

AIR HANDLING UNIT SCHEDULE

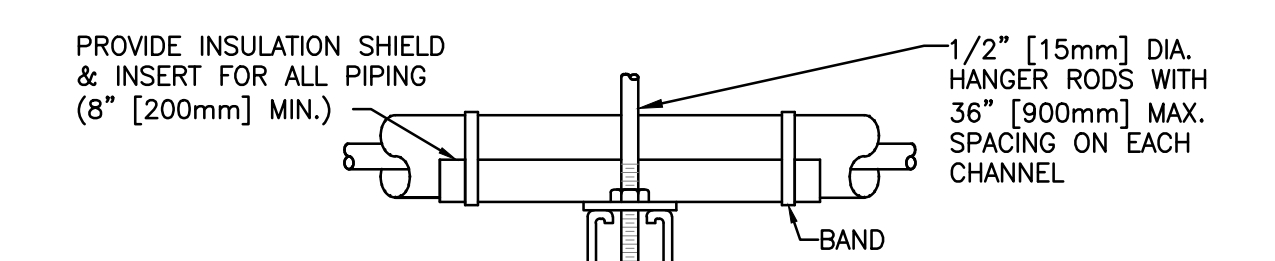
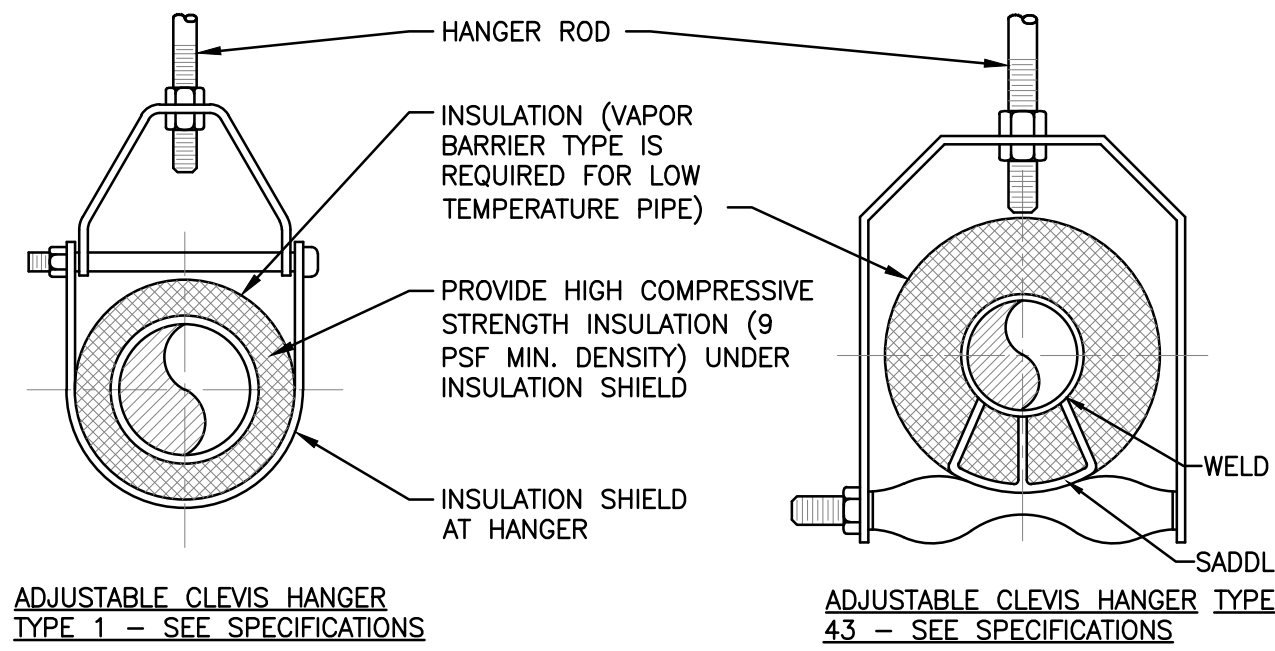
MARK NO.	MANUFACTURER	MODEL	ARRANGEMENT	AIRFLOW CFM	MIN VENT AIRFLOW CFM	MIN O.A. CFM	FAN TYPE	FAN SIZE	FAN RPM	MOTOR HP	EXT. S.P. (IN.W.G.)	TOTAL S.P. (IN.W.G.)	CHILLED WATER COOLING COIL							ELECTRICAL			NOTES	
													E.D.B. (°F)	E.W.B. (°F)	L.D.B. (°F)	L.W.B. (°F)	TOTAL MBH	SENS. MBH	GPM	PD (FT.W.G.)	VOLT	Ø		HZ
90-2-AHU-1	TRANE	CSAA021	HORIZONTAL DRAW THRU	10800	3650	3650	AF	20.0	2300	25.0	2.00	7.65	75	65.0	48.5	48.4	512.4	315.3	105	12	208	3	60	1,2,3,4

- NOTES:
- COOLING COIL BASED ON 45° EWT/55 LWT.
 - MODULAR CLIMATE CHANGER WITH THE FOLLOWING SECTIONS: FILTER/MIXING BOX, COOLING COIL, FAN, DIFFUSER, FINAL FILTER, DISCHARGE PLENUM WITH DOWN DISCHARGE. MIXING BOX FOR FIXED OUTSIDE AIR QUANTITY, MERV 8 FILTERS IN ANGLE RACK, 550 FPM MAXIMUM COOLING COIL VELOCITY, FAN VFD WITH BYPASS, MERV 14 12" CARTRIDGE POST FILTERS. FAN VFD SHIPPED LOOSE WITH DISCONNECT SWITCH WITH INLET FUSES, HSA SELECTOR, MANUAL SPEED CONTROLLER, STALL PREVENTION, PHASE SHORT CIRCUIT AND GROUND FAULT PROTECTION, UL 508C LISTED. UNIT CONTROLS INCLUDING DAMPER ACTUATORS BY OTHERS TO ACCOMPLISH THE SPECIFIED SEQUENCE OF OPERATION.
 - TOTAL STATIC PRESSURE INCLUDES A DIRTY FILTER ALLOWANCE OF 1.5".
 - MODULAR UNIT COMPONENTS SHALL BE BROKEN INTO SECTIONS FOR DELIVERY THAT WILL FIT IN EXISTING ELEVATOR CAB.

VAV BOX SCHEDULE

MARK NO.	MANUFACTURER	MODEL	INLET SIZE	MAX. COOLING CFM	MIN. COOLING CFM	DESIGN HEATING CFM	MAX. NC @ F.W.C.	HEATING GPM	HEATING EWT	HEATING LWT	MAX. COIL PD FT H2O	ELECTRICAL			NOTES
												VOLT	Ø	HZ	
90-2 VAV-1	PRICE	SDV-5000	7	450	45	300	40	12.8	1.3	180	5	120	1	60	1,2,3
90-2 VAV-2	PRICE	SDV-5000	6	200	25	125	40	5.7	0.8	180	5	120	1	60	1,2,3
90-2 VAV-3	PRICE	SDV-5000	7	450	45	300	40	12.8	1.3	180	5	120	1	60	1,2,3
90-2 VAV-4	PRICE	SDV-5000	7	525	120	350	40	15.1	1.5	180	5	120	1	60	1,2,3
90-2 VAV-5	PRICE	SDV-5000	7	525	120	350	40	15.1	1.5	180	5	120	1	60	1,2,3
90-2 VAV-6	PRICE	SDV-5000	7	385	120	255	40	11.3	1.1	180	5	120	1	60	1,2,3
90-2 VAV-7	PRICE	SDV-5000	7	385	120	255	40	11.3	1.1	180	5	120	1	60	1,2,3
90-2 VAV-8	PRICE	SDV-5000	7	485	130	300	40	13.2	1.3	180	5	120	1	60	1,2,3
90-2 VAV-9	PRICE	SDV-5000	6	280	280	280	40	12.1	1.3	180	5	120	1	60	1,2,4
90-2 VAV-10	PRICE	SDV-5000	7	350	100	250	40	6.9	0.8	180	5	120	1	60	1,2,3
90-2 VAV-11	PRICE	SDV-5000	7	425	105	275	40	12.3	1.3	180	5	120	1	60	1,2,3
90-2 VAV-12	PRICE	SDV-5000	6	200	75	125	40	5.7	0.8	180	5	120	1	60	1,2,3
90-2 VAV-13	PRICE	SDV-5000	9	775	300	255	40	11.3	1.1	180	5	120	1	60	1,2,3
90-2 VAV-14	PRICE	SDV-5000	7	430	75	275	40	12.3	1.3	180	5	120	1	60	1,2,3
90-2 VAV-15	PRICE	SDV-5000	9	735	105	475	40	20.8	2.1	180	5	120	1	60	1,2,3
90-2 VAV-16	PRICE	SDV-5000	7	525	85	350	40	15.1	1.5	180	5	120	1	60	1,2,3
90-2 VAV-17	PRICE	SDV-5000	7	465	465	465	40	20.1	2.1	180	5	120	1	60	1,2,3
90-2 VAV-18	PRICE	SDV-5000	5	200	20	125	40	5.7	0.8	180	5	120	1	60	1,2,3
90-2 VAV-19	PRICE	SDV-5000	7	375	135	255	40	11.3	1.2	180	5	120	1	60	1,2,3
90-2 VAV-20	PRICE	SDV-5000	7	450	115	300	40	13.2	1.4	180	5	120	1	60	1,2,3
90-2 VAV-21	PRICE	SDV-5000	7	385	135	255	40	11.3	1.2	180	5	120	1	60	1,2,3
90-2 VAV-22	PRICE	SDV-5000	6	125	125	100	40	4.7	0.5	180	5	120	1	60	1,2,3
90-2 VAV-23	PRICE	SDV-5000	7	375	120	255	40	11.3	1.2	180	5	120	1	60	1,2,3
90-2 VAV-24	PRICE	SDV-5000	7	460	170	300	40	13.2	1.4	180	5	120	1	60	1,2,3
90-2 VAV-25	PRICE	SDV-5000	7	350	35	325	40	14.2	1.5	180	5	120	1	60	1,2,3
90-2 VAV-26	PRICE	SDV-5000	7	385	120	255	40	11.3	1.2	180	5	120	1	60	1,2,3
90-2 VAV-27	PRICE	SDV-5000	6	125	50	85	40	3.8	0.4	180	5	120	1	60	1,2,3
90-2 VAV-28	PRICE	SDV-5000	8	620	120	400	40	18.0	1.8	180	5	120	1	60	1,2,3
90-2 VAV-29	PRICE	SDV-5000	7	535	105	350	40	15.1	1.5	180	5	120	1	60	1,2,3
90-2 VAV-30	PRICE	SDV-5000	6	200	75	150	40	7.5	0.8	180	5	120	1	60	1,2,3

- NOTES:
- PROVIDE WITH FACTORY INSTALLED JOHNSON CONTROLS ELECTRONIC DIGITAL CONTROLLER COMPATIBLE WITH THE EXISTING FACILITY JOHNSON CONTROLS DIGITAL CONTROL SYSTEM. PROVIDE WITH RUBBER IN SHEAR HANGER BRACKETS, 1 ROW HIGH CAPACITY WATER HEATING COIL, SINGLE POINT POWER CONNECTION, AND 24V TRANSFORMER FOR TEMPERATURE CONTROLS.
 - RE: COIL PIPING DIAGRAM.
 - VAV WITH REHEAT CONTROL SEQUENCE.
 - VAV WITH REHEAT CONTROL SEQUENCE.



NOTES:
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS

SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. [453KG] UNIFORM LOAD

MAXIMUM PIPE/TUBING SUPPORT SPACING																							
NOM. SIZE	IN.	THRU	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24			
FT.	[mm]	[2100]	[2100]	[2100]	[2700]	[3000]	[3400]	[3700]	[4100]	[4900]	[5200]	[5800]	[6700]	[7000]	[7600]	[8200]	[8500]	[9100]	[9600]				
TUBING	FT.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	[mm]	[1500]	[1800]	[2100]	[2400]	[2700]	[3000]	[3700]	[4300]	[4900]	[5200]	[5800]	[6700]	[7000]	[7600]	[8200]	[8500]	[9100]	[9600]				

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

1 PIPE HANGERS NO SCALE

DIFFUSER SCHEDULE

MARK NO.	MANUFACTURER	MODEL	FACE SIZE (IN.)	NECK SIZE (IN.)	NO. OF SLOTS	FRAME TYPE	FINISH	NOTES
SA	PRICE	SDS100	24	6	2	SURFACE	WHITE	3,4
SB	PRICE	SDS100	48	6	2	LAY-IN	WHITE	3
SC	PRICE	SDS100	48	8	2	LAY-IN	WHITE	3
SD	PRICE	SDS100	48	10	2	LAY-IN	WHITE	3
SE	PRICE	ASCD	12x12	6	-	SURFACE	WHITE	5
SF	PRICE	SCD	24x24	6	-	LAY-IN	WHITE	
SG	PRICE	SCD	24x24	8	-	LAY-IN	WHITE	
SH	PRICE	SDS100	24	6	2	LAY-IN	WHITE	3
SI	PRICE	SCD	12x12	6	-	SURFACE	WHITE	2
SK	PRICE	SDS100	24	6	2	SURFACE	WHITE	2,3,4
SL	PRICE	SDS100	48	10	2	SURFACE	WHITE	2,3,4
SM	PRICE	ASCD	24x24	6	-	LAY-IN	WHITE	5
RA	PRICE	PDDR	12x24	8	-	LAY-IN	WHITE	
RB	PRICE	PDDR	24x24	10	-	LAY-IN	WHITE	
RC	PRICE	PDDR	12x24	12	-	LAY-IN	WHITE	
RD	PRICE	PDDR	24x24	14	-	LAY-IN	WHITE	1
EA	PRICE	AFDDR	12x12	6	-	SURFACE	WHITE	2,6
EB	PRICE	PDDR	24x24	8	-	LAY-IN	WHITE	
EC	PRICE	PDDR	24x24	10	-	LAY-IN	WHITE	
ED	PRICE	PDDR	24x24	12	-	LAY-IN	WHITE	
EE	PRICE	AFDDR	24x24	6	-	SURFACE	WHITE	5
EF	PRICE	PDDR	24x24	8	-	SURFACE	WHITE	2
EG	PRICE	AFDDR	24x24	8	-	LAY-IN	WHITE	5

- NOTES:
- PROVIDE WITH 14x12 ADAPTOR AT NECK CONNECTION.
 - PROVIDE WITH MANUAL DAMPER.
 - ALUMINUM CONSTRUCTION. PROVIDE WITH SDBI INSULATED SIDE ENTRY INLET PLENUM.
 - PROVIDE MITERED END CAPS.
 - ALUMINUM CONSTRUCTION.

*CONTRACTOR SHALL VERIFY CEILING TYPE PRIOR TO ORDERING DIFFUSERS.

DUCTLESS SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE

MARK NO.	MANUFACTURER	INDOOR UNIT MODEL	OUTDOOR UNIT MODEL	ARRANGEMENT	AIRFLOW CFM	SPACE CONDITIONS (DB°F/WB°F)	AMBIENT TEMPERATURE (°F)	TOTAL CAP. (MBH)	SENS. CAP. (MBH)	SEER	REFRIG. TYPE	ELECTRICAL			NOTES
												VOLT	Ø	HZ	
AC-1CU-1	DAIKIN	PKA-A24KA	PUT-A24NHAS	WALL MOUNTED	635	80/67	105	24.0	18.5	17.0	R-410A	208	1	60	1,2

- NOTES:
- PROVIDE WITH WIRED REMOTE CONTROLLER KIT, CONDENSATE PUMP AND CONDENSER WIND BAFFLE.
 - PUMPS OPERATE IN PARALLEL CAPACITIES ARE AT NOMINAL CONDITIONS.

PUMP SCHEDULE

MARK NO.	MANUFACTURER	MODEL	SIZE	FLUID	MAX TEMP (°F)	FLOW RATE (GPM)	HEAD (FT. H2O)	PUMP EFFICIENCY (%)	MOTOR SPEED (RPM)	MOTOR SIZE (HP)	ELECTRICAL			NOTES
											VOLT	Ø	HZ	
90-2 HWP1	BELL AND GOSSETT	E-80	1.5AB	WATER	180	20.0	55	39	1725	1.5	208	3	60	1,2,3
90-2 HWP2	BELL AND GOSSETT	E-80	1.5AB	WATER	180	20.0	55	39	1725	1.5	208	3	60	1,2,3

- NOTES:
- INLINE PUMP, PROVIDE WITH RUBBER IN SHEAR VIBRATION ISOLATION HANGERS OR WALL SUPPORT ANGLES.
 - PUMPS OPERATE IN PARALLEL.
 - PROVIDE WITH COMBINATION STARTER DISCONNECT SWITCH & AUXILIARY CONTACTS FOR CONTROL INTERFACE.

STEAM HUMIDIFIER SCHEDULE

MARK NO.	MANUFACTURER	MODEL	MANIFOLD QUANTITY & MODEL	AIR FLOW (CFM)	LOAD #/HR	DUCT SIZE (IN. x IN.)	VAPOR TRAIL LENGTH (FT.)	ENTERING TEMP. (°F)	ENTERING RH (%)	ROOM TEMP. (°F)	ROOM RH (%)	NOTES
90-2 H-1	ARMSTRONG	H-83	(1) MV-4	10800	275	40x18	5	55	0	75	35	1,2,3

- NOTES:
- FURNISH AND INSTALL WITH 24V ELECTRIC MODULATING STEAM CONTROL VALVE, HIGH LIMIT HUMIDISTAT, DUCT PRESSURE SWITCH AND RETURN DUCT MOUNTED HUMIDISTAT. PROVIDE WITH 120V/24V CONTROL TRANSFORMER.
 - VALVING ARRANGEMENT AND CONFIGURATION TO BE AS DETAILED OR AS REQUIRED BY UNIT MANUFACTURER.
 - MAXIMUM VAPOR TRAIL AT 2160 FPM DUE TO SPACE LIMITATIONS.
 - PROVIDE WITH 304 STAINLESS STEEL FABRICATED DRAIN PAN BELOW HUMIDIFIER AND DUCT, EXTENDED 4' MINIMUM DOWNSTREAM OF HUMIDIFIER.

HEAT EXCHANGER SCHEDULE

MARK NO.	MANUFACTURER	MODEL	TUBE SIDE EWT (°F)	TUBE SIDE LWT (°F)	STEAM SHELL PSI	TUBE SIDE (°F. FT.)	STEAM SHELL (°F. FT.)	TUBE FLOW (GPM)	TUBE CAPACITY (MBH)	STEAM SHELL FLOW (LBS/HR)	NOTES
90-2 HX-1	BELL AND GOSSETT	QSU 62-4	180.0	180	15	5	0	40	391	415	1

- NOTES:
- U-TUBE ASME CODE PRESSURE VESSEL.

FAN SCHEDULE

MARK NO.	MANUFACTURER	MODEL	TYPE	AIRFLOW (CFM)	S.P. (IN.W.G.)	FAN TYPE	RPM	DRIVE	ELECTRICAL			HP/ WATTS	NOTES
									VOLT	Ø	HZ		
EF-1	GREENHECK	CW-10HP-VG	SIDEWALL	410	1.75	CENTRI	2265	DIRECT	120	1	60	1/2	1
EF-2	GREENHECK	CW-10HP-VG	SIDEWALL	565	1.75	CENTRI	2381	DIRECT	120	1	60	1/2	1

- NOTES:
- PROVIDE WITH WALL MOUNTING HARDWARE, DISCONNECT SWITCH, BACKDRAFT DAMPER, BIRDSCREEN AND INLET FLEXIBLE DUCT CONNECTION, ECM MOTOR.

EXPANSION TANK SCHEDULE

MARK NO.	MANUFACTURER	MODEL	FLUID SERVED	TANK STYLE	TANK VOLUME (GAL.)	MAX. ACCEPTANCE FACTOR	NOTES
90-2 ET-1	AMTROL	35LBC	WATER	VERTICAL	10	1.0	1

- NOTES:
- ASME CODE PRESSURE VESSEL WITH REPLACEABLE BUTYL BLADDER, MALLEABLE IRON CONNECTION, SCHRAEDER VALVE WITH EPDM SEATS.

AIR SEPARATOR SCHEDULE

MARK NO.	MANUFACTURER	MODEL	FLOW (GPM)	PRESS DROP (FT. H2O)	PIPE SIZE IN	NOTES
90-2 AS-1	BELL AND GOSSETT	R2	40	3	2	1

- NOTES:
- ASME CODE TANGENTIAL SEPARATOR PRESSURE VESSEL WITH STR