



## High Performance Dairy Equipment For The Progressive Farmer...

Our priority is making the most efficient, robust, technologically advanced, automated milking equipment to make life easier for you and better for the herd.  
Our objective is to "Make Milking More Profitable".



*Experience the difference...*

# Welcome...

Dairyking has a wide innovative product range including milking equipment, automatic scrapers, automatic feeders plus much more!

Dairyking has researched many aspects of dairy farming and dairy herd management from its own in-house R&D department and has developed unique technologically advanced solutions aimed at making dairy farming more profitable by reducing long term costs and labour inputs. This is achieved principally through focusing on getting the basics right, automation and by adding advanced technologies to your farm which make dairy farming more efficient.

Dairyking are continuously developing new products that are designed to automate many of the day-to-day processes that you are involved with which reduces time and improves productivity.

Our priority is making the most efficient, robust, technologically advanced, automated milking equipment to make life easier for you and better for the herd. Our objective is to make milking more profitable through adding advanced technologies to your farm which makes dairy farming more efficient.



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*Experience the difference...*

[www.dairyking.com.au](http://www.dairyking.com.au)

# 1 Why Choose Dairyking?

Dairyking place a huge emphasis on Research and Development in order to provide you with the most technologically advanced, high performance products that provide optimum efficiency and best operator and cow comfort! Dairyking's aftercare service, on-going customer support and constant monitoring of product performance in the marketplace, has given the company a strong competitive edge.

Perhaps uniquely for any manufacturing facility, Dairyking actually produces almost 95% of all parts internally. Dairyking uses a combination of skills to create the optimum product to give the best performance. This strict control of all stages of the production process is key to the company's commitment to ensuring the quality of the final product. The benefits of this are speedy development, ease of communication and comprehensive in-house knowledge of all aspects of the product. This enables us to have full control of all aspects of development and production.

Dairyking are known as key innovators in the industry.





Dairyking produces 95% of it's parts Internally.



Committed to ongoing research & development.



On-going customer support and constant monitoring of product performance.

## Company Profile

Dairyking, a world leader in dairy equipment manufacturing, operates from our head office in Causeway, Co. Kerry, Ireland as well as having operations in the UK and USA. The company was founded in 1968 and we have a large market share of new and parlour upgrade installations in Ireland, plus an export market that spans up to 40 countries worldwide.

Dairyking has reached this position in the market because we offer our customers significant performance advantages due to our emphasis on research and development.

Dairyking has a wide innovative product range including milking equipment, automatic scrapers, automatic feeders plus much more!

The continued growth of the Dairyking brand worldwide and the increased demand for Dairyking equipment is due to its popularity with farmers all over the world, who value the high performance capabilities of the equipment and its innovative features.

Over the past five decades, Dairyking has researched all aspects of dairy farming and dairy herd management from its own in-house R&D department and has developed unique technologically advanced solutions aimed at making dairy farming more profitable by reducing long term costs and labour inputs. We vigorously test our products through scientific trials in order to achieve peak performance capabilities.

Dairyking products operate effectively on farms with cow numbers ranging from 40 cows to 10,000 cows, this is due to the modular format of Dairyking's products. Many of the products operate effectively as stand alone products however most are capable of being upgraded and integrated into a fully computerised milking parlour with the capability of automatically monitoring the progress of each individual animals yield and the overall management of the parlour.

Lastly, Dairyking's personal approach and accessibility to its customers ensures that its service doesn't end with the sale. Indeed, our aftercare service, on-going customer support and constant monitoring of product performance in the marketplace, has given the company an up to the minute understanding of all aspects of the industry as it evolves. This in-depth industry knowledge has allowed parallel development of products to satisfy dairy farmers' needs in today's highly competitive farming environment.

## Order Our DVD...

The Dairyking DVD provides a brief overview of our systems. The DVD demonstrates the capabilities of our unique product range of high performance equipment. It includes chapters on the Swiftflo Swing Parlour, Swiftflo Plus Parlour, Swiftflo Revolver Rotary Parlour, Automatic Plant Washing Cycles, AutoDrafting, FeedRite Automatic Feeders, CleanSweep Scrapers, Backing Gates, Farm Messenger, Milk Manager, and the MooMonitor. To order your copy today contact your nearest Dairyking office or distributor alternatively you can email [jbentley@dairyking.com.au](mailto:jbentley@dairyking.com.au) with your name and address.



Finite Element Analysis - Resulting in the best liner possible!



Dairyking milking parlours vacuum profile closely follows the natural way of milking.



X-Ray Analysis – understanding the teat liner interaction enables us to design high performance liners.

## Research & Development

Dairyking's world-wide success can be credited to the company's unfaltering commitment to ongoing research and development, superior product quality and performance and excellent customer service and support. Since its existence Dairyking have focused heavily on Research and Development and as a result of this has developed unique technologically advanced solutions aimed at achieving the maximum performance from its products. For example:

- > **On average a Dairyking parlour typically milks each cow 1 minute faster.**
- > **In recent scientific trials the Dairyking cluster yielded 5% more when compared to another commercially available cluster.**
- > **Dairyking milking equipment has been designed to have the lowest levels of liner slip, excellent milk out and lower shear forces on teats which is better for udder health.**
- > **Dairyking pulsation is very similar to the natural way of milking as the vacuum profile of a Dairyking milking unit closely follows that of a calf suckling.**
- > **Dairyking milking systems have top performance when tested in accordance to the latest ISO International Standards for milking machines.**

Labour is an important aspect of any operation, we strive to achieve a better working environment and easier lifestyle on the farm by automating many tasks. We develop software in-house to meet this very important requirement.

Over the past five decades, Dairyking has researched all aspects of dairy farming and dairy herd management from its own in-house R&D department and has developed unique technologically advanced solutions aimed at making dairy farming more profitable by increasing output and reducing labour.

Our organisation first focuses on getting the basics right and once these are perfected we look at further innovation.

For example the Dairyking Cluster has been scientifically engineered for excellent milk out and low slippage while being gentle on cows. Research has shown it to have the most stable milking vacuum, while applying a very low vacuum in the rest phase. Further studies have shown our cluster to have the lowest slip levels and also excellent milk out - so much so that in a recent trial over a full lactation our cluster yielded 5% more when compared to another commonly used commercially available cluster.

It doesn't stop here; we use space age materials in the construction of our equipment so that it is hygienic, durable and reliable.

**Finally we are an organisation that uses research to back up our products - we use science with innovation!**



# Milking Basics

## Why choose a Dairyking Milking System?

The Dairyking Milking System has been engineered and designed to be the most efficient, comfortable & cow friendly system available. Extensive scientific research has been conducted by Dairyking in order to provide peak performance, automated efficiency, optimum yields & better animal health. Over the past five decades, Dairyking has researched all aspects of dairy farming & dairy herd management from it's own in house R&D department and has developed unique technologically advanced solutions aimed at making dairy farming more profitable by reducing long term costs and labour inputs.

Dairyking products operate effectively on farms with cow numbers ranging from 40 - 10,000 this is due to the modular format of Dairyking's products. Many of our products operate effectively as stand alone products however most are capable of being upgraded & integrated into a fully computerised milking parlour with the capability of automatically monitoring the progress of each individual animals yield and the overall management of the parlour.

With the Dairyking milking systems we have focused on four key areas in order to give you the best performance.



## Better Teat End Condition

Improving teat ends by milking the way nature intended.

The following is a look at the two different systems of milking cows: The Dairyking system where we lift milk up, and the conventional 2x2 system which usually milks down.



"Teat end condition has been great since installing Dairyking - we would recommend it to any sized dairy".

Matt & Annetta Martin, USA

### Dairyking System

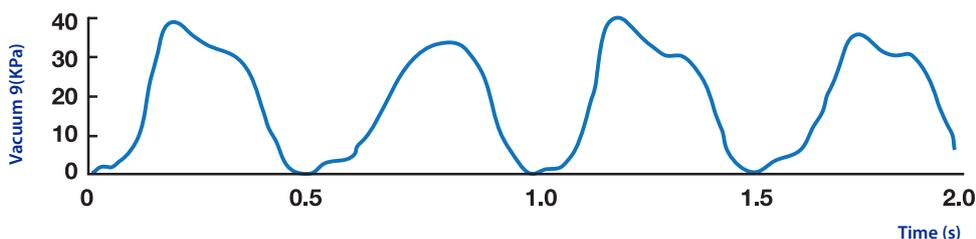
In a Dairyking milking system when the liner is open we have a high stable milking vacuum this is known as the "B" phase. This "B" phase vacuum level is directly related to milking speed. When the liner is closed Dairyking has a low rest vacuum, this is known as the "D" phase. This low "D" phase vacuum is highly beneficial for reducing the shear forces acting on the teat. During milk flow simulation studies results show that the Dairyking system has a higher "B" phase and a lower "D" phase than a system with alternating pulsation (2X2) at the same flow rate.



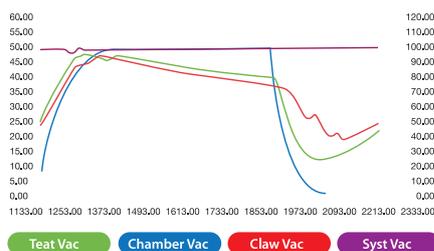
### Conventional 2x2 System

In milk flow simulation studies with alternating pulsation (2x2) results have shown that the "B" phase and "D" phase vacuum levels are very similar. The vacuum level during the "D" phase is higher which results in more stress on teats. The reason for this is that with alternating pulsation systems they are trying to do two things at the same time, milk and rest with the same vacuum level. Dairyking's milking system milks cows more efficiently by milking all four teats together and then resting all four teats together which results in a more efficient, quicker milking. Looking at the vacuum profile used by the Dairyking milking system it is very similar to that of a calf suckling and there is less stress on the teat end due to low vacuum level in the rest phase.

### Calf Suckling

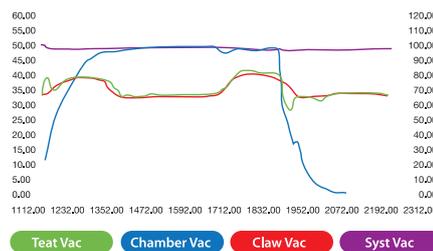


### Dairyking



High B phase, low D phase teat end vacuum

### Others



Similar B phase and D phase vacuum levels



## Reduced Slippage

The Dairyking milking unit has been designed to have the lowest levels of liner slip, excellent milk out, faster milking and lower shear forces on teats.

“We have no teat damage or cup slip, the cows are milked out cleanly, but the greatest advantage is excellent cow temperament.”

Katrina Knowles, New Zealand.

Slippage of the liner on the teat has long been a challenge for engineers. Many cows have teats that point inward, small teats, or udders that tilt upwards towards the back - all of which create a milking challenge. Without special supports or if the cow moves, slippage will occur - resulting in having to adjust the claw - thus disrupting and slowing down your routine. On some makes of parlours slippage is very noticeable as you can clearly hear the sound of air rushing into the claw - this rush of air or milk in turn impacts on the other teats. A slip on the right side of the quarter will initiate a violent burst of air and milk on the other three quarters. If there are any organisms floating around the claw or on the teat, they are swept into the teat orifice and next into the teat canal. This is why it is of the utmost importance to have good hygiene and a good prep routine.



Dairyking has spent many years researching how to reduce liner slip. We have conducted numerous trials from X-rays of the teat and liner interaction to milk flow simulation studies. As a result of this research we have engineered a liner that greatly reduces slippage. Many farmers who have converted to Dairyking have found a huge difference in liner slip. Scientific trials have been conducted to support this.



## Complete Milk Out

In recent scientific trials the Dairyking Cluster yielded 5% more when compared to another commercially available cluster.

Scientific research has shown that the Dairyking milking system maximises milk out through their unique combination of the claw, liner and pulsation system. Many dairy farmers who have converted to a Dairyking system have seen an increase in their overall production.

“Cows that were giving 17 - 18 litres of milk before the installation of the Dairyking parlour are now giving 21 - 22 litres per milking”.

John Mc Donald, Scotland.



## Reduced Milking Time

On average a Dairyking parlour typically milks each cow 1 minute faster!

It is important to milk cows quickly and efficiently. Producers only have the cow's attention for a short time, so it is important to harvest all the milk possible in that time frame.

“Reduction in milking hours, cow comfort and increase in milk yield, lessening the herd diseases and labour charges are some of the special points about Dairyking milking machinery.”

Mr. M. Doustmohammadi, Iran.

As parlours and farms are getting larger more cows are being milked with less labour in order to maintain efficiency. This is one of the areas Dairyking has focused its research on in order to make milking easier. One of the key scientific facts with the Dairyking milking system is that it is capable of milking each cow up to 1 minute faster. The benefit of this is not just a reduction in milking time and labour but also improved udder health. Many customers are amazed when they first visit a Dairyking milking system, at the minimum amount of labour that is being used, to milk so many cows in so little time. In this way Dairyking continues to make milking more profitable.



## Parlour Design

Building layout is an important aspect of any milking facility or housing complex. Overall efficiency can be enhanced by optimum parlour and building layout. In addition cleaning costs can be reduced and cow flow improved dramatically by implementing best design practices.

Dairyking have extensive experience over the last number of decades in parlour design and in the layout of facilities. We have standard drawings, which provide many sample plans however drawings can also be customised to integrate with existing farm facilities. Working with Dairyking's design team we will tailor a plan for your parlour to cater for your specific needs.

Dairyking offer a comprehensive service to all of our customers from initial contact with the sales team or distributor to designing plans to best suit your specific requirements and offering advice and expertise on your plans. Once your plans have then been approved by you, and building works have been completed the installation team will install your plant. It doesn't end there we view the relationship with our customers as a long term partnership. Through the network of Dairyking distributors and dealers an aftercare service is available to maintain your installations top performance.



## Installation

Dairyking Equipment is made from advanced materials and built in a modular format. All the parts for the parlour are manufactured in the same location ensuring optimum integration. All of our equipment is factory prepared and assembled on site, enabling efficient, quick installation with less labour giving you value for money on your investment.

Installation time is kept to a minimum and many parlours have been installed in less than a week. If you are thinking about adding to or modifying your facility why not speak to your nearest distributor and see what we have to offer.

**Better product = less labour!**

"From the planning stage Dairyking were exceptionally efficient to deal with, I received detailed drawings of the parlour which made it much easier for me when working with the builders and on top of that the speed of installation was fantastic!"

**Michael Quirke, Ireland**



# 2 Swiftflo Milking Parlour Systems

The Dairyking Swiftflo Milking system is one of the most efficient, comfortable and cow friendly systems available. Underneath its visually appealing exterior is some of the most extensively researched and technologically advanced milking equipment in the world. Progressive dairy farmers choose the Dairyking Swiftflo Milking system based on its ease of operation, efficiency and high throughput. Operator and cow comfort are of paramount importance with our parlour designs reflecting this requirement. Extensive scientific research has proven the performance of the Dairyking Swiftflo Parlour design and satisfied farmers worldwide are further evidence of its success.

We focus on getting the basics right and then adding performance and efficiency through computerisation of the milking parlour as this facilitates accurate data recording, collection and analysis thereby allowing for immediate response to current situations as well as long term strategic planning. We have a wide choice of parlour and automation options available to suit your requirements. Dairyking milking systems have top performance when tested in accordance to the latest ISO International Standards for milking systems.





## Swiftflo Intro

A Swiftflo entry level parlour caters for people who are conscientious of getting the best milking system available which allows you to add automation features that fit your operation and budget.

The Swiftflo Intro is available in all parlour configurations – Swiftflo Swing, Swiftflo Double or Swiftflo Revolver.



You have the option to choose from Breast Rail, Angle Mangers or Manual Bailing depending on available space and preferences. All the stall work is hot dipped galvanised for long life. The Dairyking Intro parlour includes entry and exit gates (excluding the Swiftflo Revolver), vacuum pump and stainless steel vacuum line and fittings, stainless steel milk line, wash line with JetStream for parlours that have more than 6 units. Also included are Dairyking high performance Swiftflo Clusters, electronic Pulsation System, Centrifugal Milk Pump and Receiver Group, Stainless Steel Delivery Line complete including Stainless Steel Tank Arm and Dropper Units with Jetter. You can choose designs from 30° to 90° cow standing.

## Key Features & Benefits

- > Stainless steel vacuum line.
- > High performance Swiftflo Clusters.
- > Scientifically proven.
- > Easy to add automation features.



Once you get the foundations right it is very easy to add automation features that suit you when the time is right. Dairyking parlours are built for automation and while all products operate effectively as stand alone units, many are also capable of being up-graded and integrated into a fully computerised milking parlour. If upgraded the system would have the capability of automatically monitoring the progress of each individual animal's yield with individual optimisation of milking and feeding routines providing control over each animal while labour is reduced by automating tasks such as feeding and cow separation.





Designed for efficiency, comfort and throughput.



The most comfortable and cow friendly milking system available.



On-going customer support and constant monitoring of product performance.

## Swiftflo Swing

Extensive scientific research has proven the performance of the Dairyking Swiftflo Parlour design and satisfied farmers worldwide are further evidence of its success.

In a fully automated Swiftflo Swing parlour when the operator is ready for milking entering one function number into any Milk Meter will switch the plant from cleaning to milking mode. As each cow enters the plant the AutoID reader identifies her. This works in conjunction with the Dairyking VoiceAssist parlour sound system and relays a sound message so that the operator hears any messages associated with each cow on entry to the plant and again when the swing over arm is activated. Dairyking Swiftflo Bailing carefully holds cows in position during milking. Swiftflo Bailing is the ultimate means of individual cow control as it ensures that all cows load into position quickly and safely and that they line up for milking in the exact order in which they enter the plant. When milking is complete the bailing system lifts clear of the cows ensuring they have the optimum amount of space in order to make a rapid exit.

The operator can easily milk the herd with the help of labour saving devices such as Automatic Cluster Removers. During milking as the operator swings across the arms, the Weighall Milk Meter is automatically activated and feeding is initiated taking the hard work out of milking. This not only saves valuable time for herd management but allows one operator to manage large plants with ease and speed. At the touch of a button the operator can divert milk to a separate receiver. This can be used to divert milk effortlessly for calf rearing.



The benefits of a Swiftflo Swing parlour are that the pit is much clearer which provides a better working environment, milk hoses are shorter which means better milking, reduced maintenance costs and better cluster alignment. The AquaJetz wash line is located underneath the cow standing area. This parlour is extremely labour saving as many tasks can be completed through automation.



## Key Features & Benefits

- > Typically 6 – 9 cows per unit per hour.
- > Capable of milking up to 350 cows per hour.
- > High utilisation of milking units.
- > High throughput per unit.
- > Modular design.
- > One of the most labour efficient parlour designs.
- > More performance and higher efficiency for your investment.

SWIFTELO SWING



Dairyking use a combination of skills to create the optimum product.



High performance equipment for the progressive farmer.



Dairyking equipment offers significant performance advantages.

## Swiftflo Double

The Swiftflo Double up parlour has one milking unit per cow place. This option is ideal where a farmer wants to maximise his or her working space and where milking groups of cows. There are many different configurations available, from the intro level Swiftflo Double to a top of the range option with DoubleGuard stainless steel cabinetry.

In a fully automated Swiftflo Double milking parlour when the operator is ready for milking, entering one function number into any milk meter will switch the plant from cleaning to milking mode. Alternatively if using the Dairyking Smart Start by lifting the cluster the automatic cluster remover or milk meter automatically starts, eliminating the need for the operator to push a button to start milking. This saves time for the operator and reinforces our objective to help make milking easier and more profitable. As each cow enters the plant the Auto ID reader identifies her. This works in conjunction with VoiceAssist Dairyking's Parlour sound system and relays a sound message so that the operator hears any messages associated with each cow on entry to the plant and again when the cluster is attached. Dairyking Swiftflo Bailing carefully holds cows in position during milking. Swiftflo Bailing is the ultimate means of individual cow control as it ensures that all cows load into position quickly and safely and that they line up for milking in the exact order in which they enter the plant. When milking is complete the bailing system lifts clear of the cows ensuring they have the optimum amount of space in order to make a rapid exit.



DoubleGuard is an optional extra for double up parlours, this is a heavy duty stainless steel cabinetry that completely encloses the milk line and pulsation line in a stainless steel unit. The cabinetry can enclose either standalone cluster removers or milk meters leaving visible the operator controlled key pad. DoubleGuard protects and safeguards your equipment and the design of it makes it very easy to clean and maintain your parlour.



## Key Features & Benefits

- > Operator has more prep time per cow.
- > Space efficient solution for larger herds.
- > Ideal for milking groups.
- > Capable of milking up to 450 cows per hour.
- > Typically 3 – 5 cows per unit per hour.
- > Clear exit/breezeway option.

SWIFTFLO DOUBLE



Designed for efficiency and performance.



Better design results in quicker installation.



This parlour is the result of decades of innovative R&D by Dairyking.



# Swiftflo Revolver Rotary

**The Dairyking Swiftflo Revolver Rotary milking parlour is the world's most advanced rotary parlour system. All of our technology in conventional parlours may be utilised in this system as well as many new developments in this unique design.**

Equipment levels are dependent on the level of automation desired by a particular farmer. Some farmers have chosen to install fully automated Swiftflo Revolvers immediately whereas others have installed plants with a view to adding automation features later. The Swiftflo Revolver may be designed in a range of sizes to meet the needs of each customer. Our design team are on hand to assist with all aspects of parlour design and our highly experienced technical staff can provide comprehensive advice and assistance. The Dairyking Swiftflo Revolver rotary parlour is made from advanced materials and is built in a modular format. All the parts for the parlour are manufactured in the same location ensuring optimum integration. The rotary platform is manufactured in-house and built for heavy duty use, it is constructed from heavy gauge steel in individual sections and hot dipped galvanised for maximum protection. The concrete platform deck provides better traction for cows and results in a quieter milking environment.

## Installation & Design

Installation time is kept to a minimum and many parlours have been installed in less than a week. The Dairyking Swiftflo Revolver Rotary is an extremely cow friendly system as it has sensors on both the entrance and the exit of the rotary. This design ensures maximum operator and cow comfort. Cow flow is at an optimum with the Dairyking Swiftflo Revolver. This parlour is the result of decades of innovative technological research and development by Dairyking. We have pioneered the latest in rotary parlours throughout the world due to the innovative design and extraordinary efficiency of this state of the art parlour.

## Automation

In a fully automated parlour each cow wears transponder ear tags, these register with the computer as they pass the electronic reader and each cow is automatically identified by Dairyking Technology. The Cluster Positioning Arm holds the Cluster in the optimum position behind the cow while milking. Our unique design means that shorter milking tubes are used which reduces maintenance costs and improves milking characteristics. The operator easily moves the cluster arm into position behind the cow thus ensuring proper alignment. Operator and cow comfort is of paramount importance to Dairyking. Optimum udder presentation speeds up cluster attachment enabling the operator to milk with ease, speed and a minimum of stress. A double modular rump rail not only improves cow comfort and facilitates easier access for the operator but also reduces the risk of the operator being kicked. Platform speed can be adjusted by the operator at any stage during the milking process from the operator console.

## Key Equipment

The majority of the equipment is located inside the rotary turntable ensuring a longer working life and a cleaner, safer milking environment. The award winning Weighall Milk Meters are located in a clean accessible environment at a convenient height for the milk recorder to ensure sampling is carried out as efficiently as possible. Each cow's milk yield is recorded using a unique weighing procedure. The milk recorder can easily view each cow's details from the Milk Manager computer programme. Milk is pumped from the receiver vessel using the Dairyking Variflo plus which optimises milk pumping and cooling. The central gland is one of the key components in all rotary milking systems. Dairyking has engineered its rotary glands to be the most technologically advanced in the world. The gland body is constructed from stainless steel and the electrical rings are constructed using an advanced engineering polymer. The gland allows vacuum, milk delivery, mains electricity, communications, water, compressed air and connections for milk diversion through the centre point keeping everything tidy and central.

## Unique Features

Two unique features of the Swiftflo revolver are the Cow Motivator and Auto Retention. Our intelligent software programme, the Milk Manager, monitors cows on the platform and works in conjunction with the Cow Motivator to encourage forgetful cows to leave the platform when they have been milked. As cows enter onto the platform an Auto Retention device drops into place behind the cow. The milk manager program checks each cows yield and milking time against her normal statistics and if outside user defined limits the retention device will retain the cow and send her back to the operator again. If a cow's statistics are as normal the Automatic Cluster Remover removes the cluster gently away from the cow, the Auto Retention device lifts and she easily reverses off the platform.



## Hygiene & Cleaning

When milking is completed automatic parking may be activated, this will automatically align the platform to the correct washing position. Automatic skirt washing is an optional extra, this cleans the rotary skirt as the platform revolves. The skirt washing uses water in addition to mechanical brush washing, this water is supplied through the rotary gland. Automatic skirt washing reduces the amount of washing and improves parlour hygiene and appearance.

## Operational Controls

All controls for the Swiftflo Revolver are within easy reach of the operator. The Control Console allows the operator to control all functions of the platform including the feeding system and automatic backing gates (if installed). All controls are mounted within a stainless steel enclosure with manual override feeder controls, platform forward, reverse and speed controls. Backing gate advancement and auto-advancement of backing gates is possible based on the number of cows that have entered the parlour. The Dairyking Swiftflo Revolver has heavy duty variable speed drive units.

## Feeding

Dairyking has considerable experience designing and manufacturing in-parlour feeding systems. When Auto Identification is installed the feed is released upon cow presence, however the intelligent software also takes into account cows going around twice and these are not given additional feed. Where Auto ID is not installed the amount of feed can be adjusted through a dial on the central console. The feed is delivered via a stainless auger to the feed trough. The Swiftflo Revolver Rotary parlour gives you the option to feed up to four different feed types. For more information on feeding see page 45.

## Key Features & Benefits

- > **Labour efficient.**
- > **Easy installation.**
- > **Designed for automation.**
- > **Capable of milking up to 700 cows per hour.**
- > **Platform designed by Dairyking.**
- > **Many systems operated by 1 person.**

# 3 Stall Work Options

Dairyking offer a range of stall work to suit your requirements which is designed by Dairyking engineers to offer strength and durability.





The ultimate in cow positioning with fast loading & unloading.

## Swiftflo Bailing

Dairyking Swiftflo Bailing is the ultimate means of individual cow control in the milking parlour. The design of the Dairyking Swiftflo Bailing means that each cow has her own clearly defined space, this results in much quicker and easier loading. All spaces are allocated in sequence as the cows enter the parlour. During milking the cow is positioned for optimum cluster attachment and alignment. Because of the design of the bailing cows are more relaxed and content during milking. With the angle of the cow standing it is much safer for the operator during cluster attachment and there is also less walking for the operator during the milking process. When all of the cows have been milked, the Swiftflo Bailing is raised to facilitate their unobstructed exit. As each row of cows are milked the Swiftflo Bailing is raised above the cows - this creates a clear way for exiting. The Swiftflo Bailing may be linked with the Milk Manager to monitor parlour performance and throughput. Swiftflo Bailing offers several advantages and unique features including the following:

- > **Enhanced cow control and correct milking unit positioning.**
- > **Adjustable bail gates for even better control of different sized herds.**
- > **Fast loading as the first cow can only occupy the first position.**
- > **Fast unloading as there is double exit space.**
- > **Complete integration with parlour automation.**



The operator can control the Swiftflo Bailing from anywhere in the pit. The Swiftflo Bailing is fully galvanised and of an extremely robust construction. The compressed air operation of the Swiftflo Bailing enhances reliability and offers precise operation.



Shortens milking time, suitable for feeding and very space efficient.

## Swiftflo Plus Bailing

The Dairyking Swiftflo Plus Bailing system incorporates all the benefits of Swiftflo Bailing and is the ideal addition to double-up parlours and large swing-over parlours. The design of the Dairyking Swiftflo Plus Bailing means that each cow has her own clearly defined space, this results in much quicker and easier loading and all spaces are allocated in sequence as the cows enter the parlour. During milking the cow is positioned for optimum cluster attachment and alignment. Because of the design of the Swiftflo plus bailing cows are more relaxed and content during milking. Because of the angle of the cow standing it is much safer for the operator during cluster attachment and there is also less walking for the operator during the milking process. When all of the cows have been milked, the Swiftflo Plus Bailing is raised to facilitate their unobstructed exit. When each row of cows are milked the Swiftflo Plus Bailing is raised above the cows - this creates a clearway for exiting. The Swiftflo Plus Bailing may be linked with the Milk Manager to monitor parlour performance and throughput. One of the unique features of this system is that feeding can be installed which allows cows to be fed individually. In this situation feed troughs move forward and upwards as cows are released. One of the major advantages of the Swiftflo Plus Bailing is that it is very space-efficient which means that it may be lowered sooner than conventional systems, this results in reduced milking time.

## Manual Bailing

Dairyking Manual Bailing is an entry level galvanised head locking system. It is best suited when feeding. It prevents poaching and ensures each cow is held in a fixed position.





Built to last from the best materials!

## Heavy Duty Stall Work

We offer a heavy duty stall work option for industrial milking operations. All of Dairyking's stall work comes complete with overhead trusses which supports the rump rail. The double rump rail complete with the stall work offers unhindered access to cows. The rump rail design offers you the option to install stainless steel butt pans where a cleaner working environment is required. The rump rail and Butt Pan are ergonomically designed to allow the operator easier access to the cow. The design of the stall work is to speed up entry and exit from the parlour.

Another option available is either a galvanised or a stainless steel kerb rail. The design of the kerb rail makes for easier construction of the parlour pit and is ideal for installations where a low level wash line and AquaJetz are fitted. The design allows you to get closer to the cow during the milking operation.

A further option to consider is split level drains. With split level drains less water is used during the cleaning process and operator time is also dramatically reduced.

We also offer the option of stainless steel standards where required.



Ideal where feeding is not required.

## Breast Rail

A Breast Rail is a double railed structure complete with overhead neck rail for safety purposes. It can be easily adjusted to accommodate seasonal fluctuations in herd size.

- > **Robust construction.**
- > **Hot dipped galvanised modular design.**
- > **Easily installed.**
- > **Ideal solution where feeding is not required and parlour width is a limiting factor.**
- > **Lower investment cost.**



Ideal for feeding in a Swiftflo Intro.

## Angle Mangers

Mangers are a stainless steel trough that is attached to the parlour wall where cow standing is at an angle. Mangers are of a robust construction. Dairyking mangers enable you to have feeding in a Swiftflo Intro parlour. Feeding in the parlour has been proven to improve cow flow and usually results in a more relaxed cow when the cluster is attached.



## Stainless Steel Troughs

Stainless Steel Troughs are a hygienic and durable option when feeding in the parlour. With Stainless Steel Troughs no specific building work is necessary reducing labour costs.



## Butt Pan

A Butt Pan is an additional option to consider. The purpose of the Butt Pan is to deflect cow manure from splashing the operator in the parlour pit and thereby enhancing the working environment. The Butt Pan is manufactured from stainless steel and incorporates a gutter to collect most of the cows manure. The gutter normally incorporates an outlet which is connected to a draining pipe.

Reduces defecation into the parlour pit.



## Splash Pan

A Splash Pan enhances the working environment for the operator by assisting in keeping cleaner surroundings. The Splash Pan is also manufactured from stainless steel and is placed on the rump rails to deflect cow manure away from the operator. The Splash Pan does not incorporate a gutter for the collection of the manure.

Assists in keeping a cleaner working environment.



## Kerbing and Split Level Drains

A galvanised or stainless steel kerb rail is available depending on your requirements. The kerbing allows you to get closer to the cow during the milking operation. The kerbing clearly defines the edge around the pit and has been designed to allow for easy cluster attachment and automatic cluster removal. Additionally the design of the kerbing makes for easier construction of the parlour pit and is ideal for installations where a low level wash line and AquaJetz are fitted.

Optimum positioning and facilitates easier and faster cleaning.

A further option to consider is Split Level Drains. With Split Level Drains less water is used during the cleaning process and operator time spent cleaning is also reduced making it easier for you to maintain high standards of hygiene.

# 4 Swiftflo Parlour Components

Details of some of the key components and options available for your Swiftflo Parlour.





## VacuTech Performance Unit

VacuTech units have been engineered to assist with easy installation. It has adjustable feet to allow for varying floor levels. The VacuTech is modular and easily extendible, the bases are universal and are available in 1, 2 and 3 pump configurations. Vacuum pumps are sized depending on your requirements and parlour size.

The VacuTech unit offers you a space efficient and safe option for housing vacuum pumps. Dairyking use a rotary vane vacuum pump which is the most reliable pump on the market. The Vacuum pumps are manufactured using a high degree of engineering which ensures that they are quiet running and offer maximum efficiency.

The VacuTech unit offers you a space efficient and safe option for housing vacuum pumps. Dairyking use a rotary vane vacuum pump which is the most reliable pump on the market.



The VacuTech unit like all Dairyking products is manufactured, assembled and tested within our factory before being dispatched to our customers. This eliminates items being manufactured on site and saves you time and labour and results in lower installation costs. The VacuTech conforms to ISO standards with test points, non return valves and exhaust which makes routine inspection and testing of the unit very quick. It also has a large capacity oil reservoir which means that it doesn't have to be filled as often.

An optional item to consider is to add VSaver controls to your VacuTech unit which can help you reduce your energy costs.

## Vacuum Lines

The standard Dairyking Vacuum Line is constructed from stainless steel to enhance durability and lifetime. Our Vacuum Lines are sized according to top international standards for energy efficiency. Due to the stainless steel design Vacuum Lines are easily cleaned.



## Milk Lines

The standard Dairyking Milk Line is constructed from stainless steel to enhance durability and lifetime. Our Milk Lines are normally sized according to top specification in international standards. Due to the stainless steel design Milk Lines are easily cleaned and sanitised.



## Regulators

The Dairyking Vacuum Regulator has been designed for both excellent accuracy and fast response. It is constructed using the latest in polymer technology for tight manufacturing tolerances, which further enhances performance. The vacuum gauge is usually located so that it is clearly visible to the milking operator.



## Receivers

A choice of glass or stainless steel receivers are available. Both designs are easily cleaned and the glass receiver incorporates a unique lid design, which makes the installation neater and provides unobstructed air and milk flow to the receiver. Because of its hygienic and high quality design it has received the 3A mark of approval which is the leading approval for hygiene design in North America. Receivers come in a range of sizes depending on parlour size. The benefit of the glass domed end is that it makes it possible to see the milking and washing process in the receiver. It is possible to have more than one milk pump outlet on the receiver if required.



## Centrifugal Milk Pumps

The Dairyking Centrifugal Milk Pump has been engineered with the latest technology, materials and design. It has a multiple curved blade impeller which has a number of advantages including high performance efficient pumping across a range of speeds due to its unique impeller design. This also reduces running costs and noise levels as the pump efficiency is increased. The curved impeller provides gentler milk transportation with a lower shear effect for better milk handling. With the Dairyking Centrifugal Milk Pump you get excellent responsiveness at all speeds which improves milk cooling where variable speed pumping is used.

The Centrifugal Milk Pump has a polished stainless steel head and protective cover. The stainless steel enclosure of the motor offers better protection during the washing down of the parlour than conventional milk pumps. The milk pump is compatible with our Food Quality Air Purge system. This is used for emptying the milk line from the pump to the tank after milking which ensures that milk is not wasted. An optional automatic drain valve may also be fitted to the pump outlet, this valve automatically releases when the machine is switched off.





## Liquid Level

The Dairyking Liquid Level controls the operation of the milk pump depending on the level of milk in the receiver. When the upper level is reached pumping commences until the milk once again reaches the lower level. The cooling water supply can be switched off by a solenoid when the milk pump is inactive. The system is designed to cater for varying levels of froth in the milk receiver and results in better control and reliability of milk pumps. An optional solenoid can control cooling motor supply.



## Filters

Dairyking have a range of filters available to suit all parlour sizes. The Dairyking filter is constructed from stainless steel and incorporates a robust filter frame. A disposable filter is fitted to ensure optimum milk filtering. In larger installations filters may be combined and the system can be configured so that filter changing during milking is possible. A filter prevents foreign material from entering the plate cooler through to the milk tank. This ensures efficiency of both the Dairyking plate cooler and your milk tank. Dairyking have a unique double stitched filter for best milk filtration. Providing filters are changed on a regular basis this ensures that you get the best quality milk.

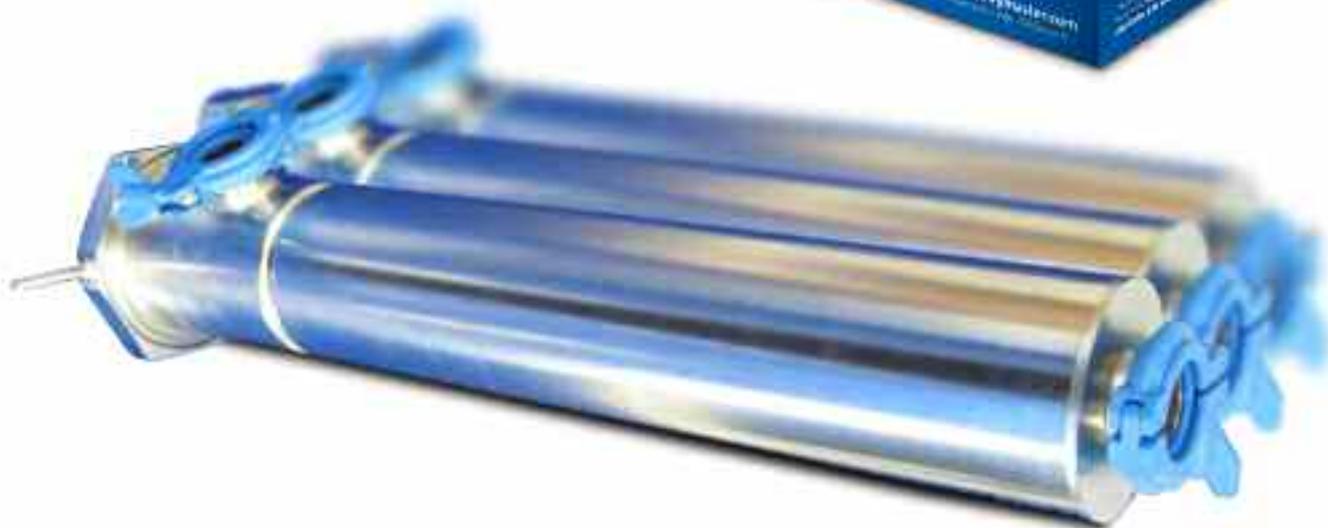


## MicroClean Filters

**High quality milk requires high quality filters!**

Our optional MicroClean filters when used in conjunction with MicroClean filter elements provide excellent filtration characteristics with low milk flow restriction and superior sediment retention. The filter is constructed from stainless steel and a filter element is fitted to ensure optimum milk filtering. In larger installations filters may be combined and the system can be configured so that filter changing during milking is possible. A filter prevents foreign material from entering the plate cooler through to the milk tank. This ensures efficiency of both the Dairyking plate cooler and your milk tank.

MicroClean for the ultimate in high performance milk filtration!





Scientific research shows the vacuum profile obtained with Dairyking pulsation is very similar to the way nature intended.

## Pulsation

A unique digitally controlled phased system minimises vacuum consumption while providing gentle teat massage. The pulsation system is one of the most important components in the milking plant. Dairyking's research focuses heavily on both design and testing to optimise operation of the pulsation system. Our pulsation system is widely recognised as being the leader in reliability, consistency and easy maintenance. Digital controllers display the pulsation rate and ratio on the front panel. The number of outputs in use is selected based on the size of installation. Vacuum consumption is minimised as a result of phased outputs. The rate and ratio are easily selected. An additional switch is provided to facilitate the flushing out of relays with water when the machine is serviced. This ensures that dirt deposits, which may build up and reduce the diameter of the pulsation tubes, will not interfere with the pulsation characteristics. One low maintenance large capacity electronic relay is used for each two milking units. These electronic pulsators are specially designed for flushing out with hot water to maintain excellent pulsation graphs and better hygiene. An air filtration line interconnects the pulsators, which also helps to maintain hygiene. A special adaptor is fitted to the end of the filtration line to filter the clean air supply.



Dairyking Pulsation control.

Our research shows that the Dairyking Milking System is the most suitable teat end vacuum for both milking and rest phases. The vacuum profile obtained with the Dairyking milking unit is very similar to the way nature intended. We have focused heavily on looking at the design of our milking equipment to ensure that it is suitable for many years. Increasing production and advances in genetics leads to many new challenges for milking technology which needs to keep ahead of these advances. One of the main advances in milking research has been the development of a milk flow simulator. Controlled measurements of vacuum and flow within a milking unit can now be taken in high flow situations to evaluate the response of our equipment to these challenges.

We have tested our pulsation and cluster to the utmost degree in order to ensure that when used in combination you get the best performance and efficiency possible.



The Dairyking Cluster has developed a well deserved name for being the best on the market.

## Swiftflo Cluster

The Dairyking Cluster has developed a well deserved name for being the best on the market. Extensive research shows the Dairyking Cluster as being second to none for increased yield and reduced slippage which delivers excellent performance characteristics. The Dairyking Cluster has earned a well deserved name for being the best on the market.

In a recent scientific trial over a full lactation the Dairyking Cluster yielded 5% more when compared to another commonly used commercially available cluster. It is produced from high-grade impact resistant materials which enhances both durability and hygiene. Milk flow is clearly visible through its transparent bowl. It has evolved over several years of scientific research and trials to design the ideal milking cluster. Dairyking has focused on both animal trials and on simulated flow experiments. Parameters such as milk out (yield) and liner slippage are measured in high producing animal trials. Flow simulation provides information in relation to teat-end vacuum level and liner wall movement. The Dairyking cluster produces a high stable milking vacuum during the milking phase and drops in the rest period. This leads to excellent milk out and improved udder health due to the reduced shear forces on the teat. We have examined the effects of sizing on all aspects of cluster design, from the liner geometry, short milk tube diameter, claw volume and claw outlet diameter to total cluster weight. The elimination of liner slippage is an extremely important part of cluster design because slippages cause impacts on the teat end. Impacts on the teat end lead to cross infection. When the liner slips air is admitted and the admitted air can be transported and impact on the teat end. Dairyking's cluster design has focused heavily on reducing this.

Because Dairyking manufactures all our equipment, we have full control over design and manufacture, which means that we can give our customers the optimum solution. The Dairyking Cluster when used with our pulsation promotes optimum results concerning milk output, cow comfort, fast milking, low slippage and maximum milk yield. This all leads to a healthier herd and increased profits. Because the Dairyking cluster is so unique in its performance many farmers have converted their existing milking systems to Dairyking and experienced the benefits.



Leading the way in liner performance - Dairyking customers have experienced milk yield increases of up to 10% when compared to other systems.

## Liners

Dairyking 916SL super soft liners are the ultimate high performance liners. Our liners show reduced slippage and increased milk yield when compared to many other liners. Furthermore many customers also report better udder health. Our super soft liners are specially designed and manufactured to ensure high performance with exceptional milking characteristics, low slip levels and excellent durability. The choice of material is critical when producing liners. Dairyking have decades of experience in designing liners, all of which have been rigorously tested in scientific trials. Our current formula is a combination of all the best results. Dairyking is unique in its approach to liner design, our design aims to have one liner for all cows.

In our research programme we have focused on developing a liner with the lowest level of slippage, complete milk out and excellent liner wall movement. The result is Dairyking 916SL liners.

In independent trials tests show that Dairyking liners lead the way in liner performance. Dairyking customers have experienced milk yield increases of up to 10% when compared to other systems. High yielding cows provide the biggest challenge for modern milking equipment but the advantages of our system are most obvious in these situations.

The Dairyking 916SL liner when used in conjunction with our pulsation and clusters has achieved great success for dairy farmers in every continent of the world.

Changing liners regularly is one of the best investments a person can make on any farm, in order to maintain excellent performance liners should be changed at recommended intervals.





Better cluster alignment and better working environment.

## Swing Over Arms

Swing Over Arms are a very popular choice for swing across milking parlours. The Swing Over Arms are constructed from stainless steel for durability and longevity. Swing Over Arms are highly recommended to increase efficiency in the milking parlour. Also available with recording jars.

Swing Over Arms offer several advantages:

- > **The pit is much clearer and provides a better working environment.**
- > **Milk hoses are shorter; this means better cluster alignment and reduced maintenance costs.**
- > **When used in conjunction with the Weighall Milk Meter or Automatic Cluster Removers the swing over arm can activate the control panel automatically and indicate that a new cow is being milked.**
- > **The Dairyking VoiceAssist parlour sound system can repeat flagged voice messages just prior to the cluster being attached, audibly alerting the operator to a specific situation.**
- > **Very user friendly and labour saving as no extra work is required.**
- > **An added benefit of Swing Over Arms is that Dairyking's unique appetiser feeding (see page 44) can be utilised which means feed is dispensed at the ideal time resulting in better cow flow and a more relaxed cow.**



Accurate and consistent milking, reduces work-load and allows one person to operate more units. Plus the Dairyking ACR can monitor flow in two milk lines.

## Automatic Cluster Removers

The Dairyking Automatic Cluster Remover accurately and consistently monitors the flow of milk during milking. When milking is finished, vacuum is removed and the cluster is detached from the cow. The ram is constructed using stainless steel which ensures maximum durability and reliability. Easy adjustment of all ACR settings is possible from the milk meter or PC. The ACR incorporates a remove override function. A restart facility is provided which allows the meter to be restarted should a cluster inadvertently be kicked off or removed.

Dairyking's Automatic Cluster Remover can monitor flow in two milk lines and allows milk to be diverted at the touch of a button, this feature comes as standard with the Dairyking ACR. It can also be fully integrated with the Dairyking ClusterCleanse which is an important consideration when choosing a cluster remover. SmartStart is an optional feature which means that the cluster is released and vacuum is applied when the operator lifts the cluster, this is especially beneficial time wise in a Swiftflo Double and a Swiftflo Revolver.





## Smart Start

Dairyking's innovative feature the Smart Start is an automatic start of the milking unit. It is especially beneficial time wise for the Swiftflo Revolver and Double Up parlours. With the Dairyking Smart Start the need for a push button start is eliminated. Where Smart Start is installed lifting the cluster starts the ACR and the Weighall Milk Meter making milking easier. The ACR Smart Start improves operator efficiency and also speeds up milking.



## JetSaver

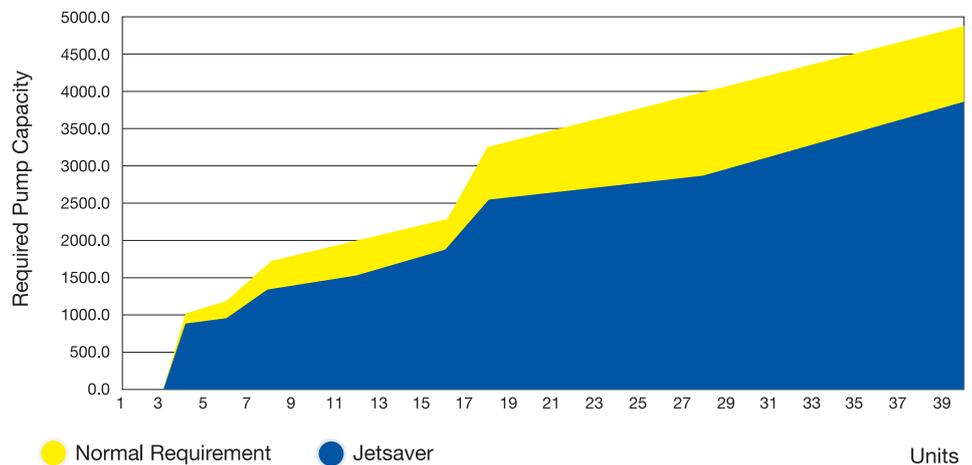
The JetSaver is a unique patented device which uses the latest technology for reducing energy consumption in milking installations. This ground-breaking technology dramatically reduces peak air demand which can result in considerable energy savings.

The JetSaver was developed in response to the relatively new challenge of increasing energy costs. As milk producers continue to grow, they must identify areas for improving their productivity and reducing costs. A vacuum pump removes air from the milking parlour which provides the negative pressure required to milk cows. Vacuum requirements for a parlour are sized according to peak demand which occurs during washing of the plant.



Washing of the milking plant only takes between 10 - 15 minutes and the milking process can take from 1 hour to 6 hours typically, the amount of energy that is not utilised can be considerable and quite costly. Thus Dairyking have developed the JetSaver which intelligently manages processes that add to the peak air demand during washing. This device saves a considerable amount of money and Dairyking has made this device a standard feature to make your operation more profitable.

This device saves a considerable amount of money and Dairyking has made this device a standard feature to make your operation more profitable.



## VSaver

As milk producers continue to grow, they must identify areas for improving their productivity and reducing costs. The Dairyking V Saver rapidly optimises pump speed according to air demand for the parlour meaning motors use less current during normal operation.

Typically where the VSaver is installed there is 50-80% less energy consumption.



The Weighall milk meter is unique because it weighs every drop of milk as it passes through from the cow to the milk line.

## Weighall Milk Meters

**Approved by the International Committee for Animal Recording (ICAR) and the Dairy Herd Improvement Association (DHIA) for accuracy and proportional milk sampling, the Dairyking Weighall Milk Meter can operate stand-alone or integrate into the Dairyking Milk Manager system.**

The Weighall Milk Meter is unique because it weighs every drop of milk as it passes through from the cow to the milk line. The meters modular design allows it to operate as a standalone electronic milk meter or it can be fully integrated into a completely automated system. In automated systems it may be integrated with AutoID, where the animal identification is updated on the display when a new cow enters the parlour. It also functions as a terminal for messages from the Milk Manager software. If using VoiceAssist the Dairyking parlour sound messaging system an audio message is played as each cow enters the parlour, when the Swing Over Arm is activated the audio message can be repeated prior to cluster attachment. Control over Automatic Cluster Removal and Milk Diversion lines is also achieved using the Weighall Milk Meter. Integrated Autodrafting can also be flagged from the milk meter terminal. Over 100 different data items may be recalled to the Milk Meter display from the PC by the operator during milking. The Dairyking Weighall Milk Meter has a unique sampling system – unlike other Milk Meters, there is no need for large attachments for milk sampling as the milk sampler is fully integrated into the meter.

The washing cycle of the milk meter has also been optimised. One instruction to any meter terminal will activate the wash cycle in all milk meters.



Our milk meters are used extensively in research centres. Some of the features of the Weighall Milk Meter are that it monitors the following:

- > **Milk Production.**
- > **Milking time.**
- > **Milk letdown.**
- > **Cows milking characteristics.**
- > **Operator work routine.**
- > **Parlour performance.**

Water usage during washing is minimised by alternating cycles between meters. The meter is suitable for all types of milking installation.

Because the Weighall Milk Meter has the latest technology this means the software can be updated remotely over the internet so that the system may be upgraded to support new features in the future.



## Turbo Transfer Recording Jars

Recording jars provide an alternative means to milk meters to measure cows milk yields. Dairyking has developed the "turbo transfer" recording system which is a highly efficient single lever control design which provides the following options.

- > **High speed emptying contributes to speeding up the whole milking process. This means parlour throughput is maintained as the next cow can be milked almost immediately. This is specifically beneficial in a Swiftflo Swing parlour.**
- > **Milk-through position; when milk recording is not required the jar does not need attention during milking.**
- > **Sampling; milk samples can be taken quickly and easily when required.**
- > **Washing; the Dairyking turbo jar has a high capacity intake spreader to distribute flow during cleaning.**

The option of swing over arms with Automatic Cluster Removers may be installed in Turbo Transfer Recording Jars. The jars are mounted in different positions depending on type of installation. Stainless steel tubing is used throughout the system with a minimum of rubber.



Milk diversion at the touch of a button.

## Milk Diversion Line

Dairyking have designed a unique milk diversion system where milk can be diverted at the touch of a button. The system consists of a separate milk line, diversion valve, receiver and milk pump. The milk diversion line can be used with Milk Meters, Automatic Cluster Removers or standalone. The benefit of the Dairyking Milk Diversion line system is that it is fully integrated, which means that there is no need for any pipe disconnection or other attachments and does not normally require additional water for washing. Many farmers use the Milk Diversion line to control bulk milk protein and fat levels. This reduces labour and reduces clutter in the milking area, which reduces milking time. Milk Diversion lines can be used on the Swiftflo Double, Swiftflo Swing and Swiftflo Revolver Rotary parlour. This is an excellent labour saver!



## Secondary Main Milk Lines

Secondary main Milk Lines consist of the receiver group and milk pumps. This allows you to divert milk after it has gone through the Weighall Milk Meter. This unique feature is especially beneficial where speciality dairy products are being manufactured. This is also used where farmers have come together and they want to invest in one facility yet each keep their own milk separate.



Dairyking Variflo+ delivering performance when you need it!

## Variable Speed Milk Pumping

The Variflo+ provides efficient cooling and gentle milk transport as it responds to the level of milk in the receiver and controls the water flow through the cooling system. Milk flow into the receiver varies both throughout the year and during milking. Variable speed milk pumping is used when efficient cooling and gentle milk transport is required. The plate cooler is utilised 3 to 4 times more when compared to typical milk pump controls. The height of milk in the receiver is measured and the output of the milk pump is matched to the cumulative quantity of milk in the receiver jar. This system ensures the pump speed increases as the milk level increases. When the milk level is low, the pump speed is reduced. The cooling water supply can be switched off by a solenoid when the milk pump is inactive. The result is a controlled milk flow through plate coolers and gentler milk handling with less water usage.



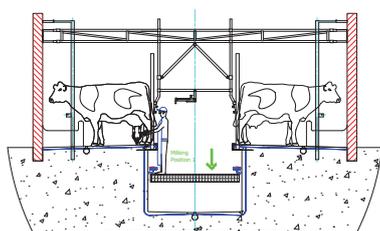
## Plate Coolers

Dairyking offer a choice of stainless steel plate coolers to suit any size plant. In today's market milk quality and the cost of cooling milk is of paramount importance. Dairyking's plate cooler is the ideal way to reduce milk temperature quickly after milking. We offer a range of plate coolers depending upon plant size and cooling requirements. Choice of single stage or two stage. Cooling efficiency can be further enhanced using the Dairyking variable speed milk pump controller.

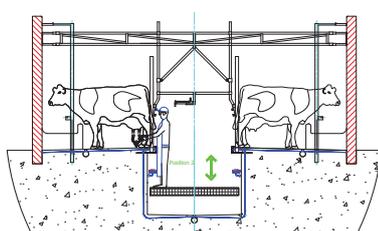
## Comfort+ Flooring

Providing an operator friendly working environment in your parlour maximises the working efficiency and productivity of your operation. Dairyking's Comfort+ Flooring provides the operator with the most comfortable working environment and helps reduce operator fatigue. This ergonomic moveable floor is available for all types of milking parlours.

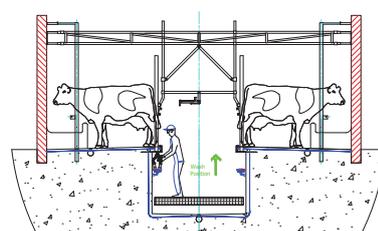
The Comfort+ Floor has a number of pre-determined height levels which can be saved to memory depending on the operator preferences. There is also a wash memory level that lowers the floor making it quicker and easier to attach the clusters to the jettors saving you time and effort. The Comfort+ Floor also facilitates easier sampling. The matting used on the floor is easy to clean as it is made of perforated plastic. This matting which is long life and non slip also facilitates easy draining so that it does not hold the water.



Milking Position 1



Milking Position 2



Wash Position

# 5 Equipment Specific to Swiftflo Revolver Rotaries

Dairyking have a number of components available depending on your requirements and automation preferences. Dairyking are continuously developing new products that are designed to automate many of the processes that you are involved with, reducing time and improving productivity. Many of the products operate effectively as stand alone products however most are capable of being upgraded and integrated into a fully computerised milking parlour with the capability of automatically monitoring the progress of each individual animals yield and the overall management of the parlour.





## Platform

The platform for the Dairyking Swiftflo Revolver is manufactured by Dairyking in house at our factory in Causeway, Ireland which results in better integration between all products on the rotary.

The platform is constructed from heavy gauge steel in individual sections and then hot dipped galvanised for maximum protection. The platform supports are totally adjustable which ensures the highest degree of accuracy when installing the platform.

Cows stand on a concrete platform deck, which provides better traction and results in a quieter working environment. A galvanised steel skirt is standard on the Dairyking Swiftflo Revolver with stainless steel available as an option.



## Console

The control console allows the operator to control all functions of the platform, feeding system and Automatic Backing Gates (if required). All controls are mounted within a stainless steel enclosure with manual feeder controls, platform forward, reverse and speed controls. In fully automated installations, Backing Gate advancement and auto-advancement of Backing Gates is possible based on the number of cows that have entered the parlour.



## Gland

The central gland is one of the key components in all rotary milking systems. Dairyking has engineered its rotary glands to be the most technologically advanced in the world. A choice of glands is available depending on the number of connections required. The gland body is constructed from stainless steel and the electrical connection rings using an advanced engineering polymer. The Dairyking gland has been engineered so that there is no need for any pipe connection or disconnection for diversion so as to reduce labour and increase efficiency. Depending on the option taken the gland allows for vacuum, milk delivery, mains electricity, communications, water, compressed air and connections for milk diversion lines through the centre point.



## Drive Units

The Dairyking Swiftflo Revolver drive units have very precise control and quick braking giving the operator complete control over acceleration and deceleration of the platform.



## Stainless Steel Protective Unit

Dairyking has designed a Stainless Steel Protective Unit (SSPU) which is optionally installed on each bail of the Swiftflo Revolver. Precision equipment is enclosed in a stainless steel casing ensuring a long life and maximum protection. The unit is extremely robust and heavy duty and is easily accessed during routine maintenance.

### Key Features and Benefits:

- > **Stainless steel robust construction.**
- > **Protects important equipment like the ACR ram, float sensor and the Milk Meter control console.**
- > **Easily cleaned.**
- > **Fast access for service personnel.**



## Milk Recording & Sampling

In the Dairyking Swiftflo Revolver the majority of the equipment is located inside the rotary table. Milk sampling is carried out in a safe, easily accessible and clean environment. The person sampling is not interfering with the operator as the sampling procedure is happening independent to the milking process. Cows are unaware that sampling is taking place so there is no interference with their routine. Most of the equipment is easily accessed for routine maintenance and service and it is located at a convenient height making it easier for sampling and service personnel.



## Secondary Info Centre

A stainless steel Secondary Information Centre can be located near the milk sampling point. A full size computer monitor (not included) can be incorporated into this cabinet which can be configured to display user defined screens from within the cow profile. When the platform revolves this screen updates and shows data for cows at a number of milking units near the sampling point. This means that samples can easily be taken with the minimum of hassle and all information is easily viewable.



## Stainless Steel Positioning Arms

The Dairyking Cluster Positioning Arm holds the cluster in the best position behind the cow during milking. As cows enter and exit the cluster is stowed neatly under the Stainless Steel Protective Unit for the safety of the equipment and unobstructed cow movement. The unique design means that shorter milk tubes can be used improving safety and reducing maintenance costs.

### Key Features and Benefits:

- > **Cows enter and exit the bails with ease**
- > **The cluster swings into position behind the cow making it easy for the cups-on operator.**
- > **Tubes are not twisted meaning there is an unrestricted flow of milk through the system.**
- > **The cluster is neatly positioned and improves cluster alignment.**



## Cow Retention

Dairyking has pioneered the use of an optional retention device for rotary parlours. The Cow Auto Retention device is lowered behind a cow, prohibiting exit until the cluster has been removed.

When the operator places the cluster on the cow, the Auto Retention device is lowered retaining the cow in her bail during milking. Under normal circumstances the Automatic Cluster Remover removes the cluster from the cow and the retention device is raised to allow the cow to exit the platform.

Where installed with Weighall Milk Meters further intelligence may be added. The software checks a cow's yield and milking time against her normal statistics and if deviations are outside user defined limits the Auto Retention will retain the cow and send her around to the cups-on operator again. As the cow approaches for the second time, the operator will be alerted through VoiceAssist the parlour sound system and on the Milk Meter display screen. The software for retention can also be configured so that the Auto Retention device does not drop unless there is a deviation from user defined limits and the cow's normal statistics. The Dairyking Auto Retention greatly reduces the work-load on the operator as it eliminates the need to manually retain cows in their bail.



## Cow Motivator

This is an extremely useful addition to complement the Dairyking Swiftflo Revolver. As a result of cow comfort on the platform, some cows forget to back off when milking has been completed. If the cow has completed milking, and is not being retained the cow is first given an opportunity to back off the platform of her own accord, if this does not happen then the Cow Motivator will activate and gently encourage the cow to back off of the platform.

Should a cow not be completely milked at this point, then the cow motivator will not operate. Additionally the Cow Motivator may also be installed with our AutoDrafting systems.



## Automatic Parking

When milking is completed, Automatic Parking may be activated this will automatically align the platform to the correct washing position.



## Rotating Wash Boom

A rotating stainless steel Wash Boom is an option for washing around the outside of the platform. This Wash Boom which is centrally mounted is supported by the rump rail supporting posts and facilitates easier parlour washing as the operator does not have to carry long hoses. The operator moves the boom by pulling the hose around the circumference of the platform and can easily wash the surrounding area. This is a major time saver and reduces operator work load.

# 6 Hygiene & Cleaning Equipment

In order for you to get the best quality milk, effective cleaning and sanitisation of milking equipment and a good routine for prepping cows plus good overall hygiene is vital to ensure that the milk you produce is of the highest standard. Thoroughly sanitising your equipment after every milking is vital to maintaining this high quality production.





## Food Quality Air Purge

**After milking purified air is pushed through the system, emptying the delivery line from the milk pump through to the milk tank.**

The Food quality air purge is a device which helps reduce the amount of milk left in lines at the end of milking. If used in conjunction with the AutoWasher it may also reduce the amount of residual water in the system between wash cycles. The system allows purified air to be pushed through the delivery line from the milk pump through to the tank after milking. There could be as much as 20-25 litres of milk in the line depending on the distance between the receiver and the tank. Water in the line before milking is cleared out in the same way. Dairyking has engineered this micro filtered triple-pass filter system to purify the air for food use.

- > **More milk is cleared from the milk line.**
- > **Reduces residual water during cleaning.**

The unit can be operated standalone or automatically with the Dairyking AutoWasher. This system can be fully utilised in all parlour types including the Swiftflo Revolver Rotary without any pipe connection or disconnection.



## ClusterCleanse

As farms are getting larger the Dairyking ClusterCleanse is an immense aid for improving milking hygiene and is an additional tool for farmers fighting the battle against the spread of contagious mastitis during milking such as Staph Aureus.

The Dairyking ClusterCleanse rinses each cluster after each cow is milked which results in a more hygienic cluster for the next cow. The ClusterCleanse is available for all types of parlour. It is available in conjunction with Dairyking Automatic Cluster Removers and in conjunction with Dairyking Weighall Milk Meters. The ClusterCleanse sequence is automatically engaged after the cluster has been removed from the cow. The cluster and the long milk tube are flushed using a combination of water and air. After the cluster is flushed out it is then automatically purged maximising the cleaning effect. This reduces the risk of "cow-to-cow" cross infection and contagious mastitis. Lower SCC means higher milk quality payments and better herd health.

Normally when a cow that is infected with Staph Aureus bacteria is milked, these bacteria remain in the liner in large quantities and can be spread to subsequent cows. Usually this is controlled by segregating cows with an infection and milking them last.

With the Dairyking ClusterCleanse there is no need to replace existing milking clusters or purchase any special liners and it does not affect the milking vacuum level. The Dairyking ClusterCleanse can also help reduce the spread of Strep. Ag. And Mycoplasma mastitis.

Are you looking to lower your SCC? Using the Dairyking ClusterCleanse results in a more hygienic cluster cutting down on the risk of infections and helping to lower your cell count.





Our AquaJet wash system is very popular as it further enhances pit space in a Swiftflo parlour and provides effective sanitisation of Clusters.

## AquaJetz

Dairyking AquaJetz is the best way to position the cluster during washing. The system is positioned neatly under the cow standing area and is highly efficient when used with ACR's as it facilitates automatic removal of clusters from the washing position. The design of the AquaJetz allows clusters to be prepared for washing before all cows are finished milking which is a real time saver.

**Dairyking AquaJetz has the following features:**

- > **Its hygienic design - washes both the outside liner lip and the inside barrel.**
- > **The self latching cover helps prevent dirt ingress during milking.**
- > **It is positioned neatly under cow standing - less obstacles in the pit.**
- > **The AquaJetz is fast and easy to use and is manufactured from strong and durable material.**

Because of the design of the Dairyking AquaJetz it is much quicker and easier to move from washing to milking position when ACR's are used. In Dairyking Swiftflo Revolver Rotary parlours AquaJetz are fitted with an additional fully protected cover and surround.



## JetStream

**The Dairyking JetStream is a very efficient method of washing milk lines.**

The JetStream accumulates a quantity of water and discharges a bullet of water at speeds of up to 12 m/s into the milk line. This high-speed jet cleans out the milk lines in a highly efficient manner. The automation of the plant cleaning can be further enhanced by installing our AutoWasher.





“My Dairyking Swiftflo Parlour is cleaned with the AutoWasher while I’m feeding calves & tending stock. Both myself & the cows are happy with the system, what more could you ask for?”

Seamus Hunt, Ireland.

## AutoWasher

**The Dairyking AutoWasher ensures that consistent plant cleaning can be achieved day after day.**

The Dairyking AutoWasher is designed for all types of milking installation. It is neatly constructed in a stainless steel enclosure into which both valves and controls are fully integrated. This is normally mounted above an optional stainless steel wash trough. The AutoWasher takes over the work of washing the milking plant, which can typically reduce labour by up to an hour per day. When an AutoWasher is installed it functions as a complete control console for the milking machine. It has the ability to start and stop the complete milking plant as required. The pre-programmed amounts of chemicals are accurately metered and the correct quantity of water is added. Chemicals are not handled at every wash so they can be stored safely away.

The AutoWasher control panel is powered with extra low voltage as electrical safety is paramount in wet environments.

The AutoWasher fully integrates and controls the parlour washing cycle. It communicates with equipment in the parlour including Milk Meters and ACR's to ensure the best cleaning sequence. An optional water recovery unit may be fitted which allows recycling some wash water for other operations on the farm. The AutoWasher allows for different wash cycles to be selected at the push of a button.



Chemicals are not handled at every wash so they can be stored safely away.

- > Wash sequences are fully programmable and can be easily adjusted by the user.
- > Pre-milking rinse can be programmed to commence automatically for 3 pre-milk rinses every 24 hours.
- > A safety check switch ensures that the plant is coupled for washing which ensures that washing will not start unless the machine is coupled correctly. This prevents wash solution from accidentally entering the bulk tank.
- > There is an in-built warning indicator, when the washer encounters an error such as low detergent etc.
- > A rechargeable battery power pack retains time and settings in the event of power failure.

With an operator's time becoming more valuable every day, the time saving can be extremely beneficial and optimisation of chemical usage and water utilisation have obvious financial advantages.

# 7 CleanSweep Automatic Scraper Systems

The original and technically superior system with installations proven over many years. Dairyking manufacture and deliver automatic scraper systems to dairy, cattle, pig and mushroom farms throughout the world. These systems now operate in every corner of the globe from small family farms to large farming facilities. We are acknowledged for unequalled standards of reliability and adaptability. The Dairyking track type system is very low maintenance and exceptionally easy to operate and control.

Thousands of kilometres of track installed worldwide...





## Hydraulic Power Pack & Controls

- > The power unit has been designed for robustness and longevity.
- > The design has been well proven and is reliable.
- > It's quick to install and low maintenance.
- > High quality materials in the hydraulic unit include stainless steel and advanced polymers which offer better appearance for years to come.
- > Ducting and hosing is neatly mounted keeping the installation tidy.
- > Environmentally friendly.
- > Design is very versatile – the digital control is designed to control up to eight passages with many unique features including passage waiting, temporary inhibit, multiple park positioning plus much more.

## Key Features & Benefits

- > Outstanding Flexibility.
- > Passages can be cleaned individually.
- > Odd numbers of passages can be easily accommodated.
- > Passages can be unequal in length.
- > Passages do not have to be parallel.
- > Passages can be at right angles.

## SpaceSaver Rambox

Dairyking has designed its scraper systems so that when you are installing a scraper system in existing buildings in many situations preparation work is not required, which results in easier installation and lower construction costs. Hydraulic hoses are routed to the power unit via sealed pipe, which further protects them from degradation. The Rambox is constructed using heavy gauge stainless steel which will mean a longer working life. Each track is formed from heavy gauge steel and has a guide rail which is anchored at two points using self-expanding high tensile bolts.



## Heavy Duty Scraper Saddle

The extra weight in the Dairyking saddle ensures a better scrape with each cycle. Our Double Ratchet mechanism reduces false tripping and allows wider and longer passages to be cleaned.

There is a range of heavy duty scraper saddles available to suit the needs of all types of passages. The robust heavy gauge Rambox ensures that the ram is fully enclosed and protected from the environment.



## Innovative Scraper Solutions

For us, providing innovative solutions to our customers is at the heart of our business. Dairyking has extensive knowledge and accumulated experience in the manufacture of total farm solutions. This knowledge combined with an active ongoing research and development programme offers Dairyking customers the very latest innovative farm solutions. This has resulted in the development of scraper solutions for pig, equine and mushroom enterprises as well as numerous innovative products for the dairy industry such as the :

- > **Scraper backing gate. (For further information see page 49)**
- > **Feedmax – the Dairyking Feedmax scraper keeps feed pushed up to livestock on a pre-programmed schedule. This refreshes feed automatically, just like when it was first dispensed.**
- > **Scrapers customised for individual client needs.**

For more information on Dairyking CleanSweep Automatic Scrapers please see our Scraper brochure.

# 8

## FeedRite Feeding Systems

The Dairyking FeedRite feeding systems are an excellent means of accurately dispensing feed both in the parlour and out of parlour. They offer a convenient and controlled method of catering to the herds nutritional requirements.





Appetiser Feeding speeds up cow loading.



For her to perform...  
Feed her right!



Accurate feeding saves you money!



Digital control unit

## FeedRite In Parlour Automatic Feeders

Dairyking FeedRite in parlour feeders are a very precise and convenient way to feed cows in the parlour. In parlour feeding offers tremendous advantages to the dairy farmer as it has been proven to increase cow flow, decrease milking time and cater for the individual nutrition requirements of cows. They are easy to install and operate and are virtually maintenance free. Systems can be installed to support multiple feed types.

One of the most interesting features of the Dairyking automated feed system is that appetiser feeding may be utilised. As each cow enters the parlour a small amount of feed is dispensed into her stall which encourages fast loading. When the unit is being attached the remainder of her allocated feed is dispensed, this usually results in a more content cow when the cluster is attached. Scientific trials have also shown higher levels of oxytocin are present when cows are fed during milking.

The Dairyking FeedRite in parlour feeders consist of a corrosion resistant hopper and the dispenser housing which is manufactured from stainless steel. The dispensing mechanism accurately meters the amount of feed dispensed. Each motor has its own in-built overload protection which activates if a foreign material obstructs its operation. Feed shoots are double bracketed and are also manufactured from stainless steel which incorporates a unique anti-vibration design. The hoppers may be filled from a completely enclosed auger system and feed bin. Due to its completely enclosed design this minimises dust and prevents rodents from entering easily.

The feeder control unit is digital and controls up to 40 feed dispensing points. The operator may select feeds on an individual or batch basis and the system also incorporates the Dairyking colour coded feed system which is a very fast and visual way of individually feeding concentrates. The calibration of the complete feeding system is so quick and easy it can be done within 2 minutes. Accurate feeding results in higher profits!



# FeedRite In Parlour Feeders for Swiftflo Revolver

Dairyking has considerable experience designing and manufacturing in parlour feeding systems. The amount of feed can be adjusted through a dial on the central console if there is no Auto Identification installed, however when Auto Identification is installed the feed is released upon cow presence. The intelligent software also takes into account cows going around twice and these are not given additional feed. The feed is delivered via a stainless auger to the feed trough. The Swiftflo Revolver Rotary parlour gives you the option to feed up to four different feed types.



## Feeding Management

In automated parlours feed control can be connected to the parlour management system easily utilising its in-built high speed communications interface. Interfacing with the Milk Manager Software offers many advantages as feeds may be calculated easily and dispensed automatically. Feed amounts may be calculated based on user defined feed levels, feeding to yield, body weights or stage in lactation.

One of the most interesting features of the Dairyking automated feed system is appetiser feeding. As each cow enters the parlour a small amount of feed is dispensed to the cow which encourages fast loading. When the unit is being attached the remainder of her allocated feed is dispensed, this usually results in a more content cow when the cluster is attached. Scientific trials have also shown higher levels of oxytocin are present when cows are fed during milking.



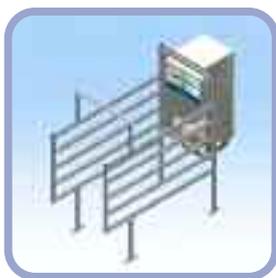
**Interfacing with the Milk Manager Software offers many advantages as feeds may be calculated easily and dispensed automatically.**



## Augers

When using Dairyking feeding systems a Dairyking auger may be fitted from a feed silo to transport the feed to the individual feed bins inside the parlour.

The auger neatly passes through the feed hopper and this reduces dust in the parlour. At the touch of a switch you can restock the milking parlour feed bins and there is little physical effort required.



Optimises the use of concentrates allowing better performance from your herd.

## FeedRite OptiFeeder

The Dairyking FeedRite OptiFeeder Out of Parlour Feeder allows you to optimise milk yield and herd health while reducing feed costs and avoiding over feeding by feeding to individual requirements. The unit provides a comfortable and convenient feeding environment for selected cows.

The OptiFeeder has been designed to dispense feed to cows throughout the day where there is a continuous requirement to individually feed concentrates. Feeding cows individually based on milk yield and lactation promotes better milk yield, fertility and the general health of the animals. It also reduces the cost of expensive feeds by avoiding over feeding. All parts of the OptiFeeder that are in contact with concentrates are manufactured from stainless steel. The OptiFeeder is completely corrosion resistant which is a big advantage particularly where minerals are dispensed in the feed. The hopper incorporates the proven dispensing technology utilised in our in parlour feeders. The dispensing mechanism accurately meters the amount of feed dispensed. Each motor has its own in-built overload protection which activates if a foreign material obstructs its operation.

When the cow visits the OptiFeeder Dairyking identification technology is at work as the system utilises an electronic ear tag to accurately identify each cow. Her specific feeding regime details are retrieved and feeding commences if adequate time has elapsed since the last visit and feeding is scheduled. The presence of the cow in the feeding station is monitored constantly and feed is dispensed only when the cow is present. In the event of a cow missing one of her feeding periods, the amount of feed missed will be divided up and dispensed between the remainder of her feeding periods. Because the system utilises the Milk Manager it allows control of both in parlour and out of parlour feeding from within the same programme. In addition the system can be configured to feed 3 different feed types. Feed stations may be installed individually or in groups depending on building layout.

Feeding is one of the most important elements in achieving best herd performance. The Dairyking out of parlour feeding system is an ideal tool to help you achieve your goals.

## Out Of Parlour Feed Manager

The out of parlour Feed Manager is an add on module of the Dairyking Milk Manager to easily control out of parlour feeders.

The system uses data already in the Milk Manager for determining the amount to feed each cow. Feed amounts may be calculated based on user defined feed levels, feeding to yield, body weight or stage of lactation. The dispensing of this feed may be distributed over different feeding periods throughout the day. The benefit of this approach is that cows generally consume their total allocated feed and unconsumed feed is distributed throughout the remainder of the day.

Out of parlour feeders allow feeding to be controlled accurately and conveniently. Since feed is one of the main inputs on farm it is of utmost importance to use your feed efficiently and effectively.



- > **Accurate distribution of feed.**
- > **Easily feed to yield, body weight or stage of lactation.**
- > **Labour saving.**

# 9 Remote Controlled Gates & Cow Management

Dairyking automate many tasks to ensure that our equipment is highly efficient. Many products operate effectively as stand alone units - making them suitable for the smaller dairy farmer, but most products are capable of being upgraded and integrated into a fully computerised milking system.





## Air Operated Entry & Exit Gates

Air operated entrance and exit gates are of robust construction and are fully hot dipped galvanised.

They may be operated from anywhere in the pit. They are extremely space efficient.



## Rotary Entrance Gate

Cows are generally eager to enter the Swiftflo Revolver Rotary parlour so much they can rush and push to enter onto the platform, the addition of an air operated saloon entrance gate can be extremely useful. This allows each cow her own opportunity and space to enter onto the platform without pushing or shoving from the rest of the herd. Entrance gates are of robust construction and are fully hot dipped galvanised. They are extremely space efficient.



## Auto Teat Spraying

The Dairyking Auto teat sprayer is engineered to spray teats using a wide-angle spray pattern. This system is combined with Integrated AutoDrafting which ensures separation of animals between applications. The cow is monitored when she enters the drafting crate, when she moves forward of a defined position it sprays for a pre-set time period. The supply of teat dip may be located in an easily accessible, convenient place away from the draft unit. The Auto Teat Sprayer comes with an additional option for automatic rinsing. The spray time per cow is user adjustable.



## Auto Weighing

The Dairyking Automatic Weighing system is the perfect accessory to our Integrated AutoDrafting System where live body weights are required on a regular basis. Body weights can be obtained easily with little or no effort which allows comprehensive monitoring of weight gain and control of feeding. Accurate separation of animals is achieved using the drafting system and an additional set of front gates hold the cow in position so her weight can be recorded. The weighing platform is of concrete construction, which provides improved cow traction. Dairyking Auto Weighing completes the measurement cycle in accurate performance monitoring of your dairy herd. The Dairyking Automatic Weighing system is very easy to use and is a fast automatic operation.



## Circular Backing Gate

Dairyking's range of circular backing gates are suitable for circular collecting yards. The gate is fully hot dipped galvanised and is extremely heavy duty. The Dairyking hock bar is included on the gate - this is a device which gently encourages cows to move towards the milking parlour. A backing gate is a great labour saving device as it reduces the need for the operator to leave the parlour pit which can make milking easier and faster. We have a wide range of gates sizes available and gates can be tailored to suit the dimensions of your collecting yard.



## Scraper Backing Gate

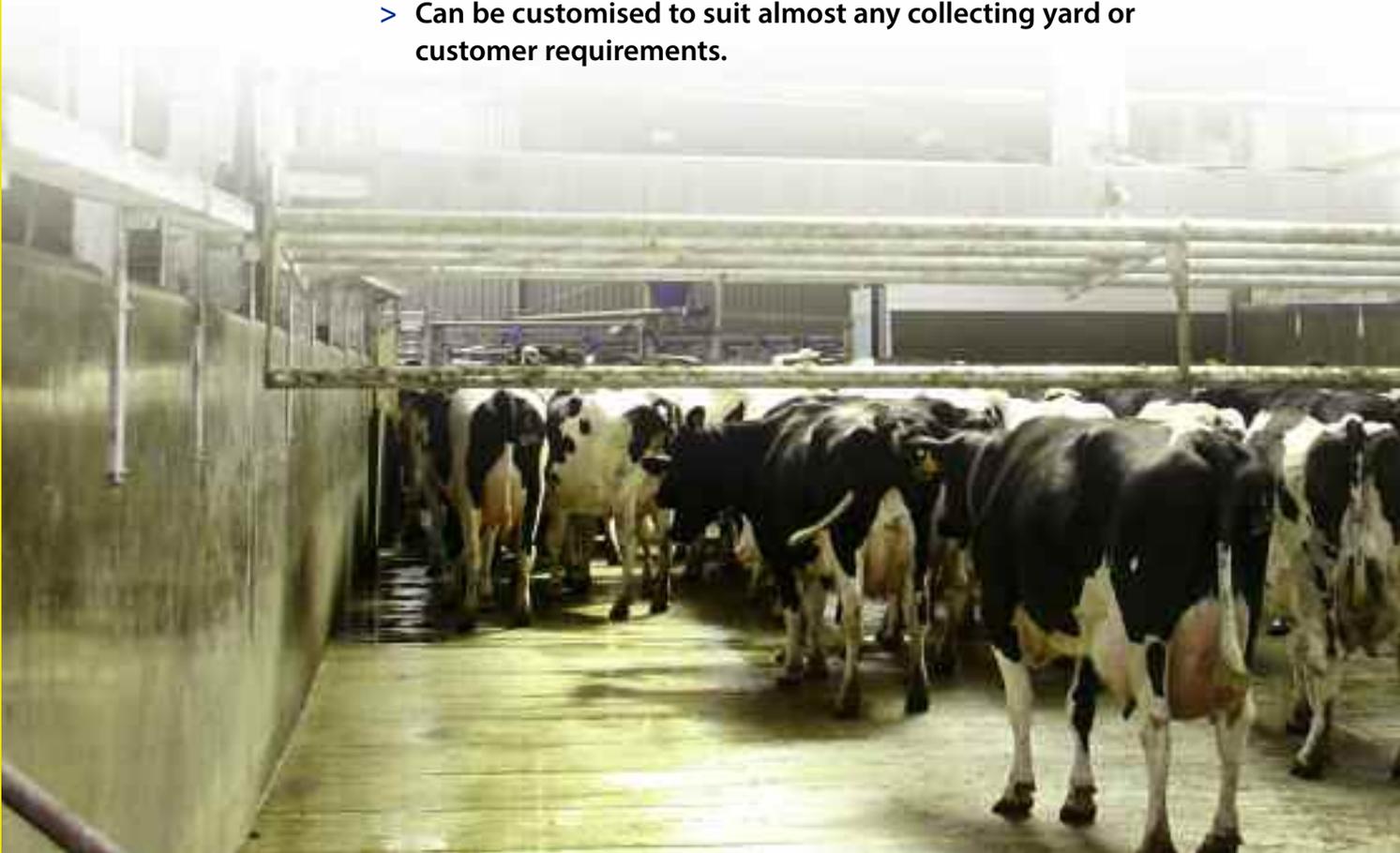
The Scraper Backing Gate uses Dairyking's proven CleanSweep Scraper technology. In the Dairyking Scraper Backing Gate cleaning can be configured to clean in either a forward or reverse directions. This robust design is fully galvanised and a choice of fixed or moveable gate is available. The operator can control gate advancement from anywhere in the milking pit.

Scraper Backing Gates can be manufactured in varying sizes for individual collecting yards.



### Key Features & Benefits

- > Ensures good cow flow.
- > Labour saving - does two jobs.
- > Robust construction.
- > Yard can be cleaned when the backing gate is moving in either a forward or reverse direction.
- > Can be customised to suit almost any collecting yard or customer requirements.





Streamlining the dairy operation!

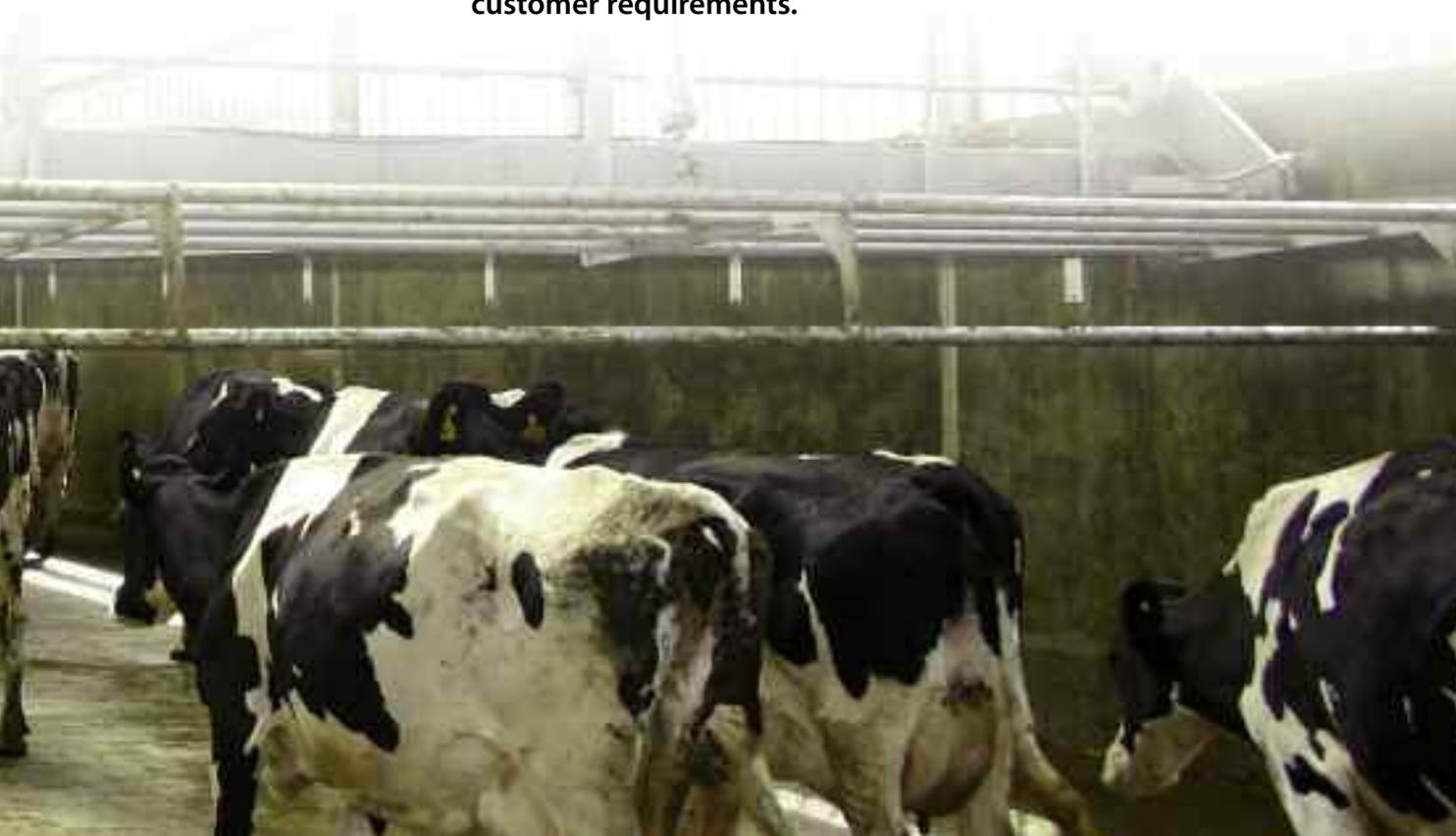
## Up and Over Backing Gate

The "Up and Over" Backing Gate is suitable for use in rectangular collecting yards. The backing gate is fixed to a rigid beam, which travels on two tracks at both sides. When the gate is fully advanced the operator may at the touch of a button easily lift the backing gate up and over a subsequent group of cows. The gate is then lowered behind the group, ready for advancement as required. The Up and Over Backing gate can optionally be set for automatic advancement, whereby once a predetermined number of cows have entered the parlour the backing gate automatically advances saving you time and effort.



### Key Features & Benefits

- > Ensures good cow flow.
- > Ideal for when milking groups of cows.
- > Robust construction.
- > Labour saving.
- > Gate can be raised to allow unhindered cow access.
- > Can be customised to suit almost any collecting yard or customer requirements.





"Before I installed the Dairyking drafting I was under more pressure and the cows were more stressed – the Dairyking drafting facilitates a one man operation, it makes the job so simple!"

Jimmy Daly, Ireland.

## Standalone AutoDrafting

Standalone AutoDrafting is a convenient means of isolating cows without the need for a PC. The Standalone AutoDrafting crate has the same high build quality as the integrated AutoDrafting. When a cow is required to be drafted the operator attaches a velcro tag to the cow's tail. A blue tag is attached for drafting to the right, a yellow tag for drafting to the left and cows without a tag walk straight ahead.

Dairyking's standalone AutoDrafting is a convenient, efficient and safe way to segregate your cows. The drafting crate is of an extremely robust construction. It's modular design makes it easy to extend and upgrade as desired. The Drafting unit is made of prefabricated hot dipped galvanised sections.

Standalone AutoDrafting provides the farmer or herd manager with a high level of control over the herd. No computer is required for the standalone version. There is a choice of two or three way drafting available. The system is easily upgraded to Integrated AutoDrafting which can also incorporate automatic weighing. Compared with manual drafting there is added convenience and minimum disturbance or cows.

Dairyking Drafting is a convenient, efficient and labour saving way to automatically sort your cows during milking.

## Key Features & Benefits

- > **Saves labour.**
- > **PC not required.**
- > **Robust construction.**
- > **Accurate.**
- > **Easily upgraded.**
- > **Facilitates a one man operation.**





Integrated AutoDrafting built to last...

## Integrated AutoDrafting

Dairyking Integrated AutoDrafting is a cow sorting system which has been designed in terms of achieving the best performance and build quality. It is available in a choice of 2-way and 3-way integrated AutoDrafting systems which may be combined when more segregation options are required. The route for individual cows can be selected from the parlour pit using the Milk Meter keypad, pre-programmed before milking on the parlour PC or directly from your mobile cell phone using Farm Messenger. Cows can be pre-programmed to draft for any number of reasons. For example, if a number of cows need to be segregated for a veterinarian visit then the operator can program the computer to draft the identified cows to a holding pen or crush for the visit.

Drafting information may be modified by keying in CowID, group or a previous veterinary history, e.g. cows that were artificially inseminated on a certain date range. The Cow Motivator may be added as an optional accessory to maintain cow flow. This is particularly useful when drafting systems are installed away from the milking parlour. The Dairyking Integrated AutoDrafting is an ideal cow segregation system for large herds as cows can be easily sorted in a number of directions. The AutoDrafting unit is of robust construction and hot-dipped galvanised. All gates on the drafting unit are hinged on low friction bearings. Saloon entry gates on the drafting unit provide accurate separation of animals. AutoWeighing for recording live body weights on a regular basis is available as an optional addition to the drafting crate. Auto Teat Spraying is also available.

### Key Features & Benefits

- > **Saves labour.**
- > **Robust - extremely heavy duty.**
- > **Choices of 2-way and 3-way drafting systems.**
- > **Saloon entry gates on the drafting unit provide very accurate separation of animals.**
- > **The selected route for individual cows can be selected from the parlour pit or pre-programmed before milking.**
- > **AutoWeighing and Auto Teat Sprayer optional.**



# 10 Dairyking Advanced Technologies

Dairyking are continuously researching and developing advanced technologies in order to streamline the dairy operation and give you a more efficient and profitable solution.





# Milk Manager

**The Dairyking Milk Manager is a powerful parlour management solution which controls and communicates with automation to provide you with instant parlour information whenever you need it.**

Our user-friendly intelligent software is the control centre for parlour automation and is an invaluable resource used to control and analyse the processes at work within your parlour. At the heart of our parlour management software is our AutoID system, when a cow is identified the system retrieves that cow's records for feeding etc. Our unique VoiceAssist system, available within the Milk Manager, integrates with the AutoID and is used to identify cows as they enter the parlour alerting the operator with important audio warnings or information which may be set up within the Milk Manager program.

During the entire milking process our management software controls and monitors each individual cow as she is being milked. Milk yields, milking durations and flow rates are among the vast analytical data which are captured and stored during each milking. These in turn may be reviewed or analysed at any time within the Dairyking Milk Manager.

Cow feeding may also be completely controlled and automated within our software. Many advanced feeding methods are available, ranging from flat feeding to performance related feeding.

Segregation of cows is also easily achieved from the user interface of the Milk Manager. Cows may be effortlessly separated using our Integrated AutoDrafting system with various options available to permanently segregate or periodically segregate over a specified time frame. Our addition of the MooMonitor Heat Detection system also seamlessly communicates with the Milk Manager. When cows are flagged as being on heat the drafting system is notified to draft the cow during predefined milking periods. Both the Dairyking Milk Manager and MooMonitor systems work hand in hand to provide the most technologically advanced heat detection system while utilising our tried and trusted VoiceAssist and Integrated AutoDrafting system to provide the operator with timely heat information and automatic cow segregation.

Controlling and monitoring your entire milking process with an ease and convenience essential in today's farm environment has never been easier using the Dairyking Milk Manager!



Streamlining the dairy operation and giving you the information you need to succeed!





## Auto ID

**The Dairyking AutoID system can be installed in all types of parlour from side by side and double ups to rotary platform systems.**

A passive RFID ear tag is attached to each cow; when she passes an antenna at the entrance to the parlour or in an Integrated Autodrafting crate the ear tag sends a signal to the reader which passes this message to a PC which identifies the cow precisely. This identification may be used to control feeding, voice messaging, integrated auto sorting etc.

Our reader system reads tags, which use the ISO (RFID) half-duplex system. Our system has the highest reliability and accuracy - this is often presumed but not delivered with other systems.

Dairyking has pioneered the use of RFID technology in milking parlours and has considerable experience in identifying cows using ear tag technology.

AutoID completely integrates with our full range of automation products.



Dairyking – Successfully using RFID ear tag technology for over 15 years!





## VoiceAssist

The Dairyking VoiceAssist enables the parlour to communicate directly to the operator during milking using voice and audio messages. The possibilities are endless and the applications of this unique and innovative feature are quite diverse which makes it a favourite on farms worldwide.

This system is an especially useful management tool where there are changes in milking personnel as important information can be communicated easily between them. The real benefit of this system is the operator is effortlessly made aware of what's happening during milking. VoiceAssist is an ideal management tool on any dairy farm.

The system which is operated through the Milk Manager parlour management software program can be configured so that some messages are enabled automatically and others may be enabled by the user. If the user would like a message to be associated with a particular cow, the operator can enter the information on the computer or Milk Meter.

When cows enter the parlour the system counts each cow as she passes the reader, if the user has enabled a message for a specific cow that message will also be called when she enters the parlour. This message can be repeated on cluster attachment. During the milking process the system continues to monitor milking, if a cow has a deviation in milk yield the operator will be immediately alerted.

VoiceAssist can be configured to keep the operator informed of the operation of other devices such as backing gate, drafting and so on. The operator can be advised of factors affecting parlour performance for example loading and unloading.

The operator can also control the parlour entertainment system through the Weighall Milk Meter control console. The Weighall Milk Meter operates as a remote control for the CD player in the PC, the volume can be adjusted as well as changing CD tracks.

VoiceAssist - enables the parlour to communicate directly and effortlessly to the operator....



VoiceAssist - enables the parlour to communicate directly to the operator....





- > **Nanotechnology based accelerometer sensing.**
- > **Unparalleled measurement accuracy.**
- > **Very accurate accelerometer measurements.**
- > **Compatible with RFID ear tag identification technology.**
- > **Intelligent power management - prolongs battery life.**
- > **Battery is replaceable – protects investment.**
- > **Intelligent algorithm: Collects data for each hour of the day & filters head movements to increase detection rates.**
- > **MooMonitor cow data: Downloads wirelessly to the MooMonitor base station.**

## MooMonitor Heat Detection

The Dairyking MooMonitor is the most technologically advanced method of heat detection on the market. For the professional herd manager one vital job is to recognise when a cow is on-heat as successful heat detection can significantly alter profits on farm. Manual heat detection is time consuming and can have variable accuracy depending on the operator's experience. Research shows that the majority of heats start between 8.00 pm and 6am when the farmer should be asleep! With herds getting larger, labour expensive and in short supply there is less time for the visual method of heat checking. The progressive dairy farmer needs a reliable helper and this is where we come in.

The MooMonitor will monitor your cows 24 hours a day, 7 days a week, 365 days of the year making it easier for you to plan synchronised/block calving. Accurate heat detection is vital in order to achieve optimal calving intervals, optimal yields and good herd reproductive performance.

A MooMonitor is a device that is fitted on the neck of the cow which records specific types of activity. The benefit of measuring activity on the neck is that it's a non-invasive external measurement and gives best cow comfort.

Data is stored for each hour of the day and is then downloaded to a base station at periodic intervals and the data is analysed in a PC to compare the activity to normal and also against the rest of the herd. The Farm Manager uses the MooMonitor Activity Analysis program to review, analyse and monitor cow activity to assist in heat detection.

The MooMonitor intelligent software fully integrates with the Farm Messenger which can be configured to alert the farmer via a text message a list of cows in heat. The MooMonitor software also integrates with VoiceAssist so that at milking time a voice alert will play on the parlour sound system alerting the operator of a particular cow that is on heat. With our Auto-Drafting System it can be set up to automatically draft active cows to a separate holding pen once milking has been completed.



Where cows are out on pasture they have a much higher variation in activity levels and this is the most challenging environment in which to detect cows in heat, during the development of the MooMonitor Dairyking conducted scientific trials to verify the accuracy of the system for cows out on pasture.

Economically the MooMonitor is well justified what with the costs of poor heat detection being reduced milk yield, insemination costs, cost of replacement animals and the cost of genetic improvement – can you afford not to improve heat detection?

# Farm Messenger

The Farm Messenger is an innovative and convenient management tool which allows the user to operate and communicate with their Dairyking parlour using their mobile phone. Information in the form of text message is sent between the user and their Milk Manager software using the Dairyking Farm Messenger. This inventive utility means that the user can now make management decisions whether on or off the farm.

When milking is completed a milking report can also be transmitted to the farmer showing the number of cows milked, the total milk yield, the milking start time and duration. The user can set up messages on the parlour sound system, draft cows, input veterinary information and much more. Reports may be generated and viewed as desired. One of the key advantages with the Farm Messenger is that most people already have a mobile phone in their pocket. This system can be securely configured to support multiple users.

With the Farm Messenger it is easy to retrieve and update information on individual cows even if you are off farm. The mobile phone is always with you so it is convenient to use. The system is fully secure, only authorised mobiles are allowed access. No downloading or uploading of information required - information is entered into the phone and sent directly to the Milk Manager program.

The key benefit of the Dairyking Farm Messenger is that you have remote access to vital information and reports. Accurate and timely information is the key to success!



**Information at your fingertips...  
automatic reports after each milking.**



# 11 Service & Aftercare

We believe that buying a Dairyking system is not a once off purchasing decision, but rather a long term partnership between you and our organisation. Dairyking and our network of distributors offer a comprehensive service to our customers focused on keeping your system maintained to the highest possible standard.





One of the key factors of our growth is that a good aftercare service is available. An investment in maintenance is an investment in your future.

## Service & Aftercare

Service is a very important part of caring for your equipment, so that you can care for your herd. Both through Dairyking itself and through our network of distributors we offer a range of service programmes which can be specifically catered to your needs.

One of the key benefits to all our customers is that in some markets Dairyking offers direct service to customers. This close relationship results in direct and timely feedback. This feedback is then put into use for product development catering for what you, the modern, progressive dairy farmer requires.

Due to this close relationship and feedback from our customers, Dairyking's equipment has been designed to be easy to service and install. We manage this through the use of common components this reduces the amount of labour required and reduces costs.

The first line of support is to contact your distributor directly this ensures that you get a quick response. Distributors worldwide are backed up by the expertise in the Dairyking technical and software teams.

### Genuine Spare Parts & Consumables

Dairyking's range of consumables and spare parts are specially formulated and engineered in order for you to get the best possible performance and life span from your equipment.

### Our Customers Say It All...

"The whole system is second to none and the back up service is exceptional. Dairyking have the best technology with simplicity behind it – it makes the farmer's job so much easier".  
Brendan Kavanagh, Ireland.

"The quality of the equipment, the innovation of the automation features and the back up service is fantastic". Kenny Boyes, Northern Ireland.

"If we need something, we can call and talk to them... to us that was a huge selling point,"  
Rick Stevens, USA.

"I find them great to deal with, their equipment is stronger and more robust than a lot of what's out there and the service is fantastic and on top of all that the comfort in the parlour is top class." Kevin Devane, Ireland.



Contact us today and see the  
benefits of a Dairyking  
system for yourself...



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Manufacturers of milking parlour equipment,  
automatic scraper systems, cow control systems,  
stallwork products, cow drafting systems,  
feeding systems for in parlour and out of parlour  
regimes, heat detection & much more!

**Milking**

**Feeding**

**Manure Scrapers**

**Cooling**

**Heat Detection**



[www.dairyking.com.au](http://www.dairyking.com.au)

*Experience the difference!*