Hand-Held Pressure Indicator

■ **Model CPH 6200**

■ **Model CPH 62I0 (intrinsically safe version)**

■ **Model CPH 6200-S2 (2-channel version)**

WIKA Datasheet CPH 6200

Applications

■ Calibration service companies / service industry
■ Instrument and control workshops
■ Quality assurance

Special Features

■ Digital instrument with external transmitter
  (plug and play)
■ Pressure ranges: from 0 ... 100 mbar up to 0 ... 1,000 bar
■ Certified accuracy: 0.2 % (incl. calibration certificate)
■ Option: Intrinsically Safe Version EEx ib IIC T4
■ Data Logger evaluation software GSoft, Calibration
  software EasyCal and fully cased service sets
  (incl. pumps) available

Hand-Held Pressure Indicator CPH 6200

Description

Areas of application
Pressure transmitters with ranges up to 1,000 bar are available
for the CPH 6200 digital indicator. This makes it especially
suited to the process technology, mechanical engineering and
mobile hydraulics industries. For oil and gas refining or
chemical industries, an Intrinsically Safe Version is also
available. The digital instrument recognises the range of the
connected pressure transmitter automatically and guarantees
high precision.

Functionality
Both gauge and absolute pressure ranges can be measured,
and by using the 2-channel version CPH 6200-S2 with two
connected pressure transmitters it is also possible to measure
differential pressure. Via a menu selection, pressures can be
displayed in bar, mbar, PSI, kPa, Mpa or mmHG.
An integrated data logger and various other functions (like
MIN, MAX, HOLD, TARE, Offset-correction, ALARM, POWER-
OFF, 3 SAMPLE RATES, SEALEVEL etc.) ensure that the
instrument can be used for many different applications.

Complete test and service sets
For maintenance and service applications various service
cases are available. These include pressure service sets with or
without pressure pump, with charger, adapter, etc. (PCL-
system), or service sets with an additional Hand-Held
Thermometer CTH 6200.

Software
Three different software options are available. The Data
Logger evaluation software (GSoft) enables the display of
recorded data, as tables or charts, on a PC. Calibration
software (EasyCal Light) is available for calibration tasks, while
easy adjustment of the CPH 6200's zero and span points is
available using "CPH-Adjustment" software.
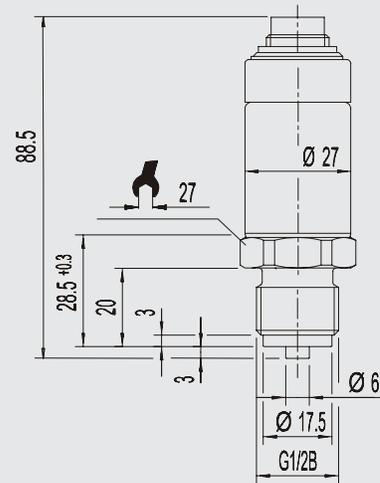
Certified precision
A factory calibration certificate for each pressure transmitter
certifies the total uncertainty of the measuring chain.
Alternatively, on request, a DKD calibration certificate can be
supplied.

WIKA

Part of your business

Dimensions in mm

Digital instrument CPH 6200

36

71

142

26
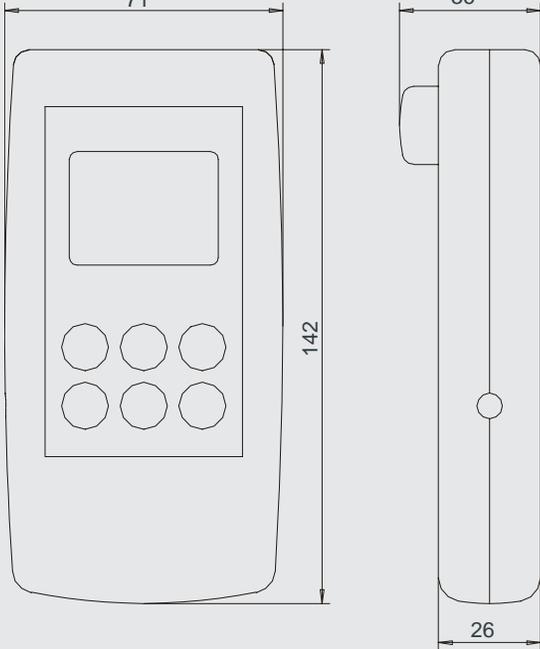
829555-1

Pressure transmitter CPT 6200

88.5

28.5 +0.3

20

3

3

27

Ø 27

Ø 6

Ø 17.5

G1/2B
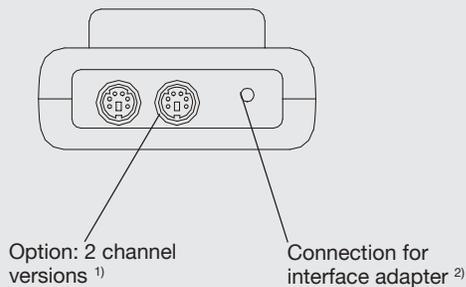
Note: The Intrinsically Safe Version CPH 62I0 in a protective leather case has no rubber base on the back.

Electrical connections to the digital instrument

Top View

829555-4

Option: 2 channel versions [1]

Connection for interface adapter [2]

Side view (Left)

829555-3

Alternative power supply via power supply unit [1]
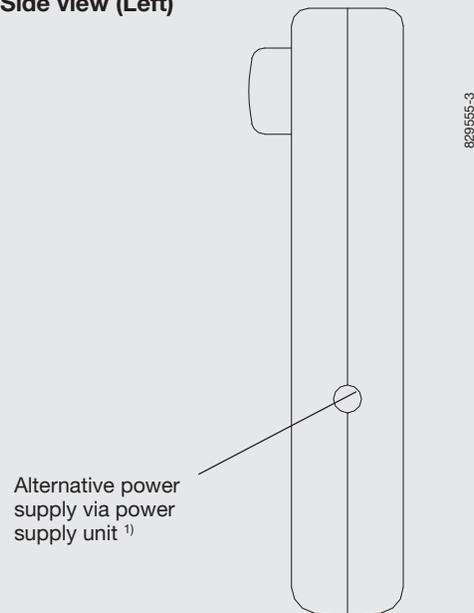
1) Not available for the Intrinsically Safe Version CPH 62I0.
2) For the Intrinsically Safe Version CPH 62I0, the use of the interface is not permitted with an explosive atmosphere.

Specifications — Hand-Held Indicator CPH 6200

Input		1: for CPH 6200 / CPH 62I0;					2: for CPH 6200-S2				
Pressure range	bar	0.1	0.16	0.25	0.4	0.6	1.0	1.6	2.5	4.0	6.0
Over pressure safety	bar	1	1.5	2	2	4	5	10	10	17	35
Burst pressure	bar	2	2	2.4	2.4	4.8	6	12	12	20.5	42
Resolution	mbar	0.1					1				

Pressure range	bar	10	16	25	40	60	100	160	250	400	600	1000
Over pressure safety	bar	35	80	50	80	120	200	320	500	800	1200	1500
Burst pressure	bar	42	96	250	400	550	800	1000	1200	1700	2400	3000
Resolution	bar	0.01					0.1				1	

Type of pressure		gauge {absolute 0.25 up to 16 bar & vacuum on request}
Accuracy (measurement chain)		0.2 % FS +/- 1 digit at reference temperature of 20 °C
Display		Large LCD display for display of 2 four-digit values and additional information
Range of display		max. -1999 up to 9999 digit, depending on sensors used
Units		can be selected from the following: mbar, bar, Pa, kPa, MPa, mmHg, psi (dependent on range)

CPH 6200 Digital Instrument specific details:

Functions via key press		Min-, Max-memory, Hold, Tare, Offset-correction, Logger (Start/Stop)
Functions via Menu		Min-, Max-alarm (acoustic*/visual), Sealevel (barom. air pressure), Power-Off-Function,
		measurement rate: 4/sec ("slow"); > 100/sec ("fast"); > 100/sec unfiltered ("peak-detect")
		[via "peak-detect" and min-/max-memory: pressure peaks of 10 msec can be detected]
Data logger		- discrete value logger: up to 99 recordings incl. time via key press
		- cyclic logger: automatic recording up to 9900 values incl. time, cycle time: selectable
		from 1 ... 3600 seconds
Interface [1]		USB and RS-232 interface via interface cable
Power supply		9V-zinc-carbon battery, alternative*: 9V rechargeable battery or mains supply
Power consumption		cycle time slow: < 1.5 mA, fast: < 3.0 mA, Low-Power-Logger-Fct.: < 0.1 mA
Working temperature	°C	0 ... 50
Air humidity	% r.h.	0 ... 95 relative humidity without moisture condensation
Storage temperature	°C	-20 ... +70
Housing		impact-resistant ABS, membrane keyboard, transparent panels (CPH 62I0 with cover)
Weight	g	approx. 160
EMC- / CE-conformity		The CPH 6200 device corresponds to the essential protection requirements established in the
		regulations of the council for the Approximation of Legislation of the member countries
		regarding electromagnetic compatibility (89/336/EWG).

CPT 6200 Reference Pressure Sensor specific details:

Pressure connection		G½ B; {flush diaphragm (G1 for 0.1 up to 1.6 bar) or various connection adapters on request}
Material wetted parts		Wetted parts stainless steel, case stainless steel
		flush diaphragm version: stainless steel {Hastelloy C4}; O-Ring: NBR[2] {FKM/FPM or EPDM}
Internal transmission fluid		Synthetic oil, (only for pressure ranges up to 16 bar or flush diaphragm)
		{Halocarbon oil for oxygen applications}[3]; {Listed by FDA for food industry}
One year stability		0.2 % of span at reference conditions
Permissible		
- medium temperature [3]	°C	-25 ... +100
- ambient temperature	°C	0 ... 50
- storage temperature	°C	-40 ... +80
Protection class		IP67 (Sensor) / IP54 (Plug)
Compensated range	°C	0 ... 70
Temperature coefficients		
- mean TC of zero signal		0.2 % / 10 K
- mean TC of span		0.2 % / 10 K
Connection to CPH 6200		via 1 m cable (plug & play); on request: up to 5 m
Weight	g	approx. 220

[1] For the Intrinsically Safe Version, the use of the interface is not permitted within an explosive atmosphere.
[2] O-ring made of FKM/FPM or EPDM for flush diaphragm with integrated cooling element.
[3] The oxygen version must not be operated under medium temperatures higher than 60 °C. Cannot be manufactured for absolute pressure ranges < 1 bar abs.
*) Not available for the Intrinsically Safe Version CPH 62I0.
{} Items in curved brackets are optional extras for additional price.

Mode of operation for Hand-Held Pressure Indicators

1 and 2 channel version for external pressure sensors

Display:

An arrow points to the chosen measurement unit

(„m" in preparation)

Main display: shows the measured value of CH1 (channel 1)
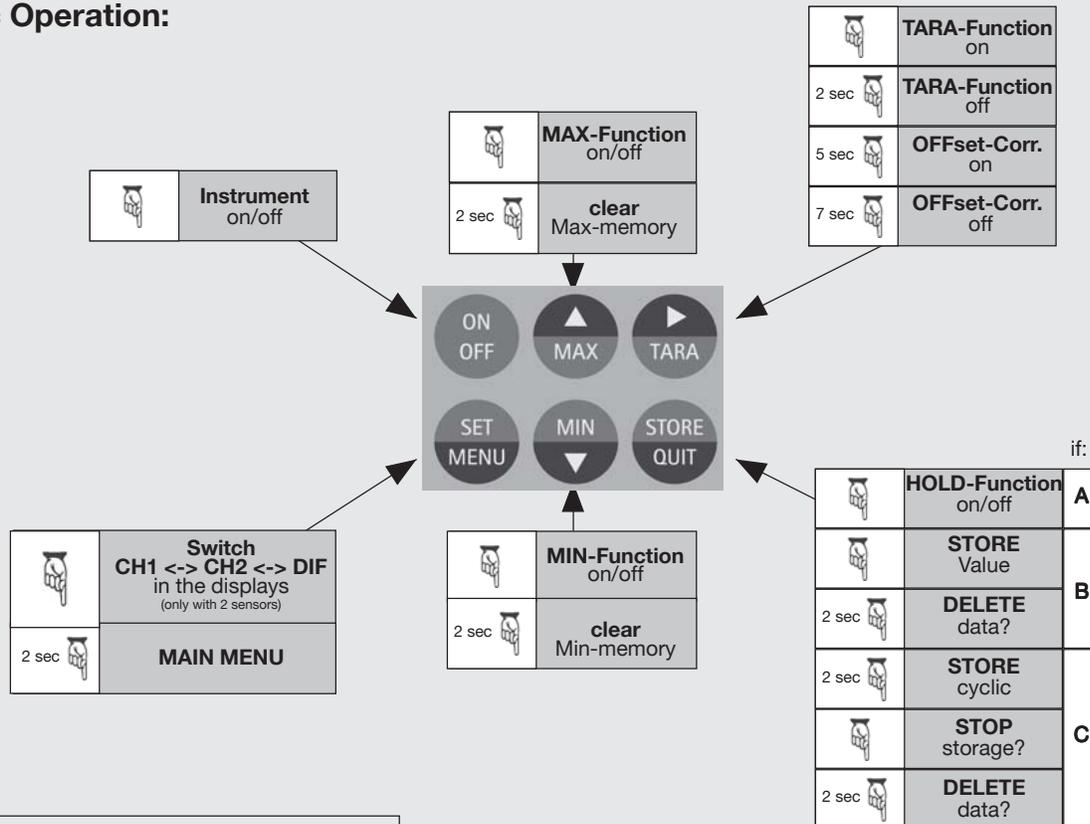
Symbol indicates weak battery or other warnings

Secondary display shows ...
- The measured value of CH2 or DIF (CH1-CH2) if it is a 2 channel version
- The values of min, max or hold function if it is a 1 channel version

an arrow above
- **Logg:** appears when logger function is chosen via the menu, flashes when logger is running
- **Tara:** indicates that the tare function is active

- **SL:** indicates that the sea level function active

Basic Operation:

	TARA-Function on
2 sec	TARA-Function off
5 sec	OFFset-Corr. on
7 sec	OFFset-Corr. off

	MAX-Function on/off
2 sec	clear Max-memory

	Instrument on/off

ON OFF — MAX — TARA
SET MENU — MIN — STORE QUIT

	Switch CH1 <-> CH2 <-> DIF in the displays (only with 2 sensors)
2 sec	MAIN MENU

	MIN-Function on/off
2 sec	clear Min-memory

if:		
	HOLD-Function on/off	A
	STORE Value	B
2 sec	DELETE data?	
2 sec	STORE cyclic	
	STOP storage?	C
2 sec	DELETE data?	

A = Logger Function deactivated
B = Logger Function STORE activated via menu
C = Logger Function CYCLE activated via menu

	= press button
2 sec	= press button 2 seconds

More information: See Operating Instructions

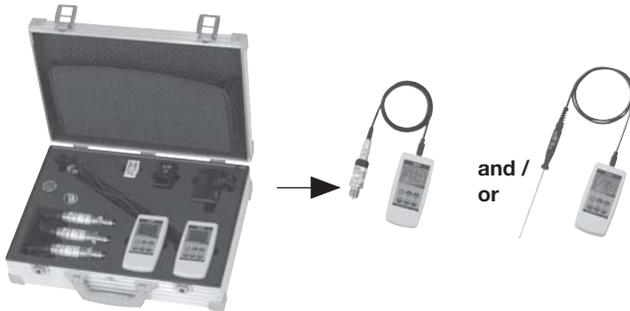# Complete test and service sets

Basic version I

**Measuring set
for pressure consisting of:**

- Plastic service case with digital instrument
- Spare battery
- Various seals
- Space for different CPT 62x0 reference pressure sensor

Available pressure ranges:
see specification on page 3.

**and /
or**

Equipment freely selectable

**Measuring set
for pressure and /or temperature (can be supplied to requirements) based on:**

- Transport case with foamed insert and available space for max. 2 digital instruments, several CPT 62x0 reference pressure sensor, several CTH-probes, power supply unit, transformer and charger or spare battery.

For information on the Hand-Held Thermometer CTH 6200 see Data Sheet CT 51.01.
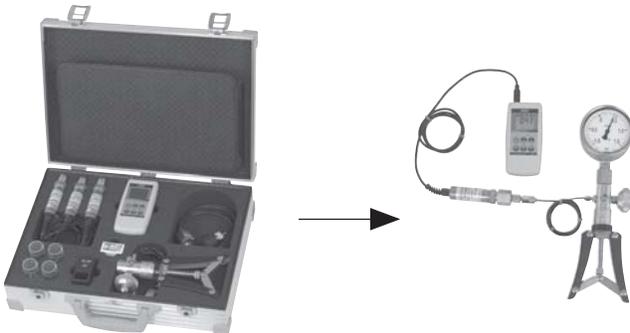
Basic version II (incl. pressure generation)

**Test and calibration service set
for pressures from -0.95 up to 35 bar consisting of:**

- Transport case with digital instrument CPH 6200
- Pneumatic hand-pump: -0.95 up to 35 bar
- Various seals
- Rechargeable battery
- Battery charger
- Space for different CPT 62x0 reference pressure sensor

Available pressure ranges:
see specification on page 3.
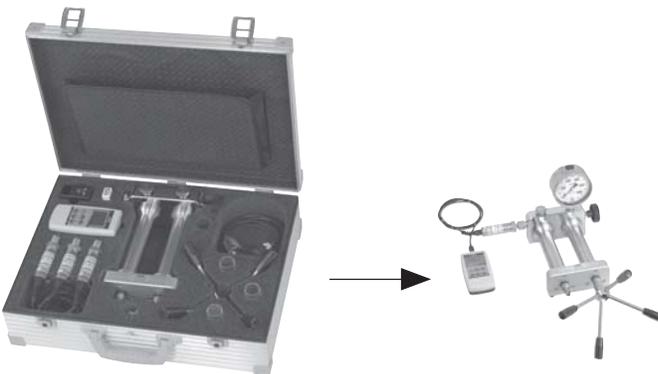
Basic version III or IV (incl. pressure generation)

**Test and calibration service set
for pressures up to 250 bar or 1,000 bar consisting of:**

- Transport case with digital instrument CPH 6200
- Hydraulic spindle pump: 250 bar or 1,000 bar
- 1 m pressure hose with G ½-connections
- Various seals
- Rechargeable battery
- Battery charger
- Space for different CPT 62x0 reference pressure sensor

Data Logger - Software GSoft

The Data Logger evaluation software GSoft allows stored data from the internal Data logger (of a Hand-Held Pressure Indicator model CPH 6200 or of a Hand-Held Thermometer model CTH 6200) to be displayed as a table or chart on a PC.
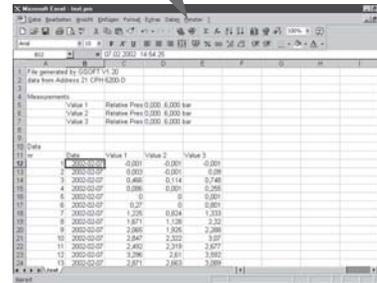
- Easy operation due to self-explanatory icon buttons
- Data of a Pressure and Temperature Hand-Helds in one diagram possible (2 separate y-Axes)
- Zoom function available
- Remote operation via PC possible
- Data can be exported to Excel®, etc.
- Language: English / German

System requirements
- IBM compatible PC (Pentium™)
- At least 20 MB hard disc capacity available
- CD-ROM drive
- At least 32 MB main memory
- Windows™ 95, 98, 2000, XP or NT 4.0
  (with Service Pack 3.0) or better
- Mouse
- One unassigned serial interface or one USB-Port
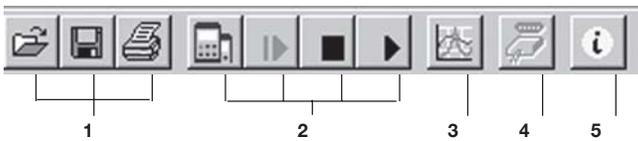 (via interface cable)
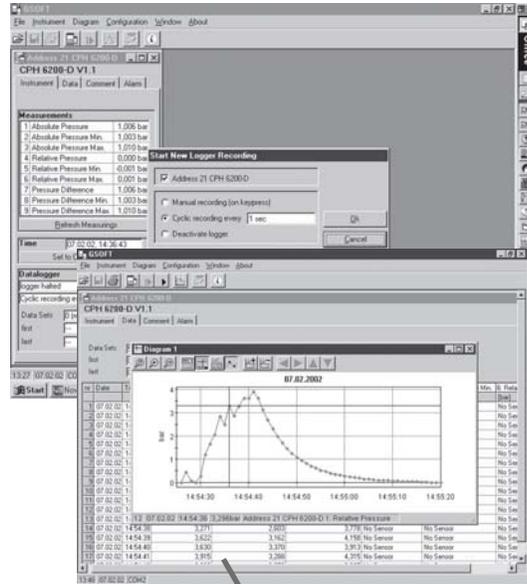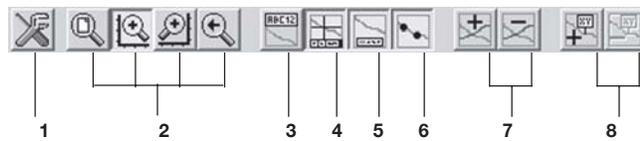
Data export to an Excel® file for example

Easy operation with self-explanatory icon buttons

Main Toolbar

1   2   3   4   5

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

Diagram Toolbar

1   2   3   4   5   6   7   8

1. Settings: grind and colour settings, manual zoom
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 points) on/off
7. Add / erase measuring series
8. Comment-labels to a measuring point: add, delete

Software CPH-Adjust-light

For the easy adjustment of a Hand-Held Pressure Indicator CPH 6200 at 1 or 2 points.
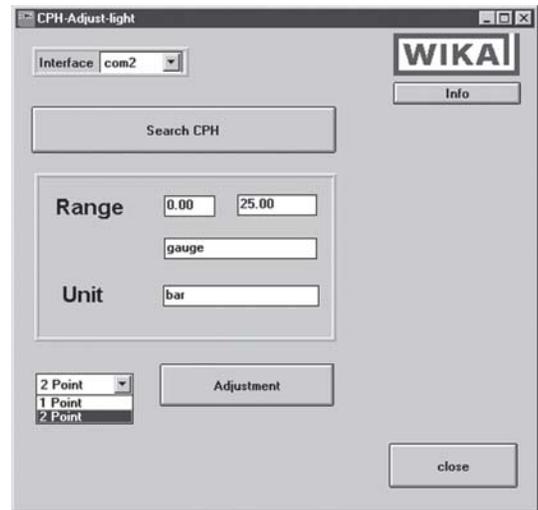
1 Point:
- Gauge transmitter: Zero-Point correction (no pressure source is needed)
- Absolute transmitter: Offset-Correction at atmospheric pressure

2 Points:
- Zero point and span correction (for adjustment of absolute pressure transmitter, a vacuum pump is required)

Very easy to use
1. Connect Hand-Held Pressure Indicator via interface cable to a PC
2. Select interface (com1, com2, etc.)
3. Start data transfer between CPH 6200 and PC by pressing the button, Search CPH
4. Select 1 or 2 point adjustment and press the button: "Adjustment" to start the adjustment procedure.

Calibration Software EasyCal

WIKA calibration software has been developed for the calibration of mechanical and electronic pressure gauges according to ISO 9000 (periodical calibration tests).

- Calibration assistant that guides you through the calibration
- User-friendly menu
- Automatic generation of calibration steps according to EN 837-1
- Certificates 3.1 in accordance with EN 10 204
- Customised test protocols possible (Access Report-Designer)
- Archiving of calibration data as well as instrument administration via Access database
- Language: English / German

DEMO-Version available (free of charge)

Main Screen of the CPH-Adjust Software
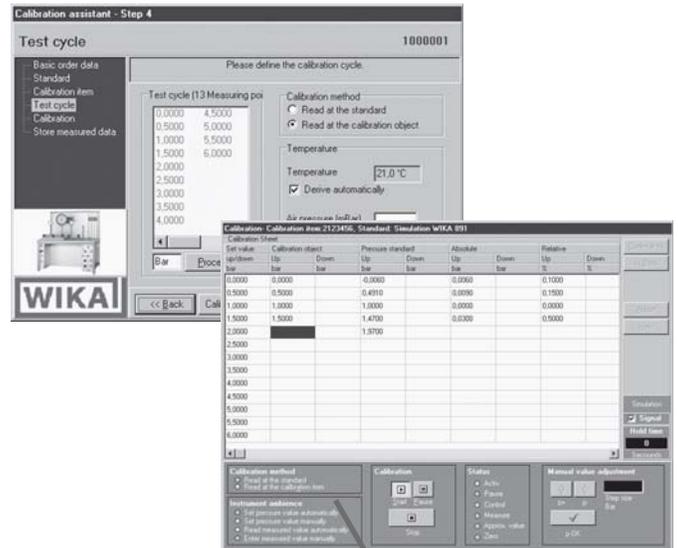
Scope of Supply

- CPH 6200 incl. 9V battery
- One sensor connetion cable per channel
- Calibration certificate 3.1 according to DIN EN 10 204
- Choice of sensor

Options

- CPH 6200-S2: 2-Channel Version
  (Differential pressure measurement between 2 connected
  CPH-pressure transmitters possible)
- CPH 62I0: Intrinsically Safe Version EEx ib IIC T4
  (ATEX Directive 94/9/EG)
- DKD certificated accuracy of 0.2 %
- Transmitters for oxygen applications

Accessories

Pressure adapters
- Various pressure adapters
- Quick-Connect process connection system „Minimess"

Power supply
- Power supply unit
- Rechargeable battery and charger

Pressure generation
- Pneumatic test pumps
- Hydraulic test pumps
- Integral reservoir and pressure hoses

Service cases
- Test and measuring cases
- Various test and calibration cases incl. test pump

Software
- Data Logger Evaluation software GSoft for CPH 6200/
  CTH 6200
- Calibration software EasyCal light for the CPH 6200
- Adjustment software CPH-Adjust for the CPH 6200

Intrinsically Safe Version CPH 62I0

Typical test assembly „hydraulic"

Products and Services within our Testing and Calibration Technology Program

- DKD calibration services for pressure
- Repair of calibration units of all makes
- Portable pressure measuring devices for testing and calibration tasks
- Precision pressure measuring units and pressure controllers
- Primary standards for pressure
- Testing technology system solutions

- DKD calibration services for temperature
- Temperature dry well calibrators
- Calibration baths and furnaces
- Temperature measuring instruments for testing and calibration tasks
- Precision Thermometers
- Primary standards for temperature
- Consulting and training

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.

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