

# User Manual

## Hour meter AGRETO VibroCounter II

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# 1 Introduction

Thank you for choosing an AGRETO hour meter. You have acquired a robust tool for daily use.

Please read this manual carefully before using the equipment.

## 2 Scope of delivery

- 1 Display unit
- 1 Mounting plate
- 2 AAA batteries
- 5 Seals
- Mounting parts
- Manual

## 3 Intended use

The AGRETO VibroCounter II is designed to measure operating hours on all types of machinery and equipment.

The activation takes place by movement / vibration of the machine. External sensors are not required.

## 4 Security

### 4.1 Safety instructions for the buyer



Important!

Make sure that every person who works for the first time with the AGRETO VibroCounter, has read and understood this manual.

## 4.2 Safety instructions for the operator



**DANGER!**

The AGRETO VibroCounter II may only be operated by persons who are familiar with the operation of the device.



**CAUTION!**

Keep the work area clean! Soiled areas contribute to accidents.



**RISK!**

Risk of injury from tip-over / fall and inattention while working with the measuring instrument during getting on and off the tractor.

## 4.3 Personal protective equipment



**WARNING!**

For individuals who work with the device or reside in the working area the wearing of safety shoes is required.

## 4.4 Residual risks

When using the device residual hazards for persons and objects may occur that can't be prevented by design or technical protection measures.



**WARNING!**

The AGRETO VibroCounter II must not be operated in explosive areas.

## 5 Technical specifications

- Packaging dimensions: 220x160x50 mm (LxWxH)
- Package weight: 450 g
- Device dimensions: 73 x 52 x 33 mm (WxHxD)
- Weight: 230 g
- Dust and waterproof plastic housing
- 3 internal control buttons for configuration
- Six-digit display with 11 mm digit height
- Icons for displaying additional information
- Powered by 2 x AAA batteries
- Battery lifetime (with standard alkaline batteries) approx. 5 years

## 6 Configuration

When delivered, the AGRETO VibroCounter II is correctly preset for most applications. If necessary, some parameters can be changed.

### 6.1 Operating Keys

The control buttons are located inside the device and accessible from the back with the mounting plate removed.



To change settings, look at the buttons and then turn the device with the display to the front to read the display.

Button	Definition	Function
M	Menu	Entry into the menu Continue to the next parameter, exit from the menu
-	Minus	Back to the previous step Decrease a parameter by 1
+	Plus	Continue to the next step Increase a parameter by 1

## 6.2 Setting the parameters

To open the parameter menu, briefly press the "M" key. The first parameter that is relevant for the set operating mode appears on the display.

The name of the parameter is displayed for two seconds, then the set value appears.

Use the "+" or "-" keys to change the value of the parameter.

Use the "M" key to change to the next parameter, the set value is saved. After the last parameter, the first parameter is displayed again.

To exit the menu, press and hold the "M" button for three seconds, or simply wait 10 seconds without pressing a button. The counter then restarts.

### Parameter SENS - Sensitivity

This parameter determines from which intensity of a movement the count is triggered, ie how strong the vibration or movement must be. The higher the value, the stronger the movement must be to trigger or continue the count.

0 = highest sensitivity (counts even on very small movements)

2 = a running internal combustion engine is already detected

4 = default

10 = lowest sensitivity (only counts for extreme movements)

The parameter SENS is related to the parameter hoLd, since a movement must always have a certain intensity and must be present for a certain period of time in order to trigger the summation.

## AGRETO VibroCounter II

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### Parameter hoLd – Holding time

This parameter determines the length of a rest period in seconds, during which the count continues without interruption. If another movement follows within the set time (which is strong enough), the complete time is added up, including the rest phase.

- 1 = summation is stopped immediately at the end of the movement
- 60 = default
- 100 = a rest period of up to 100 seconds is counted

### Parameter UnIt - Display format

This parameter determines the format of the hour display.

- 00:59 = default setting, display in hours and minutes (hhhh:mm)
- 00,99 = display in hours with 2 decimal places (hhhh,hh)

By default, the display is in hours and minutes, and the colon is used as the separator.

If necessary, you can change the display to decimal hours, here the comma is used as separator.

## 6.3 Zeroing the counter

To reset the counter, press and hold all 3 buttons together for 3 seconds. When released, the total is set to 0.

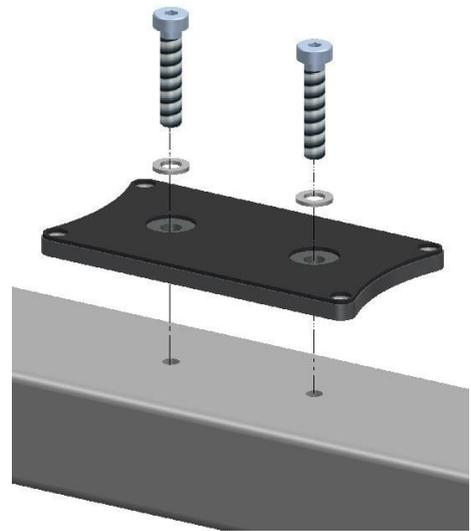
## 7 Assembly

### 7.1 Positioning of the meter

Choose the most protected, yet accessible mounting location on the machine. The installation position is not relevant for the operation of the meter.

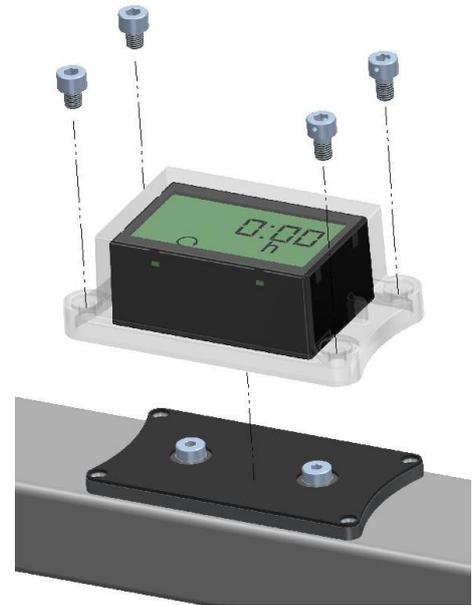
### 7.2 Fixing the mounting plate

- On delivery, the meter is mounted on the mounting plate. Disassemble the meter from the mounting plate.
- Hold the mounting plate in the desired position to the desired mounting position.
- Use the mounting plate as a template and mark the 2 holes with a pin.
- Hit one notch each with a grain.
- Drill the 2 holes with a 4.2 mm diameter drill.
- Deburr the 2 holes.
- Use a M5 screw tap to cut a thread in each hole.
- Use the 2 M5x25 allen screws and the 2 aluminum washers and screw the base plate to the machine. Note that the sealing surface of the base plate is pointing towards the meter.



### 7.3 Fastening the counter

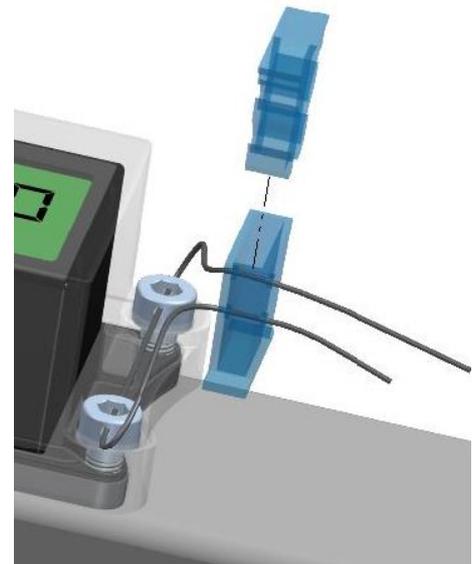
- Place the counter on the base plate.
- Use the 4 allen screws M5x8. Two of them have a small hole for the seal wire, use these two on the side where you want to attach the seal.
- First, pull slightly down all 4 screws, and then tighten every screw again so that the housing is evenly pressed against the mounting plate.



### 7.4 Attaching the seal

- Thread the seal wire through the holes in the two screws.
- Thread both ends of the wire through a hole in the seal.
- Slide the seal as close as possible to the meter and at the same time tighten the wire.
- Close the seal.

If the hole of one of the screws is not accessible, you can also drill a small hole in the housing bar between the two screws and pull through the seal wire here.



## 8 Working with the device

### 8.1 Reading the hours

The VibroCounter permanently displays the sum of the counted hours, an operation is not provided for reading.



If the colon is visible as a separator, it is hours and minutes.



If the comma is visible as a delimiter, it is decimal with 2 decimal places.

The display is updated every 16 seconds.

### 8.2 Symbols on the display



Below the hour display there are various icons for displaying additional information.



The wavy line means that the counter is currently detecting movement or vibration and is in counting mode.



The h means that the displayed values are hours.



The s lights up in the setting mode when a parameter value is expected in seconds.



The crossed-out battery icon lights when the batteries are low and you need to replace them.

## 9 Maintenance and cleaning

The VibroCounter II basically does not require ongoing maintenance.

- If the display is dirty, clean it for reading.
- If the battery symbol is lit, replace the batteries.

# 10 Troubleshooting

## 10.1 The battery symbol lights up

The batteries need to be replaced, follow these steps:

- Remove the seal and the seal wire.
- Remove the housing and remove the meter.
- Remove the old batteries and dispose them properly.
- Insert 2 new AAA batteries into the device in the specified direction.
- Mount the counter again on the mounting plate.
- Seal the device again with a new seal wire and a new seal.

## 10.2 Operating hours are not counted completely

The movements or vibrations on the machine are probably relatively low, so that the necessary intensity for the count is not reached.

- Set the parameter SENS down so that the counter triggers even with minor movements.
- To hold longer periods of rest during operation, set the parameter hOLd upwards.

## 10.3 Too many operating hours are counted

Perhaps the machine is exposed to light movements at standstill, which are recorded as operating hours.

- Set the parameter SENS upwards so that the counter only triggers for larger movements
- To prevent idle phases from being counted during operation, set the hOLd parameter down.

## 10.4 Damage to the device

- Contact the manufacturer or your dealer.

## 11 Warranty

Over and above statutory warranty for AGRETO VibroCounter II following warranty provisions apply:

- The AGRETO electronics GmbH guarantees the function and repairs or replaces all the parts that have a material or manufacturing damage within the warranty period.
- Warranty services will be performed by the AGRETO electronics GmbH.
- The decision on the existence of a warranty claim is sole responsibility of the AGRETO electronics GmbH.
- The warranty period begins with the first accounting to an end customer and ends 5 years from this date of invoice.
- Prerequisite for warranty service are the presentation of the original invoice and compliance with all elements of this instruction manual.
- Excluded from warranty are wear, normal wear and tear, damage due to misuse, negligence or accident.
- When processing a warranty claim transport costs incurred will be charged to the buyer.

## 12 Disposal



Dispose of the device as part of the final shutdown or parts of it environmentally friendly and sorted (metal to the respective metal scrap, plastic to the plastic waste, etc. - do not dispose as household waste)!

Detailed information can be found in directive 2002/96 / EC

## 13 Imprint

All information, specifications and illustrations are as of 2020, subject to technical changes or design changes.

All information in this manual are supplied without liability despite careful preparation. A liability by the author is excluded.

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