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M-701

D	MECHANICAL DEHUMIDIFICATION UNIT SCHEDULE																									GENERAL NOTES: ALL EQUIPMENT TO BE FM GLOBAL APPROVED																						
	GENERAL DATA				CFM		FILTER (PRE/FINAL)	ELECTRIC PREHEAT COIL						CHW PRE-COOL COIL																																		
	EQUIPMENT NUMBER	MANUFACTURER	MODEL	LOCATION	SA CFM	OA CFM		CFM	TYPE	V/PHZ	FLA	KW	EAT DB (°F)	LAT DB (°F)	FLUID	CFM	MBH		EAT DB/WB (°F)	LAT DB/WB (°F)	GPM	EWT (°F)	LWT (°F)	FLUID PD (FT.WG.)	ROWS	FPI																						
	MDU-1	NORTEK	VENMAR	MECHANICAL YARD	6000	6000	MERV8/MERV14	6000	SCR	460/3/60	95.9	76.3	5	45	30% PROPYLENE GLYCOL	6000	337.2	972.1	105/93	54.5/54.5	171.7	36	48	19.1	10	7																						
	MECHANICAL DEHUMIDIFICATION UNIT SCHEDULE CONT. 1																																															
EQUIPMENT NUMBER	DEHUMIDIFICATION WHEEL				DIAMETER (IN)	HP	V/PH/HZ	EAT DB/WB (°F)	LAT DB/WB (°F)	FILTER (PRE/FINAL)	HEATER					WHEEL REGENERATION					FAN																											
	TYPE		CFM	TYPE							V/PH/HZ	FLA	TEMP RISE (°F)	KW	QTY	CFM EA	BHP EA	HP EA	V/PH/HZ	TSP EA (IN.WG.)	FAN RPM EA	MOTOR RPM EA	VFD/ECM																									
	MDU-1	DESSICANT (25% REGEN, 75% PRIMARY)				60.039	0.03	460/3/60	54.5/54.5	99.9/62	MERV8/MERV14	2000	SCR	460/3/60	119.9	150	95.4	1	2000	1.27	1.5	460/3/60	2.73	1993	1745	INTEGRAL 1 HP VFD																						
MECHANICAL DEHUMIDIFICATION UNIT SCHEDULE CONT. 2																																																
EQUIPMENT NUMBER	SA FAN												CHW POST-COOL COIL																																			
	TYPE	QTY	SA CFM TOTAL	SA CFM EA	BHP EA	HP EA	BHP TOTAL	HP TOTAL	V/PH/HZ	TSP (IN.WG.)	ESP (IN.WG.)	FAN RPM EA	MOTOR RPM EA	VFD/ECM	FLUID	CFM	MBH		EAT DB/WB (°F)	LAT DB/WB (°F)	GPM	EWT (°F)	LWT (°F)	FLUID PD (FT.WG.)	ROWS	FPI																						
MDU-1	FANWALL	2	6000	3000	5.26	5.5	10.53	11	460/3/60	7.82	4	2950	1750	INTEGRAL 10 HP VFD	30% PROPYLENE GLYCOL	6000	303.2	303.2	99.9/62	53.3/42.4	53.5	36	48	13.1	6	8																						
MECHANICAL DEHUMIDIFICATION UNIT SCHEDULE CONT. 3																																																
EQUIPMENT NUMBER	ELECTRIC POST HEATING COIL							HUMIDIFIER					WEIGHT (LB)	NOTES																																		
	CFM	TYPE	V/PH/HZ	FLA	KW	EAT DB (°F)	LAT DB (°F)	CFM	STEAM PSIG	LB/HR	EAT DB/WB (°F)	LAT DB/WB (°F)																																				
MDU-1	6000	SCR	460/3/60	119.9	95.4	45	95	6000	15	125	95/54.7	95/62.5	13734	ALL NOTES BELOW																																		
NOTES: 1. PROVIDE UV LIGHTS FOR CHW COILS 2. PROVIDE WITH MIN 1.25 SQFT BYPASS WITH MOTORIZED DAMPER 3. PROVIDE WITH 10" BASE 4. UNIT IS SINGLE POINT POWER. THE SINGLE POINT POWER WILL POWER THE FOLLOWING ITEMS: A. SUMMER: a. WHEEL: 1/30 HP, 460/3/60 V/PH/HZ b. REGEN HEATER: 95.4 KW, 460/3/60 V/PH/HZ c. SUPPLY FANS VFD: 10 HP, 460/3/60 V/PH/HZ d. REGEN FAN VFD: 1 HP, 460/3/60 V/PH/HZ e. LIGHT SWITCH: 15 A, 120V OUTLET f. LED LIGHT: 1.8 A, 10W EACH @ 15 g. UV LIGHTS: 160 W @ 2, 120/1/60 V/PH/HZ h. MOTORIZED DAMPERS @ 3 i. ELECTRICAL PANEL WITH TRANSFORMER B. WINTER: a. PREHEAT COIL: 76.3 KW, 460/3/60 V/PH/HZ b. REHEAT COIL: 95.4 KW, 460/3/60 V/PH/HZ c. SUPPLY FANS VFD: 10 HP, 460/3/60 V/PH/HZ d. LIGHT SWITCH: 15 A, 120V OUTLET e. LED LIGHT: 1.8 A, 10W EACH @ 15 f. UV LIGHTS: 160 W @ 2, 120/1/60 V/PH/HZ g. HUMIDIFIER (INSTALLED IN FIELD). h. MOTORIZED DAMPERS @ 3 i. ELECTRICAL PANEL WITH TRANSFORMER 5. IN THE EVENT OF A DESSICANT WHEEL FAILURE, THE CHILLER HAS CAPABILITY OF LOWERING FLUID TEMP TO DEHUMIDIFY AIR. CHW AND HEATING COILS ARE DESIGNED TO OPERATE AT FOLLOWING CONDITIONS DURING EVENT: A. PRE CHW COOLING COIL WILL LOWER TO 32.1F EWT MIN TO AVOID FREEZING CONDENSATE: a. 6,000 CFM, 105F/93F EAT DB/WB, 52.5F/52.4F LAT DB/WB, 171.7 GPM, 32.1F/44.5F EWT/LWT, 19.4 FT.WG. PD B. POST CHW COOLING COIL WILL LOWER TO 32.1F EWT MIN TO AVOID FREEZING CONDENSATE: a. 6,000 CFM, 52.5F/52.4F EAT DB/WB, 41.9F/41.9F LAT DB/WB, 53.5 GPM, 32.1F/38F EWT/LWT, 13.6 FT.WG. PD C. ELECTRIC POST HEATING COIL WILL OPERATE AS REHEAT COIL DURING COOLING MODE IF THE WHEEL FAILS: a. 6,000 CFM, 41.9F/41.9F EAT DB/WB, 70F/54.7F LAT DB/WB, 53.9KW																																																
B	CHILLER SCHEDULE																																															
	Mark	MANUFACTURER	MODEL NO.	TYPE	REFRIGERANT	FLUID	NOMINAL TONS	ACTUAL TONS	EVAPORATOR				ELECTRICAL DATA				OPERATING WEIGHT	SHIPPING WEIGHT	REMARKS																													
CH-1	TRANE	RTAF	AIR COOLED SCREW	R-513A	30% PROPYLENE GLYCOL	170	105	225 GPM	187	48 °F	36 °F	9.10	160	335	470	460/3/60	10159	9987	ALL NOTES BELOW																													
NOTES: 1. CHILLER HAS ABILITY TO PRODUCE 28F LWT. 2. CHILLER HAS ABILITY TO OPERATE AT FOLLOWING CONDITIONS IF THE MDU-1 WHEEL FAILS: A. 32.1F/43.8F LWT/EWT, 102 TONS, 225 GPM, 9.1 WPD, 168.2 KW, 335 MCA, 470 MOCP 3. PROVIDE WITH: A. EXTENDED SKID WITH HEAT TRACED PUMPING PACKAGE INCLUDING: a. 2 CHW PUMPS @ 10HP EACH (N+1 CONFIGURATION). EACH PUMP SIZED AT 225 GPM @ 75 FT.WG. TOTAL HEAD. EACH PUMP SHALL BE PROVIDED WITH A VFD BY L&H AIRCO AND INSTALLED BY SKID PROVIDER. b. 840 GALLON BUFFER TANK c. EXPANSION TANK d. GLYCOL TANK FEED SYSTEM e. AIR SEPARATOR B. EVAPORATOR BARREL HEATERS C. VARIABLE SPEED COMPRESSORS D. 65K SCCR 4. SYSTEM IS 5 POINT POWER: A. CHILLER AND PUMPS (ELECTRICAL DATA SCHEDULED. PUMPS ARE 10 HP EACH AND POWERED BY CHILLER POWER. SCHEDULED CHILLER ELECTRICAL DATA IS REPRESENTATIVE OF ADDED REQUIRED PUMP POWER.) B. 120V/1/60 V/PH/HZ, 20A: EVAPORATOR BARREL HEATERS C. 120V/1/60 V/PH/HZ, 20A: TANK/PUMP PACKAGE HEAT TRACE D. 120V/1/60 V/PH/HZ, 15A: UNIT CONVENIENCE OUTLET E. 120V/1/60 V/PH/HZ, 1/2 HP: GLYCOL TANK																																																
A	ELECTRIC BOILER SCHEDULE																																															
	EQUIPMENT NUMBER	BASIS OF DESIGN		GENERAL			HEATING DATA				LB/HR		ELECTRICAL DATA		WT (LBS)	REMARKS																																
EB-1	MANUFACTURER	MODEL	LOCATION	SERVICE	DESCRIPTION	FLUID TYPE	INPUT (MBH)	OUTPUT (MBH)	MAX OPERATING PRESSURE (PSI)		NOMINAL	ACTUAL	POWER (KW)	V/PH/HZ	400	ALL NOTES BELOW																																
NOTES: 1. PROVIDE WITH A. CONCRETE HOUSEKEEPING PAD A MINIMUM OF 6" HT AND EXTEND 6" ON ALL SIDES. B. 2 KVA TRANSFORMER FOR SINGLE POINT POWER. C. INTEGRAL CONTROLLER W/ BACNET PROTOCOL INTERFACE 2. CHEMICAL TREATMENT SYSTEM BY CHEM AQUA																	NOTES CONTINUED: 3. WATER QUALITY REQUIREMENTS FROM CHROMALOX: A. TOTAL HARDNESS: 0-0.3 PPM AS CaCO3 B. IRON: 0.1 PPM C. COPPER: 0.05 PPM										NOTES CONTINUED: D. SILICA: 150 PPM E. ALKALINITY: 700 PPM F. TOTAL DISOLVED SOLIDS: 2200 TO 2800 PPM G. CONDUCTIVITY: 7000 MICRO OHM S/CM										NOTES CONTINUED: H. OXYGEN: 0-0.007 PPM I. pH: 8.5 to 10.0 J. NOTES: PPM = PARTS PER MILLION											
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