EVOLVING
INNOVATING
PROGRESSING

Fullwood

M²Merlin
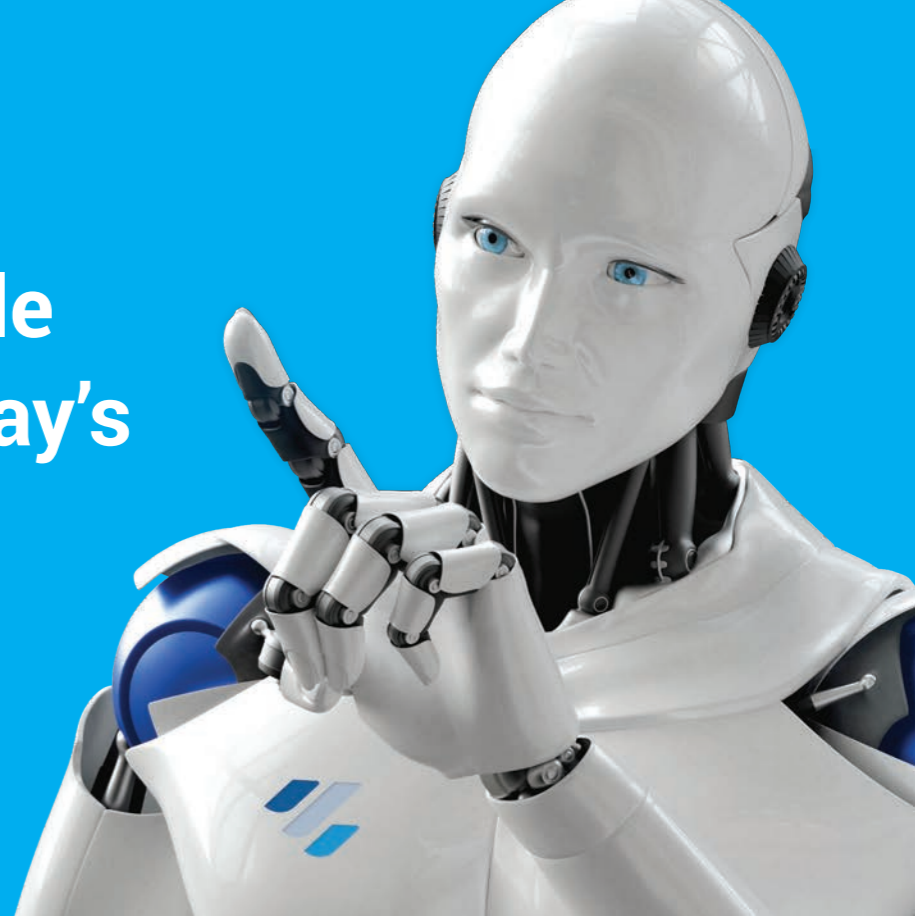Fullwood
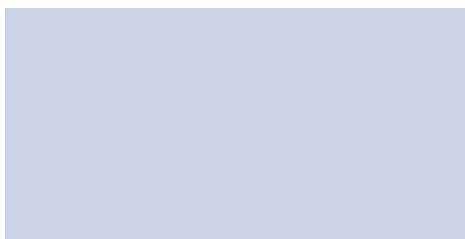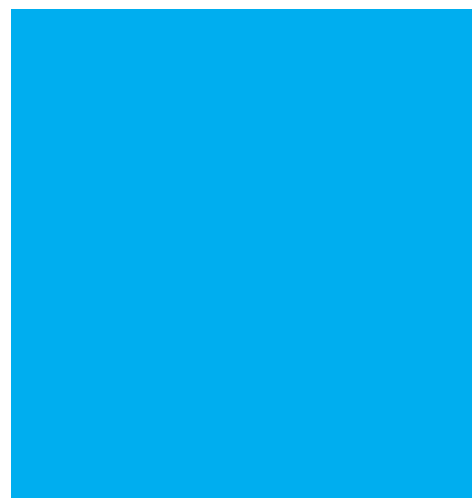
PRODUCTIVITY

MILK QUALITY

EFFICIENCY

"We search for the best possible solution for today's dairy farmer"

Fullwood has been designing milking robots for well over 20 years focused on delivering the best solutions to ensure safe, efficient robotic milking for all our dairy farmers.

Today we combine the very latest technologies to bring the best Fullwood robot ever - M²erlin.

"More milk and a better lifestyle"

Griffiths family, Wales

THE SUCCESS OF M²ERLIN IS BASED ON THREE KEY FACTORS:

1. PRODUCTIVITY

- Accurate, reliable and fast attachment
- Excellent cow flow due to Texas gates and wide exit gates
- Unique feeding design ensures the trough only opens during milking
- Minimises time in crate for cows not due to be milked

2. MILK QUALITY

- Best milking technique = more, high quality milk
- Focus on cleaning and cow health

3. EFFICIENCY

- Electric-only drives deliver energy savings
- User-friendly cabinet doors for ease of access and servicing
- Reduced maintenance time and cost

M² FULLWOOD M²ERLIN

The best just got better.

Accessible cabinet

All-electric arm

Flexible jetters

⬆ Fast Attachment
·····································
Low Maintenance ⬇

Positioning camera

Short crate

Texas gates

FEED MANGER

Unique feeding design which ensures the trough only opens during milking.
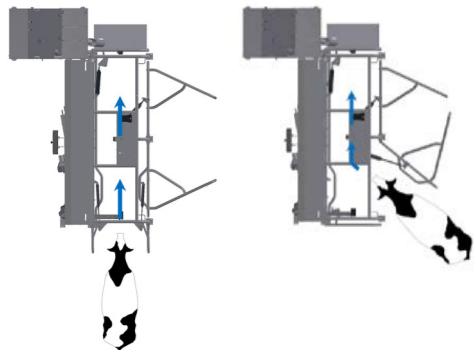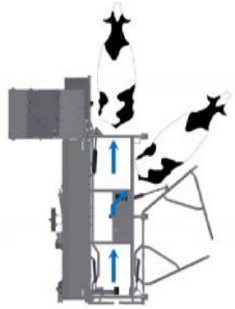
COMFORTABLE CRATE WITH OPTION FOR TEXAS ENTRY GATES

Providing easier access to enter the crate thereby improving cow flow and reducing potential agitation of cows due to be milked.

COW TRAFFIC

## With M²erlin, Fullwood offer complete flexibility when it comes to installation.

Our K-flow concept, supported by the new Texas gates, enables various location options. The shorter crate also reduces the overall footprint of the robot.
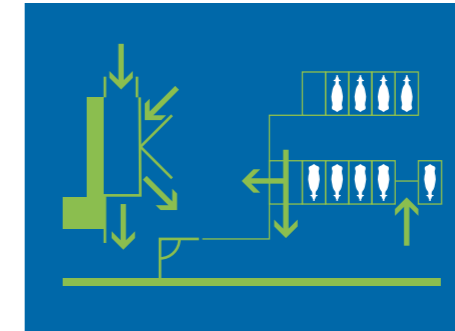
SHORT CRATE

· Fast entry and exit
· Open crate to minimise cow isolation during milking
· Comfortable cow positioning and good control
· Accurate and speedy cluster attachment
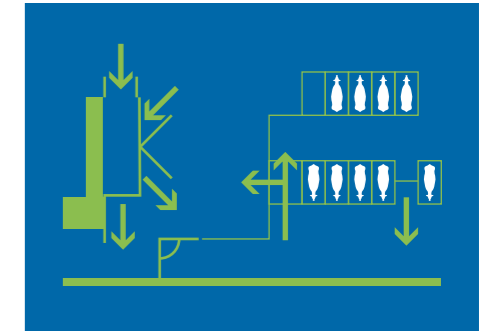· Smaller overall footprint increases choice on where M²erlin can be sited

TRAFFIC OPTIONS FOR EVERY DAIRY FARM
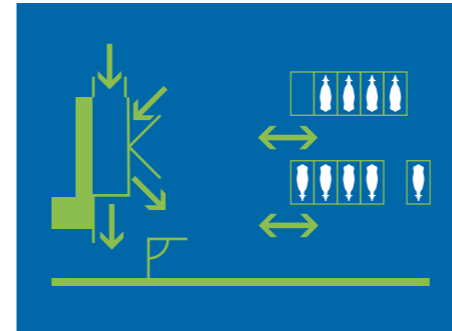
FREE2GO **MILK2FEED** **FEED2MILK**

FREE2GO

Free cow traffic is very easy to implement in almost every building. With the M²erlin, the K-flow gates make it even easier than ever.

Free2go gives the cows the freedom of choice with no restrictions.

MILK2FEED

The first option for directed cow traffic. The cows that come to the feed area have to go through a pre-selection gate that controls if the cow has to be milked. The cows that don't need to be milked go to the feed area. Those ready for milking are directed to the robots.

FEED2MILK

The second option for directed cow traffic. Cows can always come to the feed area through a non-return gate. If the cow wishes to return to the lying area, she has to pass through the pre-selection gate which determines if she is ready to be milked. After milking, all cows return to the feed area before lying down again.

GRAZING OPTIONS

Fullwood automated grazing systems offer the most comprehensive and proven solutions for M²erlin owners wanting to maximise profit from grazed grass utilisation. With a large number of grazed grass based Merlin farms in operation for a number of years, Fullwood are at the forefront of knowledge and experience when it comes to AMS and grazing systems.

Solutions include:

· A/B/C paddock systems
· Free access traffic systems
· Controlled traffic systems
· Combination of controlled and free access systems
· Customisable systems to suit your farms' grazing requirement with M²erlin

"Reduced costs and increased flexibility"

D'Haemer family, Belgium

COW MANAGEMENT

Fullwood M²erlin farmers have plenty of choice when it comes to having the right information at the right time to manage their dairy herd. The options available provide everything from basic data on the operation of the robot right through to in-line milk analysis. We can also provide information at the robot itself, in your office on the farm PC or wherever you wish on a tablet or smartphone.

AT THE ROBOT...

The Fullwood M²erlin comes with a large touchscreen Herd Management Interface (HMI) as standard. This provides on-hand information on key data such as milk flow, milk yield and cleaning. All of this can be easily viewed without having to return to the farm office. It was designed with the farmer and herd manager in mind and is a very simple system to operate. From the HMI you can enter a cow ID, give extra concentrate, and even allow her to leave the crate or move into a separate segregation area.

IN DETAIL IN THE OFFICE...

The choice of an automatic milking system allows the dairy farmer to manage his time efficiently. With Crystal herd management software, developed by Fullwood, you also have complete digital control over milking, feeding, separating, health and fertility of your herd. The system not only gives you a better work/life balance, but also provides you with a wealth of information about your production and livestock.

The 4 steps of the management circle:

1. OBSERVATION
2. ANALYSIS
3. AUTOMATIC CONTROL
4. REPORTING
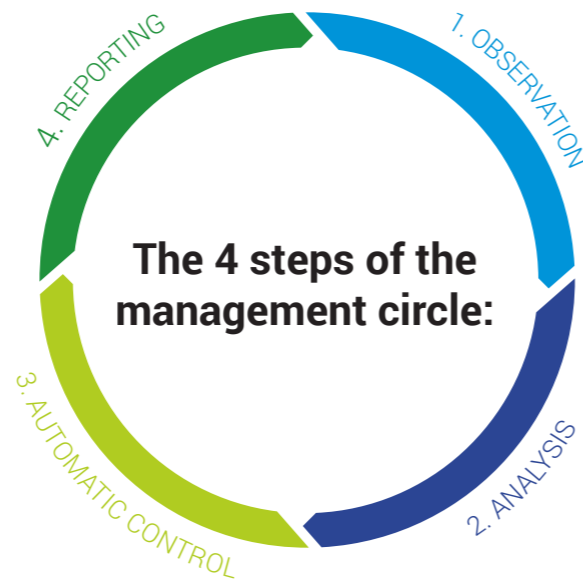
On Crystal, data from our full range of sensors can be viewed.

OR WHEREVER YOU NEED.

MerlinView provides a clear overview of the operation of the M²erlin system. It has been developed for use on a PC, tablet or smartphone and enables the user to view information on milking, feeding, cleaning and the cow itself. The data shown is both live, displaying exactly what is happening at the robot right there and then, as well as what has happened over the previous few hours. In addition, useful management information is available to provide a reliable picture of the M²erlin's daily performance.
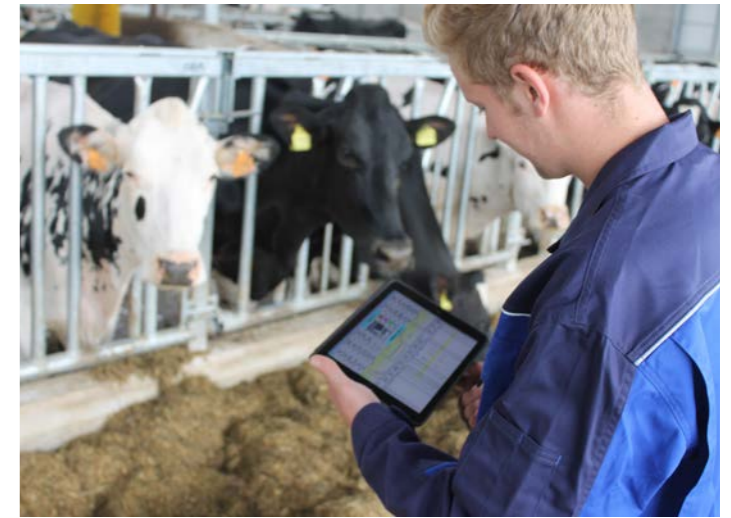
RELIABLE, ACCURATE MEASUREMENT

CRYSTACT II

This innovative, pedometer based system has been designed to provide accurate activity measurement, heat detection and cow identification.

24/7 long-range transmission provides continuous fertility monitoring, calving alerts and wellbeing notifications. The tags are fully integrated with Crystal – our leading herd management software. This complete farm management solution will help to maximise both the reproductive efficiency and overall health of your herd.

With its mechanical design and durable battery, the CrystAct II is designed to last the test of time and to withstand the harshest of farm conditions.

CRYSTALAB

This is the laboratory of your M²erlin – a state-of-the-art milk component analyser. Unique sensors monitor and record all vital details of the milk, including fat, protein and lactose concentration for every cow, at every milking. The data is then evaluated by Crystal and any potential issues are highlighted.

AfiLab provides the most effective tool in the early detection of mastitis, ketosis and sub-acute ruminal acidosis (SARA). Additional benefits include feed monitoring (TMR corrections) to help optimise feed regimes and the prevention of bulk tank contamination by blood and/or antibiotics.

The early detection of potential health issues and timely intervention not only saves on expensive vet bills, but also helps to maintain high quality milk.

4QC

4QC is more than just a sensor. Based on temperature compensated conductivity measurement and counting milk slugs, it provides an accurate indication of infected quarters. The conductivity of the milk is measured per quarter, providing an indication of flow rate and quarter contribution to total yield. All of these values are recorded and stored. This allows you to compare data and highlight large deviations between quarters.

FROM TEAT TO TANK

With robotic milking cows are milked throughout the day, so the milk must be cooled regularly, in small amounts over 24 hours. To optimise the daily number of milkings per cow, the M²erlin stops are kept to a minimum. Therefore, the installation of a buffer tank is indispensable in the overall AMS project.

1. Milking robot
2. Milk separation buckets
3. Pre-cooling at source
4. Instant cooling with ice water
5. Buffer tank with automatic cleaning
6. Tri-clamp
7. 3-way valve
8. Pneumatic cylinder
9. Milk cooling tank
10. iControl with AMS interface
11. Eco-Cool cool group with Soft Start cooling for DX tanks

CUSTOMER TESTIMONIAL

Joris Van Loock lives in Lille, Belgium. Since December 2015 he has milked his 120 cows through two Fullwood M²erlin robots. The average yield is 10,350kg on an average of 2.8 milkings per day.

"If I had to describe the M²erlin in three words it would be; quiet, comfortable and maintenance-friendly.

In 2015, I was looking for a new milking system and I made contact with Fullwood. They gave me a lot of good suggestions for my new stable. I decided to implement the FEED2MILK cow traffic system, so I don't have to search for cows that need to be milked. This works very well and I can get a lot done with the extra time this gives me. Start up for new cows is also very easy.

Working with the robot is very straightforward. With MerlinView I can follow the working of the robots and the stable and view exactly what is happening. If there are changes in the key performance parameters I have a clear view immediately. I also have a lot of data from the pedometers and CrystaLab. This is all working very accurately and gives me the right information at the right time so I can react before the cow is really ill and I lose milk.

Another benefit for me of working with Fullwood is the support from the dealer network – the service is never far away. You feel totally supported from the first contact with the sales guy to the visit from the service technician after installation. The idea that my Fullwood dealer could help me with the whole milk routine from robot, cow traffic to cooling tank was a very positive and important point.

My overall feeling after two years of milking with the M²erlin robots is that they are very user-friendly and that the cost of running and maintenance is low. I haven't had any problems and since the start-up of our robot system milk yield has increased by 20%."

"User-friendly, low running costs and higher yields"

Joris Van Loock, Belgium

A M²ERLIN SYSTEM FOR EVERY FARM

❶ Select your base M²erlin

CHOOSE BETWEEN TIRIS ID OR ACTIVITY ID, 1 SIDE ENTRY AND 1 FEED DISPENSER AS STANDARD.

This is all you need to milk your herd but should you decide a greater level of management or automation is required, we have a range of packs to suit every requirement.

❷ Choose the packs for your farm

Traffic control pack
Enabling your M²erlin to work with your choice of separation gates.

Health pack
All the tools to assess the health of your herd through activity monitoring, in-line milk analysis and 4-quarter conductivity sensing.

Management pack
For the dairy farmer who wants to have full control over all aspects of the herd.

❸ Select any other items from our list of options