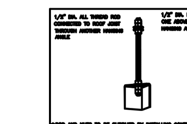


HANGING ANGLE DETAILS

HOOD STYLE / MODEL	450 DEGREES cfm/ft.	600 DEGREES cfm/ft.	700 DEGREES cfm/ft.
CANOPY ND-2	150	200	250
CANOPY ND-2 W/ END PANELS	105	140	175
SLOPED SND-2	228	294	-
ISLAND ND-2IR	260	300	350
ISLAND ND-2I	346	422	475

ETL HOOD LISTING DETAIL

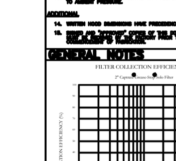
CALCULATIONS UTILIZED

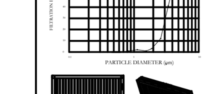
Listed under ETL File number 3054804-001/002

BUILDING CODES

CLEARANCE TO COMBUSTIBLES

GENERAL NOTES





CaptiveAire Captrate Solo Filter
ETL Listed Grease Extracting Filters
Made From 430 Stainless Steel

FILTER DETAIL

HOOD INFORMATION – Job#4328831

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TYPE	APPLIANCE DUTY	DESIGN CFM/ft	TOTAL EXH. CFM	EXHAUST PLENUM WIDTH	LENG.	RISER(S) HEIGHT	DIA.	CFM	VEL.	S.P.	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG. END TO END	ROW
1	15F (L)	6024 EX-2-PSP-F	8' 4"	600 Deg.	I	Heavy	225	1875			4"	14"	1875	1754	-0.378"	1500	430 SS Where Exposed	LEFT	FRONT
2	15F (R)	6024 EX-2-PSP-F	8' 5"	600 Deg.	I	Heavy	200	1683			4"	14"	1683	1574	-0.305"	1363	430 SS Where Exposed	RIGHT	FRONT
3	15B (L)	5424 EX-2-PSP-F	8' 6"	450 Deg.	I	Medium	200	1700			4"	14"	1700	1590	-0.311"	1360	430 SS Where Exposed	LEFT	BACK
4	15B (R)	5424 EX-2-PSP-F	5' 3"	600 Deg.	I	Heavy	200	1050			4"	12"	1050	1337	-0.226"	840	430 SS Where Exposed	RIGHT	BACK

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S) TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY.	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WGHT
1	15F (L)	SS Baffle with Handles	6	20"	16"	30%	5	L55 Series E26	NO	Wall Mnt	12"x60"x24"	Ansul R102	3.0/3.0/3.0			YES	490 LBS
2	15F (R)	SS Baffle with Handles	6	20"	16"	30%	5	L55 Series E26	NO							YES	507 LBS
3	15B (L)	SS Baffle with Handles	6	20"	16"	30%	5	L55 Series E26	NO							YES	530 LBS
4	15B (R)	SS Baffle with Handles	3	20"	16"	30%	3	L55 Series E26	NO							YES	319 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1	15F (L)	FIELD WRAPPER 18.00" High Front
		LEFT END STANDOFF 1" Wide 60" Long Insulated
		LEFT SIDESPLASH 80.00" High X 60.00" Long 430 SS Vertical
		BALANCE DAMPERS
		RISER SENSOR INSTALL 3IN DBL
2	15F (R)	FIELD WRAPPER 18.00" High Front, Right
		BALANCE DAMPERS
		RISER SENSOR INSTALL 6IN PLEN
3	15B (L)	FIELD WRAPPER 18.00" High Front, Left
		BACK STANDOFF (FLAT) 10" Wide 102" Long
		BALANCE DAMPERS
		RISER SENSOR INSTALL 6IN PLEN
4	15B (R)	FIELD WRAPPER 18.00" High Front
		RIGHT END STANDOFF 1" Wide 54" Long Insulated
		RIGHT SIDESPLASH 80.00" High X 64.00" Long 430 SS Vertical
		BACK STANDOFF (FLAT) 10" Wide 64" Long
		BALANCE DAMPERS
		RISER SENSOR INSTALL 6IN PLEN

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG.	DIA.	CFM	S.P.
1	15F (L)	Front	101"	16"	6"	MUA	12"	28"		750	0.211"
						MUA	12"	28"		750	0.211"
2	15F (R)	Front	101"	16"	6"	MUA	12"	28"		681	0.176"
						MUA	12"	28"		681	0.176"
3	15B (L)	Front	102"	14"	6"	MUA	12"	28"		680	0.175"
						MUA	12"	28"		680	0.175"
4	15B (R)	Front	64"	14"	6"	MUA	10"	20"		420	0.119"
						MUA	10"	20"		420	0.119"

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 ________

HVAC DISTRIBUTION NOTE

IT IS RECOMMENDED NOT TO INSTALL HIGH VELOCITY DIFFUSERS OR HVAC RETURNS WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

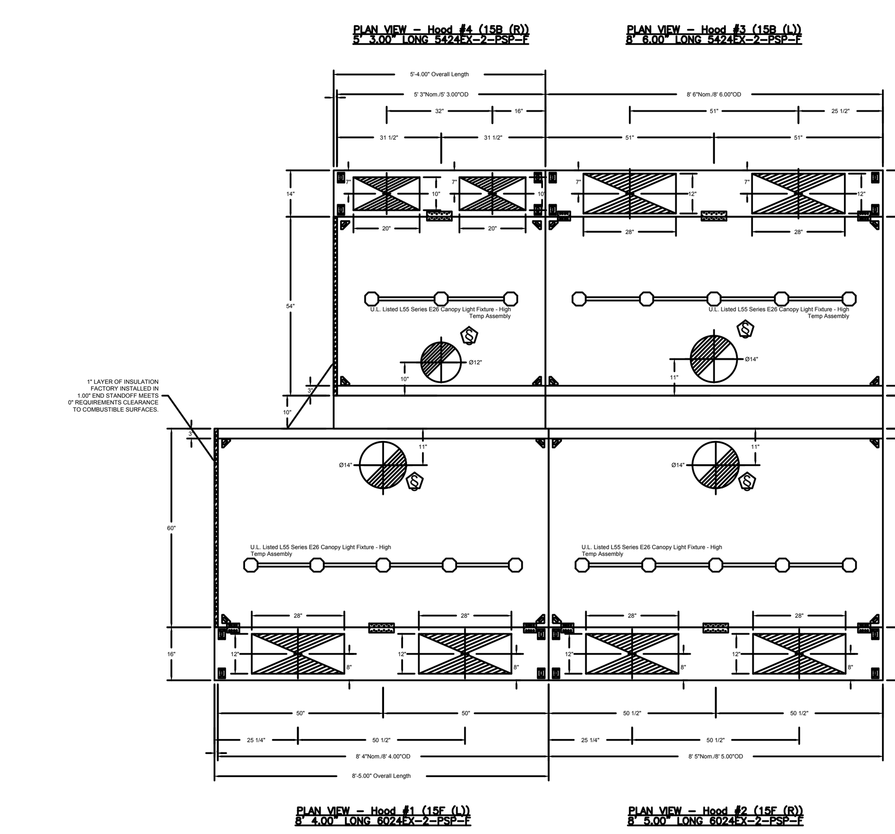
EXHAUST HOOD DETAILS

REVISIONS

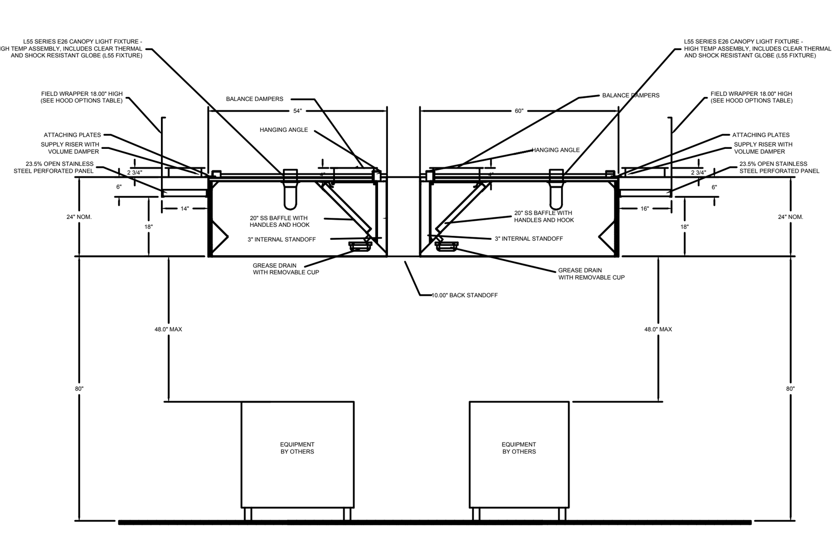
Maryland Office
2221 Kansas Ave, Silver Spring, MD, 20910 PHONE: (800) 988-0881 FAX: (919) 227-5931 EMAIL: reg32@econair.com
www.captiveaire.com

RKDT - MK - Allen, TX
ALLEN, TX, 75013

DATE: 05–19–2020
DWG.#: 4328831
DRAWN BY: BS-32
SCALE: NTS
MASTER DRAWING
SHEET NO. 1



SHEET NO. 2



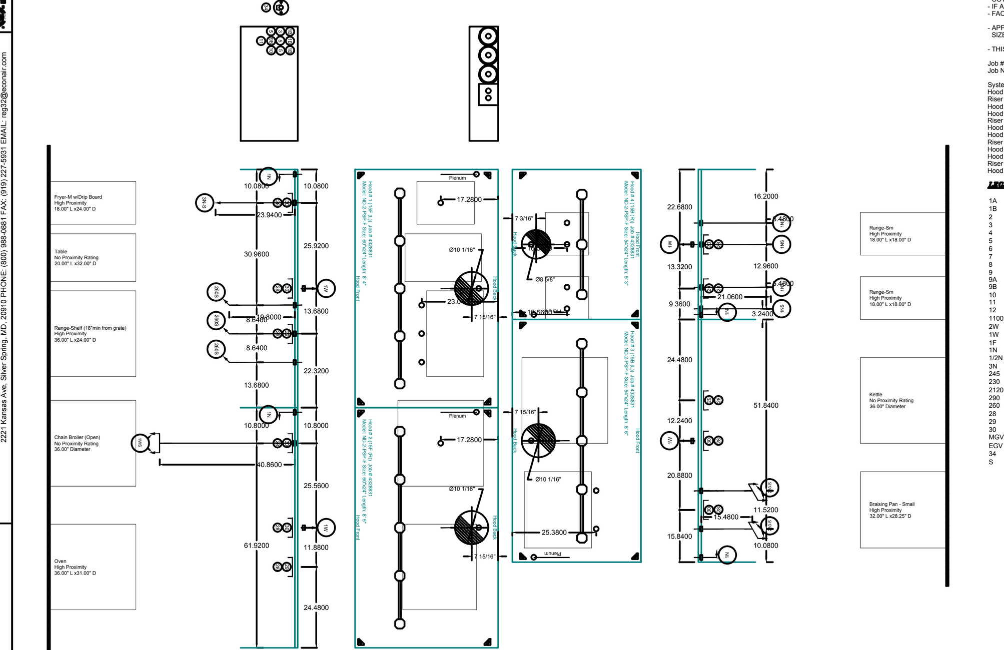
SECTION VIEW – MODEL 5424EX-2-PSP-F HOOD – #4 (15B (R))

SECTION VIEW – MODEL 6024EX-2-PSP-F HOOD – #1 (15F (L))

SHEET NO. 3

Fire System Information – Job#4328831

FIRE SYSTEM NO.	Tag	TYPE	SIZE	MAX FLOW POINTS	INSTALLATION SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/3.0/3.0	33	Wall Utility Cabinet Left	N/A



NOTES
- FIELD PIPE DROPS AS SHOWN
 SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE COVERING A RANGE, FRYER, OR WOK TO REFLECT GENERAL PIPING REQUIREMENTS.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

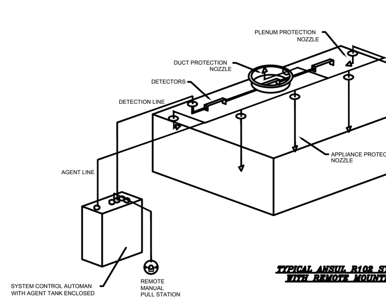
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

Job #: 4328831
Job Name: RKTD - MK - Allen, TX

System Size: ANSUL-3.0/3.0/3.0-WC Total FP required: 31
Hood # 1 8' 4.00" Long x 60" Wide x 24" High
Riser # 1 Size: 14" Dia.
Hood # 1 Metal Blow-Off Caps included.
Hood # 2 8' 5.00" Long x 60" Wide x 24" High
Riser # 1 Size: 14" Dia.
Hood # 2 Metal Blow-Off Caps included.
Hood # 3 8' 6.00" Long x 54" Wide x 24" High
Riser # 1 Size: 14" Dia.
Hood # 3 Metal Blow-Off Caps included.
Hood # 4 5' 3.00" Long x 54" Wide x 24" High
Riser # 1 Size: 12" Dia.
Hood # 4 Metal Blow-Off Caps included.

LEGEND – FIRE CABINET ANSUL SYSTEM

1A	1.5 GALLON TANK
1B	3 GALLON TANK
2	OEM AUTOMAN RELEASE
3	OEM REGULATED RELEASE
4	OEM REGULATED ACTUATOR
5	ANSULEX LIQUID AGENT (3 GAL.)
6	ANSULEX LIQUID AGENT (1.5 GAL.)
7	CARTRIDGE (101-20)
8	CARTRIDGE (101-10)
9	CARTRIDGE (101-30)
9A	CARTRIDGE (LT-A-101-30)
9B	DOUBLE TANK CARTRIDGE
10	TEST LINK
11	DOUBLE MICROSWITCH
12	HOSE ASSEMBLY
1100	DUCT NOZZLE (430913)
2W	DUCT NOZZLE (419337)
1W	NOZZLE ASSEMBLY (419336)
1F	NOZZLE ASSEMBLY (419333)
1N	NOZZLE ASSEMBLY (419335)
1/2N	NOZZLE ASSEMBLY (419334)
3N	NOZZLE ASSEMBLY (419338)
245	NOZZLE ASSEMBLY (419340)
230	NOZZLE ASSEMBLY (419339)
2120	NOZZLE ASSEMBLY (419343)
290	NOZZLE ASSEMBLY (419342)
260	NOZZLE ASSEMBLY (419341)
28	DETECTOR BRACKET
29	LOW TEMP FUSIBLE LINK
30	HIGH TEMP FUSIBLE LINK
MGV	MECHANICAL GAS VALVE
EGV	ELECTRICAL GAS VALVE
34	REMOTE MANUAL PULL STATION
S	SWIVEL ADAPTOR



TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN

CUSTOMER APPROVAL TO MANUFACTURE:

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

VERIFY MAKE/MODEL OF ALL COOKING APPLIANCES BENEATH HOOD PRIOR TO FABRICATION. CHANGES TO COOKING EQUIPMENT SPECIFICATION MAY RESULT IN ADDITIONAL FIRE SUPPRESSION SYSTEM INSTALLATION CHARGES.

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.

FIRE SUPPRESSION SYSTEM DETAILS

SHEET NO. 4

EXHAUST FAN INFORMATION – Job#4328831

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	MOTOR ENCL.	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1		EA-USBI30BD-RM	6308	1.650	873	ODP,PREMIUM	5.000	3.3110	3	208	15.0	1475 FPM	986	25

MUA FAN INFORMATION – Job#4328831

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	MOTOR ENCL.	H.P.	B.H.P.	Ø	VOLT	FLA	MCA	MOCP	WEIGHT (LBS.)	SONES
2		EA2-D.250-G15	G15-PB	A2-D.250	2500	5063	0.500	1045	ODP,PREMIUM	5.000	3.4930	3	208	15.0	18.8A	30A	717	19.8

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2		275433	253398	48 deg F	7 in. w.c. - 14 in. w.c.	Natural	92

FAN OPTIONS

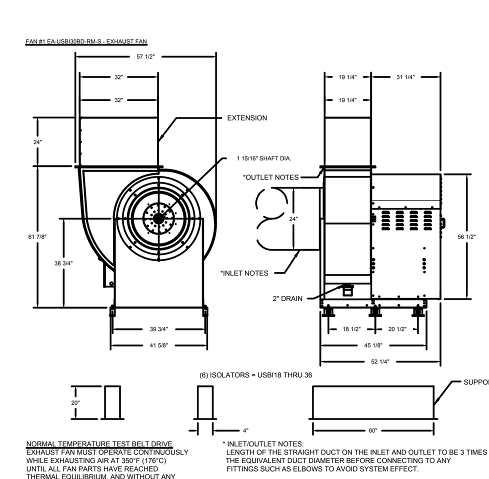
FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1		1 - BI30 - Inlet Service Duct Connection. Used to connect to standard 24" Grease Duct or Field Welded Duct. Includes (2) 7" risers bolted to standard inlet riser.
		1 - Utility Set Grease Cup
		1 - BI30 - 24" Discharge Extension.
		1 - BI - Discharge Orientation Vertical Upper Left - CW Inlet Side.
		1 - BI30 - Inlet Connection Standard 24" Flanged Grease Duct.
		1 - Utility Set - Spring Vibration Isolators - BI24 Thru BI30 / Equivalent Sized Utility Set - Indoor/Outdoor use.
2		1 - Motorized Backdraft Damper for A2-D Housing
		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

FAN ACCESSORIES

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

CURB ASSEMBLIES

NO.	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	62 LBS	Rail	4.000"W x 60.000"L x 20.000"H Comes as a set of 2.
2	# 2	80 LBS	Curb	31.000"W x 79.000"L x 20.000"H Insulated



NORMAL TEMPERATURE TEST BELT DRIVE
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 350°F (176°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

* INLET/OUTLET NOTES:
LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

FEATURES:
- ROOF MOUNTED FANS
- UL705
- UL762 AND ULC-S645 (RESTAURANT MODEL)
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C)
- HIGH HEAT OPERATION BELT DRIVE 350°F (176°C)
- HEAT SLINGER
- WEATHERPROOF DISCONNECT
- GREASE CLASSIFICATION TESTING
- 2" DRAIN
- MOTOR WEATHER COVER
- FULLY SEALED SCROLL HOUSING
- SCROLL ACCESS DOOR
- FLANGE 1 1/4" - 11 THRU 20.
- FLANGE 2" - 24 THRU 36.

OPTIONS
BI30 - INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 24" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER.
UTILITY SET GREASE CUP.
BI30 - 24" DISCHARGE EXTENSION.
BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
BI30 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT.
UTILITY SET - SPRING VIBRATION ISOLATORS - BI24 THRU BI30 / EQUIVALENT SIZED UTILITY SET - INDOOR/OUTDOOR USE.

CUSTOMER APPROVAL TO MANUFACTURE:

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

NOTES

DRAWING CONTAINS IMPORTANT INFORMATION FOR COORDINATION WITH M/E/P ENGINEER

KITCHEN FAN DETAILS

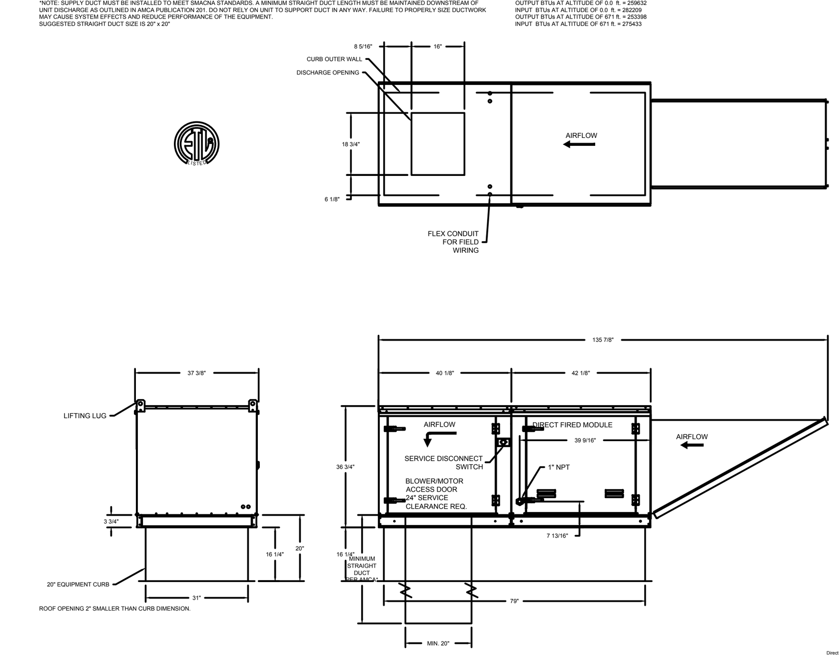
SHEET NO. 5

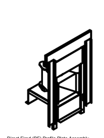
FAN #2 EA2-D.250-G15 - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 15" BLOWER
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED
5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE
8. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.

*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 201. 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 20" x 20"

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 27°F. TEMP. RISE = 48°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY
OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 259632
INPUT BTUs AT ALTITUDE OF 0.0 ft. = 282209
OUTPUT BTUs AT ALTITUDE OF 671 ft. = 253398
INPUT BTUs AT ALTITUDE OF 671 ft. = 275433





Direct Fired (DF) Profile Plate Assembly

SHEET NO. 6

Foodservice Consultant:
Concept Magik
FoodService Design & Business Consultants
18913 Coral Grove Terrace
Germantown, MD 20854
Tel: 301-515-7999
email: vjo@concept-magik.com
www.concept-magik.com

Seal

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
VIJAY OZA
FCSI
706377
PROFESSIONAL MEMBER

Project

FOODSERVICE EQUIPMENT LAYOUT

RADHA KRISHNA TEMPLE

1450 N. WATTERS ROAD
ALLEN, TX 75013

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER CM170123

SCALE NONE

DRAWN TCG

DATE 06/05/2020

SHEET DESCRIPTION

FOODSERVICE EXHAUST HOOD DETAILS

SHEET NUMBER

FS-1H