

90-AHU-3 SPECIFICATIONS

Performance Climate Changer
Quantity 1
Job Comments

Unit level options				Module Position: 0	
Actual airflow	6590 cfm	Inlet and casing - 500 Hz	74 db		
Unit elevation	0.00 ft	Inlet and casing - 1K Hz	71 db		
Unit size	14	Inlet and casing - 2K Hz	66 db		
Integral base frame	2.5in. integral base frame	Inlet and casing - 4K Hz	59 db		
UL listed unit	UL listed unit	Inlet and casing - 8K Hz	57 db		
High voltage location	Left	Ducted inlet - 63 Hz	73 db		
Length	92.500 in	Ducted inlet - 125 Hz	67 db		
Width	72.000 in	Ducted inlet - 250 Hz	61 db		
Installed weight	1400.2 lb	Ducted inlet - 500 Hz	64 db		
Rigging weight	1326.7 lb	Ducted inlet - 1K Hz	60 db		
Single or front discharge - 63 Hz	91 db	Ducted inlet - 2K Hz	55 db		
Single or front discharge - 125 Hz	84 db	Ducted inlet - 4K Hz	51 db		
Single or front discharge - 250 Hz	84 db	Ducted inlet - 8K Hz	47 db		
Single or front discharge - 500 Hz	82 db	Casing - 63 Hz	76 db		
Single or front discharge - 1K Hz	82 db	Casing - 125 Hz	74 db		
Single or front discharge - 2K Hz	76 db	Casing - 250 Hz	72 db		
Single or front discharge - 4K Hz	73 db	Casing - 500 Hz	81 db		
Single or front discharge - 8K Hz	68 db	Casing - 1K Hz	83 db		
Inlet and casing - 63 Hz	79 db	Casing - 2K Hz	55 db		
Inlet and casing - 125 Hz	78 db	Casing - 4K Hz	35 db		
Inlet and casing - 250 Hz	74 db	Casing - 8K Hz	38 db		

Controls and VFD/starter				Module Position: 0	
Factory controls package	No factory mount	LCD screen and keypad	No LCD		
Automatic Selection	No auto selection	Design Sequence	Design Sequence		
Controller mounting	No mount	Prepackaged solution option used	MP common configuration not used		
Controller type	No controller	Total number of control points	0 control points		

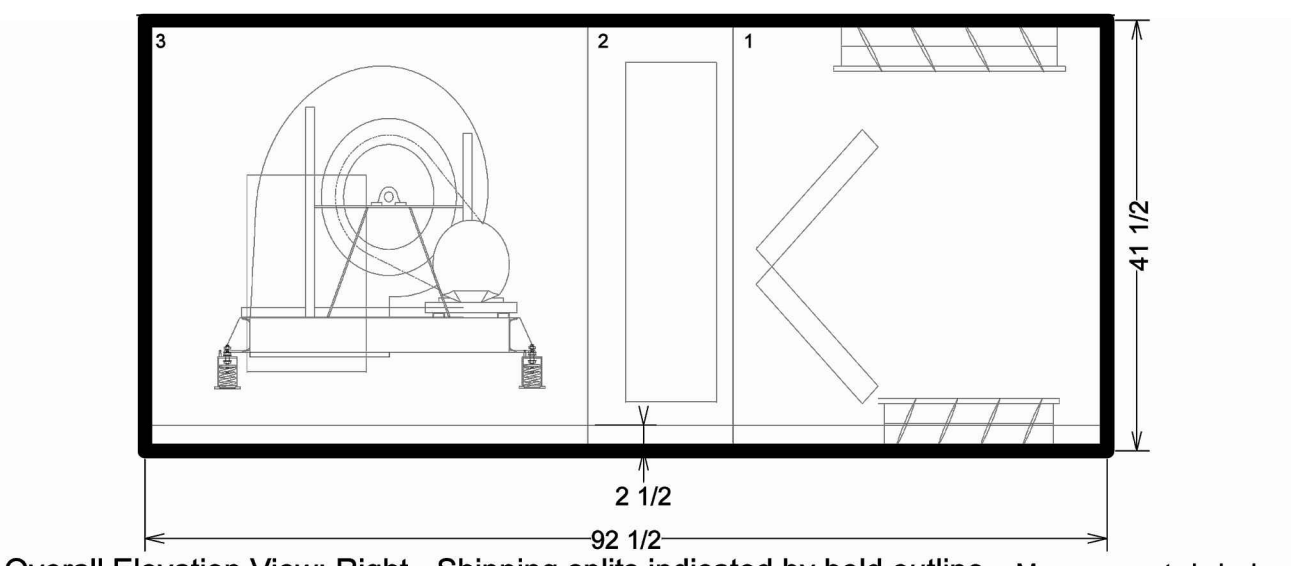
Warranty		Module Position:		0
<u>Warranty section</u>		Std. warranty only		

Air mixing section				Module Position: 1	
Section type	Air mixing section	Design sequence	Opening 1 bottom - airflow	6590 cfm	
Unit size	14	with filter	Mid-life		
Mixing section type	2"	Filter airflow	6590 cfm		
Filter frame	Pleated media - MERV 8	Opening 1 front - airflow	6590 cfm		
Filter type	Left	Opening 1 top - airflow	6590 cfm		
Access door location	Back opening type	No opening	Opening 1 bottom - face velocity	1165 f/min	
Back opening type	Full face opening	Opening 1 bottom - pressure drop	0.175 in H ₂ O		
Front opening type	Leaving	Opening 1 top total pressure drop	0.175 in H ₂ O		
Top opening type	Parallel blade damper	Opening 1 bottom total pressure drop	0.175 in H ₂ O		
Top air path	Entering	Grossed dry PD	0.175 in H ₂ O		
Top air path type	Outside	Opening 1 front - area	16.53 sq ft		
Top inlet type	Ducted	Opening 1 top - area	5.66 sq ft		
Bottom opening type	Parallel blade damper	Opening 1 bottom - area	5.66 sq ft		
Bottom air path	Entering	Opening 1 top - face velocity	1165 f/min		
Bottom air path type	Return	Opening 1 top - pressure drop	0.175 in H ₂ O		
Bottom inlet type	Ducted	Filter area	16.06 sq ft		
Right side opening type	No opening	Filter face velocity	365 f/min		
Left side opening type	No opening	Filter pressure drop	0.598 in H ₂ O		

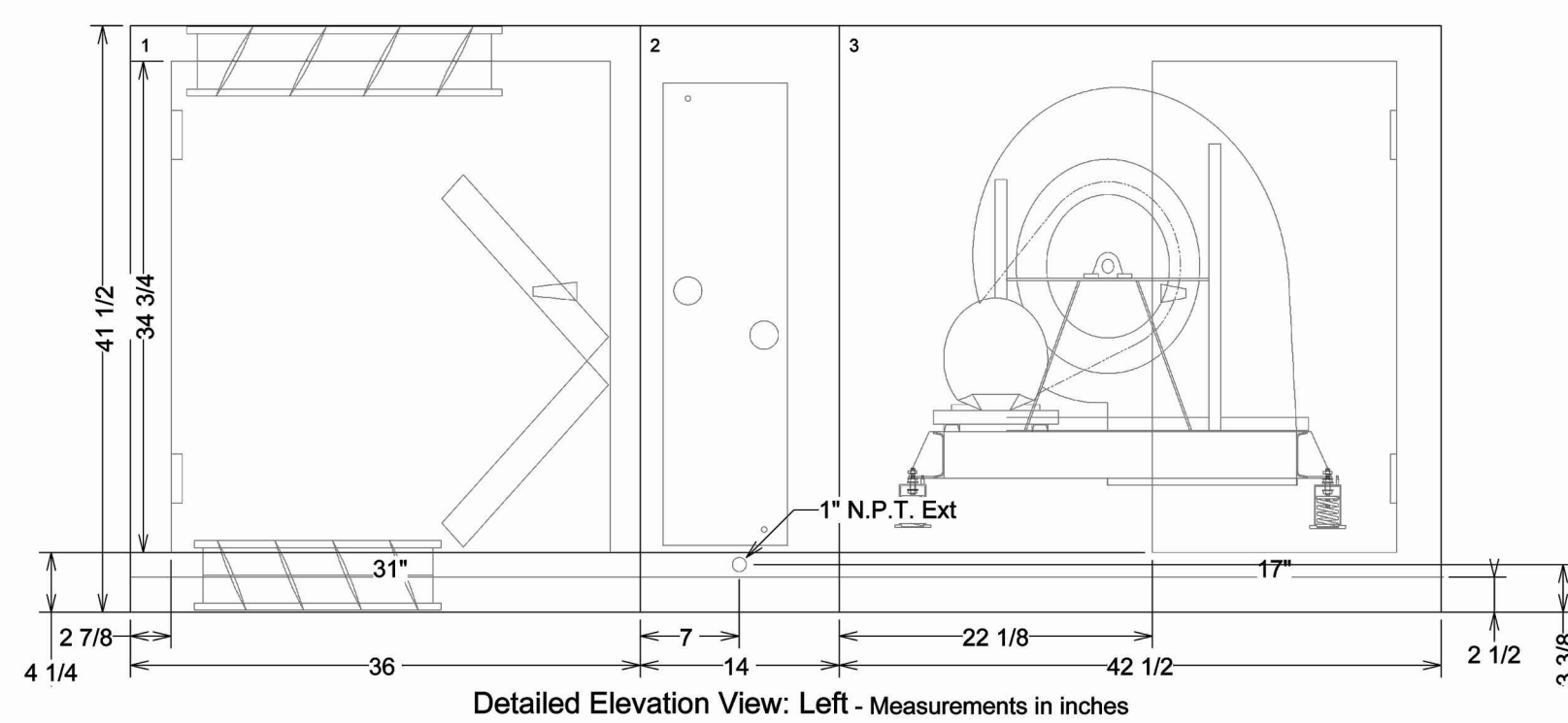
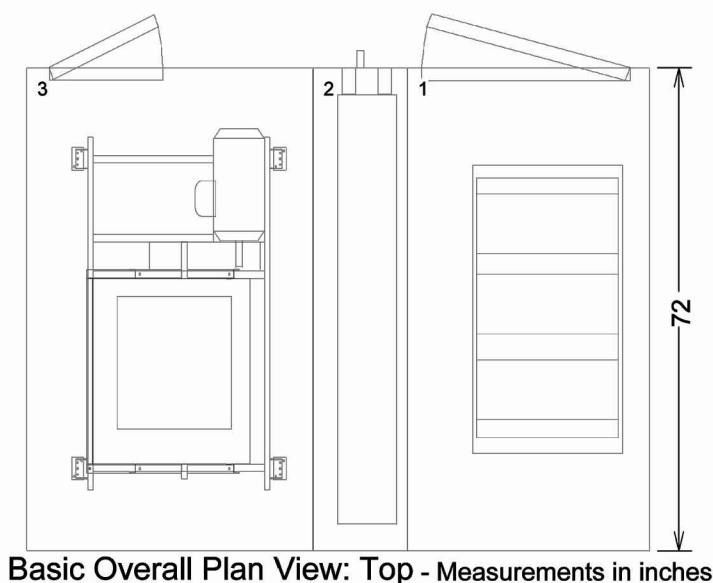
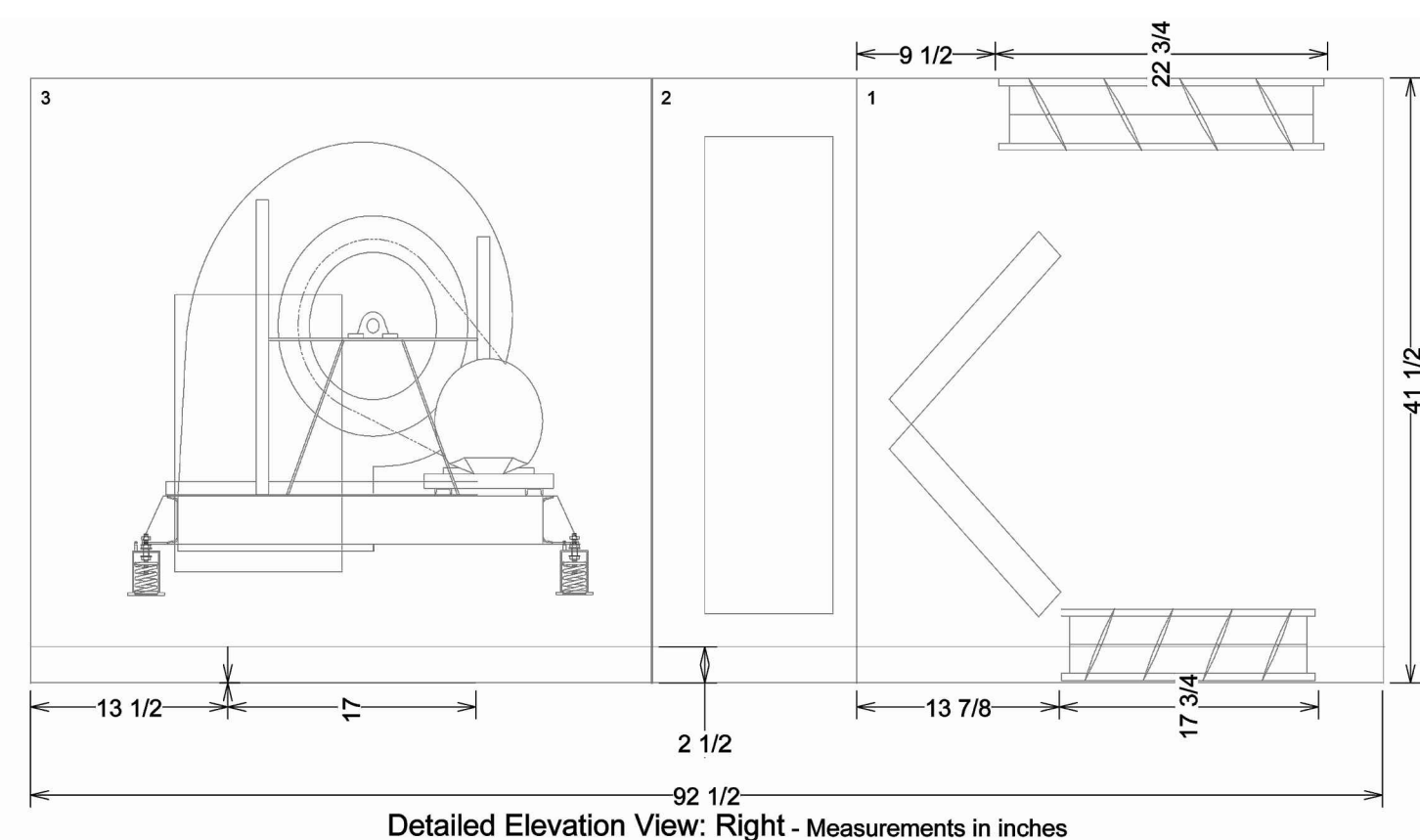
Coil section				Module Position: 2	
Coil size [2]-1	Horizontal coil	Fluid type	Water		
Section type	14	Coil fluid percentage	100.00 %		
Unit size	Medium	Target valve pressure drop	4.00 psig		
Coil application	No	Coil type	UW		
Changover coil	Chilled water	Rows	6 rows		
System type	Left	Fin type	Delta flo E (energy efficient)		
Coil supply/cabinet side	Galvanized	Fin material	Aluminum fins		
Coil casing	Galvanized	Tube diameter	1/2in. tube diameter (12.7 mm)		
Coil height	Unit coil height	Tube material/thickness	.016" (0.406mm) copper tubes		
Drain pan	Galvanized	Corrosion resistant coating	None		
Drain connection location	Left	Coil face velocity	483 f/min		
Design sequence	B	Air pressure drop	0.636 in H ₂ O		
Apply ARI ranges	Apply ARI ranges	J trap dimension	1.760 in		
Coil performance airflow	6590 cfm	H trap dimension	3.561 in		
Coil elevation	0.00 ft	Leaving fluid temperature	53.00 F		
Entering dry bulb	83.00 F	Fluid pressure drop	11.49 ft H ₂ O		
Entering wet bulb	69.00 F	Fluid volume	8.79 gal		
Leaving dry bulb	54.00 F	Fluid velocity	4.49 f/s		
Leaving wet bulb	54.16 F	Coil face area	13.65 sq ft		
Sensible capacity	211.13 MBtu	Coil rigging weight	198.7 lb		
Total capacity	328.39 MBtu	Coil installed weight	272.2 lb		
Fin spacing	98 Per Foot	Coil section pressure drop	0.636 in H ₂ O		
Entering fluid temperature	43.00 F	Section length	14.000 in		
Fluid temperature rise	10.00 F	Section height	41.500 in		
Standard fluid flow rate	65.43 gpm	Section width	72.000 in		
Coil fouling factor	0.00000 hr-sq ft-deg F/Btu	Coil weight	448.2 lb		

Fan section			Module Position: 3	
Fan sec [3]-1	Fan	Static pressure origin	Program calculated	
Section type	Supply fan	Single or front discharge - 63 Hz	91 db	
Fan application	Unit size 14	Single or front discharge - 125 Hz	84 db	
Inlet location	Back inlet	Single or front discharge - 250 Hz	84 db	
Fan orientation	Bottom-front discharge	Single or front discharge - 500 Hz	82 db	
Fan discharge	Bottom front	Single or front discharge - 1K Hz	82 db	
Access door location	Left	Single or front discharge - 2K Hz	76 db	
Drive location	Left side drive	Single or front discharge - 4K Hz	73 db	
Design sequence	D	Single or front discharge - 8K Hz	68 db	
Motor horsepower per fan	7.5 hp	Inlet and casing - 63 Hz	79 db	
Motor class	NEMA premium compliant ODP	Inlet and casing - 125 Hz	78 db	
Motor voltage	400/3	Inlet and casing - 250 Hz	74 db	
Cycle	60 cycles/sec	Inlet and casing - 500 Hz	74 db	
Drive service factor	1.5 fixed drive	Inlet and casing - 1K Hz	71 db	
Motor RPM	1800	Inlet and casing - 2K Hz	66 db	
Fan airflow	6590 cfm	Inlet and casing - 4K Hz	59 db	
Overall ESP	1.500 in H ₂ O	Inlet and casing - 8K Hz	57 db	
Unit entering ESP	0.750 in H ₂ O	Ducted inlet - 63 Hz	73 db	
Unit discharge ESP	0.750 in H ₂ O	Ducted inlet - 125 Hz	67 db	
Elevation	0.00 ft	Ducted inlet - 250 Hz	61 db	
Minimum temperature	40.00 F	Ducted inlet - 500 Hz	64 db	
Design temperature	70.00 F	Ducted inlet - 1K Hz	60 db	
Fan size and type	15in. diameter FC, class 1	Ducted inlet - 2K Hz	55 db	
Total brake horsepower	6.352 hp	Ducted inlet - 4K Hz	51 db	
Total brake horsepower at min temp	6.734 hp	Ducted inlet - 8K Hz	47 db	
Total static pressure	2.909 in H ₂ O	Casing - 63 Hz	76 db	
Speed	1178 rpm	Casing - 125 Hz	74 db	
Outlet area	2.05 sq ft	Casing - 250 Hz	72 db	
Fan module pressure drop	1.500 in H ₂ O	Casing - 500 Hz	81 db	
Section height	41.500 in	Casing - 1K Hz	83 db	
Section length	42.500 in	Casing - 2K Hz	55 db	
Section width	72.000 in	Casing - 4K Hz	35 db	
Section weight	623.0 lb	Casing - 8K Hz	36 db	

90-AHU-3 DETAILS



Pos #	Module	Length	Weight
1	Air mixing section	36	336.20
2	Coil section	14	448.20
3	Fan section	42 1/2	623.00
Installed Unit Weight 1407.40 lbs			



90-AHU-3 - HVAC DETAILS AND SPECIFICATIONS - BUILDING 90

N.T.S.

WHORTON ENGINEERING, INC. HVAC - PLUMBING - PROCESS CONTROL			
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Revisions	Date



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CAVHCS
Central Alabama Veterans Health Care System

Approved:	Approved:
Approved:	Approved:
Approved:	Approved:
Approved:	Approved:

Drawing Title
90-AHU-3 - HVAC DETAILS AND SPECIFICATIONS - BUILDING 90
Safety Officer
Clinical Representative

Project Title
HVAC MODIFICATIONS TO BUILDINGS 83, 90, & 93 TUSKEGEE, ALABAMA
Building Number
90
Checked
RDW
Drawn
JAD
Location
East Campus, Tuskegee, AL

Date
12/21/10
Project No.
619-10-445
Drawing No.
90M3.3
Drawn By
29 of 59

Veterans Administration