



REVISIONS		
Δ	DESCRIPTION	DATE



SOUTHGATE
ELEMENTARY
KITCHEN UPGRADES
and ADDITION

sheet no:

M601

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DOAS/RTU FAN SCHEDULE - JOB#8548225

FAN INFORMATION										ELECTRICAL INFORMATION										COOLING INFORMATION										REHEAT INFORMATION					GAS HEAT INFORMATION					AEL MINIMUM ROOM VOLUME			NOTES
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	TOTAL CFM	MAX OUTSIDE AIR CFM	RETURN AIR CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MDCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR		CAPACITY		IEER	ISMRE2	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (F ²)	AIRFLOW (CFM)	HEIGHT (FT)					
3	DOAS-01	1	CAS-HVAC3-1400-20-20T	CAPTIVEAIRE	20P-3	3300	3300	0	2800	1500	5.00	3	208	89.1A	100A	104.0°F	76.0°F	104.0°F	76.0°F	52.0°F	52.0°F	255.9 MBH	178.1 MBH	18.2	7.9	70.0°F	59.3°F	61.2 MBH	29.6 MBH	64.2 LBS/HR	NATURAL	400000	324000	89°F	7 IN. W.C. - 14 IN. W.C.	595.6	1031	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19				
NOTES:																																											
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED DIL SENSOR. DIGITAL DR STAGED SCROLL NOT AN APPROVED EQUAL.																																											
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE.																																											
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER.																																											
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.																																											
5. ECM MOTOR CONDENSING FANS.																																											
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE.																																											
7. SUCTION LINE ACCUMULATOR.																																											
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.																																											
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).																																											
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 16GA BASE.																																											
11. 81% EFFICIENT FURNACE WITH MODULATING INDICER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 15:1 TURNDOWN WITH NG AND 12:1 TURNDOWN WITH LP.																																											
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.																																											
13. FULLY MODULATING HOT GAS REHEAT.																																											
14. LOW AMBIENT COOLING OPERATION DOWN TO 0°F.																																											
15. HAIL GUARD FOR CONDENSING COIL.																																											
16. FACTORY INSTALLED COMPRESSOR SOUND BLANKET.																																											
17. SIDE DISCHARGE/SIDE RETURN.																																											
18. MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.																																											
19. SCOR RATING OF 10kAMP.																																											

FAN ACCESSORIES

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

CURB ASSEMBLIES

NO	DN FAN	TAG	R-VALUE	WEIGHT	ITEM	SIZE
1	# 1	KEF-1L		36 LBS	CURB	23,000"W X 23,000"L X 20,000"H VENTED HINGED.
2	# 2	KEF-1R		36 LBS	CURB	23,000"W X 23,000"L X 20,000"H VENTED HINGED.
3	# 3	DOAS-01	4.3	159 LBS	CURB	59,500"W X 91,000"L X 12,000"H INSULATED 16 GAUGE.

1" R4.3 FOIL FACED FIBERGLASS INSULATION. COMPLIES WITH UL/ULCASTM, & ASHRAE STANDARDS.

EXHAUST FAN INFORMATION - JOB#8548225

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1	KEF-1L	1	DURSHFA	CAPTIVEAIRE	1750	1.000	1420	TEAQ-ECM	1.000	0.6680	1	115	11.6	554 FPM	94	13.5
2	KEF-1R	1	DURSHFA	CAPTIVEAIRE	1750	1.000	1420	TEAQ-ECM	1.000	0.6680	1	115	11.6	554 FPM	94	13.5

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1 L	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECM03 PREWIRE (TELCO MOTOR), CCW ROTATION
2	KEF-1 R	1	2 YEAR PARTS WARRANTY
		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
3	DOAS-01	1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #2B, #47, 'MA', OR 'E2' PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	RTU BLOWER DOOR SWITCH
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	BLOWER STOP DELAY. ALLOWS RESIDUAL HEAT TO BE TRANSFERRED INTO THE SUPPLY AIR AFTER HEATING HAS STOPPED. FACTORY SET AT: 90 SECS FOR 1BT, 30 SECS FOR DF
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	20 TON MODULATING COOLING OPTION, 208/230V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B
		1	RTU CURB DUCT HANGER
		1	RTU SIDE DISCHARGE
		1	120V FIRE INPUT
		1	RTU SIDE RETURN
		1	2" METAL MESH FILTERS FOR RTU OUTDOOR INTAKE
		1	DUCT MOUNTED SMOKE DETECTOR - SHIPS LOOSE
		1	HIGH TURNDOWN OPTION FOR PARAGON UNITS
		1	DDC MSTP BACNET REMOTE UNIT MONITORING
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU HAIL GUARD
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
		1	RTUVZH17 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
		1	VAV PACKAGE W/ 0-10VDC INPUT CONTROL (S71 VFD INCLUDED)
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN

TAG	LOCATION	CFM	EXT. STATIC PRESSURE (IN W.C.)	MAX RPM	HORSE POWER	CURRENT CHAR			LOCALLY SWITCHED	INTERLOCK WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
						V	P	F							
CABINET															
EF-1	LOCKER	75	0.25	1300	0.02	120	1	60	-	LIGHTS	CABINET	DIRECT	GREENHECK	SP-B80	1-2
EF-2	RR	75	0.25	1300	0.02	120	1	60	-	LIGHTS	CABINET	DIRECT	GREENHECK	SP-B80	1-2

GENERAL NOTES:
1. PROVIDE WITH MANUFACTURER SPEED CONTROL AND DISCONNECT.
2. PROVIDE WITH BACK DRAFT DAMPER.

LOUVER

MARK	SIZE (HxW)	MIN FREE AREA (SQFT)	CFM	MANUFACTURER	MODEL NO.	LOUVER TYPE	LOUVER REMARKS
L-1	12/12	1	150	GREENHECK	ESD-403	EXHAUST	1-3

NOTES:
1. PROVIDE WITH BIRDSCREEN.
2. COORDINATE EXACT LOCATION WITH GC AND ARCHITECT.
3. COORDINATE FINISH WITH ARCHITECT.