



# GEA FEEDING ROBOT DAIRYFEED F4500

Putting feeding strategies into practice precisely –  
with the GEA DairyFeed F4500

# GEA DairyFeed F4500

Optimize milk production, animal health,  
save time and reduce your workload



Feeding is the biggest cost factor in managing a farm. Here, the quality, frequency and optimization of mixed rations for each group of cows are decisive to milk production. This is where farmers want more flexibility for their daily routines as well as precise management of their feeding strategy.

The GEA DairyFeed F4500 feeding robot combines these wishes with GEA's enormous experience in automated feeding, enabling farmers to feed their cows optimally - the basis for a profitable dairy farm.

## **Precise mapping for reliable navigation**

DairyFeed F4500 is fitted with navigation sensors, allowing it to create a precise map of your farm and to work out the ideal routes for distributing feed. This means it can constantly

localise its position, recognise obstacles and avoid collisions. It can also safely navigate between numerous barns on uneven floor and can travel on inclines of up to 10%. Your advantage: With the F4500 no major farm modifications are needed.

## **Automatic 24/7 feeding routines**

The autonomous all-rounder feeding robot weighs, mixes and distributes up to 2.2 m<sup>3</sup> of fresh TMR feed every hour for up to 300 animals in different nutritional groups. It ensures that customised rations are perfectly prepared in accordance with the feeding cycles set by you. The robot also takes over the time-consuming feed pushing after and between cycles.



#### **Intelligent feed analysis and optimization**

Useful reports help you make the right decisions at the right time. With the F4500 you can check feed consumption and leftovers and adjust the amount of the next rations accordingly to minimize feed waste. It is also possible to analyse the nutritional composition of the ingredients and mix quality with sensors, allowing for adjustments of the mixture based on your feeding strategy for the best possible animal health.

#### **Synchronisation of feeding and milking data**

Feeding efficiency is a key data for farmers to achieve their milk production goals. GEA feeding and milking robots are digitally connected via DairyNet, enabling feeding and milk output and quality data to be synchronised round-the-clock. This accurately optimizes feeding strategy and milk production.

#### **Perfect cooperation and a clean kitchen**

The design of the F4500 contributes to a cleaner kitchen and can be perfectly integrated with all kitchen equipment. Bunkers, silos, mineral and liquid containers ensure the safe, hygienic storage and distribution of valuable feed ingredients.

#### **Installed and supported by GEA dealers**

The global network of experienced GEA dealers offers a professional, high-quality 24-hour service, from individual consultation and planning to installation and start-up, as well as maintenance and support.

# GEA DairyFeed F4500 – Your solution for the digital age

Automated feeding routines including  
analysis and optimization



← The kitchen informs the robot as to which nutritional group should be fed

The robot reports its activities and the amount of leftovers →

## GEA DairyFeed F4500 features



System designed for easy service, all parts can be easily removed and mounted



Mixer with a capacity of 2.2 m<sup>3</sup>, design with blades and counter-blades for good mixing and a magnet to collect metals for animal safety



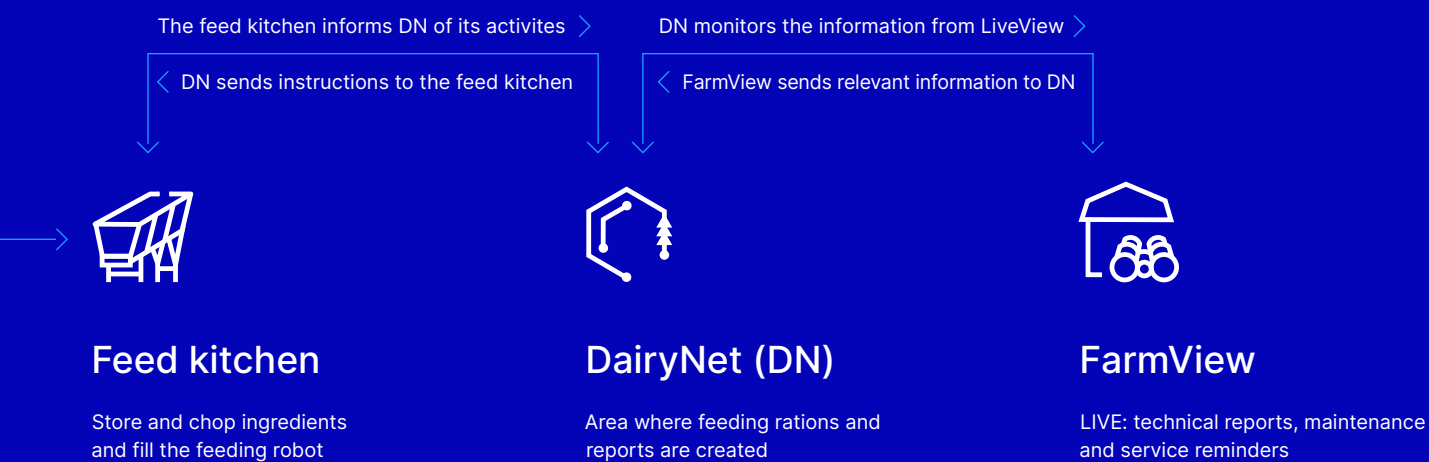
One lithium battery with high capacity, 18 hours of operation and reduced power consumption



Wheels with electric drive for better drivability between barns, uneven floors, and slopes



Two functions – scheduling of feed distribution and feed pushing



“Thanks to the F4500 and the useful reports, we have a significant increase in animal health and milk production.”

Theo van der Zwaag/The Netherlands



## Safely store valuable feed ingredients in GEA bunkers

Bunkers are the best way to store feed ingredients and maintain their quality. The GEA bunker has a volume of 16m<sup>3</sup>, the stainless-steel bottom plate ensures long lifespan and two augers an even dosing. In addition the shut-off valve promotes a clean kitchen, avoiding extra work.

# GEA DairyFeed F4500 – Optional sensors

Measure, analyse and optimize amounts of feed waste, ingredient and mixture quality

	Feed waste sensor*	Feed quality sensor*	Mix quality sensor*
<b>Concept</b>	A camera system with the latest generation of TOF (Time of Flight) sensors creates a 3D image of leftover feed. The volume of the next feed ration is calculated based on this image.	The sensor reads the spectra of each roughage ingredient via near infrared (NIR) radiation and delivers real-time information on the composition of the feed. Chemical parameters such as moisture, starch, crude protein, ADF, NDF, ash and crude fat are analysed using 44 calibration curves for different roughages.	The degree of homogeneity and length of the roughage fibres are set individually for the feed rations of each output group. The Visiomix sensor photographs the feed mixture at defined intervals and stops the mixing process when the desired quality has been reached.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Minimise feed waste</li> <li>• Increase feeding efficiency</li> <li>• Identify problems relating to feed intake</li> </ul>	The continuous measurement of nutrients ensures, for example, that the dry matter content is the same for each feed ration. The animals thereby receive the exact amount of nutrients they require, leading to a direct positive impact on their milk output.	<ul style="list-style-type: none"> <li>• Consistent quality of feed mixture</li> <li>• No adjustment of mixing time is needed if you decide to change ingredients</li> </ul>

\*Currently under development. Availability based on farm evaluation and country roll-out.

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