

FILE: R:\PROJECTS\143_OGS ORANGEBURG CHILLER REPLACEMENT_CAD\143_M-701.DWG
SAVED: 11/13/2023 4:31:48 PM
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USER: CHRISTOPHER STROM

AIR COOLED CHILLER SCHEDULE																																			
TAG	TOTAL COOLING CAPACITY (T-R)	AMBIENT TEMP (°F)	REFRIGERANT	REFRIGERANT CIRCUIT QTY.	REFRIGERANT CIRCUIT 1 NOMINAL CAPACITY (T-R)	REFRIGERANT CIRCUIT 2 NOMINAL CAPACITY (T-R)	COMPRESSOR			EVAPORATOR						CONDENSER		ELECTRICAL							SOUND DATA (SOUND POWER / SOUND PRESSURE)				MAXIMUM DIMENSIONS	MAXIMUM WEIGHT	DESIGN BASIS		NOTES		
							QTY.	KW	TYPE	FLUID	DESIGN GPM	MINIMUM GPM	FLUID PD (FT-H2O)	EWT (°F)	LWT (°F)	# OF FANS	FAN POWER (KW)	VOLTS	PHASE	MCA	MOP	TOTAL POWER (KW)	EER	IPLV / NPLV	A-WEIGHTED IN ACCORDANCE WITH AHRI 370 (dBA)						L x W x H (IN)	LBS		MANUFACTURER	MODEL
																									100%	75%	50%	25%							
ACC-1	135.5	95.0	R-513A	2	75	75	2	148.60	SCREW	30% PROPYLENE GLYCOL	291	171	18.2	45.0	57.0	12	10.95	460	3	295	400	160.30	10.14	16.55 / 16.36	101 / 72	94 / 66	92 / 64	89 / 61	274 x 87 x 94	9.628	TRANE	RTAF-150	1, 2, 3, 4		
ACC-2	135.5	95.0	R-513A	2	75	75	2	148.60	SCREW	30% PROPYLENE GLYCOL	291	171	18.2	45.0	57.0	12	10.95	460	3	295	400	160.30	10.14	16.55 / 16.36	101 / 72	94 / 66	92 / 64	89 / 61	274 x 87 x 94	9.628	TRANE	RTAF-150	1, 2, 3, 4		
1. LISTED CAPACITY IS UNIT PERFORMANCE AT DESIGN CONDITIONS. 2. CHILLER TO CONTAIN TWO REFRIGERANT CIRCUITS. EACH CIRCUIT TO PROVIDE 1/2 OF TOTAL COOLING CAPACITY (+/- 10%), RESPECTIVELY. 3. INCLUDE MANUFACTURER'S FULL PARTS AND LABOR EXTENDED WARRANTY ON CHILLER. 4. PROVIDE WITH INTEGRAL EVAPORATOR HEATER, INTEGRAL CONVENIENCE OUTLET (SEPARATE 120V CIRCUIT FOR EACH BY THE E-CONTRACT), AND FACTORY INSTALLED AND WIRED FLOW SWITCH.																																			

PUMP SCHEDULE																	
TAG	TYPE	LOCATION	SERVICE	CAPACITY						NPSHr	IMPELLER DIAMETER (IN.)	MOTOR			DESIGN BASIS		NOTES
				FLUID	GPM	HEAD (FT)	SUCTION	DISCHARGE	EFF.			RPM	HP	ELECTRICAL	MANUFACTURER	MODEL	
P-1	BASE MOUNTED, DOUBLE SUCTION	BASEMENT MECHANICAL ROOM B-14	CHILLED WATER PRIMARY PUMP	30% PROPYLENE GLYCOL	305	110	4"	3"	75%	10 FT	12.0	1750	20.0	480 / 3 / 60	WEINMAN	3L-6	1, 2, 3
P-2	BASE MOUNTED, DOUBLE SUCTION	BASEMENT MECHANICAL ROOM B-14	CHILLED WATER PRIMARY PUMP	30% PROPYLENE GLYCOL	305	110	4"	3"	75%	10 FT	12.0	1750	20.0	480 / 3 / 60	WEINMAN	3L-6	1, 2, 3
NOTE: 1. PROVIDE PUMP WITH PREMIUM EFFICIENCY MOTOR RATED FOR USE WITH A VARIABLE SPEED DRIVE. REFER TO VARIABLE FREQUENCY DRIVE SCHEDULE ON THIS DRAWING. 2. PUMPS P-1 AND P-2 WILL OPERATE IN A LEAD-LAG OPERATION WITH THE ABILITY FOR BOTH PUMPS TO OPERATE SIMULTANEOUSLY. 3. PROVIDE OVERSIZED IMPELLER LISTED IN THE SCHEDULE, BALANCE PUMP SPEED WITH VFD TO ACHIEVE DUTY POINT LISTED.																	

HYDRONIC SPECIALTIES SCHEDULE					
TAG	DESCRIPTION	SERVICE	DESIGN BASIS		NOTES
			MANUF.	MODEL	
CF-1	CHEMICAL POT FEEDER / FILTER	CHILLED WATER SYSTEM 30% PROPYLENE GLYCOL	WESSELS	4NBF14-1	1
RV-1	PRESSURE RELIEF VALVE	CHILLED WATER SYSTEM 30% PROPYLENE GLYCOL	B&G	1170	2
TDV	TRIPLE DUTY VALVE	CHILLED WATER SYSTEM 30% PROPYLENE GLYCOL	B&G	3DS-4S	3
NOTES: 1. PROVIDE WITH THE FOLLOWING ACCESSORIES a. 1" SIGHT FLOW INDICATOR - MODEL #3086 b. 5 MICRON FILTER BAG BOX, QUANTITY 25 - MODEL #BFPEP4SX c. SINGLE INSERTION MAGNET - MODEL #WMA1-1 d. COIL HOOK UP KIT - MODEL #VALVE KIT -1 2. 50 PSI RELIEF SETTING, 1" INLET, 1" OUTLET 3. 4" FLANGED CONNECTIONS, 3.41 FT HD MAX. PRESSURE DROP AT DESIGN FLOW.					

EXPANSION TANK SCHEDULE										
TAG	SERVICE	TYPE	FLUID	TOTAL VOLUME	ACCEPTANCE VOLUME (GAL)	FILL PRESSURE (PSI)	MAXIMUM OPERATING PRESSURE (PSI)	DESIGN BASIS MANUF.	DESIGN BASIS MODEL	NOTES
ET-1	CHILLED WATER SYSTEM	BLADDER	30% PROPYLENE GLYCOL	23	23	20	125	B&G	B-85	1
NOTES: 1. PROVIDE REPLACEABLE BLADDER, TANK PRESSURE GAUGE, BLADDER INTEGRITY MONITOR, CHARGING VALVE, AND BOTTOM DRAIN.										

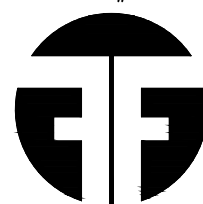
VARIABLE FREQUENCY DRIVE SCHEDULE											
TAG	EQUIPMENT SERVED	DRIVE TYPE	MOTOR		DRIVE ACCESSORIES				DESIGN BASIS		NOTES
			HP	ELECTRIC	BY-PASS	INPUT CIRCUIT BREAKER (AMPS)	L REACTOR	COMM. INTERFACE	MANUF.	MODEL	
P-1	CHILLED WATER PUMP P-1	VFD	20	480-3-60	YES	YES, (40A)	L1	C1	ABB	ACH580-VCR-027A-4+F267	1, 2, 3
P-2	CHILLED WATER PUMP P-2	VFD	20	480-3-60	YES	YES, (40A)	L1	C1	ABB	ACH580-VCR-027A-4+F267	1, 2, 3
ACCESSORY NOTES:											
C1: PROVIDE COMMUNICATIONS CARD FOR INTERFACE WITH EXISTING HONEYWELL BUILDING AUTOMATION SYSTEM, SEAMLESSLY INTEGRATE VFD OPERATION INTO THE EXISTING HONEYWELL SYSTEM.											
L1: PROVIDE STANDARD SIZE DC CHOKE.											
DRIVE NOTES:											
1. PROVIDE WITH NEMA 1 ENCLOSURE, INPUT CIRCUIT BREAKER FOR CIRCUIT PROTECTION & DISCONNECT USE - ACCESSIBLE ON FRONT OF CABINET DOOR , WITH TRIP RATING AS SCHEDULED.											
2. LABEL DRIVES WITH EQUIPMENT TAGS, SOURCE POWER PANEL #, CIRCUIT # AND VFD VOLTAGE											
3. FURNISH VFD TO THE E-CONTRACT. E-CONTRACT SHALL INSTALL VFD.											
STANDARD FEATURES:											
A. INVERTER SHALL USE IGBTs ONLY, WITH PWM CIRCUIT.											
B. VSD SHALL INCLUDE (2) 0-10 VDC INPUTS, (2) 0-10 VDC OUTPUTS, FAULT CONTACTS, AND 1 SPACE SET OF PROGRAMMABLE RELAY CONTACTS.											

FLOW METER SCHEDULE									
TAG	SERVICE	TYPE	FLUID	PIPE CONNECTION	MAXIMUM OPERATING PRESSURE (PSI)	VOLTAGE	DESIGN BASIS MANUF.	DESIGN BASIS MODEL	NOTES
FM-1	CHILLED WATER SYSTEM	ELECTROMAGNETIC	30% PROPYLENE GLYCOL	8" FLANGED	125	120/160	BADGER METER	MODMAG M5000	1
1. PROVIDE WITH: 304 STAINLESS STEEL CONNECTION AND HOUSING, PTFE LINER, HASTELLOY C-22 MEASURING ELECTRODES, 304 STAINLESS STEEL GROUNDING RING, REMOTE MOUNTED DISPLAY WITH ALUMINUM IP67 ENCLOSURE AND MOUNTING BRACKET, REMOTE MOUNTED DISPLAY CABLE - COORDINATE LENGTH WITH FIELD MOUNTING LOCATIONS, 120V POWER CONNECTION WITH INTEGRAL BATTERY BACKUP, STAINLESS STEEL IP67 JUNCTION BOX ENCLOSURE, MODBUS RS-485 COMMUNICATION WITH THE BUILDING AUTOMATION SYSTEM (COORDINATE GATEWAY CONTROLLER TO INTEGRATE INTO THE EXISTING BUILDING AUTOMATION SYSTEM).									

GLYCOL FEED SYSTEM SCHEDULE								
TAG	STORAGE CAPACITY (GALLONS)	PUMP			DESIGN BASIS			NOTES
		GPM	ON PSIG	OFF PSIG	ELEC.	MANUFACTURER	MODEL	
GF-1	50	1.5	15	20	120 V	NEPTUNE	G-50-1A	1,2
1. PROVIDE WITH: POLYETHYLENE TANK MOUNTED ON STEEL FRAME, BRONZE ROTARY GEAR PUMP, FLOAT SWITCH, LOW LEVEL LIGHT AND ALARM. CONTROL PANEL SHALL BE FACTORY WIRED AND PIPED.								
2. FILL GLYCOL PIPING SYSTEM WITH 30% PROPYLENE GLYCOL AND 70% WATER BY VOLUME.								

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 017869



Friedman Fisher Associates, P.C.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



REGISTRATION EXPIRES:
10/31/24

CONTRACT:

HVAC

TITLE:
REPLACE BUILDING CHILLERS,
BUILDING 144

LOCATION:
COOK CHILL PRODUCTION CENTER
145 OLD ORANGEBURG ROAD
ORANGEBURG, NY

CLIENT:
OFFICE OF
MENTAL HEALTH

	12/6/2023	BID DOCUMENTS
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47430	- H
DESIGNED BY:	CHS	
DRAWN BY:	CHS	
FIELD CHECK:		
APPROVED:		
SHEET TITLE:		
SCHEDULES		
DRAWING NUMBER:		
M-701		
SHEET	12	OF 18