Ohio | Public Utilities Commission

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

Case No.: ____-____-EL-EEC

Mercantile Customer: **The Kroger Co.**

Electric Utility: **Duke Energy**

Program Title or Description: **HVAC Store 351**

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. 10-834-EL-POR

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application.

Any confidential or trade secret information may be submitted to Staff on disc or via email at ee-pdr@puc.state.oh.us.

Section 1: Mercantile Customer Information

Name: **The Kroger Co.**

Principal address: **1014 Vine Street, Cincinnati, OH 45202**

Address of facility for which this energy efficiency program applies:

9939 Montgomery Rd Cincinnati, Oh 45242

Name and telephone number for responses to questions:

Grady Reid, Jr 513-287-1038

Electricity use by the customer (check the box(es) that apply):

□ The customer uses more than seven hundred thousand kilowatt hours per year at the above facility. (Please attach documentation.)

✓ **The customer is part of a national account involving multiple facilities in one or more states. (See Attachment 1 - Appendix 1).**

Section 2: Application Information

A) The customer is filing this application (choose which applies):

□ Individually, without electric utility participation.

✓ **Jointly with the electric utility.**

B) The electric utility is: **Duke Energy**

C) The customer is offering to commit (check any that apply):

□ Energy savings from the customer's energy efficiency program. (Complete Sections 3, 5, 6, and 7.)

□ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)

✓ **Both the energy savings and the capacity savings from the customer's energy efficiency program. (Complete all sections of the Application.)**

Section 3: Energy Efficiency Programs

A) The customer's energy efficiency program involves (check those that apply):

✓ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, and the date on which the customer would have replaced such equipment if it had not been replaced early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known).

Installed 5 new Roof Top Unitary Air-conditioners in April 2011

□ Installation of new equipment to replace equipment that needed to be replaced The customer installed new equipment on the following date(s):

□ Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s): _____.

□ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by the energy efficiency program:

1) If you checked the box indicating that the project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) – (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: **1,481 kWh**
See Attachment 1 - Appendix 2

2) If you checked the box indicating that the customer installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: _____kWh

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment.

3) If you checked the box indicating that the project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: _____kWh

Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment.

4) If you checked the box indicating that the project involves behavioral or operational improvements, provide a description of how the annual savings were determined.

_____

Section 4: Demand Reduction/Demand Response Programs

A) The customer's program involves (check the one that applies):

✓ **Coincident peak-demand savings from the customer's energy efficiency program.**

□ Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)

□ Potential peak-demand reduction (check the one that applies):

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.

B) On what date did the customer initiate its demand reduction program?

April 2011

C) What is the peak demand reduction achieved or capable of being achieved (show calculations through which this was determined):

Annual savings: **. 5 2 kW**
See Attachment 1 - Appendix 2

Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)

Under this section, check the box that applies and fill in all blanks relating to that choice.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) The customer is applying for:

✓ **Option 1: A cash rebate reasonable arrangement.**

OR

□ Option 2: An exemption from the energy efficiency cost recovery mechanism implemented by the electric utility.

OR

□ Commitment payment

B) The value of the option that the customer is seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

✓ A cash rebate of **$302.50** (**See Attachment 1 - Appendix 3)**

Option 2: An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider.

□ An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for ___ months (not to exceed 24 months). (Attach calculations showing how this time period was determined.)

OR

□ A commitment payment valued at no more than _____.

OR

□ Ongoing exemption from payment of the electric utility's energy efficiency/peak demand reduction

rider for an initial period of 24 months because this program is part of the customer's ongoing efficiency program. (Attach documentation that establishes the ongoing nature of the program.) In order to continue the exemption beyond the initial 24 month period, the customer will need to provide a future application establishing additional energy savings and the continuance of the organization's energy efficiency program.)

Section 6: Cost Effectiveness

The program is cost effective because it has a benefit/cost ratio greater than 1 using the (choose which applies):

□ Total Resource Cost (TRC) Test. The calculated TRC value is: _____ (Continue to Subsection 1, then skip Subsection 2)

✓ Utility Cost Test (UCT) . The calculated UCT value: **See Attachment 1 - Appendix 4** (Skip toSubsection 2.)

Subsection1: TRCTestUsed(pleasefillinallblanks).

The TRC value of the program is calculated by dividing the value of our avoided supply costs (generation capacity, energy, and any transmission or distribution) by the sum of our program overhead and installation costs and any incremental measure costs paid by either the customer or the electric utility.

The electric utility's avoided supply costs were .

Our program costs were _____.

The incremental measure costs were _____.

Subsection2: UCTUsed(pleasefillinallblanks).

We calculated the UCT value of our program by dividing the value of our avoided supply costs (capacity and energy) by the costs to our electric utility (including administrative costs and incentives paid or rider exemption costs) to obtain our commitment.

Our avoided supply costs were **$958 (Attachment 1 - Appendix 5).**

The utility's program costs were **$199 (Attachment 1 - Appendix 6).**

The utility's incentive costs/rebate costs were **$302.50 (Attachment 1 - Appendix 3).**

Section 7: Additional Information

Please attach the following supporting documentation to this application:

Narrative description of the program including, but not limited to, make, model, and year of any installed and replaced equipment.

A copy of the formal declaration or agreement that commits the program or measure to the electric utility, including:

1) any confidentiality requirements associated with the agreement;
2) a description of any consequences of noncompliance with the terms of the commitment;
3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;
4) permission by the customer to the electric utility and Commission staff and consultants to measure and verify energy savings and/or peak-demand reductions resulting from your program; and,
5) a commitment by the customer to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

Refer to Rebate Offer Letter following this application

A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Additionally, identify and explain all deviations from any program measurement and verification guidelines that may be published by the Commission.

DUKE ENERGY CORPORATION
Mercantile Self Direct Program
139 East Fourth Street
Cincinnati, OH 45202
513 629 5572 fax

February 10, 2012

Ms. Iman Dodson
The Kroger Company
1014 Vine Street
Cincinnati, Ohio 45202

Subject: Your Application for a Duke Energy Mercantile Self-Direct Rebate

Dear Ms. Dodson:

Thank you for your Duke Energy Mercantile Self Direct rebate application. As noted in the Energy Conservation Measure (ECM) chart on page two, a total rebate of $302.50 has been proposed for your HVAC project completed in the 2011calendar year. All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).

At your earliest convenience, please indicate if you accept this rebate by

- providing your signature on page two
- completing the PUCO-required affidavit on page three.

Please return the documents to my attention via fax at 513-629-5572 or e-mail to SelfDirect@Duke-Energy.com. Upon receipt, Duke Energy will submit the necessary documentation to PUCO. Following PUCO's approval, Duke Energy will remit payment.

At Duke Energy, we value your business and look forward to working with you on this and future energy efficiency projects. We hope you will consider our Smart $aver® incentives, when applicable. Please contact me if you have any questions.

Sincerely,

Grady Reid, Jr
Product Manager
Mercantile Self Direct Rebates

cc: Deanna Bowden, Duke Energy
Rob Jung, WECC

Please indicate your response to this rebate offer within 30 days of receipt.

☑ Rebate is accepted. ☐ Rebate is declined.

By accepting this rebate, The Kroger Company affirms its intention to commit and integrate the energy efficiency projects listed on the following pages into Duke Energy's peak demand reduction, demand response and/or energy efficiency programs.

Additionally, The Kroger Company also agrees to serve as joint applicant in any future filings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.

Finally, The Kroger Company affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.

If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects?

☑ YES ☐ NO

If rebate is declined, please indicate reason (optional):

Customer Signature	Printed Name	Date
	IMAN D. DODSON	2/17/12

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure (ECM)	Proposed Rebate Amount
ECM-1	HVAC – Unitary AC <65000 3 Phase (Qty 3 Store #351)	$90.00
ECM-2	HVAC – Unitary AC 65000 - 135000 (Qty 2 Store #351)	$212.50
Total		$302.50

Ohio | Public Utilities Commission

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

Case No.: ____-____-EL-EEC

State of OHIO :

I MAN D. DODSON, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

   KROGER CO

   [insert customer or EDU company name and any applicable name(s) doing business as]

2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

3. I am aware of fines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

Signature of Affiant & Title

Sworn and subscribed before me this 21 day of February, 2012 Month/Year

Signature of official administering oath

Print Name and Title

My commission expires on 12-19-2012

NOTARIAL SEAL STATE OF OHIO

BONNIE CLARK
NOTARY PUBLIC
STATE OF OHIO
Comm. Expires
December 19, 2012

Attachment 1 – Kroger HVAC

Appendix 1 – Electric History

16200675 01		
KRO-014-351		
9939 MONTGOMERY RD		
CINCINNATI, OH 45242		
Date	Days	Actual KWH
10/21/2011	29	208,405
9/22/2011	30	245,585
8/23/2011	29	270,279
7/25/2011	32	301,364
6/23/2011	30	268,157
5/24/2011	29	208,607
4/25/2011	32	89,518
3/24/2011	29	24,872
2/23/2011	29	81,906
1/25/2011	34	251,542
12/22/2010	33	241,025
11/19/2010	29	221,223
Total		**2,412,483**

Appendix 2 – Annual kWh losses and annual KW losses

Measure	Annual kWh Gross with losses	Upload Amount	TOTAL Annual kWh losses	KW Per Measure	Total KW Savings
HVAC Unitary AC < 65000 3 Phase	45.76	9	411.84	0.02	0.18
HVAC Unitary AC - 65000-135000	62.92	17	1069.64	0.02	0.34
Total			**1481.48**		**0.52**

Appendix 3 – Cash Rebate

Measure	Amount
HVAC Unitary AC < 65000 3 Phase	$90.00
HVAC Unitary AC - 65000-135000	$212.50
Total	**$302.50**

Appendix 4 – Utility Cost Test

Measure	UCT
HVAC Unitary AC < 65000 3 Phase	1.74
HVAC Unitary AC - 65000-135000	1.92

Appendix 5 – Avoided Supply Costs

Measure	T&D	Production	Capacity	Quantity	Total Avoided Costs
HVAC Unitary AC < 65000 3 Phase	$3.00	$16.00	$10.00	9	$261
HVAC Unitary AC - 65000-135000	$4.00	$23.00	$14.00	17	$697
Total					**$958**

Appendix 6 – Utility Program Costs

Measure	Qty	Admin Costs	Total Costs
HVAC Unitary AC < 65000 3 Phase	9	$7.00	$63
HVAC Unitary AC - 65000-135000	17	$8.00	$136
Total			**$199**

Ohio Mercantile Self Direct Program

Application Guide & Cover Sheet

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.

Email this form along with completed Mercantile Self Direct Prescriptive or Custom applications, proof of payment, energy savings calculations and spec sheets to SelfDirect@Duke-Energy.com. You may also fax to 1-513-419-5572.

Mercantile customers, defined as using at least 700,000 kWh annually are eligible for the Mercantile Self Direct program. Please indicate mercantile qualification:

- ☒ a single Duke Energy Ohio account
- ☐ multiple accounts in Ohio (energy usage with other utilities may be counted toward the total)

Please list Duke Energy account numbers below (attach listing of multiple accounts an/or billing history for other utilities as required):

Account Number	Annual Usage	Account Number	Annual Usage
1620-0675-01	2,412,483.00		

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart $aver® Custom Incentive. Self Direct incentives are applicable to Prescriptive measures that were installed more than 90 days prior to submission to Duke Energy and have not previously received a Duke Energy Prescriptive rebate.

Self Direct Program requirements dictate that certain projects that may be Prescriptive in nature under the Smart $aver program must be evaluated using the Custom process. Use the table on page two as a guide to determine which Self Direct program fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet. Where Mercantile Self Direct Prescriptive applications are listed, please refer to the measure list on that application. If your measure is not listed, you may be eligible for a Self Direct Custom rebate. Self Direct Custom applications, like Smart $aver Custom applications, should include detailed analysis of pre-project and post-project energy usage and project costs. Please indicate which type of rebate applications are included in the table provided on page two.

Please check each box to indicate completion of the following program requirements:

☒ All sections of appropriate application(s) are completed	☒ Proof of payment.*	☐ Manufacturer's Spec sheets	☒ Energy model/calculations and detailed inputs for Custom applications

* If a single payment record is intended to demonstrate the costs of both Prescriptive & Custom projects, please include an additional document with an estimated breakout of costs for each Prescriptive and Custom energy conservation measure.

Application Type	Replaced equipment at end of lifetime or because equipment failed**	Replaced fully operational equipment to improve efficiency***	New Construction
Lighting	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐	MSD Prescriptive Lighting ☐	MSD Prescriptive Lighting ☐
		MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐
Heating & Cooling	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Prescriptive Heating & Cooling ☒
			MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Window Films, Programmable Thermostats, & Guest Room Energy Management Systems	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐	MSD Prescriptive Heating & Cooling ☐	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐
Chillers & Thermal Storage	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Prescriptive Chillers & Thermal Storage ☐
			MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Motors & Pumps	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Prescriptive Motors, Pumps & Drives ☐
			MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
VFDs	Not Applicable	MSD Prescriptive Motors, Pumps & Drives ☐	MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐
		MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐	
Food Service	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Prescriptive Food Service ☐
			MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Process	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	MSD Prescriptive Process ☐	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
		MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	
Energy Management Systems	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐
Behavioral** & No/Low Cost**	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐		

** Under the Self Direct program, failed equipment and equipment at the end of its useful life are evaluated differently than early replacement of fully functioning equipment. **All equipment replacements due to failure or old age will be evaluated via the Custom program.**

*** Please ensure that you include the age of the replaced equipment for measures classified as "Early Replacement" in your application as well as the estimated date that you would have otherwise replaced the existing equipment if you had not chosen a more energy efficient option.

**** Behavioral energy efficiency and demand reduction projects must be both measurable and verifiable. Provide justification with your application.

MERCANTILE SELF DIRECT Ohio Heating / Cooling Equipment Incentive Application

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.
Email the complete, signed application with all required documents to PrescriptiveIncentives@duke-energy.com, mail to: Duke Energy • 431 Charmany Drive • Madison, WI 53719 or fax to 1-866-908-4921

Is this application: ☒ NEW (original) or ☐ REVISED (changes made to original application)

Building Type (Required) (check one)

☐ Data Centers	☐ Full Service Restaurant	☐ Office
☐ Education/K-12	☐ Healthcare	☐ Public Assembly
☐ Education Other	☐ Industrial	☐ Public Order/Safety
☐ Elder Care/Nursing Home	☐ Lodging	☐ Religious Worship/Church
☒ Food Sales/Grocery	☐ Retail (Small Box)	☐ Service
☐ Fast Food Restaurant	☒ Retail (Big Box)	☐ Warehouse
☐ Other:		

How did you hear about this program? (check one)

☐ Duke Energy Representative	☒ Web Site	☐ Radio
☐ Contractor / Vendor	☐ Other _____	

Please check each box to indicate completion of the following program requirements:

☒ All sections of application	☑ Invoice with make, model number, quantity and equipment manufacturer	☑ Tax ID number for payee	☑ Customer/vendor agree to Terms and Conditions

Customer Information

Customer/Business	The Kroger Co.	Contact		Iman Dodson	
Phone	513-782-3543	Account Number		1620 0075-01	
Street Address (Where Incentive should be mailed)		Kroger ATTN: Tracy MacDonald 1014 Vine St			
City	Cincinnati	State	OH	Zip Code	45202
Installation Street Address	9939 Montgomery Rd				
City	Cincinnati	State	OH	Zip Code	45242
E-mail Address	Iman.Dodson@kroger.com				

**Failure to provide the account number associated with the location where the installation took place will result in rejection of the application.*

Vendor Information

Vendor		Contact			
Phone		Fax			
Street Address					
City		State		Zip Code	
E-mail Address					

If Duke Energy has questions about this application, who should we contact? ☒ Customer ☐ Vendor

Payment Information

Who should receive incentive payment?	☒ Customer	☐ Vendor (Customer must sign below)
I hereby authorize payment of incentive directly to the vendor.	Customer Signature (written signature)	
	Date	
Provide Tax ID Number for Payee	Customer Tax ID #	31-1569563
	Vendor Tax ID #	

Terms and Conditions

I have read and hereby agree to the Terms & Conditions and Program Requirements.

Customer Signature	Iman A. Dodson	Vendor Signature	
Date	10/19/11	Date	
Title	ENERGY MANAGER	Title	

Incentives are subject to change and may be discontinued at the sole discretion of Duke Energy. Equipment must be installed and operable to be eligible for incentives. As Federal Energy Policy Law changes, equipment efficiency requirements are subject to change.

The Equipment below is (check one): ☐ New Equipment / New Construction
Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.

Central Air Unit Incentives (Rooftop and Unitary AC and HEAT PUMPS*)

Description	Make/Model # (for split system, supply both the indoor and outdoor coil numbers)	# of Units	Tons Per Unit	Incentives per Ton**	Installed AHRI Efficiency Rating (mark one)	AHRI Reference Number (required)***	Annual Operating Hours (min. of 1500)	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive
RTU 7	RQ0038VCA01212	1	3	$10.00	☐ ☒ SEER/EER**	4208274	8760	$4,834.00	4/13/11	$30.00
RTU 10	RQ0028VCA01212	1	2	$10.00	☒ ☐ SEER/EER**	4208262	8760	$4,834.00	4/10/2011	$20.00
RTU 8	RQ0048VCA01212	1	4	$10.00	☐ ☒ SEER/EER**	3897295	8760	$4,824.00	4/12/2011	$40.00
RTU 9	RQ0068VCB01232	1	6	$12.50	☐ ☒ SEER/EER**	4588964	8760	$5,494.00	4/14/2011	$75.00
RN 6	RN01180CA022F2	1	11	$20.00	☐ ☒ SEER/EER**	3561365	8760	$8,365.00	4/15/2011	$220.00

**** Incentive capped at 50% of the equipment cost.**

Cooling Incentive Table and AHRI Rated Efficiency Requirements*

Description	Size Range	Minimum AHRI Efficiency	Incentive
Packaged Terminal Air Conditioning			
A	All sizes	See ** below	$10/unit
Unitary and Rooftop Air Conditioning			
B	<65,000 BTUH (1 Phase)	14.5 SEER/split system; 14 SEER/single package system	$12.50/ton
C	<65,000 BTUH (3 Phase)	12.0 EER/split system; 11 EER/single package system	$10/ton
D	65,000-135,000 BTUH	11.0 EER	$12.50/ton
E	136,000-240,000 BTUH	11.0 EER	$20/ton
F	241,000-760,000 BTUH	10.0 EER	$10/ton
G	>760,000 BTUH	10.0 EER	$15/ton
Unitary and Rooftop Heat Pump – only Air-to-Air Heat Pump units qualify			
H	<65,000 BTUH (1 Phase)	14.5 SEER/split system; 14 SEER/single package system	$12.50/ton
I	<65,000 BTUH (3 Phase)	12.0 EER split system; 11 EER/single package system	$10/ton
J	65,000-135,000 BTUH	11.0 EER	$17.50/ton
K	136,000-240,000 BTUH	10.0 EER	$17.50/ton
L	>241,000 BTUH	10.0 EER	$17.50/ton

**** PTAC Minimum Efficiency (EER) calculation: 12.8 EER – (.213 x (BTUH/1000)**
***** Incentive capped at 50% of the equipment cost.**

- Duke Energy requires an AHRI reference # or documentation from the AHRI Manual to verify the required efficiency level for all central air systems. If the equipment or matched set is not in the AHRI manual, the manufacturer's technical fact sheets must be provided showing the efficiency level tested under AHRI conditions. Equipment capacity (size) and efficiency must be based on AHRI design conditions.
- For split systems, the indoor coil and condenser must be a matched set to be eligible for incentives.
- Cooling system(s) must operate >1,500 hours annually to be eligible.
- **Incentives are only available for Air-to-Air HP units. Ground Source and Water Source Heat Pumps are not eligible. Incentives may be available under the custom program. See custom application on the Duke Energy Mercantile Self Direct website for application and equipment requirements.**
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.

Duke Energy.

Energy Star Window / Sleeve / Room AC Incentives

Description*	Make/Model #	Size Range Btu/hr	Incentive per Unit*	Quantity	EER	Annual Operating Hours (min. of 1500)	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive

** Incentive capped at 50% of the equipment cost.

Energy Star Window / Sleeve / Room AC Incentives

Size Range	EER	Incentive	EER	Incentive	EER	Incentive
<8,000 BTU/hr	10.7	$25	11.2	$35	11.6	40
8,000 – 13,999 BTU/hr	10.8	$25	11.3	$35	11.8	40
14,000 BTU – 19,999 BTU/hr	10.7	$50	11.2	$75	11.6	80
>=20,000 Btu/hr	9.4	$50	9.8	$75	10.2	80

- Cooling system(s) must operate >1,500 hours annually to be eligible.
- An equipment data sheet is required stating that the unit is Energy Star rated and providing the EER.
- All equipment must be new to be eligible for incentives. Used equipment is *not* eligible for incentives.

The Equipment below is (check one): ☐ New Equipment / New Construction
Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.

Air Source Heat Pump Water Heater Incentives***									
Description*	Make/Model #	Quantity	Size Range	Incentive per Tank*	Installed COP Efficiency*	Annual Operating Hours (min. of 1500)	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive**
			MBH						
			MBH						
			MBH						
** Incentive capped at 50% of the equipment cost.									

Air Source Heat Pump Water Heater Incentive Table			
Description	Size Range	Minimum COP Efficiency	Incentive*
Air source Heat Pump Water Heater			
Q	10-50 MBH	3.0	$1,000/unit
R	51-100 MBH	3.0	$1,750/unit
S	101-300 MBH	3.0	$2,500/unit
T	301v-500 MBH	3.0	$3,500/unit
U	>500 MBH	3.0	$4,500/unit
* Incentive capped at 50% of the equipment cost.			

- Incentives are only available for Air Source Heat Pump water heaters.
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.
- An equipment data sheet is required stating that the COP.

The Equipment below is (check one): ☐ New Equipment / New Construction
Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.

High Efficiency Commercial Electric Water Heater Incentives***									
Description*	Make/Model #	Quantity	Size Range	Incentive per Tank*	Installed Energy Factor*	Annual Operating Hours (min. of 1500)	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive**
			MBH						
			MBH						
			MBH						
** Incentive capped at 50% of the equipment cost.									

High – Efficiency Commercial Electric Water Heater Incentive Table			
Description	Size Range	Minimum Energy Factor (EF)	Incentive*
V	All	0.93	$10/unit
* Maximum incentive cannot exceed 50% of the total equipment cost.			

- Energy Factor (EF) must be a minimum of 0.93 to qualify.
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.
- An equipment data sheet is required stating that the EF.

The Equipment below is (check one): ☐ Retrofit (installed on existing equipment)
New construction or replacement of failed equipment must apply for Self Direct Custom program.

Window Film Incentives								
Item Number (Model #)	SHGC*	Square Feet Installed	Incentive per Square Foot	Direction Window Faces	Number of Windows	Date Installed (mm/yy)	Project Cost	Total Incentive**
			$.50/sq.ft	☐ East ☐ West ☐ South				
			$.50/sq.ft	☐ East ☐ West ☐ South				
			$.50/sq.ft	☐ East ☐ West ☐ South				
**** Incentive is capped at a maximum of 50% of the project cost (equipment and external labor).**								

Window Film Incentive		
Description	Minimum Efficiency	Incentive*
Window Film	SHGC or 0.40 or less or a shading coefficient of 0.45 or less	$.50/square ft.
***Incentive is capped at of 50% of the project cost (material and external labor).**		

- Window Film must be installed according to the manufacturer's instructions on south, east or west facing windows; have a solar heat gain coefficient (SHGC) of 0.40 or less, or a shading coefficient of 0.45 or less and cover the entire window aperture.
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.

The Equipment below is (check one): ☐ Retrofit (installed on existing equipment)
New construction or replacement of failed equipment must apply for Self Direct Custom program.

Setback/Programmable Thermostat Incentives (Retrofit only)					
Make/Model #	Quantity	Incentive per Unit*	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive
*** Incentive capped at 50% of the equipment cost.**					

Setback/Programmable Thermostat Incentives (Retrofit only)	
Description	Incentive
Setback/Programmable Thermostat	$25/thermostat*

- Programmable Thermostats must replace existing standard thermostats – Incentives for new construction are not applicable.
- Incentives for Programmable Thermostats cannot exceed 50% of the cost of the thermostat.
- Thermostat(s) shall be installed according to manufacturer's specifications and comply with manufacturer's warranty requirements. Thermostat(s) shall have a program memory retention capability or battery back-up (minimum 2 days), with warning indicator for battery replacement. Thermostat(s) shall be capable of automatic variation of the start of daily-warm-up time depending on indoor and outdoor temperature variations.
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.

The Equipment below is (check one): ☐ Retrofit (installed on existing equipment)
New construction or replacement of failed equipment must apply for Self Direct Custom program.

Guestroom Energy Management Controls (Retrofit only)						
Make/Model #	Please indicate whether room is heated by Natural Gas (G) or Electric (E)? (please circle)	Quantity	Incentive per Room*	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive
	E or G					
	E or G					
	E or G					
*** Incentive capped at 50% of the equipment cost.**						

Guestroom Energy Management Controls (Retrofit only)	
Description	Incentive per Room
Guestroom Energy Management Controls for rooms heated with Electric	$40
Guestroom Energy Management Controls for rooms heated with Gas	$15

- Incentives are available for sensors that control HVAC units for individual hotel rooms.
- Sensors controlled by a front desk system are not eligible.
- Sensors must be controlled by automatic occupancy detectors.
- During unoccupied periods, the default setting for controlled units should differ by at least 8 degrees from the operating set point.
- The incentive is per guest room controlled, not per sensor; for multi-room suites the incentive is available per room controlled, if a sensor is installed in each room.
- Replacement or upgrades of existing occupancy-based controls are not eligible for a prescriptive incentive.
- All equipment must be **new** to be eligible for incentives. Used equipment is ***not*** eligible for incentives.

A C EQUIPMENT
REPRESENTATIVES, INC.
1300 N. Pennsylvania Street
Indianapolis, IN 46202
(317)921-8825 Fax (317)921-8826

PROPOSAL
DATE 11/8/10

TO: Ryan D. Stuckenberg
Kroger L. P. I.
150 Tri-County Parkway
Cincinnati, OH 45246

RE: Kroger Store # A351
Cincinnati, OH

Dear Customer,

Note: Effective 3/20/09 all curbs including curbs for these roof top units are furnished by AES.
Contact Lee Angle, lanbgle@aescurb.com
Ph: 800.786.0402 Fax: 334-283-5447

A C Equipment Reps., Inc. offers to sell the following equipment listed below for the subject job, in accordance with our standard terms and conditions of sale.

Item A: Packaged Rooftop Unit; Tagged: RTU# 6

One, (1) AAON Rooftop Unit, Model RN, complete with the following features and accessories:

- 208 V/3ϕ/60
- R410a Refrigerant
- 2" thick Insulated Double Wall Cabinet with Full Hinged Access Doors & ¼ turn latches
- Direct drive plenum type supply fan
- High Efficiency VFD duty Motor with VFD for air balance
- Scroll compressors, independent circuits, five year compressor parts warranty
- Two (2) independent refrigerant circuits
- 2- Stage, Natural Gas Heat
- 2" Pleated Filters
- Stainless steel drain pan
- Sight Glass
- Phase and Brown Out Protection
- **Manual outside air and return air dampers**
- Factory installed disconnect switch with main fusing
- Factory installed GFI receptacle
- **Factory furnished and installed CPC Multiflex 88AO controller per Kroger standards**
- **Fan proving switch**

- **Terminals for field furnished and installed smoke detectors. Detectors are by others and must not be powered from the RTU**
- All items listed above are factory installed

Not included are any freight charges, roof curbs, power or control wiring external to the unit, start up labor, warranty labor, or any items not specifically listed above.

Item B: Packaged Rooftop Units; Tagged: RTU# 7, 8, 9 & 10

Four (4) AAON Rooftop Unit, Model RQ, complete with the following features and accessories:

- 208 V/3ϕ/60
- R410a Refrigerant
- 2" thick Insulated Double Wall Cabinet with Full Hinged Access Doors & ¼ turn latches
- Direct drive plenum type supply fan
- Scroll compressor, five year compressor parts warranty
- High Efficiency VFD duty Motor with VFD for air balance
- 2-stage natural gas heat
- 2" Pleated Filters
- Stainless steel drain pan
- Sight Glass
- Phase and Brown Out Protection
- **Manual outside air damper**
- Factory installed disconnect switch with main fusing
- Factory installed GFI receptacle
- **Factory furnished and installed CPC Multiflex 88AO controller and sensors per Kroger standards**
- **Fan proving switch**
- **Terminals for field furnished and installed smoke detectors. Detectors are by others and must not be powered from the RTU**
- All items listed above are factory installed

Not included are any freight charges, roof curbs, power or control wiring external to the unit, start up labor, warranty labor, or any items not specifically listed above.

AAON's terms of sale are Net 30 days. Our price for Item A & B shipped FOB factory to the first destination, **excluding freight, sales and/or use taxes** is:

$28,341.00

We appreciate the opportunity to quote you on this project.

Sincerely,

Steve Goldenberg
Kroger_A351_aaon_pro

Kroger Store # A351
Cincinnati, Ohio

Pnet 060-00040506

EQUIPMENT
AAON Packaged Roof Top Units
With CPC Controls

MECHANICAL ENGINEER
Kohrs Lonnemann Heil Engineers, PSC
Fort Thomas, Kentucky

GENERAL CONTRACTOR
TBD

KROGER NATIONAL ACCOUNT
MANUFACTURER'S REPRESENTATIVE

A C Equipment Reps, Inc.
1300 N. Pennsylvania Street
Indianapolis, Indiana
317.921.8825

PREPARED BY

Steve Goldenberg
317.313.0228
steveg@acequipmentreps.com

SUBMITTAL DATE
November 8, 2010

Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEmail@AAON.com

RN-011-8-0-CA02-2F2:0000-00B-DRQ-0A0-C0AFHBJ-00-00000000X
Tag: RTU-6 DELI/BAKERY

Job Name:	*AAON Montgomery Road*	Unit Submittal For:	
Job Number:	*AAON Proto 000-000000000*	Unit Submittal Date:	*November 06, 2010*

	Base Option	Description
R	Series	Rooftop Unit
N	Model	Ninth Generation
011	Unit Size	Eleven
8	Voltage	208V/3Ph/60Hz
0	Design Sequence	Standard
C	Refrigeration System	R-410A - Standard Efficiency
A	Airflow Configuration	Air-Cooled Cond. + Std. Evap. Coil
0	Coil Options	Standard
2	Cabinet	2 Deep
2	Gas Heat Options	Natural Gas Aluminized
F	Heating Designation	Heat F - 196 MBtuh
2	Heating Stages	2 Stage

	Feature Option	Description
0	1A. RA/OA Section	Manually Adjustable OA Opening + RA Opening
0	1B. RA/EA Blower Configuration	Standard - None
0	1C. RA/SA Blower	Standard - None
0	1D. RA/EA Blower Motor	Standard - None
0	2. OA Control	Standard - None
0	3. Heat Options	Standard
B	4. Maintenance Options	115V Convenience Outlet - Factory Wired
D	5A. SA Blower Configuration	1 Blower + Premium Efficiency Motor + 1 VFD set @ 60 HZ
R	5B. SA Blower	22" Direct Drive Backward Curved Plenum
Q	5C. SA Motor	3.0 hp - 1120 rpm
0	6A. Pre Filter Type	Standard - None
A	6B. Unit Filter Type	2" Pleated - 30% Eff
0	6C. Filter Options	Standard
C	7. Refrigeration Control	Fan Cycling
0	8. Refrigeration Options	Standard
A	9. Refrigeration Accessories	Sight Glass
F	10. Power Options	Power Switch - 60 amps
H	11. Safety Options	Remote Smoke Detector Terminals - Field Installed Detector
B	12. Controls	Phase & Brown Out Protection
J	13. Special Controls	Factory Installed CPC Multiflex BAAO Controls Furnished by AAON
0	14A. Preheat Configuration	Standard - None
0	14B. Preheat Sizing	Standard - None
0	15. Glycol Percent	Water or No WHIP
0	16. Interior Cabinet Options	Standard - Double Wall + R-13 Foam Insulation + Stainless Steel Drain Pan
0	17. Exterior Cabinet Options	Standard
0	18. Customer Code	Standard
0	19. Code Options	Standard - ETL U.S.A. Listing
0	20. Coating	Standard
0	21. Water-Cooled Cond.	Standard - None
0	22. Control Vendors	Standard
X	23. Trim	Special Price Authorization + AAON Grey Paint

Unit Rating

2420 South Yukon Ave · Tulsa, Oklahoma 74107-2728 · Ph: (918) 583-2266 Fax (918) 583-6094
AAONBase32 Ver. 4.164 (Bld: 6723184-ASHE,3(3))

[illegible]

RN-011-8-0-CA02-2F2:0000-00B-DRQ-0A0-C0AFHBJ-00-00000000X
Tag: RTU-6 DELI/BAKERY

Job Information

Job Name:	*A351 Montgomery Road*
Job Number:	*A351 Post 060-00040506*
Site Altitude:	*0 ft*
Refrigerant	*R-410A*

Static Pressure

External:	*0.40 in. wg.*
Evaporator:	*0.11 in. wg.*
Filters Clean:	*0.06 in. wg.*
Dirt Allowance	*0.35 in. wg.*

Cooling Section

	Gross	Net
Total Capacity:	*113.42*	*110.74 MBH*
Sensible Capacity:	*99.30*	*96.62 MBH*
Latent Capacity:	*14.13 MBH*	
Mixed Air Temp:	*73.60 °F DB*	*64.16 °F WB*
Entering Air Temp:	*78.80 °F DB*	*64.18 °F WB*
Lv Air Temp (Coil):	*54.06 °F DB*	*53.85 °F WB*
Lv Air Temp (Unit)	*54.71 °F DB*	*54.09 °F WB*
Supply Air Fan:	*1 x 230 @ 0.03 BHP*	
SA Fan RPM / Width:	*977 / 4.920"*	
Evaporator Coil:	*14.8 ft² / 2 Rows / 14 FPI*	
Evaporator Face Velocity:	*241.2 fpm*	

Unit Information

***WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weight:	*1616 / 1416 lbs.**
Supply CFM/ESP:	*3810 / 0.4 in. wg.*
Final-Filter FV / Qty:	*274.32 fpm / 4*
Outside CFM:	*762*
Ambient Temperature:	*85 °F DB / 72 °F WB*
Return Temperature:	*75 °F DB / 62 °F WB*
Economizer:	*0.00 in. wg.*
Heating:	*0.04 in. wg.*
Cabinet:	*0.05 in. wg.*
Total:	*1.02 in. wg.*

Heating Section

Preheat Type:	*Std (No Preheat)*
Heating Type:	*Nat. Gas Heat*
Heating CFM:	*3810*
Total Capacity:	*156.0 MBH*
OA Temp:	*1.0 DB / 1.0°F WB*
RA Temp:	*72.0 °F DB / 62.0 °F WB*
Entering Air Temp:	*60.3 °F DB / 53.7 °F WB*
Leaving Air Temp:	*98.1 °F DB / 61.3 °F WB*
Input:	*156.0 MBH*
Heater Qty:	*1*
Consumption:	*156.0 MBH*

AHRI Listing Information

Cooling Capacity (MBH):	*113.0*
Cooling EER:	*11.2*
Cooling IEER:	*13.2*
Application EER @ Op. Conditions:	*10.9*

Electrical Data

Rating:	*208/3/60*
Unit FLA:	*47*
Minimum Circuit Amp:	*51*
Maximum Overcurrent:	*60*

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	2		208	3			16.6
Condenser Fans:	1	0.75	208	1	1075	5.4	
Supply Fan:	1	5.00	208	3	1170	10.6	
Combustion:	1	0.09	208	1	3000	1.3	

*Cabinet Sound Power Levels**

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	80	82	80	71	65	66	65	62
Return LW(dB):	77	77	72	61	62	58	45	40

**Sound power levels are given for informational purposes only. The sound levels are not guaranteed.*

22.0" STAR Plenum

2420 South Yukon Ave · Tulsa, Oklahoma 74107-2728 · Ph. (918) 583-2266 Fax (918) 583-6094
AAONEcat32 Ver. 4.184 (SN: 6713184-ARFBLXY)

JOB INFORMATION:

Job Name:	*A351 Montgomery Road*
Job Tag:	*RTU-6 DELI/BAKERY*
Rep Firm:	
Date:	*11/05/2010*

OPERATING CONDITIONS:

Air Flow:	*3,810 CFM*
Static Pressure:	*1.02 in. Wg.*
Plenum DP:	*0.00 in. Wg.*
Inlet Grill DP:	*0.00 in. Wg.*
TSP:	*1.03 in. Wg.*
Site Altitude:	*0.00 Ft*
TSP @ Sea Level:	*1.02 in. Wg.*

FAN PERFORMANCE:

RPM:	*977*
BHP:	*0.93*
Efficiency:	*65.7%*
In/Out Velocity:	*1165/1283 FPM*
Plenum Out Velocity:	*63 FPM*

WHEEL SPECIFICATION:

Max RPM:	*2,300*
Diameter x Qty:	*22.0 in. x 1*
Width%:	*100*
Tip Speed:	*5,627 FPM*
Inertia:	*6 WR²*

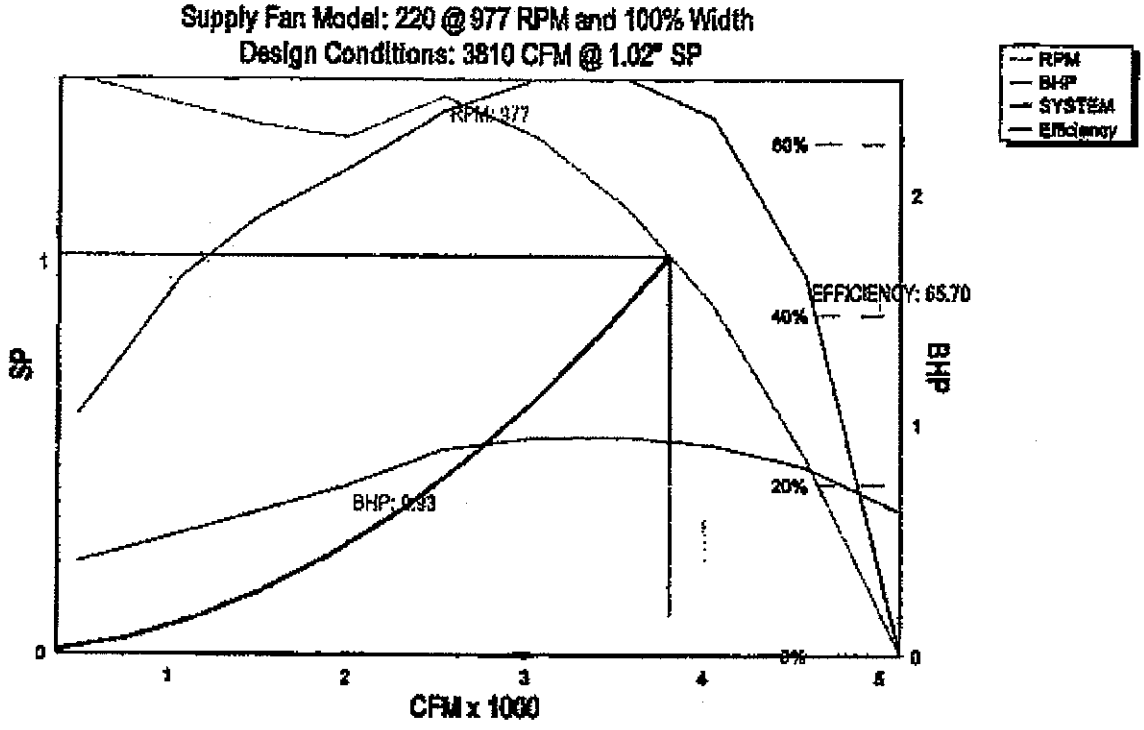
MOTOR SELECTION:

Rated HP / Bypass:	*3 / No*
Frame Size:	*213T*
Nominal RPM:	*1170*
VAC/PH/HZ:	*208/3/60*
Efficiency	*Premium / 0.885*
Enclosure Type:	*ODP*
Max Inertial Load:	*35 WR²*

FAN SOUND POWER (Inlet/Outlet):

Octave Band:				(Re 10^-12 watts)			
1	2	3	4	5	6	7	8
80	*82*	*80*	*73*	*71*	*68*	*62*	*56*
80	*82*	*80*	*73*	*71*	*68*	*62*	*56*

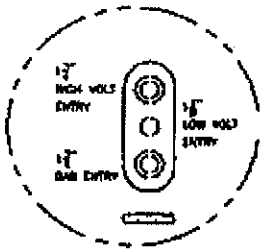
SOUND POWER A-Weighted: 81 / 81 dB



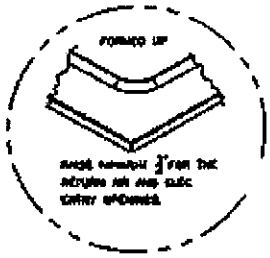
RN SERIES
B - CABINET STANDARD ~ 9-15 TON

CLEARANCES

LOCATION	• UNIT SIZE • 9 - 15 TON
OUTDOOR AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED



DETAIL A

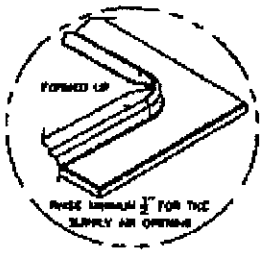


DETAIL B

NUMBER OF CONDENSER FANS

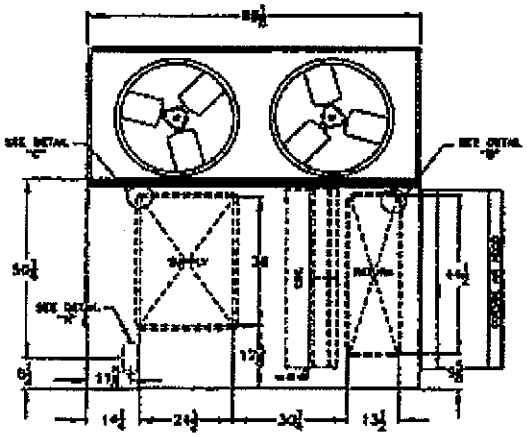
9 & 11 TON - **1 FAN**

13 & 15 TON - **2 FANS**

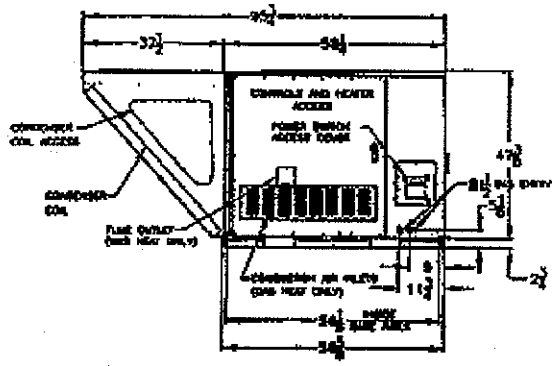


DETAIL C

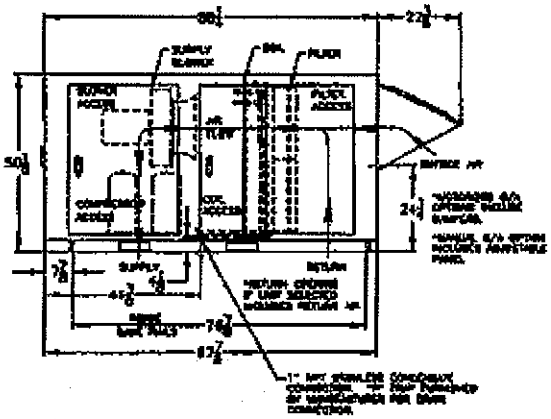
TOP VIEW



FRONT VIEW



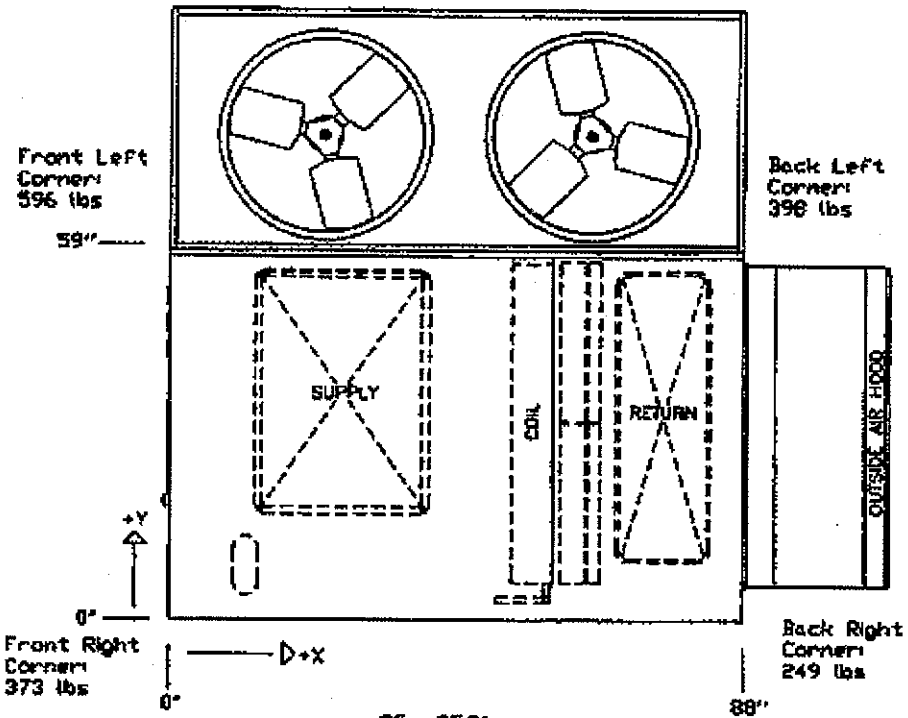
RIGHT SIDE VIEW



NOTE: ALL DIMENSIONS ARE IN INCHES

RNB CABINET
AIR COOLED CONDENSING UNIT

RN-011-B-0-CA02-2F2:0000-00B-DRQ-0A0-C0AFHBJ-00-00000000X



Total Weight:
1616 lbs

Disclaimer:
This weight estimate does not account for any SPAs.

Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-3728 - Ph. (918) 583-2266 Fax (918) 583-4094
(AAONEasy32 Ver. 4.104 (Rel: 07/07/08) ASP/SLXT)

RQ-003-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X
Tag: RTU-7 LUNCHROOM

Job Name:	*4351 Montgomery Road*	Unit Submittal For:	
Job Number:	*4351 Post 060-00040504*	Unit Submittal Date:	*November 06, 2010*

	Base Option	Description
R	Series	Roof Top Unit
Q	Generation	Tenth Generation
003	Unit Size	Three
8	Voltage	208V/3Ph/60Hz
V	Inverter Protection	Vertical Discharge and Return
C	Refrigerant Style	R-410A - Standard Efficiency
A	Unit Configuration	Air-Cooled Cond. + Std Evap. Coil
0	Coil Coating	Standard
1	Cooling/Heat Pump Staging	1 Stage
2	Heating Type	Natural Gas Aluminized
1	Heating Designation	Heat 1 - 60 MBtuh
2	Heating Staging	2 Stage

	Feature Option	Description
0	1A. RA/OA Section	Manually Adjustable OA Opening + RA Opening
0	1B. RA/EA Blower Configuration	Standard - None
0	1C. RA/EA Blower	Standard - None
0	1D. RA/EA Blower Motor	Standard - None
0	2. OA Control	Standard - None
0	3. Heat Options	Standard
B	4. Maintenance Options	115V Convenience Outlet - Factory Wired
Q	5A. SA Blower Configuration	1 Blower + Inverter Rated 3 Phase Motor + VFD set @ 55 HZ
J	5B. SA Blower	10" Direct Drive Backward Curved Plenum
D	5C. SA Motor	2 HP 1750 rpm
0	6A. Pre Filter Type	Standard - None
A	6B. Unit Filter Type	2" Pleated - 30% Eff
0	6C. Filter Options	Standard
C	7. Refrigeration Control	Fan Cycling
0	8. Refrigeration Options	Standard
A	9. Refrigeration Accessories	Sight Glass
F	10. Power Options	Power Switch - 60 amps
H	11. Safety Options	Remote Smoke Detector Terminals - Field Installed Detector
R	12. Controls	Phase & Brown Out Protection
J	13. Special Controls	Factory Installed CPC Multiflex BAAO Controls Furnished by AAON
0	14A. Preheat Configuration	Standard - None
0	14B. Preheat Sizing	Standard - None
0	15. Circuit Percent	Water or No WSHP
0	16. Interior Cabinet Options	Standard - Double Wall + R-13 Foam Insulation + Stainless Steel Drain Pan
0	17. Exterior Cabinet Options	Standard
0	18. Customer Code	Standard
0	19. Code Options	Standard - ETL U.S.A. Listing
0	20. Coating	Standard
0	21. Water-Cooled Cond.	Standard - None
0	22. Control Vendors	Standard
X	23. Trim	Special Price Authorization + AAON Gray Paint

Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6164
AAONRate32 Ver. 4.164 (SN: 8TX3204-AHPELXCV)

RQ-003-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X
Tag: RTU-7 LUNCHROOM

Job Information

Job Name:	*A351 Montgomery Road*
Job Number:	*A351 Part 040-00040508*
Site Altitude:	*0 ft*
Refrigerant	*R-410A*

Unit Information

***WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weight:	*753 / 753 lbs.***
Supply CFM/ESP:	*1300 / 0.5 in. wg.*
Final Filter FV / Qty:	*216.00 fpm / 2*
Outside CFM:	*240*
Ambient Temperature:	*82 °F DB / 73 °F WB*
Return Temperature:	*75 °F DB / 62 °F WB*

Static Pressure

External:	*0.50 in. wg.*
Evaporator:	*0.09 in. wg.*
Filters Clean:	*0.04 in. wg.*
Dirt Allowance	*0.35 in. wg.*
Economizer:	*0.00 in. wg.*
Heating:	*0.15 in. wg.*
Cabinet:	*0.02 in. wg.*
Total:	*1.14 in. wg.*

Cooling Section

	Gross	Net
Total Capacity:	*34.67*	*33.39 MBH*
Sensible Capacity:	*30.31*	*29.02 MBH*
Latent Capacity:	*4.36 MBH*	
Mixed Air Temp:	*73.40 °F DB*	*64.42 °F WB*
Entering Air Temp:	*73.40 °F DB*	*64.42 °F WB*
Lv Air Temp (Coil):	*54.63 °F DB*	*54.46 °F WB*
Lv Air Temp (Unit)	*55.61 °F DB*	*54.85 °F WB*
Supply Air Fan:	*1 x BQ185-VFD @ 0.41 BHP*	
SA Fan RPM / Width:	*1134 / 2.000"*	
Evaporator Coil:	*5.3 ft² / 2 Rows / 14 FPI*	
Evaporator Face Velocity:	*228.6 fpm*	

Heating Section

PreHeat Type:	*Std (No Preheat)*
Heating Type:	*Nat. Gas Heat*
Heating CFM:	*1300*
Total Capacity:	*48.6 MBH*
OA Temp:	*1.0 DB / 1.0°F WB*
RA Temp:	*78.0 °F DB / 62.0 °F WB*
Entering Air Temp:	*60.2 °F DB / 53.7 °F WB*
Leaving Air Temp:	*87.7 °F DB / 87.2 °F WB*
Input:	*60.0 MBH*
Heater Qty (Hi/Low):	*1*
Consumption:	*60.0 MBH*
Operation:	*N/A*

AHRI Listing Information

Cooling Capacity (MBH):	*34.0*
Cooling SEER:	*14.2*
Cooling EER:	*12.1*
Application EER @ Op. Conditions:	*11.0*

Electrical Data

Rating:	*208/3/60*	Minimum Circuit Amp:	*32*
Unit FLA:	*19*	Maximum Overcurrent:	*30*

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		208	3			10.4
Condenser Fans:	1	0.167	208	1	825	1.1	
Supply Fan:	1	2.00	208	3	1760	7.6	
Combustion:	1	0.00	208	1	3000	1.3	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	75	76	78	69	64	62	57	52
Return LW(dB):	73	74	66	57	58	56	49	43

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

18.5" STAR Plenum

2425 South Yukon Ave · Tulsa, Oklahoma 74107-2728 · Ph: (918) 583-2266 Fax: (918) 583-6004
AAONBuild2 Ver. 4.184 (S/N: 3713184 ARFSLXV)

JOB INFORMATION:

Job Name:	*A351 Montgomery Road*
Job Tag:	*RTU-7 LUNCHROOM*
Rep Firm:	
Date:	*11/06/2010*
	11/06/2010

OPERATING CONDITIONS:

Air Flow:	*1,200 CFM*
Static Pressure:	*1.14 in. Wg.*
Relief Dampers DP:	*0.00 in. Wg.*
TSP:	*1.14 in. Wg.*
Site Altitude:	*0.00 Ft*
TSP @ Sea Level:	*1.14 in. Wg.*

FAN PERFORMANCE:

RPM:	*1134*
BHP:	*0.41*
Efficiency:	*52.3%*
In/Out Velocity:	*/ FPM*
Plenum Out Velocity:	*20 FPM*

WHEEL SPECIFICATION:

Max RPM:	*2,200*
Diameter x Qty:	*18.5 in. x 1*
CFM:	*1200*
Tip Speed:	*5,492 FPM*
Inertia:	*5,492 FPM*

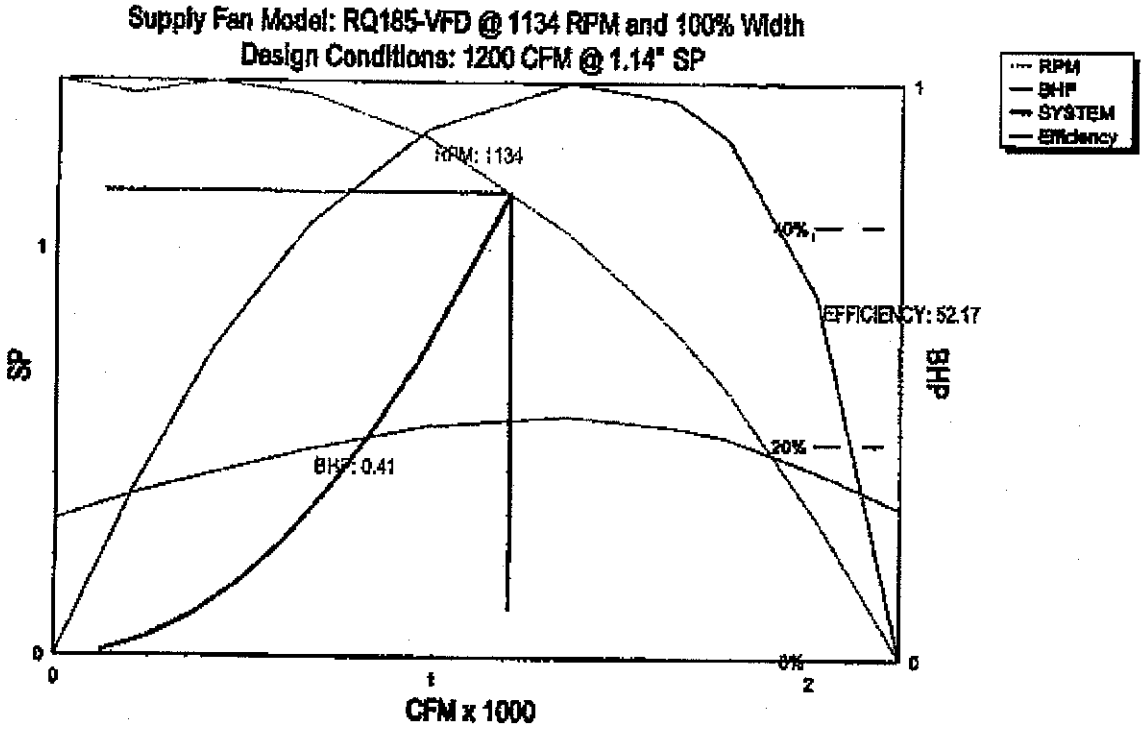
MOTOR SELECTION:

Rated HP / Bypass:	*2 / No*
Frame Size:	*48*
Nominal RPM:	*1760*
VAC/PH/HZ:	*208/3/60*
Efficiency	*Standard / 0.815*
Enclosure Type:	*ODP*
Max Inertial Load:	*27 WR²*

FAN SOUND POWER (Inlet/Outlet):

Octave Band:				(Re 10^-12 watts)			
1	2	3	4	5	6	7	8
75	*76*	*75*	*70*	*67*	*65*	*61*	*56*
75	*76*	*75*	*70*	*67*	*65*	*61*	*56*

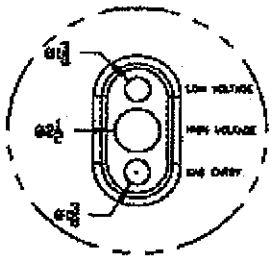
SOUND POWER A-Weighted: 77 / 77 dB



RQ CABINET
STANDARD VERTICAL ~ 1–6 TON

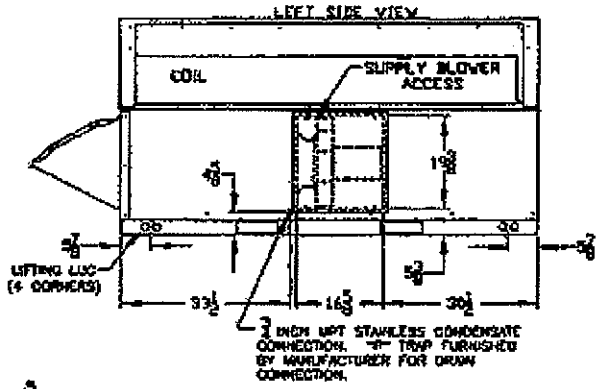
CLEARANCES

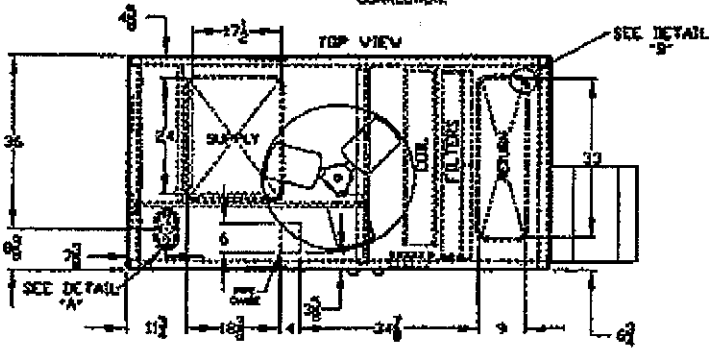
LOCATION	* UNIT SIZE * 1 - 6 TON
OUTSIDE AIR (BACK)	36
SVC (FRONT)	36
LEFT SIDE	24
RIGHT SIDE	48
TOP	UNOBSTRUCTED

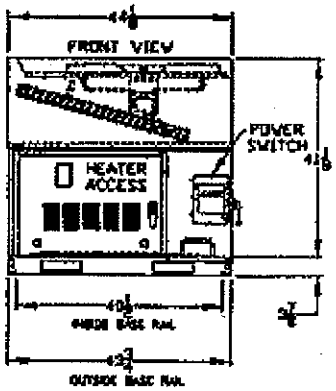


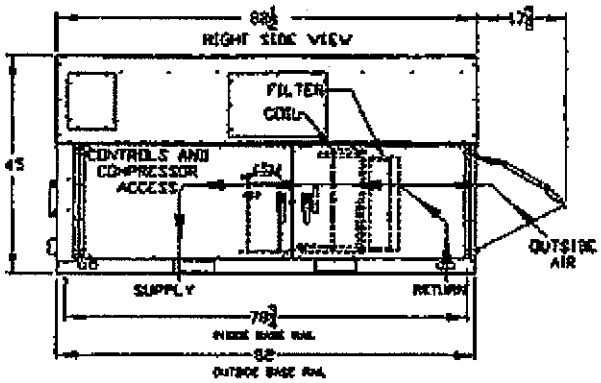
DETAIL A

DETAIL B





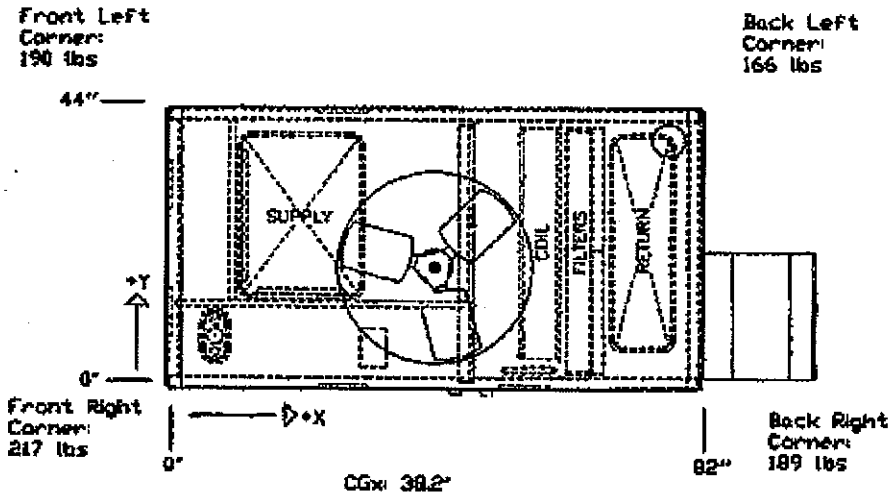




RQ-00009 NEW 03/16/10 SJS
NOTE: ALL DIMENSIONS ARE IN INCHES

RQ CABINET
VERTICAL AIR COOLED CONDENSING UNIT

RQ-003-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X



Disclaimer:
This weight estimate does not account for any SPAs.

Unit Submittal

2425 South Yukon Ave Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6254
AAONBase32 Ver. 4.164 (SN: 3173164-ASPSLXV)

RQ-004-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X
Tag: RTU-8 PHARMACY

Job Name:	*A351 Montgomery Road*	**Unit Submittal For:**	
Job Number:	*A351 Post 082-00040526*	**Unit Submittal Date:**	*November 04, 2010*

	Base Option	Description
R	Series	Roof Top Unit
Q	Generation	Tenth Generation
004	Unit Size	Four
8	Voltage	208V/3Ph/60Hz
V	Interior Protection	Vertical Discharge and Return
C	Refrigerant Style	R-410A - Standard Efficiency
A	Unit Configuration	Air-Cooled Cond. + Std Evap. Coil
0	Coil Coating	Standard
1	Cooling/Heat Pump Staging	1 Stage
2	Heating Type	Natural Gas Aluminized
1	Heating Designation	Heat 1 - 60 MBtuh
2	Heating Staging	2 Stage

	Base Option	Description
0	[illegible]	[illegible]
0	[illegible]	[illegible]
0	[illegible]	[illegible]
0	1D. RA/EA Blower Motor	Standard - None
0	2. OA Control	Standard - None
0	3. Heat Options	Standard
B	4. Maintenance Options	115V Convenience Outlet - Factory Wired
Q	5A. SA Blower Configuration	1 Blower + Inverter Rated 3 Phase Motor + VFD set @ 42 HZ
J	5B. SA Blower	12" Direct Drive Backward Curved Plenum
D	5C. SA Motor	2 HP 1750 rpm
0	6A. Pre Filter Type	Standard - None
A	6B. Unit Filter Type	2" Pleated - 50% ES
0	6C. Filter Options	Standard
C	7. Refrigeration Control	Fan Cycling
0	8. Refrigeration Options	Standard
A	9. Refrigeration Accessories	Sight Glass
F	10. Power Options	Power Switch - 60 amps
H	11. Safety Options	Remote Smoke Detector Terminals - Field Installed Detector
B	12. Controls	Phase & Brown Out Protection
J	13. Special Controls	Factory Installed CPC Multiflex BBAO Controls Furnished by AAON
0	14A. Preheat Configuration	Standard - None
0	14B. Preheat Sizing	Standard - None
0	15. Glycol Percent	Water or No WSHP
0	16. Interior Cabinet Options	Standard - Double Wall + R-13 Foam Insulation + Stainless Steel Drain Pan
0	17. Exterior Cabinet Options	Standard
0	18. Customer Code	Standard
0	19. Code Options	Standard - ETL U.S.A. Listing
0	20. Coating	Standard
0	21. Water-Cooled Cond.	Standard - None
0	22. Control Vendors	Standard
X	23. Trim	Special Price Authorization + AAON Grey Paint

Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONBuild2 Ver. 4.14d (SN: 8772184-ASFSLXT)

RQ-004-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X
Tag: RTU-3 PHARMACY

Job Information

Job Name:	*A351 Montgomery Road*
Job Number:	*A351 Prot 060-00046506*
Site Altitude:	*0 ft*
Refrigerant:	*R-410A*

Unit Information

***WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights:	*809 / 809 lbs.***
Supply CFM/ESP:	*1400 / 0.5 in. wg.*
Final Filter FV / Qty:	*252.00 fpm / 3*
Outside CFM:	*350*
Ambient Temperature:	*92 °F DB / 73 °F WB*
Return Temperature:	*75 °F DB / 62 °F WB*

Static Pressure

External:	*0.50 in. wg.*
Evaporator:	*0.16 in. wg.*
Filters Clean:	*0.05 in. wg.*
Dirt Allowance	*0.35 in. wg.*
Economizer:	*0.00 in. wg.*
Heating:	*0.18 in. wg.*
Cabinet:	*0.03 in. wg.*
Total:	*1.27 in. wg.*

Cooling Section

	Gross	Net
Total Capacity:	*47.85*	*46.20 MBH*
Sensible Capacity:	*38.53*	*37.16 MBH*
Latent Capacity:	*9.03 MBH*	
Mixed Air Temp:	*79.25 °F DB*	*65.00 °F WB*
Entering Air Temp:	*79.25 °F DB*	*65.00 °F WB*
Lv Air Temp (Coil):	*53.10 °F DB*	*53.09 °F WB*
Lv Air Temp (Unit)	*54.16 °F DB*	*53.54 °F WB*
Supply Air Fan:	*1 x EQ135-VFD @ 0.53 BHP*	
SA Fan RPM / Width:	*1229 / 3.000"*	
Evaporator Coil:	*5.3 ft² / 3 Rows / 14 FPI*	
Evaporator Face Velocity:	*266.7 fpm*	

Heating Section

PreHeat Type:	*Std (No Preheat)*
Heating Type:	*Nat. Gas Heat*
Heating CFM:	*1400*
Total Capacity:	*48.6 MBH*
OA Temp:	*1.0 DB / 1.0°F WB*
RA Temp:	*75.0 °F DB / 62.0 °F WB*
Entering Air Temp:	*56.5 °F DB / 51.4 °F WB*
Leaving Air Temp:	*85.6 °F DB / 62.6 °F WB*
Input:	*60.0 MBH*
Heater Qty (Hi/Low):	*1*
Consumption:	*60.0 MBH*
Operation:	*N/A*

AHRI Listing Information

Cooling Capacity (MBH):	*47.5*
Cooling SEER:	*14.6*
Cooling EER:	*12.5*
Application EER @ Op. Conditions:	*11.6*

Electrical Data

Rating:	*208/3/60*
Unit FLA:	*24*
Minimum Circuit Amp:	*27*
Maximum Overcurrent:	*40*

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		208	3			12.7
Condenser Fans:	1	0.33	208	1	1075	2.6	
Supply Fan:	1	2.00	208	3	1760	7.5	
Combustion:	1	0.08	208	1	3000	1.2	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	77	75	73	71	66	63	60	54
Return LW(dB):	74	74	68	69	58	65	60	48

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

18.5" STAR Plenum

2425 South Yukon Ave · Tulsa, Oklahoma 74107-2728 · Ph. (918) 583-2266 Fax (918) 583-6024
AAONEnet32 Ver 4.164 (DB: 6770154-AS7SLXV)

JOB INFORMATION:

Job Name:	*A351 Montgomery Road*
Job Tag:	*RTU-3 PHARMACY*
Rep Firm:	
Date:	*11/06/2018*
	11/06/2018

OPERATING CONDITIONS:

Air Flow:	*1,400 CFM*
Static Pressure:	*1.27 in. Wg.*
Relief Dampers DP:	*0.00 in. Wg.*
TSP:	*1.27 in. Wg.*
Site Altitude:	*0.00 Ft*
TSP @ Sea Level:	*1.27 in. Wg.*

FAN PERFORMANCE:

RPM:	*1229*
BHP:	*0.53*
Efficiency:	*52.9%*
In/Out Velocity:	*/ FPM*
Plenum Out Velocity:	*23 FPM*

WHEEL SPECIFICATION:

Max RPM:	*2,200*
Diameter x Qty:	*18.5 in. x 1*
CFM:	*1400*
Tip Speed:	*5,952 FPM*
Inertia:	*5,952 FPM*

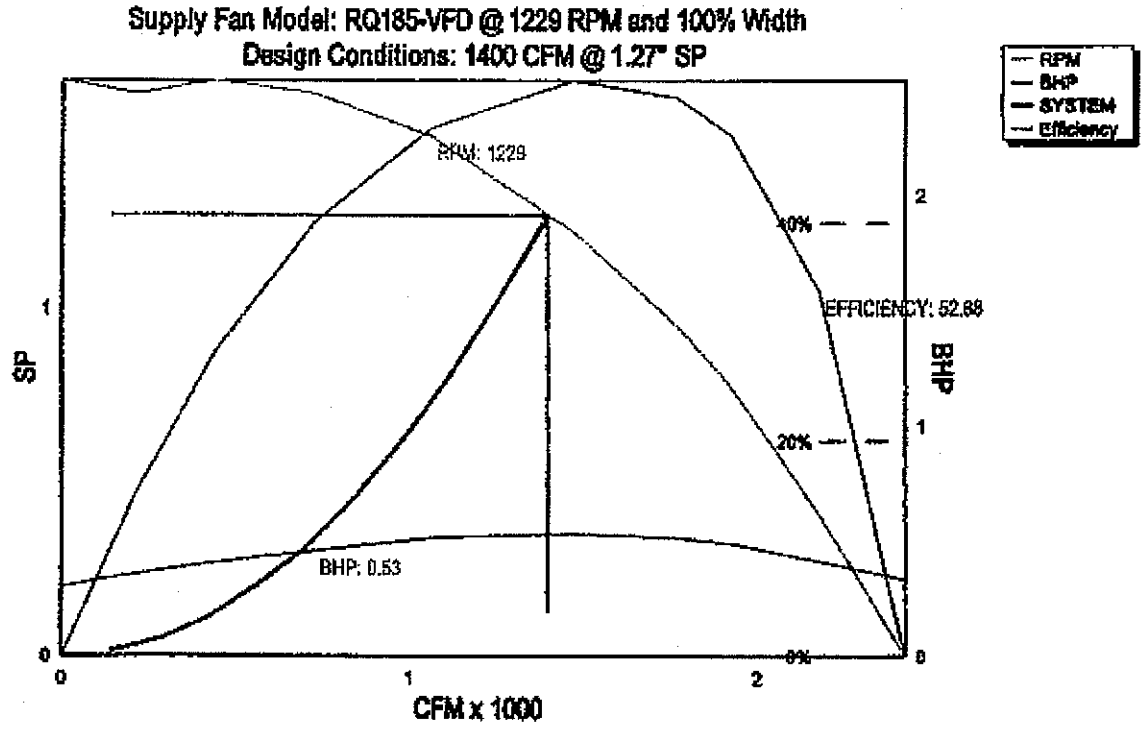
MOTOR SELECTION:

Rated HP / Bypass:	*2 / No*
Frame Size:	*48*
Nominal RPM:	*1760*
VAC/PH/HZ:	*208/3/60*
Efficiency	*Standard / 0.815*
Enclosure Type:	*ODP*
Max Inertial Load:	*27 WR²*

FAN SOUND POWER (Inlet/Outlet):

Octave Band:				(Re 10^-12 watts)			
1	2	3	4	5	6	7	8
77	*78*	*78*	*73*	*69*	*67*	*64*	*58*
77	*78*	*78*	*73*	*69*	*67*	*64*	*58*

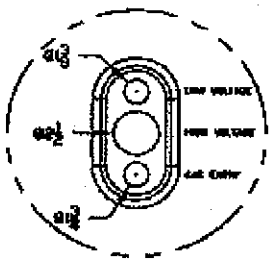
SOUND POWER A-Weighted: *78 / 78 dB*



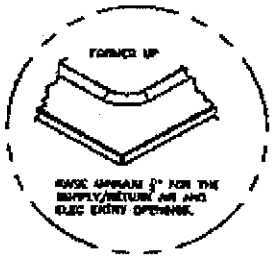
RQ CABINET
STANDARD VERTICAL ~ 1–6 TON

CLEARANCES

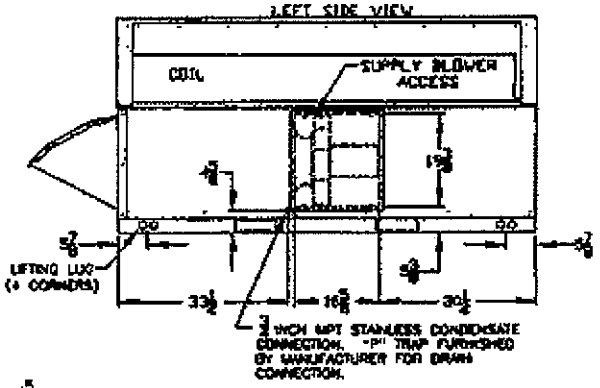
LOCATION	* UNIT SIZE * 1 - 6 TON
OUTSIDE AIR (BACK)	36
FDC (FRONT)	36
LEFT SIDE	24
RIGHT SIDE	48
TOP	UNOBSTRUCTED

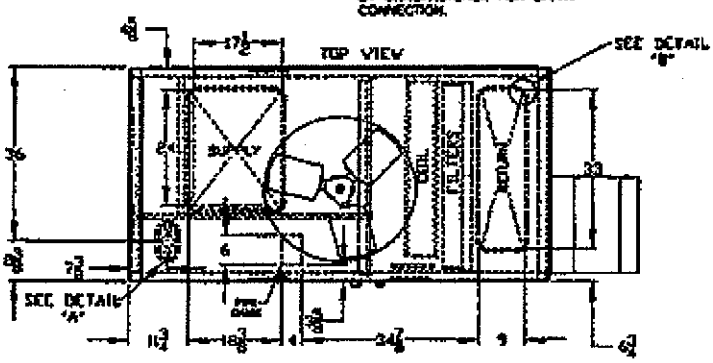


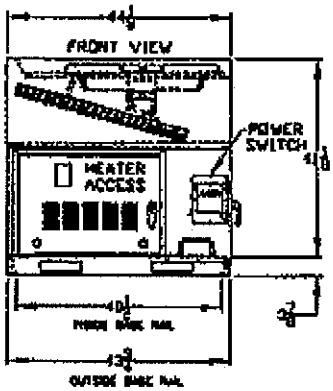
DETAIL A

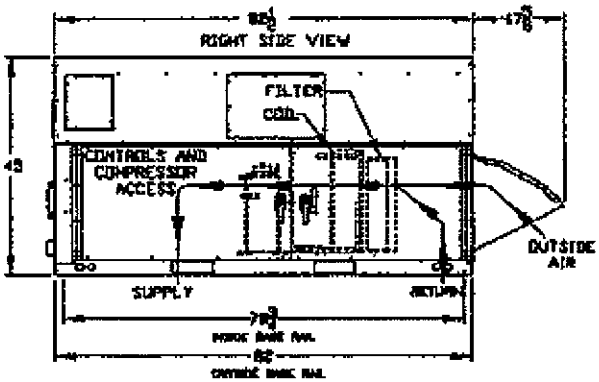


DETAIL B





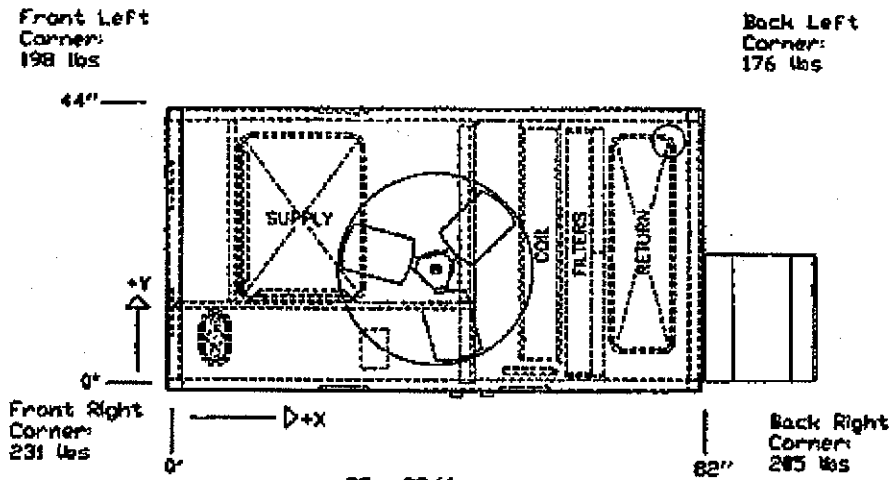




RQ-00009 NEW 03/16/10 SJS
NOTE: ALL DIMENSIONS ARE IN INCHES

RQ CABINET
VERTICAL AIR COOLED CONDENSING UNIT

RQ-004-8-V-CA01-212:0000-00B-QJD-0A0-C0AFHBJ-00-00000000X



Disclaimer:
This weight estimate does not account for any SPAs.

Unit Submittal

2425 South Yukon Ave · Tulsa, Oklahoma 74107-2728 · Ph. (918) 583-2266 Fax (918) 583-4994
AAONEase32 Ver 4.184 (64) 07/21/04-RUP(LXV)

RQ-006-8-V-CB01-232:0000-00B-QJD-0A0-C0GFHBJ-00-00000000X
Tag: RTU-9 OFFICES

Job Name:	*A851 Montgomery Road*	Unit Submittal For:	
Job Number:	*A851 Proj 050-00040506*	Unit Submittal Date:	*November 06, 2010*

	Base Option	Description
R	Series	Roof Top Unit
Q	Generation	Tenth Generation
006	Unit Size	6k
8	Voltage	208V/3Ø/60Hz
V	Interior Protection	Vertical Discharge and Return
C	Refrigerant Style	R-410A - Standard Efficiency
B	Unit Configuration	Air-Cooled Cond. + S Row Evap. Coil
0	Coil Coating	Standard
1	Cooling/Heat Pump Staging	1 Stage
2	Heating Type	Natural Gas Aluminized
3	Heating Designation	[illegible]
2	Heating Staging	2 Stage

	Feature Option	Description
0	1A. RA/OA Section	Manually Adjustable OA Opening + RA Opening
0	1B. RA/EA Blower Configuration	Standard - None
0	1C. RA/EA Blower	Standard - None
0	1D. [illegible]	Standard - None
0	1E. [illegible]	Standard - None
0	1F. [illegible]	Standard
B	2. [illegible]	115V Convenience Outlet - Factory Wired
Q	3. [illegible]	1 Blower + Inverter Rated 3 Phase Motor + VFD set @ 55 HZ
J	4. [illegible]	19" Direct Drive Backward Curved Plenum
D	5. [illegible]	2 HP 1760 rpm
0	6. [illegible]	Standard - None
A	7. Inlet Filter Type	2" Pleated - 30% Eff
0	8C. Filter Options	Standard
C	9. Refrigeration Control	Fan Cycling
0	9. Refrigeration Options	Standard
G	9. Refrigeration Accessories	ECM Condenser Fan - Multiple Speed + Sight Glass
F	10. Power Options	Power Switch - 80 amps
H	11. Safety Options	Remote Smoke Detector Terminals - Field Installed Detector
B	12. Controls	Phase & Brown Out Protection
J	13. Special Controls	Factory Installed CPC Multiflex 6AAO Controls Furnished by AAON
0	14A. Preheat Configuration	Standard - None
0	14B. Preheat Sizing	Standard - None
0	15. Glycol Percent	Water or No WSHP
0	16. Interior Cabinet Options	Standard - Double Wall + R-13 Foam Insulation + Stainless Steel Drain Pan
0	17. Exterior Cabinet Options	Standard
0	18. Customer Code	Standard
0	19. Code Options	Standard - ETL U.S.A. Listing
0	20. Coating	Standard
0	21. Water-Cooled Cond.	Standard - None
0	22. Control Vendors	Standard
X	23. Type	Special Price Authorization + AAON Gray Paint

Unit Rating

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph (918) 583-2266 Fax (918) 583-6024
AAONSize22 Ver. 4.164 (SN: 6772184-A9PB1VV)

RQ-006-8-V-CB01-232:0000-00B-QJD-0A0-C0GFHBJ-00-00000000X
Tag: RTU-9 OFFICES

Job Information

Job Name:	*A351 Montgomery Road*
Job Number:	*A351 Prot 060-0004506*
Site Altitude:	*0 ft*
Refrigerant	*R-410A*

Unit Information

***WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weight:	*907 / 907 lbs.***
Supply CFM/ESP:	*5020 / 0.5 in. wg.*
Final Filter FV / Qty:	*362.80 fpm / 2*
Outside CFM:	*506*
Ambient Temperature:	*92 °F DB / 73 °F WB*
Return Temperature:	*75 °F DB / 62 °F WB*

Static Pressure

External:	*0.50 in. wg.*
Evaporator:	*0.35 in. wg.*
Filters Clean:	*0.11 in. wg.*
Dirt Allowance	*0.35 in. wg.*

Economizer:	*0.00 in. wg.*
Heating:	*0.22 in. wg.*
Cabinet:	*0.06 in. wg.*
Total:	*1.79 in. wg.*

Cooling Section

	Gross	Net
Total Capacity:	*78.35*	*72.19 MBH*
Sensible Capacity:	*58.71*	*55.35 MBH*
Latent Capacity:	*16.64 MBH*	
Mixed Air Temp:	*79.35 °F DB*	*65.60 °F WB*
Entering Air Temp:	*79.25 °F DB*	*63.00 °F WB*
Lv Air Temp (Coil):	*52.03 °F DB*	*51.82 °F WB*
Lv Air Temp (Unit)	*53.54 °F DB*	*52.47 °F WB*
Supply Air Fan:	*1 x RQ188-VFD @ 1.07 BHP*	
SA Fan RPM / Width:	*1558 / 9.000"*	
Evaporator Coil:	*5.2 ft² / 6 Rows / 14 FPI*	
Evaporator Face Velocity:	*384.8 fpm*	

Heating Section

PreHeat Type:	*Std (No Preheat)*
Heating Type:	*Nat. Gas Heat*
Heating CFM:	*5020*
Total Capacity:	*81.0 MBH*
OA Temp:	*1.0 DB / 1.0°F WB*
RA Temp:	*75.0 °F DB / 62.0 °F WB*
Entering Air Temp:	*54.5 °F DB / 51.4 °F WB*
Leaving Air Temp:	*93.6 °F DB / 65.3 °F WB*
Input:	*100.0 MBH*
Heater Qty (Hi/Low):	*1*
Consumption:	*180.0 MBH*
Operation:	*N/A*

AHRI Listing Information

Application EER @ Op. Conditions: *10.9*

Electrical Data

Rating:	*208/3/60*	Minimum Circuit Amp:	*38*
Unit FLA:	*33*	Maximum Overcurrent:	*60*

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		208	3			32.4
Condenser Fans:	1	0.333	208	1	1100	2.8	
Supply Fan:	1	2.00	208	3	1760	7.5	
Combustion:	1	0.09	208	1	3000	1.3	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	83	82	84	79	72	69	67	61
Return LW(dB):	77	76	72	66	62	59	56	46

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

18.5" STAR Plenum

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094 -
AAONet32 Ver. 4.184 (SN: 4773)(M-ASPBLKY)

JOB INFORMATION:

Job Name:	*A351 Montgomery Road*
Job Tag:	*RTU-9 OFFICES*
Rep Firm:	
Date:	*11/06/2020*
	11/06/2020

OPERATING CONDITIONS:

Air Flow:	*2,020 CFM*
Static Pressure:	*1.79 in. Wg.*
Relief Dampers DP:	*0.00 in. Wg.*
TSP:	*1.79 in. Wg.*
Site Altitude:	*0.00 Ft*
TSP @ Sea Level:	*1.79 in. Wg.*

FAN PERFORMANCE:

RPM:	*1559*
BHP:	*1.07*
Efficiency:	*53.1%*
In/Out Velocity:	*/ FPM*
Plenum Out Velocity:	*34 FPM*

WHEEL SPECIFICATION:

Max RPM:	*2,200*
Diameter x Qty:	*18.5 in. x 1*
CFM:	*2020*
Tip Speed:	*7,851 FPM*
Inertia:	*7,851 FPM*

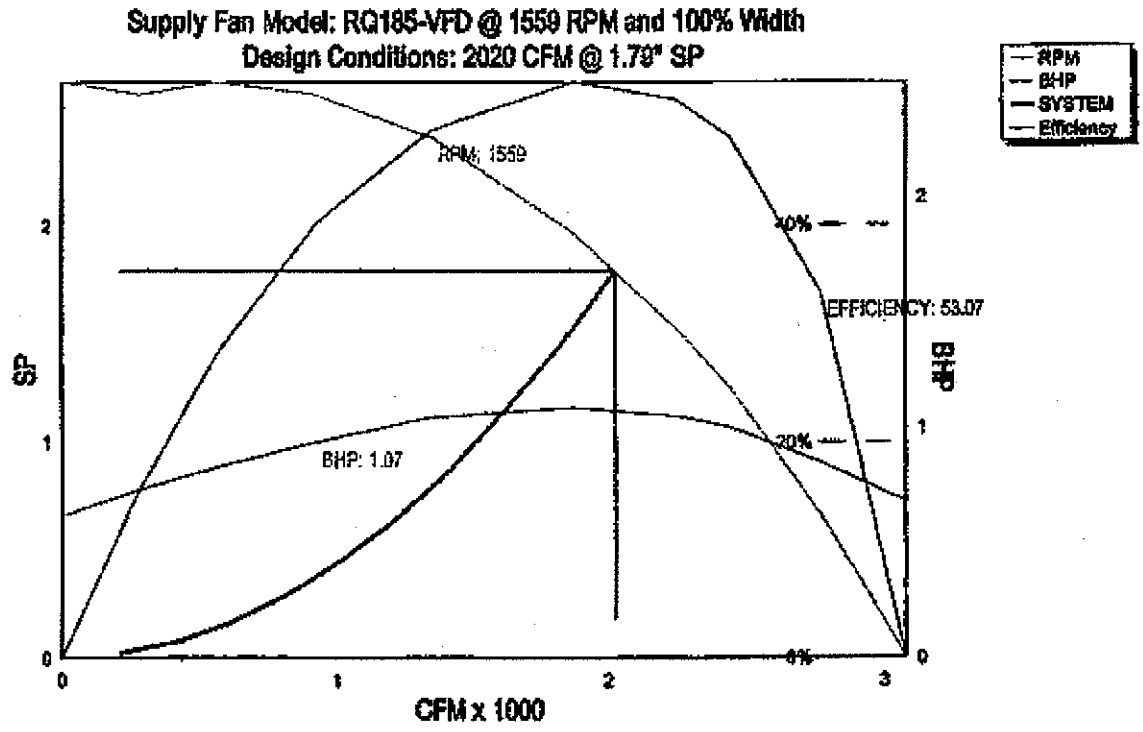
MOTOR SELECTION:

Rated HP / Bypass:	*2 / No*
Frame Size:	*48*
Nominal RPM:	*1760*
VAC/PH/HZ:	*208/3/60*
Efficiency	*Standard / 0.815*
Enclosure Type:	*ODP*
Max Inertial Load:	*27 WR²*

FAN SOUND POWER (Inlet/Outlet):

Octave Band:				(Re 10^-12 watts)			
1	2	3	4	5	6	7	8
83	*82*	*84*	*81*	*75*	*73*	*71*	*65*
83	*82*	*84*	*81*	*75*	*73*	*71*	*65*

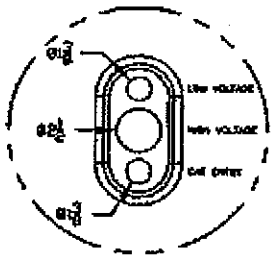
SOUND POWER A-Weighted: *84 / 84 dB*



RQ CABINET
STANDARD VERTICAL ~ 1–6 TON

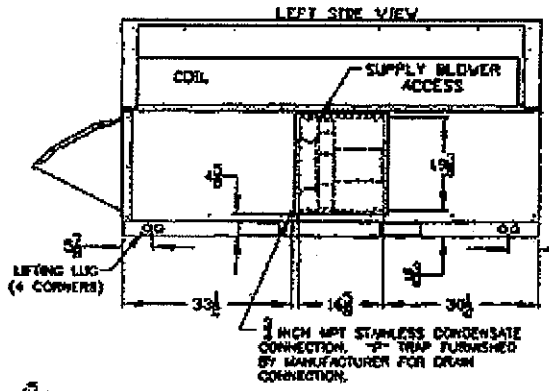
CLEARANCES

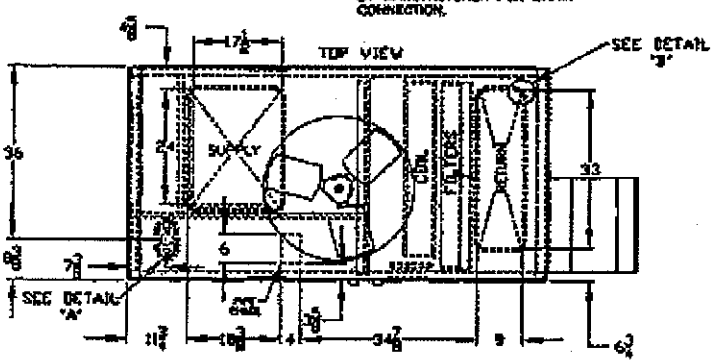
LOCATION	* UNIT SIZE * 1-6 TON
OUTSIDE AIR (BACK)	36
HVAC (FRONT)	36
LEFT SIDE	24
RIGHT SIDE	48
TOP	UNOBSTRUCTED

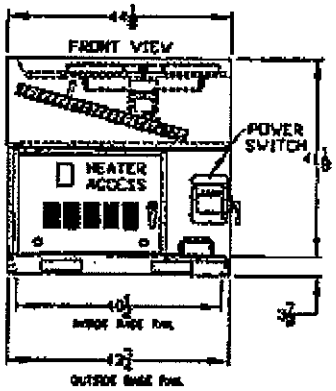


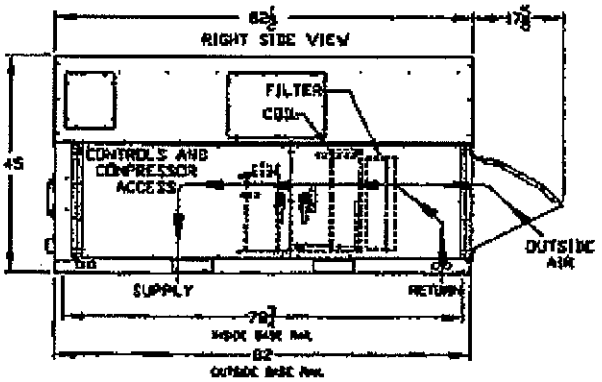
DETAIL A

DETAIL B





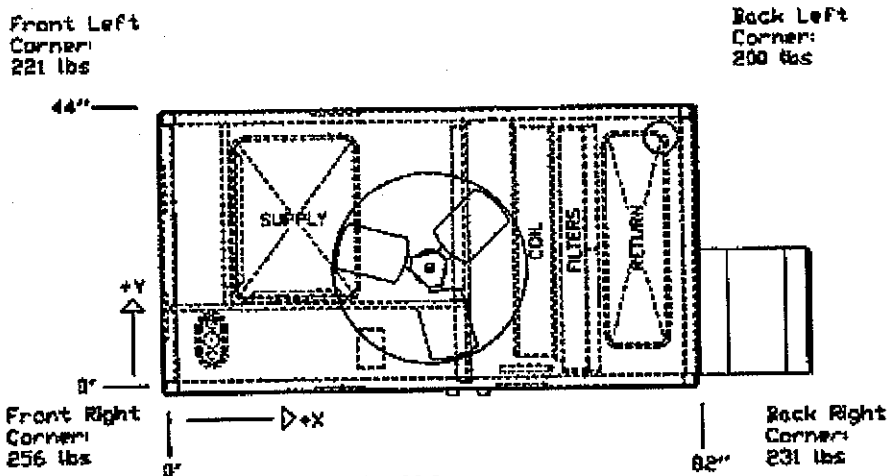




RQ-00003 NEW 03/18/10 SJS
NOTE: ALL DIMENSIONS ARE IN INCHES

RQ CABINET
VERTICAL AIR COOLED CONDENSING UNIT

RQ-006-8-V-CB01-232:0000-00B-QJD-0A0-C0GFHBJ-00-00000000X



Disclaimer
This weight estimate does not account for any SPAs.

Unit Submittal

2425 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - Ph. (918) 583-2266 Fax (918) 583-6094
AAONEnet32 Ver. 4.184 (SN: 8773194; ASPXLXT)

RQ-002-S-V-CA01-212:0000-00B-QKD-0A0-C0AFHBJ-00-00000000X
Tag: RTU-10 CUSTOMER SERVICE

Job Name:	*4351 Montgomery Road*	*Unit Submittal For:*	
Job Number:	*4351 Post 060-09040505*	*Unit Submittal Date:*	*November 06, 2018*

	Base Option	Description
R	Series	Roof Top Unit
Q	Generation	Tenth Generation
002	Unit Size	Two
S	Voltage	208V/3Ph/60Hz
V	Interior Protection	Vertical Discharge and Return
C	Refrigerant Style	R-410A - Standard Efficiency
A	Unit Configuration	Air-Cooled Cond. + Std Evap. Coil
0	Coil Coating	Standard
1	Cooling/Heat Pump Staging	1 Stage
2	Heating Type	Natural Gas Aluminized
1	Heating Destination	Heat 1 - 80 MBtuh
2	Heating Staging	2 Stage

0	[illegible]	[illegible] Opening
0	[illegible]	[illegible]
0	[illegible]	[illegible]
0	1D. RA/EA Blower Motor	Standard - None
0	2. OA Control	Standard - None
0	3. Hood Options	Standard
B	4. Maintenance Options	115V Convenience Outlet - Factory Wired
Q	5A. SA Blower Configuration	1 Blower + Inverter Rated 3 Phase Motor + VFD set @ 36 HZ
K	5B. SA Blower	10" Direct Drive Backward Curved Plenum - 60% Width
D	5C. SA Motor	2 HP 1760 rpm
0	6A. Pre Filter Type	Standard - None
A	6B. Unit Filter Type	2" Pleated - 30% 8M
0	6C. Filter Options	Standard
C	7. Refrigeration Control	Fan Cycling
0	8. Refrigeration Options	Standard
A	9. Refrigeration Accessories	Sight Glass
F	10. Power Options	Power Switch - 60 Amps
H	11. Safety Options	Remote Smoke Detector Terminals - Field Installed Detector
B	12. Controls	Phase & Brown Out Protection
J	13. Special Controls	Factory Installed CPC MultiFlex 8SAO Controls Furnished by AAON
0	14A. Preheat Configuration	Standard - None
0	14B. Preheat Sizing	Standard - None
0	15. Glycol Percent	Water or No WSHP
0	16. Interior Cabinet Options	Standard - Double Wall + R-13 Foam Insulation + Stainless Steel Drain Pan
0	17. Exterior Cabinet Options	Standard
0	18. Customer Code	Standard
0	19. Code Options	Standard - ETL (U.S.A. Listing
0	20. Curbing	Standard
0	21. Water-Cooled Cond.	Standard - None
0	22. Control Vendors	Standard
X	23. Trim	Special Price Authorization + AAON Gray Paint

Unit Rating

2420 South Yukon Ave - Tulsa, Oklahoma 74107-2728 - PH. (918) 583-2266 Fax (918) 583-6094

RQ-002-8-V-CA01-212:0000-00B-QKD-0A0-C0AFEBJ-00-00000000X

Tag: RTU-10 CUSTOMER SERVICE

Job Information

Job Name:	*A351 Montgomery Road*
Job Number:	*A351 Proto 060-00040505*
Site Altitude:	*0 ft*
Refrigerant	*R-410A*

Unit Information

***WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA*

Approx. Op./Ship Weights:	*761 / 761 lbs.***
Supply CFM/ESP:	*800 / 0.5 in. wg.*
Final-Filter FV / Qty:	*144.00 fpm / 2*
Outside CFM:	*160*
Ambient Temperature:	*92 °F DB / 73 °F WB*
Return Temperature:	*75 °F DB / 62 °F WB*

Static Pressure

External:	*0.50 in. wg.*
Evaporator:	*0.04 in. wg.*
Filters Clean:	*0.02 in. wg.*
Dirt Allowance	*0.55 in. wg.*
Economizer:	*0.00 in. wg.*
Heating:	*0.03 in. wg.*
Cabinet:	*0.01 in. wg.*
Total:	*1.00 in. wg.*

Cooling Section

	Gross	Net
Total Capacity:	*27.44*	*25.68 MBH*
Sensible Capacity:	*22.13*	*21.35 MBH*
Latent Capacity:	*5.31 MBH*	
Mixed Air Temp:	*78.40 °F DB*	*64.42 °F WB*
Entering Air Temp:	*78.40 °F DB*	*64.42 °F WB*
Lv Air Temp (Coil):	*52.55 °F DB*	*52.33 °F WB*
Lv Air Temp (Unit)	*53.24 °F DB*	*52.71 °F WB*
Supply Air Fan:	*1 x RQ18SD60-VFD @ 0.25 BHP*	
SA Fan RPM / Width:	*1125 / 1.750"*	
Evaporator Coil:	*5.3 ft² / 2 Rows / 14 FPI*	
Evaporator Face Velocity:	*152.4 fpm*	

Heating Section

PreHeat Type:	*Std (No Preheat)*
Heating Type:	*Nat. Gas Heat*
Heating CFM:	*800*
Total Capacity:	*48.4 MBH*
OA Temp:	*1.0 DB / 1.0°F WB*
RA Temp:	*75.0 °F DB / 62.0 °F WB*
Entering Air Temp:	*69.2 °F DB / 53.1 °F WB*
Leaving Air Temp:	*116.4 °F DB / 72.7 °F WB*
Input:	*60.0 MBH*
Heater Qty (Hi/Low):	*1*
Consumption:	*60.0 MBH*
Operation:	*N/A*

AHRI Listing Information

Cooling Capacity (MBH):	*27.6*
Cooling SEER:	*15.2*
Cooling EER:	*13*
Application EER @ Op. Conditions:	*11.6*

Electrical Data

Rating:	*208/3/60*
Unit FLA:	*17*
Minimum Circuit Amp:	*19*
Maximum Overcurrent:	*25*

	Qty	HP	VAC	Phase	RPM	FLA	LRA
Compressor 1:	1		208	3			8.3
Condenser Fans:	1	0.167	208	1	825	1.1	
Supply Fan:	1	2.00	208	3	1760	7.5	
Combustion:	1	0.02	208	1	3000	1.3	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW(dB):	73	74	74	67	62	60	55	50
Return LW(dB):	71	72	65	60	56	54	47	41

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

18.5" STAR Plenum

2425 South Yukon Ave · Tulsa, Oklahoma 74107-3728 · Ph: (918) 583-2266 Fax: (918) 583-6254
AAONEcat32 Ver. 4.164 (SN: 977319) ASP(FLEX)

JOB INFORMATION:

Job Name:	*A551 Montgomery Road*
Job Tag:	*RTU-16 CUSTOMER*
Rep Firm:	*SERVICE*
Date:	
	11/06/2010
	11/06/2010

OPERATING CONDITIONS:

Air Flow:	*800 CFM*
Static Pressure:	*1.00 in. Wg.*
Relief Dampers DP:	*0.00 in. Wg.*
TSP:	*1.00 in. Wg.*
Site Altitude:	*0.00 Ft*
TSP @ Sea Level:	*1.00 in. Wg.*

FAN PERFORMANCE:

RPM:	*1129*
BHP:	*0.25*
Efficiency:	*50.8%*
In/Out Velocity:	*/ FPM*
Plenum Out Velocity:	*18 FPM*

WHEEL SPECIFICATION:

Max RPM:	*2,200*
Diameter x Qty:	*18.5 in. x 1*
CFM:	
Tip Speed:	*800*
Inertia:	*5,468 FPM*
	5,468 FPM

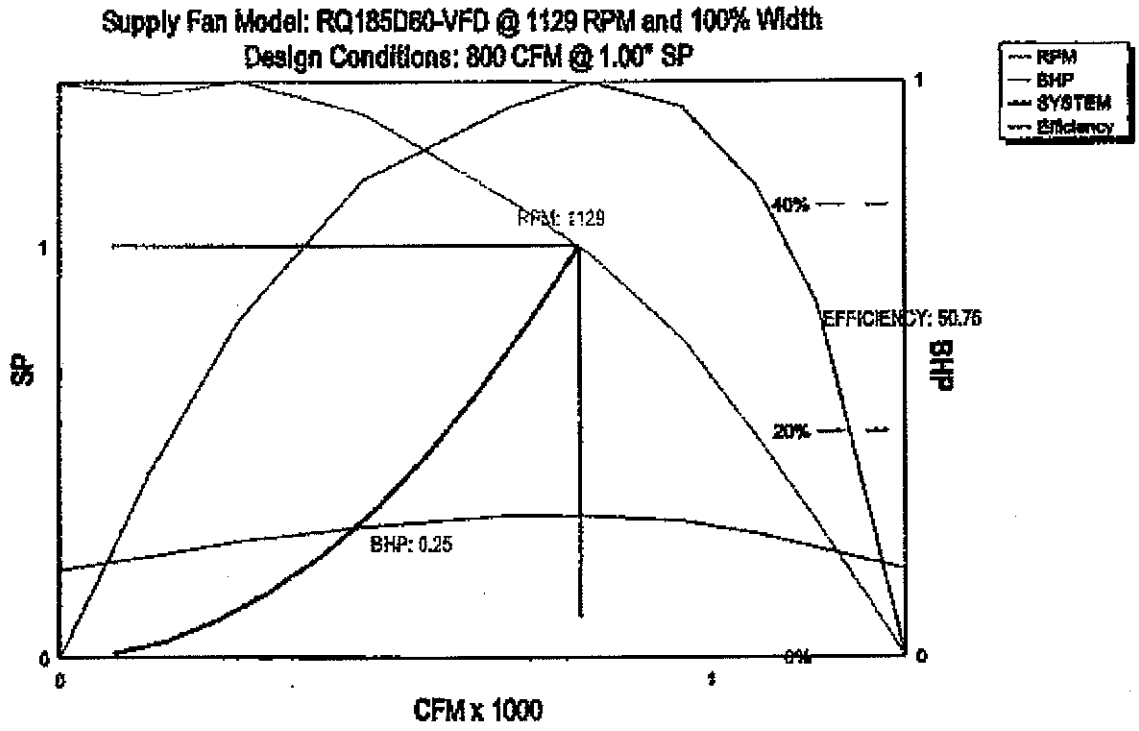
MOTOR SELECTION:

Rated HP / Bypass:	*2 / No*
Frame Size:	*48*
Nominal RPM:	*1760*
VAC/PH/HZ:	*208/3/60*
Efficiency	*Standard / 0.815*
Enclosure Type:	*ODP*
Max Inertial Load:	*27 WR²*

FAN SOUND POWER (Inlet/Outlet):

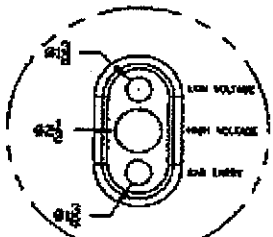
Octave Band:				(Re 10^-12 watts)			
1	2	3	4	5	6	7	8
73	*74*	*74*	*69*	*65*	*63*	*59*	*54*
73	*74*	*74*	*69*	*65*	*63*	*59*	*54*

SOUND POWER A-Weighted: 75 / 75 dB

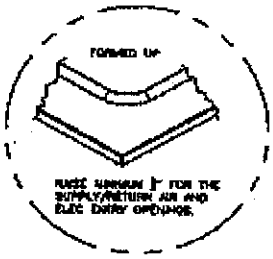


RQ CABINET
STANDARD VERTICAL ~ 1-6 TON

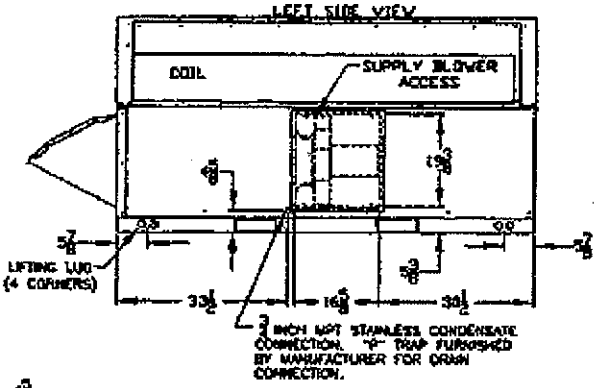
CLEARANCES	
LOCATION	* UNIT SIZE * 1-6 TON
OUTSIDE AIR (BACK)	36
HVAC (FRONT)	36
LEFT SIDE	24
RIGHT SIDE	48
TOP	UNOBSTRUCTED

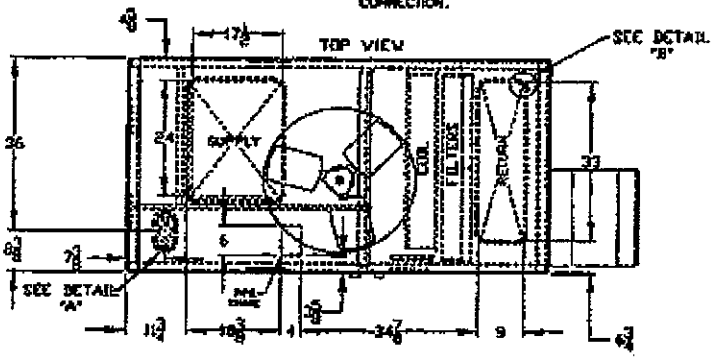


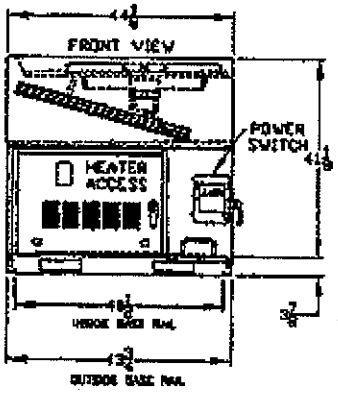
DETAIL A

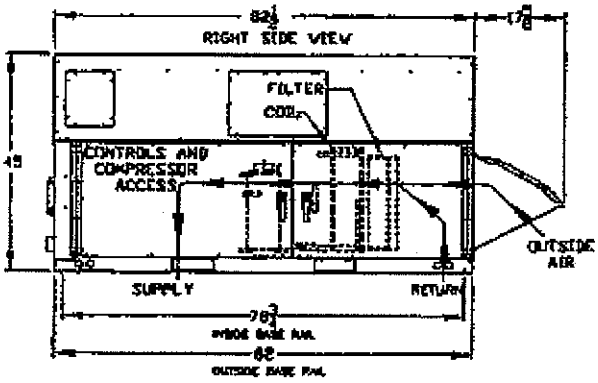


DETAIL B









RQ-00009 NEW 03/16/10 SJS
NOTE: ALL DIMENSIONS ARE IN INCHES

RQ CABINET
VERTICAL AIR COOLED CONDENSING UNIT

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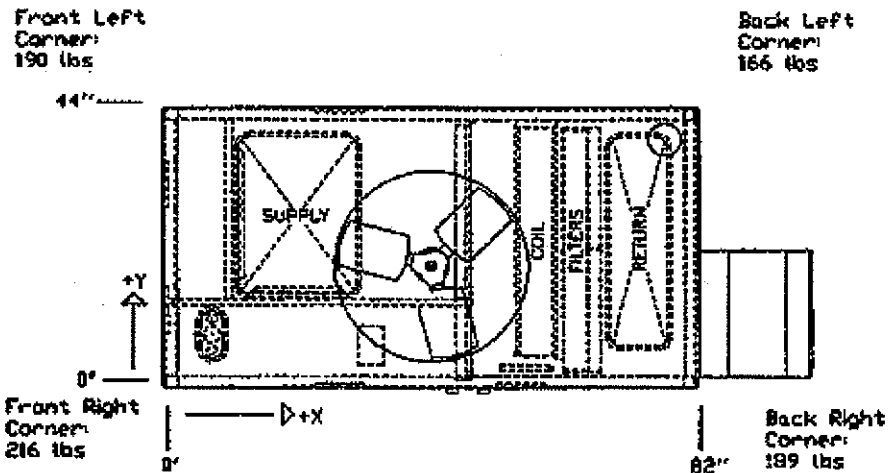

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