

# GRAIN DRYER INSTALLATIONS

## Gas or Diesel fueled dryers – the choice is yours



### Gas Fired Dryers

All OPICO GT Dryers are fuelled by LPG providing cost effective, controllable heat for drying. In addition they require minimal set up and servicing time. Choose from bulk tanks or cylinders to suit your needs.



### Diesel Fired Dryers

OPICO's Magna Dryers are fuelled with diesel which is readily available on most farms. The on board tank provides for a considerable amount of drying when required. The Duax Heat Core retains heat to moderate the burner temperature as the burner switches between high and low flame. This unique system makes the Magna one of the cleanest and most efficient direct fired diesel dryers on the market. The low level burner is also easily accessible for servicing and set up.



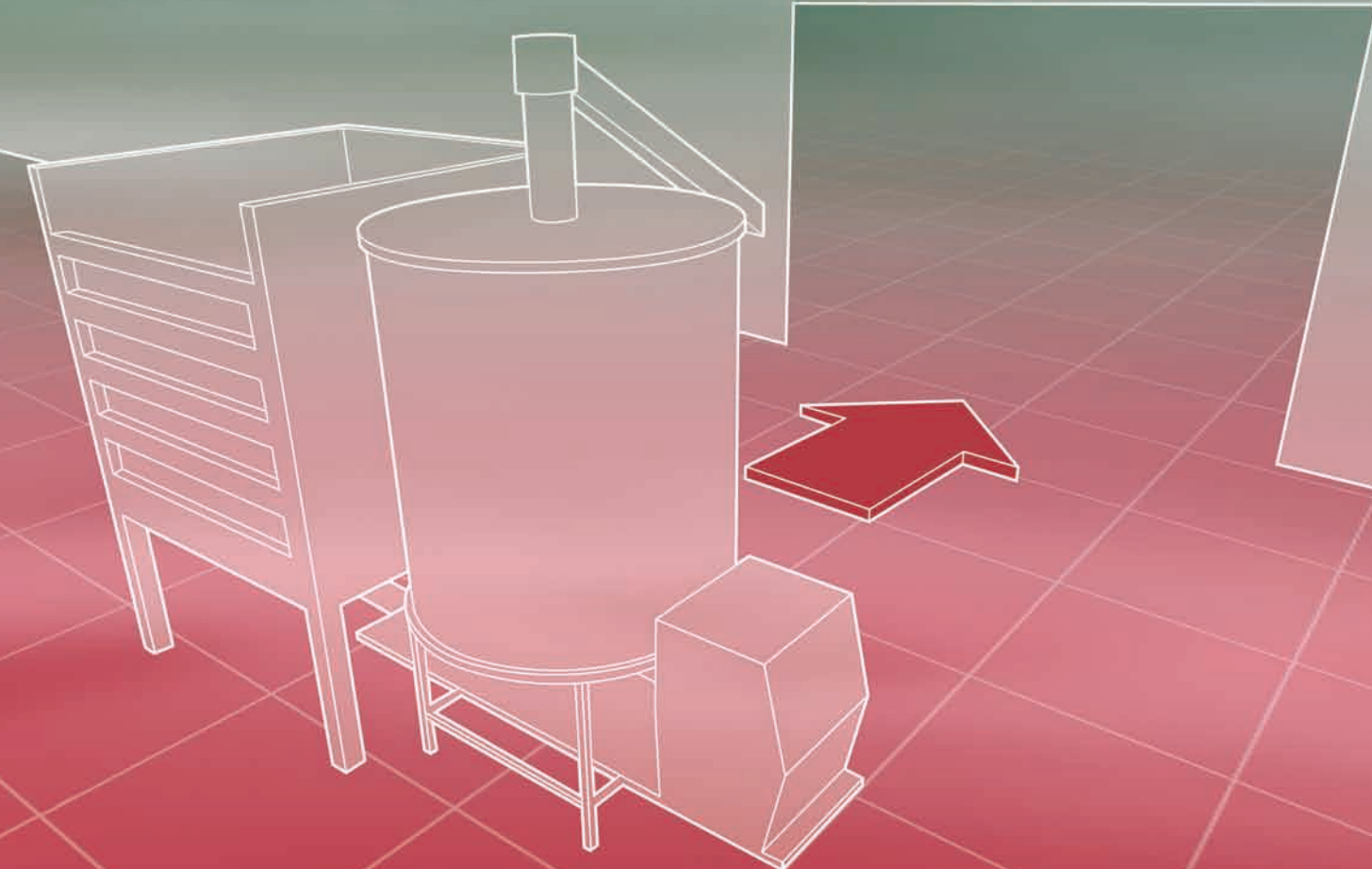
### Options

- Sky Vac dust extractor (factory fitted)
- Extended discharge and double discharge
- Extended or shortened loading hopper

### Support You Can Depend On

No-one knows more about grain drying than OPICO. We've been helping farmers to reduce their drying costs and maximise the return from their harvests for more than 40 years.

OPICO dealers' staff know our grain dryers inside-out and are fully trained to ensure a high standard of customer service. All OPICO Grain Dryers are also backed by first-class technical support and a highly responsive parts supply service.



Quality and reliability that meet your needs



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Profit from our knowledge

# GETTING THE MOST FROM YOUR OPICO GRAIN DRYER

OPICO Grain Dryers offer you unrivalled flexibility to enable you to fit them in to many different drying and storage layouts.

With a little thought about the flow of wet and dry grain and minimal alterations to existing buildings, an efficient drying process can be set up.

The key is planning a layout that avoids double handling - minimising labour input maximises the financial efficiency and drying throughput.

Many farms could increase drying output at minimal additional cost by simply arranging their system better. Electric drive and fully automated dryers are another good way of increasing drying output per day without increasing the size of the dryer being used.

Whichever control system you choose, ease of management and peace of mind are key benefits of owning an OPICO Dryer. Once set for a specific crop type the dryer looks after the drying process itself. If there is any problem it will either shut the burner off or shut down the dryer completely

- ✔ When siting your dryer, consider the grain flow around the farm to minimise double handling
- ✔ Choose a covered, ventilated environment for your dryer
- ✔ The prevailing wind should ideally be in the direction of the fan
- ✔ Take advantage of expert advice in the siting of the bulk or cylinder Liquid Propane Gas supply and diesel storage
- ✔ Grain is discharged from OPICO Dryers at height - use gravity to help you move the grain to where it needs to be
- ✔ Even in a dry year put your grain through the dryer - it will polish it up and improve its appearance and hectolitre weight

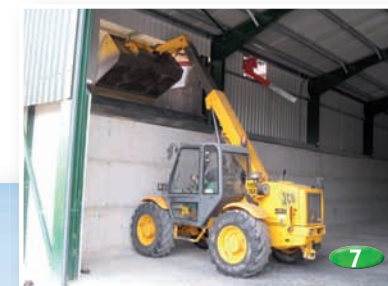
## Positioning

There are a wide range of options when it comes to choosing the right location for your new dryer.

However always consider the following guidelines to ensure you get the best possible return from your investment.

First and foremost, think carefully about the flow of grain through your farm. Choose a site that avoids or minimises downtime when filling and emptying. Ideally, your dryer should be sited in a well ventilated area and have cover overhead to protect it from the weather.

- 1 Positioning multiple dryers nearby makes management easier
- 2 If Dryers are sited inside a shed, condensation will be a problem unless there is a through draft to take the hot moist air away from the dryer
- 3 A purpose built installation with excellent positioning for fuel, ventilation and some protection from the weather
- 4 Use the natural fall of the ground to help minimise the need for additional augers and conveyors
- 5 If the installation is permanent then protect the dryer from the prevailing weather by using Yorkshire boarding which still allows ventilation
- 6 A simple extension to an existing store provides cover and ventilation as well as access
- 7,8,9 Incorporating all the Positioning elements, Picture 7 shows loading from inside the store and where the discharge is unloading the grain. Pictures 8 and 9 show the Dryer and Pre store hopper sited under a lean-to protecting them from the elements but ensuring ventilation to eradicate damp moist air



OPICO

# Filling

## OPICO Dryers can fill themselves from their reception hopper at between $\frac{3}{4}$ and $1\frac{1}{2}$ tons per minute.

If there is not enough grain to satisfy this demand then the drying cycle will be extended and the dryers throughput reduced.

Site the Dryer as close to the wet grain as possible. If loading with a materials handler use a feed hopper preloaded to ensure the demand from the loading auger can be met. With Automatic Dryers match the feed hopper to multiples of the capacity of the Dryer itself.

- 1 An 18 ton Automatic Dryer with a matched 18 ton pre-storage hopper which is loaded with wet grain stored inside the shed behind
- 2 A 12 ton Dryer takes the full capacity of the 12 ton trailers' grain chute to fill at maximum speed
- 3 A sunken loading hopper allows filling with a trailer straight from the field or with wet grain stored nearby
- 4 A buffer hopper to ensure the Dryer is filled as quickly as the loading hopper is able to take grain
- 5 An adjustable sluice to control the flow of grain is required with some designs of pre-store hopper
- 6 Bespoke intake hopper allows dryer to be integrated into an existing grain handling system
- 7,8 A sunken dryer with grain walled loading area to allow a substantial amount of grain to be piled up and feed the Dryer. This prevents double handling as grain can be tipped into the loading area straight from the field rather than being tipped and moved with a handler. Beware not to place too much grain above the loading hopper without some sort of baffle to prevent the weight of grain crushing the hopper
- 9 Reception pit allows tipping straight from the field or filling with the handler from a wet grain heap



Ensure wet grain storage capacity and auger capacities are matched to the Dryers loading capacity!



# Emptying

## One of the advantages of a recirculating Batch Dryer is that it discharges from height.

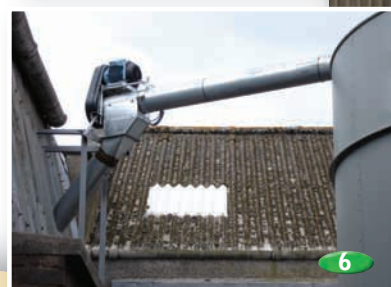
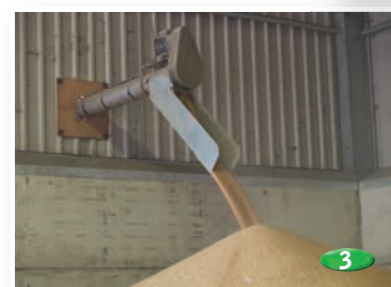
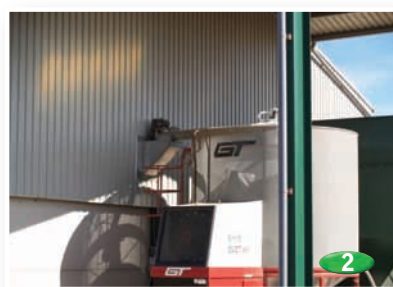
So with some planning and the help of gravity, grain can be moved to a storage area without the use of conveyors.

Dryers can be fitted with a variety of discharge options to suit particular installations and automatic dryers can be specified to provide control and power to auxiliary conveyors if required.

Many farms use dryers to fill lorries and trailers so that no additional handling is required after drying the grain.

The high discharge speed of all OPICO Dryers means that any auxiliary conveyors need to have a high capacity or buffer storage to help them keep up.

- 1 A common and low cost system is to discharge from outside a grain store through the cladding above the grain walling
- 2 More permanent installations should be fitted with a flange to seal the cladding
- 3 Electric or hydraulic horizontal discharge augers can be specified and used to control the speed of emptying
- 4 In the simplest of systems several batches of grain are left to unload before a materials handler is used to move the grain around the store and heap it up
- 5 An 18 ton dryer fitted with twin horizontal discharge to allow lorries to be filled or grain to be emptied into a storage bin
- 6 Support must be provided for extended horizontal discharge augers



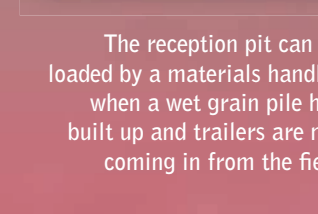
# THE PROCESS FROM WET TO DRY GRAIN

Whether using a simple PTO Drive or a fully automated 3 phase Dryer you need to keep the Dryer full for as much of the time as possible to achieve the maximum productivity in a day. This means allowing the Dryer unrestricted loading and unloading. As all OPICO Dryers are fitted with high capacity intake and discharge augers this has to be accounted for when integrating them into a system.

Similarly the whole harvesting operation can be slowed down by the intake system if trailers cannot be tipped immediately, unloading grain trailers via the grain chute is one of the worst ways as it slows the operation down considerably.



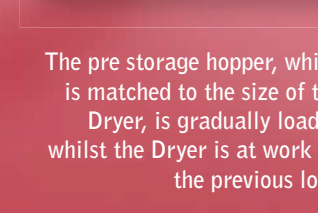
A reception pit built into the floor inside the grain store allows trailers to be tipped quickly but would require a large capacity auger to feed straight into a Dryer without a pre store bin



The reception pit can be loaded by a materials handler when a wet grain pile has built up and trailers are not coming in from the field



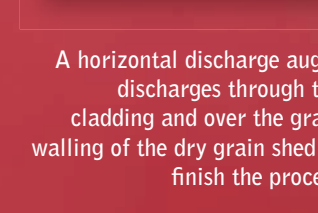
The transfer auger is then loaded from the undercover sunken reception pit



The pre storage hopper, which is matched to the size of the Dryer, is gradually loaded whilst the Dryer is at work on the previous load



The pre store hopper can also be loaded directly by a materials handler if required, whichever way it is full by the time the previous load is finished



A horizontal discharge auger discharges through the cladding and over the grain walling of the dry grain shed to finish the process