

# DeLaval Optimat™ II – Feed efficiency gains with automation





## Benefits of Optimat™ II

- **Increase milk yield and dry matter intake.** It is scientifically proven that cows which are fed many times per day have a higher dry matter intake and produce more milk.
- **Improve cow health.** The cows eat the same fresh mixture throughout the day. This means the pH in the rumen remains stable, for better cow health.
- **Improve feed efficiency – frequent distribution of feed reduces feed selection and promotes better digestion in the rumen.** It also means there is less waste left on the feed table.
- **Increase cow activity – with frequent feeding your cows don't all feed at the same time, which eliminates 'rush-hour' at the feed fence.** This enables less dominant cows to relax and eat, increasing their feed intake. And by applying either FeedFirst™ or free cow traffic you will encourage more frequent visits to the VMS.
- **Give you control – feed preparation and distribution are done exactly as you want.** You can easily adjust rations when you choose.
- **Improve feed hygiene – distributing feed by rail means your feed is not contaminated by the dirt on tractor and wagon tyres.**
- **Reduce your machinery costs – you will only need one tractor or loader to replenish the stationary mixer or buffer table.**
- **Save space – if you are planning a new barn, DeLaval feed wagon OTS takes just one third of the space required by a tractor-driven wagon – and you'll save space outside the barn too.**
- **Reduce labour costs and save time – with reduced work load and efficient time management. DeLaval Optimat offers flexibility in work routines – the mixer does not have to be filled during peak morning or afternoon work times. There is no waiting for feed to be mixed, no waiting for the right time to distribute feed, no manual feed distribution, and much less sweeping and cleaning of the feed table.**
- **Reduce your energy cost – one less tractor means less diesel is used. DeLaval OTS and RA135 use electricity and operate to a predetermined schedule, so they are very energy efficient.**
- **Frequent feeding reduces left-overs on the feed table, because feeding is done more accurately.**





## More milk with less work

**Regular frequent delivery of specific feed rations is essential for dairy farming success. Using automatic feeding systems to optimize feed management is a profitable investment – to improve your herd's health, reproduction and productivity.**



### **Automated feeding for more milk**

We are all aware that automation is becoming more and more important for efficient and profitable milk production. Automated feeding, which enables much more frequent feeding, will have a positive impact on your animals, your milk yield and your bottom line: minimizing waste, reducing costs, maximizing nutrition, and maximizing returns. It offers you all this – and a more relaxed lifestyle.

### **Feed frequently for healthy, high-yield cows**

If you feed your animals traditionally, using a mixer-wagon, you probably feed out forage just once or twice a day. Now DeLaval Optimat™ II makes forage feeding much easier. You will be able to feed your cows many times per day, around the clock, with minimal labour – and benefit from healthier animals, increased milk production, and more flexibility in your daily work.

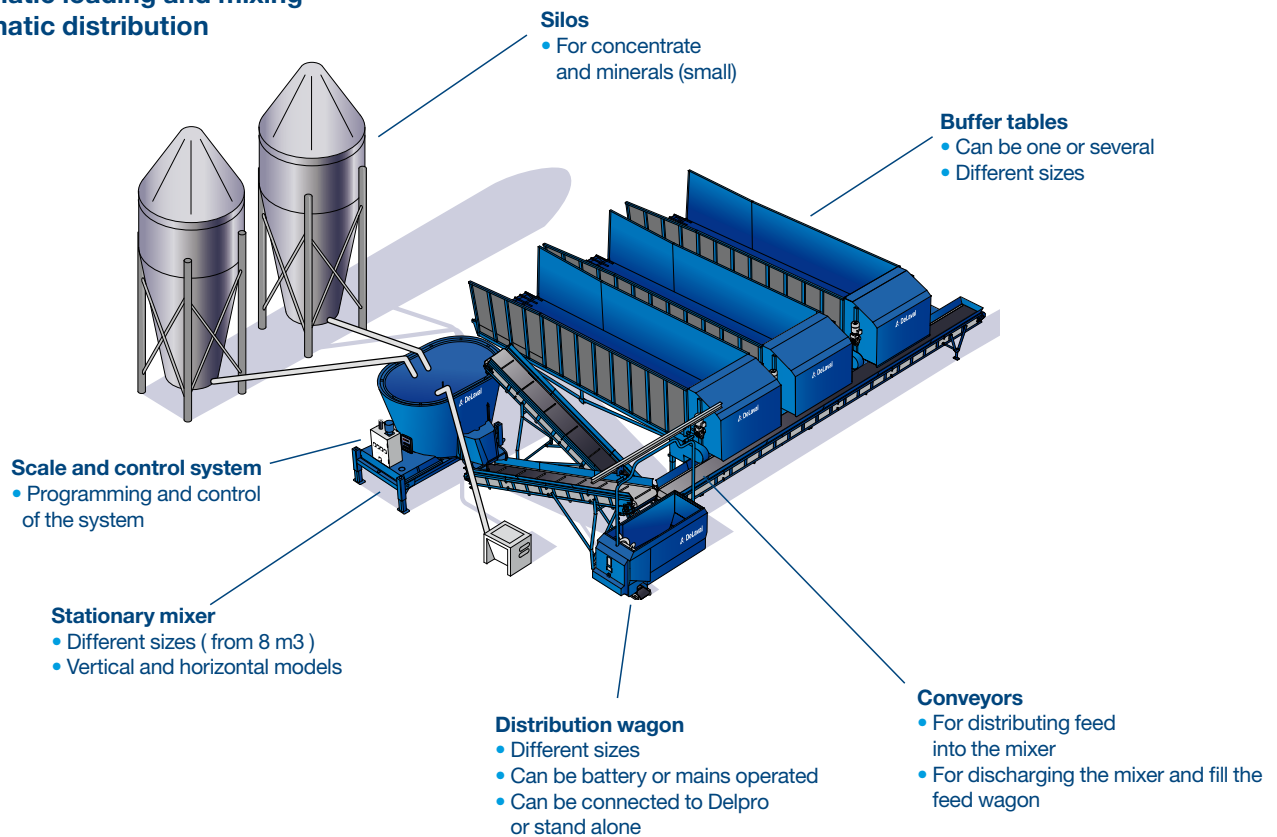
### **The right solution for every farm**

DeLaval offers feeding solutions for every farm, even helping you to improve silage making, or supplying the right feed additives for cows and calves. We have developed DeLaval Optifeeding™ system to provide a complete feeding solution which offers graduated levels of automation. It includes Optimat for preparing and distributing roughage; and DeLaval Optifeed™ for feeding individual concentrate or mineral rations, via feed stations, in-parlour feeding, or a concentrate feed wagon.

In this brochure we focus on DeLaval Optimat, for frequent deliveries of forage or TMR on to the feed table.

# Optimat™ II Master

- Full system
- Automatic loading and mixing
- Automatic distribution



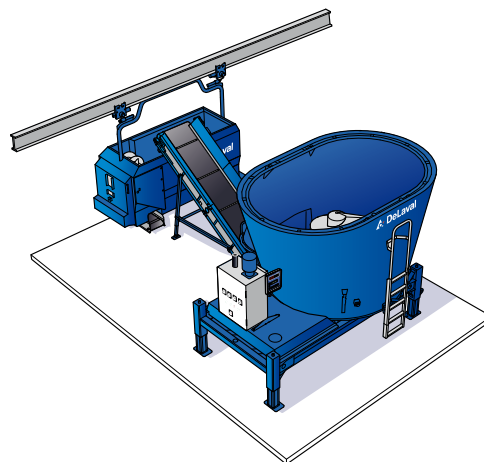
## Optimat™ II – master

The fully automated solution. Automatic control ensures accurate filling, mixing and distribution: the scale on the stationary mixer can control many feed batches per day. It works with any silos and buffer tables. It activates the motors of augers and conveyors, to automatically load recipe components and unload feed for delivery. Feed components are stored in buffer tables, silos or mineral dispenser. At preset times the stationary mixer automatically loads the feed components – forage, concentrates, minerals – to make one of many different recipes. After the mixer loads components and mixes the feed, the feed wagon – DeLaval RA135 or OTS – distributes feed to the feed table.

Optimat – Master has many benefits, particularly if you want to feed different rations to specific groups of cows. Rations are automatically mixed and distributed many times per day, so they are always fresh and accurately mixed. You just need to make sure the buffer tables stay filled. Your work time becomes much more flexible, as you can fill the buffer tables at a time to suit you. Optimat does the feeding for you.

## Optimat™ II – standard

This solution provides automated feed delivery, and feed mixing if required. You of course select the equipment that will best suit your needs. Feed can be delivered to the feed table by a rail-suspended distribution wagon, DeLaval OTS or DeLaval RA135. Feed can be mixed in DeLaval stationary mixer VSM or HSM. If feed does not have to be mixed, a buffer table may be sufficient to hold feed ready for distribution. The only non-automated task is loading forage into the stationary mixer or buffer table.



## Optimat™ II – standard

Forage is loaded in the conventional way using a loader. The conveyor carries feed to the rail-suspended wagon, which distributes it.





### Modular investment

With DeLaval Optimat the level of automation can be built up gradually. You may already have equipment like conveyor belts, augers and silos that you can combine with other products to make automated feeding work for you. Core components include a mixer and/or buffer table/s, with a rail-suspended distribution wagon or shuttle.

### DeLaval stationary mixer with capacity ranging from 8 m<sup>3</sup> to 23 m<sup>3</sup>

These robust mixers powered by an electric motor, have an accurate scale that can be programmed with feed recipes. The mixer augers have knives so different feedstuffs are efficiently cut and blended into a consistent, fluffy, palatable mix. This helps prevent cows from selecting only the more tasty components.

### DeLaval buffer table

This provides space for preparing and storing silage before it is loaded into a stationary mixer or feed wagon. The buffer table has adjustable telescopic legs, and feed capacity ranging from 8 m<sup>3</sup> to 23 m<sup>3</sup>. It can shred whole blocks of silage before loading them into the feed wagon.

### DeLaval feed wagon OTS

DeLaval OTS is an advanced automated forage wagon for efficient feed delivery for up to 280 cows. Forage is very accurately distributed: you simply programme in the feed times, feed quantities, and the groups of cows to be fed, and the 1600 litre OTS takes care of the rest. This versatile shuttle can operate on both straight and curved rails and even with rail switches, so operating in complex narrow barns is no problem. It runs on gel batteries.

### DeLaval feed wagon RA135

This is a straightforward, durable, automated feeder, available in three sizes: 2 500, 3 100 and 3 700 litres. An on-board programmable controller regulates the automatic distribution of either cut roughage or pre-mixed feed via a string-feeding function. DeLaval RA135 is driven by a power cable on the rail and has capacity to feed 450 cows.



**Country 1**

Address line 1  
 Address line 2  
 Address line 3  
 Tel XX XXX XX XX  
 Fax XX XXX XX XX  
 e-mail address  
 web address

**Country 2**

Address line 1  
 Address line 2  
 Address line 3  
 Tel XX XXX XX XX  
 Fax XX XXX XX XX  
 e-mail address  
 web address

**Your DeLaval dealer**

www.delaval.com

## Potential savings with Optimat™ II\*



	DeLaval Optimat™ II	Mobile mixer
<b>Labour</b>		
Sweeping the feed table	0 min	15 min
Cleaning the feed table	2 min	15 min
Loading forage	15 min	15 min
Mixing time	0 min	5 min
Distributing feed on the feed table	0 min	15 min
<b>Total</b>	<b>17 min</b>	<b>65 min</b>
Total costs per year at € 20 per hour	€2 068	€7 908
<b>Savings – labour</b>	<b>€5 840 per year</b>	
<b>Energy</b>		
Energy consumption	20 kWh	120 kWh
Energy needed per day	€2 on electricity	€11 on fuel
Energy costs per year	€ 730	€4 015
<b>Savings – energy</b>	<b>€3 285 per year</b>	
<b>Feed wastage</b>		
Left-over	2%	7%
Cost of wastage	€3 679	€12 877
<b>Savings – feed</b>	<b>€9 198 per year</b>	
<b>Total annual savings</b>	<b>€18 323</b>	
<b>Building costs feed table</b>		
Width of feed table	2 m	6 m
Square metres required for 50 m feed table	100 m <sup>2</sup>	300 m <sup>2</sup>
Cost at €300 per m <sup>2</sup>	€30 000	€90 000
<b>Savings – feed table</b>	<b>€60 000</b>	
<b>Investment in feed kitchen</b>		
Square metres required	100 m <sup>2</sup>	0 m <sup>2</sup>
Cost at €300 per m <sup>2</sup>	€30 000	€0
<b>Investment in feed kitchen</b>	<b>€30 000</b>	
<b>Building costs around the barn</b>		
Square metres required		
Concrete around the barn	1 000 m <sup>2</sup>	2 000 m <sup>2</sup>
Cost at €300 per m <sup>2</sup>	€30 000	€60 000
<b>Savings – around the barn</b>	<b>€30 000</b>	
<b>Total savings in building costs</b>	<b>€60 000</b>	
<b>Total savings after 15 years</b>	<b>€334 845</b>	



DeLaval Optifeeding™, Optimat™ II and Optifeed™ are part of the DeLaval commitment to Sustainable Dairy Farming: solutions that meet environmental challenges, respect animal welfare and benefit customers and society.

\*Actual results and savings may vary from this example. Ask DeLaval to calculate potential savings for your farm.