Modular Multi-position Air Handler

Air Handler - Convertible
Model: Series 2 Air Handler
3 ton with high efficiency motor
Black Epoxy Coil
GAF2A0A36M31EC
Standard Coil
GAF2A0A36M31SC
Features and Benefits

• Unique Cabinet Design
  - Double Wall Foamed and Formed Cabinet System
  - Water Proof Cabinet Design
  - R-4.2 Insulating Value (Avg. Insulating Value R-8)
  - Composite Foamed Cabinet Doors
  - Sweat Eliminating Cabinet Design
  - Loose Fiber Eliminating Cabinet Design
  - Smooth Cleanable Cabinet Design
  - 2% or Less air leakage
  - Precision Applied Durable Door Seals
• Multi-Position Upflow/ Horizontal Left / Horizontal Right
• Front Return Option
• Braze in Refrigerant Connection
• Primary/Secondary Condensate Connections

• Vortica Blower with Integrated Slide Deck for Easy Removal
• Polarized Plug connections on Blower
• Aluminum Coil with Integrated Slide Deck for Easy Removal
• Slide in Electric Heaters
• Polarized Plug connections for Electric Heater
• Labeled Panels and connections
• Guide for up to 1” Conduit connection on Top
• Electronic Expansion Valve (EEV) with Low Ambient and Low Superheat Protection
• Low Voltage Color Coded Wires
• Enhanced Coil Fin Patented
• Blow Through Design

• High efficiency ECM Constant Torque motor
• Maximum Width of 17.5”
• Compact 20.8” depth with doors removed
• Integrated Horizontal Drain pans
• Single Color
• Fused 24V Power

• Optional extended warranty available
Contents

Features and Benefits
  Optional Equipment
  Unique Cabinet Design Features and Benefits 5
General Data
  GAF2A0A36M31EC, GAF2A0A36M31SC 6
Performance Data
Electrical Data
Wiring Diagrams
Field Wiring
Convertibility
Dimensions
## Optional Equipment

### Optional Equipment for GAF2 Air Handlers

<table>
<thead>
<tr>
<th>Accessory Number</th>
<th>Description</th>
<th>Fits Cabinet Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAYECAA05LG1</td>
<td>Electric Heater, 5kW, Lugs, 24V Control, 1 Ph</td>
<td>A</td>
</tr>
<tr>
<td>BAYECAA08LG1</td>
<td>Electric Heater, 8kW, Lugs, 24V Control, 1 Ph</td>
<td>A</td>
</tr>
<tr>
<td>BAYECAA10LG1</td>
<td>Electric Heater, 10kW, Lugs, 24V Control, 1 Ph</td>
<td>A</td>
</tr>
<tr>
<td>BAYSFSCABAA</td>
<td>Supply Duct Flange A1</td>
<td>A1 (1)</td>
</tr>
<tr>
<td>BAYRETFLGAA</td>
<td>Return Duct Flange A</td>
<td>A</td>
</tr>
<tr>
<td>TASB175SB</td>
<td>Plenum Stand with Sound Baffle A</td>
<td>A</td>
</tr>
<tr>
<td>BAYFRKIT100</td>
<td>Front Return Kit</td>
<td>A</td>
</tr>
<tr>
<td>BAYBRFBX100</td>
<td>Bottom Return Filter Box</td>
<td>A</td>
</tr>
<tr>
<td>BAYWMKIT001</td>
<td>Wall Mount Kit</td>
<td>A</td>
</tr>
<tr>
<td>BAYLVKIT100A</td>
<td>Low Voltage Conduit Entry Kit</td>
<td>A</td>
</tr>
<tr>
<td>BAYAHTXV1836</td>
<td>R-22 TXV Conversion Kit</td>
<td>A</td>
</tr>
<tr>
<td>BAYSRRKIT100A</td>
<td>Side Return Kit</td>
<td>A</td>
</tr>
<tr>
<td>MITISRKIT1620</td>
<td>Side Return Kit with 16&quot; x 20&quot; Filter</td>
<td>A</td>
</tr>
<tr>
<td>BAYFLR1620A</td>
<td>High Velocity Filter Kit, 16&quot; X 20' X 1&quot; (10 filters)</td>
<td>A</td>
</tr>
<tr>
<td>TASSSBK175</td>
<td>Sound Baffle Kit 17.5&quot; Cabinet</td>
<td>A</td>
</tr>
</tbody>
</table>

1. GAF2A0A36 Cabinet is one piece 17.5" wide
2. Uses 16" x 20" filter
3. Uses 16" x 16" filter
Unique Cabinet Design
Features and Benefits

① Unique Cabinet Design
- Double wall foamed cabinet system
- Waterproof Cabinet Design
- R-4.2 Insulating Value (Avg. Insulating Value R-8)
- Composite Foamed Cabinet Doors
- Sweat Eliminating Cabinet Design
- Loose Fiber Eliminating Design
- Smooth Cleanable Cabinet Design
- 2% or Less air leakage
② Precision Durable Door Seals
③ Brazed Refrigeration Connections
④ Primary/Secondary Condensate Connections
⑤ Conduit Connection - Conduit Connection on Top
⑥ Constant Torque ECM Motor
⑦ Vortica™ Blower and Deck - Polarized Plug on Blower
⑧ All Aluminum Coil
- Integrated Slide Deck for Easy Removal
- Polarized Plug connections on Coil TXV
- Patented Enhanced Coil Fin
⑨ Labeled Panels and Connections
⑩ Electronic Expansion Valve (EEV)
⑪ Maximum width is 17.5”
⑫ Compact 20.8” Depth with Doors Removed
⑬ Integrated Horizontal Drain Pans
⑭ Maximum width is 17.5”
## PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>GAF2A0A36M31EC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GAF2A0A36M31SC</td>
</tr>
</tbody>
</table>

**RATED VOLTS/PH/HZ.**

- 208-230/1/60

**RATINGS**

- See O.D. Specifications - Plate Fin

### INDOOR COIL — Type

- Rows — F.P.I.: 3 - 14
- Face Area (sq. ft.): 3.21
- Tube Size (in.): 3/8
- Refrigerant Control: EEV
- Drain Conn. Size (in.): 3/4 NPT

### DUCT CONNECTIONS

- See Outline Drawing

### INDOOR FAN — Type

- Centrifugal
- Diameter-Width (In.): 11 X 8
- No. Used: 1
- Drive - No. Speeds: Direct - 3
- CFM vs. in. w.g.: See Fan Performance Table
- No. Motors — H.P.: 1 - 1/2
- Motor Speed RPM: 1050
- Volts/Ph/Hz: 208-230/1/60
- F.L. Amps - L.R. Amps: 4.1

### FILTER

- Filter Furnished?: No
- Type Recommended: Throwaway
- No.-Size-Thickness: 1 - 16 X 20 - 1 in.

### REFRIGERANT

- Ref. Line Connections: Brazed
- Coupling or Conn. Size — in. Gas: 3/4
- Coupling or Conn. Size — in. Liq.: 3/8

### DIMENSIONS

- H x W x D
  - Crated (In.): 40.5 x 20 x 24.5
  - Uncrated: 39.5 x 17.5 x 21.8

### WEIGHT

- Shipping (Lbs.)/Net (Lbs.): 109/98

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1. This Air Handler is AHRI certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240). Refer to the Split System Outdoor Unit Product Data Guides for performance data.
2. 3/4" Male Plastic Pipe (Ref.: ASTM 1785-76)
3. Constant Torque Motor
# Performance Data

## GAF2A0A36M31 AIRFLOW PERFORMANCE TABLE

### AIRFLOW PERFORMANCE

<table>
<thead>
<tr>
<th>GAF2A0A36M31</th>
<th>Speed Taps - 230 VOLTS</th>
<th>Speed Taps - 208 VOLTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXTERNAL STATIC (in w.g)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed Taps</td>
<td>5</td>
<td>4 †</td>
</tr>
<tr>
<td>0</td>
<td>1272</td>
<td>1203</td>
</tr>
<tr>
<td>0.1</td>
<td>1247</td>
<td>1188</td>
</tr>
<tr>
<td>0.2</td>
<td>1223</td>
<td>1169</td>
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<tr>
<td>0.3</td>
<td>1195</td>
<td>1147</td>
</tr>
<tr>
<td>0.4</td>
<td>1147</td>
<td>1121</td>
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<tr>
<td>0.5</td>
<td>1110</td>
<td>1091</td>
</tr>
<tr>
<td>0.6</td>
<td>1072</td>
<td>1058</td>
</tr>
<tr>
<td>0.7</td>
<td>1027</td>
<td>1021</td>
</tr>
<tr>
<td>0.8</td>
<td>977</td>
<td>977</td>
</tr>
<tr>
<td>0.9</td>
<td>923</td>
<td>923</td>
</tr>
<tr>
<td>1.0</td>
<td>865</td>
<td>865</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Values are with wet coil and without filters.
2. Contact your particular filter manufacturer for pressure drop data.
3. Electric heater pressure drop is negligible and is included within the airflow data.
4. † Factory Setting

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### GAF2A0A36M31 MINIMUM HEATER AIRFLOW CFM

<table>
<thead>
<tr>
<th>Heater</th>
<th>Minimum Air Speed Tap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Heat Pump</td>
</tr>
<tr>
<td>BAYECAA05LG1</td>
<td>Tap 1</td>
</tr>
<tr>
<td>BAYECAA08LG1</td>
<td>Tap 5</td>
</tr>
<tr>
<td>BAYECAA10LG1</td>
<td>Tap 1</td>
</tr>
</tbody>
</table>

**Note:** Heating and cooling speeds are the same, factory set at Speed Tap #4

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Pub. No. 22-1862-08 7
# Electrical Data

## WIRING DATA

<table>
<thead>
<tr>
<th>Heater Model No.</th>
<th>No. of Circuits</th>
<th>240 VOLT</th>
<th>208 VOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Capacity</td>
<td>Heater Amps per Circuit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kW</td>
<td>BTUH</td>
</tr>
<tr>
<td>No Heater</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BAYECA05++</td>
<td>1</td>
<td>4.80</td>
<td>16400</td>
</tr>
<tr>
<td>BAYECA08++</td>
<td>1</td>
<td>7.68</td>
<td>26200</td>
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<tr>
<td>BAYECA10++</td>
<td>1</td>
<td>9.60</td>
<td>32800</td>
</tr>
</tbody>
</table>

Note: ** Motor Amps

## DISTANCE FROM BELLY BAND TO SHAFT FACE OF MOTOR FOR MINIMUM VIBRATION

![Diagram showing distance from belly band to shaft face of motor for minimum vibration](image)

**MODEL** | **DIM "A"**
---|---
GAF2A0A36M31 | 1-1/2

A is determined per chart

Wheel is centered in Blower Housing
GAF2 AIR HANDLERS WITH SINGLE SPEED COOLING

Air Handler Hook-up Diagram

Cooling

- YI and YO connections must be made as shown
- Wire R-O connection in cooling only units
- Internally mounted condensate switch is optional and must be ordered separately
- If a 3rd party condensate overflow switch is installed, it should be wired between Y of the thermostat and YI of the EEV control.
Field Wiring

GAF2 AIR HANDLERS WITH SINGLE SPEED HEAT PUMP

- YI and YO connections must be made as shown.
- Internally mounted condensate switch is optional and must be ordered separately.
- If a 3rd party condensate overflow switch is installed, it should be wired between Y of the thermostat and YI of the EEV control.

Air Handler Hook-up Diagram

Heat Pump

- Comfort Control
- White W
- Green G
- Yellow Y
- Orange O
- Red R
- Blue B

--- Field wiring
GAF2 Convertibility

* Note: No internal modifications required for any position.
1 Badge rotation will keep brand in correct position
GAF2 AIR HANDLER DIMENSIONAL DATA

GAF2 AIR HANDLERS ARE ALL ONE PIECE CABINETS.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>H x D x W in.</th>
<th>Unit Net Weight lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAF2A0A36M31</td>
<td>39.5 x 21.8 x 17.5</td>
<td>98</td>
</tr>
</tbody>
</table>
The manufacturer has a policy of continuous product and product data improvement and it reserves the right to change design and specifications without notice.