



ROTARY MILKING PARLOUR FOR GOATS (36 MILKING PLACES)



Type of milking system: **Rotary 36**

Stall Construction material: **100 % Hot galvanized**

Components material: **100 % Stainless steel**

Capacity: **1 x 36**

Name: **Elizebeth**

GENERAL IDEA

Agromasters designs and manufactures for more than 15 years advanced rotary milking systems for sheep and goats. Due to the shape & layout of rotary, it is recommended for large dairy farms.

In Rotary milking parlours, animals are walking into a revolving platform, while they are being milked. Animals are entering in the milking system through a ramp and after taking their positions, milking process begins **internally**.

The platform is operating continuously at constant speed. Platform speed can be adjusted according to the period of milking. The platform speed and automatic feeding system is controlled automatically via the control panel.

The heavy constructed rotary is escorted with individual stalling & feeding, hot galvanized ramp and Silo. The Automatic Feeding System was designed to deliver predefined feed ratio for each animal. The Floor of the platform is anti-slippery & provides safe environment .

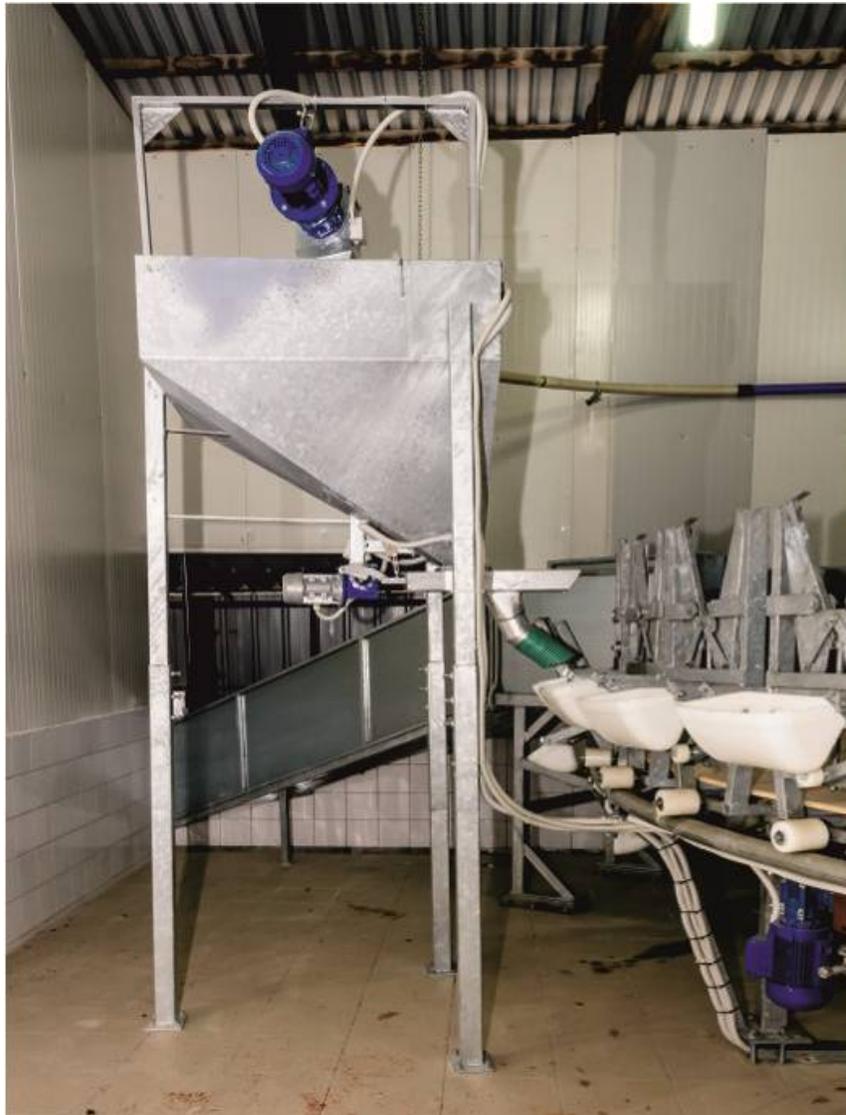
The Heart of the rotary milking system is the rotary gland. Agromasters has engineered its rotary glands to be the most technologically advanced.

All parts of the assembly are constructed from material that withstands tough working conditions.

BENEFITS OF ROTARY PARLOURS

- The main advantage of Rotary milking System is the annihilation of dead periods between the entry & exit of the animals, thus allowing continuous flow during milking process. By this way we can milk almost double number of animals comparing the traditional rapid exit and linear systems.
- We can adjust the rotation speed of the platform via the central control panel according to the quantity of milk that animals have that specific period.
- There is no requirement for special concrete constructions for the milking parlor, but just straight floor for installation of rotary platform
- One only person is required for attaching milking cluster , automatic release of milking cluster is optional and is provided with ACR or Herd management system
- Each milking cluster is escorted with automatic valves. Automatic valves automatically shut off vacuum after the end of milking, so there are no vacuum losses.
- The platform is escorted with a security system at the exit, in order to avoid any animal injury while exiting the platform
- Each Rotary Platform is escorted with its own automatic feeding system, 500 kg hot galvanized silo and an entrance & exit ramp
- Agromasters integrates superior quality milking technology to its equipment.







TECHNICAL FEATURES

A. ROTARY PLATFORM

The heavy constructed platform offers durability of the whole system. The anti-slippery floor provides safe environment for the animals

The operation of the milking system is controlled by Poseidon washing unit via one single button (Milking and washing button) & rotation speed of the platform is controlled by the central electrical panel .

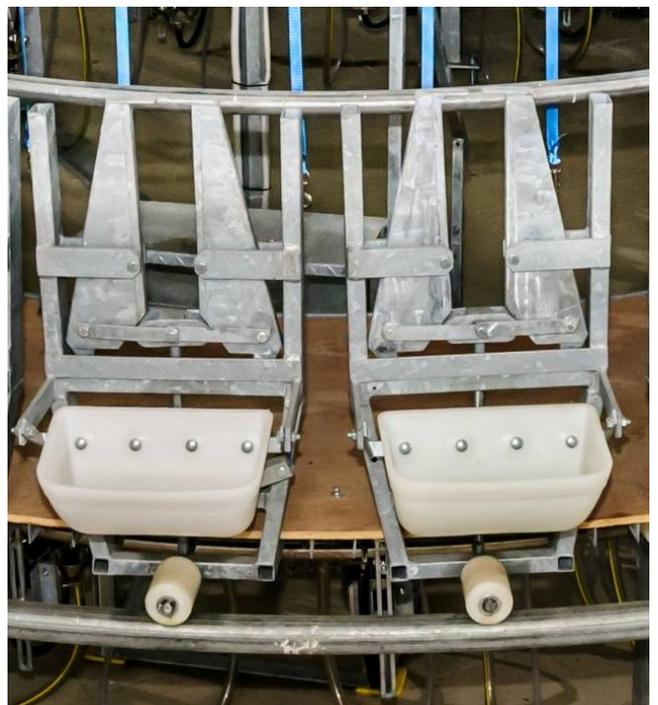
The heart of rotary milking systems is the Rotary gland .agromasters has engineered its rotary glands to be the most technologically advanced. Advanced engineering polymer is being used for electrical connection rings. Fabricated and developed in our facilities.

B .STALL SYSTEM

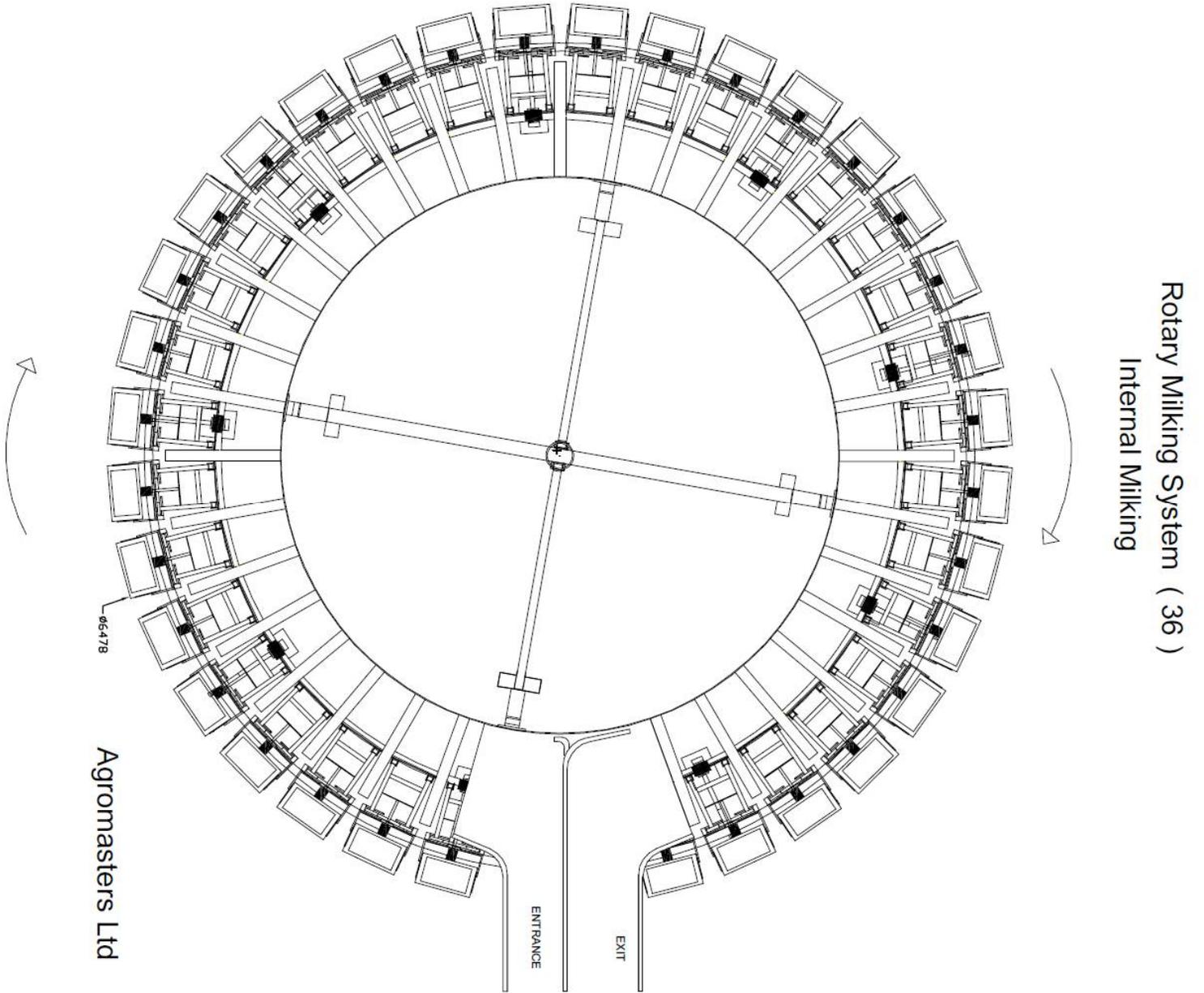
The stall system includes 36 Individual stalls that include automatic entrapment while entering the rotary platform & automatic release after the end of milking process.

The individual stall is 100% hot galvanized but can be manufactured in **Stainless steel optionally**.

Each individual place is equipped with polyester trough as well. The solid construction satisfies the needs of a modern livestock farm and gives durability against any spoilage.



C. GROUND PLAN CAROUZEL PLATFORM



D. MILKING SYSTEM

1. TUBES

We use Stainless steel tubes for milk (63 mm) & water (51 mm) in order to achieve perfect milking & washing. We use hot galvanized tubes for Vacuum (51 mm).

2. VACUUM SYSTEM

➤ UNITS : 1

Every Rotary milking system is equipped with 1 vacuum pumps of **3300 L each.**

All the vacuum pumps are auto - ventilated. We choose durable vacuum pumps which will give adequate & stable vacuum for the whole milking system .

Every single vacuum pump is escorted with its own silencer, oil can , belt stretcher , pulley , 10 HP electrical motor , protection cover.

Every vacuum pump is integrated on a hot galvanized bracket and on a 100 Litre hot galvanized vacuum tank .

Each unit is escorted with its vacuum regulator & vacuum gauge.



3. ELECTRONIC PULSATORS NT 24

➤ UNITS : 18

We install 2- exit electronic Pulsator for every 2 milking units . In total 18 pulsators per milking parlour. Agromasters NT 24 provides highly reliable operation. With its streamlined design, they are easy to install, and almost maintenance-free. Due to its low power consumption (200mA).



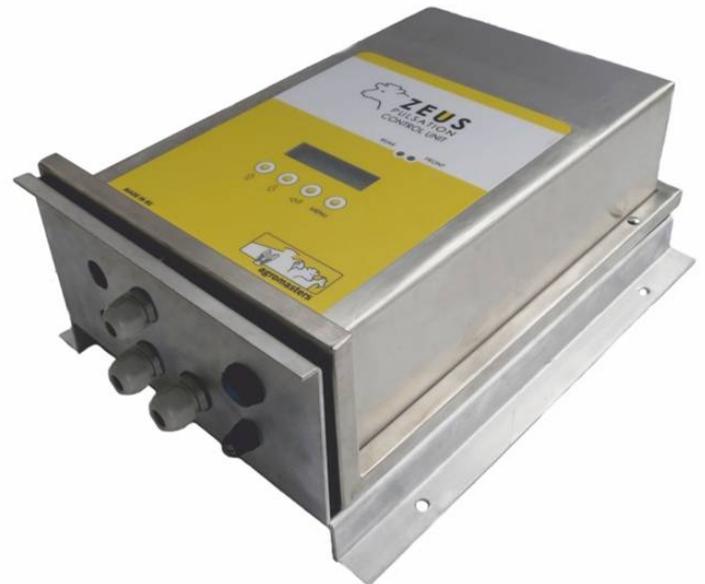
4. ZEUS PULSATION CONTROL UNIT

➤ UNITS : 1

it is capable of supplying power to a maximum of 24 electronic pulsators. It consists of 4 channels depending on the model. Each channel can synchronize & supply power up to 6 pulsators.

The Zeus control unit is specially designed for NT 24 electronic pulsators. NT 24 pulsators have minimum demands in terms of vacuum and very low energy consumption (200 mA).

The totally sealed construction of the enclosure, provides protection against any kind of moisture and humidity. The aluminium and stainless steel material add robustness to the whole product design. .





TECHNICAL CHARACTERISTICS

- * Escorted with LCD display for function check and configuration.
- * indication of current consumption on each channel .
- * Indication of Voltage supplied to pulsators.
- * Phases configuration .
- * Pulsation rate configuration (10-190 pulses / min).
- * Pulsation ratio configuration (10:90 – 90:10)
- * Indication of front and rear pulsation ratio (green and red light)
- * Easy to remove stainless steel cover for PCB check & service.
- * Auto-cooled power supply
- * Protection against short circuit , voltage overload , over temperature.

5. POSEIDON WASHING UNIT

➤ UNITS : 1

Each Rotary parlour has its own washing machine.

Each Poseidon washing unit will be escorted with its own drain valve , stainless steel water tank 70 litre and the proportional peristaltic pumps .

The **Poseidon II** washing unit is simple to use and controls parlour's milking & washing process via one single button (washing – 0 – milking).

It is available with 2 washing programs & 4 different phases for complete management of washing cycle. The large screen of the controller allows the observation of all the stages of the washing cycle (phases , programs , total washing time) .



Moreover we can make any modifications at the existing program by just entering the menu.

Both peristaltic pumps are responsible for absorbing automatically the quantities of acid and alcalic liquids, that we pre determine .

6. MILK RECEIVER

➤ UNITS : 1

The **HECTOR I** Glass Receiver is specially designed for RTS & goats milking installations. The 30 L receiver incorporates a unique design. Glass material enables the observation of milking and washing process.

The upper and bottom lids are made of stainless steel and escorted with the necessary gaskets to ensure perfect foreclosure . The central & downward base of the receiver are from Stainless steel and specially designed for this type of Receiver.

The stainless steel closing system allows the end user to empty the remaining quantity of milk.



7. MILK PUMP

➤ UNITS : 1

Rotary parlour is equipped with 100% stainless steel.

The pump is equipped with 0.75 HP electrical motor

S/S Base , S/S protection cover ,S/S impeller.

The pump is connected with S/S expanding couplings to the milk receiver.



8 SANITARY TRAPS

➤ UNITS : 1

Hermes Sanitary trap is 100 % made of stainless steel. It separates the milking part of the system from the just vacuum side of the system.

It also protects the vacuum pump from moisture and dirt that might be sucked up through the vacuum lines by accident. It supplies the receiver with vacuum and then transfers it to the milking units



9. CONNECTIONS

For tube connections we use **only** S/S expanding couplings of various diameters .

S/S milk entries of various sizes 14 -16 mm ,
16 -18 mm.

S/S supports for washing jettors.

S/S u-bolts , 63 mm , 38 mm, 51 mm

S/S bendings

S/S 3 way switch

S/S milk filter





agromasters

The image shows a complex industrial distillation system. A large, clear glass receiver is suspended vertically, connected to a network of stainless steel pipes. To the right, a control panel features a red emergency stop button, a black rotary knob, and two analog gauges. Below the control panel is a stainless steel collection tray with two funnel-shaped outlets. The entire setup is mounted on a sturdy metal frame. The background shows a tiled wall and other industrial equipment.

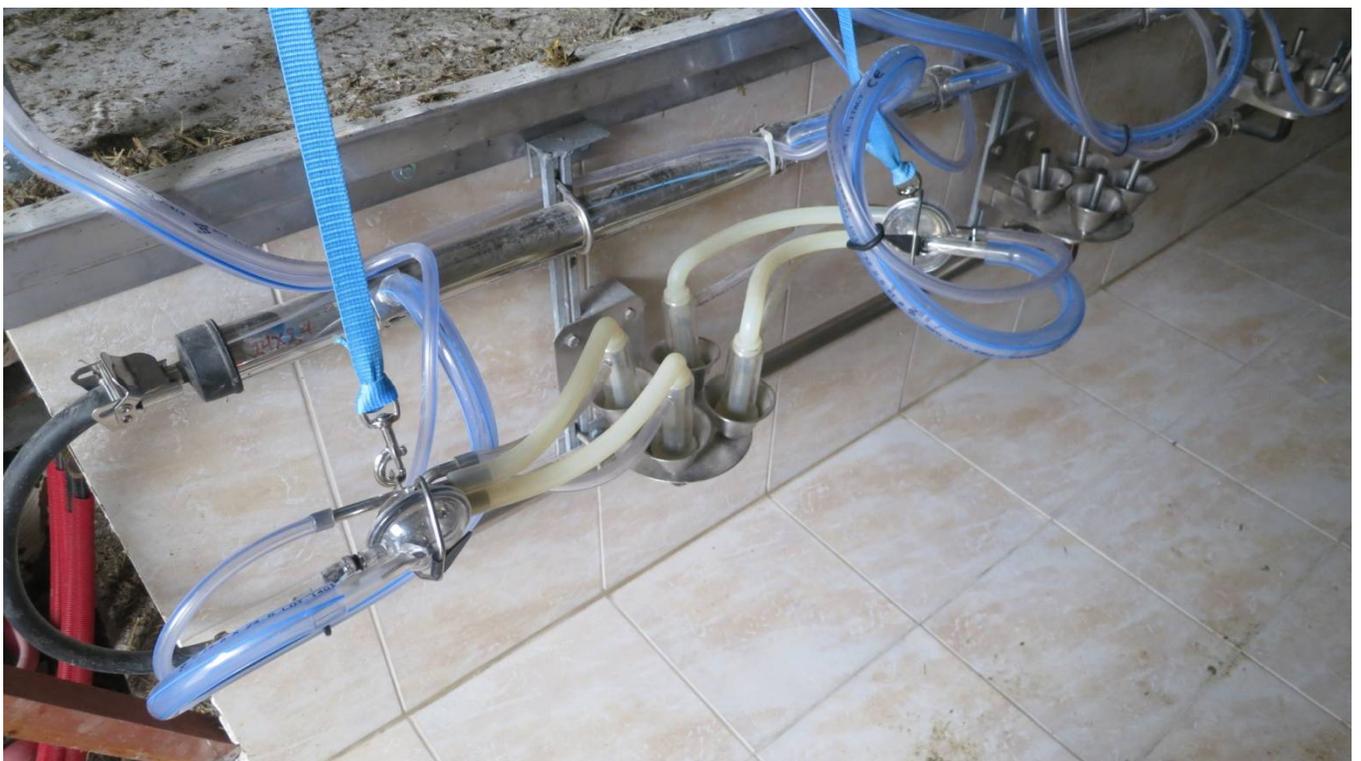
10. JETTERS

➤ UNITS : 18

The Triton II washing Jettors is a high quality product (100% Stainless steel) for sheep & goats, made in agromasters .

It is an important part of the milking machine and it must work effectively, not harm the silicone liner and be easy to use and suitable for even the most demanding parlour conditions. It is mounted on the wash line of the milking parlour. The specially designed stainless steel clip in holders ensure fast accurate placement of the milking clusters with minimum oscillations due its durable material .

The bended Stainless steel chamber contributes to optimum washing of silicone liners (internally and externally).



11. MILKING CLUSTERS

➤ UNITS : 36



The **Athena** high performance milking cluster is an alternative solution for milking effectively sheep & goats.

The flawless design & circular shape of the **Odysseus** stainless steel claw , makes it comfortable to handle . The stainless steel bended air splitter & hanger adds durability under severe working conditions . The thick transparent poly-carbonate lid contributes to maximum resistance against alkalics and acids.

The thermoplastic automatic valves in co-operation with the Stainless steel claw, contribute in optimum vacuum shut off before & after milking process , thus avoiding undesirable consumption of vacuum and suck up of dirt.

Short silicone liner promotes healthy udders, hygiene milking and gentle treatment of the teats (3 years maximum time of usage).

HERD MANAGEMENT SYSTEM FOR GOATS

11. Pandora II Milk meter

➤ UNITS : 36

Developed with both the operator and the animal in mind, the whole system provides solutions for milk quality and dairy herd management. This next-generation milking Assistant is user and maintenance friendly and can be easily fitted to any milking parlor.

Pandora II Milk meter allows for accurate measurement of smaller milk yields, making it very well suited not only for cows and buffalo, but also for small animals, such as sheep and goats

Its network of Milk Point Controllers (MPCs) , controls essential milking functions, such as pulsation control and cluster takeoff, and provides valuable information to the milker, including milk yield, flow rate, milking duration and milk temperature, as well as the electrical conductivity of the milk

When the MPCs are linked to a computer, the above data on milk quality is supplemented by data on animal health and fertility, including animal identification, parlor codes, lactations, inseminations . This Information is accessible both in the parlor (on the MPCs) and on the computer.

Main Characteristics of Pandora II milk meter

- Milk yield measurement accuracy within $\pm 5\%$ (target – not yet reached)
- Milk temperature measurement accuracy within $\pm 0.1\%$
- Measurement of electrical conductivity of milk; used as a management tool indicating of early Mastitis
- Measurement of milk flow rate and total yield
- Immediate kick off detection (3 to 5 seconds)



12. Herd management software

➤ UNITS : 1

By integrating all the system's components, Herd management software can automatically and accurately collect, analyze, monitor and manage the general herd's and the individual sheep and goats's status and generate reports to assist daily decision making and offer ongoing dairy management support.

- High resolution, continuous monitoring of production
- Risk reduction (e.g. prevents mistakes: antibiotic milk withdrawal)
- Advanced and early detection of illness
- Linked to different animal identification (from manual to fully automatic ID), per stall and at the entry of the parlor
- Information can be accessed on a daily basis, in the parlor and on the PC
- It provides total control over the milking process and other production factors such as prolificacy and offspring losses. It allows better control over the animals in the herd thus maximizing profits.

| Cow # | Tag # | Date of birth | Lactation # | Calving date | Last event | Days from last event |
|-------|-------|---------------|-------------|--------------|--------------|----------------------|
| 503 | 4394 | 01/12/2008 | 1 | 18/12/2010 | Insemination | 31 |

| Identity | Lactations events | Graph | Milk |
|----------|-------------------|-------|------|
|----------|-------------------|-------|------|

Milk information for the last 10 days

Avg. for all
 Avg. for herd
 Avg. for group

| Date | Milk yield | | | | Max. conductivity | | | | Max. temperature | | | |
|---------------|------------|-------|------|-------|-------------------|------|------|---------|------------------|------|------|---------|
| | 1 | 2 | 3 | Total | 1 | 2 | 3 | Average | 1 | 2 | 3 | Average |
| Average | 15.9 | 17.5 | 14.4 | 47.9 | 8.9 | 8.9 | 8.8 | 8.9 | 35.9 | 34.6 | 35.0 | 35.2 |
| Last 24 hours | 13.8 | 12.9 | 14.9 | 41.6 | 8.9 | 10.2 | 8.3 | 9.1 | 35.1 | 37.2 | 34.5 | 35.6 |
| Deviation [%] | -13.2 | -26.3 | 3.5 | -13.2 | 1.1 | 14.6 | -5.7 | 2.2 | -2.2 | 7.5 | -1.4 | 1.1 |
| Avg. for herd | | | | 38.8 | | | | 8.9 | | | | 35.5 |
| 11/07/2011 | 13.8 | 12.9 | 13.8 | 40.5 | 8.9 | 10.2 | 9.1 | 9.4 | 35.1 | 37.2 | 36.3 | 36.2 |
| 10/07/2011 | 15.8 | 20.3 | 14.9 | 51.0 | 9.1 | 7.3 | 8.3 | 8.2 | 36.1 | 15.0 | 34.5 | 28.5 |
| 09/07/2011 | 16.6 | 13.7 | 14.8 | 45.1 | 8.0 | 8.7 | 9.1 | 8.6 | 34.6 | 37.5 | 36.8 | 36.3 |
| 08/07/2011 | 16.2 | 24.6 | 14.7 | 55.5 | 8.3 | 9.3 | 8.9 | 8.8 | 36.9 | 37.5 | 37.7 | 37.4 |
| 07/07/2011 | 17.1 | 25.0 | 13.8 | 55.9 | 9.1 | 10.5 | 9.5 | 9.7 | 36.7 | 36.9 | 37.0 | 36.9 |
| 06/07/2011 | 16.2 | 13.7 | 14.4 | 44.3 | 8.5 | 8.7 | 8.5 | 8.6 | 35.3 | 35.6 | 37.3 | 36.1 |
| 05/07/2011 | 14.0 | 13.0 | 13.9 | 40.9 | 8.5 | 8.9 | 9.1 | 8.8 | 34.8 | 37.5 | 37.7 | 36.7 |
| 04/07/2011 | 13.2 | 14.6 | 20.7 | 48.5 | 9.3 | 9.3 | 7.7 | 8.8 | 36.5 | 36.7 | 16.0 | 29.7 |
| 03/07/2011 | 16.0 | 21.3 | 15.5 | 52.8 | 9.1 | 8.5 | 9.1 | 8.9 | 35.1 | 36.0 | 37.1 | 36.1 |
| 02/07/2011 | 16.9 | 15.1 | 8.0 | 40.0 | 8.9 | 8.5 | 8.2 | 8.5 | 36.1 | 36.2 | 37.5 | 36.6 |

Milk yield
 Max. conductivity
 Max. temperature
 Milk flow
 Duration
 Start time

12. Tiris Leg Tag for Goats

- UNITS : 1500



13. Individual antenna

- UNITS : 36

Each Milking point is equipped with its individual antenna thus offering the dairy manager a reliable animal ID system. Antennas transmit and receive all data from LRP/passive tags and then integrate them fluently with the EcoHerd system which processes the data and generates accurate, on the spot reliable reports regarding the animal's production and welfare.

14. Sorting Gate

- UNITS : 1

A sort gate can be located near the milking parlor and sick, problematic or any other specific batch of animals can be sorted and treated by either the vet or another worker later.

Herd management software automatically traces the animals that need your attention every day. All you need to do is define the criteria for animals requiring attention and the software does the rest. It controls the sort gates and separates the animals into their respective treatment areas according to your predefined instructions

The integrated update on Herd management software is used for efficiently isolating animals for treatment. It enables quick checking/treatment of animals and avoids the need to stroll over large areas seeking out the animals for treatment.

