# PERRY ENGINEERING EXCELLENCE

# **Continuous Mixed Flow Grain Driers**



Perry of Oakley Ltd. was founded in 1947 by Tom Perry, a farmer's son, Perry of Oakley Since 1947 Who offered a mobile repair and manufacturing service to local farmers and huring service in the Cokley Resingetoke area of Hempehire businesses in the Oakley, Basingstoke area of Hampshire.

Working from home he converted an Austin 12 car into a mobile workshop; the back seat was replaced by a bench and welder. He travelled all over the country, sleeping in a tent if away from home, repairing farm machinery (tubing traction engine boilers, welding combines and binders in the field).

In 1949 Tom Perry designed and built our very first belt and bucket elevator with a capacity of 5tph. 1949 also saw the introduction of our first grain cleaners. These early cleaners were equipped with mechanical sieves and aspiration to lift off dust and light rubbish.

During the early 1950s many new farm mechanisation aids were designed by Tom Perry and manufactured in Oakley. These included tractor mounted buck rakes, trailers, dust

AGRICASTROL combine harvesters and jog trough grain conveyors driven by petrol engines or electric motors. These conveyors had capacities of up to 5tph. As capacity requirements increased the first chain and flight conveyors were developed. These conveyors were the fore runners of the conveyors that Perry's currently design and manufacture with capacities up to 800tph.

In 1952, the first factory was built in Oakley. It measured 60 foot x 40 foot.

In 1955, our first continuous flow grain drier was manufactured also with a capacity of 5tph.

The business steadily developed based on its reputation of delivering reliable, well engineered conveyors and bucket elevators during the

years the business continued to grow.

In 1990, the business had expanded significantly - under the direction of Tom's son Nigel Perry - to require larger premises and a relocation move to Honiton, in Devon, was made.

The following year Nigel's son, David, joined the business - having achieved a First Class Honors degree in engineering.

early 1950s. Export sales of Perry's own design grain driers developed as well as adding dust extraction equipment and weighing hoppers to the range. The conveyor range was expanded to include curved and inclined conveyors and flow

and return types. In 1974, a brand new purpose built manufacturing facility was built in Oakley, Basingstoke.

During the next 16



In October 2007, David Perry took over as managing director, with his sister, Claire, joining full time in 2020. Perry's have continued to expand and plan for the future. The company have won numerous awards, including SHAPA Exporter of the Year 2017 & 2021, and Global 100 Best Designer of Bulk Materials Handling, Drying & Storage of the Year - UK 2022.

Investing in the very latest CAD CAM technology, including three dimensional design facilities and the latest fully automated punching and forming machinery; all Perry products are designed and manufactured in Perry's purpose built facility in the West Country using a depth of knowledge acquired during more than 70 years of business.

We have a large engineering and design department and have a very active research and development program. We provide expert technical support for our machinery worldwide and we stock one of the most comprehensive spare parts inventories in the trade.





## Savannah Series Driers are Exported Worldwide to Dry a Large Variety of Crops







- Heavy duty commercial specification grain drier built to BS6399 and BS5950.
- Widths from 2m to 8m single and 12m dual column with capacities from 5 to 150tph.
- To promote consistent movement of the grain, Savannah Series Driers are available with our highly efficient, fully galvanised, pneumatically controlled shutter discharge (with phosphor bronze bushes on all wearing parts). Pneumatic shutter discharge ensures even movement of crop across the whole bed.
- The grain column has a completely ledge free design to reduce dust and chaff residue. The tapered air ducts promote even air flow and uniform drying across the whole grain column.
- Variable cooling section so you can change from minimum to maximum cooling by using control levers from ground level.
- 25% to 30% of the drier is used for cooling the crop before it goes to store. This prevents deterioration of the grain when in store; additional ventilation will still be required.
- Touch screen PLC control interface with mobile phone app for monitoring and controlling your drier remotely. Receive status updates, warnings for alarms and change settings wherever you are over the internet.
- Automatic grain moisture control system as standard. This uses temperatures at the top and bottom of the drier to monitor incoming and outgoing grain moisture changes and control the drier discharge speed accordingly.
- Optional automatic grain sampling system which takes a sample of grain, and is analysed using the latest Near Infrared technology. The results are used by our own software to determine the correct drier speed to maintain the optimum moisture content.
- Optional inverter controlled fans for ease of control when drying light crops and for energy saving.
- Automatic crop set up page. Select the crop and moisture content, and the control panel will set all temperatures, fan speeds and discharge speed to suit.
- Connect the drier to the internet allowing UK engineers to access the panel for diagnostics or adjustments while you watch the screen.
- Burner choices are diesel, kerosene, gas, steam, coal using heat exchangers or biomass heat sources as options. Direct or indirect fired.
- Combined with the use of curved conveyors the drier and handling needs only a flat concrete pad. This means much more cost effective concrete work and straightforward calculations.
- Tried and tested design with years of proven track record.
- We have our own dedicated research and development drier at a grain cooperative. This gives us access to a drier operating under real life conditions and the capability for extended test runs for all new product developments and to enhance our R&D capabilities.

Call us today on +44 (0)1404 890300 to speak to us about our market leading Savannah Series Driers.



#### **Dual Column Driers**

- These driers provide the high capacity of a large drier combined with the flexibility of being able to use either half for drying small batches.
- If there is a small amount of crop to be dried, only one column needs to be used.
- One column can be left filled with one crop whilst the other column is used to dry another. This significantly reduces lost time spent filling and emptying the drier between batches.











#### Drier Discharge

To promote consistent movement of the grain, all Savannah Series Driers are fitted with our highly efficient, fully galvanised, pneumatically controlled shutter discharge (with phosphor bronze bushes on all wearing parts). All driers have pneumatic shutter discharge to ensure even movement of crop across the whole bed. This is especially important when drying crops from very high moisture content, and seed crops.

- Shutter discharge for efficient drier operation.
- Heavy duty fully galvanised construction with all the pivot points fitted with phosphor bronze bushes.
- Fully adjustable pneumatic or electric operation.
- Sight glasses in hoppers to aid adjustment.
- Hand slides in hoppers to control grain flow.







#### Highly Efficient Axial Flow Fans

Inverter controlled fans for ease of control when drying light crops and for energy saving.

Fan Positioning Options:

- Front mounted.
- Vertical mounted.

All fans can be fitted with:

- Pneumatically operated dust reduction shutters.
- Weather protection shutters.
- Silencers to suit requirements.
- CentriKleens for dust collection (see separate page for details.)













#### **Drier Access for Cleaning**

- Improved access to the Savannah Series Driers by putting two access hatches in the roofs of all 4m, 5m & 6m driers.
- Easier to access the inside of the driers for cleaning, maintenance and for the adjustment of proximity probes.
- Large doors for easy access when cleaning the plenums.
- Multiple cross braces and harness connection points inside the drier to provide safe access for cleaning.



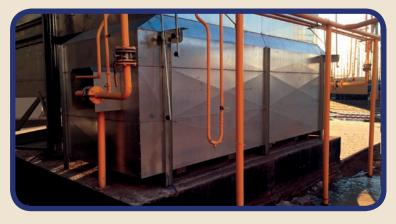


#### **Drier Burner & Fuel Options**

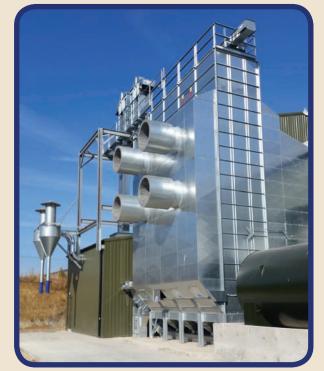
- Direct or indirect fired via air to air heat exchanger.
- **Kerosene or diesel** (3 stage, with mode selection on the PLC panel to control the amount of heat generated).
- **Natural gas or LPG** (fully modulating burners for optimum heat control).
- Partly or fully biomass fired via heat exchangers.
- Coal fired using air to air heat exchanger.











#### **Drying Light Seeds**

- Savannah driers have inverter control of drier fans as an option. This provides convenient control to reduce the airflow when drying light crops. When selecting a light crop to dry on the crop selection page, the drier PLC control automatically sets the appropriate speed for the drier fans. Also, by reducing the drier fan speed, when drying, energy can be saved.
- On multiple fan driers the PLC panel gives the operator the option to turn a fan off. To use this option effectively fan shutters should be fitted.
- During low temperature operation on multiple burner driers the PLC panel allows individual burners to be turned off.
- If the inverter controlled fan option is not selected, air can be bled into the fans to reduce the airflow through the crop using slides at the bottom of the fan plenum.

#### Light Grain & Chaff Recovery



The Light Grain & Chaff Recovery System reduces the need to clean out light grains and chaff from the drier exhaust plenum.

- Additional option on all new driers but can be retrofitted to shutter discharge driers.
- Pneumatically operated only connected to existing drier compressor.
- PLC controlled so frequency of drop can be easily adjusted.
- Labour saving.
- Particularly useful when drying oil seed rape or light seeds.
- Chaff and light seeds released directly into the discharge hoppers.
- Pneumatic flap optimises the airflow in the drier when in the shut position.

#### *Tired of cleaning your drier exhaust plenum during harvest? Then you need the Light Grain & Chaff Recovery System!*





# **PLC Control Panel**

#### Overview

- 12" Touch screen.
- Simple operation.
- Automatic grain moisture control system. This uses temperatures at the top and bottom of the drier to monitor incoming and outgoing grain moisture changes and control the drier discharge speed accordingly.
- Optional automatic drier moisture control using automatic grain sampling and actual moisture content measurement using Near Infra Red technology.
- Plain language status alerts.
- Designed and programmed in house.
- Data logging of all readouts and alarms and drier status.
- Moisture contents can be entered during the day.
- Export all recorded drier conditions and moisture contents to a spreadsheet and automatically create daily record sheets.
- Fuel use calculator included.
- Recirculating batch mode included requires additional empty probe.

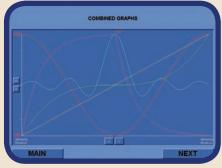


#### Internet Connectivity

Connect your panel to the internet to:

- Allow status reports to be sent to selected mobile numbers and email addresses.
- Have the ability to control or monitor the drier remotely from any internet connected PC or tablet.
- Download all drier history and data logged records.
- Connect the drier to the internet and allow UK engineers to access the panel for diagnostics or adjustments while you watch the screen.
- Requires internet connection and modem for all features.







#### Crop Set Up Page

The crop set up page allows you to enter the crop type, intake moisture content and target moisture content. The panel will then set **all** the drier parameters and start speed using this data. By selecting the crop, the control panel sets all temperatures and fan speeds to suit it.

INITIALIZED	E-MAIL	NOT CONNECTED				
ALARM E-MAILS OFF	TATUS E-MAILS OFF					
E-MAIL ADDRESS 1	bhagan@perryofoakley.co.uk	10				
E-MAIL ADDRESS 2	perrypanel@btinternet.com	5				
E-MAIL ADDRESS 3	dperry@perryofoakley.co.uk	0				
E-MAIL ADDRESS 4	MAIL ADDRESS 4 447796344047@textmagic.com					
E-MAIL ADDRESS 5	bhagan@perryofoakley.co.uk	0				
	E-MAIL SUCCESSFUL					

#### Full control of your drier from anywhere with a WiFi or 3G/4G/5G connection! Phone Application & Laptop Software



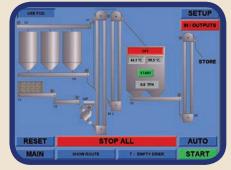
Free app available from both Apple App Store and Google Play Store.

- Control your Perry drier PLC or plant panel from your phone.
- Two settings allowing you to either view or control the panel.
- Screen shows an exact mimic of your panel.
- Full zoom compatibility making the buttons and screen easier to read.
- Static IP and passwords mean the connection is secure.
- Multiple applications can be installed on different devices.
- Multiple panels can be installed on each application.



# PLC Plant Control Panel

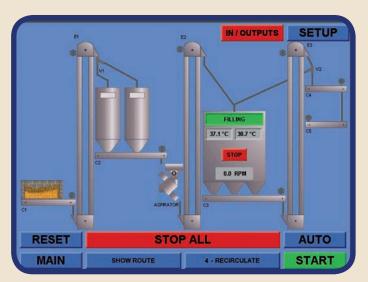
	USED ON ROUTES	
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C3		
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C5		
E3		
DRIER		
BACK SEU	TOT THE MACHINES USED ON EACH ROUTE	EQUE





#### Overview

- Additional cost option incorporated in your drier control panels.
- Switch simply between drier and plant control view.
- Can control up to twenty machines as standard.
- Unique mimic drawings for each installation.
- Manual or auto route selection modes.
- Drier operation can be seen whilst in plant control panel display.
- Possible to add routes on site without reprogramming.
- Larger control panels can be provided for large installations.





#### Automatic Grain Moisture Measurement System with Drier Moisture Control -The Grain Sentry

The Perry automatic system uses pneumatic conveying to take a grain sample from the drier filling and discharge equipment. This sample is analysed using the very latest Near Infrared technology to ascertain the moisture content, which provides industry standard accuracy for the moisture measurement for every

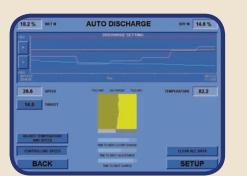
sample. Our software, written by Perry engineers, uses the information in a series of calculations to determine the correct change needed to the drier speed to maintain the best possible output grain moisture content.

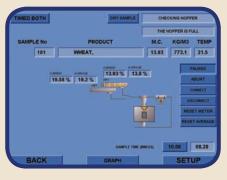
- The Grain Sentry controls not only drier speed, but also drier temperature.
- The Grain Sentry measures moisture going into and coming out of the drier.
- The Grain Sentry is suitable for most combinable crops without recalibration.
- Accurate moisture control saves fuel.
- Sampling intervals can be adjusted.
- The whole process can be monitored remotely and all information can be datalogged.
- Every time a batch of grain passes through the drier and the system monitors the output changes the algorithm is adjusted automatically and improves its performance.













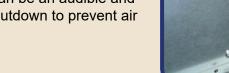




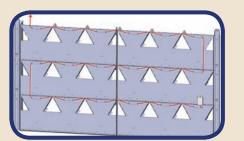
# **Drier Fire Detection**

Using the Perry patented heat sensitive cable positioning system the early stages of a potential drier fire can be detected. The system helps detect a fire at the early stages, meaning there is a better chance of action being taken to prevent a more serious drier fire. The alarm can be raised quick enough for the

situation to be dealt with. By having a precise melting point, the cable prevents false alarms. Due to changes in the wire resistance, once melted the position of the problem can be pinpointed without trouble. The cable is positioned to protect the areas of a drier where a fire is most likely to start. When the cable melts there can be an audible and visible alarm, or the drier can be automatically shutdown to prevent air from the fans and causing the fire to grow.



Can be retrofitted to any make of drier.One cable can protect a whole drier.







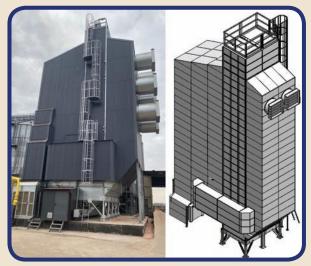
#### Energy Saving Drier Hot Air Recirculation Save up to 20% \*on your grain drying fuel bill.

The cooling air from the lower levels of the drier, which is unsaturated and of the highest temperature, is recirculated to the hot air side of the drier and remixed with the heated air. Depending on the drier size, 25% to 30% of the warmest air in the drier is moved by the recirculation fan along transfer ducts at the side of the drier to an additional plenum on the hot air side of the drier to mix with the freshly heated ambient air.

Theoretical percentage saving can be:

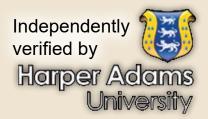
- 125°C hot air temperature, 15°C ambient, percentage saving 16% to 18% depending on drier model selected.\*
- 70°C hot air temperature, 15°C ambient, percentage saving 21% to 24% depending on drier model selected.

\*Theoretical calculation, will be affected by hot air temperature, drier fan speed and air flow, crop moisture, ambient conditions, crop type, drier model.





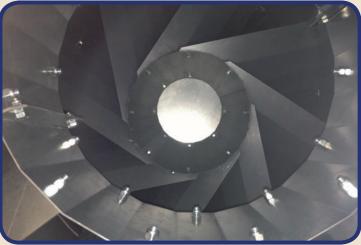




# CentriKleen - the cost effective, simple solution to your drier's dust and chaff problems.



- Can be fitted to existing axial fans on all makes of drier.\*
- No additional motor power.
- Up to 95% of visible dust and chaff collected.
- Does not require additional steel support.\*\*
- No moving parts.
- All galvanized.
- Dust and chaff can be collected into a trailer, dust box or building.
- Two models available to suit 1m and 1.25m diameter axial fans.

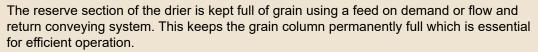


Had enough of having yards or roofs covered in chaff from your drier? CentriKleen is your solution!

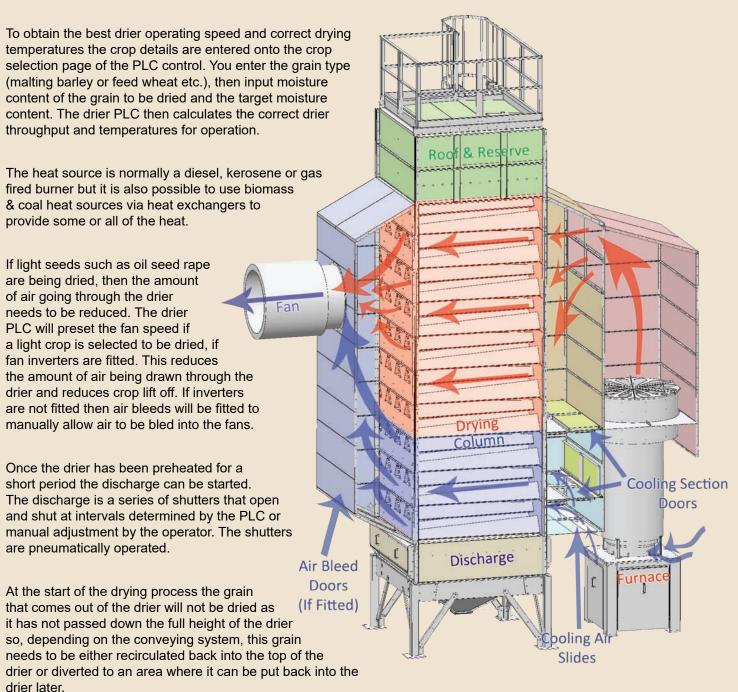
> \*Subject to fan survey and test. \*\*Access is required for periodic cleaning.



# **Principle Of Operation**







Whilst the drier is running the operator will take periodic moisture samples of grain entering and leaving the drier. When the desired exit moisture content is reached the conveying system is changed so that the dry grain is sent to store and not recirculated.

Once the operator is sure that there is a consistent moisture content for the grain leaving the drier then automatic mode can be selected to allow the PLC to control the drier without the need of the operator to be permanently in attendance.

In normal operation the bottom section of the drier uses ambient air to cool the grain before it leaves for the store.

#### Capacity and Sizes Available

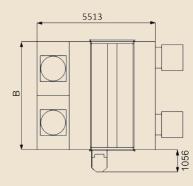


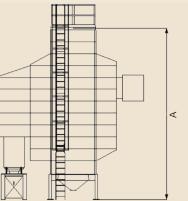
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1	node! ton	olding Capaci	Abs Total Power	orbed power	Capacity to 15%	Capacity Ma 1400	L'Role to	Drier Height (IT)	Drier Width (h), h) (* 4) 6293	7) <sub>[*8]</sub>
	S206	6	11.0	15.5	9.8	8.0	3.2	648	6293	2180
	S207	7	12.0	15.8	10.2	10.0	3.9	794	6843	
	S208	8	13.5	16.2	12.9	12.5	4.7	956	7393	
	S209	9	14.5	16.2	13.3	12.5	4.7	952	7943	
	S210	10	15.5	21.0	15.6	14.5	5.5	1103	8493	
L N	S211	11	17.0	25.9	17.9	16.0	6.2	1243	9043	
S2	S212	12	18.0	25.9	19.6	18.0	6.9	1382	9593	
	S213	13	19.0	30.1	19.9	18.0	6.9	1540	10143	
	S214	14	20.5	30.1	19.9	20.0	7.6	1589	10693	
	S215	15	21.5	25.7	21.8	23.0	8.7	1747	11243	
	S216	16	23.7	31.9	26.3	25.0	9.5	1913	11793	
	S217	17	25.0	30.9	26.0	28.0	10.8	2185	12343	2190
	\$306 \$307	6 7	<b>17.0</b> 18.5	<b>16.2</b> 21.0	13.3 16.3	12.5 15.5	<b>4.7</b> 5.8	952 1180	6293 6843	3180
	\$307 \$308	8	20.5	25.9	19.6	18.0	6.9	1382	7393	
	S309	9	22.0	30.1	19.9	18.0	7.1	1483	7943	
	\$310	10	23.5	25.7	21.8	22.0	8.3	1667	8493	
	S311	11	25.5	31.9	26.3	24.0	9.2	1855	9043	
	\$312	12	27.0	31.9	27.0	28.0	10.6	2143	9593	
	S313	13	29.0	41.5	30.5	28.0	10.2	2058	10143	
	S314	14	30.5	40.5	32.1	31.0	11.7	9359	10693	
S3	S315	15	32.0	50.3	36.8	34.0	13.1	2642	11243	
10	S316	16	35.6	50.3	38.8	36.0	13.7	2764	11793	
	S317	17	37.5	45.5	38.7	40.0	15.2	3277	12343	
	S318	18	39.4	45.5	38.7	40.0	15.3	3095	12893	
	S319	19	41.4	59.9	44.0	42.0	16.3	3285	13443	
	S320	20	43.3	59.9	45.6	46.0	17.6	3545	13993	
	S321	21	45.2	59.9	47.9	48.0	18.7	3539	14543	
	S322	22	47.2	76.1	54.0	50.0	19.6	3729	15093	
	S323	23	49.1	76.1	56.4	54.0	21.0	3759	15643	
	S324	24	51.1	76.1	59.3	56.0	21.7	3915	16193	
-	S325	25	53.0	64.5	56.1	61.0	23.6	4287	16743	
	S406	6	22.5	25.9	19.6	16.0	6.1	1228	6293	4180
	S407	7	25.0	30.1	19.9	20.5	7.9	1589	6843	
	S408	8	27.0	31.9	26.3	25.0	9.5	1913	7393	
	S409	9	29.5	31.9	27.0	25.0	9.4	1905	7943	
	S410	10	31.5	40.5	30.6	29.0	10.9	2206	8493	
	S411	11	34.0	50.3	35.3	32.5	12.3	2486	9043	
	S412	12	36.0	50.3	38.8	36.0	13.7	2764	9593	
	S413	13	38.5	45.5	38.7	36.0	13.7	2967	10143	
-	S414	14	40.5	45.5	38.7	40.0	15.2	3061	10693	
	S415	15	43.0	49.9	43.0	46.0	17.3	3493	11243	
S4	<b>S416</b> S417	16 17	<b>47.4</b> 50.0	63.5 76.1	<b>51.5</b> 56.4	49.0 52.0	<b>18.4</b> 20.5	<b>3716</b> 4132	11793 12343	
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	S418	19	55.2	63.1	59.5	57.0	21.8	4388	13443	
	S419	20	57.8	80.1	61.4	61.0	23.4	4388	13993	
	S420	20	60.3	80.1	64.4	64.0	25.0	4720	14543	
	S421	22	62.9	96.9	67.8	67.0	25.0 26.2	4972	15093	
	S423	23	65.5	96.9	70.9	72.0	28.0	5012	15643	
	S424	24	68.1	96.9	74.8	74.0	28.9	5220	16193	
	S425	25	70.7	103.5	80.3	80.0	31.2	5672	16743	

Note: It is recommended that all driers over 50tph capacity and operating FOD have an additional 550mm reserve section.

Throughput capacity assumes mature, clean grain with no restriction to airflow and with the drier stabilised. TPH is calculated on the weight of wet grain into a drier. Note that if the product going through the drier has impurities, the capacity could be reduced. Capacity is calculated using wheat at 750kg/m<sup>3</sup>. Relative humidity: 80%. Ambient temperature: 15 degrees Celsius. Drying Temperature: 125 degrees Celsius. Moisture reduction 5% from 20% to 15% M.C wet basis.

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	\$506	6	28.5	26.4	22.0	21.0	7.9	1588	6293	5180
	S507	7	31.5	31.6	26.3	26.0	10.1	2041	6843	
	S508	8	34.0	41.2	30.9	31.0	11.7	2363	7393	
	S509	9	37.0	51.0	37.0	31.0	11.9 13.9	2401	7943	
	\$510 \$511	10	<b>39.5</b> 42.5	<b>46.2</b> 46.2	<b>37.8</b> 38.9	<b>37.0</b> 41.0	15.9	2678 3117	8493 9043	
	\$512	12	45.5	60.6	45.8	46.0	17.6	3545	9593	
	S513	13	48.0	60.6	48.1	46.0	17.0	3430	10143	
	S514	14	51.0	76.8	56.6	51.0	19.1	3860	10693	
S5	S515	15	53.5	63.8	55.0	57.0	21.7	4367	11243	
S	S516	16	59.3	80.8	61.6	61.0	23.4	4726	11793	
	S517	17	62.5	80.8	64.6	66.0	25.0	5052	12343	
	<b>S518</b> S519	<b>18</b> 19	<b>65.7</b> 69.0	<b>97.6</b> 103.0	71.2 80.4	66.0 70.0	25.8 26.9	5203 5431	12893 13443	
	\$519 \$520	20	72.2	103.0	80.4	76.0	20.9	5431	13993	
	S520	21	75.4	98.8	84.3	80.0	31.2	5898	14543	
	\$522	22	78.6	119.8	88.6	84.0	32.7	6214	15093	
	S523	23	81.9	119.8	92.5	90.0	34.9	6265	15643	
	S524	24	85.1	122.0	94.2	93.0	36.1	6526	16193	
	S525	25	88.3	119.0	102.0	101.0	39.3	7135	16743	100000000
	S606	6	34.0	30.1	26.3	25.0	9.4	1905	6293	6180
	\$607	7	37.5	41.2	32.4	31.0	11.7 <b>13.7</b>	2359 2764	6843	
	S608 S609	9	<b>41.0</b> 44.0	<b>51.0</b> 46.2	<b>39.0</b> 38.9	36.0 36.0	14.1	2857	7393 7943	
	S610	10	47.5	60.6	45.8	44.0	16.5	3308	8493	1
	S611	11	51.0	76.8	54.3	49.0	18.5	3729	9043	
	S612	12	54.0	76.8	59.5	54.0	20.6	4146	9593	
	S613	13	57.5	65.2	56.4	54.0	20.4	4123	10143	
10	S614	14	61.0	80.8	64.6	62.0	23.4	4719	10693	
<b>W</b>	\$615	15	64.5	74.8	63.7	69.0	26.0	5238	11243	
S	<b>S616</b> S617	16 17	<b>71.1</b> 75.0	103.0	<b>80.4</b> 80.6	72.0 80.0	<b>27.4</b> 30.4	5528 6024	11793 12343	-
	S618	17	78.9	104.2 101.0	84.3	80.0	30.4	5964	12343	
	S619	19	82.8	122.0	89.3	85.0	32.9	6636	13443	
	S620	20	86.6	122.0	94.2	89.0	34.3	6909	13993	
	S621	21	90.5	119.0	95.4	96.0	37.4	7078	14543	
	S622	22	94.4	151.4	107.8	101.0	39.3	7457	15093	
	S623	23	98.2	151.4	112.0	108.0	41.9	7518	15643	
	S624	24	102.1	151.4	118.3	111.0	43.4	7831	16193	
5	S625 S806	25 6	106.0 45.0	144.2 51.0	117.0 38.4	118.0 32.0	45.9 12.2	8324 2457	16743 6293	8180
	\$805	7	50.0	51.0	39.0	41.0	12.2	3061	6843	0100
	5808	8	54.0	63.0	51.8	50.0	19.0	3716	7393	
	S809	9	59.0	63.0	53.2	50.0	18.8	3685	7943	
	S810	10	63.0	80.2	60.4	58.0	21.8	4411	8493	
	S811	11	68.0	99.8	69.8	65.0	24.6	4972	9043	
	S812	12	72.0	99.8	76.8	72.0	27.4	5528	9593	
-	S813	13	77.0	90.2	76.6	72.0	27.4	5717	10143	
S8	\$814 \$815	14	81.0 86.0	90.2 99.0	76.6 85.2	80.0 92.0	30.4 34.6	6104 6756	10693 11243	
10	S815	16	94.8	126.2	102.2	98.0	36.8	7432	11793	
	S817	10	100.0	151.4	112.0	104.0	41.0	8264	12343	
	S818	18	105.2	151.4	117.8	104.0	39.6	7984	12893	
	S819	19	110.4	125.4	108.6	114.0	43.6	8519	13443	
	S820	20	115.6	159.4	122.0	122.0	46.8	9456	13993	
	S821	21	120.6	159.4	128.0	128.0	50.0	9213	14543	
	S822	22	125.8	193.0	134.8	134.0	52.4	9943	15093	
	\$823 \$824	23	131.0 136.2	193.0 193.0	141.0 148.8	144.0 148.0	56.0 57.8	10024	15643 16193	
	S825	24	141.4	206.2	148.8	148.0	62.4	110441	16193	
	5025	2.5		200.2	100.0	200.0			20145	





# Mistral Series Mixed Flow Grain Driers



The Mistral Series Continuous Mixed Flow Drier is a cost effective solution, designed to be an entry level static drier for farmers looking to dry up to 30tph of combinable crops.

- Designed with the same efficiencies and expertise as the Savannah Series Driers.
  1.6mm thick grain column and air ducts, which has a completely ledge free design to reduce dust and chaff residue.
- 25% to 30% of the drier is used for cooling the crop before it goes to store. This prevents deterioration of the grain when in store. Additional ventilation will still be required.
- Fully galvanised construction for outdoor use.
- Burner and fuel options diesel, kerosene, gas steam, coal using heat exchangers or biomass heat sources as options (direct or indirect fired).
- Highly efficient axial flow fans Optional inverter-controlled fans for ease of control when drying light crops and for energy saving.
- Discharge the Mistral range of grain driers are fitted with the Perry's proven, simple to operate, roller discharge (shutter discharge is optional).
- CentriKleen the cost effective, simple solution to dust and chaff problems, which can be fitted to existing axial fans on all makes of drier.
- Fire detection can help provide early warning of a fire, helping to reduce potential damage to the drier. It is for use to detect fire within a grain drier drying column.
- Commissioning and support there is a dedicated technical support line to provide a first point of call for all technical enquiries on any Perry machine.
- Control Panel as standard, the Mistral drier is controlled via a hard-wired control panel, though this is easily upgradable to the Perry PLC Touch Screen Control Panel, using inhouse written software. Connect the drier to the internet to allow UK engineers access to the panel for diagnostics and adjustments.
- Automatic crop set up page select the crop and moisture content, and the control panel will set all temperatures, fan speeds and discharge speed to suit.





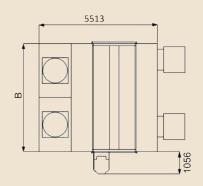


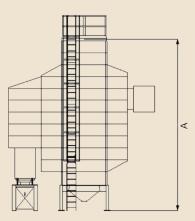
# Mistral Series Mixed Flow Grain Driers



			4			Capacity Mail	Mati	Drier Height (M), ermailtauj	Drier Width (M)	
$\langle \rangle$	7	olding Capacit	rotal power	orbed power (	Capacity & Color 40% to 15%	Pacity	mum	er Hei	er hi	
		18°Car	'el pol	A POL	2000 to 1500	1400 Mal		ern Shr	ath (p	$\mathbf{X}$
1	nodel cone	Capacit.	ver ver	the the	4, <sup>1</sup> 50	"dup	12-7-1-9-1-9-1-9-1-9-1-9-1-9-1-9-1-9-1-9-1	nal (k)		y
	"del	97	5	'nj	'nj	.Car	° <sup>t</sup> o	ing .	J.	( B)
	M205	5	11.0	15.5	9.8	8.0	3.2	648	6293	2180
	M206	6	12.0	15.8	10.2	10.0	3.9	794	6843	
M2	M207	7	13.5	16.2	12.9	12.5	4.7	956	7393	
	M208	8	14.5	16.2	13.3	12.5	4.7	952	7943	
_	M209	9	15.5	21.0	15.6	14.5	5.5	1103	8493	
	M210	10	17.0	25.9	17.9	16.0	6.2	1243	9043	
	M306	6	17.0	16.2	13.3	12.5	4.7	952	6293	3180
$\mathbf{m}$	M307	7	18.5	21.0	16.3	15.5	5.8	1180	6843	
M3	M308	8	20.5	25.9	19.6	18.0	6.9	1382	7393	
$\leq$	M309	9	22.0	30.1	19.9	18.0	7.1	1483	7943	
	M310	10	23.5	25.7	21.8	22.0	8.3	1667	8493	
	M406	6	22.5	25.9	19.6	16.0	6.1	1228	6293	4180
	M407	7	25.0	30.1	19.9	20.5	7.9	1589	6843	
M4	M408	8	27.0	31.9	26.3	25.0	9.5	1913	7393	
$\leq$	M409	9	29.5	31.9	27.0	25.0	9.4	1905	7943	
	M410	10	31.5	40.5	30.6	29.0	10.9	2206	8493	
	M506	6	28.5	26.4	22.0	21.0	7.9	1588	6293	5180
M5	M507	7	31.5	31.6	26.3	26.0	10.1	2041	6843	
7	M508	8	34.0	41.2	30.9	31.0	11.7	2363	7393	
$\leq$	M509	9	37.0	51.0	37.0	31.0	11.9	2401	7943	
	M510	10	39.5	46.2	37.8	37.0	13.9	2678	8493	

Throughput capacity assumes mature, clean grain with no restriction to airflow and with the drier stabilised. TPH is calculated on the weight of wet grain into a drier. Note that if the product going through the drier has impurities, the capacity could be reduced. Capacity is calculated using wheat at 750kg/m<sup>3</sup>. Relative humidity: 80%. Ambient temperature: 15 degrees Celsius. Drying Temperature: 125 degrees Celsius. Moisture reduction 5% from 20% to 15% M.C wet basis.





# **Mobile Driers**

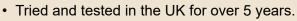
High Specification mobile drier supplied in a durable painted finish for indoor or outdoor use.

- Capacities from 7 to 42T.
- Basic operation, hard wired semi automatic panel or fully automatic PLC panel to allow unattended operation and remote connectivity via a mobile data network. Receive status updates as they happen using the PLC option.
- Models from 7.5 to 25T have the unique feature of an external auger, meaning access for servicing is easier and quicker to collapse for transit. With no centre auger the heated airflow is more uniform in the cone plenum; this increases performance. Less fuel usage as no heat is transferred to the centre auger.
- The external auger also allows the drier to have an independent mixer in the bottom and a control slide to control the rate of grain mixing during the drying process.



• Reliable Ecoflam two stage burners.

• Full stock of spares, and support, in the UK.



• The 1.5mm stainless steel screen material means the drier is suitable for oil seed rape and most UK combinable crops.

• Two year warranty period.

• The patented, stainless steel heat exchanger option has the ability to change from indirect to direct fired and as such still provide the full range of drying temperatures and efficiencies.

• There are fewer motors, meaning more reliability and a smaller electrical requirement, which can be a very important consideration for some farms.

• Large inlet tipping hopper, or an option available suitable simply

for filling by an intake and elevator combination.

- For added safety and control of the process there are three temperature sensors, one for hot air temperature, one for hot grain temperature and an additional fail-safe alarm temperature sensor.
- Very high quality paint finish to ensure a long outdoor life.
- Dual point aspiration as an option.
- Heavy duty specification.
- Quality drier made in Europe.
- Can run multiple batches unattended.
- Diesel, kerosene or gas fired.



Call us today on +44 (0)1404 890300 to speak to us about our market leading Mobile Driers.





+44 (0)1404 890300 www.perryengineering.com



The Perry Belt Drier has been purposely designed to dry almost any nonflowing product. Popular applications have included biomass, anaerobic digestate, grass and seeds.

The Perry Belt Drier is ideally suited for these materials:

Wood Chip Wood Shavings Wood Pellets Other Feed Pellets Saw Dust Biomass Straw Miscanthus and Bagasse Herbs Combinable Crops Beans and Soya Beans Shredded Recycled Matter SRF/RDF Digestate Flaked Maize Compost Cotton Rejects Extruded Pet Foods Finely Ground Wet Chips Grass Grass Seed Orange Peel Pulp Granulates Solid Shredded Waste Granular and Shredded Plastic Poultry Manure Lucerne Alfalfa



- Fine mesh drying belt.
- All galvanized construction stainless steel as an option.
- Multiple heat sources available including biomass, steam, oil, kerosene or gas.
- PLC touch screen panel with internet connectivity.
- Levelling device.
- Modular construction.
- Rotary brush to clean belt.
- Various widths up to 3m available.
- Designed and manufactured in house.
- Optional cooling section.
- Agitators for even drying.
- Air knife or pressure washer belt cleaning options.













SHAPA's 2017 & 2021 'Exporter of the Year' Award Winners & 2022 DIT Export Champions

## Perry of Oakley Ltd.

Dunkeswell Airfield, Dunkeswell, Honiton, Devon, EX14 4LF

<u>Phone</u> Sales: +44 (0)1404 890 300 Support: +44 (0)1404 890 305

E-mail: sales@perryofoakley.co.uk Web: www.perryofoakley.co.uk

Web

