

# Hydraulic comparison test pump

## Model CPP4000-X

WIKA data sheet CT 91.09

### Applications

- Simple hydraulic test pressure generation on site, in the laboratory or in the workshop
- For the testing, adjustment and calibration of all types of pressure measuring instruments
- Hydraulic pressure generation up to 4,000 bar

### Special features

- Precisely adjustable dual-area spindle pump for filling, pressure generation and fine adjustment of pressure
- Proven technology of the model CPB3800HP dead-weight tester
- Compact dimensions
- Low weight

### Description

#### Application areas

Test pumps serve as pressure generators for the testing, adjustment and calibration of mechanical and electronic pressure measuring instruments through comparative measurements. These units can be used in the laboratory or workshop, or on site at the measuring point.

#### Easy operation

By connecting the test item and a sufficiently accurate reference pressure measuring instrument to the test pump, the same pressure will act on both measuring instruments. By comparison of the two measured values at any given pressure value, a check of the accuracy and/or adjustment of the pressure measuring instrument under test can be carried out.

#### Easy handling

The model CPP4000-X comparison test pump is a hydraulic comparison test pump for generating pressure up to 4,000 bar. It is technically identical to the instrument base of the model CPB3800HP dead-weight tester. The integrated dual-area spindle pump with switching valves enables rapid filling of the test system and smooth pressure generation.



Comparison test pump model CPP4000-X

At the same time, the precisely adjustable spindle pump also serves for fine pressure adjustment. A control schematic for pressure generation on the instrument base facilitates quick and easy operation.

The two test connections are equipped with G ½ female loose union connections with double ended metal cone. Two threaded adapters mounted on M16 x 1.5 male thread are included in the scope of delivery. Further thread adapters are available for the calibration of instruments with different connection threads.

#### Compact instrument design

The CPP4000-X is also particularly notable for its compact dimensions, which are not altered during operation, since the spindle runs within the pump body. With those dimensions, the exceptionally robust ABS plastic case and the low weight associated with these, the CPP4000-X is also well suited for on-site applications.

Specifications	Model CPP4000-X
Pressure range	0 ... 4,000 bar
Pressure transmission medium	Hydraulic fluid based on VG22 mineral oil or Sebacate oil (optional)
Reservoir	170 cm <sup>3</sup>
<b>Pressure connections</b>	
Test connection	2 x G ½ B female thread union nut with metal cone; equipped with two thread adapters M16 x 1.5 as standard
Distance between test connections	290 mm
<b>Piston of spindle pump</b>	
Piston diameter, low-pressure piston	31.2 mm
Piston diameter, high-pressure piston	6.35 mm
Displacement	approx. 5 cm <sup>3</sup>
<b>Material</b>	
Wetted parts	Austenitic stainless steel, high-tensile brass, nitrile rubber
<b>Permissible ambient conditions</b>	
Operating temperature	0 ... 40 °C
<b>Instrument base</b>	
Dimensions	401 x 397 x 155 mm (W x D x H), for details, see technical drawings
Weight	13.5 kg

1) Other pressure transmission media on request.

Storage case (option)	
Material	Wood
Dimensions	664 x 614 x 380 mm (W x D x H)
Weight	8.5 kg

CE conformity	
Pressure equipment directive	97/23/EC (PS > 1,000 bar; module A, pressure accessory)

Approvals and certificates, see website

## Recommended reference pressure measuring instruments:

### Precision hand-held pressure indicator model CPH6400

**Measuring ranges:** up to 6,000 bar

**Accuracy:** up to 0.025 % of span

For further specifications see data sheet CT 14.01



### ProcessCalibrator model CPH6000

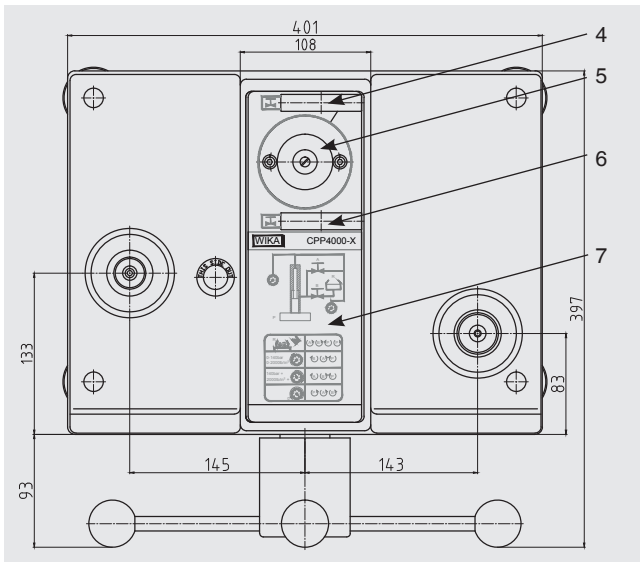
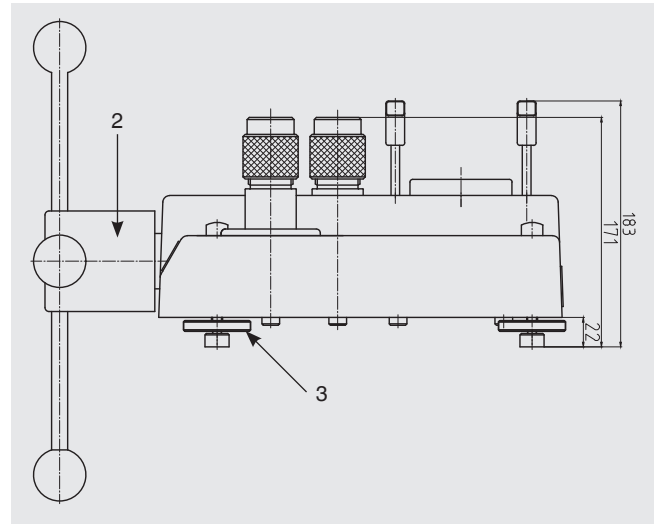
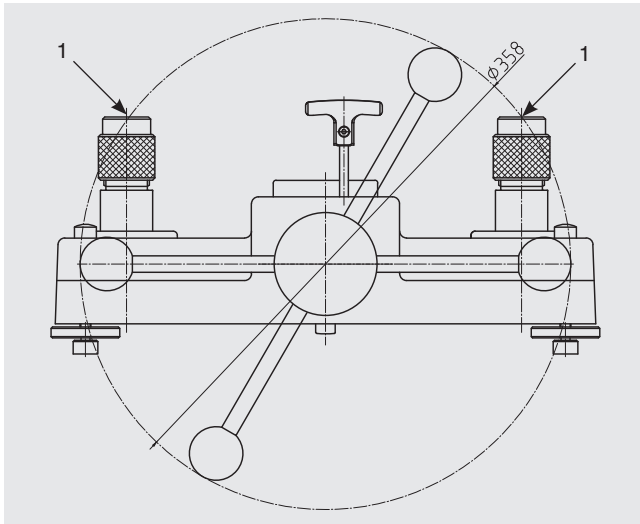
**Measuring ranges:** up to 8,000 bar

**Accuracy:** up to 0.025 % of span

For further specifications see data sheet CT 15.01

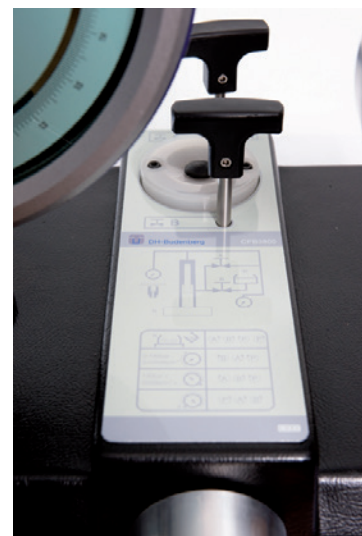
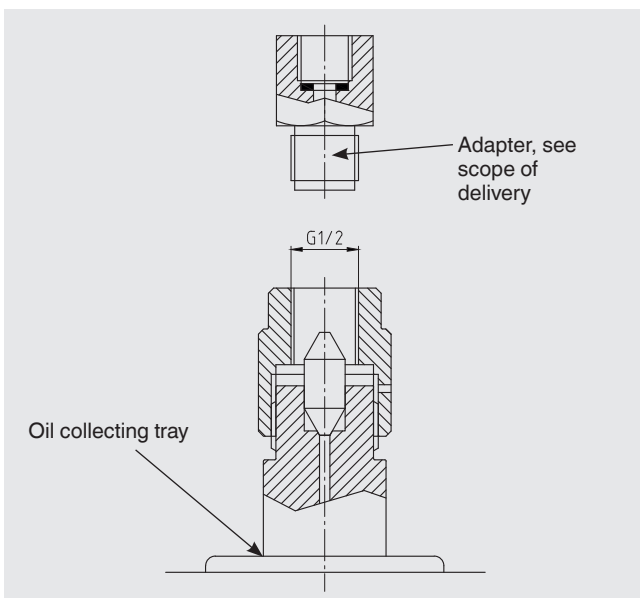


## Dimensions in mm



- (1) Test connection
- (2) Dual-area spindle pump with star handle
- (3) Rotatable feet
- (4) High-pressure shut-off valve
- (5) Reservoir with sealing plug
- (6) Low-pressure shut-off valve
- (7) Pressure generation control schematic

## Test connection



Control schematic on the CPP4000-X instrument base

## Scope of delivery

- Instrument base
- Dual-area spindle pump for filling, pressure generation and fine pressure adjustment
- Two test connections with G ½ female thread union nut with metal cone
- Two adapters for connection column, M16 x 1.5 male thread with sealing cone
- VG22 mineral oil (0.5 litre)
- Tool and maintenance set
- Operating instructions in German and English language

## Options

- Version for medium Sebacate oil

## Accessories

### Adapter

- Adapter for connection column, M16 x 1.5 male thread with sealing cone, mat.: hardened stainless steel
- Adapter for connection column, M20 x 1.5 male thread with sealing cone, mat.: hardened stainless steel
- Adapter for connection column, 9/16-18 UNF male thread with sealing cone, mat.: hardened stainless steel
- Adapter for connection column, G ½ female thread with O-ring, max. 1,600 bar, mat.: 1.4571

### Tools

- Sealing and maintenance set for instrument base
- Tool set consisting of open-ended spanner, replacement seals, pointer remover and pointer punch

### Liquids

- Hydraulic fluid based on VG22 mineral oil in plastic bottle, content 0.5 litre
- Sebacate oil in plastic bottle, content 0.5 litre

### Storage

- Storage case for CPP4000-X instrument base

## Ordering information

Model / Package / Medium / Additional adapter / Accessories / Additional order information



Calibration assembly CPP4000-X with test gauge as reference instrument and test item

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