

We understand data, We protect health.



Early warning system for
healthier animals.



Early Disease
Detection



Data-Driven Farm
Management



Body Core
Temperature
Monitoring



Increased Farm
Profitability



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What is wiCow ?

wiCow is an early warning system designed to help dairy farms **monitor animal health** more easily and reliably.

By analyzing real time body temperature and physiological data, it provides timely alerts for health issues, estrus, and calving; supporting healthier cows, more efficient farms, and sustainable dairy production.



Estrus
Detection



Data Driven
Decisions



Real-time
Monitoring



Calving
Alerts

About us

Build with passion. Driven by purpose.

muTech GmbH was founded in 2019 in Hannover with the vision to revolutionize livestock monitoring through data-driven technologies.

We are a global engineering company developing intelligent technologies that make invisible health and heat stress challenges in dairy farming visible, measurable, and actionable.

Driven by a passion for animal welfare and precision livestock farming, we have spent the last decade transforming scientific research into practical solutions that improve productivity, sustainability, and farm profitability.





Smart Monitoring

wiCow enables each animal to be monitored individually through an intravaginal sensor. The sensor continuously measures the cow's body temperature, activity, and vaginal contractility. By evaluating these measurements, the system detects calving and estrus with high accuracy. At the same time, it provides an overall health overview of the herd.

1



Health & Reproduction Monitoring

wiCow monitors body temperature and physiological data in real time to support early fever detection, estrus tracking, 24-hour advance calving alerts, and calving start notifications. This helps farmers act at the right time for both health and reproduction management.

2



Smart Farm Management

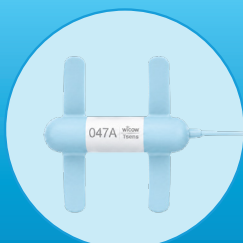
wiCow makes herd management easier with 7/24 mobile monitoring, farm statistics, and critical alert notifications. Farmers can follow important updates remotely and make faster, data-driven decisions.

3



Practical & Reliable Technology

Designed for daily farm use, wiCow offers wireless connection, long battery life, reusable sensors, medical-grade material, and compatibility with different cattle breeds. It provides a safe, practical, and sustainable solution for modern dairy farms.



The wiCow intravaginal sensor is the only system on the market that measures core body temperature and is fully reusable.

wiCow System Setup



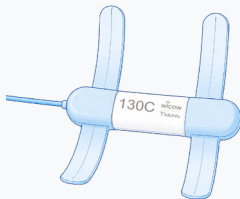
wiCow is easy to install with user guides and technical support. Repeater devices are placed inside the barn, while the Base Station is positioned in the management office. After setup, farmers can start monitoring herd health through the wiCow mobile app or web platform.



How wiCow Works ?

1

Vaginal Sensor



Measures core body, temperature, uterine contractility and activity in real time.

2

Repeater



Expands wireless coverage inside the barn and strengthens data transmission.

3

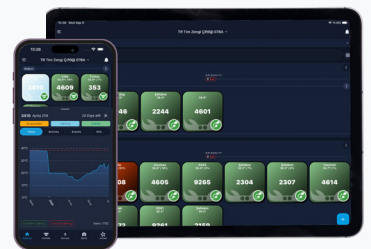
Basestation



Receives sensor data, processes it and securely sends it to the cloud.

4

wiCow App



Allows farmer to monitor herd health from mobile or web anytime, anywhere.

Why wiCow ?



Reliable monitoring

24/7 health tracking with proven technology and 96% calving prediction accuracy.



Early Diagnosis

Helps detect health risk early and reduce difficult calving losses.



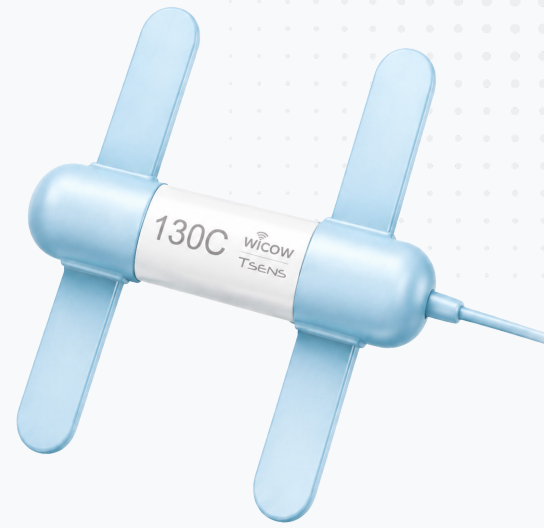
Efficient Reproduction

Supports estrus detection with 91% accuracy and helps reduce missed heats.

Tsens Smart Detection

Easy diagnosis, estrus and calving insights from one reusable sensor.

wiCow's intravaginal sensor monitors each animal individually, using real-time body temperature and physiological data to support early diagnosis, estrus detection, and timely calving alerts.



1

Health Monitoring



Core body temperature enables early detection of subclinical issues and supports healthier cows.

2

Early Diagnosis



Continuous monitoring helps reveal abnormal patterns early, allowing farmers to react before issues become serious.

3

Estrus Detection



Temperature, activity, and physiological signals help identify the right insemination timing and reduce missed heats.

4

Pregnancy & Calving



Tsens provides alerts up to 24 hours before calving and warns when calving is imminent.

5

High Fever Alert



Real time alerts help farmers act fast when it matters most.

6

Reusable Sensor



After disinfection, the sensor can be safely reused across different animals.



Calving Detection

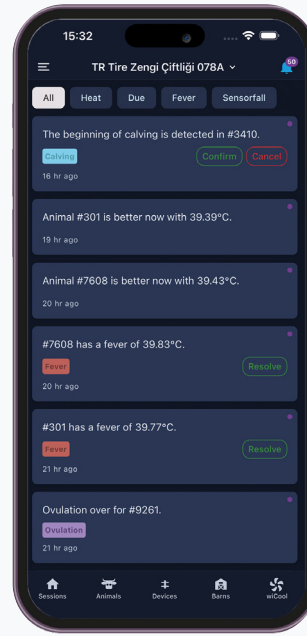
Timely alerts for
every critical stage.



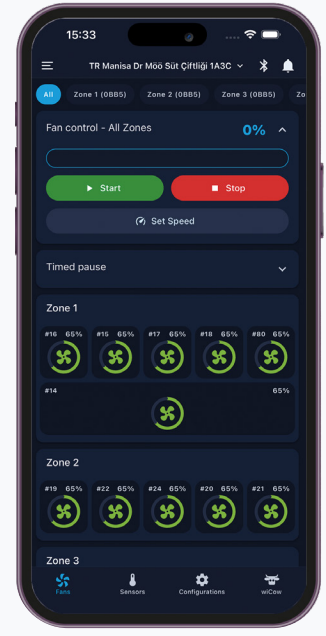
wiCow helps farmers **react at the right moment** by monitoring temperature and uterine activity. Timely alerts support safer calving and reduce losses.



24 Hours



Calving



Confirm



Before Calving

Identify high-risk conditions and prepare timely intervention.



During Calving

Notify farmers and veterinarians when assistance may be needed.



After Calving

Support follow-up, reduce losses, and improve recovery.



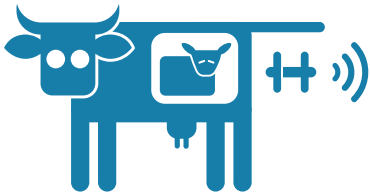
Focus

Supporting
healthier mothers
and calves.

When to Use Tsens

Apply the sensor at the right stage for better health and reproduction insights.

1 Pre-partum



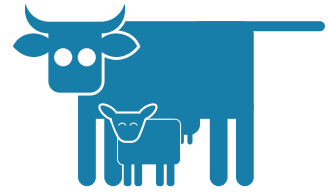
Apply 21 days before expected calving.

21 days



Post-partum

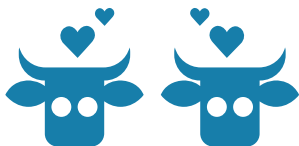
2



Apply 24-36 hours after placenta expulsion.

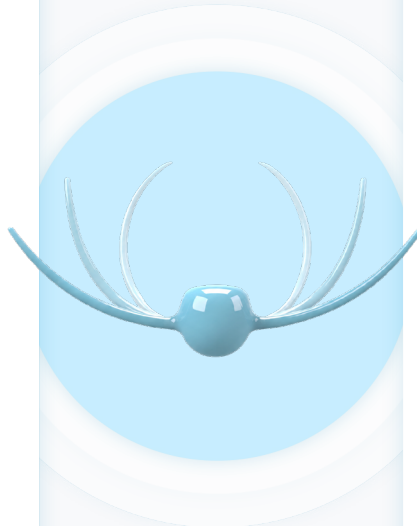
24-36 hours

3 Estrus



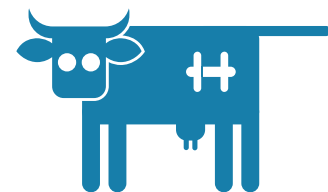
Use around 40 days after calving to support breeding decisions.

40 days



Dry period

4



Use during the first 15 days of the dry period.

15 days



Right stage

Apply at the right time for accurate insights.



Real-time insights

Monitor health, activity and reproduction.



Timely actions

Act early and improve animal well-being.



Better outcomes

Healthier cows. Stronger herds.

Tsens Sensor Features

wiCow TSens is designed to support better decisions in animal health and reproduction management.



Safe & Reliable



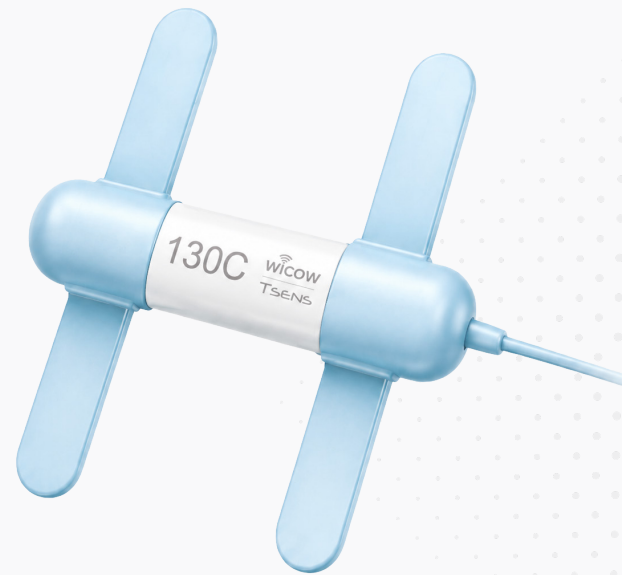
Accurate Monitoring



Long Lasting Performance



Smart & Connected



Intravaginal Use

Designed for safe and comfortable intravaginal use.



Anatomically Adapted

Shaped to fit the vaginal canal for optimal alignment.



Approved & Safe

Made from biocompatible materials and clinically validated.



Long Battery Life

Up to 6 months of use per single charge.



Continuous Smart Monitoring

Monitors temperature, activity and posture continuously and intelligently.



Durable & Water Resistant

Built to withstand challenging conditions with IP68 water resistance.



Easy Data Integration

Seamless data integration with your systems and software.

Technical Specifications



Temperature Range

30°C – 45°C



Temperature Sensitivity

±0.05°C accuracy



Motion Sensing

3-axis accelerometer



Connectivity

Radio Frequency Communication



Battery Life

Up to 10 years per charge



Water Resistance

IP67 certified



Size & Weight

135 mm × 32 mm × 13 mm/65 grams



Operating Temperature

–40°C to +85°C

Awards and Recognition

Our innovation has been recognized internationally.

2019



Plug and work

WINNER

2020



Start up

FINALIST



innovate!
award · competition · network
GERMAN AGRAR
STARTUP AWARD
1. PLATZ

Start up

FINALIST

2021



European
Product
Design
Award

FINALIST

workupagri

Accelerator Program

ALUMNI



ROOTCAMP

Accelerator Program

ALUMNI



Investment Program

RUNNER UP



Global Challenge

SELECTED

TechQuartier

WINNER



THIRD

2022

European
Innovation
Council



Accelerator Challenge
SEAL OF EXPERIENCE



TEST FARM



TÜRKİYE TEKNOLOJİ GELİŞTİRME VAKFI

Frequently Asked Questions



A. Core System & Benefits

1. What animal data does wiCow collect?

Our intravaginal sensor measures core body temperature, uterine contractions, and the animal's activity.

2. How long does the wiCow battery last?

Approximately 4 years.

3. Can the product be reused after the battery is empty?

No. The Tsens battery is not rechargeable.

4. What is the warranty period for wiCow?

The standard warranty period is 1 year and can be extended upon request.

5. What is the main difference that sets wiCow apart from other products?

wiCow focuses on monitoring the animal's metabolism rather than only tracking movement or behavior.



B. Setup, Connectivity & Operations

6. How many repeaters do we need to buy?

The number depends on farm size, wall materials, the number of cows in the barn, and the farm's location.

7. Why is the sensor cable visible?

The cable is intentionally exposed to support efficient transmission of sensor data to the base station.

8. Does the sensor cable attract the attention of other animals?

No. It stays hidden under the cow's tail while transmitting data to the base station.

9. What should we do if the sensor is lost, and how can we find it?

Check the cow's surroundings, especially areas where it may have become dislodged, and use the provided finder tool to locate it.

10. Can we track the cow's location using the sensor?

No.



C. Sensor Safety & Animal Comfort

11. Is there a risk that the wings of Tsens could damage the vaginal area?

Remove the front wing and leave only the blue wing on the sensor.

12. Does the sensor cause bleeding in animals?

Bleeding is rare if the sensor is correctly inserted. If it occurs, it may indicate improper placement or an injury and should be treated immediately. When properly inserted, the sensor does not cause harm. For more details, refer to our publication in ESAR.

13. Does the sensor cause damage to the vaginal area?

Properly designed sensors like wiCow do not interfere with the cow's urination.

14. Does the sensor prevent the cow from urinating or cause other harm?

No. The flexible wings and positioning do not cover the entire vaginal wall, allowing Tsens to adapt to the natural shape of the vaginal canal.

15. Can artificial insemination be performed while the sensor is in use?

Yes. The sensor is designed to allow artificial insemination during use.

16. Does the use of Tsens affect the vaginal flora?

No negative effect has been observed. The sensor is considered safe; see our laboratory results in ESAR.

17. Does the use of Tsens cause vaginal discharge?

As a foreign object, Tsens may initially trigger discharge as a natural reaction, but long-term use has not been shown to negatively affect vaginal flora.



D. Breeding & Field Application

18. Is wiCow suitable for block calving?

While Tsens can detect the estrus cycle, wiCow is not designed specifically for block calving systems.

19. What is the likelihood of the sensor falling off the animal?

The sensor loss rate is approximately 3%–5%.

20. How is the sensor applied to heifers?

Please refer to the presentation..



With **wiCow**,
healthier cows, stronger farms.

We combine smart technology and real-time insights to help you protect animal health, improve productivity and build a sustainable future for your farm.

Thank you for being part of the future of
smart farming.



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