



# milking parlours

SUPPLEMENT

International  
**Dairy  
Topics**

# Increasing yield and reducing farm costs with automation

## GEA Technologies, Germany

Kirkton of Beath Farm is a dairy and arable enterprise which started in 1894, run by David and Alice Thomson and son Fraser. The family were milking 135 cows and were experiencing the challenges of labour costs and pressure to spend time in the dairy while managing seasonal busy periods at their arable business. In 2016, they started looking at automation as a way forward which would be able to solve these problems.

“Our goals starting this project and the main reason to invest was to increase milking the cows from two to three times a day, increase capacity and run our dairy enterprise with reduced labour costs,” says David Thomson. The project included refurbishment of their dairy and changing to cubicles from straw bedded courts, as well as adding automated milking robots.

The family looked at the competitive market and what was on offer including local dealer support. They built a close relationship with GEA dealer DairyFlow and flew to the Netherlands to see the GEA DairyRobot R9500 for themselves. Impressed by its fast attachment, yet simple operational design and confident in the support they would receive from DairyFlow, the robots were going to be more than just a purchase.

David is of the opinion that the flexibility that the technology provides is a big thing to consider, especially for mixed farms like his. “An automated milking system just makes life easier. Very much a good thing for family farms,” he says. An added benefit was that one supply unit can connect to three robots, therefore reducing costs. The biomass boiler provides free hot water and the milk cooling costs are minimal because of the high capacity plate cooler with a slow steady throughput.

### GEA's DairyRobot R9500.



Left to right, son Fraser Thomson, mum Alice Thomson, father David Thomson.

So they made the decision to invest in the future of their business and go from their 10 x 20 Westfalia SwingOver parlour to purchasing three GEA automated milking robots.

As David says: “It’s been a lifestyle change.” After months of hard work, they now look back at the decision as most definitely the right one. The robot has reached its targets in reducing cell count and mastitis rates on farm while increasing milk yields. Now they are milking on average 3-4 times a day and bactoscan averages 11 and cell count 165.

As this is still a project in its first stages and certainly an adjustment, there is still room for improvement. Challenges came from working around the building work and training the cows to use the robot system. Initially, the milk output had dropped, but after two weeks recovered to starting levels, thereafter rising steadily. The balance between feed in the robot and at the feed fence is crucial to get visits and output.

Considering his thoughts on the future of the farming industry he’s been part of for 40 years, David feels that he has made the right decision for his business and family. “No one is going to be a millionaire out of it,” he says. “But I’m glad to be in the milk industry over any other. We are delivering a fresh product supplied to local Sainsbury stores. A lot of challenges are potentially on the horizon, but opportunities are also there to be made for a lot of people.” With GEA’s DairyRobot R9500 they are definitely easier to make. ■

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



# A relaxed milking platform with comfortable flow

## BouMatic, USA

Located just south of Lewiston, MN, Clear Crest Farm is currently milking 540 cows on a brand new 32-stall Xcalibur 360IX internal rotary. Clear Crest Farm LLC was founded in 1936 by John Miller. Today, the farm is owned by John's family including his son and grandsons and their family members; Jack and Pat Miller, and their sons Robb and Luke Miller.

Clear Crest built their first BouMatic parlour in 1969 and have been with the BouMatic brand ever since. In addition to their new rotary, they are using SmartLite Automation, BouMatic Glacier Milk Tanks and Pulse MD Pulsation on their farm.

Clear Crest manages their 1,400-acre farm and animals with nine employees. Milking three times a day they enjoy the ease of herd management that their internal rotary provides. The design also offers the ultimate in udder access. Through the zigzag curbing design, operators have the best access to the udder for rear or side milking. The slight inclination of the concrete floor encourages the cow to stand close to the milker in an open stance, offering the ultimate udder access. A good overall view of all the cows allows for fertility and health controls during milking if required.

Their cows enjoy a very relaxed milking. This platform design allows for a quick entrance and exit for cow traffic to help create a calm atmosphere in the parlour. The shape of the entrance path is a natural turn and designed to prevent any injury or discomfort. Exiting is equally stress-free and safe. Since the animals are positioned in a 60° position, facing the exit, they leave the platform in a smooth, natural movement, allowing the work flow to continue without interruptions.

The mission of Clear Crest Farm is to provide the highest quality milk while providing a safe and nurturing environment for the animals. Their mission lines up with BouMatic's guiding principle to create value through innovative solutions to harvest the highest quality milk, gently, quickly and completely. Clear Crest Farm can live out their mission every day using BouMatic products. Rugged and powerful, the Xcalibur 360IX brings a new standard for internal rotary milking. This platform provides the most relaxed milking and



quickest entrance and exit traffic for the cow. It is a very comfortable flow for her. And you can forget 'downtime' since it is designed with the same around-the-clock milking heavy-duty components as other Xcalibur parlours.

BouMatic's internal rotary is built to the same standards as their external rotary. The concrete deck and extremely rugged electric drive will keep the platform turning reliably, milking after milking. Like the external, it is designed for continuous, around-the-clock milking. The integrated console has the key milking components protected and within easy reach of the operators.

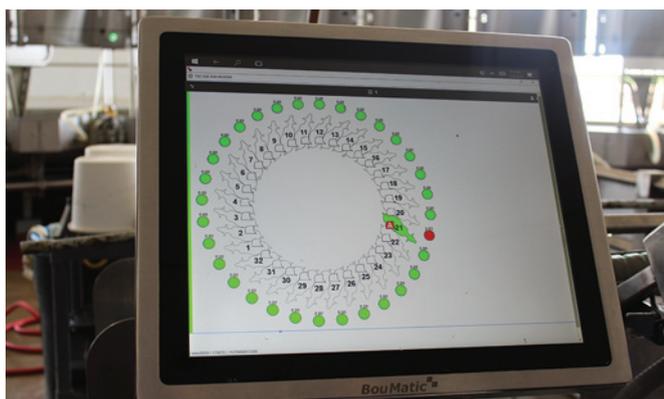
There are a few options for automation with the internal rotary, and the Clear Crest family chose the BouMatic SmartLite with SmartConnect controller. This controller operates on a web-based application using web browser software, meaning Mozilla, Chrome, Safari, FireFox and others. The Management Software provides data that is key to your individual management needs such as: milking event records, milking routine feedback and milking time and alarms. You can share historical data with third parties like veterinarians or advisers and even follow each cow's milking phase on the screen. This gives you a better understanding of your milking routines and enables you to improve your overall milking performance.

The SmartLite itself is a single-button operation for functions such as Start/Stop and Manual/Automatic. And by just lifting the cluster, the QuickStart activates to start the milking process for you. The stainless-steel button is surrounded by a bright, multi-coloured LED. The colour of the light changes to indicate the milking status at each stall so you can easily see any attentions and react to them quickly.

The operator comfort is also a key feature with the unique zigzag curbing design providing the ultimate udder access. Safety is also a key concern to be addressed. The Xcalibur 360IX has an automatic stop and reverse device. When a cow delays entering, the system stops, reverses and starts again automatically. The cows always enter without intervention of the milker.

But one of the main deciding factors for owners is how the management of an internal rotary provides labour savings compared to a much larger parallel barn. All in all, this parlour style really can maximise parlour performance. BouMatic is dedicated to ensuring that dairy farm producers throughout the world can produce the highest quality milk in the most efficient, profitable and responsible way. ■

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



# Achieving a consistent milking routine provides peace of mind

## Waikato Milking Systems, USA

Brad Clinton knew something had to change when milking 500 cows on his farm's old double-up milking parlour was taking 5-6 hours. "Our double six, step-up parlour was pretty efficient when we had a smaller herd. You could milk about 90-100 cows per hour. "Then we were milking 500 cows, three times a day, it was pretty labour intensive and not really what this type of parlour was meant for."

The Clinton Farm, in Bear Creek, Wisconsin, US, produces about 37kg of milk per day, per cow, and supplies to Saputo Dairy. The property is 2,300 acres (930 hectares) and the farm grows its own crops as well as some cash crops too. The family farm launched a major expansion plan in 2018 and at the top of the list was a new milking system.

"We just knew that with the type of parlour we were using, and the amount of cows we were milking, something had to change. We had to do something different and I kind of always knew that I'd want to go into a rotary, if the chance came up to build a new parlour."

Brad said Waikato Milking Systems was a new brand in Wisconsin at the time the family planned its redevelopment project. "We heard about the company through our dealer a year or two before we decided that we were going to build a new parlour."

He was then introduced to the benefits of the company's Centrus Composite Rotary platform. It really piqued his interest. "One of the big reasons we went with Waikato Milking Systems was the quality of the Centrus deck itself. Being composite, it does not have all that weight to carry, like a concrete platform, as it turns."

The composite platform was installed in 2019 and proved to be a real draw at an open day Clinton Farms held in September, to showcase its new milking system, dairy parlour and buildings. "We had around 800 people here, a lot of people from our area but also from other parts of the state and I know there were a few from other states as well. There was a lot of interest in the parlour and in particular the composite deck, people wanted to know more about it."



Brad said the overall 'constant cow flow' the rotary platform delivers was another top feature the farm was looking for, when it redeveloped the parlour. "You are not milking 20 cows at a time and the other 20 just standing there. I just think the constant, even flow of cows, coming in and out, is very appealing."

The new Centrus Composite Rotary has a number of milking automation and dairy management features to improve the farm's efficiency. It will mean Brad and his team can reduce milking time from 5-6 hours in their old parlour, to just two hours in their new system. When it came to automation, the parlour included SmartECRs (Electronic Cup Removers); SmartD-TECT for pulsation and milk conductivity measurements; Yield Indicators to measure milk volume and HD Stainless Steel Bails suitable for larger livestock. It also has SmartSPRAY, for pre and post milking.

All of the data generated by these automation options are gathered by the parlour's NaviGate Dairy Management System. The information can be viewed on a parlour console and the operator can make better informed decisions about how to manage the herd.

"It means everything is available for us to see on the computer screen. We can go back to the previous milking and see what happened to compare the data and make decisions. Basically it lets you know what's going on with your herd. You're not totally relying on your milkers to notice everything as the cows are being milked. It gives you peace of mind that things are getting done the right way and you know you're getting a consistent milking routine."

The NaviGate Sort Gate is also part of the dairy management system and will allow Brad to automatically sort the animals as they come off the platform and exit the parlour, using animal ID reader technology. Brad said the herd took a bit of convincing using the rotary for the first time, after graduating from the old in-line system. "It took two or three milkings, after that they started walking on themselves. You notice that it's always the same cows that walk on first and the same cows that are the last to get on, they've got their own order."

Brad said the Centrus Composite Rotary platform will give Clinton Farms the ability to expand its dairy operation in the future. "At the moment we're milking 500 cows three times a day, but it could handle 2000 cows. If we want to get that big some time later, there is plenty of room for expansion." The Waikato Milking Systems platform is the only one of its kind in the state of Wisconsin and Brad expects it will become a bit of a showpiece for the company. ■

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



# Innovative solution for milking a large number of cows

## Milcline, Italy

The Milcline Proactive Rotary Parlour with external milking is the best and most innovative solution for milking a large number of animals with a limited number of operators.

The external part of the rotary is completely covered with stainless steel panels to protect the internal components. It is equipped with the MilproP4C system, which is specially developed to solve the problem of over milking as it manages the attachment on every single quarter of the udder.

Using the Milgrip handle facilitates the work of the operators by reducing the effort of lifting and attachment of the milking unit. At the end of the milking of each individual animal, 'back flushing' is performed. This is the washing and sanitisation of the milking group.

Lobi vacuum pumps, controlled by the inverter, always work at the minimum rotation speed required, avoiding unnecessary vacuum and energy consumption. The highly reliable double beam structure supports the loading of the milking platform and the cows thanks to the two steel beams. Moreover, heavy duty nylon rollers are used.

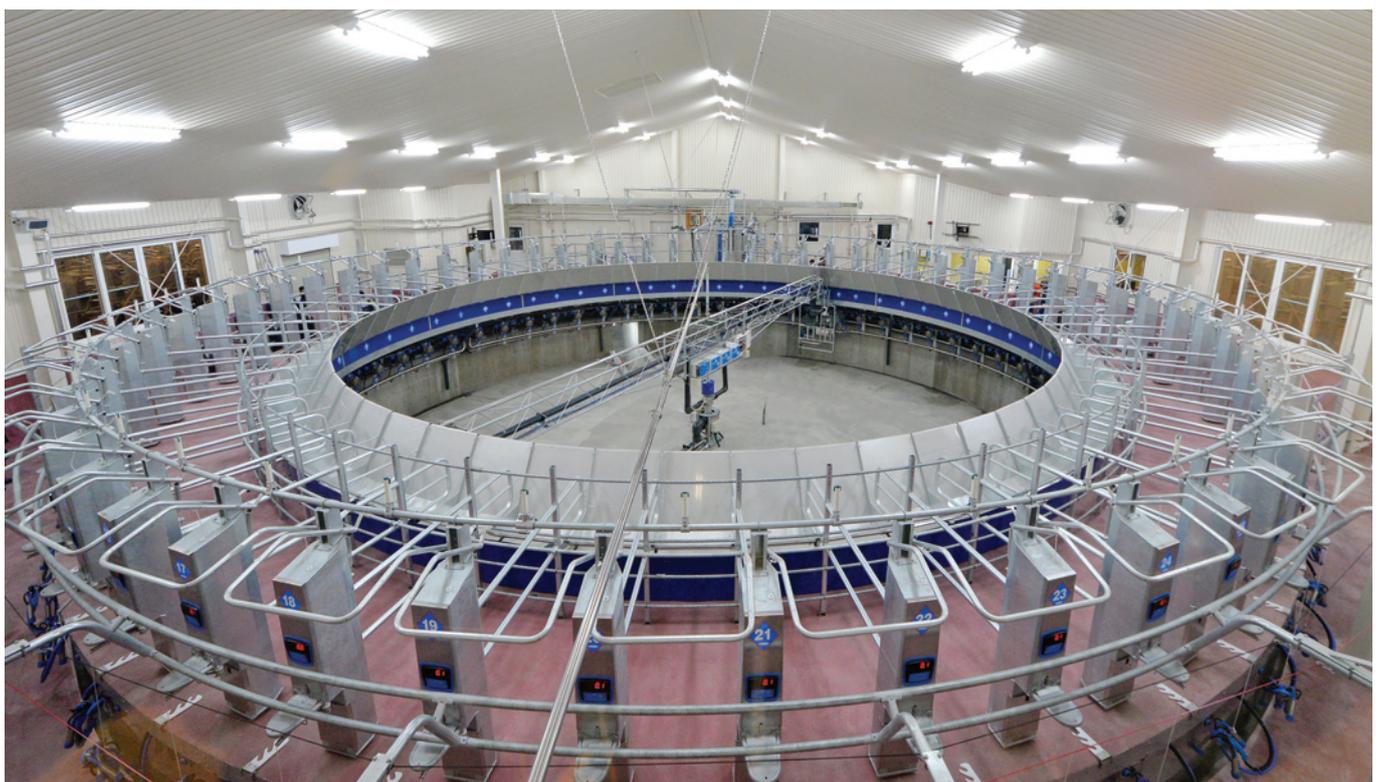


The parlour is also equipped with a two-way Selector Gate for the automatic separation of animals after milking in special areas.

Data Terminal allows real-time data and events entry during milking.

DataFlow II software allows producers to maximise the efficiency of their dairy farm by controlling the entire milking process and managing the additional components, such as Selector Gate and Data Terminal. ■

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



# Dairy robots rekindle family farm to create a better future

Delaval, UK

A 200 head dairy farm on the Devon Cornwall border recently installed DeLaval VMS milking robots to help create a better future for the family and the herd.

Newlands Farm is owned by Robert and Elizabeth Haworth. Their daughter Sarah manages the farm with her partner David Luxton and in 2018 the couple chose to make a major investment by introducing a DeLaval robotic milking system. "Sarah and I had to make a big decision about the future of the herd and the dairy. We knew we needed to invest and robots offered us an opportunity to future proof the farm," says David.

Three DeLaval VMS V300 milking robots were installed on the farm in a



Sarah Haworth and David Luxton chose to make a major investment by introducing a DeLaval robotic milking system in 2019. Six months on the couple are happy with the results they have seen.

newly constructed shed designed for the 200 pedigree Holstein herd. "We have opted for a guided cow traffic system which gives our cows the choice of when to rest, feed and visit the robots to be milked. It has also given us the opportunity to spend more time managing the farm and its future," says David.

The previous 16:16 parlour was deteriorating, and the couple worked very long hours milking and maintaining the equipment. "Our twins were born five years ago. We knew something had to change if we were going to be parents and dairy farmers. It was a case of change the parlour or look at more drastic measures," explains David.

The cows pass through the guided traffic system which includes a series of gates and automated checks, up to 16 times. However, each cow will only gain milking permission an average of 2.5 times per day depending on individual yield and stage of lactation. Each cow is monitored using DeLaval farm management software DelPro that gives David a performance dashboard on his PC and his phone. The frequency each cow is milked, the yield and any health problems are all available remotely. "Even if I am away, I know exactly what is happening. I can interpret the data provided by the robots to manage every cow individually."

David operates a multi cut silage system and in 2019 was able to make five cuts. His silage is 11.5 ME has a 70 D value and contains 20% protein. This helps the herd to deliver milk with at least 4.2% fat and 3.2% protein. In the previous parlour system, the cows yielded an average of 31 litres per head. This has increased to 33.5 litres, an additional 430 litres every day in the six months the robotic system has been in place. ■

[delaval.com](https://delaval.com)

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