

DairyRobot R9500 Quick Reference Guide

Features & Benefits,
Technical Specs and
FAQs



Features & Benefits

Feature	Benefit
Solid state camera with time of flight	<ul style="list-style-type: none"> • Fast, reliable attach time • No udder mapping required • More animals milked per box, no moving parts in the camera
Electric verses air attachment	<ul style="list-style-type: none"> • Less compressed air required • "Medical grade" air quality is not required • Less noise from the box
In-liner Everything™	<ul style="list-style-type: none"> • Consistent, efficient, complete prepping routine • More hygienically safe • Optimal udder care • Pre-determined amount of dip is used; and it only goes on the teat
Intermediate disinfection	<ul style="list-style-type: none"> • Camera, mats, and butt pan are cleaned between each cow • Teat cups are disinfected externally and internally between each cow
Indexing of animal	<ul style="list-style-type: none"> • Allows for different sized animals to use the same box comfortably
Sloped feed bowl	<ul style="list-style-type: none"> • Allows animal to eat feed easier
Removable milk cassette (service module)	<ul style="list-style-type: none"> • Easier access for maintenance • Less downtime
Wide/comfortable entry and exit	<ul style="list-style-type: none"> • Cow comfort • Box time speed - easy in and out
Manual attachment	<ul style="list-style-type: none"> • Easy handling of special needs cows • More convenient operation during cow training period • Cow can be easily accessed from behind without having to enter box
Calf milk separation	<ul style="list-style-type: none"> • Easy handling of calf milk • Can have Dam's milk go to the appropriate calf

Technical Specs

Dimensions of the box

- **Physical dimensions of the box:** 52 3/8" X 131 7/8" not including operator pit.
- **Required dimensions of the box:** Approximately 4.5 ft. x 15 ft. with wall dimensions and pit. 9 ft. vertical is preferred.

Milk path capacities

- **Distance it can pump, head pressures:** 100 meters with no more than 15 ft. of head pressure with one-way wash. Custom options available for longer distances.
- **Size of line:** 1"
- **Frost protection:** Dealer supplied, system cannot operate below 2°C (35.6°F).
- **Process of Washing:** Pre-rinse, Main wash, Post-rinse cycles. FDA model has acid and detergent in the same wash cycle, CE model alternates.

Water usages

- **Hot water required (size of water heater)**
 - Temperature: 180°F+
 - Quantity: 5gpm (1 box) 3gpm (2 box) 2.5gpm (3 box) maximum per box flow requirements for hot water during CIP.
- **Quality of water**
 - Soft water needed: Recommended
- **Estimated total water used per day:** 325 liters (CE) and 450 liters (FDA)
- **Water line size, etc.:** Local plumber to spec line size based on pressure system.

Power

- **Phase/voltage:** Single phase, 220/230 volts
- **Quantity of fuses needed:** N/A

Air requirements

- **CFM per box:** 1.2
- **PSI required:** 90
- **Quality of air:** Filtered, oil free dry air
- **Air, line sizes:** 12mm supply
- **Sort gate CFM requirement:** 5 cfm per gate @ 90PSI

Vacuum

- **CFM per box:** 300 L\min or 10.5 CFM (N.A. recommendation)
- **Vacuum line size required:** 3.5"- 6" depending on distances.

Operating temperature of the DairyRobot R9500

- **Room temp:** 2°C-40°C / 35.6°F-104°F
- **Consideration for temperature swings:** Ensure the machine doesn't freeze.

Supply unit dimensions/specs

- **Master/secondary configurations:** Three robots to one Supply Unit (SU) is possible.
- **Supply unit to box limitations:** 30M – approx. 90 ft.

FAQs

Q: How many cows will a single box milk?

With proper cow flow, herd management and system maintenance, the DairyRobot R9500 is capable of consistently performing 200 or more milkings per day. The number of cows chosen to be milked is a management decision that can vary by farm, however, it is recommended that cows have some free time available at the DairyRobot R9500.

Q: What's the expected milk production from a robot?

5,500 lbs. (2,500 kgs) is possible, but production is dependent on the management of the dairy.

Q: Will I get more milk per cow? Why?

It is possible due to the potential for increased milking frequency and individualized feeding but, all the other aspects of herd management with a robotic milking herd have to be in order as well.

Q: What's the expected productive life of a cow with robots (how many lactations)?

This is farm or herd specific and has more to do with the facility than the robot. The low stress lifestyle of a well setup robotic milking facility can certainly improve the longevity of an animal, but if other environmental or health stresses exist, these benefits will be overruled.

Q: Can I milk different breeds of animals in the same box?

This practice is not recommend.

Q: Do you have a box for a Jersey cow?

The box length can be adjusted for different breeds.

Q: What is the average milking time in the box?

The DairyRobot R9500 averages around 6 minute box times.

Q: What's the average time to attach?

The DairyRobot R9500 average is approximately 45 seconds.

Q: How big of a building do I need?

This depends on a variety of factors and is best to be discussed with a local sales specialist.

Q: What size holding area do I need in front of the boxes?

Twenty feet is recommend by the width of *each* robot.

Q: How much air is required by the DairyRobot R9500 system?

One DairyRobot R9500, milking 60 cows, 3 times per day, will require approximately 750Cuft (CE) 800Cuft (FDA) of air per day at 90PSI. Peak flow can reach 1.2cfm@90psi avgerage during milking. This data only applies to the box itself and not any additional transfer systems, etc.

Q: Do I need an air dryer?

Yes, clean, dry, oil-free air is required.

Q: How much water does the DairyRobot R9500 use?

The CE model uses approximately 325 liters of water per day and the FDA model uses approximately 450 liters (118.8 gallons) per box per day based on 60 cows milking 3X, (and no treated cows) with a 10-meter (30-ft) pipeline. These figures do not include any bulk tank or transfer system cleanings.

FAQs

Q: Do I need soft water?

Yes, it is advisable to use soft water for the CIP process of all milk handling surfaces.

Q: How long does it take to wash?

This is dependent on pipeline distances as well as hot water supply consistency due to the dynamic wash process used by the DairyRobot R9500. 30-35 minutes is typical.

Q: How many units will wash at one time?

Typically, groups of 3 robots will wash together but, on a large dairy this can be flexible to suit barn design.

Q: How often should the box be washed?

Three times a day is recommended.

Q: How is the system washed (box & discharge lines)?

It is the same principal as a parlor.

Q: How is the tank washed?

With a conventional tank wash control.

Q: When is a buffer tank needed?

It is recommended to always have a buffer tank unless cow numbers are minimal. In some countries, it is mandatory by regulation to have a buffer tank.

Q: How many buffer tanks are needed?

This depends on the number of robots, but typically one or two will handle most applications.

Q: What is the size requirement of the buffer tank?

It's not uncommon to see 150-200 liters (40-50 gallons) of milk per box per hour from a high producing herd. Factors such as tank wash time, minimum agitation requirements before sampling from the hauler and tank pump out times all need to be considered when making the size calculation.

Q: How much power does the DairyRobot R9500 require?

The DairyRobot R9500 operates on 220V single phase power. Other equipment such as vacuum pumps, etc., have to be ordered to suit the installation.

Q: What's the cost of maintenance per year (parts/labor/chemicals, etc.)?

It is best to sit down with your local GEA dealer and GEA sales specialist to calculate the specifics of your dairy to get an accurate outlook of costs for your specific operation and application.

Q: How much labor will I need for my farm after I put in robots?

The amount of labor will depend entirely on the facility management around the robot, herd management needs, animal welfare and nutrition. The robot is a milk harvesting tool but, all the other aspects of dairy farm management have to continue to be completed and in many cases in a new way.

FAQs

- Q:** **How many hours does it take to install a robot?**
An experienced dealer can install one box in a multiple box installation in approximately 140 hours, not including start-up labor. An inexperienced dealer on a one-box installation with no training has recorded 400 hours of labor, not including start-up labor.
- Q:** **Will the robot notify me if there's a problem?**
Yes, via the FarmView robotic milking app. It can text, call and email you in the event of an issue.
- Q:** **Will my existing ID work with the box (ear, neck, competitive, etc.)?**
Any GEA ID system will work.
The others are not supported.
- Q:** **What's the daily maintenance of the robot?**
Refer to the Scheduled Maintenance Manual, as well as the Service Protocols and Operation Manual.
- Q:** **How do I, or can I, use a footbath?**
Footbaths can be used as part of the traffic structure or independently in a purpose built lane at the end of the barn. The latter is preferred.
- Q:** **What is the estimated feed cost per cow?**
This depends on the cow traffic type, local feed quality and availability and regional cost per ton of robot pellet. It is best to consult with your nutritionist on this topic.
- Q:** **Can the DairyRobot R9500 robot measure SCC?**
The M6850 has the ability to do this within the robot system – and it measures by individual quarter, for the length of the milking session (no spot samples) for superior accuracy.
- Q:** **How much feed is needed in the box?**
Again, this is dependent of cow traffic, feeding regime, pasture availability and a number of other factors.
- Q:** **Can it quarter milk/separate milk per quarter?**
This is possible with the DairyRobot R9500 system, however, refer to your country's regulations on this subject.
- Q:** **How do I feed with a pellet?**
It is advisable to feed a good quality, stable structured pellet free of fines.
- Q:** **Does the DairyRobot R9500 test for components?**
Not at this time.
- Q:** **Can I use grain?**
It is possible, but millage will vary and it is not recommended during a start-up.
- Q:** **Are there any additional monthly fees?**
FarmView? Yes, FarmView is a billed service.
DairyPlan? Not at this time.
- Q:** **Will a robot work with pasture feeding?**
Yes, it's possible, but you should work with your equipment sales specialist to discuss management.
- Q:** **What's the warranty?**
One year standard.

FAQs

Q: Will there be a fee for software updates on the box, DairyPlan or FarmView?

In the future, there will be a fee for the replacement of DairyPlan but, at this time it is planned to include updates with the FarmView fee.

Q: Is the box upgradable? As new technologies are developed can they be used on my old box?

Yes, the platform is upgradable in many cases when it comes to hardware or software (i.e. SCC sensor).

Q: Will the DairyRobot R9500 work with sand bedding?

Yes, but there is an increase in maintenance costs.

Q: Will it separate calf milk? How?

Yes, via the secondary receiver.

Q: Can I milk test with a robot? How?

The DairyRobot R9500 can collect samples automatically using our sampling unit. This consists of a collection jar and a sample storage box. For more information see manual 7821-9001-005. The Mlone uses the same sampling unit.

Notes:



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