





Live Life Lely

Since its establishment, Lely has always been committed to improving the quality of life of agricultural entrepreneurs as well as the future of the sector. In addition, the company is innovative in its products as well as its concepts for marketing and distribution.

- Lely is committed to helping farmers ahead of market developments
- Lely always supplies the most innovative products to farmers and contractors
- Lely provides customers with optimum customer service
- Everything Lely invents will always serve to make life easier for the benefit of both man and animal as well as providing joy to all our employees

In short: we at Lely do our work in order to serve farmers and to make their lives as enjoyable as possible. From grassland machinery to the automatic milking system, Lely thinks with the farmer and has offered him innovative solutions for the past 60 years.



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LELY QWES-H/HR

Infrared detection system



Close monitoring of your cow herd:
heat detection and general condition



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innovators in agriculture



Infrared-based identification with heat detection system will provide accurate information on cow activity

SCR developed the Lely Qwes-H and Lely Qwes-HR monitoring system, which will identify the cow and measure cow's activity. The additional functionality of the Qwes-HR system is that it also measures the cow's ruminating activity, which is an indication of the cow's health. The activity measurement is based on an acceleration sensor instead of the commonly used mercury ones. Mercury is already prohibited in many countries. The system will monitor a cow's activity in blocks of 2 hours and thus provide very accurate information on the cow's behaviour.

The Lely Qwes-H and Lely Qwes-HR monitoring system is compatible with Lely's Astronaut A3 milking robot. A big advantage of the system is also that the infrared identification units, which download the information, can be mounted in several places in barn, such as in the robotic milking system, out-of-parlour feeder, near water trough, etc. Consequently, there are many more possibilities to download the information more rapidly, to obtain up-to-date cow information.

Integrated neck tag

The tag is attached to the upper part of the cow's neck with a collar and weight in such a way that parasite movements are prevented. The tag is protected from mechanical damage and is easier to attach to the cow. Compared to the leg attachment, the tag is better protected against damage.

Infrared communication

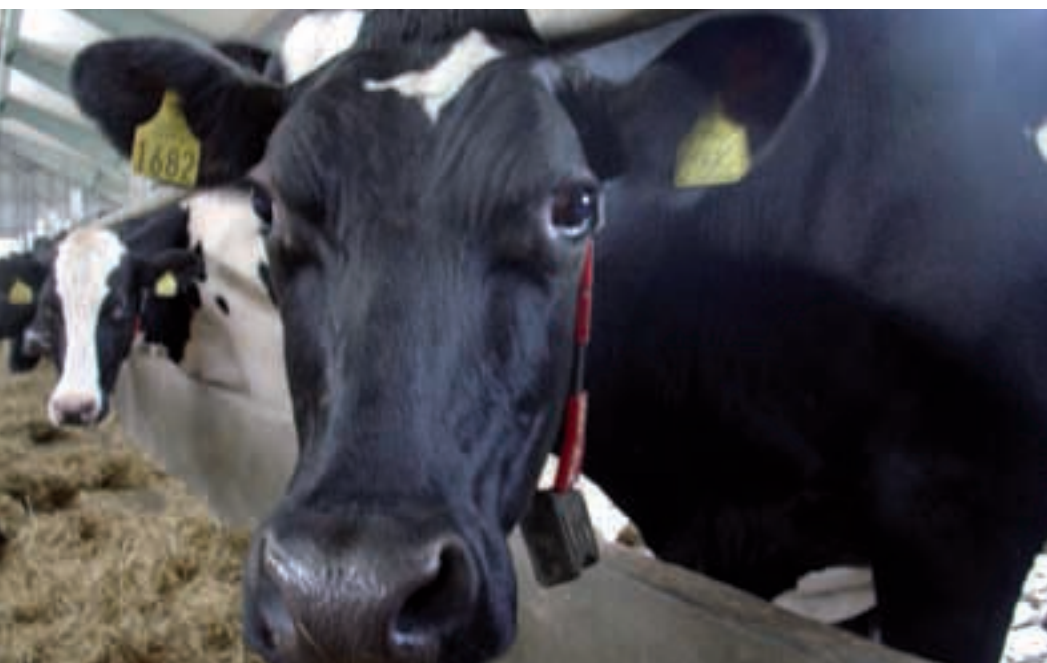
An additional unique feature of this system is the communication method between the tag and the ID Unit. SCR has chosen IR communication (similar to a home remote control).

The main advantages of this method are:

- Reliable communication between the tag and the ID unit.
- Enables increased distance between the tag and the ID unit.
- Prevention of cross-identification between tag and ID unit (crucial for reliable identification in the milking system).
- No interference when working in conjunction with RFID tags (such as TIRIS).
- No legalisation or regulation limitations.
- Possibility to download information from several places in the barn.

Activity measurement

The activity is measured by a unique method. The tag includes an acceleration sensor, microprocessor and memory, which enable the recording of a general activity index. This index quantifies all the cow's movements such as: walking, running, lying down, standing up, head movements, etc. The activity index is stored separately in the tag's memory every two hours. This separate recording enables you to monitor the cow's activity over time with great accuracy, regardless of the time intervals between the tag readings. The additional information together with the T4C management software, also allows you to differentiate abnormal activity associated with oestrus from other activities such as walking to the pasture or any other occasional activities. The tag can store data for up to 24 hours.





Lely Qwes-H: Identification and heat detection.



Lely Qwes-HR: Identification, heat detection and rumination activity measurement.

Rumination activity measurement

New Lely Qwes-HR collars offer you the earliest available information on cow health problems. Monitoring cow health with the Qwes-HR rumination, heat control and cow identification system offers the dairy farmer a completely new tool to monitor his cows. With the aid of this information, dairy farmers can improve the general health of their herds. The improved health status will increase milk production.

Changes in rumination are the earliest sign we can obtain from cows to warn us about potential problems. The earlier a farmer can obtain critical information on a health problem, the cheaper the problem normally is to deal with. The Lely Qwes-HR measures the rumination of the cows together with their activity. This information combined with a cow identification system, creates a totally new concept for neck collars.

Rumination activity is critical for every ruminating animal's health. The chewing activity of a cow produces saliva. Saliva buffers rumen Ph. Saliva production will decrease when the rumination of the cow decreases. When a cow eats too much concentrate in relation to effective fibre, the cow's rumination, saliva production and rumen Ph will decrease.

The use of Lely Qwes-HR collars enables the dairy farmer to obtain information about the whole herd as well as individual cows. If either the feed management or feed quality changes, the farmer can follow the cows' rumination activity and make

the necessary adjustments at an early stage. A good example of this practice is the transition of cows from one paddock to another. Qwes-HR collars also indicate the influence of weather on a cow's performance and general herd appetite.

In addition, Lely Qwes-HR rumination control makes herd management easier. The dairy farmer can set and modify the parameters according to his specific requirements. The system also enables the preparation of feeding programmes according to rumen performance and milk production. With the aid of early indication of any illness influencing a cow's appetite, a farmer can also reduce the incidence of clinical and sub-clinical metabolic diseases of the entire herd.

With the Lely Qwes-HR rumination-time monitoring technology we can obtain indicators of individual animal health. A sudden reduction in rumination activity compared to a cow's normal rumination time perhaps indicates that the cow has lost her appetite, has eaten too much concentrate per kg effective fibre, is in heat or ill. Continued loss of appetite can be an indicator of sub-clinical ketosis or acidosis. This gives a dairy farmer an early signal so that he can increase the forage level in the diet.

Together with heat detection, the Lely Qwes-HR collar gives the farmer on-line information about each individual cow's rumination, which serves as an indicator of the cow's health and provides information for feeding and management.