HOOD INFORMATION – JOB#4910779

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	HD-1 (FRY)	3347 BD-2	CAPTIVEAIRE	3' 6"	450 DEG	I	MEDIUM	171	600			4"	8"	600	1719	-0.568"	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	HD-1 (FRY)	CAPTRATE SOLO FILTER	2	16"	20"	85% SEE FILTER SPEC	1	L55 SERIES E26	NO							YES	228 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	HD-1 (FRY)	FIELD WRAPPER 30.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 60.00" HIGH X 43.00" LONG 430 SS VERTICAL.
		BACKSPLASH 114.00" HIGH X 18.00" LONG 430 SS VERTICAL.
		RIGHT SIDESPLASH 80.00" HIGH X 34.00" LONG 430 SS VERTICAL.
		BACK STANDOFF (FLAT) 1" WIDE 43" LONG.
		RIGHT END STANDOFF(FIN/SLP) 1" WIDE 33" LONG INSULATED.
		LEFT QUARTER END PANEL 24" TOP WIDTH, 0" BOTTOM WIDTH, 24" HIGH 430 SS.
		RIGHT QUARTER END PANEL 24" TOP WIDTH, 0" BOTTOM WIDTH, 24" HIGH 430 SS.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 3IN DBL.
		SENSOR-CV.

EXHAUST FAN INFORMATION – JOB#4910779

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	KEF 1	1	DU50HFA	CAPTIVEAIRE	600	0.600	1124	TEAO-ECM	0.500	0.1420	1	208	3.8	228 FPM	77	9.2

FAN OPTIONS

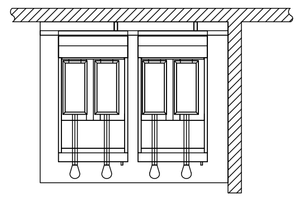
FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF 1	1	GREASE BOX.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
		1	2 YEAR PARTS WARRANTY.

FAN ACCESSORIES

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

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1		CURB ADP	17 LBS	EXHAUST ADAPTER	FROM 19.500"SQ TO 19.500"SQ X 11.000"H.



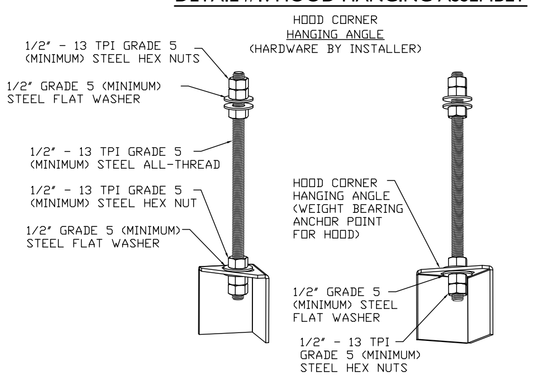
Frymaster Model FPH155 Dimensions:
45.63(h) x 15.63(w) x 29.63(d)

COOKING EQUIPMENT LAYOUT

DUCTWORK #1 PARTS – JOB#4910779 DUCT RUN

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW0817LT	600				-0.0131	4.68	1718.87	1	SINGLE WALL DUCT 8" DIAMETER, 17" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P2	DW0830AJDKIT	600				-0.0139	10.21	1718.87	1	SINGLE WALL DUCT ADJUSTABLE, 8" DIAMETER, 29.5" LONG, FLANGE AT ONE END WITH A 8" ADJUSTABLE COLLAR – STAINLESS STEEL.
P3	DW0845ASY	600				-0.0364	3.48	1718.87	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 8" DUCT, ASSEMBLY.
P4	DW0811LT	600				-0.0086	3.13	1718.87	1	SINGLE WALL DUCT 8" DIAMETER, 11" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P5	DW0804LT	600				-0.0031	1.29	1718.87	1	SINGLE WALL DUCT 8" DIAMETER, 4" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P6	DW0818AJDKIT	600				-0.0063	6.80	1718.87	1	SINGLE WALL DUCT ADJUSTABLE, 8" DIAMETER, 17.5" LONG, FLANGE AT ONE END WITH A 8" ADJUSTABLE COLLAR – STAINLESS STEEL.
P7	DW08SUBRASY						2.34		1	DUCT SUPPORT BRACKET KIT, 8" DUCT, USED FOR HANGING DUCT. 12 GA STEEL, CLEAR ZINC COATING. – 2 RINGS, 4 BRACKETS, & HARDWARE BAG 2.
P8	DW0845ASY	600				-0.0448	3.48	1718.87	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 8" DUCT, ASSEMBLY.
P9 ASSEMBLED W/P10	DW0823LT	600				-0.018	6.24	1718.87	1	SINGLE WALL DUCT 8" DIAMETER, 23" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P10 ASSEMBLED W/P9	DW1908TP	600					6.62	1718.87	1	DUCT TO CURB TRANSITION, 19-1/2" CURB TO 8" DUCT, 16 GA ALUMINIZED STEEL. MISC. NON-STANDARD TRANSITION PLATE. FOR USE WITH EXHAUST FAN.
SYSTEM AT P10						-0.7122	0.00			
	3M-2000PLUS						0.80		2	DUCT – 3M FIRE BARRIER 2000 PLUS SILICONE – USED AS SEALANT TO SEAL DUCT JOINTS.
	DW08CLASY						0.70		8	DUCT "V" CLAMP, 8" DUCT WITH NEW DESIGN 14 GA BRACKETS, ASSEMBLY.
TOTAL WEIGHT							55.47			

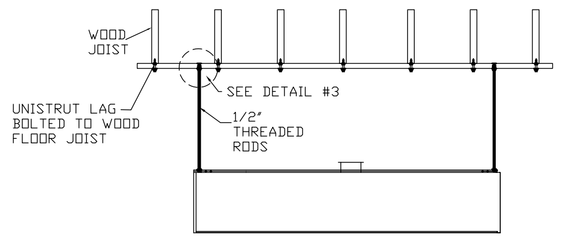
DETAIL #1: HOOD HANGING ASSEMBLY



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.

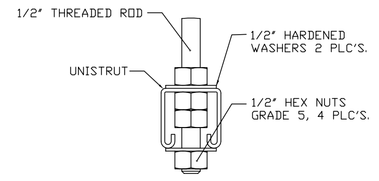
DETAIL# 2: HOOD SUPPORT



HOOD SUPPORT REQUIREMENTS	
HOOD LENGTH	NUMBER OF HANGING POINTS
3'-7"	4

DETAIL #3: HANGING ROD TO UNISTRUT

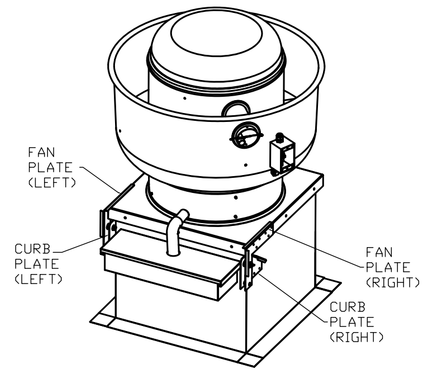
(HARDWARE BY INSTALLER)



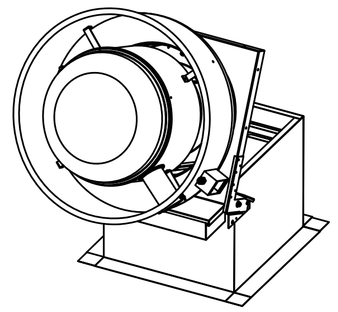
SITE / ROOF PLAN VIEW

SCOPE OF WORK
EXISTING RESTAURANT REPLACING TURBO OVEN/FRYER WITH NEW ELECTRIC FRYERS. NEW HOOD INSTALL FOR FRYERS & NEW ELECTRIC FOR HOOD & FRYERS.

CLOSED POSITION



OPEN POSITION



GREASE FAN DETAIL

RESPONSIBILTY MATRIX

A) REQUIREMENTS FOR FOOD SERVICE CONTRACTOR (F.E.C./HOOD INSTALLER)
1) HOOD & ALL ASSOCIATED EXHAUST IS PROVIDED & INSTALLED BY HOOD REPRESENTATIVE.
2) HOOD SYSTEM TO BE STARTED UP BY CONTRACTOR
   A) SMOKE TEST ON THE HOODS IN FRONT OF THE OWNER TO ENSURE SATISFACTION WITH COOKING EQUIPMENT ON.
3) HOOD & ANSUL PERMIT DRAWINGS TO BE PROVIDED BY REPRESENTATIVE AND SUBMITTED UNLESS REQUESTED DIFFERENTLY BY ARCHITECT OR OWNER.
4) SET CURB & FANS AS SHOWN ON DRAWINGS
5) INSTALLER TO ENSURE ALL HOOD AND FAN ACCESSORIES ARE INSTALLED SUCH AS GREASE CUPS, HINGE KITS, AND ANY OTHER MISC. ITEMS SHIPPED WITH THE PRODUCT.
6) INSTALL CAPTIVE-AIRE LISTED STAINLESS STEEL GREASE DUCT FROM HOOD TO FAN.
7) INSTALL QTY (2) LAYERS OF FIREWRAP ON GREASE DUCT.
8) MOUNT FACTORY SUPPLIED CABINET TO WALL IN BACK.

B) NOTES (REQUIREMENTS) FOR ELECTRICIAN;
1) FIELD WIRE FROM BUILDING PANEL 1 PHASE (120V) POWER FOR EXHAUST FAN TO THE DISCONNECT ON THE EXHAUST.
2) THEN WIRE THE C,A,S, SUPPLIED BRAIDED WIRE FROM EXHAUST FAN TO PIA & PIB OF THE HOOD CONTROL PANEL AT CABINET IN BACK ROOM.
3) FIELD WIRE FROM BUILDING PANEL TO CAPTIVE AIRE CONTROLS CABINET (WALL MOUNTED) 1 PHASE, 115V. CIRCUIT TO BE USED FOR LIGHTS & CONTROLS CIRCUITRY.
4) WIRE RED/BROWN WIRES ON ANSUL CABINET TO CAPTIVE-AIRES CONTROL PANEL C1 & AR1 TERMINAL IF NOT ALREADY DONE AT FACTORY.
5) FIELD WIRE THE DUCT SENSORS LOCATED IN EXHAUST COLLARS TO CAPTIVE AIRE CABINET. CAPTIVE AIRE SUPPLIES THE WHITE STAT WIRE & SHIPPED IN CABINET
6) FIELD WIRE & INSTALL ROOM SENSOR SUPPLIED BY CAPTIVE AIRE. MOUNT SENSOR 6' AWAY FROM HOOD UP HIGH. STAT WIRE PROVIDED BY CAPTIVE AIRE.
7) FIELD WIRE THE BUILDING ALARM SYSTEM (IF APPLICABLE) INTO THE ANSUL MICRO SWITCH LOCATED AT THE RIGHT END OF THE HOOD.
8) IF ANY ELECTRIC UNDER HOOD, BREAKER MUST BE OF SHUNT TRIP TYPE & ELECTRICIAN TO WIRE FROM ST & N1 TERMINALS OF HOOD PANEL TO SHUNT TRIP DEVICE BY OTHERS

C) GENERAL CONTRACTOR (GC/OWNER) RESPONSIBILITIES;
1) GC/OWNER IS RESPONSIBLE TO HOLD A COORDINATION MEETING WITH ALL TRADES TO ENSURE UNDERSTANDING OF REQUIREMENTS AND MAKE SURE THERE ARE NO CONFLICTS THROUGHOUT THE PROJECT & ASSIST AS REQUIRED
2) GC/OWNER IS RESPONSIBLE FOR ANY BUILDING CONSTRUCTION CHANGES OR STRUCTURAL REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO: HOOD WALL READY TO ACCEPT WALL STAINLESS & HOOD, ANY REQUIREMENTS TO HEAD OFF JOIST FOR DUCT ROUTING, ANY STRUCTURAL SUPPORTS REQUIRED TO SHORE UP BUILDING OR STRUCTURE, AND ANY FINISHED CEILING WORK, CEILING WORK, DEMO, OR COSMETIC & PATCHING WORK.
3) PROVIDE A WORKING CONSTRUCTION SCHEDULE TO ALL TRADES. ALSO TO ENSURE AREA IS COMPLETELY CLEARED OUT TO ALLOW WORK TO BE PREFORMED.
4) GC/OWNER RESPONSIBLE FOR ANY BUILDING, ELECTRICAL PERMITS. ENSURE CABINETS REMOVED & WALL STAINLESS TO BE MOUNTED ON WALL BEHIND & RIGHT OF HOOD.
5) GC/OWNER TO MAKE SURE ALL SMALLWARES & EXISTING EQUIPMENT ETC IS REMOVED PRIOR TO INSTALL.
6) ROOF FLASHING BY GC/OWNER'S CONTRACTOR.

GREASE DUCT SPECIFICATION – SINGLE WALL

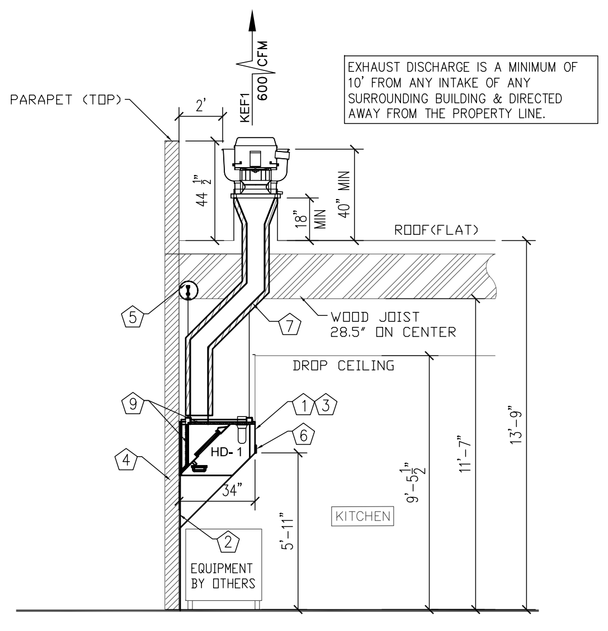
FURNISH SINGLE-WALL, FACTORY BUILT, GREASE DUCT FOR USE WITH TYPE I KITCHEN HOODS, WHICH CONFORMS TO THE REQUIREMENTS OF NFPA-96.
PRODUCTS SHALL BE ETL LISTED TO UL-1978 FOR VENTING AIR AND GREASE VAPORS FROM COMMERCIAL COOKING OPERATIONS AS DESCRIBED IN NFPA-96.
THE DUCT WALL SHALL BE CONSTRUCTED OF .036 THICK TYPE 430 STAINLESS STEEL AND BE AVAILABLE IN DIAMETERS 8" THROUGH 24".
ALL SUPPORTS, FAN ADAPTERS, HOOD CONNECTIONS, FITTINGS AND EXPANSION JOINTS REQUIRED TO INSTALL GREASE DUCT SHALL BE INCLUDED.
ROOF PENETRATIONS SHALL COMPLY WITH LISTED CLEARANCE TO COMBUSTIBLES, SEE "CLEARANCE TO COMBUSTIBLES" GUIDE FOR DETAILS.
THE GREASE DUCT WILL TERMINATE AT THE FAN ADAPTER PLATE, WILL BE FULLY WELDED TO THE FAN ADAPTER PLATE AND THE FAN ADAPTER PLATE WILL BE FASTENED TO THE CURB USING A SUITABLY SIZED FASTENER PROVIDED BY OTHERS; SEE PAGE 12 OF THE "INSTALLATION, OPERATION AND MAINTENANCE MANUAL" FOR DETAILS.
GREASE DUCT JOINTS SHALL BE HELD TOGETHER BY MEANS OF FORMED VEE CLAMPS AND SEALED WITH 3M FIRE BARRIER 2000+. SCREWS USED TO SECURE THE VEE CLAMPS SHALL BE OF THE HEX-HEAD TYPE WITH FLANGED STOPS AND TAPERED "LEAD IN" THREADS FOR EASY STARTING. NUTS SHALL BE RETAINED BY MEANS OF A FREE-FLOATING CAGE TO ALLOW EASY ALIGNMENT.
SINGLE-WALL GREASE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S "INSTALLATION, OPERATION AND MAINTENANCE MANUAL", ETL LISTING AND STATE AND LOCAL CODES.
GREASE DUCT INSTALLED OUTSIDE OF THE BUILDING SHALL BE PROTECTED AGAINST ACCIDENTAL DAMAGE OR VANDALISM.
SUPPORT VERTICALLY INSTALLED GREASE DUCT FROM THE BUILDING STRUCTURE USING RIGID STRUCTURAL SUPPORTS. ANCHOR SUPPORTS TO THE STRUCTURE BY WELDING OR BOLTING STEEL EXPANSION ANCHORS OR CONCRETE INSERTS. SUPPORT HORIZONTALLY INSTALLED GREASE DUCT FROM THE BUILDING STRUCTURE USING ABOVE METHOD OR USE DUCT MATE, WIRE ROPE & CLUTCHERS, PART NUMBERS WR20 & CL20. 1/2" THREADED ROD AND SADDLES MAY ALSO BE USED FOR THE SUPPORT OF HORIZONTAL GREASE DUCT.
FANS SHALL BE SUPPORTED INDEPENDENTLY FROM THE GREASE DUCT SECTIONS. PROTECT GREASE DUCT FROM TWISTING OR MOVEMENT CAUSED BY FAN TORQUE OR VIBRATION.

DATE:	
	7/11/21
DRAWN BY:	
	JAH
SCALE	
	NONE
REVISION	DATE

SKYLINE
6290 PRENTISS SCHOOL DRIVE
CANAL WINCHESTER, OHIO 43110
NEW COMMERCIAL HOOD IN KITCHEN

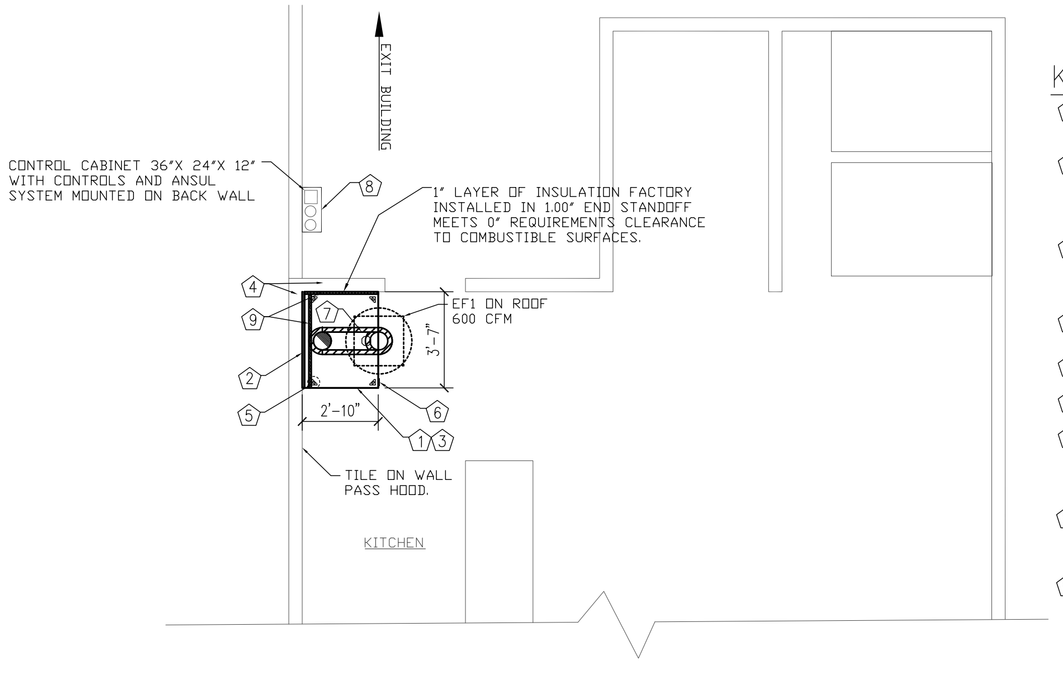
MANAGED BY:
AIR SOLUTIONS, INC.
1329 E. KEMPER RD
CINCINNATI, OH 45246
PH: (513) 860-5555

SHEET NO:
H-1



ELEVATION VIEW - HOOD #1 (HD-1)

SCALE: 1/4" = 1'-0"



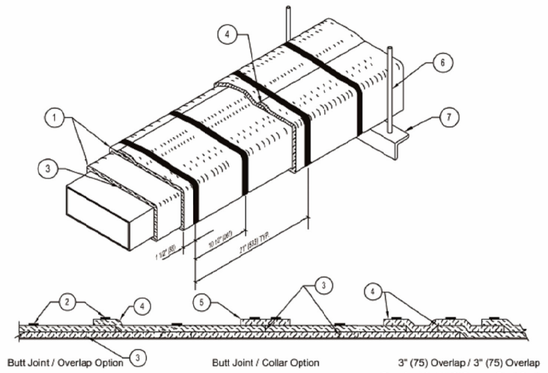
PLAN VIEW - HOOD #1 (HD-1)

SCALE: 1/4" = 1'-0"

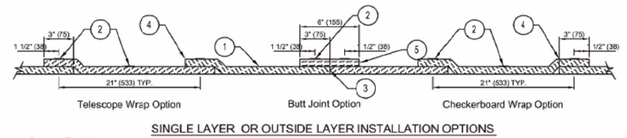
Key Notes

1) CAPTIVE-AIRE ETL LISTED HOOD IN ACCORDANCE TO UL710 SEE CAPTIVE-AIRE SHOP DWGS.
2) STAINLESS STL. WALL PANEL BELOW & BEHIND HOOD FROM FLOOR TO CEILING. ALSO THE HOOD TO LEFT. (MINIMUM). TILE INSTALLED TO THE LEFT & RIGHT OF HOOD.
3) LOW PRIORITY TYPE HOOD TO UNDERHANG COOKING EQUIPMENT FROM COOKING SURFACE (SEE CAPTIVE-AIRE LISTING SHEET).
4) WOOD STUD WITH SHEET ROCK & SS & TILE (EXTERIOR WALL).
5) HANGING ROD (SEE DETAILS #1, #2 & #3)
6) FAN/LIGHT SWITCH ON FACE OF HOOD.
7) 8" DIA CAPTIVE-AIRE LISTED DUCT WITH QTY (2) LAYERS OF LISTED FIRE WRAP FOR ZERO CLEARANCE. (SEE FIREWRAP SPEC'S)
8) HOOD CONTROLS & ANSUL (UL300) WALL MOUNTED UP AT CEILING LEVEL (VERIFY LOCATION).
9) BACK, TOP, & RIGHT END OF HOOD TO BE FACTORY INSULATED & LISTED FOR ZERO CLEARANCE TO COMBUSTIBLES.

FireMaster® FastWrap® XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System
1 or 2 Hour Shaft Alternative / Zero Clearance to Combustibles



TWO LAYER INSTALLATION OPTIONS



SINGLE LAYER OR OUTSIDE LAYER INSTALLATION OPTIONS

System Details

FIGURE 1

1	Two Layers of FireMaster FastWrap XL Blanket for Grease Duct Enclosures One Layer of FireMaster FastWrap XL Blanket for Air Ventilation Duct Enclosures		
2	Steel banding minimum 1/2" (13) wide by 0.015" (0.4) thick.		
3	Tight butt joints on inner layer (ULC Grease Duct requires 3" (75) overlap)		
4	Min. 3" (75) overlap on perimeter and between adjacent blanket on outside layer		
5	Optional 6" FireMaster FastWrap XL collar		
	System Details	6 - Hangers	7 - Trapeze Supports
	Grease Duct - per ASTM E2336	Min 3/8" (5) Rod	Min. 2"(50) x 2" (50) x 1/8" (3) angle
	Grease Duct - per ULC Protocol	Min 1/2" (13) Rod	Min. 2"(50) x 2" (50) x 3/16" (5) angle
	Grease Duct - per ULC Protocol with Maximum Area155 in2 (0.1 m2)	Min 3/8" (5) Rod	Min. 1-1/2" (38) x 1-1/2" (38) x 5/32" (4) angle
	HVAC Duct - per ISO 6944	Min 1/2" (13) Rod	Min. 2"(50) x 2" (50) x 3/16" (5) angle
	HVAC Duct - per ISO 6944 with Maximum Area 387 in2 (0.25 m2)	Min 3/8" (5) Rod	Min. 1-1/2" (38) x 1-1/2" (38) x 5/32" (4) angle

The integrity of Firmaster duct systems is limited to the quality of the installation.

FMDEL001-3

AIR BALANCE SCHEDULE

TAG	ROOMS SERVED	O.A. CFM	EXHAUST CFM
EF-1 (NEW)	KITCHEN	+	- 600
EXIST. RTU-1 (8.5 TON)	BUILDING	+ 600 (MIN)	-
EXIST. RTU-2 (10 TON)	BUILDING	+ 200 (MIN)	-
EXIST. RTU-3 (3 TON)	BUILDING	+ 300 (MIN)	-
EXIST. RESTROOM	TOILETS	+	- 150
EXIST. EF-2	KETTLE	+	- 2133
EXIST. SF-1	KETTLE	+ 1400 (MIN)	-
	NET	+117 CFM	

KITCHEN TO MAINTAIN A SLIGHTLY NEGATIVE PRESSURE. OVERALL BUILDING PRESSURE TO BE BETWEEN -0.02" TO +0.02" WC PER IMC COMMENTARY RECOMMENDATIONS

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

ETL LISTED FILE# 3054804-001

HOOD SYSTEM IS FABRICATED & DESIGNED PER UL-710 STANDARDS

FISCHER ENGINEERING SERVICES, LLC
MECHANICAL DESIGN & CONSULTING SERVICES
3872 Nottingham Ct.
Cleves, Ohio 45002
Ph: 513-675-1559