

AIR HANDLING UNIT

MARK	TOTAL DESIGN CFM	EXT. S.P. IN. W.G.	OUTSIDE AIR C.F.M.			FAN DATA			ELECTRICAL DATA			COOLING CAPACITY			DESICCANT WHEEL PERFORMANCE			PRE-FILTERS			FINAL FILTERS			BASIS OF DESIGN																			
			OCCUPIED	UNOCCUPIED	MIN.	MAX.	FAN QTY.	DRIVE TYPE	FAN HP	ELECTRICAL SERVICE	DESICCANT WHEEL SERVICE	UVC EMITTER SERVICE	TOTAL MBH	SENS. MBH	E.A.T., °F	L.A.T., °F	MAX. A.P.D. IN. W.G.	MAX. COIL F.V., F.P.M.	MIN. ROWS	MAX. FIN SPACING	REFRIGERANT TYPE	NUMBER OF CIRCUITS	E.A.T., °F		L.A.T., °F	MAX. A.P.D. IN. W.G.	FUNCTION	TYPE	DEPTH (INCHES)	MERV RATING	INITIAL A.P.D. (IN. W.G.)	D.F.A. (IN. W.G.)	MAX. F.V. (FT/MIN.)	FUNCTION	TYPE	DEPTH (INCHES)	MERV RATING	INITIAL A.P.D. (IN. W.G.)	D.F.A. (IN. W.G.)	MAX. F.V. (FT/MIN.)			
AHU-01	1,000	3.25	300	300	300	1	DIRECT	3	208V, 3ph	208V, 1ph	120V, 1ph	60.0	30.0	78.2	69.3	53.0	52.8	0.40	400	8	172	R-410A	2	83.0	72.0	58.6	48.0	1.5	PRE	DISP	4	8	0.25	0.35	450	FINAL	DISP	12	15	0.35	0.5	450	TRANE PERFORMANCE CLIMATE CHANGER WITH COQ DESICCANT WHEEL.

GENERAL NOTES:
 1. ALL RATINGS ARE AT SPECIFIED DESIGN DAY, CFM AND EXTERNAL STATIC PRESSURE CONDITIONS.
 2. SEE DETAILS AND SCHEMATICS FOR ADDITIONAL INFORMATION.
 3. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
 4. SEE VARIABLE FREQUENCY DRIVE SCHEDULE FOR MORE INFORMATION.
 5. ALL ACCESS DOORS SHALL BE CONFIGURED TO BE HELD CLOSED AGAINST NORMAL OPERATING PRESSURES. (I.E. OPEN INWARD ON POSITIVE PRESSURE AND OUTWARD ON NEGATIVE PRESSURE.)

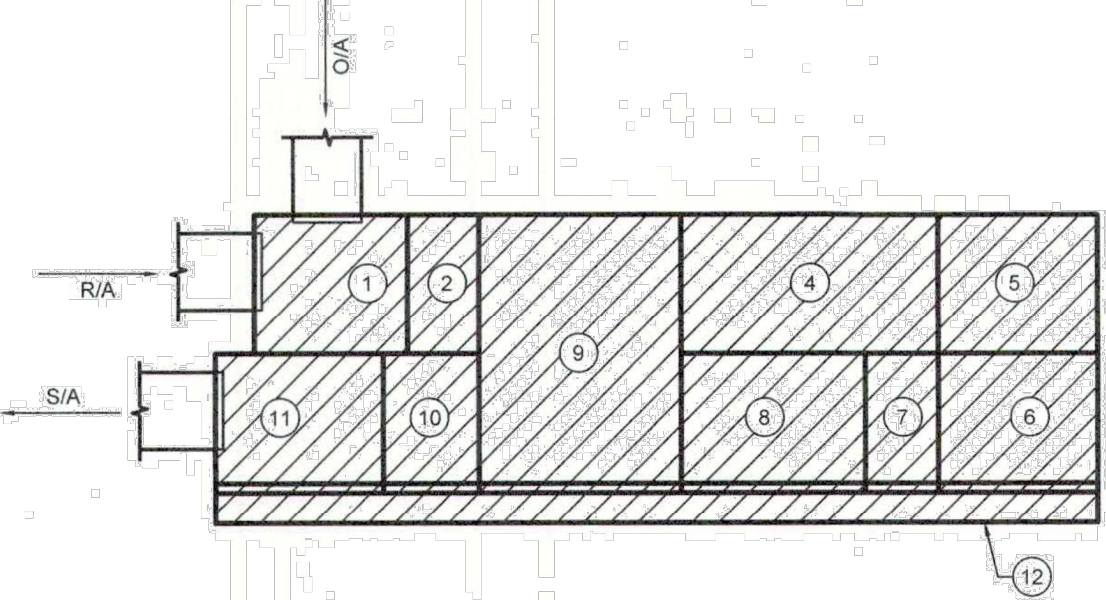
FEATURES/ACCESSORIES:
 1. PROVIDE PREMIUM EFFICIENCY MOTORS RATED FOR INVERTER DUTY.
 2. FOR UNITS WITH VARIABLE SPEED DRIVES, PROVIDE SUBMITTAL DATA FOR BOTH THE OPERATING AND DESIGN TOTAL STATIC PRESSURE. BELTS/PULLEYS TO BE PROVIDED BASED UPON DESIGN TOTAL STATIC PRESSURE.
 3. PROVIDE STAINLESS STEEL SLOPED DRAIN PANS FOR COOLING COILS.

COMPARABLE PRODUCTS:
 TRANE, YORK, MCQUAY

ROOF HOOD SCHEDULE

MARK	NECK SIZE	MAX. A.P.D. IN. W.G.	CFM	BASIS OF DESIGN	FEATURES/ACCESSORIES [1]
RH-01	8"x8"	0.05	200	GREENHECK MODEL GRSR	1, 2
RH-02	12"x12"	0.05	400	GREENHECK MODEL GRSR	1, 2
RH-03	12"x12"	0.05	475	GREENHECK MODEL GRSR	1, 2
RH-04	12"x12"	0.05	500	GREENHECK MODEL GRSR	1, 2
IH-01	18"x18"	0.035	775	GREENHECK MODEL GRSI	1, 2
IH-02	24"x24"	0.035	1,200	GREENHECK MODEL GRSI	1, 2

[1] FEATURES/ACCESSORIES:
 1. BRDSCREEN
 2. PROVIDE FACTORY KYNAR FINISH (COLOR SELECTION BY ARCHITECT)



AHU-01 SCHEMATIC

MODULE DESCRIPTION: [1]
 1. AIR MIXING/ACCESS SECTION WITH BACK RETURN AIR AND TOP OUTSIDE AIR OPENINGS. OUTSIDE AIR OPENING TO INCLUDE AIR FLOW MEASURING STATION.
 2. PRE-FILTER SECTION.
 3. COOLING COIL SECTION WITH UV LIGHTS.
 4. ACCESS SECTION.
 5. SUPPLY FAN SECTION.
 6. TURNING SECTION.
 7. COOLING COIL SECTION WITH UV LIGHTS.
 8. ACCESS SECTION.
 9. DESICCANT WHEEL SECTION WITH WHEEL BYPASS MOTORIZED DAMPERS.
 10. FINAL FILTER SECTION.
 11. DISCHARGE PLENUM WITH ACCESS.
 12. RAIL SYSTEM.

AIR TERMINALS SCHEDULE

MARK	TYPE	C.F.M. RANGE	NECK SIZE	FACE SIZE	DEFLECTION	V.D.*	FACTORY INSULATION**	BASIS OF DESIGN	NOTES
1s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	25-100	6"Ø	12"x12"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
2s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	75-225	8"Ø	20"x20"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
3s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	200-375	10"Ø	20"x20"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
4s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	350-550	12"Ø	24"x24"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
5s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	25-100	6"Ø	24"x24"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
6s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	75-225	8"Ø	24"x24"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
7s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	200-375	10"Ø	24"x24"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
8s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	350-550	12"Ø	24"x24"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1
9s	GYP. CEILING MOUNTED HIGH CAPACITY S/A DIFFUSER	175-250	8"Ø	24"x24"	2-WAY	NO	YES	PRICE M ODEL HCF	1
10s	GYP. CEILING MOUNTED HIGH CAPACITY S/A DIFFUSER	250-450	10"Ø	24"x24"	2-WAY	NO	YES	PRICE M ODEL HCF	1
11s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER WITH CRD	25-100	6"Ø	12"x12"	AS INDIC.	NO	YES	PRICE M ODEL SPD	1, 2
1r	L.A.T. CEILING MOUNTED CUBE CORE R/A GRILLE	0-600	22"x10"	24"x12"	0°	NO	NO	PRICE M ODEL 80	2
2r	L.A.T. CEILING MOUNTED CUBE CORE R/A GRILLE	700-1600	22"x22"	24"x24"	0°	NO	NO	PRICE M ODEL 80	2
3r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE	0-600	22"x10"	24"x12"	0°	NO	NO	PRICE M ODEL 80	1, 2
4r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE	700-1600	22"x22"	24"x24"	0°	NO	NO	PRICE M ODEL 80	1, 2
5r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE WITH CRD	25-100	10"x10"	12"x12"	0°	NO	NO	PRICE M ODEL 80	1, 2, 3
1e	L.A.T. CEILING MOUNTED CUBE CORE EA REGISTER	0-450	12"x12"	24"x24"	0°	YES	NO	PRICE M ODEL 80-D	2
2e	GYP. CEILING MOUNTED CUBE CORE EA GRILLE WITH CRD	25-100	10"x10"	12"x12"	0°	NO	NO	PRICE M ODEL 80	1, 2, 3
3e	GYP. CEILING MOUNTED CUBE CORE EA GRILLE	25-100	10"x10"	12"x12"	0°	YES	NO	PRICE M ODEL 80-D	1, 2

* V.D. - VOLUME DAMPER (FACTORY ACCESSORY)
 ** AIR DISTRIBUTION DEVICES WHERE NOTED TO INCLUDE FACTORY INSULATION ON REAR OF DEVICE

NOTES:
 1. PROVIDE WITH PLASTER RING FOR LAY-IN MOUNTING INSTALLATION INTO GYP. CEILING.
 2. PROVIDE WITH SQUARE TO ROUND ADAPTER. SEE PLANS FOR ROUND DUCT SIZE.
 3. PROVIDE WITH UL LISTED CEILING RADIATION DAMPER AND INSULATION BLANKET FOR DIFFUSER. BACKPAN. INSTALL PER MANUFACTURER'S INSTALLATION REQUIREMENTS TO MEET UL LISTING.

COMPARABLE PRODUCTS:
 PRICE, TITUS, METALAIR

FAN SCHEDULE

MARK	TYPE [1]	CONTROL SEQ. [2]	OPERATING CFM	S.P. IN. W.G.	R.P.M.	MAX. SONES	H.P.	B.H.P.	WATTS	ELEC. SERVICE	DRIVE	BASIS OF DESIGN	NOTES [3]
EF-01	A	B	100	0.5	817	2.5	-	-	128	120V, 1ph	DIRECT	GREENHECK MODEL SP-B150	1, 2, 3, 4, 6, 7
EF-02	A	B	100	0.5	817	2.5	-	-	128	120V, 1ph	DIRECT	GREENHECK MODEL SP-B150	1, 2, 3, 4, 6, 7
EF-03	A	B	100	0.5	817	2.5	-	-	128	120V, 1ph	DIRECT	GREENHECK MODEL SP-B150	1, 2, 3, 4, 6, 7
EF-04	A	B	100	0.5	817	2.5	-	-	128	120V, 1ph	DIRECT	GREENHECK MODEL SP-B150	1, 2, 3, 4, 6, 7
EF-05	A	D	200	0.5	1064	3.5	-	-	135	120V, 1ph	DIRECT	GREENHECK MODEL SP-A390	1, 2, 3, 6, 7
EF-06	B	A	475	0.5	1383	10	1/4	0.13	-	120V, 1ph	DIRECT	GREENHECK MODEL SQ-99-VG	1, 2, 3, 5, 6
EF-07	B	C	500	0.5	1411	10	1/4	0.14	-	120V, 1ph	DIRECT	GREENHECK MODEL SQ-99-VG	1, 2, 3, 5, 6

COMPARABLE PRODUCTS:
 GREENHECK, COOK, PENN-BARRY

[1] TYPE:
 A. CEILING CABINET TYPE
 B. ABOVE CEILING IN-LINE TYPE

[2] CONTROL SEQUENCE:
 A. EXHAUST FAN SHALL BE INTERLOCKED WITH AHU-01 OPERATION TO RUN CONTINUOUSLY BY AHU-01 CONTROL PANEL.
 B. EXHAUST FAN SHALL BE CONTROLLED BY WALL MOUNTED PASSIVE INWARD MOTION SENSOR MOUNTED AT 4' A.F.F. ADJUST SENSOR TO REMAIN ON FOR 20 MINUTES AFTER ACTIVATION.
 C. EXHAUST FAN SHALL BE CONTROLLED TO RUN CONTINUOUSLY VIA TIME SCHEDULE CONTROL.
 D. EXHAUST FAN SHALL BE INTERLOCKED WITH EF-04 OPERATION TO RUN CONTINUOUSLY.

[3] NOTES: PROVIDE THE FOLLOWING MANUFACTURER'S ACCESSORIES:
 1. UL AND AMCA RATING
 2. FACTORY MOUNTED & WIRED DISCONNECT BACKDRAFT DAMPER
 3. WALL MOUNTED MOTION DETECTOR
 4. ECM MOTOR WITH MOTOR MOUNTED POTENTIOMETER
 5. FACTORY MOUNTED & WIRED SOLID STATE SPEED CONTROLLER
 6. ALUMINUM GRILLE
 7. NEOPRENE VIBRATION ISOLATION HANGING KIT

MOTOR STARTER SCHEDULE

SERVING	HP OF EACH LOAD	ELECTRICAL CHARACTERISTICS	BASIS OF DESIGN	NOTES [1]
EF-05	135 watts	120V, 1ph	FRANKLIN CONTROLS M ODEL BAS-1P	1, 2, 3
EF-06	1/4	120V, 1ph	FRANKLIN CONTROLS M ODEL BAS-1P	1, 2, 3
EF-07	1/4	120V, 1ph	FRANKLIN CONTROLS M ODEL BAS-1P	1, 2, 3

[1] NOTES:
 1. COORDINATE CONTROL CONTACTOR REQUIREMENTS WITH ENERGY MANAGEMENT SYSTEM (EMS) TO ACHIEVE SPECIFIED SEQUENCE OF OPERATIONS.
 2. MOUNT STARTER WITHIN 10' OF EQUIPMENT SERVED. COORDINATE IN FIELD SPECIFIC LOCATION.
 3. COMBINATION MOTOR STARTER/DISCONNECT.

FILTER HOUSING SCHEDULE

MARK	LOCATION	C.F.M.	SERVES	INT. S.P. (IN. W.G.)	BASIS OF DESIGN (NO SUBSTITUTIONS ALLOWED)	FEATURES/ACCESSORIES
PH-01	MECH. MEZZ.	1000	AHU-01	1.5	LIFEAIRE SYSTEMS MODEL AIRE1000	1, 2, 3

FEATURES/ACCESSORIES:
 1. INDOOR APPLICATION WITH TOP ACCESS TO UV LAMPS.
 2. SIDE ACCESS FILTER DOORS.
 3. UNIT MOUNTED ON MEZZANINE PLATFORM.

COMPARABLE PRODUCTS:
 MITSUBISHI, DAIKIN, LG

ELECTRIC DUCT HEATERS SCHEDULE

MARK	DUCT SIZE	SYSTEM	CFM	MAX. A.P.D. IN. W.G.	E.A.T., °F	ELECTRICAL DATA			BASIS OF DESIGN	NOTES
						SERVICE	KW	NO. OF STAGES		
EDH-01	16"x14"	AHU-01	1,000	0.05	80.0	208V, 1ph	15	MOD. SCR	GREENHECK MODEL IDHC	1, 2, 3

NOTES:
 1. CONTRACTOR SHALL VERIFY DUCT SIZES WITH ACTUAL CONDITIONS.
 2. PROVIDE WITH MODULATING SCR CONTROL. SEE SPECIFICATION FOR CONTROL SEQUENCE.
 3. PROVIDE ALL UNITS WITH INTEGRAL CIRCUIT BREAKER/DISCONNECT SWITCH SEQUENCE PANEL, AIR PROVING SAFETY CONTROLS, INTERLOCK RELAY AND HIGH SAFETY CONTROLS SET AT 125°F. ADJUSTABLE.

DEHUMIDIFIER UNIT SCHEDULE

MARK	MATCHED SYSTEM	C.F.M.	PINTS/24 HRS. @ 80 DEG. F / 60%RH	ELECTRICAL DATA		BASIS OF DESIGN	NOTES
				SERVICE	AMPS		
DH-01	FE-01	350	155	120V, 1ph	8	ULTRA-AIRE M ODEL XT155H	1, 2, 3, 4
DH-02	FE-02	350	155	120V, 1ph	8	ULTRA-AIRE M ODEL XT155H	1, 2, 3, 4
DH-03	FE-03	350	155	120V, 1ph	8	ULTRA-AIRE M ODEL XT155H	1, 2, 3, 4
DH-04	FE-04	150	105	120V, 1ph	4.9	ULTRA-AIRE M ODEL XT109H	1, 2, 3, 4
DH-05	FE-05	350	155	120V, 1ph	8	ULTRA-AIRE M ODEL XT155H	1, 2, 3, 4
DH-06	FE-06	350	155	120V, 1ph	8	ULTRA-AIRE M ODEL XT155H	1, 2, 3, 4

NOTES:
 1. PROVIDE WITH HARD DRAIN CONNECTION AND 1/2" CORD WITH PLUG.
 2. PROVIDE WITH REPLACEMENT FILTERS (MERV 11).
 3. PROVIDE WITH BUILT-IN AUTOMATIC CONTROLS AND FACTORY DEHUMIDISTAT (FOR FIELD MOUNTING).
 4. PROVIDE WITH DUCT COLLARS FOR REMOTE MOUNTING/INSTALLATION.

DUCTLESS SPLIT SYSTEM (OUTDOOR SECTION) SCHEDULE

MARK	COOLING CAPACITY			HEATING CAPACITY		MAXIMUM REFRIGERANT PIPE LENGTH (FT.)	ELECTRICAL SERVICE	BASIS OF DESIGN	MATCHED TO
	OUTDOOR D.B., °F	TOTAL MBHR	MIN. S.E.E.R.	TOTAL REVERSE CYCLE, M.B.H.*	HSPF				
DCU-01	95	17.1	15	19	8.2	98	208V, 1ph	DAIKIN MODEL RXN18NMVJU	DSS-01

*BASED ON 47°F D.B. OUTSIDE AND 70°F D.B. INDOOR ENTERING COIL TEMPERATURE

NOTES:
 1. REFRIGERANT PIPE SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.
 2. PROVIDE LOW AMBIENT CONTROL CAPABILITY.
 3. ALL UNITS TO BE PROVIDED WITH HIGH/LOW PRESSURE SWITCHES, HARD SHUTOFF KIT, LIQUID LINE FILTER DRYER AND WARRANTY AS SPECIFIED.
 4. SEE SPECIFICATIONS FOR WARRANTY INFORMATION.
 5. PROVIDE WITH INVERTER DUTY OR VARIABLE SPEED COMPRESSOR.

COMPARABLE PRODUCTS:
 MITSUBISHI, DAIKIN, LG

DUCTLESS SPLIT SYSTEM (INDOOR SECTION) SCHEDULE

MARK	TYPE	TOTAL C.F.M.	HEATING CAPACITY			COOLING CAPACITY		ELECTRICAL SERVICE	BASIS OF DESIGN	FEATURES/ACCESSORIES	MATCHED TO
			INDOOR D.B., °F	OUTDOOR D.B., °F	TOT. REV. CYCLE, M.B.H.	ENT. COND. D.B.	TOTAL MBHR				
DSS-01	WALL	700	70	70	18	80	67	17.1	208V, 1ph	1, 2	DCU-01

*BASED ON 47°F D.B. OUTSIDE AND 70°F D.B. INDOOR ENTERING COIL

FEATURES/ACCESSORIES:
 1. PROVIDE WITH HARD WIRED WALL MOUNTED THERMOSTAT.
 2. MANUFACTURER'S INTEGRAL, HIGH LIFT (MINIMUM 5 FEET) CONDENSATE PUMP.

COMPARABLE PRODUCTS:
 MITSUBISHI, DAIKIN, LG

FURNACE WITH DX COOLING SCHEDULE

MARK	TYPE	TOTAL C.F.M.	O.A. C.F.M.	E.S.P. IN. W.G.	HEATING DATA			DX COOLING CAPACITY			ELECTRICAL DATA			BASIS OF DESIGN		MATCHED TO		
					FUEL	INPUT MBHR	OUTPUT MBHR	MIN. NO. STAGES	MAX. A.P.D. IN. W.G.	E.A.T., °F	TOTAL MBHR	SENS. MBHR	SERVICE	FAN H.P.	FURNACE		EVAPORATOR	
FE-01	HORZ.	1800	200	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE M ODEL SV92D120	TRANE M ODEL 4TXCD010	CU-01
FE-02	HORZ.	1400	200	0.9	N. GAS	100	97	2	0.35	80	67	46	32.5	120V, 1ph	3/4	TRANE M ODEL SV92C100	TRANE M ODEL 4TXCD008	CU-02
FE-03	HORZ.	1800	225	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE M ODEL SV92D120	TRANE M ODEL 4TXCD010	CU-03
FE-04	HORZ.	1100	150	0.9	N. GAS	60	58.2	2	0.35	80	67	35	24.7	120V, 1ph	1/2	TRANE M ODEL SV92B060	TRANE M ODEL 4TXCD003	CU-04
FE-05	HORZ.	1800	200	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE M ODEL SV92D120	TRANE M ODEL 4TXCD010	CU-05
FE-06	HORZ.	1400	200	0.9	N. GAS	100	97	2	0.35	80	67	46	32.5	120V, 1ph	3/4	TRANE M ODEL SV92C100	TRANE M ODEL 4TXCD008	CU-06

NOTES:
 1. REFRIGERANT PIPE SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION TO PROVIDE SCHEDULED MINIMUM COOLING CAPACITY AND MAXIMUM EQUIPMENT LIFE.
 2. PROVIDE ONE POINT ELECTRICAL CONNECTIONS FOR ALL INDOOR UNITS.</