

Hand-held pressure indicator

Model CPH6200-S1 (1-channel version)

Model CPH6200-S2 (2-channel version)

WIKA data sheet CT 11.01



Applications

- Calibration service companies and service industry
- Measurement and control laboratories
- Quality assurance

Special features

- Digital indicator with interchangeable pressure sensors (plug-and-play)
- Measuring ranges from 0 ... 25 mbar to 0 ... 1,000 bar
- Type of pressure: positive and negative overpressure, absolute pressure and differential pressure
- Accuracy: 0.2 %, optional 0.1 % (incl. calibration certificate)
- GSoft data-logger evaluation software, EasyCal Light calibration software and complete service cases (incl. pumps) available



Model CPH6200-S1 hand-held pressure indicator with optional model CPT6200 reference pressure sensor

Description

Extensive application possibilities

Stainless steel pressure sensors with measuring ranges up to 1,000 bar are available for the model CPH6200 hand-held pressure indicator. Therefore, it is particularly suitable as a test instrument for applications such as process technology, machine building etc. The digital indicator automatically detects the measuring range of the connected pressure sensor and guarantees a highly accurate pressure measurement.

Functionality

The CPH6200 can be used for measuring both overpressure and absolute pressure. Differential pressure measurement is possible with the 2-channel version CPH6200-S2, and two connected model CPT6200 reference pressure sensors. Selectable pressure units here are bar, mbar, psi, Pa, kPa, MPa, mmHg or inHg. An integrated data logger and various other functions such as Min, Max, Hold, Tare, Zero point adjustment, Alarm, Power-Off, Peak value detection (1,000 measurements/s), Average value filter, etc. ensure that the CPH6200 can be used for many different applications.

Complete test and service cases

For maintenance and service applications, various service case systems are available. These include service cases with or without pressure generation, rechargeable battery, battery charger, connection adapter, etc.

Software

In addition to the GSoft data-logger evaluation software for the tabular and graphical representation of the logger data, EasyCal Light calibration software for calibration functions is also available.

Certified accuracy

For each reference pressure sensor, the accuracy for the complete measuring chain is certified by a factory calibration certificate which accompanies the instrument. On request, we can provide a DKD/DAkkS calibration certificate for this instrument.

Specifications

Model CPH6200 hand-held pressure indicator (complete measuring chain)

Measuring inputs	1 input for CPH6200-S1 2 inputs for CPH6200-S2										
Measuring range	mbar	25	40	60	100	160	250	400	600		
Overpressure limit	mbar	500	500	500	1,000	1,500	2,000	2,000	4,000		
Burst pressure	mbar	1,000	1,000	1,000	2,000	2,000	2,400	2,400	4,800		
Resolution	dependent on pressure range (max. 4 1/2-digit)										
Measuring range	bar	1.0	1.6	2.5	4.0	6.0	10				
Overpressure limit	bar	5	10	10	17	35	35				
Burst pressure	bar	6	12	12	20.5	42	42				
Resolution	dependent on pressure range (max. 4 1/2-digit)										
Measuring range	bar	16	25	40	60	100	160	250	400	600	1,000
Overpressure limit	bar	80	50	80	120	200	320	500	800	1,200	1,500
Burst pressure	bar	96	250	400	550	800	1,000	1,200	1,700	2,400	3,000
Resolution	dependent on pressure range (max. 4 1/2-digit)										
Types of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. and vacuum measuring ranges from -1 ... 24 bar}, Differential pressure only with CPH6200-S2 and two connected model CPT6200 reference pressure sensors										
Accuracy of the measuring chain	0.2 % FS; optional: 0.1 % FS										
Sensor compatibility	Compatible with model CPT6200 reference pressure sensors										

{ Items in curved brackets are optional extras for an additional price.

Model CPH6200 digital indicator

Indication	
Display	Large 4 1/2 digit LCD display for indication of 2 pressure values and additional information
Indication range	-19999 ... 19999 digits, depending on sensor used
Pressure units	mbar, bar, Pa, kPa, MPa, mmHg, inHg and psi (depending on the measuring range, selectable)
Functions	
Measuring rate	4/s ("slow"); 1,000/s ("fast"); > 1,000/s unfiltered (peak value detection), selectable
Memory	Min/Max, integrated data logger
Functions via key press	Min/Max memory, Hold, Tare, Zero point adjustment, Logger (Start/Stop)
Menu functions	Min/Max Alarm (acoustic/visual), Sea level (barometric air pressure), Power-Off function, Measuring rate, Average value filter
Average filter	1 ... 120 seconds, adjustable
Data logger	Individual value logger: up to 99 recordings incl. time via key press Cyclic logger: automatic recording of up to 10,000 values incl. time Cycle time: selectable from 1 ... 3,600 seconds
Real-time clock	integrated clock with date and year
Voltage supply	
Power supply	9 V battery, alternatively: 9 V rechargeable battery or mains supply
Battery life	> 300 hours of operation (1 sensor with a measuring rate of 4/s)
Permissible ambient conditions	
Operating temperature	0 ... 50 °C
Storage temperature	-20 ... +70 °C
Relative humidity	0 ... 95 % r. h. (non-condensing)
Communication	
Interface	RS-232 or USB via special interface cable
Analogue output	DC 0 ... 1 V; configurable (alternative instead of serial interface via menu selectable)

Model CPH6200 digital indicator

Case

Material	impact-resistant ABS plastic, membrane keypad, transparent screen
Dimensions	see technical drawing
Weight	approx. 160 g (incl. battery)

Model CPT6200 reference pressure sensor

Pressure connection ¹⁾	G 1/2 B; {flush (G 1 for 0.1 up to 1.6 bar) or various connection adapters on request}
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Material

Wetted parts	Stainless steel or Elgiloy®, (> 25 bar with additional NBR seal) ²⁾ Flush diaphragm version: stainless steel {Hastelloy C4}; O-ring: NBR {FKM/FPM or EPDM}
Internal transmission fluid	Synthetic oil (only for measuring ranges up to 16 bar or flush diaphragm) {Halocarbon oil for oxygen applications}; {Listed by FDA for food industry}

Sensor specifications

Stability per year	≤ 0.2 % of span at reference conditions
Compensated range	0 ... 80 °C

Permissible ambient conditions

Medium temperature ¹⁾	-30 ... +100 °C ³⁾
Operating temperature	-20 ... +80 °C
Storage temperature	-40 ... +100 °C ³⁾
Relative humidity	0 ... 95 % r. h. (non-condensing)

Case

Material	Stainless steel
Connection to the CPH6200	via 1 m connection cable (plug-and-play); optional: up to 5 m
Ingress protection	IP 67
Dimensions	see technical drawing
Weight	approx. 220 g

{ } Items in curved brackets are optional extras for an additional price.

1) As an oxygen version, a flush diaphragm model is not available. In an oxygen version, the model CPT6200 is only available in gauge pressure ranges ≥ 0.25 bar, with media temperatures between -10 ... +50 °C and using stainless steel or Elgiloy® wetted parts.

2) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar all wetted parts are made of stainless steel, silicon, aluminium, gold, silicone.

3) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar the medium temperature and storage temperature are limited to +80 °C.

CE conformity, approvals, certificates

CE conformity, CPH6200

EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)
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CE conformity, CPT6200

Pressure equipment directive	97/23/EC
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EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)
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Approvals

GOST-R	Import certificate, Russia
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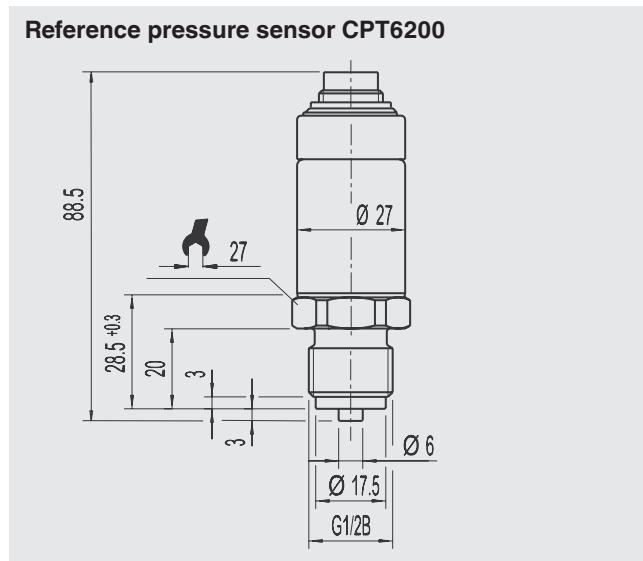
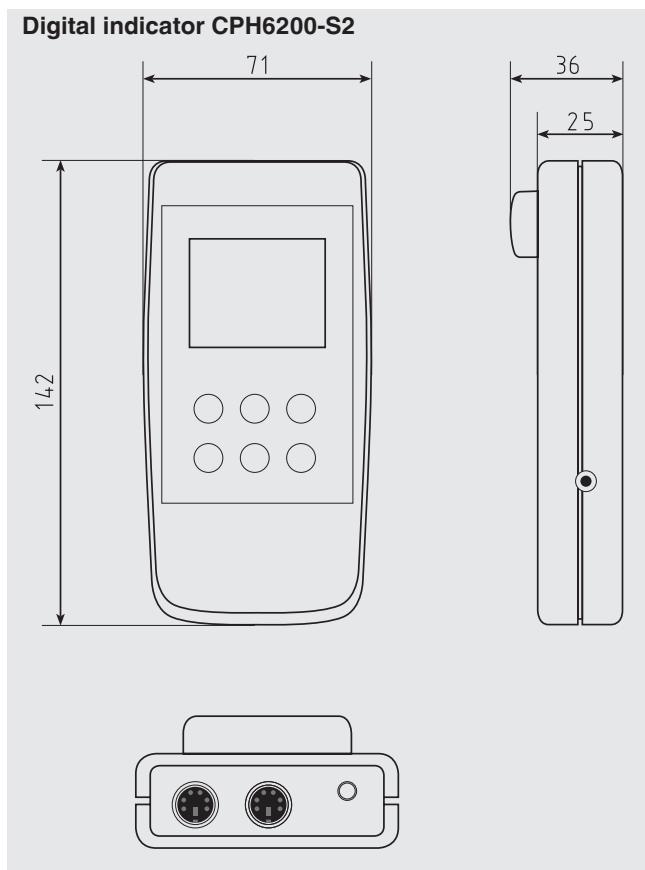
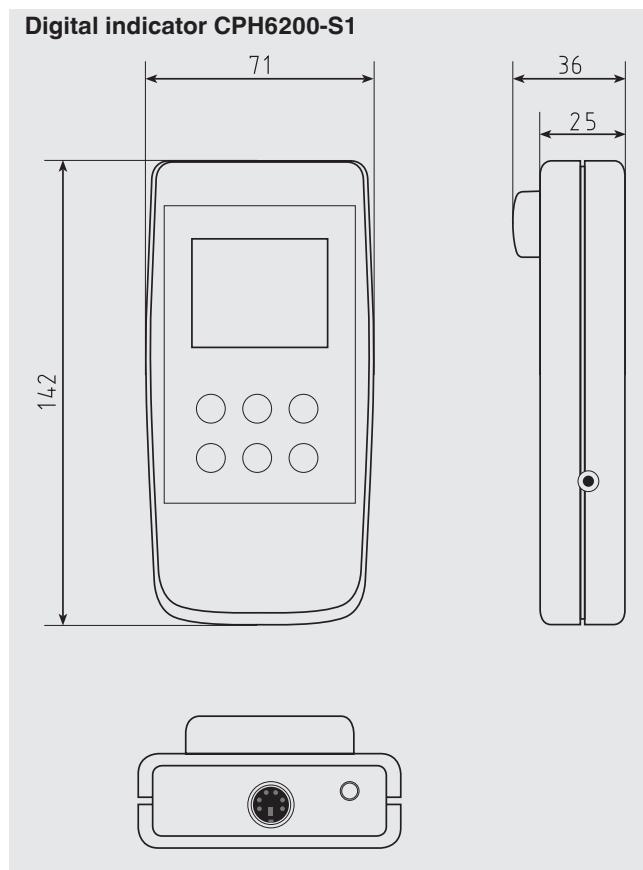
GOST	Metrology/measurement technology, Russia
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Certificates

Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate
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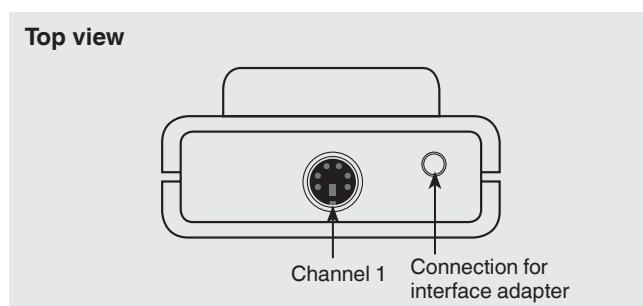
Approvals and certificates, see website

Dimensions in mm

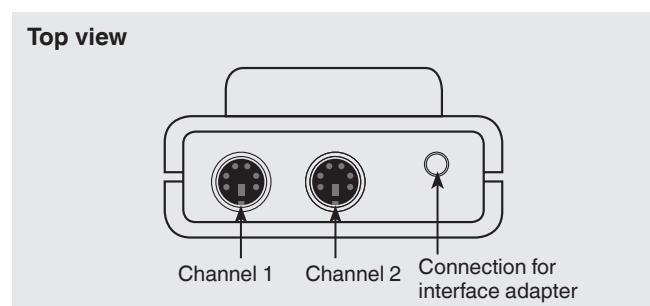


Electrical connections

Model CPH6200-S1

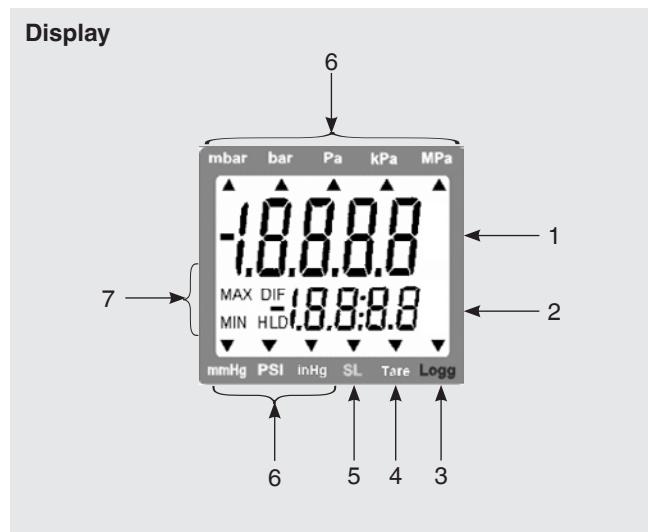


Model CPH6200-S2

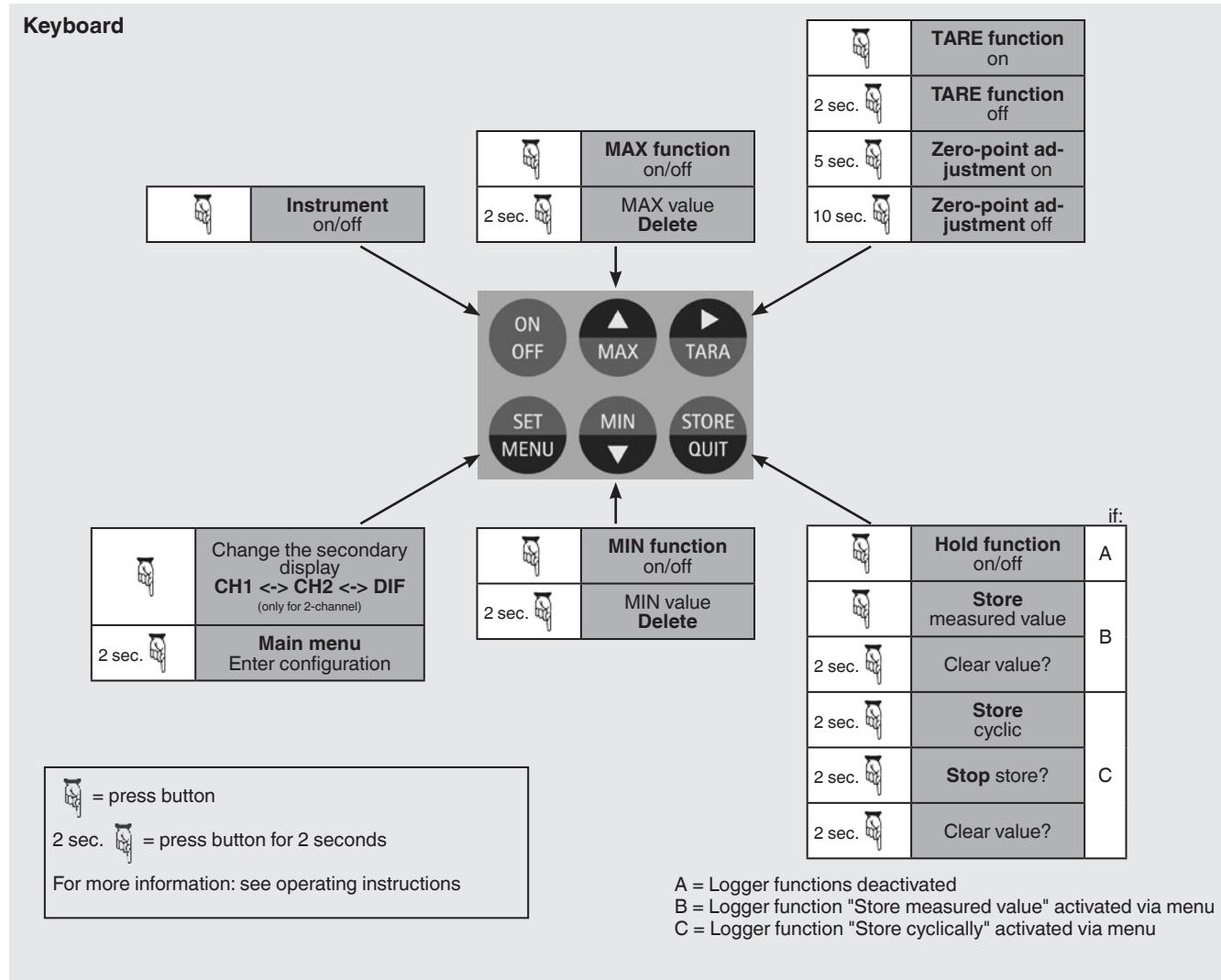


Operating functions of the models CPH6200-S1 and CPH6200-S2

1- and 2-channel version with external pressure sensors



- 1 **Main display:** current measured value for sensor 1
- 2 **Secondary display:** current measured value for sensor 2 or differential value between sensor 1 and sensor 2
- 3 **logg arrow:** logger is ready
Arrow blinking: automatic recording (Logg CYCL) active
- 4 **Tare arrow:** Tare function was activated
- 5 **SL arrow:** Height correction (sea level) was activated
- 6 **Display arrow for measured value unit**
- 7 **Indication elements for Min/Max measured value illustration**



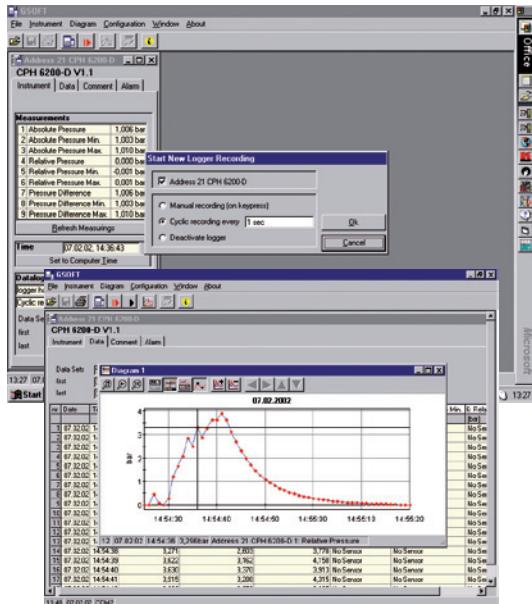
GSoft data-logger evaluation software

The GSoft data-logger evaluation software is used to display the logger data from the model CPH6200 hand-held pressure indicator on a PC in tabular form and as chart.

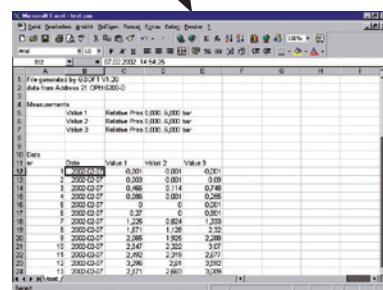
- Easy operation with self-explanatory toolbars
- Data from the pressure and temperature hand-holds (CTH6200) can be displayed in a single chart (2 separate y-axes)
- Charts offer a zoom function
- Operation of the logger function via PC (remote control)
- Data can be exported (Excel® etc.)
- Languages: German, English, French, Spanish and Czech

System requirements

- IBM compatible PC (Pentium®)
- At least 20 MB free hard disc space
- CD-ROM drive
- At least 32 MB RAM
- Windows® operating system 95, 98, NT 4.0 (with Service Pack 3.0 or higher), 2000, XP, Vista or 7
- Mouse
- One free serial interface or USB port (via interface cable)

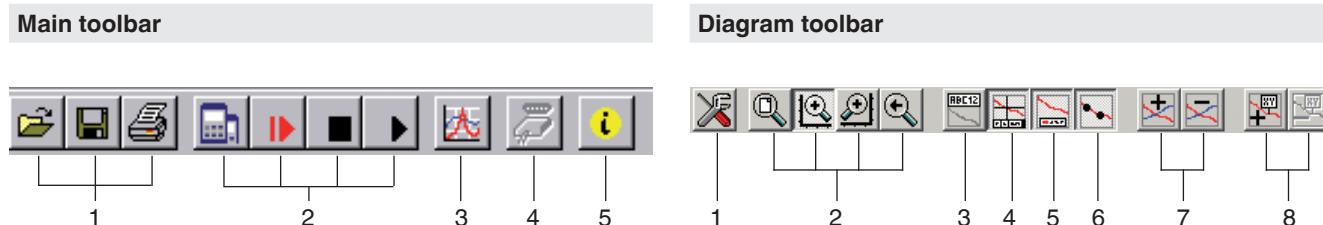


Data export e.g. in an Excel® file



Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

Easy operation with self-explanatory icon buttons



1. File functions: open, save, print
2. Logger functions: start communication, start logger, stop, read data
3. Data display: create chart
4. Interface configuration
5. Program information

1. Settings: grid and colour settings, manual zooms
2. Zoom: all, left or right y-axes (via mouse), back
3. Rename chart
4. Cursor on/off (Info footer)
5. Legend on/off
6. (Measurement point) Symbols on/off
7. Measurement series (add/delete)
8. Comments on measuring points (add/delete)

EasyCal calibration software

The WIKA EasyCal calibration software is used for the calibration (inspection equipment monitoring) of mechanical and electronic pressure measuring instruments in accordance with DIN ISO 9000ff.

- A calibration assistant guides you through the calibration
- User-friendly interface
- Automatic generation of the calibration steps in accordance with DIN EN 837-1
- Generation of 3.1 certificates in accordance with DIN EN 10204
- Customer-specific test reports possible (Access report-designer)
- Calibration data storage and instrument management via Access database
- Languages: German, English, Spanish and French

Free demo version available

The screenshot shows the WIKA EasyCal calibration software interface. The main window is titled "Calibration assistant - Step 4" and is divided into several sections:

- Test cycle:** Shows a list of 13 measuring points with values ranging from 0.0000 to 4.0000 Bar.
- Calibration method:** Set to "Read at the calibration object".
- Temperature:** Set to 21.0 °C, with a checkbox for "Derive automatically".
- Calibration Sheet:** A table showing pressure standard values for each point.
- Calibration method:** Set to "Read at the standard".
- Instrument ambience:** Set to "Set pressure value automatically".
- Status:** Shows "Active" status.
- Manual value adjustment:** Buttons for "p+", "p-", "Step size Bar", and "p OK".

An arrow points from this interface to a generated calibration certificate titled "Abnahmepflichtzeugnis nach EN 10204 - 3.1 Calibration Certificate". The certificate includes a table of calibration data and a signature at the bottom.

Complete test and service cases



Calibration case with model CPH6200 hand-held pressure indicator for pressure, consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH6200
- 9 V battery
- Various seals
- Sensor cable
- Spaces for several CPT6200 reference pressure sensors

Available measuring ranges see specifications

Basic version



Calibration case for pressure and/or temperature (equipment freely selectable), consisting of:

- Transport case with foam insert and space for max. 2 hand-held pressure indicators/thermometers, several CPT6200 reference pressure sensors, 2 temperature sensors, 1 power supply unit, charger and rechargeable battery or battery

Further specifications see data sheet CT 51.01

Equipment freely selectable

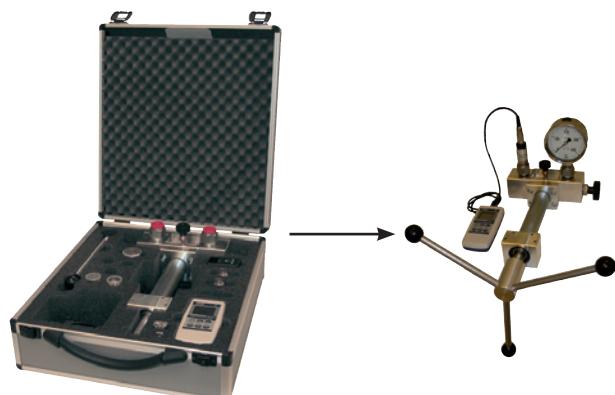


Calibration case with model CPH6200 hand-held pressure indicator and model CPP30 hand test pump for pressures of -0.95 ... +35 bar, consisting of:

- Transport case with foam insert
- Hand-held pressure indicator model CPH6200
- Model CPP30 pneumatic hand test pump; -0.95 ... +35 bar
- Various seals
- Sensor cable
- Rechargeable battery and charger
- Spaces for several CPT6200 reference pressure sensors

Available measuring ranges see specifications

Basic version incl. pneumatic pressure generation



Calibration case with model CPH6200 hand-held pressure indicator and model CPP1000-L hand spindle pump for pressures of 0 ... 1,000 bar, consisting of:

- Transport case with foam insert
- Hand-held pressure indicator model CPH6200
- Model CPP1000-L hydraulic hand spindle pump; 0 ... 1,000 bar
- Various seals
- Sensor cable
- Rechargeable battery and charger
- Spaces for several CPT6200 reference pressure sensors

Available measuring ranges see specifications

Basic version incl. hydraulic pressure generation

Scope of supply

- CPH6200-S1 incl. 9 V battery
- One sensor connection cable per channel
- 3.1 calibration certificate per DIN EN 10204
- Choice of sensors



Options

- CPH6200-S2: 2-channel version (differential pressure measurement possible via 2 connected model CPT6200 reference pressure sensors)
- CPH62I0: intrinsically safe version (see data sheet CT 11.02)
- DKD/DAkkS certified accuracy of 0.2 % or 0.1 %
- Sensors for oxygen applications

Intrinsically safe version CPH62I0-S1

Accessories

Connection adapters

- Various pressure adapters
- "Minimess®" quick-connect process connection system

Pressure generation

- Pneumatic test pumps
- Hydraulic test pumps

Voltage supply

- Power supply unit
- Rechargeable battery and battery charger

Test cases

- Various calibration cases incl. pressure generation

Software

- RS-232 interface cable
- USB interface cable
- GSoft data-logger evaluation software for models CPH6300, CPH6200, CPH62I0 and CTH6200
- EasyCal Light calibration software for models CPH6200 and CPH62I0

Ordering information

CPH6200 / Instrument version / Additional cable for reference pressure sensor / Power supply unit / Rechargeable battery and battery charger / Software / Interface cable / Test pump / Transport case / Additional order information

CPT6200 / Unit / Measuring range / Accuracy / Process connection / Special design features / Type of certificate / Additional order information

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