HOOD INFORMATION – Job#2966659

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM TOTAL EXH. CFM	RISER(S) WIDTH	RISER(S) LENG.	RISER(S) HEIGHT	RISER(S) DIA.	RISER(S) CFM	RISER(S) S.P.	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG. END TO END	HOOD CONFIG. ROW
1		5424 ND-2-PSP-F	14' 0.00"	600 Deg.	3010	10"	12"	4"		1505	-0.674"	2408	430 SS Where Exposed	ALONE	ALONE
						10"	12"	4"		1505	-0.674"				

PATEN
AC-PSP
AC-PSP
AC-PSP

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S) TYPE	FILTER(S) QTY.	FILTER(S) HEIGHT	FILTER(S) LENGTH	FILTER(S) EFFICIENCY @ 9 MICRONS	LIGHT(S) QTY.	LIGHT(S) TYPE	LIGHT(S) WIRE GUARD	LOCATION	SIZE
1		Captrate Solo Filter	10	20"	16"	85% See Filter Spec.	4	Screw In Compact	NO		

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 18.00" High Front, Left, Right
		BACKSPLASH 80.00" High X 168.00" Long 430 SS Vertical
		INSULATION FOR TOP OF HOOD
		INSULATION FOR BACK OF HOOD
		RIGHT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS
		LEFT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	RISER(S) LENG.	RISER(S) DIA.	RISER(S) CFM	RISER(S) S.P.
1		Front	168"	16"	6"	MUA	12"	28"		802	0.207"
						MUA	12"	28"		802	0.207"
						MUA	12"	28"		802	0.207"

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UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES NINE MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.

EFFICIENCY VS. PARTICLE DIAMETER

PRESSURE DROP VS. FLOW RATE

CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)
ULC-S649

CUSTOMER APPROVAL TO MANUFACTURE:

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 1	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

PLAN VIEW – Hood #1
14' 0.00" LONG 5424ND-2-PSP-F

NOTE: Additional hanging angles provided for hoods 12' and longer.

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Date: 04/14/17

ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

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JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 2	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #1

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Date: 04/14/17

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	*JOB #* 2966659
DWG # 3	*DRAWN BY* BFC-21
REV.	*SCALE* 3/8" = 1'-0"

EXHAUST FAN INFORMATION – Job#2966659

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	WEIGHT (LBS.)	SONES
1		DU180HFA	3010	1.500	1314	3.000	1.2140	3	208	9.5	221	19.2

MUA FAN INFORMATION – Job#2966659

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	WEIGHT (LBS.)	SONES	EFI
2		A1-D.250-G10	G10	A1-D.250	1000	2408	0.500	1203	2.000	1.2620	3	208	5.9	700	22	

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE
2		240276	221054	85 deg F	7 in. w.c. - 14 in. w.c.	Natural

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1		1 - Grease Box
		1 - Full Crating For Exhaust Fans
		1 - 3 Year Extended Motor Warranty
		1 - Fan Base Ceramic Seal - Ship Loose - For Grease Ducts
2		1 - AC Interlock Relay - 24VAC Coil
		1 - Motorized Backdraft Damper for A1-D Housing
		1 - Full Crating For Commercial Heater
		1 - Low Fire Start
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, -5 to 15" wc
		1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only
		1 - 3 Year Extended Motor Warranty
		1 - Extra Set of Belts

FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						
2							YES	

CURB ASSEMBLIES

NO.	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	34 LBS	Curb	26.500"W x 26.500"L x 24.000"H 3.000:12.000 Pitch Vented Hinged
2	# 2	74 LBS	Curb	21.000"W x 71.000"L x 24.000"H 3.000:12.000 Pitch Along Width, Right Insulated

FAN SOUND INFORMATION

FAN UNIT NO.	MOTOR	RPM	LWA	SONES	DBA	DISTANCE FT	OCTAVE 1	OCTAVE 2	OCTAVE 3	OCTAVE 4	OCTAVE 5	OCTAVE 6	OCTAVE 7	OCTAVE 8
1	Exhaust	1314	83	19.2	71.5	5	77	82.1	88.6	79.7	72.3	69.9	63.8	57.7
2	Supply	1203	84.1	22	72.6	5	85.6	85.6	84	80.6	76.8	77.2	73	69.5

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 4	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

FAN #1 DU180HFA - EXHAUST FAN

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

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SPECIFY PIT
EXAMPLE: 7/

OPTIONS

GREASE BOX
FULL CRATING FOR EXHAUST FANS
3 YEAR EXTENDED MOTOR WARRANTY
FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 5	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

FAN#1 - EXHAUST PERFORMANCE CURVES.

3010 CFM, 1.5 SP @ 1314 RPM and 1.214 BHP at

* Please note that these curves were adjusted for job spe

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Your Title _____ Date _____

CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 6	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

FAN #2 A1-D.250-G10 - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 10" BLOWER
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. COOLING INTERLOCK RELAY. 24VAC COIL. 120V CONTACTS. LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
5. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR DIRECT FIRED HEATERS W/EXTENDED S
STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LF120S ACTUATOR INCLUDED
6. FULL CRATING FOR COMMERCIAL HEATERS FOR SHIPPING.
7. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE F
8. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
9. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE
10. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN
PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN
ELECTRICIAN FROM DCV TO MUA SWITCH.
11. 3 YEAR EXTENDED WARRANTY FOR FAN MOTOR. PARTS ONLY; DOES NOT INCLUDE LABOR.
12. EXTRA SET OF V-BELTS. ONLY TO BE ORDERED AS FAN OPTION AT TIME FAN IS ORDERED.

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ROOF OPENING 2" SMALLER THAN CURB DIMENSION.

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 7	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

FAN#2 - HEATER PERFORMANCE CURVES.

2408 CFM, 0.611 SP @ 1203 RPM and 1.262 BHP c

* Please note that these curves were adjusted for job spec

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 8	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

SPECIFICATIONS

THE RESTAURANT FIRE SUPPRESSION SYSTEM SHALL BE THE PRE-ENGINEERED TYPE WITH A FIXED NOZZLE AGENT DISTRIBUTION NETWORK. IT SHALL BE LISTED WITH UNDERWRITERS LABORATORIES, INC. (UL)

THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. ACCESSORIES SHALL BE AVAILABLE FOR MECHANICAL OR ELECTRICAL GAS LINE SHUT-OFF APPLICATIONS.

THE EXTINGUISHING AGENT SHALL BE A POTASSIUM CARBONATE, POTASSIUM ACETATE-BASED FORMULATION DESIGNED FOR FLAME KNOCKDOWN AND SECUREMENT OF GREASE RELATED FIRES. IT SHALL BE AVAILABLE IN PLASTIC CONTAINERS WITH INSTRUCTIONS FOR LIQUID AGENT HANDLING AND USAGE.

THE REGULATED RELEASE MECHANISM SHALL BE COMPATIBLE WITH A FUSIBLE LINK DETECTION SYSTEM. THE FUSIBLE LINK SHALL BE SELECTED AND INSTALLED ACCORDING TO THE OPERATING TEMPERATURE IN THE VENTILATING SYSTEM. THE FUSIBLE LINK SHALL BE SUPPORTED BY A DETECTOR BRACKET/ LINKAGE ASSEMBLY.

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TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 9	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

Exhaust Fan Wiring	JOB 2966659 - Little Giant r5	
DRAWING NUMBER EXH2966659-1	SHIP DATE 3/27/2017	MODEL DU180HFA

Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[2]
SW-01	Main disconnect switch	[2]

Date: 04/14/17

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Direct Fired Heater Wiring	JOB 2966659 - Little Giant r5	
DRAWING NUMBER DF2966659-2	SHIP DATE 3/27/2017	MODEL A1-D.250-G10

Installed Options

Motorized Back Draft Damper

Discharge Temp. Control

DCV Wiring

24V AC Interlock Relay

Component Identification

Label	Description	Location
CB-01	Circuit breaker (2amp)	[3]
FR-01	Flame rod	[16]
FSC-01	Fireye FSC	[11-14]
MA-01	Modulating amplifier	[19]
MT-01	Supply motor	[2]
MT-02	Damper motor	[5]
PS-01	Low Airflow Switch	[9]
PS-02	High Airflow Switch	[9]
RE-DV	DCV Relay	[1][5]
RE-10	AC Interlock Relay	[10][17]
SW-01	Main disconnect switch	[2]
SW-03	Damper end limit switch	[4]
TR-01	Power transformer(200v)	[3]
TR-02	Power transformer(20va)	[12]
TR-03	Ignition transformer	[14]
TR-04	Power transformer(20va)	[17]

Date: 04/14/17

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Installation Wiring	JOB 2966659 - Little Giant r5	
DRAWING NUMBER RP2966659-2	SHIP DATE 3/27/2017	MODEL A1-D.250-G10

POWER FROM DEDICATED BREAKER

Installed Options

DCV Connections

Date: 04/14/17

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ELECTRICAL PACKAGES – Job#2966659

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	F
				LOCATION	QUANTITY		TYPE
1		DCV-1111	Wall Mount In SS Box	05 - SS Wall Mount Box	1 Light 1 Fan	Smart Controls DCV	Exhaus Supply

TYPICAL SC-ENERGY MANAGEMENT SYSTEM WITH REMOTE MOUNTED PANEL

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 13	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system turndown requirements outlined in IECC 403.2.8 (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 temperatures sensors. This function shall meet the requirements of IMC 507.2.1.1
- 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. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on demand. The duct temperature sensor input(s) 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 to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system after cooking operations have completed. Operation during either of these periods will disable the supply fans and provide an exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a 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 push button fan & light switch activation
  b. Integrated gas valve reset for electronic gas valves (no reset relay required)
  c. VFD Fault 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 Oper

The hood control par
given time:

- Automatic: The sy
  the temperature
  configurable temp
  zone can be con
  motor (such as E
  equipped with var
  within a user-def
  variable speed fo
  calculated for th
  exhaust and make
- Manual: The syst
- 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 (DDC, BMS or hard-wired interlock)

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CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 14	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE
2966659	DCV-1111		INSTALL
	JOB NAME: Little Giant r5	DATE: 3/27/2017	DWG NO: ECP #1-1

BREAKER PANEL TO CONTROL PANEL

Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

BREAKER PANEL — CONTROL PANEL

BREAKER 1PH, 120 V, 15 A — Hot → H1; Neutral → N1; Ground → GND

CONTROL POWER. DO NOT WIRE TO SHUNT TRIP BREAKER.

1ST HOOD LIGHT BREAKER SHARED W/ CONTROL POWER. SWITCH #1

BREAKER 1PH, 208 V, MCA: 21.4 A, MOCP: 30 A — LINE → L1; LINE → L2; Ground → GND

EXH-1 SM-1

WIRE TO VFD QUICK CONNECTOR

BREAKER 1PH, 208 V, MCA: 16.6 A, MOCP: 25 A — LINE → L3; LINE → L4; Ground → GND

SUP-2 SM-2

WIRE TO VFD QUICK CONNECTOR

CONTROL PANEL TO FANS

Responsibility: Electrician

CONTROL PANEL — FANS

Load Wiring SM-1 WIRE TO VFD QUICK CONNECTOR: U1, V1, W1, GND

LOAD LEG 1, LOAD LEG 2, LOAD LEG 3, GROUND — FAN: 01 — EXH-1 — FLA: 9.5, HP: 3.000, VOLT: 208 V

MUST HAVE ITS OWN CONDUIT DO NOT SHARE CONDUIT!

WIRE TO DISCONNECT

Load Wiring SM-2 WIRE TO VFD QUICK CONNECTOR: U2, V2, W2, SF1, N1, GND

LOAD LEG 1 (BLACK), LOAD LEG 2 (BLACK), LOAD LEG 3 (BLACK), 120V HOT (RED), 120V NEUTRAL (WHITE), GROUND (GREEN) — FAN: 02 — SUP-2 — FLA: 5.9, HP: 2.000, VOLT: 208 V

MUST HAVE ITS OWN CONDUIT DO NOT SHARE CONDUIT!

MAKE UP AIR DAMPER PROVING INTERLOCK — ON PCB: IL1A, IL1B — REMOVE JUMPER — IN MUA #1: D3, D7

LOW VOLTAGE CONNECTION FOR DAMPER INTERLOCK. SHOULD HAVE CONTINUITY WHEN DAMPER IS PROVEN OPEN. NOT REQUIRED FOR ALL UNITS. SEE MAKE-UP AIR SCHEMATIC.

TERMINAL NAMES DO NOT APPLY IF MUA BY OTHERS

CONTROL PANEL TO ACCESSORY ITE

Responsibility: Electrician

CONTROL PANEL

CONTROL PANEL TO FIRE SYSTEM MICROSWITCH: C1, AR1

WIRE C1 TO COMMON (1). WIRE AR1 TO NORMALLY CLOSED (2). C1 TO AR1 SHOULD HAVE CONTINUITY WHEN ARMED.

IF MORE THAN ONE FIRE SYSTEM, WIRE IN SERIES AS SHOWN

CONTROL PANEL TO SWITCHES: J4 — ALL SWITCHES FACTORY WIRED, CAT-5 CONNECTION

CONTROL PANEL TO HOOD LIGHTS 1400 W MAX: B1, W1, GND — BLACK, WHITE, GREEN

WIRE TO J-BOX ON TOP OF HOOD

CONTROL PANEL TO WORLD WIDE WEB: COMM — CAT-5 ETHERNET CONNECTION

WIRE DIRECTLY TO COMMUNICATION MODULE. SEE CASLINK OWNERS MANUAL FOR FURTHER INSTRUCTIONS.

CONTROL PANEL TO KITCHEN TEMP SENSOR: T1A, T1B — ROOM TEMP

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN ROOM AWAY FROM HEAT SOURCES. SEE MANUAL

CONTROL PANEL TO DUCT SENSOR: T2A, T2B — HOOD 1 RISER 1

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN EXHAUST DUCT

CONTROL PANEL TO DUCT SENSOR: T3A, T3B — HOOD 1 RISER 2

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN EXHAUST DUCT

CONTROL PANEL TO PSP SENSOR: T4A, T4B — HOOD 1 PSP TEMP

WIRE TO CONTROL BOARD. SENSOR MOUNTED IN SUPPLY PLENUM.

THE FOLLOWING CONNECTIONS MAY OR MAY NOT BE REQUIRED BASED ON JOBSITE SPECIFICATIONS

CONTROL PANEL SIGNAL FOR EXTERNAL SHUNT TRIP: ST, N1 — HOT TO SHUNT COIL, NEUTRAL FROM SHUNT COIL — SHUNT COIL

ST TERMINAL IS ENERGIZED IN FIRE CONDITION.

CITY OF PORTLAND, MAINE — RESURGAM

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 04/14/17

UNLESS SPECIFIED OTHERWISE, ALL FACTORY AC WIRING 16 AWG. ALL FACTORY DC WIRING 18 AWG.

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DRY CONTACTS (SHOWN DE-ENERGIZED)

14 AWG RA-1-1 ON/OFF WITH FIRE

14 AWG RA-2-1 ON/OFF WITH SUP

14 AWG RA-2-2

SC-20 x 18 x 8.62 BOX

LEGEND

- - - FIELD WIRING
——— FACTORY WIRING

BK- BLACK	YW- YELLOW
BL- BLUE	GY- GREY
BR- BROWN	PR- PURPLE
OR- ORANGE	RD- RED
WH- WHITE	GR- GREEN
OR/BL- OR/BL STRIPE	
BL/RD- BL/RD STRIPE	
RD/GN- RD/GN STRIPE	
WH/BL- WH/BL STRIPE	

JOB NAME: Little Giant r5

DRAWING TITLE: DCV-1111

DESCRIPTION OF OPERATION: Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY THREE PHASE MOTOR REQUIRED! Room temperature sensor shipped loose for field installation.Verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

JOB NO	DRAWN BY
2966659	
TYPE: FACTORY	DATE: 3/27/2017

DWG NO ECP #1-2

System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipmen has had a complete start up per the Operation and Installation Manual. Typically, the SD be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to th attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has t resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepan that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 04/14/17

	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

CUSTOMER APPROVAL TO MANUFACTURE:

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

CAPTIVEAIRE

JOB Little Giant r5	
LOCATION PORTLAND, ME, 04102	
DATE 3/27/2017	JOB # 2966659
DWG # 17	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"