



OVERVIEW

Helping to set new performance and energy saving standards

Global Solutions...

wireless control for hundreds of applications

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- easy to use and incredible performance
- leading edge design and technology
- highly committed to innovation
- products you can rely on
- global support and suppliers

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COMPANY

BOUKENS ENKHUIZEN

Accurate control with minimum energy usage for seed processing

Netherlands

Optidrive's are helping to set new performance and energy saving standards for specialist drying equipment used for vegetable and flower seeds all over the World.

Boukens Enkhuisen based in the Netherlands, have been designing and manufacturing specialist technical cooling and drying equipment for over sixteen years. Their latest innovation is used to carefully dry flower and vegetable seeds before packaging and is supplied to major seed producing companies all over the World.

This machine is required to process the seeds according to stringent standards. The seeds must not be damaged in any way and specific criteria must be achieved for the condition of the seeds prior to packaging, to prevent bacteria growing inside the package. This advanced process control is provided through a series of Optidrive's which are in turn controlled from a central PLC using Modbus. The system control has to be very accurate to ensure that the correct conditions are achieved to minimise the drying time whilst achieving the correct finished product quality. The Optidrive's were supplied by Hiflex Automatiseringstechniek B.V. Invertek Drives Sales Partner in the Netherlands.

Fast and Easy Commissioning

The key benefit to the machine builder in using Optidrive's in this application is the very quick and simple installation and commissioning time. The drives are mounted in a common control panel, and linked together using RJ45 cables and splitters, allowing the Modbus network to be quickly connected together. Each drive then requires only motor parameter data to be entered and control from Modbus to be selected, hence the commissioning time is very short.

Energy Efficient

The seed is loaded into rotating drums which are controlled by Optidrive E2 drives. The rotation of the drums allows the air to circulate around the seed, in a similar manner to a tumble dryer, to ensure that the seed is dried evenly. A series of Optidrive's are used for highly energy efficient control of the fans which circulate warm air through the seed for the drying process. Finally, the machine has a built in condenser section, so that the moisture removed from the grain is condensed back into water and can be drained away safely.

Optidrive's are used on all aspects of the process, controlling the: ventilation speed; cooling compressor speed; condenser speed; and the speed of the rotation drums which contains the seeds to be dried. Monitoring signals from various sensors feed information, such as temperature and moisture content in the air, to the PLC. This enables the process to be controlled extremely accurately whilst ensuring that the minimum of energy is required, a dual benefit for the end user.

The drying process must be carefully monitored to ensure that strict global standards for seed drying are always adhered to. Using Optidrive's controlled via Modbus allows these standards to be easily met by this equipment.

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