大久生物科技股份有限公司
GRANDEVER BIOTECHNOLOGY CO., LTD.

xylem

HACCP never was as easy

COMPLYING TO THE HYGIENE REQUIREMENTS WITH THE ebro® HACCP SYSTEM

- Define and control HACCP tasks
- Document temperature and oil quality
- Reduce effort and cost

-ebro-

a **xylem** brand

ebro® HACCP system

One system for all

The **ebro® HACCP system** comprises **several components** which can be chosen in order to cover the various tasks and requirements when controlling food. Various measurement devices can act jointly with different pieces of **software** as well as several accessories in order to always have the **perfect solution** – from simple, efficient **collection of measurement data** to **definition and control of HACCP tasks across locations** – according to requirements.

Measuring temperature and oil quality

The new measurement devices are based on very successful concepts, honed over the course of many years. Both the thermometers and the oil quality monitors are perfectly suited for the applications. What´s new is the option to **store measurement data** in the device and to forward it **to a software** via Bluetooth.

Lower cost

The **measurement devices** save the data **digitally** in its memory. Therefore, it´s not necessary any longer to carry along pen, paper and clipboard additionally. Thus, temperature and oil quality control is much faster and more efficient. This **saves time** and therefore **money**. Also, the devices have a rechargeable battery, **sparing frequent battery changes.**

Optimize processes

The **ebro® HACCP system** offers numerous simplifications compared to conventional temperature and oil quality control. Both measuring and storing the data can be done **with few buttons to press or mouse clicks**. This high degree of automation **reduces the effort and the risk of failure.**

Define HACCP tasks

Complying to the relevant **EU regulations** for food safety requires to introduce control mechanisms, create cleaning instructions and define other tasks. All of these can be entered in the software of the **ebro® HACCP system easily** and **extremely flexible.** The tasks and dates for the cleaning and measurement personnel arise from those measures, and the system will **inform, remind and guide** them.

Keep control

The **ebro® HACCP system** offers the option to **identify measurement locations** and the **personnel** via NFC tags. This works similarly to cards for clocking out. Among other things, the tags are there to confirm **the right person** has measured at the right location. These data can be checked in the software later on. Thus, the fulfillment of the previously defined tasks **can be followed easily.**

Create reports

The **ebro® HACCP system** can not only store measurement data, but also **date**, **time** and the **location** of each measurement, as well as the identifier of the **measurement personnel.** Therefore, all relevant data are stored in a **database**. These data can later be examined at any time. An annual report of the temperature and oil quality, so far a sheer impossible task due to hundreds of sheets of paper, can be created with a few mouse clicks.

Keep track

Both upcoming and fulfilled HACCP tasks are clearly presented in the software. The data of **single stores** or **multiple sites simultaneously** can be evaluated with little effort. A dashboard for the corporate and quality management offers **an overview for the big picture.** Naturally, you can also go into detail if required.

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The right software for every application

HACCP software

HACCP softwares are Digital Food Safety Management Systems that allow for defining, managing, scheduling and controlling **Food Safety processes** 24/7. With them, it is possible to transform paper-based checklists into **digital checklists** to gain real-time insight and drive Food Safety process optimization.

Usually these software consist of a cloud-based application software and an app for mobile devices. ebro´s Bluetooth devices are supported by the HACCP-softwares of various providers. Contact us for a recommendation!

Evaluation software Easy Data Collector

The evaluation software **Easy Data Collector (EDC)** is a self-contained, Windows-based **application software**. It offers the **collection, evaluation and storage of measurement data** gathered with the measurement devices, especially to customers who don´t need an **HACCP** software. **EDC** focuses entirely on the measurement data, similar to the ebro® **Winlog. basic** software.

EDC has its own **database**. Accurate analysis of the measurement data, e.g. weekly or monthly trends, or evaluations based on locations are no problem. Even after years, such **reports can be made with a few mouse clicks.**

Applications

Collecting data with Bluetooth devices and EDC

The measurement devices are ideal for regular round walks to check the temperature e.g. of **cooling rooms** or during **incoming goods inspections**. The measurement and time data will be stored in the device and then transferred to the **ebro® EDC software** on a PC. There it can be supplemented with additional data, e.g. personnel and locations, if required. **Reports and other evaluations** can be made at any time.

This application of the **ebro® HACCP system** is ideal if it´s all about **storing the data.**

HACCP with Bluetooth devices and HACCP software

You can define the various HACCP tasks in **HACCP softwares**, whereupon an app informs the responsible personnel. If it´s cleaning the floor, washing the cutlery or the workwear – all can be entered, fulfilled and later checked. One of those tasks can be **temperature** or **oil quality control**, and for that the devices are ideal. They send the measurement data to an app, which forwards it to the cloud.

This application of the **ebro® HACCP system** is ideal if it´s about the computer aided **implementation of an HACCP concept**, which includes temperature and oil quality control, among other things.

Collecting data with NFC devices and EDC

The NFC devices can do anything the Bluetooth devices can do, and in addition communicate with NFC tags. These allow for a higher degree of **automation and control**, since the measurement locations and personnel do not need to be entered manually. The EDC software receives complete data sets.

This application of the **ebro® HACCP system** is ideal if it´s about **storing the data**, with **optimized processes** and a certain degree of **control**.

HACCP with NFC devices and HACCP software

This application comprises all options of the Bluetooth devices together with an HACCP software. In addition, **measurement locations** and **personnel can be identified** via NFC tags. During the definition of the measurement task, who shall measure where and when has already been determined. Usually it is hard to follow if indeed this has been done as intended, though. The tags are there as an additional **verification** and increase the degree of **control**.

This application of the **ebro® HACCP system** is ideal if it´s about the computer aided **implementation of an HACCP concept**, which includes temperature and oil quality control, among other things, and requires the highest degree of control.

Technical data TLC 750 BT/NFC

Technical data

Measurement range	-50 °C ... +250 °C (-58 °F ... 482 °F)
Accuracy infrared	±4 °C at -50 °C ... -30.1 °C (±7.2 °F at -58 °F ... -22 °F) ±2.5 °C at -30 °C ... -18.1 °C (±4.5 °F at -22 °F ... -0.4 °F) ±1.5 °C at -18 °C ... -0.1 °C (±2.7 °F at -0.4 °F ... 149 °F) ±1.0 °C at 0 °C ... +65 °C (±1.8 °F at 32 °F ... 149 °F) ±2.0 °C or 2 % at +65 °C ... +250 °C (±3.6 °F at 149°F ... 482°F)
Accuracy penetration probe	±0.5 °C at -30 °C ... +99.9 °C (±0.9 °F at 22 °F ... 212 °F) ±1 °C (±2 °F) or 1 % for the remaining measurement range (whichever is larger)
Resolution	0.1 °C / 0.2 °F
Distance to spot ratio	8:1
Sensor	Thermocouple type T
Operating temperature	-20 °C ... +50 °C (-13 °F ... 122 °F)
Storage temperature	-30 °C ... +70 °C (-40 °F ... 158 °F)
Battery	Rechargeable lithium polymer battery 3,7 V
Battery lifetime	Approximately 8 h of continuous use
Battery charging	Wireless or via USB-C port, 500 mA
Dimensions (L x W x H)	169.5 x 44 x 23 mm (without probe), needle length = 100 mm
Housing material	ABS
Weight	Approximately 140 g
Protection class	IP 65
Automatic deactivation	Automatically after 15 seconds, deactivatable
Certificate	Factory Calibration Certificate
Memory capacity	200 measurement values
Interfaces	NFC (only TLC 750 NFC), BLE, USB-C

The thermometers have an infrared sensor for **surface temperature** measurement and a penetration probe for **core temperature** measurement. The display with **backlight** can be read from both sides. This combination of features is ideal for **incoming goods inspections and storage monitoring.**

But they can do much more than that. The thermometers have a memory for up to 200 measurements. With one walkabout, all measurement locations can be handled. The measurements will be saved and can be transferred wirelessly via the **IF 750** or the **HACCP app** on a mobile device to the PC at once – **no manual notes required anymore!**

On top of that, the **TLC 750 NFC** can read NFC tags, which can identify **measurement locations** and the **users** of the device. Hence, it brings together all relevant data automatically and **without risk of failure:**
what has been measured by whom, where, and when – because the device also knows **date and time.**

The rechargeable battery can be charged with an appropriate device, e.g. the **IF 750**, or the USB interface.
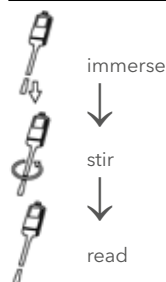
Technical data FOM 330 BT/NFC

Technical Data

Measurement range: oil	0 % ... 40 % TPM* (oil temperature of +50 °C to +200 °C / +122 °F to +392 °F)
Accuracy: oil	Typically ± 2 %
Resolution: oil	0.5 %
Measurement range: temperature	+50 °C ... +200 °C (+122 °F ... +392 °F)
Accuracy: temperature	± 1 °C
Resolution: temperature	0.1 °C
Operating temperature	-20 °C ... +50 °C (-4 °F ... +122 °F)
Storage temperature	-25 °C ... +60 °C (-13 °F ... +140 °F)
Battery	Rechargeable lithium polymer battery 3.7 V
Battery charging	Wireless or via USB-C port, 500 mA
Dimensions (L x W x H)	314 x 54 x 22 mm
Housing material	ABS (food safe)
Weight	Approximately 250 g
Protection class	Waterproof IP67
Certificate	Factory calibration certificate (two calibration points, values dependent on the oil)
Memory capacity	200 measurement values
Interfaces	NFC (only FOM 330 NFC), BLE, USB-C

TPM: Total polar materials

The **Bluetooth oil quality monitors** share the same qualities as the standard device FOM 330-4: reliable measurement, robustness and clarity of results. The devices are offered as a set, including a carrying case and a practical hand protector.

Additionally, they have a data memory for up to 200 measurements. This way you can measure in multiple fryers directly after each other. Similar to the TLC 750, all other innovations have been integrated into the FOMs as well: Bluetooth interface, battery rechargeable either via USB-C port or wirelessly (Qi), as well as the NFC functionality of the FOM 330 NFC.

Signal lamp

NextStep

immerse
↓
stir
↓
read

fresh oil

questionable oil

old oil

Digital food quality control at one glance

User NFC tag

NFC communication

Location NFC tag

Bluetooth communication

IF 750

USB

LAN
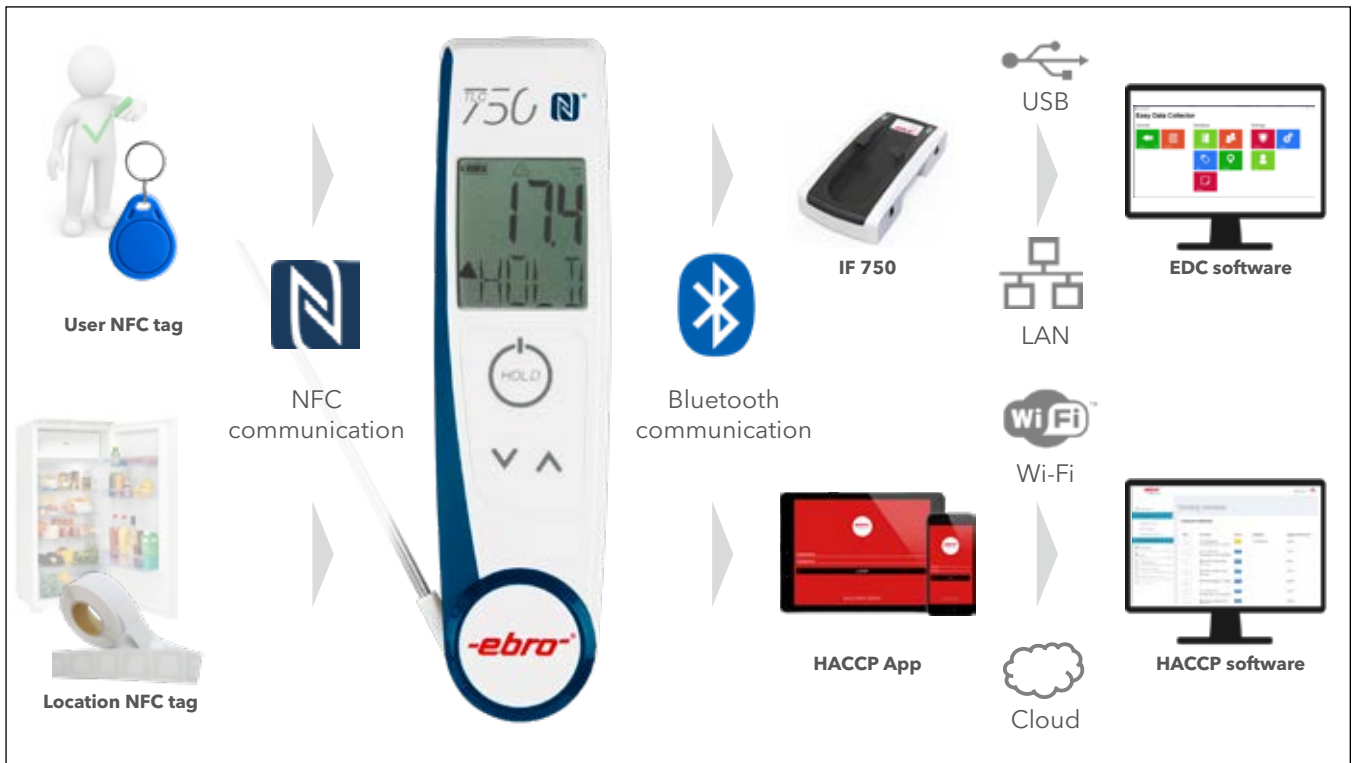
Wi-Fi

Cloud

EDC software

HACCP App

HACCP software

Fig. Complying to the hygiene requirements with the ebro® HACCP system

Accessories

The **IF 750** has a BLE interface, so that you can communicate with the thermometers even without mobile device. Additionally, it has both a USB and an Ethernet interface, allowing it to talk to a PC. Therefore, it establishes the **connection between HACCP software and measurement device.**

It also serves as a **charging station** for the thermometers. Charging is done wirelessly, avoiding electric contacts and their common problems, like corrosion and wear.

The **NFC interface** of the **IF 750** offers reading NFC tags into the software while setting up the measurement system. There the tag information can be assigned to locations and users.

The **IF 750** is also there to **store** the thermometers. It can be laid on a flat surface e.g. a desk, or used as a wall mount.

IF 750

The **CS 750** is a combination of charging station and wall mount, and the **WM 750** is a wall mount only. Those two items are supplements to the system, in case several thermometers are used. They have the same shape as an **IF 750** and can be connected to it physically, so that the entire measurement system is **situated in a compact manner.**

The user NFC tags **UT 750** can be assigned to users of the **TLC 750 NFC**. Similar to a time card, the user will be identified by the tag. This way the **TLC 750 NFC** will know who is using it. That information will then be linked to the measurement data. **Later on you can follow who measured.**

The location NFC tags **LT 750** work in a similarly way. They identify the measurement locations, e.g. a rack in a cooling room, or a fridge. **This way you can follow where it has been measured.**

UT 750

LT 750

How to order:

Typ	Description	Part No.
TLC 750 NFC	Dual HACCP-Thermometer	1340-5741
SH 750 NFC	Set: TLC 750 NFC, Interface IF 750 incl. charging station, evaluation software EDC, 5 User-Tags, 5 Location-Tags	1340-5752
TLC 750 BT	Dual radio thermometer	1340-5740
SH 750 BT	Set: TLC 750 BT, Interface IF 750 incl. charging station, evaluation software EDC	1340-5751
SI 750	Set: Interface IF 750 incl. charging Station and evaluation software EDC	1340-5750
CS 750	Charging station for the TLC 750 BT and TLC 750 NFC	1341-5750
UT 750	Set: 5 User-Tags for TLC 750 NFC	1341-5751
LT 750	Set: 5 Location-Tags for TLC 750 NFC	1341-5752
WM 750	Wall mount for TLC 750 BT and TLC 750 NFC	1341-5753
FOM 330 BT-Set	Radio Food Oil Monitor-Set (incl. Radio Food Oil Monitor, hand protection, carrying case, calibration certificate)	1340-2734A
FOM 330 NFC-Set	HACCP Food Oil Monitor-Set (incl. HACCP Food Oil Monitor, hand protection, carrying case, calibration certificate)	1340-2736A

You can find more information about our HACCP products under: ebro.com/en/haccp

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