GEA Automated Feeding Systems

Minimize workload, optimize cash flow
MANAGE FEEDING ROUTINES EASILY AND PRECISELY

Automatic weighing, mixing, distribution: precise, cost-optimized use of feed resources thanks to GEA Automated Feeding Systems.
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Better feeding, flexible work and optimized costs

On a dairy farm feeding accounts for up to 25 percent of the workload. Automated feeding systems from GEA take over these time and labor-intensive tasks. While you have more freedom for your daily planning, all of the work routines are handled reliably and in a coordinated manner: the storage and supply of the feed ingredients, mixing of the TMR and the distribution to the feeding table – in smaller portions distributed throughout the day.

Additionally, in order to optimize your production of high-quality milk, each performance group receives the best feed mix supplied in the right quantity – at any time of day or night in accordance with your programmed feeding schedules. Monitored and controlled by an intelligent software, which you can access from anywhere 24 hours a day. All GEA Automated Feeding Systems are compatible with each other and can be perfectly integrated into every dairy farm.
You benefit from ...

- more precise feed supply tailored to specific cow groups
  Unique management software coordinates, controls, monitors and logs all of the feed supply workflows

- healthy, high-yield cows
  Around the clock, freshly mixed, precisely measured rations for each performance group promotes the best cow health

- flexible, efficient working environment
  Flexible daily planning with full control and real-time reporting from the automated feed supply – regardless of location and time

- positive effects on your cash flow
  Feed mix amounts precisely tailored for the specific performance group, minimize feed waste and increase cost efficiency and revenue

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Rails (navigation)
Optimally controlled: efficient logistics for the feeding routines via a transport system consisting of rails, switches and curves.

Feed bunker
Safe storage: optimal storage of feed ingredients such as corn silage, grass silage and alfalfa is stored in daily amounts in the bunker equipment.

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LESS WORKLOAD, BETTER QUALITY OF LIFE AND HIGH PRODUCTION YIELDS
GEA offers automated modular feeding systems that grow with your business, where necessary. You can benefit from individually tailored solutions that help you to achieve greater flexibility, quality of life and cost efficiency through higher productivity, animal health and labor savings.
You benefit from ... a more precise feed supply tailored to specific cow groups!

- Excellent feeding management software
- Requirement-oriented feeding of the performance groups
- High-precision weighing and distribution

Automatic feeding at its best – controlled and monitored by WIC

Profitable milk production needs a perfectly organized feed supply. This is ensured by the intelligent WIC software (Wireless Integrated Control) that controls and monitors all of the feeding-related activities and processes: from inventory control, weighing and mixing the feed ingredients, to the portion control and distribution of the TMR as well as the consumption of the individual performance groups. Using WIC, you ensure that each group receives its programmed feed ration, around the clock.

Requirement-oriented rations for each group

Create tailored feed rations, which correspond precisely to the animal’s specific nutritional requirements – without any additional work? No Problem: group your herd by age, pregnancy status, lactation or drying phase. Then enter the ration for each animal group via computer, and the automated feeding system from GEA takes care of the rest for you. This enables you to supply freshly mixed rations to up to 30 groups, as needed.

Not a gram too much: cost-saving weighing and precision

Whether precise quantity control of feed ingredients during weighing or 100% distribution on the feeding table, GEA systems, such as the MixFeeder or Mix&Carry are software-controlled and so precise that they make the most cost efficient use of your feed resources. For example, you can weigh the feed ingredients with precise quantity control and obtain a status comparison between the feed wagon, MVM mixer, silos and bunkers. With the GEA FreeStallFeeder WIC, a display on the MVM mixer shows the current weight, enabling the operator to manually adjust the share of each feed ingredient, as needed.

Precision is also the key with the automatic distribution to the feeding table. The systems are designed in such a way that each programmed section of the animal group runs the full length at a constant speed. This provides all of the animals with the same quantity of feed in their place at the feeding table.

REAL-TIME STATUS WITH WIC

Everything immediately visible on screen: WIC shows all current information about each feeding system with one click. For example: GEA MixFeeder WIC – animal groups, feed types, rations, feeding times, etc. and all feeding parameters can be altered at any time via the barn computer and monitored on the touch panel.
You benefit from ...

healthy, high-yield cows!

- Frequent feed intake stabilizes the rumen pH
- TMR matched precisely to the group
- Homogeneous feed mix ration
- Feed is always freshly mixed
- Stress-free and quiet distribution

Stable rumen pH value thanks to frequent feed provision

The health of the cows is closely linked to the quality of their diet and the appropriate feeding strategies. The most reliable means of measuring the structural supply of the ration for dairy cows is the pH in the rumen. In an optimum rumen, the values range between 5.5 and 6. An important element for maintaining a stable pH, which has been proven through multiple studies, is the provision of small, well structured feed rations distributed throughout the day.

Precise, homogeneous feed mix for each group

The GEA feeding systems automatically provide each group with the TMR feeding mix tailored precisely to their nutritional requirements, with continuously good quality due to constant portion sizes of the feed ingredients without fluctuations. This enables you to minimize the risk of your animals suffering from feed-related metabolic disorders.

Every feed portion freshly mixed

Fresh feed promotes continuous feed intake – an important factor for the stability of the pH in the rumen. GEA systems such as the MixFeeder WIC or the Mix&Carry WIC automatically ensure that every feed portion is mixed from feed bunkers that are refilled daily. This provides your animals with a fresh feed mix, consisting of optimum, fermentation-free components.

Quiet feeding – stress-free barn climate

High noise levels can have a great affect on animal stress, which can weaken the cow’s immune system and can increase the cow’s risk of disease such as mastitis. All GEA automatic feeding systems are distinguished by battery-powered, almost silent operation. This facilitates a relaxed atmosphere in the barn. The feed wagons travel slowly via rail guided suspension and pass over the feeding tables almost silently, ensuring stress-free, quiet feed distribution.
HEALTHY RUMEN

Feeding oriented by nutritional needs distributed throughout the day with a good feed structure helps to maintain an optimum rumen pH between 5.5 and 6. The best prerequisites for high performance with the best health.
You will benefit from ... flexible, efficient working environment!

- High performance and reliable feeding system
- Full control and reporting of all the feeding activities
- Two-way communication system: always informed even when away
- Highly flexible working hours and schedules
- Easy to clean and maintain

Automated feeding systems from GEA lighten your daily routine workload. Whether mixers, feeders or conveyor belts: these high-performance systems run reliably after being programmed and take care of the physically strenuous and time-intensive activities associated with feed mixing and distribution – several times a day and around the clock.

Everything always under control – even when you are away
The WIC software continuously records and saves all feeding activities for each performance group and creates status reports: feed rations, weighing, mixing and distribution. The WIC functions also include a current overview of the filling status of silos as well as the feed consumption of animal groups. As such, you can obtain all of the information that you need to monitor and optimize your feed management at any time. The two-way communication of the WIC system provides comfort and safety: you can request status reports via SMS along with an alarm message to your mobile phone in the event of a fault.

Flexible work planning – easy cleaning and maintenance
With fully automated feeding you only need to fill the bunkers in the morning, the system carries out the remaining pre-programmed feeding routines “by itself”. The bunkers, mixers and feed wagons are optimally emptied after completion of the process, minimizing your cleaning and maintenance work. This means that you have more time to monitor the performance of your operation or simply enjoy more free time.

THE BEST POSSIBLE WORKLOAD REDUCTION
WIC can mix, monitor and control up to 30 customized feeding plans with a maximum of 30 ingredients for each animal group.
You will benefit from ... positive effects on your cash flow!

- Cost-optimized group feeding
- Optimum feed utilisation
- Fast return on investment
The requirement-oriented group feeding with automated feeding systems from GEA has the best influence on your cash flow. The division of the herd according to age, reproductive status, lactation phase or dry period enables precise preparation of the feed rations for each performance group. This approach reduces costs, in particular with regard to the use of expensive feed components – reliably, computer-controlled and without additional work.

Almost 100% feed consumption
The animals receive TMR feeding with the optimum composition and consistency, distinguished by 99% consumption which can result in increasing milk yield and quality. Conventional feeding systems, on the other hand, have an average leftover portion of 5 percent. A clear advantage of automated feeding with GEA systems which has a direct impact on your feed costs and, consequently, on the profitability of your dairy farm. Depending on the barn design, herd size and number of daily rations, the Return on Investment (ROI) for your dairy farm may amount to less than 1 year in comparison to conventional feeding.

OPTIMIZED CASH FLOW
Example: MixFeeder WIC:
The automated feeding system from GEA offers annual savings of up to € 72,000 on operating costs in comparison to conventional systems.
Wireless Integrated Control (WIC) – automated feeding with intelligent control software

WIC provides easy control and monitoring of all automated feeding activities: storage, weighing, mixing and distribution.

The user-friendly WIC software enables you to smartly network your daily feeding routines and have them carried out automatically at any time of the day or night – with the reliability and analysis of all relevant data including the feed consumption of the animals. The function parameters of the multilingual WIC software can be easily and quickly defined and monitored via the computer based on performance groups. This includes feed ingredients, mixture and quantity for up to 30 feeding plans with a maximum of 15 ingredients per plan, delivery times and filling levels of the silos. Your benefits with WIC: efficient feed management, perfectly fed, healthy and high-performance animals as well as a large workload reduction and greater cost-effectiveness of your operation.

Monitoring and control via remote access
Using the data collected, you can easily analyse all phases of the feeding management process and optimize these where necessary by adjusting feed mixtures or feeding frequency, for example. The two-way communication of the WIC system also enables you to query the current system status via your smartphone at any time when you are away. In the event of a system fault, you receive an alarm message from WIC via SMS and can resume the feeding process via a response function, if necessary.

The WIC software is a fully integrated system which controls, records and analyses all feeding functions.
The WIC software keeps you informed and up to date about every phase of the automatic feeding. The continuous data recording and evaluation helps you to optimize the programmed parameters where necessary with just a few clicks, using the intuitive touch panel.
I BENEFIT TWICE:
FROM SHORTER WORKING HOURS
AND SIMULTANEOUSLY FROM
MORE ACTIVE COWS IN THE BARN.
Torbjörn Carlsson, Lönneberg Gard,
Jönköping, Sweden, 70 cows

YOUR BENEFITS AT A GLANCE

- Automatic rail-guided feed wagon:
  software-controlled filling of the pre-mixed
  feed and distribution in group-specific portions at
  programmed times of day and night
- State-of-the-art WIC (Wireless Integrated Control):
  simple programming, control and optimisation of the
  feeding activities via computer or touch panel
- Receive current status reports via smartphone
  regardless of the time and your location
- Space-saving installation for new barns or retrofits
GEA FreeStallFeeder WIC – small portions in a precise mix, perfectly distributed around the clock

Controlled by the software, the automatic feed wagon collects the TMR from the mixer and distributes it to each performance group quietly and precisely in customized portions at the specified times.

Manual feeding is time-consuming and strenuous routine work which the GEA FreeStallFeeder WIC handles automatically for you in accordance with your specifications – reliably and around the clock thanks to the WIC software. The system is programmed via computer: you can define up to 30 performance groups and specify the feed quantity that each group receives, how often and when. All of the data can be viewed and modified at any time via the barn computer, and relevant information is available on the touch screen on the feeder. If desired, you also receive the current data at any time regardless of your location as a status report on your smartphone.

Automatically distribute feed
The GEA FreeStallFeeder WIC runs on rails to the mixer and collects the finished feed mix. It then slowly and quietly rolls along to the feeding tables at the programmed times and precisely distributes the feed portions to each performance group. The repeated distribution throughout the day minimizes feed losses, prevents overfeeding and, thus, promotes cow health. The space-saving system can be utilized in barns higher than 215 cm and with a feeding table width of only 200 cm. This is an economical solution for both barn extensions and retrofitting – suitable for every farm and available in three sizes.

Coordination of feed components, quantities, feed plans and delivery schedules

High-energy feed mixture in the mixer
Frequent, precisely measured distribution
Performance groups – optimum feed utilisation

Mixer
GEA FreeStallFeeder feed wagon
GEA Mix&Carry WIC – the perfect choice for large farms: extensive workload reduction, good feed mixture and precise feeding

“Intelligent feeding” instead of manual feeding routines: The automated feed wagon controlled by WIC handles the weighing, mixing and distribution, providing optimum control of all feeding parameters.

Nutrient-oriented feeding of the different performance groups with customized TMR rations is one key element for higher milk yield. The automated GEA Mix&Carry WIC easily handles this for you, while saving you time. You configure the feed ingredients and amounts with the user-friendly WIC system conveniently via computer and define the feed plans and feed frequencies – for up to 30 groups and 15 feed ingredients per group.

Weighing, mixing, delivery: all fully automatic
The GEA Mix&Carry WIC automatically handles your daily feeding routines at the press of a button: the ingredients from bunkers and silos are weighed and placed in a stationary mixer in accordance with the rations. The rail-guided feed wagon distributes the freshly mixed feed at the programmed times via its delivery conveyor to the right places on the feeding table – on one side or both sides.

Always well informed – no matter where you are
The WIC software ensures that you can always access the data and selected functions of the Mix&Carry system via smartphone, no matter where you are. This allows you to monitor every step of the feeding and optimize it on the computer, if necessary. This helps to reduce feed costs and increases milk yield.
YOUR BENEFITS AT A GLANCE

- Fully automatic weighing, mixing and distribution of regular, nutrient-oriented TMR feeding by a 2.0/3.0 m³ feed wagon
- WIC software: computer-controlled feed management for up to 30 different performance groups with 30 feed ingredients*
- Minimized workload for the feeding routines: greater flexibility with daily scheduling
- Location-independent monitoring and reporting for all feeding activities in real-time via computer, touch panel and smartphone
- Modification of the system parameters via barn computer or touch panel
- Statistical data acquisition and storage of the system data: basis for analyses and optimization of the feeding parameters
- Reduced feed costs through precise mixing, weighing and distribution of the feed
- Repeated fresh feed distribution: the best cow health, highest possible milk yield and quality
- Space-saving design: only requires 200 cm wide feeding table
- Large capacity feeding – the feed kitchen works as an independent TMR center, preparing the next ration, at the same time the Feeder wagon is distributing.

*Maximum of 15 ingredients per feed plan

OUR 350 COWS ARE NOW FED TEN TIMES A DAY. THAT IS WHY THEY ARE MORE RELAXED AND COME TO THE FEEDING TABLE VOLUNTARY. WE NOW NEED LESS FEED PER LITER OF MILK PRODUCED.

David Partridge, Ennerleigh Farm, Devon, England, 350 cows
The automatic GEA MixFeeder WIC provides every animal group with a precisely portioned fresh feed mix around-the-clock via software control. Your benefit: more milk and better animal health, less work and costs.

Eliminate time-consuming feeding routines. The WIC (Wireless Integrated Control) software networks feed bunkers and silos and monitors each step fully automatically – from the precise weighing and mixing of the ingredients in accordance with set feeding plans and specifications, to time-controlled feeding of the performance groups. The bottom line for you is precise automatic feeding with the best time and cost efficiency.

Precise feed mix – best cow health
The GEA MixFeeder WIC supplies all animal groups with a precise amount of freshly mixed TMR that is ideal for their performance level – fully customized and fed at just the right time. This keeps the animals active, ensures optimum feed consumption and, thus, the best animal health and milk quality.

More freedom for your work and leisure planning
With WIC, you can access a complete status report of the MixFeeder system in real time regardless of where you are – via computer, touch panel or smartphone. You can change or optimize the system parameters quickly and easily using the barn computer or touch panel.

Reduce costs, increase yield
Optimize your costs with the GEA MixFeeder WIC: the ideally tailored feed mix minimizes the residual feed quantities, helps to ensure a long-term reduction of veterinary costs thanks to healthier animals and also maximizes milk yield per cow.

Coordination of feed ingredients, amounts, feed plans and schedules

Optimally stored feed ingredients
Automatic, precisely weighed portions
Fresh group-specific feed mixture
YOUR BENEFITS AT A GLANCE
- Automated, simple and efficient feeding management
- Precise and customized group feeding
- Intelligent feeding route calculation
- Best animal health with fully utilized performance potential
- Flexible working environment with efficient, time-saving work processes
- Interactive control and management via barn computer or wagon touchscreen panel
- Maximum information availability through status overview via smartphone
- Minimized residual feed
- Declining animal treatment costs
- Reduction of working time and personnel costs
- Maximized milk yields with optimized quality
- Unsurpassed low power consumption

OUR MILK PRODUCTION HAS ALREADY INCREASED BY 3 TO 4 LITERS PER DAY THANKS TO THE MULTIPLE FEEDINGS THROUGHOUT THE DAY. THE COWS ARE MORE ACTIVE AND INDEPENDENTLY COME TO BE MILKED MORE OFTEN.
Rosemarie Pflügl, Landwirt Pflügl, Reichertsheim, Germany, 60 dairy cows
GEA BeltFeeder – efficient introduction into automated feeding

As a combination of conveyor belt and wire pulled plough, the automatic feed distributor is the first step towards automated feeding management – flexible, economical and durable.

The GEA BeltFeeders can regularly and automatically distribute smaller raw feed amounts several times per day to different performance groups, reducing your workload significantly. The length of the conveyor belts can be precisely tailored to every barn size. This guarantees optimum transport of the feed or the raw feed ingredients between bunkers or mixers and the conveyor belt as well as the precise distribution to the feeding table.

**Easy installation and low maintenance**

Space-saving installation on a framework or fastened to the ceiling, the cable-guided plough automatically serves the feeding tables. The typical high reliability of the GEA equipment enables continuous operation while frequent starting and stopping have no effect on the durable feed distributor. The GEA BeltFeeder can be installed quickly and easily and offers you a low-maintenance, economical automatic feed delivery solution.
YOUR BENEFITS AT A GLANCE

- Efficient, robust feed distributor: conveyor belt combined with wire pulled plough
- Automatic feeding of various animal groups several times a day via a conveyor belt
- Optimized feed intake and consumption: best animal health and milk quality
- Simple, space-saving installation and rapid commissioning
- Lower workload and personnel costs, greater working time flexibility
- Affordable introduction into automated feeding
- Good solution to solve height differences
MVM mixer – optimize mixture quality

The heart of the automatic feed supply: MVM vertical mixer processes the ingredients powerfully yet gently to retain the structure in a consistent feed mix.

Equipped with five sturdy knives, the augers in the MVM mixer gently cut down and mix all types of round or square bales of hay, silage or straw and also handle loose material perfectly. The feed mix is prepared while retaining the optimum feed structure, offering your animals valuable nutrients and supplements for healthy, high-performance milk production. The finished feed mixture is transported residue-free via an elevator module to the feed delivery unit – feeder or conveyor system.

Less work, better feed quality
Depending on the stall concept, you can manually fill the MVM mixer yourself or seamlessly integrate it into a fully automated GEA feeding system. Whichever solution you choose, the mixer eliminates labor-intensive feeding routines and provides you with more flexibility in your daily planning.

The MVM mixer is an investment that rapidly pays off for your dairy farm: it guarantees improved quality of the TMR together with optimized consumption by your animals while simultaneously reducing your workload. With a view toward nutrient-oriented, economic capacity designs, GEA offers a wide range of mixers from 8 to 30 m³.

<table>
<thead>
<tr>
<th></th>
<th>MVM 8/10</th>
<th>MVM 14/18/20</th>
<th>MVM 22/27/30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of augers</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Motor size, kW</td>
<td>12</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>Number of knives</td>
<td>5</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Number of counter knives</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

YOUR BENEFITS AT A GLANCE
- Gentle processing of round and square hay, silage and straw bales
- Optimized mixing quality with the best consumption properties
- Nutrient-rich, consistent feed mix for healthy, high-performance milk production
- Residue-free provision via flexible elevator module
- Lower workload, more flexible daily planning
- Options available from 8 m³ to 30 m³
- Simple installation and rapid commissioning
- Robust, durable stainless steel construction (optional) with low-maintenance technology
- Unique 2-motor system, reduces power consumption and improves emptying of the mixer
The MVM mixers with vertical augers and blade geometry designed for a gentle chopping and intensive mixing of the raw feed ingredients, creates a consistent feed mix. The integrated elevator module ensures a residue-free provision and can be adapted perfectly to every barn layout thanks to its flexible length and installation position.

LOW MAINTENANCE, DURABLE AND ENERGY-EFFICIENT DESIGN

The MVM mixers are highly energy efficient due to their separate motors for mixing and emptying. With its robust stainless steel construction (optional) and the electronic and hydraulic equipment protected in the equipment room, the solution is very easy to care for, low-maintenance and durable.
GEA feed bunker – precise raw feed processing and provision

The most important elements of the GEA automated feeding systems: the GM and M7 raw feed bunker series establish a modular system that grows to match the size of your herd and farm.

**GM feed bunker**

The GM series of feed bunkers feature specially designed output rollers for an even, precisely measured feed output onto a conveyor belt, into a mixer or a feed wagon. With the GM17 (17 m³), GM23 (23 m³) and GM20 (20 m³) horizontal bunkers for feed, the series offers a complete concept capable of processing diverse types and amounts of raw feed.

All of the parts coming into contact with the feed are made of stainless steel. This includes the side walls, floor, outlet and floor chain. This ensures a long service life and optimum feed hygiene. Thanks to their modern design, the GM feeding bunkers are self-cleaning as no feed residues can accumulate at the edges. The GM series utilizes the first-in first-out principle to safeguard regular, clean provision of fresh feed – the best prerequisites for optimal cow health.
**M7 feed bunker**

M7 (7 m³) bunkers are used to store the raw feed in a closed construction with rust-proof side panels. The basic version offers a volume of seven cubic meters. The design of the bunker allows you to attach extension sides to make the filling process even easier and cleaner. The M7 bunkers are ideal for adding smaller quantities of raw roughage to the feed mix ration. The raw feed is output via stainless steel floor plates guided by reinforced chains. A flexible frame enables perfect positioning of the bunker at the optimum angle.

**YOUR BENEFITS AT A GLANCE**

- Precise raw feed portioning
- Consistently high-quality fresh feed
- Easy installation, low maintenance and long service life
- M7: ideal for small quantities of raw food or seasonal ingredients such as alfalfa, carrots and potatoes as well as special admixtures such as spent grains
The right system for every requirement

The best possible feeding management and healthy high-performance animals combined with significant workload reduction and cost-optimized farm management – automated feeding systems and feed bunkers from GEA optimally help you to achieve these goals.

GEA feeding systems

The choice is yours: as a leading provider of complete solutions for the dairy sector, GEA offers you a broad portfolio of proven and innovative systems for automated feeding. They can be perfectly integrated into every dairy farm, are compatible with each other and can easily grow with your business.

<table>
<thead>
<tr>
<th></th>
<th>GEA BeltFeeder</th>
<th>GEA FreeStallFeeder WIC</th>
<th>GEA MixFeeder WIC</th>
<th>GEA Mix&amp;Carry WIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Herd size</strong></td>
<td>up to 700*</td>
<td>100 to 700*</td>
<td>100 to 300*</td>
<td>300 to 700*</td>
</tr>
<tr>
<td><strong>Cow groups</strong></td>
<td>up to 15 groups</td>
<td>up to 30 groups</td>
<td>up to 30 groups</td>
<td>up to 30 groups</td>
</tr>
<tr>
<td><strong>Mobile access</strong></td>
<td>not possible</td>
<td>possible</td>
<td>possible</td>
<td>possible</td>
</tr>
<tr>
<td><strong>PC</strong></td>
<td>not possible</td>
<td>possible</td>
<td>possible</td>
<td>possible</td>
</tr>
<tr>
<td><strong>Control information</strong></td>
<td>feed schedule</td>
<td>how much feed was</td>
<td>storage, weighing and distribution</td>
<td>storage, weighing and distribution</td>
</tr>
<tr>
<td></td>
<td>information</td>
<td>distributed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Homogenous mixing</strong></td>
<td>with an external MVM</td>
<td>with an external MVM</td>
<td>inside the feed wagon</td>
<td>with an external MVM</td>
</tr>
<tr>
<td><strong>Precision weighing</strong></td>
<td>manually</td>
<td>manually/semi-automatically</td>
<td>automatic weighing</td>
<td>automatic weighing</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td>precise</td>
<td>high precision</td>
<td>high precision</td>
<td>high precision</td>
</tr>
<tr>
<td><strong>Barn layout</strong></td>
<td>simple layout</td>
<td>can handle complex</td>
<td>can handle complex</td>
<td>can handle complex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>layouts</td>
<td>layouts</td>
<td>layouts</td>
</tr>
<tr>
<td><strong>Amount of ingredients</strong></td>
<td>manual/unlimited</td>
<td>manual/unlimited</td>
<td>up to 30 ingredients</td>
<td>up to 30 ingredients</td>
</tr>
<tr>
<td><strong>Rations</strong></td>
<td>few rations</td>
<td>few TMR; up to 4 filling positions</td>
<td>up to 30 rations</td>
<td>up to 30 rations</td>
</tr>
<tr>
<td><strong>Feeding on spot</strong> (sorted animals)</td>
<td>not possible</td>
<td>possible</td>
<td>possible</td>
<td>possible</td>
</tr>
</tbody>
</table>

*Numbers are average. Depends on barn complexity
GEA filling equipment

The GEA filling equipment for automated feeding systems offers a wide range of solutions for the processing and output of solid, loose and liquid feed components – providing the perfect fit for nearly all farm sizes and barn concepts. They are easy to install and offer convincingly easy care, low-maintenance and a durable design.

<table>
<thead>
<tr>
<th></th>
<th>GM17</th>
<th>GM23</th>
<th>GM20 Horizontal</th>
<th>GM Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>17 m³</td>
<td>23 m³</td>
<td>20 m³</td>
<td>20 m³</td>
</tr>
<tr>
<td><strong>Feed type</strong></td>
<td>loose roughages such as grass silage or corn silage</td>
<td>loose roughages such as grass silage or corn silage</td>
<td>loose roughages such as grass silage or corn silage</td>
<td>block silage/ loose roughages</td>
</tr>
<tr>
<td><strong>Fits best if ...</strong></td>
<td>kitchen and farm floor are on the same level</td>
<td>kitchen and farm floor are on the same level</td>
<td>kitchen is higher than the farm floor</td>
<td>used when the farmer prefers to cut the silage in blocks</td>
</tr>
<tr>
<td>M7</td>
<td>Straw table / bale unroller</td>
<td>Bale handler</td>
<td>Mineral dispenser</td>
<td>Molasses dispenser</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>7 m³</td>
<td>max. diameter: 1.6 m</td>
<td>14 – 20 m³</td>
<td>–</td>
<td>Variable</td>
</tr>
<tr>
<td>Silage, grains, potatoes, carrots</td>
<td>straw</td>
<td>bales</td>
<td>minerals or pre-mix</td>
<td>molasses</td>
</tr>
<tr>
<td>for seasonal ingredients and small amount of roughages</td>
<td>when straw is compacted</td>
<td>in combination with a FreeStallFeeder WIC, MixFeeder WIC or Mix&amp;Carry WIC to open the bales</td>
<td>for powder ingredients in small amounts</td>
<td>to add molasses to the ration</td>
</tr>
</tbody>
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Automated GEA solutions for the dairy sector

Information technologies and automated processes have become part of everyday life. GEA offers automated modular solutions for the milking, feeding and sorting as well as the manure and barn climate management.

**Young animal feeding**
Efficient calf raising is one cornerstone of successful dairy farms. Building on this, comprehensive work and cost management safeguards the profitable future of your farm.

**Automatic milking**
Automatic milking systems from GEA provide for high-quality milk, increase the herd performance and profitably optimize production with maximized yields for dairy farms of any size.

**Cow routing and selection**
GEA routing and selection systems guide the animals as required and efficiently through the barn or to the feeding areas and ensure the separation of sick cows for further treatment.

MODULAR, ECONOMICAL SYSTEM SOLUTIONS FROM A SINGLE SOURCE
GEA offers modular product and system solutions for all areas of dairy farming that can be tailored to the specific needs of your farm. Your benefit: more flexible working time management, higher milk yields, lower costs and, thus, significantly higher value creation.
Through the fully integrated combination of automated GEA technologies, you create synergies that improve the day-to-day work on your dairy farm.

**The advantages for you:**
- Less work: more time to focus on the management of the farm instead of having to handle routine activities
- More precision: daily work routines are always carried out in the same way at the specified time
- Improved farm performance: greater milk yield and quality through requirement-oriented group feeding throughout the course of the day
- Higher profitability: lower feed and labor costs, low-maintenance operation with minimal energy consumption

**Optimal feeding**
An optimized barn concept is based on two main factors: easy access to clean, high-quality drinking water combined with the right amount of fresh, high-quality feed.

**Manure management**
The increased demands being placed on manure disposal can complicate the growth of a dairy farm. GEA manure management processes offer cost-effective solutions with profitability benefits.
Always there for you – GEA’s effective dealer network of specialists

GEA stands for first-class components and system solutions for milk production and milk processing operations. Accordingly, GEA sets demanding standards for its service partners.

Best milk and productivity. Every day, every year, with GEA Service.
GEA works with a worldwide dealer network of specialists that offer individual advice and competent service at the highest level.

These highly trained experts are happy to show you how you can use automated feeding systems from GEA on your farm to sustainably optimize productivity and efficiency. The service spectrum ranges from the requirement-oriented planning and design of the feeding system to the installation and commissioning along with operator training, support and maintenance. This ensures that from the very first day onward, you receive the best performance for your animals and your dairy farm from the system and its components.

**Original spare parts and accessories from GEA**

When you choose an automated feeding system from GEA you always rely on having access to original spare parts along with an extensive range of accessories from GEA. You will surely benefit from manufacturer quality, distinguished by a long service life and high reliability.
We live our values.
Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.