

A blue graphic with three white chevrons pointing right, followed by the text 'Freedom to choose' in white, bold, sans-serif font.

Freedom to choose

DeLaval Voluntary
Milking System (VMS)

A photograph of a man and a woman standing in a modern milking parlor. The woman is wearing a red and white plaid shirt and blue jeans, and the man is wearing a blue plaid shirt and blue jeans. They are standing next to a large, blue and stainless steel DeLaval VMS machine. A cow is visible in the background, looking out from a stall. The machine has a control panel with a screen and several buttons. The overall scene is clean and professional.

Your solution – every day

The DeLaval logo is positioned at the top left of the machine's blue canopy. It features a stylized 'd' icon followed by the brand name 'DeLaval' in a white, sans-serif font.

DeLaval

Choose the
automation that
works smarter
for you



Automated solutions make your farm more profitable without the hard work. One of the core solutions is automated milking. DeLaval Voluntary Milking System (VMS) sets you free from the manual labor of milking. So you can improve your herd's performance, while managing your own time better.

Increasing demands on your milk production may be driving your plans to expand. But how will you face the challenges of finding the right people and technologies to care for your cows – the milking, the feeding, the cleaning and the many other tasks involved in running a successful dairy operation?

DeLaval can help you find the answer – by providing the automation solution that works smarter for you, every day.

By expanding your operation to include DeLaval Voluntary Milking System (VMS), you can achieve new levels of labor-saving efficiency, reliability, flexibility, animal health and milk quality.

An automated milking barn solution maximizes time for management while minimizing labor requirements in milk production. You can expect better milking performance from your herd, improved cow comfort and better overall herd management.

VMS can give you more freedom to manage your own time. Your farm is your life – one that you've worked hard for. Now it can start working for you.

The smart solution



DeLaval shows you how to achieve more from your herd with fewer resources, and how to expand your operation while lowering labor costs. VMS simply gives you more control over your business.

At the heart of DeLaval VMS is a computer-controlled, automated system that streamlines or removes much of the manual labor associated with milking cows.

A touch-screen interface gives you fast and intuitive control of the entire system.

VMS uses an agile hydraulic, robotic arm together with lasers and an image processing system for precise, quick teat detection. The arm does not get tired or lose patience with difficult cows – it has a range of options to help attach difficult udders and speed up the attachment process on easy udders.

DeLaval's robotic milking solution offers farming families time away from a stringent daily milking schedule. Family events may be enjoyed to the fullest – and more time may be spent managing your feed costs, controlling your herd health, and applying your management skills to all areas of your dairy business.

The system may easily be switched to manual mode to train new cows. And with the AutoTeach feature, each cow's teat position is automatically identified, so milking may proceed immediately. You can save even more time with automatic adjustment of milking permissions based on time, expected yield, lactation number and days in milk. You may also use a laptop computer or PDA as a wireless remote to give you even more control and independence.



The most advanced robotic arm



Fast, effective, flexible... and gentle. Perhaps it's no surprise that the milking arm on DeLaval's VMS is modeled after the human arm – yet it'll keep on working, day-in, day-out, around the clock.

The unique design of the hydraulic robot arm sets DeLaval apart from other automatic milking systems: it enables more cows to be milked over a given time period. This multi-purpose arm – modeled after the flexible movement range of the human arm – gently handles teat cleaning, teat cup attachment and teat disinfection. The multi-purpose arm also helps assure proper milk tube alignment to reduce slippage and kick-offs.

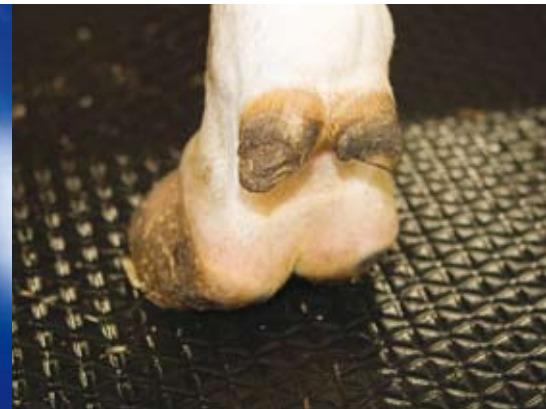
The high performance teat visualization system has a camera coupled with dual lasers to help assure fast and accurate teat identification for quick, dependable attachment rates. The arm is flexible enough to attach teats at 45° angles. To further enhance comfort and save time, the AutoTeach feature gives DeLaval the ability to automatically find the teats without manual programming.

The hydraulic functioning of the arm provides extended reliability and reduced service requirements when compared with pneumatic systems.



A close-up photograph of a brown cow lying down in a stall. The cow is wearing a yellow and orange collar with a tag that reads '01490'. The cow's head is resting on a bed of straw. A blue metal railing is visible in the background. The overall scene is calm and comfortable.

A calm,
comfortable
experience



Technology should adapt to the cow, not the other way around. DeLaval VMS allows animals to follow a calm and natural rhythm throughout the entire milking cycle. This way, everybody benefits.

Cows that are comfortable will have much better milk letdown and yield, and a robot that is inviting will process more milkings per day. So the system's milking station is designed to comfortably accommodate long and short cows with indexing feed manger and splash guard. Feed is gradually dispensed during milking and stopped at the most convenient time for the cow to exit the station quickly.

Cows milk when they like – in a calm, quiet environment. DeLaval VMS has been designed to enhance and promote that concept. The animal enters the milking station and stands naturally on the flat, slip-resistant floor. The feed manger automatically indexes so the cow is positioned well for milking.

Each teat is then individually cleaned, stimulated, pre-milked and dried before milking. Optimum teat stimulation leads to higher milk flow and shorter unit on-time – and that translates to higher milking capacity and profitability.





Planning
for success



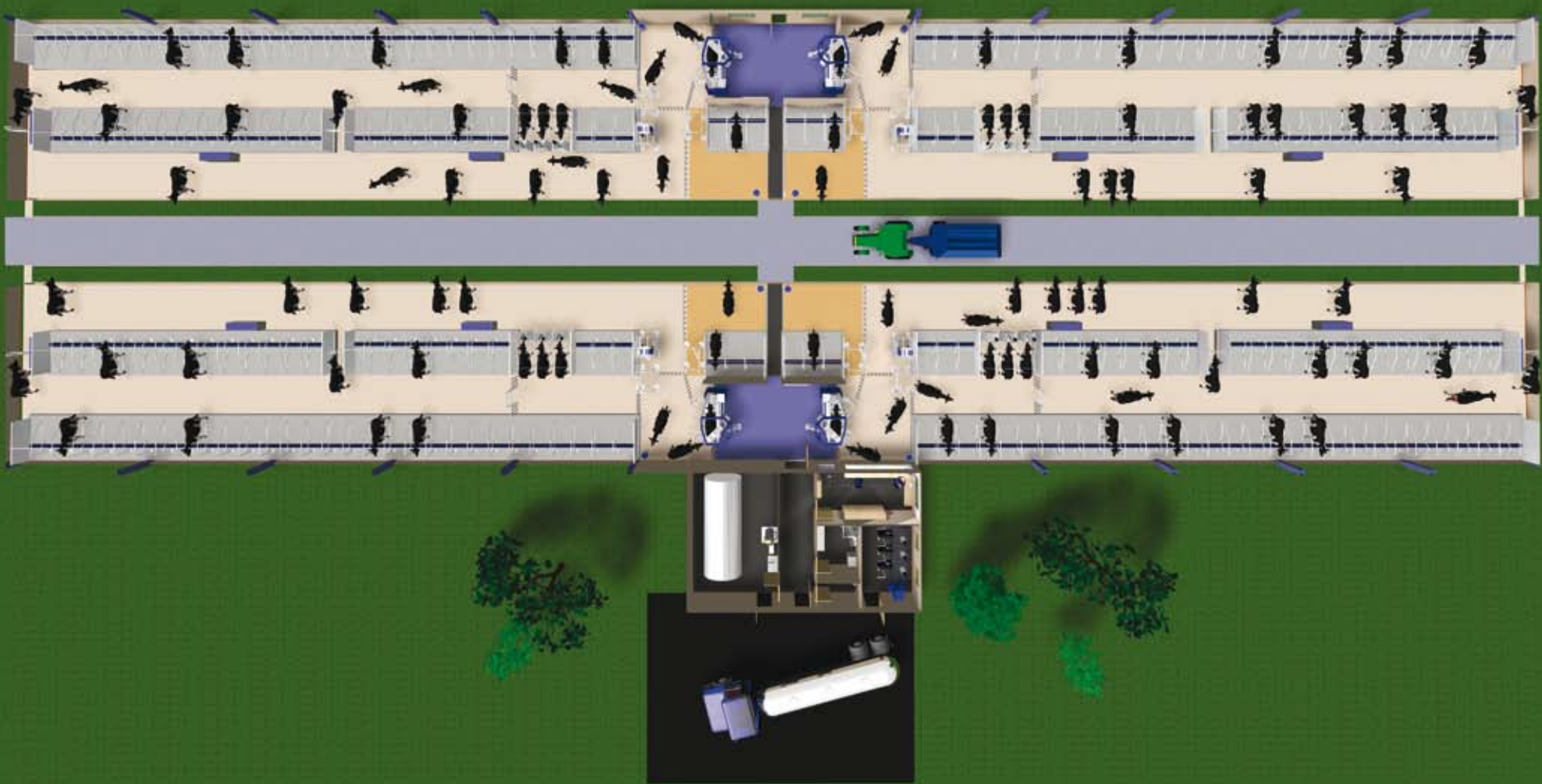


Success relies on more than just buying technology – you need to consider all the vital elements that will make your barn productive, such as cow traffic, feeding strategy, cow comfort... and above all, how the whole system fits together.

Skillful barn planning and barn design are crucial for success with automated milking to keep cow traffic flowing smoothly and to gain maximum benefit from overall system performance. You need to plan a labor-efficient barn layout while respecting the requirements of voluntary milking for the cows – frequent feeding and comfortable resting. Your goal is to maximize barn performance while minimizing the labor needed to keep everything running smoothly.

What is the best solution for your operation? Should you select two, three, four or even six rows with one or two feed alleys? Would you prefer free cow traffic or managed cow traffic? We can assist you in finding the right answers to all these questions and more.

Whether you're planning a new or renovated barn, DeLaval is here to help you as you plan your project.



DeLaval VMS gives you the freedom to choose the type of cow traffic that's best for your farm. Whether free cow traffic, feed first or milk first, DeLaval VMS will milk just as quickly and effectively no matter which strategy is used.

To give you some ideas about how to maximize performance and cow comfort, here is a sample solution showing four DeLaval VMS, 250 cows and a central feed alley. The herd is divided into four equal pens. Each pen has a DeLaval VMS and a separation area for handling attention cows that are automatically diverted by the VMS.

Cow traffic is based on the Feed First concept. Cows have free access to the feed bunk at all times. They always follow the same simple circle, which makes it easy for them to adapt and perform in a predictable manner. Upon their return to the holding area, a DeLaval Smart Selection Gate (SSG) will identify each cow to determine status specific to milk permission. When a cow has milking permission, she will be directed to the VMS.

An office is strategically located to provide a clear view inside the barn, and each VMS is easily accessible via a short clean path. The milk cooling tank is placed close to the milking stations to minimize the length of milk lines and reduce overall water consumption.





Managing your
herd more easily





The key to better herd management lies in better understanding of your animals. VMS herd management software gives you that information, allowing you to make better decisions in less time.

With DeLaval VMS, it's possible to monitor each cow individually, even in herds with hundreds of cows. With clear identification of each cow, the intelligent herd management software flags exceptional animals, such as those that deviate from normal milking or activity levels. By using special cow sorting areas with optional computer-linked smart selection and separation gates, you may easily achieve automated cow separation and handling.

DeLaval VMS herd management software automates daily tasks to save even more time. A smart and simple index – MDi (Mastitis Detection index) – will give you an updated overview of the health of each cow after milking. You can count on daily VMS help with automatic teaching of new cows brought into the system, and automatic milk permission settings based on days in milk and expected yield.



**Feeding strategy –
increase station
visits and yields**



What, when and how you feed your animals plays a significant role in the volume and quality of yield that your herd produces. Do you have the right menu for successful productivity?

A key factor in gaining the best performance from your cows in an automatic milking system is the feeding strategy that you plan. This will influence how the cows move around the barn, and how they behave socially.

Regular feeding throughout the day and night increases animal activity and encourages increased visits to the milking stations. It promotes higher milk yields due to increased dry matter intake.

By providing additional concentrate feed stations, you will also have the opportunity to make individual corrections to each cow's ration. You may lower the mix and increase the energy content provided in the feed stations to better suit the individual needs of each cow.

DeLaval can help you plan the correct feeding strategy for your ambitions, and help you take advantage of the opportunities to reduce labor and feed costs.

Monitoring and protecting the quality of your milk



The success of your business depends on the quality of the milk you produce. So it is worth assuring that your milk is harvested and stored in the best possible conditions. Once again, the unique design features of VMS are here to help.

Milk quality with DeLaval VMS is safeguarded by the unique hygienic design of the milking station and the advanced sensors used to monitor each quarter of every cow. Specific features – such as the manure splash guard, automatic floor cleaning, rinsing of all cups inside and out between each cow, and immediate teat cup kick-off alert – all contribute to better milk quality and your overall peace of mind. There's also a unique teat preparation cup that cleans and dries the teats before milking. The teat preparation cup has its own separate line so no dirty pre-milk may enter the main milk line.

An optical milk meter measures conductivity, milk flow, yield and blood levels in each quarter. Abnormal milk will automatically be diverted according to the criteria that you set in the software.

The optional DeLaval Online Cell Counter (OCC) (not available in all countries) can provide an accurate Somatic Cell Count (SCC) for each animal at every milking.

While all of this is happening, the VMS system's real-time management software safely records all data and events for retrieval wherever and whenever you need them.



Cooling systems and solutions



DeLaval offers a complete range of cooling solutions and tanks for keeping your milk in perfect condition while it awaits collection. This can make an important difference in the value of your product.

Any successful robotic milking system must protect the milk once it has been harvested, and DeLaval offers a choice of two types of cooling systems that may be adapted to meet different needs.

Flow Controlled Cooling (FCC) is ideal for low milk flows and irregular milking patterns as it can adjust its cooling capacity according to the flow into the tank. It takes the temperature of the milk below 35°F, while removing the risk of ice build-up.

Buffer Controlled Cooling (BCC) is designed for much larger volumes, and provides the possibility of instantly cooling batches of milk before they enter the main holding tank. This means that milk may be harvested even as the main tank is being emptied and cleaned.

DeLaval supplies a seamless solution from teat to tank – that means that you can rely on one partner for your complete milk system needs.

 DeLaval



**Comfortable
cows are more
productive and
profitable**





Animal health and welfare is paramount to the success of your business. When you invest in VMS, DeLaval can help you provide the optimum level of comfort and care for your herd.

Cow comfort and health are important factors for animal welfare and for milk quality and yields. They will play a key role in improving your profitability.

Naturally, cows need plenty of quality feed, water and fresh air. They also need soft, dry and clean resting surfaces and sound footing. Standing and lying down should come easily. DeLaval can help you achieve all of these needs – for instance, with rubber mats and mattresses and cow-activated swinging cow brushes.

Hoof care is essential to cow health and comfort, and foot bathing to reduce hoof diseases and maintain hoof integrity plays an important role. DeLaval automated footbath AFB1000 virtually maintains itself as you program the controller to provide effective foot bathing for your animals.

**Service, support,
advice: DeLaval is
there for you**





Automating your dairy operation is a big step – so it's important to choose a partner with the experience and expertise to make it a success.

Reliability is critical for the success of automated milking – and you may rely on the support of DeLaval personnel as well as your DeLaval-trained VMS specialists to assist you in establishing and upgrading your automated milking operation to its highest potential – from initial planning and design, to regular scheduled servicing and maintenance.

DeLaval VMS can take your dairy operation to new levels of productivity and profitability.

**DeLaval's Hamra Farm –
developed by farmers,
for farmers**





DeLaval's class-leading dairy farming technology has been developed specifically for farmers, by farmers. It is tested and used in real-life conditions – right here – at DeLaval's very own Hamra Farm, outside Tumba, just south of Stockholm in Sweden.

Hamra Farm is a research farm for DeLaval solutions, and is used as a training, research and meeting facility. It is also a fully functioning, 5,100 acre dairy farm with approximately 230 milking cows in three barns that has been run as a commercial enterprise since 1901. Today it produces milk in both stanchion and loose housing environments including a fully automated milking barn. In 2008, more than 50% of the cows produced an average of over 24,700 lbs. (11,000 liters) of milk each.

Visiting Hamra gives you a great opportunity to see the latest developments from DeLaval in practice. Milking is conducted in a conventional herringbone parlor, a parallel parlor and a VMS milking robot.

We look forward to welcoming you to our very own Hamra Farm and showing you how DeLaval can offer complete milk harvesting solutions for your dairy business.



DeLaval Inc.
11100 North Congress Avenue
Kansas City, MO 64153-1296
USA
Telephone: 816-891-7700
Fax: 816-891-1606
www.delaval-us.com
www.profoundproductivity.com

DeLaval Inc.
2020 Fisher Drive
Peterborough, ONT K9J 7B7
Canada
Telephone: 705-741-3100
Fax: 705-741-3150
www.delaval.ca

www.sustainabledairyfarming.com
www.milkproduction.com



DeLaval has over 125 years of experience and innovation in the dairy business, helping dairy producers operate their farms in the best way.

Our Sustainable Dairy Farming solutions will increasingly contribute to the production of more quality food, for more people, with less impact on the environment. It's all part of our Smart Farming strategy – putting dairy farmers at the center stage of a fully integrated and automated farm operation.

A dairy producers' future is defined by scale and efficiency. Integrated automation is increasingly providing the answers to the need for enhanced profitability; while consumers are making growing demands for greater food quality and safety.

DeLaval Voluntary Milking System (VMS) is making a major contribution to that Smart Farming strategy by maximizing time for management while minimizing labor requirements in milk production.



DeLaval Voluntary Milking System (VMS) supports DeLaval's commitment to Sustainable Dairy Farming: solutions that meet environmental challenges, respect animal welfare and benefit customers and society.