

Uniquely Versatile - Perfect results on many materials

No other range of driers can match the range and condition of materials that can and have been successfully handled by these driers.

Bagasse	Oats
Barley	Paper
Borage	Peas and Beans
Bread Crumbs	Pellets
Chilli Peppers	Plastics
Cocoa Beans	Poppy Seeds
Coffee Beans	Potato Peelings
Compost	Pyrethrum
Cotton Seed	Rape Seed
Evening Primrose	Rice
Glass	Saw Dust
Grass	Seaweed
Grass Seed	Soya Beans
Herbs	Straw
Limestone	Sugar Beet Pulp
Linseed	Sunflower
Maize	Wheat
Malted Sorghum	Wood Shavings

Construction & Erection

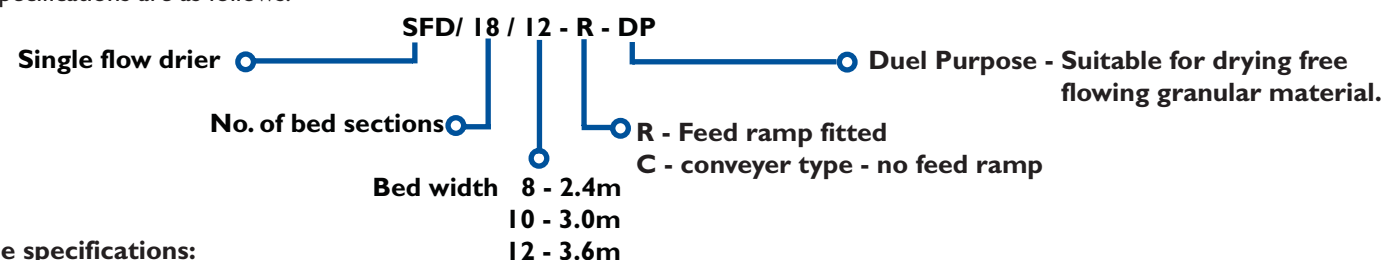
All single flow driers are composed of sections which are bolted together on site. The roof and the sides of the drier are formed with galvanised sheets fixed to the bed supports supplied with the drier. A level strip of concrete is all that is required as foundation with a simple pit at the discharge end according to the equipment to be adapted. After erection of the drier framework the undersides of the bed are infilled with brickwork to form a well insulated plenum chamber with minimum heat loss.



(SFD 18/12) Drier under construction in Sudan

Specifications

All single flow driers are built to meet our customers specific requirements. Drier specifications are as follows:



Example specifications:

Single Flow Conveyor Driers 'G' Range with feed ramp for grass, 'DP' Range with hopper and cooling fan for all types of grain	1.0/G 10 1.0/DP 10	1.5/G 10 1.5/DP 10	2.0/G 10 2.0/DP 10	2.5/G 10 2.5/DP 10	3.0/G 16 3.0/DP 16	
Water Evaporation - Kg/hr	2,724	4,067	5,388	6,663	7,862	
Dry Grass 75% - 10% - Kg/hr	1,015	1,564	2,030	2,550	3,045	
Calorific Values - (K.Cal/hr)	2,570,000	3,911,000	5,315,000	6,715,000	7,749,000	
Fuel consumption (approx) at 290 F	305	418	639	807	912	
Tons/hr Output Dry Wheat 20% - 15% 'DP Models only	17	21	24	30	45	
Tons/hr output Dry Maize 45% - 15% (DP)	8.2	9.8	11.3	14.7	26.1	
Total Hp	Hot Fans & Compressors	75	75 + 40	100 + 40	125 + 60	125 + 60 + 50
	Cold Fan (DP Models only)	15	15	15	15	15
	Output control	3	3	5.5	5.5	7.5
Grass feed and intermediate spinners	5.5 + 3 x 2.0	5.5 + 3 x 2.0	5.5 + 4 x 2.0	5.5 + 4 x 2.0	7.5 + 4 x 3.0	
Approximate Dimensions	Length (m)	30.9	39.9	55.0	65.8	55.0
	Width (basic frame)(m)	7.3	7.3	7.3	7.3	8.8
	Height (m)	4.4	5.2	6.6	7.3	7.0

In accordance with our policy of continuous development, we reserve the right to change specifications and prices at any time without notice or incurring liability to purchasers. All goods supplied according to our published terms and conditions of sale (copies on application)

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Single flow drier

Low temperature system -
Preserves colour/quality & reduces risk of fire

Uniquely versatile -
Handles virtually any material

Fuel efficient -
With recovery of unsaturated exhaust from final section, compatibility with CHP systems

Maximum life with minimum maintenance

Furnace & fuel economy -
Fuel efficiency is increased further through the system of recirculating unsaturated exhaust air.

Precise temperature control -
Drying temperature may be controlled and monitored throughout the drying process

Precise flow consistency -
Mechanical flow via inverter speed controller

Minimal Environmental impact -
Low noise, dust controlled, low profile

Full Controllability as Standard

Adjustable Bed Depth Control

A unique feature of the Special Products Drier is that bed depth can be varied to get the best results from every material (e.g. reduced depth for dense or very wet products, or increased depth for light products) - making optimum use of the available airflow.

Air Control - for light materials

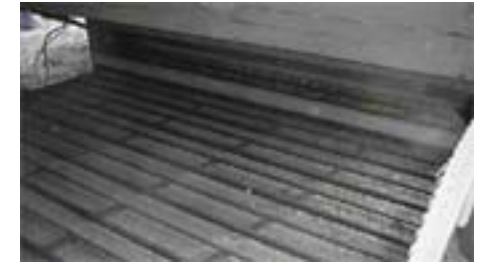
Light products do not risk being lost in the exhaust air stream because the air volume can be restricted, keeping dust emissions to a minimum.

Safety control - for unsupervised operation

Automated, planned, fail safe shutdown of the drier is provided via a choice of control systems which are relay logic or PLC with MMI. Remote telemetry package, data recording and processing also available.

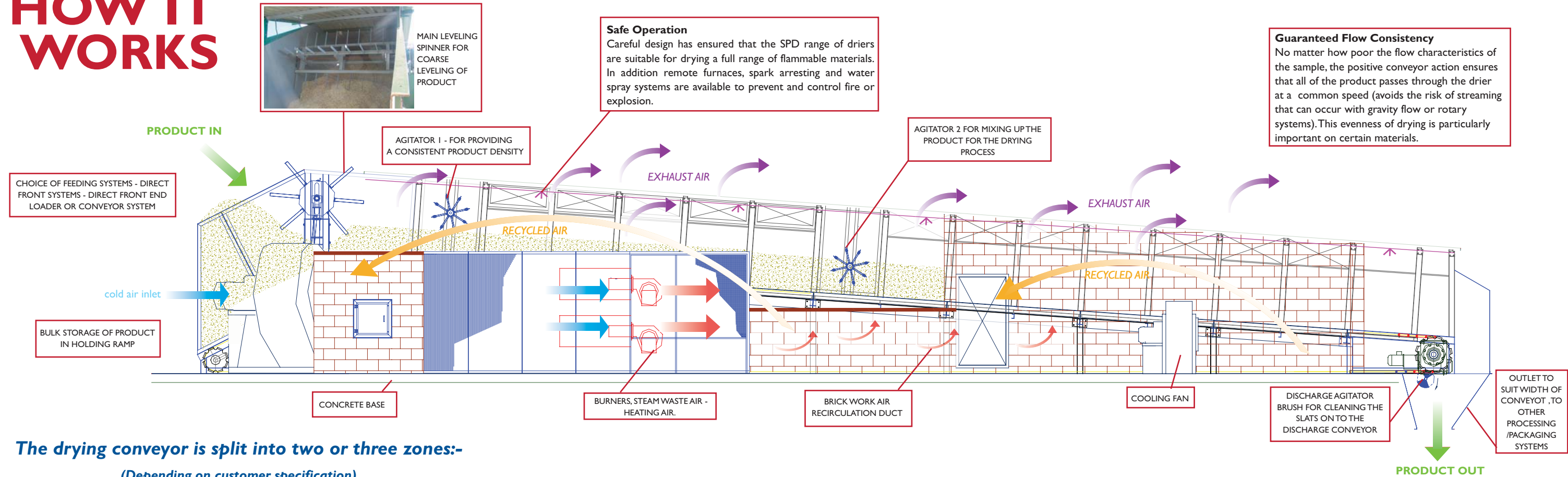
Material Movement

The chase chain which carries the material forward over the louvred drying bed - consisting of twin roller chains with removable slats which run over specially designed sprockets. An inbuilt hydraulic chain tensioning arrangement ensures that correct chain adjustment can be conveniently maintained. Various slat types are available to suit products of different types



Single flow drier

HOW IT WORKS



The drying conveyor is split into two or three zones:-

(Depending on customer specification)

DRYING SECTION 1

The first area is where the very wet material undergoes initial moisture reduction, the exhaust air from this section is effectively fully saturated and is expelled to atmosphere via the side exhaust doors above the bed. The drying air temperature in this section can be up to 130°C

DRYING SECTION 2/3 (DEPENDENT UPON SPECIFICATION)

The product is becoming drier, most of the exhaust air from this section which is not fully saturated with moisture is recycled to the fan/furnace supplying the first drying section - where the extra humidity has less impact on drying performance.

Recycling the air in this way optimises energy efficiently. Depending on customer priority (efficiency or optimal performance) and the material/ambient conditions, the proportion of air for recycling can be adjusted. The drying air temperature of this section tends to be kept to less than 120°C

COOLING SECTION 3

Optional - A cooling section where cold air is passed through the dry material - the heat generated by this process is again recycled to the fan/furnace for the previous drying section. The moisture in the dry material is equilibrated. The exhaust air from this section is very dry, so it is all recycled back to the fan/furnace of the second section.

Environmental Impact

Low Noise - very quiet operation

All fans are located inside main drier body. All hot fan impellers are special low noise, aerofoil bladed, backward curved centrifugal type. All noise is generated at low level and so on particularly sensitive sites, sound barriers can be erected to create an even quieter installation.

Emissions - options to suit local requests

A variety of dust and moisture control measures can be easily employed to ensure that emissions are below the necessary environmental legislation. Full moisture recovery is also available incorporating exhaust dehumidification.

Low profile - minimising visual impact

New drier installations can blend unobtrusively with building profiles, often overcoming very tight planning constraints. Off-standard colours can be accommodated at extra cost.



Heating Options -

Full Temperature Control

Automatic pressure jet burners allow the complete range of possible drying temperatures to be obtained without changing nozzles, through the full range of ambient conditions.

Can be fuelled by diesel, gas, heavy oil or multi-fuel options. Can be easily linked to make fired furnaces, heat exchangers, incorporating high or low grade heat from CHP systems.

Highly Efficient, Uniquely Versatile

Improved Fuel Consumption - thanks to air recirculation

The uncompacted drying bed encourages moisture release and warm exhaust air from the final cooling section is recirculated to hot fans, improving fuel consumption by up to 15% - important as fuel costs account for over 80% of energy costs on all continuous drying systems.

Highly Efficient

Multiple fans - Multiple fans can be employed so that when combined with air recirculation drying efficiencies can be optimised.