FILTER HOUSING

TAG	FILTER DATA					MANUFACTURER & MODEL
	HOUSING SIZE (WxHxD)	FILTER DEPTH	HEIGHT	LENGTH	ARRANG.	
FH-1	48"x36"x6"	4"	18"	24"	(1)	FLANDERS PRECISION AIRE MODEL PRECISION CELL II MERV 14 (95% EFFICIENT)

(1) PROVIDE WITH SIDE ACCESS DOOR TO ALLOW FILTER REPLACEMENT. PROVIDE FOUR (4) 24"x18"x4" MERV-14 FILTERS TO BE MOUNTED IN A 48" WIDE x 36" HIGH x 6" DEEP FILTER HOUSE WITH THE FILTERS ARRANGED IN TWO ROWS TWO COLUMNS HIGH.

PUMP SCHEDULE

TAG	SERVICE	TYPE	FLOW (GPM)	HEAD (FT.)	RPM	IMPELLER DIA. (IN.)	SUCTION X DISCHARGE (IN. X IN.)	FLUID TEMP. (°F)	FLUID TYPE	ELECTRICAL DATA		MFG. AND MODEL	REMARKS
										MOTOR HP	VOLTS/ PHASE		
CP-4	CONDENSATE FROM AC-2	CONDENSATE PUMP AND RECEIVER	2.2	20	-	-	-/1/4	-	CONDENSATE	1/18	115/1	LITTLE GIANT VCL-24ULS	-

DIFFUSER, REGISTER AND GRILLE SCHEDULE

TAG	TYPE	SIZE	NECK SIZE	PATTERN	MOUNTING	MATERIAL	MANUFACTURER & MODEL NO.	REMARKS
SD-1	SUPPLY DIFFUSER	24"x24"	SEE DWG	4-WAY	LAY IN	STEEL	NAILOR UNI	1, 2
RR-1	RETURN REGISTER	SEE DWG	-	45° DEFLECTION, 3/4" BLADE SPACING	SURFACE	STEEL	NAILOR 6145H	1, 2

1) PROVIDE WITH OPPOSED BLADE DAMPERS
2) OR APPROVED EQUAL

VAV BOX SCHEDULE

TAG	SIZE	AHU	TYPE	MAXIMUM PRIMARY CFM	MINIMUM PRIMARY CFM	MIN. DELTA S.P.	MAX NC	HEATING COIL								MINIMUM OUTSIDE AIRFLOW	BASIS OF DESIGN	REMARKS
								MBH	GPM	E.A.T. (°F)	L.A.T. (°F)	APD (IN WC)	E.W.T. (°F)	L.W.T. (°F)	WPD W.C			
TB-21	4	AC-2	SINGLE DUCT	100	100	.01	-	4.3	0.5	55	95	.01	180	163	.1	1	3/4	25	ENVIRO-TEC MODEL SDR	1
TB-20	6	AC-2	SINGLE DUCT	260	160	.01	20	6.9	0.5	55	95	.03	180	152	.1	2	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-13	8	AC-2	SINGLE DUCT	680	160	.01	20	14.8	1.0	55	95	.14	180	150	.3	2	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-12	8	AC-2	SINGLE DUCT	760	320	.01	20	16.5	1.0	55	95	.14	180	147	.3	2	3/4	80	ENVIRO-TEC MODEL SDR	1
TB-11	6	AC-2	SINGLE DUCT	360	160	.01	20	7.8	0.5	55	95	.03	180	149	.1	1	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-10	4	AC-2	SINGLE DUCT	200	160	.01	20	6.9	0.5	55	95	.02	180	152	.3	1	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-9	5	AC-2	SINGLE DUCT	300	160	.01	20	6.9	0.5	55	95	.02	180	152	.3	1	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-8	6	AC-2	SINGLE DUCT	370	320	.01	20	13.9	1.0	55	95	.15	180	152	.3	2	3/4	40	ENVIRO-TEC MODEL SDR	1
TB-7	6	AC-2	SINGLE DUCT	470	470	.01	20	20.4	1.5	55	95	.15	180	153	.8	2	3/4	120	ENVIRO-TEC MODEL SDR	1
TB-6	6	AC-2	SINGLE DUCT	390	320	.01	20	13.9	1.0	55	95	.14	180	152	.3	2	3/4	40	ENVIRO-TEC MODEL SDR	1

1. ADJUST HEATING CFM TO 50% OF VAV BOX MAXIMUM OR MINIMUM PRIMARY CFM, WHICHEVER IS GREATER.

FAN SCHEDULE

TAG	LOCATION	SERVICE	TYPE	DRIVE	CFM	E.S.P. (IN. W.C.)	RPM	BHP	ELECTRICAL DATA				BASIS OF DESIGN MFG. AND MODEL	REMARKS
									MOTOR H.P.	VOLTS	PH.	MINIMUM MOTOR EFFICIENCY		
RF-1	EXIST. MECHANICAL ROOM	AC-1 RETURN/RELIEF AIR	SQUARE INLINE CENTRIFUGAL	BELT	6340	1.50	1196	3.33	5	208	3	89.5	COOK 225-SQN-B	2
RF-2	MECHANICAL ROOM C512B	AC-2 RETURN/RELIEF AIR	SQUARE INLINE CENTRIFUGAL	BELT	2810	1.40	1756	1.42	1-1/2	208	3	86.5	COOK 150-SQN-B	1, 2

1. PROVIDE UNIT WITH DUAL SIDE AND END OUTLET ARRANGEMENT.
2. PROVIDE WITH PREMIUM EFFICIENT MOTOR DRIVEN BY VARIABLE FREQUENCY DRIVE.

AIR HANDLING UNIT SCHEDULE

TAG	SERVICE	SUPPLY FAN DATA									COOLING SECTION									ELECTRICAL DATA			FILTER SECTION		MANUFACTURER & MODEL NO.	UNIT WEIGHTS (LBS)	REMARKS
		FAN TYPE	CFM	OUTDOOR AIR CFM (MAX.)	OUTDOOR AIR CFM (MIN.)	ESP	TSP	RPM	DESIGN BHP	MOTOR HP	EAT (Fdb/Fwb)	LAT (Fdb/Fwb)	CAPACITY (MBH)		FACE VELOCITY FPM	AIR PRESS. DROP IN. W.C.	EWT (F)	LWT (F)	FLOW (GPM)	FLUID	WATER PRESS. DROP FT. W.C.	VOLTS/PH	FLA	MINIMUM MOTOR EFFICIENCY	MERV 8 FILTER APD (IN WC)	MERV 14 FILTER APD (IN WC)			
													SENS.	TOTAL														
AC-2	VA HOSPITAL - VISION CENTER	AIRFOIL	2810	2810	700	1.2	3.40	1750	2.86	3.0	78/64	54.8/53.9	71.0	84.1	492	0.61	45	55.1	16.6	WATER	3.9	208/3	4	89.5	0.64	0.78	MCQUAY CAH006GDDC	1540	1,2,3

1. UNIT TO BE VARIABLE AIR VOLUME AIR HANDLING UNIT, WITH HORIZONTAL UPBLAST DISCHARGE CONFIGURATION. PROVIDE WITH MIXING BOX WITH REAR OUTSIDE AIR AND TOP RETURN AIR INLETS WITHDAMPERS, MERV 8 PRE-FILTER SECTION, CHILLED WATER COOLING COIL, SUPPLY FAN SECTION, DIFFUSER SECTION AND MERV 14 POST-FILTER SECTION. MAX COIL WIDTH 50". MUST COMMUNICATE CLEARLY WITH EXISTING VA TRANE CONTROL SYSTEM.
2. PROVIDE WITH PREMIUM EFFICIENT MOTOR DRIVEN BY VARIABLE FREQUENCY DRIVE.
3. AIR HANDLING UNIT TO BE DELIVERED DISASSEMBLED TO FULLEST EXTENT POSSIBLE TO ALLOW FOR DELIVERY TO DESIGNATED INSTALLATION LOCATION.

SYMBOLS LEGEND

- HWS — HOT WATER SUPPLY PIPING
- HWR — HOT WATER RETURN PIPING
- CHWS — CHILLED WATER SUPPLY PIPING
- CHWR — CHILLED WATER RETURN PIPING
- SUPPLY AIR DIFFUSER
- RETURN OR EXHAUST AIR REGISTER
- SUPPLY AIR DUCTWORK
- RETURN AIR DUCTWORK
- CONTROL WIRING
- MANUAL AIR VENT
- PIPE BREAK
- PIPE TURN DOWN
- PIPE TURN UP
- MID PIPE DOWN
- GATE VALVE
- THREE-WAY VALVE
- UNION
- BUTTERFLY VALVE
- PRESSURE GAUGE
- REDUCER
- RELIEF VALVE
- CONTROL VALVE
- THERMOMETER
- FIRE / SMOKE DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- SHUTOFF VALVE
- STRAINER
- BALANCE VALVE
- SPACE SENSOR - MH-48"AFF
- POINT OF CONNECTION
- POINT OF DISCONNECTION

ABREVIATIONS LEGEND

ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
AS	AIR SEPARATOR
B	BOILER
BHP	BRAKE HORSEPOWER
BTM	BOTTOM
BTUH	BRITISH THERMAL UNITS/HOUR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
COND	CONDENSATE
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
Cv	VALVE COEFFICIENT
D	SUPPLY DIFFUSER
DB	DRY BULB
DCW	DOMESTIC COLD WATER
DDC	DIRECT DIGITAL CONTROL
DEG. F	DEGREES FAHRENHEIT
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EX.	EXISTING
EWT	ENTERING WATER TEMPERATURE
F	FARENHEIT
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FLR	FLOOR
FSD	FIRE SMOKE DAMPER
FT	FEET
F.T.R.	FIN TUBE RADIATION
GPM	GALLONS PER MINUTE
HC	HEATING CONTRACTOR
HEF	HOOD EXHAUST FAN
HEX	HEAT EXCHANGER
HP	HORSEPOWER
H&V	HEATING AND VENTILATION
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ
IN	INCHES
INT	INTERNAL
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LDB	LEAVING DRY BULB
LF	LINEAR FOOT
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
MER	MECHANICAL EQUIPMENT ROOM
MH	MOUNTING HEIGHT
MD	MOTORIZED DAMPER
MIN	MINIMUM
MAX	MAXIMUM
MC	MOTOR CONTROLLER
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NOL	NON OVER LOADING
OA	OUTSIDE AIR
OED	OPEN END DUCT
OS&Y	OPEN STEM & YOKE
P	PUMP
PD	PRESSURE DROP
PH	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RD	RETURN DIFFUSER
RF	RELIEF FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RP	RADIANT PANEL
RG	RETURN GRILLE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SF	SQUARE FOOT
SP	STATIC PRESSURE
SPS	STATIC PRESSURE SENSOR
SD	SMOKE DAMPER
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
TB	VAV TERMINAL BOX
TEMP	TEMPERATURE
TR	DUCTWORK TRANSITION
TYP	TYPICAL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VERT	VERTICAL
W	WIDTH
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WH	WATER HEATER

CONTROLS LEGEND

D	DIGITAL INPUT
DO	DIGITAL OUTPUT
A	ANALOG INPUT
AO	ANALOG OUTPUT
M	MOTOR OPERATOR
ST	STARTER
CS	CURRENT SENSOR
ES	END SWITCH
R	RELAY
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
SA	SUPPLY AIR
EA	EXHAUST AIR
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN

100% DESIGN SUBMISSION

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