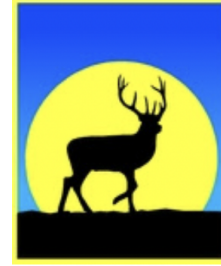


# Blacktail Refrigeration

PO Box 1082  
Lakeside, MT 59922  
406.844.2082



## Estimate

### Estimate

Hot Springs School District

### Project

Rooftop Unit Replacement

### Estimate #

q-240904

### Expdate

10/1/2024

Description	Qty	Unit price	Total price
Ruud M1 10 TON HEAT PUMP R410A 208/230-3 2 STAGE COMP VFD BELT DRIVE MED STATIC HI	1	\$14,097.85	\$14,097.85
Install	1	\$4,800.00	\$4,800.00
DOWN DISCHARGE ECONOMIZER W/SEIMENS ACTUATOR & CONTROL RGED/RHPD 7-12.5 TON	1	\$1,809.57	\$1,809.57
ELECTRIC HEATER KIT 30KW 208-230V 3PH FOR RHPD 7.5 THRU 10 TON	1	\$1,081.78	\$1,081.78
Curb Adapater	1	\$1,945.81	\$1,945.81
Misc Fittings	1	\$300.00	\$300.00

Subtotal \$24,035.01

Notes: Replacement of Rooftop unit. No changes to building electrical or controls quoted here. Any changes made in those areas may require additional parts and charges.

Adjustments \$0.00

**\$24,035.01**



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Date: Sep 3 2024

Job: HOT SPRINGS

Submitted By: BRANDON



## Performance Summary

Tag: <b>RTU - 1</b>	Model No: <b>RHPDZT120ACG000ABCA0</b>	AHRI Ref: <b>203373844</b>
Project: <b>HOT SPRINGS</b>	City: <b>SPOKANE INTL ARPT</b>	State: <b>WA</b>
Altitude: <b>2,365</b>	Air Discharge:	

## Cooling Performance

AHRI Rating - Capacity: <b>114,000</b>	EER: <b>11</b>	IEER: <b>14.1</b>
Gross Cap @ AHRI Rating Conditions(btuh) - Capacity: <b>118,579</b>		
Ambient Air (F) - Dry Bulb: <b>89.6</b>	Wet Bulb: <b>61.7</b>	
Airflow (CFM) - CFM: <b>4,000</b>	SCFM: <b>3,571</b>	
System Entering Air (F) - Dry Bulb: <b>80</b>	Wet Bulb: <b>67</b>	% RH: <b>52.2</b>
System Leaving Air (F) - Dry Bulb: <b>59.5</b>	Wet Bulb: <b>57</b>	
Air Enthalpy (btu/lb) - Entering: <b>32.9</b>	Leaving: <b>25.4</b>	
Design Net Cooling Capacity (btuh) - Total: <b>120,200</b>	Sensible: <b>79,100</b>	Latent: <b>41,100</b>
Design Gross Capacity (btuh) - Capacity: <b>121,300</b>	Sensible: <b>80,200</b>	
Total Power - Watts: <b>11,095.7</b>	KW: <b>11.1</b>	

## Heating Performance

AHRI Rating @ High Heating - Capacity: <b>112,000</b>	COP: <b>3.3</b>	HSPF: <b>0</b>
Electric Heat Input - KW: <b>0</b>		
Heating Airflow (CFM) - CFM: <b>3,571</b>		
Air Dry Bulb (F) - Outdoor: <b>11</b>	Entering Air: <b>70</b>	Leaving Air: <b>87.2</b>
Air Temperature Rise (F) - Rise: <b>17.2</b>		
Capacity (btuh) - Total: <b>66,410</b>		
Total Heating Power - Watts: <b>9,695.9</b>	KW: <b>9.7</b>	

## Air Moving System Characteristics

External Static Pressure (inches WG) - ESP: <b>0.5</b>	
Blower Speed or Speed Tap - RPM: <b>837</b>	Drive: <b>Belt</b>
Motor Characteristic (watts & BHP) - Power: <b>1,405.8</b>	

## Electrical Supply

Ampacity & Overcurrent Protection @ 230 Volts	
Power Supply (Volt/Hz/Ph) - Volt/Hz/Ph: <b>208-230/60/3</b>	
Minimum Ampacity (amps) - Ampacity: <b>57</b> <i>Ampacity and Fuse do not reflect any added electric heat.</i>	
Max Overcurrent Protection (amps) - Fuse: <b>80</b>	HACR Breaker: <b>80</b>

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## Dimensions, Weight & Clearances

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Dimensions - Length: <b>88 - 5/8</b>	Width: <b>57 - 1/2</b>	Height: <b>59 - 1/2</b>
Weight (lb) - Weight: <b>873</b>		
Clearances (inches) - Front: <b>48</b>	Cond. Coil: <b>18</b>	Duct Side: <b>12</b>
Clearances (inches) - Evap End: <b>36</b>	Top: <b>60</b>	

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Product Submittal #: d231f2ba-58a4-4f28-830a-3b6653eeb081

Submittal Printed on: 9/3/2024 11:13:00 PM

For Model: **RHPDZT120ACG000ABCA0**

In keeping with its policy of continuous progress and product improvement, reserves the right to make changes without notice.

Gross capacity does not include the effect of motor heat. AHRI rating is net capacity and includes the effect of fan motor heat. All net capacities also accounts for the effect of motor heat.

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# Model: RHPDZT120ACG000ABCA0

## SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS

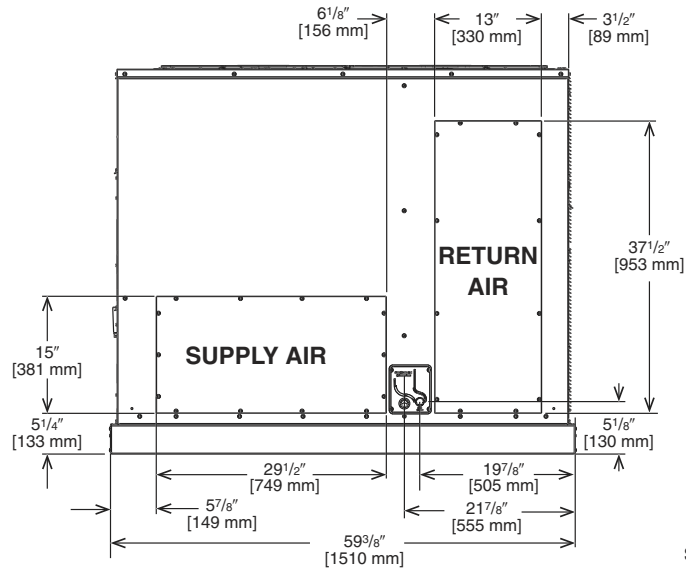


Illustration  
ST-A1273-01-F

## SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS

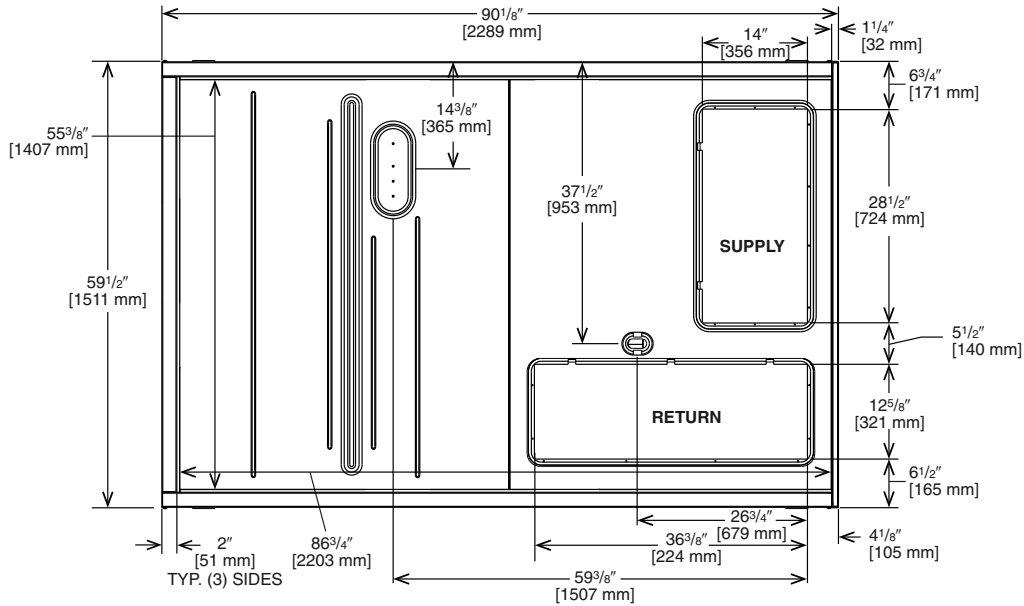


Illustration  
ST-A1273-01\_A-00

[ ] Designates Metric Conversions

# RXRD-01MDDAM3 - Economizer (Downflow)

## NON-DDC ECONOMIZER FOR DOWNFLOW DUCT INSTALLATION

### Use to Select Field-Installed Options Only

- RXRD-01MDDAM3—Single Enthalpy (Outdoor)**
- RXRX-BV01—Dual Enthalpy Upgrade Kit**
- RXRX-AR02—Optional Wall-Mounted CO<sub>2</sub> Sensor**

- Features **Honeywell JADE™** Digital Controls
- Available Factory Installed or Field Accessory
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Ultra Low Leak Dampers meet California Title 24 requirements
- AMCA 511 Certified Class 1A Leakage—1" WG of differential pressure tested to AMCA Standard 500-D
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin Electrical Connections
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO<sub>2</sub> Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Downflow Duct Application.
- Field Installed Power Exhaust Available

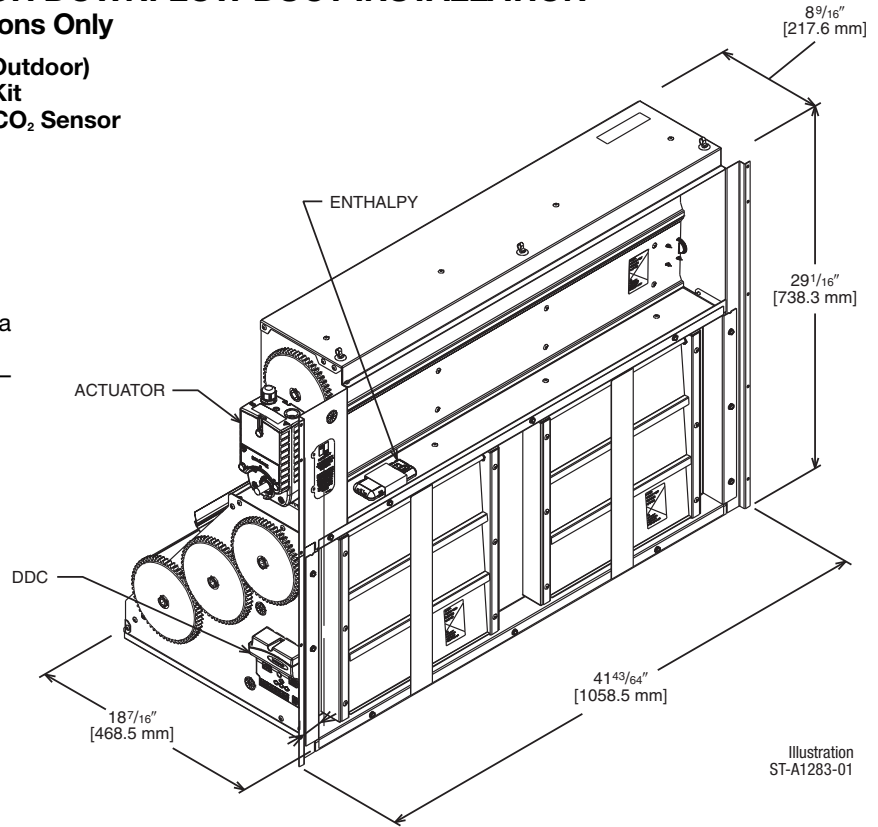


Illustration  
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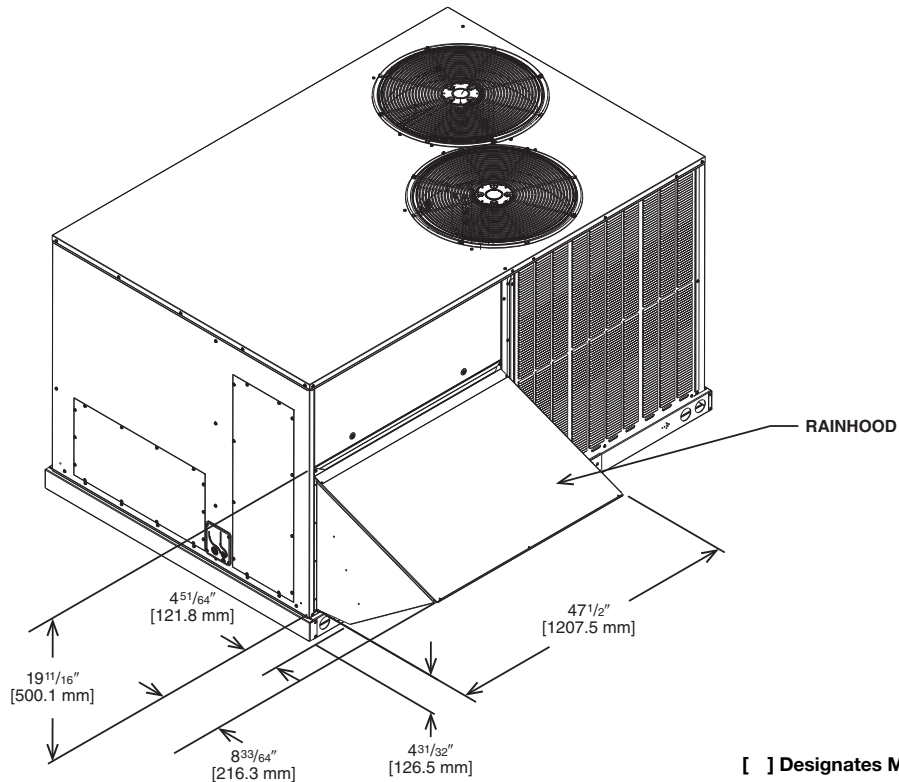


Illustration  
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[ ] Designates Metric Conversions