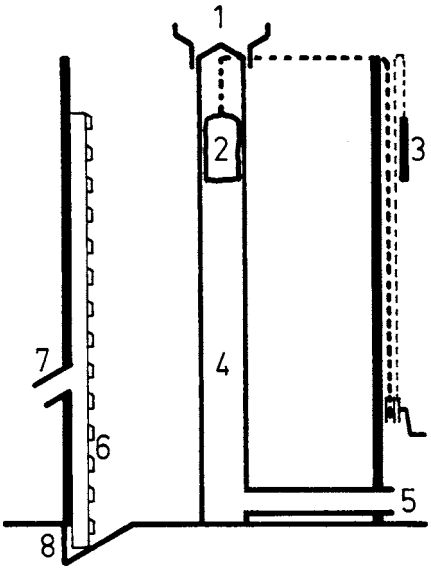
KC Instructions



1) Distributor
2) Ventilation valve
3) Valve indicator
4) Ventilation pipe
5) Air duct
6) Emptying and mixing units
7) Wall mounted sacking-off outlet
8) Concreted grain outlet

Prior to filling the silo
Remove any dirt from the perforations in the ventilation pipe with a stiff broom. Clean out kernels and dirt from the air duct and the bottom of the ventilation pipe.

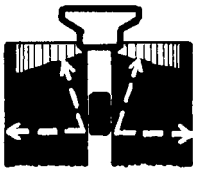
Make sure that the air duct is properly connected to the ventilation pipe.

Make sure that the valve is whole, that the winch can raise and lower the valve and that the valve indicator follows it at the same height.

The ventilation valve and indicator should be at the same height. To check this, on silos witout raised distributor, hoist the valve to the top. The indicator should be in the position shown.

Filling
Fill the silo through the distributor. Dirt may collect in pockets if the distributor is not used and can make drying uneven and lengthy. Drying is speedier if grain is put through a Kongskilde precleaner before filling.

KC silos can be fitted with raised ventilation pipes which put the distributor 0.6 m or 1.2 m above the edge of the silo. The best shape of grain in a filled silo for ventilation purposes is an even, natural slope from the distributor down. On silos which have the distributor even with the silo edge, do not fill the lined area until grain has been sufficiently dried down for storage.

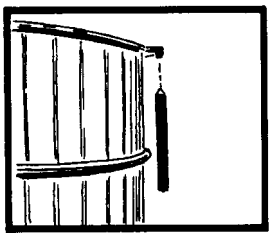


Do not walk on grain in the silo. This will compact it and reduce air flow where you have stepped.

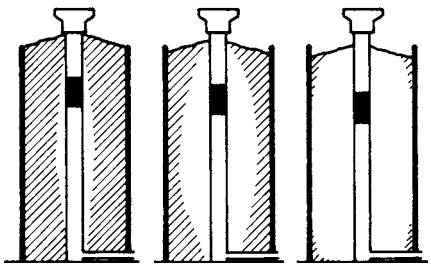
Clean the blower before ventilating
Run the blower for a short while through any piping that may be used to connect the blower to the air duct. Kernels blown into the ventilation pipe will be driven into the perforations and block them.

Ventilate soon after filling
Newly harvested grain, even if low in moisture content, will not be dry enough for safe storage.

The grain will sink
The bottom of the ventilation valve should be at a depth in the grain equal to the distance from the ventilation pipe to silo wall. Lower the valve when the grain sinks during drying. Otherwise too much air will escape upwards.



Drying pattern
Drying begins around the ventilation pipe and ends at the outermost grain layer.



Blow day and night
Blow, regardless of the weather, day and night, until the grain is ready for storage. Except for the worst possible conditions of combined low temperature and fog, the temperature rise generated in the Kongskilde blower will continue to reduce the grain's moisture content even in rainy or foggy periods.

It is more economical, however, to extract the last 1-2% on days of low relative humidity.

Keep doors and windows open
Through drafts are necessary to let fresh air in. Otherwise, the humidity of the air inside the building will become greater than outside, even in foggy weather. Roof ventilation is strongly recommended.

Time required to extract 4%
(from 20% to 16%)

Ambient temperature 63°F (17°C)
- Relative humidity 80%.

		Blower TRL75	
Silo-size	Tons Wheat	Days	Hours
KC 20/24	5.8	2	7
KC 20/30	7.3	2	7
KC 20/36	8.7	3	5
KC 20/42	10.2	3	19
KC 20/48	11.6	4	7
KC 20/54	13.1	4	20
KC 20/60	14.6	5	10
KC 27/30	13.2	4	21
KC 27/36	15.8	5	20
KC 27/42	18.5	6	20
KC 27/48	21.1	7	19
KC 27/54	23.8	8	19
KC 27/60	26.4	9	19
KC 27/66	29.0	10	18
KC 33/30	21.0	7	19
KC 33/36	25.1	9	7
KC 33/42	29.3	10	20
KC 33/48	33.4	12	9
KC 33/54	37.7	13	22
KC 33/60	41.8	15	12
KC 33/66	46.0	17	2
KC 40/30	30.2	11	4
KC 40/36	36.3	13	10
KC 40/42	42.3	15	16
KC 40/48	48.4	17	22
KC 40/54	54.4	20	3
KC 40/60	60.5	22	9
KC 40/66	66.6	24	15

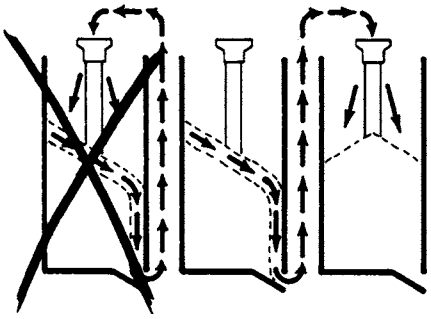
Example: KC 27/54 is 2,7 m wide and 5,4 m high.

Grain over 21%
If temperature of the grain in the outer layer at top and bottom of the silo rises 3-6°F (2-4°C) in the course of one day despite blowing, turn the grain from one silo to another.

Grain between 18 and 21%
When the moisture content measured half way up the silo at the silo wall has dropped about two percent, it is necessary to turn the grain. There-after continue blowing until the grain is ready for storage.

Grain under 18%
Blow without turning until all the grain in the silo is ready for storage. (See para "Always finish drying...").

Grain lots at varying moisture content
If the silo is filled with portions of grain of varying moisture content, treat according to the highest content (see above). Turning, however, will equalize such differences.



Turning and mixing
As grain runs out layer by layer from the top, the innermost, drier grain, mixes with the damper along the silo wall. You cannot, therefore, successfully turn grain in the same silo, as it would be the same layer of grain which continued to circulate.

We recommend turning, after drying has been completed, before final storage.

How to take a grain sample
Insert the sampler at an upward slant. Move it back and forth 3-4 times by 10-15 cm. The upward slant will cause grain to run down into the sampler pipe. Extract sampler.

Always finish drying or ventilating during the cool hours of night or early morning
The lower its temperature, the better grain stores.

Approximately one week after combining, grain is ready for storage at the following temperatures:

Grain temp. °F	41	50	59	68	77
Grain temp. °C.....	5	10	15	20	25
Moisture content of grain %	19	16	14	13	12

Dried grain can be ready for storage but not stable in the first few months after harvest. Therefore, ventilate for approximately 1 hour every week with cool air until grain temperature is low enough to remain constant.

Example: Grain at 16% is ready for storage at 50°F (10°C).

Check temperature daily
If grain temperature is 9°F (5°C) or more above the temperature in the barn, ventilation is necessary. Check the temperature morning, noon and night at first, especially in warm weather.

Leave the thermometer in the grain
After checking, insert the thermometer about 20 cm into the lowest aperture in the silo - it is then ready to be read next time. The thermometer needs to be in grain about 15 minutes before it can be read. Therefore, keep one in each silo.

Should grain temperature rise
If the temperature of the grain rises 2-3°F (1-2°C) in a day in grain which is otherwise apparently storable, ventilate until temperature falls and remains constant.

Ventilation in warm weather conditions may further raise grain temperature temporarily but will reduce moisture content. Continue ventilation through the cool hours.

Check that temperature has fallen and remains constant.

Emptying
Emptying must be carried out through an emptying unit to obtain mixing of the outer and inner grain layers. It is important that grain lots of different moisture contents be mixed during emptying. The emptying unit also removes any side pressure of grain weight against the silo wall.

Poor ventilation can be caused by:

Blower's damper not completely open. Ensure that it is in the "blow" position.

Poor connection between blower and silo air duct. Ensure joins are tight and properly sealed.

Incorrect ventilation valve position.
Too high - too much air escapes upwards.
Too low: - upper layers of grain get insufficient ventilation.

See para "The grain will sink".

Ventilation valve allows air to escape past it. Check the canvas bag and replace if worn.

Kernels left in the blower are blown into the ventilation pipe where they plug up the air holes.

Loose kernels might be removed by using a vacuum cleaner through the air duct. Otherwise, empty the silo and clean the pipe by brush.

The air duct has pulled loose from the ventilation pipe foot. Empty the silo and replace. Secure with split pin.

Very wet grain has not been circulated to another silo early enough. Turn as soon as possible.

Ventilation has been discontinued for too long before the grain is ready for storage. If this has resulted in the beginning of mould, turn immediately and ventilate.

Very dirt grain Clean grain is much easier to dry than dirty, but grain with moisture content above 20-21% is difficult to clean. Therefore, dirt is best removed after partial drying. Grain should be precleaned every time it is moved.