

# Sophisticated and sensational



**AMETEK**<sup>®</sup>  
CALIBRATION INSTRUMENTS

*...because calibration is a matter of confidence*

## Introducing the new Reference Temperature Calibrator

AMETEK continues to develop new techniques to improve performance, accuracy, convenience and functionality of the well-known JOFRA calibration products. By doing so, we maintain our position as one of the leading worldwide manufacturers of temperature dry-block calibrators.

We are proud to introduce our new top model RTC (Reference Temperature Calibrator), which is no exception to the above and even more sophisticated than any existing calibrators. The RTC offers many new fantastic features, a new specially developed reference sensor, high profile design and the usual outstanding JOFRA quality.

The new RTC calibrator comes in three different models – A, B, and C.

A is without signal section

B is with input for both sensors under test and reference sensors

C is with input for reference sensors

The general specifications are improved compared to the ATC calibrator. Better accuracy and stability in combination with faster performance in a lighter calibrator.

## DLC - Dynamic Load Compensation

To complement our new state-of-the-art RTC calibrator, we have developed a unique feature that makes it possible to perform top calibration specifications without being affected of the actual load.

In other words – the RTC calibrator offers the same high accuracy and stability whether it is loaded with a 3mm sensor or a 12mm sensor. The RTC will also provide top calibration results when loaded with several sensors.

A new reference sensor, the DLC (Dynamic Load Compensation) has been specially developed for this purpose and is used as the second external reference sensor.

The principle of the DLC is taking the JOFRA dual zone technology to an even higher level than the ATC. The DLC creates almost perfect temperature homogeneity inside the insert by adapting the temperature contribution to the actual load. You could call it a “solid metal stirrer” indicating that it is the closest you will get to a calibration bath performance without using a bath.

The display of the RTC calibrator indicates when the DLC has compensated for the actual load and reached a uniform temperature distribution.

Based on the new DLC functionality, the RTC will for all we know be the best performing dry-block calibrator on the market when calibrated and tested according to the globally accepted EURAMET standards for calibration of dry-blocks.

✓ ***The first dry-block that is not load sensitive***

## Reference sensors with intelligent plugs



The well-reputed JOFRA STS reference sensors as well as the new DLC reference sensor are all mounted with intelligent plugs containing all individual information regarding the sensor.

Firstly, this means that the time-consuming coefficient downloading sequence with risk of errors is no longer necessary. Secondly, the user can change the reference sensor and be up and running immediately.

✓ ***Intelligent plugs save time and eliminate errors***



## Cooling calibrators with same size of inserts

The new cooling calibrators RTC-156 and RTC-157 are now using the same insert dimensions (30x150mm). This also makes it possible to reuse inserts from the ATC-156.

✓ **Cost-saving due to multi-purpose use of inserts**

## USB connector for communication

Another unique RTC feature is the USB connector that facilitates communication with JOFRACAL and upgrading of firmware.

Furthermore, there are two USB hosts for future utilities and an SD card slot for memory. The RS232 is no longer needed.



✓ **Fast and easy access to all computers**



## Redesigned reference sensors

The new DLC sensor and the STS reference sensors have been redesigned. They are both angled 90 degrees and have been customized to the calibrator so they are only slightly higher than its top.

The new design makes it easier to calibrate threaded sensors and sensors with connection heads.

✓ **Easy calibration of head-mounted sensors**

## Increased temperature ranges

The new RTC series has a wider temperature range than ever seen before.

RTC-156 from -30°C/-22°F to 155°C/311°F  
RTC-157 from -45°C/-49°F to 155°C/311°F  
RTC-700 from 33°C/91°F to 700°C/1292°F

✓ **Wider temperature range for more applications in one calibrator**

## High inserts for high temperature calibrators

The higher the temperature - the bigger the heat loss will be through the sensor under test. Consequently, and combined with the fact that high temperature sensors are usually very long, the RTC-700 has a 200mm insert.

The long sensors are usually mounted so they are exposed to a high process temperature over a wide range.

The long insert ensures that the sensor is calibrated in a way that simulates the actual conditions very well.

✓ **Better calibration accuracy at high temperatures**

## New multi-hole insert kits

Two special multi-hole insert kits have been developed to comply with calibration of almost any sensor diameter without having numerous inserts in the carrying case.

The first kit is a metric insert kit consisting of only four inserts covering all diameters from 3 to 13mm. The other is an imperial insert kit consisting of only three inserts covering six different sizes from 1/8" to 1/2".

All inserts have holes for both DLC and STS sensors. The new multi-hole insert kits will replace the ATC kits.



✓ **Multi-diameter readiness with only few inserts**

## Demand for speed

Time is money! That is why all the new RTC calibrators have reduced heating and cooling time compared to the ATC calibrators.

This has reduced the time spent per calibration point remarkably.

✓ **Save time and money with the new RTC series**

## Reduction of weight

A calibrator is often carried from one job to another. Therefore, it is essential that the weight of the calibrator is as low as possible.

We have reduced the weight by up to 20% compared to the ATC – even though the RTC is equipped with more electronics and/or bigger inserts.

✓ **The low weight protects the user from overload**

## Easy to read color display and user-friendly navigation

The new 5.7" display is now in color, which makes it very easy to read. The main temperatures, like SET, READ, True and SUT (Sensor under test), are always displayed at all stages of the programming procedure.

The navigation is menu-driven and very logical to use and the display shows any important information needed for the current function in use. The communication windows pop up and are followed by discrete sound messages.

The display is very bright and the main information can be read from a distance.

✓ **Very intuitive and user-friendly interface**



## New carrying case



We have specifically designed an all-in-one-handle carrying case.

It is now possible to store all necessary reference sensors in the carrying case with an optimum physical protection. There is room for inserts and insulation plugs to cover all dimensions and compartments for the new support rod set, wires, manuals, certificates, plugs, etc. Finally, the trolley mounted to the case makes it very stable.

✓ **An all-in-one-handle carrying case**

## Integrated support rod

The new support rod is part of the reduced weight philosophy. There are two fixing holes integrated in the calibrator where the support rods can be placed.

✓ **Integrated support rod**

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