

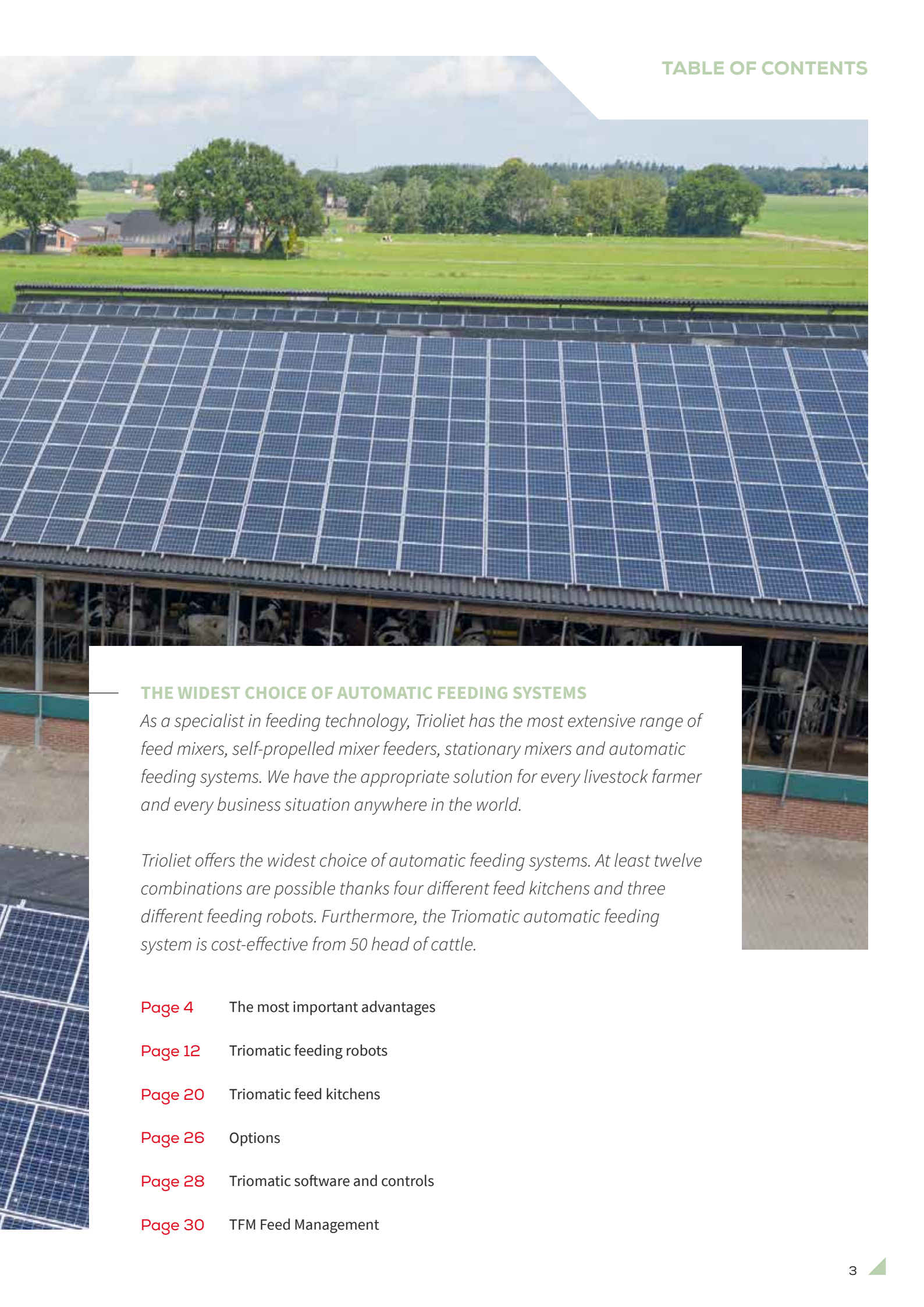


TRIOMATIC

automatic feeding systems

CONSISTENT FEED QUALITY THANKS TO ADVANCED AUTOMATION





THE WIDEST CHOICE OF AUTOMATIC FEEDING SYSTEMS

As a specialist in feeding technology, Trioliet has the most extensive range of feed mixers, self-propelled mixer feeders, stationary mixers and automatic feeding systems. We have the appropriate solution for every livestock farmer and every business situation anywhere in the world.

Trioliet offers the widest choice of automatic feeding systems. At least twelve combinations are possible thanks four different feed kitchens and three different feeding robots. Furthermore, the Triomatic automatic feeding system is cost-effective from 50 head of cattle.

Page 4 The most important advantages

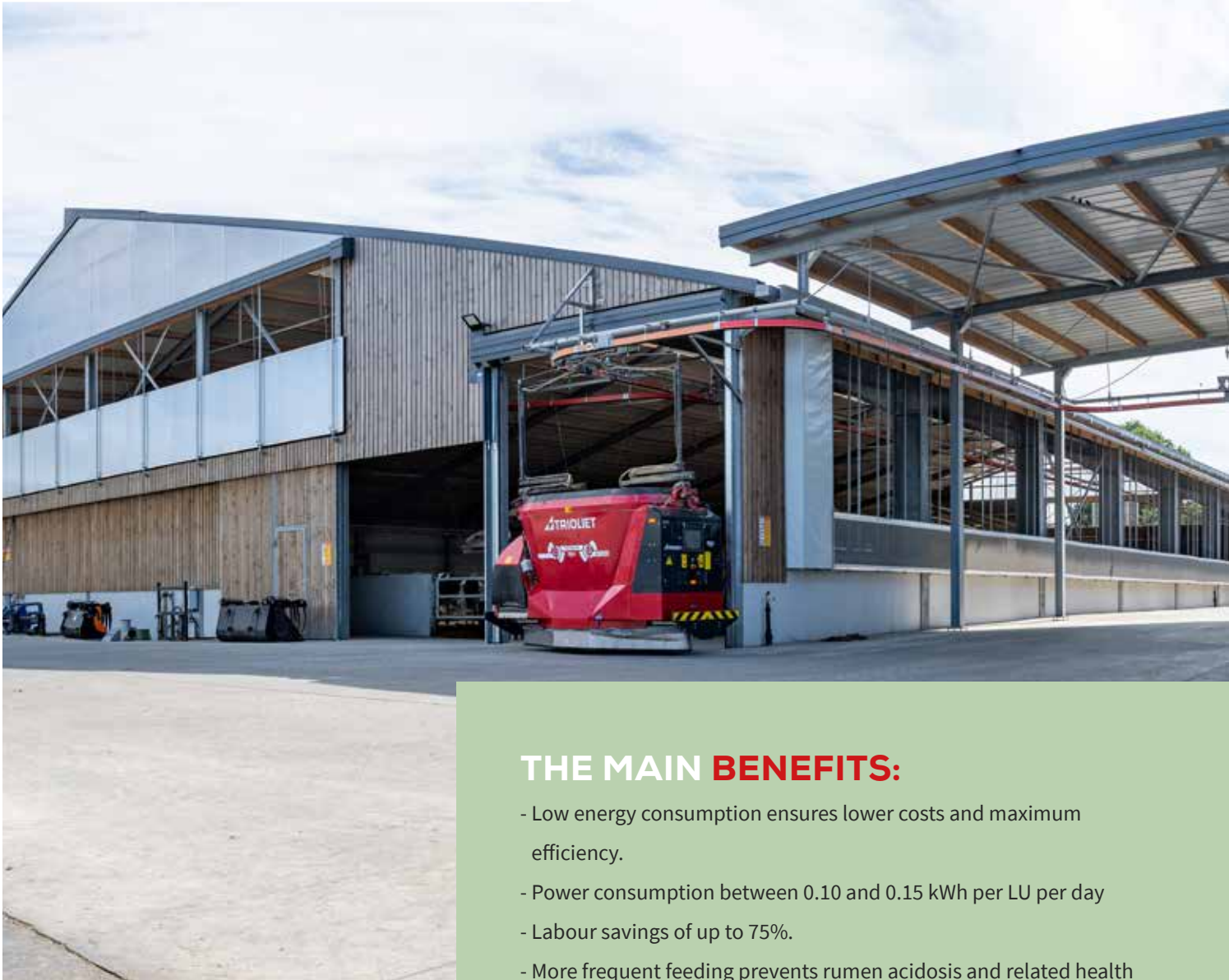
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Automation is becoming increasingly important in modern dairy farms for producing milk efficiently and profitably, while for beef farmers, it is important to achieve the highest possible weight gain. However, automatic feeding is a major step for many livestock farmers. It is therefore good to know what an automatic feeding system actually delivers.

THE MAIN **BENEFITS:**

- Low energy consumption ensures lower costs and maximum efficiency.
- Power consumption between 0.10 and 0.15 kWh per LU per day
- Labour savings of up to 75%.
- More frequent feeding prevents rumen acidosis and related health problems.
- More frequent and targeted feeding leads to higher milk production and improved fertility.
- The ability to mix accurately and precisely, even for small groups of animals.
- Operational reliability: feeding always continues.
- A calmer barn environment, with less hierarchy among the animals.
- High flexibility and reduced dependence on labour.
- Savings on feed costs thanks to high loading accuracy and lower residual feed quantities.

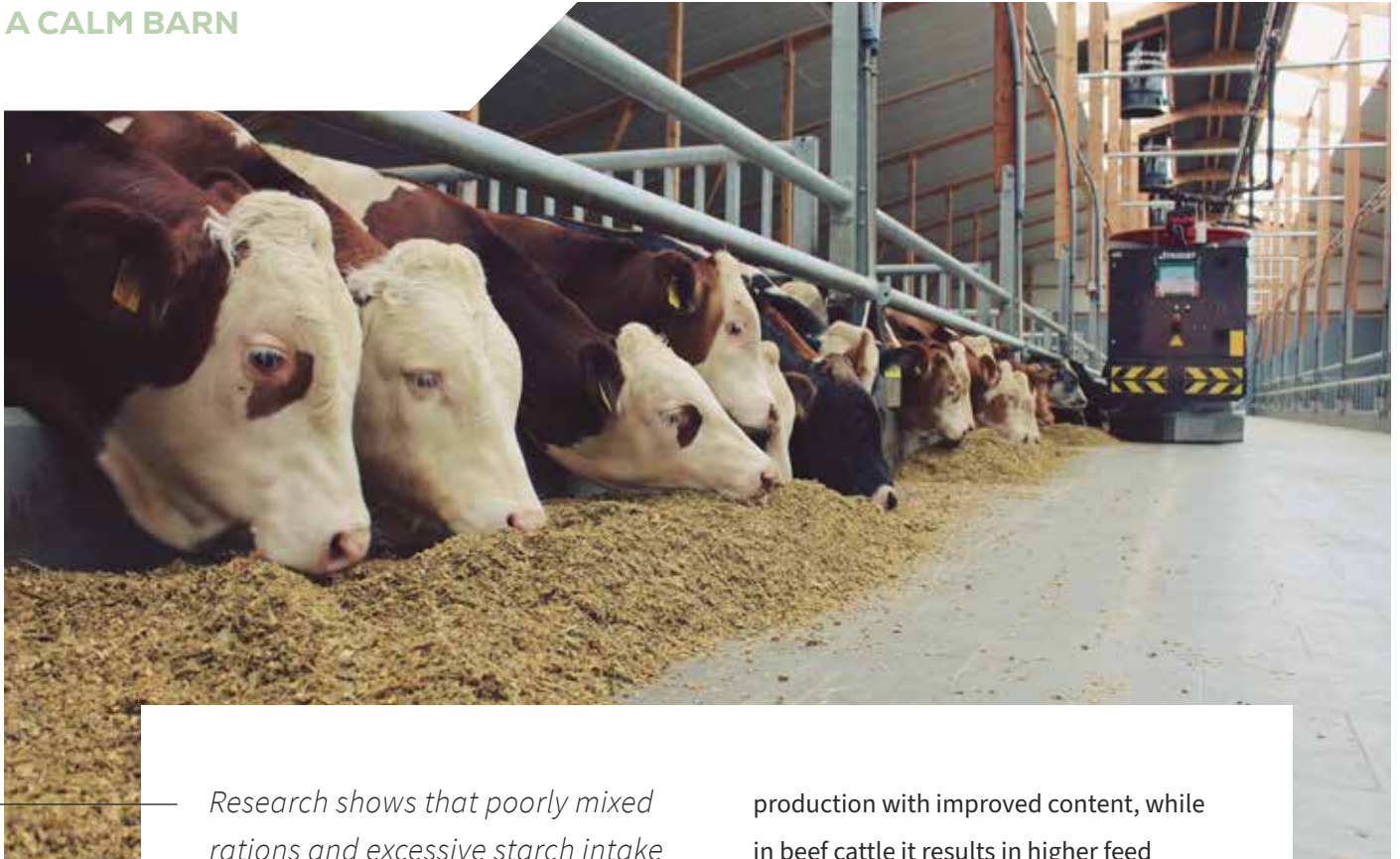


AUTOMATIC FEEDING:

**THE PERFECT BALANCE BETWEEN
EFFICIENCY AND ANIMAL WELFARE**



A CALM BARN



Research shows that poorly mixed rations and excessive starch intake are the main causes of ruminal acidosis. But it can also be a result of large and irregular amounts of feed. Feeding smaller amounts more often results in much more consistent feed intake and therefore less chance of ruminal acidosis. Twelve equal meals per day are ideal for dairy cows and three to five per day for beef cattle.

production with improved content, while in beef cattle it results in higher feed conversion. Moreover, it ensures a calmer barn and a better start for the calves. There is less competition at the feeding fence and every animal gets exactly what it needs. The ability to feed several times per day has a positive impact on the feed conversion ratio and the health of the livestock.

Ruminal acidosis is a common problem with dairy cows. It causes reduced rumination activity, diarrhea, lower feed intake and lower milk yields. Excessively low rumen pH leads to decomposition of bacteria, releasing toxins which can in turn cause inflammations in the hoofs (for example). With a Triomatic automatic feeding system, it is possible to plan a total of more than 40 feeds each day for multiple groups. The dairy cows, heifers and dry cows each get their own ration, spread throughout the day. In dairy cattle, this leads to higher milk

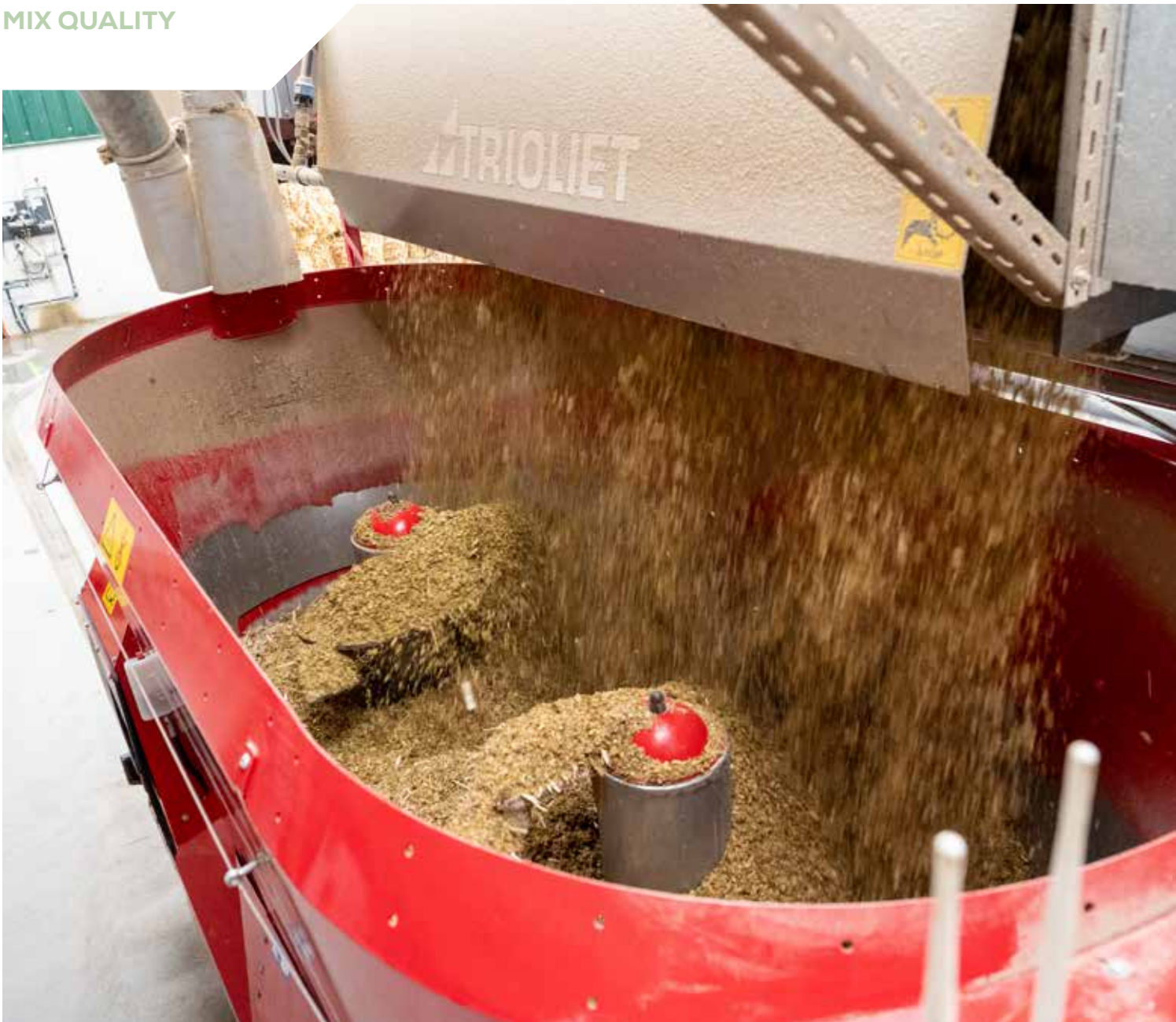


CUSTOMER STORY:

Thanks to the savings in labour and energy, the Triomatic system pays for itself.

FREQUENT FEEDING PREVENTS RUMINAL ACIDOSIS





GOOD MIXING PREVENTS FEED SELECTION

Scientific research has shown that dairy cows, beef cattle and goats all have a very strict biological clock, which is why it is important to feed livestock at fixed times. The ration also needs to be consistent and must have the same composition every day and every feed. Once you have sat down with your feed advisor to determine what the ration should be, it is important that this carefully composed menu actually ends up in the animals. To prevent them from picking out the tastiest bits of feed, it is important that the ingredients are mixed well. When rations are properly mixed, it is impossible to pick and choose and so every animal receives a properly balanced ration.

TRIOMATIC DELIVERS BOTH VERTICAL AND HORIZONTAL MIXING

In addition to a balanced ration, the quality of the mixing is very important. Triomatic feed robots have a specially shaped chamber in which the feed is mixed both vertically and horizontally according to the 'Dual Flow' principle. The system always uses a twin-auger mixing principle and is equipped with auger knives. Thanks to the unique shape of the augers, even small quantities of feed (from approx 60 kg / 130 Lbs) can be mixed effectively. The high auger speed also improves mixing: during mixing, the augers can reach more than 30 rpm, while during emptying they reach 60 rpm. This ensures that even smaller groups of animals receive a balanced and thoroughly mixed ration.

INVESTMENT IN STAFF OR IN AUTOMATION?

At present, feeding can take around an hour and a half every day, and salaries are not getting any cheaper. By contrast, an automated feeding system can reduce the time spent on this task to 15 to 30 minutes per day. At the same time, the costs of investment are spread over the lifetime of the system. When you realise that the earliest Triomatic feeding system has already been running for more than twelve years, it doesn't take long to put two and two together. The feeding robot does exactly what you ask it to do and is always ready for you, 24 hours a day, 7 days a week.



Well-mixed rations prevent selection at the feeding rack

PERFECT MIXING STARTING AT 60 KG / 130 LBS

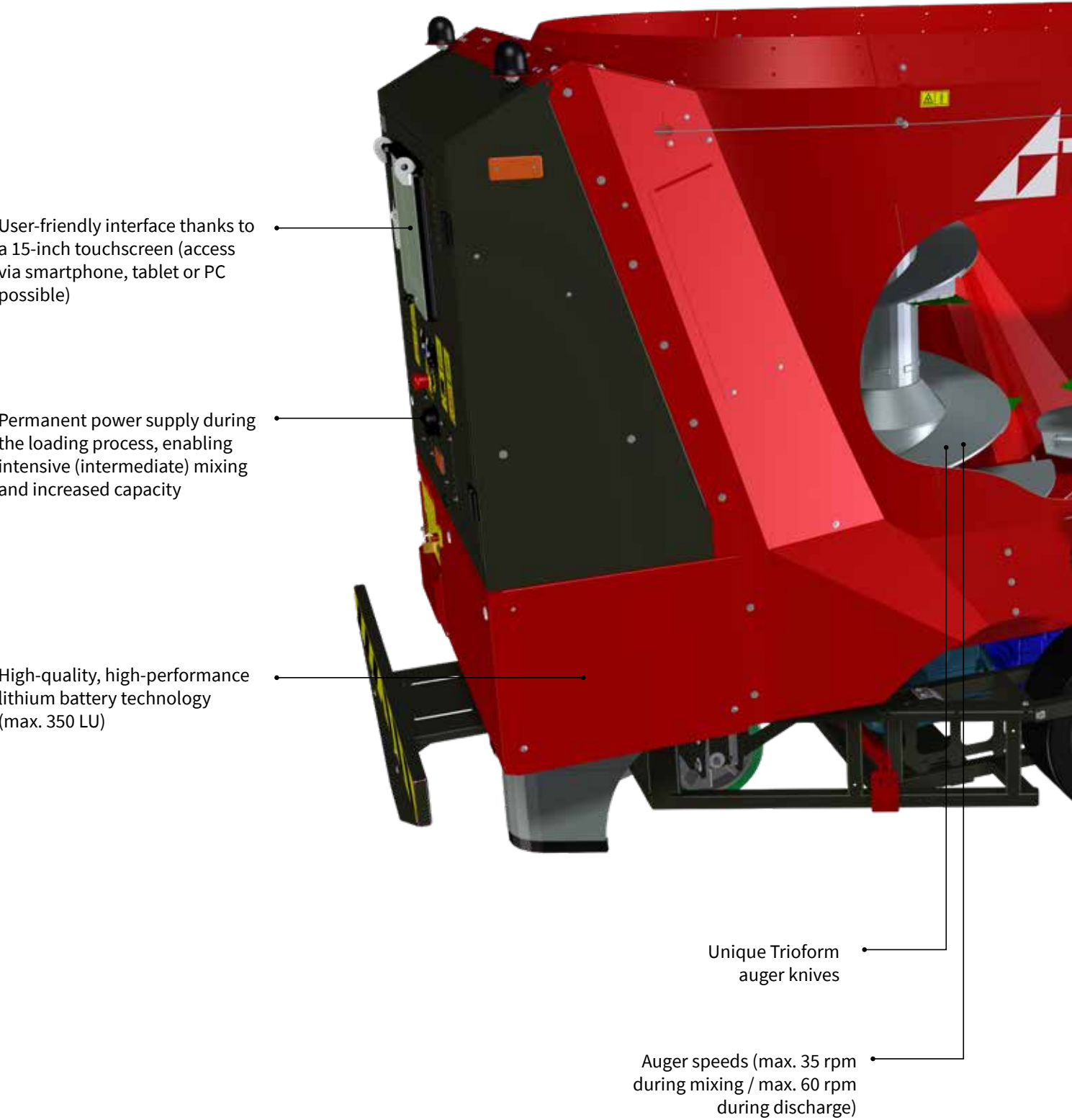
SAVE MONEY WITH AUTOMATIC FEEDING

If you take a closer look at automatic feeding you will see that there are many benefits beyond just the savings in labour. Research among Triomatic users has shown that the cost savings can also be considerable. The savings come mainly from improved feed utilisation, higher milk production with better content, greater feed efficiency, less work and lower energy costs.



The Triomatic is ready for you 24 hours a day, 7 days a week

UNIQUE FEATURES OF THE TRIOMATIC



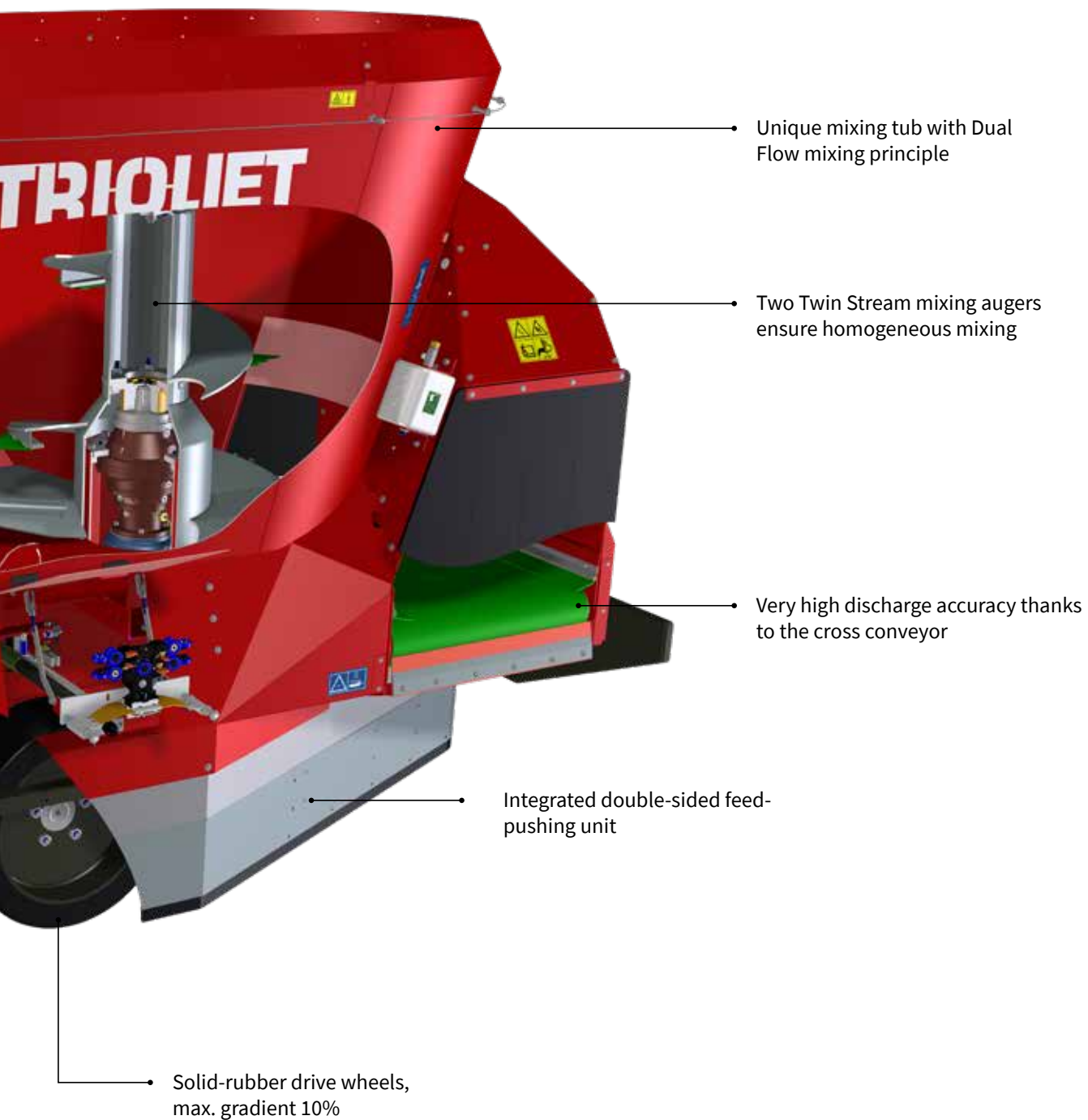
User-friendly interface thanks to a 15-inch touchscreen (access via smartphone, tablet or PC possible)

Permanent power supply during the loading process, enabling intensive (intermediate) mixing and increased capacity

High-quality, high-performance lithium battery technology (max. 350 LU)

Unique Trioform auger knives

Auger speeds (max. 35 rpm during mixing / max. 60 rpm during discharge)



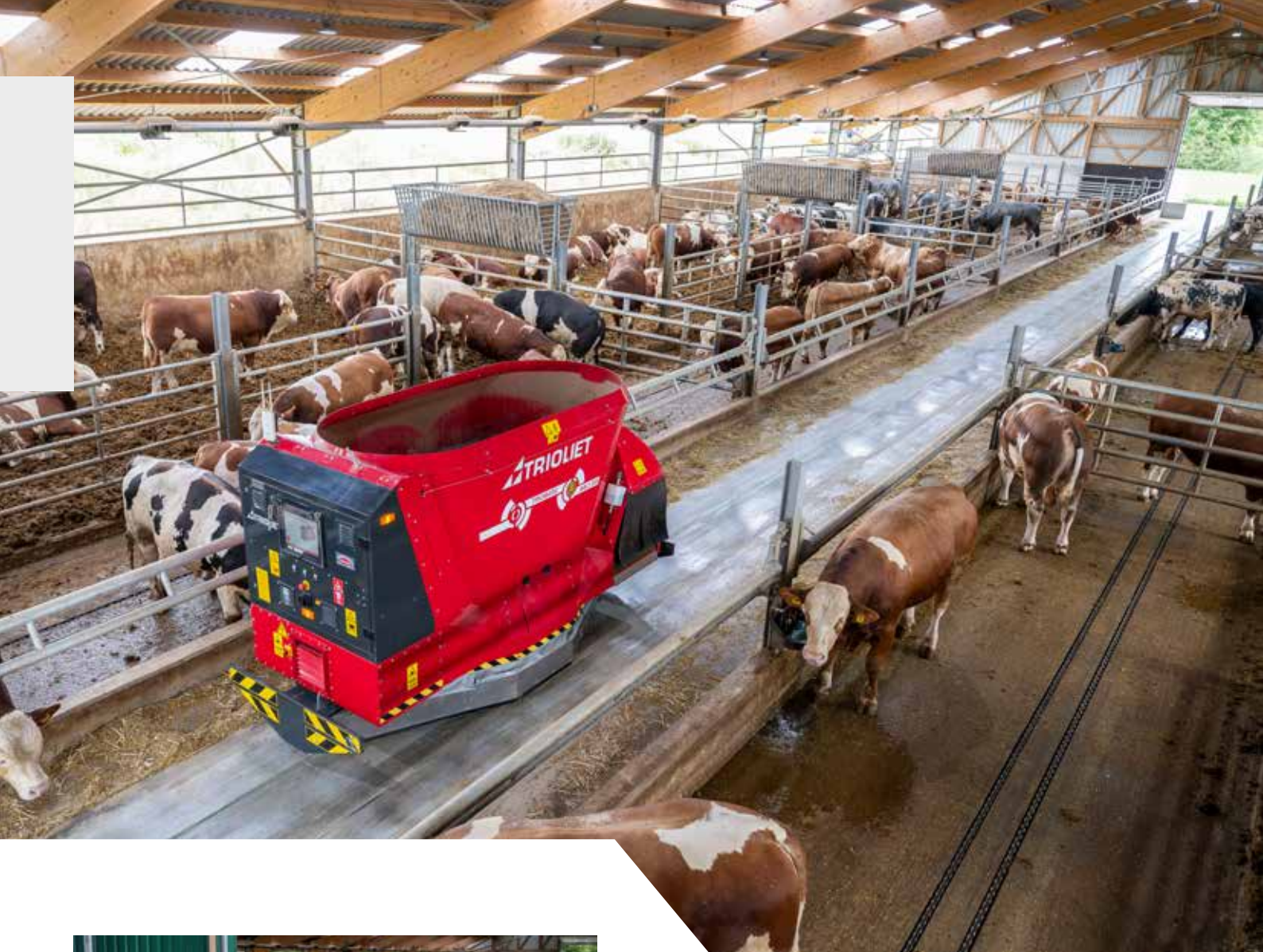
TRIOMATIC FEEDING ROBOTS

Hanging or wheeled robot



You can choose from a suspended feeding robot, a wheeled robot powered by electricity, or a battery-powered wheeled robot, depending on your barn and farm operation. In addition, four types of feed kitchens are available, offering different feed storage options (loose, in blocks or bales), so the system can always be configured to suit your situation.





CHOICE OF FOUR DIFFERENT FEEDING ROBOTS:

1. Triomatic HP 2 300 "Hanging", suspended from a steel rail and powered via a conductor rail
2. Triomatic WP 2 300 / 600 "Wheeled", on wheels and powered via a conductor rail
3. Triomatic WB 2 300 "Wheeled", on wheels and battery-powered

The feeding robots have two vertical mixing augers and a capacity of 3 m³ / 110 cu.ft. or 6 m³ / 220 cu.ft., and are suitable for 50 to 800 LU.

TRIOMATIC HP

Hanging robot - Triomatic HP 2 300



FEATURES OF THE TRIOMATIC HP

This feeding robot hangs from a steel rail, making it independent of ground surface and weather conditions when moving outdoors. Differences in height, for example between stalls, are easily bridged. The robot can also be lifted automatically using a winch. This offers even more advantages; for example, the route can also pass over the cubicles.



WATCH THE VIDEO:

Scan the QR code to go directly to the video.



See also www.automaticfeeding.com for more information and testimonials from Triomatic users



The robot can be combined with all types of Triomatic feed kitchens

TECHNICAL SPECIFICATIONS FOR THE TRIOMATIC HP 2 300 FEEDING ROBOT

Features of the HP 2 300 feeding robot

Capacity	3 m ³ / 110 cu.ft
Number of augers	2
Width	1.30 m / 55"
Minimum (net) width of feeding alley	2.40 m / 94"
Number of heads that can be fed by one feeding robot	50-550 head
Feeding capacity, quantity of feed per day*	+/- 25,000 kg / +/- 55,000 Lbs
Maximum load capacity	1,250 kg / 2,750 Lbs
Required electric connection	3x32 A
Required voltage	400 V~
Required frequency	50/60 Hz
Maximum gradient of track	2 %
Maximum gradient of track with rack and pinion drive	14 %

* dependent on the storage system, feed types and length of route

TRIOMATIC WP

Wheeled feeding robot with conductor rail Triomatic WP 2 300 and WP 2 600



Suitable for wide feed alleys thanks to the offset function.

The Triomatic WP feeding robot runs on wheels and follows a conductor rail that provides both power and guidance. The suspension system places no requirements on the steel structure of the barn. Thanks to the offset function, the robot can feed and push up feed up to 1.5 metres / 59" to the left and right of the rail, making it ideal for wide feed alleys up to 5.5 metres / 216". The WP can be combined with all Triomatic feed kitchens.



HIGH-CAPACITY ROBOT FOR LARGE-SCALE LIVESTOCK FARMS

With a 6 m³ / 220 cu.ft. capacity and a 2,000 kg / 4,400 Lbs loading capacity, the WP 2 600 is ideal for approximately 850 LU. The system can be expanded to up to 4 robots for farms with approximately 2,500 LU. The spacious tub with two Trionox augers mixes and cuts the feed homogeneously even with dry rations. Thanks to smart energy-saving technology, only one auger runs during dispensing, reducing energy consumption and increasing capacity. Suitable for all Triomatic feed kitchens (T10-T40).





TECHNICAL SPECIFICATIONS FOR THE TRIOMATIC WP FEEDING ROBOT

Features of the WP feeding robot	300	600
Capacity	3 m ³ / 110 cu.ft.	6 m ³ / 220 cu.ft
Number of augers	2	2
Width	1.30 m / 51"	1.88 m / 74"
Minimum (net) feeding alley width*	2.40 m / 95"	2.90 m / 115"
Number of heads that can be fed by one feeding robot	50-550 LU	50-850 LU
Feeding capacity, quantity of feed per day **	25,000 kg / 55,000 Lbs	40,000 kg / 88,000 Lbs
Maximum load capacity	1,250 kg / 2,750 Lbs	2,500 kg / 5,500 Lbs
Required electric connection	3x32 A	3x40 A
Required voltage	400 V	400 V
Required frequency	50/60 Hz	50/60 Hz
Maximum offset, left and right from the power rail	1.50 m / 59"	1.50 m / 59"
Minimum ceiling height from the feeding alley*	3.00 m / 118"	3.00 m / 118"
Maximum height of power rail*	4.20 m / 165"	4.20 m / 165"
Maximum gradient in the direction of travel*	10 %	5 %
Maximum threshold height in the direction of travel	50 mm / 2"	50 mm / 2"

* Variations upon request

** Dependent on the storage system, feed types and length of route

TRIOMATIC WB

Battery-powered wheeled feeding robot Triomatic WB 2 300



MAXIMUM FLEXIBILITY

TRIOMATIC WB FEATURES

The Triomatic WB feeding robot is a wheeled robot equipped with high-quality battery technology for driving, dispensing and pushing up feed. In the feed kitchen, the feeding robot docks onto a charging rail to recharge the batteries and to drive and mix on mains power while inside the feed kitchen. This results in higher system capacity and an improved mixing result through intensive (intermediate) mixing during the charging process. The Triomatic WB robot navigates using antennas that follow an induction wire in the floor. This reliable navigation technology gives the system the flexibility to move between different barns and feed alleys across the farmyard. The robot can be combined with all types of Triomatic feed kitchens.





TECHNICAL SPECIFICATIONS FOR THE TRIOMATIC WB 2 300 FEEDING ROBOT

Features of the WB 2 300 feeding robot	
Capacity	3 m ³ / 110 cu.ft.
Number of augers	2
Width	1.30 m / 51"
Minimum (net) feeding alley width*	2.40 m / 91"
Number of heads that can be fed by one feeding robot	50-350 head
Feeding capacity, quantity of feed per day**	+/- 25,000 kg / +/- 55,000 Lbs
Required electric connection	3x32 A
Required voltage	400 V~
Required frequency	50/60 Hz
Minimum ceiling height from the feeding alley*	2.50 m / 100"
Maximum gradient in the direction of travel*	10 %
Maximum threshold height in the direction of travel	30 mm / 1"

* Variations upon request

** Dependent on the storage system, feed types and length of route

TRIOMATIC FEED KITCHENS

With a storage capacity up to 5 days



Triomatic T30

FOUR DIFFERENT TRIOMATIC FEED KITCHENS ARE AVAILABLE:

1. *Triomatic T10 control panel*
2. *Triomatic T20 with stationary mixer(s)*
3. *Triomatic T30 with feed bunkers for coarse feed*
4. *Triomatic T40 with feed floors for silage blocks and/or bales*

All feed kitchens can be combined with both hanging (HP) and wheeled (WP and WB) Triomatic feeding robots.





TRIOMATIC T10 CONTROL CABINET

The Triomatic T10 is a main control cabinet used, for example, to switch tower silos and third-party feed dosing systems on and off. A Triomatic robot cannot control other systems without this Triomatic T10 main control cabinet.



TRIOMATIC T20 FEED KITCHEN WITH ONE OR MORE STATIONARY MIXER(S)

The Triomatic T20 feed kitchen consists of a main control cabinet with one or more stationary mixers. The mixer is electrically driven and is available with 1, 2 or 3 vertical augers and a capacity of 7 m³ to 52 m³ / 250 to 1,860 cu.ft.

The Triomatic T20 can process all types of feed in any form, including round or square bales with long-fibre feed. The Triomatic T20 is particularly suitable for livestock farmers who want to feed one base ration and, if required, add different concentrate feed components in the robot for each group.

TRIOMATIC T30 FEED KITCHEN

Feed kitchen with storage bunkers



FEATURES OF THE TRIOMATIC T30 FEED KITCHEN

The Triomatic T30 feed kitchen has one or more feed bunkers, with the number depending on the number of coarse feed ingredients, and is suitable for all types of feed (max. 15 cm / 6" long). The storage bunkers are made of stainless steel and are simple to fill using a silage cutter. The feeding robot collects the feed from each bunker based on the pre-programmed quantity. The bunkers are fully hydraulically driven and have a capacity of 10 m³ / 360 cu.ft or 18 m³ / 650 cu.ft. per bunker. Thanks to their special design, the feed that is loaded first is also used first, according to the first-in, first-out principle. The smart bunker design ensures clean operation without feed losses. The special residual correction system guarantees very high loading accuracy. Depending on feed quality and weather conditions, the storage bunkers need to be filled on average once every two days.





Suitable for all types of feed

TECHNICAL SPECIFICATIONS FOR THE TRIOMATIC T30 FEED KITCHEN

Features of the Triomatic T30 feed bunker	T30 1000	T30 1800
Capacity	10 m ³ / 360 cu.ft.	18 m ³ / 650 cu.ft.
Length	4.12 m / 162"	6.50 m / 256"
Width	2.73 m / 107"	3.00 m / 118"
Height	3.92 m / 154 "	3.92 m / 154"
Height back wall (from floor)	1.42 m / 56"	1.42 m / 56"
Height side walles (from floor)	1.88 m / 74"	2.20 m / 87"
Minimum feed kitchen access height*	4.00 m / 157"	4.00 m / 157"
Maximum loading capacity	4,500 kg / 11,000 Lbs	10,000 kg / 22,000 Lbs
Average power consumption during discharge	3 kW	3 kW
Required electrical connection	3x32 A	3x32 A
Required voltage	400 V~	400 V~

*Variations upon request

** Depending on type of product

TRIOMATIC T40 FEED KITCHEN

Feed kitchen with feed floors



FEATURES OF THE TRIOMATIC T40 FEED KITCHEN

The Triomatic T40 feed kitchen is a combination of one or more feed floors, with the number depending on the number of coarse feed ingredients. These feed floors are easy to load using a silage cutter but the system is also suitable for round or square bales of silage, hay or straw. The cutting unit has two circular knives that cut the feed up evenly, leaving a compact feed structure. Thanks to the simple technology of the circular cutting knives, the system uses little energy: only 0.5 to 1.0 kWh per load. This represents a saving of 50% compared to other systems. The cutting unit is fitted with an automatic cleaning system to prevent the feed from caking. In the Triomatic T40 feed kitchen, the feed can be stored for 3 to 5 days because the feed remains in solid form and so can be kept for longer.



OPTIONAL

A range of options can be added to all Triomatic feed kitchens:

- *Tower silo control systems, liquid dosing systems, etc.*
- *Stainless-steel mineral mixer unit with elevating auger for powdery products such as minerals, chalk, etc.*
- *Stainless-steel auger discharge bunker with agitator, cross and elevating auger for wet, loose and corrosive by-products such as brewer's grain, sugar beet pulp, potato pulp, CCM, pellets, cereals, etc.*
- *Software connections to TFM feed management.*



Suitable for silage blocks and square or round bales

TECHNICAL SPECIFICATIONS FOR THE TRIOMATIC T40 FEED KITCHEN

Features of the Triomatic T40 feed kitchen	
Maximum number of feed floors*	8
Feed floor length	6.25 m / 7.60 m / 8.90 m / 20 ft / 25 ft / 29 ft
Feed floor width (between the walls)	1.95 m / 77"
Height	3.60 / 12 ft
Minimum required clearance in the feed kitchen	4.00 m / 13 ft
Minimum required feed kitchen depth:	Length of feed floor + 2.50 m / +8 ft
Maximum height of silage block or bale	1.80 m / 6 ft
Maximum width of silage block or bale	1.80 m / 6 ft
Maximum diameter/length of bale	1.60 m / 5 ft
Maximum load** per feed floor	15,000 kg / 33,070 Lbs
Required electric connection*	3x32 A
Required voltage	400 V~
Required frequency	50-60 Hz

*Variations upon request

** Depending on type of product

OPTIONS



Stainless-steel auger dosing bunker with agitator, cross auger and elevator auger



Water supply system complete with 1 m / 39" spray boom



Mineral dispenser with 120 L / 31.7 Gallon storage bag and stainless-steel trough auger



Silo Box control for controlling external silos

TRIOMATIC SOFTWARE AND CONTROLS



In all situations, the Triomatic robot is in charge and controls the feed kitchen by sending signals via WiFi. A control panel with a 15" touchscreen is located on the rear of the robot. Feed, rations, groups and any sub-groups can be entered via this screen. The ability to program subgroups is particularly important for beef farms, but also for dairy farms, allowing barn routes to be fed according to specific requirements. The settings can also be accessed online from a computer, tablet or smartphone. Common adjustments and settings can therefore easily be made remotely or

directly on the robot via the user-friendly display. The TFM Cloud feed management program can be linked to third-party management software. Any fault notifications are sent via an app. It is then possible to log in using a computer, tablet or smartphone to resolve the fault remotely.

In all situations, the Triomatic robot is the 'master' and controls the feed kitchen via Wi-Fi signals.



DO YOU KNOW WHAT YOUR ANIMALS ARE EATING?

TFM FEED MANAGEMENT

The TFM feed management program provides a wealth of valuable information. TFM is available in the Cloud, which means it is accessible to you at all times. Not only rations, dry matter intake and loading accuracy, but also roughage and concentrate stocks can be monitored based on the rations fed. Clear graphical reports immediately show feed costs and the average over a selected period. In addition, certain feed management programs can be linked to other farm management systems. In that case, feed data can, for example, be linked to milk production and animal numbers, allowing feed efficiency to be determined easily. In short, it answers one of the most important questions: 'What is my return?'

Trioliet offers different TFM versions:

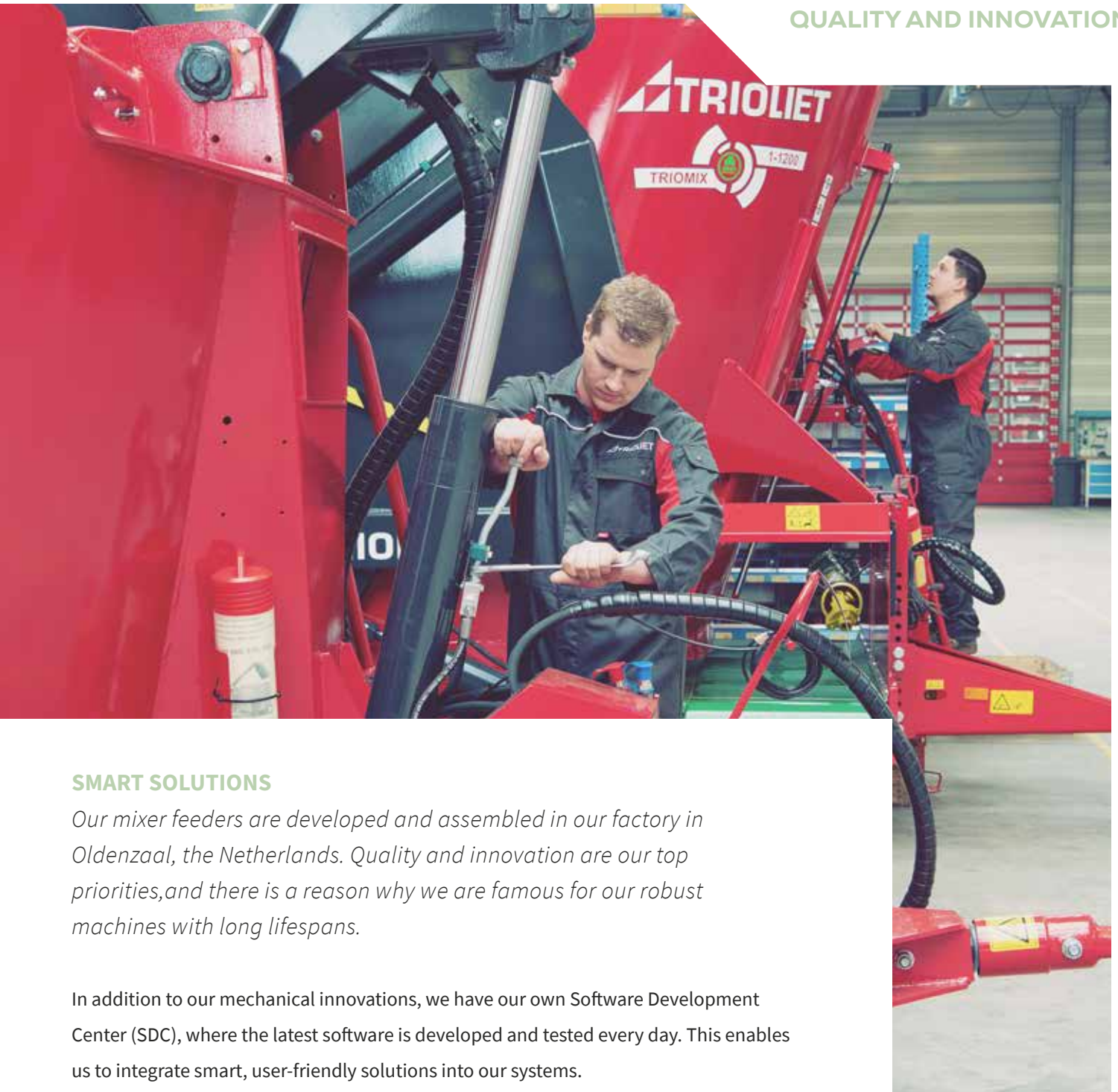
- ✓ **TFM Feed Pro** feed management for dairy farmers
- ✓ **TFM Feedlot Pro** feed management for beef farmers



TFM FEEDLOT PRO

TFM Feedlot is designed for beef farmers who want to manage feed and other costs per batch, among other things. TFM Feedlot includes all the advanced features of TFM Feed Pro, as well as functions for tracking groups of animals and generating delivery reports. With TFM Feedlot, you can also add non-feed-related costs, such as bedding or veterinary/medical costs per batch, pen or animal, which can be applied daily or as a one-off expense. In addition, the program allows feeding curves to be programmed so that rations are automatically adjusted according to requirements and stage of life.





SMART SOLUTIONS

Our mixer feeders are developed and assembled in our factory in Oldenzaal, the Netherlands. Quality and innovation are our top priorities, and there is a reason why we are famous for our robust machines with long lifespans.

In addition to our mechanical innovations, we have our own Software Development Center (SDC), where the latest software is developed and tested every day. This enables us to integrate smart, user-friendly solutions into our systems.

New machines are extensively tested before they go into production. Every day, more than 400 employees work on the development, improvement and sales of our feeding systems both at our headquarters in the Netherlands and in the field, at home and abroad. Approximately 85% of our machines are exported to more than 50 countries, including Germany, the United States, Mexico, Uruguay, Chile, Saudi Arabia, France, Ireland, China, Norway and Australia, to name just a few.

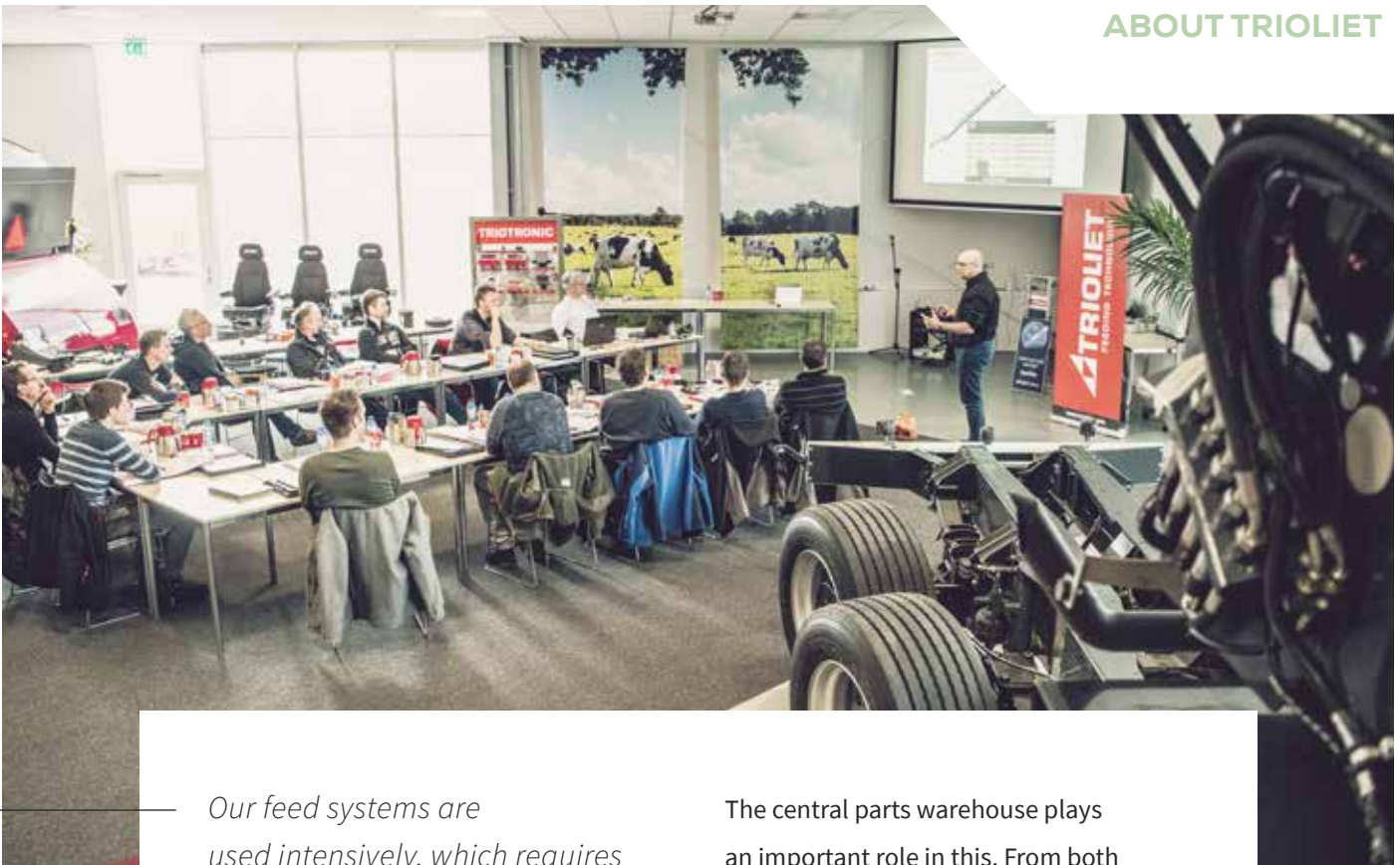


GREEN LABEL

Our aim in everything we design and produce is to be of service to the livestock farmer. Work lighting, time and fuel savings, a healthy herd and optimum mixing quality are just some of the priorities that we focus on. Naturally, we also pay careful attention to the environment and to living conditions. We award those products that make a significant contribution to sustainability with the Green Label quality mark. You can recognise the Green Label mark by the sticker on the feeding system.

In many ways, the Triomatic automatic feeding system contributes to a cleaner, healthier environment for both humans and animals. It doesn't use much power, and there is no need to drive a tractor into the barn with dirty tyres, unhealthy exhaust gases and high fuel consumption. More feeds can also be scheduled each day, meaning that there is a constant supply of fresh feed and the animals take in more nutrients. This results in healthier livestock, a happy farmer and an environmentally friendly business.





Our feed systems are used intensively, which requires periodic maintenance. To be able to quickly service your requirements, we have an extensive worldwide network of dealers. They are ready to advise and assist as required.

From our head office in the Netherlands, our own service engineers and fitters offer support to the dealers.

The central parts warehouse plays an important role in this. From both our warehouse in Oldenzaal (NL) and Trioliet warehouses worldwide, we can deliver spare parts anywhere in the world within 24 hours. Our dealers receive regular training to ensure they are always up to date with the latest developments. Service technicians and salespeople from all over the world come to our headquarters for technical and commercial training at the Trioliet Training Centre in Oldenzaal (NL).





As you can see, we are a total supplier of premium feed technology. Every day thousands of cows all over the world are fed with our machines. Over more than 75 years, our family business has grown into a global player. We view it as our duty to provide sustainable premium solutions around the world for the mechanised and automated feeding of cattle on professional farms. That means that designing new solutions and optimising existing technologies are our highest priorities. We are able to offer made-to-measure solutions for cattle farms throughout the world. We draw on our very extensive range of feeding technology. Naturally, we hope we can be of service to you too.

Robert Liet

A handwritten signature in blue ink, appearing to read 'Robert Liet'.





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Trioliet. Invents for you.

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