



**TRANE®**

# Modular Multi-position Air Handler

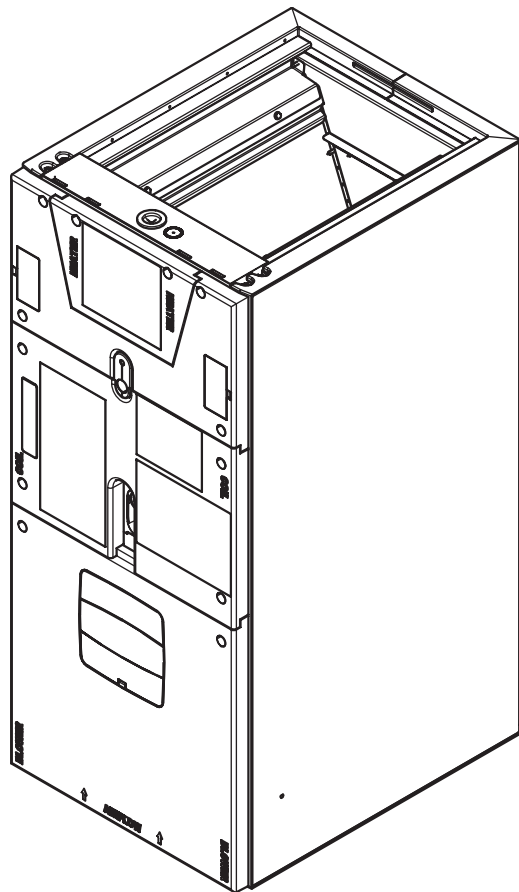
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## **Air Handler - Convertible**

**Model: Series 2 Air Handler**

**3 ton with high efficiency motor**

**GAF2A0A36M31SA**



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**PUB. NO. 22-1862-01**



## 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



# Contents

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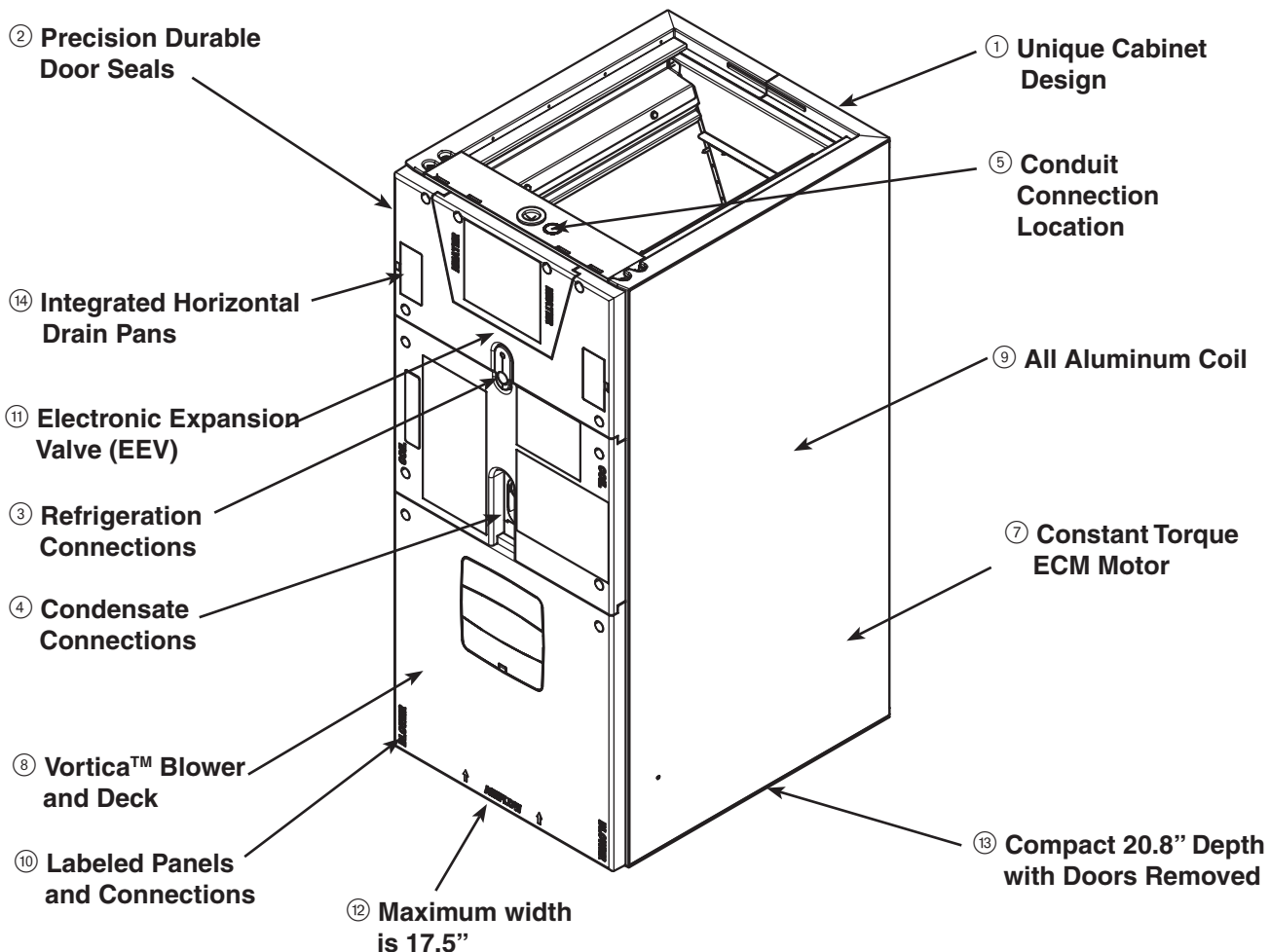
# Optional Equipment

## OPTIONAL EQUIPMENT FOR GAF2 AIR HANDLERS

Accessory Number	Description	Fits Cabinet Size
BAYECAA05LG1A	Electric Heater, 5kW, Lugs, 24V Control, 1 Ph	A
BAYECAA08LG1A	Electric Heater, 8kW, Lugs, 24V Control, 1 Ph	A
BAYECAA10LG1A	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	Front Return Kit	A
BAYBRFBX100	Bottom Return Filter Box	A
BAYWMKIT001	Wall Mount Kit	A
BAYLVKIT100A	Low Voltage Conduit Entry Kit	A

① GAF2A0A36 Cabinet is one piece 17.5" wide

# 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

## PRODUCT SPECIFICATIONS

<b>MODEL</b>	
<b>RATED VOLTS/PH/HZ.</b>	<b>GAF2A0A36M31SA</b>
<b>RATINGS</b> ①	208-230/1/60
<b>INDOOR COIL — Type</b>	See O.D. Specifications - Plate Fin
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

**GAF2A0A36 AIRFLOW PERFORMANCE TABLE**

AIRFLOW PERFORMANCE										
GAF2A0A36M31SA										
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

GAF2A0A36M31SA MINIMUM HEATER AIRFLOW CFM		
Heater	Minimum Air Speed Tap	
	Without Heat Pump	With Heat Pump
BAYECAA05LG1AA	Tap 1	Tap 2
BAYECAA08LG1AA	Tap 5	Tap 5
BAYECAA10LG1AA	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



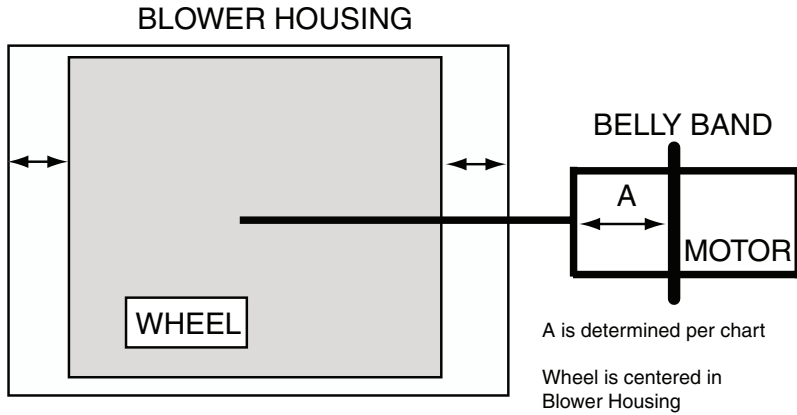
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# Electrical Data

WIRING DATA											
GAF2A0A36M31SA											
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
BAYECAAA05++	1	4.80	16400	20	30	30	3.60	12300	17.3	27	30
BAYECAAA08++	1	7.68	26200	32	45	45	5.76	19700	27.7	40	40
BAYECAAA10++	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

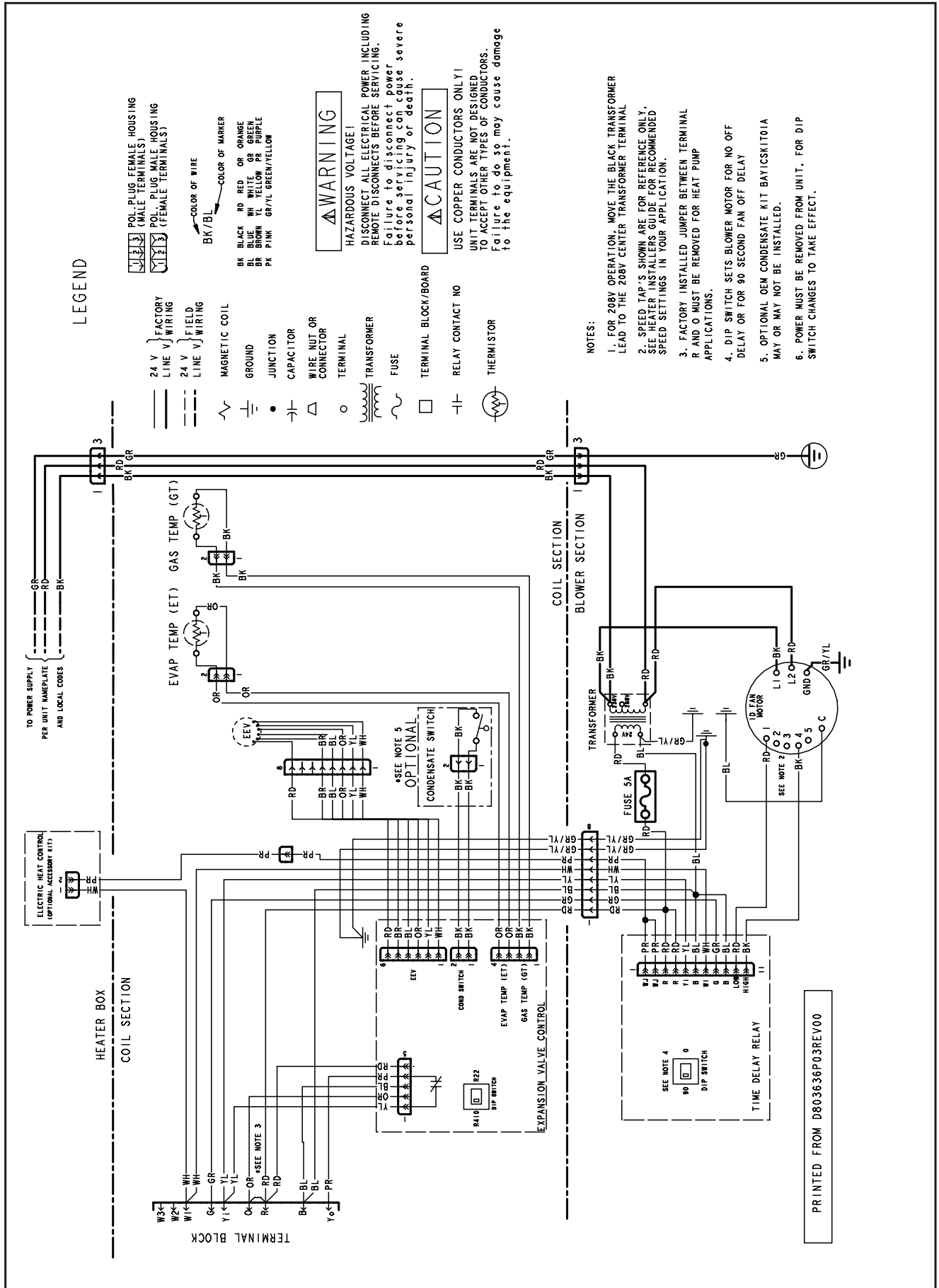


MODEL	DIM "A"
GAF2A0A36M31SA	1-1/2

A is determined per chart

Wheel is centered in Blower Housing

# WIRING DIAGRAM FOR GAF2A0A36M AIR HANDLER

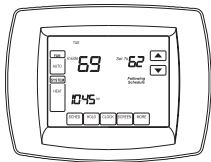




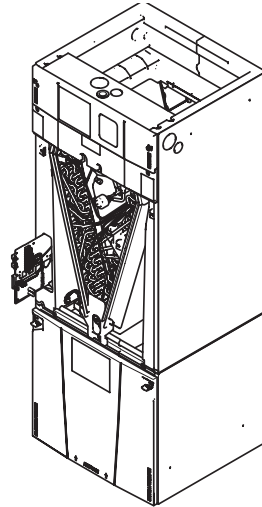
# Field Wiring

## GAF2 AIR HANDLERS WITH SINGLE SPEED COOLING

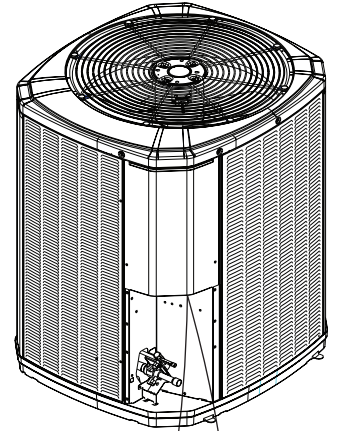
Air Handler Hook-up Diagram  
Cooling



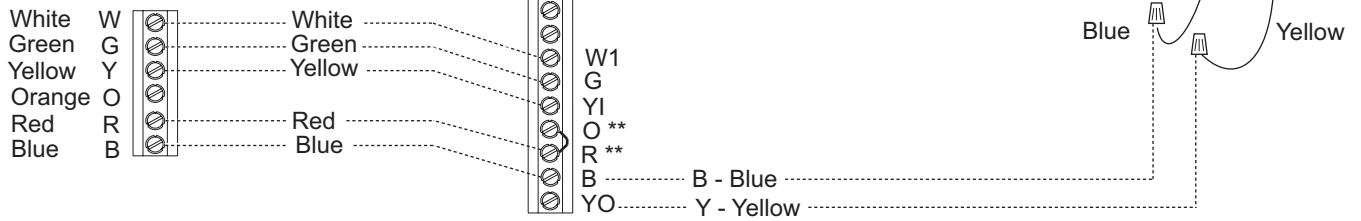
Comfort Control



Air Handler



Air Conditioner



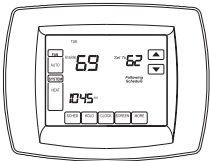
..... Field wiring

- \*\* R to O jumper must be removed for heat pump system
- 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 in series between YO and Y to the outdoor unit

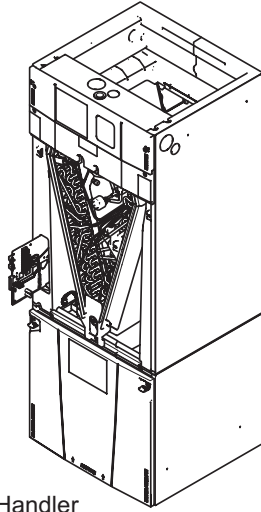
# Field Wiring

## GAF2 AIR HANDLERS WITH SINGLE SPEED HEAT PUMP

Air Handler Hook-up Diagram  
Heat Pump

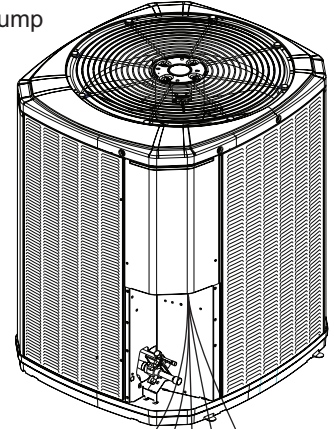


Comfort Control



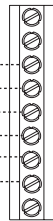
Air Handler

Heat Pump

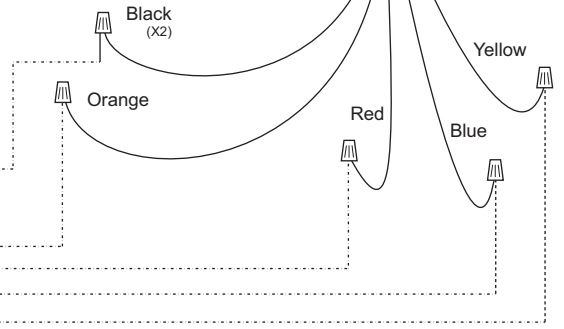


White W  
Green G  
Yellow Y  
Orange O  
Red R  
Blue B

White  
Green  
Yellow  
Orange  
Red  
Blue



W1 ..... W1 - White  
G ..... G  
YI ..... YI  
O \*\* ..... O - Orange  
R \*\* ..... R - Red  
B ..... B - Blue  
YO ..... Y - Yellow



..... Field wiring

- \*\* R to O jumper must be removed for heat pump system
- YI and YO connections must be made as shown
- Internally mounted condensate switch is optional and must be ordered separately
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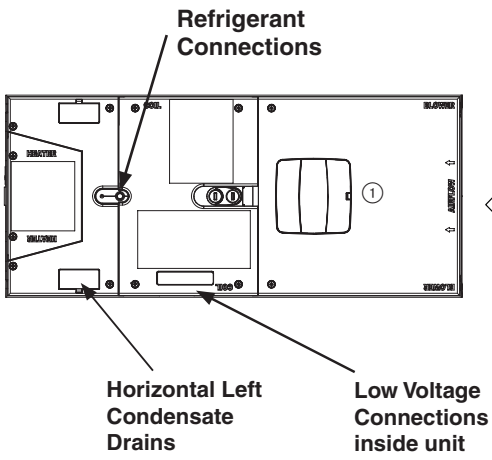
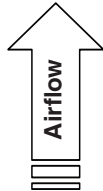
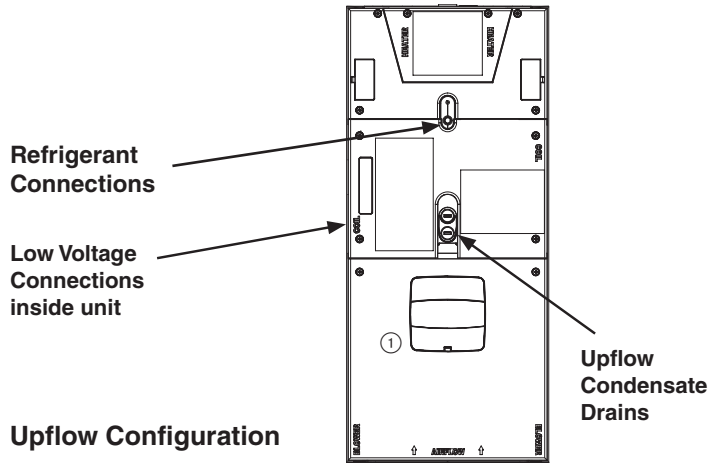


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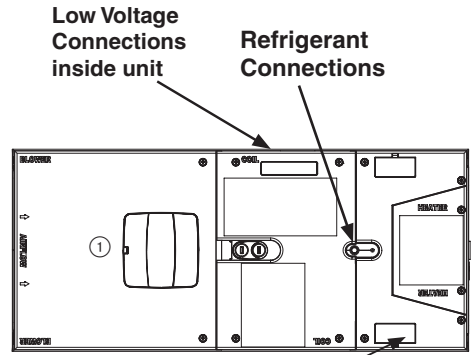
# GAF2 Convertibility

- \* Note: No internal modifications required for any position.
- ① Badge rotation will keep brand in correct position

## Multi-position Air Handler



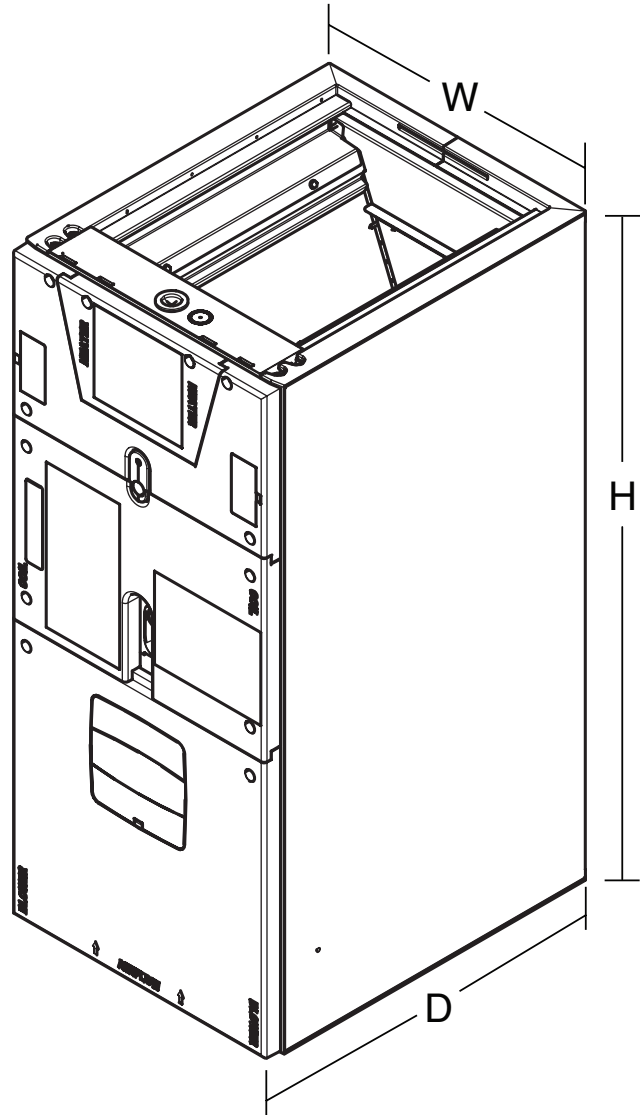
Horizontal Left\*



Horizontal Right\*

# Dimensions

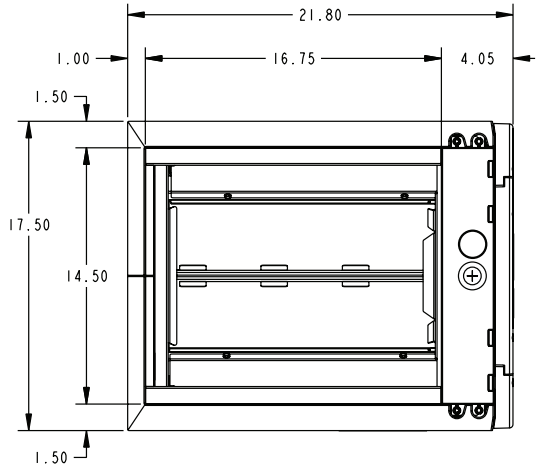
## GAF2 AIR HANDLER DIMENSIONAL DATA



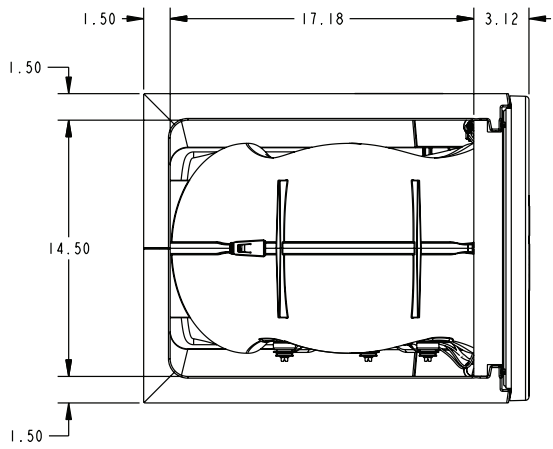
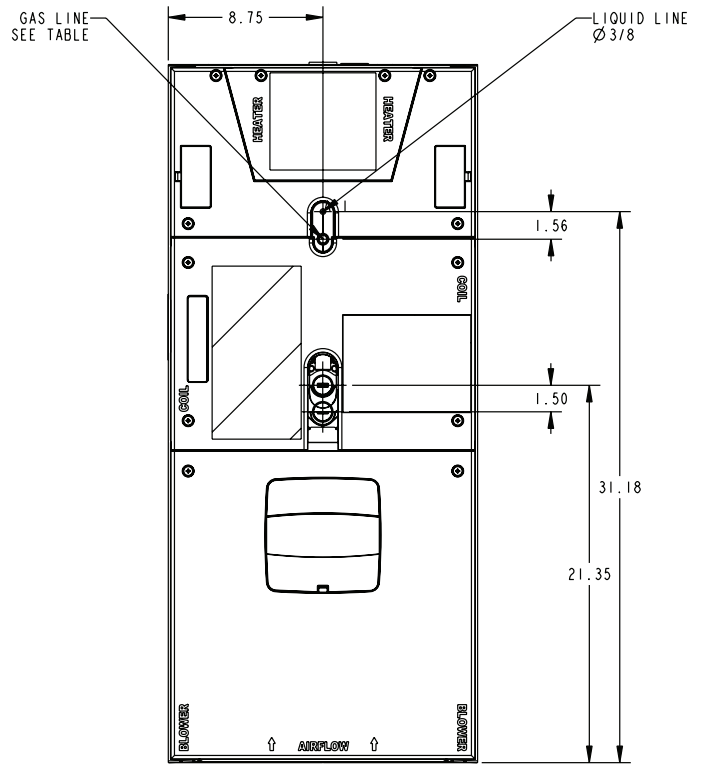
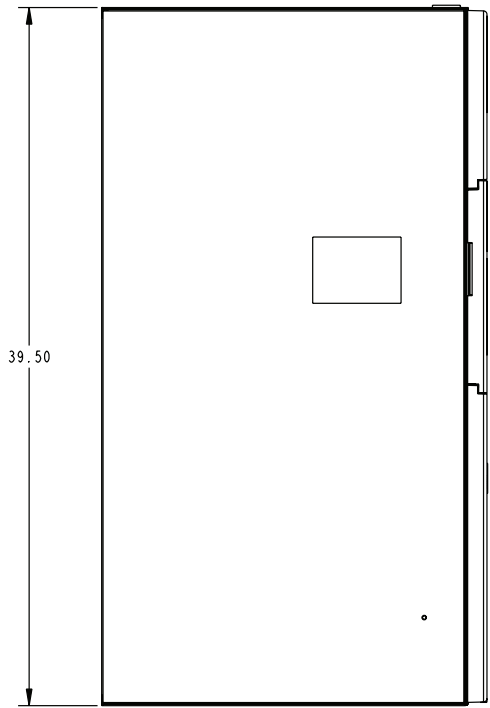
Model Number	H x D x W in.	Unit Net Weight lbs.
GAF2A0A36M31SA	39.5 x 21.8 x 17.5	98

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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The manufacturer has a policy of continuous product and product data improvement and it reserves the right to change design and specifications without notice.