

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 5/17/2024

Return Request: 5/27/2024

Project: CALS Main Library Renovations

Supplier: Powers of Arkansas

Manufacturer: Loren Cook

Submittal: HVAC Power Ventilators (KEF-1)

Submittal Number: 23 34 23-02

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Polk Stanley Wilcox
801 South Spring St.
Little Rock, AR 72201
501-378-0878

ENGINEER

Bernhard
1 Allied Drive, Bldg. 2, Suite 2600
Little Rock, AR 72202
501-666-6776

GENERAL CONTRACTOR

CDI
3000 Cantrell Rd.
Little Rock, AR 72202
501-5666-4300

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

23-8016

dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

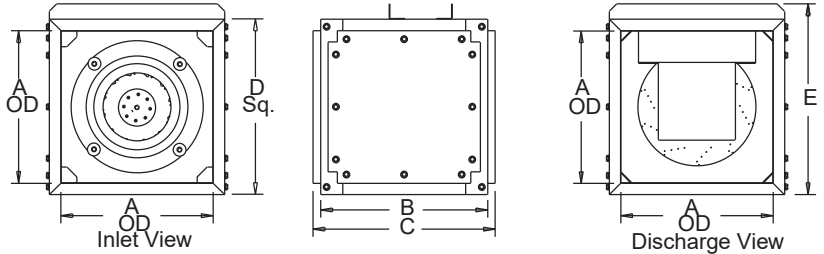


MARK: KEF-1
PROJECT: CALS MAIN LIBRARY RENOVATION
DATE: 5/6/2024

SQN-D VF

**Centrifugal Square Inline
Direct Drive
Preprogrammed EC
Electronically Commutated Vari-Flow® Motor**

STANDARD CONSTRUCTION FEATURES:
All aluminum wheel - Galvanized 18 gauge steel housing - Three removable access doors - Closed cell neoprene gasketing - Inlet and discharge duct collars - Universal mounting feet - Preprogrammed EC electronically commutated Vari-Flow® motor/drive package - Transit tested packaging.



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Power (HP)	FEG	FEI	Speed Control
1	120SQN28D (VF)	1400	1.00	1872	.499	n/a(<1HP)	1.17	EC

Altitude (ft): 266 Temperature (F): 70

Motor Information

HP	RPM*	Volts/Ph/Hz	Enclosure	RLA
3/4	2800	115/1/60	OPEN -EC	8.5



*Motor programmed to max speed of 2110 RPM.
RLA based on motor manufacturer's data at programmed HP and max RPM.
Motor is electronically/thermally protected.

Dimensions (inches)

A	16
B	20
C	22
D Sq	18-7/16
E	20
Housing Gauge	18

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	162	Unit	96
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***Includes fan, motor & accessories.

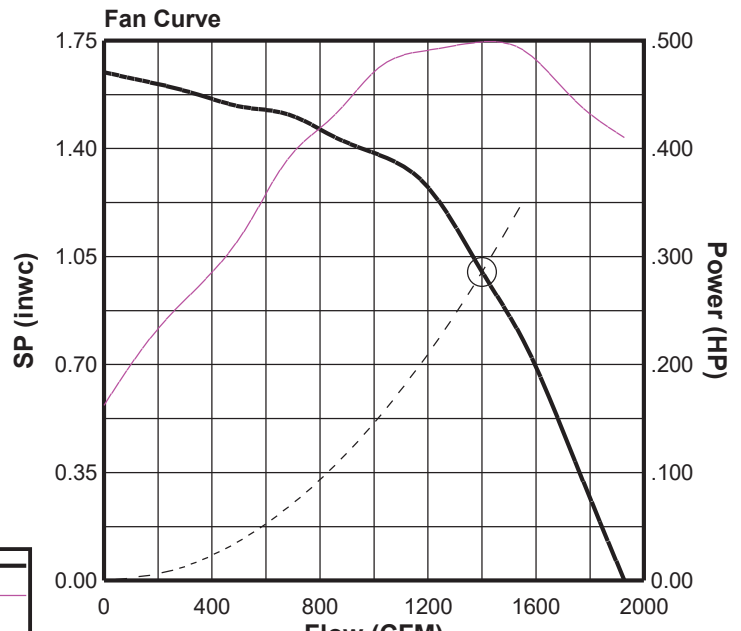
Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA	Sones
Inlet	69	77	79	76	68	63	61	54	76	65	12.8
Outlet	80	83	80	72	69	68	63	55	77	65	14.4

- Distance from Sound source 5 ft

Accessories:

- EXTERNAL SIGNAL SPEED CONTROL
- CTL & XFMR BY OTHERS
- DISCONNECT NEMA 1 PRE-WIRED
- BDM-16 MTR DPR 115V
- FLANGED INLET
- FLANGED OUTLET
- RC-75 SET(4) - ISOLATORS



Fan Curve Legend

CFM vs SP	—
CFM vs HP	—
Point of Operation	○



Speed Control

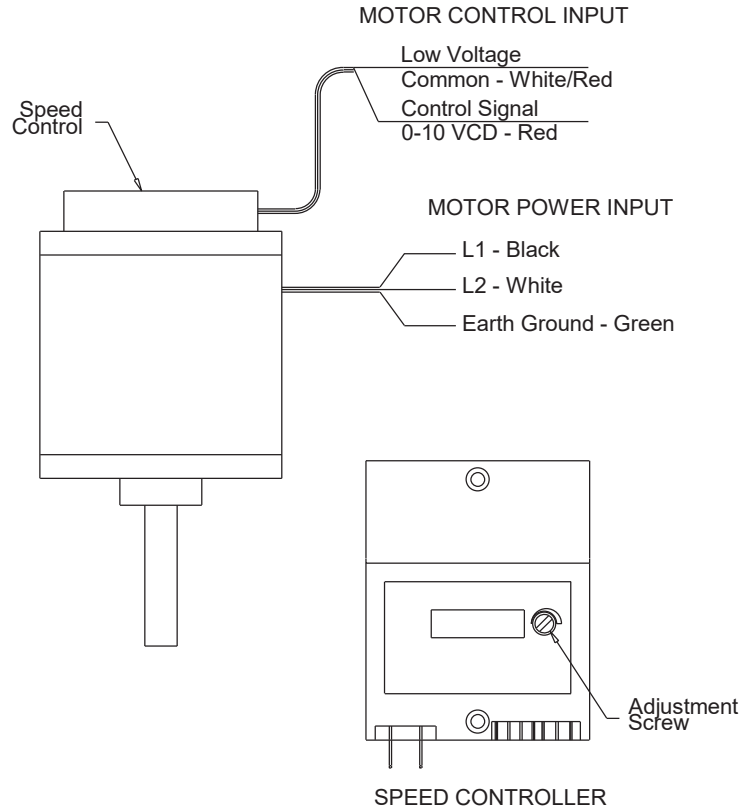
External Speed Control Electronically Commutated (EC) Motor Type N

STANDARD CONSTRUCTION FEATURES:

Vari-Flow EC Motors are available in 1/8 to 1 HP for 120V or 208-230V -Single phase applications have a adjustable speed range of 500 to 1725 or 500 to 2800 - Some motors come with a factory programmed maximum RPM for specific applications - External signal speed control requires a 0-10 VDC control signal to adjust speed of the motor - The motor will operate from 2-10 VDC and turns off when the control signal is below 1.9 VDC - Dial on speed control must be set to 0 for proper external speed control operation.

Dimensions (inches)

Mark	Qty	Description
KEF-1	1	OPEN -3/4HP - 115V/1 PH/ 60 2800/0000 -EC





BDM

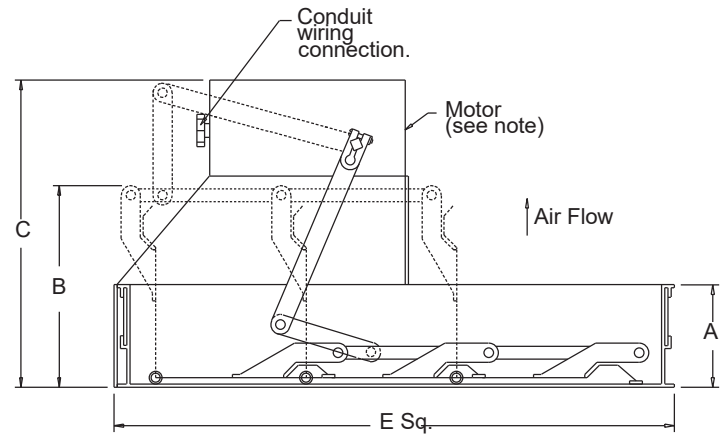
Motorized Backdraft Damper

STANDARD CONSTRUCTION FEATURES:

- .020 aluminum blades - .060
- aluminum frame - Aluminum hinge
- pins - Brass bushings -
- Non-overloading motor.

Notes:

Max operating temperature 130 Deg F (50 Deg C)



Dimensions (inches)

Mark	Qty	Description	A	B Max	C	E Sq.	# Motors
KEF-1	1	BDM-16 MTR DPR 115V	1-7/8	5-3/16	8	15-3/4	1

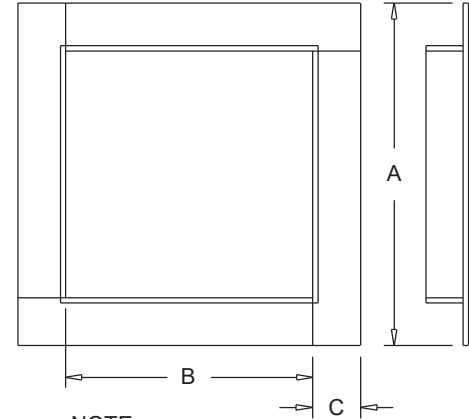


COOK

PROJECT: CALS MAIN LIBRARY RENOVATION

DATE: 5/6/2024

Companion Flange Inlet/Discharge



NOTE:

Mat'l: C" X C" X 1/8
6063-T5 aluminum or 1020 steel.

Dimensions (inches)

Mark	Qty	Description	A	B	C
KEF-1	1	FLANGED INLET	19-1/4	16-1/4	1-1/2

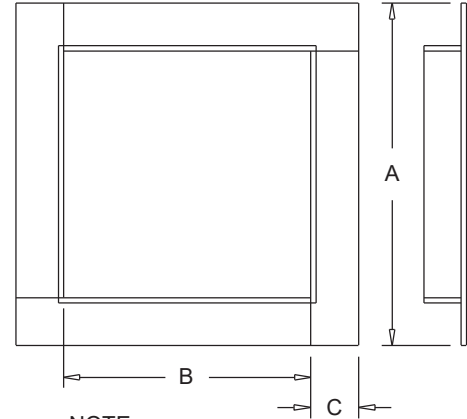


COOK

PROJECT: CALS MAIN LIBRARY RENOVATION
DATE: 5/6/2024

Companion Flange

Inlet/Discharge



NOTE:
 Mat'l: C" X C" X 1/8
 6063-T5 aluminum or 1020 steel.

Dimensions (inches)

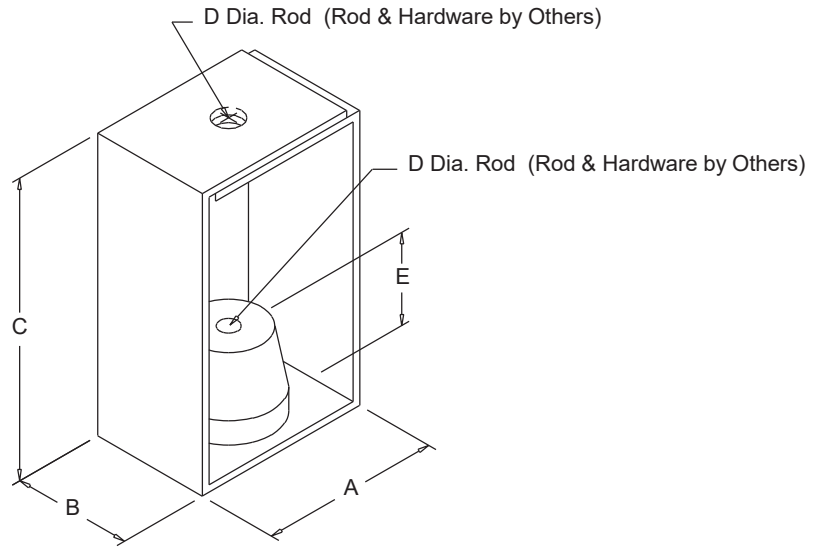
Mark	Qty	Description	A	B	C
KEF-1	1	FLANGED OUTLET	19-1/4	16-1/4	1-1/2



RIS CEILING

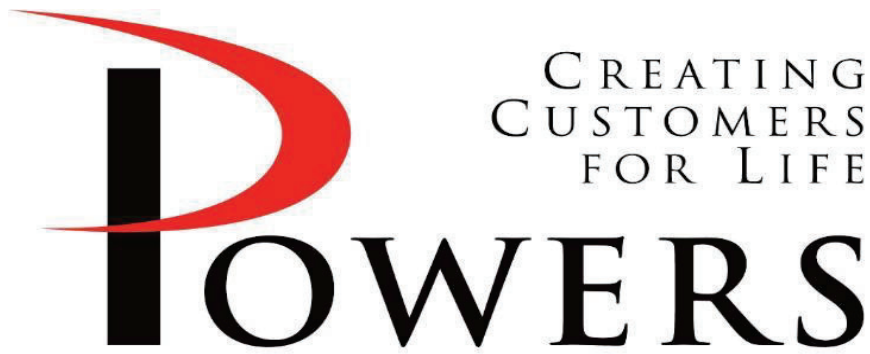
Rubber-In-Shear
Isolator
Ceiling Mounted

NOTE:
Dimensions are for informational
purposes only - Not for construction.



Dimensions (inches)

Mark	Qty	Description	A	B	C	D	E
KEF-1	1	RC-75 SET(4)	2.15	1.50	2.72	0.38	0.45



SUBMITTAL

PRODUCT	Kitchen Hood Package
MANUFACTURER	Stratovent
JOB NAME	CALS Main Library Renovation
LOCATION	Little Rock, AR
ENGINEER	Bernhard TME
CONTRACTOR	Comfort Systems
DATE	5/14/2024
SUBMITTED BY	Courtney Michael

5440 Northshore Drive - North Little Rock, Arkansas 72118 - Tel: 501.374.5420 Fax: 501.370.9298

FOR QUESTIONS, CALL THE
 Stratavent
 REGION 24
 PHONE: (919) 573 - 4250
 EMAIL: Jeff.Johnson@stratavent.com

STRATOVENT HOODS ARE
 BUILT IN COMPLIANCE WITH



NFPA #96
 NSF STANDARD #2
 UL STANDARD 710
 ETL FILE NO. 3054804-001

UL710 RATINGS: MODEL SV-ND2

450F APPLIANCES
 6' MIN OVERHANGS (OPEN ENDS)
 48" MAX ABOVE APPLIANCES

MINIMUM AIRFLOW:
 150 CFM PER LINEAR FT WITH
 OPEN ENDS

HOOD INFORMATION - JOB#6779909

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)						HOOD CONSTRUCTION	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL		SP
1		4824 SV-ND-2	STRATOVENT	4' 0"	450 DEG	I	MEDIUM	162	650			4'	12"	650	828	-0.280'	430 SS WHERE EXPOSED

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)				LIGHT(S)			FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE			WIRE GUARD
1		CAPTRATE SOLD FILTER	2	16"	20"	85% SEE FILTER SPEC	2	L55 SERIES E26 100W MAX A19 BULBS BY OTHERS	NO	YES	252 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT, BACK. FINISHED BACK - GROUND/POLISH 48.00' LONG. SENSOR-CV.

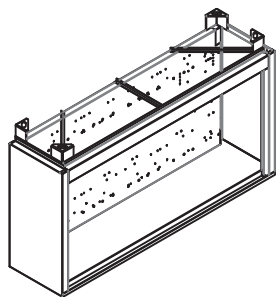
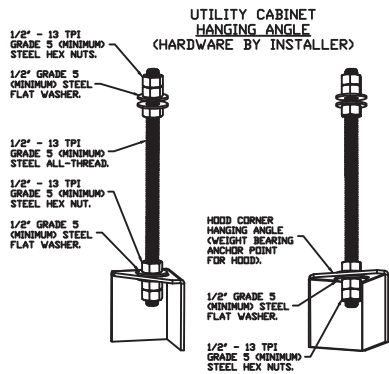
WALL-MOUNT UTILITY CABINET

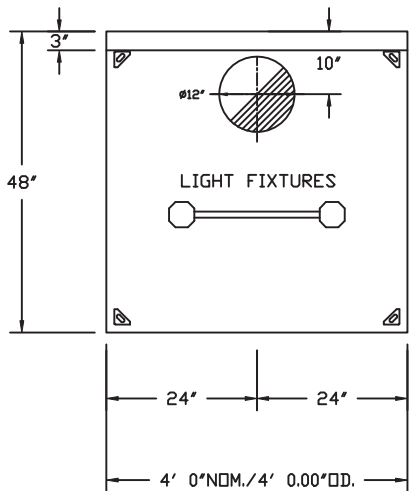
HOOD NO	LOCATION	SIZE	UTILITY CABINET(S)				WEIGHT
			FIRE SYSTEM		ELECTRICAL	SWITCHES	
			TYPE	SIZE	MODEL #	QUANTITY	
1	WALL MNT	12"x42"x24"	TANK FS	4.0	DCV-1011	1 LIGHT 1 FAN	240.00 LBS

WALL-MOUNT UTILITY CABINET ASSEMBLY INSTRUCTIONS

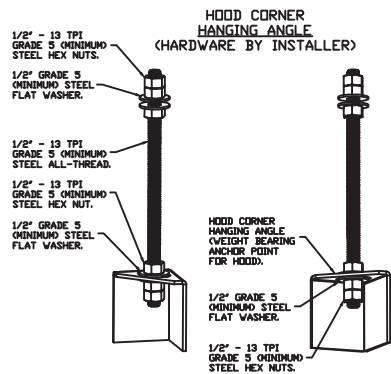
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH UTILITY CABINET HANGING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

CABINET TO BE HUNG BY HOOD INSTALLER. SEE UTILITY CABINET SCHEDULE FOR CABINET SIZE.



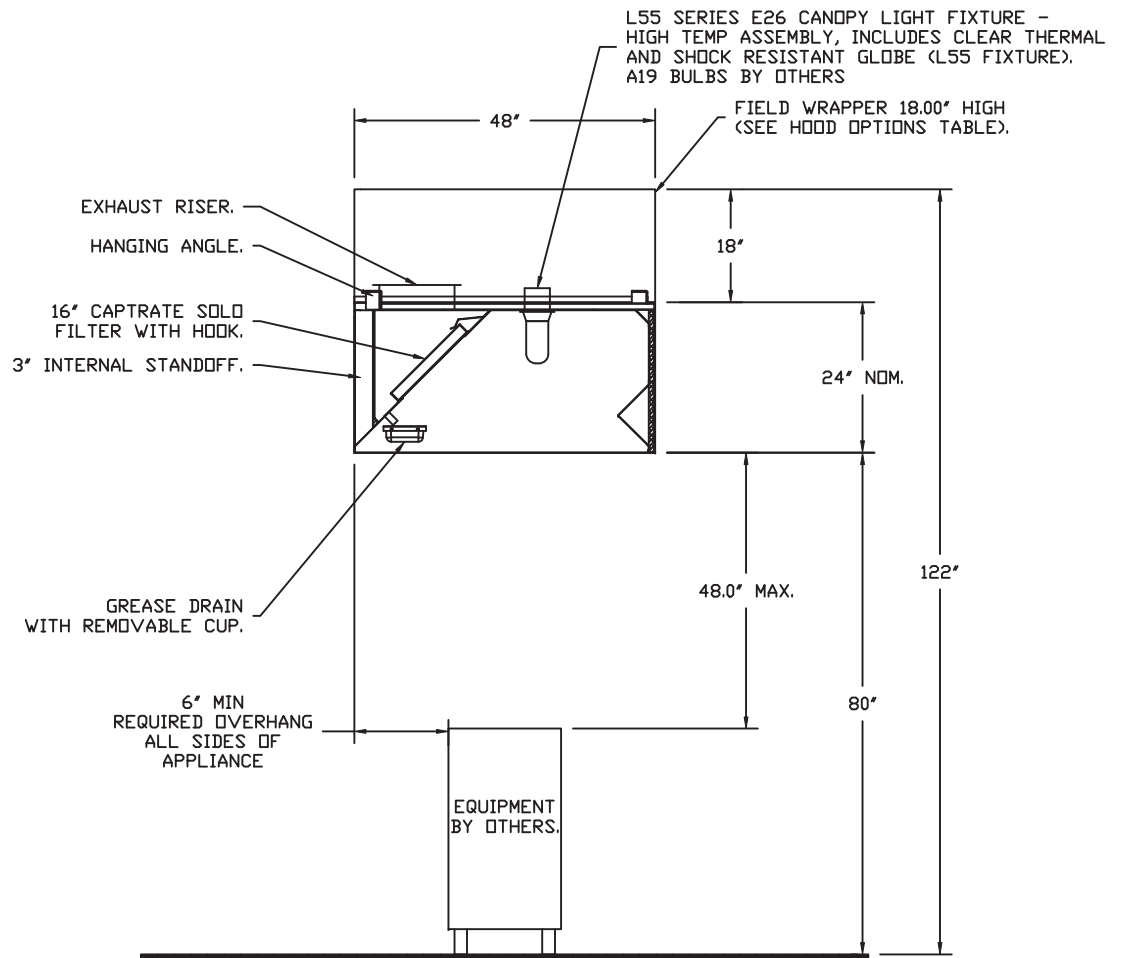


PLAN VIEW - HOOD #1
4' 0.00" LONG 4824SV-ND-2



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.



SECTION VIEW - MODEL 4824SV-ND-2
HOOD - #1

EXHAUST FAN INFORMATION - JOB#6779909

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	KHEF-3	1	SV-DU50HFA	STRATOVENT	650	1.220	1522	TEAD-ECM	0.500	0.3610	1	115	6.3	247 FPM	78	16
2	KEF-5	1	SV-DU50HFA	STRATOVENT	650	1.220	1597	TEAD-ECM	0.500	0.4170	1	115	6.3	247 FPM	76	17.8

PLEASE NOTE THAT EF-5 ON THE FAN SCHEDULE IS INCLUDED IN THE HOOD PACKAGE SUBMITTAL HOOD MANUFACTURER MIS-LABELED EF-5 W/ KEF-5

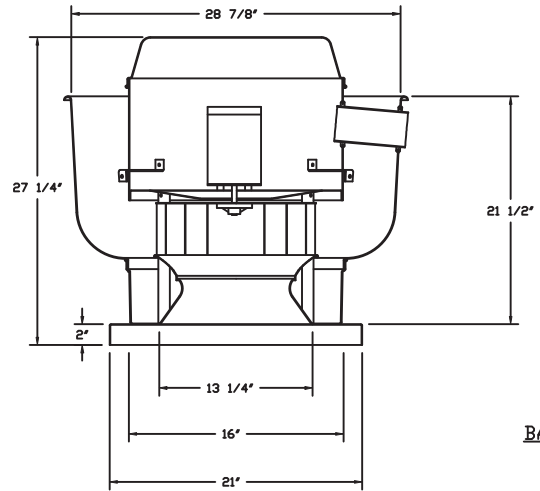
FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KHEF-3	1	GREASE BDX
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2	KEF-5	1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	SCR-13 BIRD SCREEN
		1	I 15-BDD DAMPER
		1	2 YEAR PARTS WARRANTY

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KHEF-3	38 LBS	CURB	19.500"W X 19.500"L X 26.000"H VENTED HINGED.
2	# 2	KEF-5	34 LBS	CURB	19.500"W X 19.500"L X 26.000"H.

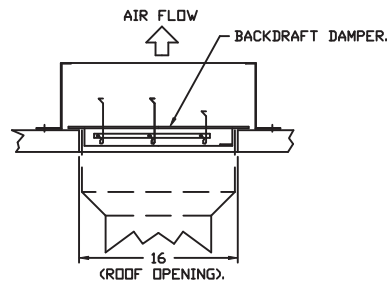
FAN #2 SV-DU50HFA - EXHAUST FAN (KEF-5)



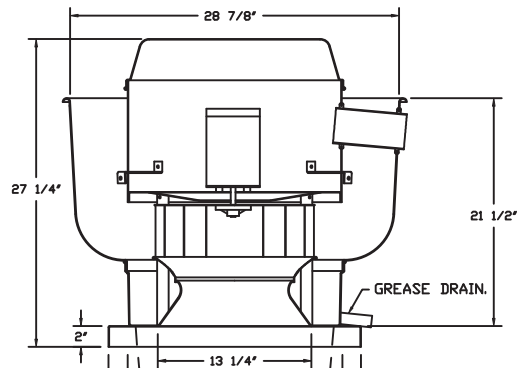
- FEATURES:**
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
 - ROOF MOUNTED FANS.
 - UL705.
 - VARIABLE SPEED CONTROL.
 - INTERNAL WIRING.
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
 - NEMA 3R SAFETY DISCONNECT SWITCH.

- OPTIONS**
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION.
 - SCR-13 BIRD SCREEN.
 - I 15-BDD DAMPER.
 - 2 YEAR PARTS WARRANTY.

BACKDRAFT DAMPER INSTALLATION



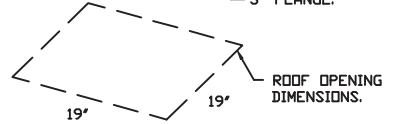
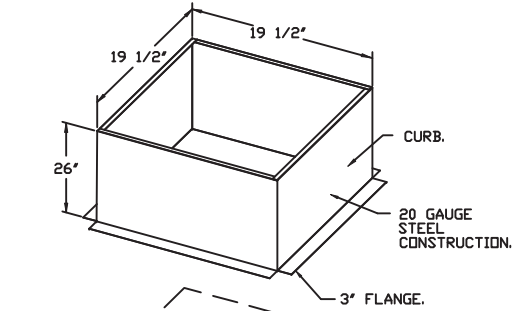
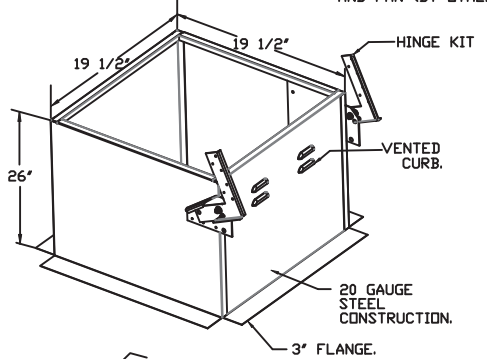
FAN #1 SV-DU50HFA - EXHAUST FAN (KHEF-3)



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

- OPTIONS**
- GREASE BDX.
 - ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
 - 2 YEAR PARTS WARRANTY.

DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS).

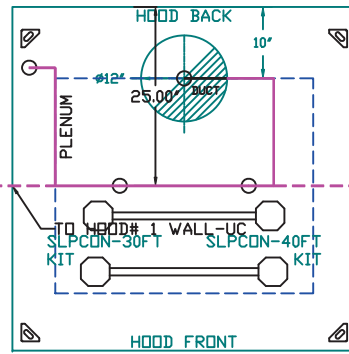
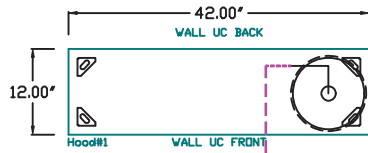


FIRE SYSTEM INFORMATION - JOB#6779909

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0	20	18	WALL UTILITY CABINET LEFT	N/A

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		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 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 361091 3/8" BRASS PLUG.	3	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	1	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROGRESS ADAPTER.	3	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 87-30001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	1	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 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	3	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	4	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5' DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - SLPDCN-30FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 29' GAP. KIT CONTAINS 32 FEET OF BLACK MG WIRE, 32 FEET OF TAN MG WIRE, 30 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - SLPDCN-40FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 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 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	3	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	1	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	4	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	4	0
	26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	4	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	

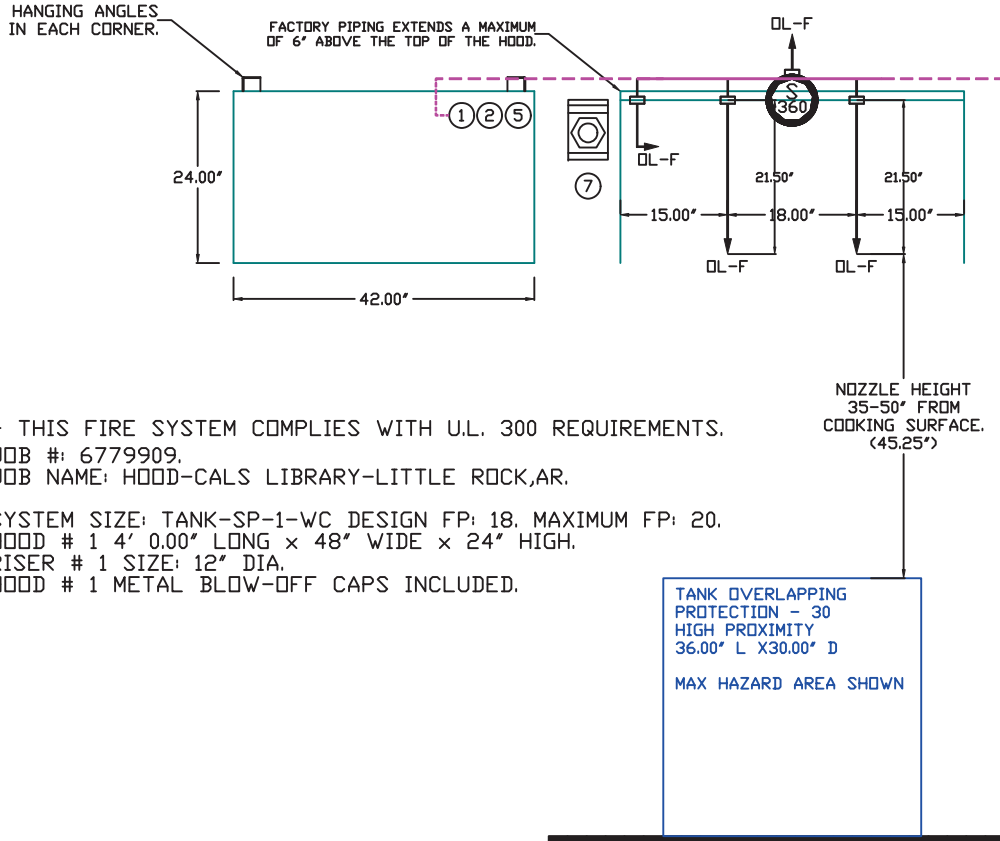


LEGEND - FIRE CABINET TANK SYSTEM

- 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.

HOOD # 1 JOB # 6779909 FS # 1
 MODEL: ND-2 SIZE: 48"x24" LENGTH:
 4' 0"

The quoted hood fire suppression system is NOT, Ansul R102, it is TANK-brand Fire Suppression System. TANK-brand system is certified to UL300/NFPA17A. Price includes Installation by a certified Fire Suppression Subcontractor sourced and hired by hood vendor, non union / non prevailing wage labor ONLY, (REQUEST RE-BID IF SPECIAL WAGES ARE REQUIRED) Includes chrome sleeving on exposed piping, Test, and standard Permits. Special permitting required by the city or others is NOT included. Special permitting is considered to be anything requiring Engineering work or sealed/stamped drawing by a licensed engineer. Price is for a system that is installed during normal daytime weekday business hours. Any weekend or night work required will be extra.



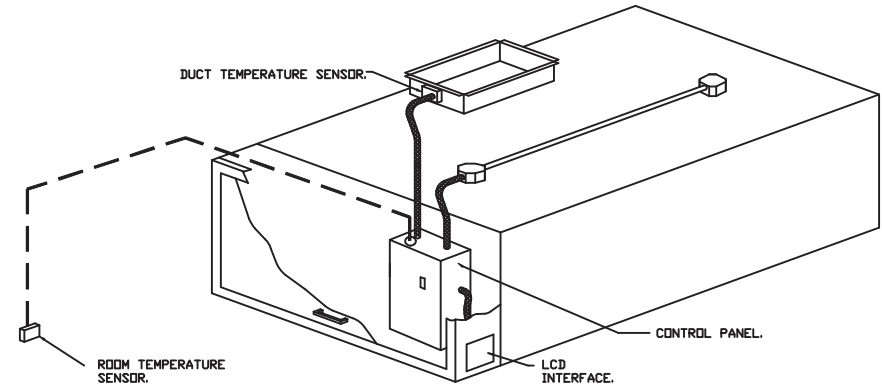
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.
 JOB #: 6779909,
 JOB NAME: HOOD-CALS LIBRARY-LITTLE ROCK,AR.
 SYSTEM SIZE: TANK-SP-1-WC DESIGN FP: 18, MAXIMUM FP: 20.
 HOOD # 1 4' 0.00" LONG x 48" WIDE x 24" HIGH.
 RISER # 1 SIZE: 12" DIA.
 HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

Before purchasing this option, the contractor should research local jurisdictional requirements. Multiple permits may be required by others prior to fire system connection (plumbing, mechanical, etc). Pricing assumes the hood mounted fire suppression cabinet housing all tanks and release system, 1 low voltage pull station NO GAS SHUTDOWN VALVE INCLUDED, ASSUMES ELECTRIC APPLIANCE. Price is for surface mounted conduit for low voltage wiring to pull station (conduit recessed into the wall is extra) Any appliance layout changes that occur after hood production could result in added cost and job site delays. Price includes two trips to job site. One trip is for installation, second trip is for test. Additional charges will apply for additional trips needed because of failed tests. Full system dump test are not included, air puff test only. Enunciating alarms, strobes, or special alarm systems are not included and must be contracted directly by installing contractor with fire suppression contractor if required. Fire extinguishers are not included. If a wall-mounted s/s utility cabinet is included in the hood quote, this cabinet must be hung by the mechanical contractor prior to the fire suppression contractor showing up to the job site. Cabinet to be supported from above with all-thread.

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	φ	HP	VOLT	FLA
1		DCV-1011	WALL UTILITY CABINET LEFT	FACE MOUNT LEFT	1 LIGHT	SMART CONTROLS DCV	KHEF-3	EXHAUST	1	0.500	115	6.3
				SIDE OF HOOD	1 FAN							
				HOOD # 1								

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

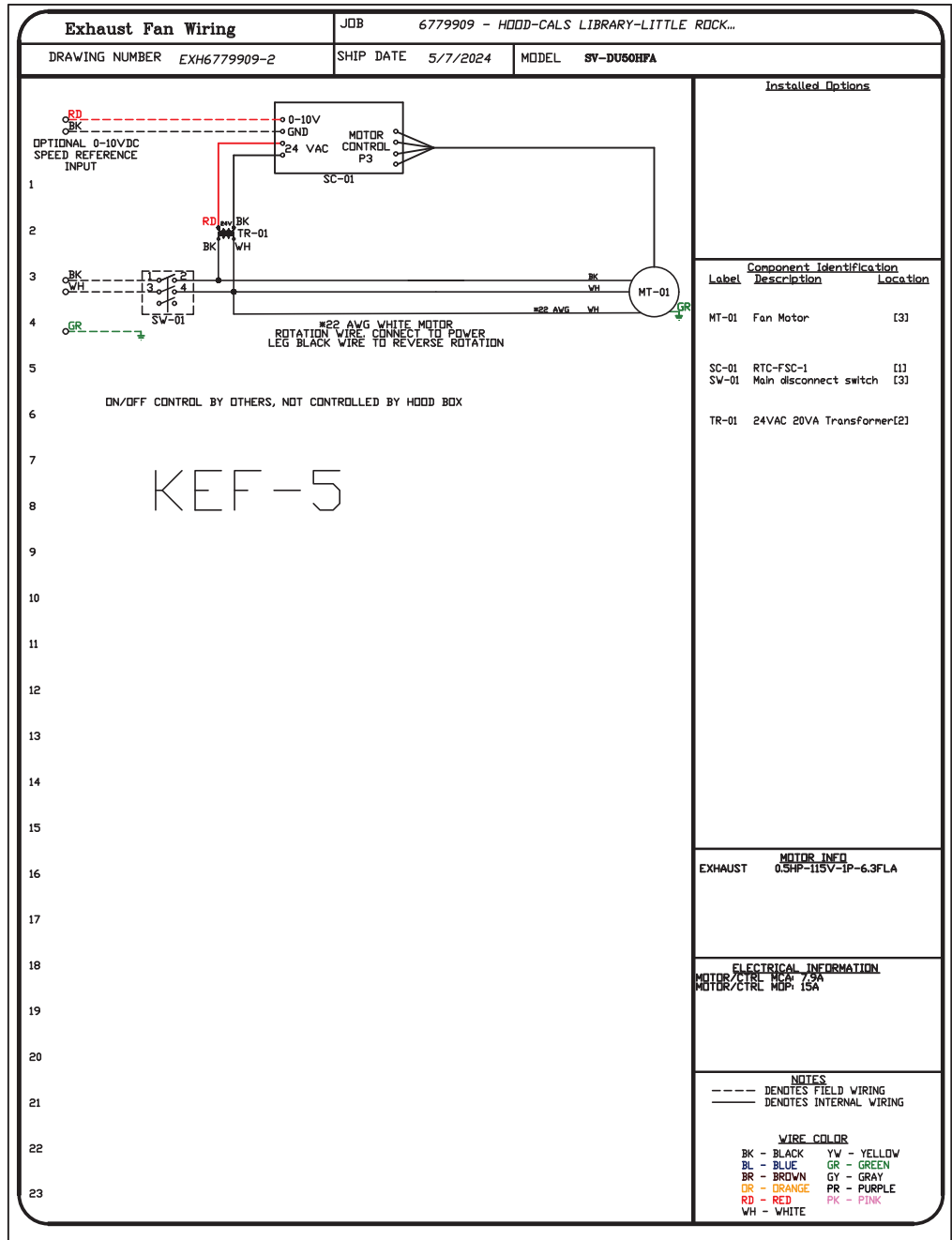
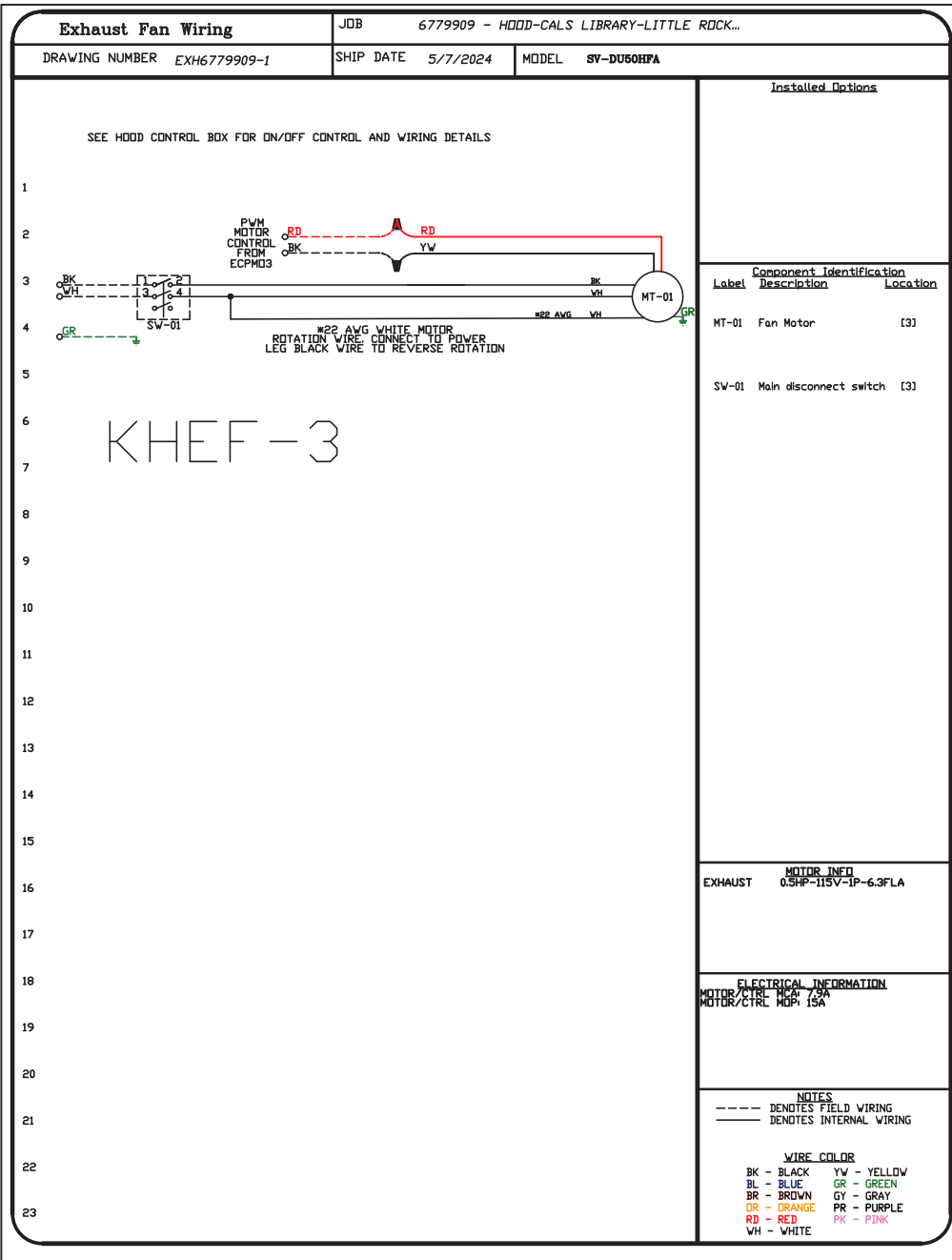
- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED 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 403.7.5 (2021).
 - **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 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.



JOB NO
6779909

MODEL NUMBER
DCV-1011

DRAWN BY
INSTALL

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate 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.

JOB NAME
HOOD-CALS LIBRARY-LITTLE ROCK...

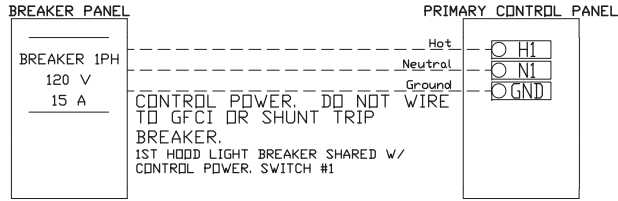
DATE
5/7/2024

DWG NO
ECP #1-1

BREAKER PANEL TO PRIMARY CONTROL PANEL

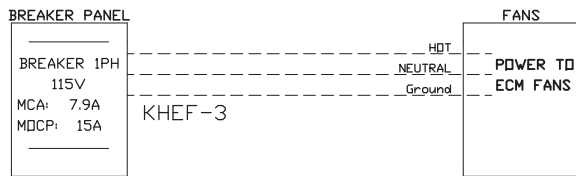
Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



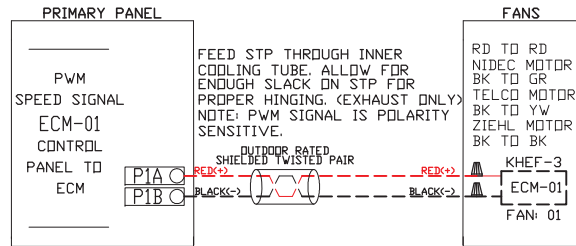
BREAKER PANEL TO FANS

Responsibility: Electrician



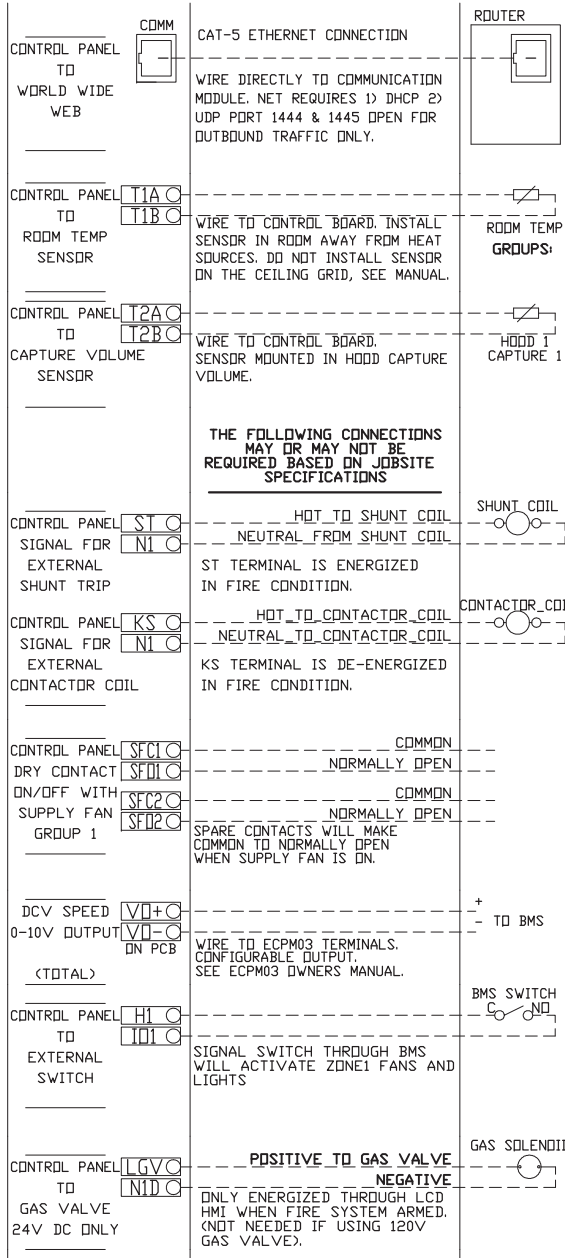
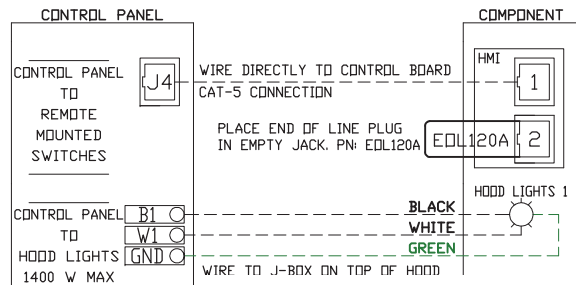
CONTROL PANEL TO FANS

Responsibility: Electrician



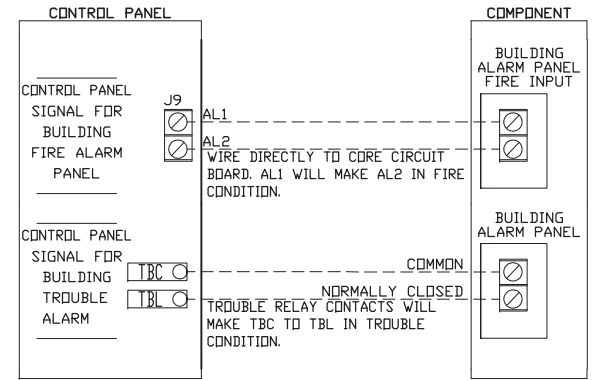
CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician



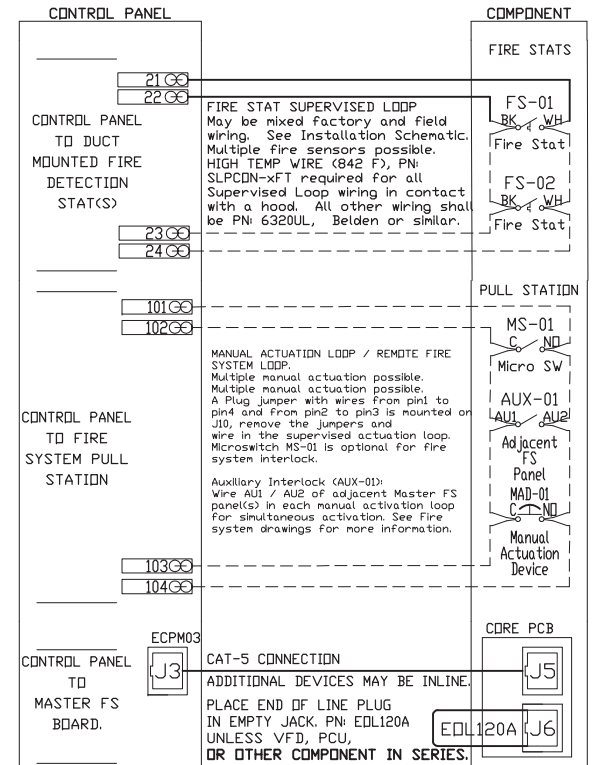
CONTROL PANEL TO FIRE SYSTEM

Responsibility: ALARM CONTRACTOR



CONTROL PANEL TO FIRE SYSTEM

Responsibility: CERTIFIED INSTALLER



JOB NO
6779909

MODEL NUMBER DCV-1011
JOB NAME HOOD-CALS LIBRARY-LITTLE ROCK...

DRAWN BY
DATE 5/7/2024
SCHEMATIC TYPE INSTALL
DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 4.0.

WALL MOUNT UTILITY CABINET TANK PROTECTION ELECTRICAL DETAIL

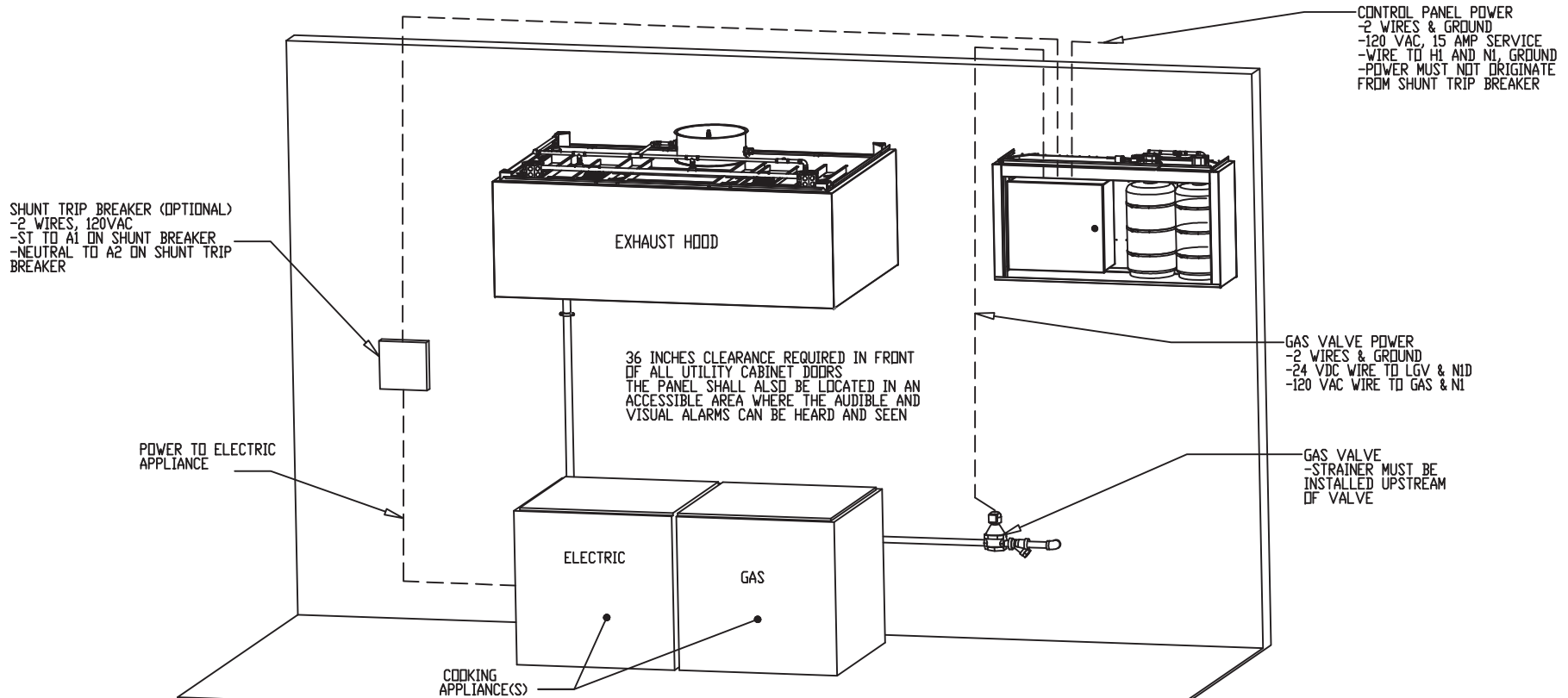
10/01/2023 Rev. 03

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	< 1.0 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

JOB NO
6779909

MODEL NUMBER
DCV-1011

JOB NAME
HOOD-CALS LIBRARY-LITTLE ROCK...

DRAWN BY
INSTALL

DATE
5/7/2024

SCHEMATIC TYPE
ECP #1-4

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 40.

WALL MOUNT UTILITY CABINET TANK PROTECTION LOW-VOLTAGE DETAIL

10/01/2023 Rev. 3

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 HOOKUP 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	< 1.0 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-6531B
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 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) #441601C6.FE9 (WHT) & #441601C6.FE0 (BLK) WIRE OR SIMILAR ONLY IF RAN OF HOOD; OTHERWISE BELDEN #6320UL 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)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA. CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. 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

FIRE ALARM CONTACT
 -2 WIRES WIRED TO NORMALLY OPEN CONTACTS
 (CLOSES IN FIRE CONDITION)
 -CORE CONTROL PANEL AL1 AND AL2
 -SEE FIGURE 2

TROUBLE CONTACT
 -2 WIRES TO NORMALLY OPEN
 CONTACTS (CLOSE IN TROUBLE
 CONDITION)
 -CORE PANEL TERMINALS TBL AND TBC
 -SEE FIGURE 4

SUPERVISED LOOP
 -4 WIRES, 24VDC CONNECT BLACK
 WIRES BETWEEN 21 AND 24 IN PANEL,
 CONNECT WHITE (OR RED) WIRES
 BETWEEN 22 AND 23 IN PANEL
 -ADDITIONAL FIRESTATS, WIRED IN
 SUPERVISED LOOP
 -USE HIGH TEMP (842°F)
 #441601C6.FE9 (WHT) &
 #441601C6.FE0 (BLK) WIRE ONLY IF
 RAN OVER TOP OF HOOD;
 OTHERWISE BELDEN #6320UL OR
 SIMILAR PLENUM RATED WIRE
 -SEE FIGURE 1

36 INCHES CLEARANCE REQUIRED IN
 FRONT OF ALL UTILITY CABINET DOORS
 THE PANEL SHALL ALSO BE LOCATED IN
 AN ACCESSIBLE AREA WHERE THE
 AUDIBLE AND VISUAL ALARMS CAN BE
 HEARD AND SEEN

MANUAL
 ACTUATION
 DEVICE
 10 TO 20
 FEET FROM
 HOOD LOCATED
 NEAR POINT
 OF EGRESS
 FROM HOOD
 42 TO 48 INCHES
 ABOVE FLOOR
 LEVEL TO
 CENTER OF PUSH
 STATION

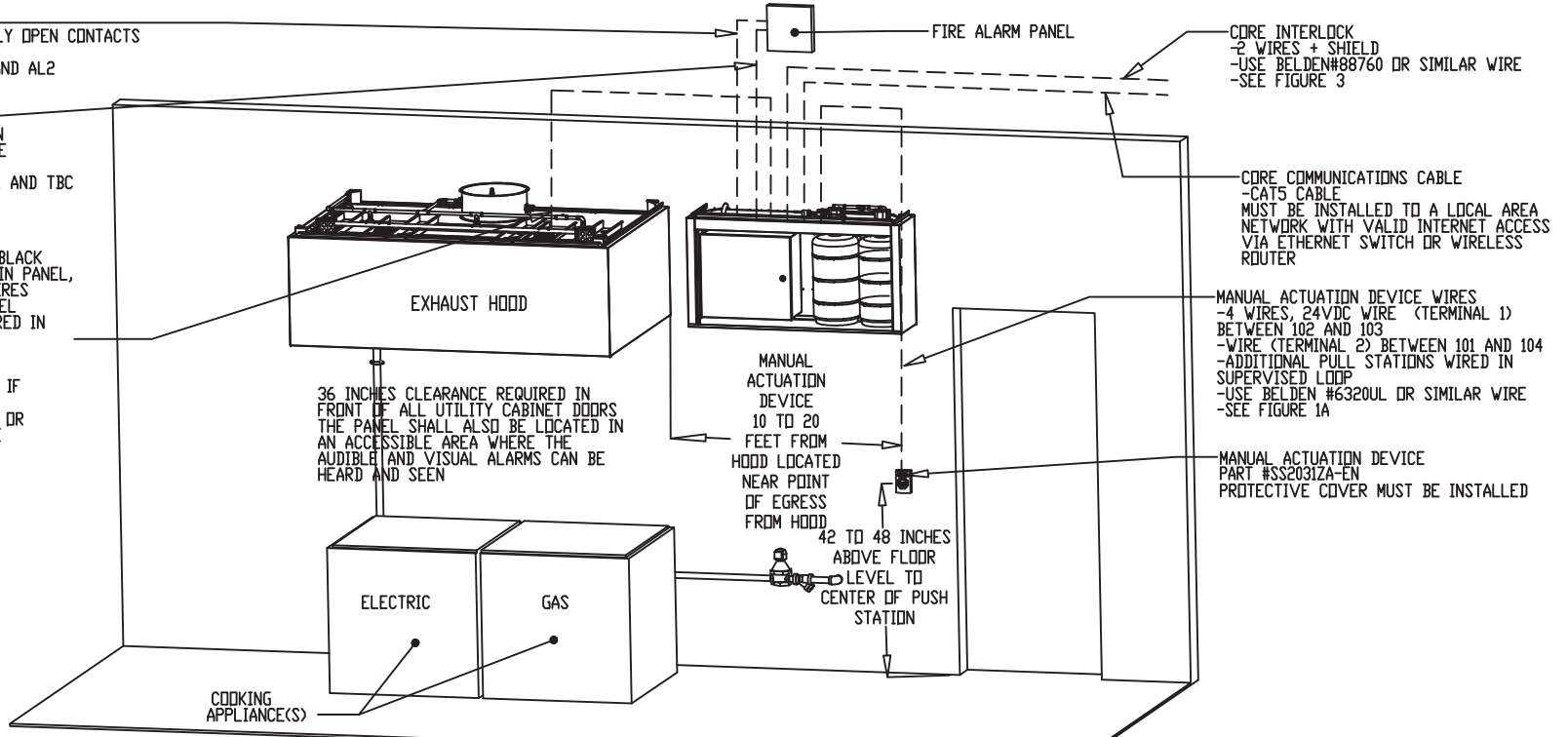
FIRE ALARM PANEL

CORE INTERLOCK
 -2 WIRES + SHIELD
 -USE BELDEN#88760 OR SIMILAR WIRE
 -SEE FIGURE 3

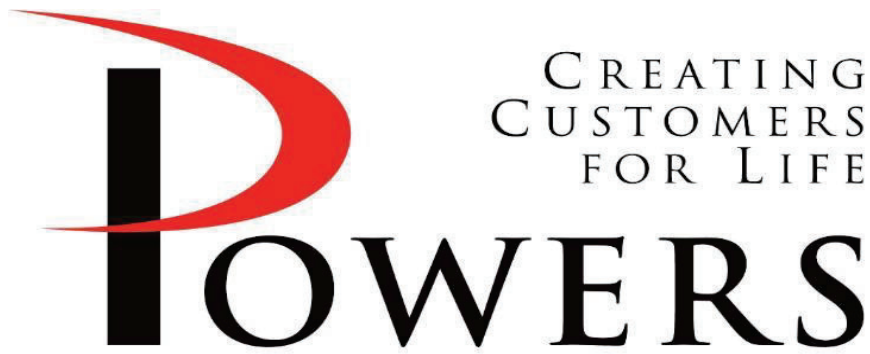
CORE COMMUNICATIONS CABLE
 -CAT5 CABLE
 MUST BE INSTALLED TO A LOCAL AREA
 NETWORK WITH VALID INTERNET ACCESS
 VIA ETHERNET SWITCH OR WIRELESS
 ROUTER

MANUAL ACTUATION DEVICE WIRES
 -4 WIRES, 24VDC WIRE (TERMINAL 1)
 BETWEEN 102 AND 103
 -WIRE (TERMINAL 2) BETWEEN 101 AND 104
 -ADDITIONAL PULL STATIONS WIRED IN
 SUPERVISED LOOP
 -USE BELDEN #6320UL OR SIMILAR WIRE
 -SEE FIGURE 1A

MANUAL ACTUATION DEVICE
 PART #SS2031A-EN
 PROTECTIVE COVER MUST BE INSTALLED



ATTENTION: LC
 BE Routed IN
 NOTE: SEE INSTALLATIO



SUBMITTAL

PRODUCT	Recirculating Kitchen Hood with Fire Suppression
MANUFACTURER	Denlar
JOB NAME	CALS Main Library Renovation
LOCATION	Little Rock, AR
ENGINEER	Bernhard TME
CONTRACTOR	Comfort Systems
DATE	5/14/2024
SUBMITTED BY	Courtney Michael

5440 Northshore Drive - North Little Rock, Arkansas 72118 - Tel: 501.374.5420 Fax: 501.370.9298

Date: _____ Job Name: CALS Library Renovation Mark: _____
 Reference: _____ Unit Location: _____ Prepared By: _____
 Engineer: _____ Contractor: _____ Approval: _____
 Expected Job Date: _____ Notes: _____

UNIT OPTIONS:

- | | |
|---|---|
| <input type="checkbox"/> ADA Fan/Light Control | <input checked="" type="checkbox"/> Manual Pull Station |
| <input type="checkbox"/> ClockBox | <input type="checkbox"/> ClockBox Pro |
| <input type="checkbox"/> Custom Color Specify Color: _____ | <input type="checkbox"/> Top Cover |
| <input type="checkbox"/> Test Tank | <input type="checkbox"/> Make-Up Air Control Module |
| <input type="checkbox"/> Strobe -Light & Annunciator | <input type="checkbox"/> Limiting Speed Control Module |
| <input type="checkbox"/> Power Distribution Block Module | <input type="checkbox"/> Relay Control Module |
- Please specify correct receptacle

DISCONNECT OPTIONS:

- 3/4" NPT Natural Gas (*DED Needed if Electric Components Need to be Controlled on a Gas Range*)
- Electric ***Specify NEMA: 220VAC =** 14-50R 6-20R 10-50R **120VAC =** 5-15R 5-20R
- Dual Element (includes 3/4" NPT Natural Gas and Electric)
- *Specify NEMA: 220VAC =** 14-50R 6-20R 10-50R **120VAC =** 5-15R 5-20R
- Dual Receptacle ***Specify NEMA: 220VAC =** 6-20R **120VAC =** 5-15R 5-20R

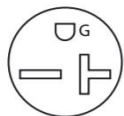
ELECTRIC NEMA (RECEPTACLE) OPTIONS



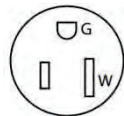
14-50
220VAC 50AMP



10-50
220VAC 50AMP



6-20
220VAC 20AMP



5-15
120VAC 15AMP



5-20
120VAC 20AMP

GENERAL FEATURES:

- Wall Mounted
- Pre-Engineered Fire Suppression System
- Variable Fan Speed Control
- Two Step Pre-Suppression
- Plenum Nozzle
- MAIN Power Switch
- Reset Switch
- Light Switch
- Pressure Gauge
- Temperature Switches Triggering Pre-emptive Shutdown
- Hard Wired Fuel Source Disconnect
- Dry Alarm Contacts
- On Board Diagnostics
- Status LED
- Trouble Signal
- Service Key
- Audible Buzzer (90dB)
- Service Switch
- Pressure Switch
- Grease Baffle w/ Drip Tray
- ETL/CSA Listed
- Permanently Lubricated Centrifugal Fan Motor listed to UL507
- Local, Remote and Trouble Alarms
- Shatter-Proof or LED Bulb

FEATURES	DESCRIPTION
Compliance	UL300A NSF UL507
Canopy Width	36 Inches
Dimensions In.	35-7/8 x 19-3/8 x 10-1/2
Weight Lbs.	56.8
Voltage / Hz / Amps	120 / 60 / 3
MOCP	15A
Fire Control	Programmable Logic Controller
Tank Type / Pressure / Volume	Stainless Steel / 102+8% Psi / 1.84 Liters
Venting / Fan Type / Speed	Recirculating / Integral / Variable Speed
CFM	174 ~ 276
Min / Max Installation Height	30 / 36 Inches
Duct Collar (In. / mm)	N/A
Sound Rating	62 / 70 dB
Finish	18 & 20 GA 304 Brushed Stainless Steel
Lighting	(1) LED Bulb Medium Base
Suppression Agent	Low pH Wet Chemical Amerex 660
No. of Nozzles / Spray	4 / 60 Degree Conical
Actuation Type	Mechanical Fail-Safe
Protection Device / Limit	3 Globe Links / 280°F

Model

D1036-F

Technical Data Book

DENLAR

FIRE PROTECTION

PRE-ENGINEERED RANGE HOODS

Not responsible for typographical errors. Continuing research results in product improvement, therefore specifications are subject to change without notice. For the most updated information, please consult factory directly.

LAB-110259 REV12202021

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[D1000 Nozzle Placement](#)
[D1000 Tank Information](#)

Accessories

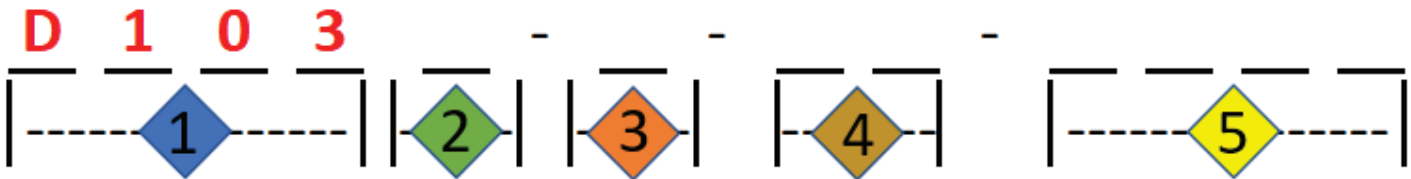
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[Make Up Air Fan Control Module/Damper Control](#)
[CFM Limiting Speed Control](#)
[Handicap Accessible Controls](#)
[Top Cover](#)

Part Number

D1000-MPK
CLBX & CLBX-PRO
D1000-E
D1000-G
D1000-DRD
D1000-DED
D1000-TANK-FC
D1000-TANK-SA
D1000-TANK-TEST
D1000-TANK-E
D1000-STROBE
D1000-FBO
D1000-MACM
D1000-LSC
D1000-ADA
D1030-TC-F(R)

Model Identification

Model Identification



ID	1
Label	Model
D103	Denlar

ID	2
Label	Size
0	30" Model
6	36" Model

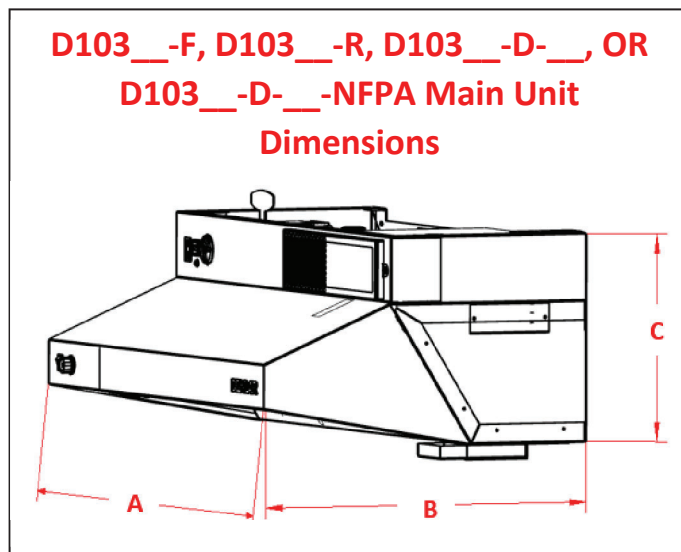
ID	3
Label	Exhaust Type
F	Front Exhaust
R	Rear Exhaust
D	Top Ducted Exhaust

ID	4
Label	Top Ducted Fan Type
IF	Inline Fan
RF	Roof Fan
WF	Wall Mount Fan

ID	5
Label	NFPA Compliant
NFPA	Includes High Performance Fan, Manual Pull Station, Timer Lock Out System

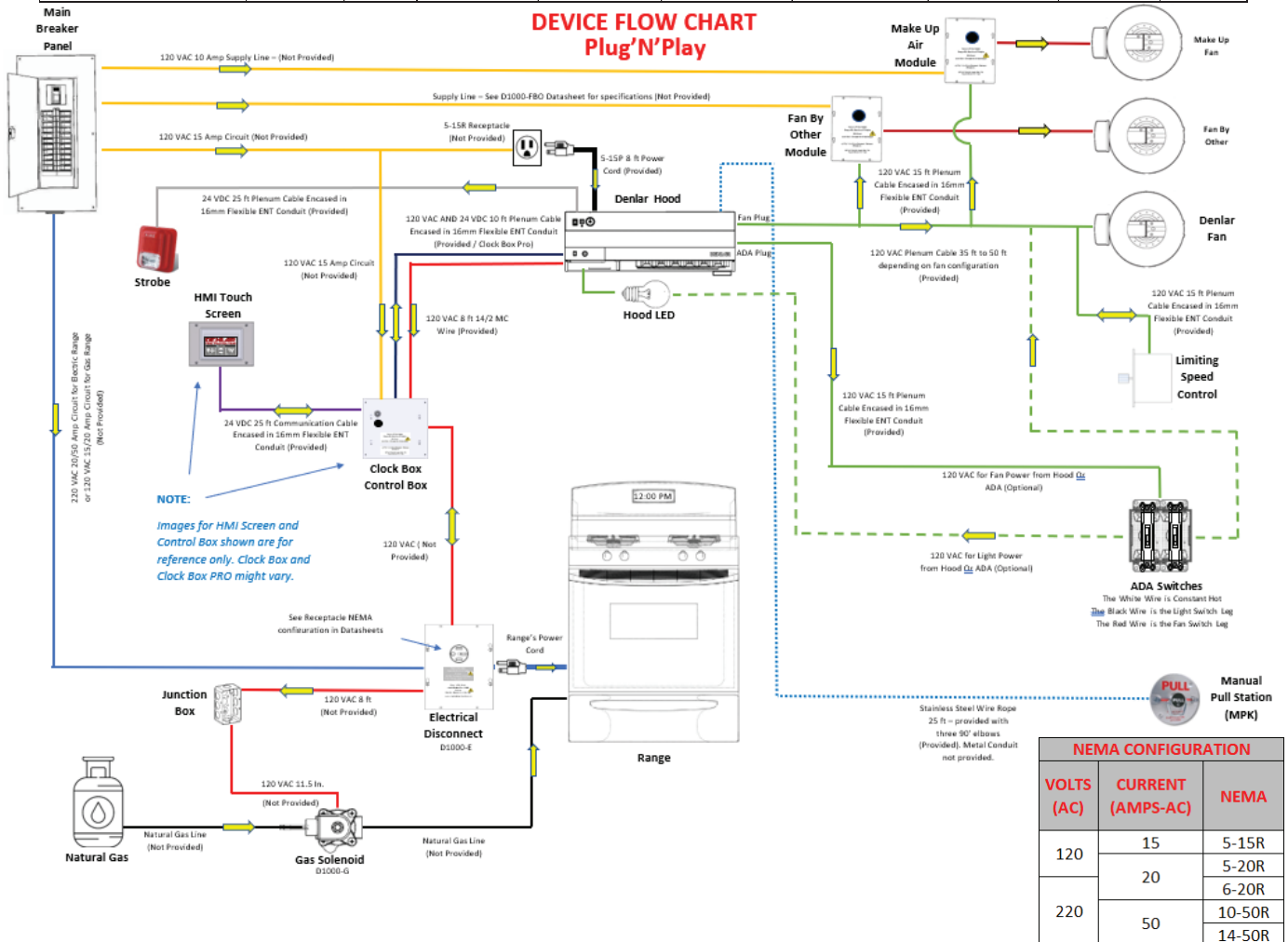
D1000 Dimensions and Weights

Model Dimensions and Weight						
MODEL	MOUNTING CONFIG.	MOUNTING HEIGHT (In.)	LENGTH (In.)(A)	DEPTH (In.)(B)	HEIGHT (In.)(C)	WEIGHT (Lbs.)
D1030-F		MIN:24 MAX:30	30		10.5	53.4
D1030-F-NFPA					14.8	75
D1030-R					10.5	53.4
D1030-R-NFPA					14.8	75
D1030-D-IF					10.5	53.4
D1030-D-IF-NFPA						
D1030-D-RF						
D1030-D-RF-NFPA						
D1030-D-WF						
D1030-D-WF-NFPA						
D1036-F	WALL			19.375	10.5	56.8
D1036-F-NFPA		MIN:30 MAX:36	36		14.8	78.8
D1036-R					10.5	56.8
D1036-R-NFPA					14.8	78.8
D1036-D-IF					10.5	56.8
D1036-D-IF-NFPA						
D1036-D-RF						
D1036-D-RF-NFPA						
D1036-D-WF						
D1036-D-WF-NFPA						



Electrical Specifications

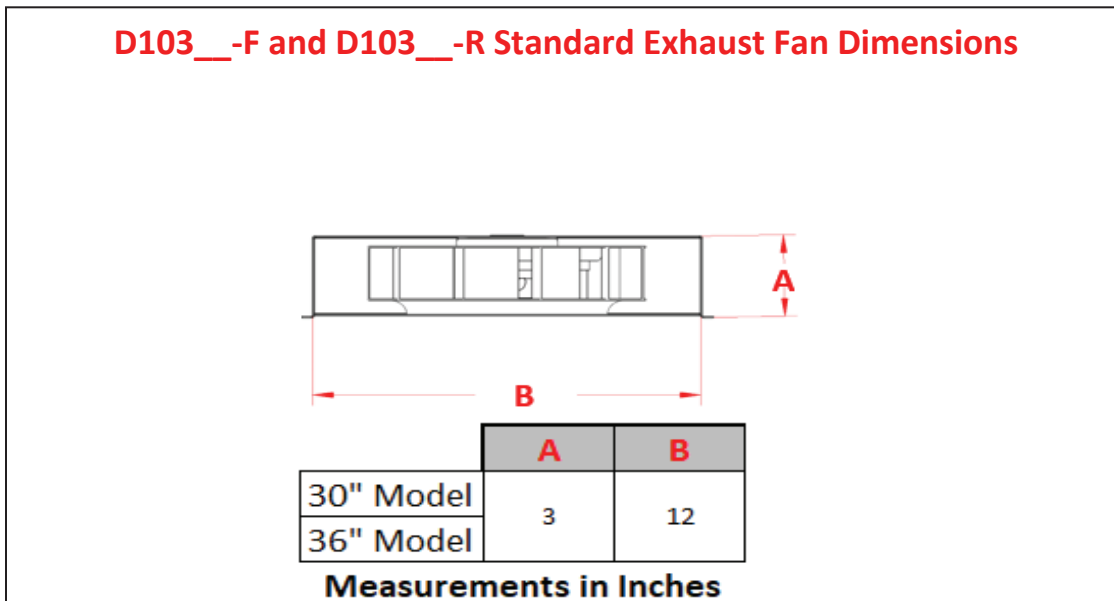
Electrical Information									
MODEL	VOLATGE (AC)	PHASE	FREQUENCY (Hz.)	CIRCUIT BREAKER SIZE (AMPS)	OPERATING CURRENT (AMPS)	FAN OPERATING CURRENT (AMPS)	OUTPUT OPERATING CURRENT (AMPS)	INPUT WIRING	OUTPUT WIRING
D1030-F					1.38	0.8			
D1030-F-NFPA					3.7	3.1			
D1030-R					1.38	0.8			
D1030-R-NFPA					3.7	3.1			
D1030-D-IF					2.4	1.8			
D1030-D-IF-NFPA					3.1	2.5			
D1030-D-RF					4.6	4			
D1030-D-RF-NFPA					5.6	5			
D1030-D-WF					1.38	0.8	0.25 to 0.5	12/2 MC WIRE	14/2 MC WIRE
D1030-D-WF-NFPA					3.7	3.1			
D1036-F	120	1	60	15-20	1.38	0.8			
D1036-F-NFPA					3.7	3.1			
D1036-R					1.38	0.8			
D1036-R-NFPA					3.7	3.1			
D1036-D-IF					2.4	1.8			
D1036-D-IF-NFPA					3.1	2.5			
D1036-D-RF					4.6	4			
D1036-D-RF-NFPA					5.6	5			
D1036-D-WF					1.38	0.8			
D1036-D-WF-NFPA					3.7	3.1			



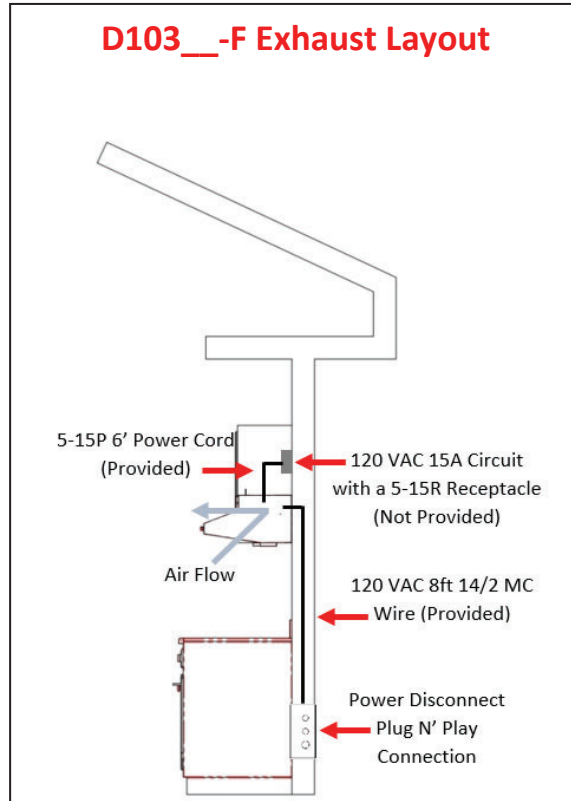
Fan Specifications

MODEL	STYLE	TYPE	WEIGHT (Lbs.)	OPERATING CURRENT (AMPS)	VOLTAGE (AC)	PHASE	FREQUENCY (Hz.)	Fan Ratings			HOOD OUTLET (In.) (LxH)	DUCT	FAN INLET	FAN OUTLET	CONTROL	SPEEDS					
								CFM +/-2.5% (LOW-HIGH)	PRESSURE (In. WATER)	DBA (LOW-HIGH)											
D1030-F	Front Discharge	Integral to Hood	6.25	0.8	120	1	60	174 ~ 276	-0.09 ~ -0.18	62 ~ 70	12 X 3	N/A	6.5 (Dia.)	12 X 3	Electronic Control Module (ECM)	Variable					
D1030-F-NFPA	Rear Discharge		22	3.1				216 ~ 514	-0.26 ~ -1.38	60 ~ 84	30 x 4		9.8 x 9.7	30 x 4							
D1030-R	Rear Discharge		6.25	0.8				139 ~ 279	-0.09 ~ -0.17	62 ~ 70	12 X 3	6.5 (Dia.)	12 X 3								
D1030-R-NFPA	Discharge	22	3.1	174 ~ 519				-0.25 ~ -1.35	60 ~ 80	10 X 4.25	9.8 x 9.7	10 X 4.25									
D1030-D-IF	Inline	Ducted	10.5	1.8				283 ~ 474	-0.23 ~ -0.61	57 ~ 69	35 ft.	10 (Dia.)	10 (Dia.)								
D1030-D-IF-NFPA			13.5	2.5				297 ~ 545	-0.29 ~ -0.89	60 ~ 70		12 (Dia.)	12 (Dia.)								
D1030-D-RF	Inline Ducted Roof Mount	Roof w/Curb adapter (Without physical curb)	35	4				357 ~ 499	-0.40 ~ -0.84	61 ~ 73	7 (Dia.)	50 ft.	10 (Dia.)	20-13/16 (Dia.)							
D1030-D-RF-NFPA				5				326 ~ 548	-0.39 ~ -1.09	63 ~ 75			9 7/8	20 (Dia.)							
D1030-D-WF	Wall Mount	External Wall Ducted	13.5	0.8				208 ~ 281	-0.14 ~ -0.28	56 ~ 60	35 ft.	6.5 (Dia.)	14 x 3								
D1030-D-WF-NFPA			20.5	3.1				172 ~ 522	-0.10 ~ -0.66	60 ~ 75			8.5 (Dia.)	12 X 3							
D1036-F	Front Discharge	Integral to Hood	6.25	0.8				120	1	60	174 ~ 276	-0.09 ~ -0.18	62 ~ 70	12 X 3			N/A	6.5 (Dia.)	12 X 3	Electronic Control Module (ECM)	Variable
D1036-F-NFPA	Rear Discharge		22	3.1							216 ~ 514	-0.26 ~ -1.38	60 ~ 84	30 x 4				9.8 x 9.7	30 x 4		
D1036-R	Rear Discharge		6.25	0.8	139 ~ 279	-0.09 ~ -0.17	62 ~ 70				12 X 3	6.5 (Dia.)	12 X 3								
D1036-R-NFPA	Discharge	22	3.1	174 ~ 519	-0.25 ~ -1.35	60 ~ 80	10 X 4.25				9.8 x 9.7	10 X 4.25									
D1036-D-IF	Inline	Ducted	10.5	1.8	283 ~ 474	-0.23 ~ -0.61	57 ~ 69				35 ft.	10 (Dia.)	10 (Dia.)								
D1036-D-IF-NFPA			13.5	2.5	297 ~ 545	-0.29 ~ -0.89	60 ~ 70					12 (Dia.)	12 (Dia.)								
D1036-D-RF	Inline Ducted Roof Mount	Roof w/Curb adapter (Without physical curb)	35	4	357 ~ 499	-0.40 ~ -0.84	61 ~ 73				7 (Dia.)	50 ft.	10 (Dia.)	20-13/16 (Dia.)							
D1036-D-RF-NFPA				5	326 ~ 548	-0.39 ~ -1.09	63 ~ 75						9 7/8	20 (Dia.)							
D1036-D-WF	Wall Mount	External Wall Ducted	13.5	0.8	208 ~ 281	-0.14 ~ -0.28	56 ~ 60				35 ft.	6.5 (Dia.)	14 x 3								
D1036-D-WF-NFPA			20.5	3.1	172 ~ 522	-0.10 ~ -0.66	60 ~ 75						8.5 (Dia.)	12 X 3							

Fan Dimensions

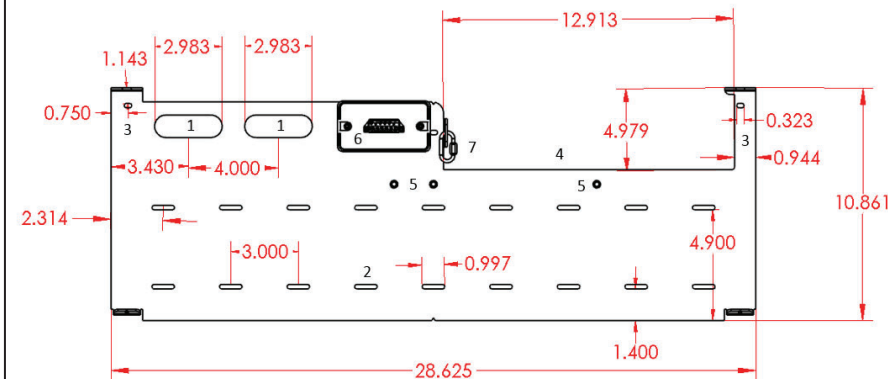


Exhaust Layout



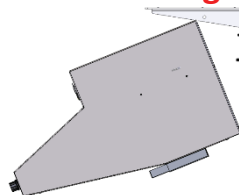
Back Plate Support (BPS) Layout

Back Plate for D103__-F and D103__-R Exhaust Models



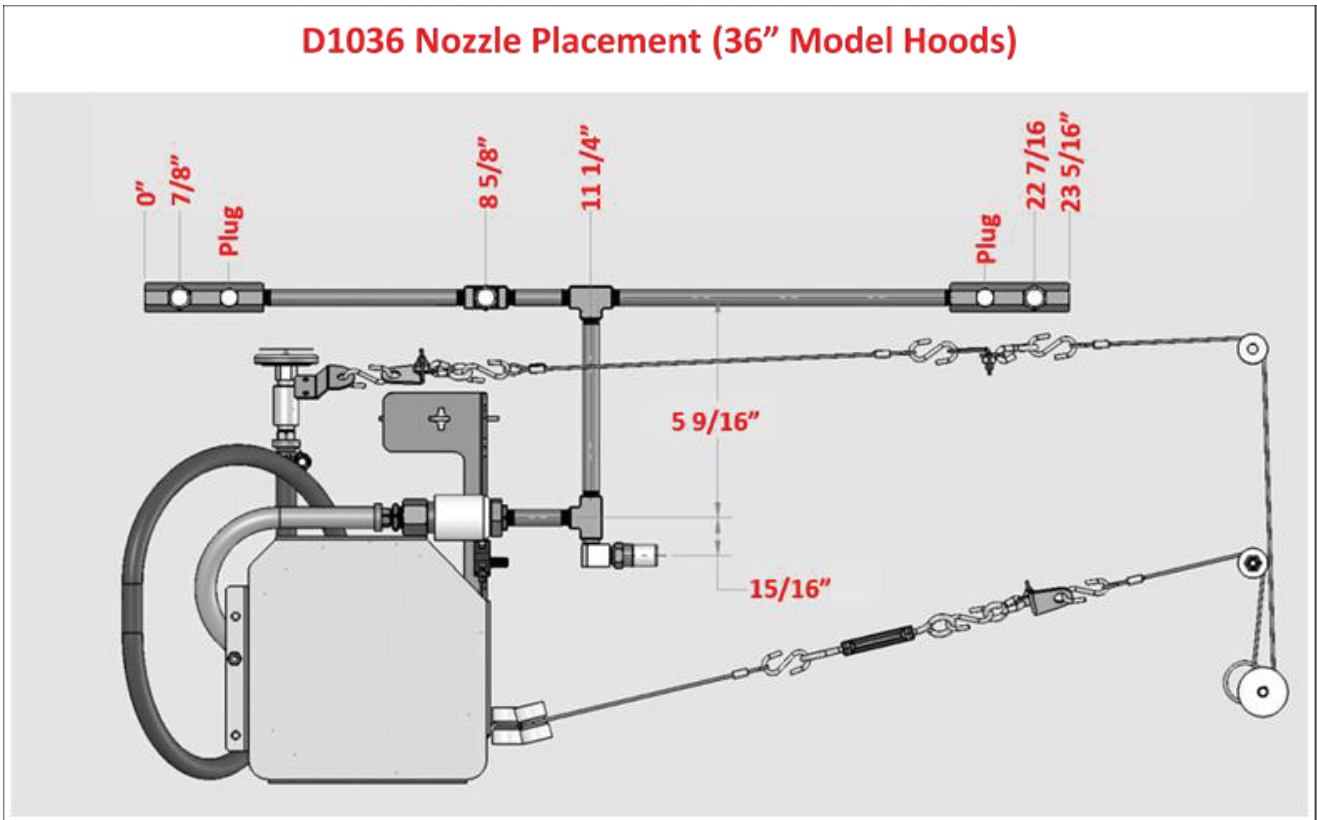
Back Plate Support Layout	
1	Cut-outs for Wire Entry
2	Mounting Holes
3	Top Mounting Holes
4	Cut-out for Rear Exhaust Fan
5	1/4-20 Studs for Securing Hood to D1000-BPS
6	Handy Box for Power In and Power Out
7	Quick Link Safety Cable Holder

The Main Unit needs clearance to tilt to a 45 Degree Angle for Maintenance Purposes

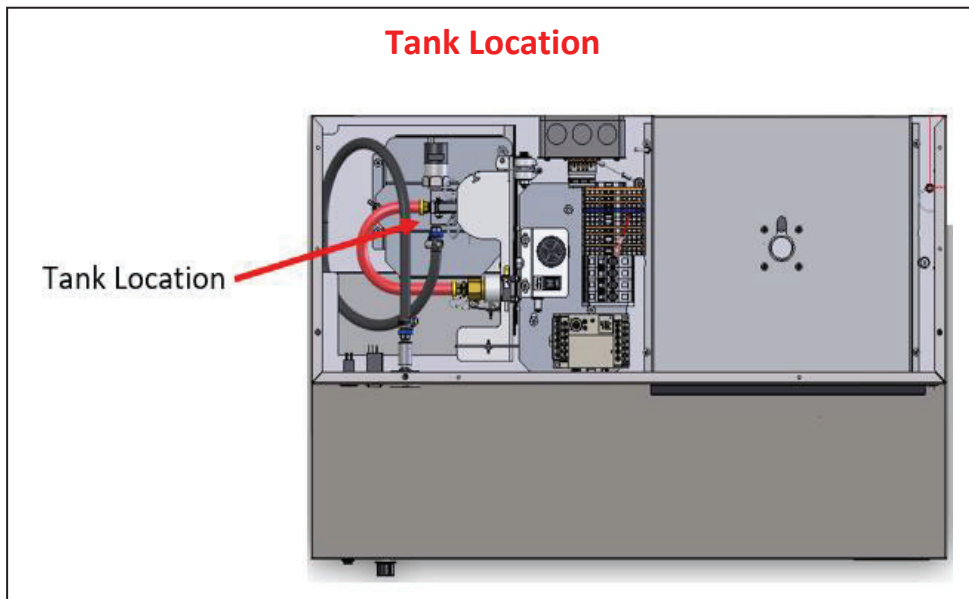


D1000 Nozzle Placement

D1036 Nozzle Placement (36" Model Hoods)



Tank Location

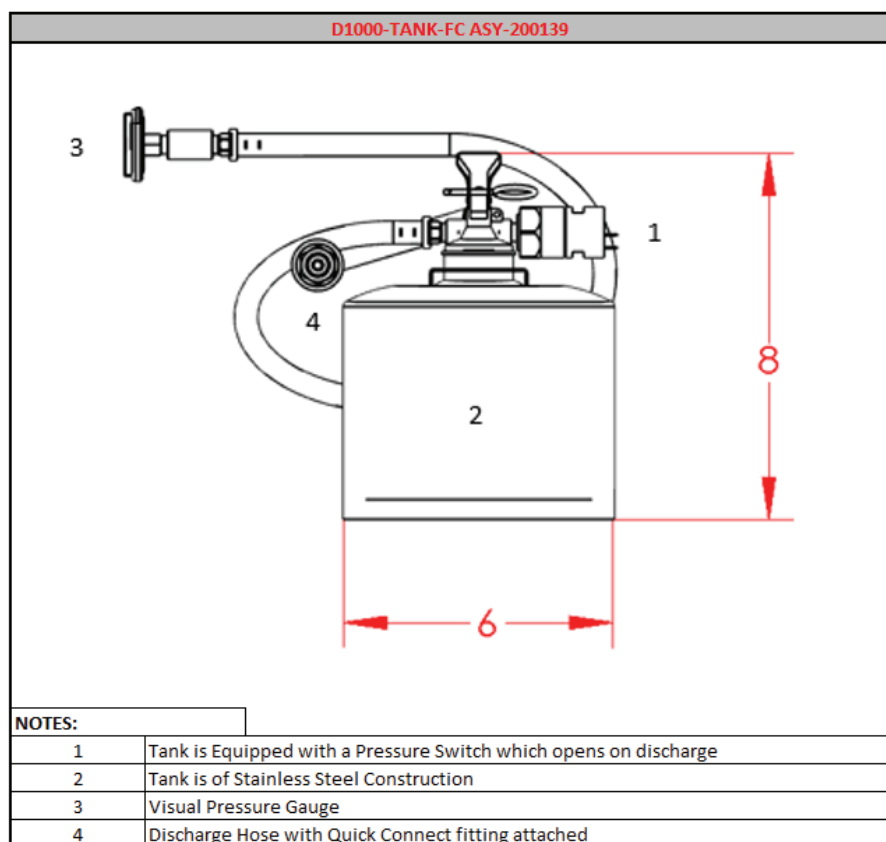


D1000-Tank Information

D1000-TANK-FC

(Integral to all D1000 Hood Models)

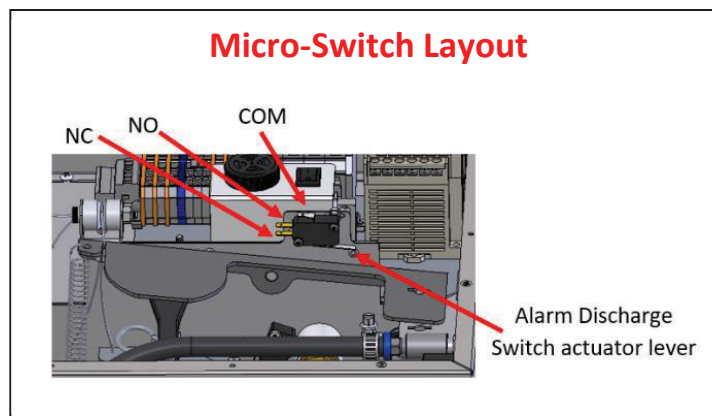
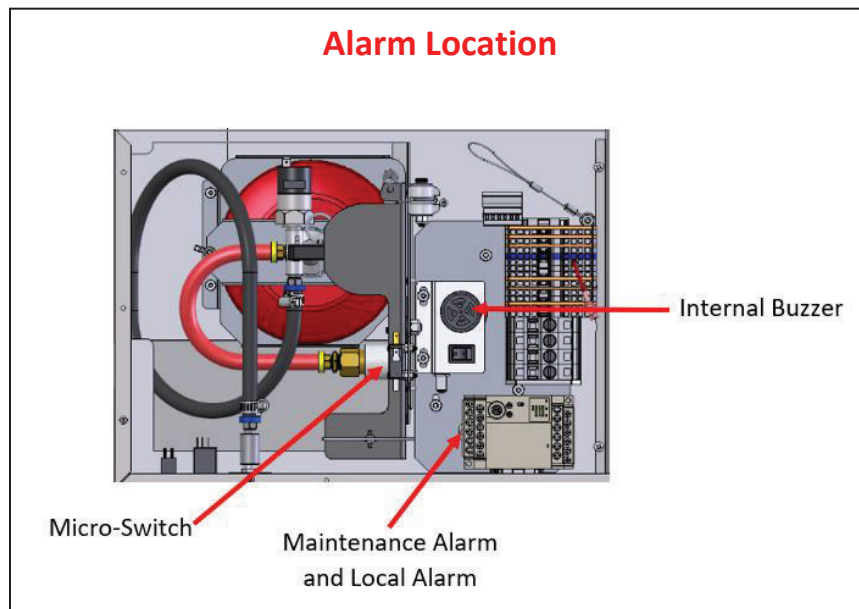
Tank Information												
	TYPE	COMPLIANCE	MOUNTING CONFIGURATION	LENGTH (In.)	DEPTH (In.)	HEIGHT (In.)	WEIGHT (Lbs.)	VESSEL	CHEMICAL TYPE	VOLUME (mL.)	CHEMICAL WEIGHT (Lbs.)	PRESSURE (PSI)+8%
D1000-TANK-FC	Self Contained Fire Suppression System	UL-1995	Integral to the Hood	N/A	6	8	9.4	Stainless Steel	Amerex 660	1300	2.2	102



Alarm Information

(Integral to all D1000 Models)

Alarm Ratings						
	TYPE	TYPE OF CONTACTS	CONTACT AMPERAGE (AC)	DECIBLES	LOCATION	Activates Upon
Internal Buzzer	Audible	None	None	90	Top Center of the Main Unit	Tank Discharge Hose Disconnected, Low Pressure in the Tank, or High Temperature Fault (190°F Deg. At the Hood)
Maintenance Alarm	Dry Contact	Com / NO	5	None	PLC Contacts C0 and Y0	Low Pressure in the Tank and High Temperature Fault (190°F Deg. At the Hood)
Local Alarm					PLC Contacts C1 and Y1	Mechanical Discharge of the Tank
Micro-Switch	Dry Contacts	Com / NO / NC	15		Micro-Switch above Tank Actuation Paddle	



Manual Pull Station Data

D1000-MPK

(Included in NFPA Models)

The Manual Pull Station (D1000-MPK) is designed to discharge the D1000 Model when a user pulls the tab from the Manual Pull Station Face Plate. The D1000-MPK is provided with 25 feet Stainless-steel Cable and with three 90 Degree Corner Pulleys. It is required to have 7-10 inches extra of the Stainless-steel Cable at the Pull Station Box.

The D1000-MPK comes equipped with the following:

- 1x Enclosure 4" x 1.5" Octagon Metal Box
- 1x Manual Pull Station Face Plate
- 1x 1/2" ENT Conduit Connector
- 3x 90 Degree Corner Pulleys
- 1x 25' Stainless-steel Cable with Clevis Pin



1x Enclosure 4" x 1.5" Octagon Metal Box



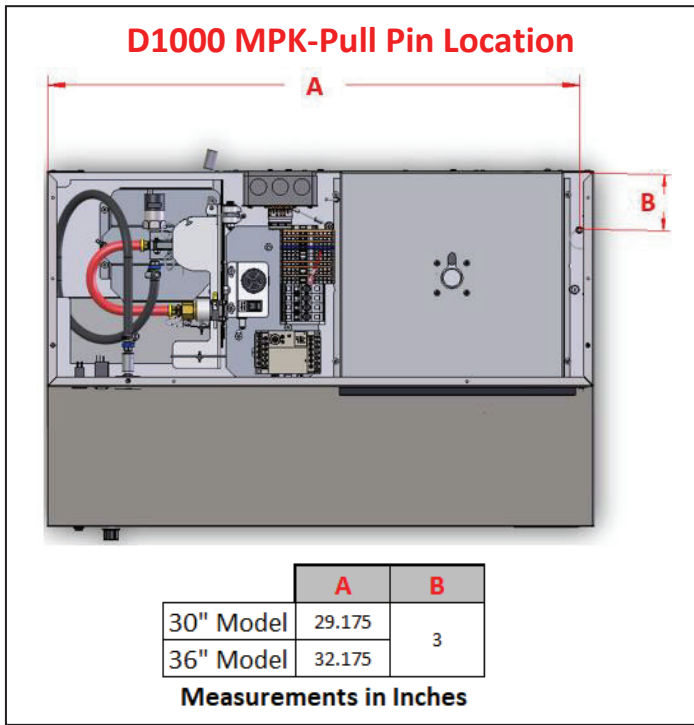
1x Manual Pull station Face Plate



1x 1/2" ENT Conduit Connector



3x 90' Degree Corner Pulleys

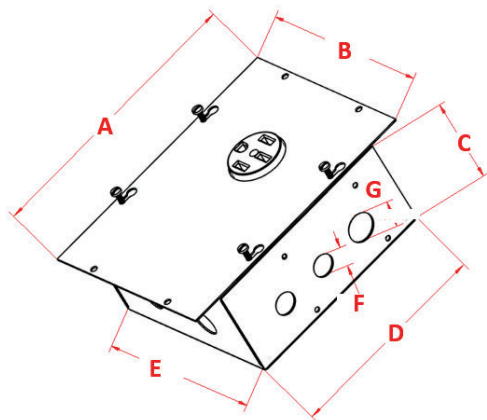


ELECTRICAL DISCONNECT

D1000-E

		ELECTRICAL SPECIFICATIONS								
		RECEPTACLE RATINGS			COIL RATINGS					
MODEL	PART NUMBER	NEMA	OUTPUT VOLTS (AC)	OUTPUT CURRENT (AMPS)	COIL VOLTAGE (AC)	PHASE	FREQUENCY (Hz.)	FUSE (AMPS)	FUSE TYPE	OPERATING CURRENT (AMPS)
D1000-E-120 5-15	ASY-300068	5-15R	120	15	120	1	60	0.5	5X20mm CARTRIDGE	0.25
DS-E-120 5-15	ASY-300071									
D1000-E-120 5-20	ASY-300035	5-20R	20							
DS-E-120 5-20	ASY-300038									
D1000-E-220 6-20	ASY-300067	6-20R	220	50						
DS-E-220 6-20	ASY-300070									
D1000-E-220 10-50	ASY-300055	10-50R	50							
DS-E-220 10-50	ASY-300069									
D1000-E-220 14-50	ASY-200074	14-50R								
DS-E-220 14-50	ASY-200178									

DIMENSIONS AND WEIGHT

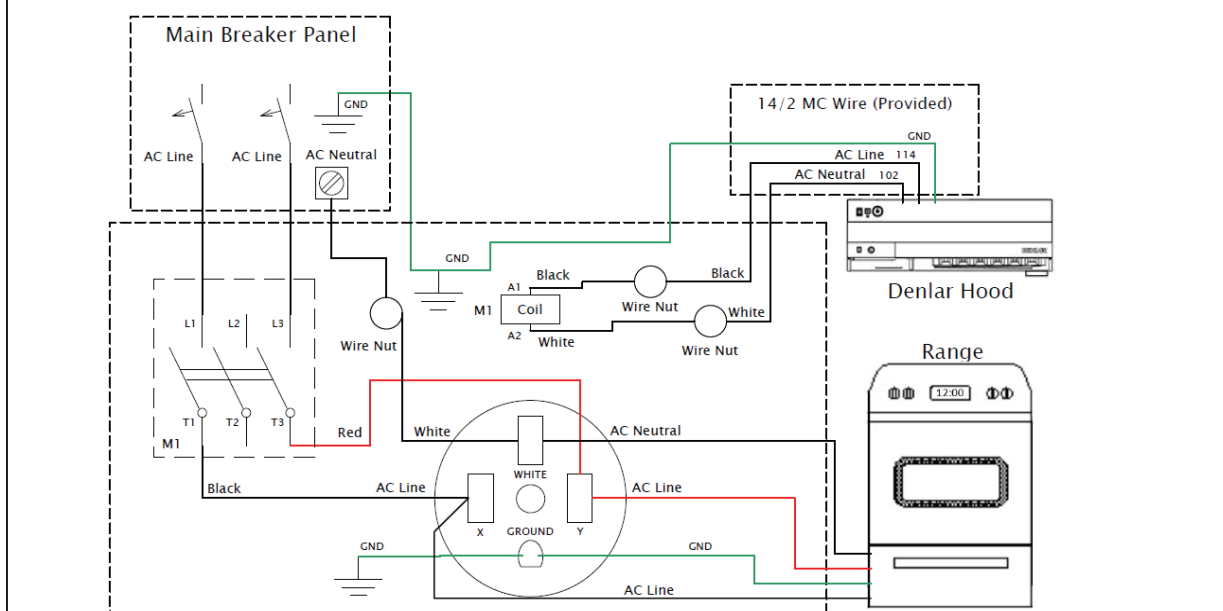


A	B	C	D	E	F	G
10.5	8	3.6	8	8	0.8	1.1

Measurements in Inches

MATERIAL INFORMATION			
WEIGHT (Lbs.)	MATERIAL	MOUNTING TYPE	MOUNTING HEIGHT
5.4	GALVANIZED	SURFACE OR FLUSH MOUNT	SEE LOCAL CODES

SCHEMATIC

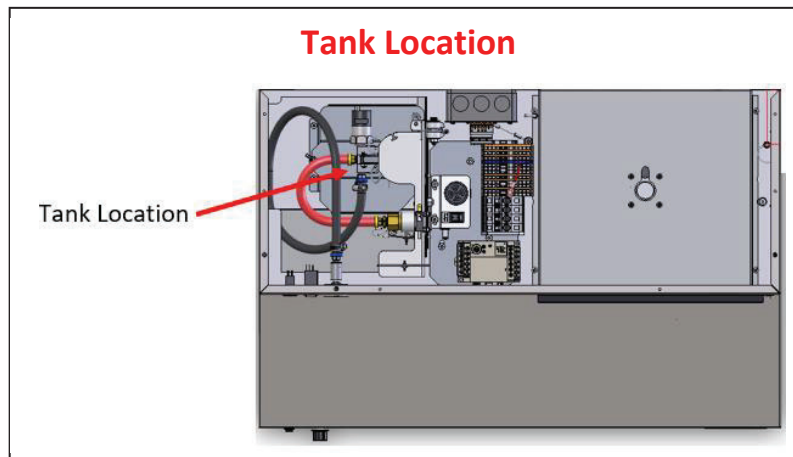
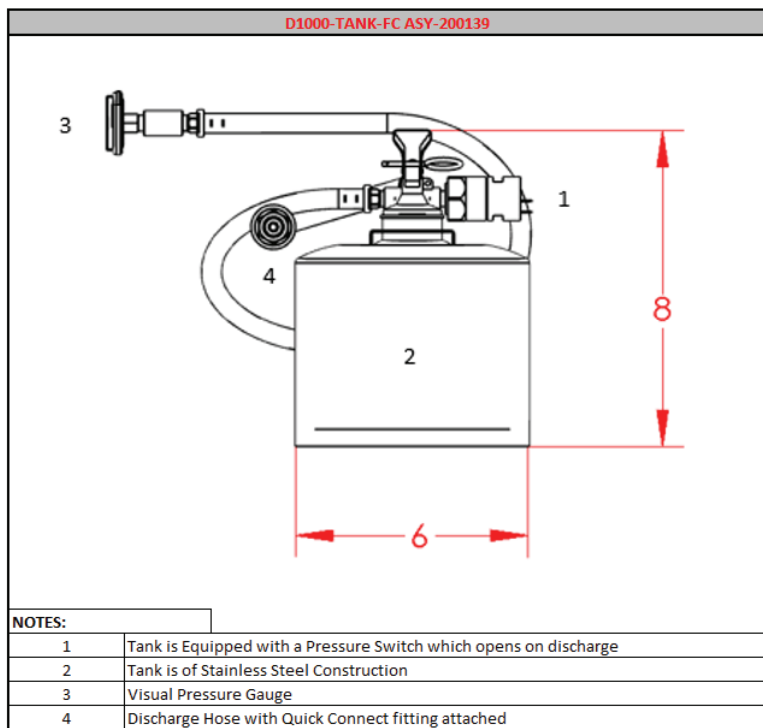


TANK FULLY CHARGED

D1000-TANK-FC

(Integral to all D1000 Hood Models)

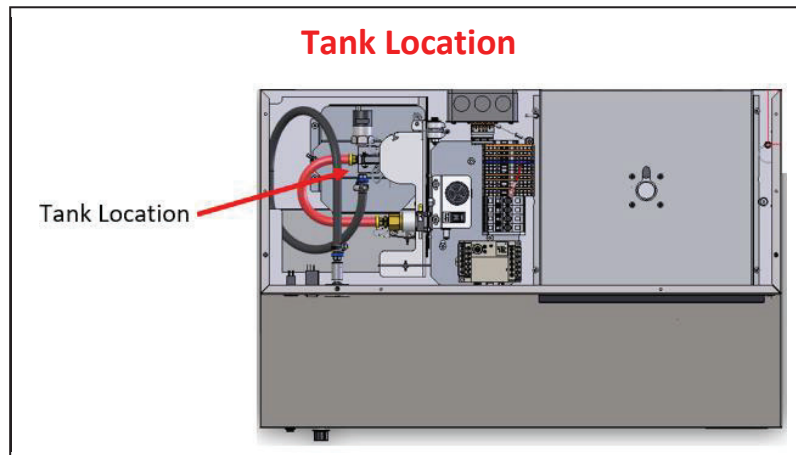
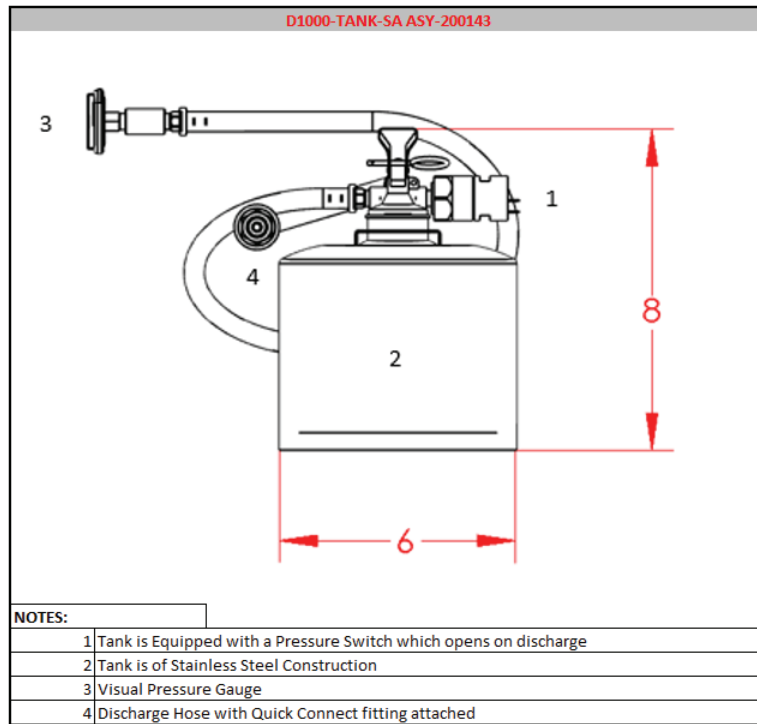
Tank Information													
MODEL	PART NUMBER	TYPE	COMPLIANCE	MOUNTING CONFIGURATION	LENGTH (In.)	DEPTH (In.)	HEIGHT (In.)	WEIGHT (Lbs.)	VESSEL	CHEMICAL TYPE	VOLUME (mL)	CHEMICAL WEIGHT (Lbs.)	PRESSURE (PSI)+8%
D1000-TANK-FC	ASY-200139	Self Contained Fire Suppression System	UL-1995	Integral to the Hood	N/A	6	8	9.4	Stainless Steel	Amerex 660	1300	2.2	102



TANK WITH AMEREX AND NOT CHARGED

D1000-TANK-SA

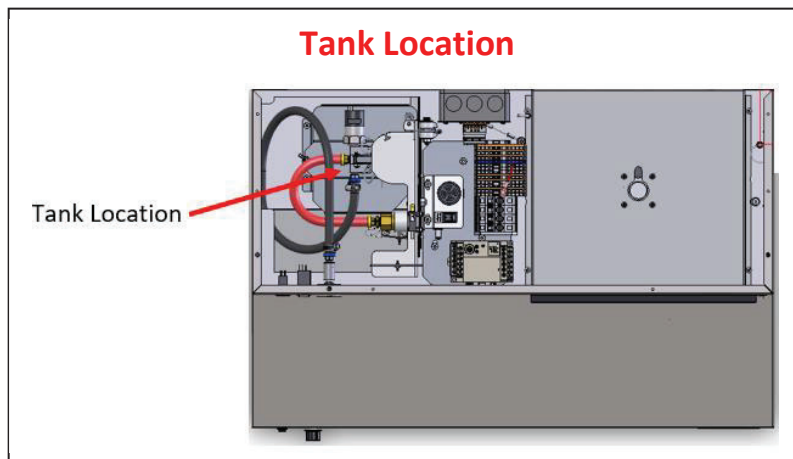
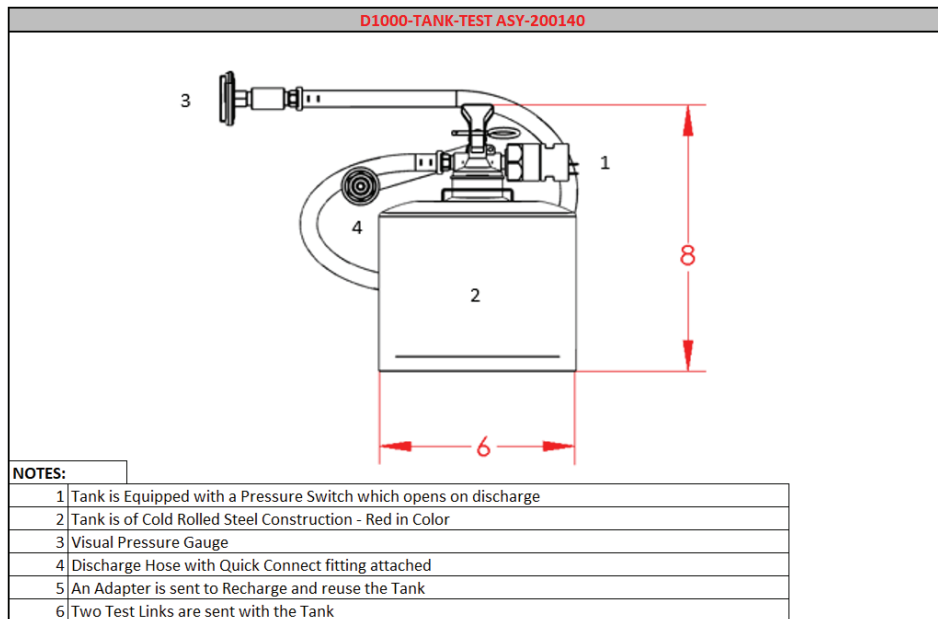
Tank Information													
MODEL	PART NUMBER	TYPE	COMPLIANCE	MOUNTING CONFIGURATION	LENGTH (In.)	DEPTH (In.)	HEIGHT (In.)	WEIGHT (Lbs.)	VESSEL	CHEMICAL TYPE	VOLUME (mL)	CHEMICAL WEIGHT (Lbs.)	PRESSURE (PSI)+8%
D1000-TANK-SA	ASY-200143	Self Contained Fire Suppression System	UL-1995	Integral to the Hood	N/A	6	8	6	Stainless Steel	Amerex 660	1300	2.2	(Charge to 102 on location)



TANK TEST – NITROGEN CHARGED ONLY

D1000-TANK-TEST

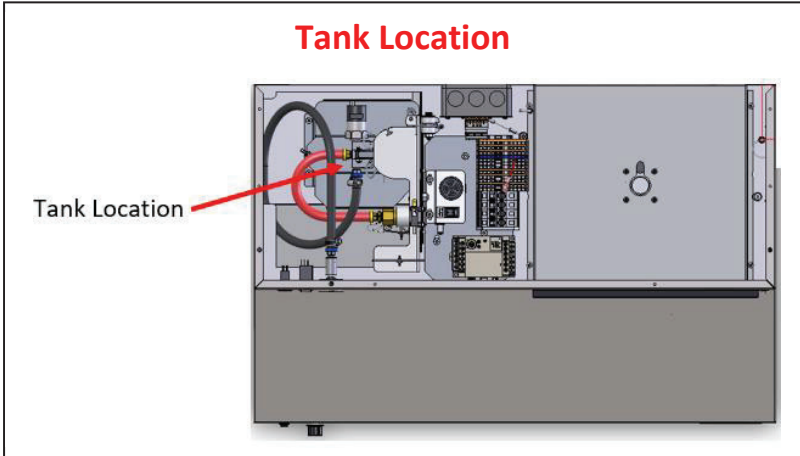
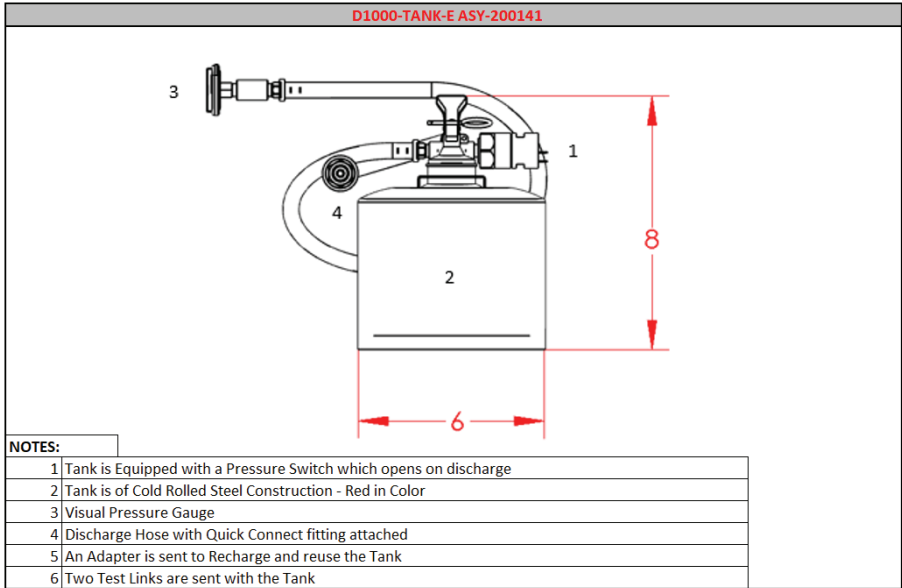
Tank Information													
MODEL	PART NUMBER	TYPE	COMPLIANCE	MOUNTING CONFIGURATION	LENGTH (In.)	DEPTH (In.)	HEIGHT (In.)	WEIGHT (Lbs.)	VESSEL	CHEMICAL TYPE	VOLUME (mL)	CHEMICAL WEIGHT (Lbs.)	PRESSURE (PSI)±8%
D1000-TANK-TEST	ASY-200140	Self Contained Fire Suppression Test System with Nitrogen	UL-1995	Integral to the Hood	N/A	6	8	6	CRS	None	0	None	102



TANK NOT CHARGED

D1000-TANK-E

Tank Information													
MODEL	PART NUMBER	TYPE	COMPLIANCE	MOUNTING CONFIGURATION	LENGTH (In.)	DEPTH (In.)	HEIGHT (In.)	WEIGHT (Lbs.)	VESSEL	CHEMICAL TYPE	VOLUME (mL.)	CHEMICAL WEIGHT (Lbs.)	PRESSURE (PSI)+8%
D1000-TANK-E	ASY-200141	Self Contained Fire Suppression Test System	UL-1995	Integral to the Hood	N/A	6	8	6	CRS	None	0	None	(Charge to 102 on location)



TOP COVER

D1030-TC-F(R)

(D1000 Only)

