

Thermal Innovations and Products

## INHECO Measurement Plate

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# INHECO Measurement Plate (IMP)

## Product Description

The IMP is a compact and precise measurement tool in SBS format for verifying the temperature, relative humidity or shaking performance of heating, cooling, incubation and shaking devices used e.g. in LabAutomation applications.

The cordless design allows a flexible use of the IMP, even measurements in closed systems, e.g. incubators are possible. The IMP can be handled by all common gripper systems which gives the opportunity to automate the whole verification / validation process. 10 built-in temperature sensors guarantee the seamless monitoring of the temperature distribution over the whole surface area, a three-axis acceleration sensor determines the shaking speed and amplitude.

The measurement data are stored on an internal EEPROM and can be transferred via USB or built-in IrDA interface to an external PC for evaluation and analysis. The IMP is equipped with a  $\mu$ SD memory card for additional data storage and for an alternative data transfer option between the IMP and the computer. The temperature and shaking data can be exported in csv format for customized evaluation or transferred to the INHECO IMP software.

The measurement profile can be easily preadjusted for each run, by connecting the IMP via interface to the INHECO IMP software. Parameters like „measurement duration“, „scan interval for sensors“ etc, can be set and adjusted individually.

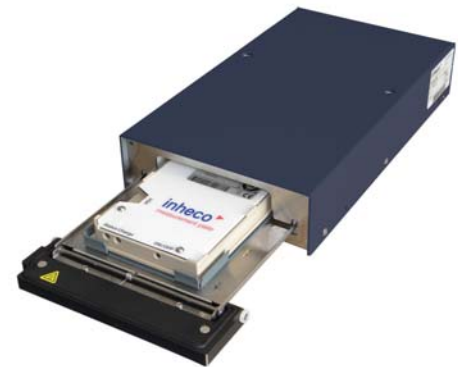


7901000: INHECO IMP

## Scope of delivery

The IMP is delivered with a standard NIST/DAkKS calibration of the temperature sensors. INHECO recommends an annual re-calibration. The NIST/DAkKS calibration of the shaker sensor can be ordered separately.

The temperature evaluation software is included in the IMP package. The manual, quick start guide and evaluation software are stored on the Micro SD card. The standard IMP comes with a flat bottom contact surface. Adapters for other formats, e.g. 96 well PCR plate, are available on request.

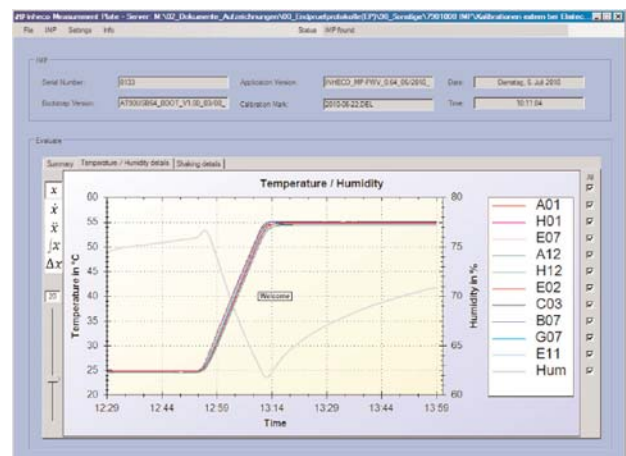
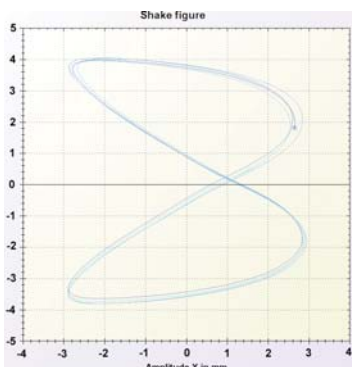


7300003 Incubator MP with 7901000 IMP

Product	Article No.	Dimension W x D x H (mm)	Weight (kg)	Temp.Range
IMP	7901000	85,7 x 128 x 14,9	0,1 kg	4°C to 60°C

## IMP Evaluation Software

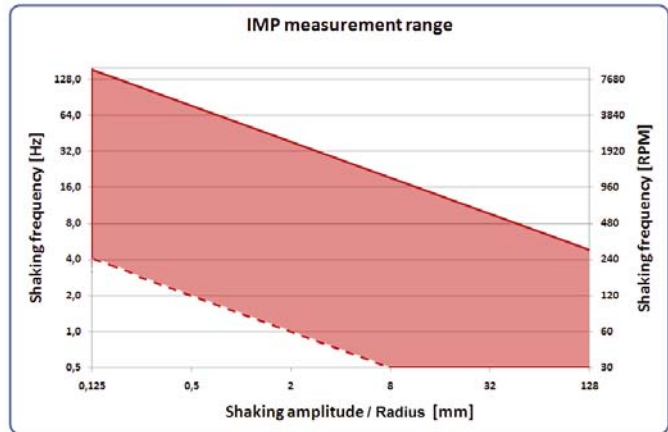
The IMP software allows to perform a thorough analysis of the measurements generated by the IMP regarding temperature, humidity and shaking performance.



# Main Specifications

Specification	7901000
Interface (besides Micro-SD-Card)	USB (1.1 / 2.0), IrDA
Number of temperature sensors	10
Accuracy amplitude	± 10%
Accuracy RPM	± 5%
Relative humidity 0%-10%, 91%-100%	± 4,0%
Relative humidity 11%-90%	± 2,0%
Temperature range	4°C to 60°C
Max. # measurement points (without µSD)	10.000
Run-time battery in operation*	ca. 12 hours

\* at ambient temperature

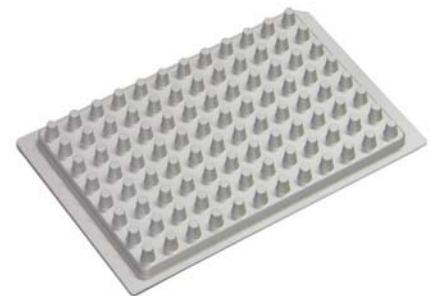
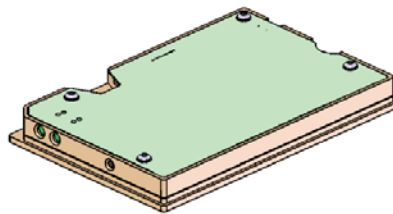
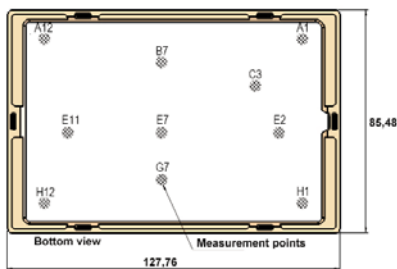


7901000 IMP measurement range

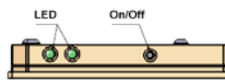
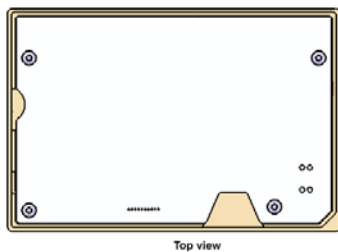
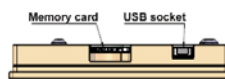
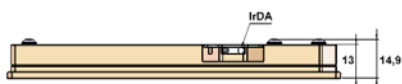
Temperature precision (calibrated)	± 0,1°C
Temperature precision @60°C on Flat Bottom**	± 0,3°C
Temperature accuracy (calibrated)	± 0,1°C
Temperature accuracy @60°C on Flat Bottom**	± 0,8°C

\*\* measured at 60°C on a Flat Bottom Adapter with a CPAC unit

# Drawings

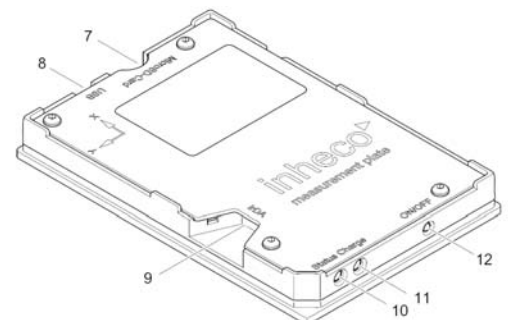


3200369 PCR 96 Well Adapter



# Accessories & Calibration

Product	Article No.
96 Well PCR Adapter	3200369
IMP Temperature Calibration NIST/DAkKS	7901002
IMP Shaking Calibration NIST/DAkKS	7901003



(7) Micro SD-Card Holder  
(8) USB Connector  
(9) IrDA Interface

(10) Status LED  
(11) Battery Charge LED  
(12) ON/OFF Switch

**INHECO**  
**Industrial Heating & Cooling GmbH**

Fraunhoferstrasse 11  
82152 Martinsried  
Germany

Tel.: +49 (0)89 899593-101  
Fax: +49 (0)89 899593-149

E-mail: [sales@inheco.com](mailto:sales@inheco.com)  
[www.inheco.com](http://www.inheco.com)

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