

# Solid Rock United Methodist Church - 2297 North Carolina 24

## GENERAL NOTES:

INSTALLATION PER IFC-2018, NFPA 96, 17A, AND UL 300 STANDARDS AND PER MANUFACTURERS' INSTRUCTIONS/RECOMMENDATIONS DESIGN BASED ON SECTION IV OF BUCKEYE INSTALLATION MANUAL

ALL PIPE AND FITTINGS ARE 3/8" SCHEDULE 40 BLACK IRON & CHROME PIPING CONFIGURATIONS & LIMITATIONS ARE TOO LENGTHY TO LIST PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS SEE CHAPTER 4 - DISTRIBUTION PIPING REQUIREMENTS

ACTUATION & EXPELLENT HOSES, PIPING OR TUBING SHALL BE INSTALLED IN ACCORDANCE WITH CHAPTER 5: "INSTALLING THE ACTUATION & EXPELLANT GAS LINES"

DETECTION LINE LIMITATIONS SHALL BE INSTALLED IN ACCORDANCE WITH BUCKEYE'S TECHNICAL MANUAL CHAPTER 4 - SYSTEM DESIGN SCISSOR STYLE DETECTORS SHALL BE USED WITHOUT OFF-SET CONDUIT. MAXIMUM # OF DETECTORS IS 15. MAXIMUM NUMBER OF CORNER PULLEYS IS 20 WITH A MAXIMUM OF 150' OF 1/2" EMT FUSIBLE LINK INSTALLATION SHALL CONFORM TO MANUFACTURER'S INSTRUCTIONS APPLIANCES WITH A CONTINUOUS COOKING SURFACE UP TO 48" X 48" SHALL BE PROTECTED WITH A SINGLE DETECTOR APPLIANCES EXCEEDING 48" X 48" SHALL BE PROTECTED BY MULTIPLE DETECTORS

REMOTE MANUAL PULL STATION(S) SHALL BE INSTALLED ON A PATH OF EGRESS OR EXIT AND IN ACCORDANCE WITH BUCKEYE TECHNICAL MANUAL CHAPTER 4 - SYSTEM DESIGN MAXIMUM NUMBER OF 20 CORNER PULLEYS, 150 FEET OF 1/2" EMT AND (1) TEE PULLEY

MECHANICAL GAS VALVE CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH CODE REQUIREMENTS & CHAPTER 4 - SYSTEM DESIGN OF THE BUCKEYE MANUAL A MAXIMUM OF 20 CORNER PULLEYS, 150 FEET OF 1/2" EMT AND (1) TEE PULLEY

ELECTRIC GAS VALVES SHALL BE CONNECTED USING A RESET RELAY RESET RELAY & ELECTRICAL PORTION OF VALVE INSTALLATION SHALL BE BY A QUALIFIED ELECTRICIAN CONFORMANCE WITH NFPA #70 IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR NOT AAFP

CONNECTION TO FIRE ALARM CONTROL PANEL TO BE MADE BY OTHERS WHEN APPLICABLE ELECTRICAL DISCONNECTS TO BE PERFORMED BY QUALIFIED ELECTRICIAN, WHEN APPLICABLE GAS VALVE TO BE INSTALLED BY A QUALIFIED PLUMBER WHEN APPLICABLE CONFORMANCE TO APPLICABLE NFPA CODES FOR ALARM, ELECTRICAL & PLUMBING WORK IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR & IS NOT THE RESPONSIBILITY OF AAFP

CONDITION AND ACCEPTABILITY OF THE EXHAUST HOOD & DUCT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR

APPLIANCES SHOWN ON PLANS ARE REPRESENTATIONAL ONLY - ACTUAL APPLIANCES MAY APPEAR DIFFERENT THAN SHOWN ON PLANS

## GENERAL SEQUENCE OF OPERATION - NOT PROJECT SPECIFIC

UPON ACTIVATION OF A FUSIBLE LINK OR REMOTE MANUAL PULL STATION A BUCKEYE WET CHEMICAL FIRE SYSTEM MAY RESULT IN THE FOLLOWING SEQUENCE OF OPERATION:

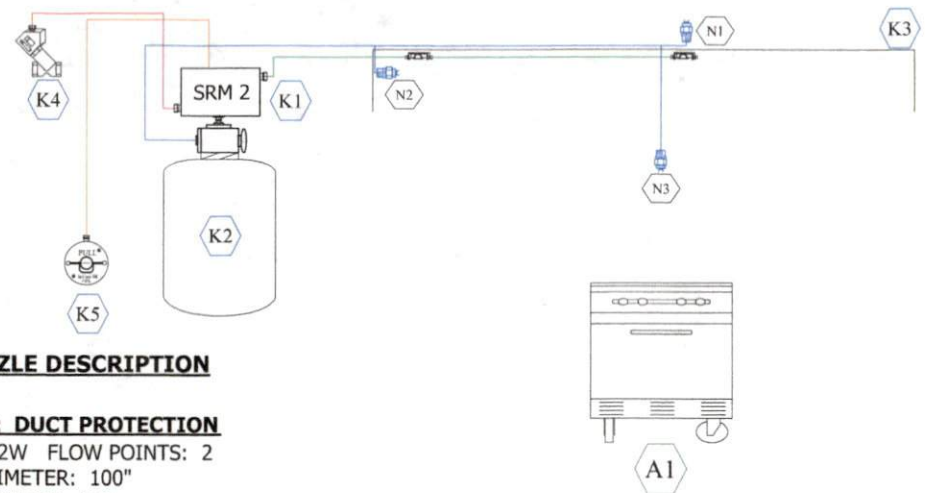
WET CHEMICAL SHALL DISCHARGE ONTO PROTECTED APPLIANCES & INTO DUCT & PLENUM AREAS OF HOOD SIMULTANEOUSLY, IF CONNECTED, A FIRE ALARM SYSTEM SHALL BE ACTIVATED OR A HORN/STROBE SHALL ACTIVATE (PRECISE OPERATIONS OF FIRE ALARM SYSTEM / CONTROL PANEL ARE NOT THE RESPONSIBILITY OF THE SUPPRESSION SYSTEM CONTRACTOR AND ARE NOT LISTED ON THESE PLANS) SIMULTANEOUSLY, ALL GAS APPLIANCES LOCATED UNDER THE HOOD SHALL SHUTDOWN VIA MECHANICAL OR ELECTRICAL GAS VALVE

SIMULTANEOUSLY, ALL ELECTRICAL EQUIPMENT, PROTECTED OR UNPROTECTED, UNDER THE HOOD SHALL SHUTDOWN SIMULTANEOUSLY, HOOD LIGHTS, AS PERMITTED BY CODE MAY REMAIN ON OR MAY SHUTDOWN

SIMULTANEOUSLY, INTERNAL MAKE-UP AIR SHALL SHUTDOWN

SIMULTANEOUSLY, EXTERNAL MAKE-UP AIR MAY REMAIN ON OR MAY SHUTDOWN

SIMULTANEOUSLY, EXHAUST FAN MAY OR MAY NOT CONTINUE TO OPERATE (IF THE EXHAUST FAN IS OFF AT THE TIME OF DISCHARGE, THE FAN MAY OR MAY NOT TURN ON)



## I.D. NOZZLE DESCRIPTION

### N-2W NOZZLE: DUCT PROTECTION

NOZZLE ID: N-2W FLOW POINTS: 2  
 MAXIMUM PERIMETER: 100"  
 MAXIMUM DIAMETER: 16"  
 LOCATION: CENTERED W/IN PERIMETER  
 HEIGHT: 2" TO 8" ABOVE DUCT COLLAR

### N-1HP NOZZLE: PLENUM PROTECTION

NOZZLE ID: N-1HP FLOW POINTS: 1  
 LOCATION: 2 TO 4 IN. FROM FILTER FACE  
 & CENTERED BETWEEN FILTER HEIGHT  
 NOZZLE AIM: HORIZONTAL DOWN LENGTH  
 POSITIONED: 0 TO 6 IN. FROM END OF HOOD  
 TO THE TIP OF THE NOZZLE.

### N-2LP NOZZLE: RANGE

NOZZLE ID: N-2LP  
 LOCATION: CENTER OF HAZARD OR  
 11 3/8" MAX FROM NOZZLE TO  
 CENTER OF ANY BURNER GRATE  
 HEIGHT: 30" TO 40"  
 MAX. COVERAGE: 36" X 24"

## I.D. APPLIANCE DESCRIPTION

A1 SIX BURNER RANGE

## I.D. DESCRIPTION

- K1 NEW SRM2 CONTROL HEAD CONTAINS (1) CARTRIDGE, (1) SET OF MICROSWITCHES
- K2 CYLINDER #1 - BFR-10 TANK 10 FLOW POINTS AVAIL. 5 USED
- K3 HOOD #1: NEW TYPE I EXHAUST HOOD: 8'-0" X 78" W/ A SINGLE BANK OF BAFFLED FILTERS CONTAINS (1) EXHAUST DUCTS: 16" ROUND
- K4 NEW MECHANICAL GAS VALVE LOCATED ABOVE THE CEILING
- K5 NEW REMOTE MANUAL PULL STATION LOCATED 48" A.F.F. ON PATH OF EGRESS OR EXIT

N1

N2

N3

A1

Solid Rock United Methodist Church

ALL AMERICAN FIRE PROTECTION

ANNUAL MANUAL #:	410002-12	NOTES:	2297 North Carolina 24
DRAWING #:	1 OF 1		Cameron, NC 28526
SCALE:	N/A	DATE:	
DRAWN BY:	TWJ	DATE:	07/16/2021

159 S Main St, Spring Lake, NC  
 Phone: 910-496-0600  
 Fax: 910-496-0613





**GREASE DUCT & CHIMNEY SPECIFICATIONS:**

PROVIDE GREASE DUCT EQUAL TO VENTILATION DIRECT MODEL "VDW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "VDW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "VDW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.

PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "VDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO VENTILATION DIRECT MODEL "VDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

**PATENT NUMBERS**

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.  
AC-PSP WALL (CANADA) - CA PATENT 2820509.  
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

VENTILATION DIRECT RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

**HVAC DISTRIBUTION NOTE**

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

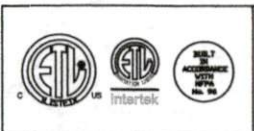
**VERIFY CEILING HEIGHT**

\_\_\_' - \_\_\_"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

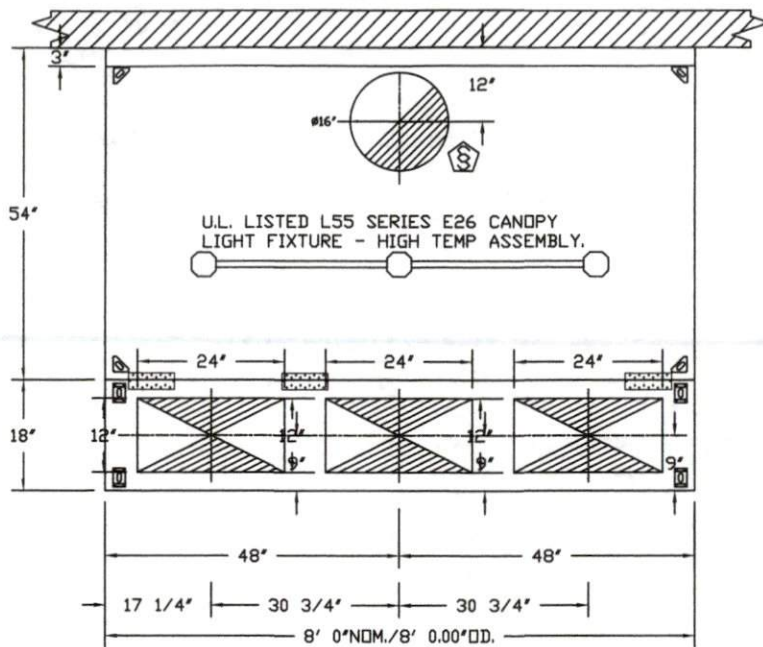
**CUSTOMER APPROVAL TO MANUFACTURE:**

APPROVED AS NOTED   
APPROVED WITH NO EXCEPTION TAKEN   
REVISE AND RESUBMIT   
SIGNATURE \_\_\_\_\_  
YOUR TITLE \_\_\_\_\_ DATE \_\_\_\_\_

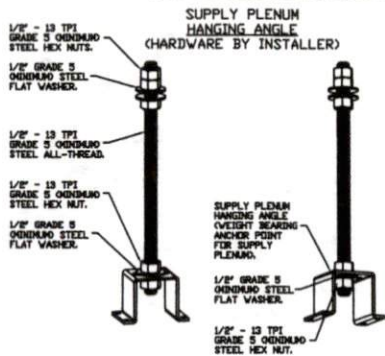


JOB# Hood	
LOCATION Spring Lake, NC,	
DATE 6/10/2021	JOB # 4931432
DWG # 2	DRAWN BY
REV.	SCALE 3/8' = 1'-0'



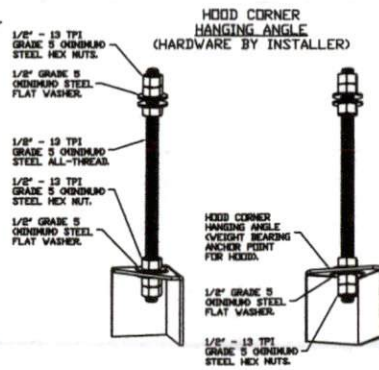


PLAN VIEW - HOOD #1  
8' 0.00" LONG 5424VX-2-PSP-F



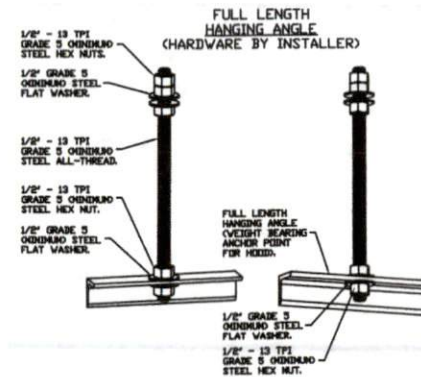
**ASSEMBLY INSTRUCTIONS**

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.



**ASSEMBLY INSTRUCTIONS**

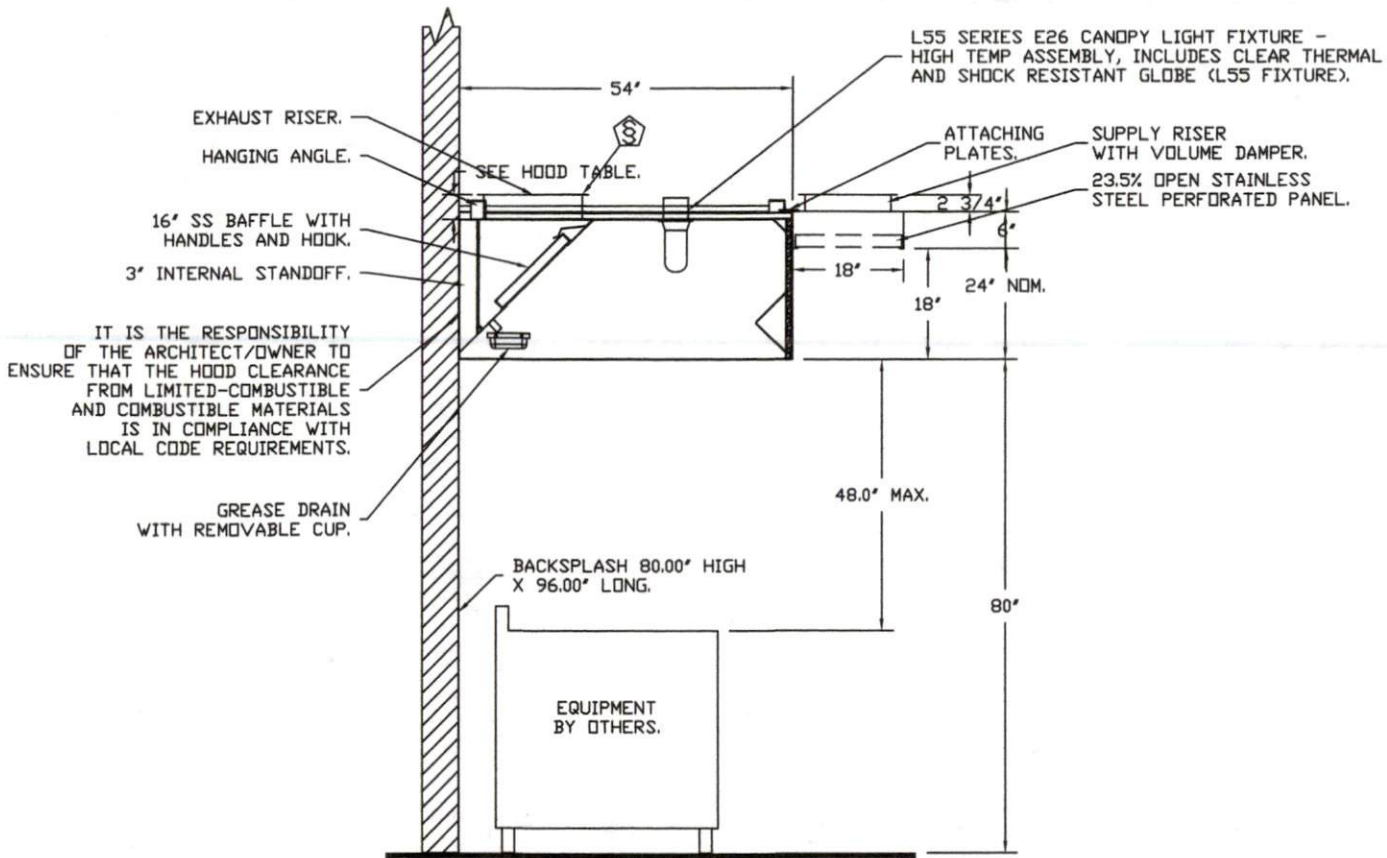
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND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



**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 FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

	<b>Ventilation Direct</b>	
	JOB 8' Hood	
	LOCATION Spring Lake, NC,	
	DATE 6/10/2021	JOB # 4931432
DWG # 3	DRAWN BY	
REV.	SCALE 3/8" = 1'-0"	



SECTION VIEW - MODEL 5424VX-2-PSP-F  
HOOD - #1

			JOB# Hood	
			LOCATION Spring Lake, NC,	
DATE 6/10/2021		JOB # 4931432		
DWG # 4		DRAWN BY		
REV.		SCALE 3/8" = 1'-0"		

**EXHAUST FAN INFORMATION - JOB#4931432**

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	VXD85	VENTILATION DIRECT	2200	0.750	1413	ODP	0.750	0.5030	1	115	9.8	696 FPM	98	15.2

**MUA FAN INFORMATION - JOB#4931432**

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
2		1	VA1-G10	G10D	A1	-	1760	0.500	915	TEAD-ECM	1.000	0.5750	1	115	11.6	15.6A	25A	197	20

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX.
		1	2 YEAR PARTS WARRANTY.
2		1	ECM WIRING PACKAGE-SUPPLY - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CW ROTATION.
		1	2 YEAR PARTS WARRANTY.

**FAN ACCESSORIES**

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

**CURB ASSEMBLIES**

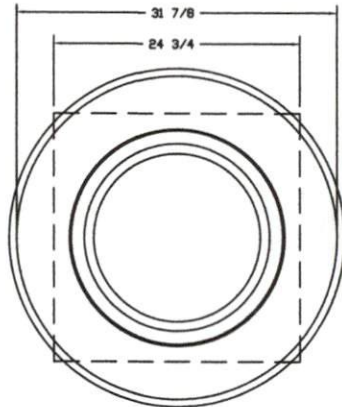
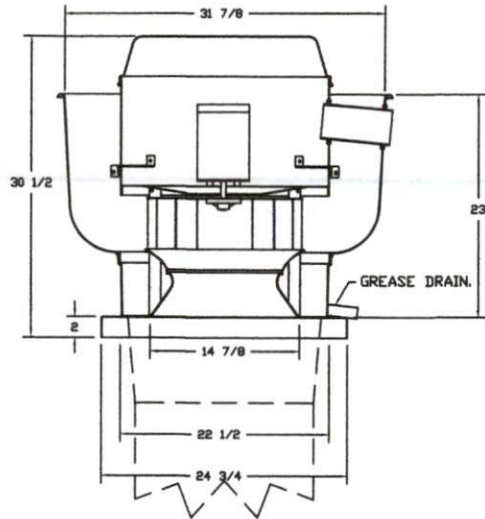
NO	DN FAN	WEIGHT	ITEM	SIZE
1	# 1	36 LBS	CURB	23.000"W X 23.000"L X 20.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	29 LBS	CURB	21.000"W X 21.000"L X 20.000"H ALONG LENGTH, RIGHT.
3		29 LBS	EXHAUST ADAPTER	FROM 31.000"SQ TO 26.500"SQ X 9.000"H.



**Ventilation Direct**

<i>JOB#</i> Hood	
<i>LOCATION</i> Spring Lake, NC,	
<i>DATE</i> 6/10/2021	<i>JOB #</i> 4931432
<i>DWG #</i> 5	<i>DRAWN BY</i>
<i>REV.</i>	<i>SCALE</i> 3/8" = 1'-0"

FAN #1 VXD85 - EXHAUST FAN



TOP VIEW

**FEATURES:**

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

**NORMAL TEMPERATURE TEST**

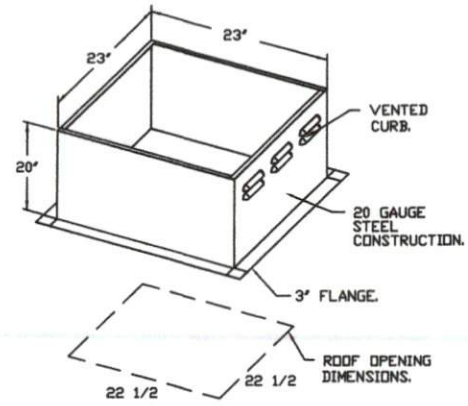
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**ABNORMAL FLARE-UP TEST**

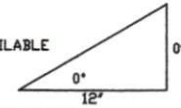
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

**OPTIONS**

GREASE BOX.  
2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:  
EXAMPLE: 7/12 PITCH = 30° SLOPE.



**Ventilation Direct**

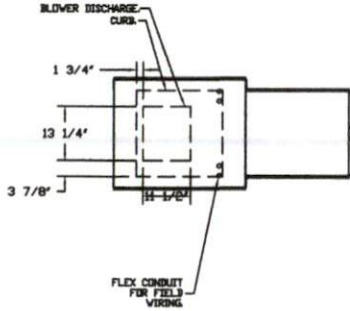
JOB# Hood	
LOCATION Spring Lake, NC,	
DATE 6/10/2021	JOB # 4931432
DWG # 6	DRAWN BY
REV.	SCALE 3/8" = 1'-0"



FAN #2 VAL-G10D - SUPPLY FAN

1. DIRECT DRIVE UNTEMPERED SUPPLY UNIT WITH 10" BLOWER IN SIZE #1 HOUSING WITH SPEED CONTROL, DISCONNECT SWITCH.
2. INTAKE HOOD WITH EZ FILTERS-LOW CFM.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. ECM WIRING PACKAGE FOR SUPPLY MOTORS WITH PWM SIGNAL FROM ECM#3 PREWIRE.
5. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
6. 2 YEAR PARTS WARRANTY.

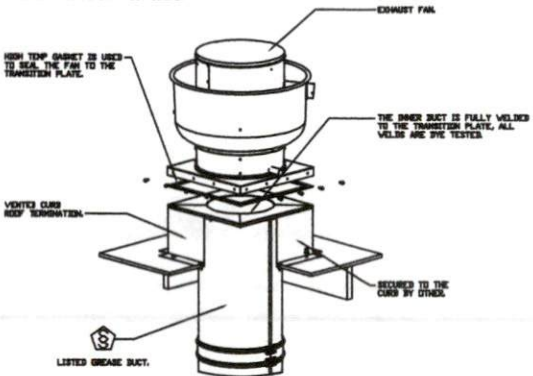
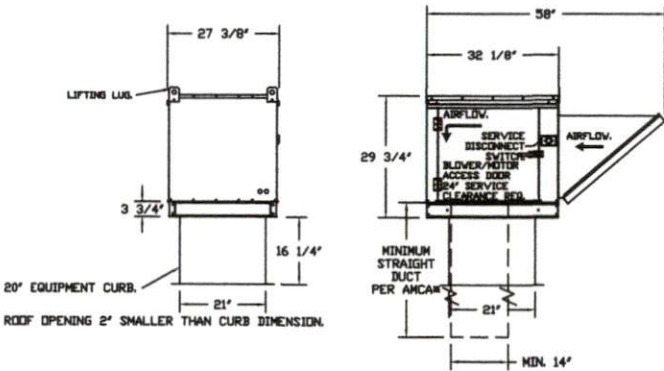
NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 801. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" x 14".



**GREASE DUCT & CHIMNEY SPECIFICATIONS:**  
 PROVIDE GREASE DUCT EQUAL TO VENTILATION DIRECT MODEL "VDW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "VDW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "VDW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURERS INSTALLATION GUIDE.  
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURERS LISTING MODEL "VDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.  
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**CUSTOMER APPROVAL TO MANUFACTURE:**

APPROVED AS NOTED	<input type="checkbox"/>
APPROVED WITH NO EXCEPTION TAKEN	<input type="checkbox"/>
REMARK AND REQUIRMENT	<input type="checkbox"/>
SIGNATURE _____	_____
YOUR TITLE _____	DATE _____



**Ventilation Direct**

JOB# 8' Hood	
LOCATION Spring Lake, NC,	
DATE 6/10/2021	JOB # 4931432
DWG # 7	DRAWN BY
REV.	SCALE 1/4" = 1'-0"

# Exhaust Fan Wiring

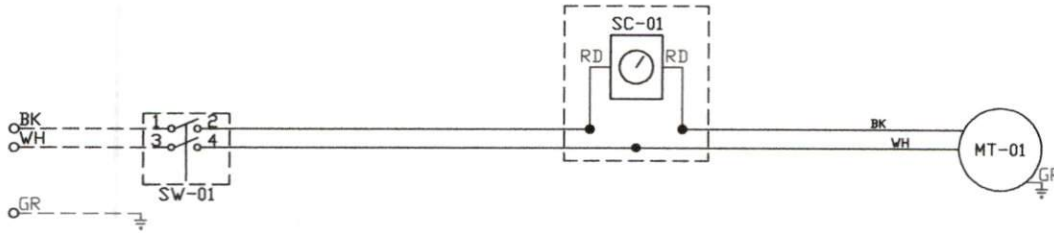
JOB 4931432 - 8' Ho...

DRAWING NUMBER EXH4931432-1

SHIP DATE 6/10/2021

MODEL VXD85

1  
2  
3  
4  
5  
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22  
23



### Installed Options

Speed Control

### Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
QD-01	Quick Disconnect	[3]
SC-01	Speed Control	[2]
SW-01	Main disconnect switch	[3]

**MOTOR INFO**  
EXHAUST 0.75HP-115V-1P-9.8FLA

**ELECTRICAL INFORMATION**  
MOTOR/CTRL MCA: 12.3A  
MOTOR/CTRL MOP: 20A

**NOTES**  
----- DENOTES FIELD WIRING  
————— DENOTES INTERNAL WIRING

**WIRE COLOR**  
BK - BLACK    YW - YELLOW  
BL - BLUE    GR - GREEN  
BR - BROWN   GY - GRAY  
OR - ORANGE   PR - PURPLE  
RD - RED      PK - PINK  
WH - WHITE

# AirHandler Wiring

JOB 4931432 - 8' Ho...

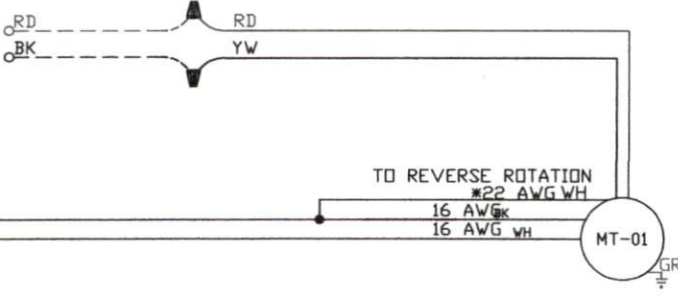
DRAWING NUMBER A4931432-2

SHIP DATE 6/10/2021

MODEL VA1-G10

ATTENTION ELECTRICIAN!  
DROP FOR DISCONNECT CONNECTION  
IS FACTORY SUPPLIED  
CONNECT POWER TO THE DROP

PWM  
MOTOR  
CONTROL  
FROM  
ECPM03



## Installed Options

## Component Identification

Label	Description	Location
-------	-------------	----------

MT-01	Supply motor	[2]
-------	--------------	-----

SW-01	Main disconnect switch	[2]
-------	------------------------	-----

MOTOR INFO	
SUPPLY	1HP-115V-1P-11.6FLA

ELECTRICAL INFORMATION	
MOTOR/CTRL CIRCUIT MCA:	15.6A
MOTOR/CTRL CIRCUIT MOP:	25A

## NOTES

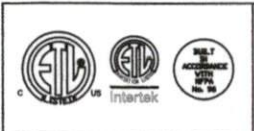
----- DENOTES FIELD WIRING  
 \_\_\_\_\_ DENOTES INTERNAL WIRING

## WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

**ELECTRICAL PACKAGE - JOB#4931432**

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	φ	HP	VOLT	FLA
1		SC-111110FP	WALL MOUNT IN SS BOX	05 - SS WALL MOUNT BOX	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL	EXHAUST	1	0.750	115	9.8
							SUPPLY	1	1.000	115	11.6



**Ventilation Direct**

<i>JOB'S</i> Hood	
<i>LOCATION</i> Spring Lake, NC,	
<i>DATE</i> 6/10/2021	<i>JOB #</i> 4931432
<i>DWG #</i> 10	<i>DRAWN BY</i>
<i>REV.</i>	<i>SCALE</i> 3/8" = 1'-0"

JOB NO  
4931432

MODEL NUMBER  
SC-11110FP

DRAWN BY  
INSTALL

DESCRIPTION OF OPERATION:  
120V 1 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans On in Fire, Fans Off in Fire, Thermostatically Controlled. Room temperature sensor shipped loose for field installation.

JOB NAME  
8' Hood

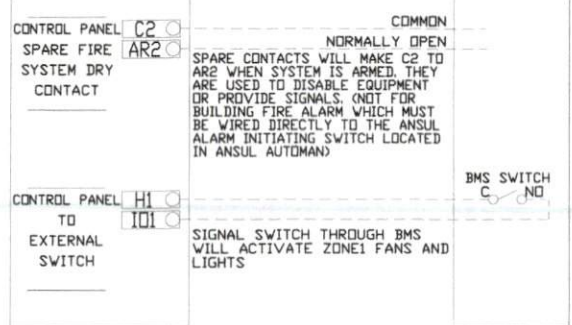
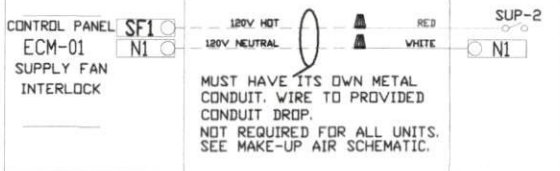
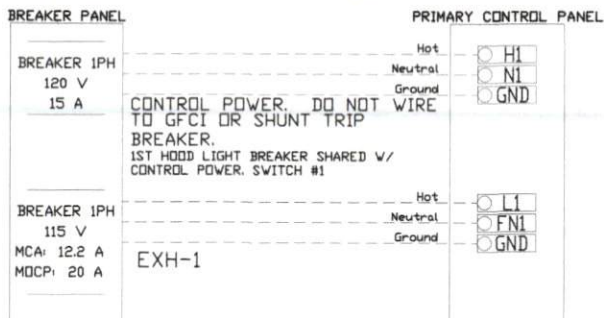
DATE  
6/10/2021

DWG NO  
ECP #1-1

**BREAKER PANEL TO PRIMARY CONTROL PANEL**

Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

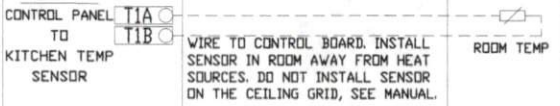
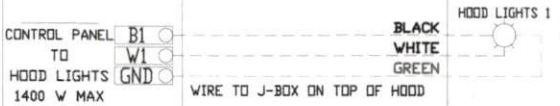
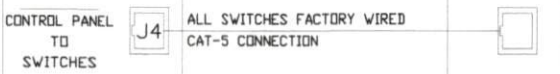
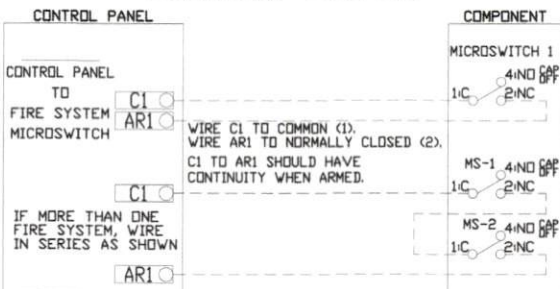


**CONTROL PANEL TO ACCESSORY ITEMS**

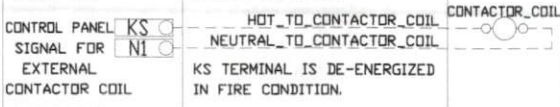
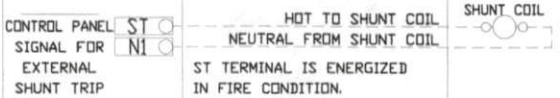
Responsibility: Electrician

**BREAKER PANEL TO FANS**

Responsibility: Electrician

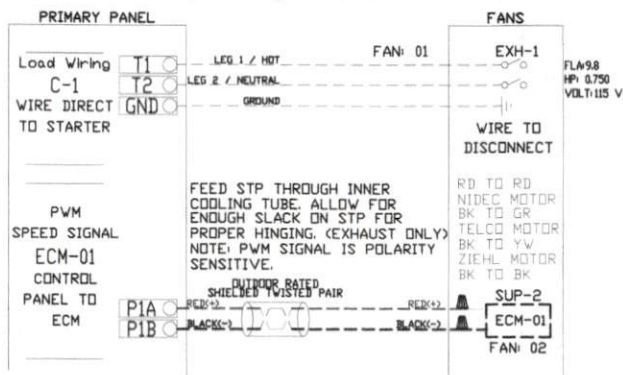


THE FOLLOWING CONNECTIONS MAY OR MAY NOT BE REQUIRED BASED ON JOBSITE SPECIFICATIONS

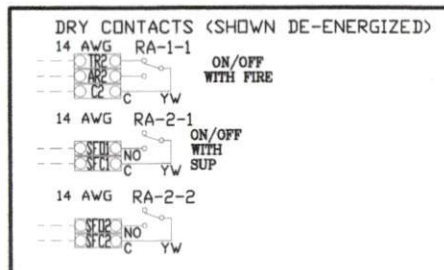
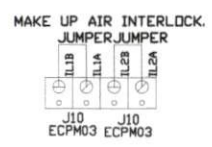
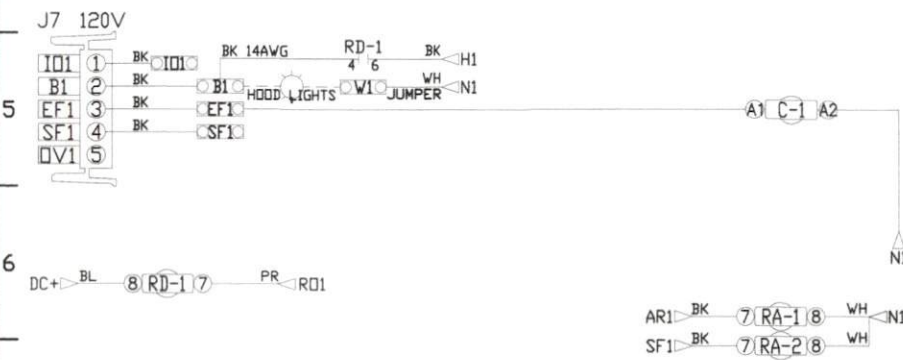
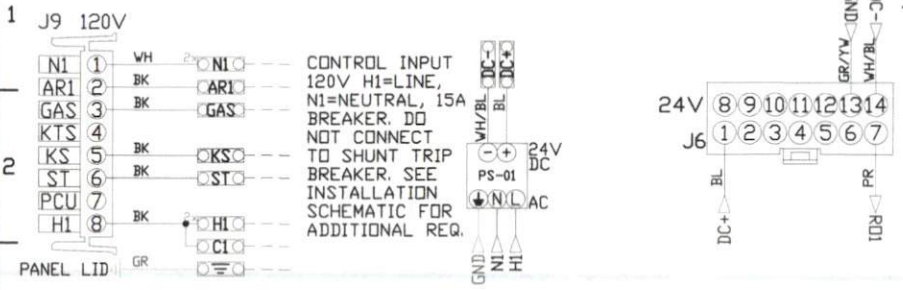


**CONTROL PANEL TO FANS**

Responsibility: Electrician



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



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS DCV Rev. 2.12.00 HMI Rev. 2.12.00

RA-x	120 VAC RELAY	RD-x	24 VDC RELAY
NO	4 3	NO	4 3
NC	2 1	NC	2 1
COIL	8 7	COIL	8 7
COM	6 5	COM	6 5

COMPONENT LIST

LABEL	DESCRIPTION
ST-X	Starter varies
DL-X	Overload varies
C-X	Contactor varies
PS-1	Power Sup. 24VDC MDP19-24A-1C
RA-x	120V Relay DPDT 34110184.0
RD-x	24VDC Light Relay 34110188.0

N/A  
50.8X  
PIB-X  
PIA-X

LEGEND

---	FIELD WIRING
---	FACTORY WIRING
BK-	BLACK
BL-	BLUE
BR-	BROWN
WH-	WHITE
GR/BL-	GR/B. STRIPE
BL/RD-	BL/RD STRIPE
RD/GR-	RD/GR STRIPE
WH/BL-	WH/BL STRIPE
YW-	YELLOW
GY-	GREY
PR-	PURPLE
RD-	RED
GF-	GREEN

JOB NAME  
8' Hood  
DRAWING TITLE  
SC-11110FP  
DESCRIPTION OF OPERATION  
120V 1 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermatically Controlled, Room temperature sensor shipped loose for field installation.

JOB NO 4931432  
DATE 6/10/2021  
DRAWN BY  
TYPE FACTORY  
DWG NO ECP #1-2

A | B | C | D | E | F | G | H | I

MOTOR POWER CIRCUITS. SEE INSTALLATION DIAGRAM FOR FIELD WIRING REQUIREMENTS.

1 PH	14 AWG	C-1
115 V	BK	L1 T1
20 A	WH	L2 T2
	GN	L3 T3
		13 14

MTR:EXH-1  
CONT:100-K12D10  
FLA:9.8  
HP:0.750

**FACTORY WIRING SCHEMATIC CIRCUIT BOARDS**  
DCV Rev. 2.10.00  
HMI Rev. 2.10.00

RA-X 120 VAC RELAY	RD-X 24 VDC RELAY
NO 4 3	NO 4 3
NC 2 1	NC 2 1
COIL 8 7	COIL 8 7
COM 6 5	COM 6 5

**COMPONENT LIST**

LABEL	DESCRIPTION
ST-X	Starter varies
C-X	Contactors varies
SM-X	VFD varies
LR-X	Line/Load Reactor varies

**LEGEND**

--- FIELD WIRING  
--- FACTORY WIRING

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

JOB NAME  
**8' Hood**

DRAWING TITLE  
**SC-111110FP**

DESCRIPTION OF OPERATION  
**120V 1 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.**

JOB NO 4931432	DRAWN BY
DATE 6/10/2021	
DWG NO ECP #1-3	

DUCTWORK #1 PARTS - JOB#4931432

DUCTWORK #1 FRONT VIEW

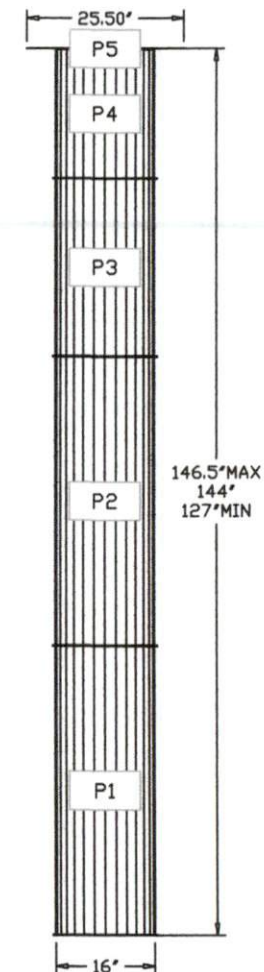
TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	VDW1647LT	2200				-0.0153	24.89	1575.63	1	SINGLE WALL DUCT 16" DIAMETER, 47' LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P2	VDW1647LT	2200				-0.0153	24.89	1575.63	1	SINGLE WALL DUCT 16" DIAMETER, 47' LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P3	VDW1629LT	2200				-0.0095	15.68	1575.63	1	SINGLE WALL DUCT 16" DIAMETER, 29' LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4 ASSEMBLED W/P5	VDV1630AJDKIT	2200				-0.0069	20.06	1575.63	1	SINGLE WALL DUCT ADJUSTABLE, 16" DIAMETER, 29.5' LONG, FLANGE AT ONE END WITH A 16" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5 ASSEMBLED W/P4 SYSTEM AT P5	VDW2316TP	2200					8.03	1575.63	1	DUCT TO CURB TRANSITION, 23' CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON BDU15, DU75 & 85.
	V3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	VDV16CLASY						1.18		4	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							99.87			

SINGLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

DUCT DIAMETER	HORIZONTAL SUPPORT (FT)	VERTICAL WALL SUPPORT (FT)	VERTICAL CURB SUPPORT (FT)
5"	10'	10'	24'
6"	10'	10'	24'
7"	10'	10'	24'
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'
26"	10'	10'	24'
28"	10'	10'	24'
30"	10'	10'	24'
32"	10'	10'	24'
34"	10'	10'	24'
36"	10'	10'	24'

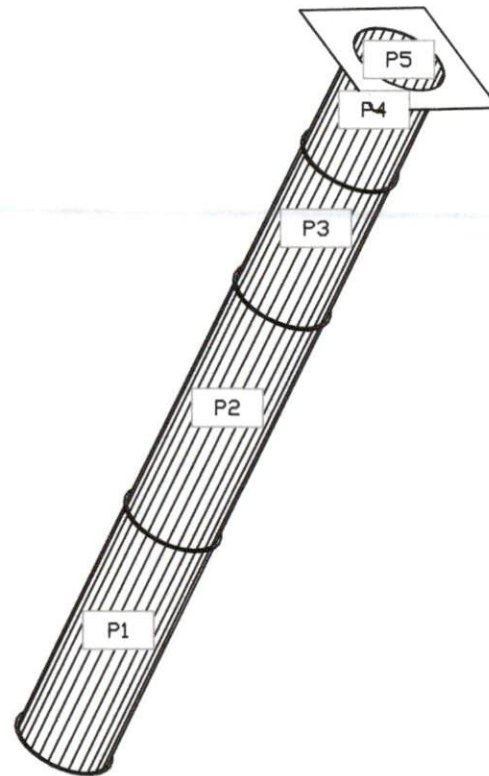
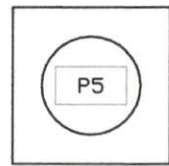
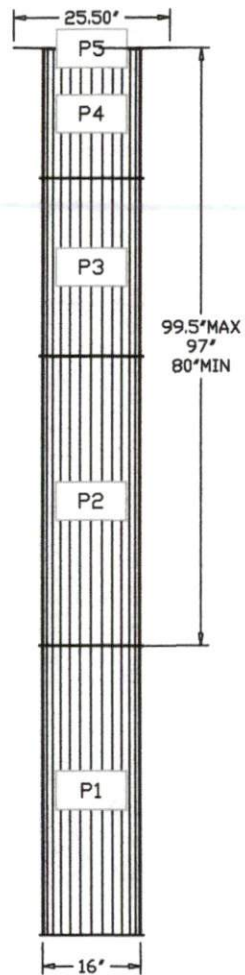
DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.



  		JOB# Hood	
		LOCATION Spring Lake, NC,	
		DATE 6/10/2021	JOB # 4931432
		DWG # 14	DRAWN BY
		REV.	SCALE 3/8" = 1'-0"



DUCTWORK #1 SIDE VIEW DUCTWORK #1 TOP VIEW DUCTWORK #1 SE VIEW



**Ventilation Direct**

<i>JOB</i> 8' Hood	
<i>LOCATION</i> Spring Lake, NC,	
<i>DATE</i> 6/10/2021	<i>JOB #</i> 4931432
<i>DWG #</i> 15	<i>DRAWN BY</i>
<i>REV.</i>	<i>SCALE</i> 3/8" = 1'-0"