

# DeLaval Rotary E500

## A System Approach





# IT ALL REVOLVES AROUND YOU

**The DeLaval Rotary E500 is all about helping you to maximise your throughput while minimising the operator hours per milking.**

The expertise we have gained designing, manufacturing and monitoring the highest throughput milking systems on the planet have been applied to make the DeLaval Rotary E500 a throughput machine.

To deliver this requires not just a milking platform, but a fully integrated milking system – a rotary system with more information, more automation, more functions and more technology than we've ever included before – and to deliver it so that one person can operate everything safely, comfortably and easily, from a central point.

It's not just the milking itself that is simpler, calmer and more comfortable; but also the service, support and advice that is an integral part of what makes your Rotary E500 one of the most efficient milking systems available today.



#### Animal Welfare

The Rotary E500 is designed to get your cows into position faster, to milk them quickly and gently, and to get them back to feed smoothly and calmly. It does this by working with the cows, not against them.



#### Farm Profitability

Designed to milk more cows, more quickly, generating more milk from a system with one agreed cost for servicing, maintenance and consumables – that's what the Rotary E500 is all about.



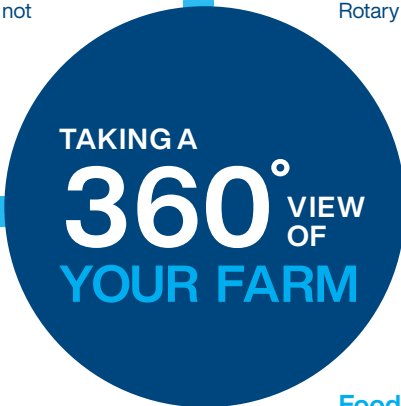
#### Food Safety

With our best milking technology, vacuum technology, transport and storage solutions – the Rotary E500 is at the forefront of food safety in the dairy industry.



#### Work Efficiency

Whether you want to milk with just one operator, or you want to get milking completed faster and with less pressure, the Rotary E500 is designed to maximise milk per labour hour.



This brochure introduces our standard release of E500. Some features, components and services mentioned herein are optional to the customer. With the flexibility brought by optional features, components and services, you may choose your own version of E500 and your desired level of services based on your budget and needs. Results may vary and are not guaranteed. DeLaval does not claim that the results mentioned in this brochure are typical and this information does not constitute a warranty nor guarantee of service. Actual performance and improvement will depend on a number of factors, including milking practices, type of cows, farm and herd maintenance practices.



# Why is it better?

When every hour counts - this is the milking system you can count on. Available in sizes up to 128 bails, these high throughput machines need minimal downtime for cleaning and maintenance.

The E500 features all of our leading CowFlow and WorkFlow technologies, which makes it the most efficient milking rotary we have ever built.

Up to  
**7%**  
shorter  
milking time<sup>3</sup>

**30%**  
greater throughput  
than existing DeLaval  
rotary solutions<sup>4</sup>

Up to  
**6**  
different safety  
devices<sup>2</sup>

**14**  
different rotary  
sizes available

Our highest  
throughput  
rotary milking  
system

Up to  
**1.5**  
cow entry  
for faster  
loading<sup>1</sup>

<sup>1</sup>Data collected from test farms

<sup>2</sup>When using dual receiver configurations

<sup>3</sup>Compared to standard configured milking system

<sup>4</sup>When compared to a 106 PR3100HD at 4.9 sec/bail



# The key features

The fast flow principle that underpins everything we have built into the Rotary E500 relies on the seamless interaction of every part of the system.



## DeLaval Cockpit™

Putting more control into the place where it is easiest to access.



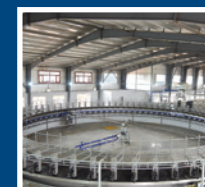
## DeLaval FastBail™

Calmer, healthier cows presenting themselves in the best position for milking.



## DeLaval FastExit™

Throughput drives efficiency, and the FastExit™ system means just that.



## DeLaval WorkSure™

Designed for minimal service time and 24/7 operation.



# DeLaval Cockpit™

The Cockpit unlocks the possibility of one-person operation.

It is about giving you access to more information, more automation, more functions and more technology than we've ever given you before – and to deliver it so that one person can operate everything safely, comfortably and easily, from a central point – the place where you are in total control – the Cockpit of your DeLaval Rotary.

## It all revolves around you

It may be positioned on the outside of the rotary, but everything about it puts you at the centre.

It's not just that it is possible to control everything – we have designed it so that it is easier, faster and much easier on your body.

Simple things like the balance of the clusters to make cups-on easier, all the way to the placement of the larger higher definition touchscreen control panel and the look-through bail that makes it easier to keep your eyes on everything and act quickly and effectively when you see an opportunity to do so.

### Cow group speed control

Customised speed for different herds or groups.

### Comfort start

Automatic start, faster attachment with less physical stress.

### Emergency mode

A redundancy is built in to allow rotation of the platform to remove cows if the control system fails.

### Crowd gate control

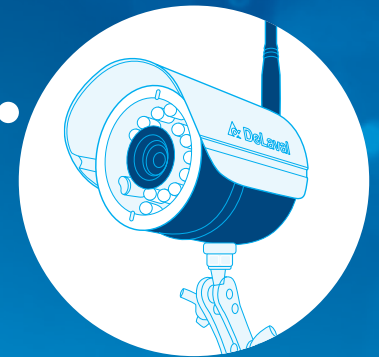
One touch stop and start for accurate cow control.

### Non-negotiable health and safety features

The Rotary Controller shows on the touch screen all the safety trip positions and shows if they are triggered during the milking session. Health and safety is a priority at DeLaval.

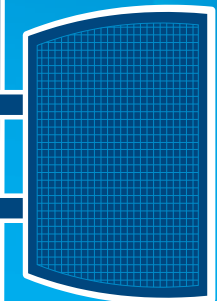
### Farm Monitoring Camera

The DeLaval Farm Monitoring Camera provides safe supervision of the cows. The portable and wireless receiver allows for constant supervision of the cows. The milker can keep an eye on the exit area, backing gate and holding yard.



### Visual alarms

Quick visual alarms to avoid milking disruptions and ensure safety for workers and cows.



### Audible alarms

### Adjustable slow down

Reduces second rotation cows.

### Interactive Data Display (IDD)

Presents the status of all cows being milked at each milking point on your rotary.

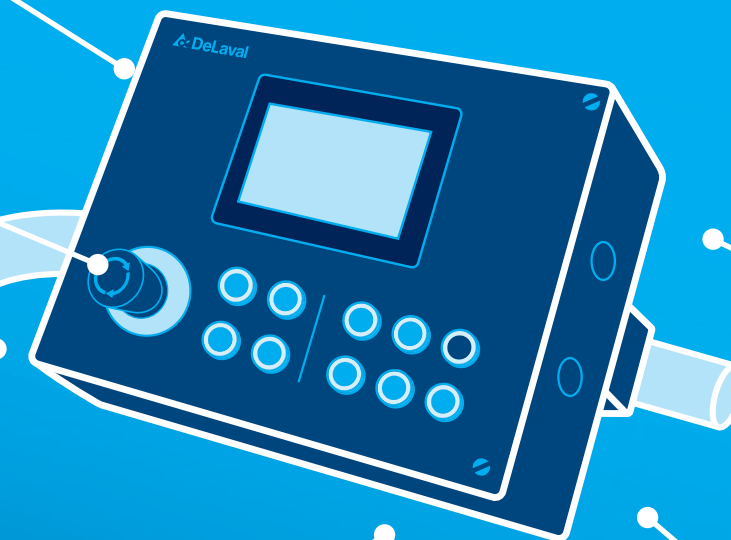
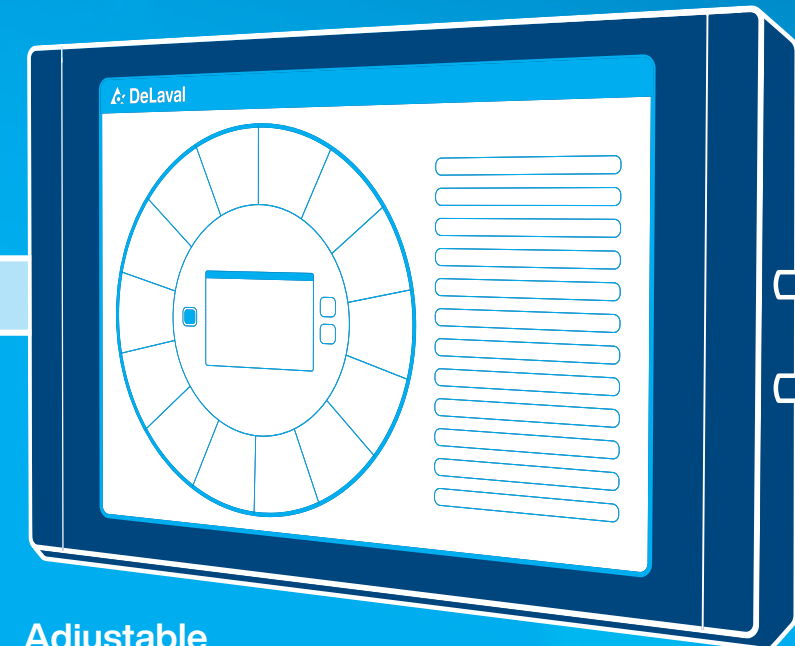
### Variable speed

Adjust platform speed for optimal throughput so the operator can focus on attachment.

### Controller

We use full words and graphics, not codes, so decisions can be made on the go.

### Configurable stop at exit





# DeLaval FastBail™

The DeLaval Rotary E500 is designed to create continuous and consistent movement of cows through milking - we call this Fast Flow. At the heart of this system is a bail that cows want to enter. This is the secret of DeLaval FastBail™.

With an open, low, low profile bail with no sharp edges cows are eager to get onto the platform, which is why we have teamed the FastBail™ with a 1.5 cow entry.\*

This combination between a bail cows are competing to enter, and an entry design that not only deals with this competition - it works with it to generate faster, more efficient loading.

You will see the results in speed, throughput and an absence of empty bails.

**Central to  
the fast flow  
of cows.**

## Comfortable stalling

## Slim lines

## 15 degree angled bail

Udder is closer to milker for faster and easier cluster attachment.

## Milk tube

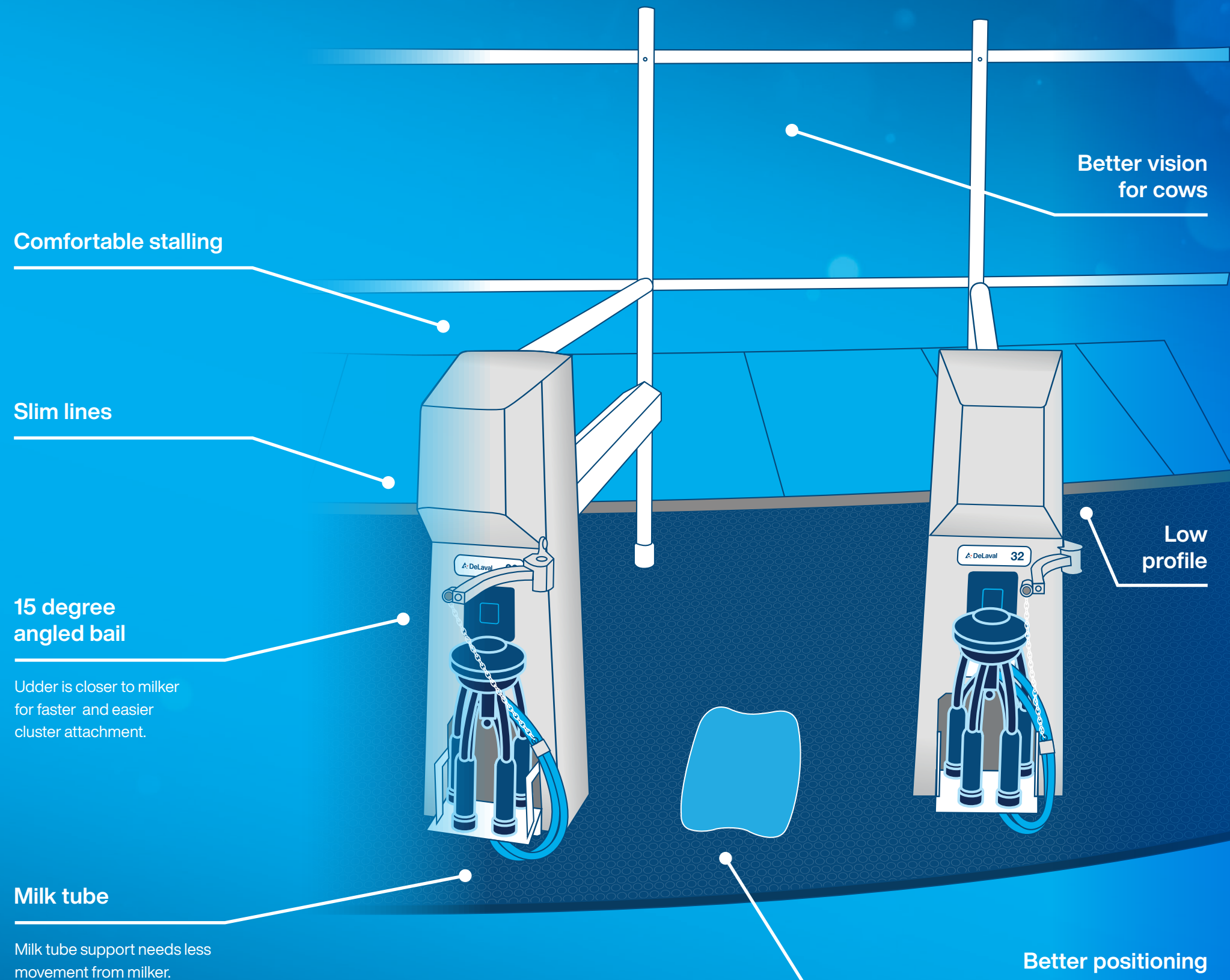
Milk tube support needs less movement from milker.

**Better vision  
for cows**

**Low  
profile**

## Better positioning

Cow's inside hind leg is closer to and behind cabinet, reducing contact with cluster - less polluting of clusters, better detachment and more comfortable for cows.





# DeLaval FastExit™

The main restriction on the flow of cows in a milking system is congestion at exit. Not on a DeLaval Rotary E500. The Rotary E500 harnesses many of the exit features pioneered by DeLaval over the last decade on some of the largest, highest throughput rotary systems ever made.

By bringing these features to the Rotary E500 we have created a throughput machine.

The key is the combination of an angled bail, a low profile bail and an exit bow.

This creates a simple and comfortable exit for your cows, and this translates directly to speed of exit.

The Fast Flow continues at exit.

## Angled bail

Forms a perfect line with the exit bow to allow a more natural arc of movement for the cow which directly translates to speed of exit.

## Low profile bail

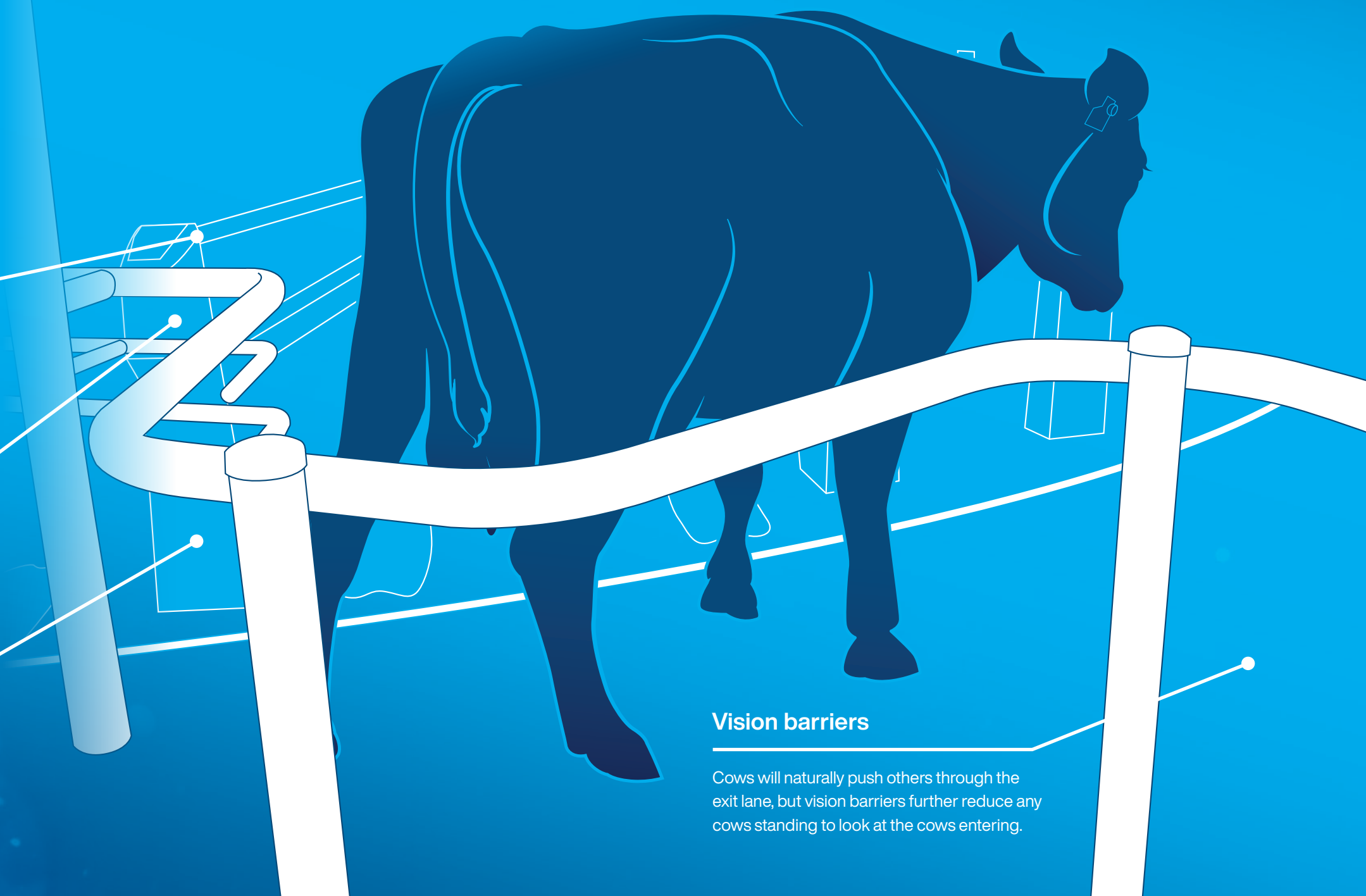
Allows cows to begin turning earlier and without having to raise their heads in an uncomfortable and unnatural motion.

## Exit bow

The cow backs in and the shape of the bow encourages her to pivot naturally in an arc to move immediately to the exit lane.

## Vision barriers

Cows will naturally push others through the exit lane, but vision barriers further reduce any cows standing to look at the cows entering.





# DeLaval WorkSure™

If you know the cost of your downtime to the minute – The DeLaval Rotary E500 is the system that was designed for your operation. The E500 is the fastest, largest and most relentless rotary milking system we've ever built, which makes it a worthy successor to the legendary PR3100HD.

Designed to never quit, the E500 has a combination of rugged, durable components, back-up drives and hardware, and smart thinking that makes it possible to carry out many cleaning and servicing tasks without hitting the brakes.

The E500 has multiple emergency stops to provide a safe working environment for those working near the rotary, inside or out.

It's not just how fast you can make the rotary spin that counts. It's how fast you can make it stop. At the core of the DeLaval Rotary Controller RC5 is the ability to stop even the largest decks quickly and safely.

The drives on the E500 can be swung away from the deck providing a better service environment.

**Easy service**

**Worker safety**

**Fast stop**

**Minimal downtime**

When every minute counts, there is no time for downtime, so the E500 is built smarter - to give you certainty.

**Crucial mode**

The DeLaval Rotary Controller RC5 is built to let you operate even in the event of failure, to allow the rotary to keep turning and the cows to be milked.

**Backup controller**

A backup control system is built in to ensure the safety and operational elements are active when the deck is turning.

**It keeps spinning**

Optional extra drives can be added to the rotary platform to ensure that maximum efficiency can be maintained in the event of drive failures.

**Built tough**

Over 20 years of defining the meaning of heavy-duty rotary, we know what components work in a high volume, high intensity dairy environment. The E500 and system components are built to ensure that the rotary keeps operating at maximum efficiency.

**Easy access**

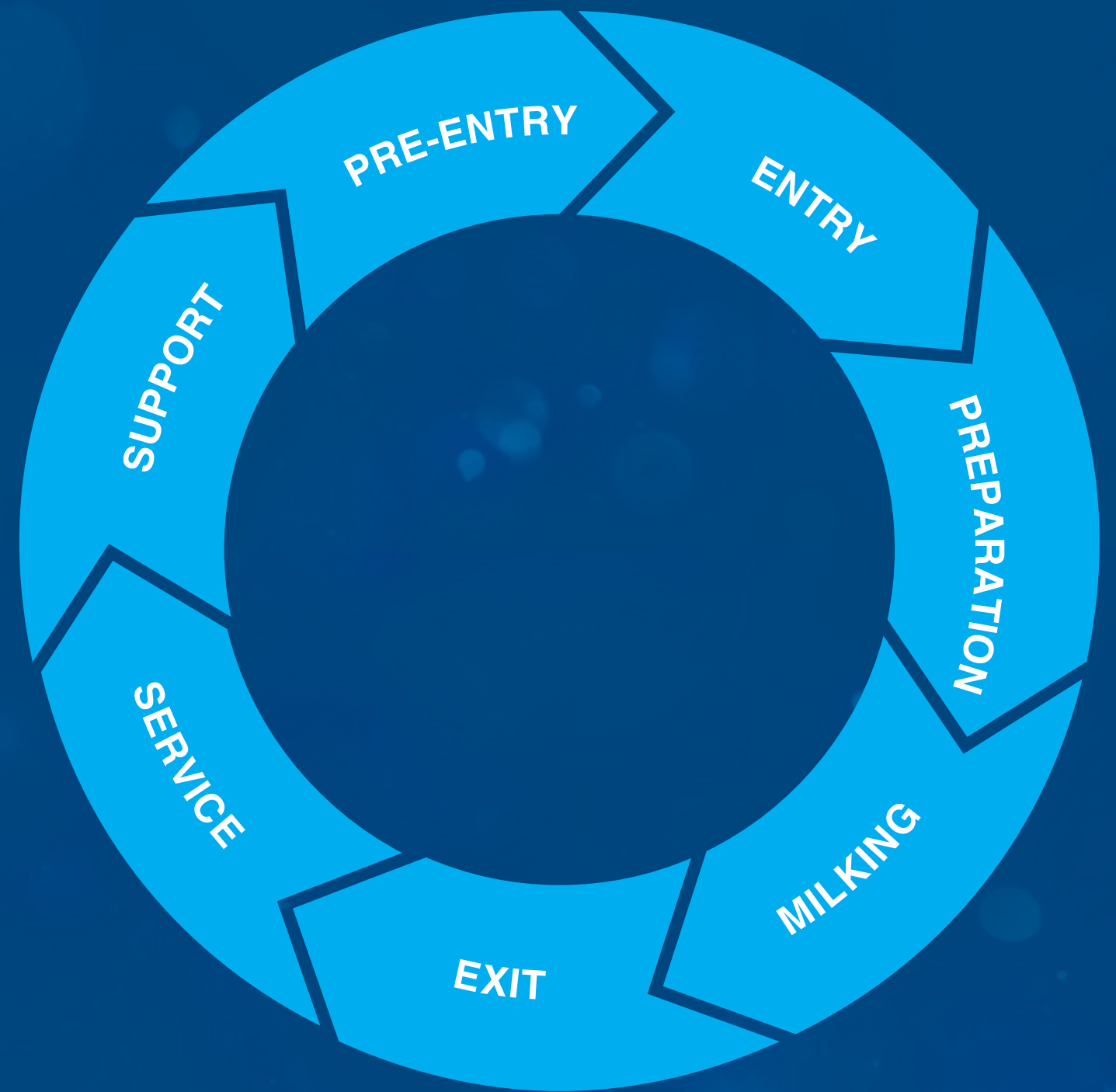
With external drives on the platform, there is no need for a service technician or employee to climb under the platform or behind milk lines to service the drive system.





# Putting it all together

The DeLaval Rotary E500 is designed to generate throughput efficiency by using the deep understanding that we have built up over more than 135 years. You will see the benefits of this experience, combined with our eye for detail, in everything from how the Rotary E500 works with cows' natural movements and physiology, to how it makes it easy and safe for workers – all built around a milking system that delivers advanced extraction, vacuum and pulsation settings for fast, gentle milking.







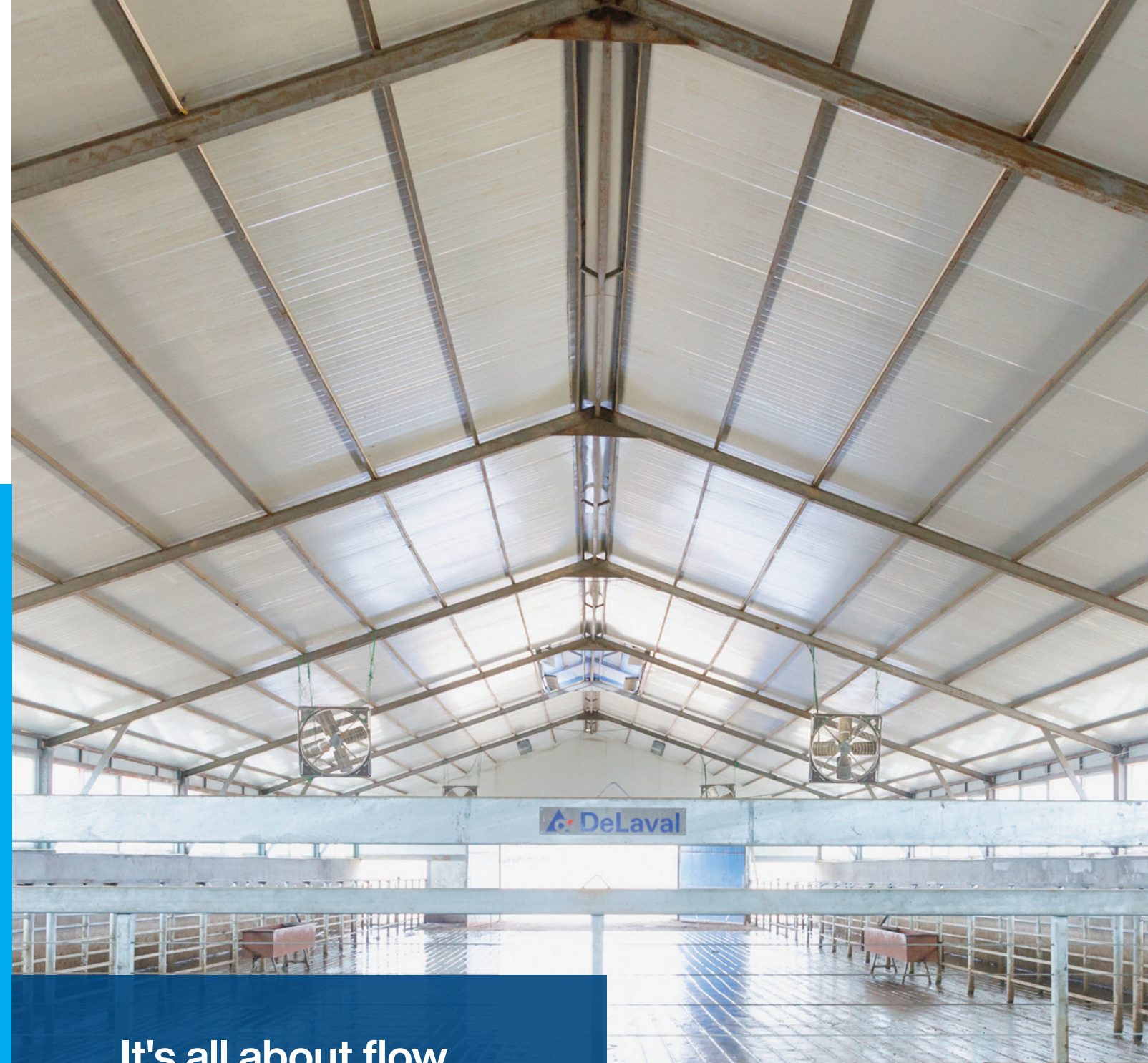
# PRE-ENTRY

The throughput, speed and efficiency generated by the DeLaval Rotary E500 all starts at the pre-entry phase.

Time in the holding area is wasted time – time that would be more efficiently utilised eating, resting or being milked. That's why the E500 is designed to help you minimise this unproductive waiting.



Stress in the holding area should be minimised as much as possible. Reduce stress with proper ventilation, properly sizing the holding area, using the crowd gate to only encourage cows to move forward and keeping staff out of the holding area.



## TAKING A 360° VIEW



### Animal Welfare

Short waiting times and a calm, fast process is key to rumination and cow health.



### Farm Profitability

Eliminating the time wasted fetching animals means more time on important tasks.



### Work Efficiency

The ability to increase throughput as well as improve cow productivity.



### Food Safety

A reduction in stress can lead directly to an improvement in milk quality.

## It's all about flow

There are a couple of things the E500 does to help reduce waiting:

By making the rest of the process fast, we reduce the time it takes for the herd to be milked.

The crowd gate can be controlled centrally from the Cockpit™, which means cows can be moved efficiently forward to the entry phase of milking without the need for an operator to step away from the tasks of milking – this speeds the whole process up.





# ENTRY

We have designed and built many of the world's largest dairy systems, so we know how to make them operate as efficiently as possible. It is this continuous flow of cow traffic that makes entry so important.



In our most efficient systems, the key to unlocking faster entry is the design of the entry lane. If not designed properly, the entry lane can act as a bottleneck that decreases loading speed and lead to more empty bails on the deck.

By using the proven 1.5 cow entry pioneered on the very largest, fastest systems, the E500 is able to provide some of the best rotary efficiencies available today.

Results over the last 10 years have shown that with 1.5 cow entry, 20 times more cows get pushed through by herd mates. This push and competition among cows makes entry much faster because any slow cows in front will be bypassed until they feel ready to join, which results in fewer empty bails.\*



## TAKING A 360° VIEW



### Animal Welfare

Works with herd hierarchy to make it possible for sorting and movement to occur without stalling entry.



### Farm Profitability

Fast, smooth entry designed for fewer disruptions to routines for operators.



### Work Efficiency

A fast, safe entry helps you milk more cows with few labour hours.



### Food Safety

Cows are positioned to increase access to the udder for milking preparation.

## 1.5 Cow entry

With exactly the same entry mechanics as the legendary DeLaval Rotary PR3100 which sets the standard on many of the world's largest dairy operations, the Rotary E500 delivers an entry system that provides fast and smooth entry.

\*data collected from test farms





# PREPARATION

The FastBail™ is designed to make preparation easy, fast and effective. With minimal obstructions to the operator, the prep routine can be a smooth operation without the need to handle items not part of the prep routine.



## Preparation is the key to an efficient milking process

Correct preparation procedures help to:

- Trigger let-down
- Ensure hygiene
- Ensure udder health
- Maximise milk flow
- Shorten milking times

Correct preparation and stimulation helps to deliver shorter milking times and less damage to teats. Studies conclusively show that teat end condition is highly correlated to new mastitis infection. That is why preparation is so critical.



### TAKING A 360° VIEW



#### Animal Welfare

Designed for easy access and visibility, allowing thorough and consistent udder care.



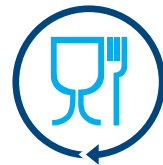
#### Farm Profitability

Better preparation could improve milk yield and quality while reducing health costs.



#### Work Efficiency

Excellent hygiene and superior stimulation could help you achieve a higher yield.



#### Food Safety

Superior cleaning and stimulation could help to improve milk quality.





# MILKING

Everything we do at DeLaval is about better milking. The DeLaval Rotary E500 has been designed to include many of our latest and exclusive milking innovations.



## TAKING A 360° VIEW



### Animal Welfare

Our pulsation technology combined with the latest cluster and liner technology helps you to maintain good udder health.



### Farm Profitability

Designed to milk quickly and gently - it all adds up to productivity and profitability.



### Work Efficiency

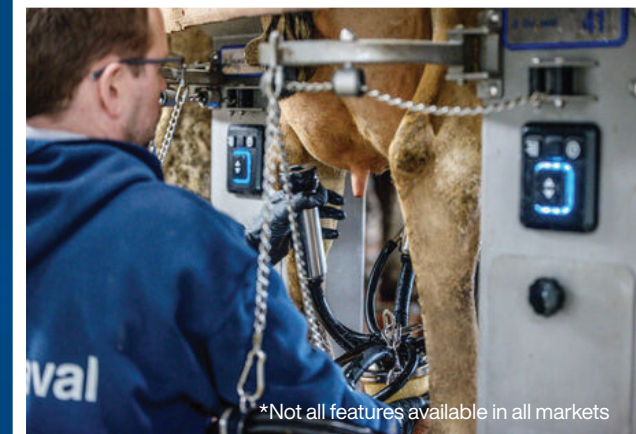
Ergonomically designed, simplified, fast routines with safe access to udders means more cows per hour per labour unit.



### Food Safety

The DeLaval MC73, MC75 or Evanza clusters incorporate DeLaval TopFlow™ technology designed to reduce flooding and cross contamination.

## Designed to milk better



\*Not all features available in all markets

### Easy access

Milking depends on the action of the people milking, and in the DeLaval Rotary E500 the milkers can easily find a comfortable milking position. This means it is easy, safe and comfortable for your workers to manage the milking process consistently from the DeLaval Cockpit.



\*Not all features available in all markets

### Flow-Responsive™ Milking

When every second counts, if you're not able to respond to what's actually happening you will be sacrificing performance. It's the same with milking. Don't milk at one vacuum level regardless of the actual milk flow, with DeLaval Flow-Responsive™ Milking vacuum, pulsation and stimulation technology your system adjusts automatically to let you go significantly faster without compromising udder health.



# Flow-Responsive™ Milking

In the past, most milking systems available operated at one pulsation and vacuum level throughout each milking session. This monovac approach means an “average” vacuum level is set to reduce the inevitable gap between the cow’s milk flow and the system’s ability to extract that milk. Now there is a new way with DeLaval Flow-Responsive™ Milking. By more closely following the milk flow of your cows Flow-Responsive™ Milking is able to adjust the key milking parameters of vacuum and pulsation during each milking session. The outcome is a steeper, shorter milk flow profile.

## Milk faster Go with the flow

DeLaval Flow-Adjusted Milking™

Flow-Adjusted Stimulation.....●  
Flow-Adjusted Vacuum.....●  
Valid for both Stim & Vac.....●

Less  
forced  
take-offs<sup>1</sup>

Positive  
effect on  
teat-end<sup>1</sup>



Up to  
**+5%**  
average  
milk flow<sup>1</sup>

Up to  
**15** sec  
less cups-on  
time<sup>1</sup>

Up to  
**40%**  
reduction in  
bimodalities<sup>1</sup>

Up to  
**+9%**  
peak  
milk flow<sup>1</sup>

Up to  
**24%**  
less prep  
time<sup>1</sup>

<sup>1</sup>Data recorded on test and pilot farms. DeLaval does not claim that these results are typical and this information does not constitute a warranty nor guarantee of service. Actual performance and improvement will depend on a number of factors, including milking practices, type of cows, farm and herd maintenance practices.





# EXIT

Being able to get cows to move quickly away from the rotary and bridge provides more space for the next cows to exit. Not only is it important to get cows on the deck, it is just as important to move cows away from the deck at exit.



## With FastExit™ it isn't a problem.

Cows, like people, move much faster when going forwards. The combination of the angled bail and exit bow allow cows to begin turning sooner, and to complete the turn faster using more of a pivot action. It all adds up to cows moving faster, more comfortably and that means you can move more cows with less effort in less time.



### TAKING A 360° VIEW



#### Animal Welfare

FastExit makes the movement more natural for cows, which puts less stress on them.



#### Farm Profitability

Exit speed is the key to milking more cows per hour, which means more milk in the tank.



#### Work Efficiency

The more efficient the rotary system the more milk produced per labour hour.



#### Food Safety

With an exit process that includes teat spraying, sorting and treatment, the next milking is optimised too.

## The Fast Flow principle in action

To help ensure the smooth flow of cows from the platform The DeLaval rotary E500 combines three design features to create a fast exit. The angle of the FastBail™ forms a direct line with the exit bow to create a simple straight movement that is not possible without the angle. By adding the lower height of the bail cabinet, these three features work together to keep things flowing - exactly how you like it.





# SERVICE

At DeLaval, we strive to help you operate your system at peak performance and work with you to keep it up to date with maintenance and service needs.



## It's all about performance

To deliver the level of performance you demand, we leave no aspect of the process to chance. That's why we don't just design and manufacture milking hardware, but we also operate state-of-the-art specialist production facilities that produce our own ranges of detergents, teat dips, liners and the consumables you need for day to day operations.

- System lubricants
- Routine maintenance
- Liners and rubber
- Filters
- Detergents
- Teat dip
- Tubes

But none of this would matter if we didn't also have a great team of expert technicians who attend regular DeLaval training courses to help ensure that every time they drive on to your farm – they have the specialist diagnostic tools, materials, skills and knowledge to keep your Rotary E500 spinning.



### TAKING A 360° VIEW



#### Animal Welfare

Having liners, settings and detergents functioning together helps to improve udder health.



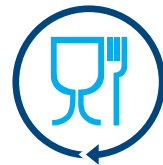
#### Farm Profitability

DeLaval service and consumables help keep your system running at full efficiency.



#### Work Efficiency

Our service staff can work with you to budget for estimated scheduled services to keep your investment operating at its peak performance.



#### Food Safety

Everything working together to protect the quality of your milk.

The DeLaval Rotary E500 has been designed to reduce the service load on your farm. Using time tested rotary designs the E500 is robust, reliable and ready to milk - at every milking.





# SUPPORT

Local experts with global support

We know that selecting a DeLaval milking system is not a short-term commitment. In many cases it represents a long term relationship. We take this seriously, and it is the support and advice that we can provide over those years that we feel is our greatest advantage, and key to that is our independent dealer network. With so many dairy farms in so many places, it would not make sense to attempt to support all of those farms without skilled, trusted locals. That's what your DeLaval Dealer represents.



## TAKING A 360° VIEW



### Animal Welfare

Longevity, fertility and productivity are the key drivers for our advisory team.



### Farm Profitability

Better routines, effective cleaning and ongoing system optimisation helps to ensure operators can get more done.



### Work Efficiency

Helping to ensure your system is optimised for your herd, operators and conditions.



### Food Safety

Transport, cooling and storage are central to the implementation of any new system.

## DeLaval Performance Plans

# Because performance is everything

Every DeLaval Rotary comes with a DeLaval Performance Plan. This means that we are all very clear about what you demand, and what we will deliver. From servicing and maintenance to remote monitoring of your vacuum levels - if it will help you perform, we will find a way to deliver it.

## What's in your Performance Plan?

### DeLaval Plus

DeLaval Plus is an ever growing set of applications that represent the most advanced level of farm management analysis and reporting that we have ever made.

### Advisory Services

Our Dairy Advisors can help you with advice before, during and long after installation of your milking system. They can support you in further optimising system performance and maximising results.

### InService™ All-Inclusive

DeLaval InService™ All-Inclusive means routine maintenance, scheduled servicing and the replenishment of consumables; all for one agreed price and with a payment structure that works for you.







More efficient  
worker  
routines

Less  
stressful for  
cows

Automate  
selecting  
and sorting  
of cows

Improve  
cow flow and  
efficiency

Reduce the  
risk of staff  
injuries

Save up to  
**50%**  
labour time sorting  
cows for milking\*

## Maximise cow flow with a customised Traffic Solution

The days of spending hours every day manually pushing, fetching and sorting cows are gone thanks to the cow traffic solutions available from DeLaval.

## It's all about Cow Flow

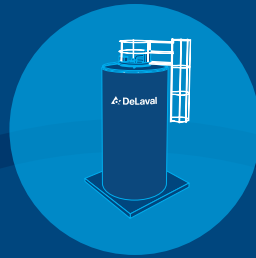
Modern milking systems are able to milk more cows, faster than ever. The key to unlocking their potential is making sure your cow traffic systems are able to move cows through those systems and back to feed as quickly and safely as possible. Whatever milking system you use.



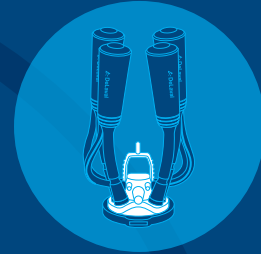
# DeLaval Rotary work well with:



DeLaval Advisory



DeLaval cooling



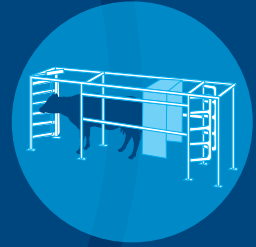
DeLaval Evanza™

We deliver solutions that help you get more, better quality milk from healthier animals.

That's why we don't just focus on one part of the milking process. We design, manufacture, install and maintain whole systems, and we are supporting ongoing performance of every component of those systems.



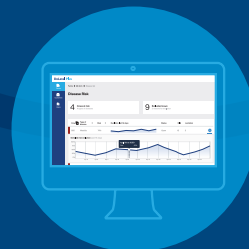
DeLaval InService™



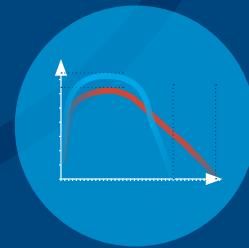
DeLaval cow traffic



DeLaval Farm Management



DeLaval Plus



DeLaval Flow-Responsive™ Milking

## Put a DeLaval Rotary to work for you

Take the next step on your DeLaval Rotary journey, either talk to your trusted DeLaval representative or for more information

visit us at [www.delaval.com](http://www.delaval.com)

\* Data from our pilot farms, not contractual. DeLaval does not claim that the results reflected herein will be achieved by all users and this information does not constitute a warranty nor guarantee of service or performance. Actual, individual performance and improvement will depend on a number of factors, including milking practices, type of cows, farm and herd maintenance practices.

