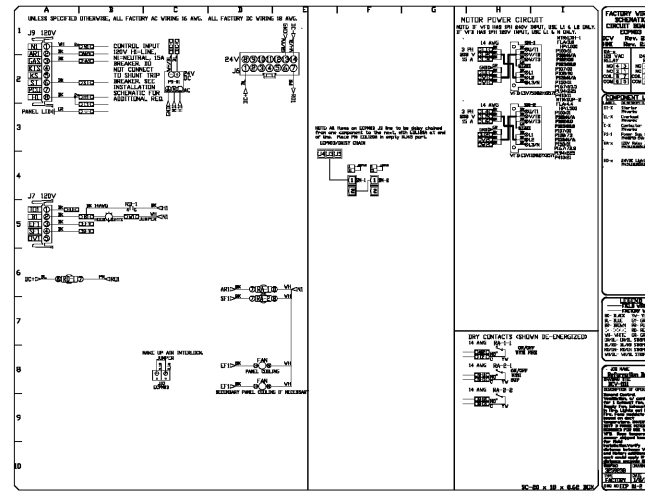


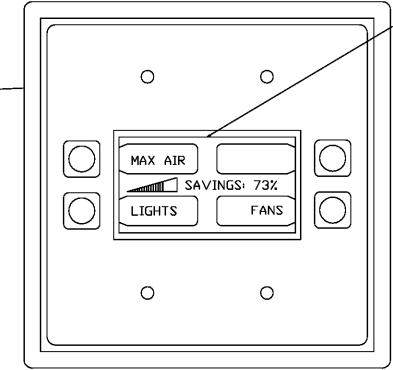
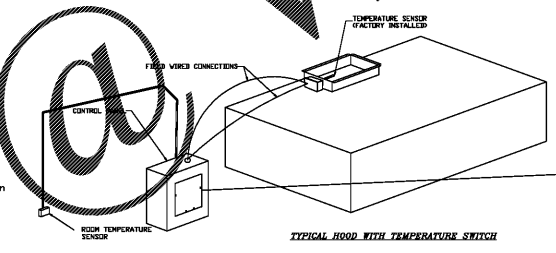
NO.	TAG	PACKAGE #	LOCATION	SYSTEMS		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	HP	VOL. FLA	CFM
1		BCV-1111	Vault Mount in SS Box	1 LIGHT	1 Fan	Smart Controls BCV	Supply	3	1.500	200	4.4



**ELECTRICIAN NOTES:**  
 All Hood/Fan/EMS/UDS/PCU electrical connections and interconnections to be provided and installed by Electrician. Electrician to provide, install, and land wiring between hood lights, hood temp sensors, renoys, Ansul system microswitches, and any other component requiring an electrical connection to the Captive-Aire electrical package. Failure by the Electrician to make ALL required electrical connections and interconnections will result in the electrical controls not working properly, loss of fan, or heat as a result of electrical control wiring. Working properly is the responsibility of the Electrician. Light bulbs for kitchen hoods to be provided and installed by electrician.

**Demand Control Ventilation Hood Control Panel Specifications:**

- Controls shall be listed by ETL (UL 308A) and shall comply with demand ventilation system shutdown requirements outlined in IECC 403.2.2 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperature sensors. This function shall meet the requirements of IMC 5.7.11.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. Digital controller shall modulate the VFDs between a minimum speed and a maximum speed on demand. The duct temperature sensor inputs to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0 to 100% for the system with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm in the digital controller shall modulate VFD speed proportional to all exhaust fans that are included in the same fan group as the supply fan.
- The system shall operate in PREHEAT MODE, COOK MODE or COOL DOWN MODE when sufficient time remains beneath the hood to permit the cooking operations have completed. Upon completion of these periods, the digital controller shall provide exhaust fan speed and the equal to the minimum ventilation requirements.
- Digital controller shall enable the sensors to activate the exhaust fan(s), activate the fire alarm reset trip, and enable an electric gas valve automatically when fire condition is detected and covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD interface shall be provided with the following features:
  - a. On/Off button fan & light switch activation
  - b. Integral gas valve reset for electronic gas valves (no reset relay required)
  - c. VFD Fan speed display with audible & visual alarm notification
  - d. Duct temperature sensor failure detection with audible & visual alarm notification
  - e. Mis-wired duct temperature sensor detection with audible & visual alarm notification
  - f. A single low voltage Cat-5 RJ45 wiring connection
  - g. An energy savings indicator that utilizes measured kWh from the VFDs



**Sequence of Operations:**

- The hood control panel is capable of operating in one or more of the following states at any given time:
  - **Automatic:** The system operates based on the differential between room temperature and the temperature at the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as 'dynamic', these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as 'static', fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
  - **Manual:** The system operates based on human input from an HMI.
  - **Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
  - **Other:** The system operates based on the input from an external source (BMS, BMS or hard-wired interlock)

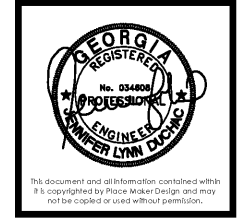
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Reformation Brewery  
 WOODSTOCK, GA, 30188

DATE: 1/8/2018  
 PROJECT: 3259238  
 DRAWING: E1 - 50  
 SHEET NO. 4

REV #	DATE	DESCRIPTION

**REFORMATION BREWERY**  
 105 ELM STREET  
 WOODSTOCK, GEORGIA 30188  
 REFORMATION BREWERY



**PLACE MAKER DESIGN**  
 1000 CIRCLE 75 PARKWAY  
 SUITE 400  
 ATLANTA, GEORGIA 30339  
 404.549.4499

ISSUE DATE	12/29/17
DRAWN BY	ASL/JJ/CJAL
CHECKED BY	JJ
PWD PROJ #	17072

**KITCHEN HOOD PACKAGE**

**M2.4**

Order