

# P-MICRO & S-MICRO (STANDARD, L AND XL)



THE AUTOCLAVE DATALOGGERS WITH THE SMALLEST VOLUME EVER (STANDARD)!

Miniaturized data loggers for monitoring sterilisation and pasteurisation processes, entirely in food grade material

The **S-Micro** (140°C) and **P-Micro** (100°C) data loggers, with their standard, L and XL versions, now make temperature monitoring in sterilization and pasteurization processes even simpler, thanks to their reduced dimensions that make them the monitoring device for autoclaves with the smallest volume in the world.

## System

The loggers can be used with two types of software:

- **SPD**, for quick and easy monitoring: start the devices, run your process, download data and analyse;
- **TS Manager**, for thorough analysis and control: an **FDA 21 CFR Part 11 compatible software** with multi-tiered access and reports in conformance with the regulations. Designed for autoclave validation, from pharmaceutical/medical to laboratories, dentists and food.

## Main features

Apart from its tiny size there are many other important features of the Micro logger series:

- high accuracy and precision: with an accuracy of  $\pm 0,1^{\circ}\text{C}$  these devices can be employed in any application involving food, pharmaceuticals, validation, laboratory and medical field;
- fast response time thanks to the 3 mm diameter probe;
- low battery consumption for an extended battery life;
- very easy to deploy in any type of package.

They all work with the DiskInterface HS. For the standard version there is also the DiskInterface HS Mini. SPD software is included

## Versions

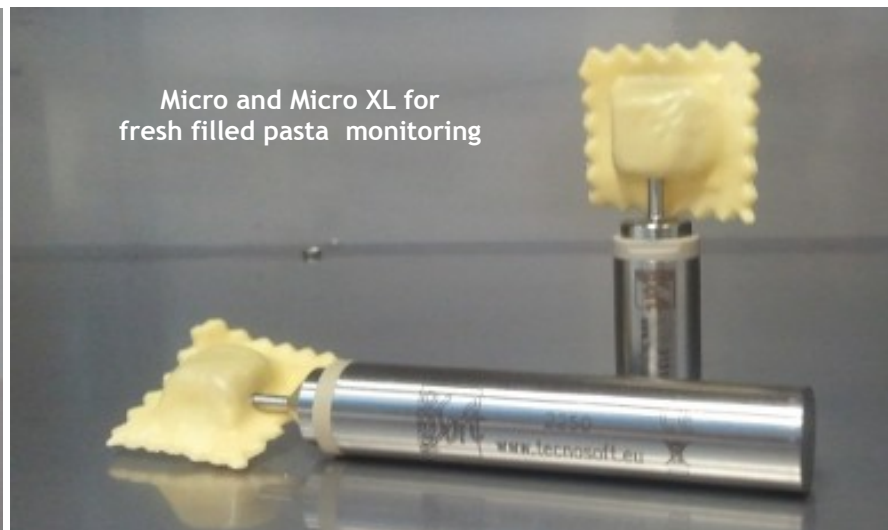
- Standard: 17 mm diameter X 14 mm, the smallest logger for autoclave.
- Micro L: 17 mm diameter X 39 mm, extended battery life, possibility of extended calibration ( $-40^{\circ}\text{C}$ ).
- MicroXL: 17 mm diameter X 64 mm, extended battery life, possibility of extended calibration ( $-40^{\circ}\text{C}$ ).

## Applications

- Temperature monitoring of sterilisation and pasteurisation processes.
- Autoclave validation according to 21 CFR Part 11 regulations.

## Advantages

- Entirely food grade and submersible.
- Printed reports compliant with health regulations and ISO (data cannot be edited using the software).
- F0 and PU calculation.
- Supplied with an ACCREDIA traceable **calibration certificate** (standard calibration:  $+25^{\circ}\text{C} \div +125^{\circ}\text{C}$ ).
- **USER REPLACEABLE BATTERY.**



Fields of application



Healthcare



Pharma



Dentists



Food



Laboratory

Interface Communication

USB

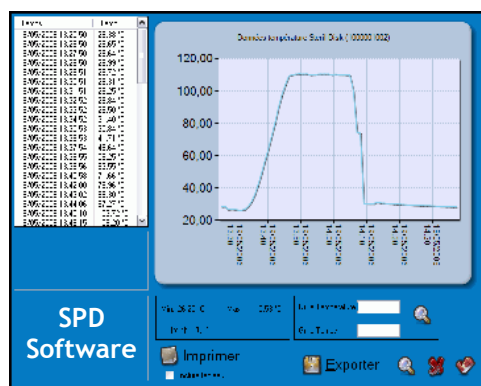
## Technical features

| Type                        | Standard  | Micro L  | Micro XL   |
|-----------------------------|---|--|--|
| Dimensions (probe excluded) | 14 h X 17 Ø (mm)  | 39 h X 17 Ø (mm)   | 64 h X 17 Ø (mm)   |
| Probe                       | 20 h or on demand (max. 175 mm) X 3 Ø (mm)  |  |  |
| Materials                   | Stainless steel AISI316L + Peek (completely Food Grade)   |  |  |
| Temperature range           | P-Micro: 0 °C ÷ +100 °C<br>S-Micro: 0 °C ÷ +140 °C  | P-Micro L/XL: -40 °C ÷ +100 °C<br>S-Micro L/XL: -40 °C ÷ +140 °C |  |
| Temperature resolution      | 0,01 °C   |  |  |
| Temperature accuracy        | ± 0,1 °C (in the calibration range only; standard range +25 °C ÷ +125 °C)                                 |  |  |
| Number of acquisitions      | 20.200  |  |  |
| Acquisition rate            | Programmable from 1 every second upwards  |  |  |
| Battery life                | <b>user replaceable</b><br>560.000 acquisitions @25 °C  | <b>user replaceable</b><br>+10.000.000 acquisitions @25 °C       | <b>user replaceable</b><br>+17.000.000 acquisitions @25 °C |
|                             | Battery life might be less if exposed to high (+90 °C) and low (-20 °C) temperatures for extended periods |  |  |
| Protection degree           | IP68  |  |  |
| Communications              | DiskInterface HS Mini (P-Micro, S-Micro only), DiskInterface HS (SPD software included)                   |  |  |

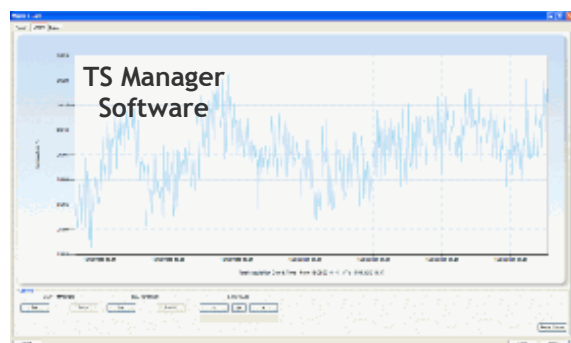
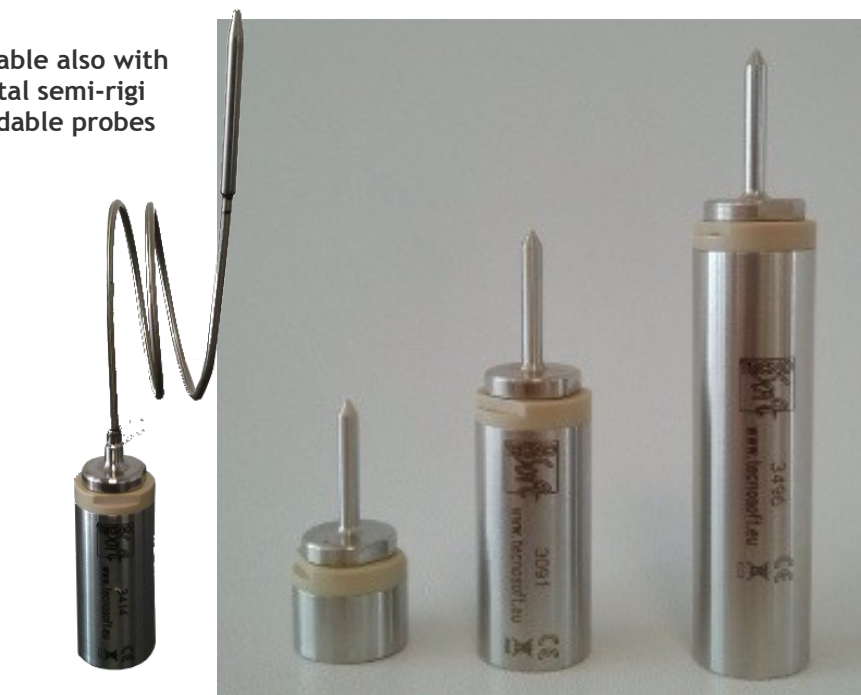
## Software

| Type               | SPD   | TS Manager   |
|--------------------|---|--|
| Operating Systems  | Windows XP, Vista, 7, 8 (32, 64 bit)  |  |
| Data management    | Missions sorted by start date and logger serial number                              | Missions filtered by start date, logger type, serial number, customer/instrument validated and much more |
| Data visualization | Graph (with zoom) and table (exportable into Excel) and report printout of the data |  |
| Multi-Graph        | Two or more missions can displayed on a single graph                                |  |
| F0 and parameters  | Automatically calculates the F0; the Z and N parameters of the formula can be set   |  |
| Languages          | Italian, English, French, Spanish, German   | Italian, English, German   |

**NO NEED TO DRILL ANY LIDS, NO NEED TO MODIFY YOUR PRODUCT PACKAGING: PROGRAM THE DATA LOGGER, PLACE IT IN YOUR PRODUCT AND START YOUR PROCESS!**



Available also with  
metal semi-rigi  
bendable probes



P-Micro and S-Micro are easily employed in the food industry: they can be used in packages, containers, jars or loosely inside pasteurisers to monitor the product temperature at its core, for example in freshly filled-pasta.



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UNI EN ISO 9001:2008 Certified for Software development

Product Code:  
ts01pm1/d / ts01sm1/d  
ts01pm11/d / ts01sm11/d  
ts01pmx11/d / ts01smx11/d