

Test case

Incl. digital pressure gauge model CPG1200 or CPG1500 Model DTK1X00

WIKA data sheet CT 93.03

Applications

- Calibration service companies and service industry
- Calibrations directly on-site
- Maintenance and service facilities
- Pressure test
- Simple test pressure generation on-site, in the laboratory or in the workshop

Special features

- Simple data transmission via USB interface or Bluetooth®
- Optional data logger for up to 1 million data points
- Precise adjustment through the fine adjustment valve
- Clear and simple operation
- The right hand test pump for every pressure range



Test case model DTK1X00 incl. digital pressure gauge model CPG1200 or CPG1500 and hand test pump

Description

As a supplement to the individual instruments CPG1200 and CPG1500, the digital pressure gauge is also available as a part of a test case. According to customer requirements, the test cases are assembled in different versions. All test cases are delivered in a handy case with individually adapted foam inserts.

Application areas

The test cases are the ideal tool for the hydraulic or pneumatic testing, adjustment and calibration of mechanical and electronic pressure measuring instruments through comparative measurements or for the setting of pressure switches. These and other tests can take place in the laboratory or workshop, or on-site at the measuring location, fast and reliably.

With the test cases, service and maintenance are more complete, safer and more flexible. The test cases are high-quality finish, handy and robust and also suitable for service use.

WIKA-Cal software

The collected data from the data logger of the digital pressure gauge can be transmitted wirelessly to the WIKA-Cal calibration software via Bluetooth® for further evaluation. WIKA-Cal also offers, over and above PC-supported calibration, the management of the calibration and instrument data in an SQL database. A Bluetooth® or USB interface is available for the data transfer.

Specifications

Digital pressure gauge	CPG1200	CPG1500
Pressure range		
Gauge pressure	1 ... 1,000 bar	1 ... 1,000 bar [15 ... 15,000 psi]
Absolute pressure	-	1 ... 40 bar abs. [15 ... 500 psi abs.]
Vacuum and +/- measuring range	-1 ... 9 bar to -1 ... 40 bar	-1 ... 7 bar to -1 ... 40 bar [-14.5 ... 100 psi to -14.5 ... 300 psi]
Accuracy ^{1) 2)}	0.25 % FS	<ul style="list-style-type: none"> ■ 0.025 % FS ■ 0.05 % FS ■ 0.1 % FS
Connection location	Vertical mounting position, process connection lower mount	
Process connection	Depending on the hand test pump	
	<ul style="list-style-type: none"> ■ G ½ ■ G ¼ 	<ul style="list-style-type: none"> ■ G ½ ■ G ¼ ■ ¼ NPT, only for the U.S. market
Data logger	<ul style="list-style-type: none"> ■ Without ■ Integrated data logger (can also be activated subsequently) 	
Interface	<ul style="list-style-type: none"> ■ Micro-USB type B ■ Micro-USB type B and Bluetooth® vers. 5.2 	<ul style="list-style-type: none"> ■ Without ■ Bluetooth®
Approval	Standard - Not permitted to be used in hazardous areas!	
Further specifications	→ See data sheet CT 10.20	→ See data sheet CT 10.51

1) Including non-linearity, hysteresis, zero point offset and end value deviation (corresponds to measured error per IEC 61298-2).

2) FS = Full span = end of measuring range - start of measuring range

Accuracy specifications in connection with the CPG1200

Accuracy specifications ¹⁾	
Gauge pressure/Vacuum and +/- measuring range in bar	
0.25 % FS ²⁾	<ul style="list-style-type: none"> ■ -1 ... 9 bar ■ -1 ... 15 bar ■ -1 ... 30 bar ■ -1 ... 40 bar ■ 0 ... 100 bar ■ 0 ... 400 bar ■ 0 ... 700 bar ■ 0 ... 1,000 bar

1) FS = Full span = end of measuring range - start of measuring range

2) Vacuum 0.1 % full span

Accuracy specifications in connection with the CPG1500

Accuracy specifications ¹⁾	
Gauge pressure/Vacuum and +/- measuring range in bar	
■ 0.025 % FS	■ -1 ... 7 bar
■ 0.05 % FS	■ -1 ... 40 bar
■ 0.1 % FS	■ 0 ... 10 bar
	■ 0 ... 16 bar
	■ 0 ... 25 bar
	■ 0 ... 40 bar
	■ 0 ... 60 bar
	■ 0 ... 100 bar
	■ 0 ... 160 bar
	■ 0 ... 250 bar
	■ 0 ... 400 bar
	■ 0 ... 700 bar
	■ 0 ... 1,000 bar

1) FS = Full span = end of measuring range - start of measuring range

Accuracy specifications ¹⁾	
Gauge pressure/Vacuum and +/- measuring range in psi	
■ 0.025 % FS	■ -14.5 ... 100 psi
■ 0.05 % FS	■ -14.5 ... 300 psi
■ 0.1 % FS	■ 0 ... 500 psi
	■ 0 ... 700 psi
	■ 0 ... 1,500 psi
	■ 0 ... 2,000 psi
	■ 0 ... 3,000 psi
	■ 0 ... 5,000 psi
	■ 0 ... 10,000 psi
	■ 0 ... 15,000 psi

1) FS = Full span = end of measuring range - start of measuring range

Accuracy specifications ¹⁾	
Gauge pressure in bar abs.	
■ 0.025 % FS	■ 0 ... 7 bar abs.
■ 0.05 % FS	■ 0 ... 10 bar abs.
■ 0.1 % FS	■ 0 ... 20 bar abs.
	■ 0 ... 40 bar abs.

1) FS = Full span = end of measuring range - start of measuring range

Accuracy specifications ¹⁾	
Gauge pressure in psi abs.	
■ 0.025 % FS	■ 0 ... 100 psi abs.
■ 0.05 % FS	■ 0 ... 300 psi abs.
■ 0.1 % FS	■ 0 ... 500 psi abs.

1) FS = Full span = end of measuring range - start of measuring range

Certificates

Certificates	
Calibration ¹⁾	
CPG1200	<ul style="list-style-type: none"> ■ Without ■ 3.1 inspection certificate per DIN EN 10204 ■ DAkkS calibration certificate (traceable and accredited in accordance with ISO/IEC 17025)
CPG1500	<ul style="list-style-type: none"> ■ 3.1 inspection certificate per DIN EN 10204 ■ DAkkS calibration certificate (traceable and accredited in accordance with ISO/IEC 17025)
Recommended calibration interval	1 year (dependent on conditions of use)

1) Calibrated in vertical mounting position with process connection facing downwards

→ For approvals and certificates, see website

Hand test pumps, pneumatic	CPP10-H	CPP30	CPP40
Pressure range	-0.85 ... 10 bar [-25 inHg ... +145 psi]	-0.95 ... +35.0 bar [-28 inHg ... +500 psi]	-0.95 ... +40 bar [-28 inHg ... +500 psi]
Pressure transmission medium	Ambient air		
Pressure connection			
For reference pressure measuring instrument	G ⅛, female thread, to G ½, female thread	G ½, female thread, swivel union nut with seal	G ¼, female thread
For test item	G ⅛, female thread, to G ¼, female thread	G ¼, female thread, swivel union nut with seal on the production hose connection	G ¼, female thread, swivel union nut with seal
Setting of the test pressure	Fine adjustment valve		
Material	<div><div></div>Brass, nickel-plated</div> <div><div></div>Anodised aluminium</div>	<div><div></div>Brass, chrome-plated</div> <div><div></div>Anodised aluminium</div> <div><div></div>High-strength plastic</div>	
Seals	<div><div></div>Anodised aluminium</div> <div><div></div>Brass</div> <div><div></div>ABS</div> <div><div></div>NBR 70 Shore</div>		
Dimensions (L x W x H)	170 x 100 x 55 mm [6.69 x 3.94 x 2.17 in]	250 x 122 x 103 mm [9.84 x 4.80 x 4.06 in]	240 x 170 x 50 mm [9.45 x 6.69 x 1.97 in]
Weight	675 g [1.49 lb]	510 g [1.125 lb]	1.1 kg [2.43 lb]
Further specifications	→ See data sheet CT 91.10	→ See data sheet CT 91.06	-

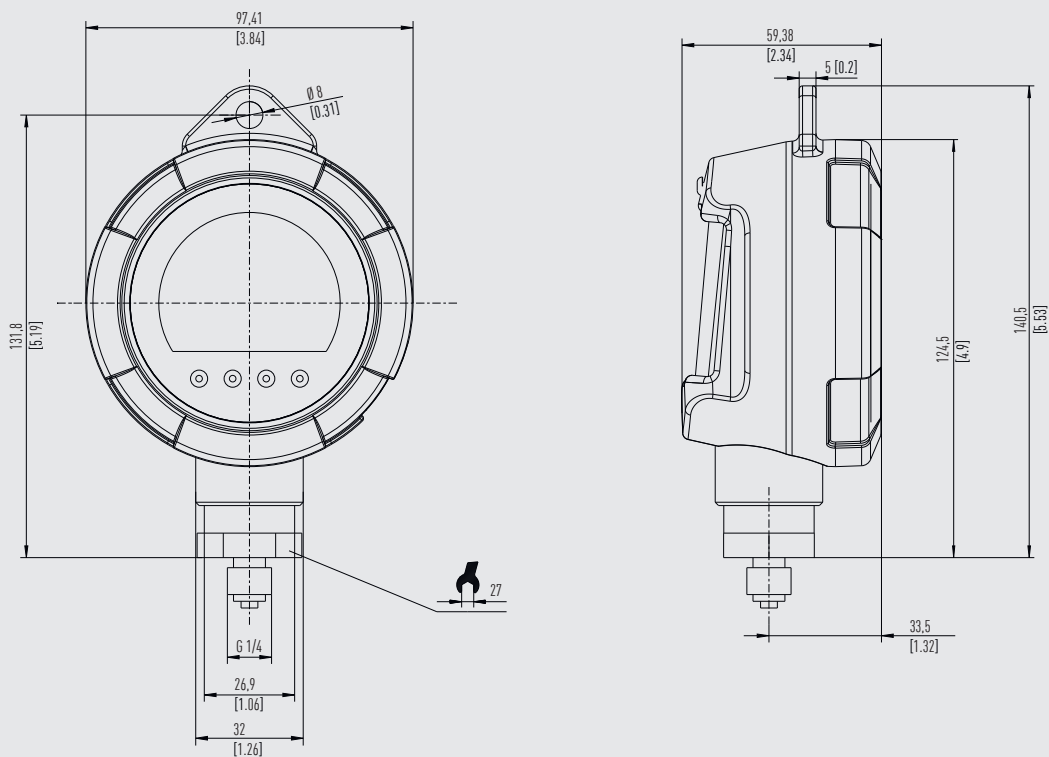
Hand test pumps, hydraulic	CPP700-H	CPP1000-H
Pressure range	0 ... 700 bar [0 ... 10,000 psi]	0 ... 1,000 bar [0 ... 14,500 psi]
Pressure transmission medium	<div><div></div> Hydraulic liquids from mineral oil</div> <div><div></div> Simple distilled water ^{1) 2)}</div>	
Pressure connection		
For reference pressure measuring instrument	G ½, female thread, swivel union nut with seal. The connection can be disconnected using an Allen key. Then a G ⅜ female thread is available.	
For test item	G ¼, female thread, at test connection hose, length 1 m [3.28 ft]	G ¼ female, freely rotating at test connection hose, length 1 m [3.28 ft]
Setting of the test pressure	Fine adjustment valve/volume adjustment	
Liquid reservoir	200 cm³ [12.2 in³]	
Material	<div><div></div> Anodised aluminium</div> <div><div></div> Brass</div> <div><div></div> Stainless steel</div> <div><div></div> ABS</div>	
Seals	FKM and NBR (standard)	
Dimensions (L x W x H)	280 x 170 x 120 mm [11.02 x 6.69 x 4.72 in]	
Weight	1.9 kg [4.19 lbs.]	
Standard accessories	Minimes® 1620 test item connection hose; length 1 m [3.3 ft]	
Further specifications	→ See data sheet CT 91.07	

1) Other pressure transmission media on request.

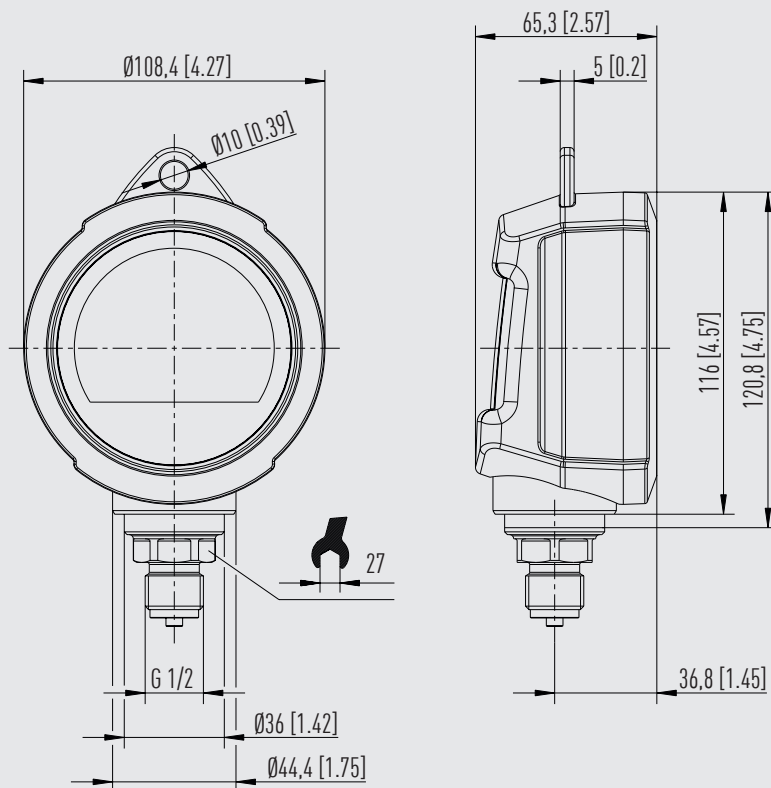
2) Liquids are not included in the delivery.

Dimensions in mm [in]

CPG1200 with protective case cap

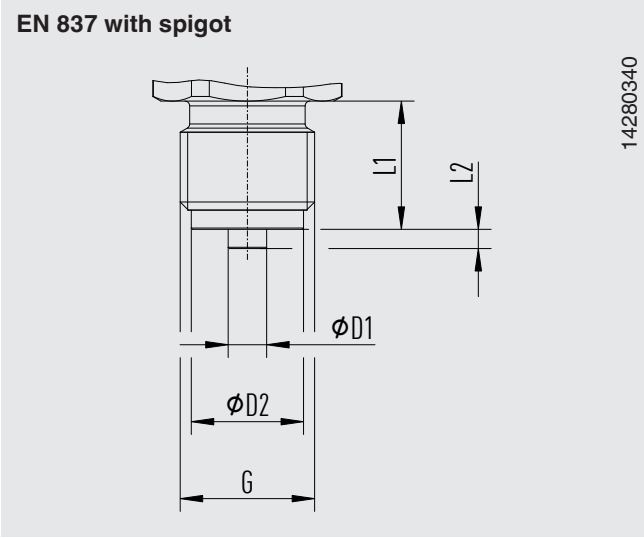


CPG1500 with protective case cap



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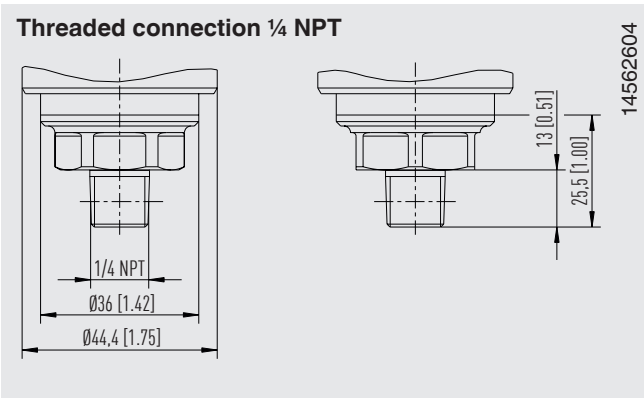
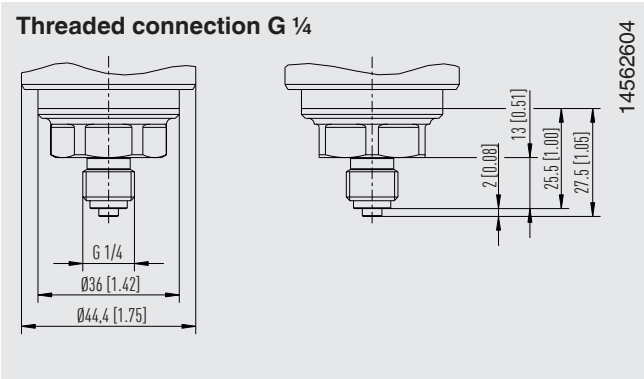
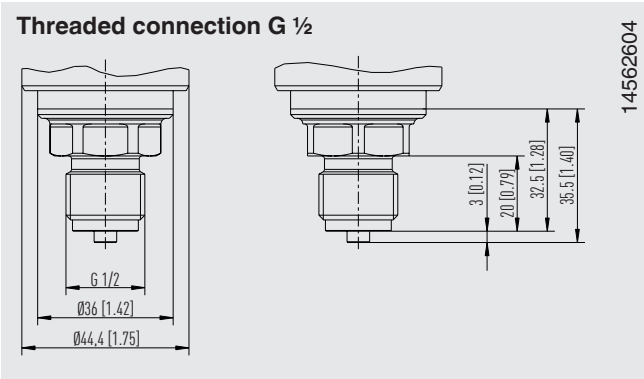
Process connections CPG1200



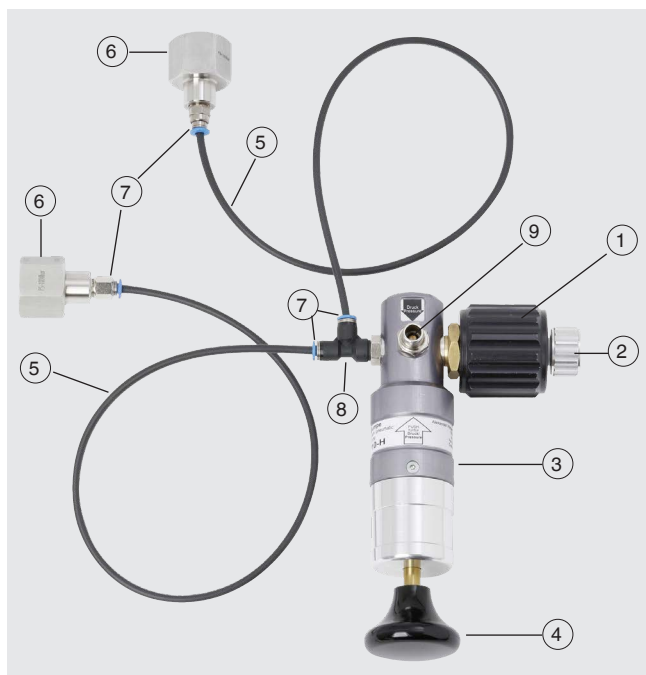
G	L1	L2	D1	D2	ASL
G ¼ B	13 [0.51]	2 [0.08]	5 [0.19]	9.5 [0.374]	013
G ½ B	20 [0.79]	3 [0.12]	6 [0.24]	17.5 [0.689]	026

Other connection adapters are available on request.

Process connections CPG1500

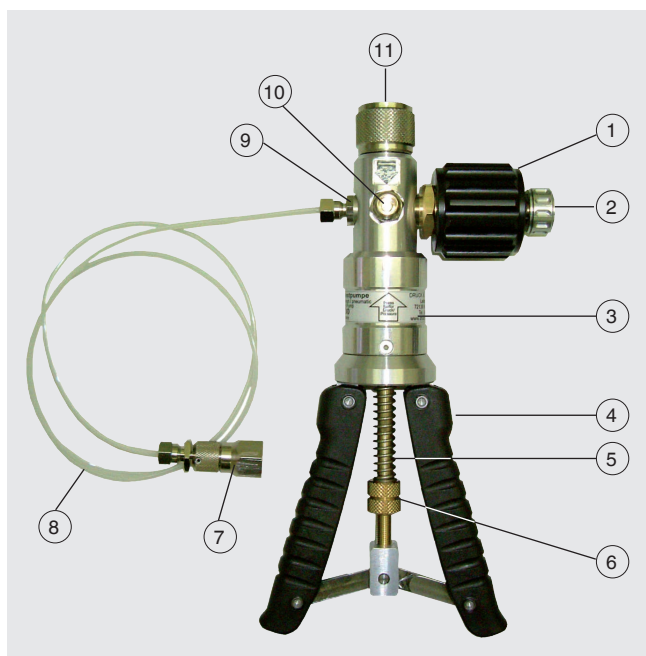


Pneumatic hand test pump model CPP10-H



- ① Fine adjustment valve
- ② Pressure relief valve
- ③ Pump body
- ④ Push rod for pressure/vacuum generation
- ⑤ Connection hose; length 0.5 m [1.64 ft]
- ⑥ Pressure adapters for reference pressure measuring instrument and test item (can be freely selected)
- ⑦ Hose connection adapter G $\frac{1}{8}$, male thread, to 4 mm quick connector
- ⑧ T-connector, 2 x G $\frac{1}{8}$, female thread, to G $\frac{1}{8}$, male thread
- ⑨ Switching valve pressure/vacuum generation

Pneumatic hand test pump model CPP30



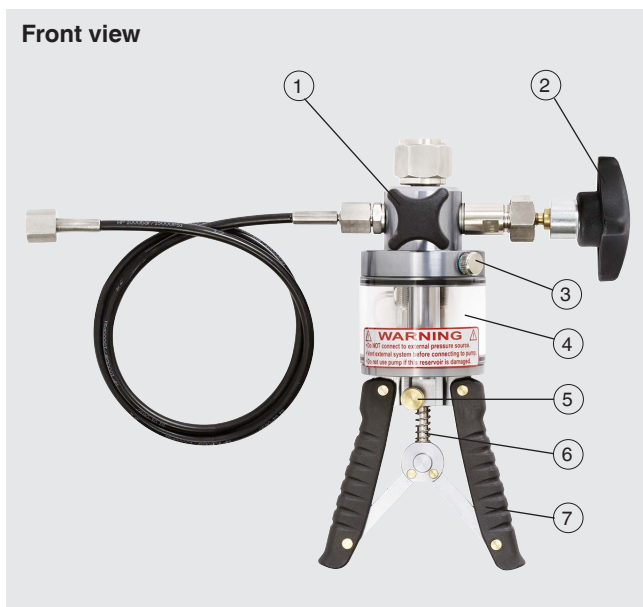
- ① Fine adjustment valve
- ② Pressure relief valve
- ③ Pump body
- ④ Pump handles
- ⑤ Piston rod with external spring
- ⑥ Adjustable knurled nut for setting the pump performance, with counter nut
- ⑦ Test item connection G $\frac{1}{4}$, female thread, freely rotating
- ⑧ Connection hose; length 0.5 m [1.64 ft]
- ⑨ Pressure connection for connection hose
- ⑩ Switching valve for pressure/vacuum generation
- ⑪ Reference instrument connection, G $\frac{1}{2}$, female thread, freely rotating

Pneumatic hand test pump model CPP40

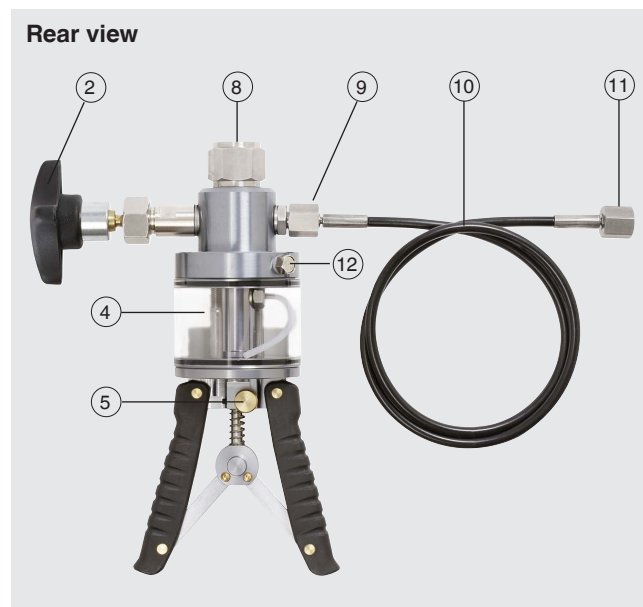


- ① Fine adjustment valve
- ② Pressure relief valve
- ③ Pump body
- ④ Pump handles
- ⑤ Piston rod
- ⑥ Adjustable knurled nut for setting the pump performance, with counter nut
- ⑦ Connection hose; length 1.0 m [3.28 ft]
- ⑧ Test item connection G ¼, female thread, freely rotating
- ⑨ Pressure connection for connection hose
- ⑩ Switching valve for pressure/vacuum generation
- ⑪ Reference instrument connection G ¼, female thread, fixed

Hand test pump model CPP700-H/1000-H



- ① Pressure relief valve
- ② Fine adjustment valve
- ③ Plug screw for liquid reservoir
- ④ Liquid reservoir
- ⑤ Toggle control, system and high-pressure generation
- ⑥ Piston rod with external spring
- ⑦ Pump handles
- ⑧ Reference instrument connection, G ½, female thread, freely rotating



- ⑨ Pressure connection for connection hose
- ⑩ Connection hose
CPP700-H: Minimesse® system with a G ¼ female pressure gauge bulkhead connector
CPP1000-H: G ¼, female thread
- ⑪ Test item connection G ¼, female thread, freely rotating
- ⑫ Blind plug, do not open!

WIKA-Cal calibration software

Easy and fast creation of a high-quality calibration certificate

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.

To switch from the demo version to a licenced version, a USB dongle with a valid licence must be purchased.

The preinstalled demo version changes automatically to the selected version when plugging in the USB dongle and remains available as long as the USB dongle is connected to the PC.



- The user is guided through the calibration or logger process
- Management of calibration data and instrument data
- Intelligent preselection via SQL database
- Menu languages: German, English, Italian, French, Dutch, Polish, Portuguese, Romanian, Spanish, Swedish, Russian, Greek, Japanese, Chinese
More languages are due with software updates
- Customer-specific complete solutions possible
- Maximum degree of automation in connection with our CPx series

The supported instruments are continuously expanded and even customer-specific adaptations are possible.





For further information, see data sheet CT 95.10

There are two licences available for WIKA-Cal in conjunction with a precision pressure measuring instrument of the CPx series



The WIKA-Cal calibration software is available both for reading the logger data stored in the precision digital pressure gauge as well as for online calibrations together with a PC. The scope of software functions depends on the selected licence. Several licences can be combined on one USB dongle.

Cal-Template (demo version)	Cal-Template (light version)	Log-Template (full version)
Fully automatic calibration	Semi-automatic calibration	<ul style="list-style-type: none">■ Live measured value recording for a certain period of time with selectable interval, duration and start time■ Readout of the integrated data logger of the precision digital pressure gauge■ Creation of logger protocols with graphic and/or tabular representation of the measuring results in PDF format■ Possibility of exporting measuring results as CSV file
Limitation to two measuring points	No limitation of the measuring points approached	
<ul style="list-style-type: none">■ Creation of 3.1 inspection certificates per DIN EN 10204■ Calibration data can be exported to Excel® template or XML file■ Calibration of pressure measuring instruments		
Ordering information for your enquiry for a single licence:		
Is available for a cost-free download	WIKA-CAL-LZ-Z-Z	WIKA-CAL-ZZ-L-Z
	WIKA-CAL-LZ-L-Z	

Accessories and spare parts

Accessories for CPG1200 ¹⁾		Order code
Description		CPG-A-15-
	Alkaline batteries - Ex-approved 3 x 1.5 V AA	-A-
	Micro-USB type B to USB cable Length: approx. 2 m [6.6 ft]	-M-
	Power supply unit, DC 5 V with Micro-USB type B connector Black Power: 2,500 mA	-P-
	Bluetooth® USB stick	-U-
Ordering information for your enquiry:		
1. Order code: CPG-A-12 2. Option:		↓ []

1) The figures are an example and may change depending on the state of the art in design, material composition and representation

Accessories for CPG1500 ¹⁾		Order code
Description		CPG-A-15-
	Alkaline batteries - Ex-approved 3 x 1.5 V AA	-C-
	Bluetooth® USB stick	-2-
Ordering information for your enquiry:		
1. Order code: CPG-A-15 2. Option:		↓ []

1) The figures are an example and may change depending on the state of the art in design, material composition and representation

Scope of delivery for model CPG1200

- Digital pressure gauge, model CPG1200 incl. protective case cap
- 3 x 1.5 V AA alkaline batteries
- Micro-USB type B to USB cable approx. 2 m [6.6 ft]
- Power supply unit, DC 5 V with Micro-USB type B connector
- Adapter set, depending on pressure range
- Plastic case
- Test pump
- PTFE sealing tape
- Operating instructions



Digital pressure gauge, model CPG1200 with protective case cap and USB cable

Scope of delivery for model CPG1500

- Precision digital pressure gauge, model CPG1500 incl. protective case cap
- 3 x 1.5 V AA alkaline batteries
- Adapter set, depending on pressure range
- Plastic case
- Test pump
- PTFE sealing tape
- Operating instructions
- Calibration certificate



Precision digital pressure gauge model CPG1500 with protective case cap

Ordering information

DTK1X00 / Digital pressure gauge model / Data logger / Communication / Unit / Pressure type / Measuring range / Accuracy / Type of certificate / Special oil / Additional accessories / Instrument version

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We reserve the right to make modifications to the specifications and materials.
In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.