

1
2
3
4
5
6
7
8
9
10
11

A B C D E F G H J K L M N O P

EXHAUST FAN INFORMATION - Job#4110057

FAN UNIT NO.	TAG	FAN UNIT MODEL #	MIN/MAX CFM/LF	MIN CFM	MAX CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	KEF-1	USB18DD-RM	150/200	1988	2600	1.750	1285	1.500	1.2170	3	208	6.6	1333 FPM	395	18.5

MAU FAN INFORMATION - Job#4110057

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	MAX CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	MCA	MOCP	WEIGHT (LBS.)	SONES
2	MAU-1	A2-IBT-200-20D	20MF-2-MOD	A2-IBT-200	1540	2150	0.750	1153	2.000	0.9400	3	208	8.3	10.4A	15A	1025	9.6

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MAU-1	200000	160000	69 deg F	7 in. w.c. - 14 in. w.c.	Natural	80

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1	KEF-1	1 - Utility Set Grease Cup
		1 - B118 - 24" Discharge Extension.
		1 - B1 - Discharge Orientation Vertical Upper Left - CW Inlet Side.
		1 - B118 - Inlet Connection Standard 20" Flanged Grease Duct.
2	MAU-1	1 - Utility Set - Spring Vibration Isolators - B118 / Equivalent Sized Utility Set - Indoor/Outdoor use.
		1 - Motorized Backdraft Damper for A2-I Housing
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, 0 to 10" wc, 1 Furnace
		1 - Freezestat
		1 - Standard Electrical Connection (main and control panel) for Standing Power - Single Module. If a Non-DCV Prewire is used on the IBT Heater, the #28, #47, "NS", "MA", or "E2" Option Prewire must be selected. Do not provide supply starter in prewire.
		1 - IBT Size 1 & 2 Side Discharge
		1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only

CURB ASSEMBLIES

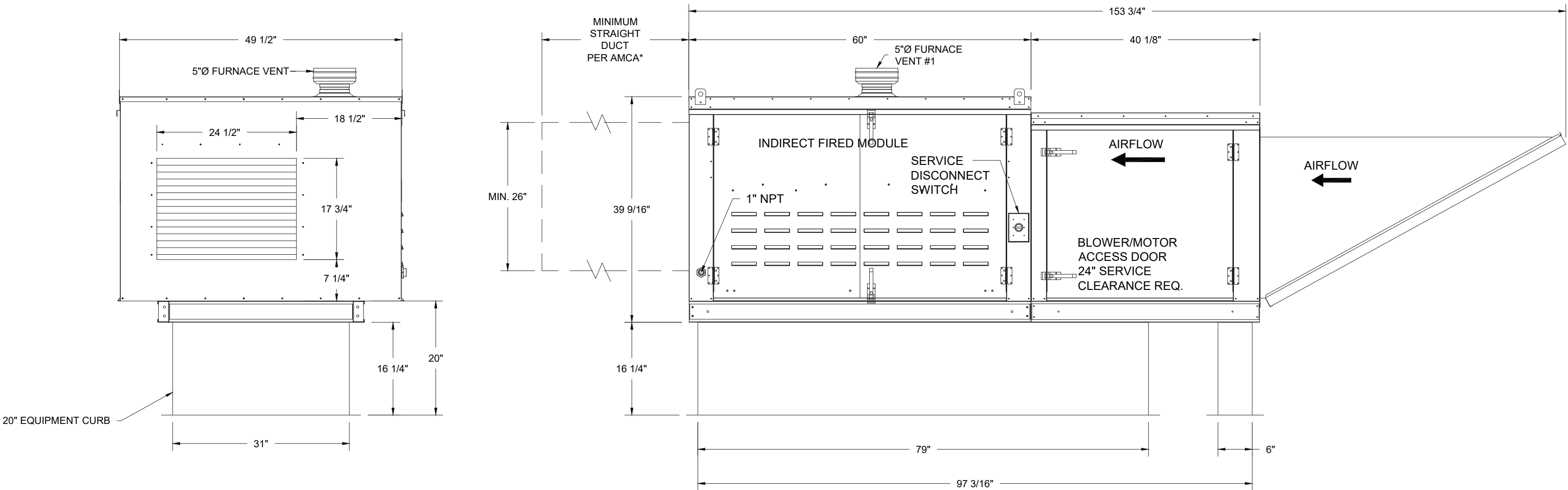
NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	25 LBS	Rail	4.000"W x 48.000"L x 10.000"H Comes as a set of 2.
2	# 2	MAU-1	107 LBS	Curb	31.000"W x 79.000"L x 20.000"H Insulated
	# 2			Rail	6.000"W x 31.000"L x 20.000"H

FAN #2 A2-IBT-200-20D - MAKEUP AIR UNIT WITH HEATER (MAU-1)
1. INDIRECT BENT TUBE GAS FIRED HEATER WITH 20" DIRECT DRIVE FAN, 1 FURNACE, ELECTRONIC FULL MODULATION, CONSTANT 80% EFFICIENCY, AND 6:1 MAX TURNDOWN FOR NG, (5:1 MAX TURNDOWN FOR LP). STAINLESS STEEL BURNER AND HEAT EXCHANGER.
2. INTAKE HOOD WITH EZ FILTERS
3. SIDE DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED
5. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
6. GAS PRESSURE GAUGE, 0 TO +10 INCHES WC, 2.5" DIAMETER, 1/8" THREAD SIZE, REAR THREAD
7. FREEZESTAT FACTORY SET AT 35°F AND 10 MINUTES
8. SEPARATE 120V ELECTRICAL CONNECTION FOR ALL IBT HEATERS WITH 1 MODULE FOR STANDING POWER. 120V MUST BE RUN BY ELECTRICIAN FROM BUILDING PANEL TO MAU SWITCH.
9. USED WITH SIZE 1 AND SIZE 2 SIDE DISCHARGE IBT MODULES.
10. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MAU SWITCH.
11. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION)
IBT - US Patent 877119 B2

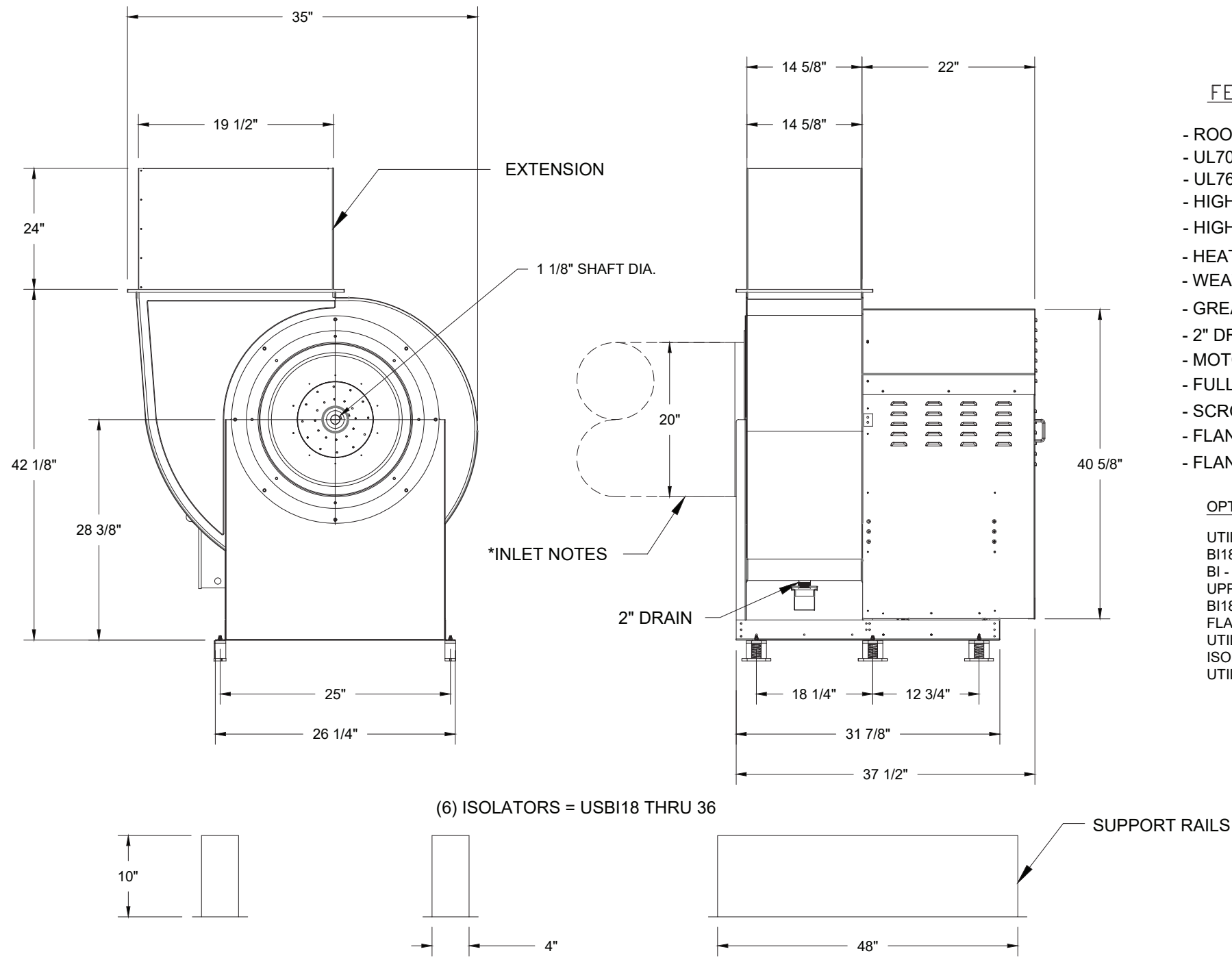
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS, A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 26" x 26"

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 5°F. TEMP. RISE = 69°F.
BTUs CALCULATED OFF STANDARD AIR DENSITY
OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 160218
INPUT BTUs AT ALTITUDE OF 0.0 ft. = 200272



FAN #1 USB18DD-RM - EXHAUST FAN (KEF-1)



FEATURES:

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

OPTIONS

UTILITY SET GREASE CUP.
B118 - 24" DISCHARGE EXTENSION.
B1 - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
B118 - INLET CONNECTION STANDARD 20" FLANGED GREASE DUCT.
UTILITY SET - SPRING VIBRATION ISOLATORS - B118 / EQUIVALENT SIZED UTILITY SET - INDOOR/OUTDOOR USE.

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.

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

Date 1/10/20
Checked
Drawn IM/MAM
MICHAEL J. MCGOVERN, R.A.
REGISTERED ARCHITECT
License No. 022257-1

Revisions:
ISSUE TO BD 11/23/20
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DOCUMENT IS A VIOLATION OF SECTION 2209 OF THE NEW YORK STATE EDUCATION LAW. THESE DOCUMENTS REMAIN THE EXCLUSIVE PROPERTY OF THE ENGINEER, AND MAY NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

LAN ASSOCIATES
engineering • planning • architecture • surveying
252 MAIN STREET, GOSHEN, NEW YORK 10924 (845) 581-0350

NYSed PROJECT # 66-07-01-03-0-005-020
KITCHEN HOOD EXHAUST FAN & MAKEUP AIR UNIT SCHEDULES & DETAILS
2019 BOND REFERENDUM
CHATSWORTH AVENUE ELEMENTARY SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
CHATSWORTH AVENUE, LARCHMONT, NY 10538
Job No. 4.1092.72.03
File No. 10927203M601
M6.03