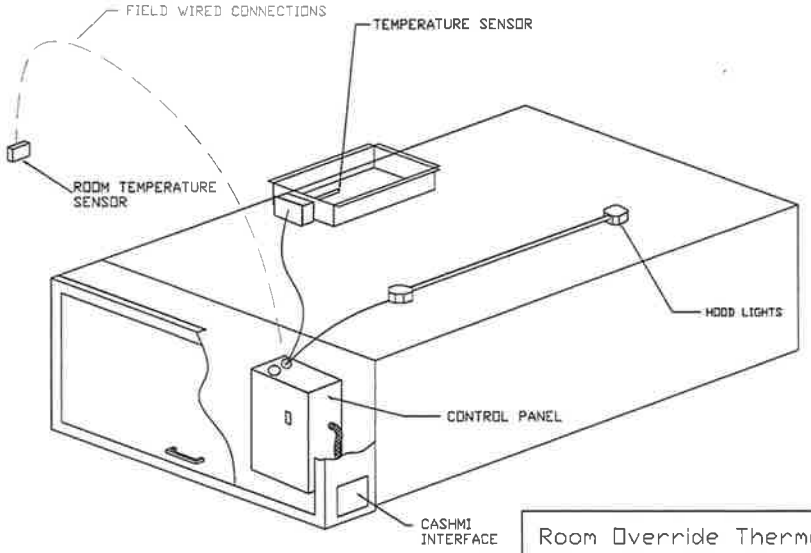
Page 12 - Electrical Specs - 254 Commercial St.

ELECTRICAL PACKAGES – Job#1912251

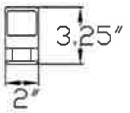
NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	ø	H.P.	VOLT	FLA
1		SC-EMS1111	Utility Cabinet Right	Utility Cabinet Right	1 Light	Smart Controls EMS.	Exhaust	3	2.000	208	6.2
				Hood # 1	1 Fan		Supply	3	1.500	208	4.7



TYPICAL SC-ENERGY MANAGEMENT SYSTEM WITH HOOD MOUNTED PANEL

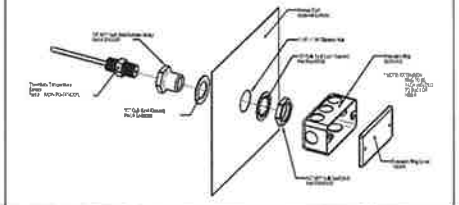
Duct Temp Sensor to be installed in every exhaust riser. All Duct Temp Sensors and Hood Lights to be wired back to SC-EMS Electrical Control Box.

Room Override Thermostat

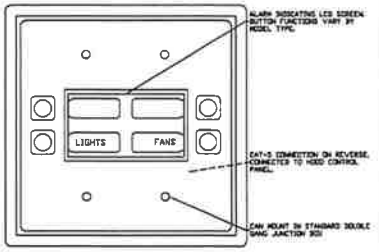


Provides room override based on temperature differential between the room and duct. Installed by electrician on a wall, 5'-6' off the finished floor, in the space but not directly under the hood or close to an appliance (including the electrical control box) so the reading is accurate for space.

DUCT THERMISTOR SENSOR INSTALLATION



HOOD CONTROL PACKAGE INTERFACE with LCD Screen



EMS Specification
Demand Ventilation System
Application:
The EMS Demand Ventilation System is designed to automatically reduce exhaust and supply airflow quantities, while ensuring hood performance is maintained. The EMS uses Variable Frequency Drives (VFD) and temperature sensors in the exhaust ducts to modulate the fans speed during cooking operation and maximize energy savings. The EMS LCD screen interface provides fan(s) control, system configuration, and diagnostic information.
Construction:
The EMS includes:
- A smart Controller
- LCD Screen Interface
- Duct Temperature Sensor(s)
- Room Temperature Sensor
- Variable Frequency Drive(s)

Controls will be listed by ETL to UL standard 508A.
The system includes a LCD screen interface for fan(s) and hood lights control, wash control (if applicable), gas valve reset, programmable schedule, Max Air Override function, Preparation Time mode, Cool Down mode, and diagnostics including VFD status. The LCD screen shows descriptive plain text explaining the functions or values. The LCD screen interface will be installed on the face of the hood, on the face of the utility cabinet or on the face of a wall mounted control enclosure.
Control enclosure will be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. Control enclosure may be constructed of stainless steel or painted steel.
The smart controller will constantly monitor the exhaust air temperature through the riser mounted temperature sensor and modulate the fan speeds accordingly.
A room temperature sensor will also be provided for field installation in the kitchen space in order to start the fan(s) based on the temperature differential between the room and the exhaust air in the duct rather than fixed set-points.
A Preparation Time Mode is available for morning operation: dedicated make-up air will be locked out only allowing the use of transfer air during this mode. Exhaust fan(s) will run at low CFM while maintaining a balanced kitchen pressure.
A Cool Down Mode is designed for equipment cool-down period at the end of the daily cooking operations: similarly to Preparation Time mode, dedicated make-up air will be locked out only allowing the use of transfer air during this mode. Exhaust fan(s) will run at low CFM while maintaining a balanced kitchen pressure.
Fan maximum/ minimum speeds will be adjustable for proper kitchen balance. Fan direction change is also available from the smart controller configuration menu without need for rewiring.
Duct Temperature Sensor(s) will be mounted in the exhaust hood riser(s). Temperature probe will be constructed of Stainless Steel. System will be factory pre-set to modulate fan speed within a range of 45°F for 600°F and 700°F cooking applications and a range of 5°F for 400°F cooking applications. Setpoints are fully adjustable through the touch screen interface based on application needs.
The Max Air Override will have an adjustable timeout value.
The panels include color coded wiring with as-built wiring diagrams and spare terminals controlled by the fire system micro switch. The panel is factory pre-wired to shut supply fans down in a fire condition. Options to turn ON the exhaust fans or turn off the hood lights in a fire condition will be configurable through the smart controller, but only through a password protected menu to prevent any changes after a fire inspection has been performed.

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☐
Revise and Resubmit ☐
SIGNATURE _____
Your Title _____ Date _____

CAPTIVEAIRE

JOB Commercial St - Portland, ME (heated) r1	
LOCATION Lewiston, ME	
DATE 11/14/2013	JOB # 1912251
DWG # 6	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"