

Media Release

Significant energy savings and increased livestock health and productivity

The benefits of accurate and efficiently controlled ventilation in agriculture buildings

The health and productivity of livestock and poultry in the agricultural industry can be impacted significantly by how good or bad the ventilation is in the buildings they are housed in.

Poor ventilation can lead to increased risk of bacteria and viruses affecting livestock, impacting significantly on their welfare and financially on the farming business. In addition, inefficient ventilation systems can result in high energy use and costs.

Invertek Drives, an innovator and manufacturer of variable frequency drives (VFD) used to control electric motors and fans, is leading the way in using VFD technology to improve ventilation in livestock and crop storage environments.

“The fans used in ventilation systems are mostly controlled by AC electric motors. In many cases, these are operating without any form of motion control. This means they are running constantly at full speed using high levels of energy,” said Kes Beech, Technical Manager at Invertek Drives.

“This can also significantly increase wear and tear, impacting on the amount of maintenance they need and the cost of downtime.

“By controlling the speed of the fans to the level of ventilation required at different times of the day, variants such as temperature, moisture, and humidity can be controlled and significant savings can be made in energy use. This can result in energy savings of up to 30 or even 50 per cent in some cases.”

He added: “It also means that as conditions change in the buildings, such as the number of animals, external temperatures or conditions, the flow of ventilation can be accurately controlled.”

According to research in the United States, 100 per cent of fresh air kills airborne bugs 10 times faster than just 50 per cent of fresh air.

The Farm Advisory Service Scotland, UK, has reported that improving ventilation in cattle sheds can increase productivity by between 3-5 per cent.

VFDs, such as Invertek’s Optidrive E3 IP66 / NEMA 4X, are being used in agricultural ventilation applications throughout the world.



The fully enclosed IP66 / NEMA 4X rated enclosure makes it ideal for the often harsh conditions associated with such environments. They can also be mounted close to the fan. This means there is no need for a dedicated control room or cabinet which saves costs and space.

The drives can control any AC motor-controlled fan, such as wall, ceiling, roof-mounted, turbulator or plate fans.

The fans can be used in a range of buildings that are used for livestock, poultry, crop or grain storage.

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Notes to the Editor

Invertek Drives

Invertek Drives Ltd is dedicated to the design and manufacturing of electronic variable frequency drives for controlling electric motors. Established in 1998 it has grown year-on-year and is now one of the world's leading innovators in VFD technology.

In November 2019 it was acquired by Sumitomo Heavy Industries Ltd (SHI), a leading global manufacturer and distributor of power transmission and control equipment. Invertek's UK headquarters, located at Welshpool, Powys, UK, houses specialist facilities for research and development, manufacturing and global marketing.

All operations, including research and development, are accredited to the exacting customer focused ISO 9001 quality standard whilst its Environmental Management System is accredited to the ISO 14001 quality standard.

In 2019 a new 5,500 sq metre global manufacturing and distribution facility was opened at the headquarters, allowing production of up to 400,000 VFDs a year. Invertek's products are sold globally by a network of specialist distributors in over 80 different countries.

Invertek Drives unique and innovative Optidrive range is designed for ease of use and meets with recognised international design standards for CE (Europe), UL (USA) and CTick (Australia). More details can be found by visiting www.invertekdrives.com.