



By Appointment To
Her Majesty The Queen
Dairy Equipment Manufacturers
Fullwood Limited Ellesmere

The Fullwood Rotary Abreast – total control for maximum profit



This complete solution gives total control over four of the main input costs of any dairy farm – energy, feed, health and breeding. Controlling costs and increasing yields through focusing on animal health will result in maximum profit for any Fullwood Rotary Abreast farmer.

Best for you and your dairy farm

Fullwood Limited
Grange Road
Ellesmere
Shropshire
SY12 9DF

T. +44 (0)1691 627391
F. +44 (0)1691 627361
sales@fullwood.com
www.fullwood.com

Fullwood



Fullwood Rotary Abreast – the advanced milking system for today's farmer.

Fullwood and the farmer

Contents

- 03 / Introduction from David O'Hare
- 04 / The history of the rotary milking system.
- 06 / Fullwood external rotary milking systems - the features
- 07 / David Christensen - Zero problems
- 08 / Fullwood rotary milking systems - setting out the benefits
- 09 / Lynsey Awde - it's a family affair
- 10 / In their own words - what some Fullwood farmers have to say about rotaries
- 11 / Technical Specifications
- 12 / The Fullwood Rotary Abreast - total control for maximum profit



/Front cover image
Lynsey Awde, who has been running the family farm alongside her dad and mum, Trevor and Francis, since 2001.

“From the company’s earliest days we have had a philosophy of developing market sector innovation bringing world leading technological advancements to the dairy industry.”

/David O'Hare
Chief Executive

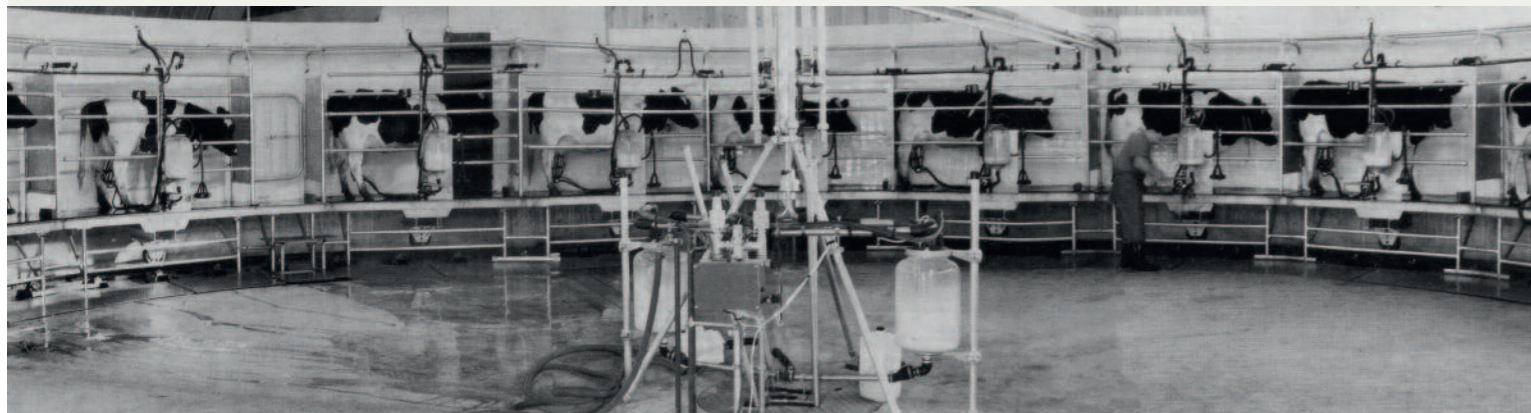


/Thomas & Samuel Steele
In December 2009 the Steeles took the decision to install a 60 point Fullwood Rotary Abreast.

Every product we develop is based on a design philosophy of improving efficiency, quality and profitability. The Fullwood Rotary platform is no exception.

The first rotary milking system to go into production in the UK, revolutionised milking for farmers not just in Britain but throughout the world. Forty years on the Fullwood Rotary Abreast proves that we're not sitting on our laurels. The parlour reduces milking times, improves product quality and cuts down on labour ensuring happier and more contented cows and increased profitability.

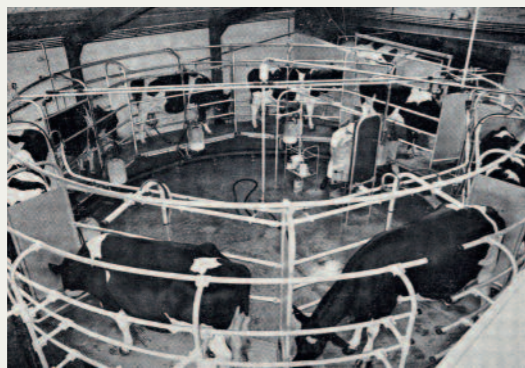
The history of rotaries: Fullwood at the forefront for over 40 years



The Rotary Tandem

1969

The first rotary milking platform to go into production in Britain was a Fullwood Rotary Tandem installed for Mr D Powell of Hittisleigh, Devon in August 1969. The Rotary Tandem was designed for milking herds of 300 or more cows using two operators. An 18 point rotary with two workers would milk approximately 140 cows per hour. Mr Powell's rotary was a 13 point system with automatic teat cup removal enabling him to milk 120 cows in little over an hour all on his own.



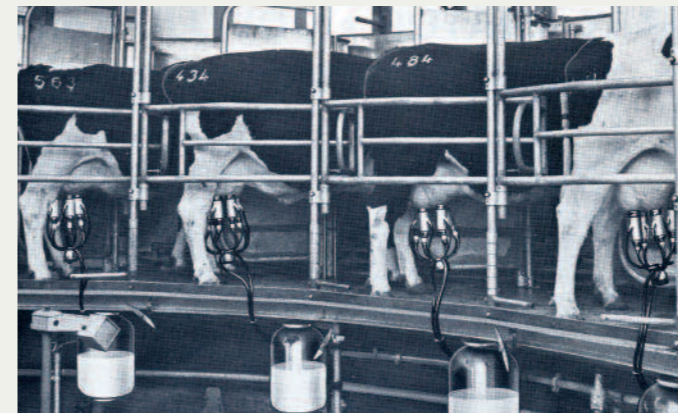
The Rotary Carousel

1970

It soon became apparent that there was a limited market for the Rotary Tandem but that there was a large demand for a parlour to milk between 100 and 150 cows using only one operator. Fullwood's research and development efforts to meet this increasing demand resulted in the launch of the Carousel in 1970.

The primary difference between the Rotary Tandem and the Carousel was that the Carousel halted automatically as each cow appeared before the operator. It was calculated that for one operator to achieve 70 cows per hour, 8 milking points were required. By 1972 Fullwood rotary systems were operating all over the world from Belgium, France, Holland and Sweden to Barbados, Australia, Japan and South Africa.

The size and cost of a building for a large system such as a 13 or 18 point Rotary Tandem, led to the development of a reduced size plant which could still maintain a milking rate of between 120 and 150 cows per hour.



The Rotary Herringbone

This was achieved by angling cows herringbone style and the new Fullwood 18 point Rotary Herringbone could be installed in a 9 metre building as opposed to over 15 metres for a similar size Rotary Tandem.

1971

The forerunner to today's rotary Abreast was launched in 1971. A simple low-cost rotary plant designed to give a high throughput for the larger herd, this system was available in two sizes, 20 and 30 point.

This system proved just as popular as the Tandem and the Carousel with installations across Europe in the first few months of being on sale.

Some of the original reasons cited for choosing a Fullwood rotary platform

"What I want is a milking system which will enable me to milk 160-170 cows on my own without help. I don't want to spend more than one and a half hours at the job and I don't want to be exhausted at the end of it." **Derek Powell, Devon 1969**

"We were looking to the future" says Mr Tory, "where we could have a good man doing the thinking and a machine doing the work. I believe agriculture has got to compete with industry these days and it has got to have the equipment to do so." **Maurice A. Tory, Blandford Forum, 1971**

"The advantages of the carousel definitely outweigh the extra cost. If you're going to save half the extra cost," says Mr Bird, "let's say £1,000, in a year, it's worth it. I reckon I'm saving the cost of one cowman a year." **Mr Bird, Cheshire 1971**

Why choose a rotary?

- If your herd size is over 400 cows
- If you are looking for fast throughput with the minimum number of operators
- If you would like a low maintenance budget – platform only needs to be serviced once a year



Automated teat spray



Internal or external milk lines



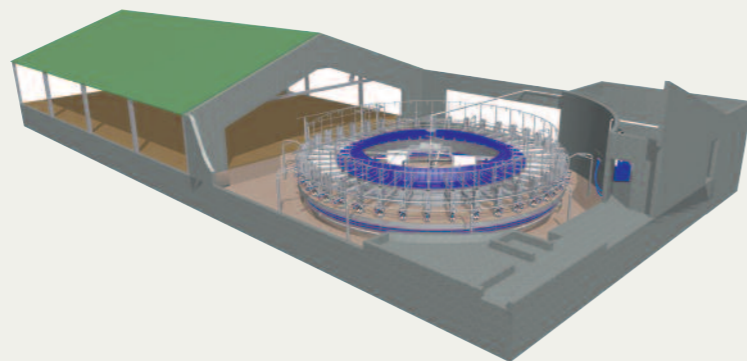
Milk tube support arm

Features of Fullwood rotaries

- Robust design – heavy duty, galvanised or stainless steel stalling
- Safety compliant – compliant with all EU directives for animal and operator
- Quick installation times due to modular construction
- Controlled by plc (programmable logic controller) for easy speed adjustment
- At a push of a button will automatically move platform to wash position
- Hydraulic rather than electric motors – greater longevity, fewer services, lower costs
- Wifi communication as standard
- Backflush – lowers each cluster individually at a given point in cycle
- Sanitises cluster after every cow with air, peracetic acid, water and then air again
- Clockwise or anti-clockwise rotation
- Integrated with Crystal herd management software
- Automated teat spray
- Available with feeding

External rotary features

- Quick loading and excellent udder presentation
- Inward sloping
- Milks large groups quickly
- If milking equipment located inside, milk recording can take place during milking – no need for sampling after the event
- Rotary control system: safety monitor for whole parlour linked to all emergency stops.
- Second time round gates
- ID at entrance or per stall
- Milk rejection systems
- Internal or external milk lines
- Stainless steel midi-skirt minimises area for clean down
- Milk tube support arm
- Sizes: 24/28/32/36/40/44/50/60/72/80



/David Christensen
Kingston Bagpuize,
Abingdon, Oxfordshire
All of the dairy farm's
production goes for
liquid milk, mainly
serving the London
market, at a rate
of 20 tonnes per day.



Zero

As far as David Christensen is concerned 'no news is good news'. With a dairy herd numbering 620 cross-breed cows the last thing he wants is for his team to constantly report operating problems. The good news is that his decision to install a Fullwood Rotary parlour has given him a 'big fat zero' as far as problems are concerned. By avoiding costly and time consuming production difficulties, David has been able to produce a hugely impressive 50 million litres of milk since the parlour was installed in February 2001. He's also benefitted from much faster milking times, which makes for more contented cows and staff who get to go home earlier too.

But the best testimony is expressed in his own words, "we've had 11 years of stress-free milking and you can't put a price on that".

"I've got absolutely nothing to say about our Rotary parlour, which is exactly how I like it."

External rotary

Benefits:

- Easy to use
- Quick throughput
- Low down time
- Low costs
- Stress-free
- Low costs, high throughput, more time = increased profit



Arjan Coppelmans decided to install the Fullwood 40 point external rotary platform after visiting a farm that had been operating a Fullwood external rotary for the past seven years.

As Arjan put it “the system had been milking 700 cows, three times a day since it was first installed, without any problems, which was good enough for me”. Whereas it previously took 5 hours a day to milk the herd, it is now possible to milk the 150 cows in one hour. And his cows took to the new milking system straight away – some wanting to stay on the rotary a second time round! For Arjan his wife Thea and his parents Leo and Maria their new Fullwood rotary has proved to be the perfect investment for the future growth and development of their farm.

Farmer/owner:
Arjan Coppelmans
 Farm location:
Beerzerveld
Netherlands
 Herd:
130 Holstein Friesians
 Milking system:
40 point rotary Abreast
 Date of installation:
December 2011



When Thomas and Samuel Steele decided on a Fullwood rotary abreast platform it was definitely a family affair. Also involved in the decision were Mum and Dad, Rosemary and Thomas, and it wasn't a decision taken lightly. The whole family were involved in a huge amount of research, visiting farms in Eire, UK, Germany and South Africa. Key to the decision was the robust Fullwood stalling and the fact that it will allow for further expansion of the herd from 400 to 600 cows, should they wish to.

With milking times reduced by a third and an annual yield for the herd of 10,555 litres/cow the farm is achieving overall profits, before drawings, of 6p per litre. The parlour was commissioned in December 2009 and nearly three years on the recent accolade of Dairy Farmer of the Year, has put the icing on the cake.

Farmer/owner:
Thomas and Samuel Steele
 Farm location:
County Down
Northern Ireland
 Herd:
400 Holstein Friesians
 Milking system:
60 point rotary Abreast
 Date of installation:
December 2009



/Lynsey Awde
 Farm location, Cumbria
 Lynsey gets to enjoy some down time with her son, David.

4.5 million

It wasn't the best of starts. When Grandad died in 2001, the year of the foot and mouth outbreak, the Awde family was in danger of losing their home. At that point Dad stepped in and bought the farm. Daughter Lynsey and son Francis decided it was time for family unity and stayed with Mum and Dad on the farm. Since those early, difficult days the farm has gone from strength to strength.

In 2007 the family installed a Fullwood 50 point rotary platform enabling them to milk 200 cows per hour. Today the Awdes have 450 cows in milk, averaging circa 4.5 million litres per annum. Thanks to their commitment and dedication and Fullwood technology, life is good. Profitability is growing steadily and with every other weekend off, Lynsey and her family clearly made the right decision back in 2001.

“We’ve got millions of reasons to be proud of what we’ve achieved.”

/In their own words
What some of the Fullwood
farmers have to say about
the Rotary Abreast



Better human and animal welfare

Fullwood has vast experience of machine milking – we were there at its inception. This ensures that the best knowledge available is utilised in making life as stress-free as possible for man and animal. Rotary milking is one element of the total package Fullwood can supply for your farm. Identification, management software, cooling systems, segregation and feeding equipment are all available to get the best from your cows and to improve your work-life balance.

Fullwood is at the forefront of designing, manufacturing and supplying milking systems across the globe.

“The new parlour is not only more energy efficient than the previous system, it is also a lot quicker,” Trevor continues. “That means we can get the whole of the morning milking done using cheaper low-rate electricity. On average we are saving between £5 and £6 a day on power alone which translates to an annual saving of around £2,000.” *Trevor & Richard Bray, Devon, England*

“Overall time and labour costs have reduced by 25%. Furthermore yield in one lactation has increased by 25%.” *Tamás Busák, Hungary*

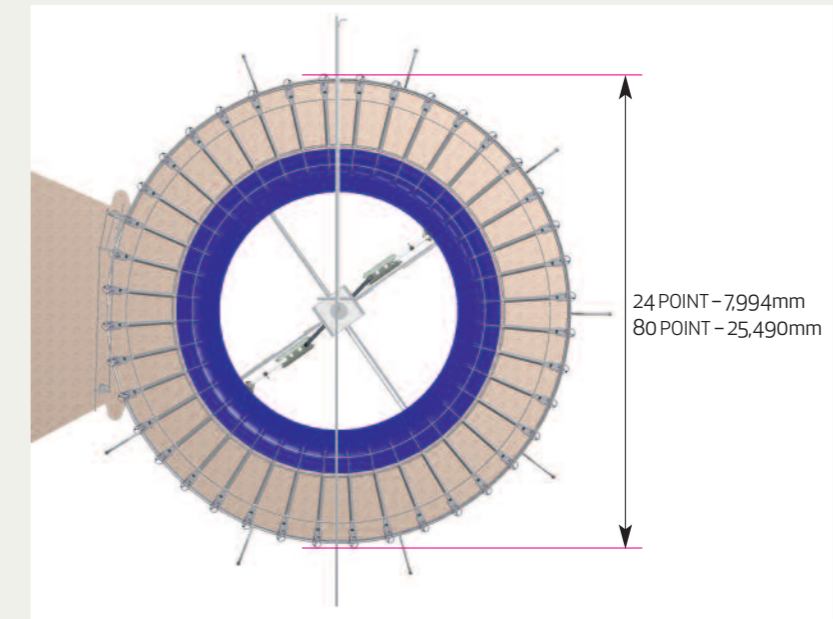
Over the ten years with his rotary parlour Yoshinao produced 16.4 million litres of milk. This is impressive stuff but possibly more impressive is the service record of the parlour. Over its lifetime engineering support was only needed twice for the centre bearing and no attention has ever been required on the platform or any other major components. *Yoshinao Nakashima, Japan*

“The 50 point Fullwood rotary has reduced milking times from 9 to 4 hours a day.” *Arthur Fearnall, Cheshire, England*

“230 cows per hour based on two people milking. This has removed the need for relief staff. The entire farm is now run by a total of three full time staff with labour costs reduced by an estimated £30,000 a year.” *Nigel Rowney, Ayrshire, Scotland*

“The parlour has been really worthwhile, we used to have a herringbone parlour and it was taking about four and a half hours to milk 300 cows. It now takes us only 2 hours to milk 400.” *Thomas & Samuel Steele, Co Down, Northern Ireland*

Fullwood Rotary Abreast Technical Specification



We appreciate the need for reliability and with this in mind Fullwood offers an approved maintenance plan developed to ensure that Fullwood milking equipment consistently satisfies the requirements of the highest standards.

- Platform Requirement – 5.5kW 3PH
- Power Consumption – 11-33kWh (based on 2 milkings per day)
- Water Consumption – 432-1440 litres per day (dependant on delivery line length)
- Operation Indicator – LCD Operator Console
- 1 service per year – 1 (platform)
- 2 services per year as part of the Fullcare service plan
- Complies to the following Directives;
 - Machinery Directive 2006/42/EC
 - Low Voltage Directive 2006/95/EC
 - EMC Directive 2004/108/EC
- Complies to the following Standards
 - ISO 13849-1:2006 Safety-related parts of control systems
 - ISO 12100:2010 Safety of machinery – General principles for design – Risk assessment and risk reduction
 - ISO 3918:2007 Milking Machine Installations - Vocabulary
 - ISO 5707:2007 Milking Machine Installations - Construction and Performance
 - ISO 6690:2007 Milking Machine Installations - Mechanical Tests