



# **Manual**

## **AGRETO Weighing Beams**

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# 1 Introduction

Thank you for choosing an AGRETO Weighing beam kit. You have acquired rugged weighing technology for everyday practice.

Please read this manual carefully before you start working with the weighing equipment.

Please fill the serial number of your AGRETO balance beam sets, it is located on the side of the packaging box.

# 2 Scope of delivery

- 2 weighing beams with built-in load cells, spacer plates and feet
- 4m long cables from the beams to the weighing display
- This manual

# 3 Intended use

The AGRETO Weighing beam kit is universally applicable, can be combined with any weighing indicator and is also for the use in wet areas like stables.

The AGRETO Weighing beams aren't officially calibratable and therefore not authorized to determine weights for legal transactions. The scale is used as a checkweigher for internal use.

## 4 Security

### 4.1 Safety Instructions for the buyer



#### IMPORTANT!

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

### 4.2 Safety instructions for the operator



#### DANGER!

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



#### PRECAUTION!

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



#### PRECAUTION!

Note the crushing force for the establishment and handling with a weighing platform.



#### PRECAUTION!

Note the risk of injury from stumbling and inattention while the assembly, disassembly, and adjustment operations.

**PRECAUTION!**

Repairs and other technical interventions on the device may only be performed by qualified personnel. There is a danger of electric shock.



For persons who are engaged in the assembly, dismantling or adjustments, the wearing of safety shoes are required.



For persons who are engaged in the assembly, dismantling or adjustments, the wearing of protective gloves is mandatory.

### 4.3 Residual Hazards

Working with the device residual risks may arise for persons and objects that cannot be prevented by design or technical protection measures.

**WARNING!**

The AGRETO weighing beams must not be operated in explosive areas.

## 5 Technical Details

|                                |                               |
|--------------------------------|-------------------------------|
| Standard load:                 | 1.000 kg per load cell        |
| Breaking load:                 | 1.500 kg per load cell        |
| Total standard load:           | 4.000 kg (platform + load)    |
| Working temperature:           | -35 to +65 °C                 |
| Temperature compensated range: | -10 to +40 °C                 |
| Power supply:                  | 5 - 15 Volt DC                |
| Resistance:                    | 350 Ohm                       |
| Signal output:                 | 3 mV/V                        |
| Cable length:                  | 4 m                           |
| Accuracy:                      | + / - 0,25 % in practical use |

## 6 Fundamentals for the correct function

The weighing beams must be flat and horizontally placed or installed. The feet have an adjustment threads to help you align the weighing platform. Make sure that the weighing beams stand free and do not touch a wall on any side.

## 7 Construction of the scale structure

If you mount a finished cage or platform construction on the weighing beam, please ensure that the load is not transferred to the weighing beam center, but to the side in the area of load cells on the weighing beam.

A customized building construction can in principle be arbitrary. It must be only guaranteed that the whole construction stands up only with the legs on the ground.

In animal husbandry a wood support structures have proven (wood makes no noise and is not as slippery as metal). For that mount square timbers (e.g.: 50x50mm) on the side of the weighing beams and then screw wooden boards / wood posts on the squared timbers.

The structure should be dimensioned such that the weighing platform is deformed as little as possible and the load is applied vertically to the load cells in all load ranges. Please also note that the weight of the weighing platform reduces the maximum load of your scale. Mount the building so that it protrudes as little as possible about the feet in order to prevent tipping (risk of injury, risk of overload).

The stated maximum load of 4.000 kg refers to the built-in load cells (4x1.000 kg). If this maximum load is to be achieved in practice, the mechanical construction must be correspondingly strong and self-supporting, and every corner of the balance should be charged equally.

## 8 Weighing indicator connection

If you use an AGRETO weighing indicator, the connection cable has been installed with the right plug and you just need to connect it to the weighing indicator. An AGRETO weighing indicator will be delivered with a user guide, where you can read about the operation of the scale.

If you use a different weighing indicator stick to the pin assignment below:

| cable no: | cable colour (if existing) | description               |
|-----------|----------------------------|---------------------------|
| 1         | Black                      | EX - (power supply Minus) |
| 2         | Red                        | EX + (power supply Plus)  |
| 3         | White                      | SI - (signal Minus)       |
| 4         | Green                      | SI + (signal Plus)        |

## 9 Troubleshooting

To determine whether the construction is suitable and the scale weighs properly, should load the center and then sequentially each corner of the weighing platform with about 100 kg.

If there are significant deviations the reasons can be following:

- One or more weighing feet are not firmly on the ground, possibly tipping the scales even. -> Adjust with the leveling feet the height of the scale.
- One or more weighing feet are not on a horizontal and solid ground. -> Change the location of the balance, or you may put steel plates under the feet.
- The scale construction bends through and thus creates side forces on the weighing feet. -> Increase (or decrease) the scale construction.
- The balance structure is somewhere on the side in contact with a wall or another object. -> Place the scale so that no part of the scale construction is somewhere in contact with another object.
- The scale construction is somewhere in contact to the ground, possibly due to contamination. -> Make sure that the entire scale construction stands up exclusively with the weighing feet on the ground.

- One or more cables are damaged. -> Find the corner in which a false weight is displayed and check the appropriate cable. If damage to the cable, the affected cable including load cell must be replaced.
- In the plug connection is moisture. -> Dry it carefully with a hair dryer.
- All the points listed above are excluded, then one or more load cells are defective. -> Please contact the manufacturer or dealer.

## 10 Warranty

Over and above statutory warranty 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.

## 11 Disposal



Dispose the product in the definitive shutdown or parts of environmentally friendly (metal to the respective metal scrap, plastic to plastic waste, etc. - Do not dispose as household waste!)

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

## 12 Declaration of Conformity



### EC Declaration of Conformity

For the following named product

### AGRETO Weighing Beams

This is to confirm that it complies with the essential protection requirements of Council Directive on the approximation of the laws of Member States relating to electromagnetic compatibility (2004/108/EC), Low Voltage Directive and scales (2009/23/EG).

For the evaluation the following standards were applied:

EN 61010-1:2010

EN61326-1:2013, EN61000-6-4:2007+A1:2011, EN61000-6-2:2005

EN 61000-3-3:2008

This explanation is given by the manufacturer

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Submitted by:

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25.03.2014



legally binding signature

## 13 Imprint

All information, specifications and illustrations are as of 2017, subject to technical changes or design changes.

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