



GEA DairyProQ

The automated rotary milking solution
for large-scale dairy farms



engineering for
a better world

gea.com

DairyProQ quality goes into series production

GEA's automated rotary DairyProQ provides farmers with groundbreaking ways to optimize the workflow of dairy production. The DairyProQ quality represents the perfect balance between people, animals and technology.



- Superior milk quality,
through preventive animal health management and exceptional hygiene
from teat to tank.
- Ideal work environment,
through the fine-tuning of all components to fit the needs of the environment
and its personnel.
- Productivity around the clock,
through highly reliable, consistent system performance and functionality.
- Your reliable partner,
through qualified and innovative service packages from GEA dealers around the world.





Superior milk quality

- Optimal milk harvest
- Preventive health management
- Intelligent cooling systems



DairyProQ – The ideal approach for large-scale dairy farms

Only the most healthy and comfortable cows produce the highest quality milk. The DairyProQ rotary parlor starts with animal comfort. Through an optimal milk harvest process that includes proper udder prep and key milk quality assessments for each individual cow, the automated rotary parlor provides a unique, one-on-one milking session for every cow, ensuring the best conditions to achieve a maximum milk yield and maintain a maximum level of herd health. It's the ideal in dairy production – today and tomorrow!

Individual care for every cow

Cows are creatures of habit. That's all the more reason for them to appreciate the calm and unique milking routine in "their very own" DairyProQ, from teat cup attachment to teat stimulation, cleaning, drying, pre-milking and milking, through post-dipping and individual quarter detachment. Every milking procedure step is performed inside the teat cup in a fully automated process that provides your cows the consistent precision they appreciate.

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- The image shows a top-down view of a circular milking parlor. Numerous cows are positioned in stalls around a central green circular area. Each stall is equipped with a teat cup. A large, light blue circular arrow surrounds the parlor, indicating a clockwise flow. A legend in the bottom left corner identifies the steps of the milking process with colored circles: orange for Attachment, Stimulation, and Post-dipping, Detachment; pink for Cleaning; dark blue for Pre-milking; and light blue for Milking. The diagram shows these steps occurring sequentially as cows move through the parlor.
- Attachment
 - Stimulation
 - Cleaning
 - Pre-milking
 - Milking
 - Post-dipping , Detachment

The best teat care throughout

With the DairyProQ, complete milking procedures take place “in-liner”, inside the teat cup in one single attachment. Teat stimulation begins as soon as the teat cup attaches, gently preparing the udder for milking. Then, cleaning or pre-dipping begins depend the country-specific regulations and is followed by drying and pre-milking .



Milk sensors ensure the utmost in animal health and milk quality

The DairyProQ incorporates key sensors to constantly analyze and monitor the flow of milk according to conductivity, color, temperature and milk volume on a per quarter basis. Based on this data and any potential alerts, the milk valves open or close to ensure that only consumable milk goes into the tank.



Individual quarter detach prevents over-milking

If one quarter finishes milking before the other, the milking process at that quarter stops. The milk valve closes, the teat is post-dipped and the teat cup is removed.



Udder health starts at each teat

Dipping takes place inside the teat cup, evenly and economically distributing the dipping solution throughout the fine pores and wrinkles of the teat skin. The fresh dip coverage provides the ideal protection against mastitis pathogens between milkings.



Intelligent design customized to your needs.

A safe and efficient cooling system from GEA works with your DairyProQ to cool milk quickly and maintain your milk quality to the highest of levels.



The cooling specialists

GEA milk storage vessels protect your milk until it's time for delivery. Available in either traditional horizontal or space-saving vertical form, GEA's indoor and outdoor milk-cooling tanks can hold up to 40.000 litres / 10,600 Gallons.



Plate coolers

With extremely low flow resistance, it keeps everything hygienic.



Direct cooling for high milk quality

Direct cooling can cool up to 12,000 liters/3,170 gallons of milk per hour to the optimum storage temperature.



Efficient cooling

Frequency controlled milk pumps move the milk through the plate coolers to the milk tank. Benefit from better cooling efficiency while maintaining top milk quality.



- High productivity and quality are combined to meet profitability objectives
- A calm and comfortable herd guarantees high milkability
- Standardized processes support healthy udders
- Mastitis-causing bacteria transmission from one cow to another is entirely prevented
- Large-scale milk lines support a uniform milk flow for efficient milk handling

Heat recovery

Capture the energy released from milk during the cooling process to meet your heating needs for free. Hot water tanks sustainably store the heat extracted during cooling, which you can use to heat water for cleaning and regulate room temperature.



Ideal work environment

- Attractive workplace with intuitive cow monitoring tools
- Effective herd management
- Continuous processes, flexible timing



Invest in the future now

The GEA DairyProQ provides dairy farms with an efficient working environment with hightech flair. The automated milking systems spare personnel from physically strenuous manual milking procedures, allowing them to focus on more rewarding activities of herd management. At the same time, automated milking in a computerized workplace serves as a showcase for modern Dairy Farming. Monotonous routines are a thing of the past, and young personnel will be inspired to join the modern and sophisticated dairy industry with state-of-the-art processes and regular working hours.

Providing peace of mind

Anyone who likes working with animals will immediately enjoy operating the DairyProQ. It creates a great sense of confidence and security by providing an unobstructed view and easy access to each animal during the automated milking process.



Unobstructed view and easy access to each animal



Animal health at a glance

Industrial touchscreens provide thorough insights into the milking process directly at the rotary parlor. Realtime visual graphics and the intuitive interface greatly simplify the monitoring of animal data. Animals exhibiting any abnormality can easily be guided to the treatment area, meaning that you can act quickly and your cattle can stay healthy with just a few clicks.



Visual graphics enables transparent processes and effective herd management







Fast track to productivity

The GEA DairyProQ does the milking for you, so you can devote more time to managing your herd and its productivity. Each animal can be inspected by simply looking at the screen, allowing you to take appropriate action immediately!

New freedom and flexibility

Automated milking routines and fixed milking times guarantee structured, efficient work processes for everyone. Since you need to schedule only one operator for the milking process, you can free up workers for other activities. It's easier to plan working hours, shifts and training sessions. Enjoy your new independence, while reducing fixed costs at the same time!



- Animal-friendly milking stall design and ergonomic milking
- Unobstructed view and access to each animal enables quick intervention at any time
- Greater success in hiring and retaining personnel with easier schedule and shift planning
- Efficient time management reduces working hours and speeds up routine processes





Productivity around the clock

- Standardized processes mean higher productivity
- Cows can be milked 24/7
- No downtime



An all-around profitable and rewarding investment

By choosing the DairyProQ, you can automatically count on high productivity. Depending on the size of your dairy farm, around 120-400 cows can be milked per hour in 28-80 stalls. But regardless of your throughput, only one person is needed to oversee the process. Even if you increase your herd, the personnel requirement stays the same. So calculate your herd size, savings potential, operating hours, wages and fixed costs. You'll see that the DairyProQ pays for itself with herd sizes of 500 cows and more within approximately ten years.

Good prospects for high profitability

Take advantage of the new found security that standardized milking processes provide. Whether it's the weekend or the start of the working week, the DairyProQ never takes time off. Its standardized steps produce a consistent milking performance, and the direct payoff is more – high quality – milk. Staff motivation rises with their new responsibilities revolving around herd management. Guarantee your success by investing in sustainability, and make your dairy farm ready for the future by installing the DairyProQ.



Per-place-milking ensures production performance

One of the underlying concepts of the DairyProQ is that the milking stall modules operate independently of one another, with a robotic module at every stall. This is the only system that enables reattachment and udder access at any time. Should one module be temporarily out of service, the affected stall can be closed until it's repaired, while all the other stall modules continue operating without interruption. Your cows and your operation are kept on schedule.





Maximum cow comfort

The highly durable stainless steel stall dividers are designed with smooth, rounded corners to perfectly accommodate the animal's anatomy. In just a few steps the cow is comfortably positioned for milking to begin. Flexible frames can be used to adjust the stall space for different breeds. Altogether, there's no more comfortable method of initiating and carrying out the milking process.



Freedom of movement beneath the cow

Once the cow is in position, the MilkRack slides into place underneath her. Should the cow kick, a feedback mechanism enables the mechanical milking arm to maneuver away. Then the attachment process can start over.

Targeted, quick attachment

A Time of Flight (TOF) camera detects the shape and position of the cow's teats, both visually and dimensionally. The milking control unit calculates the ideal position to automatically apply the teat cups, placing them precisely below the teats. This TOF principle ensures an accurate attachment in a matter of seconds.



A TOF camera ensures precise attachment



Reliable valve components

The valve units ensure an accurate supply of dipping solution, disinfectant, air and water pressure throughout the various stages of the milking process, and additional safety valves closely monitor the procedure. Absolute precision is the key to a continuously reliable milking.

High-efficiency disinfection

As soon as the arm swings into the park position, the CIP nozzles kick into action, cleaning the surface of the teat cups with powerful jets of water. When docked into place, the insides of the teat cups are disinfected with a high-grade solution of water, peracetic acid and compressed air. Very quickly, the MilkRack is ready for its next application.



A MilkRack with high-tech features

The MilkRack's cover is made of ultra-flexible plastic and protects the equipment from dirt and kicks. With its special sandwich construction, the device is extremely robust and reliable.



All rotary functions within easy reach

At the control panel, the operator has all of the rotary parlor's functions within easy reach, including speed, emergency stop, direction, and so on. For a quick change of the milking groups, the entry gate can be closed and the automated crowd gate can be activated.



- Independent per-stall modules ensure that milking is possible at any time for 24/7 operations
- More cows per operator can be milked in the same amount of time
- The time intervals for udder cleaning can be adjusted depending on hygiene
- DairyProQ can be perfectly matched to herd size and future expansion plans



Your reliable partner

- Continuous customer care ensures the system's high performance
- A trusted partnership
- Innovative online monitoring



Tailored solutions for growth and profitability

At GEA, we understand the growing demands of dairy production and strive every day meet the industry's changing needs. We rely on you as our long-term partner because your day-to-day experience provides us with an inside look at the challenges that lie ahead. Based on the collective knowledge of dairy farms around the globe, we can develop individualized solutions that are tailored to perfectly suit your operation. We as a manufacturer, along with our network of GEA dealers, work hand-in-hand with you to achieve profitability and growth together.

Innovative service concept

Automated milking with your DairyProQ comes with reliable support and provides your dairy with full milking security.

- Proven, time-tested milking technology ensures maximum performance and a long operating life.
- Maintenance and repairs can be conducted during milking operation with no downtime.
- Our innovative service packages ensure reliable support and consultations, from installation to operation.

*The right choice for your herd
Rubber or silicone? Black or green? Let your GEA service
partner help you select the best option for your herd.*

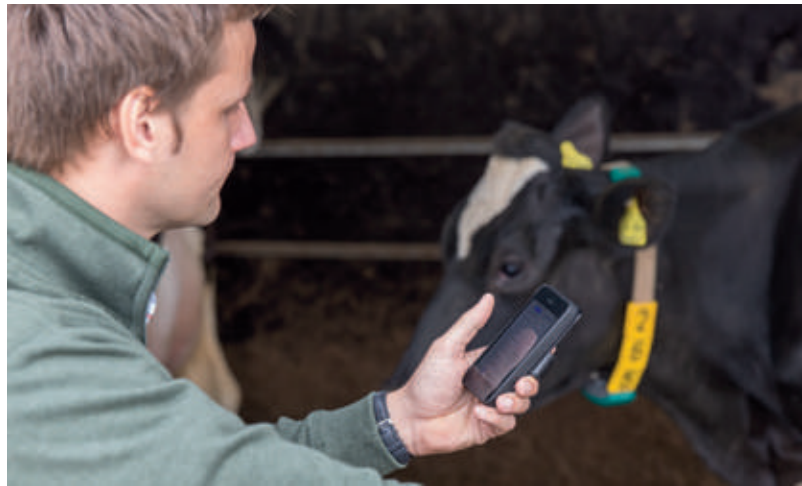


Service and maintenance during operation

The service-friendly design of the DairyProQ allows for online diagnostics and parameter configuration of individual milking components during milking operation. A few simple steps are all it takes to dismantle a service module and replace it with a new one. Entire milking stall modules can be replaced as necessary. The service room provides a clean atmosphere for repairs. Quick and easy service increases efficiency and reduces operational downtimes to an absolute minimum.

Emergency milking guaranteed

The DairyProQ incorporates even more enhanced milking reliability and security. The milking units can be attached manually, providing a safe and easy solution during an emergency until your GEA service partner has arrived at the location.



FarmView 2.0

Take advantage of our innovative software solution to gain detailed insight into your DairyProQ performance and to receive instant notification of any discrepancies. Combined with a service agreement from your GEA dealer, you'll also benefit from the integrated service calendar that notifies you of scheduled appointments. Log reports and data backups record all maintenance work and daily performance characteristics. Potential areas of optimization can be detected remotely and become the basis to develop an improved strategic solution. You'll reap the benefits of utilizing all of your system's capabilities and the fastest response times.



- Modular design makes maintenance and repair easy, and enhances service quality
- Uninterrupted operation during servicing and maintenance prevents downtime
- Service agreements set predetermined costs and regular maintenance intervals
- Online system monitoring and optimization via FarmView 2.0





Reliable service on your door step

For GEA, a lifetime partnership begins at the very beginning of your farm's buying process. You'll experience ideal customer care through a certified service partner in your immediate vicinity. Before installation you will be involved in comprehensive consultations regarding all matters of planning, production processes and herd management. A site manager will coordinate all the steps of construction and will always be available to answer any questions you may have. When the system is up and running, GEA's and the dealers' highly trained staff ensures continuous support, upon request around the clock.

- Quick and competent help at your location
- Spare parts stock and supply
- Continuous support and regularly scheduled system maintenance
- 24/7 hotline if desired
- Continuous training of service technicians by GEA Learning Center



We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

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