# better milking advice with

**VADIA**

by BioControl

Understand and manage udder health and milk quality problems

# Logging and Analyzing Milking Vacuum

Udder health problems are often related to the milking equipment, many times in combination with inadequate milking routines. Notorious are teat-end vacuum fluctuations due to poor quality liners, liner slips or insufficient vacuum capacity. Pathogens reaching the teat-end due to 'backspray' or 'cluster-flooding' is another known cause.

BioControl's VaDia is designed for milking technicians, advisers, veterinarians and other professionals in the dairy industry to deal with these problems. It is the next-generation Milking Time Test (MTT) instrument for testing during milking ('wet test') and is the result of a close cooperation with the International Dairy Federation IDF and Tine, the Norwegian dairy farmers cooperative.

Malfunctioning pulsators also have a big impact on udder health and milk quality. The VaDia can be used for quick and easy Pulsator Testing and Falloff and Attachment Testing (ISO 5707 and 6690).
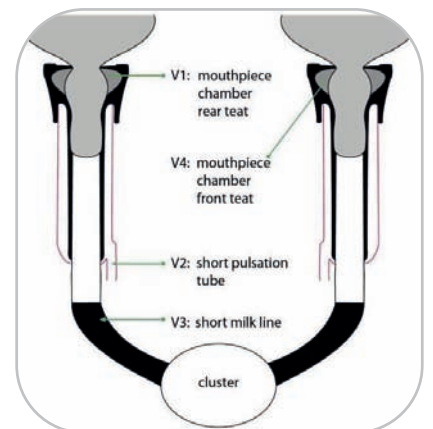
Milk line cleaning – Slug analysis, The cleaning of the milk line is assured through a few different processes. The VaDia is analyzing the physical aspect of the slug that is being sent through the milk line.

VaDia is battery operated and small and lightweight enough to be taped to a teatcup during milking. VaDia works completely 'stand-alone', which enables the adviser to forget about the actual measurement and concentrate on observing milking routines. The logged data is analyzed after or during milking with VaDia Suite, an easy-to-use PC-tool to view vacuum details and generate summary reports.

A Bluetooth streaming mode is available for real-time, in-parlor diagnostics. This is also handy for advisors, schools and practical farmers who can use VaDia as a training tool for new milkers and students. The new user interfase for VaDia Suite is adapted for touch screen use, allowing the user to see the data live and perform tests and recordings in the parlor as well as the VaDia Mobile for Android operating systems.


*Taped to cluster during milking*



V1: mouthpiece chamber rear teat
V4: mouthpiece chamber front teat
V2: short pulsation tube
V3: short milk line
cluster

*4 vacuum logging points*


*Small, lightweight, 'shell-curved'*


*4 vacuum channels, indicator light and watertight USB*


*Alkaline possible if rechargeable empty*

- 4 vacuum channels, 200 samples/second/channel, 8 hours logging capacity
- Log-file retrieved through USB
- Bluetooth true time streaming with 200 samples/second/channel
- Rechargeable AA battery, charging from PC-USB
  If battery is empty: Alkaline AA can be used for emergency
- VaDia Suite software for analyzing and report making
- Water resistant housing. 90x60x30 mm. 85 grams
- Up to 80 kPa, accuracy ± 0.2 kPa

developed in cooperation with TINE FIL IDF

# VaDia Suite PC Program for Analyzing and Report Making

**Fully integrated PC-software with modules for:**

- Milking Time Testing and Milking Registration

- Pulsator Testing (ISO 6690), Cluster Falloff and Attachment Testing (ISO 6690)

- Milk line cleaning – Slug analysis

New User Interface Adopted to Touch Screens

Automatic updates when you start up the PC program.

Comprehensive customer database and results from previous tests.

Available in many languages, including Asian languages.
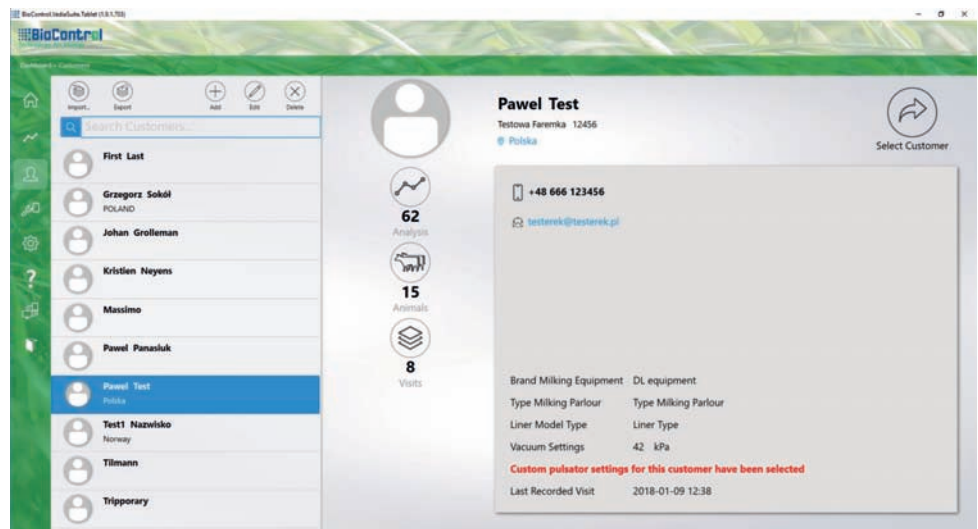


## VaDia Mobile for Android

- View vacuum in real time

- Up to 4 VaDia devices connected at once

- Live Pulsator Test results

- Milk line cleaning – Slug analysis

- Easily create, browse and share reports
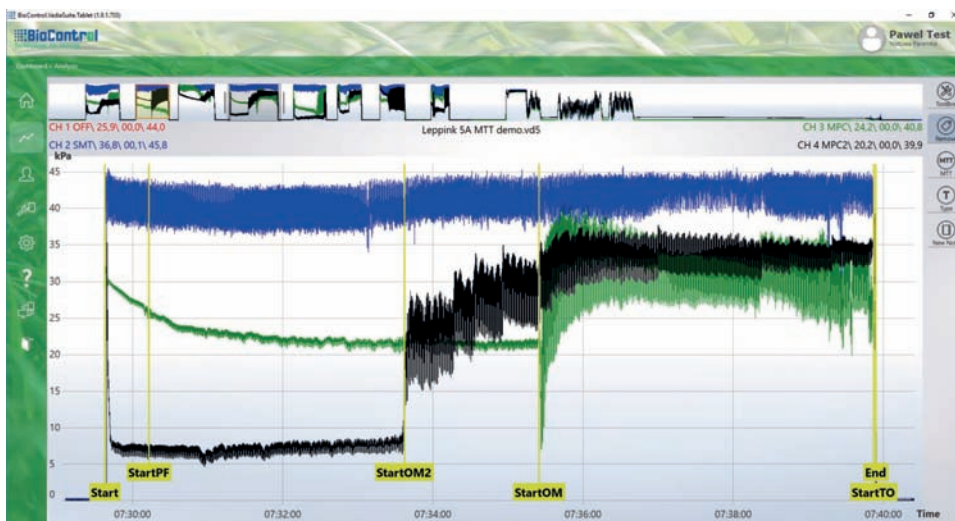
- Quick print results on the 2" thermal printer
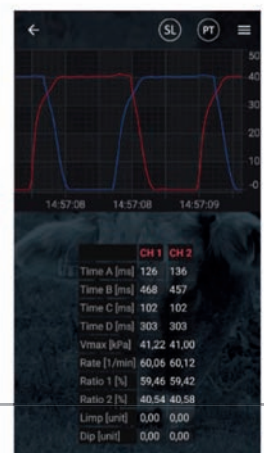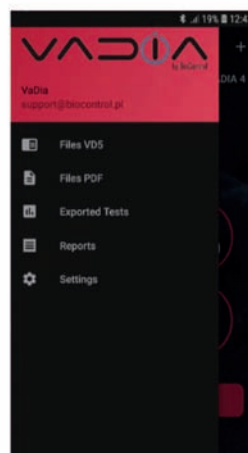


Reports made as pdf for easy storing and emailing.

Deviations from target values highlighted.

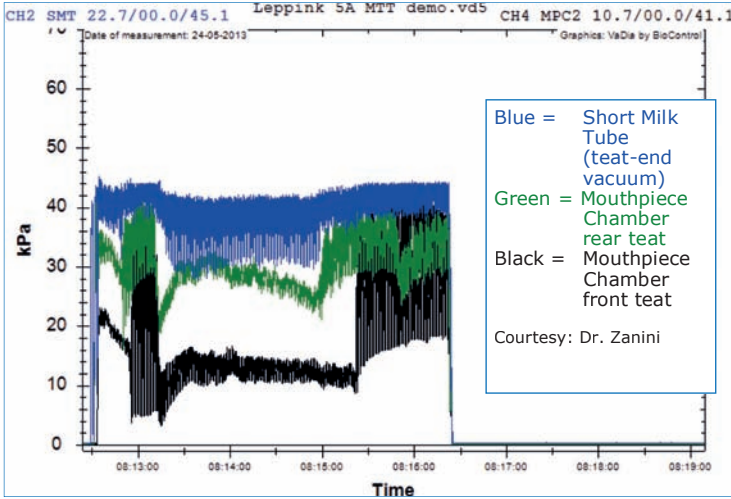Reports with summary page and chosen information from tests.



Easy Bluetooth streaming with fast insertion of pulsator number.

For all brands and types of milking equipment, including robots.

# Analyze Data Gathered with the VaDia

Analyze Milking Time Test results and get information regarding: preparation time, let down time, peak flow time and vacuum, Mouth Piece Chamber and Short Milk Tube vacuums, overmilking, irregular vacuum fluctuations, etc.



Blue =   Short Milk Tube (teat-end vacuum)

Green =   Mouthpiece Chamber rear teat

Black =   Mouthpiece Chamber front teat

Courtesy: Dr. Zanini

*Bimodal milk release, significant overmilking*



*Record information during milking*



*Correct timing of A, B, C and D is imperative for proper udder management*
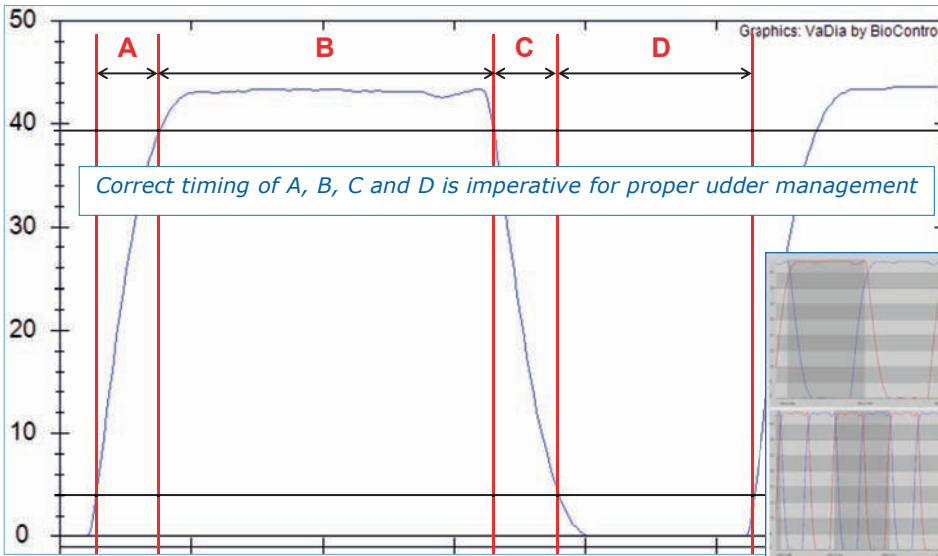
Compare pulsator and vacuum with customer set targets.

*VaDia Suite Pulsator Test Results*



Milk line cleaning – Slug analysis, The cleaning of the milk line is assured through a few different processes. The VaDia is analyzing the physical aspect of the slug that is being sent through the milk line.



| Scale | kPa |
|---|---|
| Velocity | 13,61 |
| Slug Length (sec) | 2,41 |
| Distance | 10 |
| Diameter | 48,00 |
| Vacuum drop | 29,2 |
| Work Vacuum | 42 |

**BioControl**
Technology for biology

# The VaDia gives you...

## Easy Milking Time Test

VaDia can be used for vacuum logging during milking to better analyze milking routines and milking equipment in order to improve udder health and milk quality. Bluetooth streaming data enables immediate, in-parlor results.

VaDia works completely 'stand-alone', which enables the advisor to concentrate on observing milking routines. VaDia can be used on all brands and types of milking equipment, including robots.

### Get insight into:

- Proper cow preparation (fast milk release)
- Overmilking
- Automatic take-off functioning
- Do these liners fit these teats?
- Vacuum level and fluctuations
- Average teat-end vacuum during peak flow

## Fast Pulsator Testing

Correct timing of the A, B, C and D-phases is important to ensure fast and complete milking. Correct vacuum build-up in the pulsator channels is necessary to ensure proper liner opening and closing.

The VaDia Suite PC-software is equipped with a Pulsator Test module for fast and easy pulsator 'dry-testing' according to ISO 6690 and for detailed analysis during milking in the Milking Time Test.

### Pulsator testing can be done:

- Online (Bluetooth streaming for immediate result during the test)
- Offline (analyzing all pulsator data after the test)

## Cluster Falloff and Attachment Test

The objective of the cluster falloff and attachment test is to test if the vacuum recovery is in accordance with the ISO 6690 standard, which is mandatory in certain countries.

The VaDia Suite contains a module to test if the vacuum recovery is according to the standard.

### Get information regarding:

- Undershoot
- Vacuum drop
- Overshoot

# VaDia is easily attached to the milking cluster


*needle pierces ´straw´ in liner*


*straw in Mouth Piece Chamber*


*piercing straw in Short Milk Tube*


*fits every milking cluster*


*VaDia on cluster, ready for milking*


*VaDia on robot*

# Complete VaDia Startup kit:



VaDia kit in robust case:

- 2 x VaDia
- USB cable
- Power supply
- Piercing needle
- Roll of silicon tube
- Accessory kit



One User license for Full VaDia Suite software :

- Milking Time Testing and Milking Registration
- Pulsator Testing and Fall-Off Testing
- Milk line cleaning – Slug analysis

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Specification may be changed without prior notice.