



EC Upgrade for Supermarket AHU

RadiPac EC centrifugal fan



Supermarket

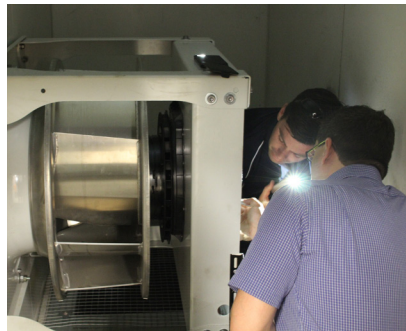
- EC plug fan for AHU
- Up to 70% fan energy reduction
- No maintenance



Project

Installation

Advantages of EC Upgrades



Fan upgrade at IGA Ormond

The IGA supermarket in Ormond in Melbourne's South-East needed an upgrade of its air-handling unit fan. The old double inlet forward-curved fan assembly with belt drive had failed and needed replacing.

The upgrade was undertaken to replace the old fan and a solution was found in collaboration between MB Refrigeration, Markair Components and ebm-papst to select the most energy efficient fan for the customer.

The new EC fan is limited to 70% of its capacity to match the original fan performance, but it only consumes 3.45 kW. The original fan required a 15 kW 4-pole motor.

The airflow is easily adjustable using the potentiometer on the outside of the AHU.

Installation process

Over the course of one afternoon the old fan was removed, a separation wall was built and the new ebm-papst EC plug fan was installed.

The upgrade was undertaken by contractor MB Refrigeration and the fan was supplied via Markair Components. The original airflow was calculated based on the existing fan specification and duct work. (Since the fan had failed the airflow could not be measured.)

Controls

The new fan was set to fixed speed operation. The fan speed can be set via a potentiometer outside the AHU and can easily be adjusted. To ensure that the fan is not over- or under-performing a minimum and maximum speed was programmed.

Energy savings

New EC RadiPac fans save between 40 to 70% electrical power compared to belt driven systems at identical but variable performance. The fan system can be upgraded at any time to temperature control.

Performance

There is an additional 30% capacity reserve in the selected fan should more airflow be required in the future.

No service or maintenance required

ebm-papst EC fans don't use belts, pulleys, and the fans' bearings are maintenance-free.