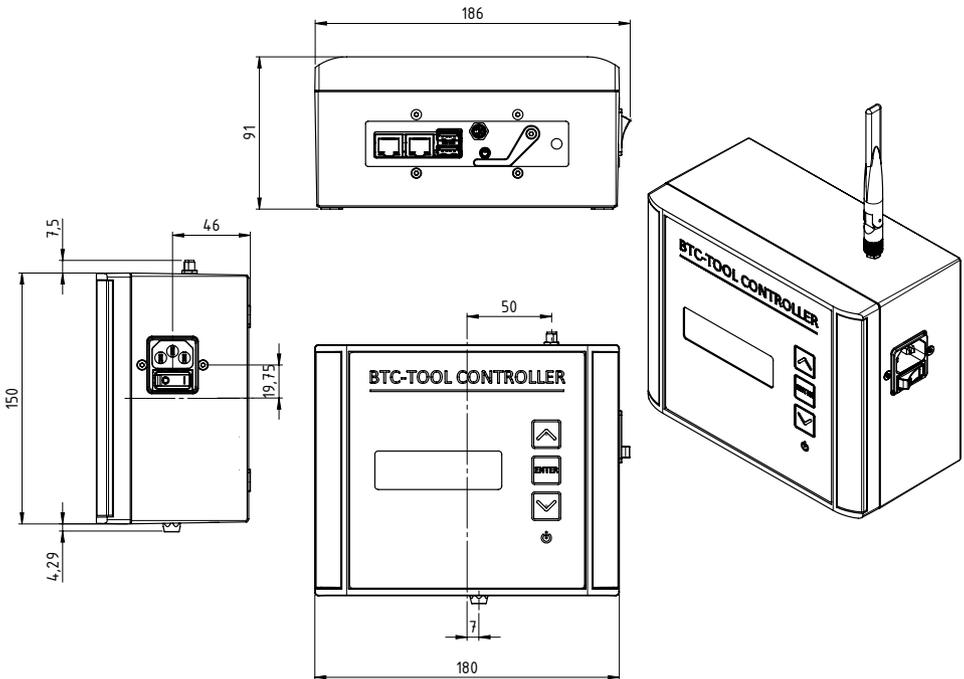
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Observe the following information when storing the BTC-Tool Controllers:

- Store the device in a dry environment protected against splashing water.
- Store the device in a well ventilated space and protected against exposure to dust.
- Ensure that the storage environment is free of aggressive chemicals and vapours.

## 6 Technical data

Description	BTC-O-EU	BTC-O-CH	BTC-O-UK	BTC-O-US
Operating voltage	110 ... 240 VAC			
Mains frequency	50 ... 60 Hz			
Power consumption	max. 15 W			
Connector type	Type F	Type J	Type G	Type B
Operating altitude	< 2000 mNN			
Operating temperature	10 - 40 °C			
Storage temperature	0 - 50 °C			
Dimensions without antenna (L × W × H)	180 × 150 × 90 mm			
Weight	approx. 1.6 kg			



Dimensions in mm  
Not shown to scale

## 7 Troubleshooting and Fault repair

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The BTC-Tool Controller by HS-Technik is a very long-lasting tool.

If, however, a device does not work properly you can find, and eliminate, the most frequent causes for errors in the table below.

<b>Error</b>	<b>Possible cause</b>	<b>Remedy</b>
BTC-Tool Controller does not work	No power supply	Check power supply
Calling up the BTC web interface does not work	IP address is faulty	Check internet settings. IP address must match that of the BTC.
Tools are connected but there is no response on the web interface, or tool	IP address is faulty	Check IP address (must be in the same range of numbers), match ports
BTC screen displays frozen image/black screen, settings no longer possible	BTC is no longer reacting	<ol style="list-style-type: none"><li>1. Switch off BTC</li><li>2. Hold down both arrow keys &amp; and switch on simultaneously</li><li>3. Boot mode opens and the BTC is started up normally</li></ol>
BTC screen displays frozen image/black screen	BTC is no longer reacting	<ol style="list-style-type: none"><li>1. Switch off BTC</li><li>2. wait approx. 10 seconds</li><li>3. power on BTC again</li></ol>
Barcode for Wi-Fi settings is not being read	Scanner is deactivated	Activate scanner, if necessary, manual entry of the Wi-Fi settings (in older versions)
Older riveting tool will not connect. Constant request to empty the riveting mandrel container	Spool settings incorrectly programmed	Check the Wi-Fi settings for the tool
Tools not working simultaneously despite two (or more) different barcodes	incorrect group distribution	In case of simultaneous modes of operation the tools/barcodes must be divided into different groups accordingly.

If the error still persists or is not listed, please contact HS-Technik GmbH.

**Repairs:**

Telephone: +49 (0)7628 / 91 11-0

E-mail: repaircenter@hs-technik.com

**Programming:**

Telephone: +49 (0)7628 / 91 11-0

E-mail: support@hs-technik.com

**Please note the following information:**

- Serial number of the device
- What error has occurred?
- Display
- When did the error first appear?
- What have you done to fix the error?

We reserve the right to make errors, technical changes to our products and changes to the delivery program in the course of further development.

## CE Declaration of conformity

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We, the manufacturer, hereby declare that the named tool complies with the essential protection requirements of the listed EU directives regarding design and construction type.

The prerequisite for this is the intended use of the tool as well as compliance with the installation and commissioning instructions.

If the product or its accessories are modified without our permission, this declaration becomes invalid.

<b>Tool description:</b>	Wi-Fi Tool Controller
<b>Type designation:</b>	BTC-O-XX
<b>Manufacturer:</b>	HS-Technik GmbH Im Martelacker 12 D-79588 Efringen-Kirchen
<b>Directives:</b>	2014/30/EU 2014/35/EU 2014/53/EU
<b>Applied standards:</b>	EN 62368-1:2014 EN 301 489:2017-02 EN 55032:2015 EN 300 328:2016-11 EN 301 893:2015-03

HS-Technik GmbH  
Im Martelacker 12, D-79588 Efringen-Kirchen

July 2020



Florian Hanke  
CEO

# Notes

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A series of horizontal dotted lines for writing notes.

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