

83-AHU-1 SPECIFICATIONS

Performance Climate Changer			
Quantity	1		
Job Comments			
Unit level options		Module Position:	0
Actual airflow	6800 cfm	Inlet and casing - 500 Hz	77 dB
Unit elevation	0.00 ft	Inlet and casing - 1K Hz	73 dB
Unit size	14	Inlet and casing - 2K Hz	70 dB
Integral base frame	2.5in. integral base frame	Inlet and casing - 4K Hz	67 dB
UL listed unit	UL listed unit	Inlet and casing - 8K Hz	61 dB
High voltage location	Left	Ducted inlet - 63 Hz	96 dB
Length	76.500 in	Ducted inlet - 125 Hz	78 dB
Width	72.000 in	Ducted inlet - 250 Hz	68 dB
Installed weight	1737.1 lb	Ducted inlet - 500 Hz	70 dB
Rigging weight	1665.6 lb	Ducted inlet - 1K Hz	65 dB
Single or front discharge - 63 Hz	101 dB	Ducted inlet - 2K Hz	62 dB
Single or front discharge - 125 Hz	94 dB	Ducted inlet - 4K Hz	58 dB
Single or front discharge - 250 Hz	88 dB	Ducted inlet - 8K Hz	52 dB
Single or front discharge - 500 Hz	85 dB	Casing - 63 Hz	97 dB
Single or front discharge - 1K Hz	84 dB	Casing - 125 Hz	81 dB
Single or front discharge - 2K Hz	79 dB	Casing - 250 Hz	78 dB
Single or front discharge - 4K Hz	77 dB	Casing - 500 Hz	82 dB
Single or front discharge - 8K Hz	70 dB	Casing - 1K Hz	84 dB
Inlet and casing - 63 Hz	99 dB	Casing - 2K Hz	57 dB
Inlet and casing - 125 Hz	86 dB	Casing - 4K Hz	40 dB
Inlet and casing - 250 Hz	80 dB	Casing - 8K Hz	39 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	A
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	
Warranty section	Std. warranty only		

Filter section			
Module Position:		1	
Section type	Filter	Filter area	18.06 sq ft
Unit size	14	Filter face velocity	377 f/min
Filter type	Angled filter	Filter pressure drop	0.603 in H ₂ O
Filter frame	2in. filter frame	Filter section pressure drop	0.603 in H ₂ O
Access door location	Left	Section length	26.500 in
Primary filter type 1	Pleated media - MERV 8	Section width	72.000 in
Design sequence	B	Section height	41.500 in
Filter airflow	6800 cfm	Section weight	274.2 lb
Filter condition	Mid-life		

EQUIPMENT TO BE TRANE OR APPROVED EQUAL.

Performance Climate Changer

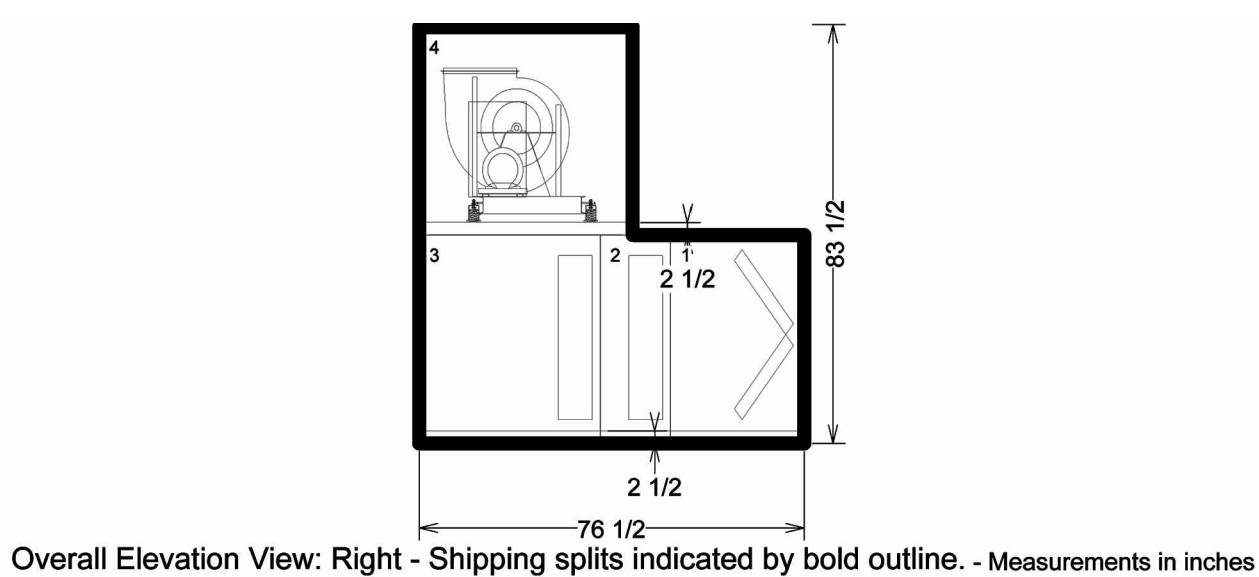
Coil section		Module Position:	
Coil sec [2]-1		2	
Section type	Horizontal coil	Target valve pressure drop	4.00 psig
Unit size	14	Coil type	UA
Rows	Medium	Rows	2 rows
Coil application	Heating coil	Fin type	Delta flo E (energy efficient)
Changeover coil	No	Fin material	Aluminum fins
System type	Hot water	Tube diameter	1/2in. tube diameter (12.7 mm)
Coil supply/cabinet side	Left	Tube mat/wall thickness	0.016" (0.406mm) copper tubes
Coil casing	Galvanized	Corrosion resistant coating	None
Coil height	Unit coil height	Coil face velocity	538 f/min
Drain pan	Galvanized	Air pressure drop	0.215 in H ₂ O
Drain connection location	Left	J trap dimension	1.702 in
Design sequence	B	H trap dimension	3.404 in
Apply ARI ranges	Apply ARI ranges	Leaving fluid temperature	160.00 F
Coil performance airflow	7300 cfm	Fluid pressure drop	6.90 ft H ₂ O
Coil elevation	0.00 ft	Fluid volume	2.37 gal
Entering dry bulb	18.00 F	Fluid velocity	5.42 ft/s
Leaving dry bulb	70.00 F	Total cap coil #1	411.68 MBh
Total capacity	411.68 MBh	Coil face area	13.65 sq ft
Fin spacing	121 Per Foot	Coil rigging weight	84.4 lb
Entering fluid temperature	180.00 F	Coil installed weight	104.1 lb
Fluid temperature drop	20.00 F	Coil section pressure drop	0.215 in H ₂ O
Standard fluid flow rate	41.11 gpm	Section length	14.000 in
Coil fouling factor	0.00050 hr-sq ft-deg F/Btu	Section height	41.500 in
Fluid type	Water	Section width	72.000 in
Coil fluid percentage	100.00 %	Section weight	280.1 lb

Coil section		Module Position:	
Coil sec [3]-1		3	
Section type	Vertical coil	Fluid type	Water
Unit size	14	Coil fluid percentage	100.00 %
Section size	Large	Target valve pressure drop	4.00 psig
Access door location	Left	Coil type	UW
Coil application	Cooling coil	Rows	4 rows
Changeover coil	No	Fin type	Delta flo H (Hi efficient)
System type	Chilled water	Fin material	Aluminum fins
Coil supply/cabinet side	Left	Tube diameter	1/2in. tube diameter (12.7 mm)
Coil casing	Galvanized	Tube mat/wall thickness	0.016" (0.406mm) copper tubes
Coil height	Unit coil height	Corrosion resistant coating	None
Drain pan	Galvanized	Coil face velocity	498 f/min
Drain connection location	Left	Air pressure drop	0.510 in H ₂ O
Design sequence	B	J trap dimension	1.957 in
Apply ARI ranges	Apply ARI ranges	H trap dimension	3.914 in
Coil performance airflow	6800 cfm	Leaving fluid temperature	55.00 F
Coil elevation	0.00 ft	Fluid pressure drop	3.90 ft H ₂ O
Entering dry bulb	80.00 F	Fluid volume	6.19 gal
Entering wet bulb	67.00 F	Fluid velocity	2.90 ft/s
Leaving dry bulb	58.00 F	Coil face area	13.65 sq ft
Leaving wet bulb	57.16 F	Coil rigging weight	158.0 lb
Sensible capacity	194.91 MBh	Coil installed weight	209.8 lb
Total capacity	212.05 MBh	Coil section pressure drop	0.510 in H ₂ O
Fin spacing	131 Per Foot	Section length	36.000 in
Entering fluid temperature	45.00 F	Section height	41.500 in
Fluid temperature rise	10.00 F	Section width	72.000 in
Standard fluid flow rate	42.26 gpm	Section weight	463.8 lb
Coil fouling factor	0.00000 hr-sq ft-deg F/Btu		

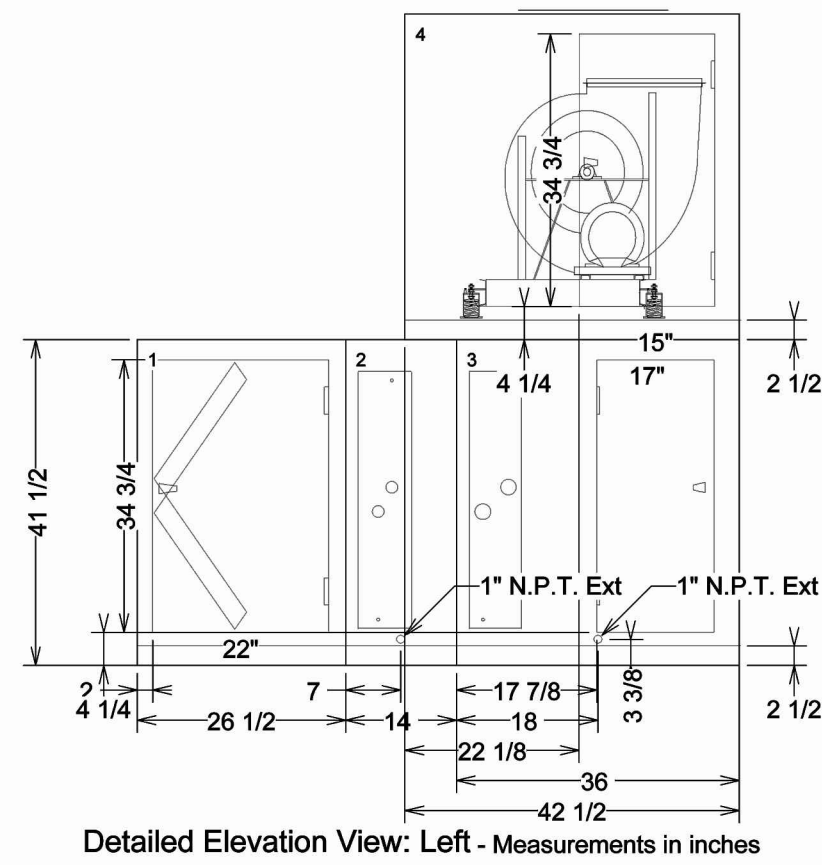
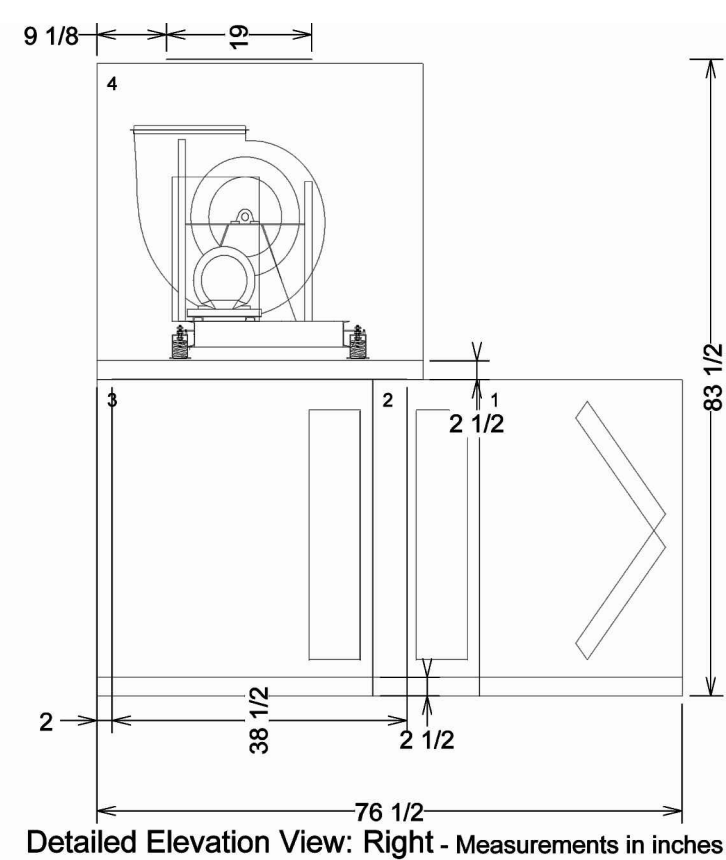
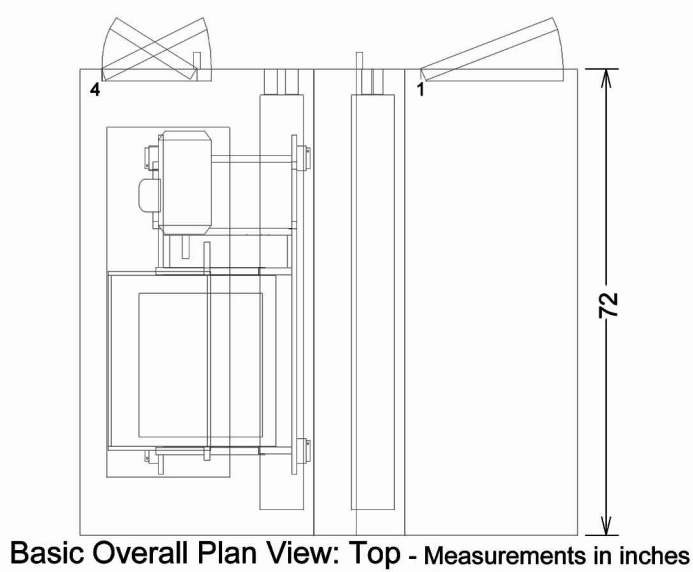
Performance Climate Changer

Fan section		Module Position:	
Fan sec [4]-1		4	
Section type	Fan	Section weight	686.0 lb
Fan application	Supply fan	Static pressure origin	Program calculated
Unit size	14	Single or front discharge - 63 Hz	101 dB
Inlet location	Bottom inlet	Single or front discharge - 125 Hz	94 dB
Fan orientation	Top-front discharge	Single or front discharge - 250 Hz	88 dB
Fan discharge	Top front	Single or front discharge - 500 Hz	86 dB
Access door location	Left	Single or front discharge - 1K Hz	84 dB
Drive location	Left side drive	Single or front discharge - 2K Hz	78 dB
Design sequence	D	Single or front discharge - 4K Hz	77 dB
Motor horsepower per fan	10 hp	Single or front discharge - 8K Hz	70 dB
Motor class	NEMA premium compliant COP	Inlet and casing - 63 Hz	99 dB
Motor voltage	460/3	Inlet and casing - 125 Hz	86 dB
Cycle	60 cycles/sec	Inlet and casing - 250 Hz	80 dB
Drive service factor	1.5 free drive	Inlet and casing - 500 Hz	77 dB
Motor RPM	1800	Inlet and casing - 1K Hz	73 dB
Fan airflow	6800 cfm	Inlet and casing - 2K Hz	70 dB
Overall ESP	3.173 in H ₂ O	Inlet and casing - 4K Hz	67 dB
Unit entering ESP	1.566 in H ₂ O	Inlet and casing - 8K Hz	61 dB
Unit discharge ESP	1.586 in H ₂ O	Ducted inlet - 63 Hz	96 dB
Elevation	0.00 ft	Ducted inlet - 125 Hz	78 dB
Minimum temperature	40.00 F	Ducted inlet - 250 Hz	68 dB
Total static pressure override	4.500 in H ₂ O	Ducted inlet - 500 Hz	70 dB
Fan size and type	18in. diameter FC class 2	Ducted inlet - 1K Hz	65 dB
Total brake horsepower at min temp	9.741 hp	Ducted inlet - 2K Hz	60 dB
Total static pressure	10.326 hp	Ducted inlet - 4K Hz	58 dB
Speed	1378 rpm	Ducted inlet - 8K Hz	52 dB
Outlet area	2.86 sq ft	Casing - 63 Hz	97 dB
Fan outlet velocity	2398 f/min	Casing - 125 Hz	78 dB
Fan module pressure drop	4.500 in H ₂ O	Casing - 250 Hz	82 dB
Fan discharge loss pressure drop	0.000 in H ₂ O	Casing - 500 Hz	84 dB
Section height	41.500 in	Casing - 1K Hz	84 dB
Section length	42.500 in	Casing - 2K Hz	57 dB
Section width	72.000 in	Casing - 4K Hz	40 dB
		Casing - 8K Hz	39 dB

83-AHU-1 DETAILS



Pos #	Module	Length	Weight
1	Filter section	26 1/2	274.20
2	Coil section	14	280.10
3	Coil section	36	463.80
4	Fan section	42 1/2	686.00
Installed Unit Weight 1737.10 lbs			



83-AHU-1 - HVAC DETAILS AND SPECIFICATIONS - BUILDING 83

N.T.S.

WHORTON ENGINEERING, INC. HVAC - PLUMBING - PROCESS CONTROL		
RANDALL WHORTON, P.E. PH 256/820-9897 FAX 256/820-9896		
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WHORTON ENGINEERING PROJECT NO. 10159		

Revisions	Date

	MCE MILLS-CONOLY ENGINEERING, P.C. 8218 Old Federal Road TELEPHONE: (334) 270-0010 Montgomery, AL 36117 FAX: (334) 270-0040
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	Central Alabama Veterans Health Care System
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Approved:	Approved:
Approved:	Approved:
Approved:	Approved:
Approved:	Approved:

Drawing Title
83-AHU-1 - HVAC DETAILS AND SPECIFICATIONS - BUILDING 83
Safety Officer
Clinical Representative

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

Date
12/21/10
Project No.
619-10-445
Drawing No.
83M3.1
Drawn By
OT 59

Veterans Administration