# Intelli-Hood®

*NEW CONSTRUCTION*

# SPECIFICATION

## A. Demand Ventilation Controls

The Melink Intelli-Hood® controls shall automatically control the speed of the exhaust (and make-up if applicable) fan to ensure optimal hood performance. The system includes the following components: I/O Processor, Keypad, Temperature Sensors, Optic Sensors, Variable Frequency Drives (VFDs – electronic motor starters which replace magnetic starters for 3-phase motors), and Cables.

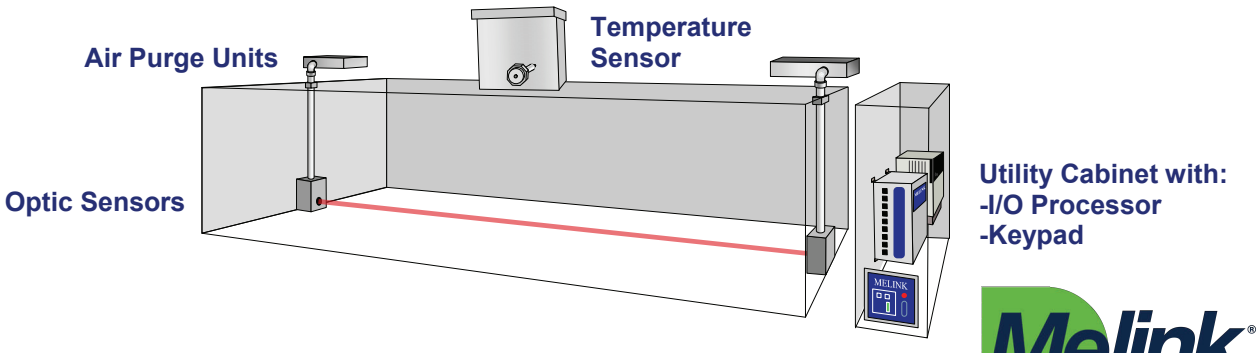
## B. Hood Manufacturers

This pre-engineered system shall be integrated by the hood manufacturer for new construction. The I/O Processor, Keypad, and VFDs shall be mounted in the utility cabinet, the Temperature Sensors shall be mounted in the exhaust collar, and the Optic Sensors shall be mounted inside the ends of the hood with air purge units (APU) mounted on top.

The following specified system shall be provided by Melink Corporation based in Cincinnati, OH. No substitutions allowed.

## C. Standard System Components

1. I/O Processor (120/1, 20A) - Sends RS-485 signals to the VFDs for up to four independent exhaust fans and one SF/MUA (multiple VFDs can be controlled with each signal).
2. Keypad - Controls lights and fans for up to 4 hoods (one keypad per I/O Processor).
3. Temperature Sensor - Monitors exhaust air temperature at duct (one sensor per exhaust duct).
4. Optic Sensor with APU - Monitors smoke load inside hood (one sensor per Type 1 hood).
5. Variable Frequency Drive (1/2-30 HP, 208-230/3 or 460/3) - Varies fan speed (one VFD per fan).
6. Cables - Links I/O Processor to keypad, sensors, and VFDs. Must specify required lengths.




Melink®

Melink Corporation (513) 965-7300 www.melinkcorp.com

## D. Responsibilities

1. Hood manufacturer to pre-mount Melink Intelli-Hood system at factory.
2. Hood manufacturer to pre-wire system components with cables provided by Melink.
3. Melink to pre-program the system based on the application, using the Melink Simplissimo menu (i.e. temperature span, minimum speed, number of sensors).
4. Electrical contractor to field-wire the I/O Processor inside the utility cabinet with an input of 115/1 or 230/1 VAC from a dedicated circuit. The output wiring to be connected to the hood lights.
5. Electrical contractor to field-wire the variable frequency drives (VFDs) inside the utility cabinet by connecting 3-phase input power from the circuit breakers. The output wiring shall be connected to the respective fan motor. The output wiring shall be run in separate conduit for each VFD. (Note: If there is a heated MUA unit, a separate circuit must feed the controls; do not use the motor circuit. Also, a control cable with at least 6 conductors shall be run from the MUA unit to the I/O Processor).
6. Mechanical contractor to connect plug-n-play cables from I/O Processor to each hood.
7. Electrical contractor to start-up the system by pressing the light and fan switch on keypad to verify the hood lights turn on and the fans go to minimum speed. Correct fan rotation if necessary.
8. Air balance contractor to air balance the system by pressing the 100% switch on keypad. Speed adjustments on belt-drive fans to be made at the fan, and speed adjustments on direct-drive fans to be made at the VFDs.

## E. Sequence of Operation

The operator presses the light and fan switch on the Keypad in the morning, and the fans operate at a preset minimum speed during idle periods. Then the operator turns on the cooking appliances and the resulting heat load causes the fan speeds to increase proportionately with the exhaust air temperature. Upon the detection of smoke/vapors inside the hood, the fans ramp up to 100% speed to ensure proper capture performance (and compliance with national and local codes).

If the automatic on/off feature is enabled, in the event the operator forgets to turn the fan switch on in the morning the system will automatically turn on as the duct temperature rises above 90F degrees. Similarly, the system will automatically turn off as the temperature drops below 75F.

In the event of any problem, the operator can press the 100% switch and operate the fans at 100% speed. This sensor bypass feature has a programmable timer to ensure the energy-saving mode is resumed after a period of time.

## F. Approvals

The Melink Intelli-Hood Operator is UL and CSA Listed, and conforms with all applicable codes and standards including NFPA 96, BOCA, SBCCI, ICBO, NSF, and CE.

## G. Warranty

Melink Corporation warrants this equipment to be free from original defects in material and workmanship for a period of three years from the purchase date, provided same has been properly stored, installed, operated, maintained, and serviced. Melink Corporation is not responsible for the cost of removal of the defective product or part, damages due to removal, or any expenses incurred in shipping the product or part to or from the plant, or the installation of the repaired or replaced product or part.

## H. Contact

Melink Corporation
5140 River Valley Rd.
Milford, OH 45150
U.S.A.

P: 513-965-7300
F: 513-527-7023

www. melinkcorp.com
intellihood@melinkcorp.com