



Product Data

Project Name:	Athletes in Action Wooden Family Fieldhouse AIA	Submittal Code:	237433.00-PD-01	REV:	00
Document Set:	Construction Documents				
KLH Project #:	23752.00-CD	Received Date:	04/10/2023		
Section Name:	Packaged Outdoor Rooftop Units				
Section Number:	237433.00				
Submitted By:	Corna Kokosing Construction				
Authored By:	TP Mechanical				
Client Name:	MSA Design				

SUBMITTAL REVIEW

Exceptions Noted

By: Christine E. Shea **Date:** 04/14/2023

ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. COMMENTS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR REMAINS RESPONSIBLE FOR ACCURACY OF QUANTITIES, DIMENSIONS, DETAILS AND COORDINATION WITH OTHER TRADES.

RTU-2

- 1.1 Available fault current over 5000, provide an SCCR rating above 5000.

End of Submittal Review

Note: Additional submittals are not required where "Exceptions Noted" is indicated. It will be assumed however that all necessary corrections will be executed. Provide as-built record copies within OM Manuals at project close-out (not before) for all affected submittals.

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Submittal #237433-1.1 - Packaged Outdoor Rooftop Units 237433 - Packaged Outdoor Rooftop Units

Revision	1	Submittal Manager	Matt DeHays (Corna Kokosing Construction Company)
Status	Open	Date Created	Apr 10, 2023
Issue Date	Apr 10, 2023	Spec Section	237433 - Packaged Outdoor Rooftop Units
Responsible Contractor	TP Mechanical Contractors, Inc.	Received From	Kevin Oney (TP Mechanical Contractors, Inc.)
Received Date	Feb 16, 2023	Submit By	
Final Due Date	Apr 24, 2023	Lead Time	
		Cost Code	
Location		Type	Product Information
Approvers	KLH RFIs/Submittals (KLH Engineers), Amy Benetti (MSA Sport), Zach Herbst (MSA Sport)		
Ball in Court	KLH RFIs/Submittals (KLH Engineers)		
Distribution	KLH RFIs/Submittals (KLH Engineers), Kevin Oney (TP Mechanical Contractors, Inc.), Lindsey Ward (TP Mechanical Contractors, Inc.), Zach Herbst (MSA Sport), Amy Benetti (MSA Sport), Matt DeHays (Corna Kokosing Construction Company), Sean Rice (Corna Kokosing Construction Company)		
Description	<p>A. Product Data 1. Provide for each type of product indicated. a. Submit manufacturer's technical product data, including rated capacities of selected model clearly indicated, dimensions, required clearances, weights, furnished specialties and accessories; and installation and start-up instructions. b. Configuration settings shall match the sequence of operation shown in the contract documents. c. BacNet control points list.</p> <p><u>Rev1 for RTU-1 changes only, based on KLH comments on Rev0</u></p>		

PROCUREMENT TRACKING

Contract Number	Critical Item	No
Material Released? No	Field Verification Required	No
Anticipated Delivery Date	Local/In-stock	No

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Sean Rice		Apr 10, 2023	Apr 10, 2023	Submitted	237433-1.1 PACKAGED OUTDOOR ROOFTOP UNITS - RTU-1 REVISION.pdf (Current)
KLH RFIs/Submittals	Apr 10, 2023	Apr 22, 2023		Pending	
Amy Benetti		Apr 24, 2023		Pending	

Name	Sent Date	Due Date	Returned Date	Response	Attachments
Zach Herbst		Apr 24, 2023		Pending	



Submittal #237433-1.1 - Packaged Outdoor Rooftop Units 237433 - Packaged Outdoor Rooftop Units

Revision	1	Submittal Manager	Matt DeHays (Corna Kokosing Construction Company)
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PROCUREMENT TRACKING


Contract Number		Critical Item	No
Material Released?	No	Field Verification Required	No
Anticipated Delivery Date		Local/In-stock	No

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Sean Rice		Apr 10, 2023		Pending	
KLH RFIs/Submittals		Apr 22, 2023		Pending	
Amy Benetti		Apr 24, 2023		Pending	
Zach Herbst		Apr 24, 2023		Pending	

Job: 81097 -Athletes in Action - WFF

Description:
Submittal Stamp Approval Cover Sheet
Date Due Back:

CONTRACTOR	ARCHITECT
<div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;">  Corna-Kokosing </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> REVIEWED WITH NO CORRECTION </div> <div style="text-align: center;"> <input type="checkbox"/> REVIEWED WITH CORRECTION </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> REJECTED </div> <div style="text-align: center;"> <input type="checkbox"/> REVISE & RESUBMIT </div> </div> <div style="margin-top: 10px;"> <p>UCI NO. _____ BY <u>Sean Rice</u></p> <p>DATE <u>4/10/23</u> JOB NO. <u>81097</u></p> </div> <p style="font-size: small; margin-top: 10px;">NOTE: Approval does not constitute acceptance for accuracy of dimensions, quantities or design. As required under the Subcontract and Contract Documents, Subcontractor remains fully responsible for the accuracy and conformity of its submittals and for design representation, dimensions and installation. Any deviation from the Contract Documents which are not otherwise clearly noted as such by Subcontractor within the submittal have not been reviewed or approved by the contractor, and can only be authorized upon a properly executed Change Order. Approval of this submittal does not constitute a release or waiver of any claims by Contractor and shall not be deemed to authorize any deviations, substitutions or changes in the requirements of the Contract Documents or the Subcontract Documents. Subcontractor shall remain fully responsible for all corrective work, cost and expense incurred by Contractor or others for any deviations made without such authorization as is required under the Contract Documents. Where required for approval by law or under the Contract Documents, Subcontractor shall have any design deviation stamped by the responsible architect or engineer.</p>	
ENGINEER	CONSULTANT



SUBMITTAL DATA

Project: Athletes In Action – Wooden Family Fieldhouse
Bid Category :
Project No.: E1000119
TP Tab No.: 205
Construction Manager: Corna Kokosing Construction Company
Architect/Engineer: MSA Sport / KLH Engineers
Submittal For: Roof Top Units – Resubmittal
Specification #: 23 74 33
Manufacturer: Carrier
Supplier: Habegger

The attached submittal data has been reviewed by TP Mechanical Contractors for compliance with the Architect/Engineer's specifications and plan schedule for this project.

In order to maintain the project schedule, we request that this submittal be returned to TP Mechanical Contractors **within 7 days**.

NOTE: Material cannot be released without Architect/Engineer's approval of submittal.

(Please place stamp of approval here)

<u> X </u>	PRODUCT DATA
<u> </u>	DRAWINGS
<u> 4/4/23 </u>	DATE SUBMITTED
<u> </u>	DATE RESUBMITTED
T. P. MECHANICAL CONTRACTORS	
BY	<u> Lindsey Ward </u>
This drawing or brochure has been checked to quality or proper components only. Approval of this drawing or brochure shall not relieve the supplier of responsibility for accuracy or dimensions of full compliance with plans and specifications and purchase order.	



Resubmitting- all previous submittals are void.

SUBMITTAL

Project

John Wooden Family Fieldhouse

Date

3/31/2023

Exclusions:

- Changed RTU-1 to 50 ton P series per KLH
- Submitting on micro-channel coils condenser, Al/Cu not offered

Table Of Contents

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

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RTU 2-3

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report
Guide Specification
Corner Weight
BACNet Report**

Unit Report For RTU 2-3

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Unit Parameters

Unit Size:..... **040 (40 Tons)**
 Volts-Phase-Hertz:..... **460-3-60**
 Supply / Return:..... **Horizontal/Horizontal**
 Configuration:..... **Staged Air Volume**
 Evaporator Coil Type:..... **Standard**
 Heating Capacity:..... **High Gas Heat, Staged Control, Staged**

Control, S.S. Heat Exch

Heat Option:..... **Multi-staged**
 Stainless Steel Drain Pan:..... **Selected**
 Greenspeed:..... **Selected**

Shipping Dimensions

Unit Length:..... **17' 11"**
 Unit Width:..... **7' 10"**
 Unit Height:..... **6' 1"**
 Unit Operating Weight:..... **5510** lb
 Unit Shipping Weight:..... **5551** lb

***Weights and Dimensions are approximate. Weight does not include curbs and accessories. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions refer to certified drawings.

** Shipping Weight does not include extended leadtime options' weight.

Factory Installed Options

Application Type:..... **Staged Air Volume**
 Non Fused-Disconnect:..... **Selected**
 CO2 Sensor:..... **Selected**

Exhaust/Outdoor Air

OA Intake/Return:..... **No Exhaust**
 Outdoor Air Intake:..... **Differential Enthalpy Ultra Low Leak Economizer**

Supply Fan

Supply Fan Type:..... **Forward Curve**
 Supply Fan Motor HP:..... **15 HP**

Condenser Coil

Cond. Coil Fin Coating:..... **MCHX Cond, Al/Cu Evap**

Mixed-Air and Outdoor Air Filters

Mixed-Air Filter Type:..... **Standard Efficiency Throwaway**
 Mixed-Air Filter (Quantity) Size:..... **(10) 20 x 24 x 2**
 Outdoor Air Filter (Cleanable Mesh):..... **(8) 16 x 25 x 2, (4) 20 x 25 x 2**

Warranty Information

First Year - Parts Only (Standard)
 Cooling Start up, first unit
 Cooling Start up, each additional unit
 Gas Heat Exchanger Plan 6-10 Years Parts Only
 Compressor Years 2-5 Parts Only

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
48A8T040BPG65AEM	Rooftop Unit With Greenspeed Intelligence	2
	Base Unit	
	Differential Enthalpy Ultra Low Leak Economizer	
	Non-Fused Disconnect	
	Stainless Steel Drain Pan	
	Premium Efficiency 15 HP	
	Return Air CO2 Sensor	
	Domestic w/BACnet Communication	

Accessories

Unit Report For RTU 2-3

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

Accessory Part #	Description	Quantity
CRRFCURB006A00	14-inch Roof Curb	2
CRHAILGD006A00	Hail Guard	4
CRBARRLF003A01	Barometric Relief	4
CRHUMDSN001B00	Outdoor or Return Air RH Sensor	4

Performance Summary For RTU 2-3

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Part Number:.....48A8T040BPG65AEM

Unit Refrigerant:.....R410A
 EER (AHRI 340/360):.....9.8
 IEER (AHRI 340/360):.....14.5

Unit Dimensions

Unit Length:.....17' 11"
 Unit Width:.....7' 10"
 Unit Height:.....6' 1"
 Unit Operating Weight:.....5510 lb
 Unit Shipping Weight:.....5551 lb
 *Unit operating weight does not include accessories weight.

Unit

Heating Type:.....Gas Heat
 Supply/Return:.....Horizontal/Horizontal
 Application Type:.....Staged Air Volume
 Voltage:.....460-3-60
 Cooling Airflow:.....12000 CFM
 Altitude:.....0 ft
 Cond. Ent. Air Temp:.....95.0 F
 Ent. Air Dry Bulb:.....81.0 F
 Ent. Air Wet Bulb:.....68.0 F
 Ent. Air Enthalpy:.....32.24 BTU/lb
 Lvg. Air Dry Bulb:.....55.8 F
 Lvg. Air Wet Bulb:.....55.5 F
 Lvg. Air Enthalpy:.....23.47 BTU/lb
 Gross Cooling Capacity:.....473.30 MBH
 Gross Sensible Clg. Cap:.....326.69 MBH
 Compressor Power:.....33.0 kW
 Coil Bypass Factor:.....0.064
 Refrigerant Charge, Circuit A:.....23.0 lb
 Refrigerant Charge, Circuit B:.....23.5 lb

Part Load(%) Operation

Cooling Capacity Steps:.....25,50,75,100

Gas Heating Data:

Heating Airflow:.....12000 CFM
 Heating Ent. Air Temp:.....68.0 F
 Number of Heating Steps:.....5
 Gas Input (Max):.....800 MBH
 Gas Output:.....648 MBH
 Gas Output(Min):.....246.2 MBH
 Heating Lvg. Air Temp:.....118.0 F
 Steady State Eff:.....81
 Temp.Rise:.....50.0 F
 Capacity Stages - Heat (% Full):.....38, 50, 75, 88, 100

Supply Fan Information:

Ext.Static Pressure:.....0.75 in wg
 Selection Static Pressure:.....0.75 in wg
 Supply Fan RPM:.....833 *
 Supply Fan BHP:.....9.61 BHP
 Supply Fan Motor HP:.....15 HP

Field supplied and installed sheave package may be required

Performance Summary For RTU 2-3

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Electrical Data

Voltage Range:.....	414 - 508
Compressor #A1 RLA:.....	14.8
Compressor #A1 LRA:.....	130
Compressor #A2 RLA:.....	14.8
Compressor #A2 LRA:.....	130
Compressor #B1 RLA:.....	14.8
Compressor #B1 LRA:.....	130
Compressor #B2 RLA:.....	14.8
Compressor #B2 LRA:.....	130
Indoor Fan Motor HP:.....	15
Indoor Fan Motor FLA:.....	21
Combustion Fan Quantity:.....	2
Combustion Fan FLA (ea.):.....	1.1
Power Supply MCA:.....	99
Power Supply MOCP (Fuse or HACR):.....	110
Electrical Convenience Outlet:.....	None
Outdoor Fan [Qty / FLA (ea)]:.....	4 / 3.3

SCCR, Short Circuit Current Rating: 5kA

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

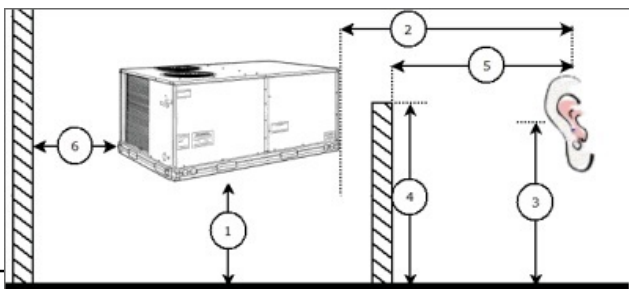
Acoustic Information

	Discharge, Lw	Inlet, Lw	Outdoor, Lw
63 Hz	92.9	90.1	64.2
125 Hz	84.9	78.1	73.9
250 Hz	83.7	72.5	80.9
500 Hz	81.7	66.2	84.4
1000 Hz	81.5	66.4	86.7
2000 Hz	79.7	60.6	81.3
4000 Hz	76.4	55.9	74.9
8000 Hz	70.4	50.7	66.2

Discharge / Inlet Duct Sound Power test data rated in accordance with the AHRI 260 Standard.

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Advanced Acoustics



Performance Summary For RTU 2-3

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Advanced Acoustics Parameters

1. Unit height above ground:.....**30.0** ft
2. Horizontal distance from unit to receiver:.....**50.0** ft
3. Receiver height above ground:.....**5.7** ft

Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	64.2	73.9	80.9	84.4	86.7	81.3	74.9	66.2	90.3 Lw
B	38.0	57.8	72.3	81.2	86.7	82.5	75.9	65.1	89.2 LwA
C	30.9	40.6	47.6	51.1	53.4	48.0	41.6	32.9	56.9 Lp
D	4.7	24.5	39.0	47.9	53.4	49.2	42.6	31.8	55.9 LpA

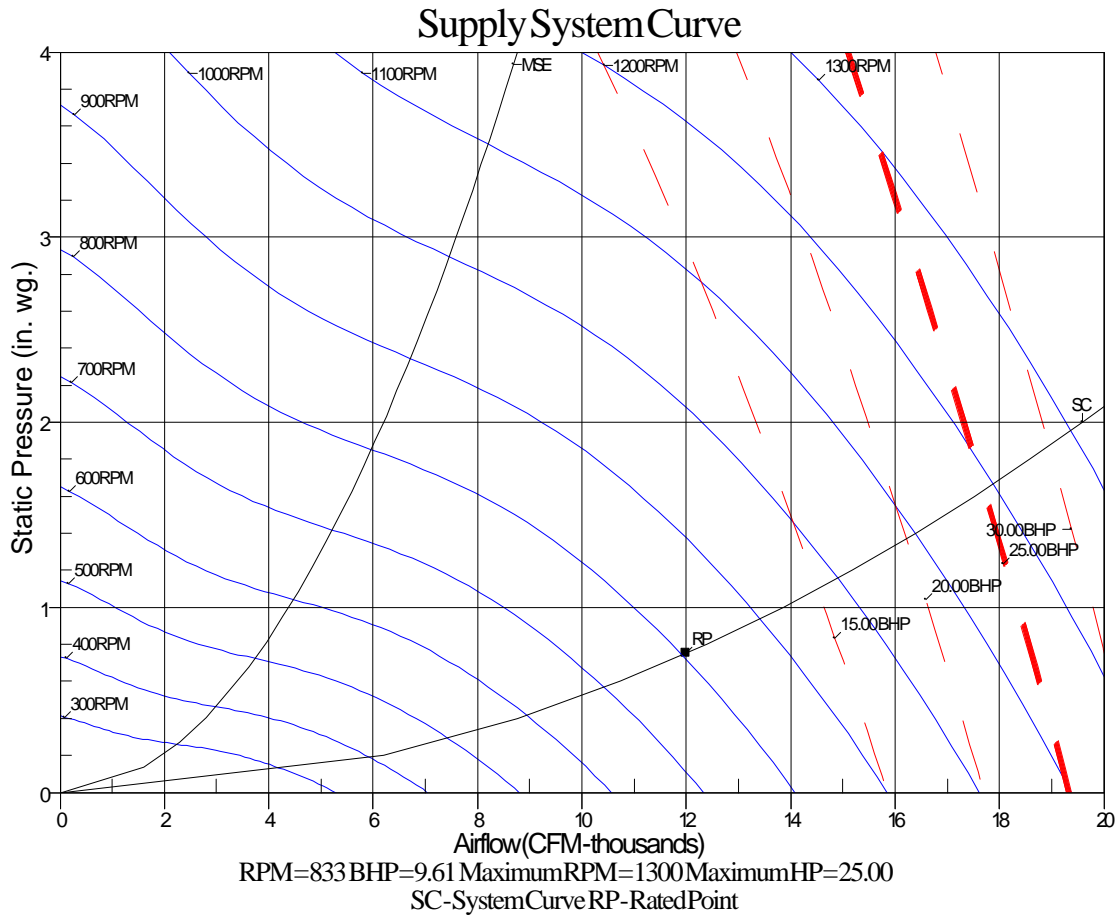
Legend

- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Performance Summary For RTU 2-3

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM



RTU-4

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For RTU-4

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Unit Parameters

Unit Size:..... **050 (50 Tons)**
 Volts-Phase-Hertz:..... **460-3-60**
 Supply / Return:..... **Horizontal/Horizontal**
 Configuration:..... **Staged Air Volume**
 Evaporator Coil Type:..... **Standard**
 Heating Capacity:..... **High Gas Heat, Staged Control, Staged**

Control, S.S. Heat Exch

Heat Option:..... **Multi-staged**
 Stainless Steel Drain Pan:..... **Selected**
 Greenspeed:..... **Selected**

Shipping Dimensions

Unit Length:..... **17' 11"**
 Unit Width:..... **7' 10"**
 Unit Height:..... **6' 1"**

Unit Operating Weight:..... **5702** lb
 Unit Shipping Weight:..... **5743** lb

***Weights and Dimensions are approximate. Weight does not include curbs and accessories. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions refer to certified drawings.

** Shipping Weight does not include extended leadtime options' weight.

Factory Installed Options

Application Type:..... **Staged Air Volume**
 Non Fused-Disconnect:..... **Selected**
 CO2 Sensor:..... **Selected**

Exhaust/Outdoor Air

OA Intake/Return:..... **No Exhaust**
 Outdoor Air Intake:..... **Differential Enthalpy Ultra Low Leak Economizer**

Supply Fan

Supply Fan Type:..... **Forward Curve**
 Supply Fan Motor HP:..... **20 HP**

Condenser Coil

Cond. Coil Fin Coating:..... **MCHX Cond, Al/Cu Evap**

Mixed-Air and Outdoor Air Filters

Mixed-Air Filter Type:..... **Standard Efficiency Throwaway**
 Mixed-Air Filter (Quantity) Size:..... **(10) 20 x 24 x 2**
 Outdoor Air Filter (Cleanable Mesh):..... **(8) 16 x 25 x 2, (4) 20 x 25 x 2**

Warranty Information

First Year - Parts Only (Standard)
 Gas Heat Exchanger Plan 6-10 Years Parts Only
 Compressor Years 2-5 Parts Only
 Cooling Start up, each additional unit

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
48A8T050BQG65AEM	Rooftop Unit With Greenspeed Intelligence	1
	Base Unit	
	Differential Enthalpy Ultra Low Leak Economizer	
	Non-Fused Disconnect	
	Stainless Steel Drain Pan	
	Premium Efficiency 20 HP	
	Return Air CO2 Sensor	
	Domestic w/BACnet Communication	

Accessories

Unit Report For RTU-4

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

Accessory Part #	Description	Quantity
CRRFCURB006A00	14-inch Roof Curb	1
CRHUMDSN001B00	Outdoor or Return Air RH Sensor	2
CRBARRLF003A01	Barometric Relief	2
CRHAILGD006A00	Hail Guard	2

Certified Drawing for RTU-4

Project: John Wooden Family Fieldhouse
Prepared By:

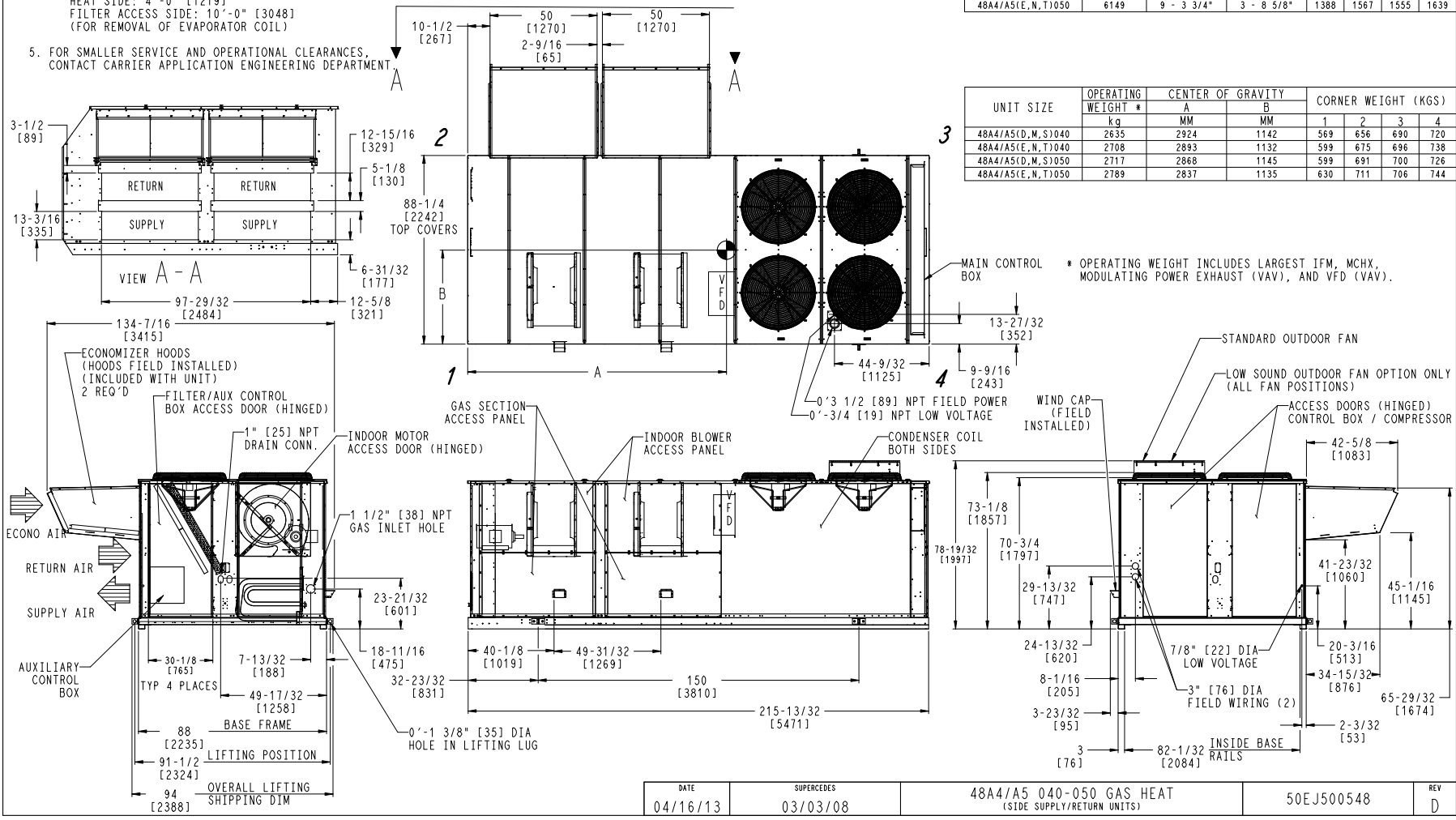
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12:29PM

- NOTES:
1. WEIGHTS INCLUDE ECONOMIZER.
 2. \odot CENTER OF GRAVITY.
 3. FOR MULTIPLE UNIT APPLICATIONS SEE LITERATURE.
 4. UNIT CLEARANCES:
- TOP OF UNITS: NO OVERHANG
CONDENSER COIL: 4'-0" [1219]
ECONOMIZER SIDE: 6'-0" [1829]
HEAT SIDE: 4'-0" [1219]
FILTER ACCESS SIDE: 10'-0" [3048]
(FOR REMOVAL OF EVAPORATOR COIL)
5. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT

UNITED TECHNOLOGIES SYRACUSE, NY CARRIER P.O. BOX 4808 13221 THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT. SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

UNIT SIZE	OPERATING WEIGHT #	CENTER OF GRAVITY		CORNER WEIGHT (LBS)			
		A	B	1	2	3	4
48A4/A5(D,M,S)040	5809	9 - 7 1/8"	3 - 9"	1254	1445	1522	1588
48A4/A5(E,N,T)040	5969	9 - 5 7/8"	3 - 8 1/2"	1320	1488	1535	1627
48A4/A5(D,M,S)050	5989	9 - 4 7/8"	3 - 9 1/8"	1320	1524	1544	1601
48A4/A5(E,N,T)050	6149	9 - 3 3/4"	3 - 8 5/8"	1388	1567	1555	1639

UNIT SIZE	OPERATING WEIGHT #	CENTER OF GRAVITY		CORNER WEIGHT (KGS)			
		A	B	1	2	3	4
48A4/A5(D,M,S)040	2635	2924	1142	569	656	690	720
48A4/A5(E,N,T)040	2708	2893	1132	599	675	696	738
48A4/A5(D,M,S)050	2717	2868	1145	599	691	700	726
48A4/A5(E,N,T)050	2789	2837	1135	630	711	706	744



* OPERATING WEIGHT INCLUDES LARGEST IFM, MCHX, MODULATING POWER EXHAUST (VAV), AND VFD (VAV).

DATE	SUPERCEDES	48A4/A5 040-050 GAS HEAT (SIDE SUPPLY/RETURN UNITS)	50EJ500548	REV
04/16/13	03/03/08			D

Performance Summary For RTU-4

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Part Number:.....**48A8T050BQG65AEM**

Unit Refrigerant:.....**R410A**
 EER (AHRI 340/360):.....**9.8**
 IEER (AHRI 340/360):.....**14.2**

Unit Dimensions

Unit Length:.....**17' 11"**
 Unit Width:.....**7' 10"**
 Unit Height:.....**6' 1"**
 Unit Operating Weight:.....**5702** lb
 Unit Shipping Weight:.....**5743** lb

***Unit operating weight does not include accessories weight.**

Unit

Heating Type:.....**Gas Heat**
 Supply/Return:.....**Horizontal/Horizontal**
 Application Type:.....**Staged Air Volume**
 Voltage:.....**460-3-60**
 Cooling Airflow:.....**16300** CFM
 Altitude:.....**0** ft
 Cond. Ent. Air Temp:.....**95.0** F
 Ent. Air Dry Bulb:.....**81.0** F
 Ent. Air Wet Bulb:.....**68.0** F
 Ent. Air Enthalpy:.....**32.24** BTU/lb
 Lvg. Air Dry Bulb:.....**57.8** F
 Lvg. Air Wet Bulb:.....**57.2** F
 Lvg. Air Enthalpy:.....**24.51** BTU/lb
 Gross Cooling Capacity:.....**566.78** MBH
 Gross Sensible Clg. Cap:.....**407.63** MBH
 Compressor Power:.....**38.7** kW
 Coil Bypass Factor:.....**0.064**
 Refrigerant Charge, Circuit A:.....**27.0** lb
 Refrigerant Charge, Circuit B:.....**28.0** lb

Part Load(%) Operation

Cooling Capacity Steps:.....**25,50,75,100**

Gas Heating Data:

Heating Airflow:.....**16300** CFM
 Heating Ent. Air Temp:.....**68.0** F
 Number of Heating Steps:.....**5**
 Gas Input (Max):.....**800** MBH
 Gas Output:.....**648** MBH
 Gas Output(Min):.....**246.2** MBH
 Heating Lvg. Air Temp:.....**104.8** F
 Steady State Eff:.....**81**
 Temp.Rise:.....**36.8** F
 Capacity Stages - Heat (% Full):.....**38, 50, 75, 88, 100**

Supply Fan Information:

Ext.Static Pressure:.....**0.75** in wg
 Selection Static Pressure:.....**0.75** in wg
 Supply Fan RPM:.....**1057** *
 Supply Fan BHP:.....**19.31** BHP
 Supply Fan Motor HP:.....**20** HP

Field supplied and installed sheave package may be required

Performance Summary For RTU-4

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Electrical Data

Voltage Range:.....	414 - 508
Compressor #A1 RLA:.....	16
Compressor #A1 LRA:.....	140
Compressor #A2 RLA:.....	16
Compressor #A2 LRA:.....	140
Compressor #B1 RLA:.....	16
Compressor #B1 LRA:.....	140
Compressor #B2 RLA:.....	16
Compressor #B2 LRA:.....	140
Indoor Fan Motor HP:.....	20
Indoor Fan Motor FLA:.....	27
Combustion Fan Quantity:.....	2
Combustion Fan FLA (ea.):.....	1.1
Power Supply MCA:.....	111
Power Supply MOCP (Fuse or HACR):.....	125
Electrical Convenience Outlet:.....	None
Outdoor Fan [Qty / FLA (ea)]:.....	4 / 3.3

SCCR, Short Circuit Current Rating: 5kA

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

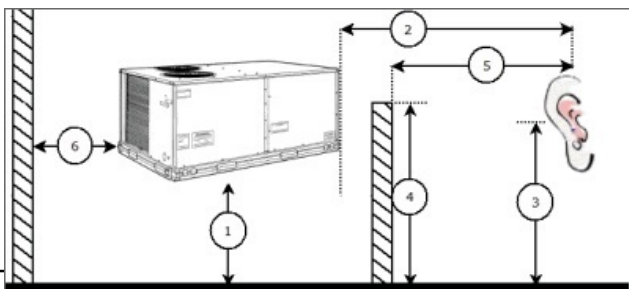
Acoustic Information

	Discharge, Lw	Inlet, Lw	Outdoor, Lw
63 Hz	90.9	89.0	64.2
125 Hz	86.2	74.6	73.9
250 Hz	88.5	67.1	80.9
500 Hz	81.7	64.9	84.3
1000 Hz	81.0	64.5	86.7
2000 Hz	78.9	61.4	81.3
4000 Hz	76.1	57.3	74.8
8000 Hz	69.1	48.8	66.4

Discharge / Inlet Duct Sound Power test data rated in accordance with the AHRI 260 Standard.

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Advanced Acoustics



Performance Summary For RTU-4

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

Advanced Acoustics Parameters

1. Unit height above ground:.....**30.0** ft
2. Horizontal distance from unit to receiver:.....**50.0** ft
3. Receiver height above ground:.....**5.7** ft

Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	64.2	73.9	80.9	84.3	86.7	81.3	74.8	66.4	90.2 Lw
B	38.0	57.8	72.3	81.1	86.7	82.5	75.8	65.3	89.2 LwA
C	30.9	40.6	47.6	51.0	53.4	48.0	41.5	33.1	56.9 Lp
D	4.7	24.5	39.0	47.8	53.4	49.2	42.5	32.0	55.9 LpA

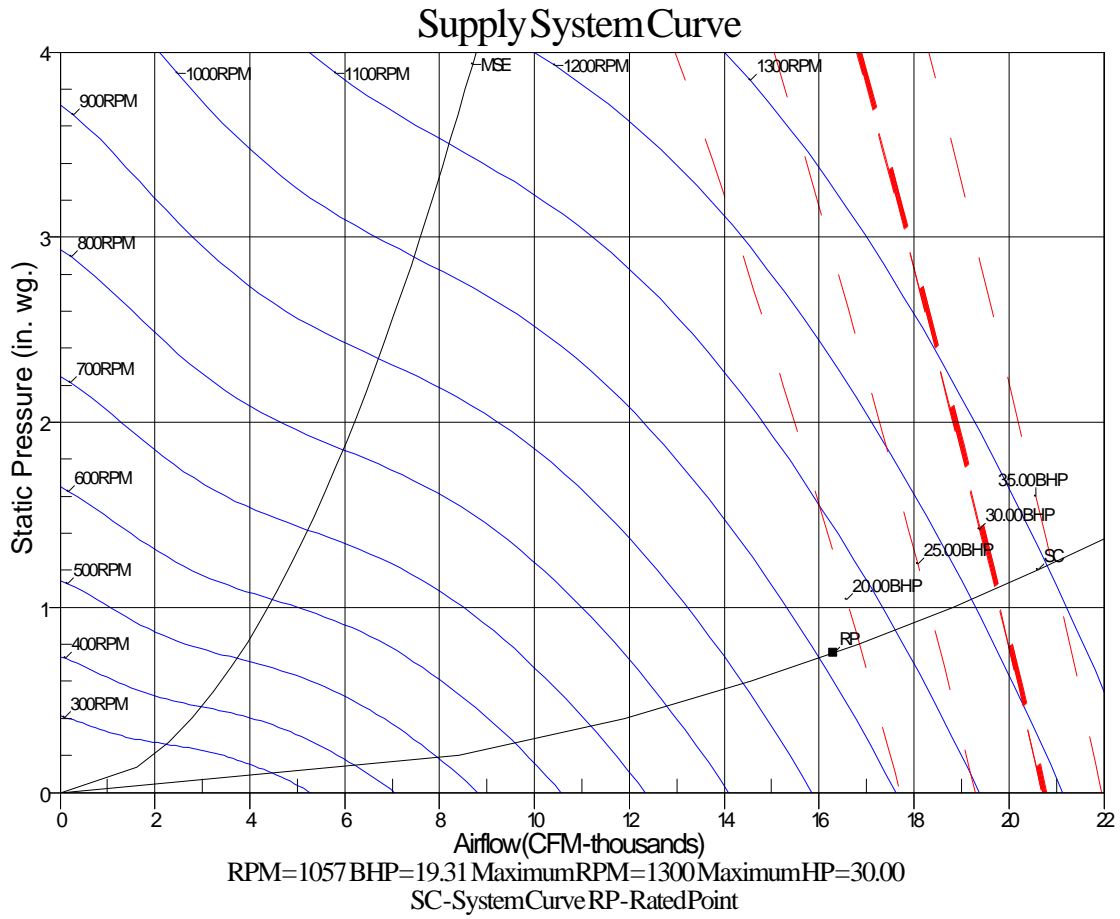
Legend

- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Performance Summary For RTU-4

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM



RTU-1 R1

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For RTU-1 R1

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Unit Parameters

Unit Size: **50 Tons**
 Volts-Phase-Hertz: **460-3-60**
 Supply / Return: **Vertical/Vertical**
 Configuration: **VAV**
 Evaporator Coil Type: **Hi cap Evap**
 Heating Capacity: **High Gas Stainless Steel - Modulating**
 Heat Option: **Modulating**
 Filter Option: **2" MERV 5 Filters**
 Greenspeed: **Selected**

Shipping Dimensions

Unit Length: **27' 11"**
 Unit Width: **7' 8"**
 Unit Height: **5' 11"**

Unit Operating Weight: **8325 lb**
 Unit Shipping Weight: **8356 lb**

***Weights and Dimensions are approximate. Weight does not include curbs and accessories. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions refer to certified drawings.

** Shipping Weight does not include extended leadtime options' weight.

Factory Installed Options

Application Type: **VAV**
 Non Fused-Disconnect: **Selected**
 Digital Compressor: **Selected**

Exhaust/Outdoor Air

OA Intake/Return: **Economizer with Modulating Power Exhaust**
 P.E./ R.F. Motor HP: **15 Hp Exhaust/Return Fan**

Supply Fan

Supply Fan Type: **FC Supply Fan**
 Supply Fan Motor HP: **20 Hp**

Condenser Coil

Cond. Coil Fin Coating: **Standard MCHX**

Mixed-Air and Outdoor Air Filters

Mixed-Air Filter Type: **2 in. MERV 5**
 Mixed-Air Filter (Quantity) Size: **(8) 20x 25 x 2, (8) 20 x 20 x 2**
 Outdoor Air Filter (Cleanable Mesh): **(5) 20 x 20 x 1, (2) 20 x 25 x 1**

Warranty Information

First Year - Parts Only (Standard)
 Compressor Year 2-5 Parts Only
 Cooling Start up, first unit
 Gas Heat Exchanger Plan 6-10 Years Parts Only

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

NOTE: Please see Warranty Catalog 808-218 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
48P7L050650QZYFJD6	Rooftop Unit With Greenspeed Intelligence	1
	Base Unit	
	Hi cap Evap	
	Economizer with Modulating Power Exhaust	
	15 Hp Exhaust/Return Fan	
	BACnet	
	High SCCR, Short Circuit Current Rating	
	Disconnect	
	Digital Compressor	
	Vertical Supply/ Return, VAV Greenspeed	
	High Gas Stainless Steel - Modulating	

Unit Report For RTU-1 R1

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

	Supply VFD	
	20 Hp Supply Fan Motor	

Accessories

Accessory Part #	Description	Quantity
CRRFCURB059A00	14-inch Roof Curb	1
CRHAILGD024A00	Hail Guard Grille Protection	1

Performance Summary For RTU-1 R1

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Part Number:.....48P7L050650QZYFJD6

Unit Refrigerant:.....R410A
 EER (AHRI 340/360):.....9.8
 IEER (AHRI 340/360):.....14.8

Unit Dimensions

Unit Length:.....27' 11"
 Unit Width:.....7' 8"
 Unit Height:.....5' 11"
 Unit Operating Weight:.....8325 lb
 Unit Shipping Weight:.....8356 lb

***Unit operating weight does not include accessories weight.**

Unit

Heating Type:.....Gas Heat
 Supply/Return:.....Vertical/Vertical
 Application Type:.....VAV
 Voltage:.....460-3-60
 Evaporator Type:.....Hi cap Evap
 Cooling Airflow:.....17980 CFM
 Altitude:.....630 ft
 Cond. Ent. Air Temp:.....94.0 F
 Ent. Air Dry Bulb:.....77.0 F
 Ent. Air Wet Bulb:.....66.0 F
 Ent. Air Enthalpy:.....31.02 BTU/lb
 Lvg. Air Dry Bulb:.....56.6 F
 Lvg. Air Wet Bulb:.....55.3 F
 Lvg. Air Enthalpy:.....23.60 BTU/lb
 Gross Cooling Capacity:.....587.11 MBH
 Gross Sensible Clg. Cap:.....387.33 MBH
 Compressor Power:.....41.4 kW
 Coil Bypass Factor:.....0.194
 Refrigerant Charge, Circuit A:.....35.2 lb
 Refrigerant Charge, Circuit B:.....36.5 lb

Part Load(%) Operation

Cooling Capacity Steps:.....12-23, 38-50, 62-73, 88-100

Gas Heating Data:

Heating Airflow:.....17980 CFM
 Heating Ent. Air Temp:.....50.0 F
 Number of Heating Steps:.....919
 Gas Input (Max):.....590 MBH
 Gas Output:.....527 MBH
 Gas Output(Min):.....68 MBH
 Heating Lvg. Air Temp:.....77.8 F
 Temp.Rise:.....27.8 F
 Capacity Stages - Heat (% Full):.....14% to 100%

Supply Fan Information:

Ext.Static Pressure:.....1.00 in wg
 High Gas Heat Loss:.....1.52 in wg
 High Capacity Coil Loss:.....0.33 in wg
 Economizer Loss:.....0.30 in wg
 Power Exhaust Loss(with PE Fan Off):.....0.32 in wg
 Selection Static Pressure:.....3.47 in wg
 Supply Fan Type:.....FC Supply Fan
 Supply Fan RPM:.....848 *
 Supply Fan BHP:.....21.88 BHP
 Supply Fan Motor HP:.....20 Hp

Performance Summary For RTU-1 R1

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

Field supplied and installed sheave package may be required

Power Exhaust Information:

Airflow:.....	15000	CFM
Ext. Static Pressure:.....	0.50	in wg
Selection Static Pressure:.....	0.50	in wg
Return Fan RPM:.....	773	*
Return Fan BHP:.....	8.7	BHP
Motor HP:.....	15 Hp Exhaust/Return Fan	

Field supplied and installed sheave package may be required.

Performance Summary For RTU-1 R1

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Electrical Data

Voltage Range:.....	414 - 508
Compressor #1 Qty:.....	2
Compressor #1 RLA:.....	17.9
Compressor #1 LRA:.....	125
Compressor #2 Qty:.....	2
Compressor #2 RLA:.....	18.6
Compressor #2 LRA:.....	125
Outdoor Fan Motor Qty:.....	4
Outdoor Fan FLA (ea):.....	2.9
Indoor Fan Motor HP:.....	20
Indoor Fan Motor FLA:.....	27
Power Supply MCA:.....	140
Power Supply MOCP (Fuse or HACR):.....	150
Power Exhaust [Qty / Hp(ea) / FLA(ea)]:.....	2 / 7.5 / 11
Minimum Non-Fused Disconnect Amperage:.....	145.6

SCCR, Short Circuit Current Rating: 65kA

An uncoated Novation condenser coil was selected for this product. This is based on an installed location with postal code: 45385 and a non-corrosive localized environment.

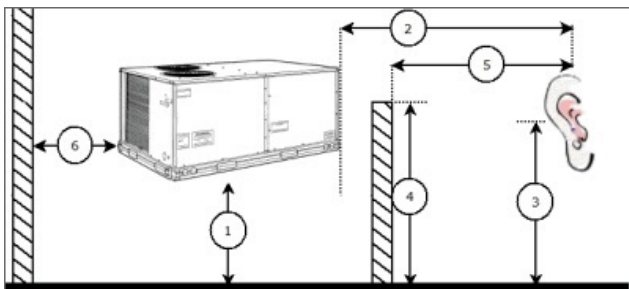
Acoustic Information

	Discharge, Lw	Inlet, Lw	Outdoor, Lw
63 Hz	100.1	92.1	64.5
125 Hz	100.3	82.3	72.2
250 Hz	95.5	76.5	79.0
500 Hz	96.1	76.1	82.3
1000 Hz	86.3	69.3	84.1
2000 Hz	80.3	69.3	80.2
4000 Hz	73.1	60.1	74.0
8000 Hz	63.8	47.8	66.6

Discharge / Inlet Duct Sound Power test data rated in accordance with the AHRI 260 Standard. Return fan or power exhaust fans not included in sound data.

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Advanced Acoustics



Performance Summary For RTU-1 R1

Project: John Wooden Family Fieldhouse
 Prepared By:

03/31/2023
 12:29PM

Advanced Acoustics Parameters

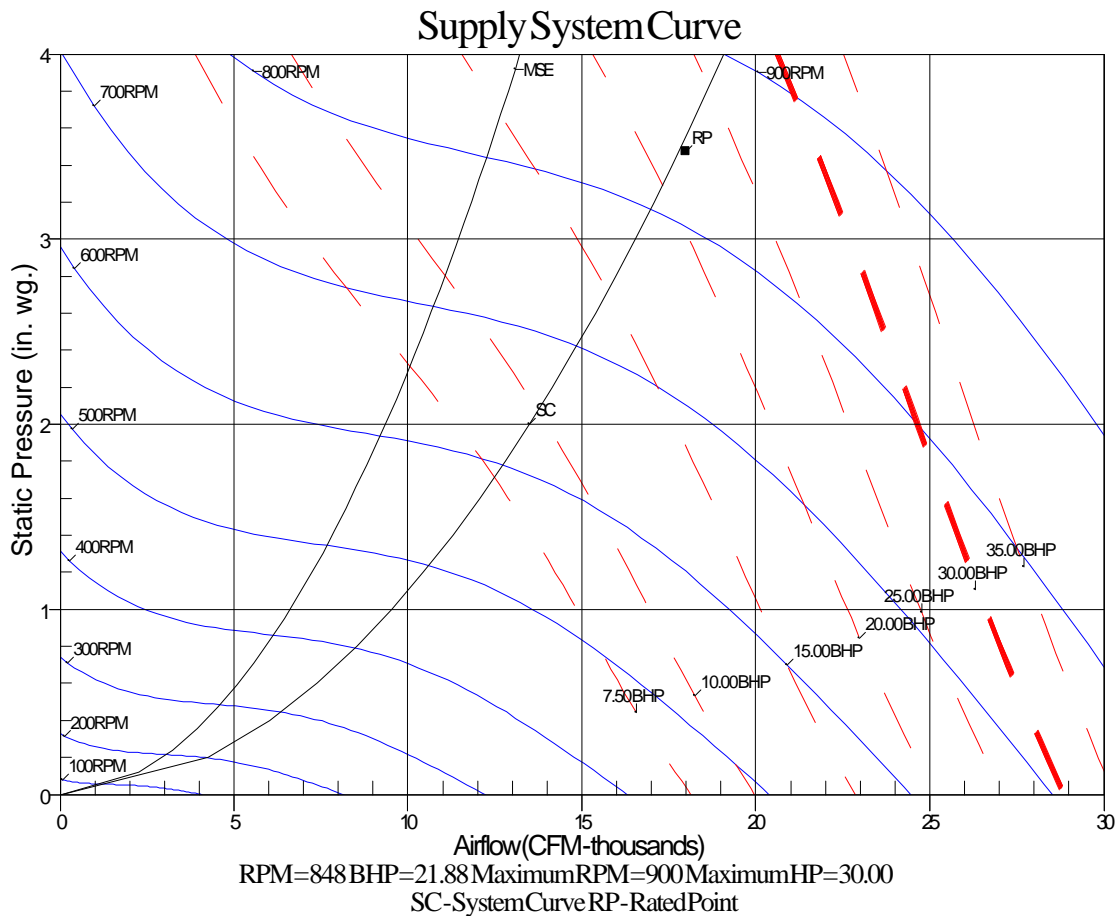
1. Unit height above ground:.....**30.0** ft
2. Horizontal distance from unit to receiver:.....**50.0** ft
3. Receiver height above ground:.....**5.7** ft

Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	64.5	72.2	79.0	82.3	84.1	80.2	74.0	66.6	88.2 Lw
B	38.3	56.1	70.4	79.1	84.1	81.4	75.0	65.5	87.2 LwA
C	31.2	38.9	45.7	49.0	50.8	46.9	40.7	33.3	54.9 Lp
D	5.0	22.8	37.1	45.8	50.8	48.1	41.7	32.2	53.9 LpA

Legend

- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA



Performance Summary For RTU-1 R1

Project: John Wooden Family Fieldhouse
Prepared By:

03/31/2023
12:29PM

