



Handy Portable Milking Machines

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PMC4, PMC5, PMC7, PMC8



PMC4



PMC5



PMC7



PMC8



INSTRUCTION MANUAL

for



PMC4 Handy Portable Milking Machine Single Cow Dry Run Pump



PMC5 Handy Portable Milking Machine Single Cow Oil Run Pump



PMC7 Handy Portable Milking Machine Twin Cow Dry Run Pump



PMC8 Handy Portable Milking Machine Twin Sheep/Goat Dry Run Pump

Operation, Cleaning and Maintenance

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1. GENERAL INFORMATION

General information and safety warnings

Important warnings

To safeguard the operator and prevent any damage to the equipment, before carrying out any kind of operation it is important to have read and fully understood the instruction manual.

Symbol used in this manual

The following symbols are used in this manual to highlight indications and warnings which are of particular importance:



WARNING: This symbol indicates health and safety regulations designed to protect operators and/or any exposed persons.



CAUTION: This symbol indicates that there is a risk of causing damage to the equipment and/or its components.



NOTE: This symbol is used to highlight useful information.



FOR DRY RUN MODELS ONLY - PMC4/PMC7/PMC8



FOR OIL RUN MODELS ONLY - PMC5

Rules and regulations for the user



WARNING: Any failure to observe the warnings provided in this manual may lead to equipment malfunctions or damage to the system.

Limitation of liability

Dairy Spares Ltd declines all liability for damage to persons, animals and/or things caused by incorrect use of the equipment.

Prior using the product

Requirements and rules for personnel and Safety Rules



WARNING

Before using the device, the operator must carefully read the manual.

- **The person using the device must be of legal age and have received training. They must be physically and mentally fit. He or she must also have been provided with adequate information on how to operate the Portable Milker.**
- **During the assembly and activation of the device, follow the instructions in the manual and the rules and regulations applying to health and safety at the work place.**
- **When using the Portable milker the operator should wear non-slip safety footwear during use, to help prevent damage from accidental falls.**

Disposal

General regulation

The appliance must be disposed of only and exclusively by specially authorized waste disposal companies in accordance with all relative legislation.

The packaging must be consigned to the relative authorized companies to be recycled.

Fire prevention



NOTE

The machine is not equipped with fire extinguishers.

The operator must make sure that the place in which the appliance is used is equipped with an adequate number of suitable fire extinguishers. The extinguishers must be positioned where they are clearly visible and protected from damage and improper use.

Safety regulations



WARNING

It is strictly prohibited to extinguish fires involving electrical equipment with water!

Characteristic of extinguishers

Use powder, foam or halogen extinguishers which must be positioned next to the device.

Operating personnel must receive adequate instruction on how to use the extinguishers.

Normative references applied

Directive 2006/42/EC (Machinery Directive).

Marking

Information plates fastened onto the machine



Figure 1: Label containing identification data of the electric motor.

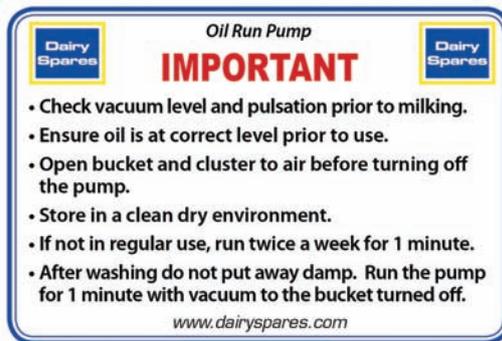
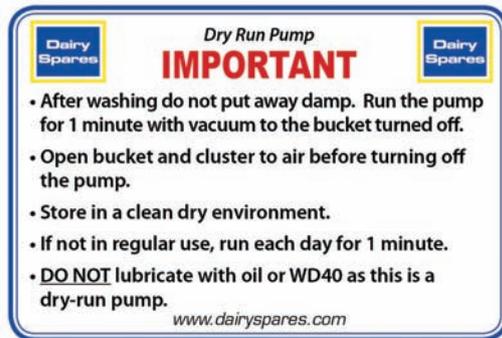


Figure 2: Label containing washing, storage and maintenance instructions.

Safety details



WARNING: The removal or damaging of safety decals is strictly prohibited.



DANGER



RISK OF HIGH TEMPERATURE



READ THE MANUAL CAREFULLY



DO NOT SPRAY WITH WATER



RISK OF ELECTROCUTION

2. DESCRIPTION OF THE MACHINE

General characteristics

The Dairy Spares portable milking machines make it possible to milk a cow into a stainless steel bucket where the required electric supply and the necessary safety equipment is available.

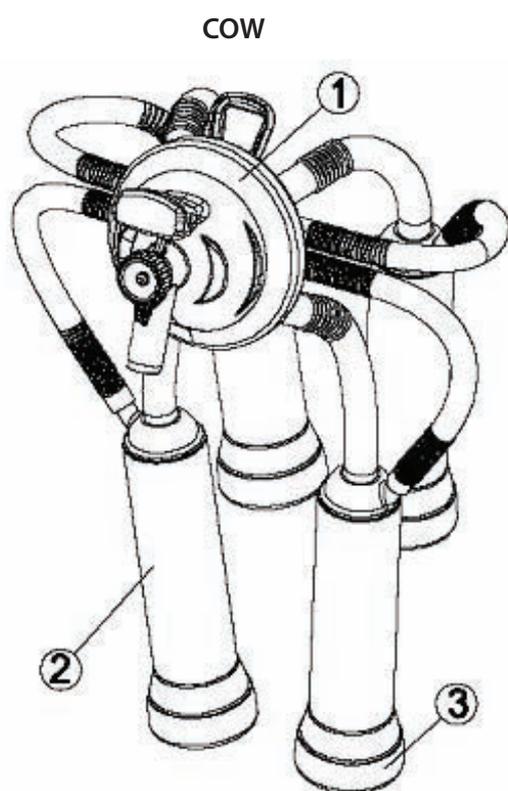
They are fitted with Dairy Spares components which have been specifically studied and designed for milking cows.

The electric motor and vacuum pump supplied with the machine is designed to create vacuum pressure inside the tank, which, professionally speaking, is used to milk cows and by means of portable milking equipment. The equipment provided is suitable to milk a maximum of one or two cows at a time.

The Dairy Spares portable milking machines meet with the requirements stipulated by the legal regulations in force as well as the relative technical standards concerning health and safety in the workplace, environmental protection and fire prevention.

The milking cluster is usually equipped with the following components:

- ① Milking claw comes complete with auto shut off valve to prevent dirt being sucked in should the cluster be kicked of during milking.
- ② Teat cup shells x 4 for cow or x 2 for sheep/goat.
- ③ Milking liners x 4 for cow or x 2 for sheep/goat. The code moulded onto the hood of the liner at the position shown in the diagram will indicate the liner type when needed for replacement.



The Dairy Spares portable milker machines meet with the required legal and technical standards in force with regard to safety and hygiene at the workplace, environmental protection, and fire-protection safety.



WARNING: The portable milking machines must only be operated under supervision.

General technical features



PMC4, PMC7 and PMC8

Dry run pump with maximum flow rate of 185 l/min for a maximum vacuum of 50kPa.

DO NOT LUBRICATE THIS VACUUM PUMP UNDER ANY CIRCUMSTANCE

Permitted operating temperatures

+5°C to +40°C

Maximum operating altitude

Up to 1000 metres above sea level.

Electric pump features

Electric power supply

The electric motor model is 230Vac at 50Hz (Refer to the motor's identification plate)

Current

4.7 Amp (Refer to the motor's identification plate)

Construction and operational features



- Graphite vane dry run vacuum pump (PMC4/7/8).



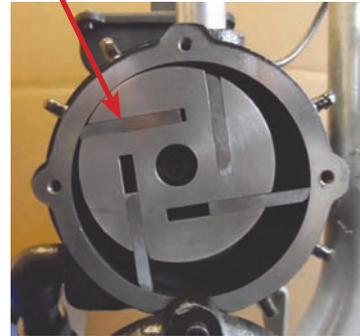
- Lubricated rotary vane vacuum pump (PMC5).
- Applied to the frame so as to be horizontal to the axis with regard to the ground.
- Equipped with a single phase asynchronous squirrel-cage motor.
- They have a suction nipple pointing downwards connected to the trolley frame by a steel spiral reinforced tube.
- **NOTE: The direction of pump rotation is indicated by the embossed red arrow on the end plate of the pump body.**

Spare Parts

PMC06E Portable Milker Dry Run Vacuum Pump 185ltr/min, 220V, 0.55kW



PMC06J Set of 4 Graphite vanes for Vacuum Pump.



For a full list of spare parts available, please see pages 22-26.

Noise emission values in accordance with 2006/42/EC point 1.7.4.2 u

Max. sound pressure level

74.0±0.5 dBA

Max. sound power level

87.5±0.6 dBA

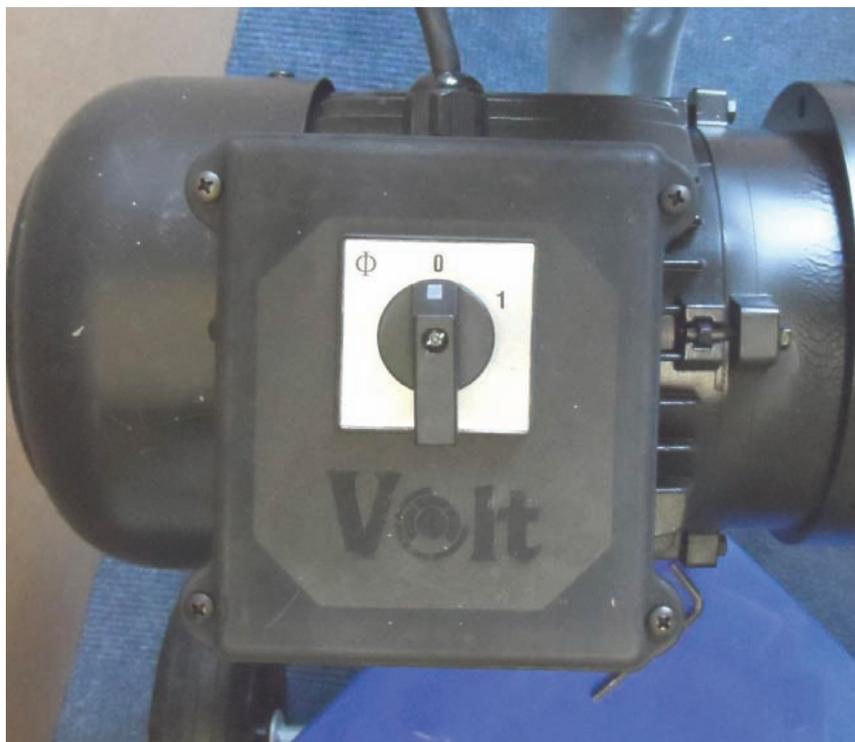
Recommended parameters for optimum milking

Animal	Vacuum Range (kPa)	Pulsations (ppm)	Ratio (%)
Cow	48-50	60	60/40
Goats	42-44	90	60/40
Sheep	40-42	120	60/40

Electrical diagram

Once connected to correct mains electrical supply, the electric motor has a rotary action On-Off switch to control the motor.

The portable milking machines come complete with mains flex and fused plug.



WARNING

It is strictly prohibited to interfere with or modify electrical connections of the motor.



WARNING

Before turning ON the electric motor, ensure that the electrical network voltage and frequency correspond to the values displayed on the label of the electric motor for the vacuum pump.



WARNING

Before the electric motor is turned OFF, ensure that air has been let into the system to lower the vacuum level and prevent the pump counter rotating.

3. INTENDED AND NON-INTENDED USE

Intended use

- These portable milking machines are designed for bucket milking cows (PMC4/5/7), sheep or goats (PMC8)
- These models allow only one or two animals to be milked at a time depending on model used.
- Milking, cleaning and maintenance operations must be carried out in accordance to what has been specified in the relevant paragraphs of this manual.
- This milking machine is designed to use milk containers with a maximum capacity of 30 litres of water or milk in a temperature range from +5 to +40 °C.
- The support arm is exclusively designed to support the milking clusters.
- For details with regard to the load capacity, please refer to what has been specified in the relevant paragraph in this handbook, "Section 6.4 Maximum carried loads".



WARNING

The portable milking machines that must be used under supervision.



NOTE

The operator must always be present from the moment the machine is turned on to the moment it is turned off (machine must be supervised).

Non-intended use

This Milking Machine must not be used for any purpose other than those envisaged and specified in the section "Foreseen Use". Any use different to that for which the machine was designed could lead to hazardous operating conditions for the operators, maintenance technicians, the animals and any other persons exposed to the machine itself.



WARNING It is hereby specified that:

- **It is prohibited to use the portable milking machine to transport persons or animals.**
- **It is prohibited to use the portable milking machine to transport anything other than the Milking Bucket it was provided with or specified for use with.**
- **It is prohibited to use the portable milking machine to transport other kinds of liquid other than those specified.**



WARNING

The machine was not designed to operate in a potentially explosive atmosphere. Therefore, it is forbidden to install and use it in this type of environment.



WARNING

Any use other than the one covered in this manual is considered improper use and is therefore forbidden. Dairy Spares declines any liability associated with any use of the machine other than the one covered in this manual and may invalidate the warranty.



WARNING

Do not store the machine next to inflammable materials when parts are still hot.

4. RESIDUAL RISKS



WARNING

ELECTRICAL SAFETY AND FIRE-PROTECTION SAFETY

The electrical system to which the machine is to be connected must have the following protections:

For protection against indirect contact:

The machine must be supplied by means of an electrical system supplied with a differential circuit breaker connected to the earthed system according to the standards and laws in force covering portable equipment.

For protection against overloads of the electric motor:

A suitable overload protection device and overload cut-out circuit breaker must be installed, which interrupts the circuits once the nominal current of the machine has been exceeded.



WARNING

The portable milking machines are not protected for continuous use.



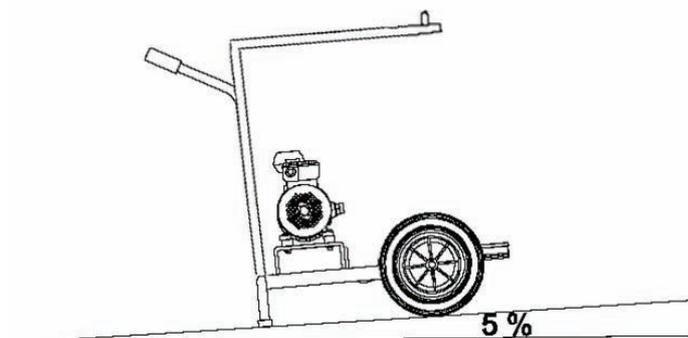
WARNING

HANDLING - TIPPING OVER

It is prohibited to lift the machine from the ground. It has been designed to be handled on flat ground and pushed as indicated in the specific section of the manual (see page 14).

It is suitable to handle ramps under 5%.

It is not suitable to go up or down steps.



The arm for handling and the arm for the milking clusters are designed to support a person or an animal. Do not lean on them.



WARNING: MOBILE ELEMENTS

The electric motor's protective shaft cover must not be removed.

Ensure that it is correctly installed before turning on the electric motor.

FIRE

Do not store the machine next to inflammable materials when parts are still hot.

PERSONAL PROTECTIVE EQUIPMENT:



Use Safety footwear.



Use gloves to avoid burns from contact with hot parts of the electric motor and vacuum pump.



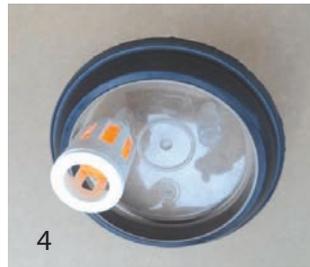
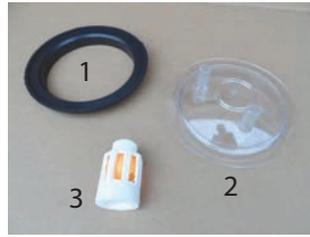
Use the manufacturers recommended PPI equipment throughout the washing cycle and when handling chemicals.

5. ASSEMBLY

Assembling the PMC4, PMC5, PMC7 and PMC8 portable milking machines

Step 1

- Place the lid gasket PMC06B (1) on to the lid PMC06A (2).
- Push the lid check valve PMC06C (3) onto a nipple on the underside of the lid.
- Make sure the seal is secure around the lid (4) by pressing it with your fingers and turning the lid.
- Place the lid on top of the bucket (5).



Step 2

Insert the liners (4) into the teat cup shells (5). Line up the alignment marks on the liner hood and milk tube and pull the liner into place making sure the marks are in alignment preventing the liner twisting. Circled on the picture.

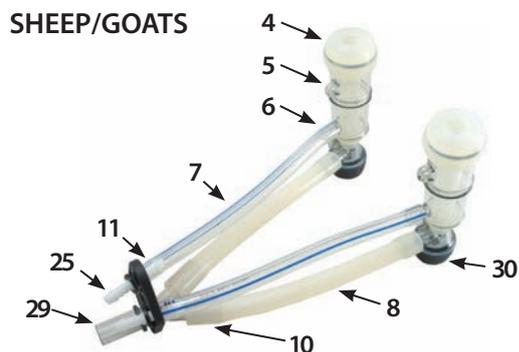
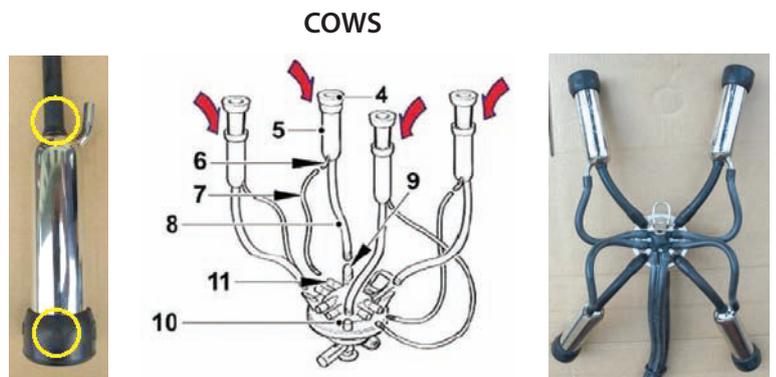
Push the short pulse tubes (7) onto the air nipples (6) of the teat cup shells and the other end onto the respective pulse nipples (11) on the claw.

COWS

Fully push home the ends of the liners (8) onto the nipples of the claw so the liner reinforcement protects the nipple end (10). Fit the liner so the pulse tubes fold tidily when folding the liners.

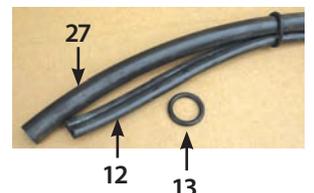
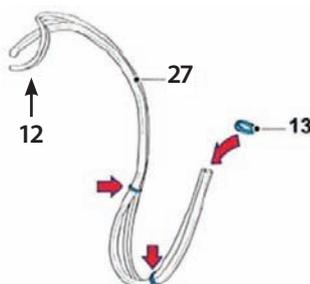
SHEEP/GOATS

Fully push home the ends of the liners onto the top nipple of the MC110A Semi Auto Valve (30) so that the valve side nipple is aligned with the teat cup shell air nipple (6). Fit the short milk tube (8) onto the side nipple of the MC110A Semi Auto Valve (30) and the other end onto the inlet nipple of the milk claw Y piece (10).



Step 3

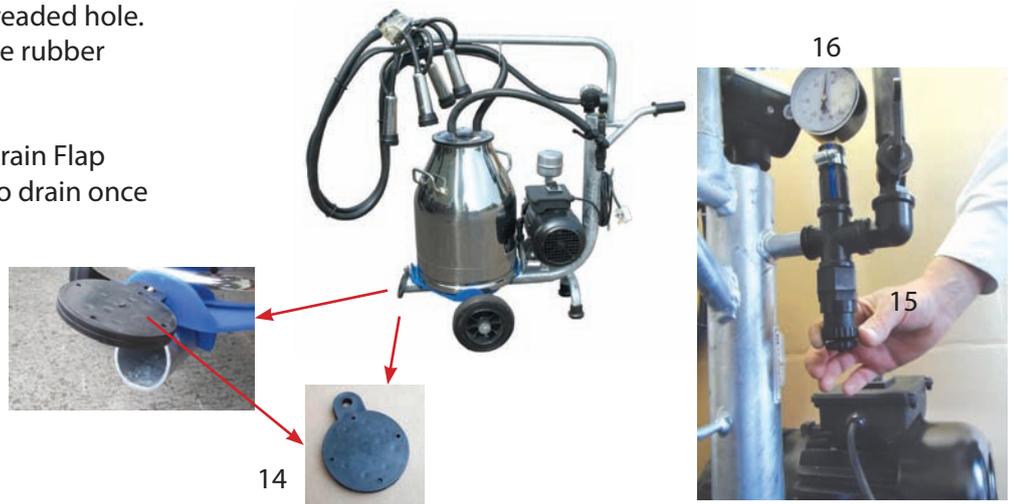
To allow the main milk (27) and main pulse tube (12) to be run together between the last tube support arm ring and the claw piece use 3 or 4 tube assembly rings RP11 (13) at regular intervals.



Step 4

Screw the regulator (15) into the threaded hole. Push the vacuum gauge (16) into the rubber nipple.

On the bottom of the frame is the Drain Flap PMC06P (14) this allows any liquid to drain once the vacuum is off.



Step 5

Insert the pulsator adaptor 9153 (17) into the slide on the base of the pulsator body making sure that the angled part of the connector is pointing towards the back of the pulsator 9152 (18).

Place the pulsator (20) complete with the adaptor (19) onto the vertical nipple (21) to provide vacuum to the pulsator.

Use the lever tap to open and close the vacuum (21).

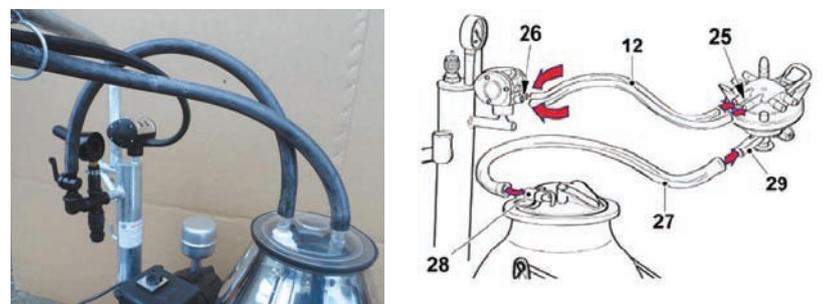


Step 6

Connect the main pulse nipples (25) on the claw to the pulsator nipples (26) using the twin pulse tube TC02 (12).

Connect the claw outlet nipple (29) to the milk inlet nipple (28) on the lid using the long milk tube TC09 (27).

Take care to feed tube assembly through the two blue rings on the support arm to provide support to the cluster during milking.



COW

SHEEP/GOAT



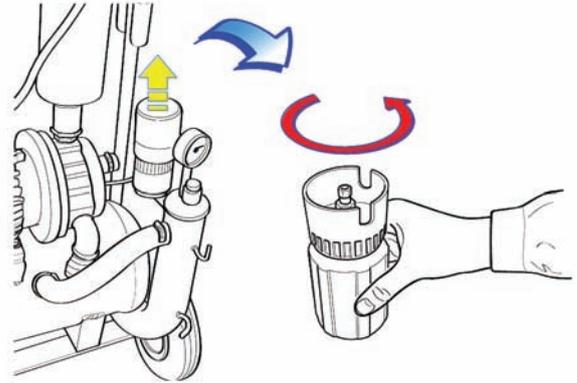


Filling and adjusting the lubricator on the PMC5 cow portable milking machine oil run vacuum pump

Step 1



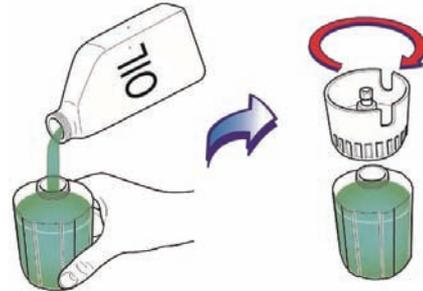
Remove and open the oil container.



Step 2



Fill the oil container with vacuum pump oil.

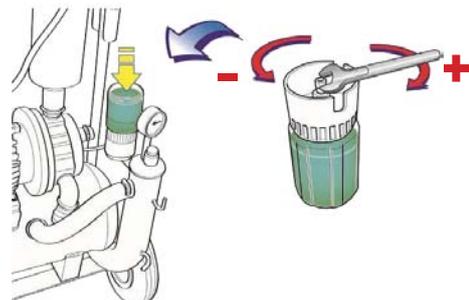


Step 3



Turn on the screw to regulate the oil flow.

1. Loosen the lock nut (anti-clock)
2. To regulate the oil flow:
 - 2.1. INCREASE – Turn the brass nipple clockwise
 - 2.2. DECREASE - Turn the brass nipple anti clockwise
3. When regulated tighten the lock nut (clockwise)



Step 4



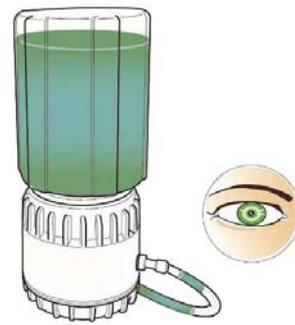
During operation check that the oil goes through the connection pipe to the pump.

Should this not occur, turn the screw to adjust the oil flow.

Oil should drip from the reservoir to the pump when running at a rate of 3 drips per minute.

Oil reservoir must be checked and refilled regularly as required.

Recommended oil - Dairy Spares Vacuum Pump Oil (order code VP04 (5ltr) or VP05 (25ltr)).



Step 5



Oil that has been used through the vacuum pump will collect in the exhaust and run off to the used oil collection container.

This oil must NOT be used again through the vacuum pump.

The used oil must be disposed of responsibly or recycled if possible.



Oil Collection Container

6. USING THE DEVICE SAFELY

Use and safety precautions

- The operator must always be present when the machine is in use.
- The electric motor and vacuum pump can reach high temperatures, particularly the exhaust, as indicated in the relevant diagram. Be careful not to touch hot surfaces with your bare hands.
- These machines are designed to be used by one operator. The authorised operator is responsible for preventing others from idling within 3 metres from the machine.
- It is prohibited to modify the machine and electrical connections in any way.
- Ensure that the electrical system to which the electric motor is to be connected is compatible with the machine and is in compliance with the local regulations in force.
- Always disconnect the device from the electrical power supply before commencing any maintenance operations, cleaning or repairs.



WARNING

For protection against indirect contact:

- The machine must be supplied by means of an electrical system supplied with a differential circuit breaker connected to the earthed system according to the electrical regulations in force.

For protection against overloads of the electric motor:

- A suitable overload protection device and overload cut-out circuit breaker must be installed, which interrupts the circuits once the nominal current of the machine has been exceeded.
- Avoid using the electric motor and vacuum pump with a blocked vacuum/air tube.
- A wet electric motor and vacuum pump must NOT be connected to the electrical socket outlet for risk of electrocution.

Ensure that the shaft cover is assembled onto the electric motor before operating.

Ventilation and cooling

- The electric motor is air-cooled by means of the built-in fan on the end of the electric motor.
- Strictly avoid obstructing the cooling airflow to the motor.
- Do not cover the fan cover, motor or vacuum pump during operation.
- The air being moved into the motor by the fan should be cool not warm.
- Prevent water and foreign objects from getting into the motor and vacuum pump.
- The ventilation holes on the fan cover must be regularly cleaned.
- Electric motor and vacuum pumps that are used outdoors must be totally protected against climatic conditions and direct sunlight.

Handling

Try to adopt a comfortable upright position when moving the portable milker around. Take care to look ahead in the direction you are intending to travel to ensure the surface is not rough and uneven, which may cause an imbalance in the portable milker.



Supported maximum loads

The portable milking machine is designed to support the following maximum loads:

1. Bucket platform Max 40kg
2. Cluster support arm Max 5kg

7. MILKING AND WASHING OPERATIONS

First start-up / machine settings

After assembling your portable milker as indicated in Section 5, you may proceed with the first start-up, where you are required to set the milking vacuum level.

The milking vacuum level changes according to the type of animal that must be milked. We recommend the milking levels indicated in the table "Recommended parameters for good milking" in Chapter 2 on page 7.



WARNING

For protection against indirect contact:

- The machine must be supplied by means of an electrical system supplied with a differential circuit breaker connected to the earthed system according to the standards and laws in force.

For protection against overloads of the electric motor:

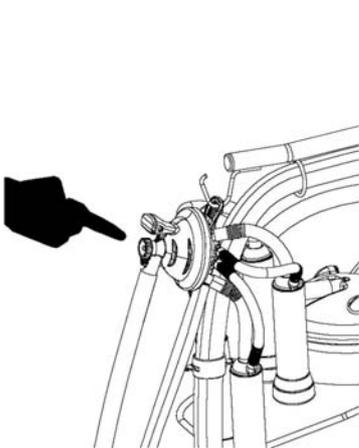
- A suitable overload protection device and overload cutout circuit breaker must be installed, which interrupts the circuits once the nominal current of the machine has been exceeded.

Before turning on the electric pump, ensure that electrical network voltage and frequency correspond to the values displayed on the label of the electric motor and electric pump.

To set the vacuum level, proceed as follows:

1. Connect the motor's electrical socket-outlet to the electrical system.

2. Close the claw valve.



COW



Claw valve closed
No Vacuum to teat cups
Not Milking - SET UP POSITION

Claw valve open
Vacuum to teat cups
Milking can take place

Claw valve locked open
Vacuum to teat cups
Plunger cap locked for washing

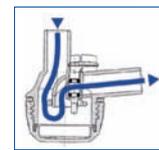
SHEEP/GOAT



Washing



Milking



MC110A

3. The Vacuum tap to the top of the bucket must be open. See page 11 'Step 5'.

4. Turn on the electric supply and turn on the illuminated On/Off switch to position "I". The Portable Milker should now start up and start to produce vacuum.

5. Unscrew the locking nut (2) on the top of the regulator (1). Read the vacuum level on the vacuum gauge (4) by looking at the needle against the outer kPa scale. There is a red vertical indicator line which shows 50kPa. Screw or unscrew the lower vacuum regulator valve nut (3) (clockwise increases) until you obtain the desired vacuum level. Once this is obtained screw up the regulator top locking nut (2) to set the level.



Clockwise increases the vacuum.

Anticlockwise decreases the vacuum level

6. Before proceeding with milking operations, rinse the components that come into contact with the milk with a sterilising solution.



Check the pulsation

Now you have correctly adjusted the vacuum level it is possible to crudely check the pulsation rate.

With the vacuum pump running, the bucket vacuum tap open, the claw valve closed and the vacuum showing at the correct level:

1. Firstly you should be able to hear the pulsator clicking.
2. WITHOUT opening the vacuum valve you should be able to detect the movement of the pulsation affecting the liner by inserting your thumb or finger into the liner and feeling the pulsation movement of the liner wall.
3. You should count the number of pulses in one liner during a period of 15 seconds. Multiply the total by 4 to get 'Pulse Rate Per Minute'.
4. The recommended rate and ratio for milking a cow is shown in section 'Recommended parameters for optimum milking' on page 6.
5. The Pulsation rate for a cow at 48-50 kPa is approximately 60 PPM (Pulses Per Minute). For a goat at 42-44 kPa is approximately 90PPM and for a sheep at 40-42 kPa is 120PPM. See table below.
6. The pulsation rate can be adjusted by inserting the Allen key provided into adjustment screw at the lower back of the pulsator. A small rotation of the adjustment screw either way will change the PPM.
7. Continue to count the PPM in the liner in 15 second batches until the rate is approximately 60 PPM.
8. It is recommended that you briefly check the pulsation is moving the liner before each milking.
9. You should check the PPM on a weekly basis.



Subsequent start-ups

1. Close the claw valve or pinch clip.
2. Turn on the electric pump by positioning the switch to "I".
3. Check that the vacuum level is stable at the previously set value.

Electric motor start-up and stop

Electric pump:

1. It is turned on by positioning the electric motor switch to "I".
2. It is turned off by positioning the electric motor switch to "O" it should never be under vacuum when it is stopped.

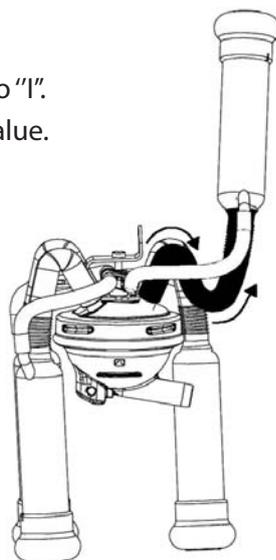
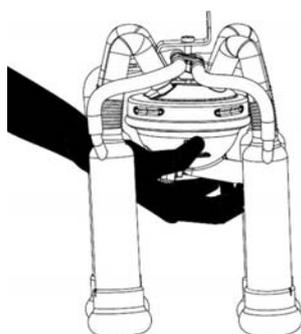
Portable Milker Settings

PORTABLE MILKER SETTINGS			
Animal Breed	Vacuum Level kPa	Rate ppm	Ratio %
Cow	48-50	60	60:40
Goat	42-44	90	60:40
Sheep	40-42	120	50:50

Milking operations

After having executed the machine settings and pulsation, you may proceed with milking.

1. Close the claw valve.
2. Open the vacuum tap to the bucket.
3. Turn on the electric pump by positioning the switch to "I".
4. Check that the vacuum level is stable at the desired value.
5. Prepare and clean the animals teats.



COW

6. Keep the milking cluster in your hands as indicated, close off as many of the liners against the claw nipples as you can to retain the vacuum and open the claw valve.
7. With the cluster under the animal lift one of the teat cups and attach the liner to the teat. The vacuum will help hold the liner in position but will NOT support the whole cluster, keep the teat cup as vertical as possible.
8. You may see the vacuum level drop and the pulsation slow down during this process. As the vacuum level drops the pulsation slows down. As soon as the cluster is on all teats, the vacuum level will rise again and the pulsation should return to the correct Pulses Per Minute. (PPM)
9. Next release the second liner and place it on the teat; again while supporting the cluster.
10. Continue to put all the liners on the cow and support the cluster until the vacuum level recovers and the you can hear the pulsation working correctly.
11. At this stage the animal should commence milking.
12. Monitor milking and verify that there is milk in the claw.
13. When the flow rate has dropped and there is no longer sufficient milk flow in the claw, close the claw valve and remove the cluster from the teats.
14. DO NOT let the bucket overflow as this may damage the vacuum pump.
15. It is recommended to disinfect the teats with a special teat dip solution as soon as milking is finished to help prevent infection.

SHEEP/GOAT

6. Ensure the valve stems on the MC110A Semi Auto Valves (see diagram on page 16) are in the up position. Open the pinch clip on the main milk tube.
7. With the cluster under the animal fit the liner onto the teat and the valve automatically opens.
8. The milking vacuum will be applied to the teat. You may see the vacuum level drop slightly and hear the pulsation slow down during this process.
9. Fit the second teat cup to the other teat.
10. Once both teat cups are applied the vacuum and pulsation should return to the correct milking levels.
11. At this stage the animal should commence milking.
12. Monitor milking and verify that there is milk in the claw.
13. When the milk flow rate has dropped and there is insufficient milk passing through the cluster. Just pull the liner slightly to detach the unit: this lets in air which closes the MC110A Semi Auto Valve.
14. DO NOT let the bucket overflow as this may damage the vacuum pump.
15. It is recommended to disinfect the teats with a special teat dip solution as soon as milking is finished to help prevent infection.



Washing

Washing the components after milking

On termination of every milking procedure, wash the components that have come into contact with the milk without any delay. Therefore, wash the milking cluster, milk tube, bucket and bucket lid, using water and recommended proprietary alkali circulation detergent in sufficient quantity to guarantee cleaning of the product.

You are advised to wash the claw / milking cluster once every two weeks with solutions composed of:

- Water + phosphoric acid based milk stone remover in concentrations NOT exceeding 3%.
- **NEVER mix with other chemicals!**

1. Fill the bucket with cold water (not more than 20 litres). **NEVER OVERFILL THE MILK BUCKET.**

COW

2. With the electric motor and the vacuum pump running and the vacuum open to the milking bucket, place the open ends of the liners into the wash bucket and open the claw valve to allow the water to be drawn up into the milking bucket.

SHEEP/GOAT

2. With the electric motor and vacuum pump running; vacuum in the bucket, have the pulsation running and ensure the valve stems on the MC110A Semi auto valves are in the down position. Place the open ends of the liners into the wash bucket, open the main milk tube pinch clip and to allow the wash water to be drawn up into the milking bucket.

3. Periodically lift the cluster clear of the water to allow the air to surge and cause turbulence in liquid. Then plunge it back into the liquid and repeat until the wash bucket is empty.



4. When the bucket is empty leave the pump running, turn off the vacuum tap to the bucket, remove the lid of the bucket and tip the water away.
5. Refill the container with hot water (maximum temperature 80°C), not more than 20 litres and mix with the alkali circulation cleaner to the correct dilution.
6. Repeat the steps 3 to 5 with the hot wash. If you wish you can return the hot wash water back into the wash bucket and repeat the process again.
7. When you have finished with the hot wash return it to the wash bucket and use it with a special brush (BR09) to clean the inside of the liners then and another brush to clean the outside of the cluster, milk bucket and to keep the portable milker frame generally clean and hygienic.
8. Repeat steps 1 to 5 with clean water to rinse any trace of detergent away.



9. **VERY IMPORTANT** - Before putting the machine away, leave the vacuum tap to the bucket closed and the pulsator running for 1 minute. The pump will then work harder and generate warmth in the pump to help dry out any moisture carried over through the vacuum pump and out of the exhaust.

REMEMBER - A DRY RUN VACUUM PUMP SHOULD NOT BE LUBRICATED - SO IT MUST BE KEPT DRY AT ALL TIMES OR IT MAY RUST.

10. The vacuum tap to the bucket and the claw valve should then be opened to lower the vacuum level before turning off the electric motor and vacuum pump by pressing the red switch on '0'.
11. The portable milker can then be put away in its parking position until the next milking.
12. **IMPORTANT** - If the portable milker is not being used every day it should be:



RUN FOR 1 MINUTE EVERY DAY.

This will allow the graphite vanes to protect the vacuum pump and keep it in a good working order, ready for when it is required the next time.



RUN TWICE A WEEK.

This will protect the vacuum pump and keep it in a good working order, ready for when it is required the next time.

Washing the portable milking machine



WARNING

Do not spray or splash water onto the electric motor and electric switch control box.

Do not connect the mains electric plug to the electricity supply whenever the portable milking machine is wet.

Do not store the machine next to inflammable materials when parts are still hot.

Store the machine in a Clean and Dry environment.



DO NOT LUBRICATE A DRY VACUUM PUMP AS IT WILL DAMAGE THE VANES



SEE PAGES 12 + 13

Additional periodic Washing of the portable milking machine

It is advisable that once per week you follow these additional wash procedures or sooner if you have had a small carry over of milk.



BR29A – Milk Tube
cleaning brush



BR09 Rotary Liner brush ideal
for cleaning inside the liners

1. After the completion of the normal wash procedure and without the vacuum pump running remove the clear vacuum supply tube to the bucket and using a tube brush and some of the warm wash water that you could have kept, clean the tube and tap through with a tube brush (BR29A).
2. Attention should also be paid to removing the top and bottom bung from the vertical blue metal vacuum supply tank that is part of the frame.
3. Care should be taken when cleaning this as you do not wish to get any liquid in vacuum pump port. It may be prudent to pass a moist cloth down through the tube a few times to ensure cleanliness.
4. The upper and lower bung should be left off for a while to allow the interior of the tank to dry fully before being reassembled.

8. GENERAL MAINTENANCE

Storage requirements

The portable milking machine must be stored in dry places having temperatures between +5 and +25°C. Protect against dust and atmospheric agents.

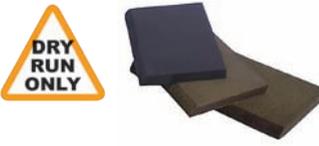
Periodic maintenance

N°	Components	Check Frequency	Maintenance to Execute
1	Electric motor fan cover	Once a month	Check that the cover is unobstructed, if otherwise, clean it with a brush eliminating dirt from inside its seat.
2	Liners	6 months or 2,500 milking	Replace the liners when they have reached a 6-month lifespan or 2,500 milking.
3	Replace the vacuum pump blades	Every 2 years	Replace the blades once every 2 years: <ul style="list-style-type: none">- Unscrew the 4 pump cover screws.- Remove the blades.- Put in 4 new blades (see instructions).- Close the cover with the 4 screws, tightening the screws to 20Nm for 185-200ltr/min pumps.  WARNING - Replacement operations must be carried out by disconnecting the electrical plug from the system's fixed electrical socket outlet and when the pump is cold.
4	Pulsator	2 months	Clean the pulsator.
5	Pulsator	Once a year	Carry out a ratio and frequency check by a qualified personnel equipped with a pulsator tester. Service as required.
6	Tubes	Once a year	Change the rubber parts.
7	Changing the power cable	Before each use	Check that the power cable is not stripped, crushed or burnt. If it is stripped, it must be replaced. Cable type H05, with 3 conductors each, with a section of 1.5mm ² (square millimetres)  WARNING - The power cable must be replaced by qualified staff. the cable must be blocked using the special plastic cable retainer and fixed with 2 screws. Do not start the motor if this cable is not properly blocked.

9. TROUBLE SHOOTING

N°	Components	Problem Detected	Solution
1	Electric Motor	Electric motor won't start and turn the vacuum pump.	<p>Likely cause, it has been put away damp, and the barrel of the pump is likely to be corroded. IF A DRY RUN PUMP DO NOT LUBRICATE. A qualified person is needed to clean and replace the vacuum pump vanes. DO NOT be tempted to force the motor to start, as the vanes maybe damaged by the corrosion in the barrel if not cleaned.</p> <p> WARNING - do not interfere with the electric motor or switch.</p>
2	Electric Motor	It blows the fuse or it trips the circuit breaker in the mains consumer unit.	<p> WARNING - do not interfere with the electric motor or switch.</p>
3	Vacuum pump	It does not produce sufficient vacuum.	<p>Check that:</p> <ul style="list-style-type: none">- The tubes are properly connected.- The liners and tubing have not holes.- The bucket lid and gasket are seating properly.- The Vacuum taps and regulator are operating.

10. SPARE PARTS

	Part Number	Description
	PMC06A	Plastic Lid for PMC4, PMC5, PMC7 and PMC8 2 x 16mm Nipple
	PMC06B	Gasket Rubber for PMC06A
	PMC06C	Non Return Valve Complete for PMC06A
	PMC06D	Float Ball for PMC06C
	PMC06E	Vacuum Pump Dry Run for PMC4, PMC7 and PMC8 185ltr, 220V, 0.55kW (DO NOT OIL)
	PMC06F	Vacuum Pump Oil Run for PMC5 200ltr, 220V, 0.55kW
	PMC06G	Vacuum Pump Exhaust for PMC5
	PMC06H	Vacuum Pump Exhaust for PMC4, PMC7 and PMC8
	PMC06I	Motor Shaft Protection Cap for PMC4 and PMC5
	PMC06J	Graphite Vane for PMC4, PMC7 and PMC8 (4Pk) 70mmx46mmx5.95mm (DO NOT OIL)

10. SPARE PARTS *(continued)*

	Part Number	Description
 	PMC06L	Kevlar Vane for PMC5 Oiled (4Pk) 70mmx46mmx5.85mm
	PMC06N	Plastic Outlet Fittings for PMC4, PMC5, PMC7 and PMC8
	PMC06O	Regulator for PMC4, PMC5, PMC7 and PMC8
	PMC06P	Drain Flap for PMC4, PMC5, PMC7 and PMC8 Galvanised Vacuum Tank
 	PMC06Q	Universal Oiler for PMC5
 	PMC06R	Waste Oil Collection Tank for PMC5
	PMC06S	Vacuum Gauge for PMC4 and PMC5 63mm
	PMC06T	Tube Support Arm for PMC4, PMC5, PMC7 and PMC8
	PMC06U	Spare Wheel for PMC4, PMC5, PMC7 and PMC8 200x50
	PMC06V	Rubber Support Leg Ferrule for PMC4, PMC5, PMC7 and PMC8

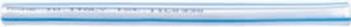
10. SPARE PARTS *(continued)*

	Part Number	Description
	PMC06W	Rubber Handle Grip for PMC4, PMC5, PMC7 and PMC8
	PMC06X	Stainless Steel Bucket Only for PMC4, PMC5 and PMC7
	9152	Greenoak P90 Pulsator 2 Ports 60:40, Alternate
	9152SVK	Greenoak P90 Service Kit for 9152/9154
	DB48B	Greenoak Vacuum Gauge for PMC4, PMC5, PMC7 and PMC8
	MC110A	Goat/Sheep Classic Assembly c/w Shut Off (Bucket Milking)
	ML08I	Delaval Large Bore Type Milking Liner (960000.01) c/w 10mm Milk Tube 23.5mm
	ML30	Silicone Milking Liner for Goat (Single) PMC8 Only
	ML32	Silicone Milking Liner for Sheep (Single) PMC8 Only
	ML40G	Plastic Teat Cup Shell for Goat (Single) PMC8 Only 48mmx129mm(L)x20.5mm

10. SPARE PARTS *(continued)*

	Part Number	Description
	ML40S	Plastic Teat Cup Shell for Sheep (Single) PMC8 Only 45mmx105mm(L)x25mm
	PA28	Clear Plastic Twin Air Tube 7mmx14mmx25m
	PL190	Pulsator Twin Pulse L02 60:40, Alternate
	PL303	L02 Maintenance Kit Complete 60:40, Alternate
	RP11	Rubber Cord Ring ID 32mm(1¼")
	TA01	Rubber Short Pulse Tube 228mmx7mm (9"x9/32")
	TA04	Short Air Tube for Sheep/Goats Plastic 240mmx7.6mmx14.6mm
	TC02	Rubber Twin Air Tube 7mmx14mmx18.3m
	TC08	Rubber Milk Tube 14mmx25mmx18.3m
	TC09	Rubber Milk Tube 15.5mmx27mmx18.3m

10. SPARE PARTS *(continued)*

	Part Number	Description
	TM05	Short Milk Tube for Sheep/Goat Silicone PMC8 Only 230mmx10mmx20mm
 	VP04	Vacuum Pump Oil Universal (Red) for PMC5 Only 5ltr
 	VP05	Vacuum Pump Oil Universal (Red) for PMC5 Only 25ltr



Szutest Technical Inspection and Certification

ATTESTATION OF COMPLIANCE

The technical file and test reports of the following product have been checked and found in compliance with the Parliament and Council Directive 2006/95/EC of 12 December 2006 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits and Parliament and Council Directive 2006/42/EC of 17 May 2006 on the approximation of the laws of the Member States relating to machinery.

Name of Manufacturer: Dairy Spares
Manufacturer's Address: Selahaddin Eyyubi Mahallesi 1596
Istanbul
Turkey

Declares that:

Machine designation: Mobile milking machine, milking systems and spare parts and accessories

Model: PMC4X, PMC5X, PMC7X and PMC8X

Comply with: Machinery Directive 2006/42/EC
Voltage Limitation Directive 2006/95/EC

Base of attestation: File of documentation, test report Ref. No. 15-0913/04

The referred technical file is reviewed and attested with presumption of compliance with the essential requirements listed EU Directives above. This attestation does not abrogate the compulsory obligation of the manufacturer to issue the declaration of conformity.

Date: 2015-09-14
Revision date: 2020-09-13

Mehmet ISIKLAR
General Manager

XX01E

Manual for PMC4/5/7/8

