



home of world-class dairy equipment & innovation



## milkrite InterPuls

# Stress-free milking for you and your animals



# Mouthpiece Vented Triangular Liners

- Reduced teat-to-teat contamination
- More efficient milk removal
- Exceptional cow comfort
- Improves teat condition
- Reduced slips and kick-offs
- Easier cluster removal

#### **FAST FACTS**

- 40% of USA Dairy farmers use Milkrite liners...
  4.5 million cows milked every day
- 5 of the world's biggest dairy farms use Milkrite liners



**Gentle**Three-sided teat massage during milking

"We saw the results straightaway. Our SCC immediately dropped from 250,000 to around 150,000. And, since then, we've probably been closer to a 120,000 to 130,000 average".

Wayne Kuhne – Gippsland, Victoria.

Impulse 300 Claw

# **CHALLENGING TIMES**

I've been privileged to both witness and be part of many changes and much growth in Daviesway/DASCO during my career.

But despite all the evolution, two things remain the same.

One is the challenge the Australian dairying landscape continues to throw at us. The other is Daviesway's commitment to stand alongside our farmers. Our focus remains firmly on new technology, service and information-sharing to help with efficiencies — and your bottom line.

One technological breakthrough is undoubtedly Milkrite's mouthpiece vented triangular liners. For that reason, they feature strongly within these pages. These liners include a world-first combination of science, dramatically improving teat health, dropping SCC and negating cup slip. There are now more than 350 installations in Australia, and the stories within this publication showcase some of the results.

#### Who are we?

Daviesway continues to be a family -owned Australian business. Just over three decades ago, we employed one salesperson. Today, we are home to a team of 70 staff located throughout the country, and we have alliances with more than 700 dealers, resellers and retail rural outlet stores across Australia.

#### Global networks

Our strong global networks with household brands within our industry are also a vital piece of our operation.

## Manufacturing, calf-rearing and DASCO

We enjoy the advantage and flexibility of an in-house manufacturing arm in Victoria, in addition to a full service and technical team. We have a calf-rearing specialist department (including Australia's only dried colostrum for calves, kids and foals), and – finally – an in-house chemical manufacturing plant, DASCO, which introduced pre-mixed dairy detergents in Australia.

#### Standing up

Historically, we have been happy to be one of the dairy industry's best-kept secrets; however, we feel the industry now needs a more visible path to the best information, specialists, designers, products and technology on offer. For that reason, we are embarking on a mission to share breaking news and innovation from our global partners.



#### **NIKK TAYLOR**

General Manager – Daviesway/DASCO Mobile: 0438 600 251 Email: nikk.taylor@daviesway.com.au

Nikk Taylor has been with Daviesway/DASCO for 21 years, working across all aspects of the business, including expanding the family-owned Australian operation into East Asia.

You may also notice more of a Daviesway presence in the seminar and workshop space. This is also a deliberate decision to share best-practice information.

Because, as in everything, strength comes down to the people.

We recently upgraded our website and it's jam-packed with information, videos, stories and feedback. Don't hesitate to check it out at www.daviesway.com.au.

We trust you enjoy the read, and if you have any questions, don't hesitate to contact one of our team.

# Jetter Range

Robust • High Performance • Versatile

Designed by Daviesway the versatile **Variflo and Flo-Tek jetter range** have been an integral part of dairy farm wash systems for more than three decades.















Perfect fit for all Milkrite<sup>®</sup> shells that use an IP15, IP13 and IP10 Milkrite<sup>®</sup> liners



# BIGGEST SINGLE IMPROVEMENT IN DAIRY

It's a big call when Wayne
Kuhne says installing
Milkrite Vented Triangular
Liners has been the "best
single improvement" his
family has made to its dairy.

**IMPACT RESISTANT SHELL** 

Internally moulded in a triangular shape to optimise liner performance



**TWO CHOICES** 



Impact resistant plastic weight



Stainless steel weight

That's because the Kuhne family is a power player in the industry – running under the internationally recognised, Bushlea Jerseys.

The family milks 420 registered Jerseys on 150 hectares of prime rolling dairy country in Gippsland, Victoria. Bushlea has arguably kicked more goals than any other Jersey breeder in the country, and the Kuhnes are equally sharp business managers.

This is the home of the 2017 Supreme Champion and 2018 Grand Champion Jersey from International Dairy Week, and in October 2018 an animal Bushlea bred created history when she became the first Australian-bred animal to finish third in an in-milk US milking class at the biggest dairy show in the world – World Dairy Expo.

However, at home, far away from the hype, Wayne Kuhne never loses focus on making the dollars make sense, and his investments are always studied choices. In 2002, the family had installed a 20-a-side Rapid Exit Herringbone dairy, through Daviesway.

And, in 2018, they decided to make the switch to Milkrite – the world's only internally triangular moulded plastic shell, and mouthpiece vented triangular liners.

"We were looking for a change," Wayne said. "We were having a bit of trouble with our SCC (Somatic Cell Count).

So, I talked to a few people that had Milkrite, and I also talked to Daviesway. We were due for a service, and to change the liners in our old claws. So, we thought it'd be a good time to make the switch, if we were going to do it."





#### MILKRITE – MOUTHPIECE VENTED TRIANGULAR LINERS

- Air enters the system through a calibrated air vent in the liner mouthpiece above the milk
- Smooth efficient airflow eliminates milk reflux and forces the milk in one direction away from teat end
- No cross-contamination = less mastitis & lower SCC



Perfect teat ends

The marked point of difference in the science is that the pulsation pressure is evenly distributed from three sides of the teat – making it gentler on teats, lowering SCCs and promoting teat condition.

In addition, the air vent (which is positioned in the mouthpiece at the top of each liner, instead of the claw), introduces air above the milk-flow, eliminating splash-back, cross-contamination and making cluster removal gentler.

"We kept our existing Boumatic claws, but we added the Milkrite shells and liners. It wasn't an insignificant financial decision, but the feedback we got from other farmers was just unanimous – everyone thought they were great," Wayne said.

And, it didn't take long for Wayne to see why.

"We saw the results straightaway. Our SCC immediately dropped from 250,000 to around 150,000. And, since then, we've probably been closer to a 120,000 to 130,000 average".

"It's been a massive result for us. We've only had three mastitis cases in five months, since we installed Milkrite. And, in the past, we'd have no mastitis and then if we got one case, we'd get six. With Milkrite, if we do get a case it has been nice to contain it to a singular cow."

The other upside – which their autumn calving hinted at, but the spring drop confirmed – was the ease of breaking in freshly calved two-year-olds.

"We calved in 250 cows in the spring, and the heifers (in particular) have been just excellent to break in," Wayne said. "We had started to notice that at the end of our autumn calving, but we didn't have enough heifers coming through at that time to give us enough of a sample to be completely sure.

"The inflations must be extremely soft on the teat, because the heifers just don't move. Even when the heifers have swelling after calving, there are no marks on their teats, and they are so easy to break in that the inflations must not cause them any discomfort. Teat-slip is also a thing of the past.

"There is no doubt in my mind that this is probably the best single improvement we've ever done in the dairy."



Cluster control in the palm of your hand

Finally, you can easily customise your cluster equipment so they work exactly the way YOU want them to...

#### CR-1 - Electronic Cup Remover



- can be fully customised, using the most up-to-date software
- programmed from any Wi-Fi enabled device
- controls existing components
- in-built system diagnostics & alarm sensors
- controls pulsators
- claw drop / claw lift functionality



# SCC DROPPED BY UP TO 100,000

in north-west Victoria. The couple, who have bred and owned the most Grand Champion Holsteins at International Dairy Week - including the 2018 Supreme Champion of All Breeds - milk 400 cows through a 44-stand rotary in a busy operation, which produces 3.3 to 3.6 million litres on a Partial Mixed Ration annually. They conquered a concerning SCC climb in 2018 that - while not sliding them out of premium grade - was impacting on animal health, and the high achievers' mind set. With their SCC hovering too close to 200,000, the main problem wasn't the numbers, but the impact on some young cows who had developed mastitis for no apparent reason. They decided they needed some fresh perspective and asked their local vet, Clavin and Rogers, and independent consultants Dairy Focus, at Kyabram, to assess their dairy, and their own performance within that. Their 18-year-old plant was an obvious target, and they braced themselves for the financial outlay. "They identified straight away that our cups and inflations didn't match our cows," Steve said.

Steve and Deanne Hore took their cows inside this summer, housing their herd in a newly completed shed with a modified manure pack.

Asking questions and being prepared to hear the answers

dropped Steve and Deanne

by up to 100,000 on their

**Hore's Somatic Cell Count (SCC)** 

1500-acre Leitchville property



"We'd been using those same inflations for 18 years. And, the assessment of us working in the dairy wasn't great either, to be honest. So, we had to change things."

They involved Daviesway's Philip Schulz once they got the results in. After trialling several different options, they decided to switch to Milkrite mouthpiece vented triangular liners and shells, combined with a Boumatic claw. Steve and Deanne also made other management changes.

"We now cup-on five or six bails in, to allow a better milk let-down," Steve said.

"The cows exit the dairy and go straight to the mix, whereas they used to have to stand and wait. We also changed our teat dip back to a premix teat spray, and concentrated on a better application."

The changes cost them \$30,000, and Deanne says it was worth every cent.

"You wonder, 'what is a lot of money?'
Deanne said. "We were looking at installing
ACR [Automatic Cup Removers] or changing
our pulsation before the assessment, and
we've been able to hold off on that because
we've got results with what we're doing".

"It actually becomes very cheap when your SCC is consistently running at between 70,000 to 80,000 on 400 cows. When you also consider the lower stress levels, vet costs and overall herd health, it's been a no-brainer for us."

Steve said, in hindsight, questioning both the plant and their own performance was the right thing to do.

"It's been back to basics a bit. But I'd encourage all farmers to question their protocols and take the time, and work through the criticisms for a better result. The flow-on effect has made a significant impact on our overall herd health."







#### **BMCC CALCULATOR REPORT**

# Based on an average BMCC of 200,000 cells/ml INCREASED INCOME FROM LOWERING BMCC

Average BMCC on 400 cows	Increased income/ cow/year	Increased total income/year
150,000	\$47	\$18,800
100,000	\$75	\$30,000



The Hore family pictured .after winning Supreme Champion at IDW 2018. (L-R) Marty, Brady, Kelsie, Steve and Deanne Hore. Photo: Bradley Cullen.



# NEW DAIRY CHANGES FAMILY'S LIFE

#### Gippsland share farmers Ben and Lou Hall look forward to milking these days for good reason.

The couple, who work for Sam and Pattie Linklater, are milking in a spanking new 36-stand rotary dairy at Victoria's Buln Buln East. It's a far cry from the dairy that used to stand on this site — a 20-a-side herringbone dairy with no stall gates — which took 7.5 hours to milk on a good day, without breakdowns.

Ben and Lou are quick to acknowledge the freshly minted dairy they now wake up to every day, has eased their workload in so many ways.

Built after close collaboration with Daviesway's specialist team, the Allenby Engineering platform formed the base for a full Daviesway plant. It includes a M8 Vacuum pump, a BouMatic Auto wash system with Wilson Hot Water Services, a lowline milking system with Variable Speed Drive (VSD) milk pump, a Jumbo milk filter, an industrial plate cooler, Tech-line Visi claws together with Milkrite shells and vented triangular liners and Milkrite Interpuls High-line pulsation. It also included a Daviesway independent bridge-mount teat sprayer, with Ambic cow locators.

Milking is now one hour and 10 minutes of smooth sailing.

"When I finish milking, I'm no longer worn out and angry," Ben smiles. "Neither are the cows. It's like a different herd. It's unbelievable."

Ben said the rotary takes 11 minutes per round on a freshly calved herd.

"And, we're not pushing it at that.

We could do it in nine to 10 minutes, but we've tailored it. We're sending about five to six cows around again, which we are comfortable with. Because it's still faster milking to send 10 per cent of the herd around again, than it is to send none and slow the platform down.

"For the size of the farm and the amount of cows we milk – peaking at 320 – this sized dairy is a perfect solution. Even if we milked 360, it's only 10 laps."

The Milkrite vented triangular liners have been a winner – its global popularity a result of the revolutionary design.



Pictured from left, Greg Lechte (Daviesway Manager - Warragul) and Ben Hall

#### **COW LOCATOR**

- Makes the cows stand in an ideal position for optimum milk-out
- Ideal for easy cluster attachment, automated teat spraying, and health checks



#### **INTERPULS PULSATION CONTROLLER**

- Push-button adjustments for optimum performance
- Controlled pulsation firing reduces vacuum fluctuations

"I get one set of cups kicked off every 10 milkings, and I no longer get cup-slip," Ben says.

"In the old dairy, I'd have 10 cups off every milking. The clusters used to be heavy, and when one cow would kick, she'd mostly likely knock the cups off the cow next door, which often turned into a knock-on effect.

"It's amazing the difference the new dairy makes in that regard. The heifers are also doing better, because they get their own feed and bail, instead of getting pushed around by the bigger, older cows."

Ben said he was determined to include cow locators, because he also wanted Automatic Cup Removers (ACR) and auto teat spray — making the dairy a one-person operation if it was needed.

"With the ACRs you need the cows standing right, so when the cups come off everything else flows smoothly. The cups hang better, so the milk out is nicer and it makes the teat spraying more accurate."

Ben said they chose the Tech-line Visi claws because they were cost-effective, light, robust, and manufactured in-house by Daviesway at Warragul. A claw-lift feature is a practical advantage because as one set of cups is activated, it pre-lifts the next unit in readiness for the operator.

In a nod to worn backs across the nation, the new jetters fold up and out of the way during milking, and attaching the clusters after milking involves no bending.

A variable speed milk pump cools the milk to 6°C by end of milking and a Bou-Matic auto wash system saves the couple 20 minutes every milking. "Both of those additions have been fantastic," Ben said. "The milk in the vat used to be still 20 degrees by the end of milking, so I suspect our power bill will now be better too.

"And, we can start the auto wash system after milking...and walk away."

They chose to include two feed heads in the grain-feeding system, so they can lead feed the dry cows. And, they installed an extended bridge area where they can stand at cow-height on the platform at cups-off, and treat cows while they are still on the rotary, if they choose.

"It makes it quicker and less stressful for everyone," Ben said.

The final piece of the puzzle is that Ben knows Daviesway has a dedicated local service team.

"I can ring Daviesway at 6am and they'll be here in 15 minutes. It's nice to be working with local guys, who have such a great understanding of every part of our dairy."



## BRIDGE MOUNTED TEAT SPRAY SYSTEM

- Controlled from the ID system and it can also stand alone
- Doubles as a platform stop if the cluster approaches the bridge gap
- Adjustable spray time and pressure
- Sensors for cow, milking cluster and cow retention



Flo-Tek dual gland and sanitary trap system



#### GUARDIAN II AUTO PLANT WASH SYSTEM

- Controls all functions of washing including vacuum and milk pumps
- Controls hot & cold water valves, drain valves
- Three chemical pumps
- Five different fully programmable wash programmes



# DETERMINED TO SEEK CHANGE

Victorian dairy farmers Jason and Abby Burleigh were frustrated with their fluctuating somatic cell count (SCC) and teat-end condition until they made a game-changing decision.

Consciously clean and methodical in the dairy, the couple milks 240 cows through a 22-a-side herringbone dairy with Automatic Cup Removers at Nullawarre, in south-west Victoria.

With an average production of 698 kilograms of milk solids per cow, environmental mastitis outbreaks had haunted them periodically. And, when their SCC spiked at 200,000 three times, it was the final straw.

Jason said, "We had always had bad teat-end condition. Always. At dry-off I got to the point where I was so frustrated and disappointed that we had the vets out to see what was going on. They said it wasn't too bad. But every sample of mastitis was coming back as environmental — and I wasn't happy with it."

#### Unique design logic calls

When the Burleighs read about Milkrite – the world's only internally triangular moulded plastic shell and mouthpiece vented triangular liners – they resonated with its unique design logic.

They liked how any cross-contamination between cows was eliminated by the clever positioning of the air vent. Located in the mouthpiece of the shell instead of the claw, it introduces air above the milk-flow — and stops splash-back. It also makes cluster removal gentle.

Abby said, "It made sense to us that the pulsation pressure could be evenly distributed from three sides of the teat – and that it would theoretically make milking gentler on teats, lower SCC, and promote teat condition."

Jason adds, "Good old Google. We watched a lot of footage on there about them, and had a sample set in our dairy for a while before we made our final decision to switch."

#### **Dramatic udder-health improvement**

Daviesway's Milkrite specialist Leon Lourey has been marketing liners for 25 years. He said he's never seen any other liner make such a dramatic improvement in udder health, so he's not surprised that, as the word spreads, the liner everyone now asks him for is ... Milkrite. He said the trend is everywhere, with more than 40% of US dairymen now using the technology.

"I guess that's why the technology has been dubbed the biggest advance in the milking process in a generation," Leon said. "Anecdotally, almost all of the dairies I've worked with that have switched to Milkrite have noted a significant uniform drop in SCC, cup-slip and improved teat-end condition."

And, so it has been for the Burleighs after they handled a Leptospirosis outbreak that initially complicated the changeover and early impact.

Jason said, "At dry-off now, the teats are awesome. We went from having lesions on teat-ends, to clean teats. And, when we have calved down in previous years, we have always struggled with mastitis in fresh cows.

"We didn't change any of our procedures at dry-off after we put in the Milkrite. And, of the 240 we calved in, we had two cases of mastitis. In other years, we were often treating two cases a week."

#### Inline mastitis monitoring

Jason said their clinical mastitis status is also automatically monitored by Ambic inline mastitis detectors. The detectors give an on-the-spot inline visual milk sample from every cow at every milking.

Abby said checking that monitor is the first thing they do before putting a machine on the next cow. Religiously.

"It's been awesome. I would recommend them to everybody. It's great to have that visual and physical verification right in front of you after every cow.

"And, if there are clots on the filter sock at the end of milking, we don't have to go through the herd, because we're already onto it."

#### Clinical mastitis outbreaks conquered

The combination of solid protocols and Milkrite has resulted in an average SCC of between 70,000 and 80,000.

Abby said, "What we've also really loved about this change is the significant improvement in teat-end condition, and conquering our clinical mastitis outbreaks."



#### **LEON LOUREY**

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Leon joined Daviesway 22 years ago, initially working in dairy hygiene in Western Victoria and South Australia for the DASCO arm of the business. He crossed to Daviesway nine years ago, and in January 2018 was appointed national manager of Daviesway's Milkrite vented liner business. Leon also supports general milking equipment and dairy consumable sales in Western Victoria and South Australia.



Teat-end condition is no longer a headache for Abby and Jason Burleigh (pictured L-R with Daviesway's national Milkrite manager Leon Lourey).



# NEW TECHNOLOGY IS A FARMER'S GUARDIAN ANGEL

# Technology on-farm is today affordable, efficient and hard to live without.

And, one of the most reassuring nextgeneration monitoring technologies is named "HALO" for good reason.

This is because it monitors "anything and everything" from vat cooling, water meters, tank levels, grain levels for re-ordering, and milking systems. It can command and control effluent systems, and report from weather stations.

Developed by Kiwi company Tag IT Technologies Ltd, HALO also stores data and sends email alerts to a farmer's mobile phone (or multiple mobiles), if there is a fault.

#### **Always watching**

HALO founder Josh White grew up on a farm, and said the design "seemed natural" to him.

"It's always amazed me that farmers get up early, flog their guts out and then walk away and leave that milk in the vat with no one watching it," he said.

"What if the power goes off, if the chiller tripped out? Do you know the hot wash has gone through? So, we came up with a product that is always watching." On a 10,000-litre vat, based on a NZ\$4.75 milk solids payout, saving a single vat of milk using HALO was worth NZ\$3800; on an NZ\$5.75 payout, that saving jumped to NZ\$4600 (in Aussie terms, a A\$4.56 payout meant savings worth A\$3650 and A\$4420).

#### **Available in Australia**

More than 1000 Kiwi farms have now embraced the technology, which is available to Australian dairy producers now through Daviesway.

Daviesway's HALO specialist Paul Hurst said a compelling part of the system – particularly in a tough season – is that it's modular. He confirmed that once Australian dairy producers take the first step, they quickly build the technology into other facets of their operation.

"One of our clients initially put in milktemperature monitoring on his vat, then his crushed-grain silo and his water tank.

"He appreciated the system so much, he then added it to his two bulk-grain silos.

"What he really likes with that is that his grain company also has access to his HALO dashboard, and they can monitor his grain usage in real time, including his 'use rate.' They can use that to build trends, and he never has to worry about

running out of grain on the Friday of a long weekend – which happens to people more often than you'd think."

#### **Losses plugged**

Paul said subtle losses on-farm can be hard to quantify, so accurate monitoring is empowering.

"One client initially put in milk monitoring for his vat and his plate cooler exit temperatures. After a month, he added a water-flow monitor.

"He had a big dam feeding all his troughs in the lower end of his farm. He knew he was losing some water, and HALO confirmed he was losing 40,000 litres a day.

"The information was coming in on his phone, and he was able to isolate and fix the leaks one-by-one, then check his phone to judge how the fix was impacting his water flow.

"HALO also saved him a couple of vats of milk."

Paul said sharing HALO with Australian dairy farmers is exciting.

"This is technology that quickly pays for itself," he said.



# LOGIC RULES THE DAY IN TASMANIA

# Former dairy technician Isaac Korpershoek and his veterinarian wife Angelique brought a lot of combined knowledge to the milking equipment conversation. Isaac (right) is pictured with Daviesway's Rick Wilson.

#### Isaac and Angelique Korpershoek can't believe something so logical took so long to be discovered and developed for the dairy industry.

The well-known Tasmanian dairy farmer and his veterinarian wife milk 300-320 autumn-calving cows on their 140-hectare (125ha effective milking area) coastal property at Forest. The property enjoys picturesque views across the Bass Strait with barely any winter frosts.

With a herd averaging 620 kilograms of milk solids on grass and silage, supplemented with 2.3 tonnes of grain per cow per year, this young couple was "cooking with gas" until two years ago. It was then they started having trouble with reddened teat ends, cup slip and a SCC (somatic cell count) that refused to drop under 180,000.

They turned to the milking equipment in their 25-unit swingover herringbone dairy.

The Korpershoeks' search for a solution ended with the innovative technology in Daviesway's Milkrite InterPuls shell and cup liners – the world's only internally triangular moulded plastic shells, specifically designed for the mouthpiece-vented triangular liners.

A ringing additional endorsement was that 40% of US dairy farmers (and five of the world's 10 biggest dairy farms) use the technology, which has won global innovation — excellence awards in milking technology in the UK (Prince Philip Award), France (Innov' Space), Denmark (three-star award at Agromek) and Sweden (the highest award at Elmia).

The coastal property overlooks The Nut, a famous local attraction near the historic village of Stanley. The Nut is the remains of an ancient volcanic plug.



milkrite InterPuls

Back home in Australia, Tasmanian farmers have also jumped on the technology — with more than 100 installations on the Apple Isle so far.

#### **Logical and gentle**

The two points of difference with the Milkrite InterPuls shells and liners are that teat compression during milk-out is evenly distributed from three sides of the teat — rather than the traditional two sides. The three-way compression is significantly gentler on teats. In addition, the air vent is positioned in the mouthpiece at the top of each liner (rather than at the claw), which introduces the air above the milk flow, and eliminates splash-back and crosscontamination.

Isaac says, "That three-way compression on the teat, rather than the two-point teat pinching we all grew up with made complete logical sense to me. I did my fitter trade as a dairy technician, building dairies and centre pivots. What surprised me the most when we found this technology was that no-one had thought of it before. Angelique felt the same from a vet's perspective.

"When you stop, and think about it, it's a very simple and logical concept."

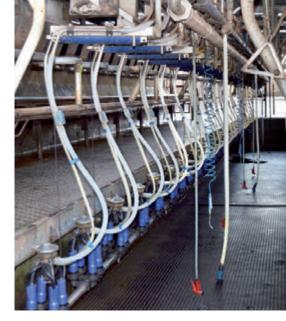
The shells and liners can be fitted to most existing claws (including a conversion to Milkrite Jetters), which worked for Isaac and Angelique's budget.

"I thought that in addition to helping our SCC, it might also help when it came to breaking in my first-calving heifers to the dairy – and it certainly did," Isaac adds.

"Our fresh heifers just don't seem to play up when they first calve in anymore, because they are so much more comfortable now. And, I personally also like the lighter shells."

Isaac's SCC now sits around 100,000 all year round, on a herd averaging 34 litres. He says the level of teat comfort has allowed him to run the dairy's vacuum higher at 48 kiloPascals, which took 15 minutes off milking.

As always, good news travels fast: Isaac's neighbour is one of the more than 100 other Tasmanian dairies that have installed Milkrite InterPuls shells and liners.



Milkrite shells and liners can be fitted to most existing claws and jetters.



First-calved heifers have settled into the dairy quicker since the Milkrite installation.

#### **MILKRITE TASMANIA**

Over 100 plus quality farms have made the switch to better milking



#### **CLOVELLY DAIRY (BRIDGEPORT)**

- Two 54 Unit Rotary Dairies milking over 3800 cows
- Average BMCC 120,000 to 130,000



#### **MULDER DAIRY (FOREST)**

• 20 unit Double-up milking 320 cows Gerard and Ria Mulder (together with their son, Ronnie) won the 2017 Tasmanian Dairy Business of the Year.



#### "THE GUMS" - VAN DAIRY (WOOLNORTH)

- 60 Unit Rotary milking over 1000 cows
- Average BMCC 85,000

Van Dairy have successfully installed Milkrite – mouthpiece vented triangular liners on 7 of their 24 farms.

#### **Doctor Dasco**

# Liners are highly engineered – and underestimated

The milking machine has been around so long now that few give it a second thought.

But, it's important to sometimes pause and consider that the milking machine is the single most complicated piece of farm equipment for food harvesting.

There is quite simply no other piece of machinery that uses so many different techniques for moving and transferring product.

And, there is no other machine that interacts on a daily basis with animals on skin tissue – which is about as sensitive as it gets.

So, twice or thrice a day, you are not just going to the dairy to milk. You are working with a seriously complicated machine. This machine is the interactive point between you and money.

If your liners aren't functioning correctly, you risk your herd's teat-end health, your SCC and milk quality.

#### Recommended 'expiration date'

Liners are highly engineered, they have been developed over 100 years, and are made using more than 50 compounding materials. At just 2mm thick, they spend their entire life under tension. They are exposed to all sorts of different environmental and working conditions, temperatures of between 0-75 degrees Celsius, more than 60,000 litres of milk, and some 20,000 litres of wash chemicals.

So, it makes sense that there is a recommended "expiration date" of 2500 milkings (or 1.5 million closures). Once that threshold is exceeded, you are looking at a 7% negative impact on milk volume and milk quality.

It's wise to start planning, and mark your diary to start to plan for it from the 2000-milking mark.

#### **Chemicals to watch**

Chemicals that can prematurely damage liner rubber (yet which are all registered for use in dairies, regardless of the concentration) include sulphuric acid, and sanitisers such as chlorine or peroxide.

Do your homework with a professional before you settle on your chemical choice. Because as a liner ages, its surface hardens and cracks — making it an excellent matrix for hosting pathogens.

#### **Knowledge sharing**

I thoroughly enjoyed getting out on-farm recently together with Murray Dairy to chat with farmers about milk liner health. The interest and interaction was brilliant.

We will be moving into this space more proactively, using our team of skilled and trained technicians to help find solutions, and to share industry break throughs and innovation.



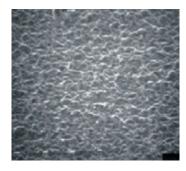
**HAMISH HUNT** 

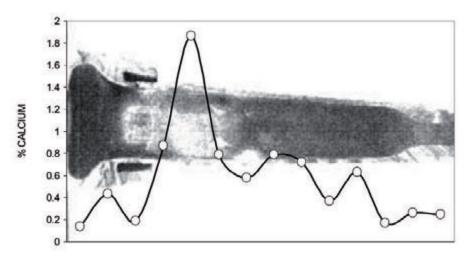
Special Projects – Daviesway/DASCO Mobile: 0400 118 749 Email: hamish.hunt@daviesway.com.au

Hamish has worked with DASCO/ Daviesway on special projects for 21 years. The Industrial Chemist graduated with a degree in Bachelor of Applied Science in Applied Chemistry from RMIT University in Melbourne in 1986 – before adding further study in Bio Science and Genetics.



The impact of liner wear is clearly shown on these scanned electron micrographs of a liner barrel at the point of contact with the teat when it was new (top photo) and after 4300 milkings (bottom photo).





As the liner ages, calcium, phosphorous and other chemicals become embedded in the working liner surface contributing to it hardening and cracking. This graph shows the distribution of calcium on a used liner.



# Planned liner change to minimise SCC

- At 2500 milkings
- · Promotes udder health



## Set wash temperatures

- Rinse 35°C Remove milk film
- Wash 75°C Remove fats
- · Fat removal optimises liner life



## **Select chemical**

- Rinse additive optimises milk film removal
- Alkali daily remove fats
- Acid daily remove scales



Dairy
Performance
= \$\$\$

# Planned machine maintenance

- Protects pulsators
- · Protects udder health
- · Optimises liner life



#### **Jetters**

- Support claw
- Prevent distortion
- Optimise cleaning





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**VENUE:** MERCURE PORT OF ECHUCA 465 High Street, Echuca

**TIME:** 9:30AM

MARCH

**RSVP:** 20 MARCH, 2019

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