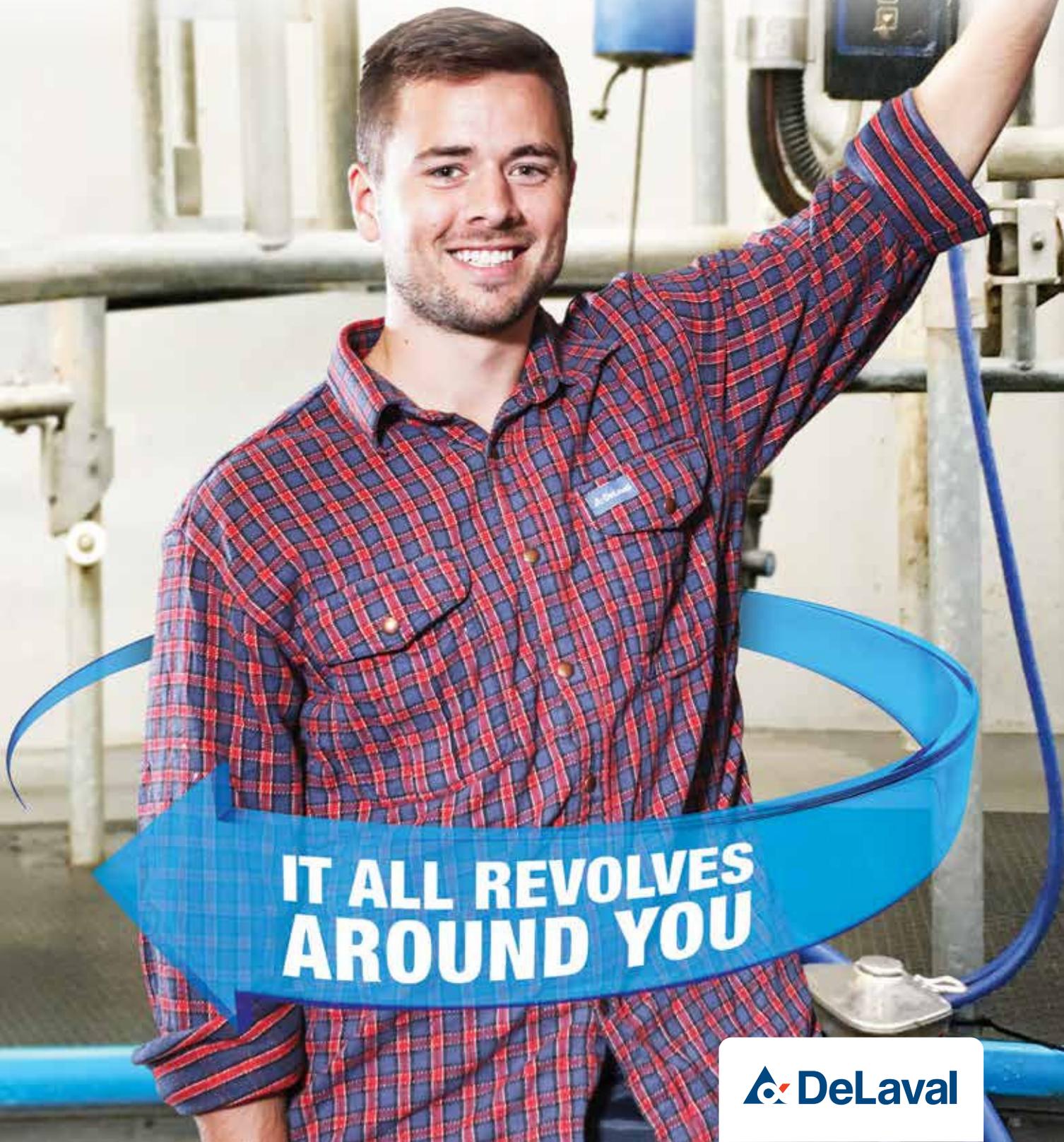




# GET MILK READY

Your system works best with DeLaval Detergents, which is no real mystery, after all, we designed it that way.

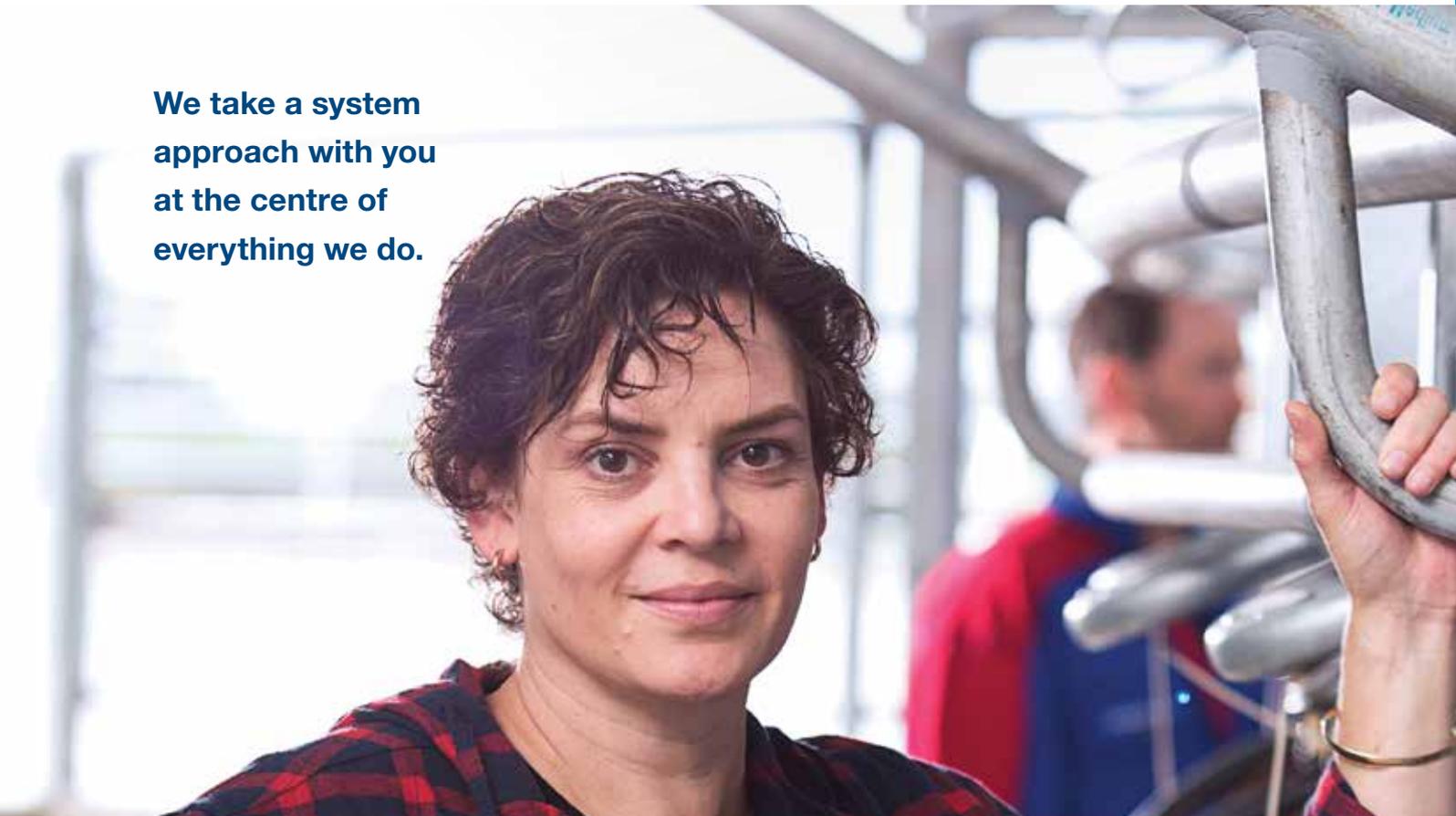


**IT ALL REVOLVES  
AROUND YOU**

 **DeLaval**

# IT ALL REVOLVES AROUND YOU

**We take a system approach with you at the centre of everything we do.**



**Dairy farming is a complex business where everything needs to come together every time you milk. That's what we call being Milk Ready.**

**It means never wasting a single minute of all your hard work and making sure that every time a milking**

**unit is attached, your system is ready and able to extract, transport and store the highest quality milk.**

**This means not just thinking about one point in the process, but looking at everything from chemicals and water to routines and training.**



## Animal Welfare

DeLaval detergents & cleaning have no negative effect on animal welfare. We will not promise something that we cannot deliver.



## Farm Profitability

DeLaval detergents are optimised to work with your equipment. We will ensure optimal dosing for maximum cleaning efficacy.

# TAKING A 360° VIEW OF YOUR FARM



## Work Efficiency

One supplier with complete competence on detergents, equipment and the best settings for your farm, that's simply peace of mind.



## Food Safety

DeLaval detergents are fully compliant with the latest legislation and dairy processing demands to secure your milk quality and avoid residues in milk.

# GET MILK READY FOR BETTER RESULTS

## It's about focusing on your milk, not just detergents.

We don't formulate and manufacture detergents because selling chemicals is all we do.

We do it because dairy is all we do.

For 135 years we have been at the forefront of the dairy industry, designing, manufacturing, installing and operating more milking systems

than anyone on the planet. That's why we also design, formulate and produce things like liners, oils and detergents that we know will work seamlessly with our systems to deliver the results you expect from us, and that we expect from our systems.

As a result, we produce detergents that are focussed on delivering the highest quality milk.

It means that, rather than just cleaned, with DeLaval you know that your milking system is Milk Ready.

### HIGHER MILK QUALITY

- Low total bacteria count
- No residues

### INCREASED EQUIPMENT LIFETIME

- Reduced wear on equipment
- DeLaval detergents made and tested to work with DeLaval equipment

### CLEANER MILKING EQUIPMENT

- Reduced risk of biofilms
- Reduced risk of milkstone
- Bacteria doesn't grow on clean surfaces



A woman wearing a dark blue DeLaval cap and a matching jacket is looking at a handheld rugged device. She is in a dairy processing plant, surrounded by stainless steel pipes and machinery. The background is slightly blurred, focusing attention on the woman and the device.

**PROVEN  
EFFICACY**

All detergents have passed challenging cleaning tests\*

**100%  
COMPATIBLE**

No damage to sensitive original parts within lifetime\*

**LINER FRIENDLY**

No effect on original liner material & elasticity within lifetime\*

**30+ YEARS OF  
EXPERIENCE**

In formulating and manufacturing DeLaval detergents

**MPI/APVMA  
APPROVED**

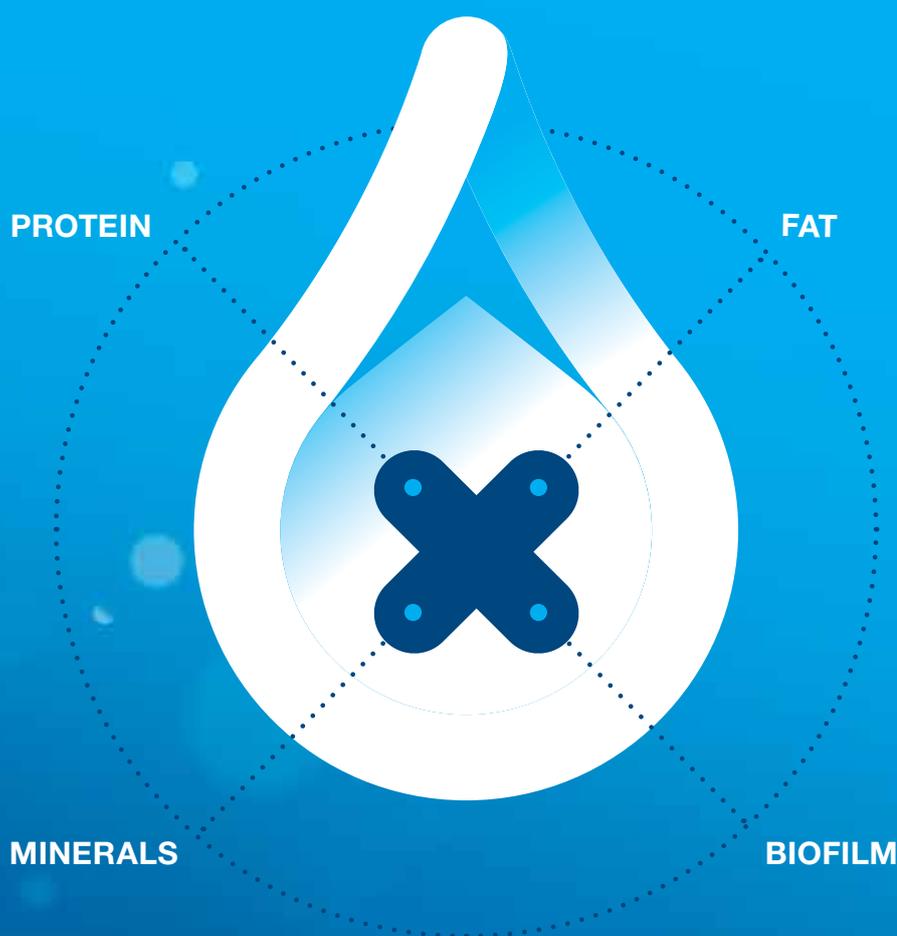
All detergents have passed the demanding tests.

**It's all about being ready for the most important moment on any dairy farm: the next milking.**

\*Proven in challenging in-house lab tests

# WHAT CAN STOP YOU FROM BEING MILK READY?

The strange thing about milk readiness is that the two things that can prevent you from being Milk Ready are in fact milk and the water you use to clean your milking system.

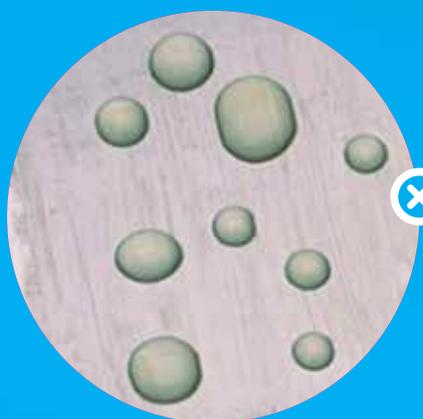


# WHAT TO LOOK FOR?

How to easily recognise the main challenges on your farm

## PROTEIN

In newly formed milk deposits, protein concentration can reach up to 20%. On equipment, it gives these recognisable rainbow-like colours.

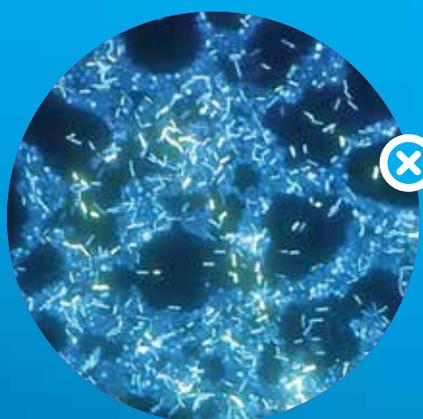


## FAT

In newly formed milk deposits, fat concentration can reach as high as 25%. Fat deposits can look and feel like a greasy layer.

## MINERALS

While there are minerals present in milk, the ones present in the water used for cleaning can be a much greater problem. Mineral residues give a powder-like appearance, and can be white or orange/red depending on the type.



## BIOFILM

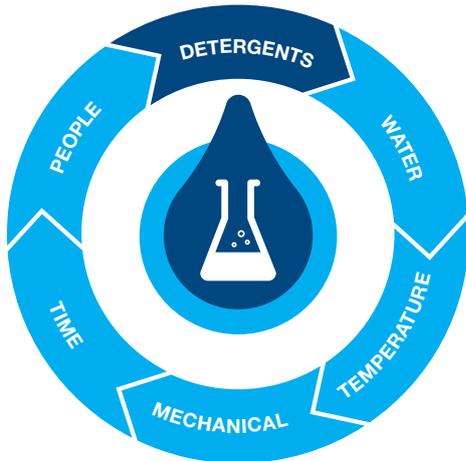
Sudden peaks in bacteria count can be caused by biofilms. Biofilms usually form on a soil deposit that has already adhered to equipment surfaces. They can typically be found in harder to clean areas. These complex living communities of bacteria, fungi and other micro-organisms are hard to clean with regular cleaning routines.

# GET MILK READY



We develop and produce detergents specifically formulated to work with the cleaning systems and processes used by modern milking systems.

This means they are fierce with contaminants, but gentle on your system and its components.



## WHAT IS THE ROLE OF THE DIFFERENT DETERGENTS IN THE SUCCESS OF CLEANING?

**The formulation of a cleaning product relies on the functional properties and possible combinations of well-known chemicals. To effectively prevent deposits the following properties are considered:**



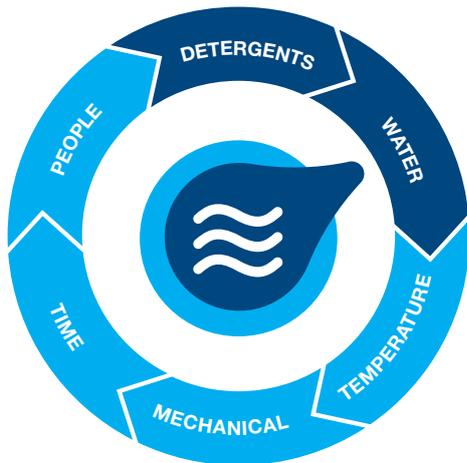
**Alkali:** An alkaline detergent will convert fat into a soluble compound that is suspended and can then be rinsed out with the cleaning solution (saponification), so it doesn't stick to equipment surfaces.

**Surfactants:** The main function of surfactants is to detach deposits from surfaces and suspend them in solution.

**Acids:** Dissolves minerals and can remove general milk deposits in combination with surfactants.

**Chlorine:** Breaks proteins into smaller parts and has disinfecting properties. Liquid chlorine is unstable, depending on formulation and storage conditions. Therefore, avoid long storage, high temperatures and exposure to UV light to maintain product efficacy.

**Water softeners:** As minerals reduce the cleaning efficacy, water softeners are used to counteract this and to avoid minerals settling in the installation.



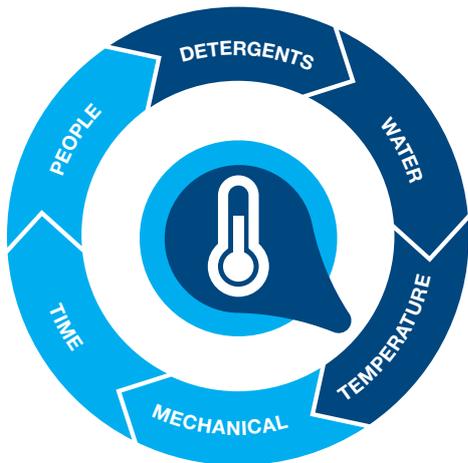
## WATER CONTAINS MINERALS AND HARDNESS IS A MEASURE OF THESE MINERALS

**Hard water may cause problems in hot water heaters and other equipment due to the formation of mineral deposits. It will also reduce the effectiveness of the detergent if not dosed properly. For this reason, properly formulated detergents contain ingredients that counteract these effects.**

We will help you choose the chemicals and processes that suit your water source.

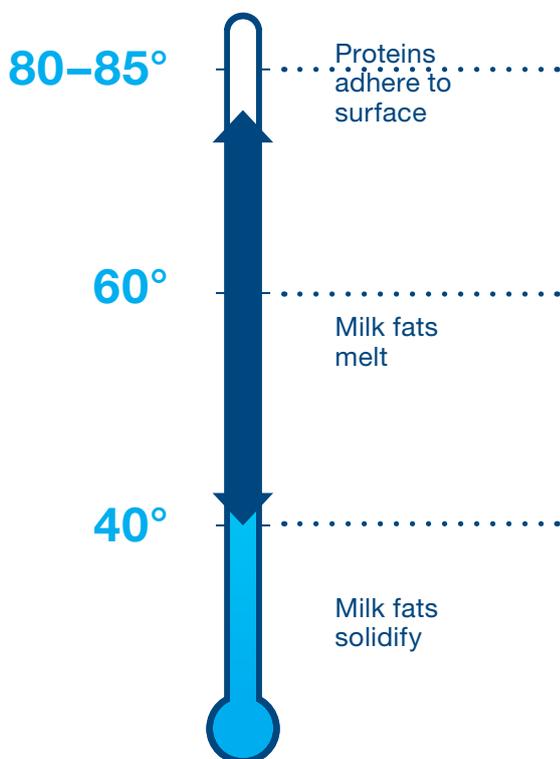
Water quality and quantity must be tested and understood. The source must be known and the minerals in suspension must be tested. Knowing these details helps to recommend the correct products for your system. Water quality can significantly impact cleaning success and must not be underestimated.





## TEMPERATURE IS A CRITICAL ELEMENT IN ANY CLEANING PROCESS

The role of heat is to improve the dissolution and emulsification of different materials and to enhance detergent action. It is important to use the right temperature at each stage. If the temperature is too low – milk fats will solidify, if it is too high - milk proteins will adhere to surfaces, becoming very difficult to remove.



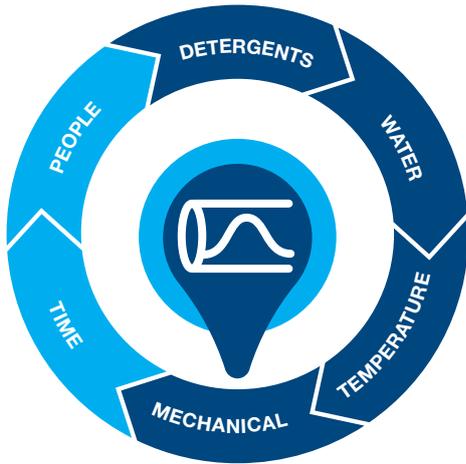
**Pre Rinse:** A warm water rinse, to get rid of most of the milk residues after milking. The rinse should continue until the discarded effluent water is clear. The temperature should not exceed 45°C in order to avoid denaturing any native proteins, which would then become much more difficult to clean, but should also not be lower than 35°C because then fats will solidify.

**Main Rinse:** A circulation cleaning with a cleaning solution containing the detergent. The water temperature is usually around 80° to 85°C at the start and is decreased to about 55°C at the end of the circulation. An actual cleaning temperature of 70°C will also boost detergent efficacy. The end temperature should never be below 60°C since this could cause the formation of fatty coatings.

**Post Rinse:** A final rinse, usually with cold or luke warm water, to remove any residuals of the cleaning solution. “The last glass of (post-rinse) water coming out of your system, should be be clear!”

**Always follow the label instructions and use appropriate safety equipment.**

*Some products are specifically designed to operate outside of the guides presented above. Adhere to label instructions*

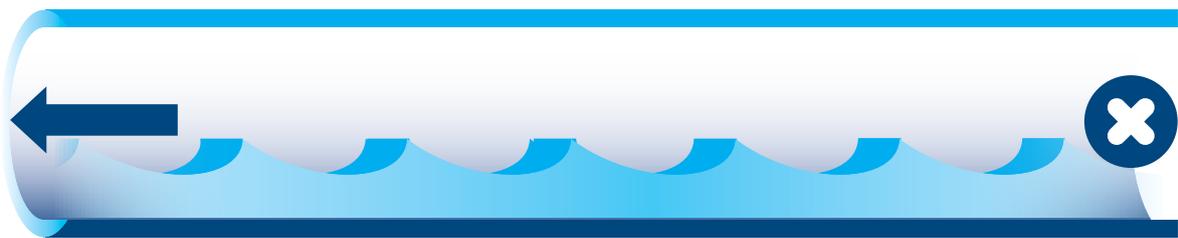


## SLUG FORMATION: SLUG QUALITY AND QUANTITY IS CRITICAL FOR CLEANING

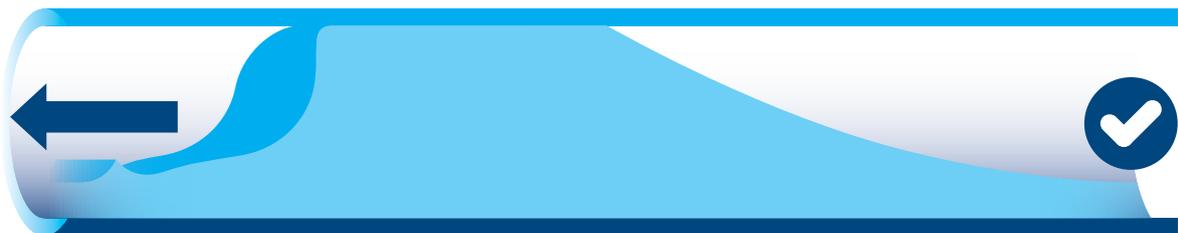
**A slug can be described as a moving cylinder of water measuring from a few centimeters to several meters in length.**

An effective slug fills up the whole pipe section over its length.

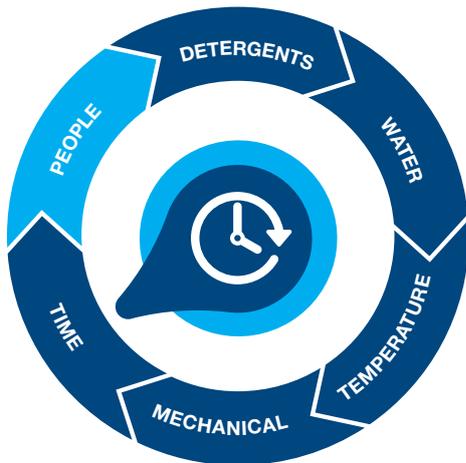
This means that all surfaces in the pipe will be reached by the cleaning water including the “roof” of the pipe.



Not optimal flow



Optimal flow

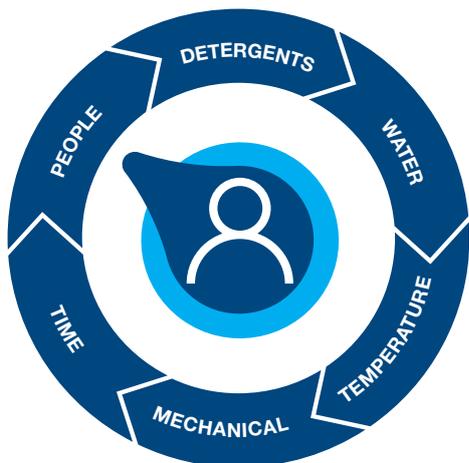


## 7-10 MINUTES OF MAIN CIRCULATION TIME (MAIN RINSE) IS RECOMMENDED

**Cleaning must be long enough to ensure proper contact time between water, detergents and all milking system parts and surfaces, and to allow optimal mode of action of the detergent.**

On the other hand cleaning must not be longer than needed because temperature will then drop too much, which can result for example in sedimentation of fat particles (will solidify in low temperatures).





## WE WILL USE OUR EXPERTISE ON EQUIPMENT, DETERGENTS AND ROUTINES TO OPTIMISE YOUR CLEANING RESULT

**DeLaval will ensure an optimal balance of all cleaning factors with correct settings and dosage to ensure that you are Milk Ready. All you have to do is regularly check the cleaning results and unit in case of unforeseen circumstances.**

Our service technicians are trained to check, service and optimise your cleaning results to your farm conditions. They will help you select the best detergents for your farm and optimise dosing accordingly.

As well as carrying out the key Milk Ready cleaning tasks consistently and thoroughly, it is essential that storage and replacement of detergents follows best practice. Store them out of direct sunlight and regularly check shelf life. Chlorine based products are known to degrade over time so large amounts of stock are not advised.

## DeLaval Cleaning Analysis DCA

### A unique process from DeLaval

Measurements of slug speed, length & validity, combined with cleaning temperature is evaluated through a complete CIP cycle.

A complete CIP cycle consists of filling time, wash time and drain time.

Optimal wash time is key for good results:

- Too long: lower temperature
- Too short: insufficient 'soaking time'
- Too short: insufficient number of slugs

One of our trained technicians will review your dairy operation to get hard data on the performance and operation of your cleaning systems. With this data, the technician can adjust the influencing parameters of your CIP to reach optimal cleaning.

Delaval



Keep your milking system performing at the level you demanded when you purchased it.

# WHAT ARE THE CRITICAL POINTS?

By checking the cleanliness of the following parts, it is easy to identify potential cleaning issues. In case of problems, ask your trained DeLaval service technician for effective troubleshooting. They know the equipment, can check cleaning settings and advise the best solution to resolve and prevent any cleaning issues.

## MILKING INSTALLATION

- Filter unit – check for any residue
- Liners – check for wear or black residue

## PARLOURS

- Cluster bowl – check for any residue
- End receiver – check for any residue

## AUTOMATIC MILKING SYSTEM

- Preparation cup – check for any residue
- Buffer tank – check for any residue

## COOLING TANK

- Tank outlet – check for any residue
- Spray ball & nozzle – check for blockings





**DeLaval**

**Don't just clean.**

**Make sure that your system is  
ready to extract, transport, cool and  
store the highest quality milk.**

# HELPING YOU TO SELECT THE RIGHT COMBINATION OF DETERGENTS TO ENSURE YOU ARE MILK READY

## Step 1

### Choosing the correct Alkali

	WATER HARDNESS		
	SOFT	MEDIUM	HARD
Chlortech	👉👉👉	👉👉👉	👉👉👉
Power Pak	👉👉👉	👉👉👉	👉👉👉
Dynamite Plus	👉👉👉	👉👉👉	👉👉👉
Alkali HW	👉👉	👉👉	👉👉👉
Chloridet	👉👉	👉👉	👉
Liquid Dynamite Plus	👉👉	👉👉	👉
Liquid Alkali	👉👉	👉👉	👉

👉 Good    👉👉 Great    👉👉👉 Excellent    **NS** = Not Suitable

\*Use biocides safely. Always read the label and product information before use.

## CLEANING EFFICACY

PROTEIN	FAT	MINERAL
👉👉👉	👉👉👉	👉👉👉
👉👉👉	👉👉👉	👉👉👉
👉👉👉	👉👉👉	👉👉👉
👉	👉👉👉	👉👉👉
👉👉👉	👉👉	👉
👉👉👉	👉👉	👉
👉	👉👉	👉

### Chlortech

- Highly concentrated, heavy-duty, chlorinated alkaline milking machine detergent.
- Fast milk fat and protein removal in difficult to clean systems.
- Low foaming therefore suitable for all types of machine cleaning
- Pack size: 20kg bag or 20kg pail  
(APVMA - 54470)

### Power Pak

- Highly concentrated, heavy-duty chlorinated alkaline detergent
- For the periodic “bomb” cleaning of butterfat and milk protein residue build-ups.
- Suitable for all machine cleaning
- Pack size: 2kg or 10kg pail  
(APVMA - 54471)

### Dynamite Plus

- Premium quality, chlorinated alkaline powder detergent with a caustic base for more effective removal of fat and protein.
- Contains high levels of water softeners ideal for use in water up to 700ppm total hardness.
- Pack size: 20kg bag  
(APVMA - 54472)

### Alkali HW

- Tolerant, hard water alkaline powder detergent containing a high level of water softeners that has been formulated for use in water up to 1000ppm hardness.
- Contains alkaline salts to remove milk fat & protein.
- Pack size: 20kg bag  
(APVMA - 54476)

### Liquid Dynamite Plus

- A balanced chlorinated liquid alkaline detergent to remove fat deposits and protein residues.
- Allows a consistent flow and dosage in automated detergent dosing equipment.
- Suitable for water conditions up to 400ppm water hardness.
- Pack size: 20L, 110L  
(APVMA - 54027)

### Liquid Alkali

- A concentrated liquid caustic detergent with wetting agents and excellent fat and protein dissolving ability.
- Recommended for use with automatic cleaning systems.
- Pack size: 20L, 110L, 200L  
(APVMA - 54474)

### Chloridet

- A highly concentrated liquid chlorinated alkaline detergent for the removal of fat & protein deposits
- For milkstone removal in milking plants
- Pack size: 20L, 110L  
(APVMA - 60691)

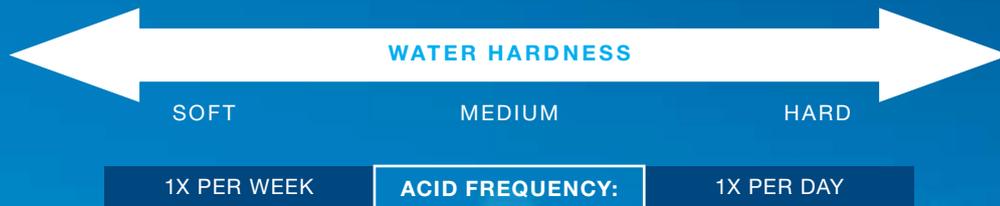
## Step 2

## Choosing the correct Acid

Your required acid-to-alkali ratio depends on your water hardness and the cleaning efficacy of your selected Alkali.

Alkaline dominant routine  
1 to 4 acid washes per week

Alternating routine  
1 acid and 1 alkaline wash per day



	ACID CHOICES		
	LIQUID/POWDER	MINERAL REMOVING POWER	NOTES
<b>Antistone</b>	LIQUID	💧💧💧	
<b>Cidisan</b>	LIQUID	💧💧💧	Extra surfactants for better cleaning of all soils
<b>Alfaguard</b>	POWDER	💧💧💧	Super concentrated powder
<b>Acidet Plus</b>	LIQUID	💧💧💧	

### Antistone

A low-foaming nitric acid-based liquid detergent for the removal of mineral residues. Economical dose rate which works well in water containing dissolved minerals.

Pack size: 20L, 110L, 200L  
(APVMA - 54468)

### Cidisan

A premium quality, ultra low-foaming acid sanitiser that cleans well in all water types, especially suited for use in water that is high in iron. Effective in highly turbulent milking machines.

Pack size: 20L, 110L, 200L  
(APVMA - 63290)

### Alfaguard

A rapid dissolving, economical, powdered detergent for milkstone removal. Formulated for daily use and performance is unaffected by water hardness.

Pack size: 20kg  
(APVMA - 54463)

### Acidet Plus

A low-foaming acid sanitiser that is based on a concentrated blend of phosphoric acid & dodicin to assist in the removal of milk stone and iron deposits. Able to be used in automatic cleaning systems.

Pack size: 20L, 110L, 200L  
(APVMA - 69733)

# WE HELP YOU STAY MILK READY!

**We want to make sure you get the optimal output from both our milking equipment and consumables (e.g. detergents).**

We train our service technicians to optimise cleaning according to your equipment and farm situation. This means we can ensure:

- Advice about detergents and help you to select the best product for your milking and cooling equipment, based on your farm challenges
- Optimal settings of the milking and cooling installation and the cleaning unit.

Cleaning milking equipment is essential for milk quality and with DeLaval, you can be certain that when you run your cleaning process, it contributes to the best milk quality possible without using too much hot water or detergents. Through continuous training and supplying our technicians with the best tools and materials available, we will keep you Milk Ready!



**You take care of extracting  
milk from your cows.**

**We'll take care of extracting milk  
residue from your system.**

# **InService™ All-Inclusive**

**For one agreed price we will  
make sure that your milking  
system is Milk Ready. It all  
revolves around you. This means  
we will carry out scheduled  
servicing and supply - for  
example, chemicals and filters.  
We will even advise you about  
detergent storage conditions,  
keeping in mind their shelf life.**

We will help to select the best product for your installation and challenges. Our trained DeLaval service technician will ensure cleaning is well-balanced for maximum cleaning performance and minimal impact on your equipment. They know the installation, cleaning equipment and DeLaval's detergent range to secure your milk quality and maximise your income!

With DeLaval InService™ All-Inclusive we will carry out routine maintenance, scheduled servicing and the replenishment of consumables, including your preferred detergents; all for one agreed price.

Making sure your cleaning system is performing at the optimal level - liners, tubes, detergent, teat spray, filters and oil will all be replaced as required throughout the agreement.



*We live milk*

[delaval.com](https://delaval.com)

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