

Big Bale Drier



Ventus 2400 - your guarantee for dry straw

Ventus 2400



The Kongskilde Ventus 2400 drying system is designed for the drying of straw in big bales.

The drying process takes place in a drying section, which holds one big bale at a time.

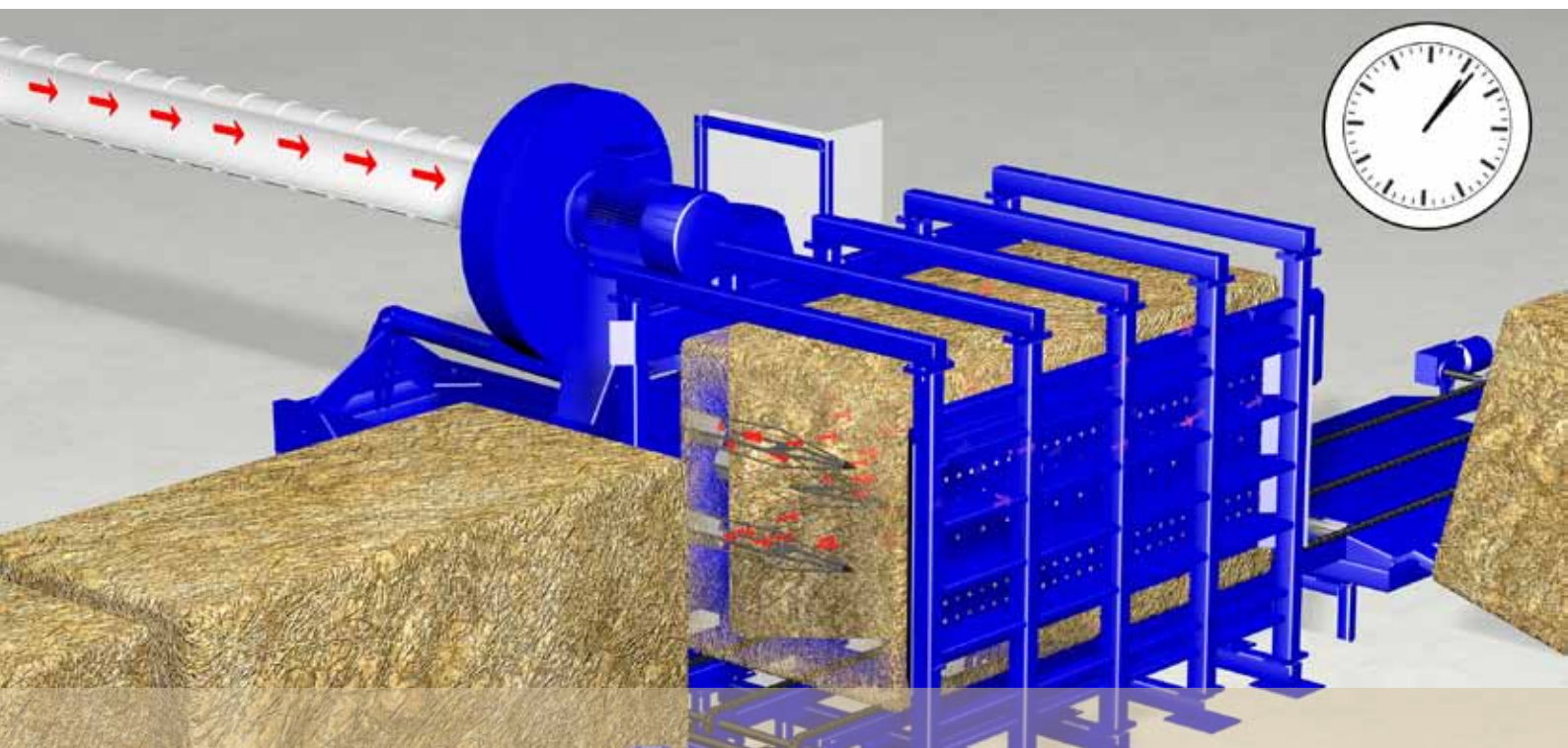
Wet bales are placed on a conveyor, from where they are conveyed one by one to the drying section.

The required drying time is set on a timer. When the bale is dried in the required drying time it is automatically moved out of the drying section, to be replaced by the next wet bale.

Dry bales emerging from the drying section are moved onto a push section. Once on the push section the dry bale is pushed sideways on to the floor. Depending of the smoothness of the floor this can normally be done up to a maximum of 8 bales. The dry bales are then placed side by side on the floor ready to be picked up with a fork lift.

Ventus 2400

- High capacity fan fitted with efficient IE2 motor.
- The modular system makes it easy to build systems adapted to individual requirements both on the wet and dry side of the drier.
- The conveying chain runs on a low friction liner.
- The drying spears have a wear resistant low friction coating, reducing potential bale damage.
- The drying spears have a spring-loaded connection to the air distribution head, thereby minimizing any potential impact damage when introduced in to the bale.
- The hydraulic pump station is equipped with temperature and level control.
- The blower motor has a soft start device, giving a smooth start up.
- When running in drying mode the dryer is automatically controlled by a control panel. The controls can be set to manual, allowing for manual running of each function via a touch screen.



Technical Information



Ventus 2400 enables

- Wet bales to be turned into a saleable product
- Baler and tractor to be utilised more efficiently
- An increased amount of straw to be harvested
- In-field cost reductions
- Improved quality of harvested straw

Standard control panel

- The panel contains a communication module which automatically calls a designated number if the wet bale stock runs out, or if the drier stops for any other reason
- Router for remote support prepared for USB modem or cable
- Remote control for reversing of conveyor on wet side, allowing for central loading of wet bales
- Displays programme history

Bale dimensions

Width 1200 mm
Height 1200 – 1300 mm
Length 2200 – 2500 mm

Motors installed (3 x 400V)

Blower 37 kW
Hydraulic pump 5,5 kW
Chain conveyor 0,55 kW
(min 2 depending on conveyor length)

Power supply to panel: 125Amp.

Typical consumption

Blower app. 26 kW
Oil heater 7,7-12 l/h



Technical Information

Floor requirements

High load bearing concrete, uncracked (C25/30)

Floor space

Drying section with spearhead app. 3,1 m x 4,7 m
 Push station with drive section app. 3,0 m x 4,0 m
 Conveyor section w. o. drive section app. 2,95 m x 1,25 m
 Conveyor section w. o. drive section,
 incl. post app. 2,95 m x 1,38 m
 Drive section app. 0,53 m x 1,7 m

Length conveyor section2,95 m
 Length drive section0,40 m
 Number of sections per drive, one-way.....5 pcs.
 Number of conveyor sections per drive, two-way.....4 pcs.

Number of bales which can be pushed on the floor by the push station (smooth concrete) 8 pcs.
 Number of bales that can be pushed sideways can be increased by installing sheets of low friction material on the floor.

Heaters

Heater	Heat output kW/kcal	Fuel consumption, l/h	Air flow m ³ /h	Heating of air Δt , °C	Remarks
KAI 300HC	58/59,000	7,8	6,500	27	
KM 100X	85/92,400	9,5	6,500	33,2	
KM 130X	129/111,000	12		38	
KS125 w. 2 stage burner	149/128,140 75/64,500	max. 15,2 min. 7,6	6,500	60 30	max. 60 °C
KS 150 w. 2 stage burner	173/148,780 87/74,820	max. 17,6 min. 8,8	6,500	70 35	max. 60 °C

Δt = the difference between the temperature required and the minimum temperature outdoor.

Hot water radiator

	Heat output kW/kcal	Air flow m ³ /h	Heating of air Δt , °C	Hot water		
				l/sec	Inlet °C	Outlet °C
Hot water radiator 150 kW	145/125,000	6,500	58	1,9	80	60
Hot water radiator 175 kW	163/140,000	6,500	65	2,14	80	60

Examples of energy consumption for drying

The below values for drying capacity and energy consumption are only intended as a guide, as a number of external factors - primarily the relative humidity and the air temperature - affect the drying time and moisture content.

When drying with warm air from oil heater, the following values for energy consumption can be used as guideline:

	½ hour, moisture content in bale varies from 25 – 35% H ₂ O	¾ hour, moisture content in bale varies from 35 – 45% H ₂ O
Blower	13 kWh	20 kWh
Oil heater	3,8 l	5,7 l

When drying with warm air from straw burner, the following values for energy consumption can be used as guideline:

	½ hour, 25 – 35% H ₂ O	¾ hour 35 – 45% H ₂ O
Blower	13 kWh	20 kWh
Straw for burner	14 kg	21 kg

Conditions:

The bale is dried until a moisture content of 13% is reached in a minimum of 85% of the straw at an outdoor temperature of 20°C. Large variations in the moisture content may occur in the individual bale before drying.

Complete drying of some very wet areas in the bale will demand longer drying time. Normally it should not be necessary to dry the bale for such a long time that all areas within the bale are dried to the final level.

The temperature of the air and the relative humidity will also have an impact on the drying capacity. The drying capacity will be larger in warm and dry conditions than in cold or humid conditions.



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