

AIR HANDLING UNIT

MARK	TOTAL DESIGN CFM	EXT. S.P. IN. W.G.	OCCUPIED UNOCCUPIED		FAN QTY	DRIVE TYPE	FAN FAN	ELECTRICAL SERVICE	ELECTRICAL DATA		COOLING CAPACITY				DISICANT WHEEL PERFORMANCE				PRE-FILTERS				FINAL FILTERS				BASIS OF DESIGN																
			MIN.	MAX.					MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.		MIN.	MAX.														
AHU-01	1,000	3.25	300	300	300	1	DIRECT	3	200V, 1ph	200V, 1ph	120V, 1ph	80.0	50.0	78.2	88.3	50.0	82.8	0.40	400	8	172	R-10A	2	0.0	72.0	28.8	48.0	1.5	PRE	DISP	4	6	0.25	0.35	480	FINAL	DISP	12	15	0.35	0.5	480	TRANE PERFORMANCE CLIMATE CHANGER WITH CO2 DISICANT WHEEL

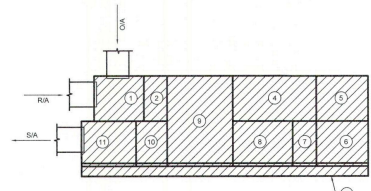
GENERAL NOTES:
 1. ALL RATINGS ARE AT SPECIFIED DESIGN DAY, CFM AND EXTERNAL STATIC PRESSURE CONDITIONS.
 2. SEE DETAILS AND SCHEMATICS FOR ADDITIONAL INFORMATION.
 3. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
 4. SEE VARIABLE FREQUENCY DRIVE SCHEDULE FOR MORE INFORMATION.
 5. ALL ACCESS DOORS SHALL 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. BELT SPLINES TO BE PROVIDED BASED UPON DESIGN TOTAL STATIC PRESSURE.
 3. PROVIDE STAINLESS STEEL SLOPED DRAIN PANS FOR COOLING COILS.

ROOF HOOD SCHEDULE

MARK	NECK SIZE	MAX. A.P.D. IN. W.G.	CFM	BASIS OF DESIGN	FEATURES/ACCESSORIES (1)
RH-01	3'x3'	0.65	200	GREENNECK MODEL GSR	1, 2
RH-02	17"x12"	0.65	400	GREENNECK MODEL GSR	1, 2
RH-03	17"x12"	0.65	475	GREENNECK MODEL GSR	1, 2
RH-04	17"x12"	0.65	500	GREENNECK MODEL GSR	1, 2
RH-05	17"x14"	0.65	775	GREENNECK MODEL GSR	1, 2
RH-02	24"x24"	0.83	1,300	GREENNECK MODEL GSR	1, 2

(1) FEATURES/ACCESSORIES:
 1. BRUSHLESS
 2. PROVIDE FACTORY KYMAR FINISH (COLOR SELECTION BY ARCHITECT)



AHU-01 SCHEMATIC

MODULE DESCRIPTION:
 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. DISICANT 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
1a	GYP. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	25-100	6"Ø	12"x12"	AS INCL.	NO	YES	PRICE MODEL SPD	1
2a	GYP. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	75-225	6"Ø	20"x20"	AS INCL.	NO	YES	PRICE MODEL SPD	1
3a	GYP. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	200-375	10"Ø	20"x20"	AS INCL.	NO	YES	PRICE MODEL SPD	1
4a	GYP. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	350-550	12"Ø	24"x24"	AS INCL.	NO	YES	PRICE MODEL SPD	1
5a	L.A.T. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	25-100	6"Ø	24"x24"	AS INCL.	NO	NO	PRICE MODEL SPD	1
6a	L.A.T. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	75-225	6"Ø	24"x24"	AS INCL.	NO	YES	PRICE MODEL SPD	1
7a	L.A.T. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	200-375	10"Ø	24"x24"	AS INCL.	NO	YES	PRICE MODEL SPD	1
8a	L.A.T. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER	350-550	12"Ø	24"x24"	AS INCL.	NO	YES	PRICE MODEL SPD	1
9a	GYP. CEILING MOUNTED HIGH CAPACITY VIA DIFFUSER	175-250	6"Ø	24"x24"	2-WAY	NO	YES	PRICE MODEL HCF	1
10a	GYP. CEILING MOUNTED HIGH CAPACITY VIA DIFFUSER	250-450	10"Ø	24"x24"	2-WAY	NO	YES	PRICE MODEL HCF	1
11a	GYP. CEILING MOUNTED SQUARE PLAQUE VIA DIFFUSER WITH CRD	25-100	6"Ø	12"x12"	AS INCL.	NO	YES	PRICE MODEL SPD	1, 3
1r	L.A.T. CEILING MOUNTED CUBE CORE RA GRILLE	0-600	22"x10"	24"x12"	0"	NO	NO	PRICE MODEL B0	2
2r	L.A.T. CEILING MOUNTED CUBE CORE RA GRILLE	700-1600	22"x22"	24"x24"	0"	NO	NO	PRICE MODEL B0	2
3r	GYP. CEILING MOUNTED CUBE CORE RA GRILLE	0-600	22"x10"	24"x12"	0"	NO	NO	PRICE MODEL B0	1, 2
4r	GYP. CEILING MOUNTED CUBE CORE RA GRILLE	700-1600	22"x22"	24"x24"	0"	NO	NO	PRICE MODEL B0	1, 2
5r	GYP. CEILING MOUNTED CUBE CORE RA GRILLE WITH CRD	25-100	10"x10"	12"x12"	0"	NO	NO	PRICE MODEL B0-D	1, 2, 3
1e	L.A.T. CEILING MOUNTED CUBE CORE RA REGISTER	0-450	12"x12"	24"x24"	0"	YES	NO	PRICE MODEL B5-D	2
2e	GYP. CEILING MOUNTED CUBE CORE RA REGISTER	25-100	10"x10"	12"x12"	0"	NO	NO	PRICE MODEL B0	1, 2, 3
3e	GYP. CEILING MOUNTED CUBE CORE RA REGISTER	25-100	10"x10"	12"x12"	0"	YES	NO	PRICE MODEL B0-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 INDICATOR DAMPER AND INSULATION FLAMEKIT FOR DIFFUSER. BACKPAN. INSTALL PER MANUFACTURER'S INSTALLATION REQUIREMENTS TO MEET UL LISTING.

FAN SCHEDULE

MARK	TYPE(1)	CONTROL SEQ.(2)	OPERATING HP	S.P. IN. W.G.	R.P.M.	MAX. GHP	MOTOR DATA	ELEC. SERVICE	DRIVE	BASIS OF DESIGN	NOTES (3)		
FF-01	A	B	100	0.5	817	2.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SP-B150	1, 2, 3, 4, 5, 6, 7		
FF-02	A	B	100	0.5	817	2.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SP-B150	1, 2, 3, 4, 5, 6, 7		
FF-03	A	B	100	0.5	817	2.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SP-B150	1, 2, 3, 4, 5, 6, 7		
FF-04	A	B	100	0.5	817	2.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SP-B150	1, 2, 3, 4, 5, 6, 7		
FF-05	A	D	200	0.5	1054	3.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SP-B300	1, 2, 3, 4, 5, 6, 7		
FF-06	B	A	475	0.5	1054	3.5	-	120V, 1ph	DIRECT	GREENNECK MODEL SQ-BV-10	1, 2, 3, 5, 6, 7		
FF-07	B	C	500	0.5	1411	10	54	114	0.4	120V, 1ph	DIRECT	GREENNECK MODEL SQ-BV-10	1, 2, 3, 5, 6, 7

COMPARABLE PRODUCTS:
 GREENNECK, COOK, PENNBARBY
 MANUFACTURER'S ACCESSORIES

(1) TYPE:
 A. CEILING CABINET TYPE
 B. ABOVE CEILING PLANE 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 INVERTED MOTOR/RESISTOR MOUNTED AT A.P.T. ADJUST BRIDGE TO REMAIN ON FOR 30 MINUTES AFTER ACTIVATION.
 C. EXHAUST FAN SHALL BE CONTROLLED TO RUN CONTINUOUSLY VIA TIME SCHEDULE CONTROL.
 D. EXHAUST FAN SHALL BE INTERLOCKED WITH FRESH AIR OPERATION TO RUN CONTINUOUSLY.
 (3) NOTES:
 1. UL AND AMCA RATING
 2. FACTORY MOUNTED 3 WIRE DISCONNECT
 3. BACKCRAFT DAMPER
 4. WALL MOUNTED MOTION DETECTOR
 5. ECM MOTOR WITH MOTOR ISOLATED POTENTIOMETER
 6. FACTORY MOUNTED 3 WIRE SOLID STATE SPEED CONTROLLER
 7. ALUMINUM GRILLE
 8. NEOPRENE VIBRATION ISOLATION HANGING KIT

MOTOR STARTER SCHEDULE

SERVING	HP OF EACH LOAD	ELECTRICAL CHARACTERISTICS	BASIS OF DESIGN	NOTES (1)
FF-05	135 watts	120V, 1ph	FRANKLIN CONTROLS MODEL BAS-1P	1, 2, 3
FF-06	14	120V, 1ph	FRANKLIN CONTROLS MODEL BAS-1P	1, 2, 3
FF-07	14	120V, 1ph	FRANKLIN CONTROLS MODEL BAS-1P	1, 2, 3

(1) NOTES:
 1. COORDINATE CONTROL CONTRACTOR REQUIREMENTS WITH ENERGY MANAGEMENT SYSTEM (EMS) TO ACHIEVE SPECIFIED SEQUENCE OF OPERATIONS.
 2. MOUNT STARTER WITHIN 6' OF EQUIPMENT SERVED. COORDINATE IN FIELD SPECIFIC LOCATION.
 3. CONNECTION MOTOR STARTER TO 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	LIFETIME SERVICE MODEL AIRE 1000	1, 2, 3

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

COMPARABLE PRODUCTS:
 MITSUBISHI, DARRIN, 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	NO OF STAGES			
DH-01	18"x14"	AHU-01	1,000	0.55	60.0	200V, 1ph	18	MOD. SCR.	GREENNECK MODEL LQAC	1, 2, 3

NOTES:
 1. CONTRACTOR SHALL VERIFY DUCT SIZES WITH ACTUAL CONDITIONS.
 2. PROVIDE WITH ISOLATING SCR CONTROL. SEE SPECIFICATION FOR CONTROL SEQUENCE.
 3. PROVIDE ALL UNITS WITH INTERNAL CIRCUIT BREAKER/DISCONNECT SWITCH/ DISCONNECT PANEL. AIR FLOWING SAFETY CONTROL. INTERLOCK RELAY AND HIGH SAFETY CONTROL SET AT 98°F. ADJUSTABLE.

DEHUMIDIFIER UNIT SCHEDULE

MARK	MATCHED SYSTEM	C.F.M.	PINTS/24 HRS @ 80% RH @ 70°F	ELECTRICAL DATA		BASIS OF DESIGN	NOTES
				SERVICE	AMPS		
DH-01	FE-01	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4
DH-02	FE-02	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4
DH-03	FE-03	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4
DH-04	FE-04	180	105	120V, 1ph	4.9	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4
DH-05	FE-05	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4
DH-06	FE-06	350	155	120V, 1ph	8	ULTRA-AIRE MODEL XT155H	1, 2, 3, 4

NOTES:
 1. PROVIDE WITH HARD DRAIN CONNECTION AND # 6 CORD WITH PLUG.
 2. PROVIDE WITH HANGING RAILS (TYPE 18) 1/16".
 3. PROVIDE WITH RAIL IN AUTO MOUNT 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			ELECTRICAL SERVICE	BASIS OF DESIGN	MATCHED TO
	OUTDOOR DB, °F	TOTAL MBHR	MIN. S.E.E.R.	TOT. REV. CYCLE, M.B.H.	HPPT	MAXIMUM REFRIGERANT PIPE LENGTH (FT.)			
DCU-01	95	17.1	15	18	8.2	98	200V, 1ph	DARRIN MODEL R10N1BMVJU	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 SAFETY SWITCHES, W/NO 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.

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 DB, °F	OUTDOOR DB, °F	TOT. REV. CYCLE, M.B.H.	INT. COND. DB, °F	TOTAL MBHR	MIN. S.E.E.R.				
DSS-01	WALL	700	70	47	18	80	87	11.1	200V, 1ph	DARRIN MODEL FT2N1BMVJU	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 WIRE WALL MOUNTED THERM STAT.
 2. MANUFACTURER'S INTERNAL HIGH LIFT (MINIMUM 5 FEET) CONDENSATE PUMP.

CONDENSING UNIT SCHEDULE

MARK	COOLING CAPACITY			ELECTRICAL			BASIS OF DESIGN	MATCHED TO
	OUTDOOR DB, °F	TOTAL MBHR	MIN. S.E.E.R.	SERVICE	MCA	MOOP		
CU-01	95	59	14.95	200V, 1ph	32	50	TRANE MODEL 4TR18001	FE-01
CU-02	95	46	14.80	200V, 1ph	28	40	TRANE MODEL 4TR18049	FE-02
CU-03	95	59	14.95	200V, 1ph	32	50	TRANE MODEL 4TR18001	FE-03
CU-04	95	35	14.95	200V, 1ph	18	30	TRANE MODEL 4TR18041	FE-04
CU-05	95	59	14.95	200V, 1ph	32	50	TRANE MODEL 4TR18001	FE-05
CU-06	95	46	14.95	200V, 1ph	28	40	TRANE MODEL 4TR18049	FE-06
CU-07A	95	30	14.95	200V, 1ph	17	25	TRANE MODEL 4TR18030	AHU-01
CU-07B	95	30	14.95	200V, 1ph	17	25	TRANE MODEL 4TR18030	AHU-01

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

ELECTRIC WALL HEATER SCHEDULE

MARK	C.F.M.	E.A.T. °F	MINIMUM BTU/H	SERVICE	HTG. ELEM. HP	MANUFACTURER AND MODEL	NOTES
BWH-01	225	50	10,200	200V, 1ph	3	1/8" MARVEL SERIES 3400	1, 2

NOTES:
 1. PROVIDE WITH INTEGRAL THERMOSTAT AND TAMPERPROOF THERMOSTAT COVER PLATE.
 2. HEATER TO BE SURFACE MOUNTED. MOUNT WHERE DIRECTED BY ARCHITECT.

NO.	REVISIONS	DATE	DESCRIPTION