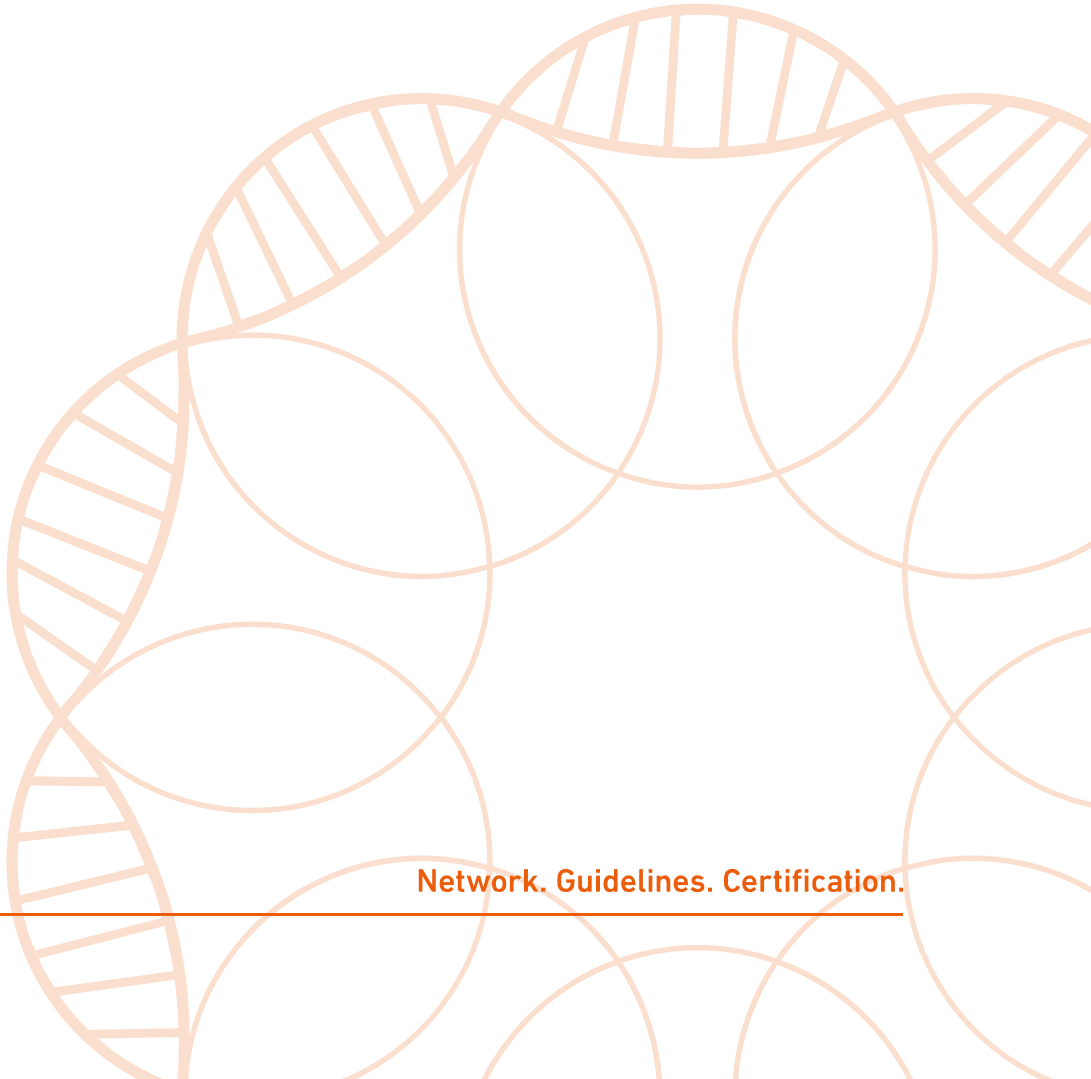
THE GLOBAL STANDARD
FOR LIVESTOCK DATA

ICAR Guidelines for Routine Checking of the milk meters

Dairy Manager Milk Meter

Version May, 2020



Network. Guidelines. Certification.

7 Commissioning

The Weighall Milk Meter requires the following to be conducted in order to commission the system.

- Installer must check that all the Milk Meter Units have been levelled and plumbed.
- Carry out the calibration of the Milk Meter
- Conduct a Water Test on the milk meter units (where applicable)
- Ensure Milk manager software is scanning for and detecting devices (if applicable)

7.1 Calibration of the milk Meter

Important Notes

1. The vacuum must be on when calibrating the meter to get a proper calibration reading.
2. The settings in each individual milk meter must be calibrated before being put into operation.
3. The calibration must take place on each farm as each meter must be calibrated individually and on the site they are going to be in operation.
4. The meter must also be recalibrated after any service work.

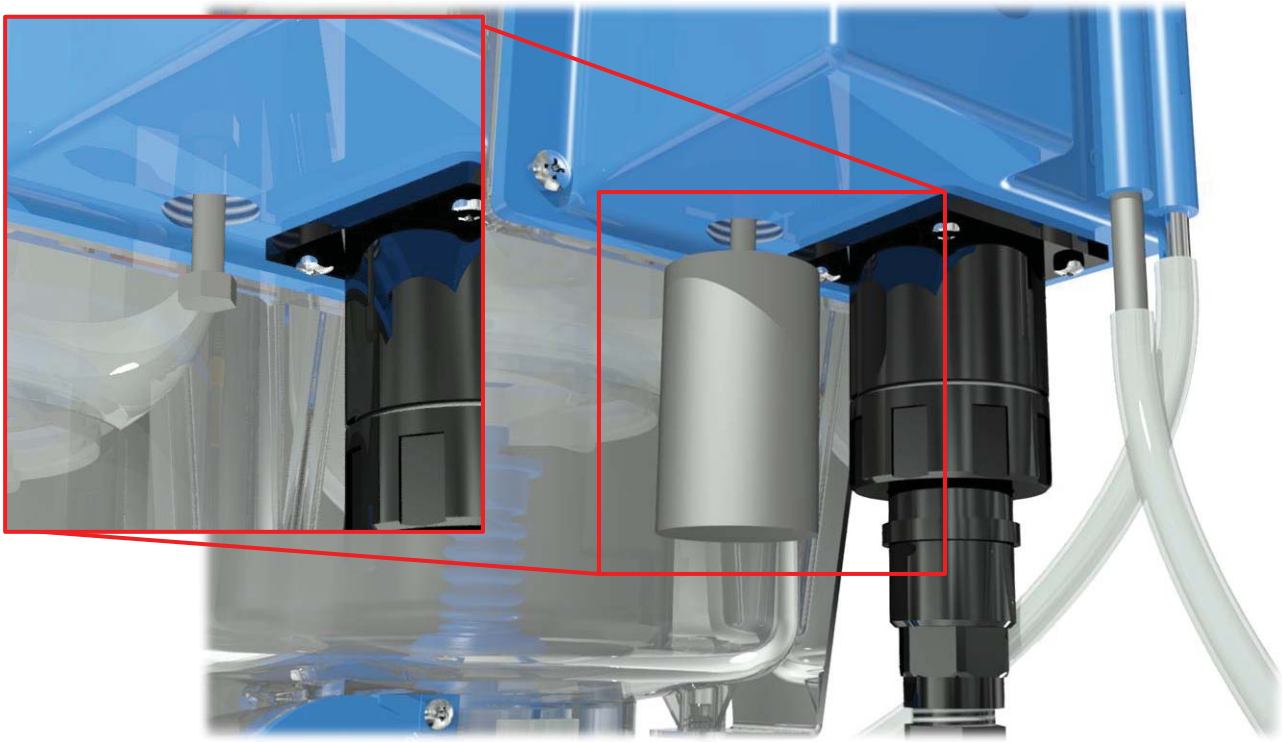


Figure 140 – Location of the cap on the load cell calibration hook

1. Remove the cap from the load cell housing.
2. Enter the calibration mode
   To enter calibration mode for each of the milk meters, press the function button, F then type in 1 9 7 6 Confirm by pressing enter ↵

3. Edit the calibration setup values. Press En↵ to move through the calibration setup values, the only values that can be edited here are :

   Comms En 1, this is always 1 so that the meters will be able to talk to each other, i.e. using the comms wire.
   This Address on each meter has to have a unique address so that the PC can communicate with it. (Meter + 10). I.e. meter 2 +10 = address 12 meter 3 +10 = address 13 etc...

4. Calibration parameter zero is then arrived at.

Figure 141 – Milk Meter Calibration parameter zero

5. Ensure the meter is in a steady position and ensure that the weigh cup is empty and free from obstruction. Then press the funct F key and keep it pressed for 20 seconds, then release the key. This is the number of counts of the load cell that corresponds to zero weight.

6. Press Enter ↵ again, the display screen should now have span on display. Hang the known test weight from the calibration hook see Figure 142 and make sure it is not moving, swinging or touching anything i.e. keep it steady.

Figure 142 – Calibration Weight in position

Keep the function key pressed for 20 seconds, release the Function key. The meter now knows the effect of 500g on the load cell.

7. Press the function button F, cal factr should now be on display. Key in the appropriate cal factr value.

Important Notes

Zero, span and cal factr values are used by the meter to automatically calibrate itself and give an accurate reading when milk recording.

Table 35 – Calibration Values

Parameters	Meaning	Value
Comms En	Allows the meters to communicate with each other.	1:-ON
This Addr	Each meter must have a unique address so that the PC can communicate with it.	From 11 -to 120
Zero	Reading from the load cell when there is no weight in the cup.	From - 14,000 to + 14,000
Span	Reading from the load cell when the test weight is applied	From 4000 – 7000
Cal Factr	The Calibration Factor **(Milk)**	528
Cal Factr	The Calibration Factor **(Water)**	550

7.2 Water Test

Prior to performing the water test, ensure the meter is operating correctly and ensure that all the valves are sealing correctly.
(Use Function 1983 to open and close the top and bottom valves.)

7.2.1 Water test procedure

1. Fill a 10 to 20 litre clean bucket with clean water.
2. Place the bucket on an accurate weighing scale and take careful note of the total weight of the water.
3. Enter the calibration mode (Function 1976) of the meter under test and change the cal factor to 550 for water.
4. Disconnect the cluster milk tube from the meter which is being tested and connect the Milk Meter calibration tube to the milk line. The Milk Meter calibration tube has a 4mm bore with a 1mm air bleed hole near the top.
5. Start the milking machine as normal.
6. Place the end of the Milk Meter calibration tube beneath the level of the water allowing water to be sucked up but not any air.
7. Ensure that the water is not entering the top chamber of the meter too quickly as this would not be realistic and give a false reading.
8. Stop the vacuum when the water has been sucked up.

9. Ensure water in the milk tube is drained back to the container.
10. Calculate the weight of the water that passed through the meter by subtracting the weight of the water remaining in the container.

Repeat the above procedure two more times and calculate an average for the results.

Important Notes

If it is determined that the weight measurements recorded by a meter are outside the meter tolerance of 2%, the Cal Factr (528, default for milk) can be modified by the required percentage. For example, if the recorded value is 4% too high then decrease the Cal Factr by 4%.