



# User Manual

PCE-MTS50 Test Stand



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: [www.pce-instruments.com](http://www.pce-instruments.com)

Last change: 18 November 2019  
v1.0



## Contents

<b>1</b>	<b>Safety notes</b> .....	<b>1</b>
<b>2</b>	<b>Introduction</b> .....	<b>2</b>
<b>3</b>	<b>Technical specifications</b> .....	<b>2</b>
<b>4</b>	<b>Delivery scope</b> .....	<b>2</b>
<b>5</b>	<b>Device description</b> .....	<b>3</b>
<b>6</b>	<b>Installation and operation</b> .....	<b>4</b>
6.1	Manual testing.....	4
6.2	Automatic testing.....	4
6.3	Setting the test speed.....	4
6.4	Limiting screws.....	4
<b>7</b>	<b>Contact</b> .....	<b>5</b>
<b>8</b>	<b>Disposal</b> .....	<b>5</b>

## 1 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, ...) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.



## 2 Introduction

The motorised force test stand PCE-MTS50 can be used for vertical compressive and tensile force tests. All force gauges from PCE Instruments can be mounted to the force test stand. An adaptor plate may be required to do so. The maximum load is 500 N. Using the motorised test stand allows the user to align the test object precisely with the measuring cell so that the force can be applied accurately. The automatic test mode makes automatic measurements up to a certain point possible with the test stand. A manual force test mode allows forces to be applied accurately.

## 3 Technical specifications

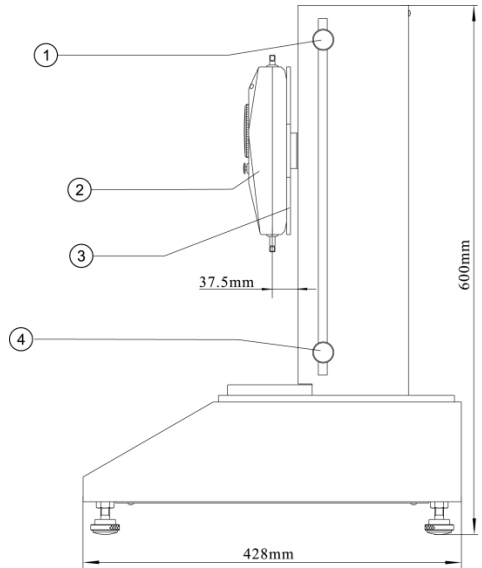
Force measuring range	Max. 500 N / 50 kg
Traverse	Max. 315 mm / 12.4 in
Feed speed	50 ... 250 mm / 2 x 9.8 in, min up to 200 N 250 ... 500 mm / 9.8 x 19.7 in, min up to 500 N
Power supply	110V or 220V AC
Current consumption	1.5 A
Optimal operating conditions	20°C / 68 °F, ≤ 80 % relative humidity (RH)
Dimensions	Approx. 430 x 240 x 570 mm / 16.9 x 9.4 x 22.4
Weight	Approx. 24.2 kg / 54 lb

## 4 Delivery scope

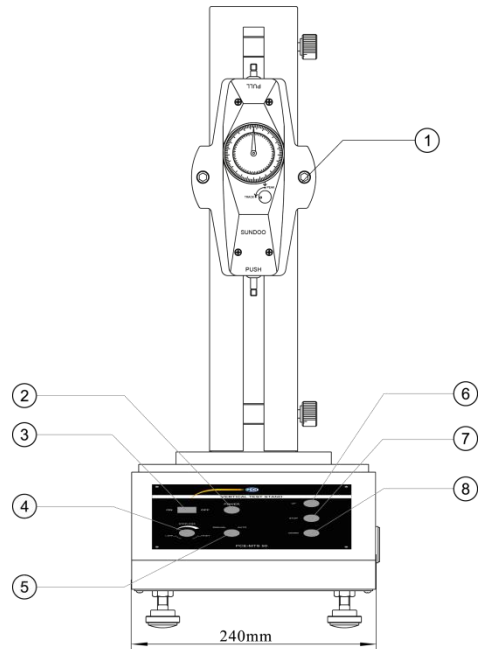
- PCE-MTS50
- User manual

## 5 Device description

1. Upper limiting screw
2. Meter (not included)
3. Mounting plate for meters
4. Lower limiting screw



1. M6 thread
2. Power lamp
3. On/off switch
4. Speed control
5. Auto/manual switch
6. Up key
7. Stop key
8. Down key

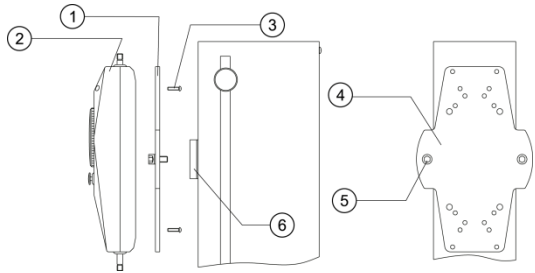


## 6 Installation and operation

### Installation of the test stand

To mount a meter onto the PCE-MTS50, screw it into the threads on the mounting plate. Make sure the screws are tightened properly.

1. Mounting plate for meters
2. Force gauge (not included)
3. M3 screw
4. Rear side
5. M6 thread
6. Moving block



Installation of the PCE-MTS50

Front view of mounting plate

#### 6.1 Manual testing

To control the traverse distance manually, follow these steps:

- A. Select manual mode by turning the rotary switch for manual/auto selection.
- B. Press and hold the up or down key to move the moving block up or down.
- C. The device will stop moving when you release the key.

#### 6.2 Automatic testing

- A. Select auto mode by turning the rotary switch for manual/auto selection.
- B. Press the up or down key to move the moving block up or down.
- C. To stop the device, press the stop key.

#### 6.3 Setting the test speed

The test speed can be set before and during the test. Turn the speed control to set the speed as required.

#### 6.4 Limiting screws

The limiting screws make sure that the device does not move too far and automatically cuts off the traverse distance in manual as well as in automatic mode. Therefore, these limiting screws must not be removed. However, they can be arranged differently, depending on your application. The device must be turned off to loosen and rearrange the limiting screws.

## 7 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

## 8 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.





## PCE Instruments contact information

### Germany

PCE Deutschland GmbH  
Im Langel 4  
D-59872 Meschede  
Deutschland  
Tel.: +49 (0) 2903 976 99 0  
Fax: +49 (0) 2903 976 99 29  
info@pce-instruments.com  
www.pce-instruments.com/deutsch

### Germany

PCE Produktions- und  
Entwicklungsgesellschaft mbH  
Im Langel 26  
D-59872 Meschede  
Deutschland  
Tel.: +49 (0) 2903 976 99 471  
Fax: +49 (0) 2903 976 99 9971  
info@pce-instruments.com  
www.pce-instruments.com/deutsch

### The Netherlands

PCE Brookhuis B.V.  
Institutenweg 15  
7521 PH Enschede  
Nederland  
Telefoon: +31 (0)53 737 01 92  
info@pcebenelux.nl  
www.pce-instruments.com/dutch

### United States of America

PCE Americas Inc.  
711 Commerce Way suite 8  
Jupiter / Palm Beach  
33458 FL  
USA  
Tel: +1 (561) 320-9162  
Fax: +1 (561) 320-9176  
info@pce-americas.com  
www.pce-instruments.com/us

### France

PCE Instruments France EURL  
23, rue de Strasbourg  
67250 Soultz-Sous-Forets  
France  
Téléphone: +33 (0) 972 3537 17  
Numéro de fax: +33 (0) 972 3537 18  
info@pce-france.fr  
www.pce-instruments.com/french

### United Kingdom

PCE Instruments UK Ltd  
Unit 11 Southpoint Business Park  
Ensign Way, Southampton  
Hampshire  
United Kingdom, SO31 4RF  
Tel: +44 (0) 2380 98703 0  
Fax: +44 (0) 2380 98703 9  
info@pce-instruments.co.uk  
www.pce-instruments.com/english

### China

PCE (Beijing) Technology Co., Limited  
1519 Room, 6 Building  
Zhong Ang Times Plaza  
No. 9 Mentougou Road, Tou Gou District  
102300 Beijing, China  
Tel: +86 (10) 8893 9660  
info@pce-instruments.cn  
www.pce-instruments.cn

### Turkey

PCE Teknik Cihazları Ltd.Şti.  
Halkalı Merkez Mah.  
Pehlivan Sok. No.6/C  
34303 Küçükçekmece - İstanbul  
Türkiye  
Tel: 0212 471 11 47  
Faks: 0212 705 53 93  
info@pce- cihazlari.com.tr  
www.pce-instruments.com/turkish

### Spain

PCE Ibérica S.L.  
Calle Mayor, 53  
02500 Tobarra (Albacete)  
España  
Tel. : +34 967 543 548  
Fax: +34 967 543 542  
info@pce-iberica.es  
www.pce-instruments.com/espanol

### Italy

PCE Italia s.r.l.  
Via Pesciatina 878 / B-Interno 6  
55010 Loc. Gragnano  
Capannori (Lucca)  
Italia  
Telefono: +39 0583 975 114  
Fax: +39 0583 974 824  
info@pce-italia.it  
www.pce-instruments.com/italiano

### Hong Kong

PCE Instruments HK Ltd.  
Unit J, 21/F., COS Centre  
56 Tsun Yip Street  
Kwun Tong  
Kowloon, Hong Kong  
Tel: +852-301-84912  
jyi@pce-instruments.com  
www.pce-instruments.cn