

DryMac



Let's get your first question out of the way:

- 12m DryMac Drier, 44m³, 32 tons WNIS R540,000
- 6m DryMac Drier, 22m³, 16 tons WNIS R460,000

Prices above are base prices for the Dry Mac Drier only. Other Dry Mac configurations and services are priced separately.



Big numbers, we agree, especially if you are just starting out and your yields are low. But you are in a long term business and you think about the bigger picture. It is about what you get for your money, the ROI, the payback period, volumes and the highest quality output.

The price can be daunting if your trees are still maturing and your yields are low but increasing. By the 5th year your yields per tree will be at a maximum and you need the most efficient, effective solution for your business. DryMac provides everything you need.

Major financial institutions that understand the Macadamia industry and who understand the value of implementing DryMac solutions in your business are ready to assist you. The DryMac Team would be very happy put you in touch.

The DryMac Team, lead by Adrian Padt, take pride in introducing the DryMac products.

DryMac Innovative Drying Solutions **powered by Rocket Works** 

DryMac applies proven, leading edge technology to make you more profitable.

What do you get for your money?

- The most efficient, effective, controllable and configurable drying solution on the market.
- A modularised plug and play drying system that scales as you grow without the need to build or extend your facilities.
- As your yield increases you don't need to build to increase your drying capacity. You simply add a new DryMac, plug it in and start drying
- DryMac is an all weather, highly mobile drying system that can be dropped anywhere. Just supply power, plug it in and start drying. Built on robust, proven, weather resistant, industrial grade materials, DryMac Driers don't need a building to operate.
- You can even stack DryMac units if your physical space is limited in some way
- Highly configurable to suit your space and your logistics from tree to shipping
 - Bulk bins
 - Roll In bins
 - Bulk bags / crates
 - Trolleys & Trays
- A Drier that can dry Macadamia Wet Nut In Shell and be configured to dry Macadamia Kernels and other agricultural products, for example tobacco, meringa and certain fruits thus maximising the productivity of your investment once the macadamia season is finished. Your investment will not stand idle.

Let's talk efficiency, effectiveness and configuration:

Efficiency

In traditional drying methods you build or renovate a building turning it into a de-husking, sorting and drying facility. As your yields grow you continue to build and extend to cope with the increasing demand. These costs mount up and considerations are significant:

- Availability of Land
- Drying building and maintenance
- Rent for the building
- Permanent utilities (water & power) to the building
- Staff costs for personnel to be on site to manage the drying room
- Health hazards associated with working inside a drying room
- Using hot air as the drying medium is expensive, highly inefficient and highly uncontrollable leading to poorer quality product and lower quantity output compared to DryMac technology

- Traditional drying happens at 40C or above but with DryMac technology we can reduce the temperature and therefore reduce your costs and improve quality of the final Nut In Shell.
- The traditional drying process is labour intensive and requires constant manual attention to ensure the drying process is managed. DryMac is self contained, almost autonomous drier that can be managed remotely from a Desktop PC or Cell Phone App.

	HPD drying	Hot air drying	Vacuum drying	Freeze drying
SMER (kg/kWh)	1.0 – 4.0	0.1 – 1.3	0.7 – 1.2	0.4 and lower
Operating temperature range (°C)	-10 to 80	40 to very high	30 – 60	-35 to >50
Operating % RH range	10 – 80	Varies based on temperature	Low	Low
Drying efficiency (%)	Up to 95	35 – 40	Up to 70	Very low
Drying rate	Faster	Average	Very slow	Very slow
Capital cost	Moderate	Low	High	Very high
Running cost	Low	High	Very high	Very high

Effectiveness

- DryMac technology automatically controls the drying process to the specific EMC value that you set
- Each harvest traditionally requires a new bin in which to dry the NIS, whereas DryMac will allow you to simply add the next batch of nuts into the already drying nuts and still dry all the nuts to your specified EMC.
- DryMac will dry both Nut In Shell, Kernel and other produce, extending your processing capabilities and potential revenue sources.

How do we do it?

The details behind our technologies are our secret and the way we utilise the technology to power DryMac is revolutionary - but your success is our success so we want to share the important stuff with you.



Traditional methods of drying by heating are inefficient, wasteful and can adversely affect quality.

Instead of inefficiently and financially wastefully heating a large drying room full of moist air and waiting until the nuts finally test at the correct EMC, DryMac seals the nuts inside the Drier, checks the condition of the air inside the Drier and then removes the exact amount of moisture required to dry the nuts to the exact EMC percentage that you desire. DryMac doesn't recirculate moist air into the drying process meaning DryMac drying is quicker and more effective, reducing your heating costs. Throughout the drying process DryMac automatically checks the condition of the air in the drier thousands of times and adjusts the conditions inside the Drier to optimise the drying process, meaning you have a consistently high quality output and a very predictable drying schedule.

You can even mix batches of part dried nuts with a new batch of harvested nuts. DryMac simply adjusts to the new moisture content in the drier and continues to dry all the nuts to your required EMC.

As soon as the nuts are at the correct EMC percentage the DryMac Drier goes into a maintenance mode to keep the nuts at your desired EMC protecting your extremely valuable crop, reducing spoilage and saving you money .

How do we get rid of the moisture?

In traditional drying the moist air from the nuts in the drying bins is simply vented into the ambient conditions in the drying room effectively raising the ambient moisture content of the drying room. This extends the drying time required for the nuts to reach the specified EMC, slowing down your throughput and delaying your delivery. In order to continue or speed up the drying process you raise the temperature, increasing your heating costs and potentially degrading the quality or spoiling the nuts as you expose them to excessive temperatures over a longer period of time.

DryMac seals the nuts inside the Drier and since DryMac doesn't have to keep heating fresh air to remove moisture from the nuts the DryMac uses far less energy than traditional drying methods. DryMac condenses the moisture released from the nuts into fresh water that you can collect and use directly from the DryMac unit. DryMac condenses the moisture as fresh water that you can collect straight from the drier and reuse as you require. At a starting moisture content of 24% NIS the 12m DryMac can produce around 100lt of fresh water per day.



Configuration

DryMac Driers are the most configurable drying solution available. Built using existing, proven, industry standard, weather proof, hard wearing, resilient, industrial grade materials to ensure that they operate in ALL conditions.

- Plug and play configurations of 6m and 12m units
- Transportable so you can change your drying facility layout easily as you expand in the coming seasons
- On Grid, Off Grid or Hybrid power solutions can be customised to your requirements
- The DryMac can be configured as a
 - Drier
 - Storage unit
 - Drier / Storage combo unit
- The internal fixtures are highly configurable to suit your space and your logistics, from tree to shipping. You can dry in:
 - Bulk bins
 - Roll In bins
 - Bulk bags / crates
 - Trolleys & Trays

DryMac has everything you need. We provide:

- Driers
- Sorting Conveyors
- Cross Conveyors
- Incline Conveyors
- De-huskers
- Graders
- Water Baths
- Flash Driers
- In Field drying/storage bins that can be utilised in outlying areas to start the drying process and stop spoilage before the nuts can be collected and transported to your drying facility
- Nut harvesting /sweeping machinery for fallen nuts

The DryMac team, lead by Adrian Padt, provide on-site consulting to help you optimise your existing drying and processing facility (whether you use DryMac products or not) and provide impartial, expert advice on how to effectively grow your processing facility to meet your future yields.

The DryMac team can also assist with logistics of transport, storing and packaging nuts from your facility.

Contact Details

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