



**INSTALLATION & OPERATING  
INSTRUCTIONS  
for ACHP & ACHP-FP SERIES  
CEILING MOUNT AIR HANDLER**

All information contained herein is subject to change without notice.

10-175H

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10/04

## INDEX

|                             |    |
|-----------------------------|----|
| INTRODUCTION .....          | 2  |
| REPLACEMENT PARTS .....     | 2  |
| SAFETY INSTRUCTIONS .....   | 2  |
| SPECIFICATIONS .....        | 3  |
| INSTALLATION .....          | 4  |
| PIPING .....                | 8  |
| ELECTRICAL WIRING .....     | 8  |
| MAINTENANCE .....           | 10 |
| PLUMBING REQUIREMENTS ..... | 11 |

## INTRODUCTION

### CHECKING PRODUCT RECEIVED

Upon receiving the unit, inspect it for damage from shipment. Claims for damage, either shipping or concealed, should be filed immediately with the shipping company. Check the unit model number, specifications, electrical characteristics and accessories to determine if they are correct. In the event an incorrect unit is shipped, it must be returned to the supplier and must NOT be installed. The manufacturer assumes no responsibility for installation of incorrectly shipped units.

### BEFORE BEGINNING INSTALLATION

Carefully read all instructions for the installation prior to installing unit. Make sure each step or procedure is understood and any special considerations are taken into account before starting installation. Assemble all tools, hardware and supplies needed to complete the installation. Some items may need to be purchased locally. Make sure everything needed to install air handler is on hand before starting. After deciding where to install unit, closely look the location over - both the inside and outside of home. Note any potential obstacles or problems that might be encountered as noted in this manual. Choose a more suitable location if necessary.

### INSTALLING CEILING MOUNT AIR HANDLERS

Proper installation of a ceiling mount air handler helps ensure trouble free operation. Improper installation can result in problems ranging from noisy operation to property or equipment damages, dangerous conditions that could result in injury or personal property damage and could void the warranty. Give this booklet to the user and explain it's provisions. The user should retain these instructions for future reference.

## REPLACEMENT PARTS

### ORDERING PARTS

When reporting shortages or damages, or ordering repair parts, give the complete unit model and serial numbers as stamped on the unit's nameplate.

Replacement parts for this appliance are available through your contractor or local distributor. For the location of your nearest distributor, consult the white business pages, the yellow page section of the local telephone book or contact:

SERVICE PARTS DEPARTMENT  
GOODMAN MANUFACTURING COMPANY, L.P.  
2550 NORTH LOOP WEST, SUITE 400  
HOUSTON, TEXAS 77092  
(713) 861 - 2500

## IMPORTANT SAFETY INSTRUCTIONS

### Recognize Safety Symbols, Words, and Labels

The following symbols and labels are used throughout this manual to indicate immediate or potential hazards. It is the owner's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of serious personal injury or death, property damage and/or product damage.



### DANGER

IMMEDIATE HAZARDS WHICH WILL RESULT IN PROPERTY DAMAGE, PRODUCT DAMAGE, SEVERE PERSONAL INJURY AND/OR DEATH.




### WARNING


HAZARDS OR UNSAFE PRACTICES COULD RESULT IN PROPERTY DAMAGE, PRODUCT DAMAGE, SEVERE PERSONAL INJURY AND/OR DEATH.



### CAUTION

HAZARDS OR UNSAFE PRACTICES WHICH MAY RESULT IN PROPERTY DAMAGE, PRODUCT DAMAGE, AND/OR PERSONAL INJURY.

 **DANGER**  
**PELIGRO**



**CARBON MONOXIDE POISONING HAZARD**

Special Warning for Installation of Furnace or Air Handling Units in Enclosed Areas such as Garages, Utility Rooms or Parking Areas

Carbon monoxide producing devices (such as an automobile, space heater, gas water heater, etc.) should not be operated in enclosed areas such as unventilated garages, utility rooms or parking areas because of the danger of carbon monoxide (CO) poisoning resulting from the exhaust emissions. If a furnace or air handler is installed in an enclosed area such as a garage, utility room or parking area and a carbon monoxide producing device is operated therein, there must be adequate, direct outside ventilation.

This ventilation is necessary to avoid the danger of CO poisoning which can occur if a carbon monoxide producing device continues to operate in the enclosed area. Carbon monoxide emissions can be (re)circulated throughout the structure if the furnace or air handler is operating in any mode.

CO can cause serious illness including permanent brain damage or death.

B10259-216

**⚠ DANGER**

140-DEGREE WATER CAN CAUSE FIRST DEGREE BURNS. WE REQUIRE THE INSTALLATION OF A WATER-TEMPERING VALVE TO SUPPLY LOWER TEMPERATURE WATER TO THE FIXTURES IN THE HOUSE. USE A WATTS N170L SERIES OR EQUIVALENT.

**⚠ WARNING**

HEATING UNIT SHOULD NOT BE UTILIZED WITHOUT REASONABLE, ROUTINE, INSPECTION, MAINTENANCE AND SUPERVISION. IF THE BUILDING IN WHICH ANY SUCH DEVICE IS LOCATED WILL BE VACANT, CARE SHOULD BE TAKEN THAT SUCH DEVICE IS ROUTINELY INSPECTED, MAINTAINED AND MONITORED. IN THE EVENT THAT THE BUILDING MAY BE EXPOSED TO FREEZING TEMPERATURES AND WILL BE VACANT, ALL WATER-BEARING PIPES SHOULD BE DRAINED, THE BUILDING SHOULD BE PROPERLY WINTERIZED, AND THE WATER SOURCE CLOSED. IN THE EVENT THAT THE BUILDING MAY BE EXPOSED TO FREEZING TEMPERATURES AND WILL BE VACANT, ANY HYDRONIC COIL UNITS SHOULD BE DRAINED AS WELL AND, IN SUCH CASE, ALTERNATIVE HEAT SOURCES SHOULD BE UTILIZED.

**⚠ WARNING**

DO NOT CONNECT TO OR USE IN CONJUNCTION WITH THIS UNIT ANY DEVICES FOR THE PURPOSE OF SAVING ENERGY OR INCREASING OPERATING EFFICIENCIES, WHICH HAVE NOT BEEN TESTED AND APPROVED BY GOODMAN AND DESIGN CERTIFIED FOR USE WITH THIS UNIT. HAZARDOUS CONDITIONS, SERIOUS DAMAGE, AND REDUCED UNIT PERFORMANCE MAY RESULT FROM THE USE OF DEVICES WHICH HAVE NOT BEEN APPROVED OR CERTIFIED BY GOODMAN.

**⚠ WARNING**

IF A BACK FLOW PREVENTER IS INSTALLED IN THE SYSTEM, AN EXPANSION TANK IS NECESSARY.

**⚠ WARNING**

DO NOT STORE COMBUSTIBLE MATERIALS OR USE GASOLINE OR OTHER FLAMMABLE LIQUIDS OR VAPORS IN THE VICINITY OF THIS APPLIANCE SO AS TO PREVENT THE RISK OF PROPERTY DAMAGE OR PERSONAL INJURY. HAVE YOUR CONTRACTOR POINT OUT AND IDENTIFY THE VARIOUS CUT-OFF DEVICES, SWITCHES, ETC. THAT SERVES YOUR COMFORT EQUIPMENT.

**⚠ WARNING**

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT DUCT WORK TO ANY OTHER HEAT PRODUCING DEVICE SUCH AS FIREPLACE INSERT, STOVE, ETC. UNAUTHORIZED USE OF SUCH DEVICES MAY RESULT IN FIRE, CARBON MONOXIDE POISONING, EXPLOSION, PERSONAL INJURY OR PROPERTY DAMAGE.

**⚠ WARNING**

THE HOT WATER COIL AND ALL WATER LINES MUST BE PURGED OF AIR BEFORE THE HOT WATER PUMP CAN BE ENERGIZED. FAILURE TO PURGE THE WATER SYSTEM OF AIR CAN RESULT IN DAMAGE TO THE PUMP.

**⚠ CAUTION**

INSULATE AND PROTECT ALL WATER PIPING AS NECESSARY TO PREVENT FREEZING. FROZEN OR BROKEN WATER PIPES MAY CAUSE DAMAGE TO THE UNIT AND ARE NOT COVERED UNDER WARRANTY.

**⚠ CAUTION**

FOR UNITS SHIPPED WITH THE FREEZE PROTECTION OPTION, FREEZE PROTECTION WILL NOT WORK UNLESS THERE IS POWER TO THE UNIT.

## SPECIFICATIONS

### General

Units are designed to be installed in a horizontal position above a dropped ceiling. **NOTE:** Units are not to be installed outside the structure, units are designed for **Indoor Use Only**.

The information on the rating plate is in compliance with the FTC, UL and DOE rating for single phase units in the U.S.A.

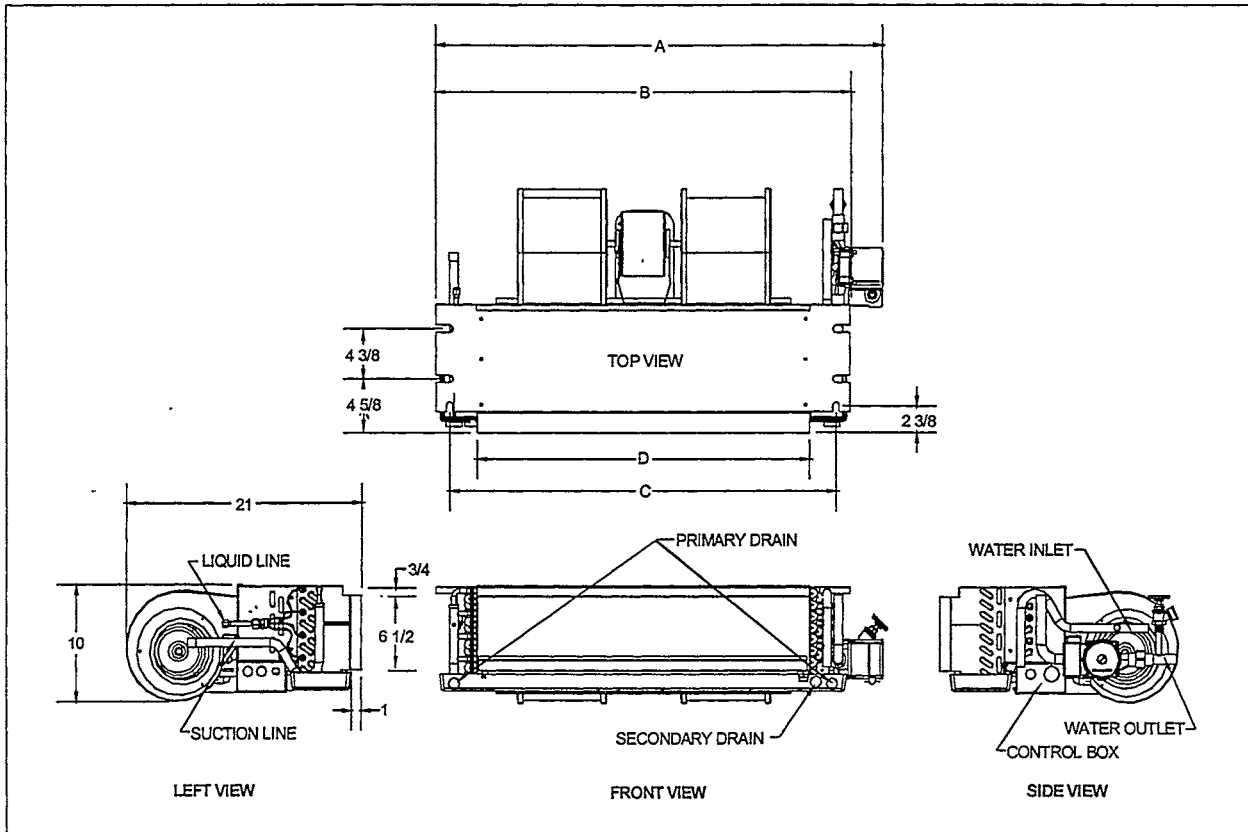
Important: The United States Environmental Protection Agency (EPA) has issued various regulations regarding the introduction and disposal of refrigerants in this unit. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. Because regulations may vary due to passage of new laws, we suggest a certified technician perform any work done on this unit. Should you have any questions please contact the local office of the EPA.

### Major Components

Unit includes an evaporator coil with flowrator assembly, an indoor blower and all necessary internal electrical wiring. The cooling system of unit is charged with an air / freon mixture and performance tested. Refrigerant amount and type are indicated on rating plate.

## Dimensions and Layout

| Model                    | A      | B      | C        | D      |
|--------------------------|--------|--------|----------|--------|
| ACHP1819-1/ ACHP1819-1FP | 40 1/4 | 37 1/4 | 34 11/16 | 30     |
| ACHP2423-1/ACHP2423-1FP  | 40 1/4 | 37 1/4 | 34 11/16 | 30     |
| ACHP3028-1/ACHP3028-1FP  | 46 1/4 | 43 1/4 | 40 11/16 | 36     |
| ACHP3632-1/ACHP3632-1FP  | 58     | 55     | 52 1/2   | 47 3/4 |



## INSTALLATION

### General

This product is designed and manufactured to permit installation in accordance with National Codes. It is the installer's responsibility to install the product in accordance with National Codes and/or prevailing local codes and regulations. Use a low temperature, non-lead solder on all water line copper joints.

### Pre-Installation Checkpoints

Perform pre-installation checkpoints before attempting any installation. The following check points should be considered:

- Structural strength of supporting members
- Clearances and provision for servicing
- Power supply and wiring
- Air duct connections
- Drain facilities and connections

Units are designed to be installed in a horizontal position above a dropped ceiling. The location of the unit should be based on thorough consideration of the pre-installation checkpoints.

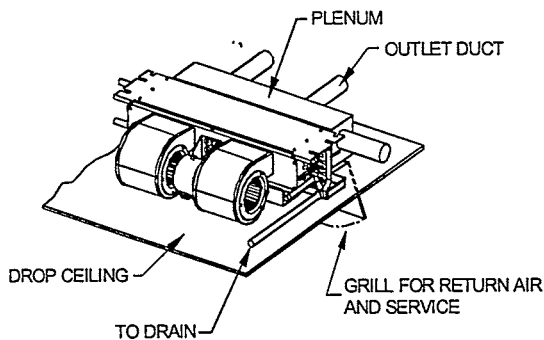
## UNIT INSTALLATION

**NOTE:** For installation in the Commonwealth of Massachusetts, refer to the schematic plumbing diagrams in Figure 3 & 4.

Before mounting the unit above a dropped ceiling, make sure that the strength of the mounting members is adequate to support the weight involved. **NOTE:** Adequate support is very important and is the installer's responsibility. See table below for approximate weight, without water, according to model.

| Model                    | Weight (lbs). |
|--------------------------|---------------|
| ACHP1819-1/ ACHP1819-1FP | 65            |
| ACHP2423-1/ACHP2423-1FP  | 65            |
| ACHP3028-1/ACHP3028-1FP  | 75            |
| ACHP3632-1/ACHP3632-1FP  | 105           |

As shown in the Figure below, the unit should be mounted in a horizontal position above a dropped ceiling of adequate strength.



The location of the unit should provide proper access for inspection and servicing.

### DUCTING

The installing contractor, in accordance with local codes, should fabricate ductwork. When sizing and designing the duct system, industry manuals, such as NESCA (National Environmental Systems Contractors Association, 1501 Wilson Blvd. Arlington, Virginia 22209), may be used as a guide.

Unit should be placed as close to the space to be air conditioned as possible. Adequate clearance must be maintained as indicated in the section titled "Clearances". Ducts should be run as directly as possible to supply and return outlets. To reduce noise transmission, use of non-flammable, weatherproof, flexible connectors on the unit's supply and return connections are recommended.

### Filters

Filters are not provided with unit, and must be supplied and installed in the return air system by the installer. For periodic inspection and cleaning, a field installed filter grille

is recommended to allow for easy and convenient access to the filters. Filters must have adequate face area for the rated air quantity of the unit.

### Clearances

Units are UL listed for installations with zero clearance to combustible materials. Reference should be made to the marking on the particular unit being installed, where specific information regarding clearances is provided. Access must be provided for servicing the unit. Units installed in a removable ceiling panel must have ample space for servicing unit.

### Evaporator Coil Connections

This fan coil uses a factory installed fixed orifice piston to meter the refrigerant for the evaporator coil. This allows the fan coil to be matched with either a heat pump or a standard condensing unit. Size of the suction and liquid refrigerant lines is determined by the instructions supplied with the outdoor unit. Evaporator coil has a trace gas charge from the factory and must be removed before being connected. Connections for both the liquid refrigerant and suction lines are sweated connections.

### Hot Water Connections

Connections to the hot water coil are 3/4" (7/8" O.D.) copper tubing. The hot water inlet is located by a label on the unit which clearly identifies the correct connection. All piping connecting the fan coil to the home water system should be 3/4" (7/8 O.D.) copper tubing. Using the correct size of tubing will prevent loss of head pressure. The total length of piping used to connect the fan coil to the water heater should not exceed 200 feet. Use "T" fittings at the water heater to connect into the home water system. "T" fittings must be installed on the vertical hot and cold supply lines of the water heater as shown in Figure 2.

Connections from the fan coil unit are made to the horizontal connection of the "T" fittings. This will allow air to be purged from the system when water is used in the home. Between the fan coil and water heater connections, two valves (provided by the installer) must be installed to permit purging of air in the system and also allow the hot water coil in the unit to be separated from the home water system during servicing.

**NOTE:** A secondary check valve is to be installed on the inlet side of the unit. A spring loaded Watts Regulator 600 series 3/4" npt check valve is supplied with your unit for this purpose and may be installed in a vertical or horizontal position. Install the check valve as close to the water heater as is feasible. The check valve must be secured with two wire ties to the tubing manifold. See Figure 2 for schematic diagram of secondary check valve.

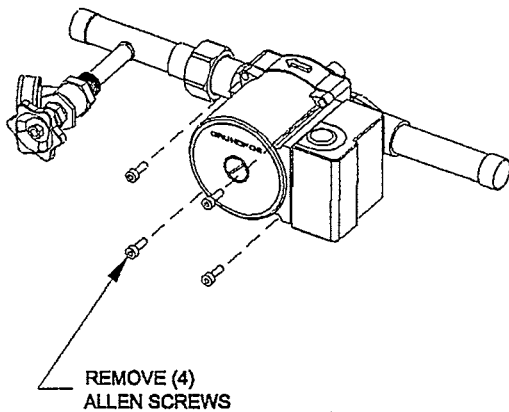
**NOTE:** In the rare case that thermal siphoning occurs with secondary check valve installation, it is recommended that a solenoid operated valve be installed. See Figure 2 in "Plumbing Requirements" section for schematic diagram of solenoid valve.

### Pump Terminal Box Position

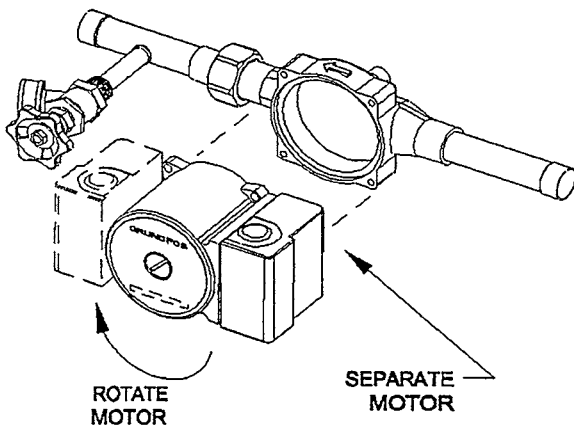
If the terminal box position needs to be changed, it is best to do so before installation. However, if the pump is already installed, ensure that the electrical supply is turned off and close the isolation valves before removing the Allen screws.

To change terminal box position:

1. As shown below, remove the four (4) Allen screws (4 or 5 mm wrench) while supporting the stator (motor).

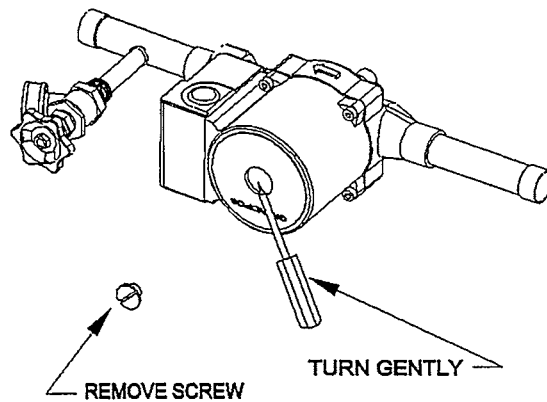


2. As shown below, carefully separate the stator from the pump chamber and rotate it to the correct terminal box orientation.



3. Replace the Allen screws and tighten diagonally and evenly (7 ft-lb torque).
4. As shown below, check that the motor shaft turns freely. Remove large screw in the middle of nameplate, insert a small flat blade screwdriver into the end of the shaft, and turn gently. Replace and tighten screw.

NOTE: If the shaft does not turn easily, repeat the disassembly/reassembly process.



### Installation Requirements

1. Thoroughly clean and flush the system prior to pump installation.
2. Install an air vent at the high point(s) of the system to remove accumulated air.
3. Ensure that water does not enter the terminal box during the installation process.
4. For closed system, install a safety relief valve to protect against temperature and pressure build-up.
5. If there are excessive suspended particles in the water, it is recommended that a strainer and/or filter be installed and cleaned regularly.
6. Do not start the pump until the system has been filled and purged.

### Purging The System

1. Open hot water faucet (to vent air) and allow water heater to fill with water. Close faucet when water heater tank is full and all air has been purged.
2. As shown in Figure 2 in "Plumbing Requirements" section, close the valve on the hot water supply from the water heater ("A") and open the valve on the cold water return to the water heater ("B"). Use bucket or hose to discard water during purging process. Purge air completely from lines.
3. Once air is purged, close return valve ("B") and open supply valve ("A"). Purge the coil and lines of air completely.
4. After air is purged from the system and filled with water, open the return valve ("B") and the supply valve ("A").
5. Slowly remove the indicator plug in the middle of the nameplate. Allow the air to purge from the pump until water appears. While air is venting, gently turn shaft and move it in and out with a small flat blade screwdriver. Protect the terminal box from getting wet. After air has been vented, install and re-tighten the plug.
6. Apply power to the fan coil and set the room thermostat on heat. Raise the temperature setting to activate the circulating pump.

- Ignite water heater. Set thermostat on water heater appropriate for your heating requirements (Note: national codes, local codes, and requirements may limit the temperature). See Important Safety Instructions for hot water.
- Check the pump to insure proper operation. The water inlet of the unit should be hot if the water temperature in the water heater has reached the set point. If water is not being circulated through the coil, but the pump is running, then open the air bleed valve in the unit and purge any air left in the system.
- Adjust the water heater thermostat so that the water temperature entering the hot water coil is appropriate for your heating requirements (Note: national codes, local codes, and requirements may limit the temperature). This is done with the unit energized and operating long enough for all temperatures to stabilize.

### Changing The Piston

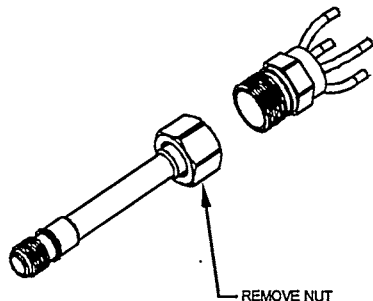
This indoor coil contains the flowrator distributor assembly, which consist of a tailpiece, Teflon seal, nut, distributor body and internal check flow piston.

This coil is furnished with a flow control piston installed that matches the BTUH capacity of the coil. A piston size that is too small will cause starving and one that is too large will cause flooding. The following table indicates the condensing unit capacity and the recommended piston size.

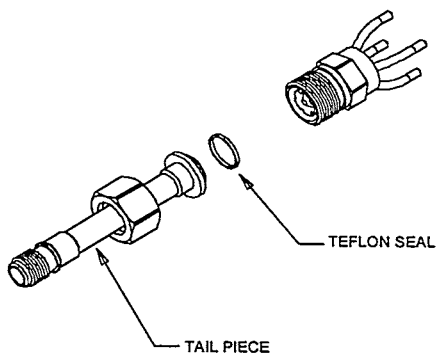
| Model        | Condensing Unit, Nominal Cooling BTU | Part No.   | Piston Size |
|--------------|--------------------------------------|------------|-------------|
| ACHP1819-1FP | 18,000                               | BT13690-04 | 52          |
| ACHP2423-1FP | 24,000                               | BT13690-01 | 59          |
| ACHP3028-1FP | 30,000                               | BT13690-05 | 65          |
| ACHP3632-1FP | 36,000                               | BT13690-13 | 73          |
| ACHP1819-1   | 18,000                               | BT13690-04 | 52          |
| ACHP2423-1   | 24,000                               | BT13690-01 | 59          |
| ACHP3028-1   | 30,000                               | BT13690-05 | 65          |
| ACHP3632-1   | 36,000                               | BT13690-13 | 73          |

If a combination is used that requires a piston size change, change the piston in the distributor on the indoor coil before installing coil and follow the procedure shown below.

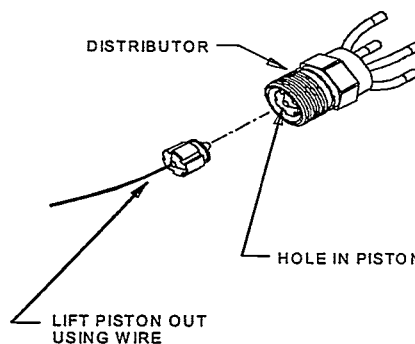
- Remove the nut using a back-up wrench.



- Remove the tail piece and Teflon seal.

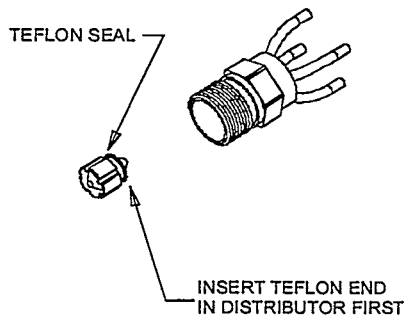


- Using the wire provided with replacement piston, run wire (hooked end) through hole in piston.



- Hook nose end of piston and lift gently from distributor body.
- Replace piston with one of the proper size listed in the condensing unit capacity and the recommended piston size table. Install piston with Teflon seal end of piston in distributor first. Do not force piston into distributor.

**Note:** Ensure piston is free to rotate and move up and down in distributor body.

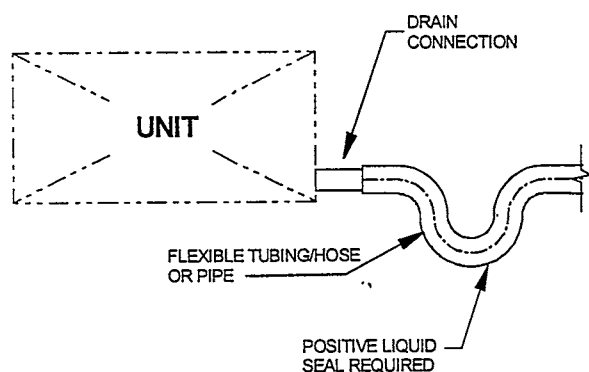


6. Replace tail piece and Teflon seal.
7. Replace nut using back-up wrench. Torque nut with 10 to 30 ft. lbs.
8. Check fitting for leaks after installation, evacuation and charging of the low side is complete.

## PIPING

The condensate drain connection of the evaporator is a halfcoupling of 3/4" N.P.T. An inSIT trap must be provided to have proper condensate drainage.

Install condensate drain trap as shown. Use 3/4" drain connection size or larger. Do not operate without trap. Unit must be level or slightly inclined toward drain.



## ELECTRICAL WIRING

### General

All wiring should be made in accordance with the National Electrical Code in the U.S.A. Determine the availability of sufficient power to operate the unit. The voltage at the power supply should be checked to make sure it corresponds to the unit's RATED VOLTAGE REQUIREMENT. Wire sizes should be determined from the unit nameplate ampacity and in accordance with the Branch Circuit Copper Wire Size table, and the NEC (National Electrical Code). Under no circumstances should wiring be sized smaller than is recommended by either of these two sources. The unit must be permanently grounded in accordance with local codes, or in the absence of local codes, with the N.E.C. ANSI/NFPA NO. 70-1987 or latest edition in the U.S.A.

All information needed to connect the 120 VAC supply and the 24VAC control wiring is supplied with the unit. See unit Wiring Diagram- Figure 1. Since this unit is supplied with a 24 volt Class 2 transformer, a thermostat, with isolating contacts, must be used when connecting other add-on equipment using a Class 2 transformer.

## Wiring

To wire units, make the following high and low voltage connections at either location.

### High Voltage Wiring:

Units are designed for Single Phase 115 Volt only, two leads should be connected to terminals L1 and L2 on the breaker in the electrical control section, using wire sizes specified in table below.

### BRANCH CIRCUIT COPPER WIRE SIZE

(Based on 1% Voltage Drop)

| SUPPLY WIRE LENGTH - FEET | BRANCH CIRCUIT AMPACITY |    |    |    |    |    |    |    |
|---------------------------|-------------------------|----|----|----|----|----|----|----|
|                           | 15                      | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 200                       | 6                       | 4  | 4  | 4  | 3  | 3  | 2  | 2  |
| 150                       | 8                       | 6  | 6  | 4  | 4  | 4  | 3  | 3  |
| 100                       | 10                      | 8  | 8  | 6  | 6  | 6  | 4  | 4  |
| 75                        | 12                      | 10 | 8  | 8  | 6  | 6  | 4  | 4  |
| 50                        | 14                      | 12 | 18 | 10 | 8  | 8  | 6  | 6  |

NOTE: Wiring for unit only, no heat kit installed.

- Wire size based on 60°C rated wire insulation and 30°C Ambient Temp. (86°F).
- For branch circuit wiring (main power supply to unit disconnect), the minimum wire size for the length of run can be determined from the Branch Circuit Copper Wire Size table and using the circuit ampacity found on the unit's rating plate. From the disconnect to the unit, the smallest wire size allowable may be used, **as the disconnect must be in sight of the unit.**
- For more than 3 conductors in a raceway or cable, see the N.E.C. for derating the ampacity of each conductor.

### Low Voltage Wiring:

For low voltage wiring connect 24 Volt wires from the thermostat to the corresponding wires in control box using No. 18 AWG.

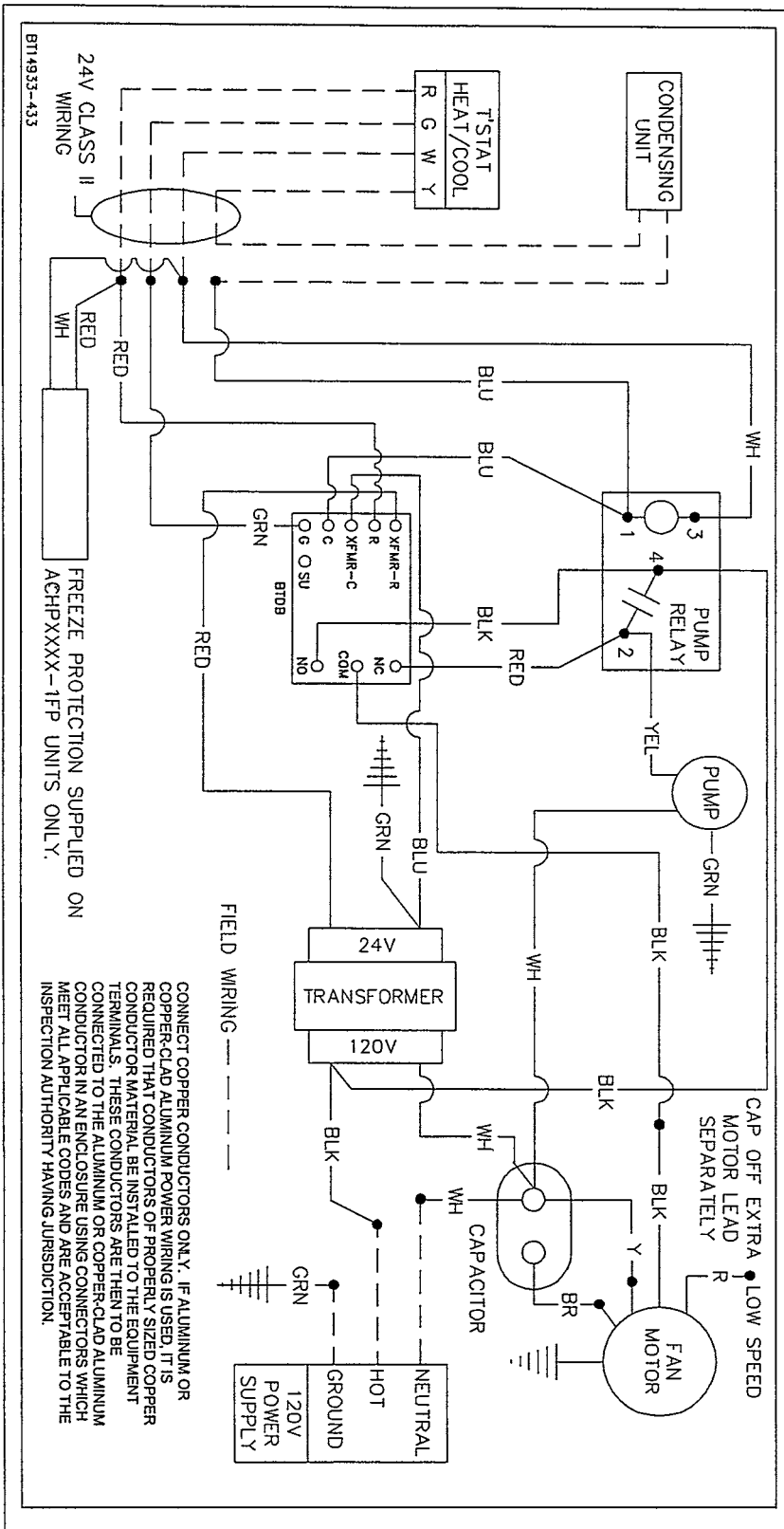
| Lead  | Thermostat |                 |
|-------|------------|-----------------|
| RED   | RED        |                 |
| GREEN | GREEN      |                 |
| WHITE | WHITE      |                 |
| BLUE  | -          | CONDENSING UNIT |
| -     | YELLOW     | CONDENSING UNIT |

### Internal Wiring:

A diagram of the internal wiring of this unit is located under the control box top. If any of the original wire, as supplied with the appliance, must be replaced, the wire gauge and insulation must be the same as the original wiring.



# WIRING DIAGRAM - FIGURE 1



## MAINTENANCE

### Room Thermostat

This device controls the operation of your heating and cooling unit. It senses the indoor temperature and signals the equipment to start or stop maintaining the temperature you have selected for your comfort. The room temperature should be in a central, draft free, inside wall location for best operation. Do not place any heat producing apparatus such as lights, radio, etc., near the thermostat, as this will cause erratic operation of the comfort system.

### Air Filters

All central air moving comfort systems must include air filter(s). Filter(s) will be located either in the equipment or in the return air duct system upstream of the equipment. Filter(s) remove dust and debris from the air thus helping to keep your conditioned space clean. More important, the filter keeps dust and debris from collecting on heat transfer surfaces thus maintaining optimum equipment efficiency and performance. Inspect and clean or replace filters every month. This routine maintenance procedure will pay big dividends in reduced service expense. Never operate comfort equipment without filter(s).

### Fuses and/or Circuit Breakers

Equipment should be connected to the building electric service in accordance with local and National Electric codes. This electrical connection will include over current protection in the form of fuses or circuit breakers. Have your contractor identify the circuits and the location of over current protection so that you may be in a position to make inspections or replacements in the event the equipment fails to operate. Keep replacement fuses of the proper size on hand.

### Periodic Checkup and Service

This product is designed to provide many years of dependable, trouble-free comfort when properly maintained. Proper maintenance will consist of annual checkups and cleaning of the internal electrical and heat transfer components by a qualified service technician. Failure to provide periodic checkup and cleaning can result in excessive operating cost and/or equipment malfunction.

### Pump Replacement

1. Disconnect electrical power to the unit before servicing.
2. Close supply valve ("A") and return valve ("B"). Open the air bleed valve to de-pressurize the system and drain water.

3. Remove the metal pump housing by loosening the four screws on the pump. **DO NOT UNSOLDER PUMP.**
4. Replace with new pump housing assembly and reconnect components to pump. Before assembling, make sure that the rubber o-ring is in place on the pump housing.
5. Purge the system of air as described earlier and reconnect the electrical power.

### Common Problems and Solutions

#### • NOISY PUMP:

System may not be totally purged of air. Purge the system again as described earlier.

#### • T & P VALVE ON WATER HEATER WEEPS:

This normally occurs when a backflow preventer has been installed in the cold water line supplying the water heater. An expansion tank may be necessary to correct the problem. Contact a qualified plumbing professional for assistance.

#### • HOT WATER IS CIRCULATING THROUGH THE HEATING COIL DURING THE COOLING CYCLE:

The check valve may be stuck open and allowing hot water to circulate through the coil.

#### • LITTLE OR NO HEAT FROM WATER COIL:

- A. Purge system. Air may still be in water lines.
- B. The inlet and outlet connections may be reversed at the fan coil.
- C. Water heater thermostat is not set at proper temperature.
- D. Water heater thermostat is not calibrated.
- E. The dip tube in the water heater may not be installed correctly or may be restricted.
- F. Look for restriction in heating system from water heater to fan coil. Because some water heaters are supplied with check valves, remove any extra check valves except for the one supplied with the fan coil.
- G. The air handler is undersized for the space being heated.
- H. Water heater is undersized.

# PLUMBING REQUIRMENTS- FIGURE 2

SEE FIGURES 3 & 4 IF UNIT IS INSTALLED IN THE COMMONWEALTH OF MASSACHUSETTS

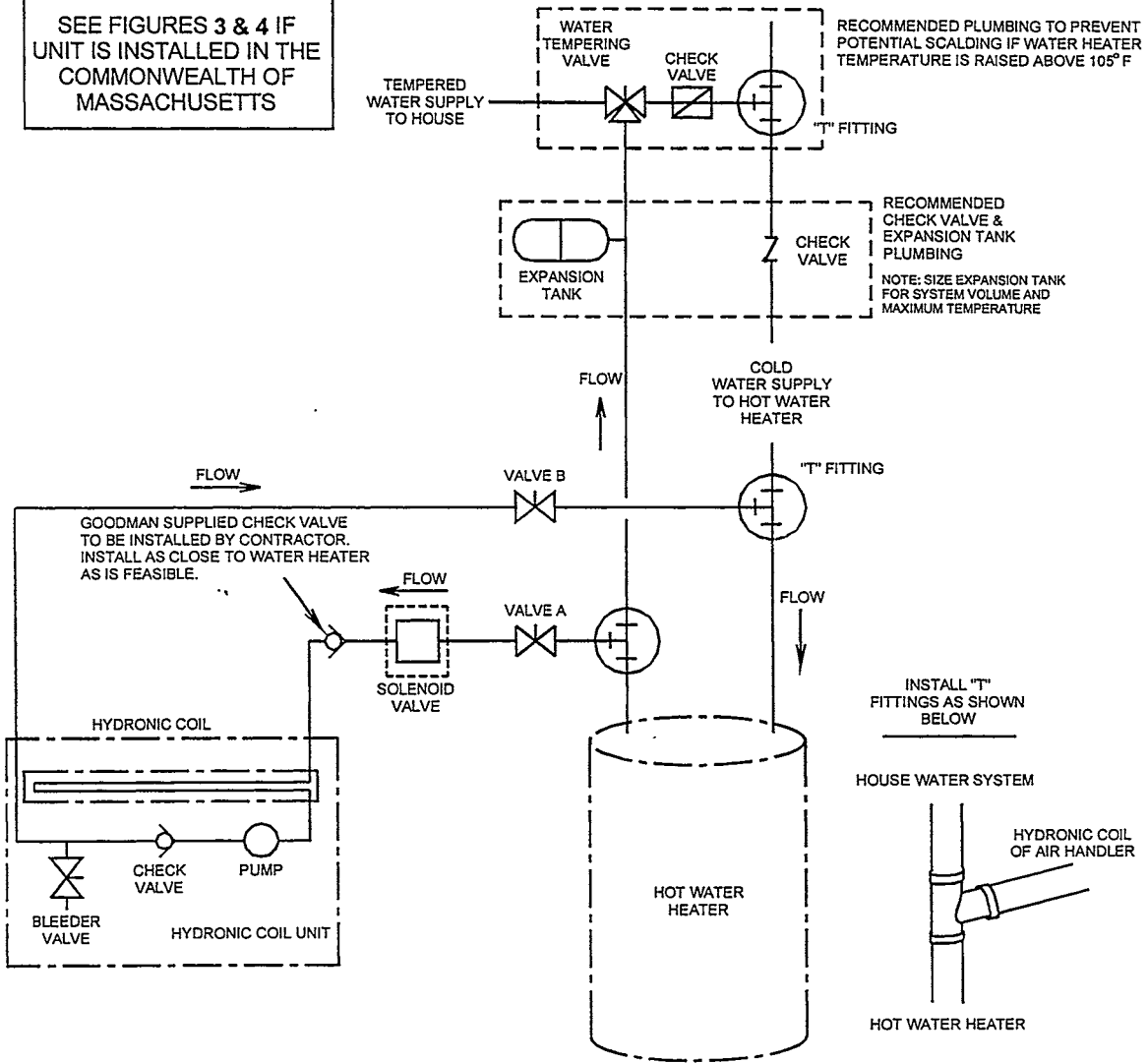
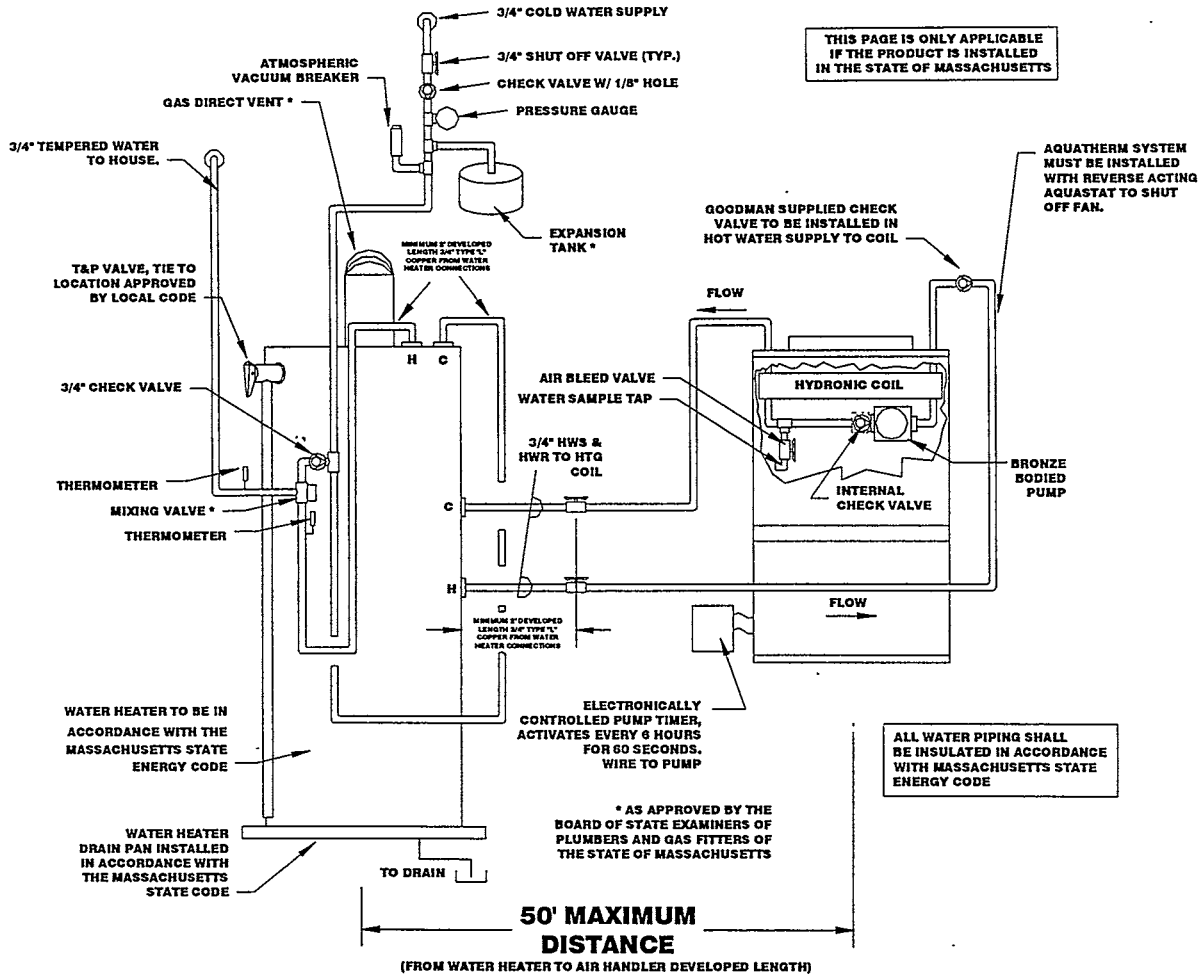


FIGURE 2

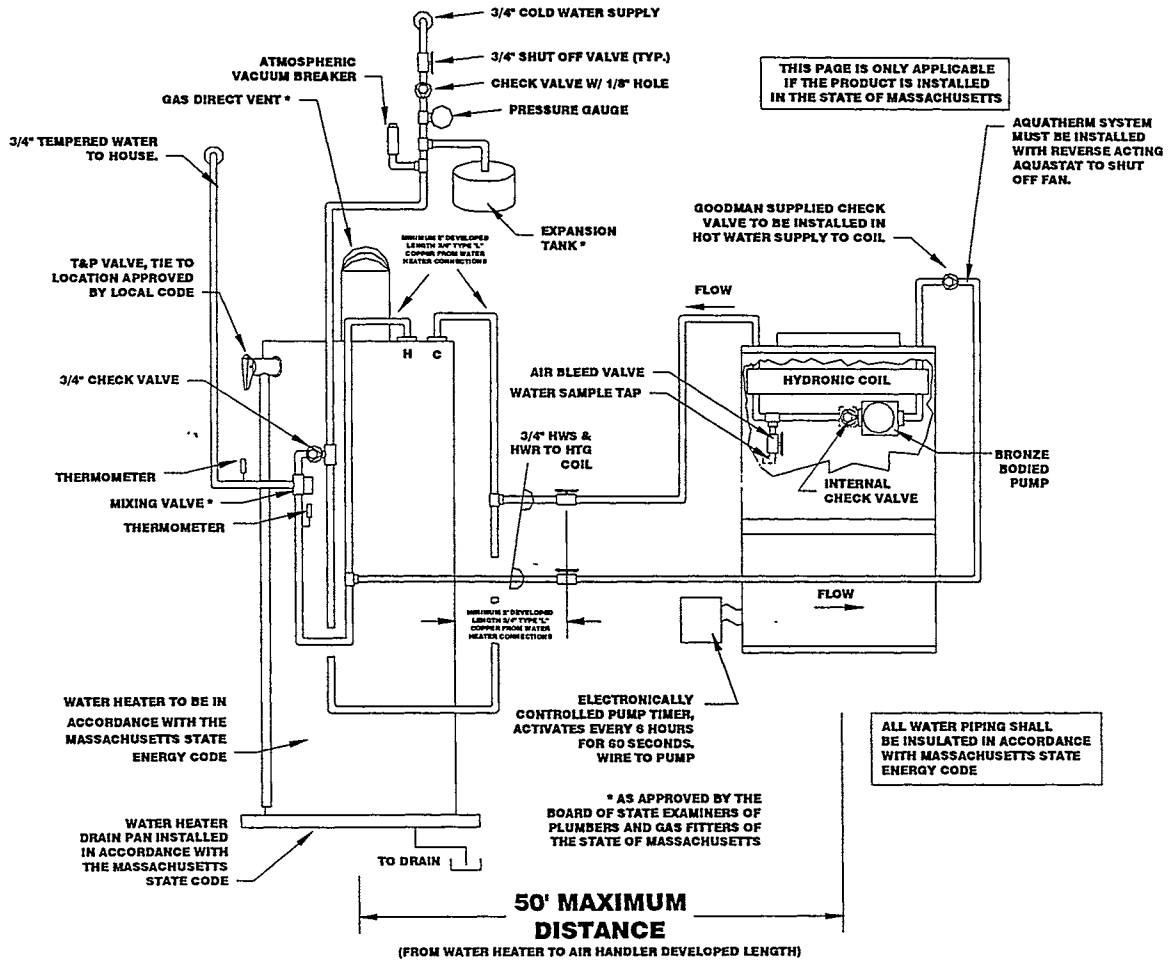
# PLUMBING REQUIRMENTS- FIGURE 3

## PLUMBING REQUIREMENTS PER THE COMMONWEALTH OF MASSACHUSETTS BOARD OF STATE EXAMINERS OF PLUMBERS AND GAS FITTERS



# PLUMBING REQUIRMENTS- FIGURE 4

## PLUMBING REQUIREMENTS PER THE COMMONWEALTH OF MASSACHUSETTS BOARD OF STATE EXAMINERS OF PLUMBERS AND GAS FITTERS



**NOTE: SPECIFICATIONS AND PERFORMANCE DATA LISTED HEREIN  
ARE SUBJECT TO CHANGE WITHOUT NOTICE**

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