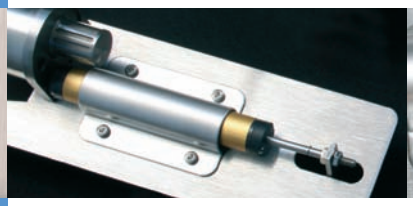
Temperature, humidity and shrinkage data logger

CeriDry

Control of temperature, humidity and shrinkage in drying processes of bricks, tiles and ceramics.

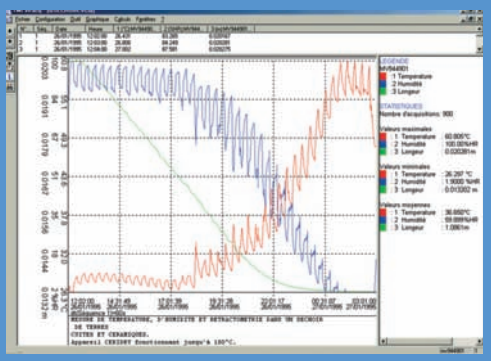
CeriDry correlates the evolution of humidity rate and air temperature with the shrinkage of bricks, tiles or ceramics while they dry.
It also enables the acute evaluation of drying within two parts of the same brick or tile.



Metrology

- **Operation range:**
  - Temperature..... from -30°C to 150°C
  - Humidity..... from 0 to 100 %RH non condensed
  - Shrinkage..... movement of 20 mm
- **Uncertainty:**
  - Temperature..... +/- 0.2°C from 0°C to 140°C
  - Humidity..... +/- 3.5 %RH from 2% to 98 %RH
  - *The uncertainty corresponds to 2 standard deviations.*
- **Resolution and noise:**
  - Temperature..... 0.04°C
  - Humidity..... 0.05 %RH
  - Shrinkage..... 0.01 mm
- Each logger can be calibrated and adjusted at the temperature points corresponding to the users' needs.

Technical specifications



- **Material**: 316 L stainless steel
- **Dimensions**: length 169 mm, width 55 mm, height 52 mm
- **Temperature sensor**: Pt1000
- Capacitive humidity sensor
- Linear potentiometer shrinkage measurement
- Positioning support in 3 points
- **Memory capacity**: 12 000 acquisitions per measurement channel
- **Programmable acquisition rate**: minimum 1 second, maximum 59 minutes and 59 seconds
- Programmable acquisition duration
- Programmable recording start by date, hour, minute
- User replaceable battery
- Non volatile memory (EEPROM)

Software operating conditions

- Data transfer with a communication interface connected to the USB port.
- Operates under **Windows® XP (SP3)/Vista/7**

NOTA:
Annual maintenance is advised for O-rings replacement, recalibration and adjustment.

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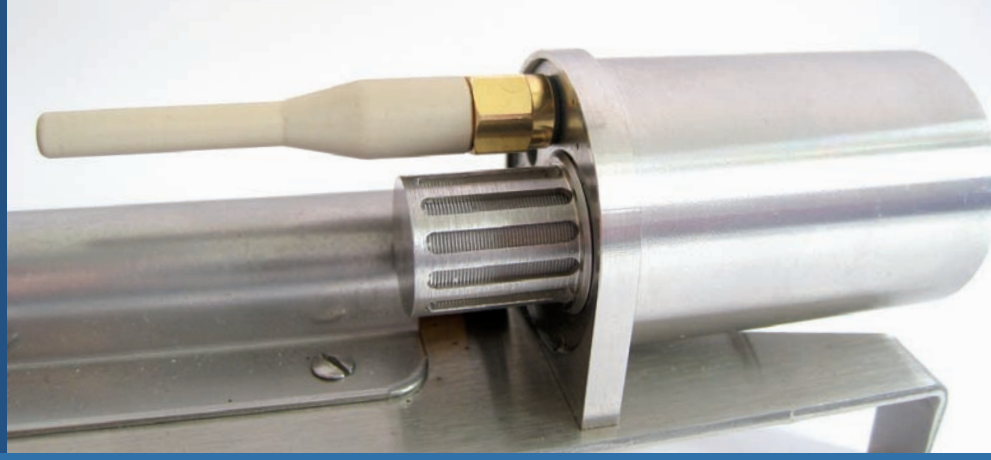
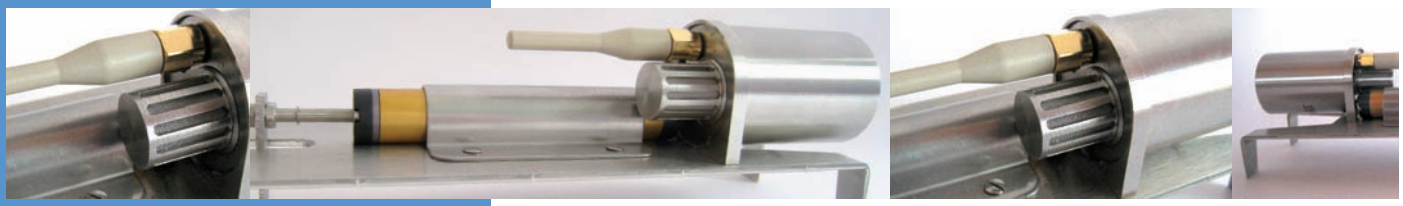
CeriDry

Radio Option



Real time data

CeriDry Radio is an autonomous transmitter/recorder equipped with sensors.
It has been developed to enable two functions: real time radio transmission of the data measured by the sensors and recording of the transmitted data.
CeriDry is available with optional 2.4 GHz radio transmission.



They are designed to support temperatures from –30°C to +140°C.

- CeriDry is 169 mm x 55 mm x 52 mm.
- The CeriDry Radio antenna is removable from the body, its length is 50 mm. It allows data transmission by hertzian channel.
- The CeriDry Radio can be set up by the user. The operation mode of the device may be selected during programming:
  - Radio transmission of data without recording in memory.
  - Radio transmission of data while recording in the memory.

Radio transmission

- The frequency used by the radio transmitter is within ISM 2.4GHz bandwidth (industrial, scientific or medical devices). This bandwidth can be used without licence.
- CeriDry radio uses the technology based on the IEEE 802.15.4 standard, which enables to manage various loggers in the same space with more frequent sampling.
- The receiving base station can be connected either directly by USB, or using a long distance connection RS485 type, or even using an Ethernet or a wifi connection.
- Various types of receiving antennas can be connected to the radio receiver according to loggers use.

Reach between transmitter and receiver

- 25 meters in clear field, may vary according to the application environment.

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