Dairymaster Parlour Operator Handbook

Version 1

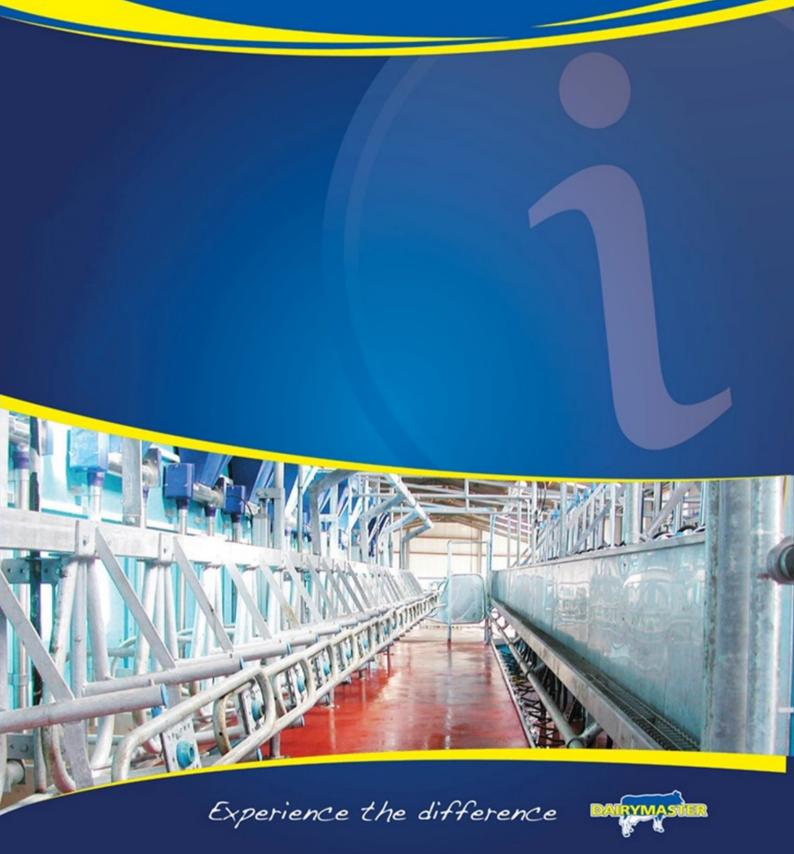


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1. Pre Milking Checks.

Before beginning milking the operator should go through some simple checks outlined below to ensure that the plant has been washed completely since the last milking.

- Ensure the Wash Couplings have been disconnected.
 (Milk/Divert couplings).
- Ensure the Milk Pipe is Coupled to the Milk Tank ready for milking.
- ✓ Ensure Clean Milk Filter(s) are in place.
- Check Vacuum Pump oil level (ensure that oil is present).
- Check that the Milk Tank Outlet is Closed.
- ✓ Check the Pinch Clips going to the Sanitary Trap and Jetstream closed for MILKING. (Open for WASHING).
 (This is Automated in Rotary Parlours)
- Turn on the Water supply to the Plate Cooler.

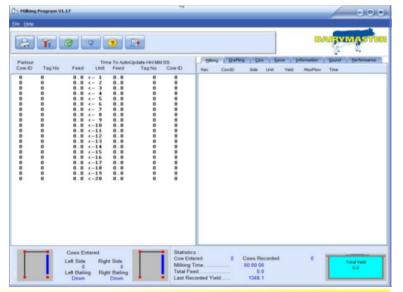
(This is Automated if the Autowasher is installed)

- Check Feed Auger Contactors have been Switched On or that Feeding has been Switched on in the Rotary Operator Console.
- ✓ Ensure the Milk Tank is in COOLING mode.
- ✓ Check that the System Vacuum is between 48 50kPa on the Parlour Vacuum Gauge.

1.1 Milk Manager (Where Present):

Before beginning milking the operator should go to the computer and open the milking program. In some installations the program can be automatically set up to start at milking time.

- 1. Click on the Dairymaster milking program on the screen:
- 2. The following window should appear:
- Dairymaster Milking Program
- 3. At this stage you are ready to enter the pit and begin milking.



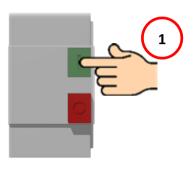
1.2 Starting the Milking Plant:

Turn on the milking Machine by switching on the Vacuum Pumps or if an Autowasher is installed the milking machine is started via the control panel interface on the front of the unit.

(Refer to the Quick Reference guide for the AutoWasher).

No AutoWasher Installed

Press the Green Button on the Vacuum Pump Contactor.





AutoWasher Installed

Use the Up/Down Arrows to Scroll to Ready to Milk & Press the Green Button





2. Control Systems

2.1 Control Systems

Each Milking unit will have one of the following controls systems in place.



Milk Meter



Standalone ACR



SwiftFlo Control



SwiftFlo Pulse



SwiftFlo Commander

2.2 External washing of controllers

Refrain from spraying the outside of the SwiftFlo Controls or milk meter with excessive amounts of water as this only increases the build-up of lime scale externally.

Ensure that the electronic control units are not sprayed with high-pressure jets and that cleaning detergents are not used on it. To clean, simply wipe with a damp cloth.

2.3 Milking Claw Vent Hole

Every Second or Third Milking check the claw air vent to ensure that it is free and clear of any obstruction. If the vent is not clear it could have a negative effect on the accuracy of the Milk Flow Indicator as well as having a negative effect on the plant performance.

2.4 Milking Routine

A good milking routine is needed to remove milk efficiently from cows with minimal risk to udder health. A good routine should result in high quality milk with low bacterial contamination.

Clean nitrile disposable Gloves should be worn at all time during milking. Sleeves should be rolled up and clean.

Benefits of a good milking routine are:

- Reduced levels of mastitis.
- ✓ Increased milk production.
- ✓ Rapid milking out of cows.

3. Quick Access Guides—Control Systems

3.1 Milk Meter Controller

	Daftrymassear Miffix Metar
Step	Step Actions
-	Press F100 and Enter to put the parlour into Milk Mode.
2	Push the Swing over arm in the direction of the cow/ press the start button and start the milking.
3	Milk can be diverted by pressing F1 twice before the cluster is attached, once finished it automatically resets to main milk line.
4	CowIDs can be entered at the bail, by pressing the correction button and inputting the ID followed by enter.
5	Press F101 to put the parlour into wash mode when milking is complete.

<u> Panymaseer Immi kineeer</u>	BOOTH		22		Buttons
Button	Outcome	Button	Outcome	Function No. Outcome	Outcome
E	Divert Line	O	Restart Button	100	Milk Mode
		(101	Wash Mode
2	Switch Sides	*	ACR Override	102	Meter open - non-recording mode
E	Drafting	<u>—</u>	Function Button	103	Hold, Jetters down Left
(E	Start Button	(1	Fotor Rutton	104	Hold, Jetters down Right
)		107	Individual Wash Mode
	Stop Button	(1)	Correction Button	108	Individual Normal Mode



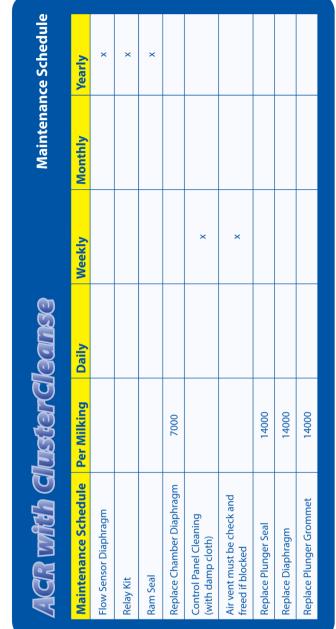




3.2 Standalone ACR Controller



ACR with ClusterCleanse DAIR



	Wash		
•	Start		
(į	Alarm	Rea
	Stop	. 1 - 2	Dirt
•	Postart	Float not rising or falling correctly	drair
	nestalt	Insufficient vacuum at the cluster after	
<u> </u>	Divert	START is pressed	Crac
•			
<u>-≫</u>	Remove Override	Remove Override LED is flashing	durir
		S	

Outcome

Button

Alarm Alerts

Dismantle the chamber and clean carefully

or grit in the chamber and or chamber

n hole

ason

Change diaphragm

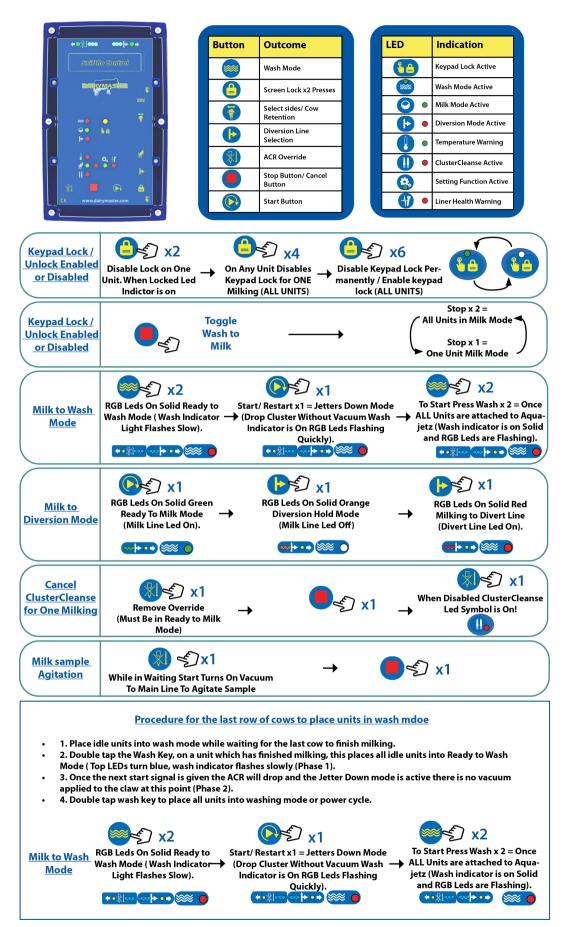
cked diaphragm in float chamber

Check flow sensor

The Flow Sensor did not detect milk flow during the min. milking time

	Automatic Cluster Remover And Cluster Cleanse
HAMI UP DIVERSION LINE RINSE AIR SENSOR (D) SENSOR (M) START (R) START (R) WASHING REMOVE OVERSIDE	DA Automatic And C

3.3 SwiftFlo Control



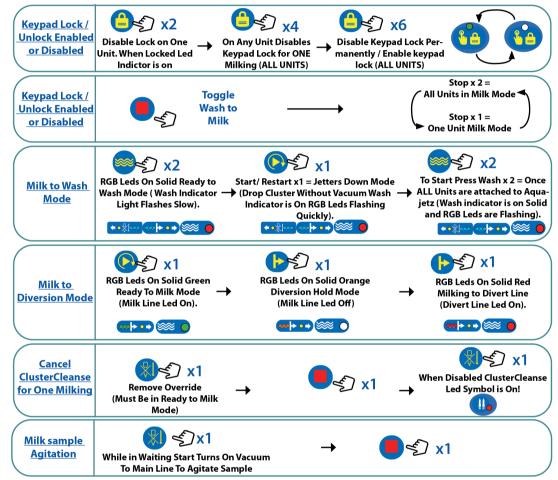
Note: Power cycle all units after each configuration

3.4 SwiftFlo Pulse Controller



Button	Outcome
	Wash Mode
	Screen Lock x2 Presses
The state of the s	Select sides/ Cow Retention
•	Diversion Line Selection
*1	ACR Override
	Stop Button/ Cancel Button
	Start Button

LED	Indication
8 ≜	Keypad Lock Active
	Wash Mode Active
9 •	Milk Mode Active
•	Diversion Mode Active
•	Temperature Warning
(I) •	ClusterCleanse Active
(3.)	Setting Function Active
₩•	Liner Health Warning



Procedure for the last row of cows to place units in wash mdoe

- 1. Place idle units into wash mode while waiting for the last cow to finish milking.
- 2. Double tap the Wash Key, on a unit which has finished milking, this places all idle units into Ready to Wash Mode (Top LEDs turn blue, wash indicator flashes slowly (Phase 1).
- 3. Once the next start signal is given the ACR will drop and the Jetter Down mode is active there is no vacuum applied to the claw at this point (Phase 2).



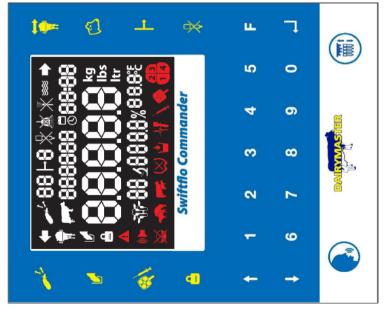
Note: Power cycle all units after each configuration

3.5 SwiftFlo Commander Controller

Swil	Swifting Commander Procedures
Step	
1	1 Press F100 and Enter to put the parlour into Milk Mode.
2	2 Make sure the Milking Program is open and the Rotary is synced.
33	Milk can be diverted by pressing 🛡 twice before the cluster is attached, once finished it automatically resets
	to main milk line.
4	4 Cow IDs can be entered at the bail, by pressing the correction button and inputting the ID followed by Enter.
2	5 Press • 104 and • at one unit and use Smart Start to place Cluster on the Jetters for washing.

Outcome	Normal Mode	Wash Mode	Hold, Jetters down Left	Hold, Jetters down Right	Place only this unit into Wash Mode	Place only this unit into Milk Mode	Cancel CC for this Unit for this Milking	Broadcast CANCEL CC to all units for this	milking	Lock Keypad
nO	Norn	Was	Hold, Jett	Hold, Jette	Place only this u	Place only this u	Cancel CC for this	Broadcast CANCEL	m	Lock
Function No	100	101	103	104	107	108	199	198		22
Outcome	Divert Milk		ACR Override	Cinction Button	railcaoil battoil	Enter Button		Voice Assist		Start/Stop Button
Button	1		☆	ш	•	1		R	(膿
Outcome	Drafting		Feeding	Com Tocting	Sullesuing	Touchpad Lock		Retention		Cow ID
Button	~1				**	d	1			1





2 2 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Step Actions 1 Put sample bottle in place 2 Turn the sampling tap to TEST 3 Press the Start ® Button and begin milking 4 When finished remove cluster from cow and press 5 Turn the sample tap to the Hold position and
9	remove the sample bottle Shake bottle
7	Return the sample tap to FMPTY when complete

4. Foremilking.

Before each cluster is attached to the cow, two squirts of foremilk should be removed from each teat to aid the detection of mastitis and flush out the milk from the teat canal.

If Pre-Spraying, apply to each teat according to manufacturer's recommendations.



4.1 Teat Cleaning:

Each of the Animals Teats should be cleaned and dried before attaching the cluster to the cow.

A different quarter of the towel should be used on each teat to avoid cross-contamination between teats.

Teat Spraying Note:

If Pre-Spraying, apply to each teat according to manufacturer's recommendations.



4.2 Cluster Attachment:

The cluster is attached to the cow as soon as possible after teat preparation. Attach the units without leaking large amounts of air into the system;

Hold the cluster level so that the short milk tubes close off the claw nipples. Apply each teat cup rapidly.

This helps to ensure that the vacuum level remains stable.



4.3 End of Milking (If Autowasher is installed)

Place all the milk meters into Wash mode by entering Function 101 on any Milk Meter / SwiftFlo Commander Controller

Or

On the ACR controller press the WASH button.

Place the clusters on the jetters, lock claw buttons in open position.

Button locked open Clusters on Jetters.



Press on the Autowasher to drain the receiver and activate the air purge.

Wait for the air purge to complete its cycle. (System Cleared)

Press to stop the pumps.



Ready the plant for washing, open the Jetstream and Sanitary Trap Pinch Clips. (This is Automated in Rotary Plants and is controlled by the Autowasher)

Connect the re-circulation pipe for washing (At the Milk tank / Rotary Platform wash link).

Remove the milk filter and replace with the spare Milk Filter. See Milk Filter Replacement.

Select the appropriate wash cycle and press start.



Please ensure that the plant is not left unwashed for long periods as this may impair cleaning and reduce the lifetime of some components due to excess deposits.

Symptom	Cause	Solution
'Acid low'	Detergent drum empty	Replace Detergent
'Hypo low'	Detergent drum empty	Replace Detergent
'San low'	Detergent drum empty	Replace Detergent
Error 'CHECK COUPLING'	The collection tank swing over arm or the Diversion line coupling is in incorrect position	Check coupling and swing over arm.
Error 'TROUGH NOT FULL'	Not enough water in the wash trough	Check Plumbing

4.4 Common Checks During Washing:

- 1. Ensure All Clusters are in place during washing.
- 2. Ensure that All Clusters are pulling water and are washing completely.
- 3. Where Meters are installed ensure that the meters are filling completely and dumping water during the wash cycle.
- 4. Ensure the Sanitary trap is washing and draining properly.
- 5. Ensure the Receiver is washing and draining properly.
- 6. Check the return water temperature to ensure that it is not below 40-45°C.

4.5 Quick Access Guide—AutoWasher

Acresmen	Testings Procedures
Step	Actions
1	Fix Milk Outlet (Coupling) to Milk tank if needed and press the Start button.
2	Use the navigational buttons to Find "Ready to Milk" and press the Start button.
3	When the Milking is complete press F3 to drain and air purge the system. Ensure "System Clear" is displayed on the screen. Press Stop button.
4	Using the directional buttons select a type of wash: cold, hot acid, rinse or post rinse.
5	Fix Milk Outlet to the wash line and press the Start Button.
9	Check to see wash has completed.

Acordo	Auto Washer						Buttons
Button	Outcome	Button	Outcome Button Outcome	Button	Outcome	Button	Outcome
Œ	Transformer Timed On		Start Button	1	Navigate Down	ग	Reset Button
F2	Transformer Toggle On/Off	0	Stop Button	↓	Navigate Up		
52	Drain & Air Purge	1	Enter Key	į	Function Button		

AutoWasher				Maintenance Schedule	e Schedule
Maintenance Schedule	Per Milking	Daily	Weekly	Monthly	Yearly
Replace the tube inside the chemical pump.					×
Cleaning Control Panel with damp cloth.			×		
Replace Detergent Tubes .				Every 3 Months	

Alarm Alerts

Re-calibrate use Function 2/ check plumbing for leaks.

Inssufficent calibration/low water pressure.

Reason

Incorrect settings. Service due time.

Action

Replace liners and carry out service.

Re-calibrate wash time.

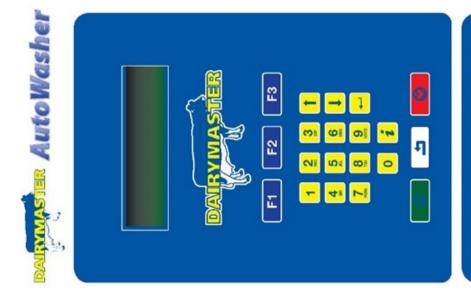
		CALENS LINE EX BUSIN	Alarm	Trough does not fill completely.		Trough does not empty completely	First Liner change.
Systems Settings	Rince & Sanitiser Settings	Cold Alkaline Wash	Hot Alkaline Wash	Acid Detergent Wash	Pre-Set Start Times	Diagnostics	Recycle Water
7	3	4	2	9	7	89	11

Acet

Setting the Time

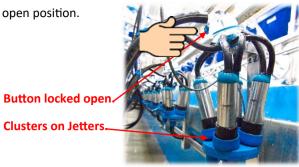
Outcome

Function

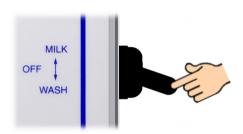


4.6 End of Milking (no Autowasher installed)

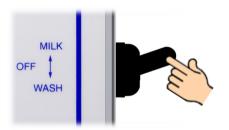
1. Place the clusters on the jetters, lock claw buttons in open position.



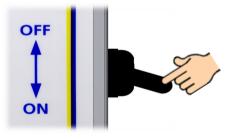
2. Turn the switch on the milk pump controllers to **Wash** until all milk is empty from the receiving jars.



3. Turn the switch back to **Milk position** again.



- 4. Press the air purge button for 30 seconds.
- Remove the Milk filter socks from the milk Filters and disconnect the Milk Coupling or Top Fill Dairy arm from bulk tank. See section Milk Filter Element Replacement.
- 6. Turn on Jetstream.



- 7. Fill the wash trough with water, place suck up pipe into water and empty trough
- 8. Turn the switch to the Wash position again.
- 9. Purge the system again
- 10. Fill the trough a second time with the required amount of water for circulation, add the required amount of detergent and circulate for 10 minutes.



Please Note: This circulation water should not be used a second time.



- 11. When the 10 min are up divert the water into a holding tank.
- 12. Rinse the machine with the required amount of cold water.
- 13. Press the air purge button again for 30 sec.
- 14. Turn the switch to the off position.
- 15. Press the red button on the contactors to stop the milking machine.
- 16. Turn off transformers and Jetstream controller & Turn off water to plate cooler.

5. Milk Filter Element Replacement.

The parlour may have single, double or triple milk filter systems installed depending on the number of milking units.

For Disposable Milk filters, they should be changed prior to each milking:

Disposable Milk Filters are available in two sizes:

Dairymaster milk filter socks 3" (box of 100) Part No: 10370005 Dairymaster milk filter socks 6" (box of 100) Part No: 10370591

For Reusable Milk filters, they should be washed & sanitized prior to each milking & replaced as needed:

Reusable Milk Filters are available in two sizes Standard & Large.

SwiftFlo precision filter elements (Standard) (box of 24) Part No: 10370013 SwiftFlo precision filter elements: (Large) (box of 18) Part No: 10370658 SwiftFlo precision filter element (Standard) (Single) Part No: 10370633 SwiftFlo precision filter element (Large) (Single) Part No: 10370690

In systems where there are 2 or more Milk Filter housings are installed can the Filter Elements be replaced during milking otherwise milking must stop to facilitate a milk filter change.

Changing the filter is done by closing the Shut off valves (Circled in Red) at the inlet and outlet of each of the Filter bodies for one filter at a time and replacing that Filter Element.

After replacing the first filter Element both valves should be opened only then can the filter at the other side of the Filter body be changed.



Note: It is important that all milk flow valves are never closed at the same time during milking; this will cause the receiver jar to flood shutting down the milking system.





For Reusable milk filters; Remove the Milk filter element and replace with a spare/cleaned or washed filter, turn the filter inside out and rinse off with cold or warm water followed by one of the following:

- Soak the filter element in Peracetic acid for 30 seconds.
- Soak the filter element in a chlorine based sterilising liquid for 20 minutes.

We recommend that you have two filter elements available always and that you replace the filter elements at least every two weeks and discard the old filter.

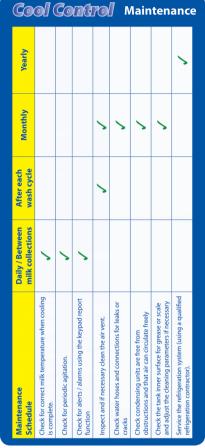
Environmental conditions will have a bearing on the useful life of the filters, therefore, it may be necessary to change the filters more frequently.

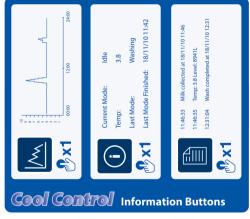
6. Quick Access Guides—SwiftCool

6.1 CoolControl





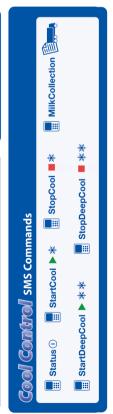








Cool Control Function Buttons



6.2 Digi Control



Di	gi C			N	Maint	enance	2
Yearly							>
Monthly Yearly			>	>	>	>	
After each wash cycle			>				
Daily / Between milk collections	>	>					
Maintenance Schedule	Check for correct milk temperature when cooling is complete.	Check for periodic agitation.	Inspect and if necessary clean the air vent.	Check water hoses and connections for leaks or cracks	Check condensing units are free from obstructions and that air can circulate freely	Check the tank inner surface for grease or scale and adjust the cleaning parameters if necessary	Service the refrigeration system (using a qualified refrigeration contractor).

Di	I	<u> Com</u>		o [F	un	ctic	on Butt	ons	
ights	Continuous or Flashing	Continuous	Continuous	Slow flashing	Slow flashing	Slow flashing	Fast flashing	Fast flashing	Fast flashing	Slow flashing	Slow flashing	Fast flashing	Slow flashing		Continuous	Continuous	Slow flashing		
Colour Coded Lights	Colour	White	White	White	White	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue		Red	Yellow	Yellow		
Colo	Left or Right	Left	Right	Alternating	Both	Left	Left	Both	Right	Right	Left	Both	Right		Both	Both	Both		
Display		TEMP	TEMP	TEMP	TEMP	1.	Ġ	E.	5 .	5.	91	92	83	TEMP	TEMP	TEMP	TEMP	6008	H001
Duration	* Default settings	20 minutes	30 minutes		90 minutes									12 min			10 min		
Tank mode details		Idle	Intermittent cooling to 8 deg	Full cooling to <4 deg	During Soft start During Normal Cooling	1. Pre-rinse 1	2. Pre-rinse 2	3. Detergent wash	4. Post rinse 1	5. Post-rinse 2	1. Quick rinse 1	2. Quick rinse 2	3. Quick rinse 2	1. Stop Cooling	2. Agitate before sampling start	3. Continue agitation	Agitation	Stop mode or Cancel alarm	Parameter settings menu
Tank mode		Cooling Mode (4 stages) Each press advances stage of cooling		3. Normal cooling	4. Deep Cooling			Full wash (5 stages)				Quick wash (3 stages) (2 presses within 5 seconds)			Milk Collection		Manual Agitation (Cooling auto restarts)	Cancel X1	
u			4	×	,		•	£);	<		•	D	X	•	£);	ξ	S sec	€ ∑	S sec
Button		0			※ ※			⊕(()(Ţ	*	Ð

Insufficient wash water (level not reached within time limit (parameter H039) Check water supply. Check water heater operation. Check inake water temperature. Check condensing unit operation. Check condensing unit operation. Check condensing unit operation. Check milk pre-cooling. Replenish acid descaler detergent Sanitiser Acid low. Sanitiser Acid low. Check temperature prob Replenish sanitizer acid Replenish sanitizer acid Replenish sanitizer acid Check temperature prob Check temperature prob Check temperature prob Check temperature prob Check power supply.
Check index water heater operation. Check index water temperature. Check index water temperature. Check index water temperature. Check of condensing unit operation. Check condensing unit operation. Check condensing and operation. Replients alkali detergent Replients and alkali detergent Replients antitzer acid Check temperature prob Check temperature prob Check power supply
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7. Milk Collection Guidelines.



Milk Collection Guidelines

- 1. Ensure the System is in COOL or DEEP COOL mode.
- 2. Press the Collection button for 1 second to Initiate COLLECTION mode.
 - This will turn off cooling and agitate the milk for a set period.

Note: if the system is not in COOL or DEEP COOL MODE the Collection mode will not initiate.

3. Take Milk Sample after the agitation period has finished



- 4. Open the Cap to empty the tank.
 - As the Tank empties the system monitors the drop in milk level.
- 5. When the tank empties, replace the wash cap. Press STOP on the Keypad
- 6. Press the Wash button to initiate WASH mode



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