

KENTRA

Continuous Flow Grain Dryers



*sometimes nature needs
a helping hand...*

Kentra Grain Systems

The Kentra continuous mixed flow dryer embodies the results of our many years of experience in the supply and manufacture of grain drying installations.

Attention to detail, the use of modern computer-aided design and manufacturing technology, allied with close cooperation with our customers and our own considerable practical experience has enabled us to develop the dryer into today's high quality machine. The dryer is both reliable and simple to operate and carries a full warranty over component and manufacturing defects for three years. It comes as no surprise, therefore, that much of our new business comes as a direct result of existing customer recommendation.

The standard range of dryers are available with capacities ranging from six to 50 tonnes per hour. All the dryers are made to a modular design and are constructed in the main from heavy duty galvanised steel. This modular construction method allows for easy and quick installation with the possibility for future expansion. When a larger dryer is required that falls outside of our standard product range then we can manufacture specifically to meet the individual customers' requirements.

Why choose a Kentra Dryer?

Drying and Cooling Sections

The drying zone is of a heavy duty construction using a minimum 2mm thick pre-galvanised steel sheet.

The 'Mixed Flow' principle employed ensures maximum economy, minimal power requirements and even drying, and the use of exhaust half ducts ensure even distribution of the drying air right up to the sides of the drying column.

The lower sections of the dryer are used for cooling, the ratio of drying to cooling zones can be easily adjusted on most models of dryer with a simple single lever adjustment.

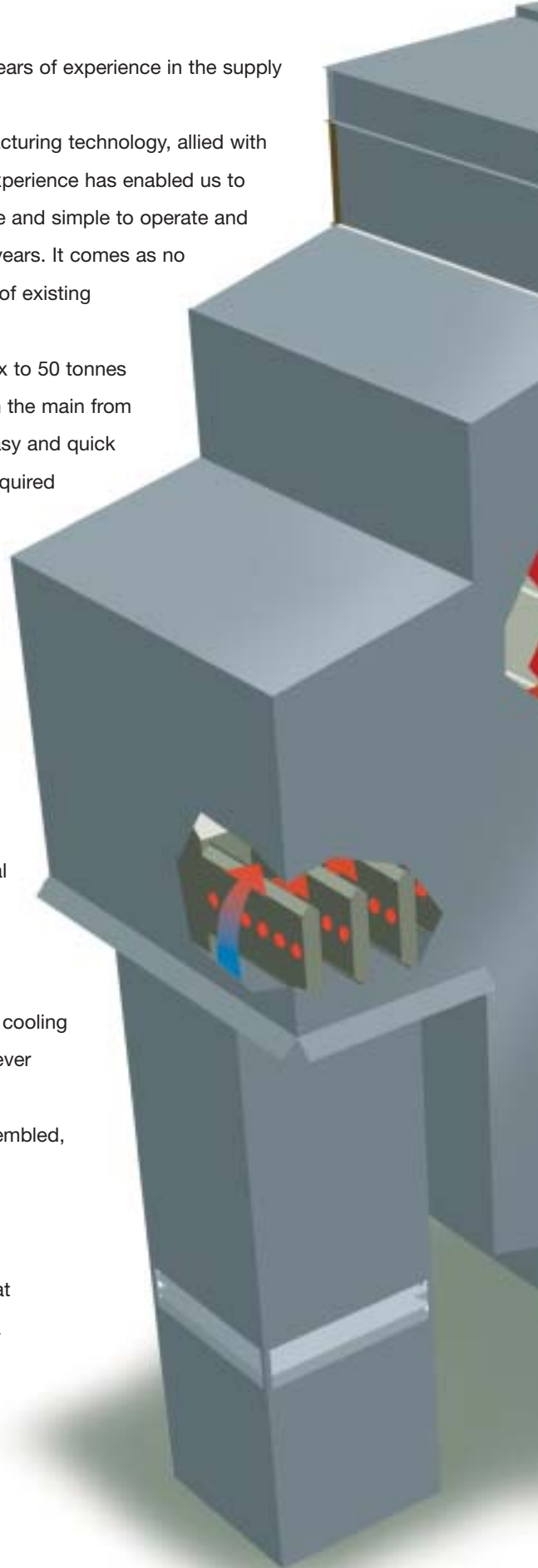
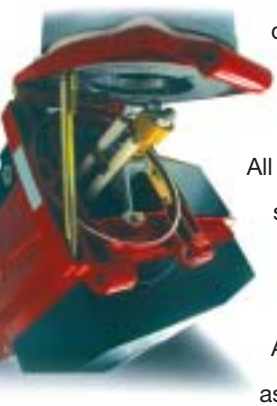
The drying zones, discharger and furnace are all delivered to site pre-assembled, minimising assembly time.

Furnace and Burner

Our unique stainless steel heat distribution unit ensures even heat distribution across the full width of the inlet plenum with only a minimal airflow resistance, this helps to reduce the total fan power requirement of the dryer.

All Kentra dryers are fitted with a 3-stage oil burner as standard. Because of the unique way that the burner is implemented the dryer can often achieve a turndown ratio in excess of 5:1.

All oil burners are supplied for use with either 'Gas Oil' or 'Kerosene' as standard giving you the choice of whichever fuel you prefer to use.





Exhaust Fans

Large diameter low power axial flow fan units, manufactured at our factory specifically for the dryer, ensure optimum performance. Every fan is supplied with a CDA-1D silencer unit as standard with alternative length and/or 'pod' type silencers available at extra cost.

Electrical System and Control Panel

The Kentra control centre now uses an LCD 'Touch Screen' display for simple and efficient operation. All safety features are included with temperature overheat protection and timed auto shutdown with alarm events and operating temperatures being logged by the system. Our control panels can also incorporate control equipment for elevators and conveyors for a totally integrated fail safe system, if required.



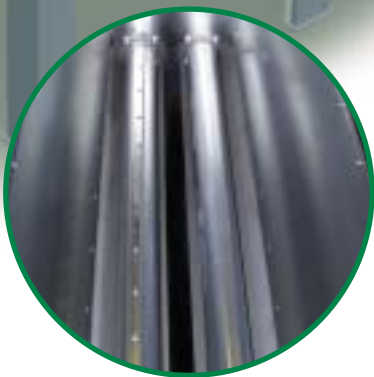
Reliability

The dryer is constructed throughout in galvanised steel plate as standard for either indoor or outdoor installation. The dryer also comes with the benefit of a comprehensive three year warranty; and all UK service and commissioning is carried out either by our own staff or your local dealer.



Discharge Unit

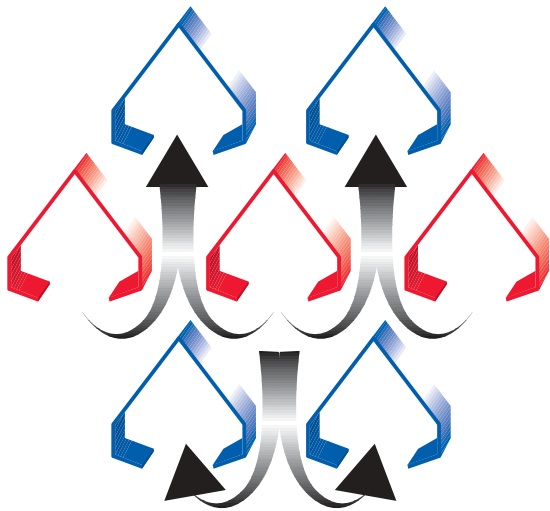
Very heavy duty construction with variable speed discharge rollers. This simple to operate unit discharges at a steady and even rate, which reduces 'surge' loading on handling equipment after the dryer.



Mixed Flow Grain Drying

Heated air is drawn into the drying column inlet air ducts, it then passes through the grain bed to the exhaust air ducts where it is discharged to atmosphere.

The inlet and exhaust ducts are fitted in alternate layers from the top to the bottom of the drying column, and because the grain alternately passes inlet and exhaust ducts it does not reach equilibrium with the temperature of the drying air.

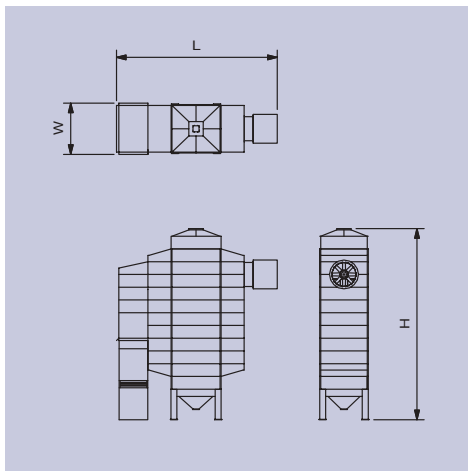


From the diagram you can see that each inlet duct is surrounded by four outlet ducts, this allows the drying air to be dispersed both with and also against the grain flow direction, hence the term 'mixed flow'. This allows much higher temperatures to be employed (up to 125°C for feed cereals) without the risk of damage to the grain. The use of these high air temperatures ensures that the dryer operates at an optimum efficiency for the crop being dried.

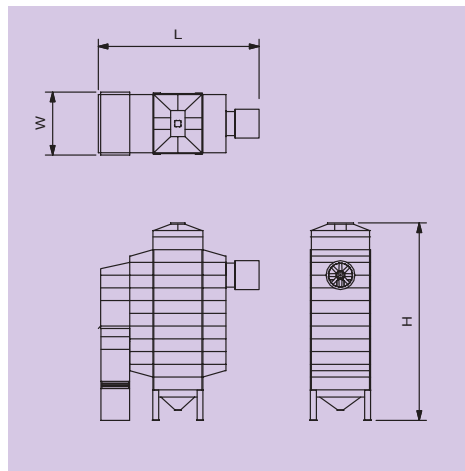
The Kentra dryer is fitted with half section exhaust ducts down the sides of the column. This ensures thorough air distribution without the risk of blockage from chaff and other light material which could accumulate down the sides of the drying column, often a problem on dryers that employ these ducts as air inlets.



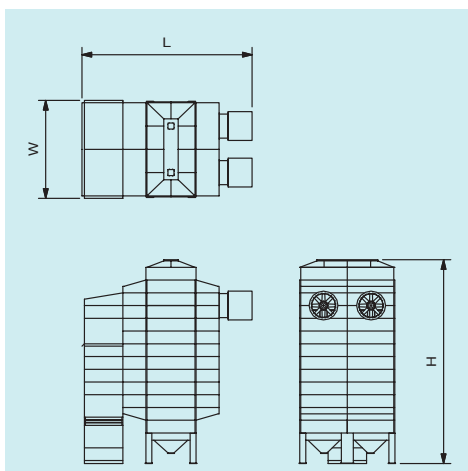
DRYER MODEL	NO OF FANS	RATED THROUGHPUT (tonnes per hour) (See note 1)	INSTALLED POWER REQUIREMENT (Kw) (See note 2)	HOLDING CAPACITY (tonnes) (See note 3)	OVERALL LENGTH (L) (metres) (See note 4)	OVERALL WIDTH (W) (metres)	OVERALL HEIGHT (H) (metres) (See note 5)	PROPORTION OF DRYER AVAILABLE FOR COOLING (See note 6)	
20 series	720	1 x 7.5kW	6.3	8.81	8.5	6.685	2.136	5.825	40%
	920	1 x 7.5kW	8.3	8.81	9.8	6.685	2.136	6.355	33%
	1120	1 x 7.5kW	10.4	8.81	11.1	6.685	2.136	6.885	29%
	1320	1 x 11kW	12.5	12.31	13.6	6.685	2.136	7.945	33%
	1520	2 x 7.5kW	14.6	16.31	16.2	6.685	2.136	8.475	30%
25 series	825	1 x 7.5kW	8.0	8.81	11.5	6.685	2.620	6.090	40%
	1125	1 x 7.5kW	10.5	8.81	13.1	6.685	2.620	6.620	33%
	1325	1 x 11kW	13.0	12.31	14.7	6.685	2.620	7.150	29%
	1625	1 x 11kW	16.0	12.31	17.9	6.685	2.620	8.210	33%
	1925	2 x 7.5kW	18.5	16.31	19.5	6.685	2.620	8.740	30%
	2225	2 x 7.5kW	21.5	16.31	22.7	6.685	2.620	9.800	33%
40 series	2425	2 x 11kW	23.5	24.05	24.3	7.075	4.072	10.330	30%
	1340	2 x 7.5kW	12.6	16.86	17.0	6.685	4.072	5.825	40%
	1740	2 x 7.5kW	16.6	16.86	19.5	6.685	4.072	6.355	33%
	2140	2 x 7.5kW	20.8	17.62	22.1	6.685	4.072	6.885	29%
	2540	2 x 11kW	25.0	24.60	27.2	7.075	4.072	7.945	33%
	3040	2 x 11kW	29.2	24.60	29.8	7.075	4.072	8.475	30%
50 series	3440	4 x 7.5kW	33.4	32.60	35.0	7.075	4.072	9.535	33%
	1650	2 x 7.5kW	16.0	16.86	21.6	6.685	5.040	6.355	40%
	2150	2 x 7.5kW	21.0	17.62	24.8	6.685	5.040	6.620	33%
	2650	2 x 11kW	26.0	24.62	28.0	6.685	5.040	7.150	29%
	3250	2 x 11kW	32.0	24.62	34.4	6.685	5.040	8.210	33%
	3750	4 x 7.5kW	37.0	32.60	37.6	7.075	5.040	8.740	30%
	4350	4 x 7.5kW	42.0	32.60	44.0	7.075	5.040	9.800	33%
4750	4 x 11kW	47.0	48.10	47.0	7.075	5.040	10.330	30%	
5250	4 x 11kW	52.0	48.10	53.4	7.075	5.040	11.390	33%	



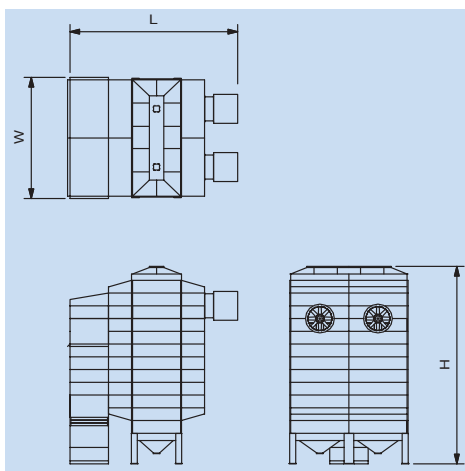
20 series



25 series



40 series



50 series

Note 1: Dryer throughputs are based on cleaned barley (density 700kg/m³) drying from 20-15% MCwb at 125° Celsius with an ambient temperature of 15° Celsius and 70% RH. Variations in operating conditions and the product being dried may affect throughputs by up to 10% either way.

Note 2: Installed power requirements are based on three phase electrical supply.

Note 3: Dryer holding capacity is based on cleaned barley (density 700kg/m³)

Note 4: Dryer overall length includes standard axial fan and CDA-1D silencer.

Note 5: Dryer overall height includes 420 mm clearance under discharge hopper outlet.

Note 6: Proportion of dryer available for cooling is the maximum available as standard, on the majority of dryers the amount of cooling can be remotely adjusted by the dryer operator.

The policy of Kenra Grain Systems Limited is one of continued product development, and as such we reserve the right to change specifications without prior notice.

400/230v, three phase, 50Hz, 4 wire supply

DRYER MODEL	TOTAL INSTALLED POWER	EXHAUST FAN(S)			DISCHARGE DRIVE		OIL BURNER(S)		
		kW	QTY	kW	MOTOR FLC	kW	MOTOR FLC	QTY	kW
720	8.81	1	7.5	14.2	0.55	3.6	1	0.76	2.10
920	8.81	1	7.5	14.2	0.55	3.6	1	0.76	2.10
1120	8.81	1	7.5	14.2	0.55	3.6	1	0.76	2.10
1320	12.31	1	11.0	21.0	0.55	3.6	1	0.76	2.10
1520	12.31	1	11.0	21.0	0.55	3.6	1	0.76	2.10
825	8.81	1	7.5	14.2	0.55	3.6	1	0.76	2.10
1125	8.81	1	7.5	14.2	0.55	3.6	1	0.76	2.10
1325	12.31	1	11.0	21.0	0.55	3.6	1	0.76	2.10
1625	12.31	1	11.0	21.0	0.55	3.6	1	0.76	2.10
1925	16.31	2	7.5	14.2	0.55	3.6	1	0.76	2.10
2225	16.31	2	7.5	14.2	0.55	3.6	1	0.76	2.10
2425	24.05	2	11.0	21.0	0.55	3.6	1	1.50	3.00
1340	16.86	2	7.5	14.2	1.10	7.1	1	0.76	2.10
1740	16.86	2	7.5	14.2	1.10	7.1	1	0.76	2.10
2140	17.62	2	7.5	14.2	1.10	7.1	2	0.76	2.10
2540	24.60	2	11.0	21.0	1.10	7.1	1	1.50	3.00
3040	24.60	2	11.0	21.0	1.10	7.1	1	1.50	3.00
3440	32.60	4	7.5	14.2	1.10	7.1	1	1.50	3.00
1650	16.86	2	7.5	14.2	1.10	7.1	1	0.76	2.10
2150	17.62	2	7.5	14.2	1.10	7.1	2	0.76	2.10
2650	24.62	2	11.0	21.0	1.10	7.1	2	0.76	2.10
3250	24.62	2	11.0	21.0	1.10	7.1	2	0.76	2.10
3750	32.60	4	7.5	14.2	1.10	7.1	1	1.50	3.00
4350	32.60	4	7.5	14.2	1.10	7.1	1	1.50	3.00
4750	48.10	4	11.0	21.0	1.10	7.1	2	1.50	3.00
5250	48.10	4	11.0	21.0	1.10	7.1	2	1.50	3.00
STARTING METHOD VOLTAGE		AUTO STAR/DELTA 400v			dc DRIVE 180v		DIRECT ON LINE 400v		

460/230v, split single phase, 50Hz, 3 wire supply

DRYER MODEL	TOTAL INSTALLED POWER	EXHAUST FAN(S)			DISCHARGE DRIVE		OIL BURNER(S)		
		kW	QTY	kW	MOTOR FLC	kW	MOTOR FLC	QTY	kW
720	8.30	1	7.5	21.0	0.55	3.6	1	0.25	2.30
920	8.30	1	7.5	21.0	0.55	3.6	1	0.25	2.30
1120	8.30	1	7.5	21.0	0.55	3.6	1	0.25	2.30
1320	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
1520	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
825	8.30	1	7.5	21.0	0.55	3.6	1	0.25	2.30
1125	8.30	1	7.5	21.0	0.55	3.6	1	0.25	2.30
1325	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
1625	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
1925	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
2225	16.31	2	7.5	21.0	0.55	3.6	1	0.76	6.00
1340	16.86	2	7.5	21.0	1.10	7.1	1	0.76	6.00
1740	16.86	2	7.5	21.0	1.10	7.1	1	0.76	6.00
2140	17.62	2	7.5	21.0	1.10	7.1	2	0.76	6.00
2540	25.12	3	7.5	21.0	1.10	7.1	2	0.76	6.00
1650	16.86	2	7.5	21.0	1.10	7.1	1	0.76	6.00
2150	17.62	2	7.5	21.0	1.10	7.1	2	0.76	6.00
2650	25.12	3	7.5	21.0	1.10	7.1	2	0.76	6.00
STARTING METHOD VOLTAGE		DIRECT ON LINE 460v			dc DRIVE 180v		DIRECT ON LINE 230v		



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