

Calibration software

Model WIKA-Cal

WIKA data sheet CT 95.10

Applications

- Creation of calibration certificates for mechanical and electronic pressure measuring instruments
- Fully automatic calibration with pressure controllers
- For the recording of certificate-relevant data in combination with the CalibratorUnits of the CPU6000 series
- Determination of the required mass loads for pressure balances
- Calibration of gauge pressure measuring instruments with absolute pressure references and vice versa



Special features

- Multicalibration of up to 7 test items possible
- Templates for the creation of calibration certificates and logger protocols
- Flexibility through individual settings
- Simple operation and set-up of the software
- SQL database independent from Microsoft® Access®

WIKA-Cal calibration software

Description

Creation of calibration certificates or logger protocols

The WIKA-Cal calibration software is used for generating calibration certificates or logger protocols for pressure measuring instruments and is available as a demo version for a cost-free download. Calibration certificates can be created with the Cal-Template and logger protocols can be created with the Log-Template. In order to switch from the demo version to a full version of the respective template, a USB stick with the licence must be purchased.

The pre-installed demo version automatically changes to the selected full version when the USB stick is inserted and remains available so long as the USB stick is connected to the computer.

User-friendly and flexible through templates

A template is a prepared document. Immediately after selecting the template, all documents will be clearly displayed in a database.

When the user generates a new document with the template, he will be guided through the creation process in a document view.

Meanwhile, the software retrieves previously created information from an SQL database and adds further data during the certificate generation.

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The process of the certificate generation adapts to the requirements of the user. Through the rules for the template, the user only sees the required or possible entries. If only one entry is possible, this is selected directly and it proceeds to the next step.

This process increases the quality and productivity of document creation. Incorrect entries are eliminated and through the automatic selection, the process is accelerated. The complexity is reduced to a minimum through the selection limitations and clearly displayed in the document overview.

The result of the document view is stored in the database and is made available in a PDF/A and a template-specific format such as XML or CSV. If the document was not completed, the document remains available in the document overview and can also be saved or printed with a "Preview" annotation as a PDF/A document.

Specifications	
Minimum system requirements	<p>Intel® Pentium® 4 or AMD Athlon® 64</p> <p>Microsoft® Windows® XP with Service Pack 3, Windows® 7 with Service Pack 1, Windows® 8 and Windows® 10</p> <p>1 GB RAM and 1 GB free hard disc space (no installation possible on portable flash storage media)</p> <p>1024 x 768 pixel screen resolution (1280 x 800 pixel recommended) with 16-bit colour depth and 256 MB VRAM</p> <p>Without the activation USB stick, the software only works in demo mode.</p> <p>For fully automatic calibrations, at least one RS-232-COM port per instrument is required for communication.</p> <p>If an SQL server is to be installed locally, .NET Framework 3.5 is required and, for Win7 and newer, also 4.x.</p>
Language versions	English, German, French, Italian, Polish and Romanian
Possible communication interfaces	USB, RS-232, GPIB IEC-625-Bus, Ethernet and Bluetooth® 2.1
Features	<p>Creating and archiving test reports with the templates Cal, Cal Light, Cal Demo, Log and Log Demo</p> <p>Tools for weight calculator with the CPU6000 and unit calculator</p> <p>Object manager allows for an intelligent use of laboratory and equipment data and facilitates the standardised testing process</p> <p>Archiving of customer-specific test reports in the SQL database</p> <p>Automatic reading and controlling of measuring instruments by means of communication types</p>
Communication types	CPH6000, CPH6200, CPH6210, CPH6300, CPH6400, CPH6510, CPH6600, CPH7000, CPH7600, CPG500, CPG1000, CPG1500, CPT6100, CPT6180, CPG2500, CPC2000, CPC3000, CPC4000, CPC6000, CPC6050, CPC8000-I (II), CPC8000-H, CPG8000-I (II), CPT2500, CPD8000, pressure sensor via Agilent 34401A or Keithley 196A digital multimeter, CPU6000-W, CPU6000-S, CPU6000-M

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Cal-Template calibration certificate

With the Cal-Template, calibration certificates for mechanical and electronic pressure measuring instruments can be generated. The calibration certificates have a format derived from the WIKA DKD calibration certificate and contain the same functions and calculations. The template has many additional features. Thus, for example, customer-specific information such as the company logo, the address, the contact or individual labelling can be adjusted by the user. It is therefore flexible and can be used to meet the needs of the customer.

After creating a calibration certificate, the user will be guided through the document and, due to the database, can only make predefined entries. For this, tables are automatically adjusted and dynamically expanded as required. In this way, for example, several references under measuring conditions or several tables under measuring results can be given.

The number of pages and headings on subsequent pages are added automatically. The selection of valid options is constantly updated so that only the inputs specified in the template settings can be made.

With the calibration of a new instrument, during the certificate generation, the database is filled with new data. If the instrument is being recalibrated and the serial number is given, all the data that was generated by the previous calibration is automatically completed by the software.

If only one selection is possible (e.g. only one accuracy specification as a result of the model selected earlier), this is immediately selected and it jumps to the next step.

On completion of the calibration certificate, it is saved as a PDF/A. The contents of the certificate and additional data, which has been determined through the measurement, are available optionally in XML format. The XML file can be read by another program such as Microsoft® Excel® and thus be used for a customer-specific certificate.

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Calibration certificate
Kalibrierzeugnis

WIKAI

Certificate No. 00000001
Zeugnis-Nr.

Allgemein		Object Calibrated (OC)	
General		Kalibriergegenstand (KG)	
Kundenname	Demo Customer	Modell	Demo 010
Modell	Demo 010	Serial No.	Demo 010
Kundenbest.Nr.	DE 123456789	Spezifikation	Demo 010
Produktions-Nr.	123456789	Skalierung	0...10 bar/psi
Erstellungsdatum	01.01.2013	Skalierung	0...10 bar/psi
Validitätsdatum	01.01.2013	Skalierung	0...10 bar/psi
Druck im Charge	Demo User	Skalierung	0...10 bar/psi
Hersteller	Demo User	Skalierung	0...10 bar/psi

Environmental conditions		Place of calibration	
Umgebungsbedingungen		Ort der Kalibrierung	
Temperatur	(20 ± 0.1) °C	Demo place	Demo place
Relative Luftfeuchtigkeit	(45 ± 1) %	Skalierung	0...10 bar/psi
Druck	(1013 ± 0.1) hPa	Skalierung	0...10 bar/psi
Druck	(1013 ± 0.1) hPa	Skalierung	0...10 bar/psi

Measurement conditions	
Messbedingungen	
Modell	Demo DPIC
Calibration span	Demo 1234
Skalierung	0...10 bar/psi
Skalierung	0...10 bar/psi
Skalierung	0...10 bar/psi

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Calibration certificate
Kalibrierzeugnis

WIKAI

Certificate No. 00000001
Zeugnis-Nr.

Measurement results	
Messergebnisse	
Measuring value	Reading OC
Measuring value	Reading OC
Measuring value	Reading OC
Measuring value	Reading OC

Statement of compliance
Konformitätsklärung

Object keeps the specification!
Der Kalibriergegenstand hält die Nennspezifikation ein!

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Cal Demo

Generation of calibration certificates limited to 2 measuring points, with automatic initiation of pressures via a pressure controller.



Cal Light

Generation of calibration certificates with no limitations on measuring points, without automatic initiation of pressures via a pressure controller.



Cal

Generation of calibration certificates with no limitations on measuring points, with automatic initiation of pressures via a pressure controller.

Log-Template logger protocol

The Log-Template can generate logger protocols, which can be used for recording data.

As with the Cal-Template, the user is guided through the document view and arrives at the end with a completed protocol from the logged data as a PDF/A document.

The data in the PDF/A document is also available as a CSV file for processing in another program, such as Microsoft® Excel®.

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Timepoint	Measured value	Measured unit
00:00:00	0.0000	
00:00:01	0.0000	
00:00:02	0.0000	
00:00:03	0.0000	



Log Demo

Creation of data logger test reports, limited to 5 measured values.



Log

Creation of data logger test reports without limiting the measured values.

Typical application

Calibrating pressure sensor automatically with WIKA-Cal and pressure controller

Pressure sensors can be calibrated automatically with the WIKA-Cal calibration software and a pressure controller of the models CPC3000, CPC4000, CPC6000, CPC6050 and CPC8000.

The current or voltage signal from the test item will be read from a multimeter such as an Agilent 34401A or Keithley 196A over the GPIB or RS-232 interface and converted to a pressure value with WIKA-Cal.

The measurement is started after a few clicks and the certificate is created with a complete analysis of the measurement uncertainty and a graph.

For details about the various pressure controllers see data sheets CT 27.40, CT 27.55, CT 27.61, CT 27.62 and CT 28.01



WIKA-Cal with model CPC3000 pressure controller, pressure sensor with model CPU6000-M CalibratorUnit

Calibrate electrical pressure measuring instruments with WIKA-Cal, CPU6000 and pressure balance

Pressure balances offer the highest accuracy as references for the calibration of pressure measuring instruments. With WIKA-Cal, not only the test items are read automatically, but also the masses to be applied for the measuring points are determined. The program displays, for each measuring point, which masses have to be applied and thereby corrects the pressure value, depending on the environmental conditions and the piston temperature, to achieve the highest accuracy. With the different products of the CPU6000 series, these conditions can be measured and read automatically, so that many entries before and during each calibration are eliminated.

For details of the CPU6000 see data sheet CT 35.02
For details of the different pressure balances see data sheets CT 31.01, CT 31.06, CT 31.11, CT 31.51 and CT 31.56

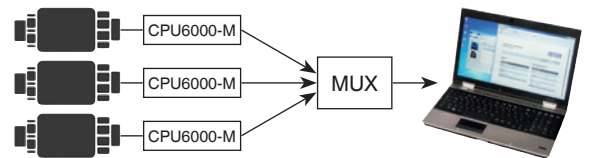


Model CPU6000-W, CPU6000-S, CPB5800 and PC with WIKA-Cal software

Multicalibration

The additionally charged "Multicalibration" licence can be ordered in addition to Cal Light or Cal. With this, it is possible to calibrate, incl. documentation, up to 7 test items simultaneously. The prerequisite is that the test items are of the same instrument model, measuring range and accuracy. During the parallel calibration, the measuring window for each test item can be viewed via a table view. The multicalibration is currently only available for electrical measuring instruments.

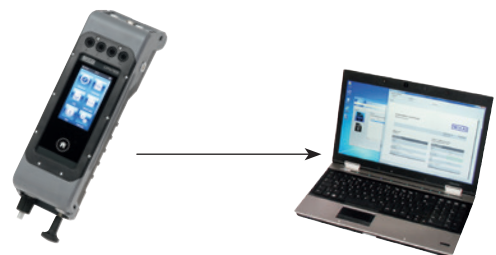
For pressure sensors, it is possible to use either several multimeters (such as model CPU6000-M, for example) or a multiplexer to which all multimeters will be connected. As multiplexers, Agilent 34970A and Netscanner 9816 are supported. The correct cabling is the responsibility of the operator.



Pressure sensors, model CPU6000-M multimeter, multiplexer and PC with WIKA-Cal software

Switch test

With the model CPH7000 process calibrator, it is possible to download the stored switch tests from the instrument and to document them directly in a protocol through WIKA-Cal. This specific switch test functionality is currently only available for the CPH7000.



Model CPH7000 process calibrator and PC with WIKA-Cal software

Scope of delivery

USB stick with selected templates (Cal Light, Cal and Log)

Option

“Multicalibration” licence in addition to Cal Light or Cal

Ordering information

Model / Cal-Template calibration certificate / Log-Template logger protocol

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