

TRANSMITTAL

To: Radius Construction
409 W 35th Street
Covington, KY 41015

DATE: 8/9/2023

Job Name:
Grant County ATC

Email fabbinante@radius1.com

ATTN: Franco Abbinante

Hudson Piping Inc. respectfully submits the following:

XX	Shop Drawings
	Literature
	Contract Documents

These are submitted as follows:

XX	For Approval
	For Your Files
	For Credit
	Approved As Noted
	Correct & Resubmit

REVIEWED
Radius Construction
No Exceptions Noted
Franco Abbinante / Sandrin Bwongera
Submittal # 69
Specification # 237223
Date: 8.9.2023

Please make necessary corrections and return 1 copy to Hudson Piping Inc.

Copies	Description	Spec. No.
1	Air Source Heat Pumps with Heat Recovery	237223

REMARKS: External condensate pump can be provided, but it does require an extra 115V power supply

Respectfully submitted,



BRIAN HUDSON
email bhudson@hudsonpiping.com

Submittal:
Grant County ATC
Addition and Renovation
715 Warsaw Road
Dry Ridge, KY 41035

Architect:
R. Ehmet Hayes & Associates
2512 Dixie Highway
Ft. Mitchell, KY 41017

Mechanical Engineer:
Shrout Tate Wilson
628 Winchester Road
Lexington, KY 40505

Submitted By:
Mechanical Contractor
Hudson Piping Inc.
836 Walnut Street
Dayton, KY 41074

Project #1874
8/9/2023

Reviewed By: Brian Hudson

Section
237223

Description
Air Source Heat Pumps with Heat Recovery



Cincinnati Office
11325 Reed Hartman Hwy, Suite 100
Cincinnati, OH 45241
(513) 475-3800

Columbus Office
6155A Huntley Road
Columbus, OH 43229
(614) 360-1330

Dayton Office
Location Coming Soon

June 13, 2023

Submittal Number: 23-101-0613-1

**UNITED COOLAIR MAKE-UP AIR UNIT
SUBMITTAL DATA**

Job Name: Grant County ATC – Addition and Renovations

Customer: Hudson Piping Inc.
836 Walnut Street
Dayton, KY 41074

Engineer: Shrout Tate Wilson
628 Winchester Road
Lexington, KY 40505

United CoolAir – Make-Up Air Unit with Energy Recovery

Tag(s)	Qty	Description
MAU-01	1	450 CFM Make-Up Air Unit with Energy Recovery

Submittal Notes 06-13-2023:

- Field installed Items:
 - Non-Fused Disconnect

Tom Haun
513-280-2446
thaun@elitaire.com
ElitAire, Inc.

SHOP DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH
CONTRACT DOCUMENTS

CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTNESS
OF DETAILS AND DIMENSIONS

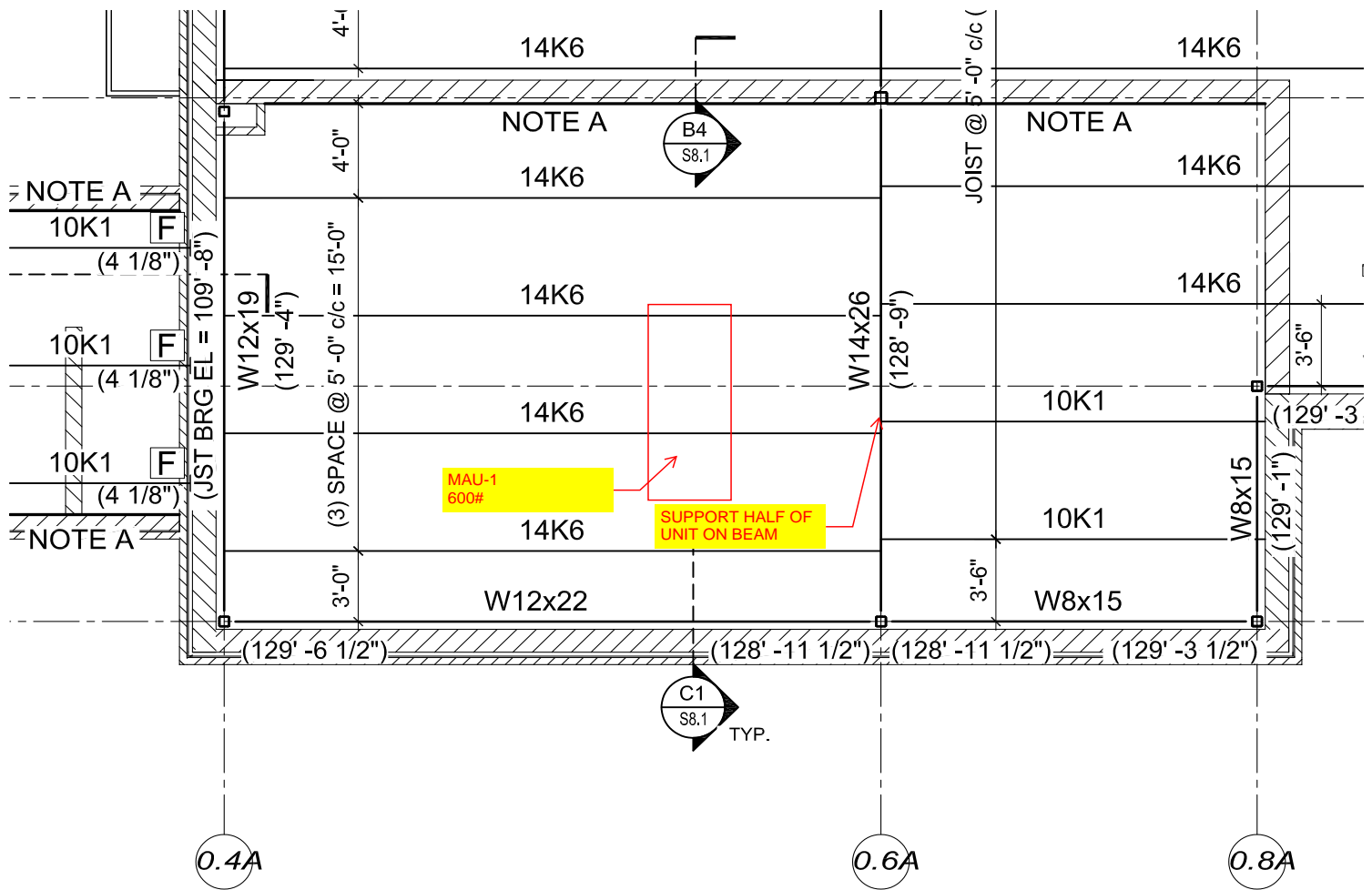
	NO EXCEPTIONS TAKEN
X	EXCEPTIONS NOTED TRANSMIT RECORD COPIES
	CORRECT and RESUBMIT

GOP Limited
Structural Engineers

Date 8/14/23 By dac

REVIEWED FOR
UNIT WEIGHT
AFFECT ON ROOF
STRUCTURE ONLY

LOCATE UNIT TO
SUPPORT HALF OF UNIT
ON W14 BEAM





Project Name Grant County ATC - Addition and Renovations
Location
Company ElitAire
Contact Tom Haun

Ref / Order No
Engineer / Architect
Owner / Manager
Contractor

Unit Tag MAU-1
Packaged Unit AAH100G1ASTA5 **Approx. Unit Weight (Lbs.) (1)** 600
Voltage 208/230-1-60
Nominal Compressor Tons 0.75
Outdoor Air CFM / Max. ESP (IWG) 450 / 1.0
Return Air CFM / Max. ESP (IWG) 450 / 1.0

DEHUMIDIFICATION PERFORMANCE

Outside Air Temp °F/°F/%/°F 95.0 DB / 78.0 WB / 47.3 RH / 71.8 DP
Return Air DB °F/°F/%/°F 75.0 DB / 63.0 WB / 51.6 RH / 56.0 DP
Supply Air (ERW Only) °F/°F/%/°F 79.1 DB / 67.2 WB / 54.3 RH / 61.2 DP
Supply Air Temp (Unit) °F/°F/%/°F 74.4 DB / 59.0 WB / 39.4 RH / 48.2 DP
Total / Sensible Capacity (Btuh) (3) 31,688 / 10,002
ISMRE (9) 11.1

HEATING PERFORMANCE

Outside Air Temp °F/°F/%/°F 0.0 DB / -1.0 WB / 69.8 RH / -6.8 DP
Return Air DB °F/°F/%/°F 68.0 DB / 53.0 WB / 35.4 RH / 39.6 DP
Supply Air (ERW Only) °F/°F/%/°F 55.7 DB / 46.1 WB / 47.2 RH / 35.9 DP
Supply Air Temp (Unit) °F/°F/%/°F 69.8 DB / 52.4 WB / 28.7 RH / 35.9 DP
Total / Sensible Capacity (Btuh) (3) 42,499 / 33,913
ISCOP (9) 8.0

PHYSICAL DATA

Indoor Coil Materials	Al Fins / Cu Tubes	Wheel Type / Diameter (in.)	Enthalpy / 19.7
Indoor Coil Rows / FPI	6 / 13	Plate Type	Sensible
Indoor Coil Face Area (Ft2)	1.0	Outdoor Coil Materials	Al Fins / Cu Tubes
Reheat Coil Materials	Al Fins / Cu Tubes	Outdoor Coil Rows / FPI	4 / 18
Reheat Coil Rows / FPI	1 / 13	Outdoor Coil Face Area (Ft2)	1.0
Reheat Coil Face Area (Ft2)	0.85		

ELECTRICAL DATA

Supply Fan kW / Amps	0.4 / 2.0	Compressor Qty. / Type	1 / Rotary
Supply Fan Qty.	1	Compressor LRA / RLA	21.9 / 3.9
Exhaust Fan kW / Amps	0.4 / 2.0	Min Circuit Ampacity (MCA)	9.3
Exhaust Fan Qty.	1	Max Overcurrent Protection (MOP)	15
Controller Amps	0.375		

AIR FILTER

Outdoor Air Type	Pleated Throwaway	Return/Exhaust Air Type	Pleated Throwaway
Outdoor Air Efficiency	2" MERV 13	Return/Exhaust Air Efficiency	2" MERV 8
Outdoor Air Qty / Size	1 / 12 x 24 x 2	Return/Exhaust Air Qty / Size	1 / 12 x 24 x 2

REFRIGERANT

Type	R-410A	Charge Amount (Lbs. - Oz.)	7 - 0
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Notes:

- (1) Excluding options or accessories.
- (3) Gross, not adjusted for motor heat.
- (6) Refrigerant Charge Amount for base unit only, no options.
- (9) ISMRE - Integrated Seasonal Moisture Removal Efficiency, ISCOP - Integrated Seasonal Coefficient of Performance

Performance values presented represent calculated values only and are not certified operating performance values. Actual performance values are dependent upon variations in entering air temperature, air flow quantity, water flow and entering water temperature, voltage at the unit, component tolerances, external static pressures, etc. which are beyond the control of United CoolAir, LLC

Project Name Grant County ATC - Addition and Renovations
Ref / Order No

Unit Tag MAU-1
Packaged Unit AAH100G1ASTA5

PRODUCT FEATURES

Air Source Heat Pump
Total Energy Recovery Wheel
Sensible Aluminum Plate Heat Exchanger
Horizontal Cabinet Configuration
Self Contained DX System
200 - 500 CFM, Adjustable
208/230-1-60 Power
ECM Fans - Supply and Exhaust
Constant Volume
Up to 1 in. ESP on Both Supply and Exhaust
8 in. Round Duct Collar Connections
Solid Double Wall Liner
2 in. R-8 Thermal/Acoustic Fiberglass Insulation
Field Selectable Return/Supply Air Panel (Panel Ships Loose)
Protective Coating on Evap & Aux Coils (E-Coat)
Stainless Steel Drain Pans
Sight Glass
TXV
Built-in Pressure Peizo Nozzle for Airflow Measurement Thru a Pressure Transducer

2 in. MERV 13 Pleated Throwaway Supply Filter
2 in. MERV 8 Pleated Throwaway Exhaust Filter
Auxiliary Reheat (Liquid Subcooling) Coil
Filter Drier (Suction Line)
Quick Connect Refrigerant Fittings for Easy Compressor Changeout
Defrost Mode
Isolated Electrical/Control Box
Microprocessor with Built-in Display Interface and BACnet MS/TP (Field Convertible to IP/Ethernet)
Remote On/Off
Emergency Shut-Down
Alarms: Loss of Airflow, Drain Pan Overflow, Dirty Filters and Sensor Failure
Sensors (Factory Installed): Control Temp, Supply Air Dew Point Temp and Supply Air Dry Bulb Temp
Functionally Run Tested at the Factory
One (1) Year Limited Parts Warranty
Five (5) Year Limited Compressor Warranty

OPTIONS

Standard Outside Air Filter - 2" MERV 13 and Return/Exhaust Air Filter - 2" Non-Fused Disconnect *, Indoor, Evap or Pkgd - 240V, 3PH, 30A MERV 8
Microprocessor Controller with Built-in Display Interface and BACnet MS/TP

* Option is shipped loose for field installation.



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Project Name
Ref / Order No

Grant County ATC -
Addition and Renovations

Unit Tag
Packaged Unit

MAU-1
AAH100G1ASTA5

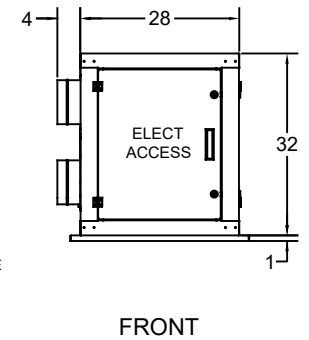
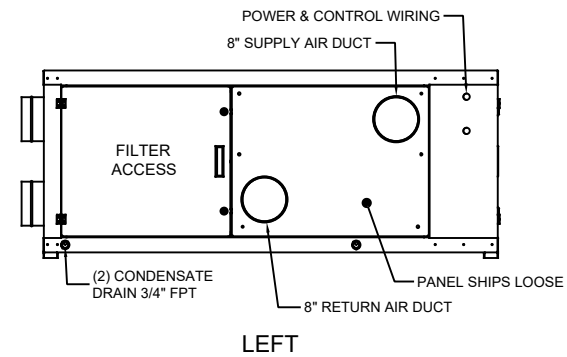
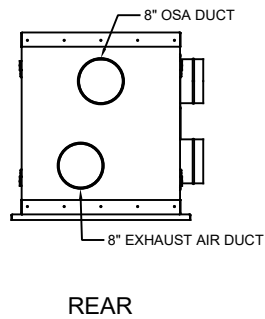
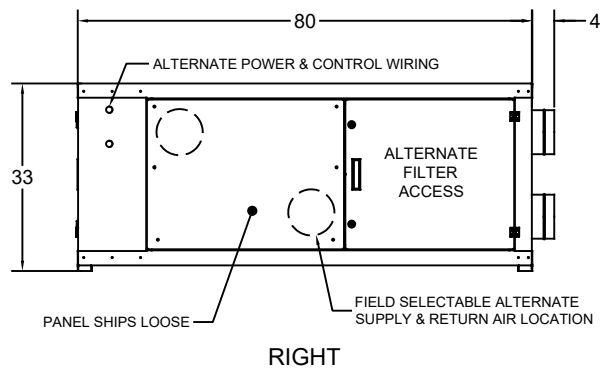
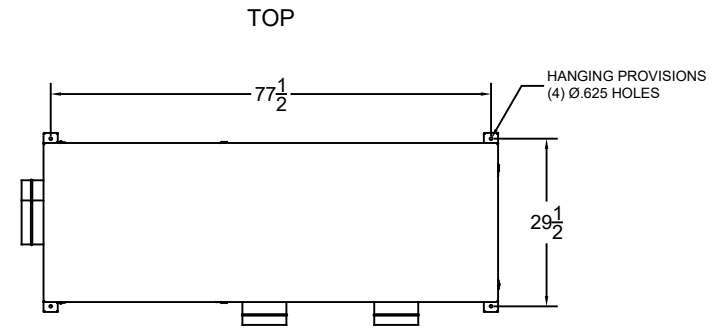
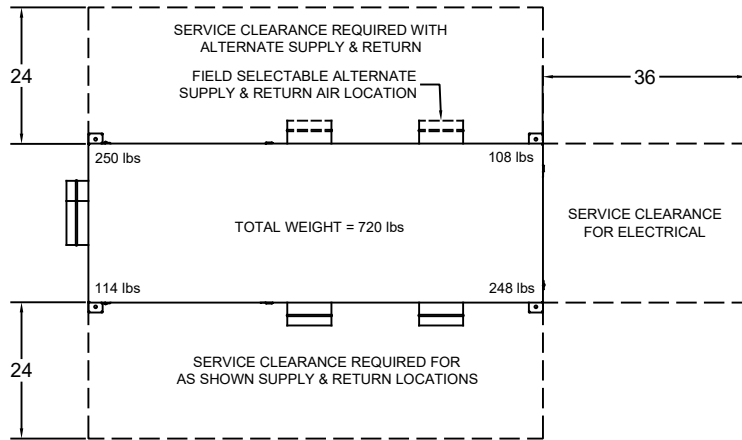
NOISE CRITERION OCTAVE BAND CENTER FREQUENCY (HZ)

Noise Criterion	63	125	250	500	1000	2000	4000	8000
	Sound Pressure Levels (dB)							
NC-30	57	48	41	35	31	29	28	27
NC-35	60	52	45	40	36	34	33	32
Alpha Aire*	62.9	49.8	45.1	38	36.9	31.9	26.9	23.4
NC-40	64	56	50	45	41	39	38	37
NC-45	67	60	54	49	46	44	43	42

* The sound pressure levels are calculated from tested sound power for an Alpha Aire unit on a floor in a room with 15 foot critical absorption distance. Installation above an acoustic ceiling will cause actual and perceived sound levels to be different.

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ALPHA AIRE - HORIZONTAL - GEN 5



Notes: Unit will ship with Supply and Return air panel loose. Field will install it in the standard location or the alternate location. See IOM for further details.

Subject to change without notice.