STEAM SYSTEM ACCESSORIES SCHEDULE

MARK	TYPE (DESCRIPTION)	SYSTEM APPLICATION	MINIMUM PRESSURE RATING(PSIG) (SATURATED)	BODY MATERIAL	INTERNAL CONSTRUCTION MATERIALS	INLET/OUTLET PIPING ARRANGEMENT	INTEGRAL COMPONENTS	CAPACITY SIZE (INCHES)	CAPACITY DIFFERENTIAL (PSI)	CAPACITY PPH	CAPACITY ORIFICE DIA. (INCHES)	MANUFACTURER/MODEL NO. (SARCO)	NOTES
FTT-1	FLOAT AND THERMOSTATIC TRAP	LPS ONLY	15	CAST IRON	STAINLESS STEEL	IN-LINE HORIZONTAL	1. FLOAT 2. THERMOSTATIC AIR VENT	0.75	0.25	279	0.22"	FTI-15	1,2
FTT-2								1.25	0.25	600	0.31"	FTI-15	1,2
FTT-3								1.50	0.25	1100	0.50"	FTI-15	1,2
FTT-4								2.00	0.25	2600	2 AT 0.75	FTB-175	1,2
FTT-5								2.00	0.25	6000	0.94"	FTB-20	1,2
FTT-6								2.00	0.25	1200	2 AT 2.12"	FTB-30	1,2
FTT-7								2.50	0.25	19000	2 AT 2.12"	FTB-125	1,2
FTT-8	FLOAT AND THERMOSTATIC TRAP	HPS ONLY (NOTE 7)	125	CAST IRON	STAINLESS STEEL	IN-LINE HORIZONTAL	1. FLOAT 2. THERMOSTATIC AIR VENT	0.75	0.25	100	0.12'	FTI-125	1,2
FTT-9								1.25	0.25	400	0.25'	FTI-125	1,2
FTT-10								1.50	0.25	920	2 AT 0.38"	FTB-175	1,2
FTT-11								2.00	0.25	2600	2 AT 0.75"	FTB-175	1,2
FTT-12								2.50	0.25	7000	2 AT 1.50"	FTB-175	1,2
IBT-1	INVERTED BUCKET TRAP	HPS ONLY (NOTE 6)	125	CAST IRON	STAINLESS STEEL	IN-LINE HORIZONTAL	1. INVERTED BUCKET 2. STRAINER, MONEL 3. BIMETALIC AIR VENT, INTERNAL	0.75	20	446	0.12"	B1H-125	1,2,3
IBT-2								0.75	20	1100	0.20"	B2-125	1,2,3
IBT-3								1.0	20	2080	0.25"	B3-125	1,2,3
TAV-1	THERMOSTATIC AIR VENT	LPS HPS	125	BRASS	STAINLESS STEEL	1. VERTICAL INLET 2. HORIZONTAL OR VERTICAL OUTLET	1. THERMOSTATIC AIR VENT	0.38" X 0.25"	50 PSIG INLET	40 SCFM AIR	–	T202	2,4
TAV-2								0.50	50 PSIG INLET	88 SCFM AIR	–	VS204	1,2
TAV-3								0.75	50 PSIG INLET	112 SCFM AIR	–	VS206	1,2
VB-1	VACUUM BREAKER	LPS HPS	125	BRASS	STAINLESS STEEL	1. VERTICAL INLET 2. HORIZONTAL OUTLET	1. BALL CHECK VALVE	0.5" X 0.12"	6" HG VACUUM	4.0 SCFM AIR	–	VB14	2,4,5

NOTES:
1. BOLTED COVER.
2. SERVICABLE UNIT WITHOUT REMOVING FROM PIPING.
3. INSTALL ONE TAV-1 EXTERNALLY PIPED ON INLET SIDE OF EACH IBT.
4. THREADED COVER.
5. VACUUM REQUIRED TO OPEN = 2 INCHES WC (0.15 IN HG).
6. NON-MODULATING SERVICE ONLY AND EOM DRIPS.
7. HEAT EXCHANGER SERVICE ONLY (COILS, CONVERTORS, ETC.).

DOUBLE DUCT AIR TERMINAL BOX SCHEDULE

COOLING VALVE DESIG.	COOLING INLET SIZE	COOLING CFM RANGE MIN.	COOLING CFM RANGE MAX.	HEATING VALVE DESIG.	HEATING INLET SIZE	HEATING CFM RANGE MIN.	HEATING CFM RANGE MAX.	MIN ΔP in. Wg	MIN. CFM SETTING (NOTE 6) COOLING	MIN. CFM SETTING (NOTE 6) HEATING	NC (MAX.) D	NC (MAX.) R	MANUFACTURER / MODEL	REMARKS
A	6"	75	400	B	6"	75	400	.30			34	25	JCI TDS	ALL NOTES
B	8"	145	800	C	8"	145	800	.30			34	25	JCI TDS	ALL NOTES
C	10"	235	1200	D	10"	235	1200	.34			35	25	JCI TDS	ALL NOTES
D	12"	340	1700	E	12"	340	1700	.38			35	25	JCI TDS	ALL NOTES
E	14"	475	2200	F	14"	475	2200	.40			35	25	JCI TDS	ALL NOTES
F	16"	625	2800	G	16"	625	2800	.40			35	30	JCI TDS	ALL NOTES

NOTES:
1. ΔP IS PRESSURRE DIFFERENCE ($\Delta P_s + \Delta P_v$)BETWEEN TERMINAL INLET AND DISCHARGE DUCTWORK AT MAX. CFM
2. NC-D IS DISCHARGE NC LEVEL BASED ON 8dB ROOM ATTENUATION AT 1.5 ΔP AND MAX. CFM.
3. NC-R IS RADIATED NC LEVEL BASED ON 8dB ROOM ABSORPTION AT 1.5 ΔP AND MAX. CFM.
4. MEDIUM PRESSURE. PRESSURE INDEPENDENT TYPE.
5. BOX COMPLETE WITH ATTENUATOR AND MIXING BAFFLES.
6. MIN. CFM SETTING = 0 UNLESS NOTED OTHERWISE.

PLAN KEY:

DD / #

SIZE IS NOTED BY COOLING VALVE DISCHARGE AND HEATING VALVE PSIG. EXAMPLE: CB, ('C' COOLING AND 'B' HEATING VALVES)

SIZE – COOLING CFM / HEATING CFM

BOX # REPRESENTS THE ROOM SERVED AND/OR LOCATION OF TERMINAL

STEAM HUMIDIFIER SCHEDULE

DESIGNATION	MIN. LBS/HR	PSIG.	HUMID. SIZE	SYSTEM SERVED	HUMIDISTAT LOCATION	MANUFACTURER/MODEL	REMARKS/NOTES
H-1	240	20	(1) 3/4" VALVE	AHU-1	LOUNGE 4E-143	DRI STEEM/ULTRASORB	ALL

NOTES:
1. DISPERSION GRID TO BE MOUNTED IN AHU, COORDINATE WITH AHU DIMENSIONS.
2. DISPERSION DISTANCE SHALL BE LESS THAN 12".
3. PROVIDE 24V ELECTRONIC ACTUATOR WITH 0-10 VDC SIGNAL.
4. PROVIDE STAINLESS STEEL HUMIDIFIER CASING.
5. HUMIDISTAT AND CONTROLS BY CONTROLS CONTRACTOR.

STEAM TO WATER HEAT EXCHANGER SCHEDULE

DESIG.	SERVES	TYPE	STEAM PRESS. (PSI)	STEAM FLOW (PPH)	MIN. CONTROL VALVE P.D. (PSI)	EWT (°F)	LWT (°F)	GPM	MAX P.D. (FT.)	MIN. SHELL DIA. (IN)	NO. OF PASSES	FOULING FACTOR	MANUFACTURER/MODEL NO.	REMARKS/NOTES
HX-1&2	4E&4B	SHELL&TUBE	25	2375	5	160	180	230	1.5	10	2	0.0005	BELL & GOSSETT / QSU 10 4-2	ALL

NOTES:
1. PROVIDE FLANGED CONNECTIONS IF LARGER THAN 2.5"
2. 3/4" O.D. 90/10 CUPRO-NICKEL TUBES WITH STEEL TUBESHEET.

AIR SEPARATOR SCHEDULE

DESIGNATION	TYPE	SERVES	MAX. FLOW GPM	INLET/OUTLET SIZE, (IN)	MAX. P.D. (FT.)	MANUFACTURER/MODEL NO.	REMARKS/NOTES
AS-1	TANGENTIAL	HEATING HOT WATER SYSTEM	230	4	0.5	AMTROL / 4 AS-L	–
AS-2	INLINE AIR PURGER	GLYCOL LOOP SYSTEM	87	4	0.5	AMTROL / 448	–

EXPANSION TANK SCHEDULE

DESIGNATION	TYPE	SERVES	MIN. TANK PRESSURE (PSIG)	TANK VOLUME (GALLONS)	LOCATION	MANUFACTURER/MODEL NO.	REMARKS/NOTES
ET-1	BLADDER	HEATING HOT WATER SYSTEM	15	34	PENTHOUSE MER	AMTROL / EXTROL 130LBC	ALL
ET-2	BLADDER	GLYCOL LOOP SYSTEM	15	10	ROOF	AMTROL / EXTROL 35LBC	ALL

PUMP SCHEDULE

DESIG.	SERVES	TYPE	EFF. %	GPM	TDH (FT)	ELECTRICAL HP	ELECTRICAL RPM	ELECTRICAL VOLT/PHASE	MANUFACTURER/MODEL NO.	REMARKS/NOTES
HWP-1&2	HEATING WATER SYSTEM	END SUCTION	75	230	75	7.5	1750	460/3	BELL & GOSSETT / 1510 2-1/2BB	1,2
GRP-1&2	GLYCOL RUN-AROUND LOOP	END SUCTION	60	100	60	5	1750	460/3	BELL & GOSSETT / 1510 2BC	1,2,3
FPP-1	AHU-1 HEATING COIL	INLINE BOOSTER	–	21	10	1/6	3300	120/1	BELL & GOSSETT / PL-50	–
FPP-2	AHU-2 HEATING COIL	INLINE BOOSTER	–	6	10	92W	2950	120/1	BELL & GOSSETT / NRF-22	–

NOTES:
1. PROVIDE PREMIUM EFFICIENCY MOTORS FOR VFD OPERATION.
2. SUCTION DIFFUSER.
3. 30% PROPYLENE GLYCOL SOLUTION.

EXTRA NOTES TO BIDDERS:

1. ALL EQUIPMENT AND INSTALLATION PERTAINING TO THE HEATING HOT WATER SYSTEM GENERATION INCLUDING STEAM PRV STATION, STEAM TO HOT WATER HEAT EXCHANGERS, HEATING HOT WATER PUMPS, EXPANSION TANK, AIR SEPARATOR, CONTROLS, ECT TO BE MECHANICAL BID ALTERNATE #1. NEW HEATING HOT WATER SYSTEM SHALL BE REQUIRED FOR THIS PROJECT OR THE VADC 4B MICU RENOVATION PROJECT. REFER TO VADC PROJECT NUMBER 688-10-024.

Revisions:	Date
CONSTRUCTION DOCUMENTS 100% SUBMITTAL FOR BID	06/13/2012
CONSTRUCTION DOCUMENTS 100% SUBMITTAL	06/22/2011
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CA PROJECT 00938.02

FULLY SPRINKLERED

Drawing Title: HVAC SCHEDULES

Approved: Project Director

Project Title: VA MEDICAL CENTER 4E PATIENT WARD EXPANSION

Location: WASHINGTON DC

Date | Checked: TB/ DEW | Drawn

Project Number: 688-336

Building Number: E

Drawing Number: H8.02

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