Successful AgriCool trial

The first trail of the AgriCool system demonstrates energy savings of up to 80%

Technical data

Type		**AF1250-001**	**AF0200-001**
ebm-papst Product		1250mm EC tunnel fan	200mm destratification fan
Air flow	m^3/h	49,191	545
Power consumption	W	1790	14
Number of fans		12	10

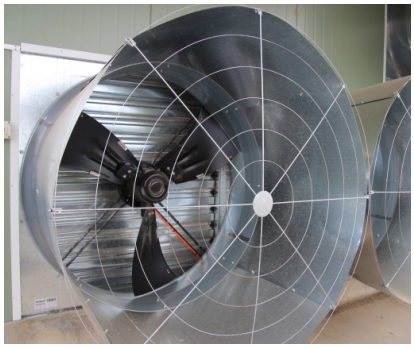
The fans are controlled through the AgriCool ventilation interface

Project

A broiler shed in Victoria, Australia, with a capacity of about 55,000 birds was equipped with ebm-papst EC fans in a technical trial to show and test their energy effi ciency and reliability. The trial was undertaken over the course of a whole batch (47 days) in January and February 2014, i.e. the Australian summer. The EC shed performance was compared to that of the adjacent shed in which conventional, belt-driven AC fans were used.

The trial resulted in an up to 80% lower power consumption for the EC ventilation system. Furthermore, the use of ebm-papst EC fans effectively halved the number of fans needed - from 24 to 12. The sidewall fans for minimum ventilation were no longer required, while air velocity and bird comfort improved. The EC fans also brought about a more stable temperature profi le and better and more even airfl ow throughout the shed

Application



The ventilation system is equipped with 1250mm high-efficiency, direct-drive, 3-phase EC fan motors with in-built speed control from ebm-papst. A motorised shutter system was supplied by Agricultural Automation and fi tted on the air intake side of the fan. The existing AgroLogic controller was supported by a control interface developed by HmiElectric.

Benefits

The high effi ciency ebm-papst EC fans for agriculture applications are extensively protected against the harsh environment in agricultural sheds. The EC fans are equipped with stainless steel shaft, nuts and bolts, bearings sealed for life, galvanised rotor plus additional coating against corrosion. The blades are of strong die-cast aluminium, coated in black paint which is highly anticorrosive, ensuring perfect fan performance even at high pressure and constant run-time.

Main benefi ts:

– Up to 80% less power consumption
– Low operating costs
– Air performance precisely matched to actual demand
– Long service life and high reliability
– No maintenance costs