

TECHNICAL NOTE

■ MAC 10 designs with Duct Collar, VAV or constant air box and fan coils

For applications requiring powered fan filter units and a ducted connection our recommendations would be to use the MAC10 LEDC (ECM motor) or Mac10 Original (PSC motor)

■ Feature

- » MAC10 LEDC
 - Power conservation and high airflow
- » MAC10 Original
 - Lower unit cost

■ Caution

- » MAC10 IQ is not recommend for the above design

For applications when you use a VAV box or Constant Airflow Terminal, Duct Collars or Fan coils. The design engineer must advise the contractor or air balancer that the air supply needs to be balanced. If you do not balance the air supply properly you have the potential to starve or over feed the fan with air causing the motor to stall which can damage the fan motor. This also can be minimized by notifying ENVIRCO beforehand for assistance. The ECM motors used in the IQ design are a Microprocessor controlled motor and are designed to maintain a constant air volume. When two controllers are compensating the air volume at the same time, the motor microprocessor is unable to stabilize the airflow and will shut itself down if it cannot find a stable operating point.

In addition to properly balancing the airflow to the Fan: you should prepare a sequence of operations turning on FFU's prior to energizing the Air Handler to prevent potential backward rotation of the blower wheel which can prevent motor rotating in the proper direction and will reduce airflow and cause eventual shutdown. The drive components inside the ECM motors are self-testing and sized for the motor being used inside the unit they can't compete with the airflows from a duct blower motor.