



Bin Dryers

KCT 20 - 27

Kongskilde
Bin Dryers

Kongskilde KCT 20 - 27 bin dryers are used for drying several kinds of free flowing crops. The drying capacity is from 0.7 t/h up to 2.0 t/h at low temperature. The bin dryers operate with Kongskilde HVL low pressure blowers and Kongskilde oil-, gas- or hot water heaters.

Kongskilde bin dryers offer a gentle drying process to seed producers. The method of drying at low air temperatures is safe and gentle even for large seeds at high moisture contents.



KCT 20 - 27 Bin Dryer

- Gentle and economical drying

Drying Principle

Kongsilde KCT dryers work on the batch principle. In the KCT dryers air travels from a central perforated ventilation pipe radially through the grain and exhausts through a permeable wall.

The air is heated 15-30°C above the ambient air temperature. The drying cycle includes a cooling period.

A typical drying sequence lasts 10-25 hrs.

Safe Storage

Safe storage is a situation in which ever present, dormant fungi and bacteria do not have enough moisture to develop toxins.

As the figure shows, safe storage demands a fairly low grain moisture and temperature. This will keep grain aspiration as well as fungi and insect activity low.

Drying - Cooling

A nominal drying time in Kongsilde bin dryers can be calculated from the formula:

$$\text{Drying Time} = \frac{\text{hkg} \times \% \text{ red.} \times 1200}{\text{Capacity of heat source}}$$

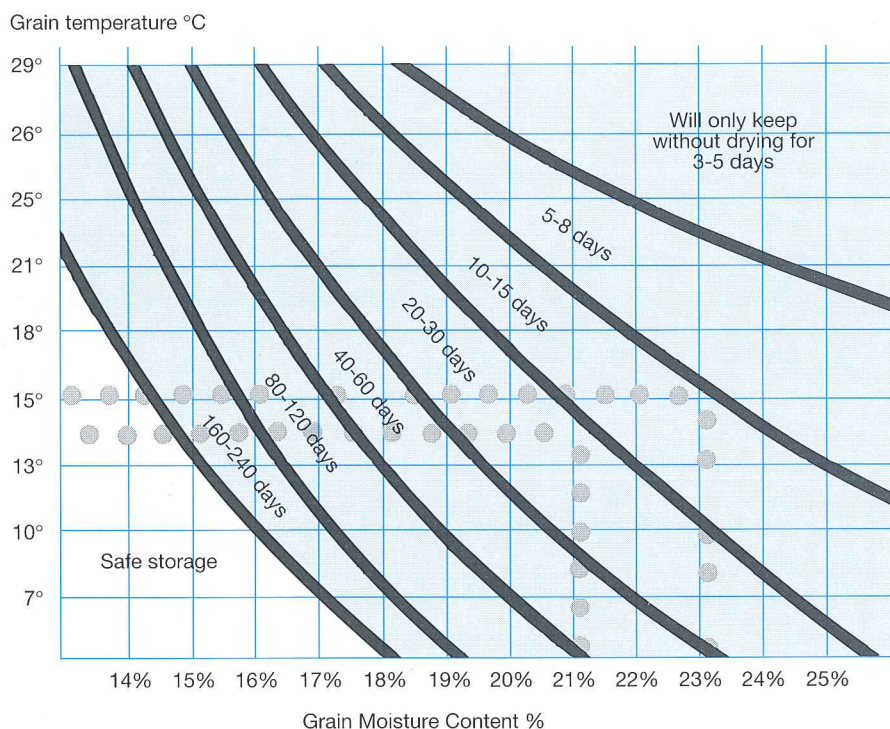
* 1 hkg = 100 kg grain

It takes about 1200 kcal to remove 1 l of water, so with sufficient air volume the capacity at the heat source in kcal/h determines drying time.

Filling and Emptying

Filling and Emptying are both important factors for the functioning of the bin dryers. Even distribution around the central ventilation pipe is ensured with a filling distributor. During emptying the special emptying/mixing device ensures even moisture content of the delivered grain by mixing grain from the area near the ventilation pipe with grain from the periphery.

When is the Grain Storage-Safe



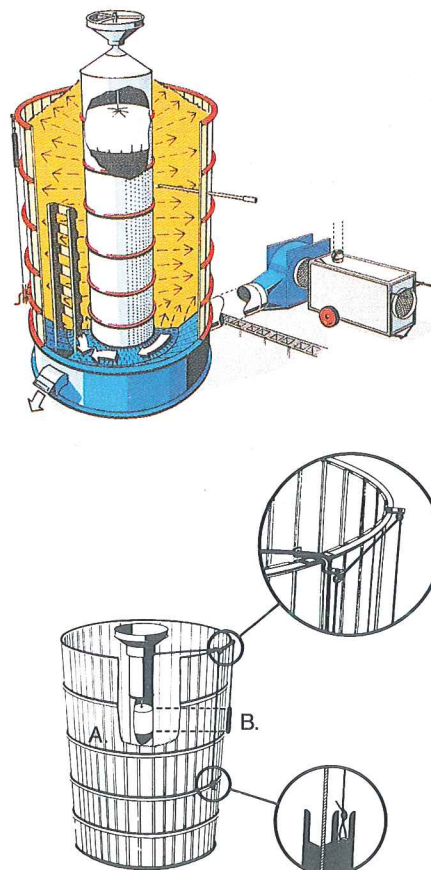
Drying in Partly Full Bins

The distance that air has to travel through the grain should be the same from any point of the ventilation pipe.

If a small batch is to be dried, it is necessary to reduce the height of the ventilation pipe; this is done with a moveable canvas bag (A) over a heavy frame. An indicator (B) shows on the outside of the silo the position of the bag.

Accessory

- Air pressure meter

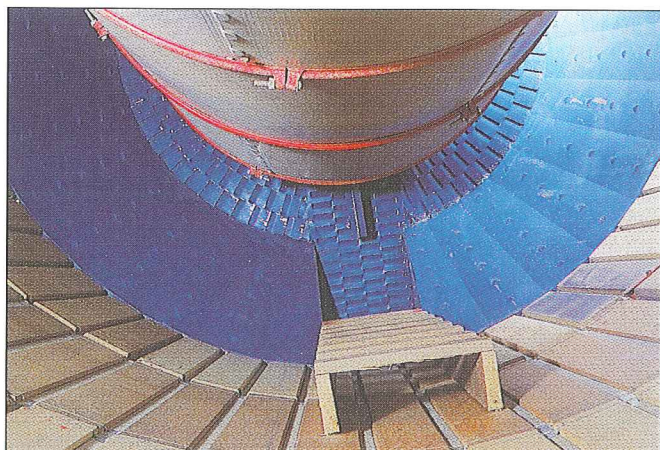


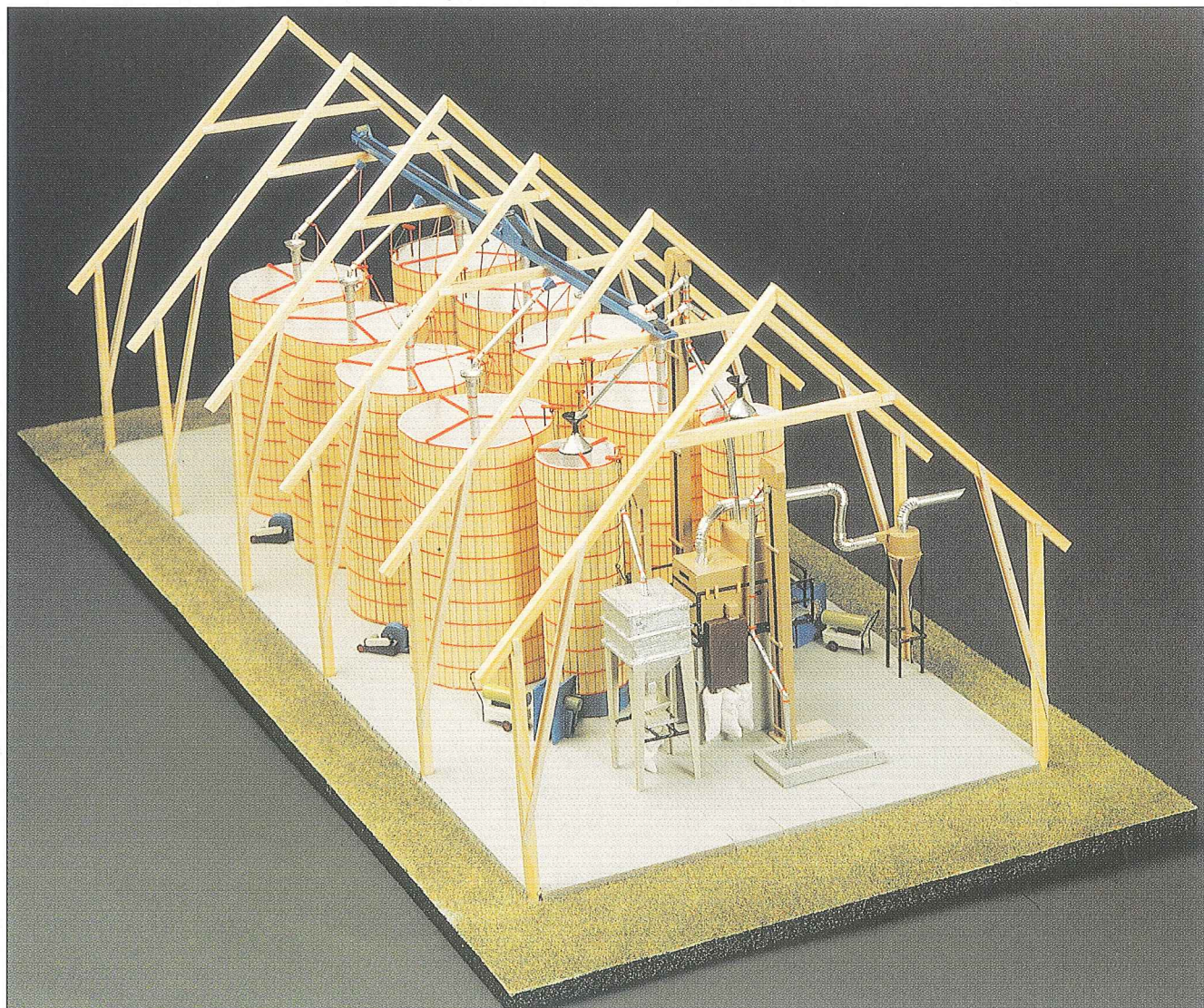
Capacity

Holding Capacities and Drying Time

Silo Typ	m ³	Ton Wheat	Blower HVL	Air Rate m ³ /m ³ grain/h	Heat Capacity Kcal./h	Drying Time Hours*
20/24	7.1	5.7	55 100	1332 1701	60.000 80.000	4.6 3.4
20/30	8.6	6.9	55 100	1194 1565	60.000 80.000	5.5 4.1
20/36	10.2	8.2	55 100	1069 1432	60.000 80.000	6.6 4.9
20/42	11.8	9.5	55 100	977 1318	60.000 80.000	5.7 5.7
20/48	13.3	10.6	55 100	885 1208	60.000 80.000	8.5 6.4
20/54	14.9	11.9	55 100	819 1114	60.000 80.000	9.5 7.1
20/60	16.5	13.2	55 100	753 1033	60.000 80.000	10.6 7.9
27/30	16.6	13.3	100 150	790 867	80.000 140.000	8.1 4.6
27/36	19.6	15.7	100 150	729 801	80.000 140.000	9.4 5.3
27/42	22.7	18.2	100 150	671 746	80.000 140.000	10.9 6.2
27/48	25.7	20.6	100 150	615 701	80.000 140.000	12.4 7.1
27/54	28.7	23.0	100 150	571 654	80.000 140.000	13.8 7.8
27/60	31.8	25.5	100 150	529 611	80.000 140.000	15.3 8.7
27/66	34.8	27.7	100 150	494 575	80.000 140.000	16.7 9.5

* 4% moisture reduction





Seed Drying

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