OPERATING INSTRUCTIONS

These instructions have been written to assist you with the installation and operation of your Tru-Test Milk Meter.

Please keep for your future reference.

For further assistance, your local Tru-Test distributor is trained and willing to help.
**Installation and Brackets**

In all cases the Milk Meter should be mounted in a vertical position.

The Milk Meter should be located as close as possible to the milk line.

All milk hoses from the claw to the Milk Meter, and from the Milk Meter to the milk line, should be kept to a minimum to avoid excessive vacuum drop, slower milking and possible milk yield errors.

Your Milk Meter is equipped with one of the mounting brackets (or similar) shown below.

**Super-Clamp Bracket**

To install, extend the jaws to the open position by pulling down on the jaw hook, place jaws over the pipe and hold bracket down whilst closing trigger to clamp firmly onto pipe. To remove, release trigger and push Meter up.

**Hanger Bracket**

Two sizes of Hanger Brackets are available; these being 3” and 2”. Simply hang Meter over pipework taking into account the above installation guide lines.

**Multi-Grip Bracket**

To install, firmly attach plastic mounting flange to facia board, steel member or pipe, with the slotted section in the vertical plane. Slide the Multi-Grip dovetail into the plastic mounting flange.

**Tube Bracket**

To install, firmly attach right angle flange to facia board, steel member or pipe, with the slotted section in the horizontal plane. Slide the extendible tube through the clamp unit to adjust height of Meter.
**Connection of Hoses**

Attach the milk hoses from the milking claw to the Milk Meter inlet tube and from the Milk Meter outlet to the milk line ensuring that hoses are kept to a minimum to avoid sagging and consequently possible errors in milk yield reading. If a take-off unit is used, connect your Milk Meter between the take-off and the milk line.

**Operating Your Meter**

**Removing the Flask and Taking a Sample**

During milking, milk flows up the Milk Meter inlet tube onto the Meter cover, where the milk spreads evenly and an exact proportion passes through a nozzle to the calibrated flask. The rest of the milk flows out through the Milk Meter outlet and to the milk line.

1. As each cow finishes milking, remove the flask by pushing down on the lower end of the flask foot with the palm of your hand. While doing this place your thumb on the thumb stop on the side of the flask foot. Simultaneously pull on the flask to free it from the seal in the flask top. As this happens a shut off valve closes the Milk Meter outlet to prevent loss of vacuum.

2. Replace this flask with an empty flask by putting the upper lip of the new flask into the inside edge of the seal in the flask top. Then snap the flask back into the flask support foot.

3. To record the milk weight, hold the flask you have removed from the Meter so that it is vertical and the milk line is at eye level. If a flask hanger is supplied, the flask can be hung from a pipeline until the user is ready to record yield and take a sample. Alternatively, the flask can be stood on a flat, even surface.

4. Be careful to read the milk line (bottom of the meniscus) and not the foam line. To assist, it is useful to have a bright light behind the flask.

5. To take a composite milk sample, cap the flask, then invert the flask at least two or three times to mix sample, then decant the required volume into a small sample vial.
**Manual Cleaning**

Wipe exterior surfaces with a clean damp cloth to remove dirt.
Wash the Milk Meter in a hot detergent solution and rinse thoroughly with clean warm water.

**Cleaning in Place**

Connect the hoses so that the detergent solution flows through the Milk Meter in the opposite direction to normal i.e. entering the Meter via the exit and exiting the Meter via the inlet. This normally involves reversing the hose connections. Flasks and sealing rings will require separate handwashing after the Meter has been cleaned.

We recommend that abrasive detergents are not used and that detergents are used at strengths recommended by the chemical manufacturer.

The use of brushes other than those supplied by Tru-Test on plastic surfaces must be avoided, as they may permanently affect metering accuracy.
**Benefits Offered by New Wide Body Components**

**Wide Body**
- Green sampling nozzle enables greater Meter capacity.
- Wider inlet tube and internal diameter milking tube enables faster milking times.
- High flow rate milking cows have less effect on Meter and claw flooding.
- Use of clear polysulfone plastic allows easy identification of the new generation Wide Body Meters.

**Wide Flask**
- Unique concave flutes provide protection for the flask print and a level gauge for reading.
- Flask design enables easy gripping of flask for removal and turning.
- Meter capacity has been increased to 110 lb yields with a shorter length flask.
- Rubber flask plug has a flat base to allow flasks to be stood on a horizontal surface.

**Flask Holder**
- Lightweight, strong and compact design enables ideal placement for spare flask.
- Adjustable fitting allows the user to position the holder to suit.

**Flask Foot**
- Ergonomic design enables palm or thumb placement for ease of flask removal.
- Back edge of foot ensures flask can be readily snapped into position on the Meter.
## Trouble Shooting

### Abnormal Reading

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk Meter more than 5 degrees from vertical</td>
<td>Reposition to vertical</td>
</tr>
<tr>
<td>Flask seal leaking air</td>
<td>Replace flask seal (should be replaced at least once a year)</td>
</tr>
<tr>
<td>Insufficient vacuum</td>
<td>Have milking plant checked</td>
</tr>
<tr>
<td>Dirty Milk Meter</td>
<td>Remove from operation and clean</td>
</tr>
<tr>
<td>Air hole in claw cap plugged</td>
<td>Clean air hole</td>
</tr>
<tr>
<td>Cracked cover or body</td>
<td>Replace cover or body</td>
</tr>
<tr>
<td>Cover deflector point damaged or blunt</td>
<td>Replace cover</td>
</tr>
<tr>
<td>Partially plugged/obstructed nozzle</td>
<td>Carefully clean obstruction or nozzle</td>
</tr>
<tr>
<td>Damaged nozzle</td>
<td>Replace part and re-test</td>
</tr>
</tbody>
</table>

### Flask Filling Too Fast

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoses reversed</td>
<td>Install hoses correctly, with the milk cluster connected to the Milk Meter inlet tube</td>
</tr>
<tr>
<td>Wrong nozzle used</td>
<td>Use proper size nozzle</td>
</tr>
<tr>
<td>Damaged cap or metering nozzle</td>
<td>Send to Milk Meter service centre or replace part</td>
</tr>
</tbody>
</table>

### No Sample in Flask

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoses not connected</td>
<td>Connect tightly</td>
</tr>
<tr>
<td>Flask seal in Milk Meter body pinched or missing</td>
<td>Replace flask seal and reset properly (should be replaced at least once a year)</td>
</tr>
<tr>
<td>Damaged flask</td>
<td>Check sealing edge/replace or send to Milk Meter service centre</td>
</tr>
<tr>
<td>Rocker valve stuck</td>
<td>Free or replace rocker valve</td>
</tr>
<tr>
<td>Cracked cover or body</td>
<td>Replace cover or body</td>
</tr>
<tr>
<td>Partially plugged/obstructed nozzle</td>
<td>Carefully clean obstruction or nozzle</td>
</tr>
</tbody>
</table>

## Product Guarantee

This product is guaranteed against failure or breakdown during normal or recommended use for one year from the date of purchase.

In addition the following are guaranteed for a further two years:

- Meter Body guaranteed to remain within specified tolerance levels when tested using a Tru-Test approved Water Test Rig.
- Flask printing guaranteed to remain legible under recommended washing and use procedures.

### Conditions of Guarantee

- The unit must have been used in accordance with the manufacturer’s instructions supplied with each unit.
- The faulty unit must be returned to a service agent accredited by the distributor.
- This guarantee relates only to the standard of manufacture and the manufacturer will not be liable for any injury or damage sustained in the use of the product.
- This guarantee covers defective parts and faulty workmanship; it does not extend to wear and tear and defects resulting from other factors. It shall not apply when the unit has not been continuously in the possession of the purchaser.
- All claims under the guarantee must be made through the outlet from whom the unit was purchased and they will refer the claim to the distributor.

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