

SELECT AIR SYSTEMS USA, INC.

ECU OPERATIONS

1. Operates solely off heat sensor mounted in hood at each collar (in front of collar). Mounted in quick seal connection with probe attached.
2. Sends reading from sensor back to temperature controller in panel. Athena temp. controller then sends temperature of hood to programmable logic controller (PLC) located in panel.
3. After PLC receives the reading, it sends readings to the variable frequency drives in both fans. (Set points for hood temperature, which determines speed of frequency drives, are preset at factory.) These temps are set based on the cooking load (low of 90 degrees F/Max. temp at high speed). Once temperature crosses minimum set point, frequency drives will gradually increase to maximum speed which is 100% of fan.
4. If hood is off, but temperature is over minimum set point, the temperature sensor to PLC will override and turn fans on.
5. 100% air operation is also a standard feature. This is a push button on the panel which once activated will run fans at 100% for three (3) minutes then returns to standard operation.
6. Micro switch for fire system is tied into ECU panel in the field.
7. Lights in hood controlled by a light switch on the ECU panel.
8. ECU panel is normally mounted remote on wall, in electrical room or in some cases in the fire cabinet. However, due to size of panel, it is not recommended for fire cabinet.
9. Clean mode also a standard feature, provides a switch to activate exhaust fan at 100% operation, without any supply in order to remove any fumes that may occur during cleaning.
10. **OPTIONAL BYPASS SWITCH** – If systems fails (fault with PLC, frequency drives, etc.) so that the ECU does not operate, an error code will display in panel. By opening box the reading will be seen and the bypass switch should be activated. This will switch fans to standard motor starters for operation until problem is corrected. (This option adds significant cost by putting in add for motor starters, transfer contactors and larger size ECU panel.) **NOTE:** In standard system variable frequency drives function in place of the standard motor starters.
11. Set points in the ECU can be wired into a BMS (building management system) in order to allow maintenance personnel to determine status of ECU at any time. (Field wired by BMS electrician)
12. ECU system can be retrofitted in the field:
 - a) Select Air will build panel complete and ship with temperature sensors loose
 - b) Existing fan controllers on hood will be disconnected and field electrician would install temp. sensors in hood, wire to ECU panel and wire frequency drives to exhaust and supply fans.
 - c) Main power must be run to ECU panel by field electrician.