USINE À SOLUTIONS

Wheeltest IV

User's manual

Translated from french

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1 General information

1.1 Warranty

Warranty is as stated in the General terms and conditions of sale, except for the length of the warranty, which is set at 24 months.

1.2 Safety information

Warning

- Do not use the Wheeltest IV if it is damaged. Before using the Wheeltest IV, inspect its casing and its electrical connections.
- The Wheeltest IV must be used in the way specified by the manufacturer
- The Wheeltest IV must only be used by people who have been trained to do so.

Beware!!!

- Please read the information included in this manual before using this apparatus. Incorrect use may damage the system or cause errors.
- Before connecting the machine for the first time, verify that the supply voltage of the power grid corresponds to that required by the machine.
- In case of prolonged non-use, disconnect the electrical supply cable.
- Do not dismantle the machine. Only the manufacturer is entitled to replace or repair a faulty component.
- Use this machine at a temperature between 10°C and 40°C (140 °F)

1.3 Transportation

This machine is not intended to be frequently transported. If it is nevertheless necessary to transport it, ensure that no shocks are caused that might deteriorate the mechanism of the device. Also, in case of transport over a long distance, it is preferable to use anti-shock packaging

1.4 Storage

The Wheeltest IV must be stored in a dry and dust-free place. The storage temperature must be between 10°C and 40°C. It is advisable to wrap up the machine to protect it from dust and humidity.

2 Parts of the machine

A watch wheel is placed on the driving cone, while a counter spindle allows the wheel to be supported. Rotation is guaranteed by a belt that drives the conical spindle. The Wheeltest IV comprises a series of control knobs for the motor.

Figure 1: General view of the Wheeltest IV

3 Use

3.1 Start-up

The machine is started by the slide switch next to the power connection. When it is turned on, the motor will not turn, but the last parameters used (speed and direction of rotation) will be restored.

3.2 Use

3.2.1 Placing the component on the Wheeltest IV

The component to be measured shall be placed on the driving cone through its central reaming.

Figure 2: Placing the component

The counter spindle must then be placed against the wheel to exercise pressure towards the cone

Figure 3: Pressure against the counter spindle

3.2.2 Adjustments

To adjust the axial position of the wheel, adjust the buffer on the axis and lock the holding screw.

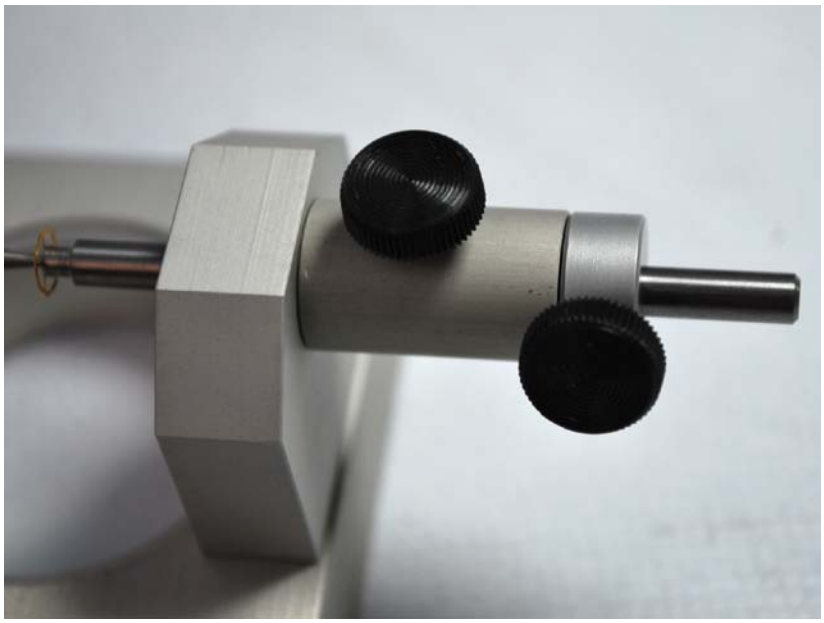


Figure 4: Buffer adjustment

Then adjust rotation speed of the wheel and drive direction.

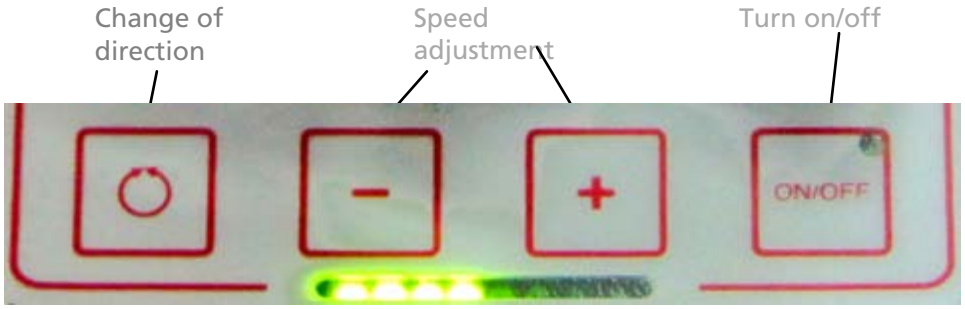
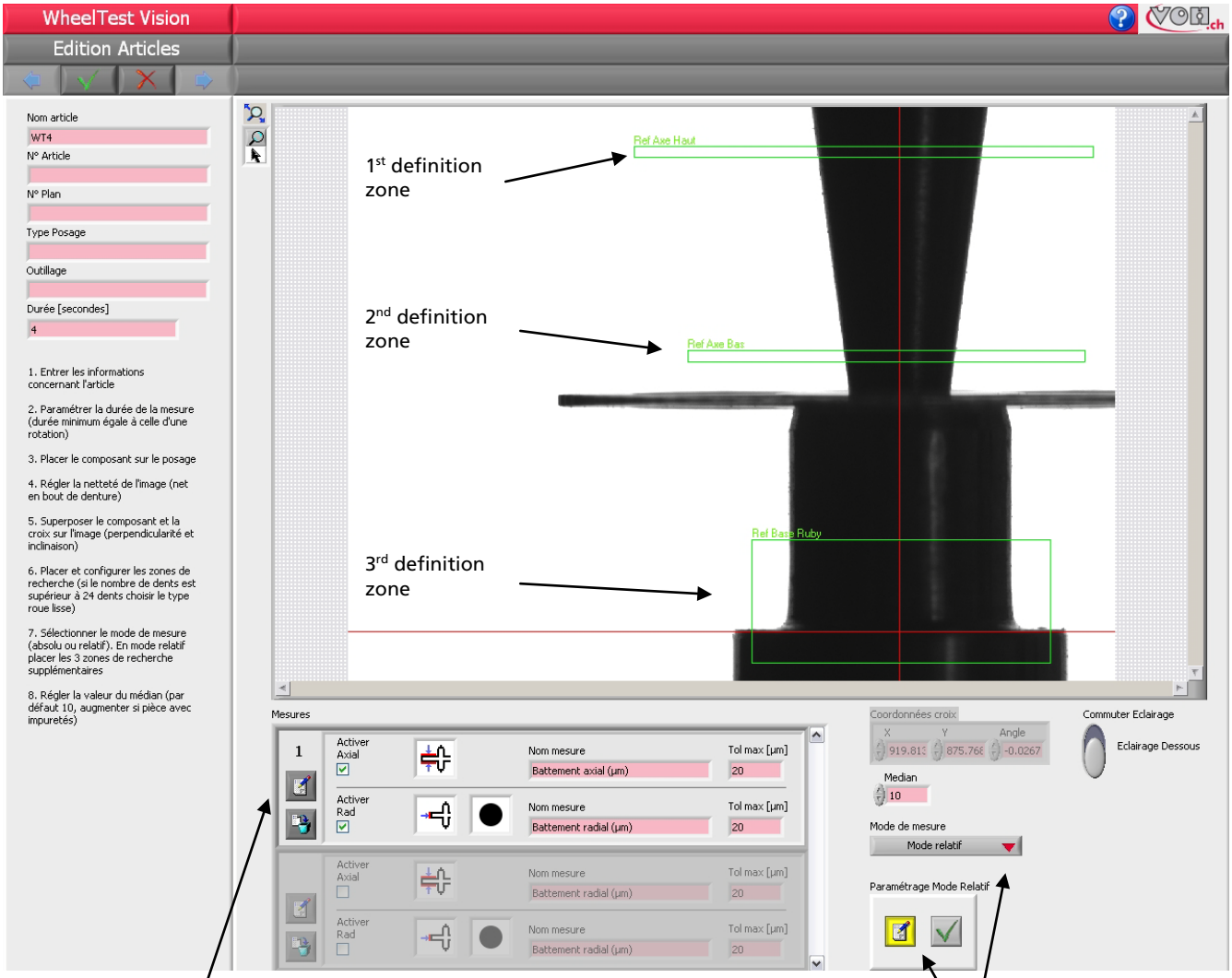


Figure 5: control panel

3.3 Use with the Wheeltest Vision

Use of the Wheeltest IV on the Wheeltest Vision requires that measurements be taken in relative mode. This mode is activated in the Article management menu of the software.



The relative mode allows the measurement of the axial and radial beats of a wheel, while taking into account the radial and axial beat of another element (in our case, the radial beat of the driving cone must be discounted).
The relative mode calculation algorithm requires knowledge of 3 elements:

- 2 points on the cone → so as to determine the radial beat of this last
- 1 fixed point → so as to determine the axial beat of a fixed support (necessary for the calculation basis and allowing micro vibrations of the support to be taken into account)

Instructions:

1. Activate relative mode
    a. The three zones to be defined appear

2. Adjust definition zones 1 and 2
    a. They define the radial beat of the cone
    b. In order for the calculation algorithm to function correctly, there must be 2 zones on the cone
    c. These 2 zones allow the vertical axis of the red cross to be determined

3. Adjustment of zone 3
    a. This defines the axial beat of the support counter spindle
    b. This defines the fixed point, so this part must not be in rotation
    c. This allows the axis to be defined

4. Choice of the wheel's axial and radial beat zones
    a. This point is defined by clicking on the check, as in absolute mode

4 Resolution of common problems

Type of error	Cause	Resolution
No LED turns on when powered up	Speed was set at minimum during last use Connections are faulty	Increase speed to confirm that the Wheeltest IV is being supplied with power Check connections.
The wheel is not driven	The belt is not resting against the driving cone	Reposition, or replace the belt Increase the distance between the Vs

5 Exclusion of responsibility/warranty

Damages caused by use, transportation or storage that do not comply with those described in this manual are not taken care of by the manufacturer. Modifications to the machine and opening the casing are forbidden and entail an exclusion of responsibility. The right to a warranty expires when these are demonstrated or if the faults noted cannot be original. Consumables (belts) are not subject to warranty.

6 Maintenance and care

No special care is necessary for the Wheeltest 4, if it is used in a laboratory, except classic cleaning with a dry cloth. The belt is a consumable to be replaced when the user deems necessary.

7 Technical data

Parameter	Value
Supply voltage	5V DC
Power	850 mW
Dimensions	Depth : 80 mm Width : 140 mm Height: 65 mm

8 Representation/distribution

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