

# Pneumatic comparison test pump

## To 140 bar [2,000 psi]

### Model CPP140-M

WIKA data sheet CT 91.14

#### Applications

- Calibration service companies and service industry
- Calibrations directly on-site
- Maintenance and service facilities
- Pressure test

#### Special features

- Simple handling
- Pneumatic pressure generation to 140 bar [2,000 psi]
- Knurled nut for easy and optimal positioning of the measuring instruments
- Precise setting of the test pressure through a fine adjustment valve
- Pressure connections with quick-release connector and knurled nut



Comparison test pump, model CPP140-M

#### Description

##### Application areas

Comparison test pumps serve as pressure generators for the testing, adjustment and calibration of mechanical and electronic pressure measuring instruments through comparative measurements. These pressure tests can take place in the laboratory or workshop, or on-site at the measuring location.

##### Easy functionality

If one connects the test item and a sufficiently accurate reference pressure measuring instrument to the hand test pump, on actuating the 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 test item can be carried out. In order to approach the measuring points exactly, the comparison test pump features a fine adjustment valve, as well as a shut-off valve for leakage-free testing.

##### Easy handling

With the model CPP140-M comparison test pump it is possible to generate pneumatic test pressures up to 140 bar [2,000 psi] very simply and precisely and without external pressure supply. The comparison test pump can also be used for vacuum generation to -950 mbar [-14 psi]. The maximum pressure or vacuum achievable is dependent upon the connected test volume.

The reference pressure measuring instrument, as well as the instrument to be tested, can be mounted on the test connections at the side. Both test connections feature a freely rotating knurled nut with an M28 x 1.5 female thread. Via the freely rotating knurled nut, the instruments can be aligned. The scope of delivery includes two suitable adapters in the selectable sizes G 1/2, female thread, G 1/4, female thread, 1/2 NPT, female thread or 1/4 NPT, female thread.

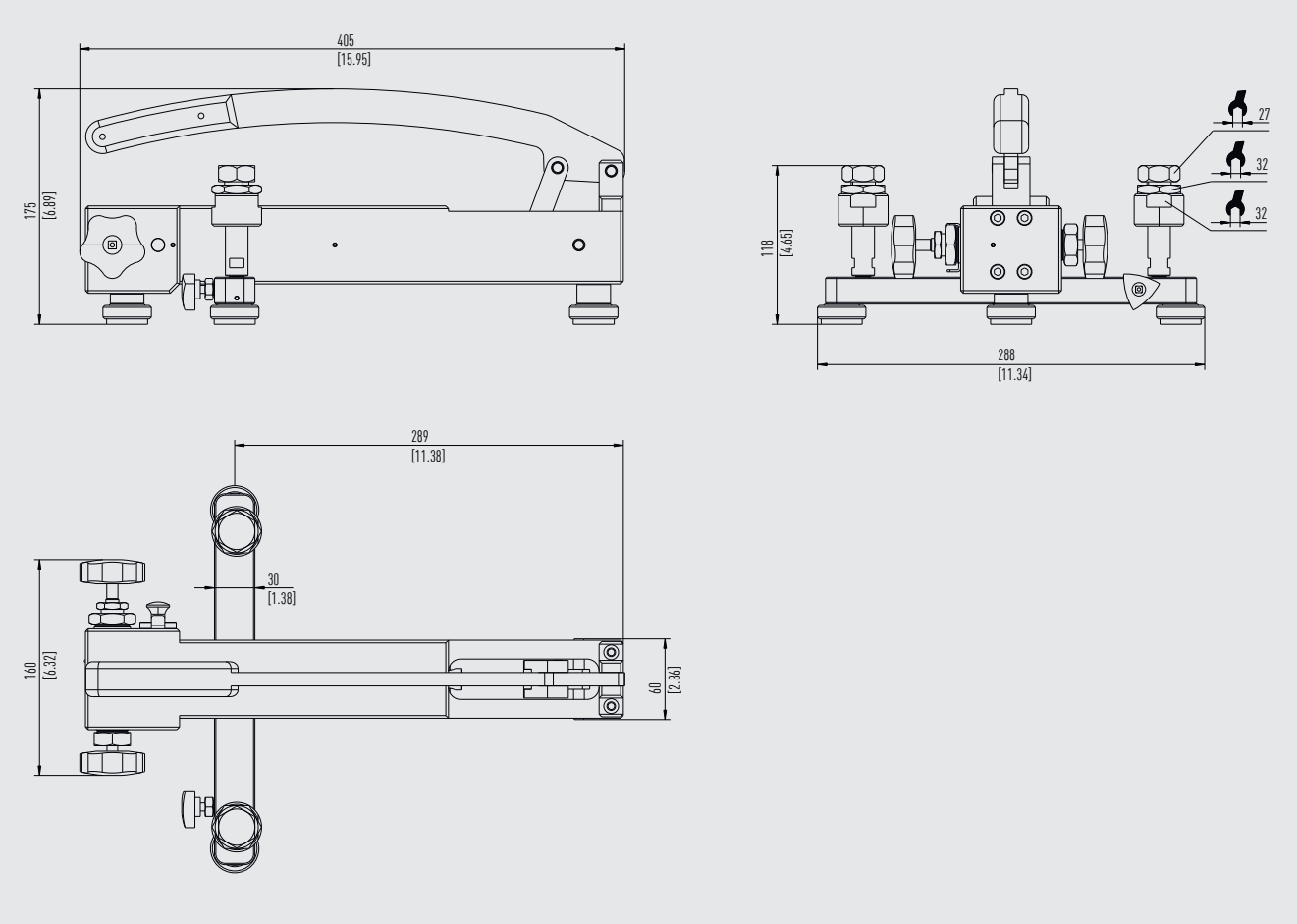
## Specifications

Basic information	
Pressure range	-0.95 ... +140 bar [-14 ... +2,000 psi]
Pressure transmission medium	Air
Pressure connections	
Test connection	2 x quick-release connectors M28 x 1.5, female thread, freely rotating with O-ring
Adapters for test connection	<ul style="list-style-type: none"><li>■ G ½, female thread</li><li>■ G ¼, female thread</li><li>■ ½ NPT, female thread</li><li>■ ¼ NPT, female thread</li></ul>
Test pressure setting	Fine adjustment valve
Resolution	1 mbar

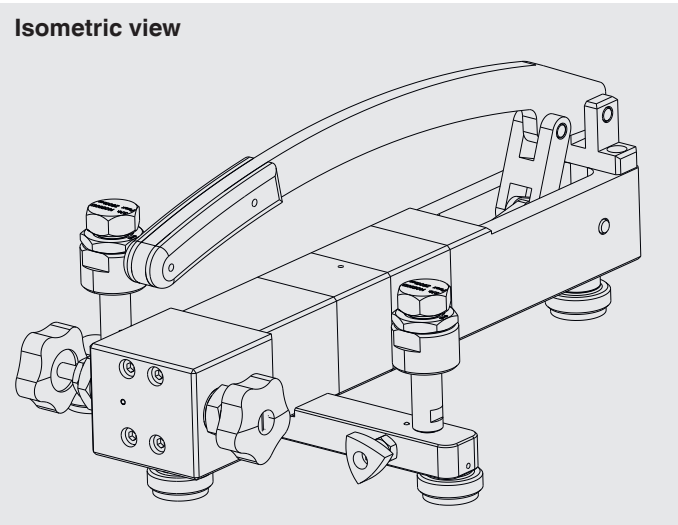
Comparison test pump	
Material	<ul style="list-style-type: none"><li>■ Aluminium alloy</li><li>■ Copper</li><li>■ Stainless steel</li></ul>
Dimensions (L x W x H)	→ See dimensions in mm [in]
Weight	Approx. 6.5 kg [14.3 lb]

Operating conditions	
Temperature of use / Operating temperature	18 ... 28 °C [64 ... 82 °F]
Storage temperature range	-10 ... +50 °C [14 ... 122 °F]
Permissible media	Air

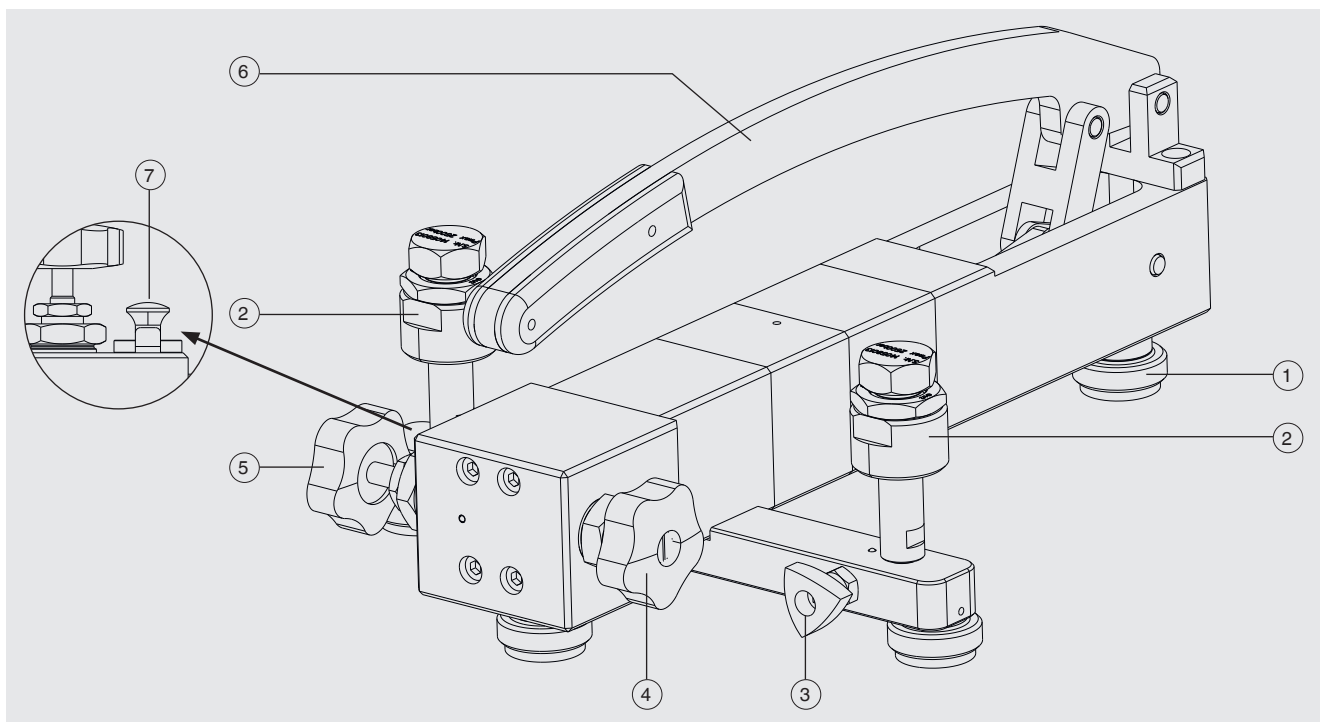
**Dimensions in mm [in]**



**Isometric view**



## Controls



- ① Levelling feet
- ② Connection for test item or reference pressure measuring instrument
- ③ Pressure relief valve
- ④ Fine adjustment valve
- ⑤ Shut-off valve
- ⑥ Pump handle
- ⑦ Vacuum/Overpressure switch

## Recommended reference pressure measuring instruments



### Precision digital pressure gauge model CPG1500

Measuring ranges: 0 ... 10,000 bar [0 ... 150,000 psi]  
Accuracy: down to 0.025 % FS

→ For further specifications, see data sheet CT 10.51



### Hand-held pressure indicator model CPH6200

Measuring ranges: 0 ... 1,000 bar [0 ... 14,500 psi]  
Accuracy: down to 0.1 % FS

→ For further specifications, see data sheet CT 11.01



### Hand-held pressure indicator model CPH6300

Measuring ranges: 0 ... 1,000 bar [0 ... 14,500 psi]  
Accuracy: down to 0.1 % FS

→ For further specifications, see data sheet CT 12.01

## Calibration software



### WIKA-Cal calibration software

For creating calibration certificates or logger protocols  
Only in combination with a reference pressure measuring instrument

→ For further specifications, see data sheet CT 95.10






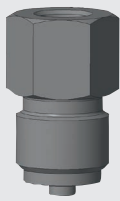
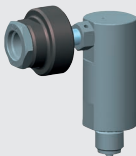
## Calibration case



### Consisting of:

- Plastic service case with foam insert
- Comparison test pump model CPP140-M
- Standard accessories see scope of delivery
- Reference pressure measuring instrument, optionally with one CPG1500 and/or a CPH6300/CPH62x0, with up to three model CPT62x0 reference sensors

## Accessories and spare parts

Description <sup>1)</sup>	Order code	
CPP-A-G		
	<b>Hydraulic fluid</b> Based on VG22 mineral oil in plastic bottle Content 1 litre	-G0-
	<b>Shut-off valve</b> Standard version Recommended for connected volumes > 4 cm <sup>3</sup>	-G1-
	<b>Fine adjustment valve</b> Standard version	-G3-
	<b>Blind plug</b> G 1/2, male thread Material: brass	-G5-
	<b>O-ring set</b> Standard version Consisting of 10 x O-ring 14 x 3.1 mm for the test connections Material: FKM/FPM	-G6-
	<b>Connection adapters</b> G 1/2, male thread to G 1/8, female thread, max. 250 bar [3,600 psi] Material: brass  G 1/2, male thread to G 1/4, female thread, max. 1,000 bar [14,500 psi] Material: 1.4571  G 1/2, male thread to G 3/8, female thread, max. 600 bar [8,700 psi] Material: brass  G 1/2, male thread to M20 x 1.5, female thread, max. 1,000 bar [14,500 psi] Material: 1.4571  G 1/2, male thread to 1/4 NPT, female thread, max. 1,000 bar [14,500 psi] Material: 1.4571  G 1/2, male thread to 1/2 NPT, female thread, max. 1,000 bar [14,500 psi] Material: 1.4571	-GA-  -GB-  -GC-  -GD-  -GE-  -GF-
	<b>90° angle connector</b> For test items with back mount connection Incl. NBR seal	-GG-
<b>Ordering information for your enquiry:</b>		
	<b>1. Order code: CPP-A-G</b> <b>2. Option:</b>	↓ [   ]

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

- Comparison test pump model CPP140-M
- 2 x M20 x 1.5 male thread blind plugs
- Connection adapters, depending on the configuration:  
2 x M28.5 x 1.5, male thread to G ½, G¼, ½ NPT or ¼ NPT, female thread
- O-ring set consisting of 10 x O-ring 14 x 3.1 mm
- Operating instructions

## Ordering information

Model / Case / Threaded insert for test connection / Angle connector / Assembly of measuring case / Further approvals / Additional ordering information

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