



Calib'Bath Connect

USER GUIDE



Reference : 13677

Non contractual document

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원문: JRI Calib'Bath Connect Calib'Bath Connect · 제조사 원문 자료입니다. 사양은 제조사 사정에 따라 변경될 수 있습니다.

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I. INTRODUCTION

The Calib'Bath Connect is a programmable calibration bath.

The Calib'Bath Connect includes all the components required to perform a fully automatic calibration: a reference temperature probe, a high-performance calibrator for measurements, and a powerful processor for system control and report generation.

With its color touchscreen and user-friendly interface, performing a calibration and printing a report has never been easier, no additional software installation required..

The specifications of the Calib'Bath Connect are documented in accordance with the recommendations of the EURAMET/cg-13/V03 standard.

a) Supply

- 1 Calib'Bath Connect
- 1 Insert standard – 13723
- 1 Insert extractor
- 1 Power cable / 1 Ethernet cable / 1 USB cable

b) Symbols

	RECYCLING : Do not dispose of in a landfill or household waste collection container. Comply with the applicable legislation for disposal.
	Power supply : The device is powered from the mains using the supplied cable (230 V AC).
	CE MARKING : This device is certified as compliant with European regulations for electrical safety, flammability, emission of disturbing radiation, and immunity to surrounding electrical disturbances.
	EAC MARKING : This device is certified as compliant with the requirements of the Eurasian Economic Union (EAC) for electrical safety, electromagnetic compatibility, and safe use.
	Redirect to the MySirius homepage.
	EN 61010-1:2011 Safety requirements for electrical equipment for measurement, control, and laboratory use. EN 61010-2-010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-010: Particular requirements for laboratory equipment intended for heating materials. EMC Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004 on the harmonization of the laws of the Member States relating to electromagnetic compatibility, repealing Directive 89/336/EEC. EN 61326-1:2003 Electrical equipment for measurement, control, and laboratory use – Electromagnetic compatibility (EMC) requirements.

II. SECURITY

a) General safety instructions

If the Calib'Bath Connect is switched on, do not leave the room without posting an identification or warning sign indicating the risk of high temperature.

Before switching off the Calib'Bath Connect, lower the block temperature to values close to ambient temperature.

Never remove the insert from the dry block or the thermoelements from the insert while they are at temperatures far from ambient. Wait until they reach ambient temperature to prevent uneven cooling from causing the parts to seize together.

b) Recommendations for measurement accuracy

The Calib'Bath Connect is a high-precision instrument and requires compliance with all the procedures described below to achieve the required levels of accuracy during calibration :

Special attention must be paid to the cleanliness of the insert. When necessary, it should be washed with water and soap, thoroughly rinsed, and dried. Oil, grease, or solid particles can hinder heat transfer to the insert and may even cause it to become stuck in the block.

The sensor to be calibrated must fit properly into the corresponding well. If the sensor is loose, the measurement accuracy can be completely compromised. The clearance between the sensor and its well should be assessed subjectively, using common sense. The sensor should fit into the well (both perfectly clean) tightly enough to remain stable and not move or oscillate, but without forcing it to the point of getting stuck.

In the specific case of generating negative temperatures, calibrations must be performed in a decreasing temperature order. Below 0 °C, ice forms on the surface of the insert and between the insert and the thermoelement being calibrated. This moisture alters thermal contact and causes errors. After use below 0 °C, increase the setpoint to a positive value, remove the insert and the sensor from the block, and carefully dry all parts before continuing the calibration.

WARNING !



Avoid any risk of electric shock when handling the equipment:

Use only a suitable power cable with a proper earth connection.

Never connect the equipment to a power outlet without grounding.

High voltage is present inside the equipment and can cause serious damage or injury.

WARNING !



Significant electromagnetic noise may cause equipment instability.

The device is equipped with electromagnetic interference filters that protect both the power supply and the device itself from noise.

These filters will not function properly if the unit is not correctly grounded.

**WARNING !**

The user is responsible for configuring and selecting the instrument's parameter values.

**WARNING !**

High temperatures are reached inside these devices.

There are fire and explosion risks if safety measures are not observed.

Clearly mark high-temperature hazard areas with appropriate signage.

Do not place the dry block on flammable surfaces or materials that may deform under heat.

Do not obstruct any ventilation openings to avoid the risk of fire inside the equipment.

**WARNING !**

Don't use the device under conditions other than those described in the technical specifications (Risk of fire or explosion).

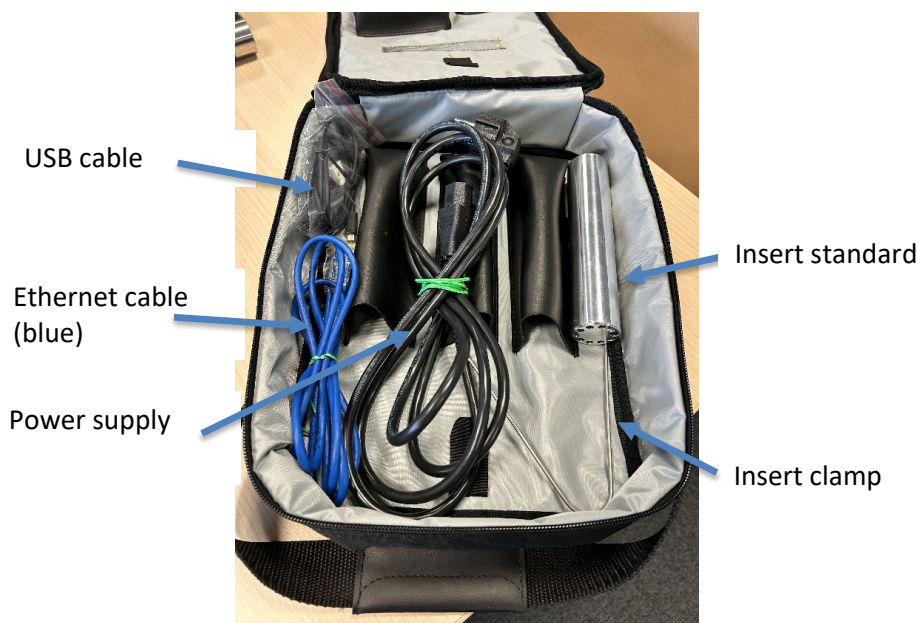
For any use other than those specified, please contact **JRI**.

III. CONFIGURATION

a) Starting up the Calib'Bath Connect

Cables and Power Supply

The calibration bath is supplied with various accessories:



Connect the supplied power cable to a mains outlet that meets the device specifications.

To connect the bath to an Ethernet network, use the supplied Ethernet cable and plug it into the network port located on the front of the device. Ensure that the other end is connected to your local network to enable communication with the device.

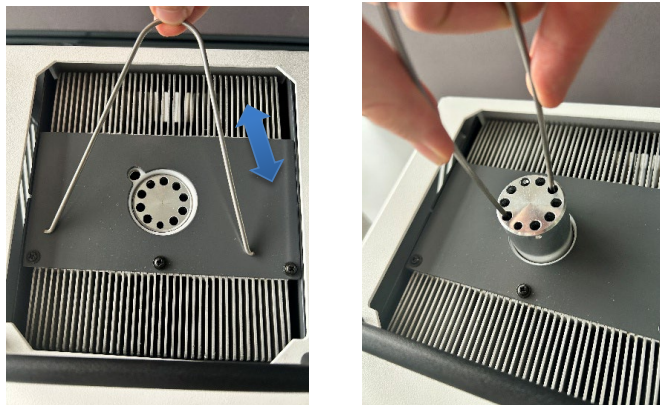
Note: Make sure all cables are properly connected before switching on the bath using the **O/I** power button.

Adding and removing inserts

To remove an insert, use the supplied extractor tool (see photo below). Grip the insert with the tool and gently lift it out of the bath.

To install an insert, align it with the corresponding slot and carefully place it into position using the extractor.

Caution : Never force the insert to avoid damaging the bath or the insert.



Before starting the calibration procedure, it is essential to install the probes in the bath. Place them in their designated positions from the beginning, before connecting the bath to MySirius or to the automatic control application.

This step ensures that the probes reach the bath temperature at the moment the calibration starts, thereby guaranteeing the stability and reliability of the measurements.

Once the probes are correctly positioned, you can proceed with the connection and program configuration steps.

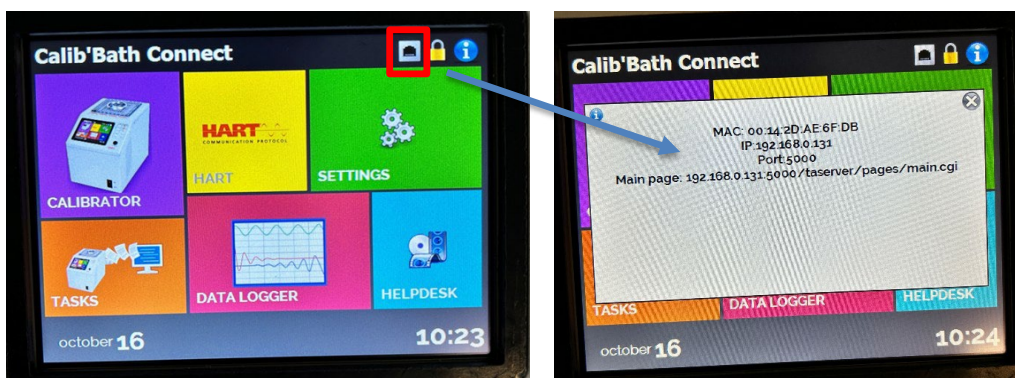
b) Configuration du Calib'Bath Connect

➤ Use with MySirius Cloud

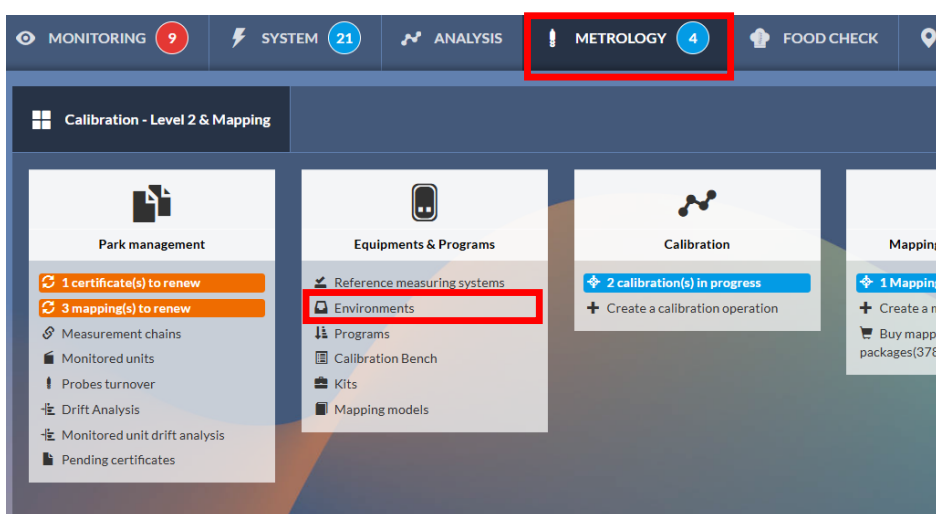
Before configuring, ensure that your MySirius account is version 5.1 or higher. This version is required to enable communication with the calibration bath.

Once the bath is powered on and connected to the network via the Ethernet cable, click the icon shown below (highlighted in red) to display the bath's connection information, including its IP address and communication port.

By default, the bath is configured for DHCP on the JRI CLOUD. If a fixed IP setup is required, or if you want to use it with MySirius SERVER or MySirius CLOUD US, refer to the "Other Configurations" section in Chapter III, §d.



These details will then be used to add and configure the bath in MySirius.
To do so, open MySirius, then go to the Metrology tab and click on Environments menu to register the bath and complete the connection.



Next, click on



Then fill in the required fields: Name of the bath, type (Calib'Bath Connect), unit and the serial number (found on the information label on the back of the bath).

UPDATE OF AN ENVIRONMENT

Name	Calib'Bath connect Bezons
Type	Calib'Bath Connect
Unit	°C
Serial number	043.05.25
Comment	

You must then enter the following parameters : IP adress of your bath, the port (which must be **5000** for the bath to connect correctly) and the usernam and password, which are :

ID : **admin**

Password : **xvmaster**

CONNECTION

IP Address

169.254.2.113

Port

5000

Login ID

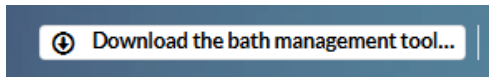
admin

Password

.....

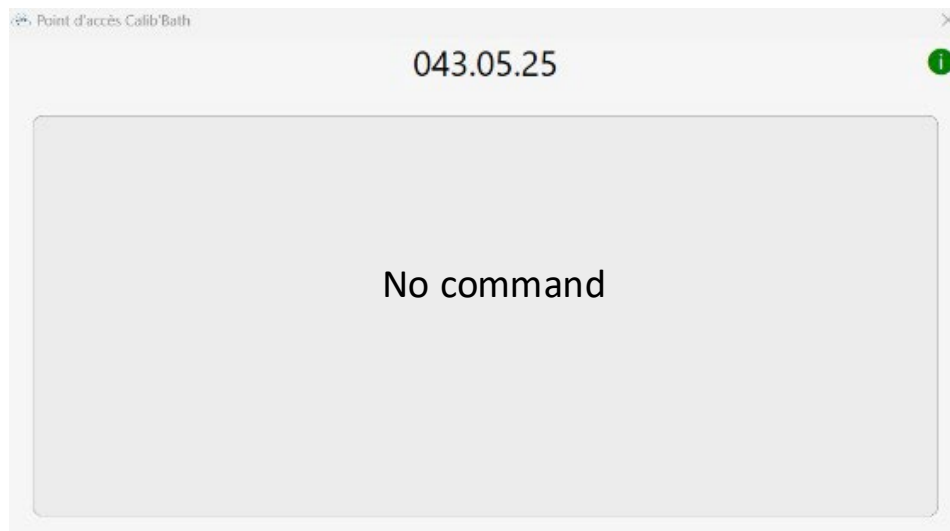
Download and run the Calib'BathConnect.exe application. This software serves as the interface between your bath and the MySirius dispatcher.

To download it, open MySirius, then select Metrology → Environment.. and :

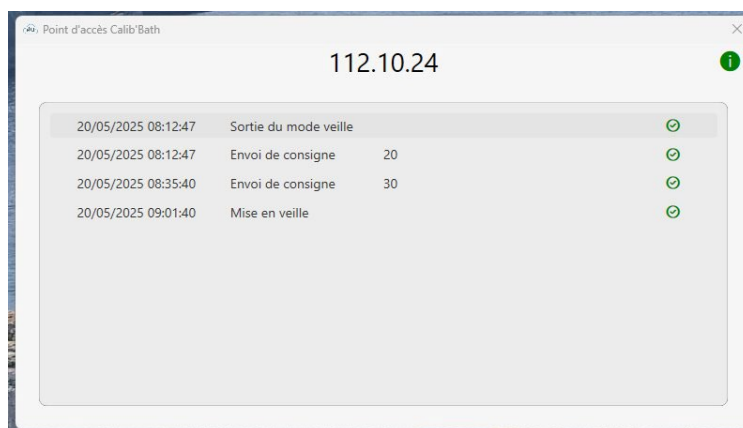


Once launched, the interface shown below will appear. To log in, use your MySirius ID. Next, select your bath from the list of available devices.

The screen shown below should appear, with the icon  indicating that the connection with MySirius has been successfully established.



The control commands appear directly in the software, as shown below.



CAUTION: Ensure that the PC on which Calib'Bath Connect is installed is not switched off or in sleep mode during calibration. Otherwise, the connection with MySirius will be lost and the bath will not receive any new instructions.

➤ Use with MySirius Server

With MySirius Server, there is no need to use the 'CalibBathConnect' software.

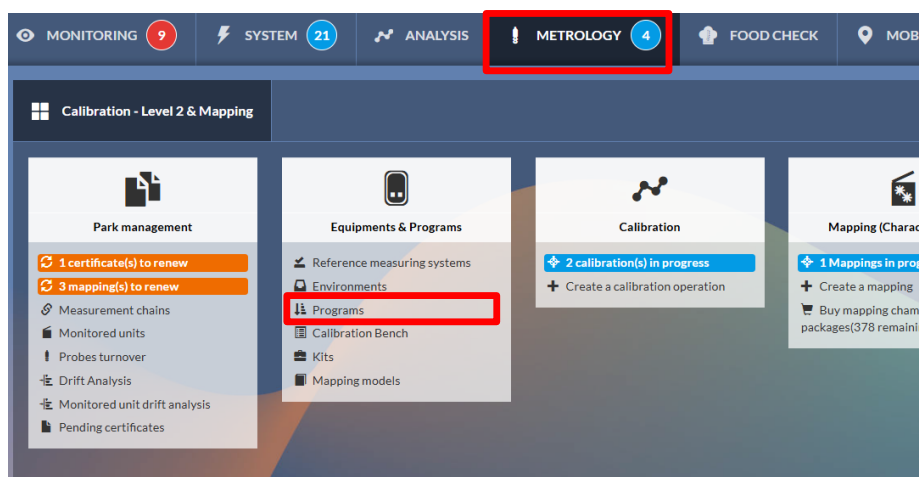
The prerequisites require that the bath be accessible from the MySirius server (IP and port of the bath open when exiting).

Operation :

The MySirius server sends commands directly to the bath, without any intermediate software.

c) Creating and launching the programme

To create a programme, go to the Metrology tab in MySirius and select the Programmes menu.



Next, click on 

Then follow the instructions to create your calibration programme with the desired number of steps.

When creating the programme, ensure that the selected medium is the bath created previously and that the “Controlled” box is ticked in green.

MODIFY A PROGRAM

Name:

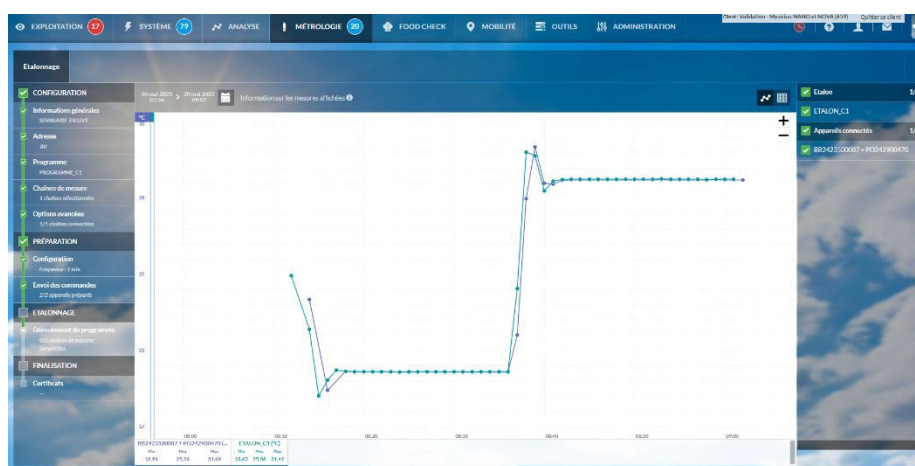
Unit:

LEVELS

Number of levels:

Number	Instruction	Standard chain	Environment	Controlled
1	0	01	Calib/Bath connect Bezons	☒
2	0	02	Calib/Bath connect Bezons	☒

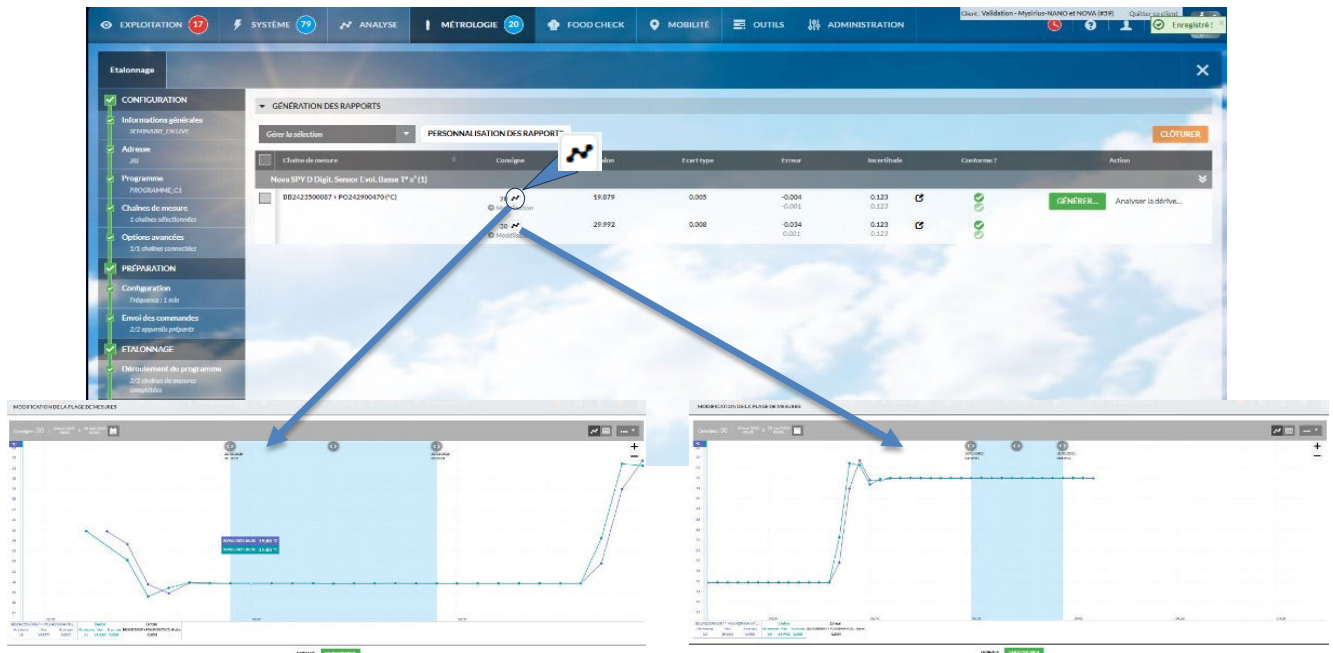
Once all checks have been completed, start the calibration by selecting the desired programme.



When calibrating from the metrology module, once the programme is launched, MySirius will follow the process below:

1. Connection with the bath
2. Sending the command to set the bath temperature to the requested setpoint
3. Waiting until the measurement chain and the standard are stable at the requested setpoint temperature
4. Detect the step found
5. Repeat steps 1) to 4) until all steps have been completed
6. End of programme detected upon retrieval of measurements, and at the end of calibration, MySirius sends a standby setpoint to the bath

You can view the different curves for your steps in the Finalisation tab on MySirius.



d) Other configurations

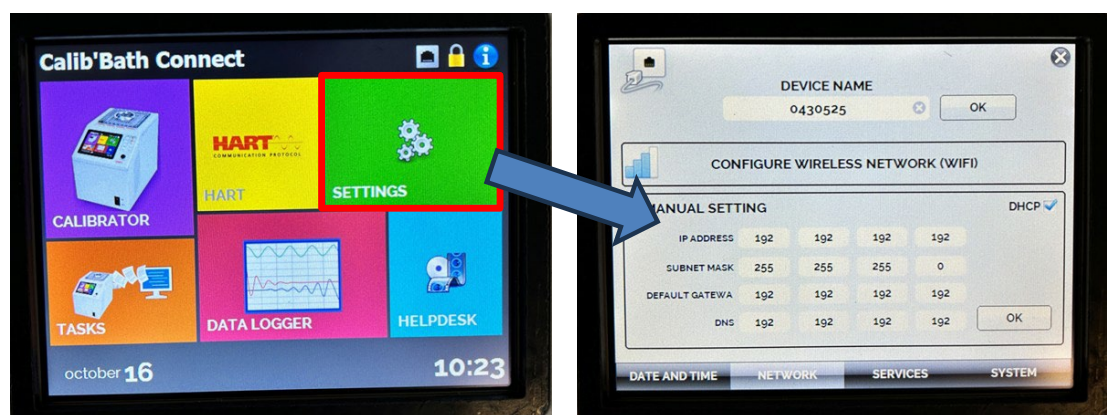
For the US Cloud, the downloadable version is already configured on the US server.

Similarly, for the FR Cloud, the downloadable version is also configured on the French server.

By default, the bath is configured in DHCP mode, which allows it to automatically obtain an IP address on your network.

However, it is possible to switch to a fixed IP address if you require a stable or specific network configuration.

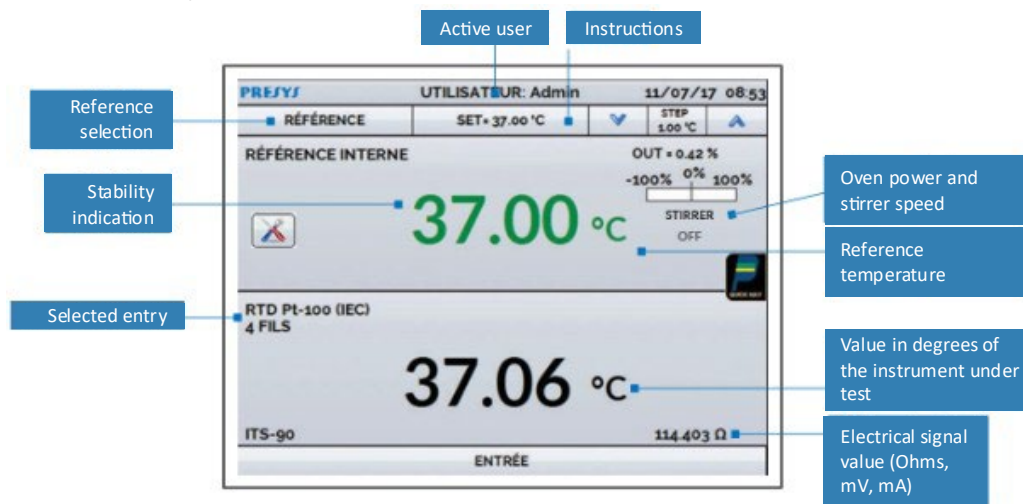
To do this, on the main screen, click Settings, then uncheck DHCP (on the right). Next, enter your IP address in the designated field.



IV. PRÉSENTATION / UTILISATION

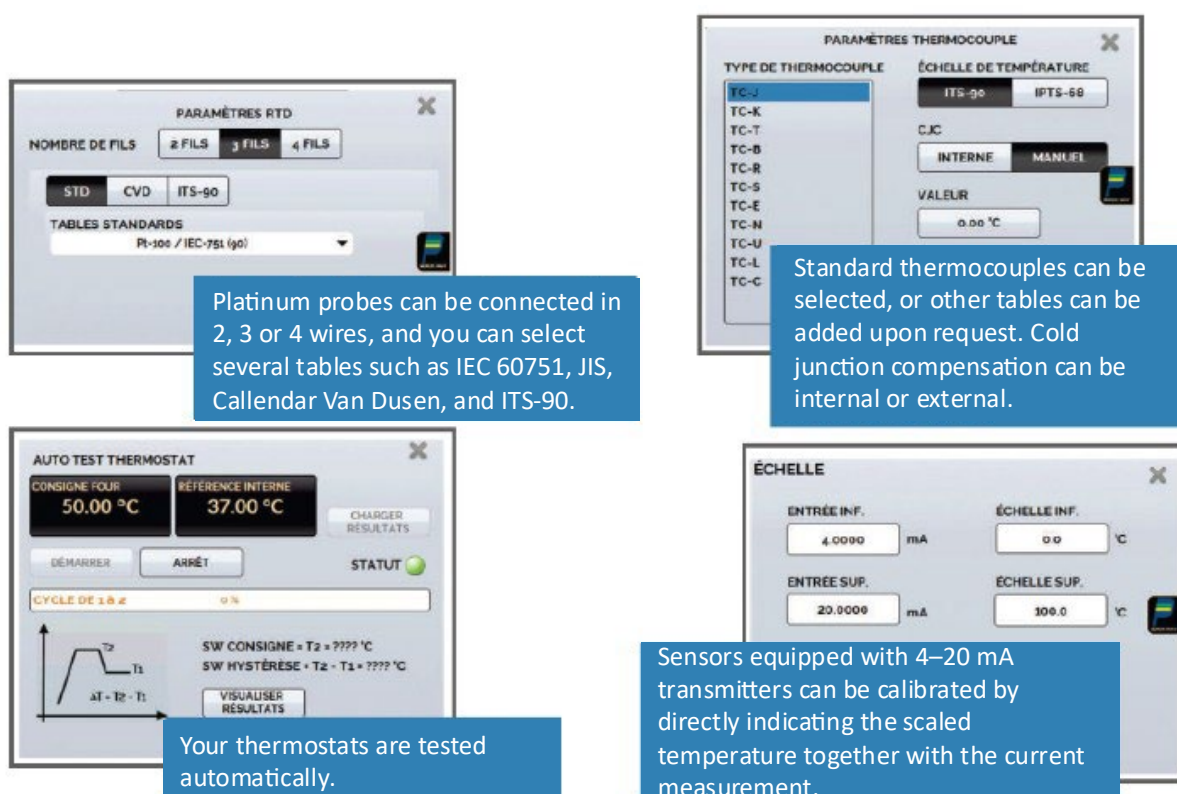
1. User interface

With its user-friendly interface, available in several languages, you will be ready to perform your first calibration after just a few minutes.



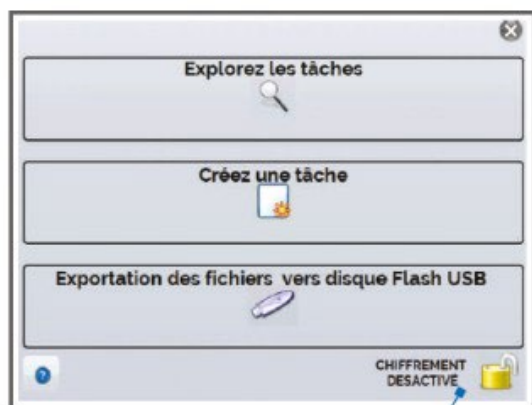
2. Measurement input

The Calib'Bath Connect units are equipped with an internal signal calibrator that allows reading of mA inputs, thermocouples, RTD sensors, and thermostats.



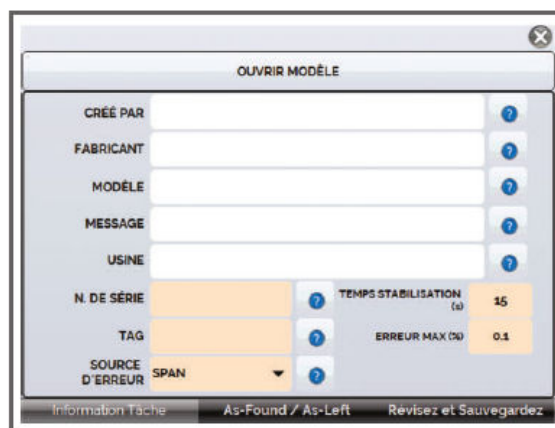
3. Use outside of MySirius automation

Automatic calibration tasks can be easily created and executed, allowing you to generate a complete report directly on your Calib'Bath Connect. The first step is to create a task by entering the relevant calibration data.



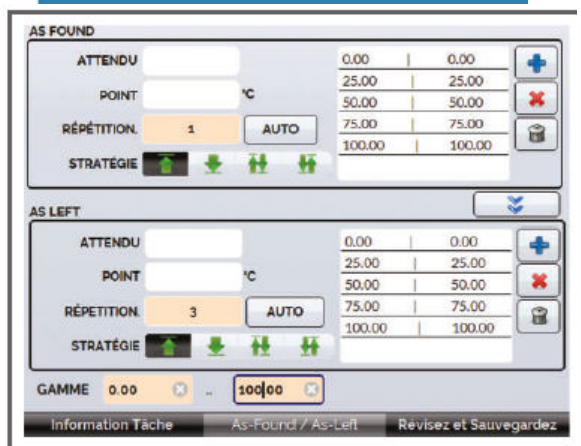
Communication with your calibration software, such as ISOPLAN, is encrypted to ensure the integrity of your data, in accordance with CFR21 Section 11. The administrator can enable encryption of XML files containing calibration data, thus preventing any unauthorized modifications.

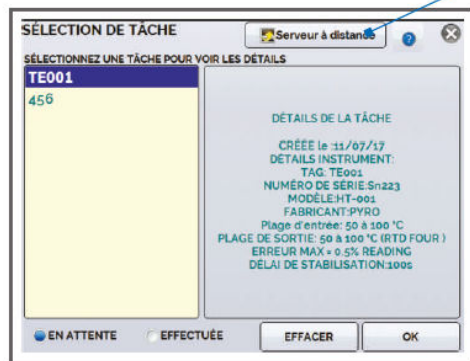
You can create the task directly on the touchscreen, or by connecting the Calib'Bath Connect to a computer. Other methods are also available, such as generating an XML file directly from your software or an Excel application. The Calib'Bath Connect can also retrieve tasks directly from a remote server via the WEB API protocol.



Information about the equipment to be calibrated can be entered, such as the model, location, serial number, TAG name, and tolerance.

You can define the different setpoints and expected measurement results, as well as the various cycles (heating, cooling, or heating/cooling) you want the Calib'Bath Connect to execute.

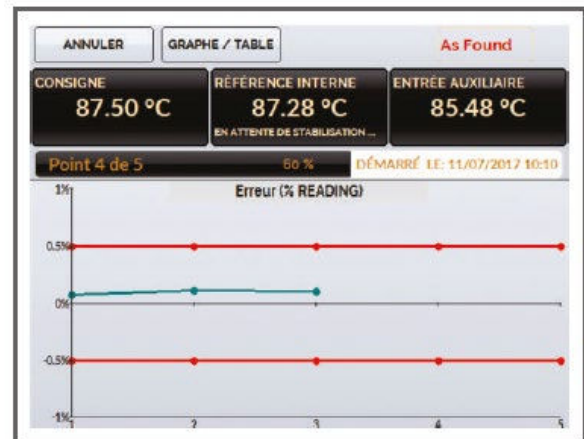




Access to a remote server

Once a calibration task has been created, go to the list of pending tasks and select it. During execution, the Calib'Bath Connect will display the progress status as well as the setpoint, reference, and measurement values.

When the bath reaches the setpoint temperature, it will wait for the defined stabilization time before recording the auxiliary input measurement. The graph will show the values along with the tolerance limits. During the calibration process, you can switch between the graph and the measurement values.



Val. Etalon	Val. Attendue	Val. Obtenue	ERR. ABS.	ERR. REL.
50.00 °C	50.00 °C	50.04 °C	0.04 °C	0.080%
62.50 °C	62.50 °C	62.57 °C	0.07 °C	0.112%
75.00 °C	75.00 °C	75.08 °C	0.08 °C	0.107%
87.50 °C	87.50 °C	87.59 °C	0.09 °C	0.103%
100.00 °C	100.00 °C	100.15 °C	0.15 °C	0.150%

When the task is complete, several options are available.

You can print a report directly on a connected printer. The report will include instrument data, reference information, and calibration results.

It can also be customized with your company logo and a digitized signature stored on the Calib'Bath Connect.

Other options include :

- Exporting the results to a USB drive in PDF, CSV, or XML format.
- Access via the Web Server.
- Uploading results to a remote server.
- Accessing the internal storage system via USB or Ethernet/Wi-Fi.

RAPPORT D'ÉTALONNAGE PRESYS

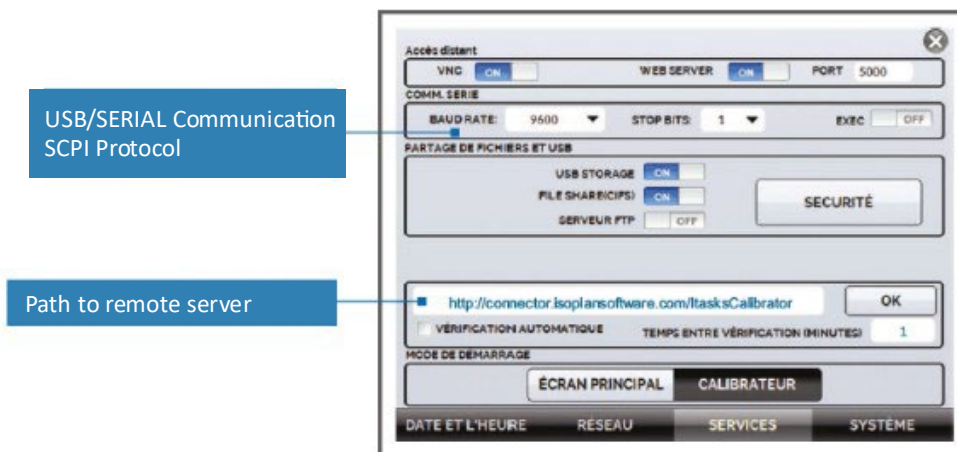
TAG: TE001		MODELE: HI-001	
NUMERO DE SERIE: S0223		FABRICANT: PYRO	
PLAGE DE SORTIE: 50 à 100 °C (RTD FOUR)			
Plage d'entrée: 50 à 100 °C			
ETALON :			
FABRICANT	NUMERO DE SERIE	MODELE	PROCHAINE CAL
PRESYS	000	TA-550P	

Val. Etalon	Val. Attendue	Val. Obtenue	Error	ERR. REL.	REUSSE / ECHEC
50.00 °C	50.00 °C	50.04 °C	0.04 °C	0.080%	REUSSE
62.50 °C	62.50 °C	62.57 °C	0.07 °C	0.112%	REUSSE
75.00 °C	75.00 °C	75.08 °C	0.08 °C	0.107%	REUSSE
87.50 °C	87.50 °C	87.59 °C	0.09 °C	0.103%	REUSSE
100.00 °C	100.00 °C	100.15 °C	0.15 °C	0.150%	REUSSE

DOCUMENT CREE:	RESPONSABLE
11/07/17	

4. Authorized Communication Types

- The Calib'Bath Connect offers multiple interaction possibilities. All the functions listed below can be enabled or disabled in the configuration settings and protected with a password.
- Through its USB port, the Calib'Bath Connect operates as a storage device, providing access to tasks in XML, PDF, or CSV format.
- When connected to your IP network via the RJ-45 Ethernet port or the Wi-Fi/USB adapter, secure access is available to the Calib'Bath Connect calibration data, allowing you to send it to a laboratory of your choice if adjustment is required.



5. Personnalisation



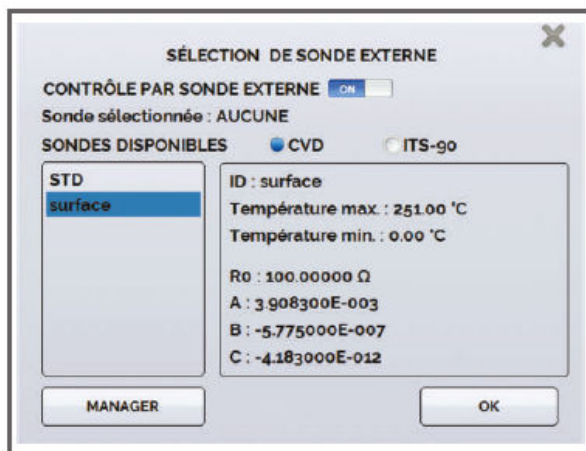
A secure access allows you to retrieve the calibration data from the Calib'Bath Connect and send it to a laboratory of your choice if an adjustment is required.

Several languages available :
English, Spanish, French, Portuguese,
Italian, Russian, Simplified Chinese,
Ukrainian.

You can define users with specific access rights within the TA system (Operator, Technician, or Administrator), along with their digital signatures, which will appear on reports directly from the touchscreen. An Operator-level user will have limited access to certain functions, such as task creation.



6. Adding a reference probe



The Calib'Bath Connect units include a measurement channel for an external reference probe (e.g., Nano SPY Reference, LoRa SPY Reference...), which can be used to improve accuracy and eliminate offset and load effects — particularly when working with liquid bath inserts or sanitary inserts with different thermal masses.

To select it, simply add it under the “External Probe Selection” menu. Once selected, the external probe will be used to control the bath. The Callender–Van Dusen calibration parameters of the probe can be entered, as well as a temperature protection limit.

By using an external reference probe, you can perform an automatic verification and re-calibration of the bath's internal sensor.

V. CHARACTERISTICS

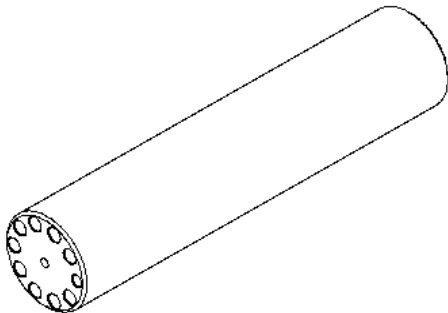
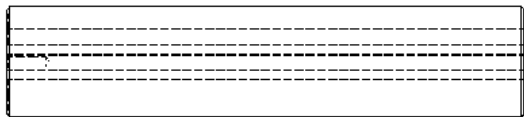
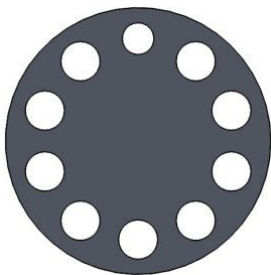
Calib'Bath Connect



Temperature range at 23 °C	: -35°C à +155°C
Measurement display accuracy	: ±0,1°C
Resolution	: 0,01°C
Stability	: ±0,02°C
Axial uniformity (40 mm) – dry block mode	: ±0,06°C PE
Radial uniformity – dry block mode	: ±0,02°C PE
Axial uniformity (40 mm) – liquid bath mode	: ±0,025°C PE
Radial uniformity – liquid bath mode	: ±0,02°C PE
Heating time	: 25 min(25°C to 140°C)
Cooling time	: 30 min(25°C to -35°C)
Electrical power	: 400 W
Insert diameter / depth	: Ø35 mm x 160 mm
Weight	: 11.3 kg
Dimensions	: 200 x 290 x 310 mm

Standard insert (included) – 13723

Material	: Aluminium
Diameter	: Ø 35 mm
Length	: 124 mm
Hole dimensions	: 1 x Ø 4mm
	: 9 x Ø 5mm



Insert alum
Orifices 1x 1

Black body insert for digital infrared thermometers – 13725

Material	: Aluminium insert
Diameter	: Ø 35 mm
Length	: 168 mm
Accuracy	$\epsilon=0,95$

The black body cavity kit transforms your TA unit into a calibrator for infrared thermometers.

The insert must be used with an external probe (resistive or thermocouple) in order to read the exact temperature of the black body surface.

Remember that the surface targeted by the infrared thermometer must be less than or equal to the effective surface area of the black body.



Insert for calibration in an oil bath – 13726

Material	: Aluminium insert
Diameter	: Ø 35 mm
Length	: 168 mm

The Liquid Bath insert kit transforms your TA-25NL/45NL dry block furnace into a homogeneous liquid bath, allowing the calibration of glass thermometers or specific sensors.

The removable container is equipped with a hermetic cap, enabling safe storage and quick liquid replacement.

A magnetic stirrer ensures the temperature uniformity of the liquid inside the container, and its rotation speed is controlled directly from the touchscreen interface.



VI. WARRANTY

Our equipment is covered by a one-year warranty, parts and labor, against any manufacturing defects, malfunction, or abnormal wear.

This warranty is limited to the replacement of defective parts and the repair of the equipment concerned, which must be returned carriage paid to our workshop. It expressly excludes any damages, compensation, or incidental expenses.

The warranty period begins on the invoice date of the product. The purchase invoice must be presented with any warranty claim.

Repairs carried out under warranty do not extend the original warranty period granted at the time of sale. Damage resulting from abnormal use or exposure to adverse environmental conditions is excluded from this warranty.

VII. MAINTENANCE CONTRACT

This maintenance contract allows you, for a minimum duration of two years, to benefit from various services such as:

- Annual or biannual equipment inspection
- Warranty extension
- Remote maintenance
- Telephone assistance: **+33 (0) 892 680 933** (rate: €0.282 excl. tax/min)
- On-site or factory replacement of equipment
- Verification of measurement accuracy (metrological certificate)
- Battery replacement
- Access to new software versions
- On-site intervention within 48 working hours after defect identification by our experts

VIII. ENVIRONMENTAL PROTECTION

JRI encourages its customers to dispose of unusable and/or irreparable measuring and recording equipment in an environmentally responsible manner. When waste production cannot be avoided, materials should be reused or recycled in accordance with environmental protection standards and best practices.

RoHS Directive

The European RoHS Directive regulates and limits the presence of hazardous substances in electrical and electronic equipment (EEE).

All new electronic products designed, developed, and manufactured by JRI comply with the requirements of Directive 2002/95/EC (RoHS).