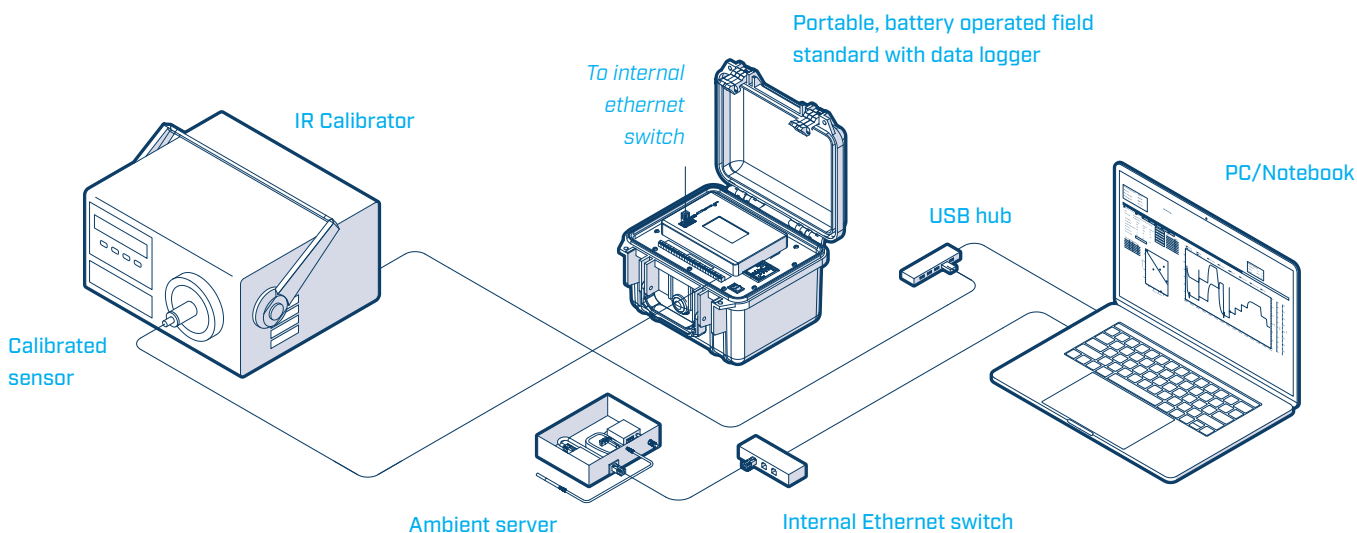


Calibration System for IR Thermometers

The Calibration System can be used to calibrate infra-red temperature sensors or infra-red thermo-guns. An infrared calibrator creates a homogeneous temperature on the entire surface of the target.



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| <p>Design based on experience from ISO / IEC 17025 accredited laboratory</p> | <p>Complete calibration system including calibration software and database</p> | <p>Very easy to use & labor-saving automatic calibration with IMS4 CalibLab</p> | <p>On-line calculation of measurement uncertainty</p> | <p>We customize the solution per your needs and budget</p> |

The calibration process is automated where possible. The software controls the infrared target temperature, takes readings from the reference, and values from the calibrated IR thermometer. The system allows calibration of instruments without electronic output too – the reading is taken and submitted into the system manually by an operator.

Portable infrared calibrator

For IR calibrations above normal ambient, the infrared calibrator provides a stable measurement surface up to 150 °C. Short heating and cooling times mean you won't have to wait long to get your work done.

If you're calibrating IR thermometers or guns at cold temperatures, you'll can. With solid-state cooling technology, this new IR calibrator reaches -30 °C in normal ambient conditions. With a conveniently located dry gas fitting on the front bezel, ice build-up on the target can be avoided.

With heating and cooling times of about 15 minutes from ambient to either extreme, the 9133 gets you to temperature quickly and performs when it gets there. We are able to supply accredited target calibration.



Technical specifications of the calibrator | Model 8133

| | |
|----------------------------------|---|
| Temperature range | -30 °C to 150 °C at 23 °C ambient |
| Accuracy | ±0.4 °C |
| Stability | ±0.1 °C |
| Target size | 57 mm |
| Target emissivity | 0.95 (±0.02 from 8 to 14 mm) |
| Resolution | 0.1 °C |
| Heating time | 15 minutes (25 °C to 150 °C) |
| Cooling time | 15 minutes (25 °C to -20 °C) |
| Computer interface | RS-232 I/O included |
| Power | 115 V AC (±10 %), 1.5 A, or 230 V AC (±10%), 1.0 A, switchable, 50/60 Hz, 200 W |
| Size (H x W x D) | 152 x 286 x 267 mm |
| Weight | 4.6 kg |
| NMI-traceable calibration | data at -30 °C, 0 °C, 25 °C, 75 °C, 100 °C, 125 °C, and 150 °C |

Calibration software IMS4 CalibLab

With IMS4 CalibLab, the process of calibration and adjustment of sensors can be fully automated. Read more:



The software guides the user through the calibration setup in several steps. The software can read serial numbers from certain (digital) sensor types. Preconfigured sensor types include specific calculation of uncertainty, corrections and

other formulas. The fully automated calibration process follows the setpoint list, sets the target temperature and scans the readings from all calibrated sensors. The system evaluates the readings for stability, calculates mean values and uncertainty. In case of any problem, error is readily indicated by a sound alarm. After the process goes through all setpoints, the results are stored in a database. You can generate certificates by one click. The certificate is generated from a template. You can freely edit the template to fit your needs. The database of calibrations holds the history of calibrations from whole calibration laboratory at one place. You can browse it by quantity, year, sensor type, serial number etc. Looking for calibration history of a certain instrument is a brief. The builtin database browser allows on-line tabular and graphical view of multiple certificates. The

software supports export to .csv, .odt, .xml and .pdf formats. Whole database can be backed-up or restored by simple click of a button. There is also provision of automatic periodic back-up.

CalibLab software features:

- Graphical user interface
- Multiple step wizard for easy setup of calibration
- Automated instrument serial number readout (if supported by instrument)
- User-defined sensor types
- Automated calibration controller
- User-defined calibration process (setpoint list)
- Support of saving / loading of setpoint list
- On-line graphing of read values, chart zooming
- On-line calculation of statistics and uncertainty

- On-line display of elapsed time and time estimate until the end
- Display of preliminary results during calibration
- Possibility to stop, pause or restart the calibration process
- Detection of sensor fault, automatic kick-out or wait until the problem is solved
- Indication of errors, sound alarm
- Generation of calibration certificates from template document
- Database of calibrations, filtering, graphing, export to .csv, .pdf, .odt, .xml
- Database backup / restore from file, automatic backup scheduler

For the automatic adjustment of the other types of sensors please contact calibration@microstep-mis.com.

