FOR QUESTIONS, CALL THE
St. Louis Mechanical
REGION 109
PHONE: (636) 229-9777
EMAIL: reg109@stlouismech.com

HOOD INFORMATION – JOB#5243916

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM (SIDE/S) WIDTH	LENG	HEIGHT	SIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	106-L	6030 ND-2-FSP-F	CAPTIVEAIRE	5' 8"	700 DEG	I	EXTRA-HEAVY	349	1980			4"	14"	1980	1852	-1.194"	800	430 SS 1001	LEFT	ALONE
2	106-ML	6030 ND-2-FSP-F	CAPTIVEAIRE	3' 5"	600 DEG	I	HEAVY	271	925			4"	10"	925	1696	-0.581"	460	430 SS 1001	MIDDLE	ALONE
3	Pizza	6030 ND-2-FSP-F	CAPTIVEAIRE	5' 3"	700 DEG	I	EXTRA-HEAVY	250	1310			4"	12"	1310	1668	-0.702"	700	430 SS 1001	MIDDLE	ALONE
4	106-R	6030 ND-2-FSP-F	CAPTIVEAIRE	14' 0"	600 DEG	I	HEAVY	202	2830			4"	12"	1415	1802	-0.633"	2066	430 SS 1001	RIGHT	ALONE
												4"	12"	1415	1802	-0.633"				
5	5S	6030 ND-2-FSP-F	CAPTIVEAIRE	14' 1"	600 DEG	I	HEAVY	200	2820			4"	12"	1410	1795	-0.629"	2060	430 SS 1001	ALONE	ALONE
												4"	12"	1410	1795	-0.629"				
6	Smoker	6624 ND-2	CAPTIVEAIRE	4' 6"	700 DEG	I	EXTRA-HEAVY	269	1210			4"	10"	1210	2258	-0.995"	0	430 SS 1001	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY # 7 MICRONS	QTY	LIGHT(S) TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SYSTEMS QUANTITY	FIRE PIPING	HOOD WEIGHT
1	106-L	CAPTRATE SOLO FILTER	4	20"	16"	85% SEE FILTER SPEC.	2	RECESSED ROUND	NO							YES	505 LBS
2	106-ML	CAPTRATE SOLO FILTER	2	20"	16"	85% SEE FILTER SPEC.	1	RECESSED ROUND	NO							YES	320 LBS
3	Pizza	CAPTRATE SOLO FILTER	3	20"	16"	85% SEE FILTER SPEC.	2	RECESSED ROUND	NO							YES	417 LBS
4	106-R	CAPTRATE SOLO FILTER	10	20"	16"	85% SEE FILTER SPEC.	4	RECESSED ROUND	NO	RIGHT	12"x60"x36"	CORE PROTECTION	0	DCV-2011	1 LIGHT 1 FAN	YES	1424 LBS
5	5S	CAPTRATE SOLO FILTER	10	20"	16"	85% SEE FILTER SPEC.	4	RECESSED ROUND	NO	LEFT	12"x60"x36"	CORE PROTECTION	0			YES	1046 LBS
6	Smoker	CAPTRATE SOLO FILTER	3	20"	16"	85% SEE FILTER SPEC.	2	L55 SERIES E26	NO	RIGHT	12"x66"x24"	CORE PROTECTION	0			YES	534 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	106-L	BACKSPLASH 80.00" HIGH X 352.00" LONG 430 SS VERTICAL.
		BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		WC-CORE PROTECTION.
		LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
2	106-ML	BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.
		WC-CORE PROTECTION.
3	Pizza	BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.
		WC-CORE PROTECTION.
4	106-R	BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		STRUCTURAL FRONT PANEL.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.
		WC-CORE PROTECTION.
5	5S	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 182.00" LONG 430 SS VERTICAL.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 68" LONG INSULATED.
		BALANCE DAMPERS.
		STRUCTURAL FRONT PANEL.
		RISER SENSOR INSTALL 6IN PLEN.
		WC-CORE PROTECTION.
		RIGHT WALL AS END PANEL.
6	Smoker	FIELD WRAPPER 18.00" HIGH RIGHT, BACK.
		RIGHT SIDESPLASH 80.00" HIGH X 66.00" LONG 430 SS VERTICAL.
		LEFT END STANDOFF (FINISHED) 1" WIDE 66" LONG INSULATED.
		BACKSPLASH - INSIDE CORNER 80.00" HIGH X 2.00" LEG LENGTH 430 SS VERTICAL.
		BALANCE DAMPERS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		FINISHES BACK- ISL/REV INSTALL 54.00" LONG, FILTERS TO THE FRONT).
		RISER SENSOR INSTALL 6IN PLEN.
		WC-CORE PROTECTION.
		LEFT WALL AS END PANEL.

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PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	PERFORATED WIDTH	LENG	SIA	CFM	SP
1	106-L	Front	68"	12"	6"	MUA	8"	24"		400	0.114"
						MUA	8"	24"		400	0.114"
2	106-ML	Front	41"	12"	6"	MUA	8"	24"		460	0.149"
3	Pizza	Front	63"	12"	6"	MUA	8"	36"		700	0.186"
						MUA	8"	36"		688	0.180"
4	106-R	Front	180"	12"	6"	MUA	8"	36"		688	0.180"
						MUA	8"	36"		688	0.180"
						MUA	8"	36"		686	0.179"
5	5S	Front	180"	12"	6"	MUA	8"	36"		686	0.179"
						MUA	8"	36"		686	0.179"

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

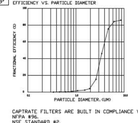
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2"-INCH DEEP HOOD CHANNELSLOTS.

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

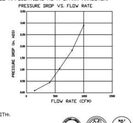
GREASE EXTRACTION EFFICIENCY: PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES, WITH A MINIMUM PARTICLE SIZE OF 0.4 MICRONS IN SIZE AND LARGER, WITH A NONCONFORMING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA 96,
NSF STANDARD #3,
UL STANDARD 8046,
UMC- MECH CODE (IMC),
ULC-S649.

PATENT NUMBERS

AC-FSP (UNITED STATES) - US PATENT 7963830 B2.
AC-FSP WALL (CANADA) - CA PATENT 2820509.
AC-FSP ISLAND (CANADA) - CA PATENT 2502330.
EXHAUST HOODS ND-2-EO-2-END-2 (CANADA) - CA PATENT 2520435 C.

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL 'DW' ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL 'DW' IS LISTED TO UL-1978 AND IS INSTALLED USING 'V' CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL 'DW' 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 'DW' 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 CAPTIVEAIRE SYSTEMS MODEL 'DW'- 2R, 2R TYPE HT, 3R, OR 32" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS 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 _____ _____

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CARVE® AMERICAN GRILLE

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FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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NO.	DATE	REMARKS
4	7/27/2022	BULLETIN #1
1	3/3/2022	ISSUED FOR PERMIT
	2/4/2022	ISSUED FOR PERMIT/BID

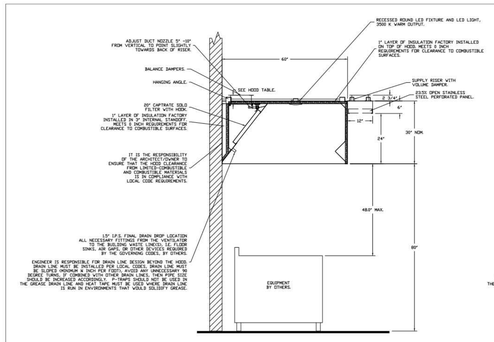
REVISIONS

Drawing Title
CAPTIVEAIRE DRAWING

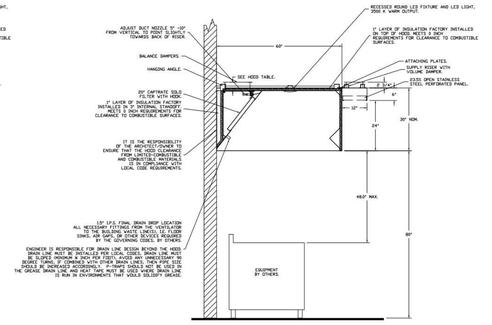
Job No. 214661
Drawn
Scale
Date 2/4/2022

Sheet No.
M-6.0

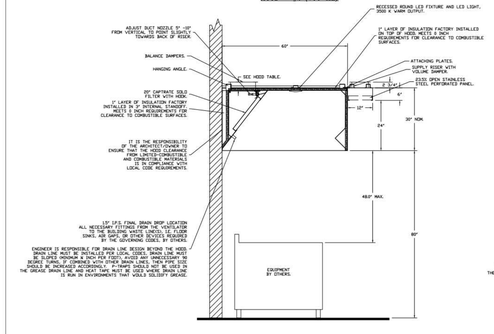
11/9/2022 5:42:46 PM C:\Revit\Projects\21500035O7 Austin, TX MEP -r21_coymacy_20221109172246.rvt



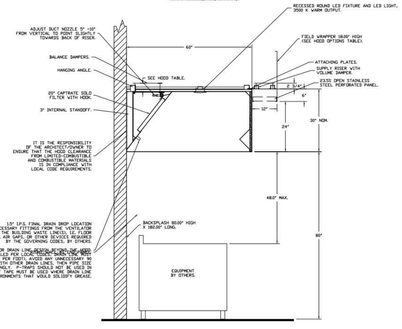
SECTION VIEW – MODEL 6030ND-2-PSP-F
HOOD – #2 (106-ML)



SECTION VIEW – MODEL 6030ND-2-PSP-F
HOOD – #3 (Pizza)



SECTION VIEW – MODEL 6030ND-2-PSP-F
HOOD – #4 (106-R)



SECTION VIEW – MODEL 6030ND-2-PSP-F
HOOD – #5 (SS)

REVISIONS

	DESCRIPTION	DATE
1		
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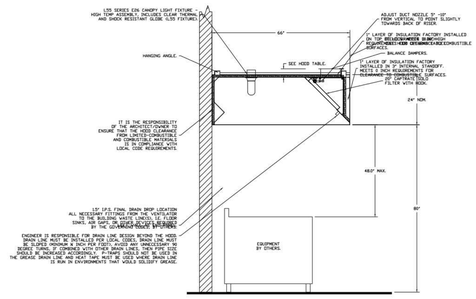

SECTION VIEW – MODEL 6624AND-2
HOOD – #6 (Smoker)

REVISIONS

	DESCRIPTION	DATE
1		
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SHEET NO. 6

SECTION 23 38 13 13

SPECIFICATIONS
TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods

PART 1 – GENERAL

1.1 SUMMARY

A. The ND2 series is a Type I, wall canopy hood for use over 600°F, 700°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.

B. The hood shall have the size, shape, and performance specified on drawings.

1.2 SUBMITTALS

A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.

B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.

C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

1.3 QUALITY ASSURANCE

A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."

B. Built-in compliance with NSF/ANSI Standard 2.

C. The hood shall be ETL Listed as:

1. Exhaust Hood Without Exhaust Damper."
2. ETL Sanitation Listed and built in accordance with NFPA 96.
3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

1.4 WARRANTY

A. All units shall be provided with the following standard warranty:

1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.

B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at its charge. The buyer shall pay all labor costs associated with the removal and reinstallation of equipment. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.

C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

PART 2 – PRODUCTS

2.1 GENERAL

A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.

B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-Ft increments along the length of the ventilator.

2.2 CONSTRUCTION

A. Construction shall be type 430 stainless steel.

B. Double wall insulated front to eliminate condensation and increase capacity on wide sizes. The insulation shall have a flexural modulus of 4.5PSI(T) and meet UL 181 requirements and be in accordance with NFPA 90A and 90B.

C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers.

D. Exhaust duct collar to be 4"high with flange.

E. An integral baffle to direct grease laden vapors toward the exhaust filter bank.

F. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.

G. All seams shall be welded and have stainless steel on exposed surfaces.

2.3 LIGHTING

A. L55 Series canopy light fixture, includes clear thermal and shock resistant globe.

B. Recessed round LED fixture and LED light, 3500K Warm output.

2.4 FILTERS

A. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.

2.5 OPTIONS

A. Fire Suppression System UL 300 fire suppression system.

B. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment.

1. Perforated diffuser plates shall be included in the design to provide even air distribution.
2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent condensation.
3. Perforated Supply Plenum (PSP)

C. Hood Mounted Utility Cabinet – Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.

2.6 ACCESSORIES

A. CORE Protection –CORE Protection plenum spray bar added.

B. Balance Damper – Used to manually balance exhaust flow rate. Installed in hood plenum.

C. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:

1. Wall as End Panel
2. Side Vertical End Panel

D. Splash panel(s) selected:

1. Backsplash
2. Backsplash – Inside Corner
3. Right Sidesplash

E. Standoff(s) selected:

1. Left End Standoff
2. Right End Standoff

F. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:

1. Wrapper

G. Miscellaneous option(s) selected:

1. Insulation for Top of Hood –Fully insulated top of hood.
2. Insulation for Back of Hood –Backside of hood is fully insulated.
3. Riser Sensor Install –Sensor set-up for 6 Flanum.
4. Structural Front Panel –Front panel made with 18 gauge material.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

REVISIONS

	DESCRIPTION	DATE
1		
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SHEET NO. 7

FIRE SYSTEM INFORMATION – JOB#5243916

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		CORE PROTECTION	0	0	FIRE CABINET RIGHT	RIGHT, HOOD 4
2		CORE PROTECTION	0	0	FIRE CABINET LEFT	LEFT, HOOD 5
3		CORE PROTECTION	0	0	FIRE CABINET RIGHT	RIGHT, HOOD 6

GAS VALVE(S)

SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS
2		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER – PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		39 – 3A – 460D980Z 24VDC OR 120VAC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0
		26 – 26 – 95A-3/8 QUICK SEAL, – 3/8" I.D.	14	0
		16 – 16 – 7910 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	14	0
		16 – 16 – 3070-3/8H-10-SS NOZZLE – CORE PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	14	0
		0 – 0 – SUPCON-40FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UP TO 39' GAP. KIT CONTAINS 42 FEET OF BLACK MG WIRE, 42 FEET OF TAN MG WIRE, 40 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 – 0 – SUPCON-80FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 3" GAP. KIT CONTAINS 5 FEET OF BLACK MG WIRE, 5 FEET OF TAN MG WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	3	0
		0 – 0 – A6029078 JUNCTION BOX FOR CORE PROTECTION MANUAL PULL STATION. 1.5" DEEP BACK BOX. BLUE.	1	0
		0 – 0 – 94767 3" X 1/2" X 1" PROPRESS TEE, USED IN APPLIANCE SPRAY BAR, VIEGA.	14	0
		0 – 0 – 79330 1" X 1" NPT PROPRESS FEMALE ADAPTER, VIEGA.	8	0
		0 – 0 – 79245 1" X 1" NPT PROPRESS MALE ADAPTER, VIEGA.	1	0
		0 – 0 – 77412 1" PROPRESS TEE, VIEGA.	1	0
		0 – 0 – 77087 1" PROPRESS 90 DEG ELBOW, VIEGA.	1	0
		0 – 0 – 442M29Z7 1" BRASS PLUG.	8	0
		0 – 0 – 12–H2802S-2S44–07–606 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 600°F.	2	0
		0 – 0 – 12–H2802S-005-07-600 DUCT FIRE THERMOSTAT. NO, CLOSE ON TEMP RISE AT 600°F.	2	0
		0 – 0 – 12–F2802S-3S44–07–360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	3	0
2		39 – 3A – 460D980Z 24VDC OR 120VAC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0
		26 – 26 – 95A-3/8 QUICK SEAL, – 3/8" I.D.	6	0
		16 – 16 – 7910 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	6	0
		16 – 16 – 3070-3/8H-10-SS NOZZLE – CORE PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	6	0
		0 – 0 – SUPCON-80FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UP TO 39' GAP. KIT CONTAINS 80 FEET OF BLACK MG WIRE, 80 FEET OF TAN MG WIRE, 20 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 – 0 – A6029078 JUNCTION BOX FOR CORE PROTECTION MANUAL PULL STATION. 1.5" DEEP BACK BOX. BLUE.	1	0
		0 – 0 – 94767 3" X 1/2" X 1" PROPRESS TEE, USED IN APPLIANCE SPRAY BAR, VIEGA.	6	0
		0 – 0 – 79330 1" X 1" NPT PROPRESS FEMALE ADAPTER, VIEGA.	2	0
		0 – 0 – 79245 1" X 1" NPT PROPRESS MALE ADAPTER, VIEGA.	1	0
		0 – 0 – 77412 1" PROPRESS TEE, VIEGA.	1	0
		0 – 0 – 442M29Z7 1" BRASS PLUG.	2	0
		0 – 0 – 12–F2802S-3S44–07–360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	2	0
3		39 – 3A – 460D980Z 24VDC OR 120VAC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0
		26 – 26 – 95A-3/8 QUICK SEAL, – 3/8" I.D.	2	0
		16 – 16 – 7910 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	2	0
		16 – 16 – 3070-3/8H-10-SS NOZZLE – CORE PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	2	0
		0 – 0 – SUPCON-80FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH LESS THAN A 3" GAP OR BACK BOX. KIT CONTAINS 80 FEET OF BLACK MG WIRE, 80 FEET OF TAN MG WIRE, 10 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 – 0 – A6029078 JUNCTION BOX FOR CORE PROTECTION MANUAL PULL STATION. 1.5" DEEP BACK BOX. BLUE.	1	0
		0 – 0 – 94767 3" X 1/2" X 1" PROPRESS TEE, USED IN APPLIANCE SPRAY BAR, VIEGA.	2	0
		0 – 0 – 79330 1" X 1" NPT PROPRESS FEMALE ADAPTER, VIEGA.	2	0
		0 – 0 – 79245 1" X 3/4" NPT PROPRESS MALE ADAPTER, VIEGA.	1	0
		0 – 0 – 77412 1" PROPRESS TEE, VIEGA.	1	0
		0 – 0 – 77087 1" PROPRESS 90 DEG ELBOW, VIEGA.	1	0
		0 – 0 – 442M29Z7 1" BRASS PLUG.	2	0
		0 – 0 – 12–H2802S-2S44–07–606 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 600°F.	1	0
		0 – 0 – 12–H2802S-005-07-600 DUCT FIRE THERMOSTAT. NO, CLOSE ON TEMP RISE AT 600°F.	1	0

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		
5		

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Carve-The Grove_R1
AUSTIN, TX, 78704

DATE: 1/19/2022
DWG.#: 5243916
DRAWN BY: ML
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 8

NOTE:
THE DOCUMENTATION CONTAINED ON THIS SHEET WAS NOT PREPARED BY HENDERSON ENGINEERS AND IS INCLUDED IN THIS SET FOR REFERENCE ONLY. HENDERSON ENGINEERS REVIEWED THE DOCUMENTATION ON THIS SHEET FOR GENERAL COMPLIANCE WITH DESIGN INTENT. SUPPLIER IS RESPONSIBLE THAT ALL FURNISHED EQUIPMENT ON THIS SHEET COMPLIES WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, CODES, AND REGULATIONS.

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FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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NO.	DATE	REMARKS
4	7/27/2022	BULLETIN #1
1	3/3/2022	ISSUED FOR PERMIT
	2/4/2022	ISSUED FOR PERMIT/BID

REVISIONS

Drawing Title
CAPTIVEAIRE DRAWING

Job No.	Drawn
214661	
Scale	**Date**
	2/4/2022

Sheet No.
M-6.1

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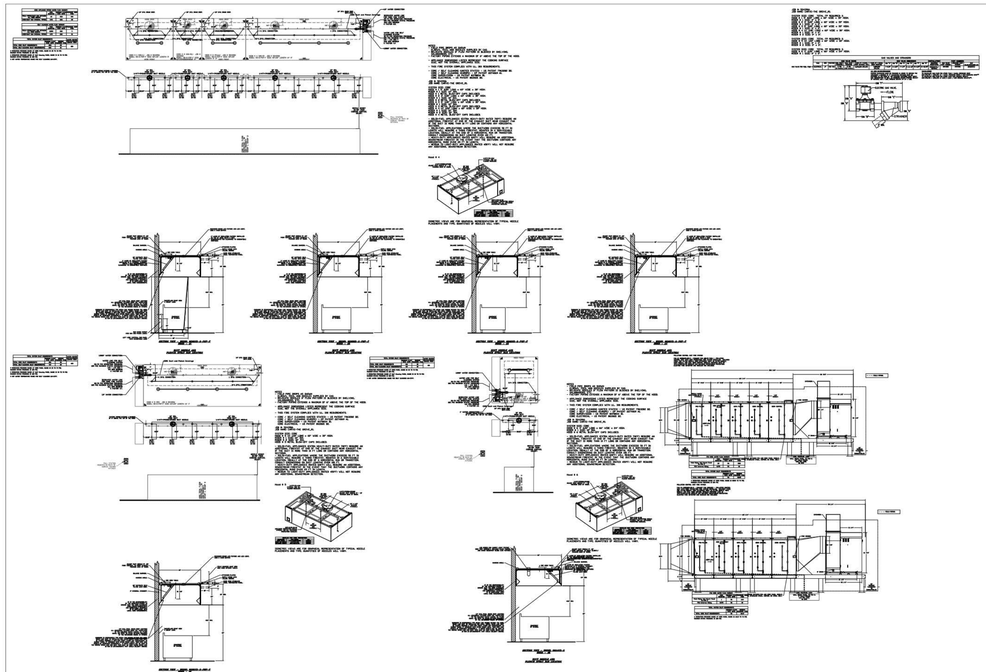

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SHEET NO.	9

EXHAUST FAN INFORMATION - JOB#5243916

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	SOLID FUEL	1	USB124330-RM	CAPTIVEAIRE	4500	2.700	1498	ODP,PREMIUM	15.000	7.8630	3	208	40.3	1496 FPM	3771	43
2	EF-1	1	SIF1133	CAPTIVEAIRE	500	1.000	1597	TEAO-ECM	0.500	0.3410	1	115	6.3		129	11.6
3	EF-2	1	SIF1133-SS	CAPTIVEAIRE	600	1.000	1642	TEAO-ECM	0.500	0.3940	1	115	6.3		124	12.5
4	GREASE	1	USB13000-RM	CAPTIVEAIRE	6575	2.000	1236	ODP,PREMIUM	20.000	8.7300	3	208	53.7	1537 FPM	5362	50

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	SOLID FUEL	1	UTILITY SET GREASE CUP
		1	B124 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	B124 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT
		1	POLLUTION CONTROL UNIT WITH PREFILTER, HIGH EFFICIENCY, HEPA, AND DUAL ODOR CONTROL FILTERS WITH INSTALLED ELECTRICAL DETECTION SYSTEM. SIZE 5
		1	PCU-SIZE 5 USBI-24 BI
		1	RUBBER VIBRATION ISOLATORS FOR BI UTILITY SETS (SET OF 8)
		1	B124-36-S HIGH TEMPERATURE HEAT & SMOKE OPTION
		1	FIRE STAT 1500 DEGREES MOUNTED IN EXHAUST FAN
		1	2 YEAR PARTS WARRANTY
2	EF-1	1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (1)-36)
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION
		1	HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA2075)
		1	1 (5-20)D DAMPER
		1	SIF(1) - STRAIGHT DISCHARGE, SQUARE DUCT CONNECTION
		1	SIF(1) - INLET - SQUARE DUCT CONNECTION
		1	2 YEAR PARTS WARRANTY
3	EF-2	1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (1)-36)
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION
		1	1 (5-20)D DAMPER
		1	SIF(1) - STRAIGHT DISCHARGE, SQUARE DUCT CONNECTION
		1	SIF(1) - INLET - SQUARE DUCT CONNECTION
		1	2 YEAR PARTS WARRANTY
4	GREASE	1	UTILITY SET GREASE CUP
		1	B130 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	B130 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT
		1	POLLUTION CONTROL UNIT WITH PREFILTER, HIGH EFFICIENCY, HEPA, AND DUAL ODOR CONTROL FILTERS WITH INSTALLED ELECTRICAL DETECTION SYSTEM. SIZE 6
		1	PCU-SIZE 6 USBI-30 BI
		1	RUBBER VIBRATION ISOLATORS FOR BI UTILITY SETS (SET OF 8)
		1	B124-36-S HIGH TEMPERATURE HEAT & SMOKE OPTION
		1	FIRE STAT 1500 DEGREES MOUNTED IN EXHAUST FAN
		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	SOLID FUEL	YES						
2	EF-1		YES					
3	EF-2		YES					
4	GREASE	YES						

CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1		258 LBS	RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 52.750"L X 25.000"H ALONG LENGTH, RIGHT.
2		258 LBS	RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.
			RAIL	6.000"W X 68.000"L X 25.000"H ALONG LENGTH, RIGHT.

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DATE:	1/19/2022
DWG.#:	5243916
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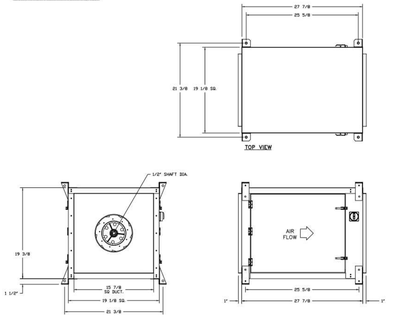
FAN #2 SIF1133 - EXHAUST FAN (EF-1)

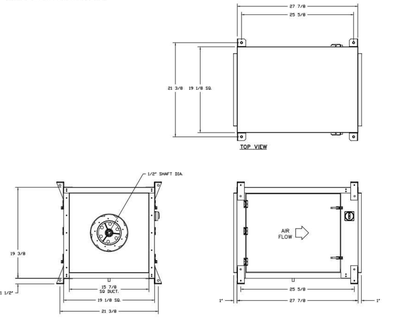


UNIVERSAL MOUNTING BRACKET
1/2" DIA. THREADED ROD ONLY
.562" DIA. MOUNTING HOLES.
USED WITH CEILING VIBRATION ISOLATORS.
USED WITH FLOOR VIBRATION ISOLATORS.
CAN BE RELOCATED IN THE FIELD AS NEEDED.

FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- TWO ACCESS DOORS FOR EASY ACCESS.
- FOUR CAST IRON INLINES NON-OVERLOADING WHEELS.
- UL705 LISTING.
- AMCA AIR & SOUND CERTIFIED.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

OPTIONS
SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (1)-36)
ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION
HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA2075)
1 (5-20)D DAMPER
SIF(1) - STRAIGHT DISCHARGE, SQUARE DUCT CONNECTION
SIF(1) - INLET - SQUARE DUCT CONNECTION
2 YEAR PARTS WARRANTY.

FAN #3 SIF1133-SS - EXHAUST FAN (EF-2)



UNIVERSAL MOUNTING BRACKET
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.562" DIA. MOUNTING HOLES.
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USED WITH FLOOR VIBRATION ISOLATORS.
CAN BE RELOCATED IN THE FIELD AS NEEDED.

FEATURES:
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- TWO ACCESS DOORS FOR EASY ACCESS.
- FOUR CAST IRON INLINES NON-OVERLOADING WHEELS.
- UL705 LISTING.
- AMCA AIR & SOUND CERTIFIED.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- 2" NPT THREADED DRAIN CENTERED IN BASE (SS MODELS).

OPTIONS
SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (1)-36)
ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION
1 (5-20)D DAMPER
SIF(1) - STRAIGHT DISCHARGE, SQUARE DUCT CONNECTION
SIF(1) - INLET - SQUARE DUCT CONNECTION
2 YEAR PARTS WARRANTY.

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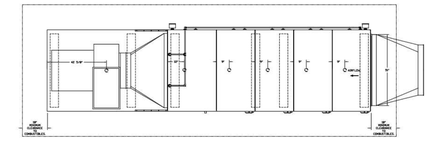
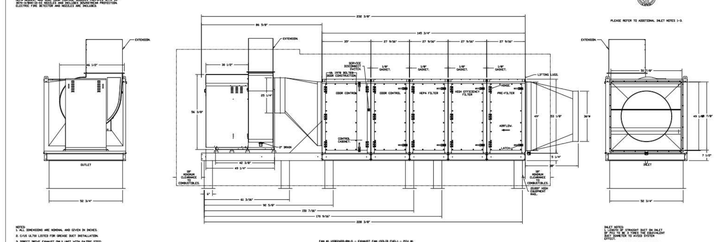
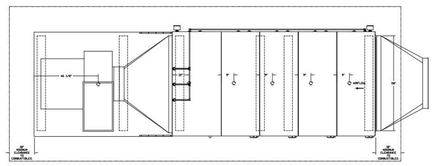
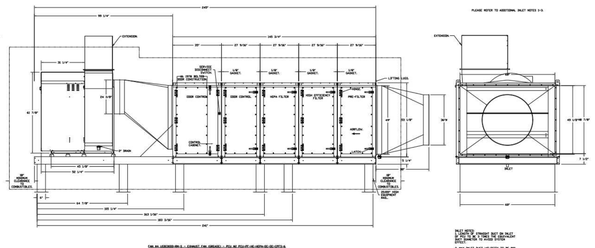
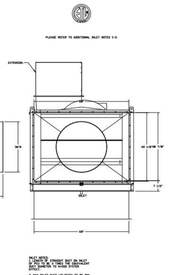


PCU FILTER SPECIFICATIONS					
DESIGN CFM = 4500					
MODULE	FILTER TYPE	FILTER EFFICIENCY	QTY	SIZE	APPX.CLEAN PRE. DROP
1	CAPTIVAIR CELS	MERV 8	12	20X25X4	0.093
2	HIGH EFFICIENCY	MERV 15	12	20X25X4	0.222
3	HEPA	MERV 18	12	20X25X4	0.408
4	QC ODC CARBON	N/A	12	20X25X4	0.282
5	QC ODC CARBON PANEL	N/A	12	20X25X4	0.706
					1.858


EXTENSION
INLET
OUTLET
LIFTING LUGS
ACCESS DOOR
PREFILTER
FINAL FILTER
ODOR CONTROL
UV LIGHT
HEPA FILTER
CONTROL PANEL
HINGED DOOR
PLENUM WITH
PLENUM WITH
PLENUM WITH







PCU FILTER SPECIFICATIONS					
DESIGN CFM = 6575					
MODULE	FILTER TYPE	FILTER EFFICIENCY	QTY	SIZE	AIRFLOW CAPACITY
1	CARTRIDGE CELLS	MERV 8	18	20x20x6"	525%
2	HIGH EFFICIENCY	MERV 13	18	20x20x6"	525%
3	HEPA	MERV 18	18	20x20x6"	525%
4	DC 1005 CARBON	N/A	18	20x20x6"	525%
5	DC 1005 CARBON PANEL	N/A	18	20x20x6"	525%
					1978

NOTES:
1. ALL DIMENSIONS ARE NOMINAL AND GIVEN IN INCHES.
2. CAUK SLOW LISTED FOR GROUND SLAB INSTALLATION.
3. CURB ADAPTER SHALL BE FURNISHED BY OTHERS. CURB ADAPTER SHALL BE INSTALLED PRIOR TO UNIT INSTALLATION.
4. UNIT STEEL IS GALVANIZED UNLESS NOTED BUT PAINT MAY BE REQUIRED AT FIELD CUT EDGES AND WELDS AS A RESULT OF SHIPPING AND HANDLING DAMAGE. TOUCH UP PAINT IS SUPPLIED WITH THE UNIT FOR FIELD APPLICATION AT THE DISCRETION OF THE INSTALLING CONTRACTOR.
5. ALTHOUGH NOT TO BE CONSIDERED AS THE ONLY WAY TO BE CERTAIN OF THE PROPER SIZE OF THE UNIT, A COMPLETE AIR BALANCE SHOULD BE MADE BY THE CONTRACTOR.
6. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WORK TO INSTALL CONTROLS AND INTERCONNECTING WIRING. REFER TO ELECTRICAL DIAGRAMS FOR RECOMMENDED WIRING.
7. UNIT AND WIRING MUST BE IN FULL COMPLIANCE WITH ALL CURRENT ELECTRICAL CODES.
8. CLEAR ACCESS TO SERVICED SIDES OF THE UNIT MUST BE MAINTAINED AS INDICATED BY CODES OR THIS DRAWING.

FIELD NOTES:
- CONNECTIONS TO BE MADE WITH COPPER WIRE ONLY. USE ONLY UNIT MANUFACTURER RECOMMENDED WIRE GAUGE.
- ALL WIRING MUST BE MADE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES.
- ALL WIRING MUST BE MADE IN ACCORDANCE WITH UNIT WIRING DIAGRAM.

FIELD NOTES:
1. FOR 4" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #1 POWER HERE FOR FAN TO STAGE 2 WITH PCU #1.
2. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #1 POWER HERE FOR FAN TO STAGE 2 WITH PCU #1.
3. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #2 POWER HERE FOR FAN TO STAGE 2 WITH PCU #2.
4. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #3 POWER HERE FOR FAN TO STAGE 2 WITH PCU #3.

FIELD NOTES:
1. FOR 4" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #1 POWER HERE FOR FAN TO STAGE 2 WITH PCU #1.
2. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #1 POWER HERE FOR FAN TO STAGE 2 WITH PCU #1.
3. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #2 POWER HERE FOR FAN TO STAGE 2 WITH PCU #2.
4. FOR 6" ASSEMBLY ONLY, CONNECT FAN EMERGENCY + PCU #3 POWER HERE FOR FAN TO STAGE 2 WITH PCU #3.

FLANGE REFER TO ADDITIONAL INLET NOTES 2-5

CAN BE ASSEMBLED IN 2, 3 OR 4 SECTIONS

CAN OPTIONS:
- 4" OR 6" HEIGHT FOR ADDITIONAL DUCT OR PLENUM CONNECTIONS
- OPTIONAL SHORT CAN FOR 4" HEIGHT ONLY
- OPTIONAL SHORT CAN FOR 6" HEIGHT ONLY
- OPTIONAL 4" OR 6" HEIGHT CAN WITH 1" FLANGE FOR DUCT CONNECTIONS
- OPTIONAL 4" OR 6" HEIGHT CAN WITH 2" FLANGE FOR DUCT CONNECTIONS
- OPTIONAL 4" OR 6" HEIGHT CAN WITH 3" FLANGE FOR DUCT CONNECTIONS
- OPTIONAL 4" OR 6" HEIGHT CAN WITH

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CARVE® AMERICAN GRILLE

JOB NO 5243916 | MODEL NUMBER DCV-2011 | JOB NAME Carve-The Grove_R1 | DRAWN BY MTL | CHANGE NO. INITIAL | DATE 1/19/2022 | SCALE 3/4" = 1'-0" | DESCRIPTION OF OPERATION: Upon a call for cooling, Factory Packaged Rooftop unit Self Standing , Gravity Ventilated, Controlled in factory from customer supplied wall thermostat. The supply fan is energized and the gas valve is energized. Gravity Ventilation, and cooling is then controlled by the wall thermostat.

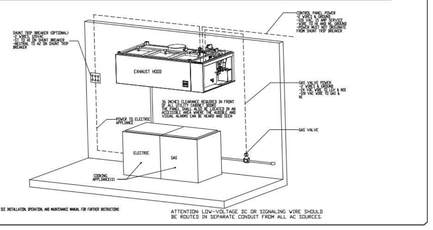
CORE TOTAL FLOOD PROTECTION ELECTRICAL DETAIL

04/04/2024 Rev. 18

FS-2: SLAVE

1. ELECTRICAL CONTRACTOR TO PROVIDE THE FOLLOWING:
2. 120 VAC 15A DEDICATED CIRCUIT TO EQUIPMENT.
3. 120 VAC 15A DEDICATED CIRCUIT TO EQUIPMENT (SUPPLY EQUIPPED OPTIONAL)

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	12 & 14	MICRO LUG	120 VAC	1 A AMPS	EXIT TO 46 ON SHUNT BREAKER COIL, AND NEUTRAL TO 42 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	16 & 18 = GROUND	CIRCUIT BREAKER	120 VAC	20 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
GEC APPLIANCE KILL SWITCH (OPTIONAL)	47& & 48	47& & 48	120 VAC	1 A AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE ANGUL AUTOMA (OPTIONAL)	A42, A43	SOLENOID	120 VAC	1 A AMPS	120V TO A42, A43 TO ANGUL ELECTRIC AUTOMAL ANGUL SOLENOID TO NEUTRAL
GAS VALVE	1222 & 1224 (P.C.) 1227 & 1229 (P.C.)	WEISS/WEB/GREEN	24 VAC 24 VAC	1.0 AMPS 1.0 AMPS	24 VAC 1.0 AMPS 1 OF 2 WIRES IS GROUND FOR 24 VAC GAS VALVE 24 VAC 1.0 AMPS 1 OF 2 WIRES IS GROUND FOR 24 VAC GAS VALVE



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

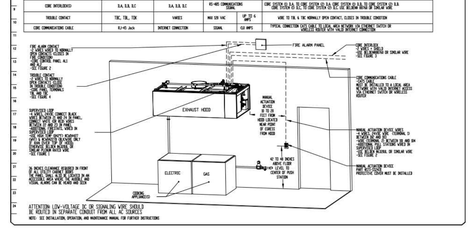
CORE TOTAL FLOOD PROTECTION LOW-VOLTAGE DETAIL

03/06/2017 Rev. 12

FS-2: SLAVE

1. ALARM SYSTEM TO CONSIST OF HORNS, STROBE(S), CORE INTERLOCKS, FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. CONTACTS RATED AT 1 AMP 24 VDC
3. SYSTEM TO BE SUPPLIED BY OTHERS

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTIVATION DEVICES	53 AND 55 N.O. CONTACTS	1 & 2	24 VDC	< 1.0 AMPS	USE MANUAL ACTIVATION DEVICE STROBE 1 & 2 ARE THE ONLY STROBES TO BE OFF WHEN MANUAL ACTIVATION DEVICE IS ACTIVATED. ALL OTHER STROBES AND HORNS TO BE ON.
MANUAL ACTIVATION DEVICE COVER	N/A	N/A	N/A	N/A	CONNECT JUMPER WIRE BETWEEN 53 AND 55 ON MANUAL ACTIVATION DEVICE
HORNS/ STROBE (SOUNDER)	53 AND 55 N.O. CONTACTS	BLACK AND WHITE	24 VDC	< 1.0 AMPS	CONNECT WIRE BETWEEN 53 AND 55 ON MANUAL ACTIVATION DEVICE TO ACTIVATE ALL HORNS AND STROBES. ALL HORNS AND STROBES TO BE ON WHEN ACTIVATED.
FIRE ALARM CONTACT	A2, A3	VARIES	24 VDC DRY CONTACT	UP TO 1 AMP	WIRE TO TB & TB# NORMALLY OPEN CONTACT, CLOSES ON ALARM CONDITION
CORE INTERLOCKS	3A, 3.5, 3.C	3A, 3.5, 3.C	10-485 COMMUNICATIONS SIGNAL		CORE SYSTEM 3A, 3.5, 3.C MUST BE CONNECTED TO CORE INTERLOCKS 3A, 3.5, 3.C
TROUBLE CONTACT	TBC, TBL, TBN	VARIES	MAX 120 VAC	UP TO 5 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	DISCRET CONNECTION	SIGNAL	0.2 AMPS	TYPICAL CONNECTION CAT5 OR CAT6 CABLE, WIRE ACCORDING TO CORE INTERLOCKS SPECIFICATIONS



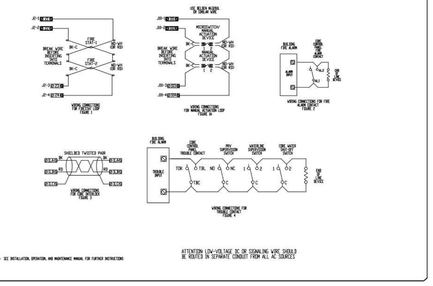
ATTENTION LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

CORE TOTAL FLOOD PROTECTION LOW-VOLTAGE FIGURES

02/05/2025 Rev. 16

FS-2: SLAVE



ATTENTION LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

CORE TOTAL FLOOD PROTECTION PLUMBING DETAIL

09/25/2023 Rev. 16

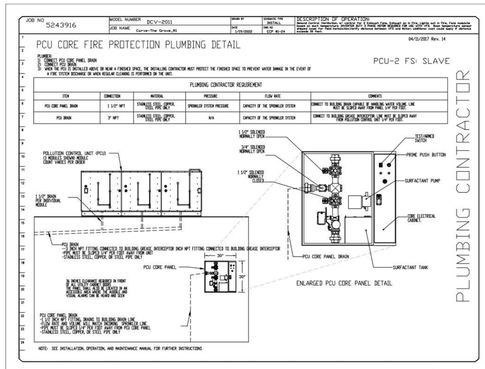
FS-2: SLAVE

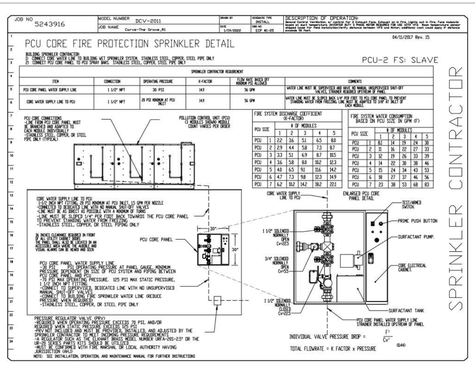
1. ALL PLUMBING CONNECTIONS TO BE MADE WITH COPPER PIPE OR LISTED BRAIDED HOSE ONLY
2. ALL PIPE SIZES SHOWN ARE MINIMUM SIZES. PIPE SIZE MAY BE INCREASED TO ACCOMMODATE LONGER RUNS BUT MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
3. PIPING TO BE SUPPLIED BY OTHERS
4. REFER TO SPECIFICATIONS FOR PIPE REQUIRED

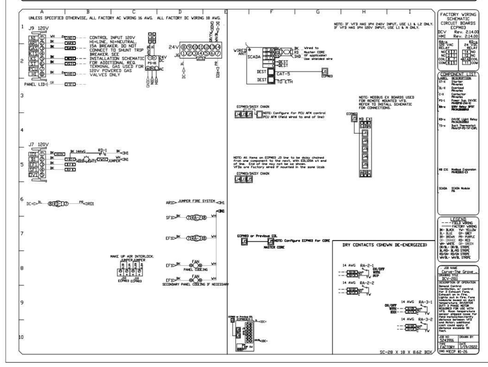
PLUMBING CONTRACTOR REQUIREMENT				
ITEM	CONNECTION	TEMPERATURE	PRESSURE	FLOW RATE
HOT WATER LINE	1 INCH NPT	140 to 199°	30 PSI TO 70 PSI	50 GPM
HOSE BRAIDED	3 1/2 INCH NPT	N/A	SANITARY GRADE	SEE ABOVE
CORE TO CORE CORE CONNECTION	HOSES	N/A	N/A	CONNECT WITH NPT STEEL, ALL ALL THREADED HOSE CONNECTION PROVIDED
BACK-TO-BACK CORE CONNECTION	HOSES	N/A	N/A	CONNECT WITH NPT PIPE, ALL ALL THREADED HOSE CONNECTION PROVIDED
GAS VALVE	HOSES	N/A	SEE TABLE	UP TO 2 INCHES NPT WITH 24V CONTROL, 5 PSI AND 3 INCH ICE ERA CONTROL
FLOOR DRAINAGE	3 1/2 INCH	N/A	SANITARY GRADE	USED TO HELP CLEAN UP FIRE SYSTEM DISCHARGE, GREASE INTERCEPTOR MAY BE REQUIRED
MUNICIPAL POTABLE WATER SUPPLY LINE	MALLEABLE IRON	N/A	VARIES	INSTALLED AVOID PIERCING PIPE IN MUNICIPAL PIPE MUST BE EQUIPPED WITH PRV MANUAL FOR

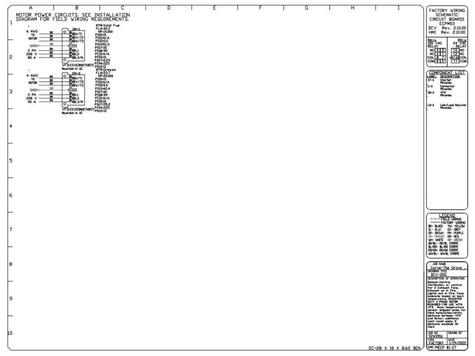
HOT WATER LINE
- HOT WATER LINE MUST BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION TO PREVENT CONDENSATION
- INSULATION MUST BE INSTALLED BEFORE PIPE IS CONCEALED
- INSULATION MUST BE PROTECTED FROM DAMAGE

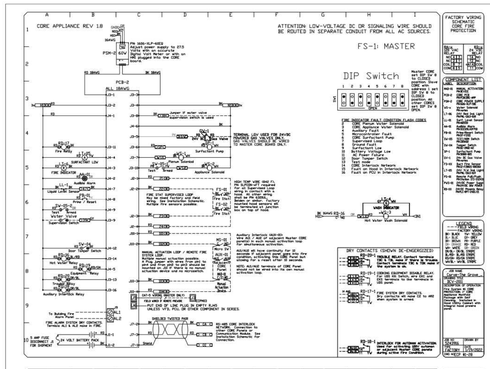
LOCATION OF BACK-TO-BACK CORE CONNECTION
- CORE TO CORE CONNECTION MUST BE MADE WITH NPT STEEL PIPE AND HOSES
- BACK-TO-BACK CORE CONNECTION MUST BE MADE WITH NPT STEEL PIPE AND HOSES
- HOSE BRAIDED
- HOSE BRAIDED CONNECTED TO CORE WITH 3/4 INCH NPT MALE ADAPTER
- HOSE BRAIDED CONNECTED TO CORE WITH 3/4 INCH NPT MALE ADAPTER
- 3/4 INCH NPT STEEL PIPE, COPPER OR STEEL
- 3/4 INCH NPT STEEL PIPE, COPPER OR STEEL
- CORE TO CORE CONNECTION MUST BE MADE WITH NPT STEEL PIPE AND HOSES
- HOSE BRAIDED CONNECTED TO CORE WITH 3/4 INCH NPT MALE ADAPTER
- 3/4 INCH NPT STEEL PIPE, COPPER OR STEEL
- 3/4 INCH NPT STEEL PIPE, COPPER OR STEEL

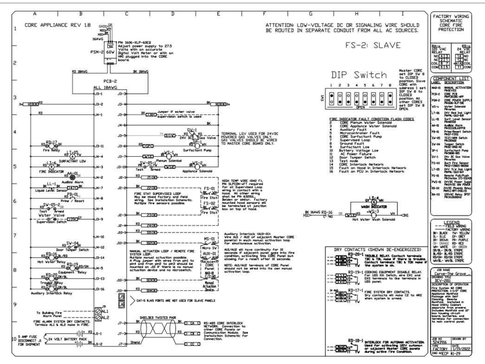


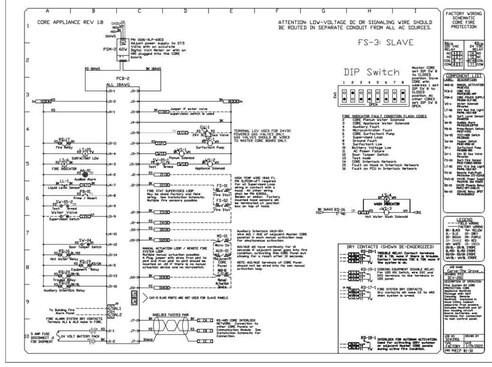


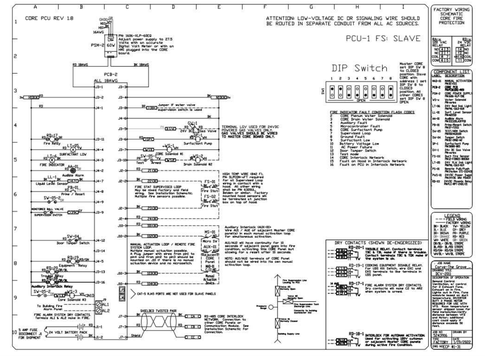


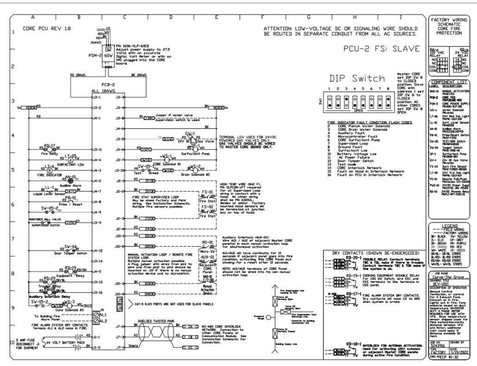






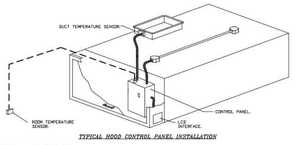






DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- 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(CS) 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 507.1.1.
- 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. ROOF TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. HOOD-MOUNTED 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.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

- GENERAL: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN HOOK TEMPERATURE AND DUCT TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLDS 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 (DDC, BMS OR HARD-WIRED INTERLOCKS).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICAL FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE 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 TO 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 DISCREPANCY 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.

REVISIONS

	DESCRIPTION	DATE
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NO.	DATE	REMARKS
4	7/27/2022	BULLETIN #1
1	3/3/2022	ISSUED FOR PERMIT
	2/4/2022	ISSUED FOR PERMIT/BID

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Job No.	Drawn
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Scale	**Date**
	2/4/2022

Sheet No.
M-6.5

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