

MINI SPLIT & HEAT PUMP FAN COIL SYSTEM SCHEDULE SCHEDULE

- NOTES:
1. ROUTE CONDENSATE DRAIN OUTSIDE TO 8" AFF. PROVIDE 45-DEGREES ELBOW AT THE END OF PIPE TO GUIDE CONDENSATE AWAY FROM BUILDING WALL PROVIDE SPLASH BLOCK AT DISCHARGE. CONDENSATE SHALL NOT BE DISCHARGE ON CONCRETE.
 2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
 3. PROVIDE LONG LINE ACCESSORIES PER MANUFACTURER'S INSTRUCTIONS.
 4. PROVIDE DISCONNECT AND ELECTRICAL CONNECTION TO OUTDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
 5. CONTRACTOR MUST COORDINATE EXACT LOCATION OF DRAIN IN THE FIELD WITH PLUMBING CONTRACTOR. MECHANICAL MUST ROUTE CONDENSATE TO APPROPRIATE LOCATION OF DISPOSAL.
 6. PROVIDE RECTOR SEAL SS610E CONDENSATE OVERFLOW SWITCH TO SHUT UNIT DOWN IN CASE OF CONDENSATE OVERFLOW.
 7. PROVIDE SELF-CLEANING IONIZATION SYSTEM. REFER TO SCHEDULES FOR FURTHER INFORMATION.
 8. MINI SPLIT SYSTEM MOUNTED ON WALL. PROVIDE FLOAT, ACTIVATED CONDENSATE PUMP TO PUMP CONDENSATE DOWN TO DRAIN WHERE REQUIRED.
 9. PROVIDE MANUFACTURER'S WIRED REMOTE CONTROLLER (7 DAY PROGRAMMABLE) MODEL KSACN1401AAA.
 10. 4 WAY CEILING CASSETTE. PROVIDE MANUFACTURER'S INTEGRAL CONDENSATE PUMP.

INDOOR UNIT MARK	OUTDOOR UNIT MARK	LOCATION		MANUFACTURER	OUTDOOR MODEL NO.	INDOOR MODEL NO.	MIN COOLING (BTU/H)	MIN HEATING @ 47F (BTU/H)	SUPPLY AIR (CFM)	SEER2	HSPF2	ELECTRICAL		NOTES
		NAME	NUMBER									VOLTS	PHASE	
ACU-1	HPU-1	BUNK 1	124	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-2	HPU-2	BUNK 2	123	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-3	HPU-3	BUNK 3	122	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-4	HPU-4	BUNK 4	121	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-5	HPU-5	BUNK 5	119	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-6	HPU-6	BUNK 6	118	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-7	HPU-7	BUNK 7	117	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-8	HPU-8	BUNK 8	116	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-9	HPU-9	CAPT. SUITE	125	CARRIER	37MARAQ09AA3	45MBCAQ12XA3	9000	10000	305	21.7	11.3	208	1	1:2:3:4:5:6:7:9:10
ACU-10	HPU-10	VIRTUAL MEETING ROOM	105	CARRIER	37MARAQ24AA3	45MBCAQ24XA3	24000	25000	635	22.1	10.5	208	1	1:2:3:4:5:6:7:9:10
ACU-11	HPU-11	ELEC	222	CARRIER	37MARAQ18AA3	45MAHAQ18XA3	18000	18000	500	23.5	10.8	208	1	1:2:3:4:5:6:7:8:9
ACU-12	HPU-12	IT	204	CARRIER	37MARAQ18AA3	45MAHAQ18XA3	18000	18000	500	23.5	10.8	208	1	1:2:3:4:5:6:7:8:9
ACU-13	HPU-13	ELEC	136	CARRIER	37MARAQ18AA3	45MAHAQ18XA3	18000	18000	500	23.5	10.8	208	1	1:2:3:4:5:6:7:8:9

KITCHEN HOOD SCHEDULE

- NOTES:
1. FILTER FOR THE KITCHEN HOOD SHALL BE LOCATED IN THE MIDDLE.
 2. HOOD SHALL BE EXHAUSTED TO OUTSIDE THRU 7" DIA DUCT. PROVIDE MANUFACTURER DUCT ADAPTER AND DAMPER.
 3. PROVIDE WALL CAP FOR RANGE HOOD EXHAUST.
 4. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
 5. PROVIDE STINLESS STEEL FINISH FOR THE KITCHEN HOOD.
 6. PROVIDE TYPE B FLUE VENT FOR KITCHEN EXHAUST DUCT.

MARK	MANUFACTURER	MODEL	INSTALLATION TYPE	MATERIAL	EXHAUST FLOW (CFM)		HOOD DIMENSIONS			ELECTRICAL		NOTES
					MIN	MAX	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	VOLTAGE (V)	PHASE	
KH-1	AIR KING	OZ SERIES	WALL-MOUNT	STAINLESS STEEL	150	250	36	18	6	120	1	1:2:3:4:5:6

FIRE SUPPRESSION SYSTEM FOR KITCHEN HOOD

- NOTES:
1. FIRE SUPPRESSION SYSTEM SHALL FIRE SUPPRESSION SYSTEM BE LOCATED IN THE CABINET ABOVE KITCHEN HOOD PER MANUFACTURERS INSTRUCTIONFIRE SUPPRESSION SYSTEM BE LOCATED IN...
 2. FIRE SUPPRESSION SYSTEM SHALL BE PROVIDED AND INSTALLED BY GUARDIAN SAFETY SOLUTION, INC QUALIFIED INSTALLER.
 3. FOLOW LOCAL FIRE PROTECTION CODES FOR INSTALLING FIRE SUPPRESSION SYSTEM.
 4. INTERLOCK RANGE TO FS-1 SUCH THAT RANGE TURNS OFF WHEN FS-1 IS ON.

MARK	SERVES	MANUFACTURER	MODEL	NOTES
FS-1	KH-1	GURDIAN SAFETY SOLUTIONS, INC	GURDIAN III	1:2:3:4

LOUVER SCHEDULE

- NOTES:
1. CONTRACTOR TO INSTALL MANUAL VOLUME DAMPER FOR LOUVER.
 2. LOUVER COLOR BY ARCHITECT.
 3. MANUFACTURER INSTALLED BIRD SCREEN.
 4. COMBINATION LOUVER/DAMPER. ALUMINUM DRAINABLE BLADE LOUVER.

MARK	MANUFACTURER	MODEL	LOUVER SIZE			DUTY TYPE	DAMPER TYPE	PERFORMANCE				NOTES
			WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)			AIR FLOW (CFM)	AIR PRESSURE DROP (IN W.G.)	FREE AREA VELOCITY (SQ FT)	FREE AREA VELOCITY (FT/MIN)	
L-1	GREENHECK	ESD-601	40	48	6	INTAKE	MOTORIZED OPERATED DAMPER	4000	0.054	6.10	656	1:2:3:4
L-2	GREENHECK	ESD-601	40	48	6	INTAKE	MOTORIZED OPERATED DAMPER	4000	0.054	6.10	656	1:2:3:4
L-3	GREENHECK	ESD-601	36	36	6	INTAKE	MOTORIZED OPERATED DAMPER	2500	0.060	3.60	695	1:2:3:4

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

- NOTES:
1. PROVIDE STANDARD WHITE FINISH.
 2. INSULATE BACK OF DEVICE.
 3. BALANCE AIRFLOW TO QUANTITY SHOWN.
 4. PROVIDE FULL SIZE SHEET METAL PLENUM ON TOP OF GRILLE FOR DUCT CONNECTION.
 5. PROVIDE MANUFACTURER'S FACE OPERATED DAMPER FOR GRILLE.
 6. GRILLE SHALL BE SAME COLOR AS THE WALL/DUCT IT IS MOUNTED ON. CONTRACTOR SHALL COORDINATE EXACT GRILLE FINISH WITH ARCHITECTURAL BEFORE PROVIDING A FINISHED COLOR.

MARK	DESCRIPTION	LAYOUT BASIS		MATERIAL	FACE SIZE	INSTALLATION TYPE		NOTES
		MANUFACTURER	MODEL			TYPE	TYPE	
E1	FULL LOUVERED FACE	TITUS	350R	STEEL	NECK SIZE + 1-3/4"	SURFACE MOUNT	INSTALLATION	6
R1	EGGCRATE GRILLE	TITUS	50F	ALUMINUM	24x12	LAY-IN INSTALLATION		1:4
R2	EGGCRATE GRILLE	TITUS	50F	ALUMINUM	24x24	LAY-IN INSTALLATION		1:4
R3	FULL LOUVERED FACE	TITUS	350R	STEEL	NECK SIZE + 1-3/4"	DUCT MOUNT		1:5
S1	3-CONE DIFFUSER - 4 WAY	TITUS	TMS	STEEL	24x24	LAY-IN INSTALLATION		1:2:3
S2	3-CONE DIFFUSER - 4 WAY	TITUS	TMS	STEEL	12x12	LAY-IN INSTALLATION		1:2:3
S3	DOUBLE DEFLECTION REGISTER - 2 WAY	TITUS	300RS	STEEL	NECK SIZE + 1-3/4"	DUCT MOUNT		3:5:6

AIR CLEANING UNIT SCHEDULE

- NOTES:
1. PROVIDE POLYSTER PRE FILTERS, CARBON FILTERS, AND HEPA FILTER.
 2. UNIT SHALL RUN 24/7 CONTINUOUSLY. PROVIDE DISCONNECT FOR REGULAR MAINTENANCE.
 3. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.

MARK	LOCATION		MANUFACTURER	MODEL	CFM	ELECTRICAL DATA				DIMENSIONS				NOTES
	NAME	NUMBER				AMPS (A)	HORSEPOWER (HP)	VOLTAGE (V)	WATTS (W)	WIDTH (IN)	LENGTH (IN)	HEIGHT (IN)	WEIGHT (LBS)	
ACM-1	GEAR	134	MATRIXAIR	CEILINGMOUNT1000	850	4.2	0.25	120	504	25.50	35.38	13.69	100	1:2:3
ACM-2	DECON	129	MATRIXAIR	CEILINGMOUNT800	450	1.1	0.18	120	132	23.00	24.00	12.63	60	1:2:3

HEAT PUMP AIR HANDLING UNIT SCHEDULE

- NOTES:
1. UNIT AT 208/10 AUXILIARY HEATER AT 208/10. UNIT SHALL HAVE SINGLE POINT CONNECTION. AIR-HANDLING UNIT WITH ECM MOTOR.
 2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
 3. PROVIDE AIR FILTERS, DUCT CONNECTIONS AND VIBRATION ISOLATION. PROVIDE PROGRAMMABLE THERMOSTAT AND SUPP. ELEC. HEAT MODULE CONNECTED TO UNIT FOR SINGLE POINT OF CONNECTION.
 4. PROVIDE CONDENSATE TRAP(S) AS RECOMMENDED BY MANUFACTURER AND ROUTE CONDENSATE DRAIN OUTSIDE TO 8" AFF. PROVIDE 45-DEGREES ELBOW AT THE END OF PIPE TO GUIDE CONDENSATE AWAY FROM BUILDING WALL PROVIDE SPLASH BLOCK AT DISCHARGE. CONDENSATE SHALL NOT BE DISCHARGE ON CONCRETE.
 5. HORIZONTAL CONFIGURATION UNIT.
 6. PROVIDE AUXILIARY DRAIN PAN UNDER THE AIR HANDLERS WITH FLOAT ACTIVATED SWITCH TO SHUT THE UNIT DOWN INCASE OF CONDENSATE OVERFLOW. REFER TO DETAIL PROVIDED.
 7. PROVIDE DUCT SMOKE DETECTOR IN SUPPLY AIR DUCT OF AIR-HANDLING UNIT.
 8. FLOAT ACTIVATED CONDENSATE SWITCH SHALL BE PROVIDED AND INSTALLED BY HVAC CONTRACTOR. DUCT SMOKE DETECTORS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED BY HVAC CONTRACTOR.
 9. PROVIDE COIL OUTLET SWITCH TO SHUT UNIT DOWN IN CASE OF CONDENSATE OVERFLOW. WIRE COIL OUTLET SWITCH IN SERIES WITH AUXILIARY CONDENSATE SWITCH LOCATED IN DRAIN PAN.
 10. UNIT SHALL HAVE MANUFACTURER'S REFRIGERANT LEAK DETECTION DISSIPATION SYSTEM.
 11. PROVIDE ONE GLOBAL PLASMA IONIZATION SYSTEM PER UNIT. REFER TO SCHEDULES FOR FURTHER INFORMATION. PROVIDE MERV 8 FILTER.
 12. PROVIDE CARRIER PROGRAMMABLE THERMOSTAT WITH FOUR SMART SENSORS. LOCATE SENSORS AND THERMOSTAT AS PER DRAWINGS.
 13. THERMOSTAT AND SENSORS SHALL WORK TOGETHER TO GET AN AVERAGE TEMPERATURE OF OCCUPIED SPACES.

MARK	LOCATION		LAUOUT BASIS		TYPE	SUPPLY FAN				EVAP. COIL ENTERING AIR DESIGN CONDITIONS		EVAP. COIL LEAVING AIR DESIGN CONDITIONS		SYSTEM COOLING MAX. REQUIREMENTS		SUPPLY HEAT (KW)	ELECTRICAL	UNIT WEIGHT (LBS)	NOTES
	NAME	NUMBER	MANUFACTURER	MODEL		DESIGN AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN.WG)	HP	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL (MBH)	SENSIBLE (MBH)				
AH-1	ATTIC SPACE		CARRIER	FTSANBC36L	HORIZONTAL	1050	190	0.50	0.50	78.3	65.3	56.4	55.0	33.01	24.81	7.5	208/1	250	1:2:3:4:5:6:7:8:9:10:11:12:13
AH-2	ATTIC SPACE		CARRIER	FTSANBD60L	HORIZONTAL	1750	315	0.50	0.75	80.0	67.0	58.8	57.9	58.44	45.90	11.3	208/1	250	1:2:3:4:5:6:7:8:9:10:11:12:13
AH-3	ATTIC SPACE		CARRIER	FTSANXB24L	HORIZONTAL	700	125	0.50	0.50	78.2	65.3	55.9	54.8	22.27	16.89	7.5	208/1	250	1:2:3:4:5:6:7:8:9:10:11
AH-4	STORAGE	301	CARRIER	FTSANBC36L	VERTICAL	1050	190	0.50	0.50	78.3	65.3	54.4	55.0	33.01	24.81	7.5	208/1	250	1:2:3:4:6:7:8:9:10:11

AIR COOLED HEAT PUMP UNIT SCHEDULE

- NOTES:
1. PROVIDE WITH DEFROST CONTROLS, LOW AMBIENT HEAD PRESSURE CONTROLS, AND ANTI-SHORT CYCLE TIMER. PROVIDE COIL GUARD.
 2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
 3. PROVIDE LIQUID LINE SOLENOID, CRANKCASE HEATER, TXV, START CAPACITOR AND RELAY AS RECOMMENDED BY MANUFACTURER FOR LONG LINE APPLICATIONS.
 4. PROVIDE MOUNTING PAD/ROOF SUPPORT AS PER DETAIL PROVIDED.
 5. 2-STAGE COMPRESSOR UNIT.
 6. PROVIDE LONG LINE ACCESSORIES PER NOTE 3 WHERE REFRIGERANT PIPE LENGTHS EXCEEDS 80-EQUIVLENT FEET.

MARK	DESCRIPTION	LOCATION		SYSTEM SERVES	MANUFACTURER	MODEL NO.	HEAT PUMP HEATING CAPACITY (BTU/HR)	REFRIGERANT TYPE	O.A. TEMPERATURE SUMMER (DB)	O.A. TEMPERATURE WINTER (DB)	NOMINAL CAPACITY (TONS)	SEER2	HSPF2	ELECTRICAL		UNIT WEIGHT (LBS)	NOTES
		NAME	NO.											VOLT (V)	PH		
HP-1	CONDENSING UNIT	ROOF	-	AH-1	CARRIER	27TPA836A003	36000	R-454B	93.0 °F	18.0 °F	3	15.2	8.1	208	1	400	1:2:3:4:5:6
HP-2	CONDENSING UNIT	ROOF	-	AH-2	CARRIER	27TPA860A003	60000	R-454B	93.0 °F	18.0 °F	5	17.5	8.1	208	1	400	1:2:3:4:5:6
HP-3	CONDENSING UNIT	ROOF	-	AH-3	CARRIER	27TPA824A003	24000	R-454B	93.0 °F	18.0 °F	2	17.5	8.1	208	1	400	1:2:3:4:5:6
HP-4	CONDENSING UNIT	OUTSIDE	-	AH-4	CARRIER	27TPA836A003	36000	R-454B	93.0 °F	18.0 °F	3	15.2	8.1	208	1	400	1:2:3:4:5:6

GAS-FIRED RADIANT HEATER SCHEDULE

- NOTES:
1. COMBUSTION AIR SHALL BE TAKEN FROM OUTSIDE VIA VENT PIPE. LOCATE COMBUSTION AND INTAKE 4'-0" AWAY AT MINIMUM TO PREVENT SHORT CIRCUIT. FOLLOW MANUFACTURER'S INSTRUCTIONS TO ROUTE AND INSTALL VENTS.
 2. RADIANT HEATER TO HAVE TYPE B DOUBLE WALL FLUE THRU ROOF.
 3. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
 4. STRAIGHT RADIANT HEATER WITH FLUE DRAFT INDUCING FAN FOR PULL THRU COMBUSTION AND REFLECTOR WITH ENCLOSED ENDS.

MARK	LOCATION		MANUFACTURER	MODEL	PRODUCT TYPE	MOUNTING HIGHT A.F.F. (FT)	GAS BURNER RATINGS				TUBE DIAMETER	INTAKE DUCT DIAMETER	EXHAUST DUCT DIAMETER	ELECTRICAL		NOTES
	NAME	NUMBER					TYPE	MAXIMUM INPUT (BTU/HR)	MINIMUM INPUT	IGNITION TYPE				VOLTAGE (V)	PHASE	
RH-1	APPARATUS BAY	133	SPACE RAY	LTU 40L7	RADIANT	11" - 0"	NG	40000	25000	DIRECT SPARK	4"	4"	4"	120	1	1:2:3:4
RH-2	APPARATUS BAY	133	SPACE RAY	LTU 40L7	RADIANT	11" - 0"	NG	40000	25000	DIRECT SPARK	4"	4"	4"	120	1	1:2:3:4
RH-3	APPARATUS BAY	133	SPACE RAY	LTU 40L7	RADIANT	11" - 0"	NG	40000	25000	DIRECT SPARK	4"	4"	4"	120	1	1:2:3:4
RH-4	APPARATUS BAY	133	SPACE RAY	LTU 40L7	RADIANT	11" - 0"	NG	40000	25000	DIRECT SPARK	4"	4"	4"	120	1	1:2:3:4

HIGH VOLUME LOW SPEED FAN SCHEDULE

- NOTES:
1. HIGH VOLUME LOW SPEED CEILING FAN. PROVIDE 3-BLADE, EXTRUDED AIRFOIL KIT, MOUNTING KIT, HI-PRO POLYESTER FINISH, 2 FT DROP LENGTH, AND FLEXIBLE POWER CORD.
 2. PROVIDE PLUG AND PLAY CAT 5E NETWORK COMMUNICATION, 100 FT OF CONTROL CABLE, FIRE ALARM WIRING, AND LOW VOLTAGE NORMALLY CLOSED FIRE ALARM RELAY.
 3. PROVIDE BRAIDED GALVANIZED STEEL SAFETY CABLE, EASY INSTALL GRIPPLE HARDWARE FOR SAFETY CABLE.
 4. FAN SHALL BE CONTROLLED BY DIGITAL TIME CLOCK 24/7-365 DAYS. TIME CLOCKS SHALL BE PROVIDED BY ELECTRICAL.
 5. PROVIDE POWER WIRING, NETWORK COMMUNICATION WIRING, CAT-5E CONTROL CABLE, SAFETY CABLE.
 6. HVLS FANS MUST BE MOUNTED TO BUILDING STRUCTURE AS SHOWN IN ONE OF THE MOUNTING DETAILS ON THIS PAGE. OTHER MOUNTING METHODS ARE NOT ACCEPTABLE UNLESS APPROVED BY STRUCTURAL ENGINEER OF RECORD (SEOR), FOR COMPLETE INSTALLATION INSTRUCTIONS, REFER TO THE INSTALLATION, OPERATION AND MAINTENANCE MANUAL (IOM).
 7. CONTRACTOR SHALL COORDINATE INSTALLATION PER MANUFACTURER'S INSTRUCTION.

MARK	LOCATION		NAME	NUMBER	MANUFACTURER	MODEL	AIR VOLUME (CFM)	MINIMUM MOUNTING HEIGHT (FT)	MINIMUM WALL CLEARANCE (FT)	DIAMETER (Ø FT)	ELECTRICAL				WEIGHT (LBS)	NOTES
											POWER (HP)	MAX SPEED (RPM)	VOLTAGE (V)	PHASE		
HVLS-1	APPARATUS BAY	133	GREENHECK		DS-3-10-90LV		29188	10	15	10	1.50	99	208	3	141	1:2:3:4:5:6:7