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## *Part of the Pile-Dry Pedestal and Fan range*



From 100 tons to 22,000 tons, from converted cattle sheds to purpose-built commercial grain stores, for the past 40 years Martin Lishman Pile-Dry Pedestals and Fans has been the number one choice as part of a professional crop storage system.



FloorVent is a version of Pile-Dry Pedestals that is ideally suited to installation in new floors and new stores, hopper bottomed bins and silos. Backed by research by HGCA and CSL, you can be sure that FloorVent will help you meet your crop storage objectives.



*Why is FloorVent easier and cheaper to install than under-floor ducts?  
Why is it so suited to cooling very deep grain?  
Turn over for the answers to these questions ... and much more.*

# FloorVent Under-Floor Ventilation

## KEY FACTS

### FloorVent System

The FloorVent under-floor ventilation system is a simple and convenient way to install a cooling system in new floors, new stores, hopper bottomed bins and silos. It combines the many benefits of the Pile-Dry Pedestal and Fan system with the need to make store handling and filling easier.

FloorVent is especially suited to deep grain stores where logistics and safety considerations can make moving fans between Pedestals difficult.

### Pile-Dry FloorVents

Pile-Dry FloorVent units comprise a 12" diameter heavy gauge perforated steel Pedestal tube with a conical cap fitted into one end. The cap serves to deflect grain that is poured onto the unit, sometimes from very high conveyor systems.

The tube is fitted to an under-floor duct via a steel base plate connector that fits into a man-hole recess in the concrete floor.

When not in use, the tube and connector plate are removed and a man-hole cover is used to cover the hole and leave the floor totally multi-purpose.

### FloorVent Fans

The unique design Pile-Dry centrifugal fans fit into the FloorVent ducts along the outside wall of the building and can be moved easily between them.

The fans are typically used to suck air through the grain. Sucking avoids condensation at the grain surface and the grain does not have to be level filled.

The fans draw the warm air out of the grain and discharge it directly to the atmosphere, so it can be replaced by cool air drawn in through the building louvres.

### Easier Filling

Overhead store filling, especially in deep stores, is much easier when a FloorVent system is used. There is little possibility that the tubes will move during filling and, when pushing up or levelling the grain after filling, there is no tube protruding from the grain that could be damaged by handling or levelling equipment.

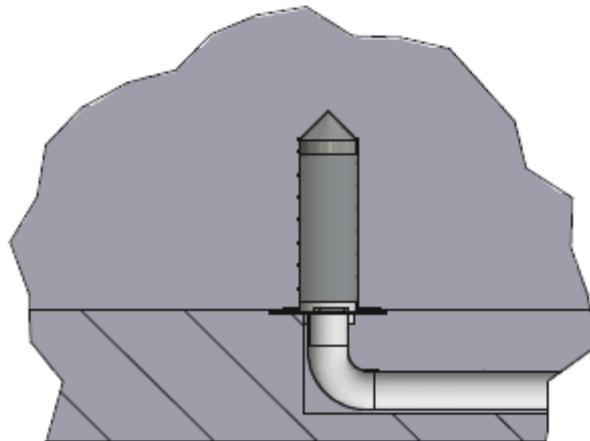
## FloorVent Benefits

- Ideal for new floors and new stores, hopper bottomed bins and silos
- Suited to very deep grain, up to 12m
- Easier overhead filling
- Vents hot air directly outside the building
- Easier and cheaper to install than under-floor ducts
- Installed using standard building materials

## Specifying FloorVent for your store

### How deep can you store your crop with FloorVent?

The FloorVent system has been used with grain at up to 12m deep in a floor store and 9m deep in hopper bottomed bins. In addition to grain depth, an allowance should be made for the under-floor pipe length between the FloorVent unit and the location of the fan on the outside wall. The system has been proven to work very effectively with this distance at 12m. Different combinations of grain depth and under-floor pipe length, not exceeding a total of 24m, would also give similar results.



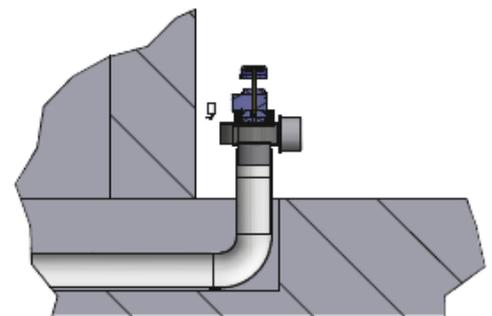
*Cross-section of FloorVent unit installed in store floor*



*FloorVent components ready to be used*



*Pile-Dry Fans in position*



*Cross-section of fan connection adjacent to external store wall*

## Why is the Pile-Dry FloorVent System easier and cheaper to install than traditional under-floor duct methods?

- With the FloorVent system there is no requirement to prepare re-inforced concrete channels and install metal louvred ventilation strips in the store floor.
- A simple trench containing a conventional solid wall drainage pipe and then filled in is all that is required. The floor can then be laid and skimmed much more quickly and easily.
- Much of the preparatory work for FloorVent installation can be completed using standard materials sourced from building merchants, which can greatly reduce installation costs.

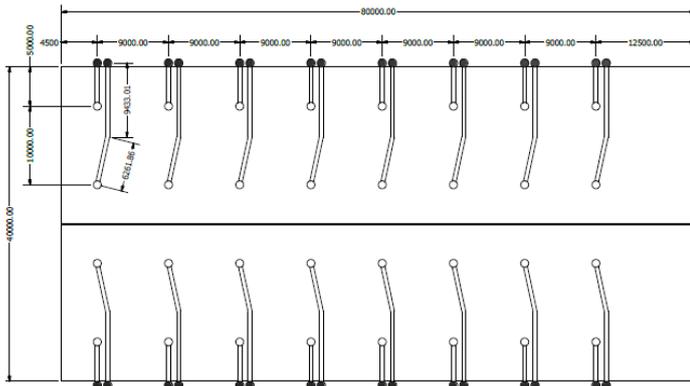
# Professional Crop Storage Systems

## Designing a FloorVent System

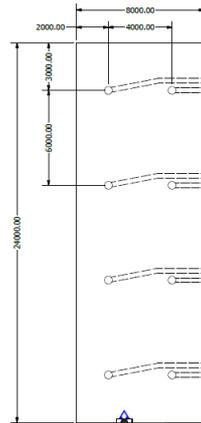
Since a typical FloorVent system is installed in new floors, new stores or bin systems that are being upgraded, this means that FloorVent design should be considered at an early stage. We are happy to work with building contractors and specifiers to ensure that not only the components are correctly designed but that they are also delivered to meet building time frames.

Below are some typical illustrations of FloorVent systems that have been installed in new grain stores. The hopper-bottomed bin version was installed in existing malting bins that required some ventilation for the grain.

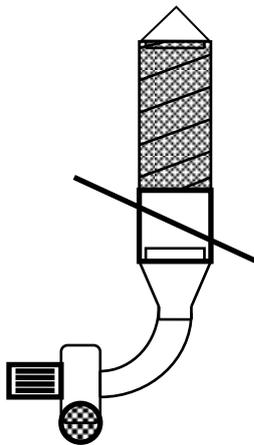
Please contact us to discuss your requirements.



Typical layouts of FloorVent Systems in bulk stores



Typical configuration of FloorVent in hopper-bottomed bins or silos



## All the benefits of Pile-Dry Pedestals

The FloorVent system has all the benefits of Pile-Dry Pedestals and Fans:

- Modular low-cost cooling system.
- Localised cooling to maximise energy savings.
- Fast cooling to target temperatures.
- FloorVent tubes have round-hole perforated ducts with 31% of free air space - up to 8 times more than other types of metal or plastic duct.
- This means no resistance to fan airflow and all the fan power is available to ventilate the grain, which leads to faster cooling and the ability to cope with deeper grain.



Typical example of cooling with FloorVent - the grain was cooled to around 10°C by the second week of October

## KEY FACTS

### Cost-effective Cooling

The FloorVent system combines cost-effective cooling with the lowest capital cost per ton stored, when compared to traditional under-floor systems.

Increased efficiency and up to 40% lower energy costs is achieved with automatic fan controllers and a correctly specified building ventilation system.

Since target grain temperatures are reached much earlier, the fans can be turned off several weeks earlier or used for many hours less than previously. This is a huge cost saving, while also ensuring the grain stays in better condition in store.

### Priority Cooling

Start cooling with FloorVent Fans as soon as grain comes into the store or off the drier, and continue for at least 24 hours to remove high heat.

Continue cooling with automatic control to make best use of cooler air. Do not wait until cold weather comes and do not worry about damp air - it is almost impossible to re-wet grain when cooling.

### Effective Drying

Drying with Pile-Dry Pedestals using ambient air has been achieved widely over many years, and the same ability applies to the FloorVent system.

Drying results depend on favourable ambient conditions, efficient fan control, fan strength and how many fans you use in the store.

Pedestals and FloorVent are not suited to drying rape or linseed which require high airflows and heat.

### Usage Variations

Pile-Dry Pedestals and FloorVent are operated in the same way for all grains, pulses, potatoes, maize and seeds such as rape, grass and sunflower.

Hessian sleeves are used to prevent small seeds passing through the perforated holes - they maintain the high airflow required and are much more effective than louvred metal or slotted plastic.

# Professional Crop Storage Systems

## Four steps to improving your crop storage

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### Pile-Dry Pedestals & Fans

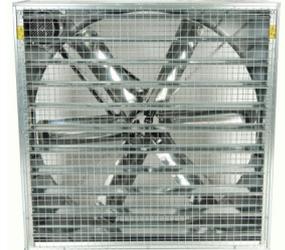
The highest grain quality with the fastest cooling system available



2

### StoreVent Crop Store Air Extraction System

- Building ventilation to maximise the efficiency of all crop cooling and drying systems - ensures sufficient air exchange to maintain cool, fresh air in the crop store at all times
  - Can be linked to Martin Lishman automatic fan controllers
- see the Martin Lishman StoreVent brochure for further details.



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### Automatic Fan Control & Crop Monitoring

- Portable and static automatic fan controllers for energy efficient crop cooling and drying
  - Cost-effective crop monitoring equipment to ensure the highest crop quality
  - Barn Owl Wireless remote crop monitoring, data storage and automatic fan control system
- see the Martin Lishman Fan Control and Crop Monitoring brochure for further details.



Temperature Differential Fan Control

Fast, energy-efficient crop cooling



Thermo-Humidistat Fan Control

Simple control for crop cooling and drying



Barn Owl Temperature & Humidity Fan Control

Comprehensive control for crop cooling and drying



Barn Owl Wireless Control & Monitoring System

Complete crop store management

4

### Trouble-Dry Hot Spot Spears & Fans

- Portable and economic cooling - a simple solution to a common problem
  - An emergency solution to hot spots where Pile-Dry Pedestals are not in use
- see the Martin Lishman Trouble-Dry brochure for further details.



#### SPECIFICATIONS

Pile-Dry FloorVents and Fans are available in models and sizes to suit different storage situations. Talk to your local supplier or contact Martin Lishman to discuss the most appropriate configuration to meet your storage requirements.

*Pile-Dry FloorVents and Fans are produced and distributed nationally and internationally exclusively by Martin Lishman Ltd. We reserve the right to alter product specifications at any time without notice.*

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Martin Lishman Ltd, Unit 2B Roman Bank, Bourne, Lincs PE10 9LQ, UK

Tel: 01778 426600 Fax: 01778 426555

E-mail: sales@martinlishman.com Website: www.martinlishman.com

Your FloorVent Supplier: