



Technology Solutions Farm with **more freedom**





**Find freedom and flexibility
through a deeper connection
to your animals:**

SenseHub™ Dairy

SenseHub Dairy is for forward-thinking and progressive-minded dairy farmers who want individual animal and group health, reproduction, nutrition, and milk production insights - **all in one ecosystem, from calf to cow.**

Because, for dairy farmers, knowing when, where, and how to focus their time and resources, empowers them to more confidently **Farm with more freedom.**



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Over 8.6 Million Cows are monitored everyday by our ear tags and neck collars





INCEPTION

New Zealand - John Burford, of Delta Plastics, met dairy farmer, Brian Murphy to produce a flexible, plastic ear tag which was named Allflex in 1974

1955



INDIA

Allflex Livestock Intelligence started operations in India

2008



INTELLIGENCE

The Allflex Group enters the world of animal health monitoring through acquisition of SCR as platform for the future

2015



DIVERSIFICATION

With connected microchip enabled pet access solutions and feeders for Pets, SurePetcare further strengthen Allflex Group Microchip Business

2016



ACQUISITION

Allflex Livestock Intelligence joins MSD Animal Health

2019

We Speak Cow

Livestock Monitoring

Our solutions monitor millions of animals worldwide. Successful producers across the globe trust our solutions to help them optimize the productivity of every animal, increase efficiency and improve the wellbeing of their livestock.

Based on over 40 years of experience and innovation, our market-leading livestock monitoring solutions leverage breakthrough proven technologies and deep industry knowledge, and are backed by academic validation. They answer producers' most pressing challenges around productivity enhancement, providing actionable information and insight when and where farmers need it. Easy to use, scalable and modular, our systems are designed to adapt and grow as farmers' needs change.



Dataflow™ II System

The DataFlow™ II System is a real-time herd management solution. It provides the herd manager as well as the milking pit operator with a set of tools designed to help with daily tasks and work in a more efficient and productive way. The system provides powerful management tools, including reports, graphs, analytics, task lists, and lifetime cow card history. The system also enables control and support of other components, such as sorting gates, individual feeding, in-parlor messaging board, and others.

Advanced Herd Management Solution

Comprising hardware and software, the DataFlow II System controls the whole milking process and automatically collects and analyzes data from the monitoring tags.

- Online milking, monitoring, and milk production using FreeFlow™
- Heat detection and advanced health monitoring
- Graphs, reports and analysis the exact information you need when you need it!
- Daily task lists and actionable information
- Real-time notifications including labor-related alerts
- Synchronization and connectivity with third-party solutions

Easy to use and Flexible Solution

Our philosophy is to keep the user interface as simple as possible, avoiding complicated panels while delivering the right information at the right time.

Milking Operator:

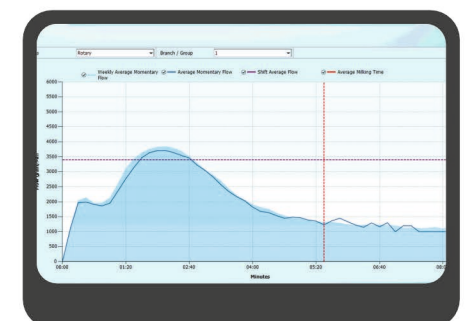
- The system presents only the exact information required for milking pit operation, at the individual MC200 milking points and on a central LCD screen
- Relevant information such as sick cows, dangerous cows, or cows that are under-producing, is visible at a glance from the milking point
- The operator is able to enter information directly from the pit

Herd Manager:

- Customizable interface, reports and graphs
- Full support for multiple users (such as herd manager, veterinarian or nutritionist), multiple herds, and different milking parlors
- All data can be accessed from distant locations, including home and mobile phone

Milking Control

Real-time milking parlor management - monitoring the milking Comprehensive information is displayed in easy-to-read reports and graphs.



SenseHub™ Dairy

SenseHub™ is a sophisticated, modular cow monitoring solution that delivers actionable information on the reproductive, health, nutritional and well-being status of individual cows and groups with easy to use user-interface mobile app, even remotely. Leveraging behaviour monitoring based on activity, rumination, eating and other proprietary key cow behavioral insights for veterinarian insights, our reproduction monitoring applications provide unmatched heat detection accuracy, including detection of weak heat signs, while minimizing false positives.



Individual Monitoring

Reproduction

- Assist in planning insemination with heat index (% of Estrus Expression)
- Assists in identifying optimum time of insemination with colour breeding window (with seperate window for Sexed Semen)

Health

- Distress alerts assist in identifying high risk cows which needs urgent attention
- Assists veterinarians for detecting efficacy of treatment

Group Monitoring

Nutrition

- Assists in improving nutrition strategy by quickly understanding how their cows react to ration changes

Wellbeing

- Assist in animal welfare with maximizing production and profitability for farmers

Summer Stress

- Identify herd discomfort due to environment and optimize mitigation measures

Heat

- Heat
- Cows with Irregular Heat
- Suspected for Abortion
- Anestrous Cows

Health

- Health
- Fresh Cow
- Animal to Inspect
- Distress
- Distress

Group

- Group Heat Stress
- Group Consistency
- Group Routine

Technology Outline

Monitor Multiple Behaviors Including

Rumination

Heavy Breathing

Activity

Eating/Grazing

- Applied on Neck
- Communication: 2.4GHz - 802.15.4
- Expected battery lifetime: 7 years
- Size: H x W: 84 x 64 mm (3.3 x 2.5 in)
- Waterproof (IP68) durability

Controller

- Area coverage: 200 x 500 m (656 x 1,640 ft)
- Connects with POE (Power Over Ethernet)

Individual Monitoring

Reproduction

Health

Coloured Breeding Window (Separate window for Sexed Semen)

Group Monitoring

Heat Stress

Nutrition

Wellbeing

Improved Farm KPI

Enhanced Control

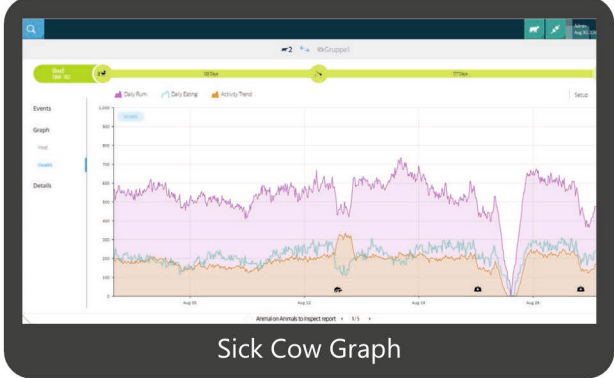
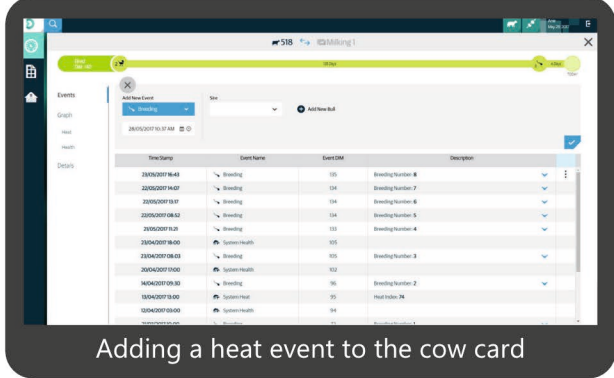
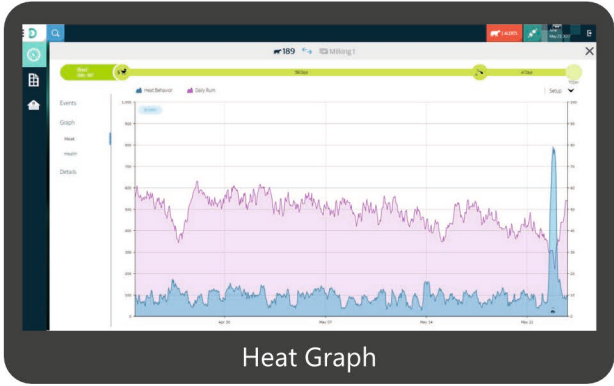
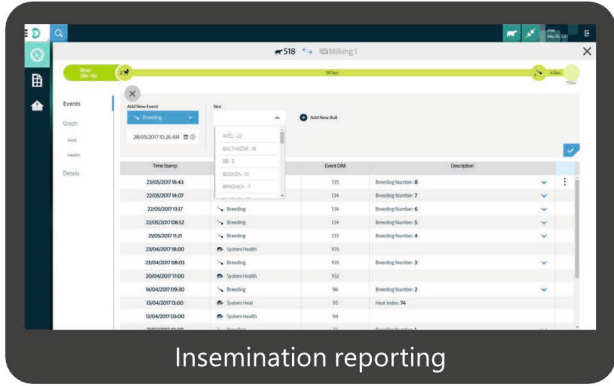
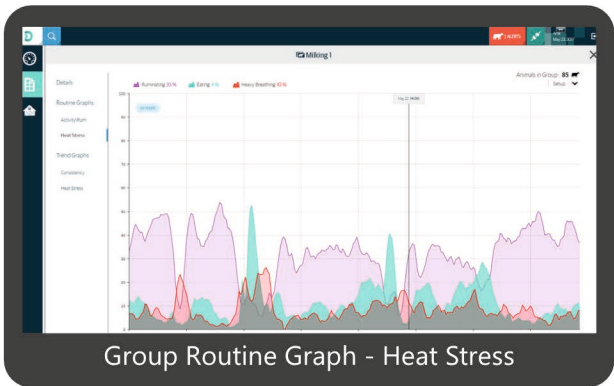
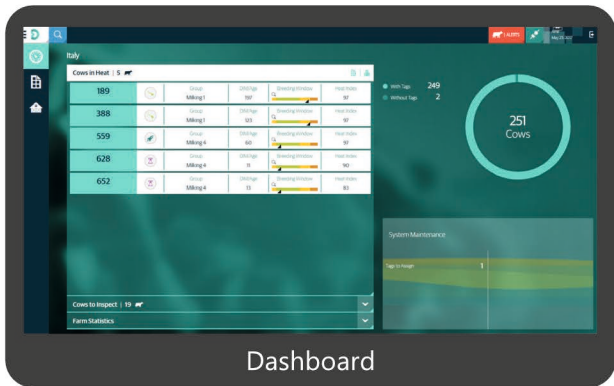
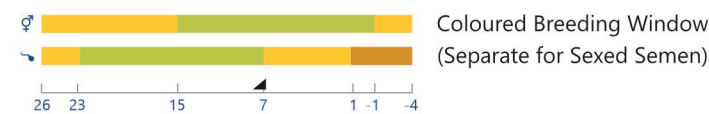
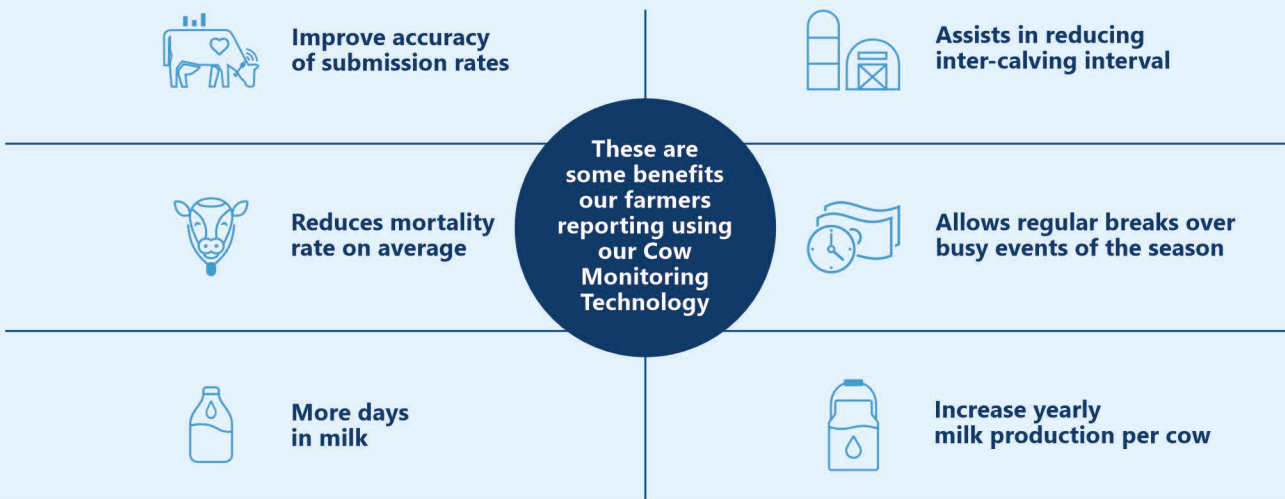
Proactive Service & Technical Support

More Profitability

Peace of Mind

This product is not intended to diagnose, treat, cure, or prevent any disease in animals. For the diagnosis, treatment, cure, or prevention of disease in animals, you should consult your veterinarian. The accuracy of the data collected and presented through this product is not intended to match that of medical devices or scientific measurement devices.

Reporting and Benefits



SenseHub™ Dairy Youngstock

The first and only youngstock monitoring solution

SenseHub Dairy Youngstock is the first solution dedicated to **monitoring dairy calves and heifers for the first 12 months of life** - so you can establish optimal performance from the start of every cow's life.

SenseHub Dairy Youngstock **detects animals that may need attention, often before any clinical signs of disease become visible**, allowing you to focus your valuable time and resources.

It enables early intervention when required, to protect future productivity of your youngstock assets.

Farm with **more freedom**
Setting up your herd for long term success

Freedom is knowing that you're optimizing performance at the start of every cow's life

SenseHub™ Dairy Youngstock
The foundation for whole-life monitoring

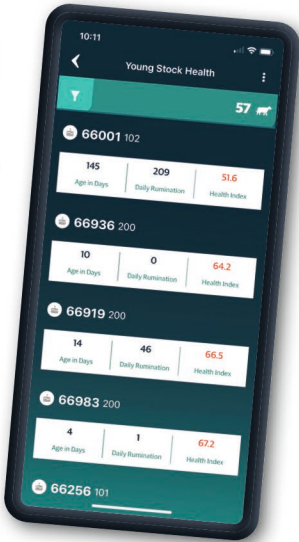
- Monitor your calves and heifers 24/7.
- Establish long-term performance through earlier intervention.
- Help to develop more efficient workflows.



SenseHub Dairy delivers actionable insights for calves and heifers that are less than 12 months old, helping to optimize the well-being of your youngstock.

With 24/7 monitoring letting you know which calves need attention as well as a blinking LED on the calf's monitoring ear tag for quick location, SenseHub Dairy Youngstock makes it easy for you to prioritize the care of your youngstock and adjust your workflow to improve operations on your farm – in three steps:

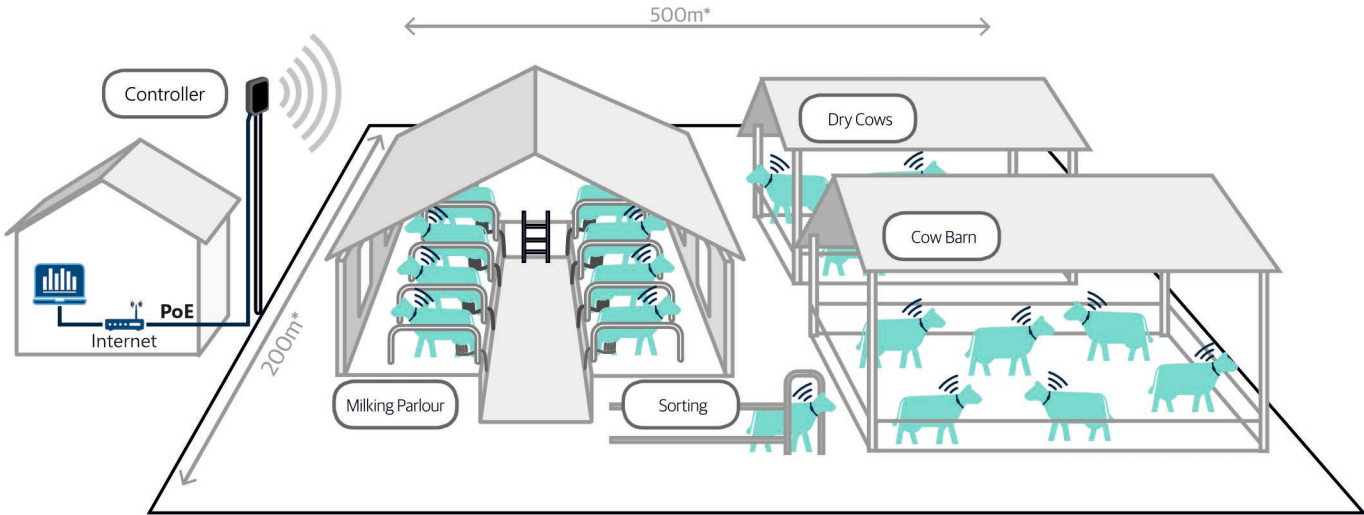
1. Attach monitoring ear tag at birth or at weaning.
2. Monitor behavior in the SenseHub Dairy system.
3. Easily identify calves and heifers requiring your attention.



Farm with **more freedom** through a deeper connection to your youngstock

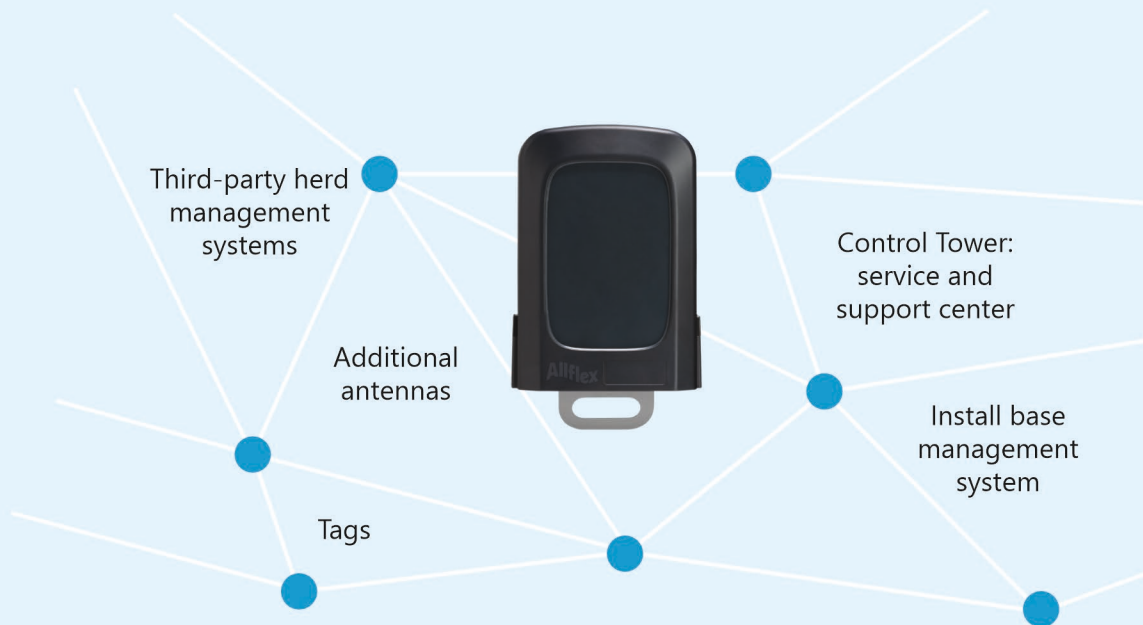
*For pre-weaned calves nipple fed.

Monitoring Components



* Typical range of Controller Radio Frequency Base Unit: 200-500m (656-1,642ft) based on farm audit

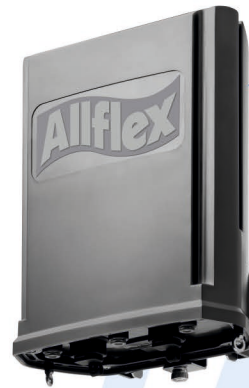
LD Base Unit for DataFlow™ II





User Application

- Remotely Up-gradable
- Easy User Interface



Controller

- Plug and Play Install
- Area coverage: 200 x 500 m (656 x 1,640 ft)
- Acts as an antenna and transmitter
- Connects with POE (Power Over Ethernet)



Monitoring Neck Tag Flex

- Applied on Neck
- Communication: 2.4GHz - 802.15.4
- Expected battery lifetime: 7 years
- Size: H x W: 84 x 64 mm (3.3 x 2.5 in)
- Waterproof (IP68) durability



Monitoring Ear Tags

- Applied on Ear
- Size - H 70mm / W 38mm / D 17mm (H 2.8" / W 1.5" / D 0.7")
- Weight – 25gram
- Communication:2.4Ghz-802.15.4
- Waterproof (Ip68)

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Milking Automation

Our milking automation technologies drive advanced milking solutions that are highly reliable, accurate and require little maintenance. These solutions improve milking, save time, increase accuracy, and improve cow and worker wellbeing. They were developed together with dairy farmers to address farmers' needs for an efficient and productive milking process that requires no special skills.

Our milking control serving over 12 million cows and measurement devices are implemented as complete solutions by various integrators worldwide and are also integrated as standalone devices in the milking systems of several other companies. The modularity and scalability of our systems make them suitable for most types of existing milking solutions at small and large farms.



MC200 Series

Milking Control Systems comprise a highly accurate milk yield measurement device and smart controller, enabling efficient and cow-friendly milking. Easy to install and use, and fully scalable, Milking Control Systems work in almost any parlor setup. Reliable operation and easy upgradeability ensure long-lasting value. It comprises of following components to optimize and streamline the milking workflow.



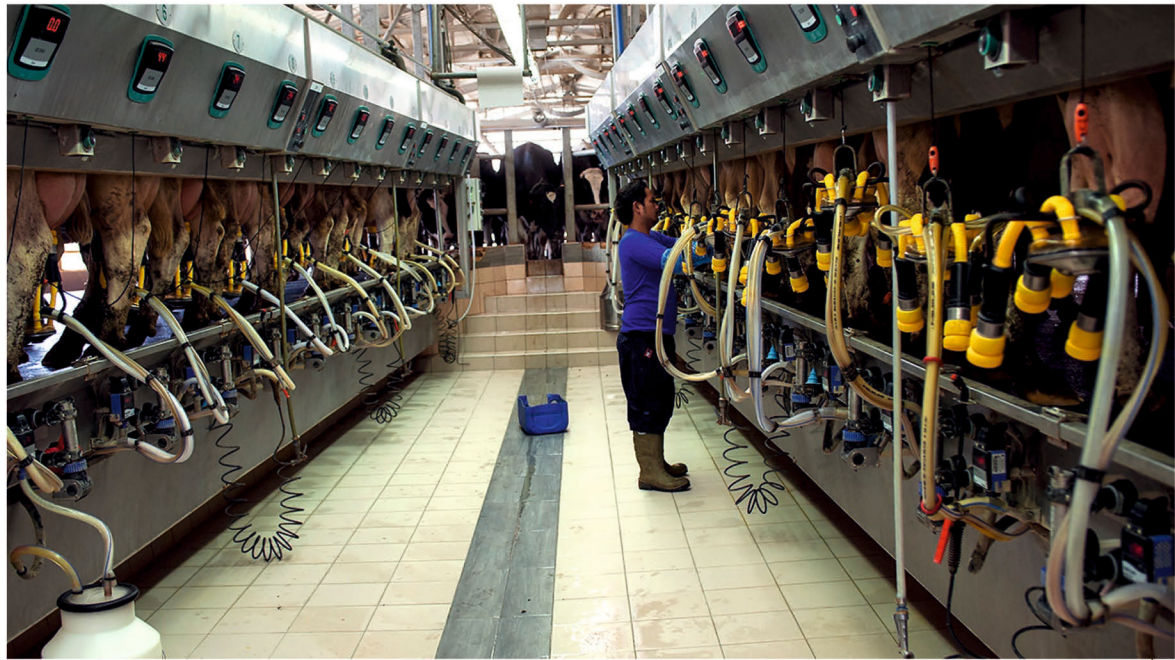
Advanced pulsation arrest and cluster removal safeguard cow comfort



Accurate milk yield data, with the FreeFlow™ milk sensor



Advanced milking control optimizes and shortens milking, while safeguarding cow wellbeing.



MC200 Series

Get accurate milk yield data and improve milking efficiency, while safeguarding cow comfort.

•Accurate milk yield data, with the FreeFlow™ milk sensor.

The compact and unique FreeFlow™ milk measurement device enables highly accurate milk yield measurement with very low vacuum fluctuations. This proven device provides accurate data on momentary milk flow and accumulated yield with high precision (better than 5%) year after year. With no moving parts, there is no need for maintenance or annual calibration.

•Advanced milking control optimizes and shortens milking, while safeguarding cow wellbeing

When needed, teat massage is automatically applied to stimulate milk letdown. The sophisticated controlled pulsation system automatically adjusts the pulsation rate and ratio according to the realtime milk flow, optimizing and shortening milking time and reducing teat irritation.

•Advanced pulsation arrest and cluster removal safeguard cow comfort

Due to the highly accurate flow measurement, the end of milking threshold can be set precisely and kept stable over time. Two options are available for end of milking: the pulsation arrest feature automatically stops the pulsation and collapses the liners on the teats, preventing over-milking even when the cluster stays on the udder. Alternatively, a smooth and fully adjustable cluster removal feature ensures accurate and gentle cluster removal, further enhancing cow wellbeing.

Grow with a modular, reliable, easy-to-install and use system

•Easy-to-install, modular milking system that can grow with your needs

MC200 Series components can be installed alone or as a complete system. All components are modular and scalable, enabling easy installation and configuration for almost any existing parlor, as well as cost-effective upgrades when your needs change. Adding other devices and components and integrating them with DataFlow™ II centralized management software provides advanced capabilities.

•Easy and flexible setup, and one operation button

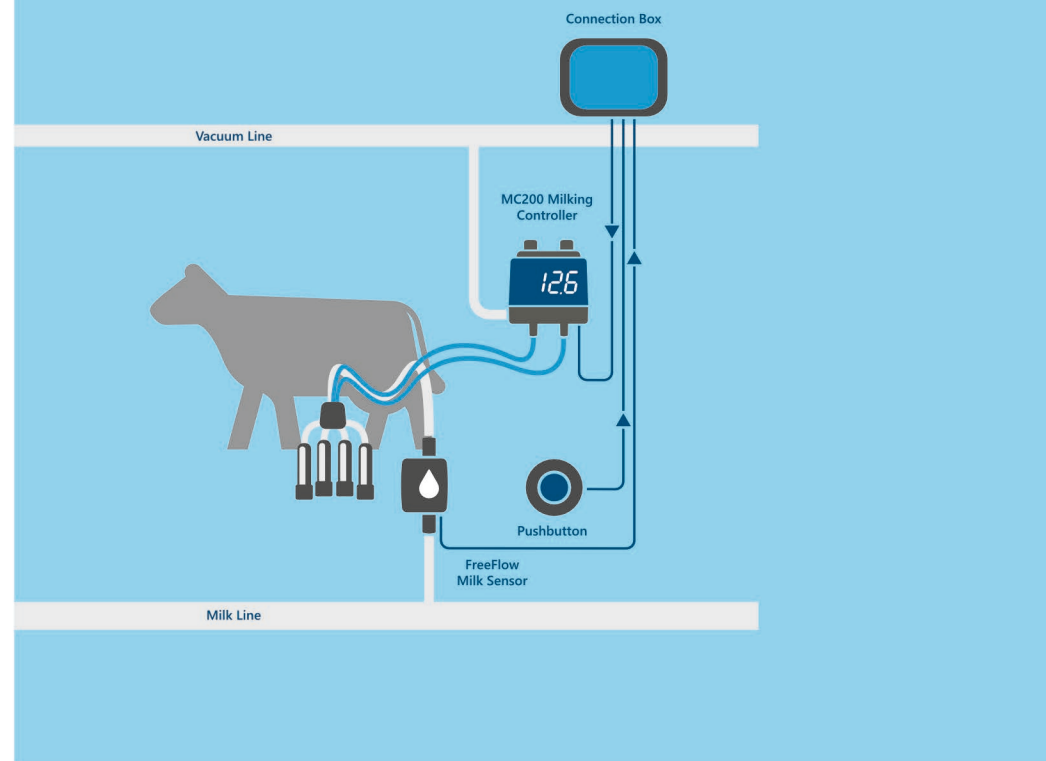
Operation using only a single button provides unparalleled ease-of-use. With its intuitive interface, the system can be easily adjusted to the needs of the parlor. While the default values cover most common configurations, dozens of different parameters can be controlled by a handheld device. This allows flexible setting and tweaking of the system according to the needs of each farmer. The configured set of parameters can then be easily applied to all milking points in the parlor.

•Reliable milking with very low maintenance

MC200 Series require virtually no maintenance. The FreeFlow sensor measures the milk without any moving parts and requires zero upkeep. The pulsator, with just two moving parts, no membranes and no small parts, requires minimal maintenance and is highly reliable even in dusty environments. The single operation button is durable, contactless and fully water and dirt-proof.

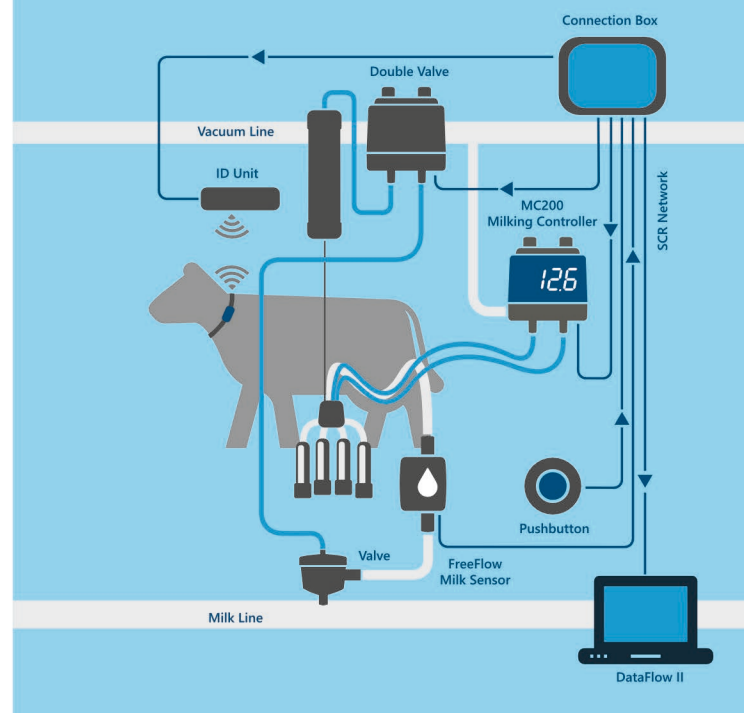
MC200PA

Basic solution with pulsation arrest (PA).



MC201DF

Advanced solution integrated with DataFlow II (DF) management system, including cow identification and PC data management. Milking point display is in the pulsator.



MC200 Series can be installed on either low or high line

NOTES



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Intervet India Pvt. Ltd.

6th Floor, Tower 5, World Trade Center, Survey No. 1,
Kharadi, Pune - 411014, Maharashtra, India.

Ph. No.: +91 20 66294700 - 01

E-mail: info.india@merck.com | **Web:** www.msd-animal-health.co.in



SenseHub India



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