Testing Device for Wheel Balancing Machines

Operating Instructions

900 008 148

EN

GEB 001 030

Kokenhorststraße 4 • D-30938 Burgwedel • Tel. 05139/8996-0 • www.haweka.com • info@haweka.com

Table of contents:

This operating instruction is subject to technical alterations.
6.2 version
Testing Device for Wheel Balancers
Illustrations: HAWEKA GmbH / 30938 Burgwedel
Issue: 01/2026

1. Product Description

This testing device is used for fast and accurate checking of all stationary wheel balancers by its user. Anyone can check easily the function and the display accuracy of his balancer.
Now an adjustment can be made even faster than previously as with this method it is not necessary to obtain a „zero-balanced wheel" beforehand.
This testing device corresponds to a "zero-balanced wheel" of 6J x 15.
The after-sales technician only has to be called if the balancer really does have a malfunction.

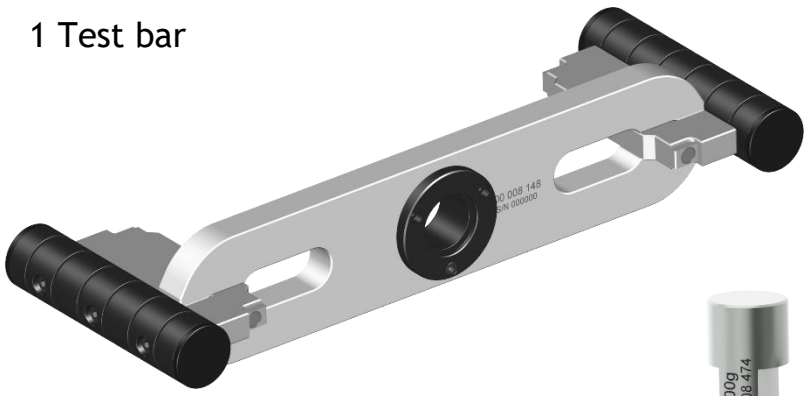
The testing device is a precision tool that has to be treated and maintained carefully. After use it has to be stored in the case in order to protect it from mechanic damages.

2. General Arrangement of the Testing Device

2.1 Testing Device 900 008 148

Content:

1 Test bar



(Ill.1)

1 Test weight	100g
1 Test weight	60g
1 Test weight	50g
1 Test weight	40g
1 Test weight	25g

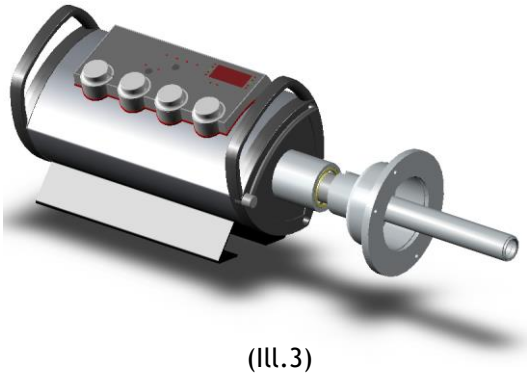
(Ill.2)

Incl. storage case (without illustration)

3. Preparation for Measurement

The basic centering device including threaded shaft has to be mounted on the balancer.

The shaft diameter is 40 mm!

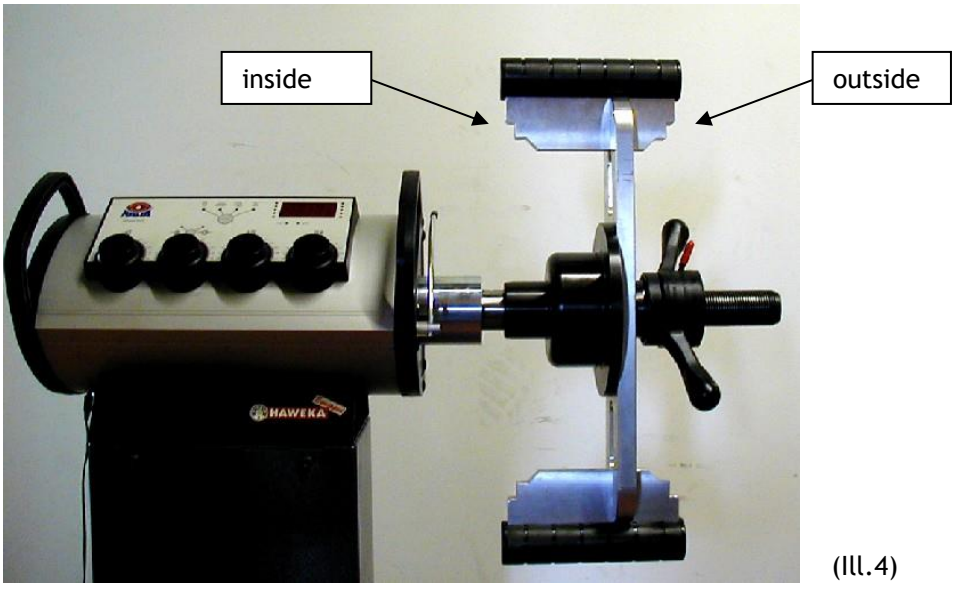


(Ill.3)

Note

The contact surfaces of the mid centering device (backplate) as well as of the testing device must be thoroughly cleaned. Already the slightest rest of dirt or rust can result in major test errors.

The test bar is slid onto the balancer shaft and then tightened with a wing nut or quick nut (Ill. 4).



(Ill.4)

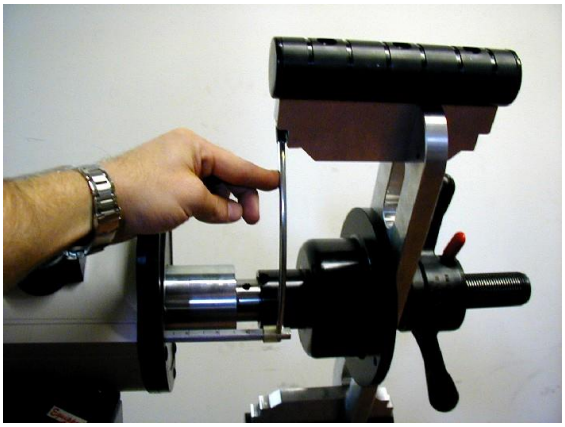
3.1 Balancer Setting

Firstly the distance between the testing device and the balancer must be set.

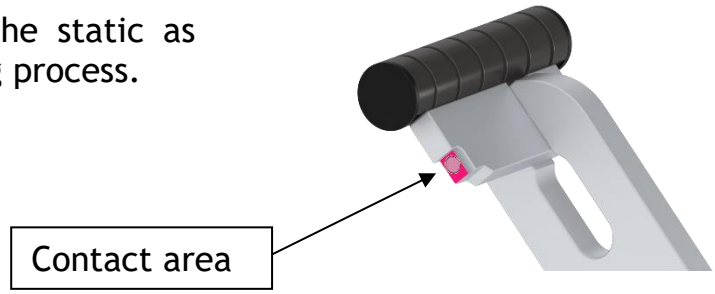
Measure with the distance meter to the magnetic weight bearing surface (Ill. 5).

Insert 15“ as diameter and 6“ as width or use the key arms and the lateral contact surface to insert these data.

The testing mode includes the static as well as the dynamic balancing process.



(Ill.5)



Attention

On balancers with suppression of the residual value, this has to be switched off so that the balancer also shows smaller unbalances. E.g. a real unbalance of 3g would be shown as 5g.

4. Measurement

First Test Run / Measuring Accuracy:

The first test run is executed without test weight. Readings of 0 – 5g are acceptable for the measuring accuracy of the wheel balancer

Second Test Run / Remount Errors:

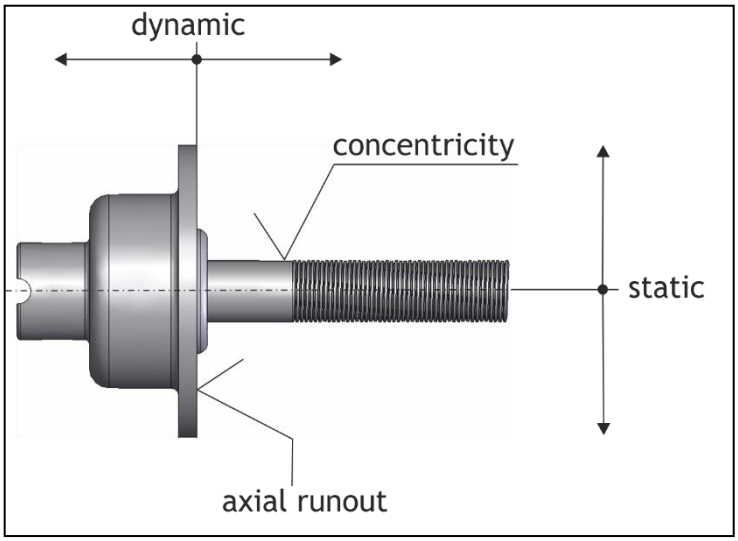
The second test run is to check for remount errors without test weights. That means after having loosened the wing or quick nut, the testing device is turned by 180° on the balancer shaft, fixed again and then the test run is started. During the turning of the testing device, the back plate of the mid centering device (pot and shaft) has to be fixed, i.e. it must not turn at all. Also now results of 0 – 5g are acceptable.

Note

Should the display show more than 5g unbalance in one of these test runs, recheck the flange and balancer shaft for cleanness and wear.

4.1 Error Analysis

If the display still shows an unbalance, run the balancer once again without the testing device. If the display is ok then, either your mid centering device has too much run out or the testing device has been damaged.



4.2 Preparations the third Test Run

A minimum unbalance of under 5g can be compensated by a calibration run of the wheel balancer. Should it be necessary to use a wheel for the calibration run, this can be replaced by the testing device in connection with a test weight. Please see the operating manual of your wheel balancer to choose the correct weight for the calibration run.

For further tests it is necessary to compensate all unbalances. This can be made by a compensation run of the wheel balancer which zeros all existing unbalances. Should the wheel balancer does not have such a function, the unbalance has to be compensated with balancing cement if necessary, so that a maximum unbalance of 1 g is not exceeded in both modes, static and dynamic.

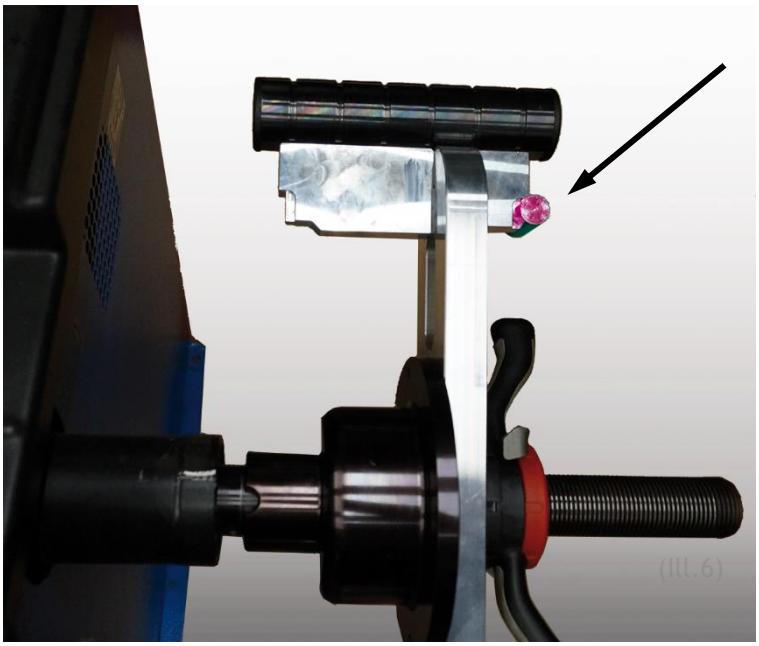
Without compensation, the subsequent examination leads to misinterpretations and incorrect results.

Third Test Run / Separation of Levels:

The third test run is to check the separation of levels and the correct display of unbalance and its relative position. One weight of your choice is mounted on the outside (illustration 6) and the test run is started. In the dynamic mode, the wheel balancer must state the correct unbalance on the outside at the correct relative position. The results must be entered in the test report.

After that, the weight is mounted on the inside and the test run is started. Also now the balancer must display the correct weight and relative position correctly within the tolerance range.

When testing the relative position, the test weight must be located under the shaft in a 6 o'clock position ±5°, as most balancers have an unbalance compensation in a 12 o'clock position. Some wheel balancers can be converted accordingly, in case of doubt, please see the operating instruction.


(Ill.6)

Should all values be out of tolerance, and calibration of the wheel balancer is necessary. If the unbalance is not within the tolerances after calibration, a service technician must repair the wheel balancer.

If the balancer displays all the values as specified, this verifies that the balancer's measuring system is operating properly.

Note

If, however, there are still complaints from customers about unbalance problems with certain vehicles, it is probable that wrong or worn adaptors have been used. HAWEKA is always glad to provide you with information on the correct adaptors to be used. Just call us and ask for expert advice.

5. Test report

Prüfprotokoll / *Test Report*

HAWEKA

Prüfvorrichtung / *Testing Device* 900 008 148

entspricht einem Nullrad 6J x 15" / *is equivalent to a zero rim of size 6J x 15*

Wuchtmaschine *wheel balancer:* _____ **Serien-Nr.** *Serial no.:* _____

	Sollwert / *nominal value*	Istwert / *actual value*
Welle, Rundlauf / *concentricity of shaft*	≤ 0,02 mm	
Anlagefläche, Planschlag / *hub run out*	≤ 0,02 mm	

Prüfdatum / *date*: _____

Prüfer / *tester*: _____

Kunde / *customer*: _____

Testlauf / *Test run* Prüfvorrichtung	Anzeigesollwert bei / *Display target value at* Ø 15"		Toleranz *tolerance*	Istwert *actual value*	Istwert dynamisch *actual value dynamic*	
Art der Prüfung/ *method of testing:*	statisch/ *static*	dynamisch/ *dynamic*	Anzeige/ *display*	statisch/ *static*	innen/ *inside*	außen/ *outside*
Ohne Gewichte/ *w/o calibration weight*	0 g	0 g	max. + 5 g			
Umschlagprüfung/ *remount error w/o calibration weight*	0 g	0 g	max. + 5 g			

Für die Prüfung muss jede Unwucht >1g durch einen Kompensationslauf der Wuchtmaschine oder mit Wuchtkitt kompensiert werden.

Before proceeding, any unbalance >1g must be compensated by using the compensation feature or using balancing putty.

Dynamische Messung *dynamic measurement*	Anzeigesollwert bei / *Display target value at* Ø 15"		Toleranz *tolerance*		Istwert *actual value*	
Mit Prüfgewicht / *calibration weight:*	innen *inside*	außen *outside*	Anzeige *display*	Winkellage *position*	innen *inside*	außen *outside*
100g außen / *outside*	0 g	100 g	± 5 g	± 5° ☐		
100g innen /*inside*	100 g	0 g	± 5 g	± 5° ☐		
60g außen / *outside*	0 g	60 g	± 4 g	± 5° ☐		
60g innen / *inside*	60 g	0 g	± 4 g	± 5° ☐		
50g außen / *outside*	0 g	50 g	± 4 g	± 5° ☐		
50g innen / *inside*	50 g	0 g	± 4 g	± 5° ☐		
40g außen / *outside*	0 g	40 g	± 4 g	± 5° ☐		
40g innen / *inside*	40 g	0 g	± 4 g	± 5° ☐		
25g außen / *outside*	0 g	25 g	± 3 g	± 5° ☐		
25g innen / *inside*	25 g	0 g	± 3 g	± 5° ☐		

☐ **Werte sind innerhalb der Toleranzen** / *actual value is in tolerance*

☐ **Werte sind außerhalb der Toleranzen** / *actual value is out of tolerance.*
Reparatur notwendig / *call service*

_____
Stempel und Unterschrift
Stamp and signature