MANUAL FOR WORK WITH A

4-HEAD LINEAR WEIGHER (FILLER) ATD-04G

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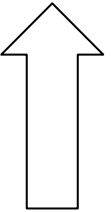
INSTALLATION

1.   Requirements:
- ambient temperature   15 - 30°C
- humidity   35 – 85%
- power supply   220V±10%, 50Hz

2. The dosing/weighing device should be placed on a specially designed for the purpose metal platform. The platform should be positioned on horizontal, rigid and smooth place.
- the weigher should be placed on a place where its performance will be not affected from vibrations or other side effects, which could deteriorate its normal operation.
- there should be enough space around the machine so that to facilitate its cleaning and maintenance.

STARTING THE WEIGHER

1. Connect the touch screen cable to the plug as shown below
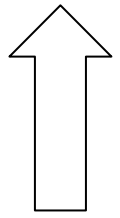
2. Connect the synchronization cable between the packaging machine and the weighing device
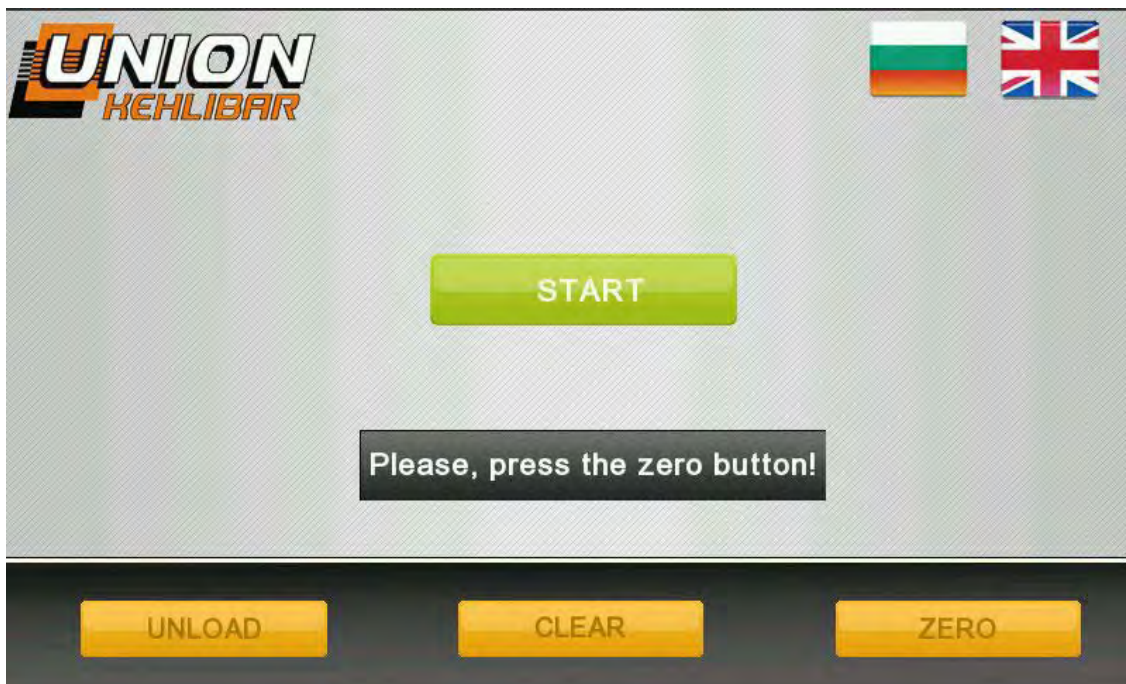
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3. The weigher is started by the black switch, placed on the left side of the control panel.

After turning on the filler, the control panel will visualize the following screen:

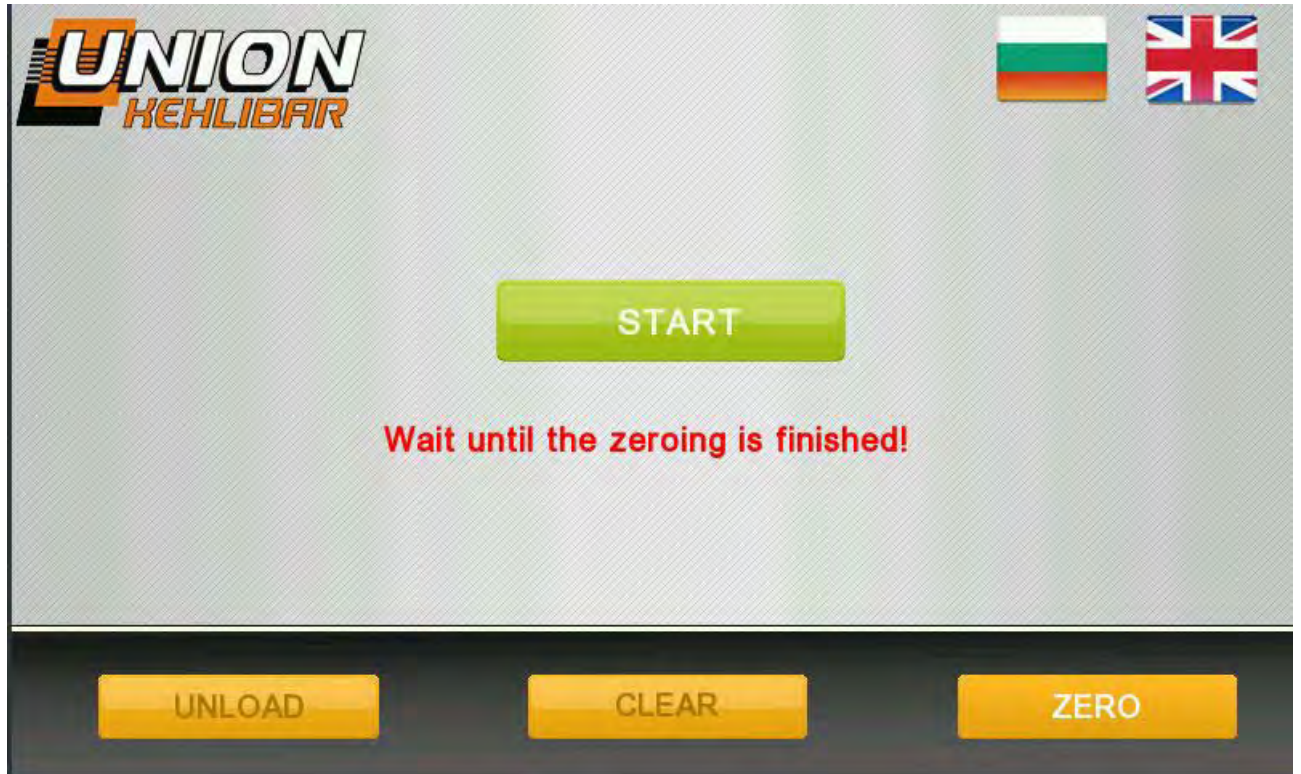4. Every time you start the machine, ZERO procedure should be done.

Press Zero button and wait until the text **Waiting until the zeroing is finished!** disappears.

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Notice: Do not touch the weighing machine during Zeroing because you could affect the correct zeroing of the scales.

In order to proceed to the main menu, press the button **START**.

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When pressing the button **START** the main menu is visualized:
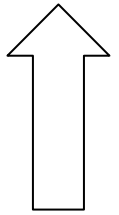
The big button **START** on the main menu, the filler starts its working regime, and the button **STOP** (shown after starting the filler) stops the working regime.
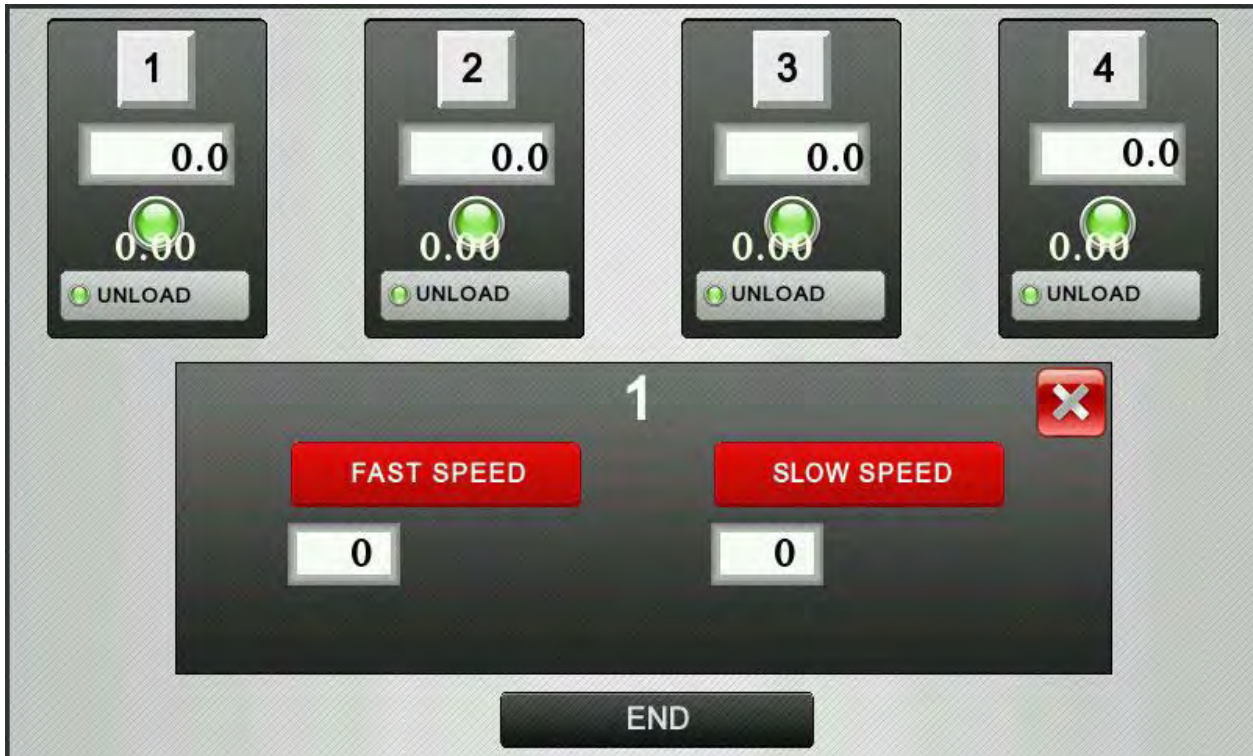
The main screen visualizes the status of the four weighing hoppers via four indication panels showing their status. Every weighing hopper can be turned on and turned off by the buttons ENABLED and DISABLED .

The indication panels for the state of the weighing hoppers also visualize the current weights of the fed product.

The menus have the option for unloading the product from each hopper manually by the buttons **UNLOAD**.

The button **WORK PROGRAM** in the upper part of the main menu opens the window for choice and loading of an operation program and the indicator with the number next to it shows which is the currently loaded work program. More information for the choice of an work programme can be found in the section **Choice and loading of a work program**.

When pressing the button**VIBRATION** in the lower part of the menu, a window opens for the temporary settings of the vibrators'amplitude
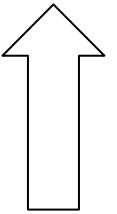
More for this setting could be found on section **WORK PROGRAM SETUP**

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CHOICE AND LOADING OF A WORK PROGRAM

After pressing the button **WORK PROGRAM** from the main screen,

the following window for choice and loading of a work program opens:

Via the arrow buttons up/down in the upper right corner of the menu, the already created operation programs can be changed, as each working program is marked with a number (1,2,3,etc…)

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After choosing a work program, it is necessary that it is loaded to the filler. This happens by the button **LOAD** in the upper part of the menu. After pressing it, you will return to the main menu, with the chosen operation program loaded.
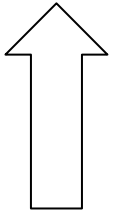
The button **PARAMETERS** opens the menu for setting and modification of different work programs. More information for the menu for setting different operation programs can be found in the section **Setting a work program.**

The button **CALIBRATION** opens the menu for calibration with a control/sample weight. More info for this menu can be found in the section **Calibration**.

SETTING A WORK PROGRAM

When pressing the button **PARAMETERS** from the previous menu, the following window for work program settings opens:

The buttons with arrows up/down in the upper right corner of the window change the operation programs which will be modified. After the done changes, to save the operation program, it is necessary to press the button **END**. The parameters, that can be changed are the following:

MINIMUM WEIGHT – Sets the minimum acceptable weight.

If your target weight is 100g and you would like to allow 2g underweight, then this parameter value should be set to 98g

GROSS WEIGHT – Sets the weight, after which the vibration switches to a slower (more accurate) speed.

If you have minimum weight set to 98 and gross weight set to 70, the machine will feed on fast speed until reaching 70g and after that will switch on slower speed up to 98g.

MAX ERROR – Sets the maximum error (above the precise weight), in the range of which the weigher will accept the dose for correct.

If you have set minimum weight to 98g and max error parameter set to 4g, then the machine will accept the doses in range 98-102g as correct doses. If the target weight goes above this interval, an overweight error will be displayed on the screen. **E**

This overweight hopper will wait until operator takes some product off from the hopper.

TIME OPEN – Sets the hopper discharging angle. Usually this parameter is factory set. It should be 0.6 for max discharging angle

MAX TIME – Sets the maximum time for the making of a dose. If there is no ready dose in this time, the machine stops working and NO PRODUCT error is displayed on the screen.

PAUSE AFTER DISCHARGE – Sets the time, necessary for the hopper to close before the starting of the vibrator. If the time is too short, the vibrator will start to feed product before the hopper is fully closed.

DOSES PER BAG – Sets the number of doses to be discharged in a single bag

MIXER – turn on or off the mixer. The mixer is off if this parameter is set to 0 and on if set to 1.

TIME DUMP – sets the discharging time duration of the hoppers. If the product being fed is light and bulky, using this parameter, it should be assured that product is completely discharged.

When pressing the button **NEXT** a window opens for setting the power of the vibrators:
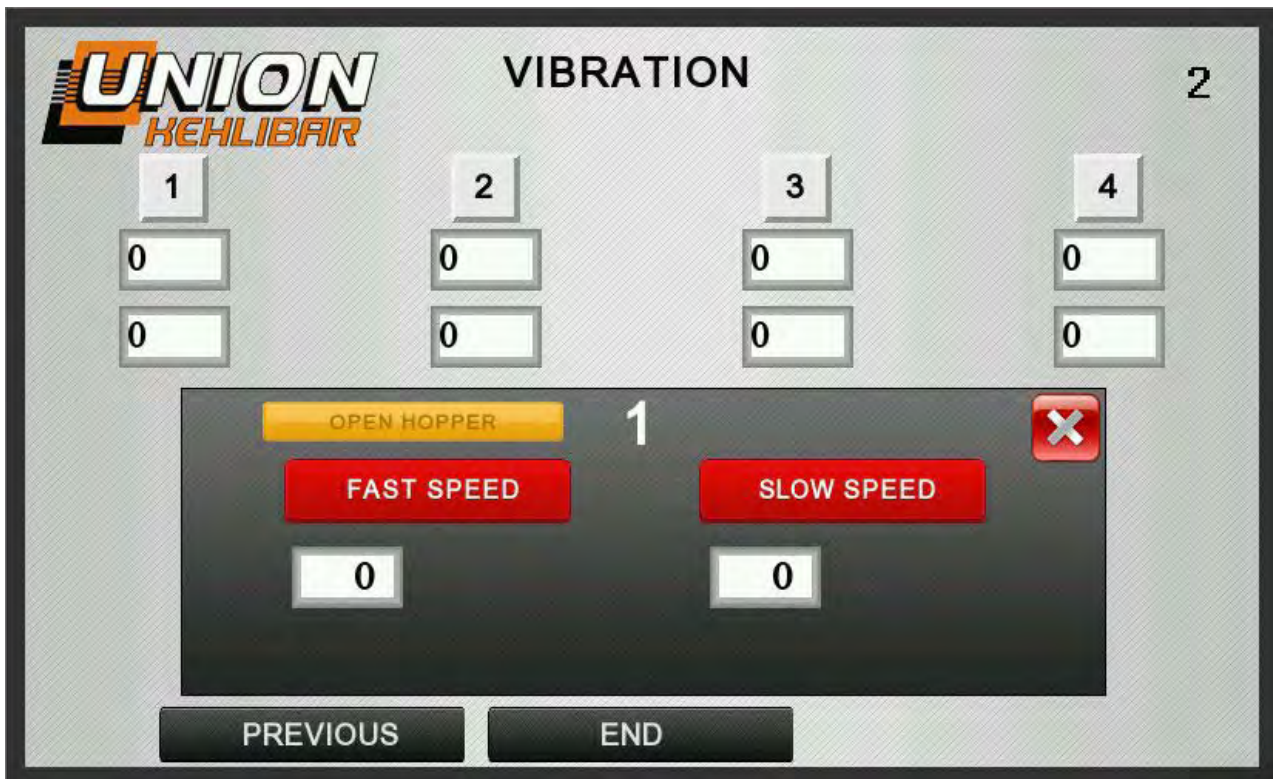
Each one of the vibrators is individually set. For the purpose, press button **1,2,3** or **4** to choose the corresponding vibrator. After that a new window will open, which can be used to set fast/slow speed for the chosen vibrator. The fast speed **(FAST SPEED)** works for reaching the set gross weight **(GROSS WEIGHT)**, and the slow speed **(SLOW SPEED)** is then turned on to reach the set precise weight **(MINIMUM WEIGHT)**.

Via the buttons **FAST SPEED (fast speed)** and **SLOW SPEED (slow speed)** the chosen vibrator turns on and off, respectively. This function is used to test the amplitude of vibration.

The button **OPEN HOPPER** is used to unload the chosen dosing hopper (bucket), because during the testing it fills with product.

NOTICE: the vibration settings are usually done using the shortcut button VIBRATION on the main screen (see below)

MECHANICAL SETTING OF THE WEIGHER

The linear weigher is used for dosing of variety of products with different size, shape and properties. Due to this reason, in order to get best performance, the product layer thickness being fed by vibrating pans should be properly adjusted. This setup is done by moving the metal gates (supplied on each vibrating pan) up/down. By moving up a respective gate, the product thickness is increased and vice versa.

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In order to get maximum precision, the gate gap should be open enough so that the product is passing without any obstructions. If the gap is too big, a lot of product will be fed which in the worst scenario could lead to often overweights.
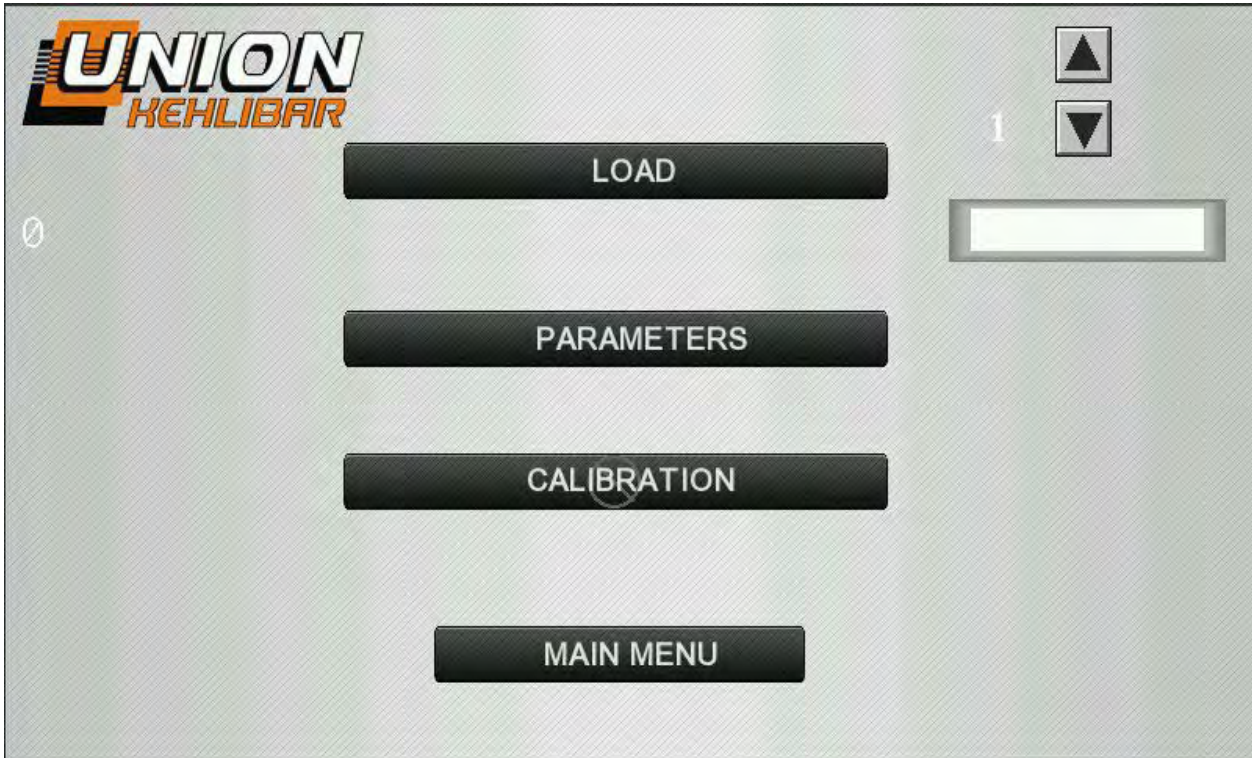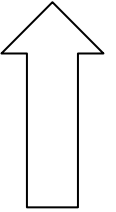
CALIBRATION

When pressing the button **CALIBRATION** from the menu,

a

window for calibrating the scales opens. The menu for calibration is protected with a password. The access password is 333. The window that opens is the following:

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The first step is to set a value for the control weight, which will be used in the calibration. This is done via the button **CONTROL WEIGHT** in the upper right corner of the menu.

For calibrating, the following procedure is used:

1. Choice of the weigher to be calibrated. (From buttons 1,2,3 or 4)

2. During calibration, the chosen hopper (bucket) has to be empty. For the purpose, press the button **DISCHARGE**.

3. Press the button **ZERO**, for calibrating the weigher.

4. Put the control weight on the weigher and press the button **FULL**, to finish the calibration.

To save the calibration, press the button **END**.

WEIGHER CLEANING
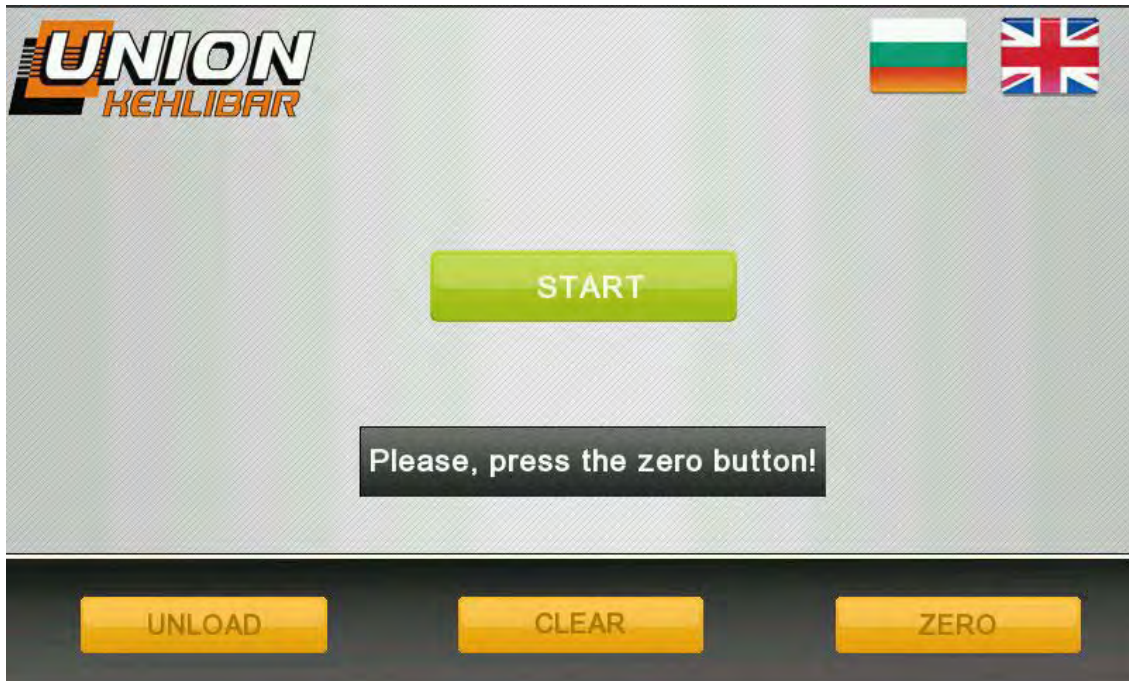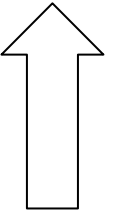
The starting screen gives the option for the usage of functions for unloading the fed product and calibration of the weighs of the filler. The weigher has 2 models for clearing the leftover product – **UNLOAD** and **CLEAR**

- The button **UNLOAD** will open the weighing hoppers and will turn on the vibrators in a constant operation mode, so that the leftover product is released. After the product is cleared, the operator has to deactivate the function.

- The button **CLEAR** activates a function with which a real working regime is simulated, maintaining the following consequence: vibration -> unloading hopper(bucket) -> closing hopper(bucket) .