ICAR Guidelines for installation of the milk meters

MDS Saccomatic IDC 3 Milk Meter

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1   Calibration and test of IDC

To ensure that the values registered by the IDC milk meter are correct, the milk meter must be calibrated and tested after installation. To ensure the accuracy of this calibration, the plant must have run in a normal milking routine for at least one week before performing the calibration.

  a. IDC1: No calibration of this unit. IDC2, IDC-T: Only water calibration.

  b. IDC3: Both water calibration and milk calibration.

  c. IDC2 for sheep and goats: carried out like IDC2 for cows except from a change in the water amounts that run through the IDC during calibration.

2   Installation test

Installation test can be performed 1 week after the plant has started normal milking routine, at the earliest. The test is performed by the fitter in the following way.
The milking system is washed immediately before the test. Wash must contain the following elements:

  a. Wash with base, which must have a start temperature of min. 75°C and end temperature must exceed 42°C.

  b. Wash with acid.

  c. If lime scale or other sediments are visible after wash perform an additional hot acid wash with a start temperature of min. 70°C.

The plant must be entirely clean and free of sediments before starting calibration!!
Check that the IDC's are hanging horizontally within a tolerance of +20 and that the measuring cups are correctly fitted and not twisted in relation to the fitting tap.
When calibrating one or more milk meters it is important that the milk meters that should not be calibrated are not serviced.

The calibration fluid is mixed according to the following table:

L mixed fluid	10 liter	15 liter	20 liter
Household salt (NaCl)	30 gram	45 gram	60 gram
Calibration fluid	5 ml	8 ml	11 ml
(12187) Washer rinse (12190)	13 ml	20 ml	27 ml

Mixing procedure
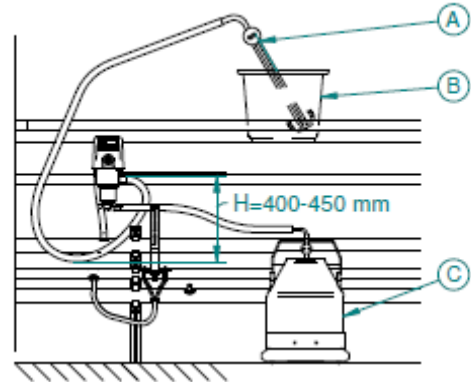
  a. Dissolve NaCl in 1L of hot water with a temperature above 50°C.

  b. Add calibration fluid and washer rinse.

  c. Stir the mixture until salt is dissolved.

  d. Add cold water to reach the desired volume and stir again.

When using the fluid for calibration it must have a temperature between 15 and 30°C.

Mixture must be recycled for calibration of same measurements. Same mixture can also be used for calibration of several meters. The mixture can be used for an entire day, after which a new mixture must be made. The scales in use must have an accuracy of + 0.02 kg.

Flowmeter (900 71.000) equipped with 3.85 mm nozzle (12189) that gives 3L/min at 38 kPa at high flow and a 1.5 mm nozzle (12188) that gives 1l/min at 38 kPa at low flow.

For sheep and goats, the nozzles are respectively 400 g/min: 271 00.111 and 1000 g/min: 12188 Airflow through the flow meter must be 6-8 l/min.

3   Calibration setup

Remove the milk hose from the milking cluster and replace it with the flow meter (A). It is important that the hose is guided from flow meter to IDC as usual as displayed on page H42 60.074GB. Now the water is lead to a milking bucket (C) from the bottom of the IDC instead of through the milk line. It is important that the hose has a drop from the IDC to the milk bucket for the water to primarily run through and not be pushed through by air. A bucket (B) with water from which the flow meter sucks water is set where the cow would normally stand.

If necessary the milking bucket can be equipped with "Bottom piece, closed" (210 46.303) so that mounting of a pulsator is not needed.

Before choosing the calibration setting on the power supply it is important that all IDCs are in milking mode and not milking.

Choose the calibration menu from the configuration menu. Access to the configuration menu is described elsewhere in this service manual. After choosing calibration menu an overview is displayed of the state of all IDCs. Power supply must be in this menu item as long as calibration is in process.