

Automated Control and

Pionair destratifiers are controlled by a Modular Control Unit (APS), based on the Proprietary Programming Software, which guarantees both the Automated management as well as the full Scalability in the time of the installation.

The APS, in the Plus version, can be upgraded with flexibility at any time, by means of plug-in I/O units, for functional purposes (e.g. humidity sensors, air quality and/or speed, etc.) and / or communication (e.g. modules for Remote Assistance, Fault Prediction, Correct Functioning Control etc).

The APS makes it possible to automate the operation of the machines and makes them active and only when the environment being served has a real need. The Destrafan fans start up "spontaneously" when the **two control sensors**, one placed at the top of the building to be destratified and the other at a height of about one meter from the ground, detect a pre-set ΔT between the temperatures perceived by the two probes. **In other words, the system will start only and only if there is the actual need to destratify**, by modulating the speed of rotation and the tripping time as a function of the received data. **This proprietary technology**, together with the extreme speed of achieving the perfect blending of the air, **can further reduce the electrical power consumption even if they are already very low, of the same destratification system.**



APS

- 3 inch Backlit display
- Manual/Automatic Management
- Summer/Winter Operating Modality
- Dual Temperature Sensor Management
- Expandability up to 4 I / O modules
- Intuitive Control Software



APS Plus

- 4 inch Display Touch Screen
- Manual / Automatic Management
- Summer / Winter Operation Modality
- Dual Temperature Sensor Management
- **Relative Humidity Control module with automatic adjustment to the perceived temperature (THI)**
- Possibility of Direct Connection to the Repeater Panels and/or Cellular phones
- Possibility of Customization of Functionalities
- Ample Expandability I/O Modules
- Intuitive Control Software

Movement

For the motorization of the Destrafan fans, PionAir uses two different technologies: Asynchronous Three -Phase and Brushless.

ASYNCHRONOUS TRI-PHASE MOTOR: considered among the most reliable electrical machines, it has performed its function for many years with very few maintenance interventions and can be adapted to different performances, according to the particular needs and different applications



- Low cost
- Readily available from distributors throughout the world
- Low Maintenance
- Versatility of use
- Maintenance and service by third parties



- Slightly Noisiness
- Need to adjust setting
- Major possibility of wear compared to the Brushless motors



In cases where it is decided a priori uniquely for the Ventilation mission (prevalently a rotation with a high number of turns), **in the event in which it might be possibly necessary to disengage from the manufacturer for assistance of the same, in the event in which the immediate cost of the component is predominant as its purchase motivation and where there are no particular needs that motivate the purchase of a Brushless Destrafan.**

BRUSHLESS MOTOR: it is a Direct Current electrical motor with a permanent-magnet rotor and the rotating magnetic field stator. This entails a lower mechanical resistance thus reducing the possible periodic maintenance, with an evident energy saving



- Greater expectations for the motor's lifespan
- No physical and electromagnetic noise
- Compact size
- Versatility in speed management during use
- Less consumption than the equivalent asynchronous motor



- Increased cost of the motor itself
- Additional cost for the drive unit
- Limited availability at the manufacturer's



Whenever there is the need to routinely move from a low number of rotations to a high number (both for Destratification as well as Ventilation), whenever the absolute quietness of the machine is required, whenever you need the motor component to be compact and minimally invasive and when you intend to evaluate the investment in the medium/long term and not immediately.

Due to the high quality of the selected motor, to the particular shape of the patented blades and a careful study of friction, we can safely say that **Pionair Systems in their Asynchronous version consume similarly to or less than most of the fans equipped with brushless motors on the market.** In this way, in addition to ensuring that our rotating machines have a greater competitiveness, we can ensure the opportunity to offer assistance to them in a simple and accurate manner, in every country of the world. **Regarding the Brushless solutions, in addition to ensuring silent and reliable motors that consume very little, we are proposing them, certain to be offering the market an innovative and reliable product as well as with an indisputable energy efficiency.**