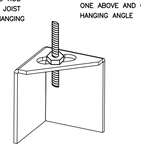
ND-2 HANGING ANGLE DETAIL

1/2" DIA. ALL THREAD ROD CONNECTED TO ROOF JOIST THROUGH ANOTHER HANGING ANGLE

1/2" DIA. HEAVY DUTY NUT ONE ABOVE AND ONE BELOW HANGING ANGLE



*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR
HANGING ANGLE IS PRE-PUNCHED AT FACTORY

HANGING ANGLE LOCATIONS

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24"H)	DIM FROM FRONT (30"H)
CANOPY ND2	4.166"	2.246"	2.246"
ND2-PSP-F	4.166"	2.246"	2.246"
BACKSHELF BD-2	4.166"	2.246	–
VHB/VHB-G	36"X36"	42"X42"	48"X48"
FRONT/BACK DIMS BY SIZE	2.246"	2.246"	2.246"

CALCULATIONS UTILIZED

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)

SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED

TOTAL DUCT AREA=144 X $\frac{\text{CFM}}{\text{FPM(*)}}$

DUCT LENGTH= $\frac{\text{TOTAL DUCT AREA}}{\text{DUCT DEPTH}}$

*CAPTIVE-AIRE DUCT CONNECTION SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1500-1800 FPM AND A SUPPLY VELOCITY OF 300-400 FPM.

BUILDING CODES

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

#3054804-001
& #3054804-002

STANDARD 710

Intertek

BUILT IN ACCORDANCE WITH NFPA No. 96

Listed under ETL File number 3054804-001/002

CLEARANCE TO COMBUSTIBLES

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED
LIMITED-COMBUSTIBLE	3" UNINSULATED STANDOFF
COMBUSTIBLE	1" INSULATED STANDOFF

GENERAL NOTES

INSTALLATION

1. ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
2. ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
3. HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGER MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
4. ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTOR'S PLANS.
5. COOKING EQUIPMENT TO SHUTOFF IN EVENT OF FIRE.
6. EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
7. ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PREWIRED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
8. LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
9. SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
10. INSTALLING CONTRACTORS ASSUME ALL RELATED REPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

BALANCE

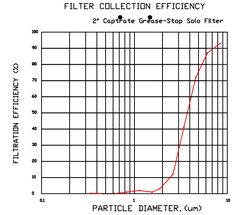
11. KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.
12. KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DINING AREA.
13. RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

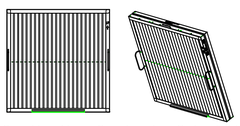
ADDITIONAL

14. WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
15. SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

FILTER DETAIL

FILTER COLLECTION EFFICIENCY





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

HOOD INFORMATION – JOB#5100636

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	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	H1	5430 ND-2-PSP-F	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	214	2250	10"	22"	4"		2250	1473	-0.683"	1800	430 SS WHERE EXPOSED	ALONE	ALONE

FOR QUESTIONS, CALL THE
HBT Foodservice
REGION 98
PHONE: (816) 221-8575
EMAIL: reg98@captiveaire.com

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	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	H1	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	LEFT	12"x54"x30"	TANK FS	4.0/4.0			YES	1099 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H1	RIGHT END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 45" HIGH 430 SS.
		LEFT END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 45" HIGH 430 SS.
		WRAPPER CHANNEL - FRONT, LEFT, RIGHT.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		RISER SENSOR INSTALL 6IN PLEN.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	H1	Front	138"	14"	6"	MUA	12"	28"		600	0.139"
						MUA	12"	28"		600	0.139"
						MUA	12"	28"		600	0.139"

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.

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.

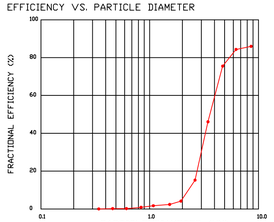
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

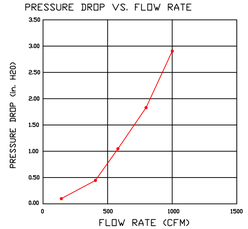
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. 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 #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

BUILT IN ACCORDANCE WITH NFPA No. 96

FOR QUESTIONS, CALL THE:
KANSAS CITY REGIONAL OFFICE
1126 SWIFT STREET, KANSAS CITY, MO 64116
PHONE: (816) 221-8575
FAX: (816) 221-8311

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☐
Revise and Resubmit ☐

SIGNATURE _____
Your Title _____ Date _____

***** NOTE *****

ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NO ALLOWED.

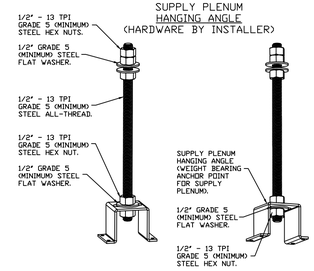
***** NOTE *****

HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTION.

***** NOTE *****

MAKEUP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOODS ABILITY TO CAPTURE AND CONTAIN.

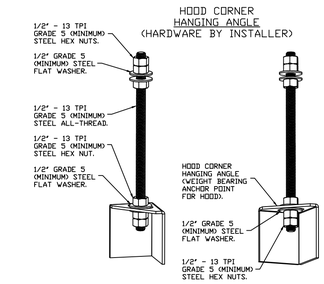
SUPPLY PLENUM
HANGING ANGLE
(HARDWARE BY INSTALLER)



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.

HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

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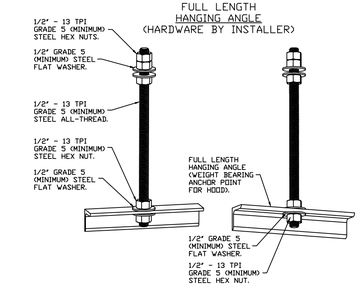
FULL LENGTH
HANGING ANGLE
(HARDWARE BY INSTALLER)



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.

RELEASED FOR CONSTRUCTION
REVISIONS
Plans Review
Equipment Services Department
Lee's Summit, Missouri
07/13/2022

DESCRIPTION	DATE
Joe Froggé	

CAPTIVE-AIRE
www.captiveaire.com
HBT Foodservice
104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-8311 EMAIL: reg98@captiveaire.com

Twisted Fresh - Summit at Pryor
LEES SUMMIT, MO, 64081

DATE: 10/11/2021

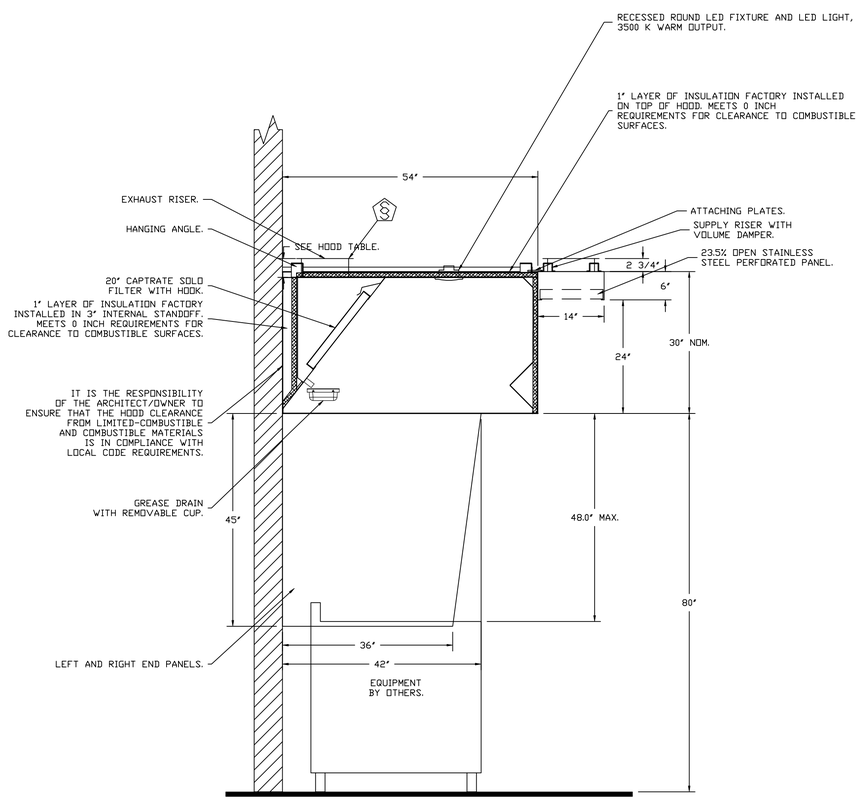
DWG.#: 5100636

DRAWN BY: dan.herten

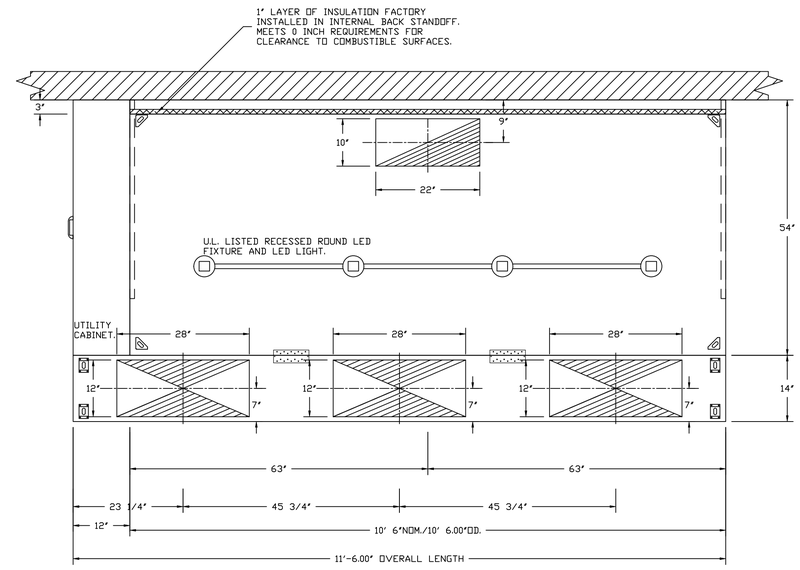
SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 1



SECTION VIEW – MODEL 5430ND-2-PSP-F
HOOD – #1 (H1)



PLAN VIEW – HOOD #1 (H1)
10' 6.00" LONG 5430ND-2-PSP-F

RELEASED FOR CONSTRUCTION
Subject to Field Inspection and Review
Development Services Department
Lee's Summit, Missouri
07/13/2022

REVISIONS

DESCRIPTION	DATE

CAPTIVE-AIRE
www.captiveaire.com
104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-8311 EMAIL: reg@captiveaire.com

HBT Foodservice

Twisted Fresh - Summit at Pryor
LEES SUMMIT, MO, 64081

DATE: 10/11/2021

DWG.#: 5100636

DRAWN BY: dan.herten

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 2

RELEASED FOR CONSTRUCTION
As Noted Review
Development Services Department
Lee's Summit, Missouri
07/13/2022

REVISIONS

DESCRIPTION	DATE

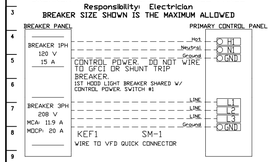
ELECTRICAL PACKAGE – JOB#5100636

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1	EC1	DCV-1111	WALL MOUNT IN SS BOX	05 - SS WALL MOUNT BOX	1 LIGHT 1 FAN	SMART CONTROLS DCV	KEF1	EXHAUST	3	3.000	208	9.5
							MAU-1	SUPPLY	3	2.500	208	5.7

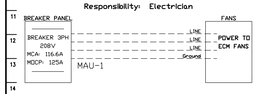
JOB NO 5100636 | MODEL NUMBER DCV-1111 | JOB NAME Twisted Fresh - Summit at Pry... | DRAWN BY | DATE 10/11/2021 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION:
Ground Control Ventilation, w/ control for 1 Exhaust fan, 1 Supply fan, Exhaust on in fire, Lights out in fire, Fans modules based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation/verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

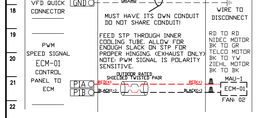
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



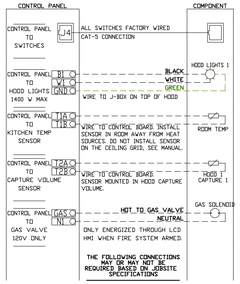
BREAKER PANEL TO FANS
Responsibility: Electrician

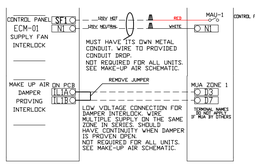


CONTROL PANEL TO FANS
Responsibility: Electrician

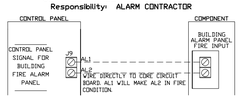


CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician





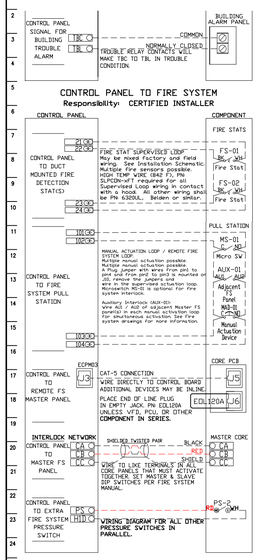
CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR



JOB NO 5100636 | MODEL NUMBER DCV-1111 | JOB NAME Twisted Fresh - Summit at Pry... | DRAWN BY | DATE 10/11/2021 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-2

DESCRIPTION OF OPERATION:
Ground Control Ventilation, w/ control for 1 Exhaust fan, 1 Supply fan, Exhaust on in fire, Lights out in fire, Fans modules based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation/verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

CONTROL PANEL TO FIRE SYSTEM
Responsibility: CERTIFIED INSTALLER



JOB NO 5100636 | MODEL NUMBER DCV-1111 | JOB NAME Twisted Fresh - Summit at Pry... | DRAWN BY | DATE 10/11/2021 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 40/40 (F3). Tank-based Fire Protection System equipped with Electronic Detection utilizing CORE board as a Listed Release Mechanism. Installed in Hood Utility Cabinet separate from prestre. Includes 12" box housing circuit board, batteries, and terminals for connection to main control panel.

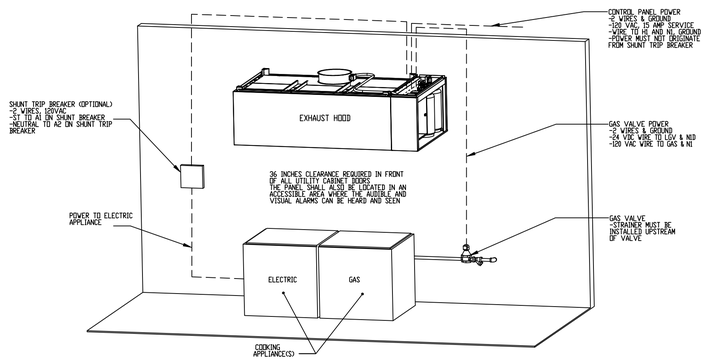
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 10 AMPS	IF 24 VDC - 2 WIRES & GROUND. N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



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

JOB NO 5100636 | MODEL NUMBER DCV-1111 | JOB NAME Twisted Fresh - Summit at Pry... | DRAWN BY | DATE 10/11/2021 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-4

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 40/40 (F3). Tank-based Fire Protection System equipped with Electronic Detection utilizing CORE board as a Listed Release Mechanism. Installed in Hood Utility Cabinet separate from prestre. Includes 12" box housing circuit board, batteries, and terminals for connection to main control panel.

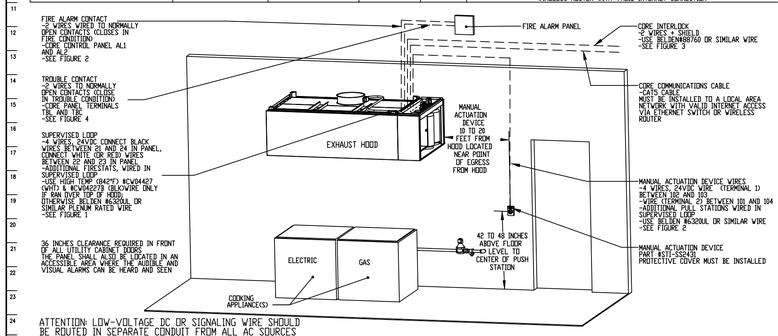
TANK PROTECTION LOW-VOLTAGE DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL WORKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 10 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-53518
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 10 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #CW34427 (WHT) & #CW34428 (BLK)WIRE OR SIMILAR ONLY. 1" RAN OVER TOP OF HOOD. OTHERWISE BELDEN #5320UL OR SIMILAR PLENUM RATED WIRE. SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL.
CORE INTERLOCK(S)	ILA, ILB, ILC	ILA, ILB, ILC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) ILA, TO CORE SYSTEM (2) ILA CORE SYSTEM (1) ILB, TO CORE SYSTEM (2) ILB CORE SYSTEM (1) ILC, TO CORE SYSTEM (2) ILC USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TDK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



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

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Twisted Fresh - Summit at Pryor
LEES SUMMIT, MO, 64081

DATE: 10/11/2021

DWG.#: 5100636

DRAWN BY: dan.herten

SCALE: 3/4" = 1'-0"

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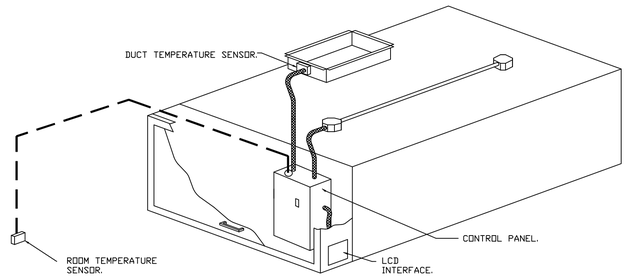
SHEET NO. 3

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.2.8 (2015).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. 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 INTERLOCK).
- 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 ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

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Lee's Summit, Missouri
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1		
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DATE: 10/11/2021

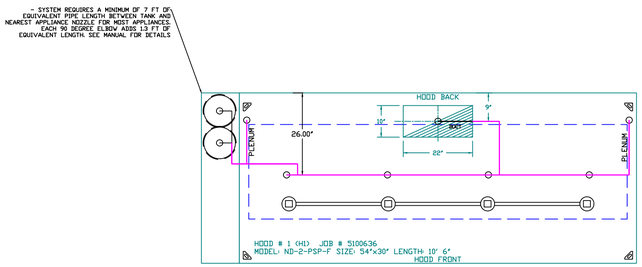
DWG.#: 5100636

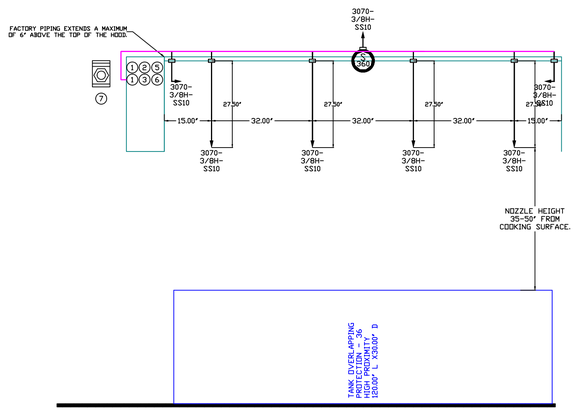
DRAWN BY: dan.herten

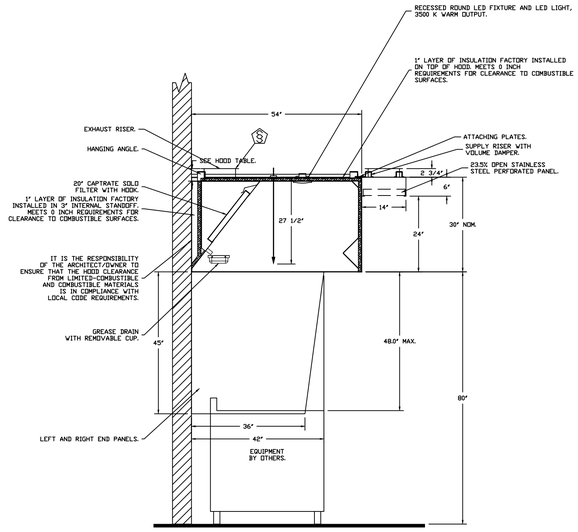
SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 4







SECTION VIEW - MODEL 5430ND-2-PSP-F HOOD - #1

NOTES
- FIELD PIPE DROPS AS SHOWN.
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED 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 #: 5100636.
JOB NAME: TWISTED FRESH - SUMMIT AT PRYOR.

SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 28.
HOOD # 1 10' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 10" x 22".
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE, TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST; ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES), ONE MECHANICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST.
EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

JOB #: 5100636.
JOB NAME: TWISTED FRESH - SUMMIT AT PRYOR.

SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 28.
HOOD # 1 10' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 10" x 22".

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.

FIRE SYSTEM INFORMATION - JOB#5100636

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1	FS	TANK FS	4.0/4.0	28	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

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

FIRE SYSTEM PARTS LIST KEY

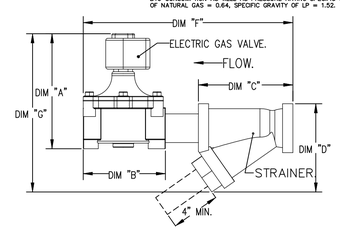
FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1	FS	0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300033-001 DIN CONNECTOR, CANFIELD PART #SJ560-201-EUDA, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 30377).	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRD PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	7	0
		0 - 0 - 9097209PC PRD PRESS PC611 1/2 PRESS TEE LD.	6	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	3	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - SLPCON-15FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 14' GAP OR BACK TO BACK HOODS. KIT CONTAINS 17 FEET OF BLACK MG WIRE, 17 FEET OF TAN MG WIRE, 15 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 3070-3/8H-10-SS NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, AND CHROME-PLATED PIPE)- 4 FLOW POINTS.	7	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	7	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	7	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

GAS VALVES AND STRAINERS

	GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1 →	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/ VERTICAL	8214280	4417K68	(SC)EGVA2

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.



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DRAWN BY: dan.herten

SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO. 5

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07/13/2022

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DESCRIPTION	DATE

EXHAUST FAN INFORMATION – JOB#5100636

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	KEF1	1	USBI18DD-RM	CAPTIVEAIRE	2250	3.000	1546	ODP,PREMIUM	3.000	1.9160	3	208	9.5	1153 FPM	423	25

MUA FAN INFORMATION – JOB#5100636

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	MAU-1	1	A1-E.362-16Z	16Z-1-MOD	A1-E.362	1000	1800	0.500	1931	ODP-ECM	2.500	0.8530	3	208	5.7	116.6A	125A	925	18.9

COILS – JOB#5100636

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING											HEATING									
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
2	MAU-1	DX	1800	93.0°F	76.0°F	70.7°F	66.9°F	---	---	---	---	60.0 MBH	40.8 MBH	19.2 MBH	---	---	---	---	---	---	---	---	---	---

ELECTRIC MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	DSGN KW'S	MAX KW'S	PHASE	VOLTS	AMPERAGE	TEMP RISE	OUTPUT BTUs
2	MAU-1	35	36	3	240	86.6	65 °F	122868

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF1	1	BI18 - INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 20" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER.
		1	UTILITY SET GREASE CUP.
		1	BI18 - 24" DISCHARGE EXTENSION.
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
		1	BI18 - INLET CONNECTION STANDARD 20" FLANGED GREASE DUCT.
		1	UTILITY SET - SPRING VIBRATION ISOLATORS - BI18 / EQUIVALENT SIZED UTILITY SET - INDOOR/OUTDOOR USE.
		1	2 YEAR PARTS WARRANTY.
2	MAU-1	1	AC INTERLOCK RELAY - 24VAC COIL.
		1	MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING. MEETS AMCA CLASS 1A RATING.
		1	INSULATION OPTION FOR VBANK FILTER SECTION.
		1	COOLING THERMOSTAT AND RELAY (NOT REQ FOR EVAP).
		1	SINGLE POINT CONNECTION - ELECTRIC HEATER - THREE PHASE - BLOWER & HEATER MUST BE THE SAME VOLTAGE & PHASE. IF A NON-DCV PREWIRE IS USED ON THE EH, #28, #47, MA OR E2 OPTION PREWIRE MUST BE SELECTED. DO NOT PROVIDE SUPPLY STARTER IN PREWIRE.
		1	CLOGGED FILTER SWITCH DRY CONTACT.
		1	DX COIL MODULE -1,000 TO 3,250 CFM (5 TON 1 CIRCUIT COIL).
		1	SIZE 1 ELECTRIC HEATER INDOOR HANGING OPTION. INCLUDES 2 HSA125 HANGING SPRING ISOLATORS PER UNI-STRUT.
		1	DXM 1-2 REFRIGERATION PARTS KIT - R410A.
		1	ECM WIRING PACKAGE-SUPPLY - PWM SIGNAL FROM ECPM03 PREWIRE (3 - PHASE ZIEHL MOTOR).
		1	2 YEAR PARTS WARRANTY.

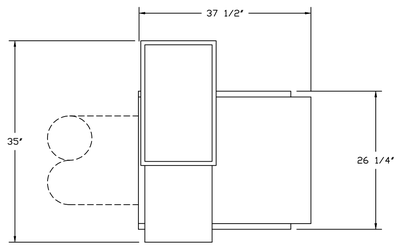
FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF1	YES						
2	MAU-1				YES		YES	

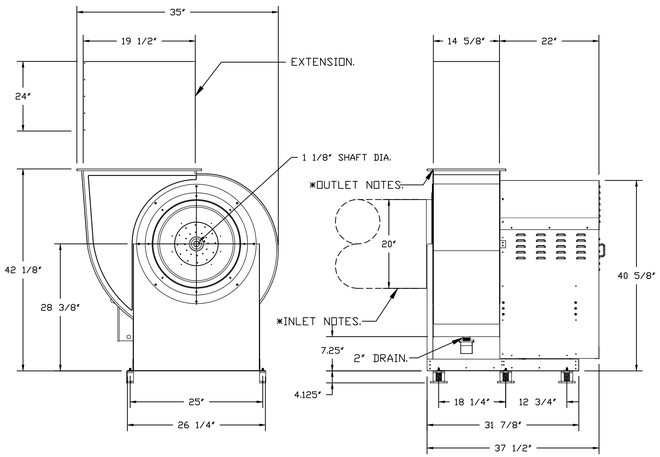
CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF1	25 LBS	RAIL	4.000"W X 48.000"L X 6.000"H ALONG WIDTH, RIGHT COMES AS A SET OF 2.

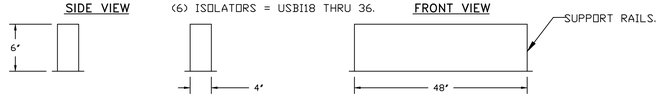
FAN #1 USBI18DD-RM - EXHAUST FAN (KEF1)



TOP VIEW



SIDE VIEW (6) ISOLATORS = USBI18 THRU 36. FRONT VIEW

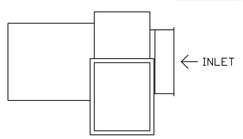


* INLET/OUTLET NOTES:
LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

NORMAL TEMPERATURE TEST DIRECT 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.

UNIT PLAN VIEW CORNER WEIGHTS:

93 LBS | 76 LBS



148 LBS | 106 LBS

CORNER WEIGHTS ARE CALCULATED BASED ON VERTICAL DISCHARGE. SUPPORT DUCT PROPERLY BEFORE FAN TO ENSURE CORNER WEIGHTS ARE NOT AFFECTED.

FEATURES:

- ROOF MOUNTED FANS.
- UL705.
- UL762 AND ULC-S645 (RESTAURANT MODEL).
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C).
- HEAT SLINGER.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- GREASE CLASSIFICATION TESTING.
- 2" DRAIN.
- MOTOR WEATHER COVER.
- FULLY SEALED SCROLL HOUSING.
- SCROLL ACCESS DOOR.
- FLANGE 1 1/4".

OPTIONS

BI18 - INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 20" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER.
UTILITY SET GREASE CUP.
BI18 - 24" DISCHARGE EXTENSION.
BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
BI18 - INLET CONNECTION STANDARD 20" FLANGED GREASE DUCT.
UTILITY SET - SPRING VIBRATION ISOLATORS - BI18 / EQUIVALENT SIZED UTILITY SET - INDOOR/OUTDOOR USE.
2 YEAR PARTS WARRANTY.

CAPTIVEAIRE
HBT Foodservice
www.captiveaire.com
104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-8311 EMAIL: reg9@captiveaire.com

Twisted Fresh - Summit at Pryor
LEES SUMMIT, MO, 64081

DATE: 10/11/2021

DWG.#: 5100636

DRAWN BY: dan.herten

SCALE: 3/4" = 1'-0"

MASTER DRAWING

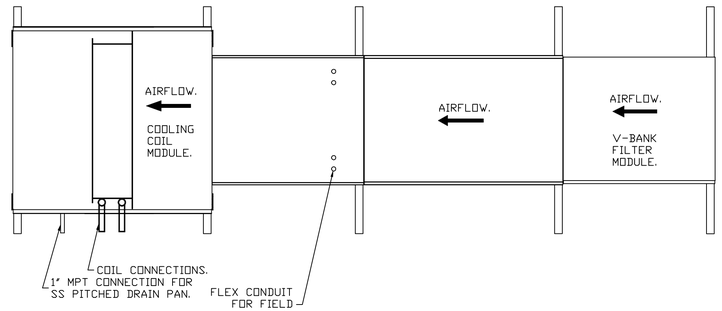
SHEET NO. 6

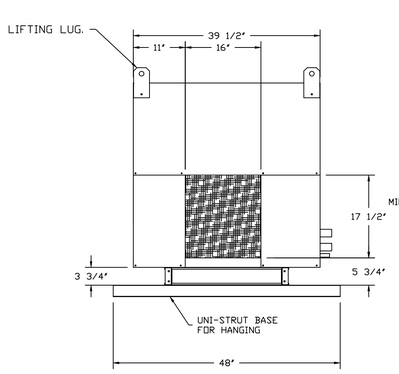
FAN #2 A1-E362-16Z - HEATER (MAU-1)
1. ELECTRIC HEATED MAKE UP AIR UNIT WITH 16" DIRECT DRIVE FAN AND A 3 STAGES TOTAL, 1 MODULATING, 36KW 240 - 3 COIL.
2. V-BANK EZ FILTERS - INDOOR.
3. SIDE DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. COOLING INTERLOCK RELAY. 24VAC COIL. 120V CONTACTS. LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
5. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TF8120S ACTUATOR INCLUDED.
6. "INSULATION" FOR V-BANK INTAKE OPTION.
7. DX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85°F.
8. SINGLE POINT CONNECTION FOR THREE PHASE ELECTRIC HEATERS - NOT USED WITH MULTIPLE HEAT MODULES.
9. CLOGGED FILTER SWITCH.
10. DX COIL MODULE FOR SIZE 1 MODULAR FANS - 1,000 THRU 3,250 CFM (5 TON - 1 CIRCUIT DX COIL, 4EZ0802H-31.5X27.0) NOT BUILT WITH OPP SIDE CONTROLS. DXM1-2
CONDENSER AND CONDENSER DISCONNECT (UNLESS PROVIDED ON QUOTE) WILL BE INSTALLED, STARTED AND WARRANTED BY OTHERS. R410A REFRIGERANT AND PIPING BY OTHERS. ENSURE DX-KIT IS ORDERED FOR FILTER DRIER, SIGHT GLASS, THERMAL EXPANSION VALVE. (OLD HEATCRAFT COIL # 5EN0903B-31.5X27.0).
11. INDOOR HANGING CRADLE FOR THE SIZE 1 ELECTRIC HEATER. 2 HSA125 HANGING ISOLATORS PER UNI-STRUT INCLUDED.
12. DX 1-2 KIT R410A. SINGLE CIRCUIT 5 TON. INCLUDES FILTER DRIER, SIGHT GLASS, AND THERMAL EXPANSION VALVE FOR DX UNITS. INSTALLATION BY OTHERS. INCLUDES R410A TXV.
INSTALLATION BY OTHERS. INCLUDES R410A TXV.
13. ECM WIRING PACKAGE FOR ZIEHL SUPPLY MOTORS WITH PWM SIGNAL FROM ECPM03 PREWIRE.
14. 2 YEAR PARTS WARRANTY.

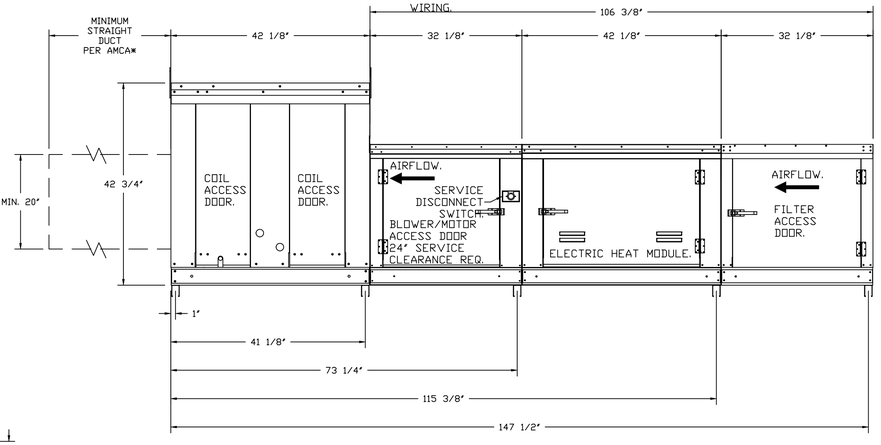
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 20" x 20".

SUPPLY SIDE HEATER INFORMATION:

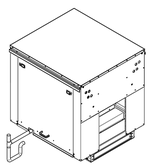
WINTER TEMPERATURE = 10°F. TEMP. RISE = 65°F.
KWs CALCULATED OFF ACTUAL AIR DENSITY.
KWs AT ALTITUDE OF 0.0 FT. = 37.
KWs AT ALTITUDE OF 973 FT. = 35.



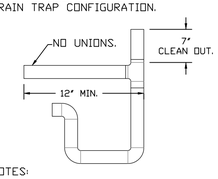




TYPICAL DRAIN TRAP INSTALL



RECOMMENDED COOLING COIL DRAIN TRAP CONFIGURATION.



NOTES:
1) 1" DIAMETER PVC PIPE ONLY.
2) USE ONLY LOW PROFILE COUPLINGS.
3) ADD CLEAN OUT AS SHOWN.

RELEASED FOR CONSTRUCTION
Plans Review
Development Services Department
Lee's Summit, Missouri
07/13/2022

REVISIONS

DESCRIPTION	DATE

CAPTIVE-AIRE
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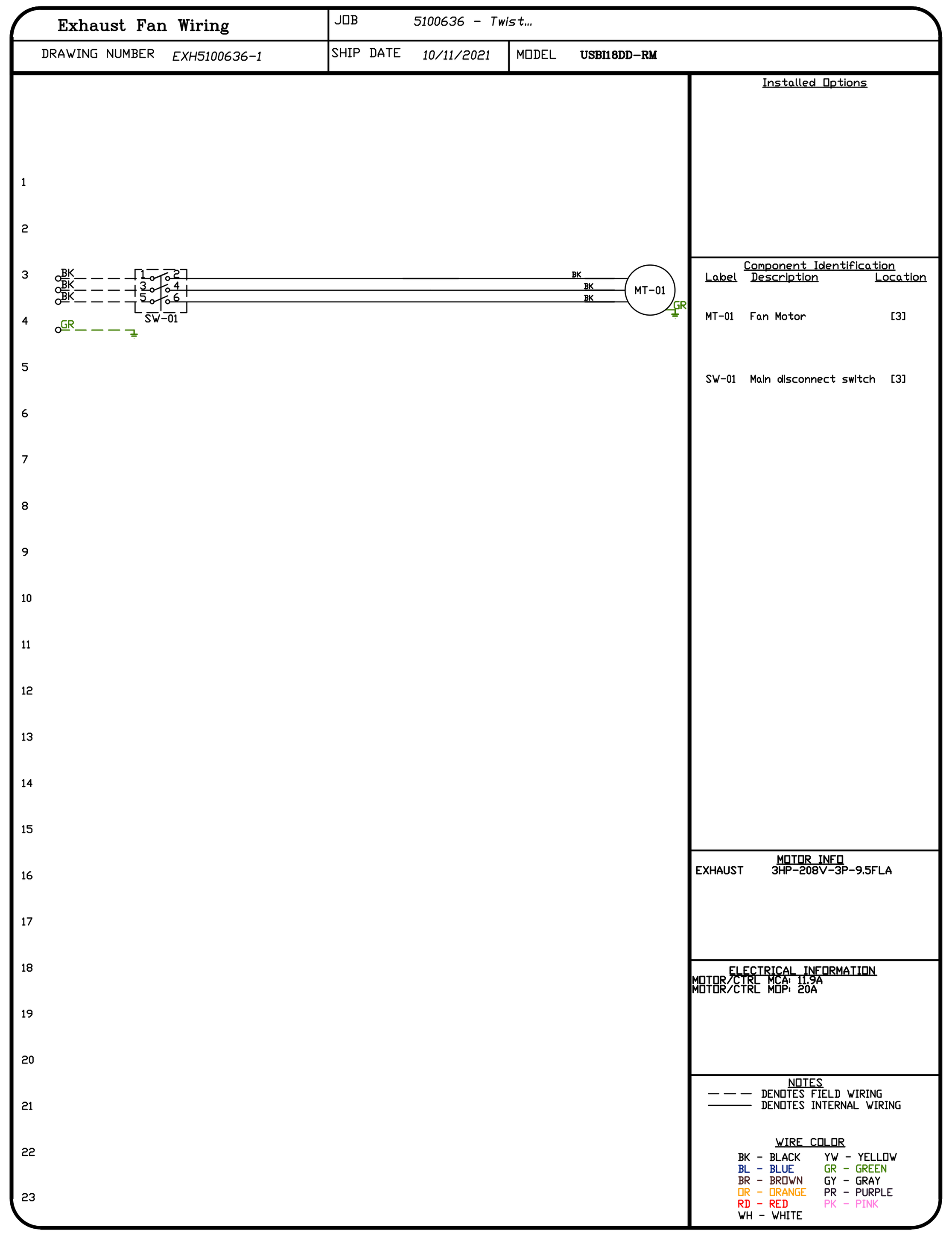
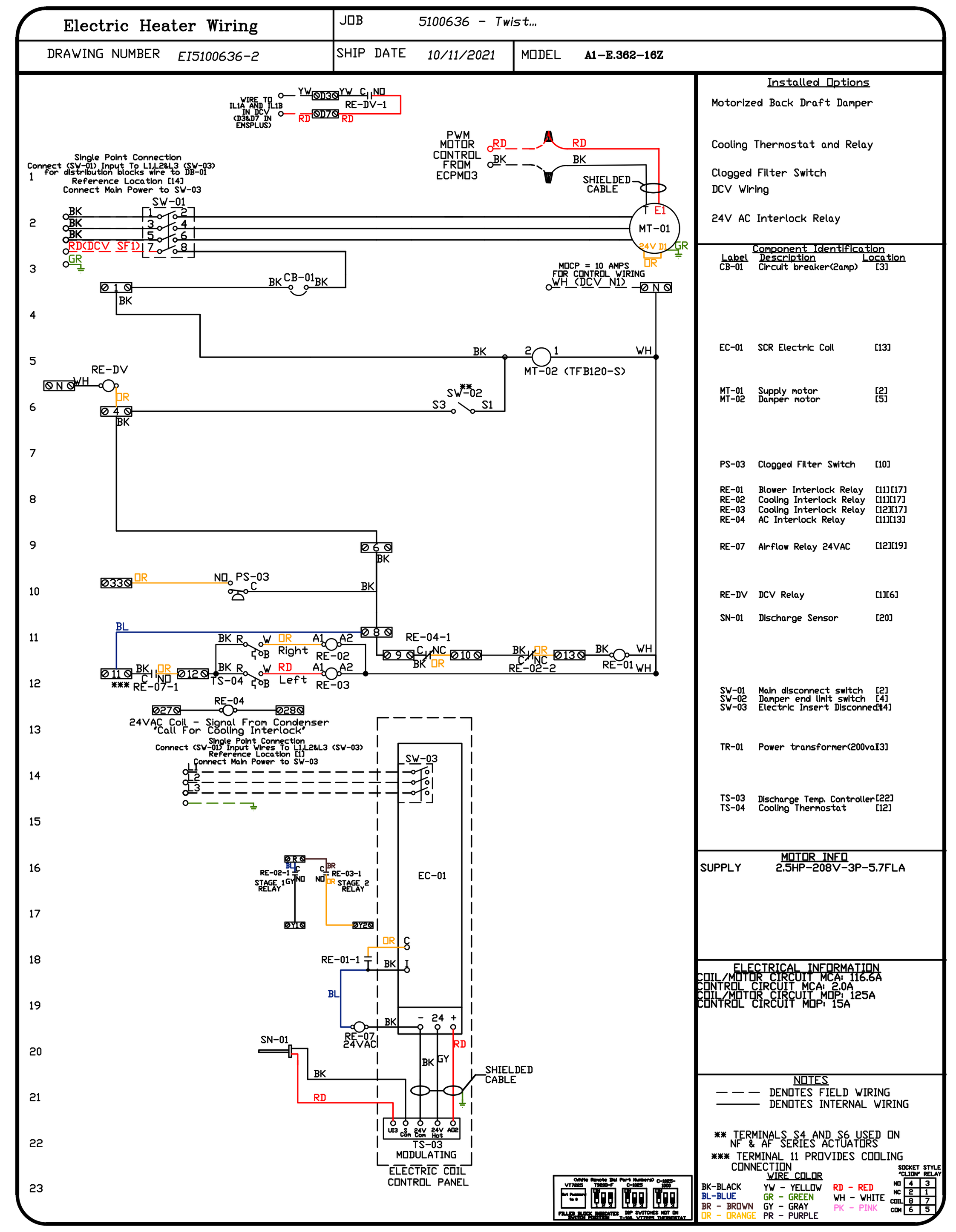
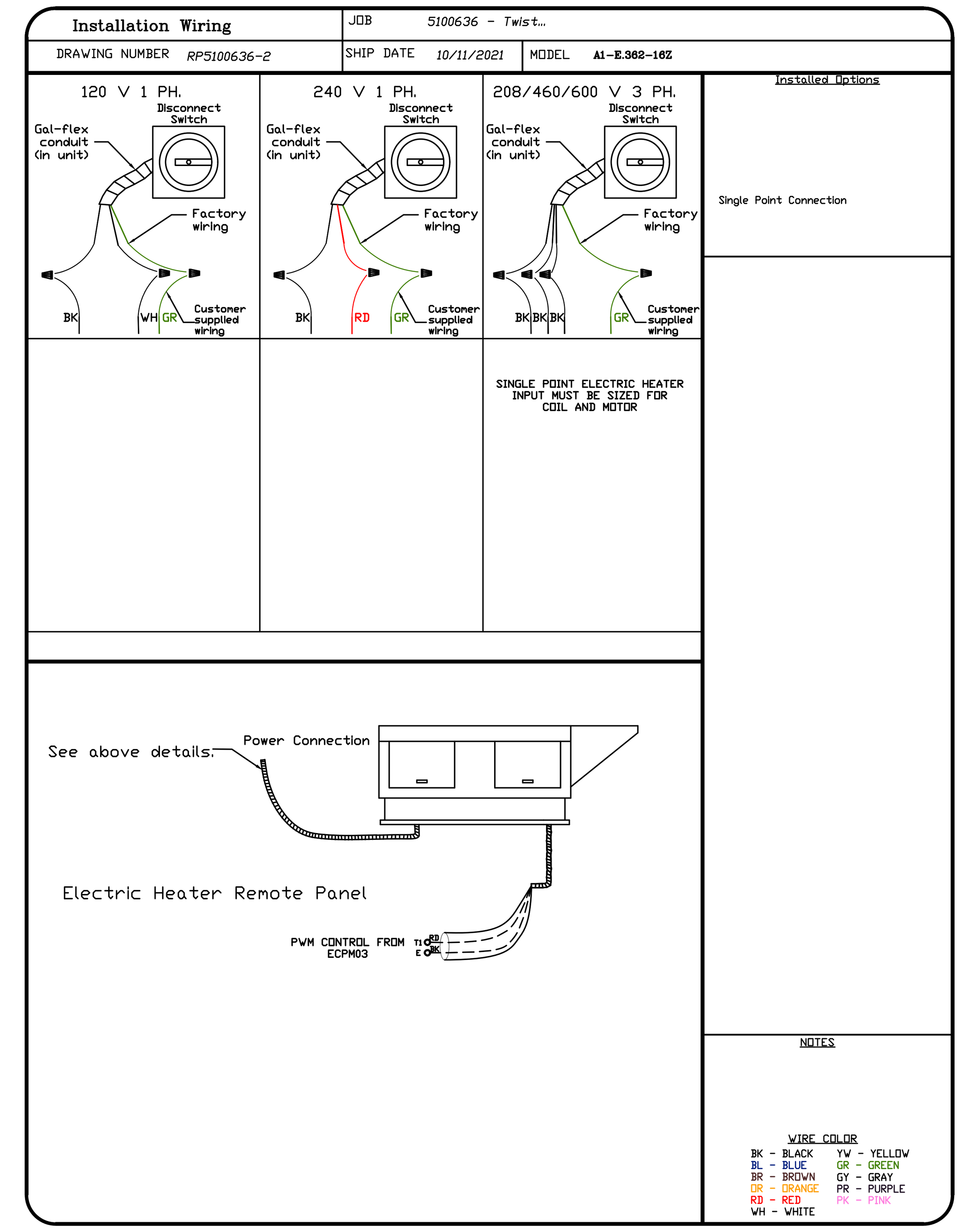
SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 7


Exhaust Fan Wiring
JOB 5100636 - Twist...
DRAWING NUMBER EXH5100636-1
SHIP DATE 10/11/2021
MODEL
Installed Options
Component Identification
Label Description Location
MT-01 Fan Motor [3]
SW-01 Main disconnect switch [3]
MOTOR INFO
EXHAUST 3HP-208V-3P-9.5FLA
ELECTRICAL INFORMATION
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
WIRE COLOR
BK - BLACK
BL - BLUE
BR - BROWN
OR - ORANGE
RD - RED
WH - WHITE
YW - YELLOW
GR - GREEN
GY - GRAY
PR - PURPLE
PK - PINK


Electric Heater Wiring
JOB 5100636 - Twist...
DRAWING NUMBER EI5100636-2
SHIP DATE 10/11/2021
MODEL A1-E.362-16Z
Installed Options
Motorized Back Draft Damper
Cooling Thermostat and Relay
Clogged Filter Switch
DCV Wiring
24V AC Interlock Relay
Component Identification
MOTOR INFO
SUPPLY 2.5HP-208V-3P-5.7FLA
ELECTRICAL INFORMATION
NOTES
DENOTES FIELD WIRING
DENOTES INTERNAL WIRING
MODULATING ELECTRIC COIL CONTROL PANEL
SHIELDED CABLE
WIRE COLOR


Installation Wiring
JOB 5100636 - Twist...
DRAWING NUMBER RPS5100636-2
SHIP DATE 10/11/2021
MODEL A1-E.362-16Z
120 V 1 PH.
240 V 1 PH.
208/460/600 V 3 PH.
Disconnect Switch
Gal-Flex conduit (in unit)
Factory wiring
Customer supplied wiring
Installed Options
Single Point Connection
SINGLE POINT ELECTRIC HEATER INPUT MUST BE SIZED FOR COIL AND MOTOR
See above details
Power Connection
Electric Heater Remote Panel
PWM CONTROL FROM ECPM03
NOTES
WIRE COLOR

REVISIONS

DESCRIPTION	DATE

CAPTIVEAIRE

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SHEET NO. 8