

## CONGRATULATIONS ON YOUR CHOICE

We are pleased to offer you the finest technology in grain quality control.

Your moisture tester was submitted through an extensive quality control process to ensure its reliability and accurate results.

Thank you for choosing us.

Please unpack your instrument carefully and if you find any damage or noncompliance, you should place it back into the original package and contact your sales representative for replacement.

### PACKAGE CONTENT

- 01 Moisture Tester;
- 01 Dump Cell;
- 01 User Guide;
- 01 Charger;
- 01 Carrying case.

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## GENERAL INFORMATION

The Moisture Tester is a portable instrument designed to measure grains, seeds and a wide variety of other product's moisture content. Based on North American Standards (USDA and CGC), all the instruments must provide results equivalent to the air oven, which is the reference method.

The moisture content reading process uses a technology based on the water dielectric properties in the sample. Using calibration charts, the water amount in the sample is converted to moisture percentage.

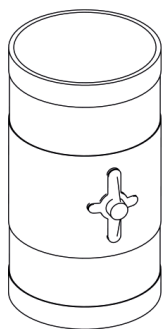
Designed to provide fast and accurate results, the instrument has also a simple and intuitive operating interface, offering the user a color display with touch panel to easily interact with the instrument. Built to meet or exceed the precision, security and performance demands for grain moisture testers described in the NIST (National Institute of Standard and Technology) Handbook 44. Plus, the instrument comes loaded with the USDA and CGC calibration charts.

## FEATURES

### Instrument features:

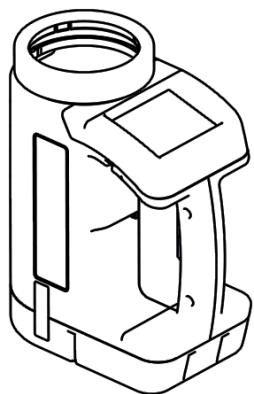
1. Integrated precision scale with a safety device to prevent misuse and results tampering;
2. Wireless communication with smart phones (Optional);
3. Integrated high tech temperature sensor which can measure from -4°F to 158°F;
4. Security protection to metrological parameters access;
5. Li-ion Battery, good for 8 hours of continuous use and it takes 2,5 hours to be fully charged when turned off;
6. Full range voltage input (100 –240 V AC);
7. Calibration charts available for more than 458 different types of grains;
8. Single measurement or 3 average readings for greater precision;
9. 3,5" Color LCD display with touch panel;
10. Auto shut down for battery saving;
11. Share the result through QR Code (Optional).

## MAIN COMPONENTS



### DUMP CELL

It is where the operator places the sample in. A mechanism made of two wings that holds/releases the sample into the grain cell.



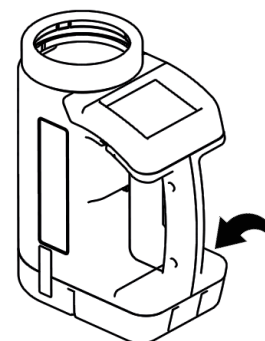
### MAIN HOUSING

The electronic circuits of the moisture tester is completely isolated inside the instrument enclosure, carefully developed to withstand the rigors of field usage.

The ON/OFF switch is in the front of the unit.

Equipped with a touch panel over a 3.5" color LCD display, offers the user an easy and intuitive interface.

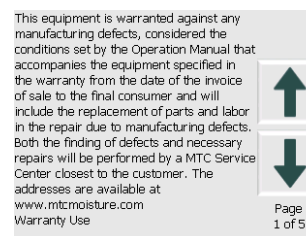
## FIRST TIME START UP



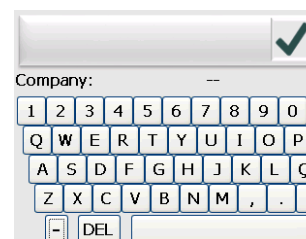
1. Press the power button at the front of the instrument for 3 seconds



2. Choose the desired language by pressing  to set it as the system language.



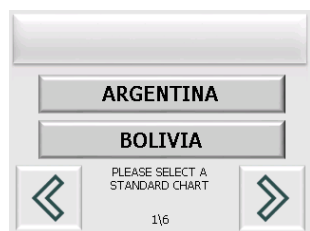
3. Read the Terms of Use<sup>1</sup> carefully. Navigate through the text using the arrows on the right side of the screen. After you reach the end of the page, a screen will pop-up, if you agree to the terms please touch the  YES.



4. Record the name of the company that owns the instrument. Use the keyboard on the screen to type it. Touch  to proceed. If mistyped, press **DEL** to write it again. After the name is saved, a screen will pop-up with a message asking for confirmation. If it is correct, touch  YES.

<sup>1</sup>The Terms of Use can also be found at the end of this manual.

## STANDARD CHARTS SELECTION/ SELF-TEST

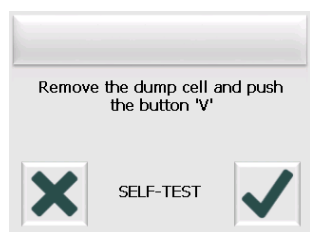
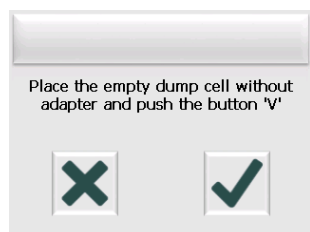


The instrument has 10 built-in chart groups (Argentina, Bolivia, Brazil, CGC English, CGC French, German, Italian, Mexico, Spanish in General, United States).

5. Select appropriate chart group to your area by navigating through .

6. Follow the steps on the screen to complete the self test. It verifies all the import components and software parameters, such as:

- Configuration parameters integrity;
- Memory;
- Time and date;
- Equipment calibration data integrity;
- Scale.

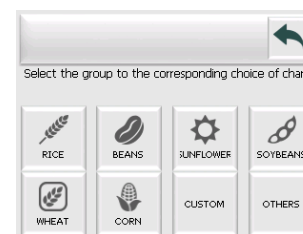


At the unlikely event of an error, restart the process pressing . In most cases, it is just an alert that can be easily solved by the user. If you can not solve the issue by yourself, please contact the most convenient authorized technical service office.

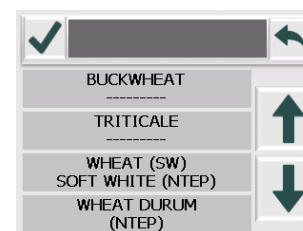
## CHART SELECTION



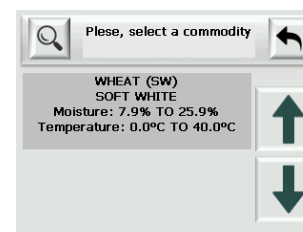
7. Press on to proceed.



8. Select the desired grain group touching on the grain icon.

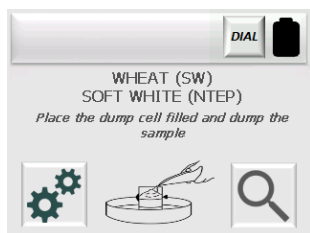


9. Select the proper chart, browse using the arrows on the right of the screen. Finally, touch on the desired chart to finish this phase. If you want to exit, you can press .



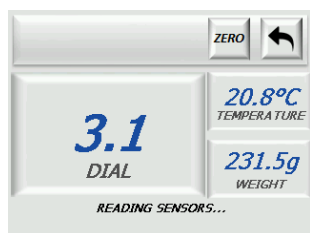
If you want to change your calibration selection, you can press the on the main screen at any time, this will take you the selection screen. The previous 5 calibrations that were used will be available, if the one you are looking for is not listed, click on the and you will be taken to the groups, then repeat the procedure described in the previous paragraph.

## MAIN SCREEN




This initial menu works as a screen for quick measurement once is selected the proper chart. This screen will be the equipment home screen after its first initialization.

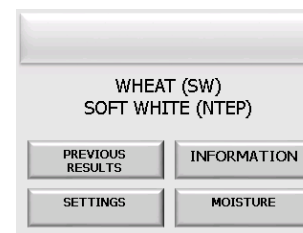
Here you have access to the battery level , charts selection , **DIAL** verification and machine settings .




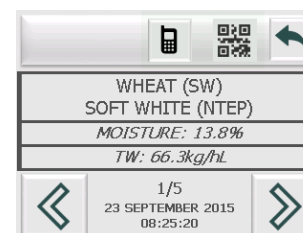
Press on **DIAL** to go to dial measurement screen. It will show the sensors readings and the sample dial.

1. Place the empty Dump Cell, press **ZERO**,
2. Fill the Dump Cell with the desired weight
3. Dump the sample in.
4. The dial reading will be shown on screen, in real time .
5. Press on  to return to moisture measurement screen.

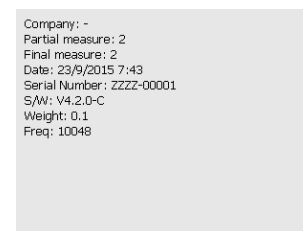
## MAIN MENU



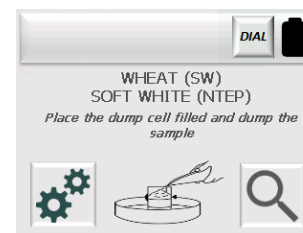
Press  to go to the main menu.



Press on **PREVIOUS RESULTS** to see the moisture measurement log. Browse using the arrows, send the result to your smart phone, which is explained on page 15, and the equipment system stores up to five readings.



Press on **INFORMATION** to display equipment parameters.



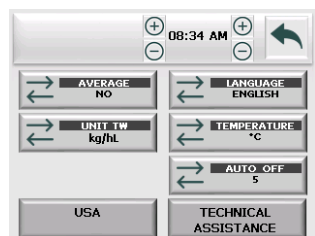
Press on **MOISTURE** to return to moisture measurement screen.

The last item named **SETTINGS** will be explained on the next page.

## SETTINGS

Press to change.

Press to return to the main menu.



12:00 AM   
 Use + and - to adjust the time, for hours use the left icons and for minutes the right icons.



It is possible to get the average moisture reading from 3 sequential dumps. You can enable it by choosing **YES**. When **NO** is chosen, the average mode is turned off. The **OVER 20%** option will do the average, however it will not count for the average calculation if the sample has 20% or less humidity.



**Celsius** and **Fahrenheit** are available.



Test Weight (TW) result can be shown in 4 different units: **kg/hL | lb/bu | lb/A bu | lb/W bu**.



There are 6 languages available: **ENGLISH / SPANISH / GERMAN / FRENCH / ITALIAN / PORTUGUESE**.



Timer for the auto shut down. The options available are: **5, 10 and 15 minutes**.

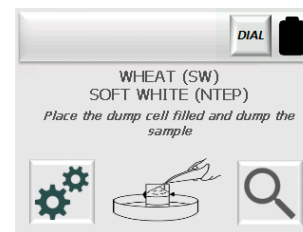


Change the built-in chart groups



Restricted area access.

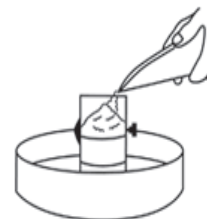
## MEASUREMENT PROCESS



1: Make sure that the instrument is on a level surface.

2: Turn the instrument on and wait for the start up process to finish.

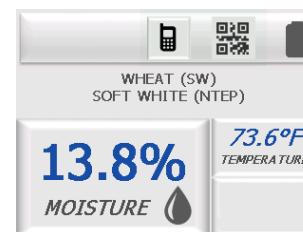
3: Select the desired chart in



4: Place the dump cell inside a proper container, like a tray, and overfill it with the sample you want to measure the moisture. With a straight edge remove excess. The filling of the dump cell must be done in a constant and controlled way.



5: Dump the sample into Grain Cell.



6: The moisture result is shown in this screen and it is sent to your phone. If desired, repeat the process, remove the sample and restart from step 4.

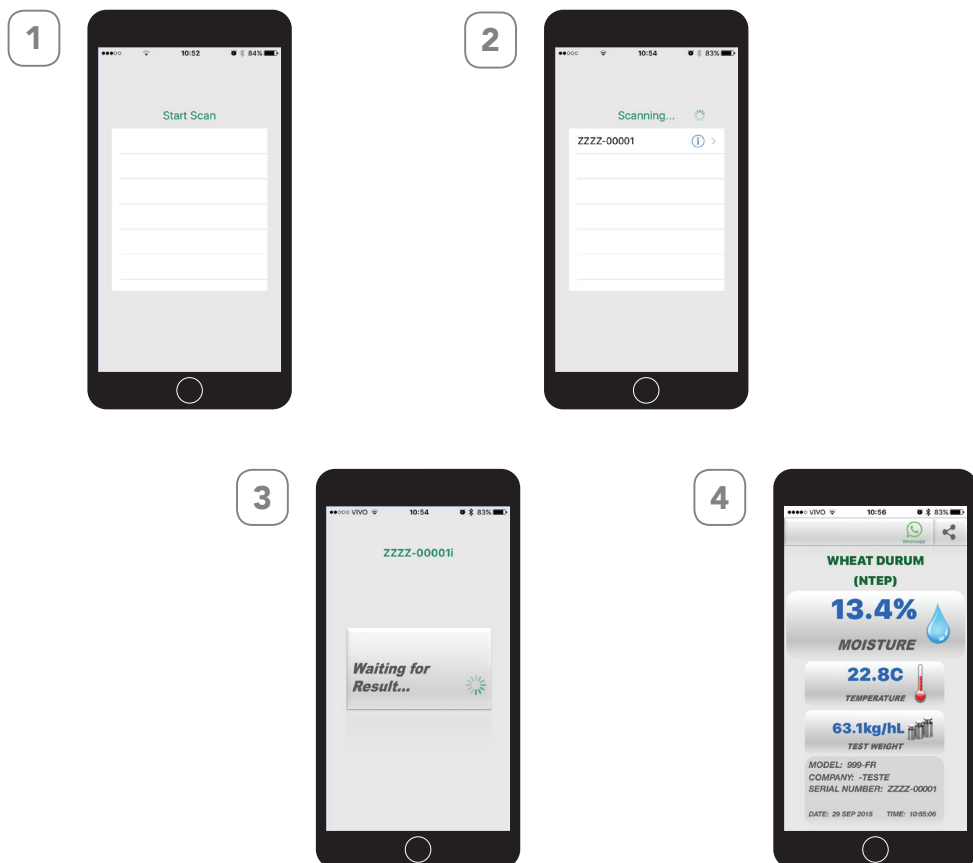
Notes:

- When the average mode is enabled, the moisture result is only shown after the third reading.
- If the humidity or temperature is outside of specification limits, the equipment will inform it and/or no results will be displayed.
- If you need to set any parameter before the measuring process, access then **SETTINGS**.

## WIRELESS COMMUNICATION (OPTIONAL)

The instrument has a wireless communication with smart phones technology. It will transmit the moisture readings from instrument to user's smart phone.

1. Download the **999-FR new** app on the App Store® or on Google Play™.
2. Open the app and turn the instrument on.
3. Press scan on the app and connect with the instrument.
4. Do a moisture reading or send the result through **PREVIOUS RESULT**.
5. Share the result through your smart phone.



## QR CODE (OPTIONAL)

The instrument can generate QR Codes from the moisture reading. You should follow the steps below to read and share it.

1. Download the **MOISTURE READER** app on the App Store® or on Google Play™.
2. Open the app and turn the instrument on.
3. Reach the result screen or the **PREVIOUS RESULT** screen and press on the QR Code.
4. Read the QR Code with the app.
5. Share the result through your smart phone.



Note: QR Code is registered trademark of DENSO WAVE INCORPORATED.  
Android and Google Play are registered trademarks of Google Inc.  
iPhone and App Store are trademarks of Apple Inc.



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## CARE AND MAINTENANCE

The instrument is factory calibrated with a Manufacturer Standard Tester, which goes under periodic verification to assure that it meets the tolerances defined by the USDA and CGC.

To assure its accuracy, the instrument must be periodically submitted to the manufacturer, where it will be calibrated and fully checked.

We strongly recommend that the instrument is submitted yearly to maintenance, during the off season, when its usage is reduced. The presence of foreign material inside the cells directly affects the instrument accuracy. It is recommended to clean the accessible parts with a damp soft cloth. The use of alcohol or other chemicals can damage the instrument.

Keep the instrument indoors and away from the external environment. Avoid strong impacts to the external enclosure, as it can directly affect the scale.

Do not let liquids get in contact with electrical parts, 2 way radios and other RF equipment near the instrument, since the RF can cause interference on the measurement.

For maintenance, please place your instrument in the original box, with all accessories and send to the manufacturer.

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## TECHNICAL ASSISTANCE/ ASSISTÊNCIAS TÉCNICAS /CENTRO DE SERVICIO / SERVICE TECHNIQUE

### **MTC – UNITED STATES**

Missouri Moisture Analyzers LLC  
201 N.Forest Avenue, Suite 227  
Independence – MO  
Zip Code 64050  
Phone: 1 660 562-0203  
sales.usa@motomcogroup.com

### **MTC - CANADA**

Canada Moisture Analyzers Inc.  
Unit I - 1079 Wellington Avenue  
Winnipeg, MB R3E 3E8, Canada  
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sales.ca@motomcogroup.com

### **MOTOMCO - PARAGUAY**

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