Installer's Guide

18-GJ03D1-2

1-½ – 5 Ton Air Handlers
Upflow / Horizontal Left

TWG018A140C TWG037A140C
TWG025A140C TWG042A140C
TWG030A140C TWG048A140C
TWG036A140C TWG060A150C

⚠ WARNING: HAZARDOUS VOLTAGE - DISCONNECT POWER BEFORE SERVICING

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

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

A. GENERAL INFORMATION

⚠ WARNING

THIS INFORMATION IS FOR USE BY INDIVIDUALS HAVING ADEQUATE BACKGROUNDS OF ELECTRICAL AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A CENTRAL AIR CONDITIONING PRODUCT MAY RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

⚠ CAUTION

EQUIPMENT DAMAGE! TO PREVENT SHORTENING ITS SERVICE LIFE, THE AIR HANDLER SHOULD NOT BE USED DURING THE FINISHING PHASES OF CONSTRUCTION OR REMODELING. The low return air temperatures can lead to the formation of condensate. Condensate in the presence of chlorides and fluorides from paint, varnish, stains, adhesives, cleaning compounds, and cement creates a corrosive condition which may cause rapid deterioration of the cabinet and internal components.

⚠ WARNING

The following warning complies with State of California law, Proposition 65.

This product contains fiberglass wool insulation! Fiberglass dust and ceramic fibers are believed by the State of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

PRECAUTIONARY MEASURES:
--Avoid breathing fiberglass dust.
--Use NIOSH approved dust/mist respirator.
--Avoid contact with the skin or eyes. Wear long sleeved, loose fitting clothing, gloves and eye protection.
--Wash clothes separately from other clothing; rinse washer thoroughly.
--Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respirator in these situations.

FIRST AID MEASURES
--Eye contact: Flush eyes with water to remove dust. If symptoms persist, seek medical attention.
--Skin Contact: Wash affected areas gently with soap and warm water after handling.

These instructions do not cover all variations in systems or provide for every possible contingency. Should further information be desired or particular problems arise which are not covered sufficiently by this manual, contact your local distributor or the manufacturer as listed on the air handler nameplate.

These Air Handlers are vertical upflow and horizontal left configuration only. Refer to Section B beginning on page 2 for additional information.

INSPECTION

Check carefully for any shipping damage. This must be reported to and claims made against the transportation company immediately. Check to be sure all major components are in the unit. Any missing parts should be reported to your supplier at once, and replaced with authorized parts only.

INSTALLATION LIMITATIONS & RECOMMENDATIONS

The general location of the air handler is normally selected by the architect, contractor and/or home owner for the most effective application and satisfaction.

These air handlers are suitable for installation in a closet, alcove or utility room with free, non-ducted, air return, using the area space as a return air plenum. With ducted supply air, if the minimum clearances to combustible materials and service access are observed, the above installations are suitable.

This area may also be used for other purposes, including an electric hot water heater - **but in no case shall a fossil fuel device be installed and/or operated in the same closet, alcove or utility room.**

In addition, these air handlers are suitable for installation in an attic, garage or crawl space with ducted supply and return air.

This equipment has been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "SUITABLE FOR MOBILE HOME USE"

For proper installation the following items must be considered:

1. If adequate power is available and correct according to nameplate specifications.
2. Insulate and seal all ducts, particularly if unit is located outside of the conditioned space.
3. To ensure maximum efficiency and system performance, the existing supply and return duct system static pressures must not exceed the total available static pressure of the air handler. Reference ACCA Manual D, Manual S and Manual RS along with the air handler Product Data and Service Facts for additional information.
4. It is recommended that the outline drawing be studied and dimensions properly noted and checked against selected installation site. By noting in advance which knockouts are to be used, proper clearance allowances can be made for installation and possible future service.
5. If supplementary heat is to be added, power supply must be sufficient to carry the load. In addition, minimum air flow settings, unit and duct clearances to combustible material must be maintained as stated on the air handler rating nameplate.

⚠ CAUTION

For air handlers not equipped with a factory installed electric heater, a field installed heater is available from Trane. Only heaters built by Trane are approved for use in the air handler. These heaters have been designed and tested in accordance with UL standards to provide safe and reliable operation. A list of approved heaters is provided on the air handler rating nameplate. Heaters that are not factory approved could cause damage and are not covered under equipment warranty.

6. If field installed electric heaters are applied, minimum air flow settings, unit and duct clearances to combustibles must be maintained as stated on the air handler rating nameplate.
7. If the unit is installed without a return air duct, applicable local codes may limit this air handler to installation only in a single story residence & within conditioned space.
8. If the outdoor unit is to be installed later, or by others, then installation of the air handler must be made to allow access for refrigerant lines, or attach refrigerant lines to air handler when installing.
9. Make sure there are provisions for installing condensate drain lines.
10. Route refrigerant & condensate drain lines away from air handler so they do not interfere with access panels and filters.
11. When external accessories are used, the additional height and width requirements must be considered in the overall space needed.
12. These units are not approved for outdoor installation.
13. These units are approved for draw-through application only.

NOTE: Condensation may occur on the surface of the air handler when installed in an unconditioned location.When units are installed in unconditioned spaces, verify that all electrical and refrigerant line penetrations on the air handler are sealed completely.

B. UNIT INSTALLATION
UPFLOW

1. **For maximum efficiency**, the horizontal drip tray should be removed. Tray removal requires that the coil be removed. The tray is detached by removing the two screws at the drain pan and the two screws holding the two brackets at the top of the coil.
2. **Openings where field wiring enters the cabinet must be completely sealed**. Location of power entry is shown on the Outline Drawing.
3. TWG037A140, TWG042A140, TWG048A140 & TWG060A150 Only: Remove the factory installed baffle assembly from the apex of the coil by removing the 5/16" hex head screws.

   Replace this baffle with the factory supplied narrow coil baffle using the screws removed previously (See Figure 1).
3. Position unit on Pedestal or other suitable foundation. If Pedestal is not used, a frame strong enough to support the total weight must be provided. Provide a minimum height of 14 inches for proper unrestricted airflow.
4. If a return air duct is connected to the air handler, it must be the same dimensions as shown in the outline drawing.
5. Pedestal and unit should be isolated from the foundation using a suitable isolating material.

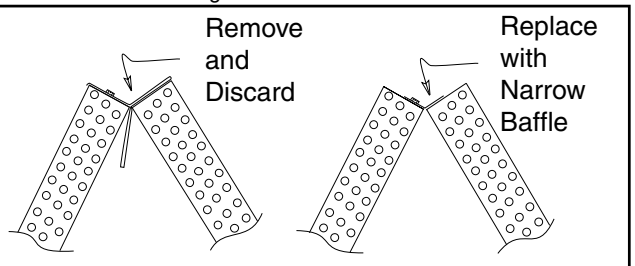


Figure 1. For Maximum Efficiency on Upflow TWG037A140, TWG042A140, TWG048A140 & TWG060A150 Only

HORIZONTAL LEFT

1. ***For maximum efficiency*** and Customer ease of filter maintenance, it is recommended that a properly sized **remote filter** and grille be installed for horizontal applications. Airflow should not exceed the face velocity of the filter being used.
2. The unit is shipped from the factory in the horizontal left airflow position.
3. **Openings where field wiring enters the cabinet must be completely sealed** . Location of power entry is shown on the Outline Drawing.
4. The unit may be suspended as long as the unit is supported from both ends as well as the middle to prevent sagging and service access is not obstructed.
5. If the unit is not suspended it must be isolated carefully to prevent sound transmission. Vibration isolators (field fabricated) must be placed under the unit.
6. It is always recommended that an auxiliary drain pan be installed under a horizontal air handler (See Condensate Drain Piping) to prevent possible damage to ceilings.
7. Isolate the auxiliary drain pan from the unit or from the structure.
8. Connect the auxiliary drain line to a separate drain line (no trap is needed in this line) and terminate according to local codes.
9. If a return duct is connected to the Air Handler, it must be the same dimensions as the return opening shown in the outline drawings.

C.DUCT CONNECTIONS

The supply and return air ducts should be connected to the unit with flame retardant duct connectors.

Convertible duct flanges can be field fabricated to make a "flush fit" for 3/4" or 1-1/2" duct board applications, see the Outline drawing for sizes of the duct connections. After the duct is secured, seal around the supply duct to prevent air leakage.

D. ACCUTRON™ FLOW CONTROL VALVE

If the indoor unit System Refrigerant Flow control is an Accutron™ orifice and check valve assembly, an orifice change may be necessary.

The outdoor unit determines the required orifice size. Check the orifice size stamped on nameplate of selected outdoor model. If the indoor unit is shipped with a different orifice size, the orifice must be changed to obtain system rated performance.

IMPORTANT: The outdoor unit will be shipped with the proper size orifice and a stick-on orifice size label in an envelope attached to the outdoor unit. Outdoor unit nameplate will have correct orifice size specified as BAYFCCV---A for rated performance.

FIELD CHANGING OF ORIFICE

NOTE: Do NOT connect refrigerant line set yet!

1. Disassemble Accutron**™** assembly by turning adapter hex nut counterclockwise. (See Figure 2).

2. Existing orifice should be removed, using a pin, wire or paper clip if necessary.

3. Insert properly sized orifice into the Accutron**™** body with rounded "bullet" nose toward the indoor unit. (See Figure 2). Ensure the orifice remains inserted in body when reconnecting mating adapter removed in item 1.

4. Reconnect adapter by hand to ensure proper mating of threads and tighten until bodies "bottom" or a definite resistance is felt.

5. Mark a line lengthwise from the union nut to the bulkhead. Then tighten an additional 1/6 turn (or 1 hex flat). The misalignment of the line will show the amount the assembly has been tightened. This final 1/6 turn is necessary to ensure the formation of a leakproof joint.

IMPORTANT: Correct tightening of the coupling is very important. Under tightening or over tightening may result in a coupling leak.

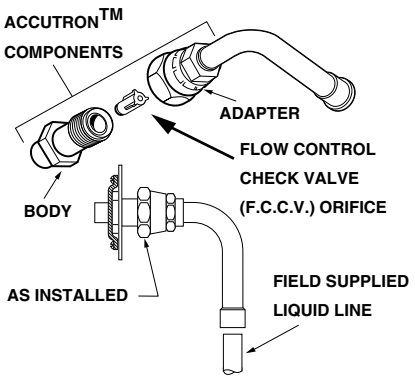


Figure 2. Flow Control Check Valve

E.REFRIGERANT PIPING

IMPORTANT: Refrigerant piping must be routed to maintain service access to blower compartment and provide easy removal of filter access panel and filter.

1. Refrigerant connections are made outside the cabinet.
2. Installation of refrigerant lines is covered in the installation instructions packaged with the outdoor unit. Evacuation, leak testing and brazing procedures are included in those instructions. Read those instructions before starting installation of refrigerant lines.

BRAZING TO EVAPORATOR SECTION

IMPORTANT: Do NOT unseal refrigerant tubing until ready to cut and fit refrigerant lines.

1. Remove liquid line soldered cap, if so equipped.
2. Using a tubing cutter, cut off the spun end of the suction tube manifold. Tubing should be cut square, round and free of burrs at the connecting end. Clean the tubing to prevent contaminants from entering the system.
3. Run refrigerant tubing into the stub sockets of indoor unit coil.
4. Braze and evacuate according to indoor and outdoor installation instructions.

NOTE: PAINTED AREAS OF UNIT MUST BE SHIELDED DURING BRAZING

F.CONDENSATE DRAIN PIPING

NOTE: Make certain that the unit has been installed in a level position to ensure proper draining.

The indoor blower is downstream of the evaporator coil which creates a negative pressure at the condensate drain connections during operation. The condensate drain connections in front of the indoor coil are 3/4" NPT. The lower connection is the primary drain. See Figure 2.

Two secondary drain connections are provided for the different orientations (See Figure 3). The lower of the two should be connected as a backup to prevent condensate overflow by a blocked primary drain.

For proper drainage of condensate, the following steps should be followed:

1. The primary drain line must be trapped with a minimum of 2" water seal as shown in Figure 4**. Do not use preformed 3/4" PVC running traps.**

   The use of Field fabricated or manufactured traps is acceptable. A manufactured trap can allow for a float switch option to be added. Refer to the manufacturers data and instructions for details.
2. **The trap must be located within 4 feet of the air handler drain outlet connection.**
3. It is recommended that a clean-out tee or cross be installed in the primary drain line for future maintenance (See Figure 4).
4. Do not use reducing fittings in the condensate drain lines.
5. Slope the drain lines downward a minimum of 1/4" per foot.
6. Insulate the primary drain to prevent sweating.
7. **Provide means for drainage to prevent winter freeze-up of condensate line**.
8. Do not connect the drain line to a closed drain system.
9. Use Teflon® tape on the air handler drain line connections! Do Not Use pipe joint compound or PVC/CPVC cement!

It is always recommended that an auxiliary drain pan be installed under a horizontally installed air handler. Connect the auxiliary drain line to a separate drain line (no trap is needed in this line) and terminate according to local codes.

NOTE: DO NOT use a torch or flame near the plastic drain pan coupling.

NOTE: DO NOT tighten the drain pipe excessively. Support the condensate piping and traps outside the unit to prevent strain on the drain coupling.

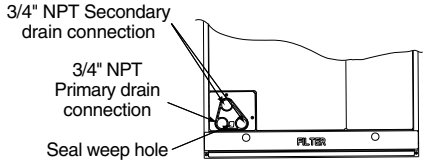


Figure 3. Condensate Drain Locations

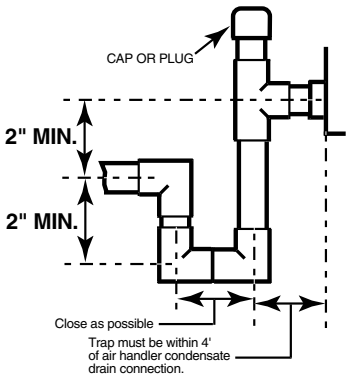


Figure 4. Condensate Drain

G.ELECTRICAL — POWER WIRING

⚠ WARNING

ELECTRICAL SHOCK HAZARD! LOCK OUT UNIT DISCONNECT SWITCH IN OPEN POSITION BEFORE SERVICING UNIT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

⚠ WARNING

Grounding Required! Follow proper local and state electrical code on requirements for grounding. Failure to follow code could result in death or serious injury.

1. These Air Handlers are shipped from the factory wired for 230 volts. The units may be wired for 208 volts. Follow instructions on unit wiring diagram located on blower door.
2. The selection of wire and fuse sizes should be made according to the Minimum Branch Circuit Ampacity and the Maximum Overcurrent Device listed on the unit nameplate.
3. Field wiring diagrams for electric heaters and unit accessories are shipped with the accessory.
4. Wiring must conform to National and Local codes. Ground unit per Local codes and following recognized safety practices and procedures.

If an electric heater is not installed, connections are made through the 7/8" knockout on the outside of the air handler, into the air handler to the two power leads and ground wire connections which are located near the discharge of the blower.

NOTE: If air handler is used with or without a heater, the 7/8" electrical entry hole as well as any other cabinet penetrations must be sealed air tight.

IF AIRHANDLER IS USED **WITHOUT** A FACTORY FURNISHED SUPPLEMENTARY HEATER, A PLATE IS REQUIRED TO COVER THE OPEN HOLE IN THE AIR FLOW SYSTEM

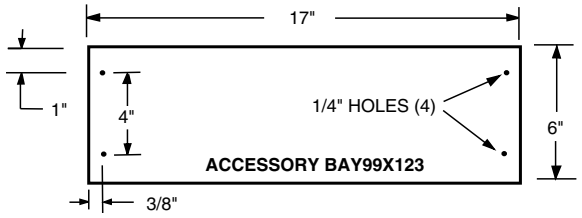


Figure 5. Heater Plate - Order Accessory BAY99X123 or field fabricate to these dimensions

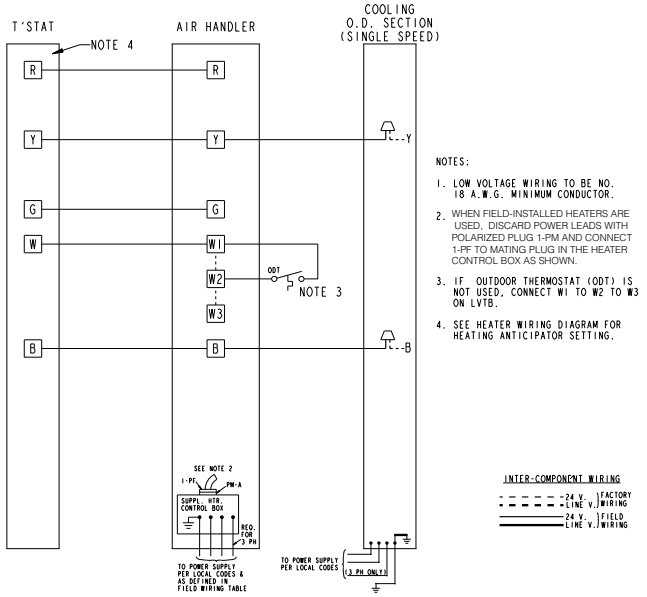
H.CONTROL WIRING

1. Connect wiring between indoor unit, outdoor unit and thermostat. The use of color-coded low-voltage wires is recommended.
2. Field wiring diagrams are provided which show the low voltage wiring hookup for a single speed cooling only system (with supplementary heaters) and a heat pump system (with supplementary heaters). Plug in type electrical connectors are provided for use with supplementary heaters.

IMPORTANT: When supplementary heaters are installed, inspect to insure that all packaging material has been removed.

NOTE: Direct drive motors have bearings which are permanently lubricated and under normal use lubrication is not recommended.

TWG AIR HANDLERS WITH SINGLE STAGE COOLING, 1 STAGE HEAT



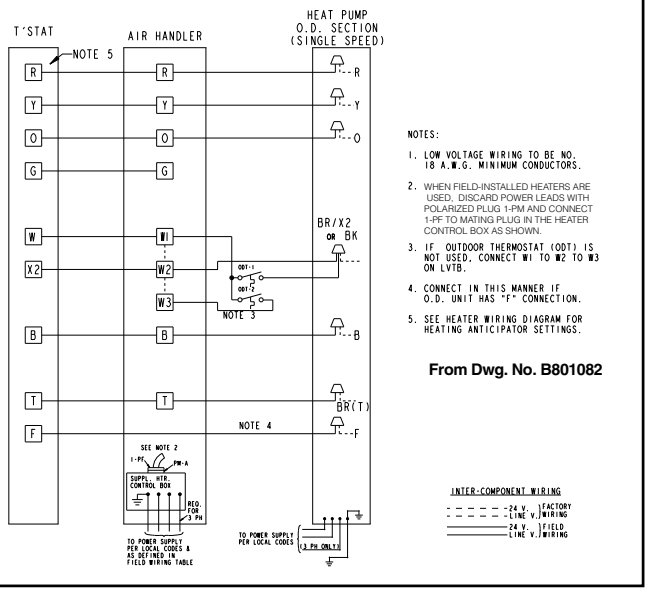
From Dwg. No. B801083

PRESSURE DROP FOR ELECTRIC HEATERS IN AIR HANDLER MODELS

HEATER RACKS	
HEATER MODEL NO.	**NO. OF RACKS**
BAYHTR1405	1
BAYHTR1408	2
BAYHTR1410 BAYHTR3410	2
BAYHTR1415 BAYHTR3415	3

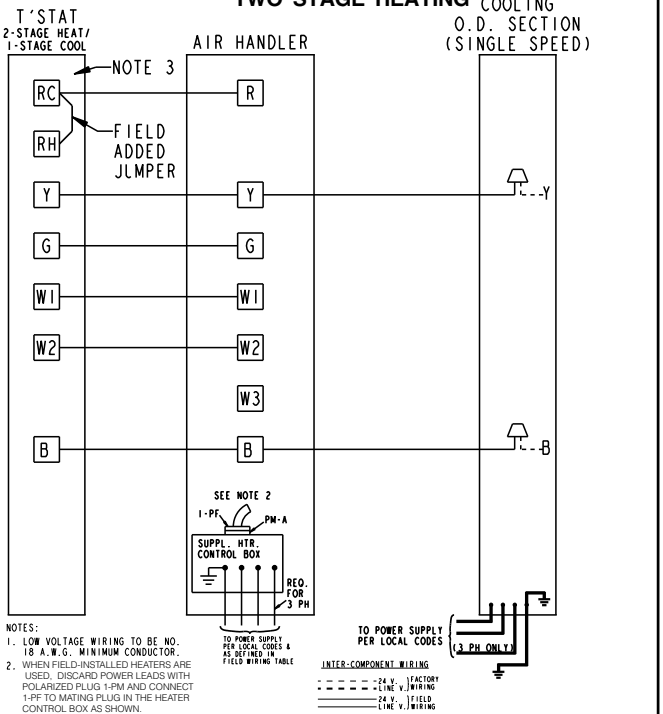
Strip heater pressure drop measurements listed in this table must be added to system static pressure to correctly use the corresponding air flow (blower) performance tables located on page 5.

TWG AIR HANDLERS WITH SINGLE SPEED HEAT PUMP



From Dwg. No. B801082

TWG AIR HANDLERS WITH SINGLE STAGE COOLING AND TWO STAGE HEATING



From Dwg. No. B801081

Air Flow (Blower) Performance Tables

AIR FLOW PERFORMANCE TWG018A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
300			0.62			0.48						0.58
350			0.48			0.35			0.54			0.42
400			0.33			0.20			0.40			0.25
450		0.48	0.19		0.41	0.06		0.53	0.26		0.47	0.09
500	0.59	0.40	0.04	0.54	0.33		0.65	0.45	0.10	0.61	0.38	
550	0.49	0.31		0.45	0.24		0.54	0.37		0.50	0.29	
600	0.38	0.20		0.33	0.13		0.43	0.26		0.38	0.18	
650	0.25	0.06		0.20	0.00		0.30	0.11		0.25	0.08	
700	0.12			0.06			0.18			0.12		
750							0.05					

NOTE: Vertical - with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG025A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
500			0.53			0.39			0.58			0.44
550			0.43			0.30			0.48			0.35
600			0.32			0.19			0.37			0.24
650			0.20	0.58		0.08			0.26			0.14
700	0.53	0.51	0.08	0.50	0.43		0.60	0.54	0.15	0.57	0.45	0.02
750	0.46	0.39		0.42	0.31		0.53	0.42	0.04	0.49	0.35	
800	0.38	0.26		0.34	0.19		0.45	0.30		0.41	0.24	
850	0.31	0.13		0.26	0.06		0.38	0.17		0.33	0.14	
900	0.23	0.00		0.18			0.30	0.04		0.25	0.01	
950	0.16			0.10			0.22			0.17		
1000	0.09						0.14			0.08		
1050	0.02						0.06					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG030A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
750						0.41						0.50
800			0.49			0.28			0.56			0.37
850	0.59	0.43	0.24	0.53	0.35	0.10	0.66	0.51	0.34	0.64	0.39	0.22
900	0.48	0.34	0.00	0.43	0.26		0.57	0.41	0.10	0.55	0.30	0.06
950	0.37	0.25		0.33	0.17		0.47	0.30		0.45	0.21	
1000	0.26	0.15		0.22	0.07		0.37	0.19		0.34	0.10	
1050	0.15	0.02		0.11			0.26	0.06		0.22		
1100	0.04			0.00			0.15			0.09		
1150							0.02					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG036A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
850			0.59									
900		0.55	0.54	0.65	0.49	0.38			0.53			0.44
950	0.62	0.51	0.47	0.59	0.44	0.31		0.52	0.47		0.47	0.35
1000	0.56	0.45	0.39	0.52	0.36	0.20	0.66	0.47	0.40	0.65	0.39	0.23
1050	0.48	0.38	0.29	0.45	0.26	0.03	0.60	0.41	0.31	0.58	0.30	0.06
1100	0.40	0.29	0.17	0.36	0.14		0.53	0.34	0.21	0.50	0.19	
1150	0.32	0.19	0.04	0.27	0.00		0.45	0.27	0.09	0.40	0.08	
1200	0.23	0.07		0.17			0.36	0.19		0.30		
1250	0.13			0.06			0.26	0.10		0.18		
1300	0.02						0.15			0.06		
1350							0.02					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG037A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
850			0.59									
900		0.55	0.54	0.65	0.49	0.38			0.53			0.44
950	0.62	0.51	0.47	0.59	0.44	0.31		0.52	0.47		0.47	0.35
1000	0.56	0.45	0.39	0.52	0.36	0.20	0.66	0.47	0.40	0.65	0.39	0.23
1050	0.48	0.38	0.29	0.45	0.26	0.03	0.60	0.41	0.31	0.58	0.30	0.06
1100	0.40	0.29	0.17	0.36	0.14		0.53	0.34	0.21	0.50	0.19	
1150	0.32	0.19	0.04	0.27	0.00		0.45	0.27	0.09	0.40	0.08	
1200	0.23	0.07		0.17			0.36	0.19		0.30		
1250	0.13			0.06			0.26	0.10		0.18		
1300	0.02						0.15			0.06		
1350							0.02					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG042A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
1150		0.53	0.30		0.42	0.20		0.59	0.37		0.49	0.24
1200	0.59	0.47	0.27	0.51	0.37	0.15		0.53	0.33		0.44	0.20
1250	0.52	0.41	0.19	0.46	0.31	0.07	0.61	0.47	0.25	0.55	0.38	0.12
1300	0.46	0.34	0.05	0.40	0.24		0.55	0.40	0.11	0.49	0.31	
1350	0.39	0.26		0.33	0.16		0.48	0.32		0.42	0.23	
1400	0.32	0.18		0.26	0.08		0.41	0.24		0.35	0.15	
1450	0.25	0.09		0.19			0.34	0.15		0.28	0.06	
1500	0.17	0.00		0.11			0.26	0.06		0.20		
1550	0.09			0.03			0.18			0.12		
1600	0.01						0.10			0.04		
1650							0.01					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG048A140C

EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
1250			0.37			0.27			0.42			0.32
1300			0.34			0.24			0.39			0.29
1350		0.53	0.29		0.44	0.19			0.34		0.52	0.24
1400	0.54	0.49	0.22	0.49	0.40	0.11		0.55	0.27	0.57	0.48	0.17
1450	0.49	0.43	0.14	0.43	0.34	0.02	0.58	0.50	0.19	0.52	0.42	0.09
1500	0.43	0.37	0.03	0.37	0.29		0.52	0.44	0.08	0.47	0.36	0.00
1550	0.37	0.31		0.31	0.22		0.46	0.37		0.41	0.30	
1600	0.31	0.24		0.25	0.15		0.40	0.30		0.34	0.23	
1650	0.24	0.17		0.18	0.08		0.33	0.23		0.27	0.16	
1700	0.17	0.09		0.10			0.26	0.15		0.20	0.08	
1750	0.10	0.01		0.02			0.19	0.07		0.13		
1800	0.02						0.11			0.05		
1850							0.03					

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

AIR FLOW PERFORMANCE TWG060A150C

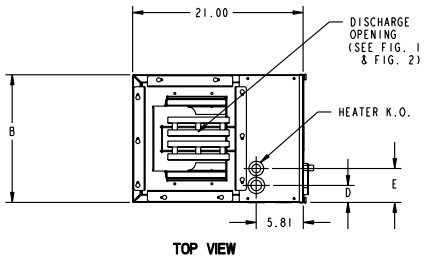
EXTERNAL STATIC PRESSURE (INCHES OF WATER)

	VERTICAL (See Notes)						HORIZONTAL (See Notes)					
	230 VOLTS			208 VOLTS			230 VOLTS			208 VOLTS		
CFM	HI	MED	LO	HI	MED	LO	HI	MED	LO	HI	MED	LO
1500						0.39						0.37
1550						0.31						0.31
1600						0.22						0.23
1650					0.53	0.11					0.52	0.12
1700			0.39		0.44				0.45		0.44	0.00
1750		0.59	0.30	0.53	0.34				0.34	0.52	0.35	
1800	0.63	0.54	0.20	0.46	0.24			0.59	0.23	0.44	0.25	
1850	0.59	0.48	0.08	0.37	0.13		0.59	0.49	0.10	0.35	0.14	
1900	0.54	0.41		0.28	0.02		0.51	0.38		0.25	0.00	
1950	0.47	0.33		0.18			0.42	0.27		0.14		
2000	0.40	0.23		0.06			0.33	0.14		0.03		
2050	0.32	0.13					0.24	0.01				
2100	0.23	0.01					0.14					
2150	0.13						0.04					
2200	0.02											

NOTE: Vertical with filter, no horizontal drip tray

NOTE: Horizontal - As shipped, without filter

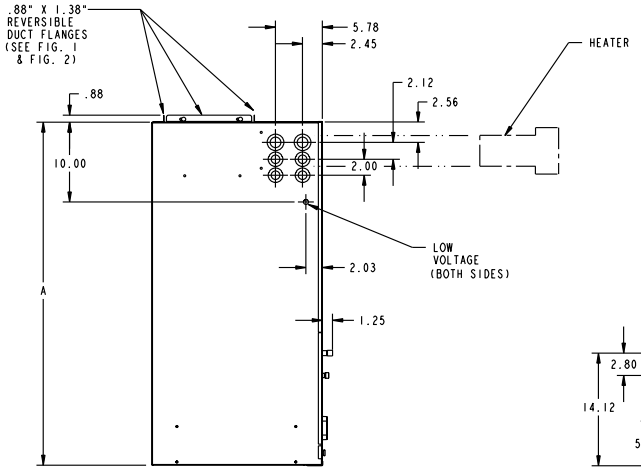
OUTLINE DRAWING FOR TWG018-036A140C



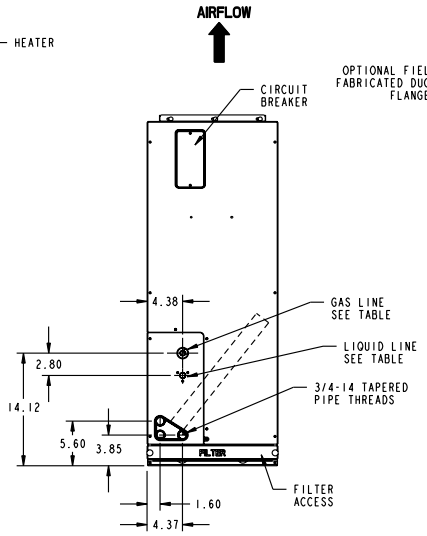
TOP VIEW

MINIMUM UNIT CLEARANCE TABLE		
	TO COMBUSTIBLE MATERIAL (REQUIRED)	SERVICE CLEARANCE (RECOMMENDED)
SIDES	0"	2"
FRONT	0"	21"
BACK	0"	0"
INLET DUCT	0"	1"
OUTLET DUCT	1"*	

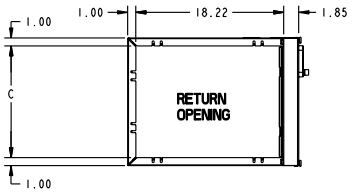
* 1" FOR THE FIRST 3 FT. OF OUTLET DUCT WHEN ELECTRIC HEATERS ARE INSTALLED. EXCEPT MODELS BAYHTR1405, 1408, AND 1410 ARE APPROVED FOR 0" PLENUM AND DUCT CLEARANCE IN THE UPFLOW CONFIGURATION ONLY.



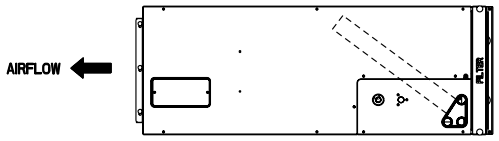
SIDE VIEW



VERTICAL UPFLOW



BOTTOM VIEW



HORIZ LEFT

METRIC CONVERSION
INCHES X 25.4 MM

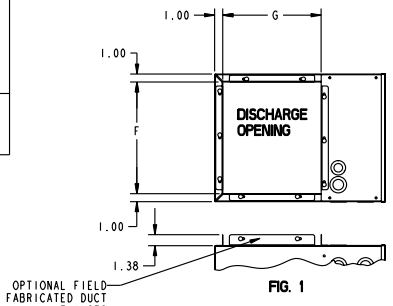


FIG. 1

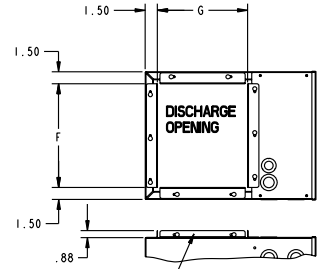


FIG. 2

	FIGURE 1		FIGURE 2	
MODEL NO.	F	G	F	G
TWG018A	14.00	12.12	13.00	11.12
TWG025A	16.00	12.12	15.00	11.12
TWG030A	16.00	12.12	15.00	11.12
TWG036A	16.00	12.12	15.00	11.12
2/4TGB-18	16.00	12.12	15.00	11.12
2/4TGB-25	16.00	12.12	15.00	11.12
2/4TGB-30	16.00	12.12	15.00	11.12
2/4TGB-36	16.00	12.12	15.00	11.12

MODEL NO.	A	B	C	D	E	FLOW CONTROL	GAS LINE SIZE	LIQUID LINE SIZE
TWG018A	43.00	16.00	14.00	2.13	4.25	FCCV	5/8 BRAZE	1/4 BRAZE
TWG025A	45.70	18.00	16.00	3.13	5.25	FCCV	3/4 BRAZE	5/16 BRAZE
TWG030A	45.70	18.00	16.00	3.13	5.25	FCCV	3/4 BRAZE	5/16 BRAZE
TWG036A	52.00	18.00	16.00	3.13	5.25	FCCV	7/8 BRAZE	3/8 BRAZE
2TGB-18	45.70	18.00	16.00	3.13	5.25	TXV	5/8 BRAZE	1/4 BRAZE
2TGB-25	45.70	18.00	16.00	3.13	5.25	TXV	3/4 BRAZE	5/16 BRAZE
2TGB-30	52.00	18.00	16.00	3.13	5.25	TXV	3/4 BRAZE	5/16 BRAZE
2TGB-36	52.00	18.00	16.00	3.13	5.25	TXV	7/8 BRAZE	3/8 BRAZE
4TGB-18	45.70	18.00	16.00	3.13	5.25	TXV	1/2 BRAZE	3/8 BRAZE
4TGB-25	45.70	18.00	16.00	3.13	5.25	TXV	5/8 BRAZE	3/8 BRAZE
4TGB-30	52.00	18.00	16.00	3.13	5.25	TXV	3/4 BRAZE	3/8 BRAZE
4TGB-36	52.00	18.00	16.00	3.13	5.25	TXV	3/4 BRAZE	3/8 BRAZE

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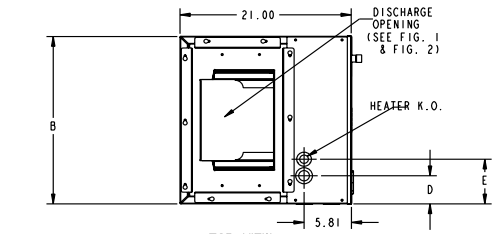
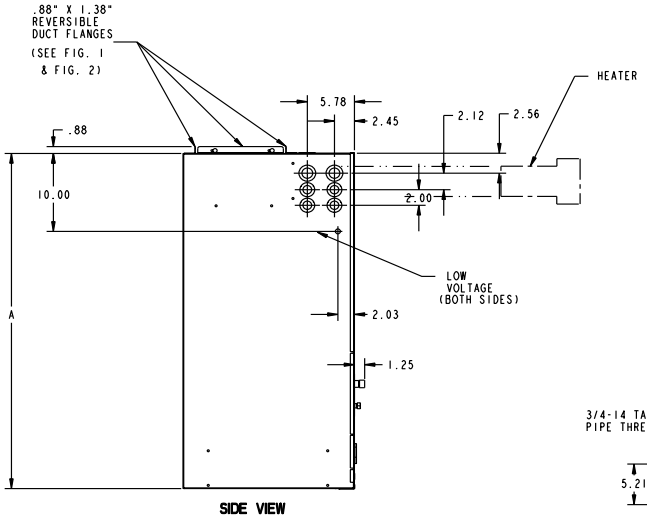
OUTLINE DRAWING FOR TWG037,042,048,060A



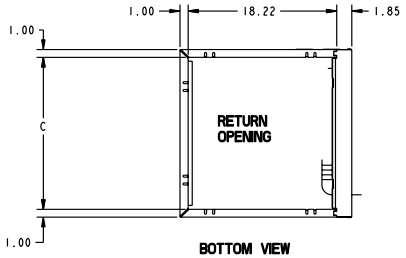
TOP VIEW

MINIMUM UNIT CLEARANCE TABLE		
	TO COMBUSTIBLE MATERIAL (REQUIRED)	SERVICE CLEARANCE (RECOMMENDED)
SIDES	0"	2"
FRONT	0"	21"
BACK	0"	0"
INLET DUCT	0"	1"
OUTLET DUCT	1" *	

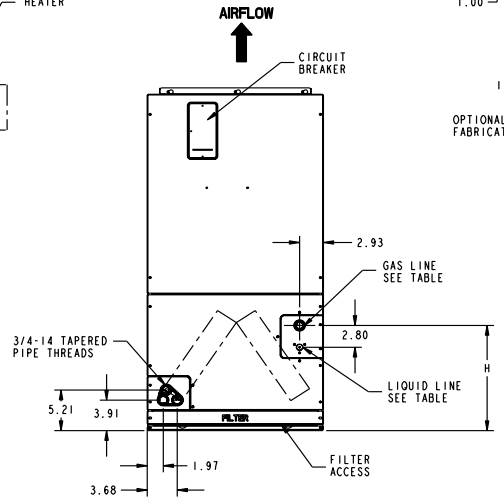
* 1" FOR THE FIRST 3 FT. OF OUTLET DUCT WHEN ELECTRIC HEATERS ARE INSTALLED. EXCEPT MODELS BAYHTR1405, 1408, AND 1410 ARE APPROVED FOR 0" PLENUM AND DUCT CLEARANCE IN THE UPFLOW CONFIGURATION ONLY.



SIDE VIEW



BOTTOM VIEW



VERTICAL UPFLOW

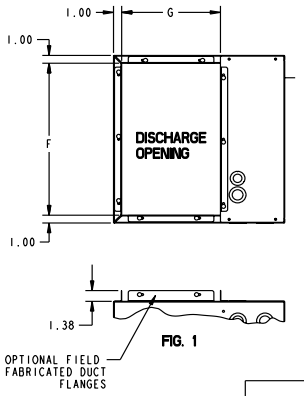


FIG. 1

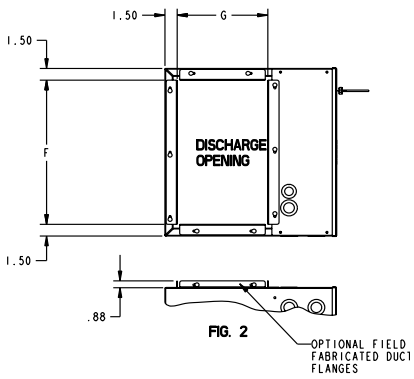
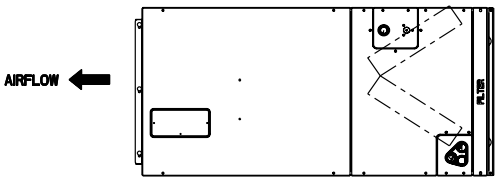


FIG. 2

MODEL NO.	FIG. 1		FIG. 2	
	F	G	F	G
TWG037A	19.50	12.12	18.50	11.12
TWG042A,2/4TGB42	21.50	12.12	20.50	11.12
TWG048A	21.50	12.12	20.50	11.12
TWG060A,2/4TGB48	21.50	12.12	20.50	11.12



HORIZ LEFT

MODEL NO.	A	B	C	D	E	H	FLOW CONTROL	GAS LINE SIZE	LIQUID LINE SIZE
TWG037A	43.00	21.50	19.50	3.61	5.73	13.50	FCCV	7/8 BRAZE	3/8 BRAZE
TWG042A	43.00	23.50	21.50	4.61	6.73	13.50	FCCV	7/8 BRAZE	3/8 BRAZE
TWG048A	48.25	23.50	21.50	4.61	6.73	18.75	FCCV	7/8 BRAZE	3/8 BRAZE
TWG060A, 2TGB48	57.25	23.50	21.50	4.61	6.73	22.50	TXV	7/8 BRAZE	3/8 BRAZE
2TGB42	48.25	23.50	21.50	4.61	6.73	18.25	TXV	7/8 BRAZE	3/8 BRAZE
4TGB42	48.25	23.50	21.50	4.61	6.73	18.25	TXV	3/4 BRAZE	3/8 BRAZE
4TGB48	57.25	23.50	21.50	4.61	6.73	22.50	TXV	7/8 BRAZE	3/8 BRAZE

METRIC CONVERSION
INCHES X 25.4 MM

D810126REV04

CHECKOUT PROCEDURES

After installation has been completed, it is recommended that the Air Handler be checked against the following checklist.

1. "Operational Procedure" for the system installation can be found in the outdoor unit installer guide and will be compatible with this Air Handler.
2. Make sure power is "OFF" at power disconnect switch.
3. Check all field wiring for tight connections. See that grounding of unit is in accord with code.
4. Make sure unit suspension (if used) is secure and that there are no tools or loose debris in, around or on top of the unit.
5. Check all duct outlets; they must be open and unrestricted.
6. Check drain lines and be sure all joints are tight.
7. Make sure secondary drain pan is installed.
8. Check power supply for correct requirements per unit nameplate.
9. Check filters for proper size. Inform owner of proper procedure for removal and reinstallation.
10. Energize the system and carefully observe its operation; make any necessary adjustment.
11. Instruct owner, engineer (if possible) on proper operating procedure and leave Use and Care Manual with owner.

SUPPLEMENTARY HEATERS CHECKOUT PROCEDURES, IF USED DOES HEATER REQUIRE A SPECIAL CIRCUIT? SEE "LIMITATIONS AND RECOMMENDATIONS"

1. Be sure the disconnect switch is "OFF", and safety label (if any) is attached.
2. Check on field wiring for tight connections and grounding according to codes.
3. Check circuit protection for proper size per nameplate specifications.
4. Check control box panel — in place and secured.

NOTE: OPERATION OF HEATERS MUST BE CHECKED DURING THE OPERATION CHECK OF THE TOTAL SYSTEM.

Trane
6200 Troup Highway
Tyler, Texas 75707
www.americanstandard.com

For more information contact your local dealer (distributor)