

# INSTALLER'S GUIDE

18-GJ37D1-6B-EN

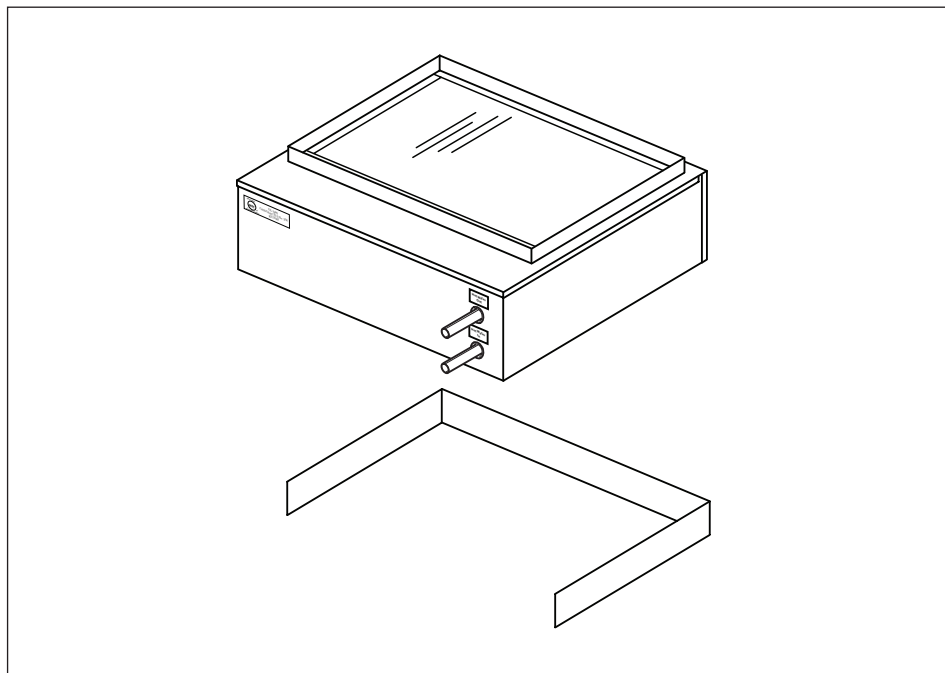
ALL phases of this installation must comply with  
NATIONAL, STATE AND LOCAL CODES

Model:  
BAYWA2311SC1AA

## Top Mount Hydronic Coil Accessory

Fits Hyperion™ and ForeFront™  
Air Handler models

**IMPORTANT**— This Document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.



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## Section 1. Safety Considerations

**IMPORTANT:** Read this manual carefully before attempting to install, operate, or perform maintenance on this hydronic coil. Installation, service, and maintenance should be performed by qualified technicians only.

**NOTE:** "Warnings" and "Cautions" appear at appropriate places in this manual. Read these carefully. Your personal safety and the proper operation of this heating product require that you follow them carefully. The manufacturer assumes no liability for installations or services performed by independent dealers.

Safety signal words are used to designate a degree or level of seriousness associated with a particular hazard. The signal words for safety markings are WARNING and CAUTION.

### WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in property damage, death or serious personal injury.

### CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It is also used to alert against unsafe practices and hazards involving only property damage.

#### 1.1 WARNINGS

### WARNING

THE INFORMATION IN THIS GUIDE IS FOR USE BY INDIVIDUALS HAVING ADEQUATE ELECTRICAL AND MECHANICAL BACKGROUND. ANY ATTEMPTS, BY UNQUALIFIED PERSONS, AT PLUMBING, INSTALLING OR REPAIRING A HYDRONIC SYSTEM OR CENTRAL AIR CONDITIONING PRODUCT COULD RESULT IN PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

### WARNING

**ELECTRICAL HAZARD!**  
DISCONNECT ALL ELECTRICAL POWER, INCLUDING REMOTE DISCONNECTS BEFORE INSTALLING OR SERVICING. FOLLOW PROPER LOCKOUT/TAGOUT PROCEDURES TO ENSURE THE POWER CAN NOT BE INADVERTENTLY ENERGIZED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

### WARNING

**LEAK HAZARD!**  
IF THE HYDRONIC COIL HAS A LEAK, USE CAUTION WHEN SERVICING THIS EQUIPMENT. THOROUGHLY WIPE OFF EXCESS WATER FROM ALL COMPONENTS AND ALLOW ADEQUATE TIME FOR THE COMPONENTS TO DRY COMPLETELY BEFORE SERVICING SYSTEM.  
FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS PERSONAL INJURY, PROPERTY DAMAGE, OR DEATH.

### WARNING

**HIGH PRESSURE HAZARD!**  
MAXIMUM ENTERING WATER TEMPERATURE IS 180°F. WATER TEMPERATURES EXCEEDING 180°F COULD CAUSE A HIGH PRESSURE BURST. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

### WARNING

**SCALD HAZARD!**  
THIS SYSTEM CONTAINS HOT WATER AND OPERATES UNDER PRESSURE. WATER TEMPERATURES ABOVE 125°F CAN INSTANTLY CAUSE SEVERE BURNS OR DEATH.  
USE CAUTION WHEN SERVICING THIS EQUIPMENT. ALLOW SUFFICIENT TIME FOR THE WATER TO COOL BEFORE OPENING THE SYSTEM DRAIN. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS PERSONAL INJURY, PROPERTY DAMAGE, OR DEATH.

### WARNING

**SAFETY HAZARD!**  
REMOVE ANY ELECTRICAL STRIP HEATERS WHEN INSTALLING THE HYDRONIC HEATER COIL. ELECTRICAL AND HYDRONIC HEAT MUST NOT BE USED TOGETHER. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

#### 1.2 CAUTIONS

### CAUTION

**SAFETY HAZARD!** Sharp Edge Hazard. Be careful of sharp edges on equipment or any cuts made on sheet metal while installing or servicing. Personal injury may result.

### CAUTION

**SAFETY HAZARD!**  
All joints must be leak free. Seal per local and national codes.

### CAUTION

**FREEZE HAZARD!** Installations subject to freezing ambient temperatures must have provisions for freeze protection to avoid damage to this appliance.

### CAUTION

**SAFETY HAZARD!** The selected location and orientation of the air handler and hydronic coil must allow the hydronic heating unit's circulator pump to be positioned with the motor shaft horizontal. Do Not install the hydronic coil with its service panel and the circulator pump facing vertical, up, or down.

## Section 2. General Information

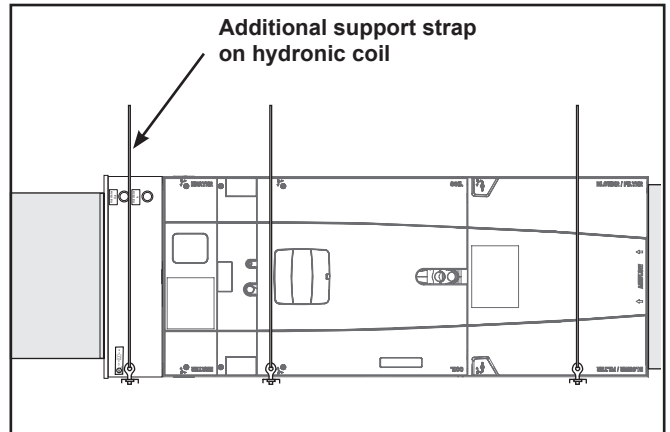
**IMPORTANT** - Follow all National and local codes when installing this hydronic coil.

This accessory hydronic coil is designed to deliver primary or secondary heating capacity and can be used in either a potable or non-potable water system. Maximum entering water temperature is 180 °F.

1. Check the hydronic coil nameplate to confirm that the selected hydronic coil is approved for use with the air handler.
2. Check the components received for damage. Report any defects or shortages to the transportation company immediately.

**NOTE** - Since the hydronic coil mounts over the discharge end of the air handler, it is necessary that the equipment power enter from one of the side conduit entry points.

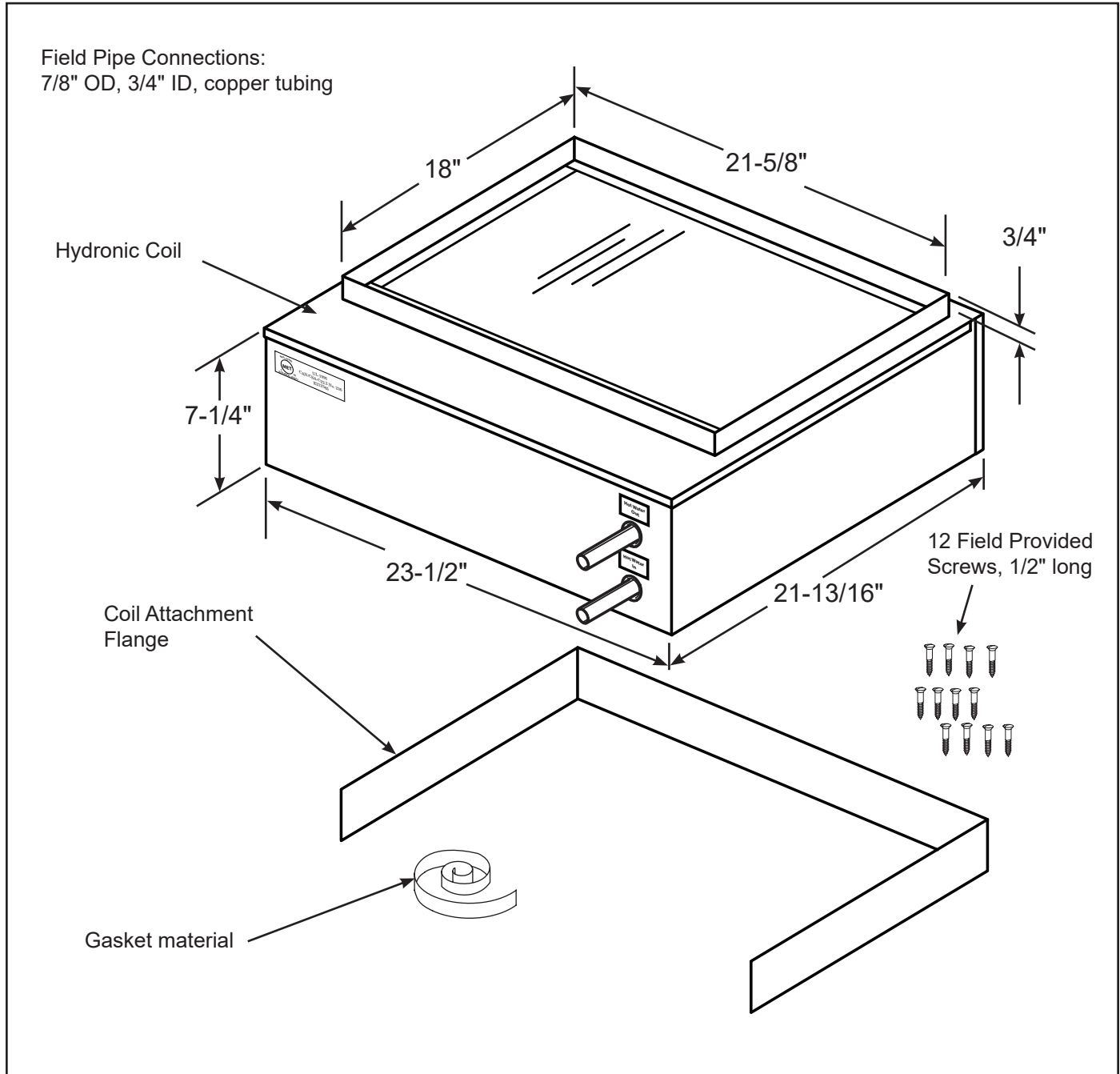
**NOTE** - The hydronic coil can be installed in upflow, downflow, or horizontal positions. When the air handler is installed in the horizontal orientation, an additional strap must be used on the coil section.



| Water Coil Model Number Nomenclature |  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
|--------------------------------------|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Digit                                |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Coil number                          |  | B | A | Y | W | A | 2 | 3 | 1 | 1 | S  | C  | 1  | A  | A  | A  |
| Brand                                | B = Both Brands  | B |   |   |   |   |   |   |   |   |    |    |    |    |    |    |
| Product Type                         | AY = Accessory   |   | A | Y |   |   |   |   |   |   |    |    |    |    |    |    |
| Heat Type                            | W = Hot Water Coil   |   |   |   | W |   |   |   |   |   |    |    |    |    |    |    |
| Product Tier                         | A = Air Handler Tier (5, 9, and X)<br>V = Air Handler Tier (7, 8) <sup>1</sup> |   |   |   |   | A |   |   |   |   |    |    |    |    |    |    |
| Size (Footprint)                     | Cabinet Width in Inches<br>- 17, 21, or 23                                     |   |   |   |   |   | 2 | 3 |   |   |    |    |    |    |    |    |
| Hydronic Heat Input                  | Hydronic Heat - 10,000 BTUH<br>(05,07,08,10,11)                                |   |   |   |   |   |   |   | 1 | 1 |    |    |    |    |    |    |
| Connection                           | SC = Sweat / Solder  |   |   |   |   |   |   |   |   |   | S  | C  |    |    |    |    |
| Power Supply                         | 1 = 208-230/1/60   |   |   |   |   |   |   |   |   |   |    |    | 1  |    |    |    |
| Major Design Modification            | Letter Sequence  |   |   |   |   |   |   |   |   |   |    |    |    | A  |    |    |
| Minor Design Modification            | Letter Sequence  |   |   |   |   |   |   |   |   |   |    |    |    |    | A  |    |
| Unit Parts Identifier                | Letter Sequence  |   |   |   |   |   |   |   |   |   |    |    |    |    |    | A  |

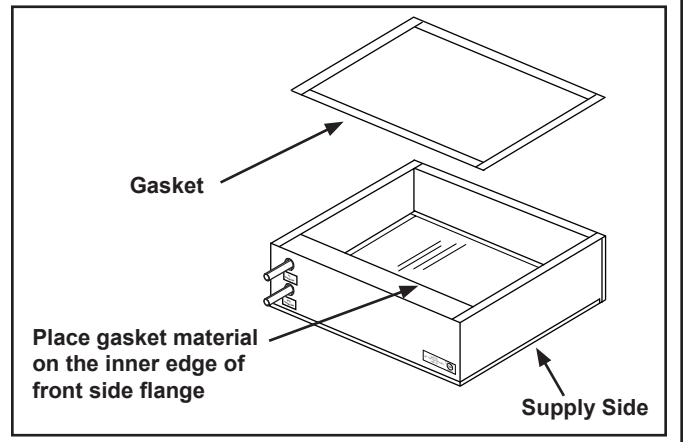
1- Tier 7 and 8 air handlers require the use of control board kit BAYWVBRD485

Section 3. Hydronic Coil Assembly



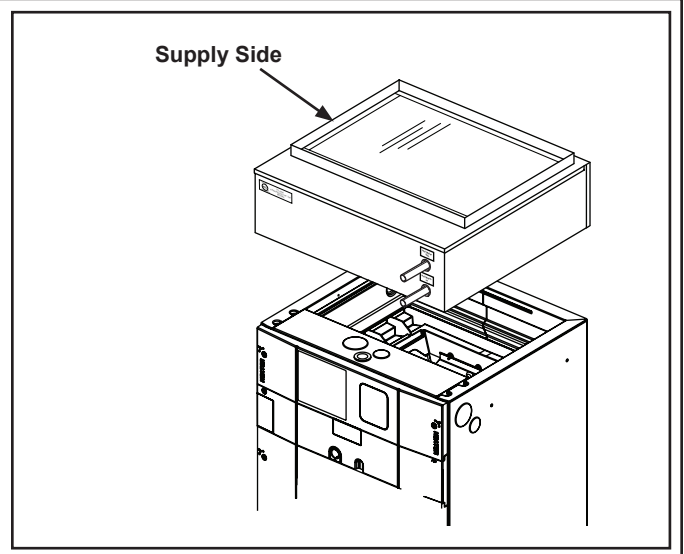
## Section 4. Install Hydronic Coil

**STEP 1** - Place the hydronic coil with the supply side facing down. Apply gasket material onto the coil flanges. On the front flange, the gasket material must be at the inner edge to create an airtight seal.



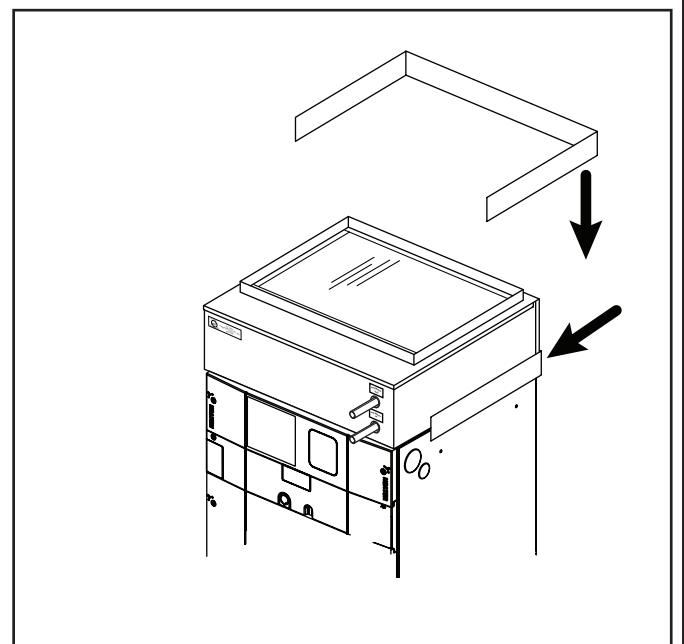
**STEP 2** - Place hydronic coil on top of the air handler cabinet.

1. Flip coil over so the gasket is on the bottom and the supply side flanges are facing up.
2. Set the coil on top of the air handler.
3. Align the coil with the air handler case.



**STEP 3** - Wrap the coil attachment flange around the air handler and coil. It should have equal amounts of material covering the coil and air handler cabinet.

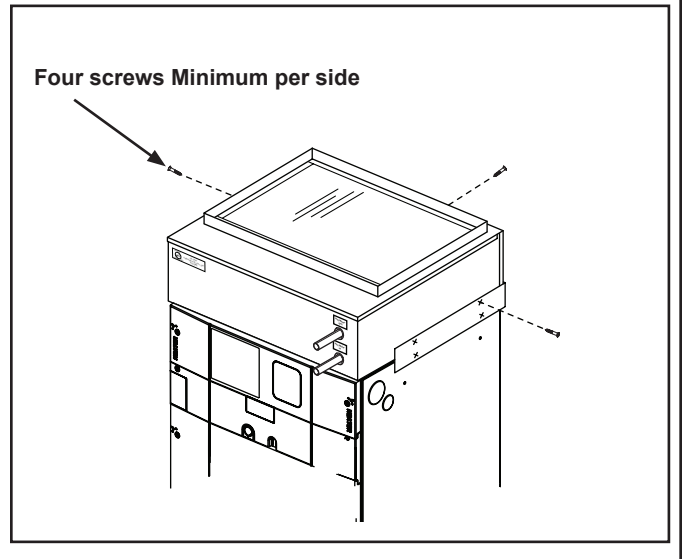
1. Take the attachment flange and wrap it around the air handler and coil.
2. Equal amounts of material should cover the coil and air handler.



## STEP 4 - Attach flange to air handler and coil.

1. Using field supplied screws, attach the coil attachment flange to the air handler and the coil.
2. Use four screws minimum per side.
3. Recommended screw length is 1/2" long.

**NOTE** - The hydronic coil can be installed in upflow, downflow, or horizontal positions. When the air handler is installed in the horizontal orientation, an additional strap must be used on the coil section.



## Section 5. Piping

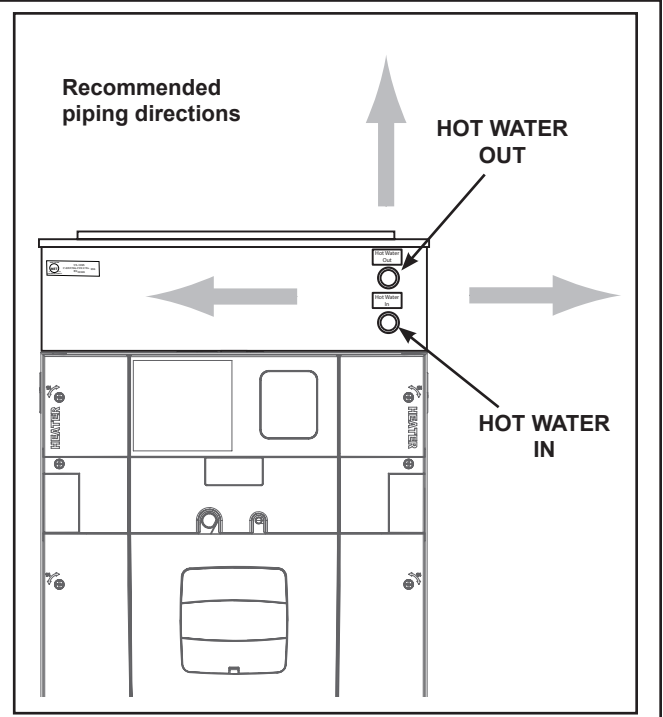
**IMPORTANT** - Follow all National and local codes when piping the hydronic system.

### STEP 1 - Attach piping to the hydronic coil.

1. Piping must consist of two vertical pipes or two horizontal pipes.
2. Use a low temperature braze solder to attach pipes.

**NOTE** - The recommended piping directions are upward, and to either the right or left side when in the upflow orientation.

In all orientations, the water lines should not cross over the air handler unit.



## Section 6. Performance Tables

### BAYWA2311SC1AAA

Entering Air Temperature 70°F db, 60°F wb

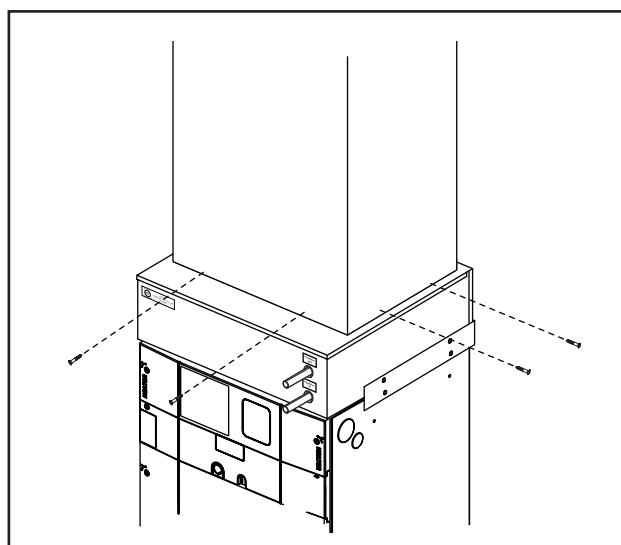
| SCFM | GPM | Airside Pressure Drop, "W.C. | 120°F Entering Water Temp |                      | 150°F Entering Water Temp |                      | 180°F Entering Water Temp |                      |
|------|-----|------------------------------|---------------------------|----------------------|---------------------------|----------------------|---------------------------|----------------------|
|      |     |                              | Total Capacity, BTUH      | Leaving Air Temp, °F | Total Capacity, BTUH      | Leaving Air Temp, °F | Total Capacity, BTUH      | Leaving Air Temp, °F |
| 1050 | 3   | 0.12                         | 22584                     | 93                   | 37898                     | 103                  | 52052                     | 120                  |
|      | 6   |                              | 26957                     | 96                   | 44659                     | 110                  | 60251                     | 127                  |
|      | 9   |                              | 28861                     | 97                   | 47528                     | 113                  | 66048                     | 130                  |
| 1200 | 3   | 0.15                         | 24485                     | 91                   | 41011                     | 101                  | 56072                     | 116                  |
|      | 6   |                              | 29226                     | 94                   | 48327                     | 108                  | 64905                     | 123                  |
|      | 9   |                              | 31291                     | 95                   | 51432                     | 111                  | 71149                     | 126                  |
| 1400 | 3   | 0.19                         | 26736                     | 89                   | 44387                     | 98                   | 60848                     | 112                  |
|      | 6   |                              | 31913                     | 92                   | 52305                     | 105                  | 70434                     | 119                  |
|      | 9   |                              | 34167                     | 94                   | 55666                     | 108                  | 77210                     | 122                  |
| 1600 | 3   | 0.24                         | 28609                     | 88                   | 47501                     | 96                   | 64994                     | 109                  |
|      | 6   |                              | 34149                     | 91                   | 55974                     | 102                  | 75233                     | 116                  |
|      | 9   |                              | 36561                     | 92                   | 59571                     | 105                  | 82471                     | 119                  |
| 1800 | 3   | 0.29                         | 30308                     | 86                   | 50331                     | 94                   | 68934                     | 106                  |
|      | 6   |                              | 36176                     | 89                   | 59309                     | 100                  | 79793                     | 113                  |
|      | 9   |                              | 38732                     | 91                   | 63120                     | 103                  | 87470                     | 116                  |
| 2000 | 3   | 0.35                         | 31878                     | 85                   | 52624                     | 92                   | 72182                     | 103                  |
|      | 6   |                              | 38050                     | 88                   | 62011                     | 98                   | 83552                     | 110                  |
|      | 9   |                              | 40738                     | 90                   | 65995                     | 101                  | 91591                     | 113                  |

|                 | GPM | PD, Head water (ft) |
|-----------------|-----|---------------------|
| BAYWA2311SC1AAA | 3   | 0.6                 |
|                 | 6   | 2.5                 |
|                 | 9   | 5.6                 |

## Section 7. Ducting

**Outlet dimension - 21-5/8" W x 18" D x 3/4" H**

**NOTE** - Attach ducting per the air handler installation guide, as well as National and local codes.



## Section 8a. 24 Volt Operation

**NOTE:** Air flow can be adjusted by discreetly controlling the W1, W2, & W3 inputs to the AFC with multi-stage thermostats. See additional notes on wiring diagram.

Example: 5TAMXD04 with BAYWA2308 hydronic heating coil  
 W1 input = 396 cfm  
 W1 + W2 input = 792 cfm  
 W1 + W2 + W3 input = 1200 cfm

Placing a jumper across all W inputs will result in the maximum airflow for the combination of heating coil and air handler.

### AIRFLOW DEMAND IN 24 VOLT CONFIGURATION

| COIL MODEL / AHU MODEL    | W1  | W1 + W2 | W1 + W2 + W3 | PWM CONTROLLED    |
|---------------------------|-----|---------|--------------|-------------------|
| BAYWA1705SC1A w/ 5TAMXB02 | 264 | 528     | 800          | Ramped HP Airflow |
| BAYWA2107SC1A w/ 5TAMXC03 | 330 | 660     | 1000         | Ramped HP Airflow |
| BAYWA2308SC1A w/ 5TAMXD04 | 396 | 792     | 1200         | Ramped HP Airflow |
| BAYWA2308SC1A w/ 5TAMXD05 | 462 | 924     | 1400         | Ramped HP Airflow |
| BAYWA2308SC1A w/ 5TAMXD06 | 528 | 1056    | 1600         | Ramped HP Airflow |
| BAYWA2308SC1A w/ 5TAMXD07 | 594 | 1188    | 1800         | Ramped HP Airflow |
| BAYWA2311SC1A w/ 5TAMXD07 | 660 | 1320    | 2000         | Ramped HP Airflow |

Airflow is based upon the heating demand from the comfort control based on the heat-pump airflow  
 Example: 4T outdoor unit x 400 HP Heating cfm/ton = 1600

## Section 8b. Communicating Operation

### AIRFLOW DEMAND IN COMMUNICATING MODE

| COIL MODEL / AHU MODEL    | MAXIMUM CFM | SERIAL COMMUNICATING |
|---------------------------|-------------|----------------------|
| BAYWA1705SC1A w/ 5TAMXB02 | 800         | Ramped HP Airflow    |
| BAYWA2107SC1A w/ 5TAMXC03 | 1000        | Ramped HP Airflow    |
| BAYWA2308SC1A w/ 5TAMXD04 | 1200        | Ramped HP Airflow    |
| BAYWA2308SC1A w/ 5TAMXD05 | 1400        | Ramped HP Airflow    |
| BAYWA2308SC1A w/ 5TAMXD06 | 1600        | Ramped HP Airflow    |
| BAYWA2308SC1A w/ 5TAMXD07 | 1800        | Ramped HP Airflow    |
| BAYWA2311SC1A w/ 5TAMXD07 | 2000        | Ramped HP Airflow    |

Airflow is based upon the heating demand from the comfort control based on the heat-pump airflow  
 Example: 4T outdoor unit x 400 HP Heating cfm/ton = 1600

### About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit [www.trane.com](http://www.trane.com) or [www.americanstandardair.com](http://www.americanstandardair.com)



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