

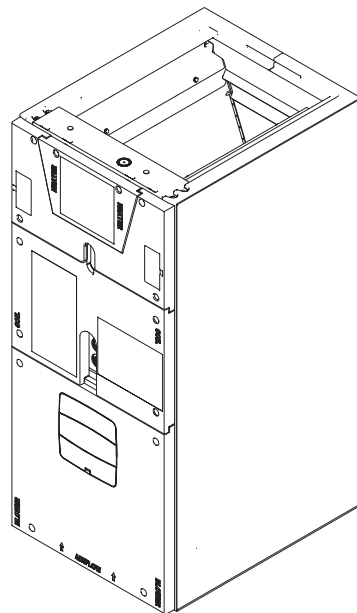


# Product Data

## Modular Multi-position Air Handler Air Handler - Convertible 3 ton with high efficiency motor Model: Series 2 Air Handler

**Standard Coil**  
GAF2A0A36M31SC

**Black Epoxy Coil**  
GAF2A0A36M31EC



*Note: "Graphics in this document are for representation only.  
Actual model may differ in appearance."*



## Features and Benefits

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- 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



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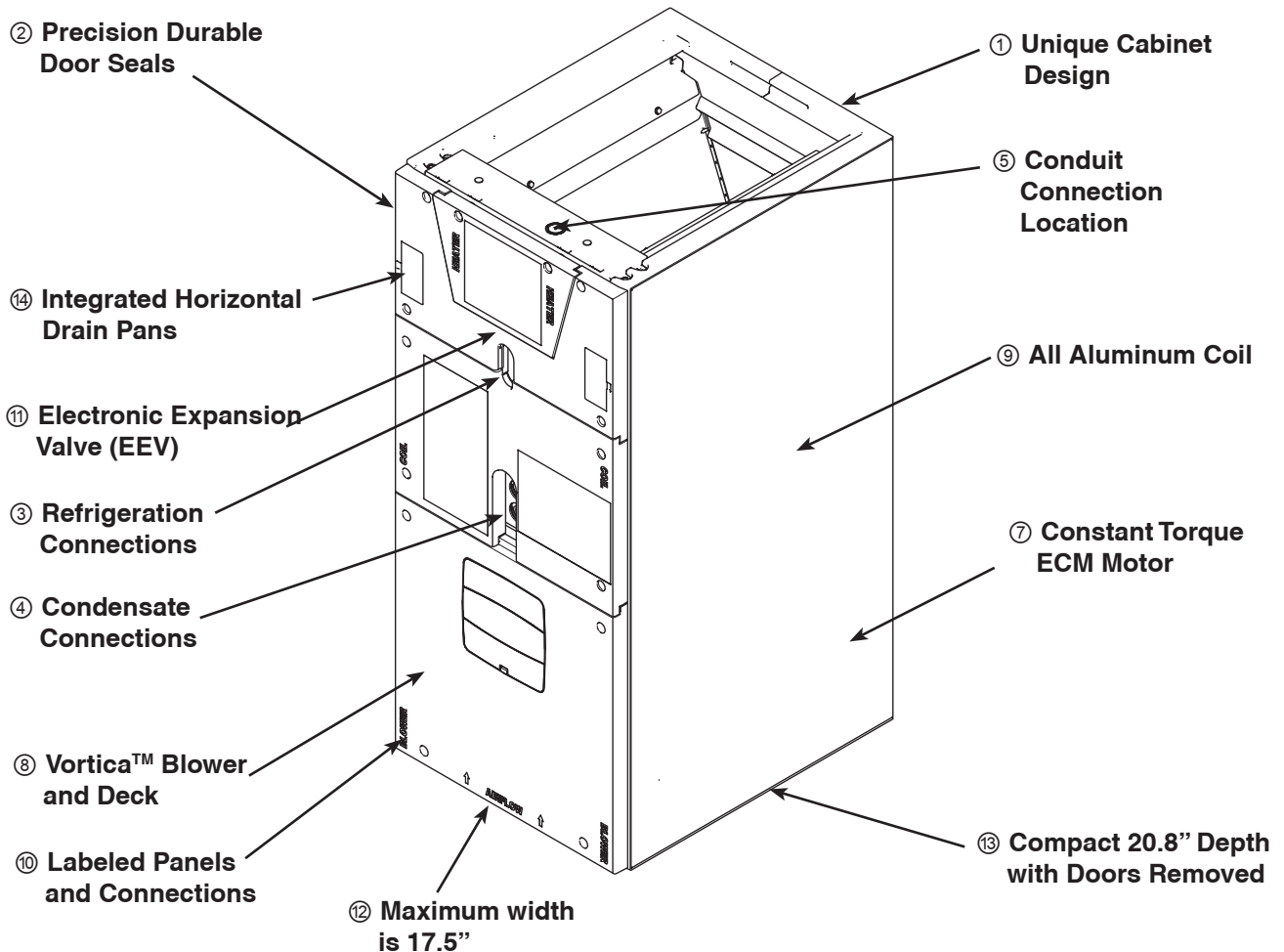


# Optional Equipment

## OPTIONAL EQUIPMENT FOR GAF2 AIR HANDLERS

Accessory Number	Description	Fits Cabinet Size
BAYECAA05LG1	Electric Heater, 5kW, Lugs, 24V Control, 1 Ph	A
BAYECAA08LG1	Electric Heater, 8kW, Lugs, 24V Control, 1 Ph	A
BAYECAA10LG1	Electric Heater, 10kW, Lugs, 24V Control, 1 Ph	A
BAYSFSCABAA	Supply Duct Flange A1 ①	A1 ①
BAYRETFLGAA	Return Duct Flange A	A
TASB175SB	Plenum Stand with Sound Baffle A	A
BAYFRKIT100 ③	Front Return Kit	A
BAYBRFBX100 ②	Bottom Return Filter Box	A
BAYWMKIT001	Wall Mount Kit	A
BAYLVKIT100A	Low Voltage Conduit Entry Kit	A
BAYAHTXV1836	R-22 TXV Conversion Kit	A
BAYSRKIT100A	Side Return Kit	A
MITISRKIT1620 ②	Side Return Kit with 16" x 20" Filter	A
BAYFLR1620A	High Velocity Filter Kit, 16" X 20' X 1" (10 filters)	A
TASSBK175	Sound Baffle Kit 17.5" Cabinet	A
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

## ⑦ Constant Torque ECM Motor

## ⑧ Vortica™ Blower and Deck - Polarized Plug on Blower

## ⑨ All Aluminum Coil

- Integrated Slide Deck for Easy Removal
- Polarized Plug connections on Coil TXV
- Patented Enhanced Coil Fin

## ⑩ Labeled Panels and Connections

## ⑪ Electronic Expansion Valve (EEV)

## ⑫ Maximum width is 17.5"

## ⑬ Compact 20.8" Depth with Doors Removed

## ⑭ Integrated Horizontal Drain Pans

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# General Data

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**PRODUCT SPECIFICATIONS**

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<b>MODEL</b>	<b>GAF2A0A36M31EC</b> <b>GAF2A0A36M31SC</b>
<b>RATED VOLTS/PH/HZ.</b>	208-230/1/60
<b>RATINGS</b> ①	See O.D. Specifications - Plate Fin
<b>INDOOR COIL — Type</b>	
Rows — F.P.I.	3 - 14
Face Area (sq. ft.)	3.21
Tube Size (in.)	3/8
Refrigerant Control	EEV
Drain Conn. Size (in.) ②	3/4 NPT
<b>DUCT CONNECTIONS</b>	
See Outline Drawing	
<b>INDOOR FAN — Type</b>	
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 ③	1050
Volts/Ph/Hz	208-230/1/60
F.L. Amps - L.R. Amps	4.1
<b>FILTER</b>	
Filter Furnished?	No
Type Recommended	Throwaway
No.-Size-Thickness	1 - 16 X 20 - 1 in.
<b>REFRIGERANT</b>	
<b>R-410A</b>	
Ref. Line Connections	Brazed
Coupling or Conn. Size — in. Gas	3/4
Coupling or Conn. Size — in. Liq.	3/8
<b>DIMENSIONS</b>	
H x W x D	
Crated (In.)	40.5 x 20 x 24.5
Uncrated	39.5 x 17.5 x 21.8
<b>WEIGHT</b>	
Shipping (Lbs.)/Net (Lbs.)	109/98

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										
GAF2A0A36M31										
EXTERNAL STATIC (in w.g)	Speed Taps – 230 VOLTS					Speed Taps – 208 VOLTS				
	5	4 †	3	2	1	5	4 †	3	2	1
0	1272	1203	972	862	716	1269	1200	969	859	713
0.1	1247	1188	945	830	670	1241	1182	939	824	665
0.2	1223	1169	917	797	625	1214	1161	909	788	616
0.3	1195	1147	890	764	579	1183	1136	879	753	567
0.4	1147	1121	863	731	533	1133	1107	849	717	519
0.5	1110	1091	835	699	487	1093	1075	818	682	470
0.6	1072	1058	808	666	441	1052	1039	788	646	421
0.7	1027	1021	781	633	395	1005	999	758	611	373
0.8	977	977	753	601	349	952	952	728	576	324
0.9	923	923	726	568	303	895	895	698	540	275
1.0	865	865	699	535	257	835	835	668	505	227

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

GAF2A0A36M31 MINIMUM HEATER AIRFLOW CFM		
Heater	Minimum Air Speed Tap	
	Without Heat Pump	With Heat Pump
BAYECAA05LG1	Tap 1	Tap 2
BAYECAA08LG1	Tap 5	Tap 5
BAYECAA10LG1	Tap 1	Tap 3

SEE AIR HANDLER NAMEPLATE OR PRODUCT DATA FOR EXCEPTIONS  
**Note:** Heating and cooling speeds are the same, factory set at Speed Tap #4



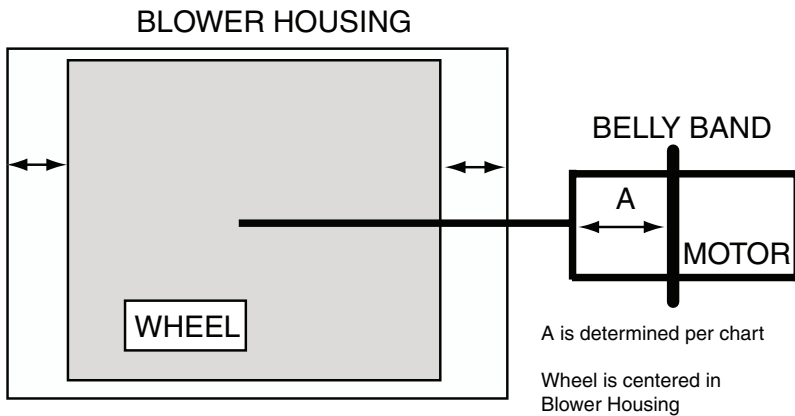
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# Electrical Data

WIRING DATA											
GAF2A0A36M31											
Heater Model No.	No. of Circuits	240 VOLT					208 VOLT				
		Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection
		kW	BTUH				kW	BTUH			
No Heater	-	-	-	4.1**	5	15	-	-	4.1**	5	15
BAYECAA05++	1	4.80	16400	20	30	30	3.60	12300	17.3	27	30
BAYECAA08++	1	7.68	26200	32	45	45	5.76	19700	27.7	40	40
BAYECAA10++	1	9.60	32800	40	55	60	7.20	24600	34.6	48	50

Note: \*\* Motor Amps

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



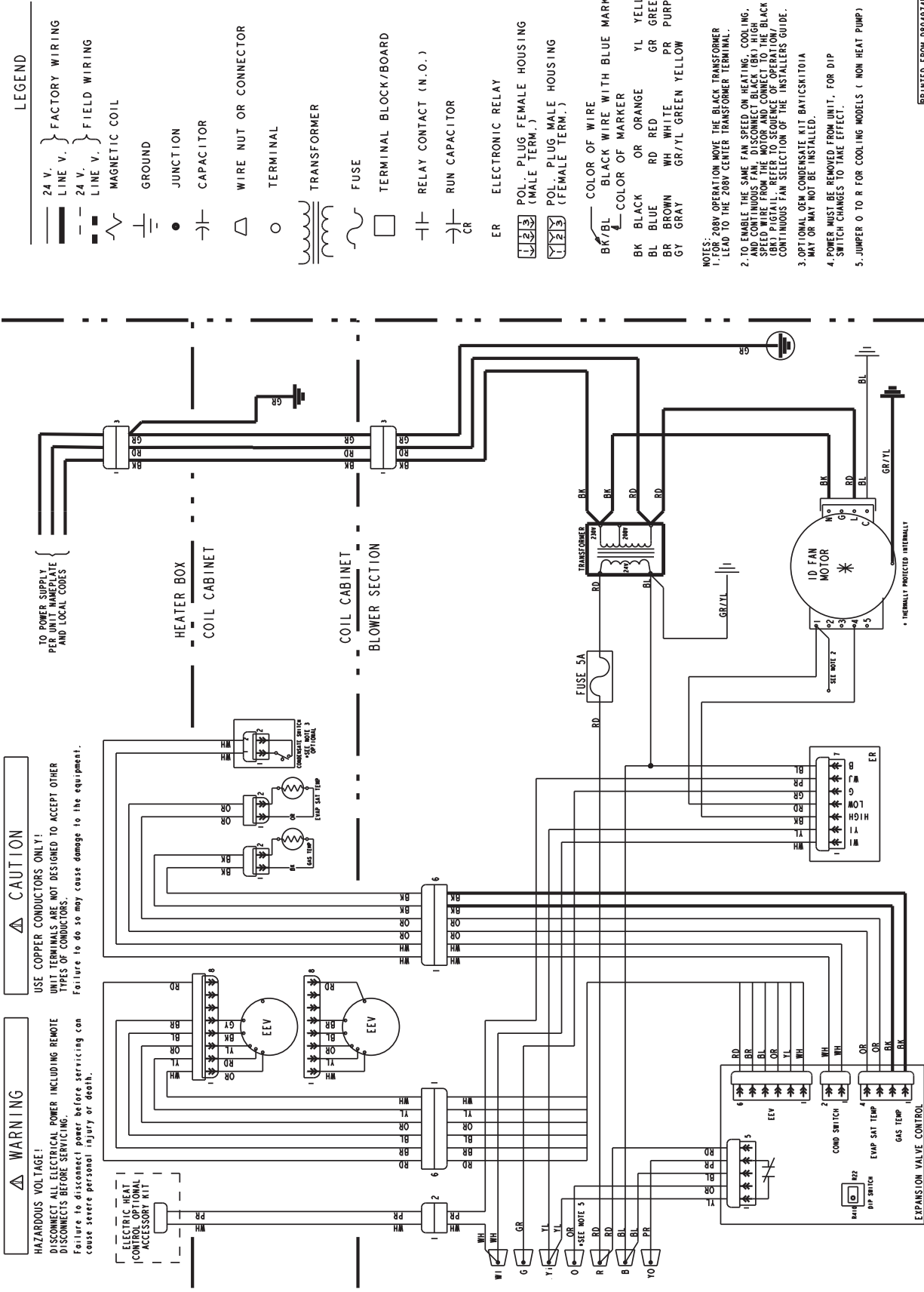
MODEL	DIM "A"
GAF2A0A36M31	1-1/2

A is determined per chart

Wheel is centered in Blower Housing



# WIRING DIAGRAM FOR GAF2A0A36M AIR HANDLER



### LEGEND

- 24 V. LINE V. } FACTORY WIRING
- 24 V. LINE V. } FIELD WIRING
- MAGNETIC COIL
- GROUND
- JUNCTION
- CAPACITOR
- WIRE NUT OR CONNECTOR
- TERMINAL
- TRANSFORMER
- FUSE
- TERMINAL BLOCK/BOARD
- RELAY CONTACT (N.O.)
- RUN CAPACITOR
- ER ELECTRONIC RELAY
- POL. PLUG FEMALE HOUSING (MALE TERM.)
- POL. PLUG MALE HOUSING (FEMALE TERM.)

- COLOR OF WIRE
- BK/BL BLACK WIRE WITH BLUE MARKER
- COLOR OF MARKER
- BK BLACK OR ORANGE YL YELLOW
- BL BLUE OR RED GR GREEN
- BR BROWN WH WHITE PR PURPLE
- GY GR/YL GREEN YELLOW

- NOTES:**
- 208V OPERATION MOVE THE BLACK TRANSFORMER LEAD TO THE 208V CENTER TRANSFORMER TERMINAL.
  - TO ENABLE THE SAME FAN SPEED ON HEATING, COOLING, AND CONTINUOUS FAN, DISCONNECT BLACK (BK) HIGH SPEED FAN FROM THE 208V CENTER TRANSFORMER BLACK (BK) PLUG. ALL REFER TO SEQUENCE OF OPERATION FOR CONTINUOUS FAN SELECTION OF THE INSTALLERS GUIDE.
  - OPTIONAL ORN CONDENSER KIT BAYCISKIT01A MAY OR MAY NOT BE INSTALLED.
  - POWER MUST BE REMOVED FROM UNIT, FOR DIP SWITCH CHANGES TO TAKE EFFECT.
  - JUMPER O TO R FOR COOLING MODELS ( NON HEAT PUMP)

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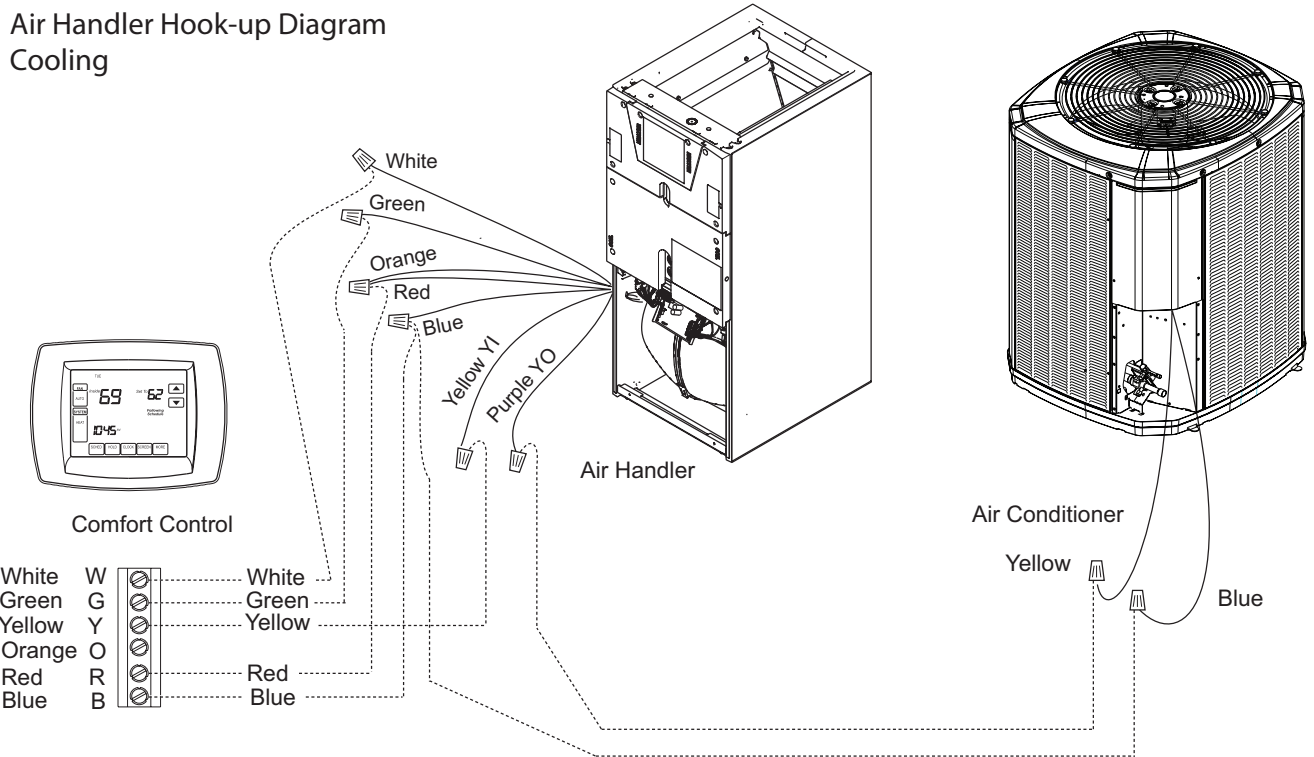


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# Field Wiring

## GAF2 AIR HANDLERS WITH SINGLE SPEED COOLING

Air Handler Hook-up Diagram  
Cooling



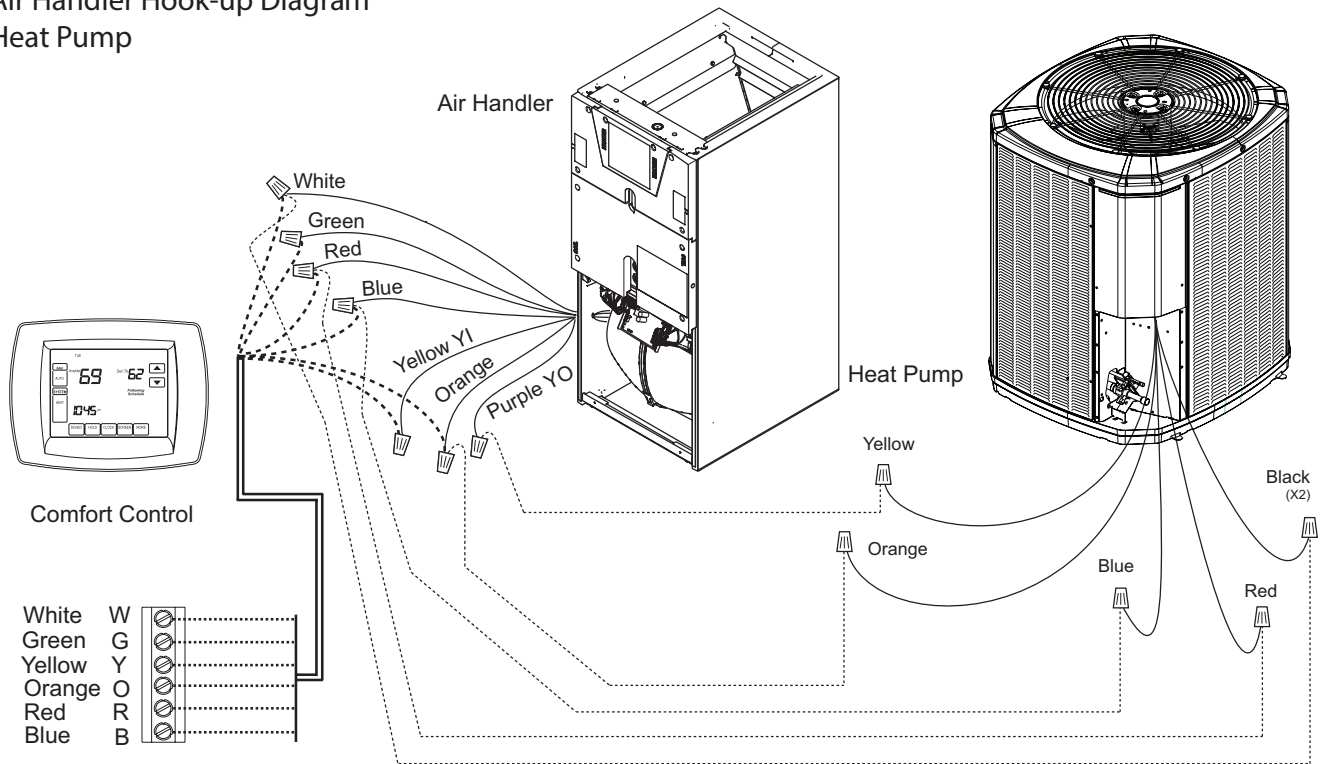
..... Field wiring

- Y1 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 Y1 of the EEV control.

# Field Wiring

## GAF2 AIR HANDLERS WITH SINGLE SPEED HEAT PUMP

Air Handler Hook-up Diagram  
Heat Pump



..... Field wiring

- Y1 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 Y1 of the EEV control.



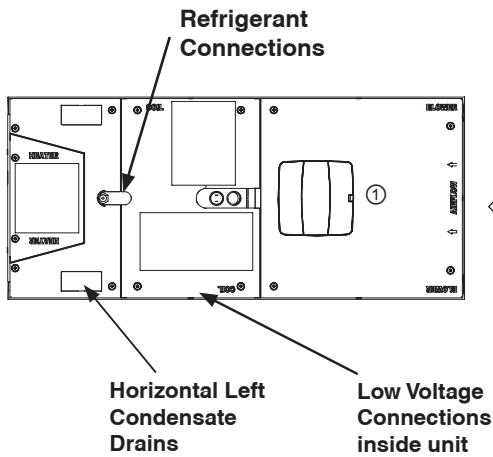
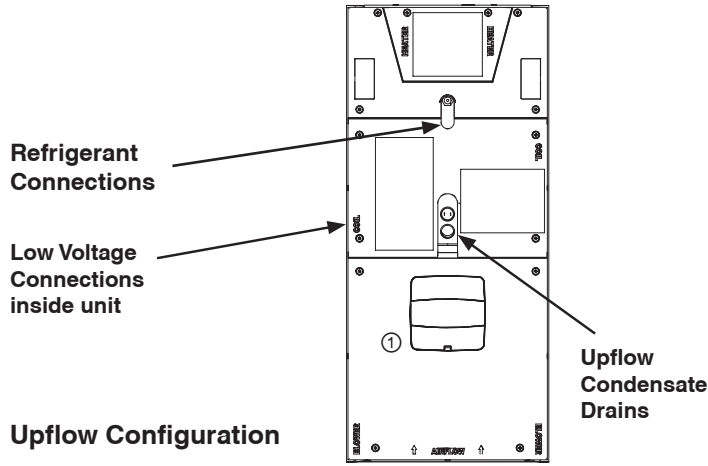
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# GAF2 Convertibility

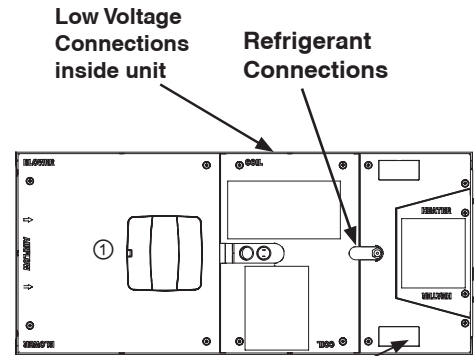
\* Note: No internal modifications required for any position.

① Badge rotation will keep brand in correct position

## Multi-position Air Handler



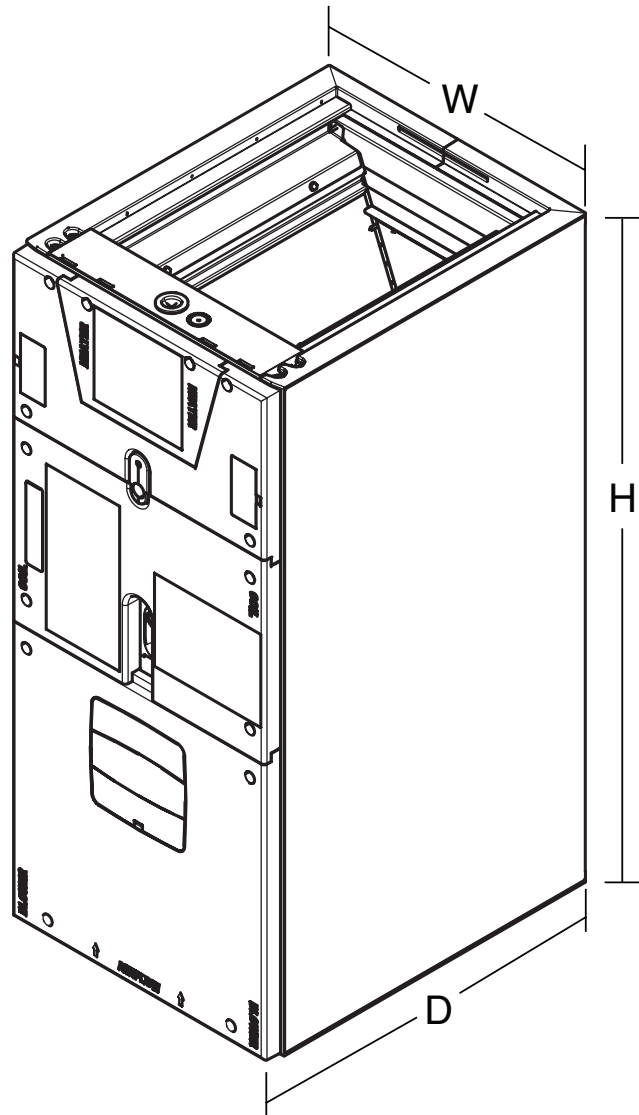
Horizontal Left\*



Horizontal Right\*

# Dimensions

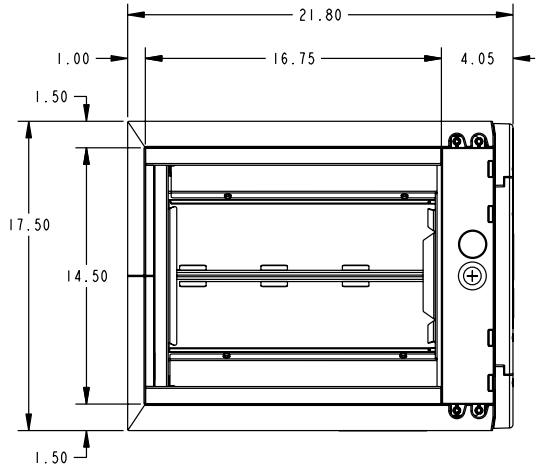
## GAF2 AIR HANDLER DIMENSIONAL DATA



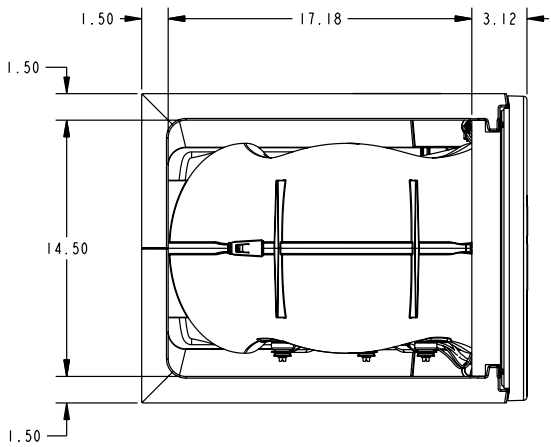
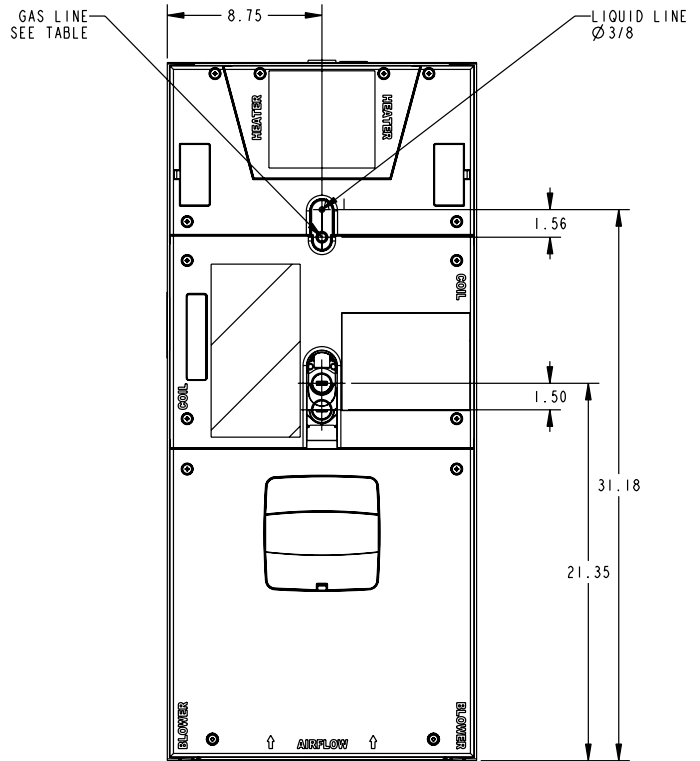
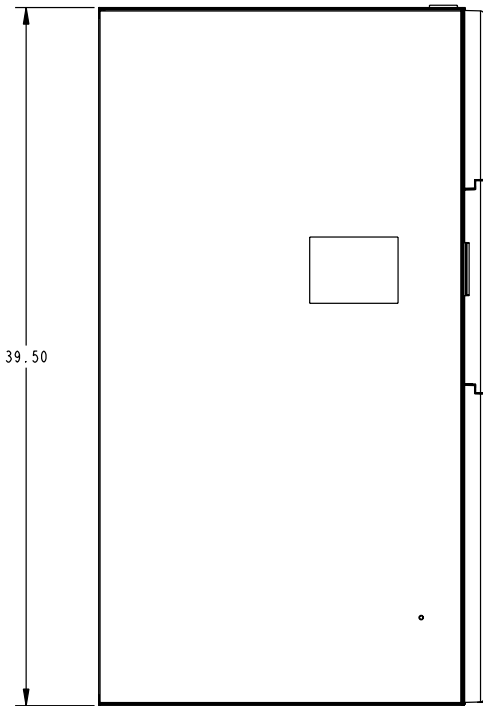
Model Number	H x D x W in.	Unit Net Weight lbs.
GAF2A0A36M31	39.5 x 21.8 x 17.5	98

GAF2 AIR HANDLERS ARE ALL ONE PIECE CABINETS.

# GAF2 OUTLINE DRAWING



MINIMUM UNIT CLEARANCE TABLE		
	TO COMBUSTIBLE MATERIAL (REQUIRED)	SERVICE CLEARANCE (RECOMMENDED)
SIDES	0"	2"
FRONT	0"	21"
BACK	0"	0"
INLET DUCT	0"	N/A
OUTLET DUCT	0"	N/A



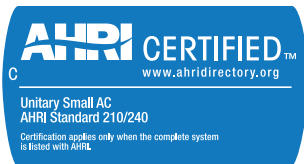
MODEL NO.	FLOW CONTROL	LIQUID LINE BRAZE	GAS LINE BRAZE
GAF2A0A18*	TXV	3/8	3/4
GAF2A0A24*	TXV	3/8	3/4
GAF2A0A30*	TXV	3/8	3/4
GAF2A0A36S*	TXV	3/8	3/4
GAF2A0A36M*	EEV/24V	3/8	3/4





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