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# milking parlours

SUPPLEMENT

International  
**Dairy  
Topics**

# Faster milking thanks to faster cow flow

## GEA Farm Technologies, Germany

With 85 lactating Montbéliard cows and their own calf rearing, GEAC Arbez produces more than 2,100 litres of milk every day for Comté cheese in Longchaumois, France. Robust milking parlour design, fast exiting and the IQ four-way milking cluster played a central role in the decision by Flavien and Carine Arbez to choose the DairyParlor P7550 from GEA. The features of the 2x8 side-by-side milking parlour with 'vertical lift' perfectly fit the family farm's routines.

### An opportunity for a new start

The Arbez family discovered the DairyParlor P7550 during a farm tour in Germany: "We were very impressed by the quick exit of the cows. Another positive aspect was the small ground area to be cleaned." A personnel change gave them the opportunity for an operational new start: "After our employee left, the two of us wanted to continue working on our own," explains Carine. "We were looking for an investment opportunity which would save us time in the milking parlour. Until now, we always spent an extremely long time in there. The new investment in this milking parlour enables us to not only handle the milking quickly but by just one of us."

### Stress-free and comfortable milking from the outset

In the past, each of the two milking sessions began with first cleaning the boxes, spreading the straw and then guiding the cows into the milking parlour. Today, the newly installed GEA CowMander crowd gate in the waiting area accelerates the process and Flavien can make optimum use of his time for the barn routine: "Because we now have a real large waiting area, we move the cows here and take care of this work during milking. The new system saves us a lot of time." Calm and stress-free, the cows move straight through the wide entrance into the milking parlour. They comfortably line up next to each other and the swivelling sequence gates provide lateral guidance. One after the other, they extend their necks through the front segments of the exit gate. "We dreamed of milking 80 cows in one hour with one person." Carine praises the operating comfort with easy access and a good view of the udders as she attaches the first cluster: "Today, we are very satisfied with our purchase because our dream has come true."



### The milking technology for high quality milk

Producers who deliver the milk for the delicious Comté cheese are also committed to feeding the Montbéliard cows hay and providing pasture grazing. Thanks to her experience from the cheese dairy, Carine is familiar with the unique aspects of the regional production: "The AOC Comté, a product with controlled origins, is made of raw milk. The standards demand strict adherence to the production method. Gentle milking with the IQ milking cluster helps us to achieve the necessary high quality."

### Routine milking procedures with only one person

In one step, Carine moves to the other side of the parlour. She appreciates the effortless procedures along with the quick handling and ergonomics of the milking clusters: "The benefits are both better synchronised cow entry with the help of the GEA crowd gate along with much quicker attachment of the IQ milking clusters." She uses the indexing function for the next group to adapt the milking stall length to smaller cows. At the push of a button, the anatomically designed front segments of the exit gate swing back and gently guide each cow into its ideal milking position: "We never need more than one person for the milking even in summer during the day and night grazing." Opposite her, the cows are tranquilly ruminating. The milking control units automatically remove the milking clusters after milking, again at the push of a button. The exit gate lifts in a matter of seconds and makes way for the cows. The cows then return to their barn straight away.

### Designed for absolute milk hygiene

The working environment meets all of Flavien's wishes when it comes to milking parlour hygiene: "The pulsators, electronic components and milking accessories are all well protected against dust and splashes thanks to the stainless steel covering. This is also aesthetically appealing and simplifies cleaning." Again time savings provide the keyword: Flavien only needs a few minutes to clean the milking clusters and walkways.

Today, the CIP cluster holders and thorough cleaning at regular intervals guarantee perfect hygiene for the milking equipment. Here in their original breeding region, the Montbéliard cows are perfectly adapted to the typical mountain climate with extreme temperature differences and night frosts. "For our new investment we wanted a robust, proven and reliable milking parlour that also provides the benefit of a rapid cow exit." The GEA DairyParlor P7550 with its durable galvanised vertical exit gates and stainless steel cabinet is the perfect solution for Flavien and Carine Arbez. ■

[gea.com](https://www.gea.com)



# Successful robotic milking: gently quickly and completely

## BouMatic Robotics, USA

Devan Toop is Vice President of Toop Farms Ltd. The Toop family dairy farm, located in Chilliwack, British Columbia, has been operating for over 140 years. The farm is currently on its sixth generation and is a landmark in its community.

Dairy farming has changed a lot over the last century. However, the Toop family has embraced many technological advancements, while maintaining some of the traditions.



They currently have 300 dairy cows and are using both BouMatic Robotics MR-D1 and MR-S1 milking robots.

## Successful upgrades

BouMatic Robotics has the belief that it is important to keep technology updated.

The latest upgrade involves camera-on-the-head technology and is designed for real time teat tracking capabilities. With this update, the arm movement is fluid and dynamic, helping to account for cow movement. This translates into quicker and more efficient attachments. BouMatic's 'Gently, Quickly, Completely' philosophy is more than just a motto, it is an integral deciding factor in all product development.

The Toop Farm has seen an increase in performance since they received the new vision system and Devan Toop is pleased with the results he has seen with BouMatic Robotics.

"We have been running the new camera for three weeks on the 3 MR-D1 and 1 MR-S1. We have noticed that the arm movement has been more fluid. Not just a lot of x, y, z back and forth and the arm is able to track the movement for more nervous cows during attach."



"For the smooth attach cows, we have seen our attach time drop by about one minute from about 3.5 minutes to 2.5 or even a 2-minute attach time."

"But we have been very pleasantly surprised with how well the new camera system has worked with some of the cows that have some failed attaches before. And our failed attaches and manuals have gone down dramatically, I'd say probably about 60 or 70%. I'd highly recommend the new cameras, they really are a wonderful piece of machinery."

## BouMatic Robotics' double box

The MR-D2 (double box robot) is a compact milking robot equipped with two stalls, side-by-side. It has a well-organised technical area and one robot arm. Using an industry leading, patented system the double box robot milks two cows simultaneously between the rear legs – gently, quickly and completely.

This unique approach of milking between the rear legs provides direct benefits, offering the ideal milking experience for the cow, safety for the owner and protection for the system itself.

With the MR-D2 double box milking robot, milking becomes easy for the cow and the dairy farmer. Each cow defines her own rhythm and decides when she wants to be milked. When entering the robot, the identification system recognises her and decides if she needs to be milked or not and what quantity of concentrated feed she needs.

The robot arm performs all operations from behind, moving between the rear legs to approach the udder. Using the latest 3D camera technology, the position of each teat is determined, and the robot cleans and preps each teat and then attaches the milking cups. The time-of-flight technology of the camera can determine the exact position of the individual teats. This has brought our milking robots superior attachment results.

The robot arm completes the entire milking process from within the enclosed technical area. This starts with washing and pre-milking each teat using the special teat preparation cup (each teat is individually cleaned and pre-milked). Next, the milking cups are attached and when milking is completed, the process finishes with the post-milking teat treatment.

BouMatic is dedicated to ensuring that dairy farm producers throughout the world can produce the highest quality milk most efficiently, profitably and responsibly. ■

[boumatic.com](http://boumatic.com)



# Taking milking to a whole new level with artificial intelligence

## Dairymaster, UK

Efficiency in dairy farming is key and in the current environment where farmers struggle to find skilled labour and with the volatility of milk price, farmers need to become more efficient to make a profit from the farm. Considering these challenges Dairymaster decided to focus on the milking process and has pioneered the use of artificial intelligence to make rotary milking more profitable, enjoyable and sustainable.

This innovative breakthrough revolutionises milking time, decision making and control from one location. Through its advanced digital interface, the operator gains a comprehensive overview and complete control of the milking operation.

Dairymaster's Mission Control takes complex data and processes it into easy actionable tasks, which makes a major impact on dairy farms. Data alone has no intrinsic value, it is what you do with the data that creates value. This innovation means Dairymaster is taking milking to a whole new level.

Dairymaster has been awarded two innovation awards for its advances with the new Mission Control at Eurotier in Germany and at the Cream Awards in the UK. This peer recognition is well justified as the next-generation touchscreen system provides farmers with real-time performance indicators on the cow and herd, including attachment time, rotary downtimes, cow throughput, expected end of milking time, the status of the milk tank, remaining feed quantity and animal health.

OptiCruise, one of the features of Mission Control, uses artificial intelligence to maximise parlour throughput. By controlling parlour rotation speed based

on live multi-stream data, every unit and cluster in the parlour is used to maximum capacity. This results in:

- Up to 30% reduced milking time meaning less labour and less parlour wear and tear.
- Less standing time for cows leads to improved animal welfare.
- Reduced running time means lower electricity and water usage.
- Better return on investment for farm enterprise.
- Remote diagnostics and troubleshooting makes servicing more efficient.
- Increase herd size, not milking time.

Dr John Daly, Research and Innovation Manager at Dairymaster explains: "Even for experienced milkers, it is not easy to get the rotary speed right. Mission Control is really to do with parlour control rather than the actual milking side of it. It is to do with the cow throughput and automatically adjusting the parlour speed based on the attachment speed of the operator."

Clear data visualisation leads to better management of the milking process. From one location, Mission Control displays the right information at the right time, so the operator can make the right management decisions.

The Mission Control interface displays live information on every cow on the platform allowing the operator to take specific actions when necessary, for example, performing a CMT when SCC suddenly increases or withholding the milk from an animal during the withdrawal period.

The operator can access real-time information at cow or herd level from one location, for example, yield, milking time, rotary stoppages, cow throughput and more. Clear visualisations inform the operator of cow-status, highlighting cows that require immediate actions which can be carried out from the interface, for example, draft for veterinary check or divert milk.

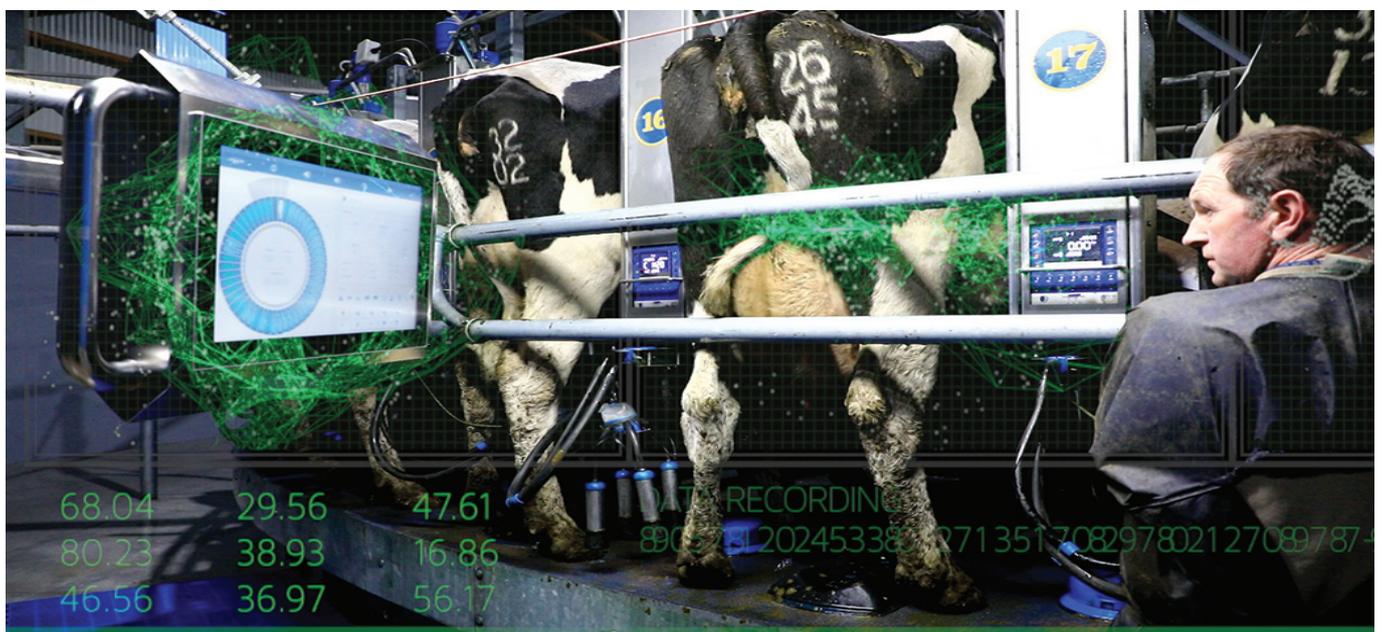
If Mission Control flags a problem and the farmer needs to stop or slow down the rotary to inspect a cow, OptiCruise takes account of the stoppage and automatically adjusts the speed of the carousel to recover that time. This means farmers know they will be able to milk faster and take time to examine and treat problem cows, so it is better for the animals and farmers.

Dairymaster's advanced cow recognition system CowNow is another unique feature of Mission Control. Some benefits of this technology are increased data accuracy and reduced risk of antibiotics reaching the milk tank.

"Innovation is core to what we do in Dairymaster. Optimising each process on farm is key for us, we heavily invest in R&D to continue creating and manufacturing products to suit all dairy farmers – from entry level to top of the range," comments Dr John Daly, Research and Innovation Manager.

Mission Control makes parlour management visual. Through its advanced digital interface the operator gains a comprehensive overview and complete control of the milking process. ■

[dairymaster.com](http://dairymaster.com)



# Quality, reliability and state-of-the-art technology for sheep & goats

## Milkplan SA, Greece

Milkplan SA is a leading company in milking systems and livestock equipment manufacturing, but is mostly well-known for its world famous cooling tanks and its sheep and goat milking systems. It is a company that has installed over 2,000 sheep and goat milking systems worldwide.

Its last mega project in this field was on a farm in Pazardzhik, one of Europe's most modern livestock units. On this farm, currently with 1,000 milking sheep, Milkplan have installed an MP Armektron Fast-4-All 2X40/80, the most advanced automatic sheep-milking system, fully-equipped with a state-of-the-art electronic management system.

It is proven that with the MP Armektron F4A, the highest percentage of productivity is reached in less time. Following animal well-being recommendations and the company's experience in the field, Milkplan's R&D team has designed the milking parlour and paid special attention to details to ensure the animals' smooth movement, comfort and welfare as well as maximising productivity effortlessly.

MP Armektron F4A is designed for 24/7 operation, while assuring milk quality from the teat to the tanker. Adaptable to any space requirement, thanks to its flexible and ergonomic design, MP Armektron F4A offers comfortable movement for the animals as well as minimum human effort. The equipment guarantees maximum flow and less stress to the animal, facilitating quick and smooth milking.

To increase herd productivity, enable breed specialisation and improve individual animal production, MP Armektron F4A was installed on the farm in Pazardzhik with an electronic herd management system so that automatic data collection is possible. The accurate and reliable database provides analytic reports that are needed for decision making and efficient herd management, as well as genetic improvement.

In order to ensure proper feed intake, feeding should take place in a



comfortable environment and the amount of feed should be distributed equally and uniformly. For these reasons the company installed 8 x 28m feeding belts, so that employees do not have to dispense feed along the barn.

Besides simplification of the feeding process, the MP feeding belt offers secure locking per site, which facilitates the marking and vaccination process. Last, but not least, another great advantage is the fact that employees do not have to walk along the feeding area in their shoes, which tends to be too risky in terms of microbes and disease contamination. Following animal well-being recommendations and their experience in the field, special importance has been placed on the neck width as well as the height of the belt so that the whole system precisely meets the needs of the herd.

A highly important factor for the maintenance of milk quality is the process of cooling so as to avoid both the growth of bacteria and the increase of milk acidity (pH). Right after milking, the milk is transferred into a 4000lt MP Powertank to reach the needed temperature and maintain its characteristics unaltered. The appropriate milk cooling tank is the only reliable way to protect the capital of the milk producing farm. MP Powertanks' special design and their evaporators' diamond weld pattern ensure direct dissipation of the milk's heat as well as energy saving and zero coolant leakage.

Having in its portfolio the most advanced sheep and goat farms worldwide, it is worth saying that the industry's preference in Milkplan is inextricably linked to the quality of the products, the company's reliability, the customer-driven approach, as well as the particular importance it attaches to development.

With continued investment in infrastructure and personnel, Milkplan develops new technologically advanced products and carries out specific projects to suit the requirements of each project that calls for personalisation and customisation. With advanced industrial know-how and fully certified production processes, Milkplan offers integrated solutions for the construction and smooth operation of a modern livestock unit, supporting the livestock farmer/dairy farmer/cheese-maker in every effort, from facilitating daily work to enhancing the unit's growth rate. ■



[milkplan.com](http://milkplan.com)