

# Test pumps

## Model CPP 30 and HD XXXX

WIKA Data Sheet CT 91.01

### Applications

- Simple pressure generation for on site, laboratories or workshops
- For testing, adjusting and calibrating all types of pressure measuring instruments
- Pneumatic pressure generation from -950 mbar up to +35 bar
- Hydraulic pressure generation up to 5,000 bar



Test pump CPP 30

### Special Features

- Various models for different pressure ranges and media
- Ergonomic handling
- Precise pressure setting via a fine adjustment valve
- Compact size
- Low weight



Test pump HD 1000

## Description

### Areas of application

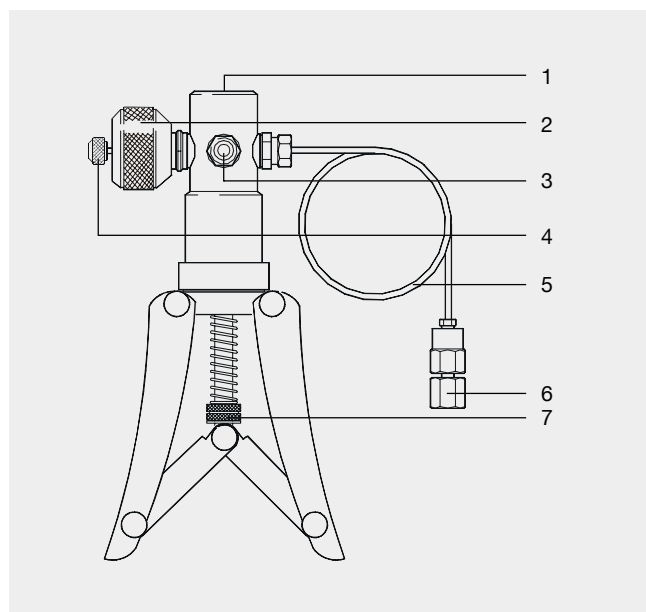
Test pumps are used for generating pressure for the testing, adjusting and calibrating of mechanical and electronic pressure measuring instruments by means of comparison measurements. These pressure tests can be carried out in laboratories, workshops or on site at the set measuring point.

### Easy functioning

When the device under test and a reference measuring instrument with an adequate accuracy are connected to the test pump, the same pressure will act on both measuring

instruments after actuating the pump. A calibration or an adjustment of the device under test can be carried out by comparing the two measured values at any pressure value. In order to enable an accurate generation of the measuring points the test pumps are provided with fine adjustment valves. In addition the pumps of the HD family feature a threaded spindle which only runs within the pump body. Thus there is no adverse bending moment acting on an outstanding spindle, and particularly for field use this has the advantage that the dimensions of these pumps will not change when the spindle is turned during operation.

## Test pump model CPP 30



### Model CPP 30 from -950 mbar ... +35 bar, pneumatic

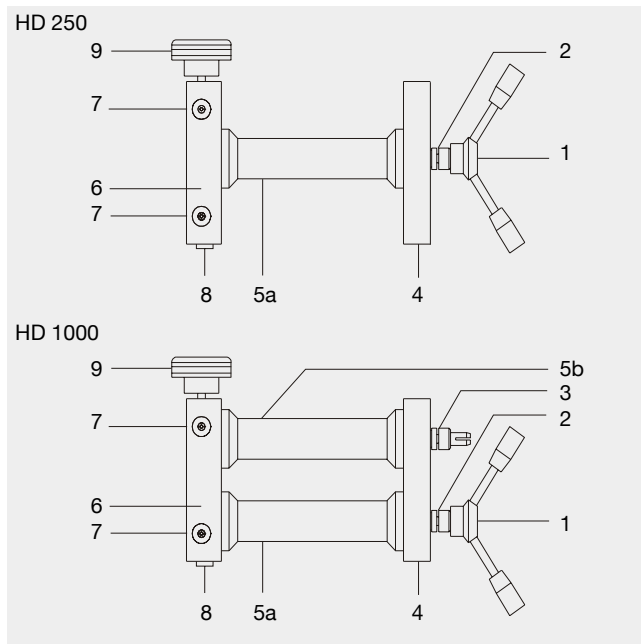
In spite of its very compact size this hand test pump enables a simple and accurate test pressure generation. Vacuum generation is possible as well by means of the change-over switch. This model also has a fine adjustment valve to enable a precise setting of the pressure. The reference instrument is directly fitted to the top of the pump, and the device under test is adapted via a connection tube (length 1 m) with G 1/4" female thread, which is included in the test kit.

- (1) Pressure connector for reference instrument, G 1/2" female rotating
- (2) Fine adjustment valve
- (3) Change-over pressure/vacuum generation
- (4) Pressure relief valve
- (5) Flexible tube for connection of device under test
- (6) Pressure connection for device under test, G 1/4" female thread
- (7) Adjustable knurled nut for the adjustment of the delivery rate of the pump

Specification		CPP 30
Pressure range	bar	-0.95 ... +35.0
Medium		Air
Pressure connections		G 1/2" female thread for reference instrument, tube with G 1" female rotating for device under test
Pressure fine adjustment		Fine adjustment valve
Overpressure protection		Adjustable by means of knurled nut
Material		brass and Chromium-plated anodised aluminium
Dimensions	mm	220 (L) x 105 (W) x 63 (T)
Weight	kg	0.51
Standard accessories		Test item connection tube 1 m
Order number		12139671

Accessories		CPP 30
Plastic case with foams for test pump		Order no.: 12139573
Dimensions in mm: (W/H/D) 395 x 295 x 106		
Set of adapters and set of seals for CPP 30 for test item connection G 1/4" male on G 1/8", G 3/8" and G 1/2" female		Order no.: 12139689
Set of adapters and set of seals for CPP 30 for test item connection G 1/4" male on M 12 x 1.5, M 20 x 1.5 and Minimess®		Order no.: 12140422
Set of adapters and set of seals for CPP 30 for test item connection G 1/4" male on 1/8" NPT, 1/4" NPT, 3/8" NPT and 1/2" NPT female		Order no.: 12139701
Connection adapter G 1/4" male on G 1/2" female, Material: stainless steel (CrNi)		Order no.: 0168483
Service kit for hand test pump CPP 30 with various O-rings and seals		Order no.: 12139786

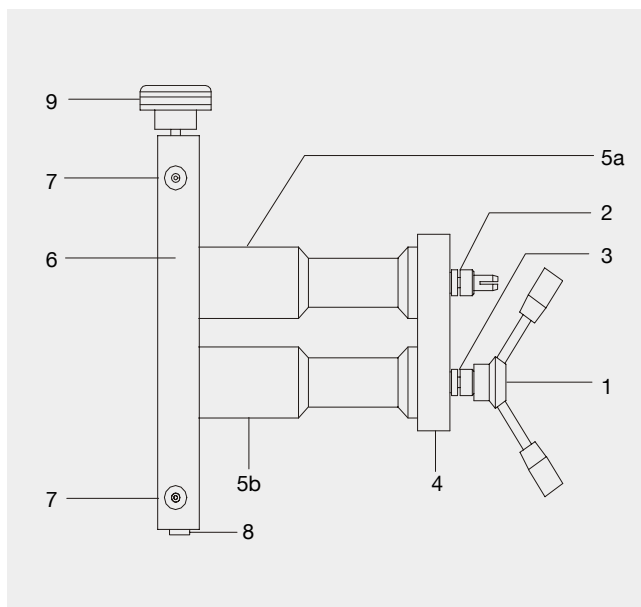
## Test pumps models HD XXXX



### Models HD 250 and HD 1000 up to 250 resp. 1,000 bar, hydraulic

Due to their size and threaded spindles running within the pump body the two hand spindle pump models are particularly suitable for field use. They have 3 connections with female thread G 1/2" for the device under test and the reference instrument (2 in the back flange at the top and 1 laterally). With model HD 1000 inlet pressures of up to 250 bar are possible in the low pressure cylinder, and a maximum pressure of 1,000 bar can be achieved in the high pressure cylinder after plugging the star handle into a different socket. Fine adjustment can be made with both models via a fine adjustment valve. For larger measuring instrument volumes medium filling reservoirs (300 cm<sup>3</sup>) are available for both models.

- |                            |                             |
|----------------------------|-----------------------------|
| (1) Star handle            | (5b) High pressure cylinder |
| (2) Low pressure spindle   | (6) Back flange             |
| (3) High pressure spindle  | (7) Test connections        |
| (4) Front flange           | (8) Lateral test connection |
| (5a) Low pressure cylinder | (9) Fine adjustment valve   |



### Models HD 3000 and HD 5000 up to 3,000 resp. 5,000 bar, hydraulic

Regarding their design and function these two hand spindle pump models are similar to model HD 1000. However, instead of a fine adjustment valve they have a shut-off valve in order to isolate the low pressure piston from the high pressure piston for inlet pressures up to 300 resp. 400 bar. They have 3 connections with female thread M 16 x 1.5 for the device under test and the reference instrument (2 in the back flange at the top and 1 laterally).

- |                            |   |
|----------------------------|---|
| (1) Star handle            | (5b) High pressure cylinder                 |
| (2) Low pressure spindle   | (6) Back flange                             |
| (3) High pressure spindle  | (7) Test connections                        |
| (4) Front flange           | (8) Lateral test connection                 |
| (5a) Low pressure cylinder | (9) Shut-off spindle for low pressure range |

Specifications		HD 250 HD 1000	HD 3000 HD 5000
Pressure range	bar	0 ... 250 (HD 250) 0 ... 1,000 (HD 1000)	0 ... 3,000 (HD 3000) 0 ... 5,000 (HD 5000)
Medium		Oil / water <sup>1), 2)</sup>	Oil / water <sup>1), 2)</sup>
Pressure connections		3x G ½" female thread	3x M 16 x 1.5 female thread
Fluid reservoir	cm <sup>3</sup>	See accessories	-
Pressure fine adjustment		Lateral fine adjustment valve	-
Low pressure piston dia.	mm	17	17
High pressure piston dia.	mm	8 (HD 1000)	6
Piston travel	mm	50	85 (low pressure piston) 60 (high pressure piston)
Material		Stainless steel	Stainless steel
Stationary fastening		4x M 6 x 10 female thread at bottom sides of flanges	4x M 6 x 10 female thread at bottom sides of flanges
Dimensions	mm	290 (L) x 190 (W) x 110 (H)	400 (L) x 370 (W) x 110 (H)
Weight	kg	7.8 (HD 250) 11.0 (HD 1000)	13.0 (HD 3000) 16.0 (HD 5000)
Order number		8404006 (HD 250) <sup>3)</sup> 8404086 (HD 1000) <sup>3)</sup>	12075175 (HD 3000) <sup>3)</sup> 12075418 (HD 5000) <sup>3)</sup>

<sup>1)</sup> Medium oil is standard, additional charge for medium water.

<sup>2)</sup> Other pressure transmitting media on request.

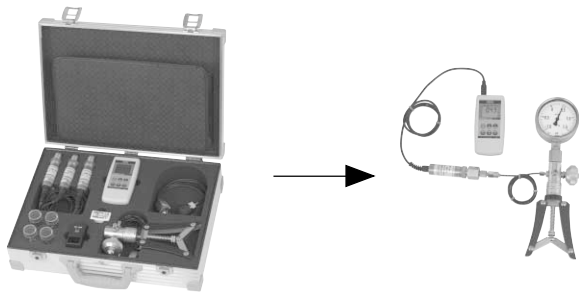
<sup>3)</sup> Order number applies to standard version for medium oil.

Accessories	HD 250 HD 1000	HD 3000 HD 5000
Hydraulic oil reservoir 300 cm <sup>3</sup> incl. shut-off valve	Order no.: 8391356 for HD 250 Order no.: 7500416 for HD 1000	-
connection tube, 1 m long with 2 x G ½" male thread	Order no.: 1416260 max. 400 bar Order no.: 2036851 max. 800 bar	-
connection tube, 1 m long with G ½" male thread and hand-operated quick-action knurled nut with threaded adapter G ½" female thread <sup>4)</sup>	Order no.: 2036878 max. 800 bar	-
Adapter with hand-operated quick-action knurled nut and threaded adapter G ½" female thread <sup>4)</sup>	Order no.: 1564846 max. 1,000 bar	-
Angle connection 90° with hand-operated quick-action knurled nut and threaded adapter G ½" female thread <sup>4)</sup>	Order no.: 1564838 max. 1,000 bar	-
Double nipple M 16 x 1.5 male thread device under test can be freely positioned	-	Order no.: 12077127
Quick-action sealing gasket for connec- tion G ½" of under test, max. 1,000 bar	Order no.: 1439146 (NBR/Ms) Order no.: 1439138 (NBR/VA)	-
Set of sealing gasket (set of wearing parts) for medium oil	Order no.: 2038092 for HD 250 Order no.: 2009510 for HD 1000	Order no.: on request
Burst disk	-	Order no.: 11023139

<sup>4)</sup> For other threaded adapters "see data sheet CT 91.23 and specify when ordering."

## Complete test & service systems with pressure generation

Test and calibration case with Hand-Held Pressure Measuring Instrument CPH 6200 and Test pump CPP 30 (-0.95 ... +35 bar) consisting of:

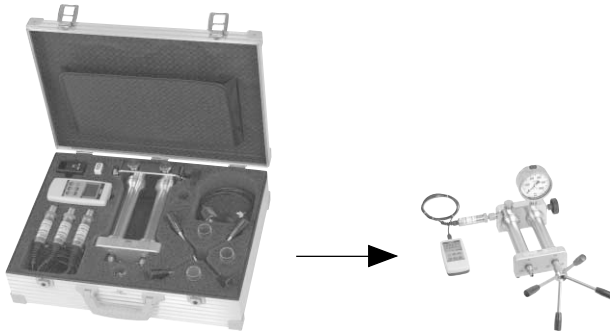


Hand-Held Pressure Measuring Instrument CPH 6200 - standard equipment II

- Transport case PCS-L with digital instrument CPH 6200
- Pneumatic hand pump CPP 30 (-0.95 ... +35 bar)
- Set of sealing gaskets
- 9V rechargeable battery
- Battery charger
- Recesses for 5 CPH pressure transmitters

Standard equipment II: Order no.: 7244882  
Further specifications: See data sheet CT 11.01.

Test and calibration case with Hand-Held Pressure Measuring Instrument CPH 6200 and Test pump HD 250 or HD 1000 (up to 250 resp. 1,000 bar) consisting of:



Hand-Held Pressure Measuring Instrument CPH 6200 - standard equipment III resp. IV

- Transport case PCS-H with digital instrument CPH 6200
- Hydraulic spindle pump HD 250 resp. HD 1000 (up to 250 resp. 1,000 bar)
- 1 m connection tube with G 1/2" pressure connection
- Set of sealing gaskets
- 9V rechargeable battery
- Battery charger
- Recesses for 5 CPH pressure transmitters

Standard equipment III (up to 250 bar): Order no.: 7244938  
Standard equipment IV (up to 1,000 bar): Order No.: 7244946  
Further technical data: See data sheet CT 11.01

For all standard equipment a **calibration software EasyCal light for CPH 6200** is also available. Order no.: 7662072  
Further specifications: See data sheet CT 95.01.

Ultra-High Pressure Calibration System with HD 5000 (up to 5,000 bar) consisting of:



Ultra-High Pressure Calibration System with pressure transmitter HP-1, Test pump HD 5000 and Calibration software EasyCal

- Hydraulic spindle pump HD 5000 (up to 5,000 bar)
- Ultra-high pressure transmitter model HP-1
- Calibration software EasyCal

Application:

- For the testing and calibrating of ultra-high pressure measuring instruments on site and in laboratories
- For testing device monitoring incl. creation of certificates and data archiving

## 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 calibrating 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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