

Hydraulic hand spindle pump

Models CPP1000-M, CPP1000-L

WIKA data sheet CT 91.05



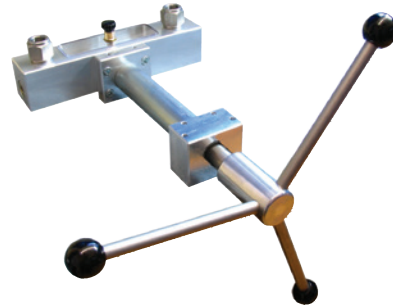
for further approvals see
page 2

Applications

- Calibration service companies and service industry
- Calibrations directly on site
- Maintenance and service facilities
- Hydraulic pressure generation up to 1,000 bar (14,500 psi)

Special features

- Ergonomic handling through the smooth-running, internally operating, precision spindle
- Integrated oil reservoir
- Removable star handle
- Freely rotating test connections (i.e. measuring instruments can be aligned)
- Precise setting of the test pressure through a fine adjustment valve (optional for model CPP1000-M)



Hand spindle pump, model CPP1000-M



Hand spindle pump, model CPP1000-L

Description

Application areas

Hand spindle pumps serve as pressure generators for the testing, adjustment and calibration of mechanical and electronic pressure measuring instruments through comparative measurements. These pressure tests may be carried out in the laboratory, workshop, or on site at the measuring point.

Easy handling

The hand spindle pumps models CPP1000-M and CPP1000-L have been designed primarily for the testing and calibration of pressure measuring instruments with small volumes. Test items and reference instruments with larger volumes should either be pre-filled outside the test

pump or also simply and conveniently filled directly from the hand spindle pump, using the shut-off valves available as an accessory for the test connections.

The CPP1000-L is the case version with a narrow rear flange, sealed reservoir and a fine adjustment valve built-in as standard.

For the CPP1000-M, the fine adjustment valve is available as an accessory and can be fitted as an option. The test connections are G ½ female. Corresponding thread adapters are available for the calibration of instruments with different connection threads.

Easy operation

If one connects the test item and a sufficiently accurate reference measuring instrument to the test pump, on actuating the pump, the same pressure will act on both 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.

Specifications

	CPP1000-M	CPP1000-L
Pressure range	0 ... 1,000 bar (0 ... 14,500 psi)	
Pressure transmission medium	Hydraulic fluid based on mineral oil or single distilled water ¹⁾ (Water-based hydraulic fluids are not suitable)	
Reservoir	110 cm ³	55 cm ³
Pressure connections		
Test connection	2 x G ½ female, freely rotating, with O-ring	
Distance between test connections	200 mm (7.9 in)	115 mm (4.5 in)
Piston of spindle pump		
Piston diameter	8 mm (0.3 in)	
Displacement per revolution	approx. 0.1 cm ³	
Overall displacement	approx. 3.9 cm ³	
Fine pressure adjustment	optional, see accessories	Fine adjustment valve on the side
Material		
Cylinder	Brass	
Piston	Stainless steel	
Rear flange	Aluminium	
Sealings	FKM, NBR; optional EPDM ²⁾	FKM, NBR
Instrument base		
Stationary mounting	2 x Ø 6.4 mm (0.3 in) through-bores in the front flange	
Dimensions (L x W x H)	420 x 280 x 103 mm (16.5 x 11.0 x 4.1 in)	420 x 240 x 103 mm (16.5 x 9.5 x 4.1 in)
Weight	6.3 kg (13.89 lbs.)	5.6 kg (12.35 lbs.)

1) Other pressure transmission media on request.

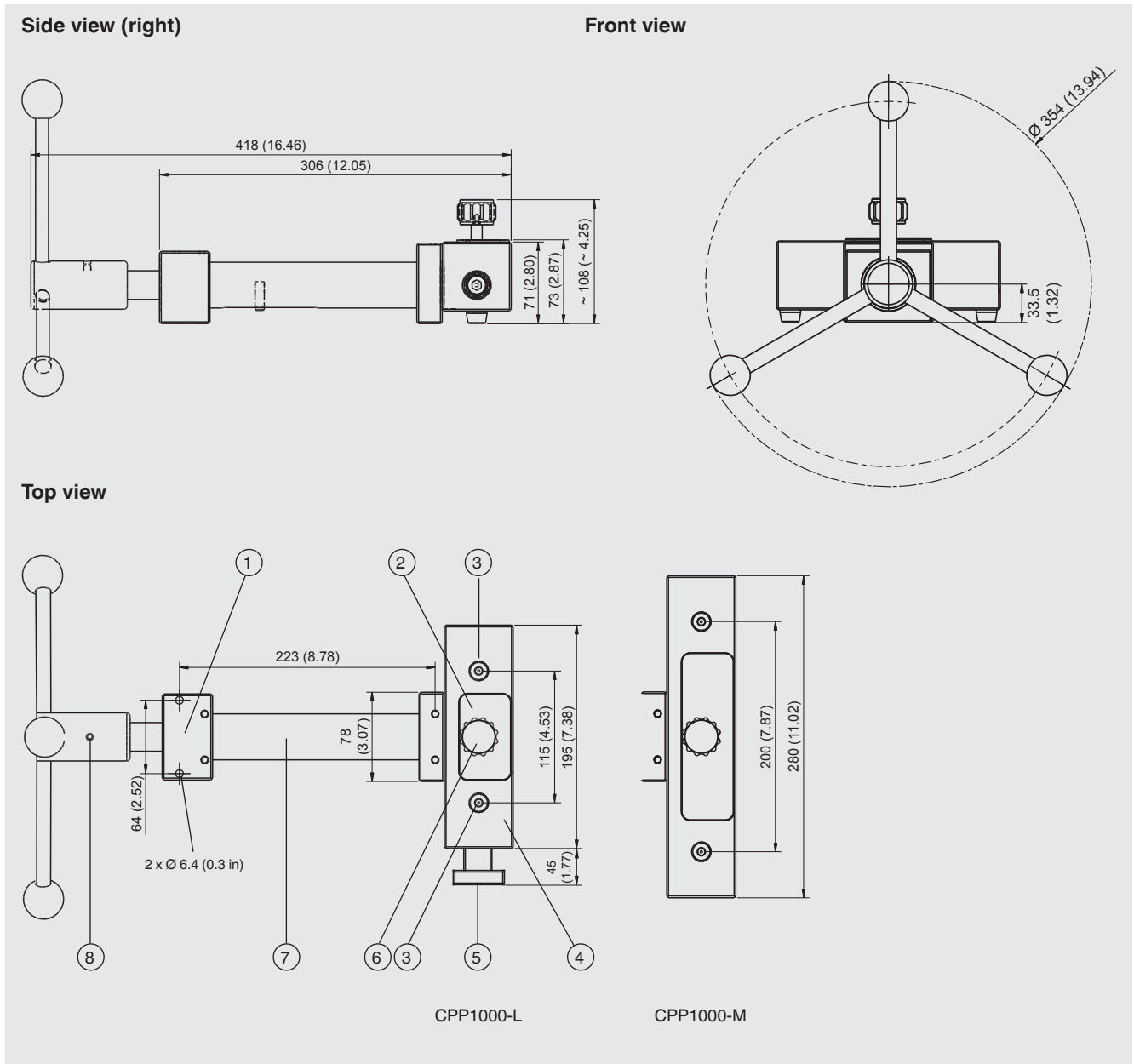
2) Using the EPDM variant (for aggressive media), Skydrol® or brake fluid is permissible as pressure transmission medium.

Approvals

Logo	Description	Country
	EAC Machinery directive	Eurasian Economic Community
-	MTSCHS Permission for commissioning	Kazakhstan

Approvals and certificates, see website

Dimensions in mm (in)



- ① Front flange with 2 fixing bores, $\varnothing 6.4$ mm (0.3 in)
- ② Medium reservoir
- ③ Test connections, G $\frac{1}{2}$ female, freely rotating, with O-ring
- ④ Rear flange
- ⑤ Fine adjustment valve (optional for CPP1000-M)
- ⑥ Shut-off valve for reservoir
- ⑦ Cylinder with spindle and piston
- ⑧ Star handle with spring-loaded thrust pad

Recommended reference pressure measuring instruments

Precision digital pressure gauge model CPG1500

Measuring ranges: to 10,000 bar (150,000 psi)
Accuracy: to 0.025 % of span

For further specifications see data sheet CT 10.51



Hand-held pressure indicator model CPH6300

Measuring ranges: to 1,000 bar (14,500 psi)
Accuracy: to 0.1 % of span

For further specifications see data sheet CT 12.01



Precision hand-held pressure indicator model CPH6400

Measuring ranges: to 7,000 bar (101,500 psi)
Accuracy: to 0.025 % of span

For further specifications see data sheet CT 14.01



Process calibrator model CPH6000

Measuring ranges: to 6,000 bar (87,000 psi)
Accuracy: to 0.025 % of span

For further specifications see data sheet CT 15.01



Calibration software

WIKA-Cal calibration software for creating calibration certificates or logger protocols

For specifications see data sheet CT 95.10



Similar products

Hydraulic hand test pump models CPP700-H and CPP1000-H

Pressure range: to 1,000 bar (14,500 psi)
Transmission medium: Oil or water

Further specifications see data sheet CT 91.07



Hydraulic comparison test pump models CPP1000-X and CPP1600-X

Pressure range: to 1,600 bar (23,200 psi)
Transmission medium: Oil or water

For further specifications see data sheet CT 91.12



Complete test and service cases with pressure generation

Calibration case with model CPH6000 process calibrator and model CPP1000-L hand spindle pump for pressures up to 1,000 bar (14,500 psi) consisting of:

- Transport case with model CPH6000 process calibrator
- Hydraulic hand spindle pump model CPP1000-L up to 1,000 bar (14,500 psi)
- Sensor cable for external operation of sensor
- Test cable set with connection terminals
- Charger
- Interface cable
- Sealing set
- Spaces for several CPT6000 reference pressure sensors

For further specifications see data sheet CT 15.01.



Basic version incl. hydraulic pressure generation

Accessories

Accessories for CPP1000-M		Order code
Description		CPP-A-6
	Hydraulic fluid based on VG22 mineral oil in plastic bottle, content 1 litre	-60-
	Shut-off valve standard version; (recommended for connected volumes > 4 cm ³)	-61-
	EPDM version; (recommended for connected volumes > 4 cm ³)	-62-
	Fine adjustment valve standard version	-63-
	EPDM version	-64-
	Blind plug G 1/2 male, mat.: Brass	-65-
	O-ring set standard version consisting of 10 seals for the test connections, mat.: FKM/FPM	-66-
	consisting of 10 seals for the test connections, mat.: EPDM	-67-
	Maintenance set standard version for hydraulic hand spindle pumps	-68-
	EPDM version for hydraulic hand spindle pumps	-69-
	Connection adapter G 1/2 male to G 1/8 female, max. 250 bar (3,600 psi), mat.: Brass	-6A-
	G 1/2 male to G 1/4 female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-6B-
	G 1/2 male to G 3/8 female, max. 600 bar (8,700 psi), mat.: Brass	-6C-
	G 1/2 male to M20 x 1.5 female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-6D-
	G 1/2 male to 1/4 NPT female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-6E-
	G 1/2 male to 1/2 NPT female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-6F-
	Angle connection 90° for test items with back mounting connection, NBR sealing	-6G-
	Replacement tank cover incl. shut-off valve, standard version	-6H-
	incl. shut-off valve, EPDM version	-6I-
Ordering information for your enquiry:		
1. Order code: CPP-A-6		↓
2. Option:		[]

Accessories for CPP1000-L		Order code
Description		CPP-A-7
	Hydraulic fluid based on VG22 mineral oil in plastic bottle, content 1 litre	-70-
	Shut-off valve recommended for connected volumes > 4 cm ³	-71-
	Fine adjustment valve	-72-
	Blind plug G ½ male, mat.: Brass	-73-
	O-ring set consisting of 10 seals for the test connections, mat.: FKM/FPM	-74-
	Maintenance set for hydraulic hand spindle pumps	-75-
	Connection adapter G ½ male to G ⅛ female, max. 250 bar (3,600 psi), mat.: Brass	-76-
	G ½ male to G ¼ female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-77-
	G ½ male to G ⅜ female, max. 600 bar (8,700 psi), mat.: Brass	-78-
	G ½ male to M20 x 1.5 female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-79-
	G ½ male to ¼ NPT female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-7A-
	G ½ male to ½ NPT female, max. 1,000 bar (14,500 psi), mat.: 1.4571	-7B-
	Angle connection 90° for test items with back mounting connection, NBR sealing	-7C-
	Replacement tank cover incl. shut-off valve	-7D-
	Replacement seal for tank cover	-7E-
Ordering information for your enquiry:		
1. Order code: CPP-A-7 2. Option:		↓ []

Hand spindle pump model CPP1000-M

Scope of delivery

- Hand spindle pump for filling, pressure generation and fine pressure adjustment ¹⁾
- Star handle
- Two test connections with G ½ female, loose union connection, with O-ring
- Operating instructions

1) Hand spindle pump is delivered unfilled

Hand spindle pump model CPP1000-L

Scope of delivery

- Hand spindle pump for filling, pressure generation and fine pressure adjustment ¹⁾
- Star handle
- Two test connections with G ½ female thread, loose union connection, with O-ring
- Fine adjustment valve
- Operating instructions

Ordering information

CPP1000-M / Medium / Special oil / Fine adjustment valve / Shut-off valve / Valve assembly / Additional ordering information

CPP1000-L / Special oil / Shut-off valve / Valve assembly / Additional ordering information

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