

**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
			OCCLUDED	UNOCCLUDED	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	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 DB	WB	L.A.T., °F DB	HR	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 CDQ DESICCANT WHEEL																										

**GENERAL NOTES:**

- ALL RATINGS ARE AT SPECIFIED DESIGN DAY, CFM AND EXTERNAL STATIC PRESSURE CONDITIONS.
- SEE DETAILS AND SCHEMATICS FOR ADDITIONAL INFORMATION.
- SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
- SEE VARIABLE FREQUENCY DRIVE SCHEDULE FOR MORE INFORMATION.
- 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:**

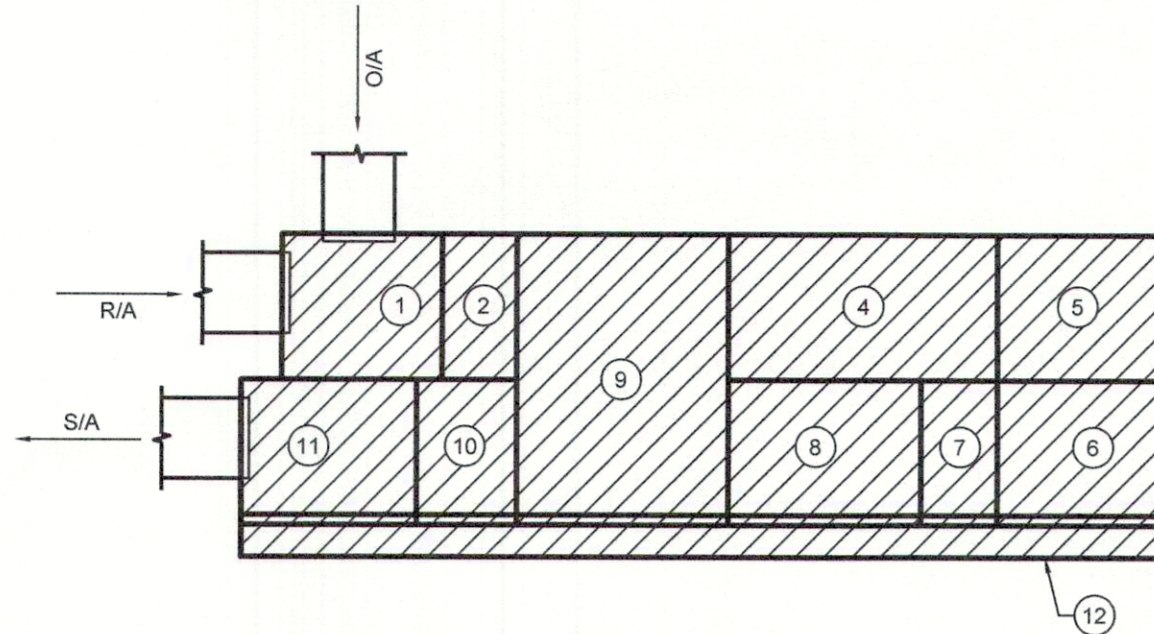
- PROVIDE PREMIUM EFFICIENCY MOTORS RATED FOR INVERTER DUTY.
- FOR UNITS WITH VARIABLE SPEED DRIVES, PROVIDE SUBMITTAL DATA FOR BOTH THE OPERATING AND DESIGN TOTAL STATIC PRESSURE BELTS/PULVEYS TO BE PROVIDED BASED UPON DESIGN TOTAL STATIC PRESSURE.
- PROVIDE STAINLESS STEEL SLOPED DRAIN PANS FOR COOLING 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 GRSS	1, 2
RH-02	12"x12"	0.05	400	GREENHECK MODEL GRSS	1, 2
RH-03	12"x12"	0.05	475	GREENHECK MODEL GRSS	1, 2
RH-04	12"x12"	0.05	500	GREENHECK MODEL GRSS	1, 2
IH-01	18"x18"	0.035	775	GREENHECK MODEL GRSS	1, 2
IH-02	24"x24"	0.035	1,200	GREENHECK MODEL GRSS	1, 2

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



**AHU-01 SCHEMATIC**

**MODULE DESCRIPTION:**

- AIR MIXING/ACCESS SECTION WITH BACK RETURN AIR AND TOP OUTSIDE AIR OPENINGS. OUTSIDE AIR OPENING TO INCLUDE AIR FLOW MEASURING STATION
- PRE-FILTER SECTION
- COOLING COIL SECTION WITH UV LIGHTS
- ACCESS SECTION
- SUPPLY FAN SECTION
- TURNING SECTION
- COOLING COIL SECTION WITH UV LIGHTS
- ACCESS SECTION
- DESICCANT WHEEL SECTION WITH WHEEL BYPASS MOTORIZED DAMPERS
- FINAL FILTER SECTION
- DISCHARGE PLENUM WITH ACCESS
- RAIL SYSTEM

COMPARABLE PRODUCTS:  
GREENHECK, COOK, PENN-BARRY

**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	1054	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	1,2,3,5,8
EF-07	B	C	500	0.5	1411	10	1/4	0.14	-	120V, 1ph	DIRECT	GREENHECK MODEL SQ-99-VG	1,2,3,5,8

[1] TYPE

- CEILING CABINET TYPE
- ABOVE CEILING INLINE TYPE

[2] CONTROL SEQUENCE

- EXHAUST FAN SHALL BE INTERLOCKED WITH AHU-01 OPERATION TO RUN CONTINUOUSLY BY AHU-01 CONTROL PANEL.
- EXHAUST FAN SHALL BE CONTROLLED BY WALL MOUNTED PASSIVE INFRARED MOTION SENSOR MOUNTED AT 48" A.F.F. ADJUST SENSOR TO REMAIN ON FOR 20 MINUTES AFTER ACTIVATION.
- EXHAUST FAN SHALL BE CONTROLLED TO RUN CONTINUOUSLY VIA TIME SCHEDULE CONTROL.
- EXHAUST FAN SHALL BE INTERLOCKED WITH FIE-04 OPERATION TO RUN CONTINUOUSLY.

[3] NOTES: PROVIDE THE FOLLOWING MANUFACTURER'S ACCESSORIES

- UL AND AMCA RATING
- FACTORY MOUNTED & WIRED DISCONNECT
- BACKDRAFT DAMPER
- WALL MOUNTED MOTION DETECTOR
- 50W MOTOR WITH MOTOR ISOLATED POTENTIOMETER
- FACTORY MOUNTED & WIRED SOLID STATE SPEED CONTROLLER
- ALUMINUM GRILLE
- 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 MODEL BAS-1P	1, 2, 3
EF-06	1/4	120V, 1ph	FRANKLIN CONTROLS MODEL BAS-1P	1, 2, 3
EF-07	1/4	120V, 1ph	FRANKLIN CONTROLS MODEL 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
FH-01	MECH. MEZZ.	1000	AHU-01	1.5	LIFEAIRE SYSTEMS MODEL AIRE 1000	1, 2, 3

**FEATURES/ACCESSORIES:**

- INDOOR APPLICATION WITH TOP ACCESS TO UV LAMP.
- SIDE ACCESS FILTER DOORS.
- UNIT MOUNTED ON MEZZANINE PLATFORM.

COMPARABLE PRODUCTS:  
MITSUBISHI, DAIKIN, LG

**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.	HSFP	TOTAL MBHR				
DCU-01	95	17.1	15	18	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.	D.B.	TOTAL MBHR				
DSS-01	WALL	700	70	47	18	80	67	17.1	208V, 1ph	DAIKIN MODEL FTXN18NMVJU	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

**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 MODEL SPD	1
2s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	75-225	8"Ø	20"x20"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
3s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	200-375	10"Ø	20"x20"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
4s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	350-550	12"Ø	24"x24"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
5s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	25-100	6"Ø	24"x24"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
6s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	75-225	8"Ø	24"x24"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
7s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	200-375	10"Ø	24"x24"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
8s	L.A.T. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER	350-550	12"Ø	24"x24"	AS INDIC.	NO	YES	PRICE MODEL SPD	1
9s	GYP. CEILING MOUNTED HIGH CAPACITY S/A DIFFUSER	175-250	8"Ø	24"x24"	2-WAY	NO	YES	PRICE MODEL HCF	1
10s	GYP. CEILING MOUNTED HIGH CAPACITY S/A DIFFUSER	250-450	10"Ø	24"x24"	2-WAY	NO	YES	PRICE MODEL HCF	1
11s	GYP. CEILING MOUNTED SQUARE PLAQUE S/A DIFFUSER WITH CRD	25-100	6"Ø	12"x12"	AS INDIC.	NO	YES	PRICE MODEL SPD	1, 3
1r	L.A.T. CEILING MOUNTED CUBE CORE R/A GRILLE	0-600	22"x10"	24"x12"	0°	NO	NO	PRICE MODEL 80	2
2r	L.A.T. CEILING MOUNTED CUBE CORE R/A GRILLE	700-1600	22"x22"	24"x24"	0°	NO	NO	PRICE MODEL 80	2
3r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE	0-600	22"x10"	24"x12"	0°	NO	NO	PRICE MODEL 80	1, 2
4r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE	700-1600	22"x22"	24"x24"	0°	NO	NO	PRICE MODEL 80	1, 2
5r	GYP. CEILING MOUNTED CUBE CORE R/A GRILLE WITH CRD	25-100	10"x10"	12"x12"	0°	NO	NO	PRICE MODEL 80	1, 2, 3
1e	L.A.T. CEILING MOUNTED CUBE CORE E/A REGISTER	0-450	12"x12"	24"x24"	0°	YES	NO	PRICE MODEL 80-D	2
2e	GYP. CEILING MOUNTED CUBE CORE E/A GRILLE WITH CRD	25-100	10"x10"	12"x12"	0°	NO	NO	PRICE MODEL 80	1, 2, 3
3e	GYP. CEILING MOUNTED CUBE CORE E/A GRILLE	25-100	10"x10"	12"x12"	0°	YES	NO	PRICE MODEL 80-D	1, 2

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

**NOTES:**

- PROVIDE WITH PLASTER RING FOR LAY-IN MOUNTED INSTALLATION INTO GYP. CEILING.
- PROVIDE WITH SQUARE TO ROUND ADAPTER. SEE PLANS FOR ROUND DUCT SIZE.
- 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

**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 D.B.	W.B.	TOTAL MBHR	SENS. MBHR	SERVICE		FAN H.P.	FURNACE	EVAPORATOR
FIE-01	HORZ	1800	200	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE MODEL SV92D120	TRANE MODEL 4TXCD010	CU-01
FIE-02	HORZ	1400	200	0.9	N. GAS	100	97	2	0.35	80	67	46	32.5	120V, 1ph	3/4	TRANE MODEL SV92C100	TRANE MODEL 4TXCD008	CU-02
FIE-03	HORZ	1800	225	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE MODEL SV92D120	TRANE MODEL 4TXCD010	CU-03
FIE-04	HORZ	1100	150	0.9	N. GAS	60	58.2	2	0.35	80	67	35	24.7	120V, 1ph	1/2	TRANE MODEL SV92B050	TRANE MODEL 4TXCB003	CU-04
FIE-05	HORZ	1800	200	0.9	N. GAS	120	116	2	0.35	80	67	59	41.6	120V, 1ph	1	TRANE MODEL SV92D120	TRANE MODEL 4TXCD010	CU-05
FIE-06	HORZ	1400	200	0.9	N. GAS	100	97	2	0.35	80	67	46	32.5	120V, 1ph	3/4	TRANE MODEL SV92C100	TRANE MODEL 4TXCD008	CU-06

**NOTES:**

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

COMPARABLE PRODUCTS:  
LENNOX, TRANE, CARRIER, YORK, RUUD/REEM

**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	50.0	208V, 1ph	15	MOD. SCR	GREENHECK MODEL IDHC	1,2,3

**NOTES:**

- CONTRACTOR SHALL VERIFY DUCT SIZES WITH ACTUAL CONDITIONS.
- PROVIDE WITH MODULATING SCR CONTROL. SEE SPECIFICATION FOR CONTROL SEQUENCE.
- 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	FIE-01	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1,2,3,4
DH-02	FIE-02	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1,2,3,4
DH-03	FIE-03	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1,2,3,4
DH-04	FIE-04	150	105	120V, 1ph			