

AR-DE11-05A

**Rooftop Dedicated Outdoor Air System  
5 ton Rooftop DOAS w/ERV wheel**



**Configuration and Option Checklist**

Shading indicates included in base model

**Electrical Power supply (V/Hz/Ø): (select one)**

- 208/3/60
- 230/3/60
- 460/3/60

**Supply Air Discharge (select one)**

- Bottom
- Horizontal

**Heat Options (select one)**

- Gas Heat Standard Turndown 4:1
- Gas Heat High Turndown 10:1
- Electric Heat

**Misc. Options (select all that apply)**

- Fan Isolation
- Compressor Isolation Valves
- Condenser coil guards
- Filter Pressure Gauge
- Filter Pressure Switch
- Smoke Detector
- Strip Heater (for control cabinet)
- Phase Voltage Monitoring
- Convenience outlet (factory wired)
- Convenience outlet (field wired)
- Sight Glass

**Control Options (select all that apply)**

- Discharge Air Control w/Duct sensor
- Discharge Air Control w/Space Temp & Humidity Sensor
- Space Temp & Humidity Control w/Discharge air reset
- LonTalk® Protocol
- BACnet® MSTP Protocol
- BACnet® IP Protocol

**ERV Preheater Options (select one)**

- 5 KW
- 10 KW
- 15 KW

**Roof Curb (select one)**

- 12" High
- 18" High
- 24" High

**Return Air Opening (select one)**

- Bottom
- Horizontal (Side)

**Supply Air Filter Options (select one)**

- 2" MERV 8
- 4" MERV 8
- 4" MERV 11
- 4" MERV 14
- Spare set 2" MERV 8

**Intake Air Hood Filter Options**

- None (birdscreen only)
- 1" Aluminum mesh

**DX Coil Options (select one)**

- 6 Row Coil
- 4 Row Coil (high airflow)

**Coil Corrosion Protection Coating(select all that apply)**

- None
- Cooling Coil Coating
- Hot Gas Coil Coating
- Condenser Coil Coating

**Airflow Monitor Options (select one)**

- Outdoor air damper airflow monitor
- Supply fan inlet cone airflow monitor

**ERV Exhaust Air Filter Options (select one)**

- 2" Aluminum mesh
- 2" MERV 8

**ERV Outdoor Air Filter Options (select one)**

- 2" Aluminum mesh
- 2" MERV 8

**ERV Control Options (select all that apply)**

- Rotation sensor
- ERV VFD

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**Standard Features**

Designed to heat, cool, and dehumidify 100% outdoor air

2" Foam-injected double wall construction, pitched roof, and access doors (22 ga. galvanized interior/22 ga. painted exterior)

Direct-drive, backward inclined plenum fans with factory supplied and programmed VFD

Fully-programmed microprocessor controls system for stand alone operation, connection to AC Smart, or BAS integration using BACnet® IP protocol

Discharge air control with discharge air duct sensor for field mounting

R410A DX Evaporator coil, condenser coil, 6 row and HGRH(hot gas reheat coil)

Modulating hot gas reheat control

Hermetic scroll compressor mounted with rubber isolators on 1" foam -injected double wall panel (digital scroll compressor for single compressor units, and combination digital scroll/on-off compressors for multiple compressor units)

Double-sloped stainless steel drain pan

Indirect gas heat with 4:1 turndown, modulating control, 409 stainless steel heat exchanger, and electronic ignition, inlet gas pressure 6-14 in-wg

2" MERV 8 supply air filters, ERV outdoor air intake filters, and ERV exhaust air filters

Active head pressure control, variable speed condenser fan motor

Integral enthalpy wheel with polymer media providing sensible and latent heat transfer between airstreams

Comprehensive factory run test prior to shipment

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**Rooftop Dedicated Outdoor Air System****5 ton Rooftop DOAS w/ERV wheel****General Data**

Voltage (V/P/C)	208/3/60
MCA (amps)	42.2
MOP (amps)	60
Design Airflow (CFM)	1900
ESP (in. wg)	1
Summer DB/WB (°F)	95/75
Winter DB (°F)	0
Outdoor Air Intake	End
Supply Air Discharge	Bottom
Return Air Opening	Bottom
Weight (lbs)	2618

**Fan Data**

Supply Fan Quantity	1
Supply Fan Wheel Diameter (in)	14
Supply Fan Wheel Speed (RPM)	2383
Supply Fan Motor HP	2
Exhaust Fan Quantity	1
Exhaust Fan Wheel Diameter (in)	14
Exhaust Fan Wheel Speed (RPM)	1852
Exhaust Fan Motor HP	1

**Filtration**

Hood	None
Supply	2" MERV 8

**Heating**

Fuel	Natural Gas
Capacity Input (MBH)	100
Capacity Output (MBH)	80
LAT (°F)	92.9
Turndown Type	Standard
Turndown Ratio	4:1

**Cooling Performance**

Coil EAT DB/WB (°F)	79.6/66.1
Coil LAT DB/WB (°F)	55.2/54.6
Unit LAT DB/WB (°F)	70.6/60.7
Total Cooling Capacity (MBH)	68.8
Sensible Cooling Capacity (MBH)	50.8
Hot Gas Reheat Coil Capacity (MBH)	25.8
Evaporator coil depth (rows)	6
Number of compressors	1
Compressor Type(s)	Digital scroll
Refrigerant charge (lbs)	10.7

**Condenser Fans**

Number of condenser fans	1
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**Sound Power (Lwa)**

Supply air discharge	93
Return Air Intake	74
Casing radiated	91

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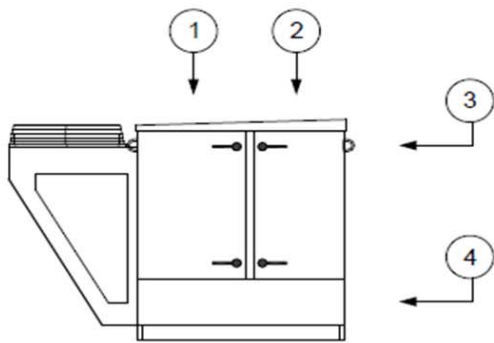
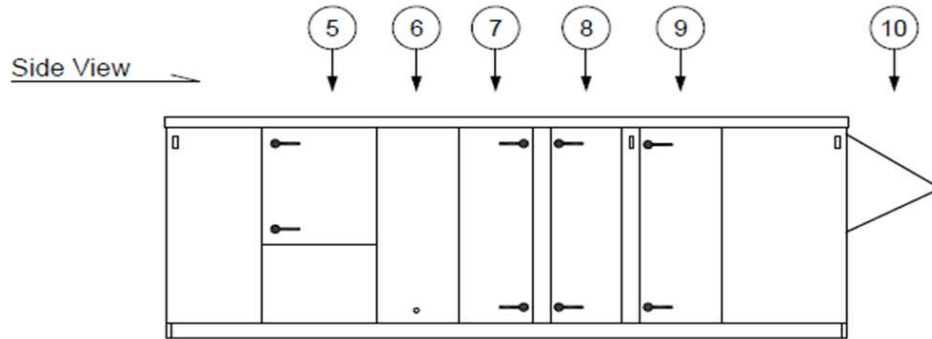
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**Front Drawing**



**Side**

**Elevation**

- 1.) COMPRESSOR ACCESS DOOR
- 2.) CONTROLS & ELECTRICAL ACCESS DOOR
- 3.) LIFTING LUG (TYP 6)
- 4.) HEATER/FURNACE ACCESS PANEL
- 5.) SUPPLY FAN ACCESS DOOR
- 6.) CONDENSATE DRAIN CONNECTION (1.25" DIA)
- 7.) EVAPORATOR COIL ACCESS DOOR
- 8.) SUPPLY AIR FILTER ACCESS
- 9.) ENERGY RECOVERY WHEEL ACCESS DOOR
- 10.) OUTDOOR AIR INTAKE HOOD

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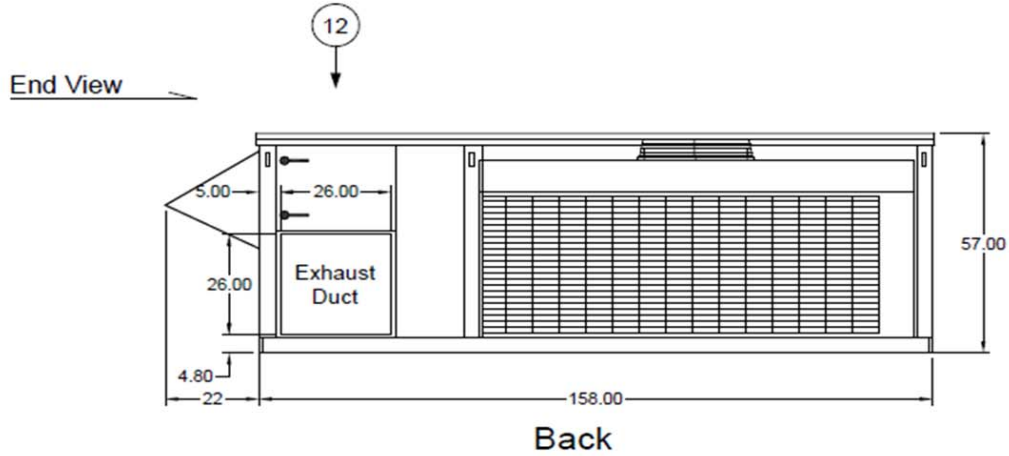
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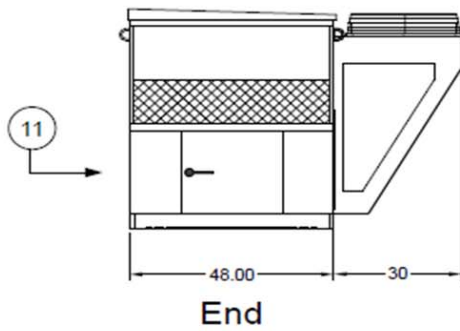


Reverse Drawing



11.) EXHAUST FAN ACCESS DOOR

12.) OUTDOOR AIR FILTER ACCESS DOOR



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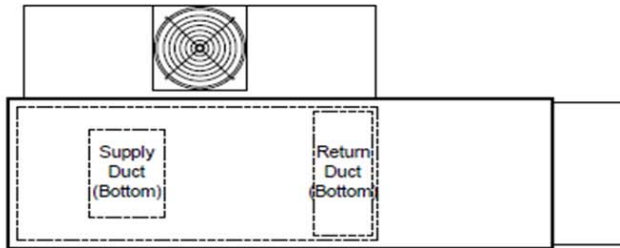
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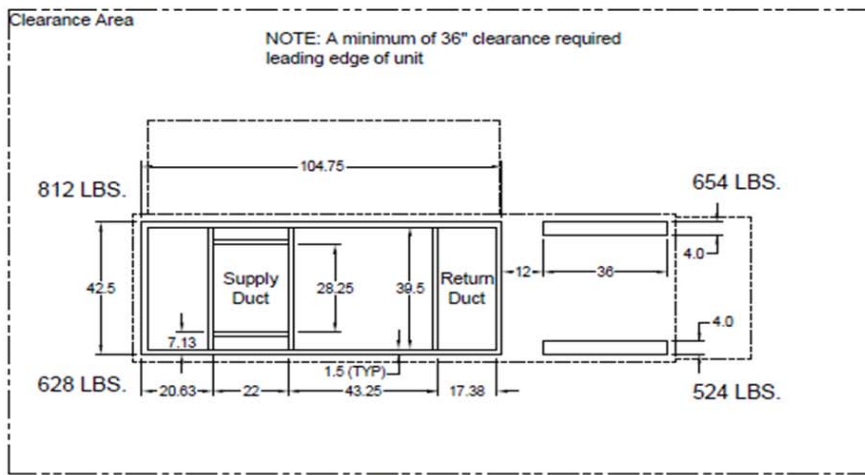
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Top Drawing



Plan



Footprint

Curb Information  
Curb Provided by: Others  
Curb Height: N/A