

Vic Rearing Farm

AgriCool destratification fan significantly reduces heating cost and improves bird comfort



Technical data

Type	AF0200-001
ebm-papst Product	200 mm EC Destratification Fan
Air flow	m ³ /h 545
Power consumption	W 14
Number of fans	9

Project

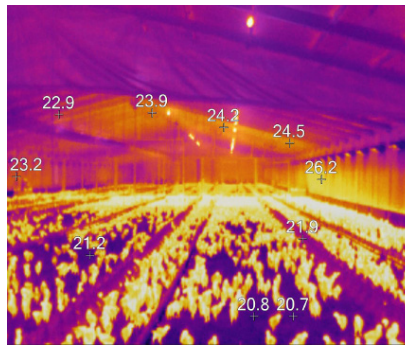


A chicken rearing farm in Victoria, Australia, with a capacity of about 45,000 birds per shed was equipped with ebm-papst EC destratification fans in a technical trial to demonstrate their energy efficiency and improve the birds' comfort. The farm consists of four sheds of equal design. One of the four sheds was upgraded by HMI Electric, installing 9 EC ebm-papst destratification fans in the shed. This way the EC destratification fans and overall shed performance could be tested and compared to the adjacent sheds of equal size but without ebm-papst fans.

The test resulted in approximately 60% lower gas consumption for the shed with EC destratification fans as well as a significant improvement of the bird's comfort.

The results deeply convinced the farmer in a manner that he immediately asked HMI Electric to fit not only his other three sheds with ebm papst EC destratification fans but also other farms.

Application

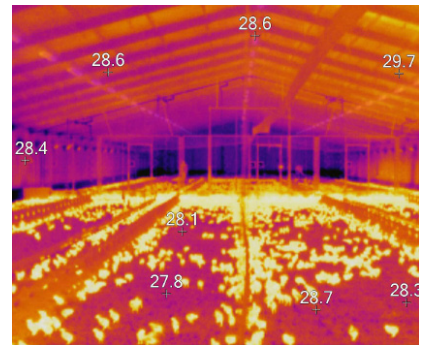


9x 200mm EC destratification fans from ebm-papst were installed in the 16.4m wide by 158m long shed and 4.9m peak roof with a spacing of 17m between destratification fans. The entire installation carried out by HMI Electric was easy and only took 3 hours.

The picture above showcases a temperature profile across the shed prior to equipping the shed with ebm-papst fans. The EC destratification fan is a specialised solution to reduce the temperature differential between the shed's ceiling and floor without affecting bird comfort. The EC destratification fans move the air on a constant basis from high, hot areas to lower, cooler areas and uses less power than a traditional lightbulb.

Furthermore, ebm-papst EC destratification fans are highly reliable as they are protected against the harsh shed environments due to a fully encapsulated motor. Accompanied by a direct drive (no belt) the fans are maintenance free.

Benefits



The ebm-papst EC destratification fans allow air speed adjustment for the specific height of the shed. This resulted in the sensitive birds not feeling any air speed but allowed even temperature distribution from top to bottom of the shed, as seen in the picture above. The fan speed is fully programmable to suit to any shed height.

Furthermore, the EC destratification fans ensure a constant and even temperature along the shed floor, resulting in improved bird spread and comfort.

The gas consumption has dropped by 60% since ebm-papst EC destratification fans were installed. Ease of installation and reliability have brought peace of mind to the Victorian rearing farmer, whilst also reducing the operational costs of the farm. The reduced gas consumption and the improved birds comfort on the farm have future-proofed the farmer's operation for years to come.