

Group: PTAC

Part No.: 106018431

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Type K Incremental Packaged Terminal Air Conditioner



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Installation

The installation of this equipment shall be in accordance with the regulations of authorities having jurisdiction and all applicable codes. It is the responsibility of the installer to determine and follow the applicable codes. Sheet metal parts, self-tapping screws, clips and such items inherently have sharp edges, and it is necessary that the installer exercise caution. This equipment is to be installed only by an experienced installation company which employs trained personnel.

Inspection

When the equipment is received, all items should be carefully checked against the bill of lading to be sure all crates and cartons have been received. All units should be carefully inspected for damage when received. If any damage is noticed, the carrier should make the proper notation on the delivery receipt acknowledging the damage. The carrier should also fill out a Carrier Inspection Report. The McQuay Traffic Department should then be contacted.

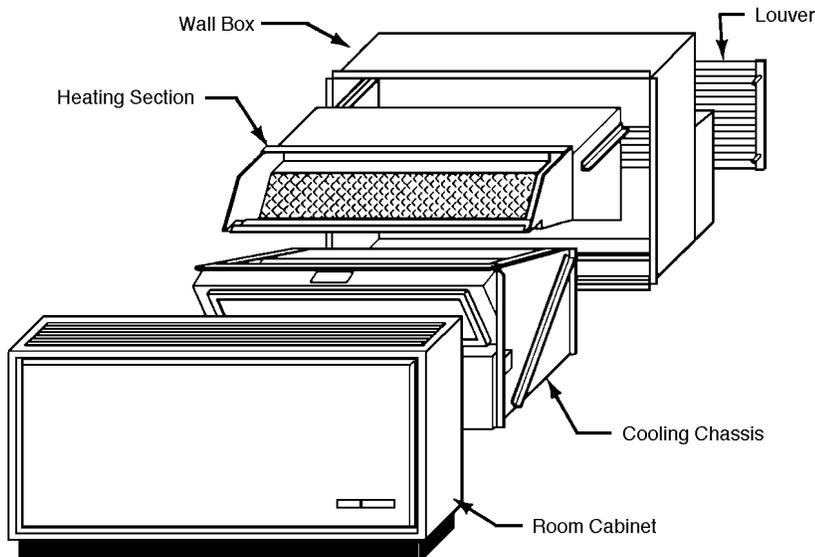
The unit nameplate should be checked to make sure the voltage agrees with the power supply available.

The Type K Series Comfort Conditioner is designed and built for through-the-wall installation in either new or existing buildings. The self-contained refrigerant system delivers cooling to the desired space. Heating can be accomplished with electric resistance or hydronic heat.

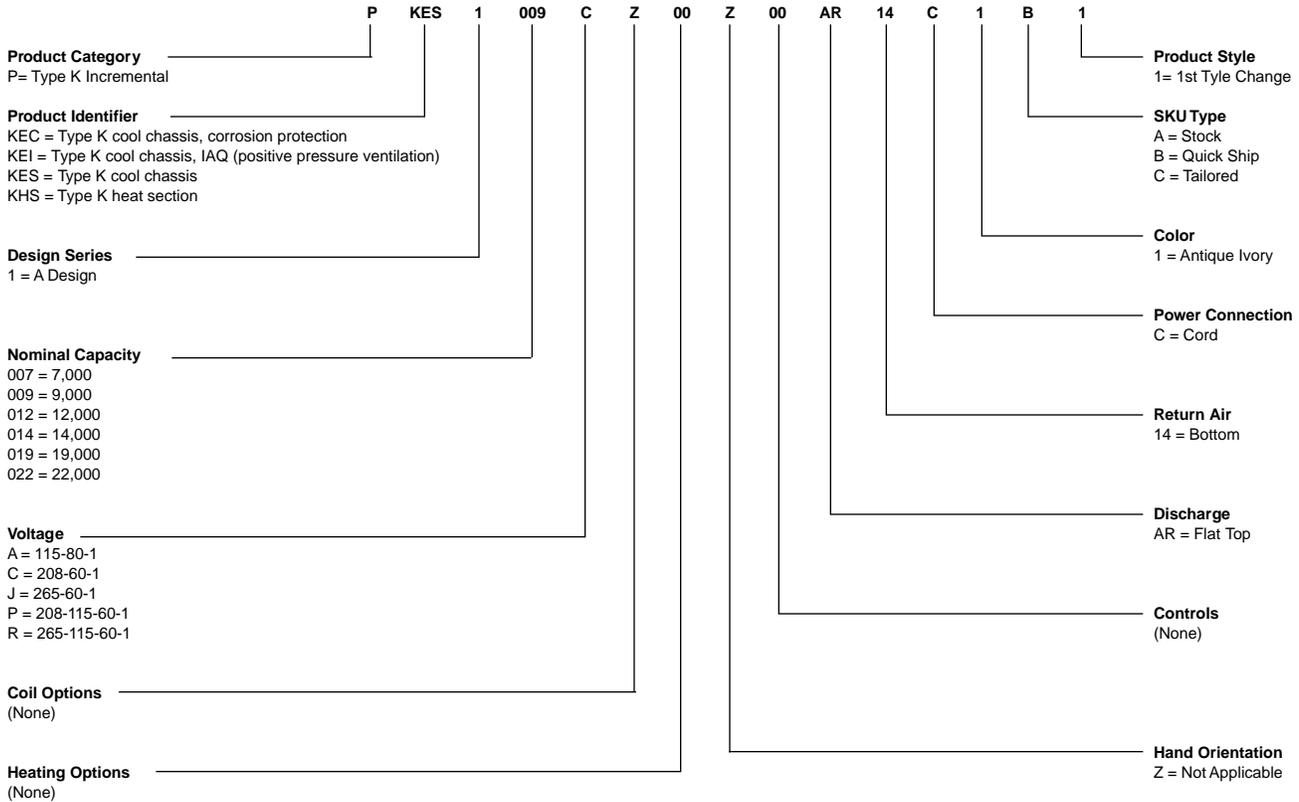
Each conditioner consists of the following components:

- Cooling Chassis
- Heat Section
- Control
- Room Cabinet
- Wall Box
- Louver

Figure 1.



TYPE K CHASSIS

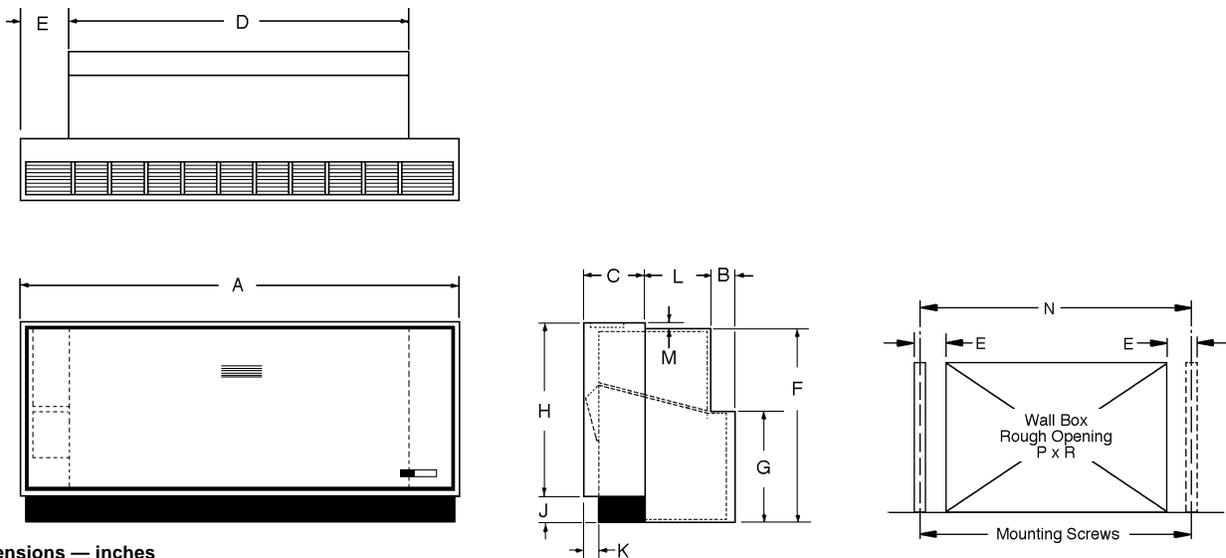


Wall Opening Requirements

Before installing the unit, check the wall opening to be sure the wall sleeve will slide in unobstructed. The rough opening should measure 25" x 36½" (635mm x 927mm) indoors and 14½" x 36½" (368mm x 927mm) outdoors for sizes 007—014 and 27¾" x 46¾" (705mm x 1187mm) indoors and 16¾" x 46¾" (415mm x 1187mm) outdoors for sizes 019—

022 as shown below. The wall box is designed to be mounted on the floor but may be located above the floor line to clear obstructions. Without cabinet modifications, the wall box can be placed up to 1" (25mm) above the floor. The standard adjustable kickplate can be telescoped to hide the space below the wall box. Complete wall box installation instructions can be found on page 4.

Figure 2.



Dimensions — inches

| Unit Size | A | B | C | D | E | F | G | H | J | K | L | M | N | P | R |
|-----------|----|---------|---------|-----|----|-----|----------------------------------|----|------------|----|----|---|-----|-----|-----|
| 007—014 | 48 | 2½ Min. | 7¼ Min. | 36¼ | 5¾ | 24½ | 13 ¹¹ / ₁₆ | 21 | 3½-5½ Adj. | 1¾ | 8 | 1 | 45¾ | 25 | 36½ |
| 019—022 | 60 | 2½ Min. | 8½ Min. | 46¼ | 6⅞ | 27⅞ | 15⅞ | 24 | 4-6 Adj. | 3 | 9¼ | ⅝ | 59½ | 27¾ | 46¾ |

Dimensions — mm

| Unit Size | A | B | C | D | E | F | G | H | J | K | L | M | N | P | R |
|-----------|------|---------|----------|------|-----|-----|-----|-----|--------------|----|-----|----|------|-----|------|
| 007—014 | 1219 | 64 Min. | 184 Min. | 921 | 146 | 648 | 348 | 533 | 89-140 Adj. | 44 | 203 | 25 | 1162 | 635 | 927 |
| 019—022 | 1524 | 64 Min. | 216 Min. | 1175 | 175 | 695 | 403 | 610 | 102-152 Adj. | 76 | 235 | 16 | 1151 | 705 | 1187 |

Wall Box Installation

The wall thickness will determine how much, if any, of the wall box will protrude into the room. Figure 3 shows a typical installation in a frame and brick wall. These instructions will vary by depth of wall, but not by wall material. Do not remove the weather panel at any time during the installation of the wall box. Premature removal of this panel could result in improper leveling or sealing. Install the wall box as follows:

1. If the wall opening has not been made, cut and break through using care to leave interior and exterior surfaces undamaged. See wall opening requirements on page 3 for proper size.
2. Install lintels as shown on the plans and specifications.
3. If the wall opening has already been made, measure it to be certain it has adequate clearance for the wall box. Be sure to allow extra clearance for insulation around the wall box to reduce sound and heat transfer. Continue with step #4.
4. Apply a layer of mortar or roofing cement to the bottom surface of the opening (see Figure 3).

5. Place 2" (51mm) fiberglass batt or 1" (25mm) styrofoam insulation around the top and sides of the wall box.
6. Locate the wall box in the wall opening with the weather panel to the outside. Use the top edge of the wall box for horizontal leveling. The wall box must also be vertically plumb. Shim the wall box to accomplish this. Recess so louver is flush with outside wall.
7. Drill four (4) holes in the sides of the wall box and attach it to the walls securely using appropriate fasteners. **Note: Never drill through bottom of wall box.**
8. If face brick is being installed, continue coursing up the wall until the wall box is completely surrounded and becomes an integral part of the wall.
9. Caulk interior and exterior perimeter weathertight where the box meets the wall. Use a nonhardening, waterproof caulk such as silicone.

Note: For rooms with thick carpet, wall box should be installed 1/2" (13mm) above concrete floor to facilitate future chassis installation and removal.

Figure 3. (Drawing Not To Scale)

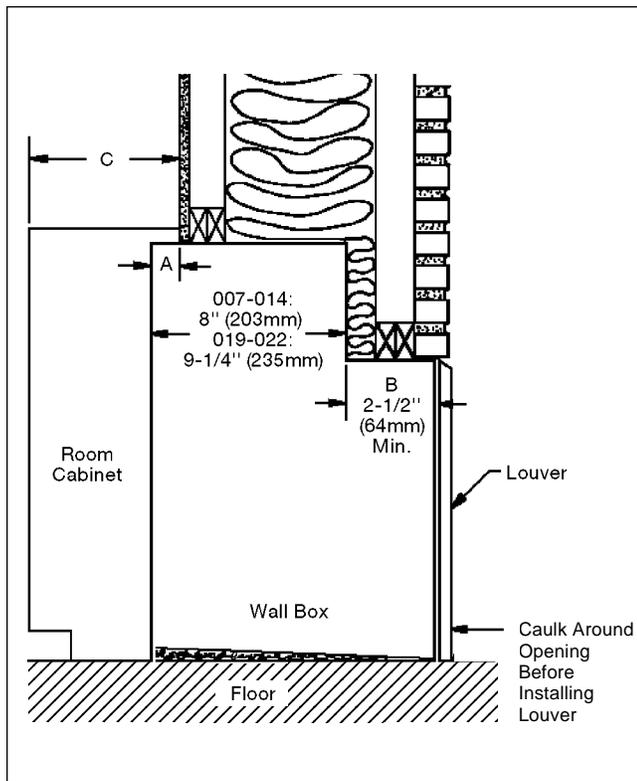


Table 1.

| Dimension "A" | | Hydronic Heat | | | |
|---------------|------------|---------------|-----|---------|-----|
| | | 007—014 | | 019—022 | |
| in. | mm | in. | mm | in. | mm |
| 0 to -1 | 0 to -25 | 8¼ | 210 | - | - |
| 0 to +1 | 0 to +25 | 9¼ | 235 | 8½ | 216 |
| 1 to 2 | 25 to 51 | 10¼ | 260 | 9½ | 241 |
| 2 to 3 | 51 to 76 | 11¼ | 286 | 10½ | 267 |
| 3 to 4 | 76 to 102 | 12¼ | 311 | 11½ | 292 |
| 4 to 5 | 102 to 127 | 13¼ | 327 | 12½ | 318 |
| 5 to 6 | 127 to 152 | 14¼ | 362 | 13½ | 343 |
| 6 to 7 | 152 to 178 | 15¼ | 387 | 14½ | 368 |
| 7 to 8 | 178 to 203 | 16¼ | 413 | 15½ | 394 |
| 8 to 9 | 203 to 229 | 17¼ | 438 | 16½ | 419 |

Note: Dimension "B" will vary by the thickness of the wall, the type of louver, the amount the louver is recessed into the wall (if any) and the amount the wall sleeve extends into the room. The minimum "B" dimension is 2½" (64mm). The wall box can be factory furnished in increments between 2½" (64mm) and 10" (254mm). Wall sleeve extensions in 1" (25mm) increments can also be provided to attach to the rear of the wall sleeve.

Table 2.

Dimensions — inches

| Wall Box | 007—014 | 2½ | 3½ | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| "B" Dimension | 019—022 | 2½ | 3½ | 4½ | 5½ | 6½ | 7½ | 8½ | 9½ | 10½ |
| Overall Length | 007—014 | 10½ | 11½ | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | 019—022 | 11¾ | 12¾ | 13¾ | 14¾ | 15¾ | 16¾ | 17¾ | 18¾ | 19¾ |

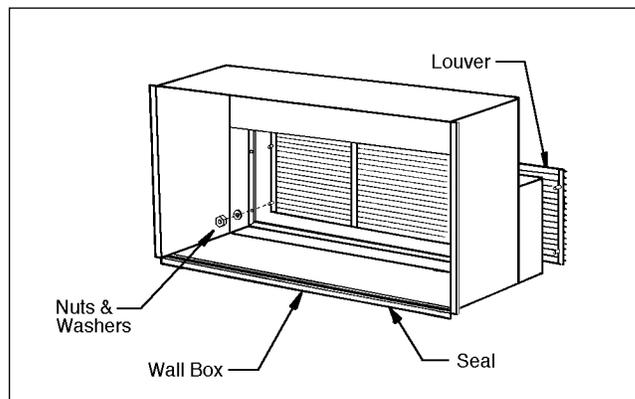
Dimensions — mm

| Wall Box | 007—014 | 64 | 89 | 102 | 127 | 152 | 178 | 203 | 229 | 254 |
|----------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| "B" Dimension | 019—022 | 64 | 89 | 114 | 140 | 165 | 191 | 216 | 241 | 267 |
| Overall Length | 007—014 | 267 | 292 | 305 | 330 | 356 | 381 | 406 | 432 | 457 |
| | 019—022 | 298 | 324 | 349 | 375 | 400 | 425 | 451 | 476 | 502 |

Outdoor Louver Installation

1. Remove the louver from the shipping carton which also contains the mounting hardware.
2. Remove the weather panel from the wall sleeve to gain access to the outside of the wall box. Verify that gap between exterior wall and wall box is caulked.
3. If an optional louver frame is required, install prior to louver installation. Caulk that portion of the frame which will come in contact with the wall. Pass the louver frame through the wall box opening and from the outside of the building, slide over the end of the wall box. Position as desired, then drill holes through the top and sides of the overlapping wall box and louver frame. Secure to the wall with screws. Caulk wall box/louver frame joint on all four sides. Provide additional caulking around outside wall and louver frame to ensure a weather tight seal.
4. Make a temporary handle by looping a piece of flexible wire or heavy cord through the louver. This will insure that a firm grasp can be maintained during installation.
5. From a position inside the room, push the louver through the opening at the rear of the wall box. Line it up with the wall box and pull it back so the louver studs pass through the holes of the wall box flange (see Figure 4).
6. Attach the washers and nuts to secure the louver in place.
7. If heat section and cool chassis are not to be immediately installed, replace the weather panel.

Figure 4.



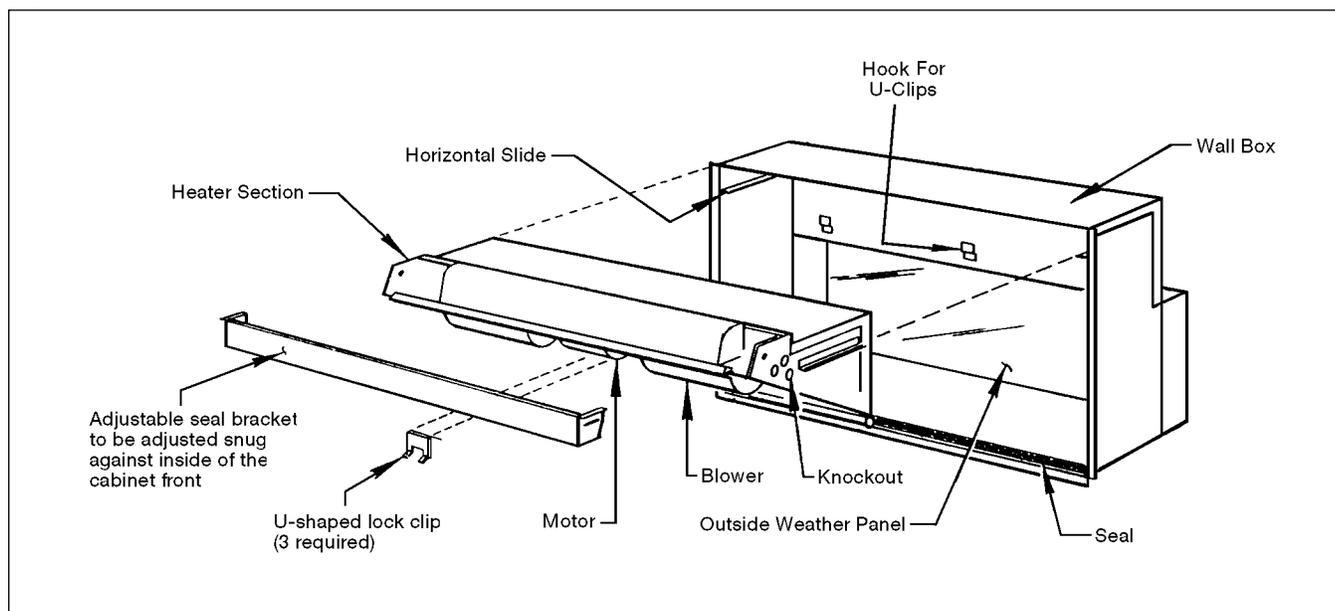
Heat Section Installation (Sizes 007–014)

The Type K heat section is matched to the Type K cooling chassis but packaged and shipped separately. Check the heat section carton label and the unit's nameplate to ensure it is correct for the cooling chassis and the space.

The following steps should be followed when installing the heat section:

1. Remove the heater from the shipping carton and examine for concealed damage. Report any damage found to the carrier. **The control is packaged with the heat section in a separate carton. Remove this carton from the heat section and set it aside until after the heat section is installed.**
 2. Manually spin the blowers to make sure there is no interference. Minor misalignment may have occurred during shipping and should be corrected. If it can't be corrected with minor adjustment, the condition should be reported to the factory. Do not lubricate roomside motor at this time.
- Each unit is adequately lubricated before leaving the factory.
3. Observe the method of installation. The heat section has side channels that ride on rails in the wall box. At the back of the wall box towards the top are two hooks that engage the heat section. Locate these hooks before sliding the heat section in place. "U"-shaped clips are included that lock the heat section in place once installed. "U"-clips can usually be found taped to the wall box interior.
 4. Remove the weather panel from the wall box. If the louver has not been installed, install it before placing the heat section into the wall box.
 5. Slide the heat section into place so that the holes of the heat section surround the hooks of the wall box. Lock it to the wall box using the "U"-shaped clips provided (see Figure 5). The "U"-shaped clips should be positioned with the open end pointing down.

Figure 5.



Additional Instructions for Hydronic Heat (Sizes 007–014)

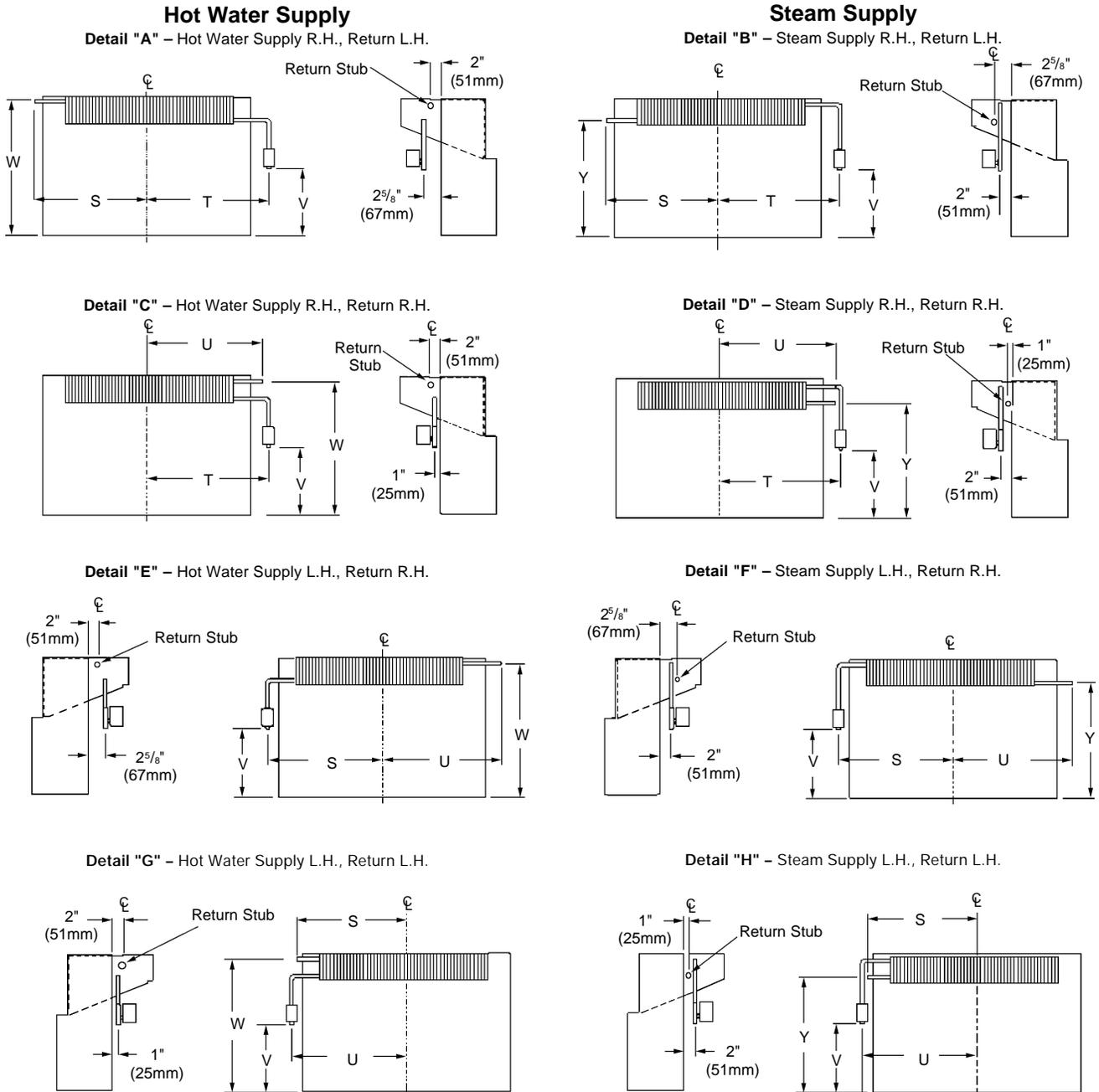
6. The piping for steam or hot water can be supplied from either the right or left side of the coil. Hot water must be supplied to the bottom of the coil, and steam to the top of the coil. See Detail A through H for specifics. To simplify connections to the coil, use 5/8" O.D. copper tubing where local codes allow.
7. A shutoff valve is recommended on the supply and return side of the coil.
8. When steam is used, a trap is required on the return side. Trap size should be determined by the consulting engineer or steam trap supplier, depending upon the

type of system and the pressure applied.

When hot water is used, an air vent must be installed at the highest point in the piping connection. If the vent is not automatic, it should be piped with easy access for regular maintenance. Caution: Locate vent so it does not drip or spray on electrical components.

9. Insulate all exposed water or steam lines that are located within the room cabinet. Failure to do this may cause erratic operation of the thermostat.
10. Protect the heat section from damage during construction. Do not **operate the heat section without a filter or the warranty will be void.**

Figure 6. Suggested Piping Arrangements



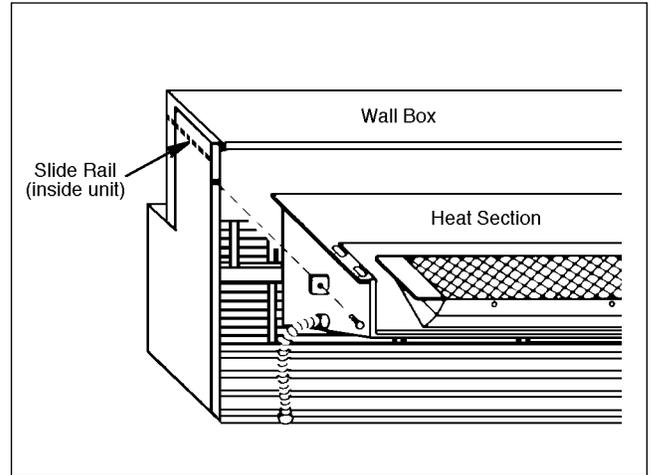
| | S | T | U | V | W | Y |
|-----|-----|-----|-----|-----|-----|-----|
| IN. | 19¼ | 21¾ | 21¼ | 10½ | 23½ | 20¼ |
| MM | 489 | 552 | 540 | 267 | 597 | 514 |

Heat Section Installation (Sizes 019–022)

Figure 7 shows the heat section installed in a standard wall box. Note that the heat section slides into a wall box on the slide rails. For heat section installation, proceed as follows:

1. Remove heat section from shipping carton.
2. Visually check for shipping damage and report any visible damage immediately to the trucker. Spin blower wheels by hand to assure they do not rub within their housing. Shipping may have loosened mounts. Adjust as required.
3. Check voltage rating on dataplate fastened to heat section. This must conform to voltage supplied for the equipment.
4. Locate slide rails on each side of wall box and insert heater section into the wall box. Slide to the rear until it is firmly seated.
5. Screw in the heat section lock screws as shown in Figure 7. (Screws are shipped with the heat section.)

Figure 7.



Steam or Hot Water Application (Sizes 019–022)

When the heat section requires steam or hot water, the installation varies. See Figures 9 and 10 for suggested piping arrangements.

1. Supply and return piping for steam or hot water is supplied from right-hand side only. Hot water must be supplied to the bottom of the coil, and steam to the top of the coil.
2. To simplify the steam or hot water connections to the coil, use $\frac{3}{8}$ " O.D. copper tubing where local codes permit. See Figure 8 for rough-in dimensions.
3. When hot water is to be used, an air vent must be put in at the highest point in the piping connection. See Figure 9. If the air vent used is not of the automatic type, it should be piped so that it may be easily opened.
4. A shutoff valve is recommended on the supply and return side of the coil. A steam trap is required on the return side when steam is used for heating. See Figure 10.
5. All steam or hot water lines which are located within the room cabinet should be insulated.

Warning: If the heat section is used for heating an area during construction, specifically plastering, precautions must be taken to protect the equipment by using covers of corrugated board, sheet metal or plywood. If the installation specifies heat only, be sure to install permanent weather panel and filter adapter (see "Installation of Heating Only Option"). Failure to heed this warning can cause malfunction of the equipment.

Figure 8.

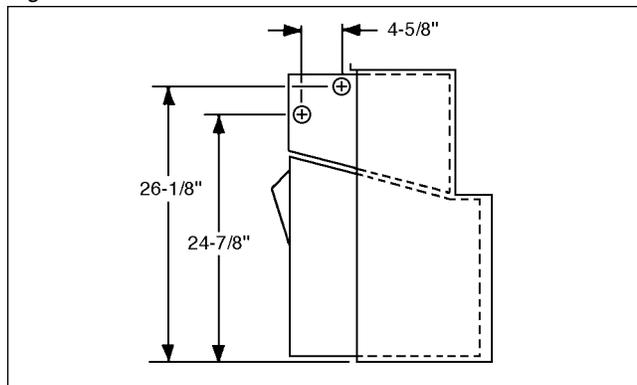


Figure 9. Hot Water Coil

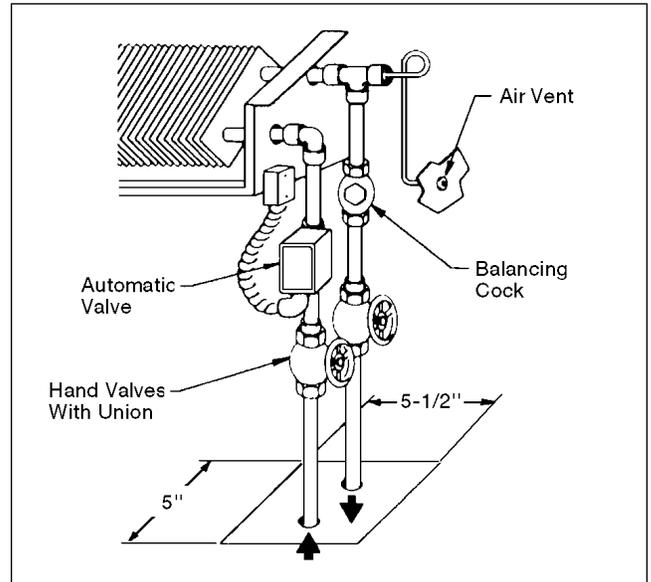
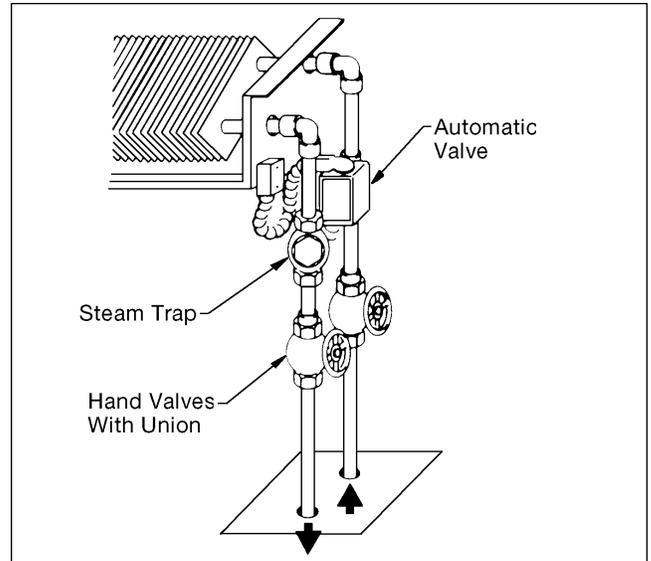


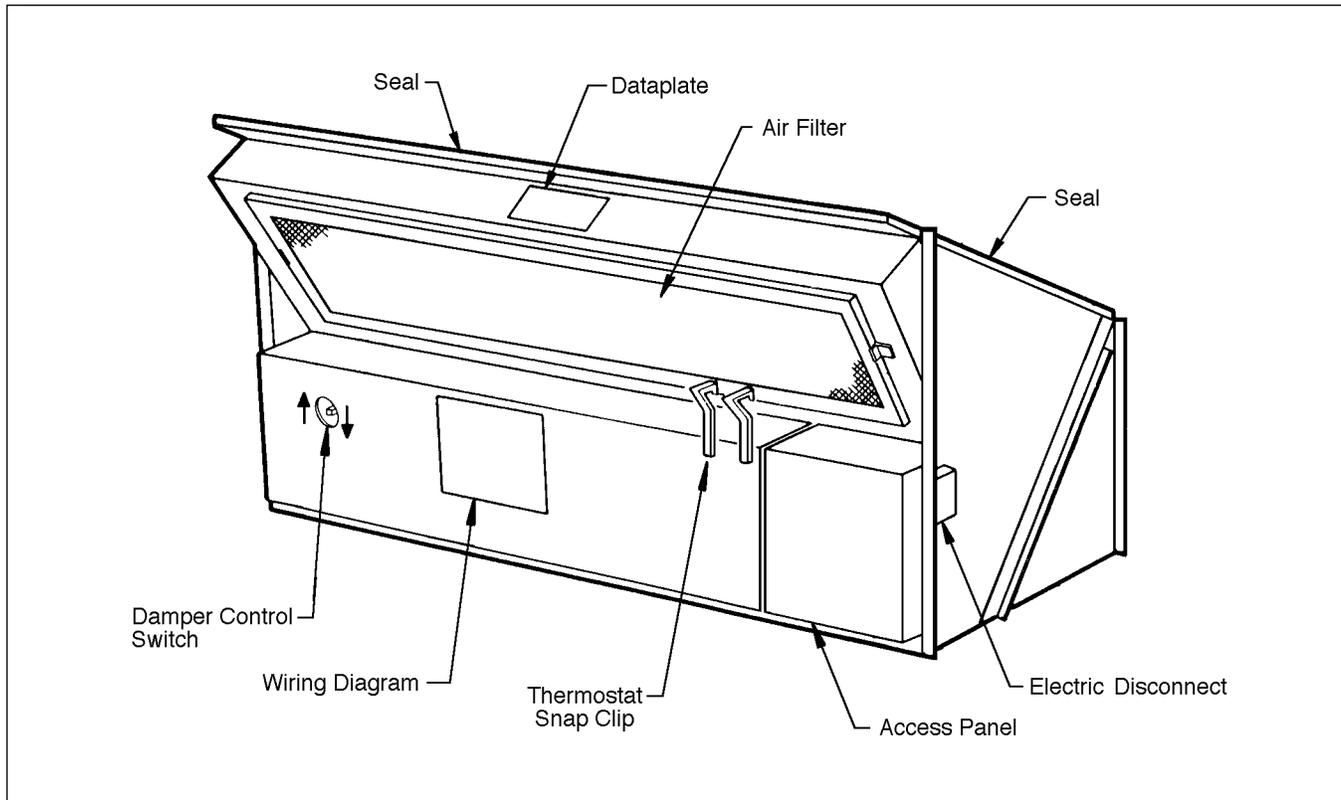
Figure 10. Steam Coil



Cooling Chassis Installation

1. Remove the cooling chassis from the shipping carton and examine it for damage. Do not rest it on end. Check the plate rating against the power supply to make sure that they are the same (see Figure 12). Also check the size (capacity) to make sure that it coincides with the heat section; e.g., Size 009 cooling.
2. The cooling chassis is supplied with an internal spring mounted compressor. The hold-down nuts on the compressor mountings should not be loosened.
3. Manually spin the condenser fan wheel to be sure that there is no interference or looseness. If it is loose, tighten the setscrew located over the center of the flat on the motor shaft. Do not lubricate condenser fan motor at time of installation.
4. Slide the chassis into the wall box. Chassis must be square in the box so that all the rubber seals are pressed tight. Check bottom seal between chassis and wall box to ensure that it has not been unseated from slot during chassis installation.
5. For unit sizes 019—022, there is a “J” bolt on each side that holds the chassis in place. Thread the “J” bolts through the holes supplied in the chassis and tighten until the chassis is firmly seated in the wall box.

Figure 12.



Electric Power Wiring

Before making any electrical connections, observe the following precautions:

1. Check the nameplate rating of the heat section and cooling chassis to make sure the equipment is connected to the proper power supply and that proper fusing is used.
2. In cases where a number of conditioners are to be installed, single circuits should be provided for each machine.
3. A separate disconnect is recommended for each conditioner in addition to individual fusing. This can be accomplished in several ways:

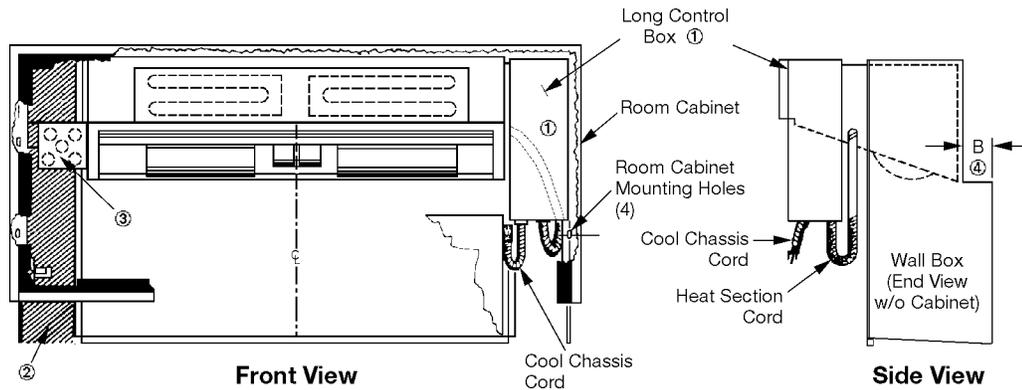
- a. By installing a remote double-pole switch in the conditioner's power line within sight of the unit.
- b. By installing a double pole, single throw "on-off" switch located in a convenient position within the room cabinet.

After all these precautions are observed, proceed as follows:

Units With Electric Heat (Sizes 007–022)

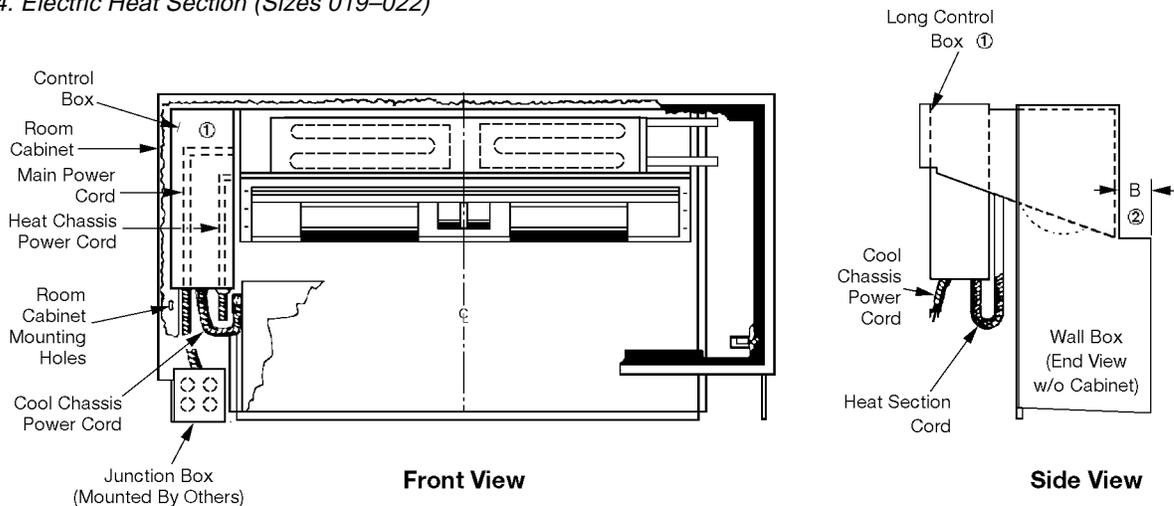
A 4" x 4" electrical junction box is located on the left side of the heat section. Field wiring should be brought to this point for power to the unit. See Figure 13 & 14.

Figure 13. Electric Heat Section (Sizes 007–014)



- Notes:**
- ① Guest room control, low voltage or master/slave wiring connections made at control box.
 - ② 4" x 24" (102mm x 51m) wall space for electrical conduits except behind junction box.
 - ③ Junction box with knockout for 1/2" (12mm) and 3/4" (19mm) conduit.
 - ④ Refer to page 4 for "B" dimension.

Figure 14. Electric Heat Section (Sizes 019–022)



- Notes:**
- ① Guest room control, low voltage or master/slave wiring connections made at control box.
 - ② Refer to page 4 for "B" dimension.

Units With Hydronic Heat (Sizes 007–014)

The hydronic heat section can be supplied with a short (4¼" high) control box or a long (13½" high) control box depending on the number of options selected. Observe the control box to determine which one was supplied for the job.

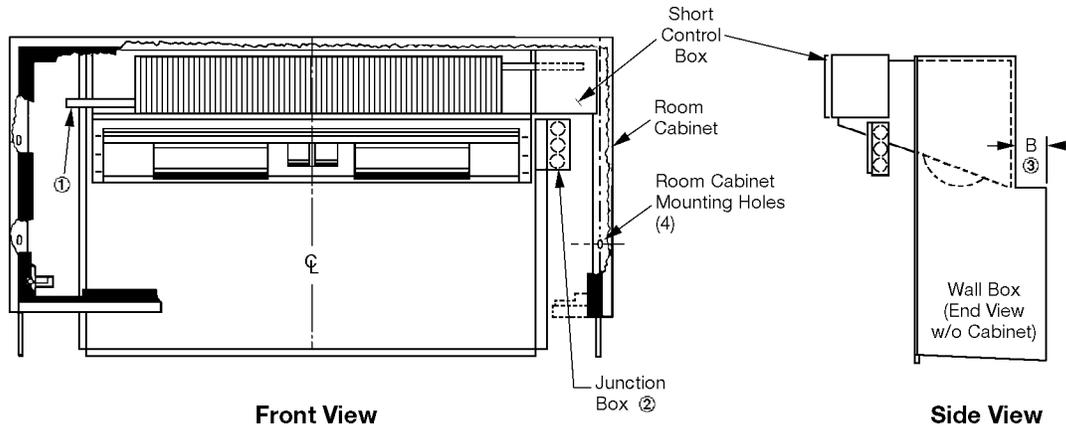
Small Control Box — If the short control box was supplied, field wiring should be brought into the 2" x 4" junction box which is located on the right-hand side of the heat section (see Figure 15.)

Long Control Box

1. If the long control box was provided, make electrical connections to a field supplied junction box that should be fastened to the floor beneath the control (see Figure 16).
2. Locate the long control box. The power wires for the control extend through the piece of flexible conduit that exits from the bottom of the control. These wires should be connected to the incoming power at the junction box installed in Step 1.

Remote Control — For units with remote mounted thermostat, refer to page 13.

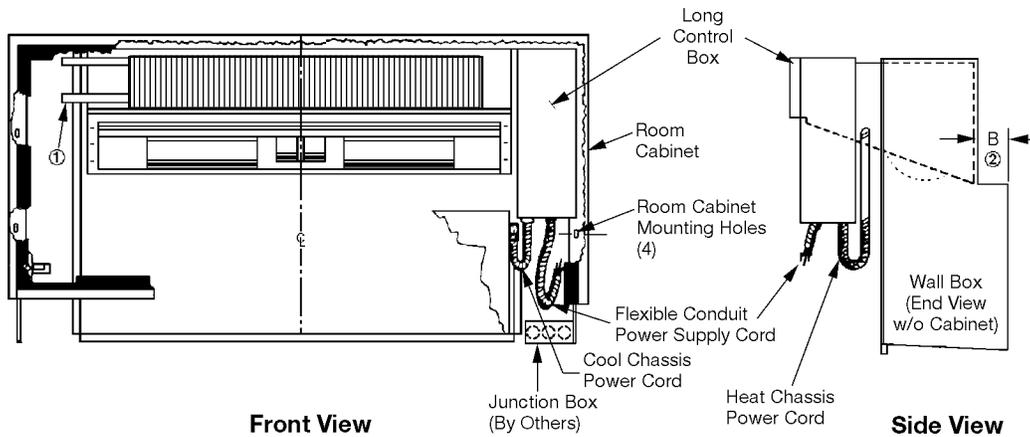
Figure 15. Hydronic Heat Section With Short Control Box (Sizes 007–014)



Notes:

- ① See Detail A, B, C, D, E, F, G, or H on page 6 for dimensions of factory installed valve and return piping stub; 5/8" O.D. copper tubing.
- ② Junction box has 7/8" diameter knockouts for 1/2" conduit.
- ③ Refer to page 4 for "B" dimension.

Figure 16. Hydronic Heat Section With Long Control Box (Sizes 007–014)



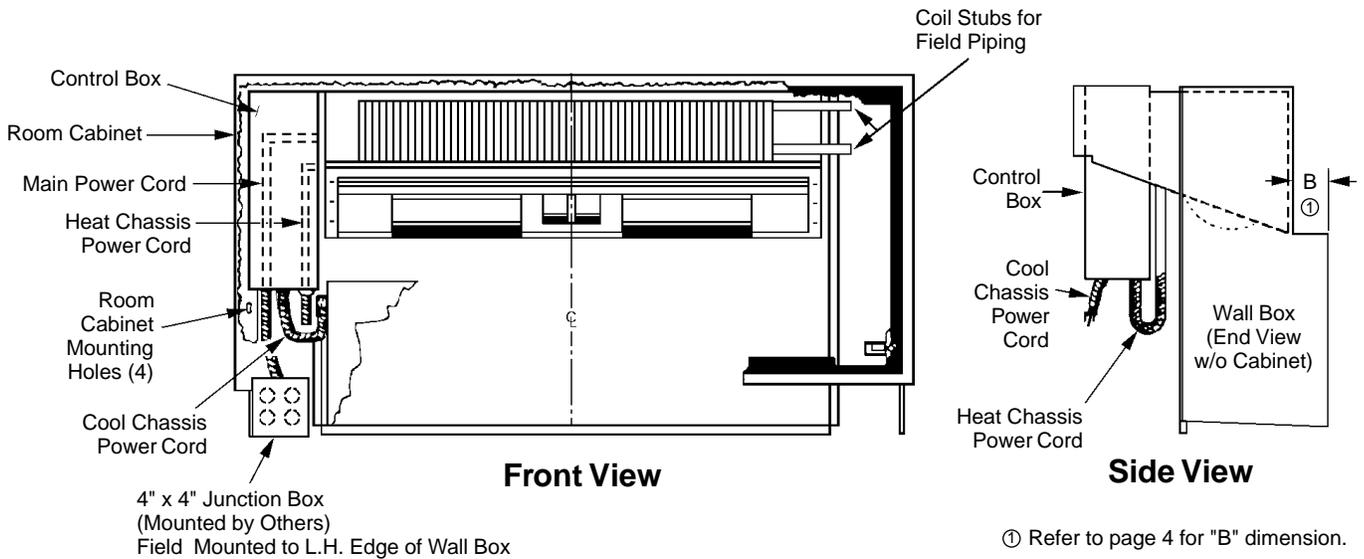
Notes:

- ① See Detail G or H on page 6 for dimensions of factory installed valve and return piping stub; 5/8" O.D. copper tubing.
- ② Refer to page 4 for "B" dimension..

Unit with Hydronic Heat (sizes 019–022)

1. Only one size control box is available for sizes 019–022. Make all electrical connections to a factory supplied junction box located on the L.H. side of the wall box.
(see Figure 17).

Figure 17. Hydronic Units (Sizes 019–022)



Room Cabinet and Control Installation

The depth of the room cabinet varies by the amount the wall box extends into the room. Check the unit tagging against the room cabinet tagging to be sure they match. Installation of the control box should be done at the same time as the room cabinet.

1. Remove the cabinet from the carton and inspect it for damage. If any is found, contact the carrier immediately. The room cabinet is made up of six pieces: a cabinet, a removable front panel, a discharge grille, two (2) end plates, and a kickplate. Make sure all pieces are included with the room cabinet.
Remove the front panel by unlocking the concealed latches at the bottom corners of the front panel (see Figure 18). Once latches are released, lift the front panel slightly and pull panel forward, then lift again and remove from the surrounding cabinet. Unit sizes 019–022 utilize safety chains that must be disconnected from the room cabinet in order to remove the front panel.

2. **For unit sizes 007–014:** Place the cabinet around the installed wall box, heat section and cool chassis and push the cabinet firmly against the wall. The discharge grille seals should rest on the discharge opening of the heat section.

For unit sizes 019–022: Position the room cabinet over the heat section so that the two studs on each side are positioned over the matching slots in the heat section. Set the cabinet down on the heat section, push tight against the wall and secure using wing nuts supplied. See Figure 19.

3. Fasten the cabinet to the wall using appropriate fasteners. The back flanges of the room cabinet have factory furnished holes for securing the cabinet to the wall.

Figure 18.

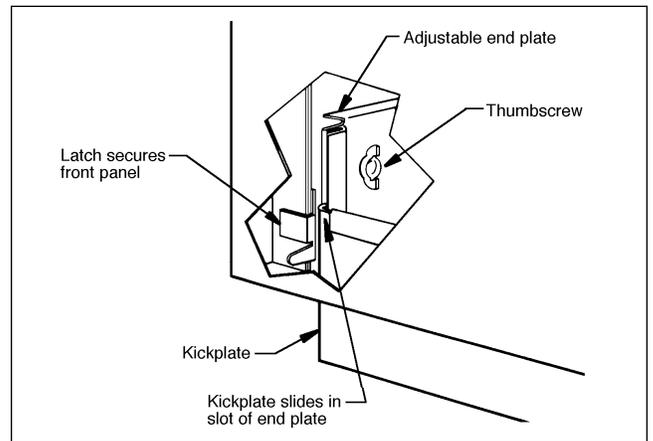
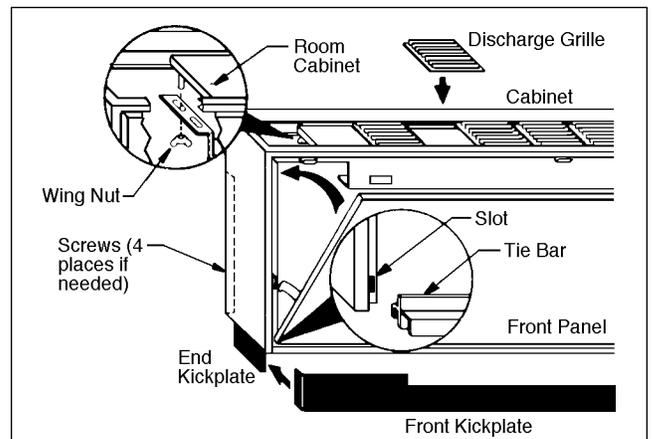


Figure 19.



4. Fasten the two (2) end plates to the room cabinet using the wing nuts supplied. These end plates are adjustable and should be positioned to set flat on the finished floor (see Figure 20).
5. Locate the kickplate and clip it into the slots provided in the end plates so that the flange is toward the floor.
6. Take the control box and escutcheon plate out of the carton for attachment to the room cabinet.
7. There are two flanges beneath the control door that support the control box (see Figure 21). Remove the two screws in the control box that hold the escutcheon plate in place. Remove the thermostat knob and escutcheon plate.
8. While holding the control box in position, set the escutcheon plate in place on the flanges beneath the control door.
9. Using the two screws removed in Step 7, secure the control box and escutcheon plate to the room cabinet.
10. Replace the thermostat control knob.
11. Connect the power cord from the heat section to the bottom of the control box. Plug in the cord from the control box to the receptacle in the cooling chassis.
12. Move the thermostat bulb to the cooling chassis and secure it to the snap clips provided. Inspect the filter to be sure it is securely in place.
13. Loosen the wing nuts on the nose piece that is attached to the heat section. Slide the nose piece toward the room cabinet until it makes contact. Tighten wing nuts to secure the nose piece in place. This nose piece prevents air from leaking back into the cabinet and giving the thermostat a false reading.
14. Retrieve the front panel and replace it in the room cabinet. Lock the concealed latches in place to prevent unauthorized tampering (see Figure 22). **Note:** Latches must be in the open position before installing the front panel.
15. Wipe cabinet with a soft cloth to remove smudges. If required, use a mild, nonabrasive cleanser.

Figure 20.

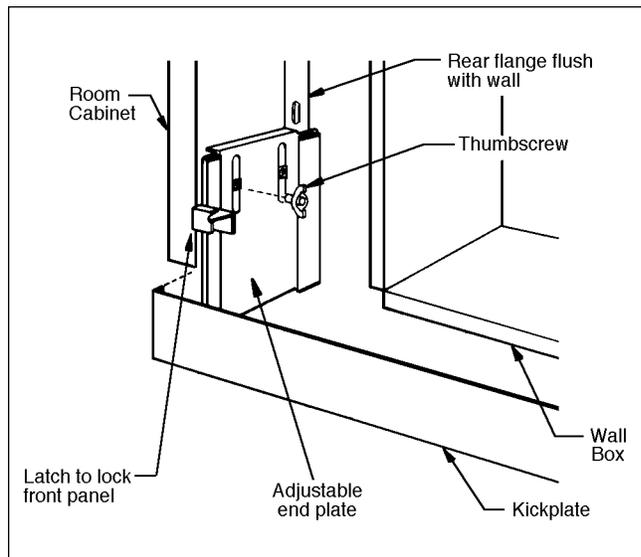


Figure 21.

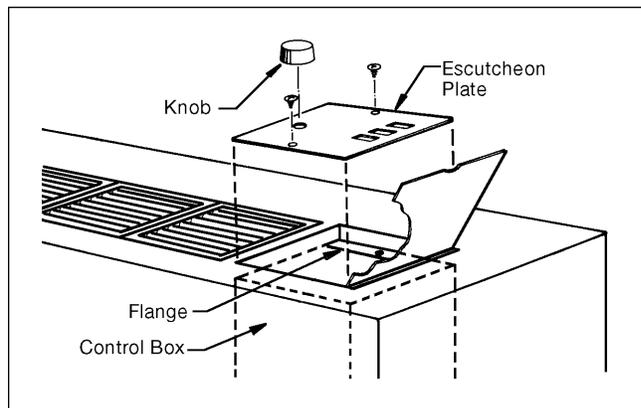
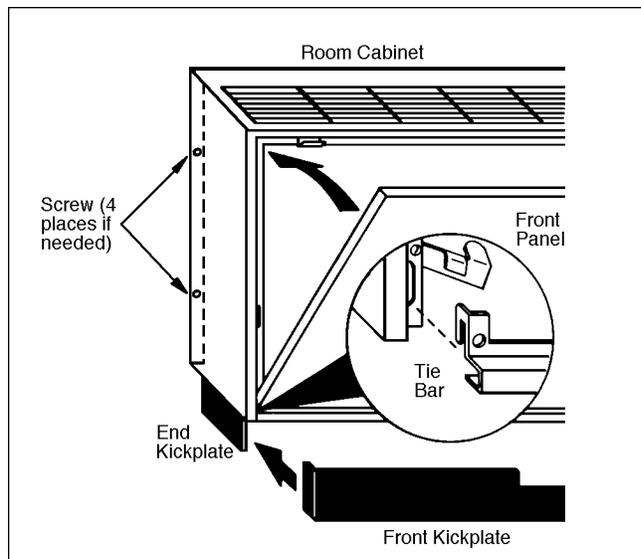


Figure 22.



Equipment Start-up

Initial start-up of the McQuay equipment by an experienced person is usually the responsibility of the installing contractor. This consists of inspecting and operating the equipment for all functions at the time of initial installation, and making adjustments as necessary. It also includes demonstrating its proper operation to the owners or their agents. Note that unless otherwise specifically agreed to in writing, there is no field labor or start-up service included in the price of the equipment.

The Type K unit is furnished with a concealed fan cycle rocker switch on the control box. Before start-up, open the front panel and place this switch in the "cycle" position. Continue start-up procedures as follows:

1. Check the main power supply to be sure there is power to the unit.
2. Open the control access door and press the button labeled F-Fan. The indoor fans should be energized.
3. Move the fan speed rocker switch from "Low Fan" to "High Fan" and back again. The fan speed should change.
4. Depress the button marked H-Heat. Turn the thermostat knob completely counterclockwise. The electric heat

elements or the hydronic valve should become energized and noticeable heat should be felt at the discharge grille.

5. Depress the C-Cool button and move the thermostat completely clockwise. The compressor and condenser fan should come on and the air from the discharge should feel cold.
6. Depress the S-Stop button and all functions of the unit should stop. **Caution: The stop button does not disconnect power to the unit. Before servicing the equipment, disconnect the unit from the power source.**

Ventilation

The introduction of outside air is controlled by an automatic damper. During normal operation, the damper will be open whenever the Heat, Cool, or Fan control buttons are depressed. If the indoor fan is not energized, the damper will be closed.

A concealed cutoff switch is provided so that the damper can be kept closed.

This switch is located at the front left-hand side of the cooling chassis (see Figure 12). It can be reached by removing the front panel.

Remote Mounted Thermostat Installation (Sizes 007—014 Only)

Units that are furnished with remote mounted thermostats should be wired as shown in Figure 23. The connections for field wiring are on a seven-position terminal board located on the face of the control box. Other considerations for remote mounted thermostat are as follows:

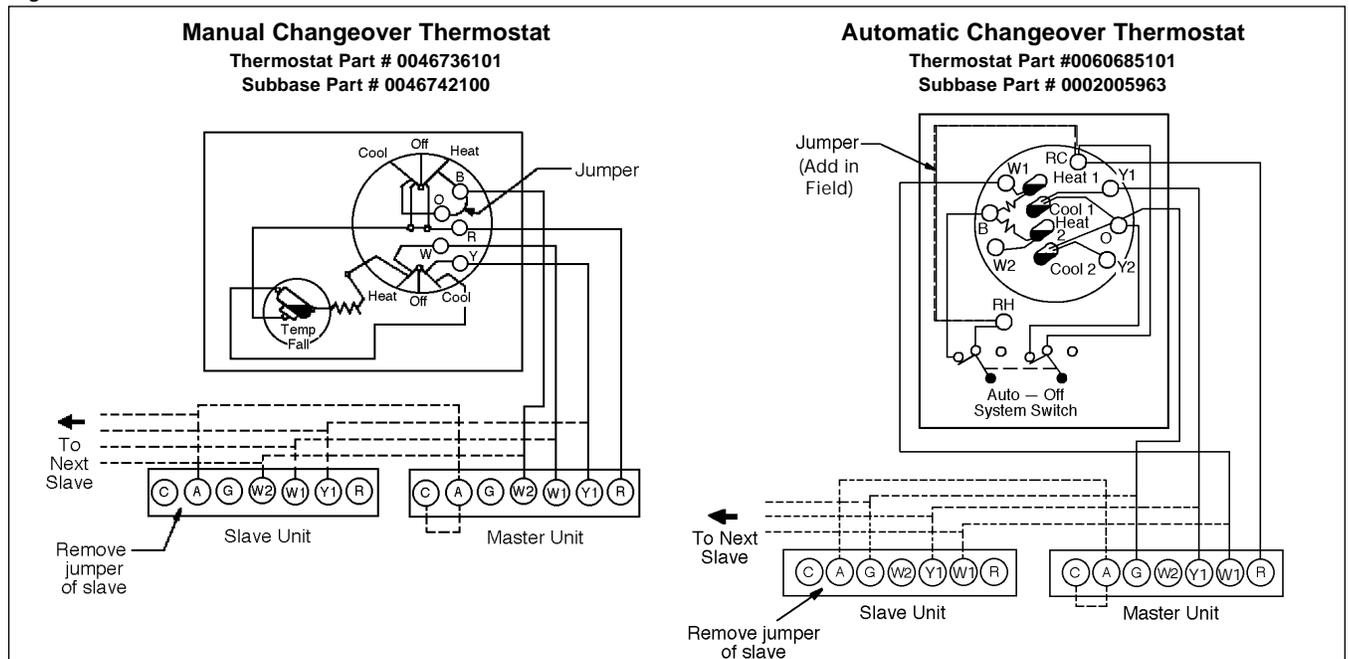
1. If slave units are to be employed, remove the jumper from terminals A to C of the slave unit. Connect terminal A of the master unit to the corresponding terminal A of the slave unit as shown in Figure 23.

The master unit is furnished with a 50 VA transformer that is capable of handling up to 7 slave units. If additional slave units are to be added, a larger field supplied transformer must be mounted external to the unit. The master and slave units draw 5.6 VA each. Furnish a transformer

to handle the number of slaves installed, plus the master unit.

2. When using a programmable wall thermostat, connect the common terminal of the thermostat to terminal A of the unit terminal board. Refer to the instructions furnished with the thermostat to locate the common terminal. **Note:** It may be necessary to reduce the number of slave units connected to the master or field supply a larger transformer when using a programmable thermostat. Check the VA draw of the chosen thermostat, plus the VA draw of the master and slave units to be sure the total doesn't exceed 50 VA power draw. Slave units are connected as described in #1 above.

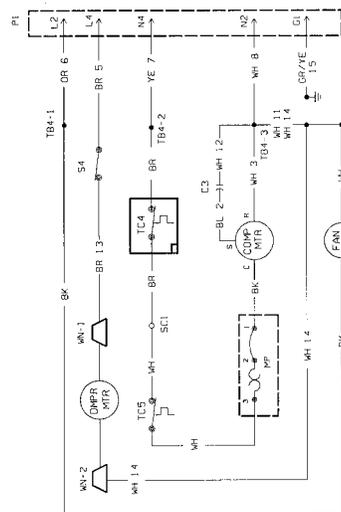
Figure 23.



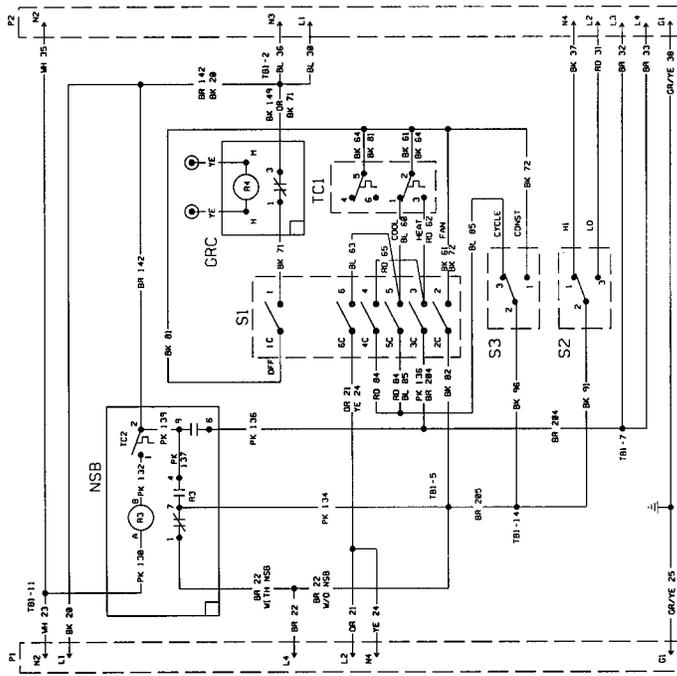
Typical Wiring Diagrams

Standard Chassis With Electric Heat & MCO Controls (Sizes 007—014)

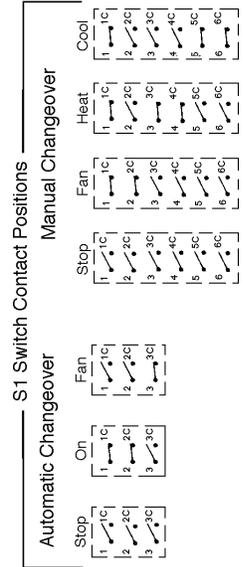
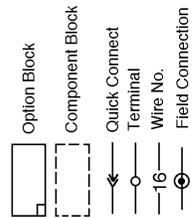
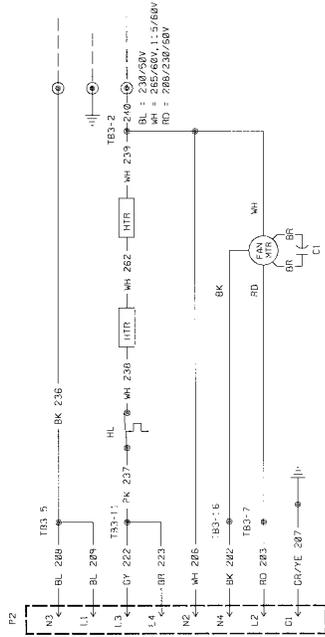
COOL SECTION



CONTROL BOX



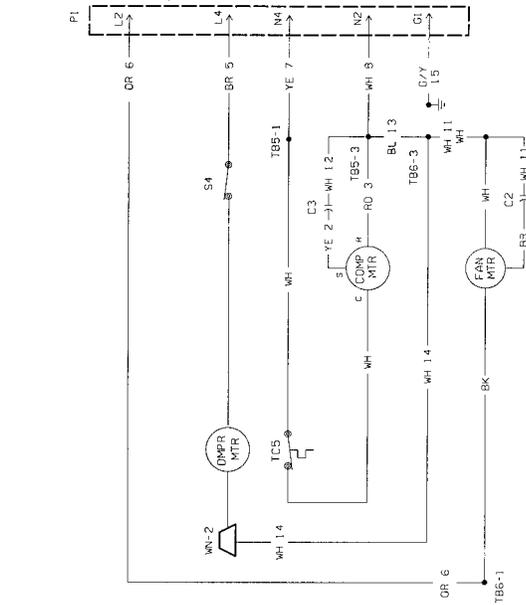
HEAT SECTION



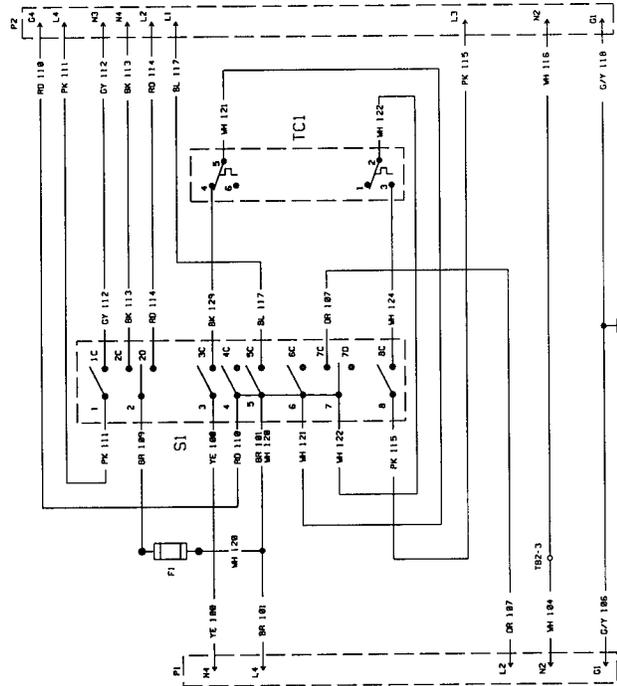
- C1 Capacitor, Indoor Fan
- C2 Capacitor, Outdoor Fan
- C3 Guest Room Compressor
- GRC Guest Room Control
- HL High Limit
- HTR Heater
- MP Motor Protector
- NSP Night Setback Control
- P1 Plug, Control Box/Heat Section to Cool Section
- R1 Relay, Heat
- R2 Relay, Cool
- R3 Relay, Night Setback (NSB)
- R4 Relay, Guest Room Control (GRC)
- R5 Relay, Hot Water Valve
- R6 Relay, Control
- R7 Relay, Night Setback (NSB)
- S1 Control Switch
- S2 Fan Cycle Switch
- S3 Fan Speed Switch
- S4 Damper Switch
- T1 Transformer
- TB1 Terminal Block, Control Box
- TB2 Terminal Board (24V), Control Box
- TB3 Terminal Board, Heat Section
- TB4 Terminal Board, Cool Section
- TB6 Terminal Box
- TC1 Room Thermostat
- TC2 Night Setback Thermostat (NSB)
- TC3 Heat Fan Lockout
- TC4 Low Ambient Lockout
- VM Valve Motor
- WN Wire Nut

Standard Chassis With Electric Heat & MCO Controls (Sizes 019—022)

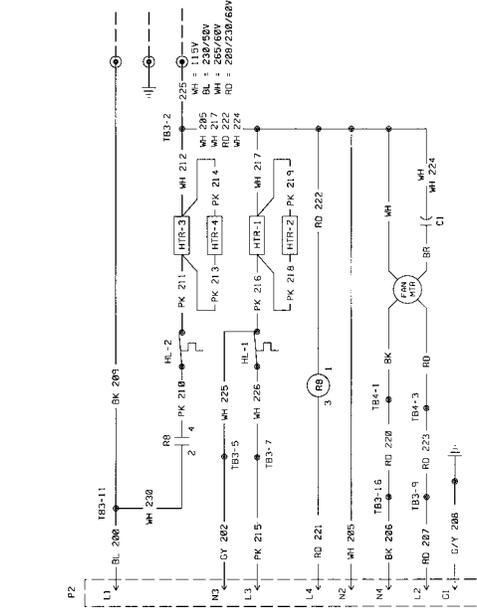
COOL SECTION



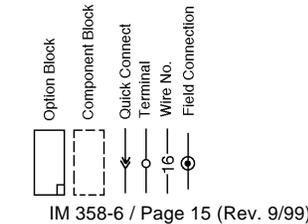
CONTROL BOX



HEAT SECTION



Note: Large heat shown. Refer to unit diagram for details of small or medium heat.



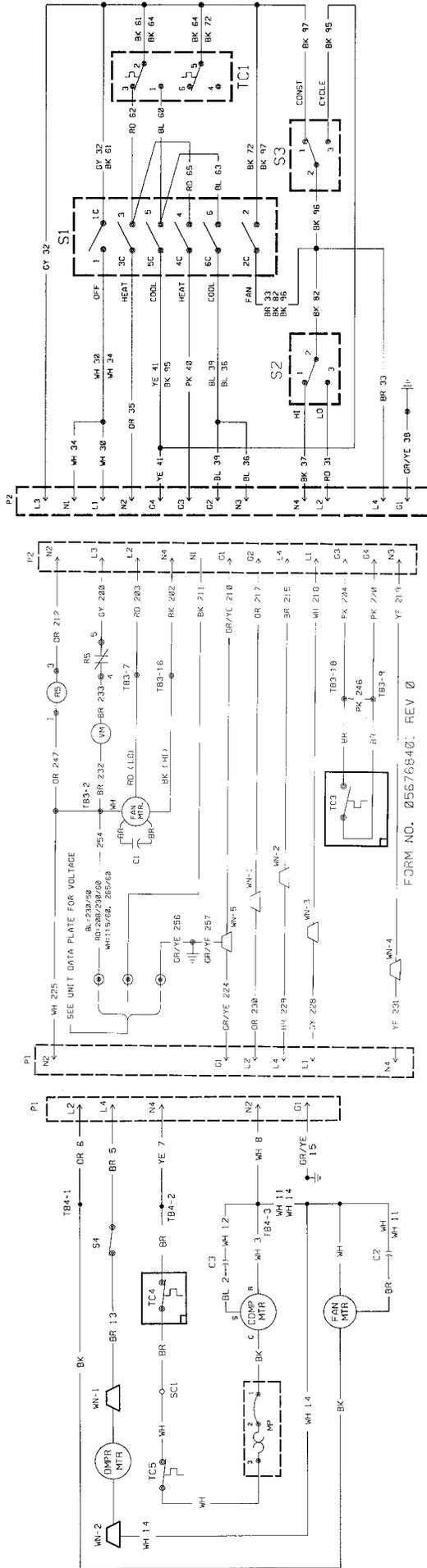
- R3 Relay, Cooling
- R4 Relay, Indoor Fan
- R5 Relay, Heating 1st Stage
- R6 Relay, Heating 2nd Stage
- R7 Relay, Night Setback (NSB)
- R8 Relay, Hot Water Valve
- R9 Control Switch
- S1 Control Switch
- S4 Damper Switch
- T1 Transformer
- T2 Terminal Box
- T3 Terminal Box
- T4 Terminal Box
- T5 Terminal Box
- T6 Terminal Box
- TC1 Room Thermostat
- TC2 Night Setback Thermostat (NSB)
- TC5 Freezestat
- VM Valve Motor
- WN Wire Nut
- C1 Capacitor, Indoor Fan
- C2 Capacitor, Outdoor Fan
- C3 Capacitor, Compressor
- F1 Fuse
- HL High Limit Heater
- MP Motor Protector
- P1 Plug, Heat Section to Cool Section
- P2 Plug, Heat Section to Control Box
- P3 Plug, PC Board
- P4 Plug, on Master Wire Harness
- P5 Plug, on Master Wire Harness
- R1 Relay, Run
- R2 Relay, Outdoor Fan Motor

Standard Chassis With Hot Water Heat & MCO Controls (Sizes 007—014)

COOL SECTION

HEAT SECTION

CONTROL BOX



FORM NO. 0567840; REV 0

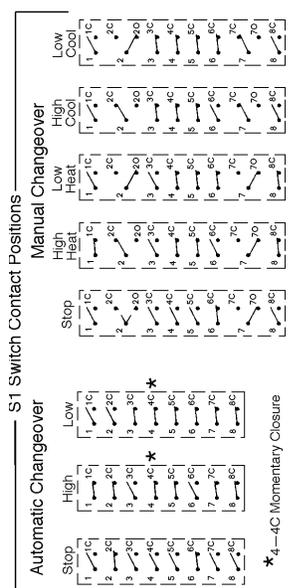
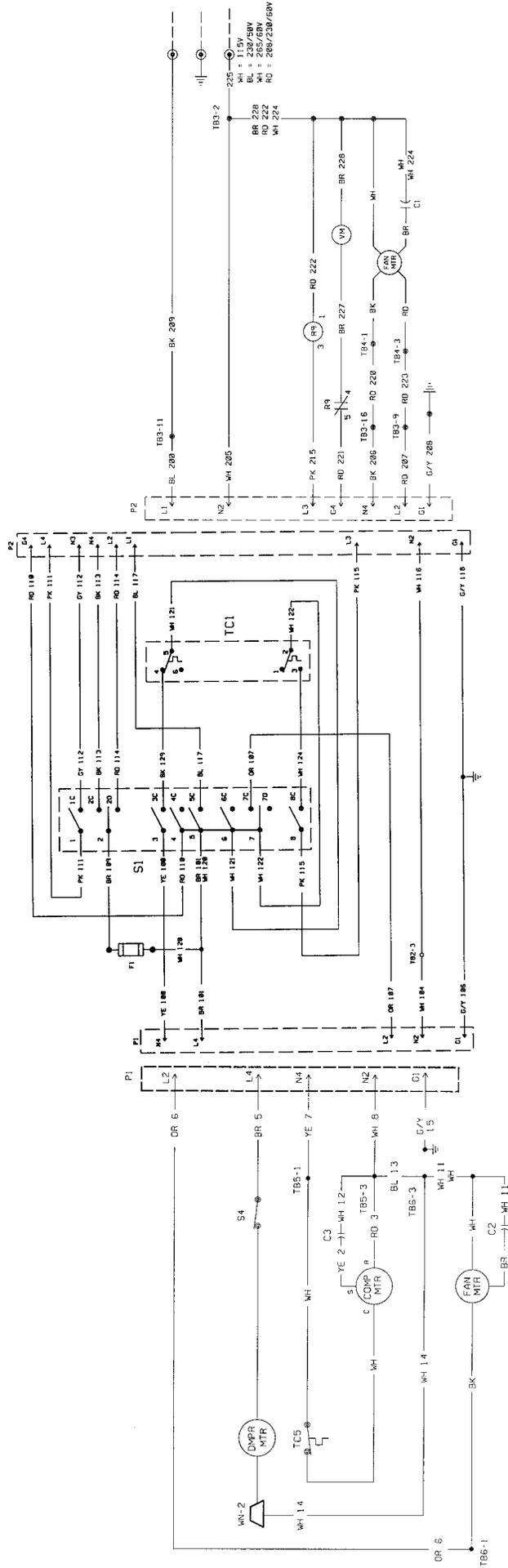
- Option Block
 - Component Block
 - Quick Connect
 - Terminal
 - Wire No.
 - Field Connection
-
- Automatic Changeover
 - Stop
 - Fan
 - On
 - Heat
 - Cool
-
- Manual Changeover
 - Stop
 - Fan
 - Heat
 - Cool
-
- C1 Capacitor, Indoor Fan
 - C2 Capacitor, Outdoor Fan
 - C3 Guest Room Compressor
 - GRC Guest Room Control
 - HL High Limit
 - HTR Heater
 - MP Motor Protector
 - NSP Night Setback Control
 - P1 Plug, Control Box/Heat Section to Cool Section
 - R1 Relay, Heat
 - R2 Relay, Cool
 - R3 Relay, Night Setback (NSB)
 - R4 Capacitor, Indoor Fan
 - R5 Capacitor, Outdoor Fan
 - R6 Guest Room Compressor
 - R7 Guest Room Control
 - HL High Limit
 - HTR Heater
 - MP Motor Protector
 - NSP Night Setback Control
 - P1 Plug, Control Box/Heat Section to Cool Section
 - R1 Relay, Heat
 - R2 Relay, Cool
 - R3 Relay, Night Setback (NSB)
 - R4 Relay, Guest Room Control (GRC)
 - R5 Relay, Hot Water Valve
 - R6 Relay, Control
 - R7 Relay, Night Setback (NSB)
 - S1 Control Switch
 - S2 Fan Cycle Switch
 - S3 Fan Speed Switch
 - S4 Damper Switch
 - TB1 Transformer
 - TB2 Terminal Block, Control Box
 - TB3 Terminal Board (24V), Control Box
 - TB4 Terminal Board, Heat Section
 - TB6 Terminal Box
 - TC1 Room Thermostat
 - TC2 Night Setback Thermostat (NSB)
 - TC3 Heat Fan Lockout
 - TC4 Low Ambient Lockout
 - VM Valve Motor
 - WN Wire Nut

Standard Chassis With Hot Water & MCO Controls (Sizes 019—022)

COOL SECTION

CONTROL BOX

HEAT SECTION



- C1 Capacitor, Indoor Fan
- C2 Capacitor, Outdoor Fan
- C3 Capacitor, Compressor
- F1 Fuse
- HL High Limit Heater
- MP Motor Protector
- P1 Plug, Heat Section to Cool Section
- P2 Plug, PC Board
- P3 Plug, on Master Wire Harness
- P4 Plug, on Master Wire Harness
- R1 Relay, Run
- R2 Relay, Outdoor Fan Motor
- R3 Relay, Cooling
- R4 Relay, Indoor Fan Motor
- R5 Relay, Heating 1st Stage
- R6 Relay, Heating 2nd Stage
- R7 Relay, Heating 2nd Stage (NSB)
- R8 Relay, Night Setback (NSB)
- R9 Relay, Hot Water Valve
- S1 Control Switch
- S4 Damper Switch
- T1 Transformer
- T2 Terminal Box
- T3 Terminal Box
- T4 Terminal Box
- T5 Terminal Box
- T6 Terminal Box
- TC1 Room Thermostat
- TC2 Night Setback Thermostat (NSB)
- TC5 Freezestat
- VM Valve Motor
- WN Wire Nut

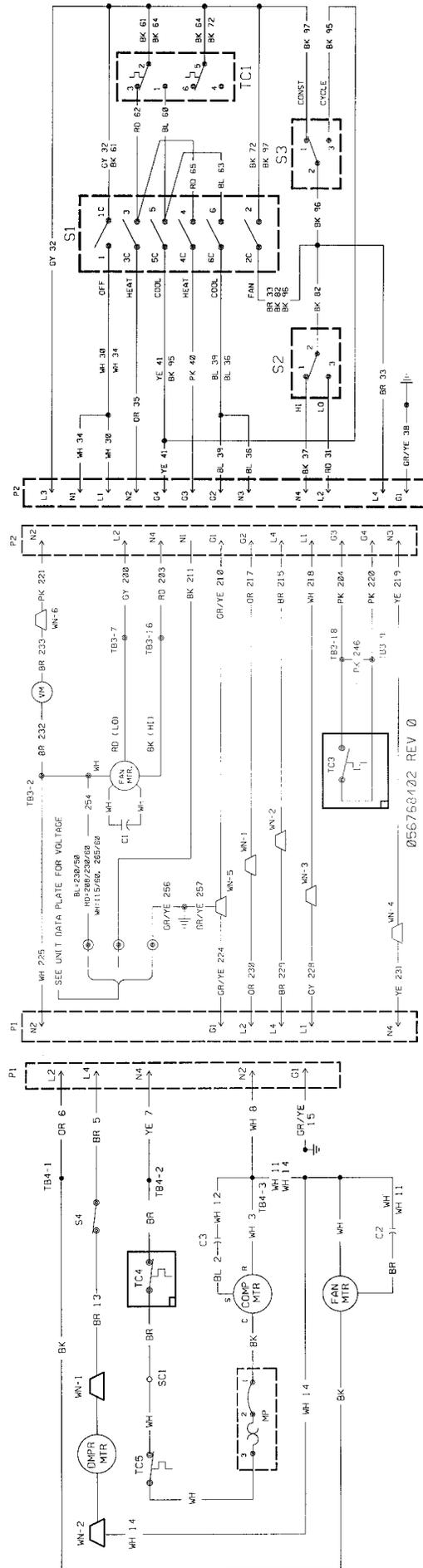
- Option Block
- Component Block
- Quick Connect Terminal
- Wire No.
- Field Connection
- *4—4C Momentary Closure

Standard Chassis With Steam Heat & MCO Controls (Sizes 007—014)

COOL SECTION

HEAT SECTION

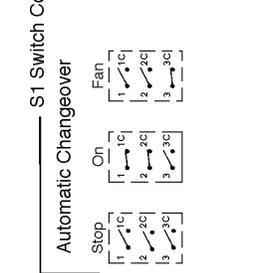
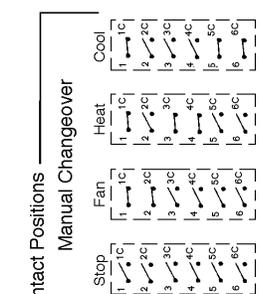
CONTROL BOX



056758422 REV 0

- R4 Relay, Guest Room Control (GRC)
- R5 Relay, Hot Water Valve
- R6 Relay, Control
- R7 Relay, Night Seback (NSB)
- S1 Control Switch
- S2 Fan Speed Switch
- S3 Fan Cycle Switch
- S4 Damper Switch
- T1 Transformer
- TB1 Terminal Block, Control Box
- TB2 Terminal Board (24V), Control Box
- TB3 Terminal Board, Heat Section
- TB4 Terminal Board, Cool Section

- C1 Capacitor, Indoor Fan
- C2 Capacitor, Outdoor Fan
- C3 Capacitor, Compressor
- GRC Guest Room Control
- HL High Limit
- HTR Heater
- MP Motor Protector
- NSP Night Seback Control
- P1 Plug, Control Box/Heat Section to Cool Section
- R1 Relay, Heat
- R2 Relay, Cool
- R3 Relay, Night Seback (NSB)



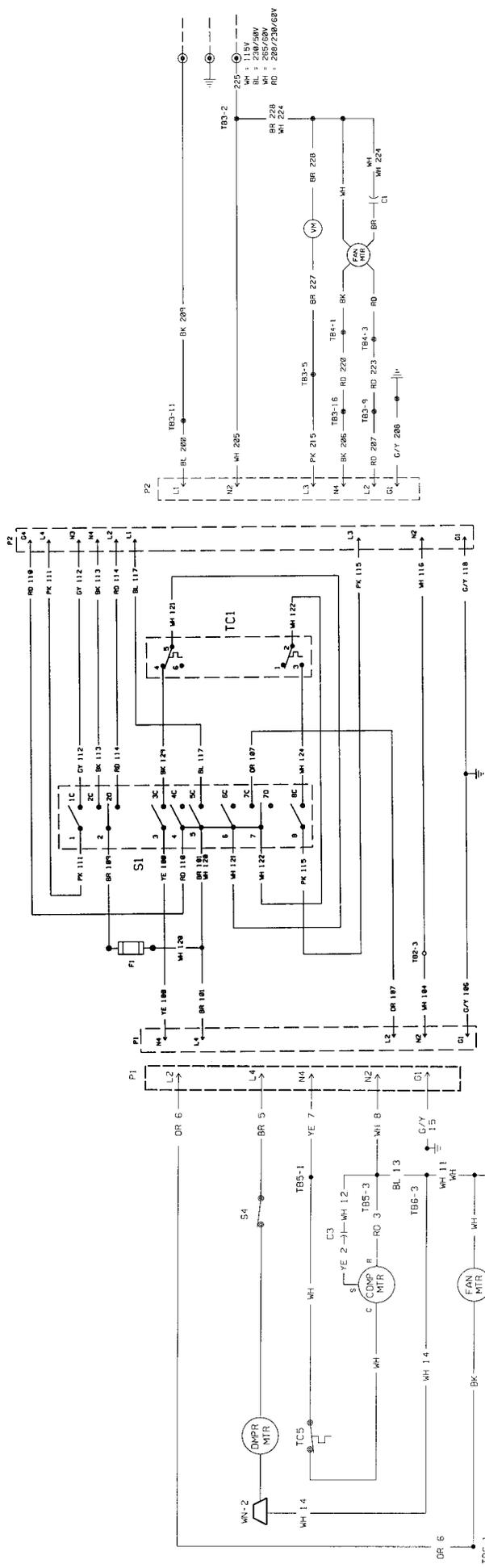
- Option Block
- Component Block
- Quick Connect Terminal
- Wire No.
- Field Connection

Standard Chassis With Steam Heat & MCO Controls (Sizes 019—022)

COOL SECTION

CONTROL BOX

HEAT SECTION



Option Block

Component Block

Quick Connect Terminal

Wire No.

Field Connection

Automatic Changeover

Stop

High

Low

Manual Changeover

High

Low

High

Low

High

Low

S1 Switch Contact Positions

Stop

High

Low

High

Low

High

Low

Automatic Changeover

Stop

High

Low

Manual Changeover

High

Low

High

Low

High

Low

C1 Capacitor, Indoor Fan

C2 Capacitor, Outdoor Fan

C3 Capacitor, Compressor

F1 Fuse

HL High Limit Heater

MP Motor Protector

P1 Plug, Heat Section to Cool Section

P2 Plug, Heat Section to Control Box

P3 Plug, PC Board

P4 Plug, on Master Wire Harness

P5 Plug, on Master Wire Harness

R1 Relay, Run

R2 Relay, Outdoor Fan Motor

R3 Relay, Cooling

R4 Relay, Indoor Fan Motor

R5 Relay, Heating 1st Stage

R6 Relay, Heating 2nd Stage

R7 Relay, Night Setback (NSB)

R9 Relay, Hot Water Valve

S1 Control Switch

S4 Damper Switch

T1 Transformer

TB2 Terminal Box

TB3 Terminal Box

TB4 Terminal Box

TB5 Terminal Box

TB6 Terminal Box

TC1 Room Thermostat

TC2 Night Setback Thermostat (NSB)

TC5 Freezestat

VM Valve Motor

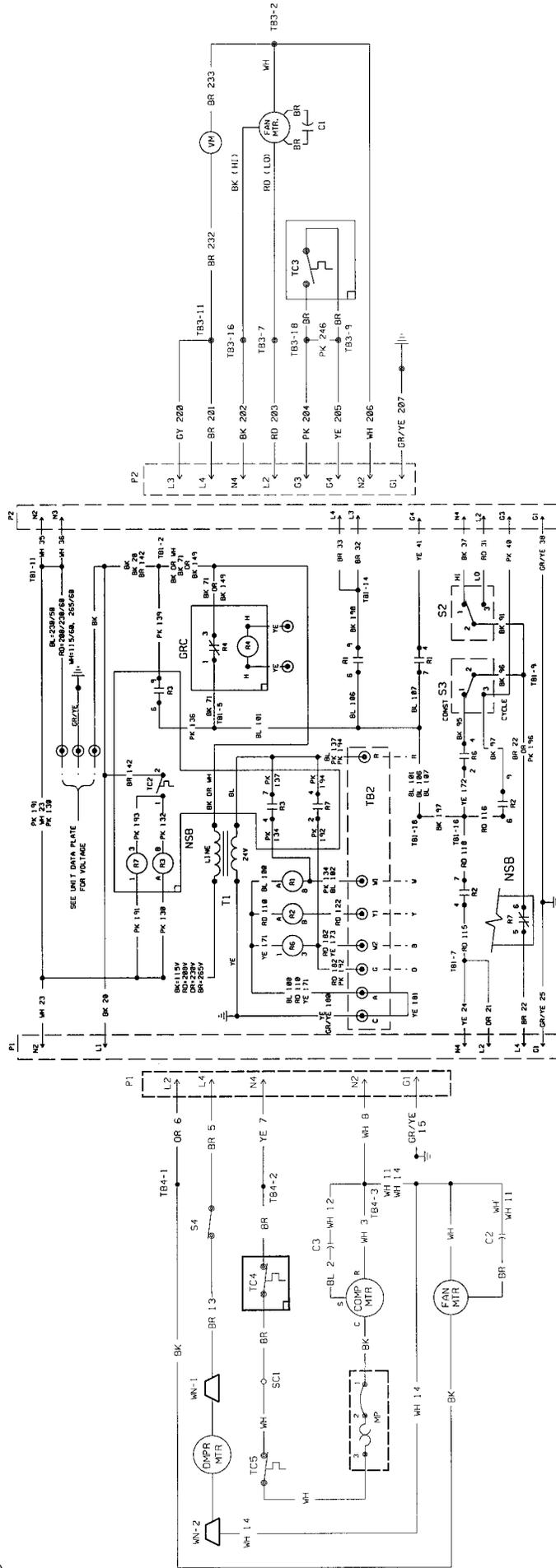
WN Wire Nut

Standard Chassis With Steam Heat & 24V Wall Stat (Sizes 007—014)

COOL SECTION

CONTROL BOX

HEAT SECTION



- Option Block
- Component Block
- Quick Connect Terminal
- Wire No.
- Field Connection

- Automatic Changeover
- Manual Changeover

- Capacitor, Indoor Fan
- Capacitor, Outdoor Fan
- Capacitor, Compressor
- Guest Room Control
- High Limit
- Heater
- Motor Protector
- Night Setback Control
- Plug, Control Box/Heat Section to Cool Section
- Relay, Heat
- Relay, Cool
- Relay, Night Setback (NSB)

- Relay, Guest Room Control (GRC)
- Relay, Hot Water Valve
- Relay, Control
- Relay, Night Setback (NSB)
- Control Switch
- Fan Speed Switch
- Damper Switch
- Transformer
- Terminal Block, Control Box
- Terminal Board (24V), Control Box
- Terminal Board, Heat Section
- Terminal Board, Cool Section

- Terminal Box
- Room Thermostat
- Night Setback Thermostat (NSB)
- Heat Fan Lockout
- Low Ambient Lockout
- Valve Motor
- Wire Nut

Scheduled Maintenance

Incremental conditioners are built to last. With proper care, the unit should provide uninterrupted service for many years. Scheduled maintenance of this equipment, as described below, is the key to the equipment's longevity.

Air filters must be cleaned at regular intervals. Twice annually may be adequate in some areas while twice monthly may be required in others. Areas with high dirt and lint content or heavy usage of units require more frequent filter maintenance than those areas of relatively clean operating or low usage conditions. Unit malfunction may occur if air filters are not kept clean.

The standard filter supplied with the Type K unit is a permanent wire mesh type. This type of filter should be rinsed with hot water and a mild detergent. Let dry and oil lightly to enhance dust collecting ability.

The Type K is also available with a carbon filter, a zeolite filter or electrostatic filter. The electrostatic filter is renewable by rinsing with hot water and replacing in the unit once dry. The carbon or zeolite filters must be discarded and replaced. The frequency of this replacement depends on the air quality of the room being filtered. Rooms with heavy smoke or ammonia content will require more frequent filter changes than rooms with minimal degrees of smoke or ammonia.

Note: When replacing the standard filter with an optional carbon, electrostatic, or zeolite filter, compress the filter brackets slightly. The optional filters are slightly thinner than the standard filter and will stay in place better if the brackets are squeezed slightly.

It is recommended that the chassis be removed every year for a thorough check-up. The heat section need not be removed but should be inspected or cleaned if necessary. Should the heat section blowers or motor need service, the entire fan board can be easily removed from the unit for service.

To access the unit for cleaning or service, proceed as follows:

1. Disconnect power to the unit.
2. Remove the front panel and the kickplate.
3. Unplug the chassis from the control box and remove the chassis from the wall sleeve. Replace with spare chassis or weatherplate.
4. Move chassis to maintenance area and check all seals, wires, and insulation and repair as required.
5. Cover motor and protect all electrical components before washing dirt from chassis.
Warning: Residential and institutional cleaning compounds can cause permanent damage to the packaged terminal unit. To avoid damage to unit controls and heat transfer surfaces, do not spray cleaning compounds onto the return air opening or unit controls. Normal cleaning can be accomplished by wiping the unit surface with a damp cloth. When using cleaning compounds on carpets, floors or walls, turn the unit off to avoid drawing potentially damaging vapors into the package terminal unit.
6. Clean condensate drain and clear weep holes.
7. Dry equipment thoroughly, especially electric parts and insulation.
8. Clean any rust spots with steel wool and paint with rust inhibiting paint.
9. Check all fasteners and tighten if necessary.
10. Check the motor nameplate for routine oiling instructions.
11. Test run chassis before reinstalling or returning to spare parts stock.

Recommended Spare Parts

An advantage of the Incremental system is that failure of any one part affects only one Incremental conditioner and does not interrupt the operation of the rest of the system. A further advantage is that a failed part can be quickly and easily replaced, thus minimizing the inoperative time of the equipment. This is so, however, only if a replacement part is quickly available. In order to replace a failed part quickly and keep all Incremental conditioners in good operating condition, McQuay International recommends that at the time Incremental conditioners are purchased, owners arrange for a small stock of replacement parts.

Where an owner carries such a stock, **immediate** replacement of a defective part is possible. The defective part can then be returned to McQuay International or one of its authorized service stations. So long as it is still in warranty, it is repaired or replaced and returned to the owner without cost for shop labor and material. Thus, the stock of replacement parts is constantly replenished. To the right is listed the kind of parts which McQuay International recommends be carried in stock, together with the quantity of parts recommended per 100 Incremental conditioners installed.

| Part Name | Qty. Per 100 Units |
|--|-----------------------|
| Cooling Chassis | 1 |
| Compressor Overload Device | 1 |
| Compressor Running Capacity | 1 |
| Indoor Fan Motor | 1 |
| Outdoor Fan Motor | 1 |
| Outdoor Fan Motor Capacitor | 1 |
| Pushbutton Switch | 2 |
| Damper Switch | 2 |
| Thermostat | 2 |
| Knob for Thermostat | 6 |
| Control Relay | 2 |
| Damper Motor | 2 |
| Hydronic Valve | 4 |
| Spare Filter | 10 |
| Touch-up Paint (1 Pt. Spray Can) | 1 |

For the current spare parts list, and applicable prices, see our McQuay representative or write McQuayService, P.O. Box 1551, Minneapolis, MN 55440.

Troubleshooting Chart

These items should be checked by a qualified service technician only.

| TROUBLE | CAUSE | CURE |
|---|---|---|
| 1. Blowers won't operate on Cool. | <ul style="list-style-type: none"> a. No power. b. Faulty pushbutton switch. c. Loose connections at pushbutton switch. | <ul style="list-style-type: none"> a. Check supply line fuses, circuit breakers, and be sure the power is on. Blown fuses would indicate circuit overloading, a short circuit, or a grounded condition in the circuit. Voltage supply to the equipment should be checked. Voltage underload must be within 10% of voltage given on dataplate. b. Replace. c. Tighten. |
| 2. Blowers operate on Cool, but compressor does not start. | <ul style="list-style-type: none"> a. Thermostat set too high. b. Heat valve is open and heat is on. c. Low voltage. d. Faulty pushbutton switch. e. Faulty connection at pushbutton switch. f. Defective wiring to thermostat. g. Loose connections at compressor terminals. h. Wiring to compressor terminals defective. i. Loose connections in compressor overload device. j. Starting capacitor malfunctions (open circuited, short circuited or loss of capacity). k. Defective compressor motor (short circuited, open circuited, grounded). | <ul style="list-style-type: none"> a. Adjust. Rotate control knob to "Cooler." b. Close heat valve. c. Check as above. d. Replace. e. Tighten. f. Replace. g. Tighten. h. Replace. i. Tighten j. Replace. k. *Ship cooling chassis prepaid to nearest McQuay authorized warranty station. |
| 3. Blowers run on Cool and compressor starts, but stops after a short interval. | <ul style="list-style-type: none"> a. Operation of overload device due to overloaded compressor motor. | <ul style="list-style-type: none"> a. Check voltage supply. Clean condenser inside and out. Check at outside face of condenser for recirculation of condenser air. Put air "splitters" in, if missing. Check to make sure condenser blower/fan is operating properly. Check compressor for short circuit. If defective, *ship cooling chassis to nearest McQuay authorized warranty station. |
| 4. Blowers run on Cool and compressor starts and runs, but compressor occasionally stops (on overload device). | <ul style="list-style-type: none"> a. Low voltage due to overloaded circuits within building or throughout the local power system. Due to varying power demands, this condition might exist only at certain times during the day or on very hot days. b. High voltage due to fluctuations in local power system; usually occurs at low load periods of the day. c. Partial short circuit in compressor motor. Under normal loading, a compressor with a partial short circuit might appear to be operating all right; increased condensing air temperature might then cause a short. | <ul style="list-style-type: none"> a. Run separate electric line to equipment. Consult local power company. b. Consult local power company. c. If confirmed, *ship cooling chassis prepaid to nearest McQuay authorized warranty station. |
| 5. Compressor starts and runs on Cool, but blowers do not run. | <ul style="list-style-type: none"> a. Faulty pushbutton switch. b. Open circuited blower motor. c. Blower rubbing against its housing. d. Bearings on blower motor seized. e. Loose connection at pushbutton switch. | <ul style="list-style-type: none"> a. Replace. b. Replace. c. Adjust blower motor or blower wheel position. d. Lubricate motor with SAE #10 oil. (It may be necessary to remove blower assembly to do this.) e. Tighten. |
| 6. Compressor starts and runs on Cool, but fan motor starts, then stops. | <ul style="list-style-type: none"> a. Operation of the internally connected overload device due to a short circuit in blower motor. b. Windings, rubbing of blower motor or lack of lubrication in blower motor bearings. | <ul style="list-style-type: none"> a. Adjust blower/fan wheel on shaft or blower motor mounting. Lubricate with SAE #10 oil (see above). b. Adjust blower wheel or motor or replace wheel. |
| 7. Equipment gives electrical shock. | <ul style="list-style-type: none"> a. Grounded electrical circuit. | <ul style="list-style-type: none"> a. Eliminate ground. |
| 8. Insufficient cooling capacity. | <ul style="list-style-type: none"> a. Equipment standing too long without being run. b. Insufficient airflow through condenser due to: <ul style="list-style-type: none"> 1) Dirty condenser. 2) Obstructed louvers on outer cabinet or wall box. 3) Condenser blower/fan not running. 4) Condenser blower/fan not up to speed. 5) Condenser blower/fan slipping on motor shaft. 6) Recirculation of condenser air. c. Insufficient airflow through evaporator due to: <ul style="list-style-type: none"> 1) Dirty evaporator. 2) Ice on evaporator coils. 3) Dirty air filter. 4) Obstructed discharge grilles. 5) Evaporator blower motor not running. 6) Evaporator blower motor not up to speed. 7) Evaporator motor slipping on motor shaft. | <ul style="list-style-type: none"> a. If the air conditioner is allowed to stand for an extended length of time without being run on Cool, it is possible for all the refrigerant to become absorbed in the oil inside the compressor and refrigeration circuit. If this should happen, there will be no cooling until the necessary working pressures have been established. This will take about 5 minutes of continuous running. b. <ul style="list-style-type: none"> 1) Clean. 2) Remove obstructions. 3) Correct as in #5. 4) Check for correct voltage. Oil blower motor if necessary. 5) Adjust blower position and tighten setscrew. 6) Correct as in #3. c. <ul style="list-style-type: none"> 1) Clean. 2) Turn equipment off to let ice melt. 3) Clean or replace. 4) Remove obstructions. 5) Correct as in #1. 6) Check for correct voltage. Oil motor is necessary. 7) Adjust blower wheel position and tighten setscrew. |

*If equipment is in warranty.

Troubleshooting Chart (cont'd)

These items should be checked by a qualified service technician only.

| TROUBLE | CAUSE | CURE |
|--|---|---|
| 8. Insufficient cooling capacity (continued). | <ul style="list-style-type: none"> d. Heat load in room exceeds capacity of equipment. e. Windows and doors in room are open. f. Compressor not pumping, indicated by: <ul style="list-style-type: none"> 1) Low wattage. 2) Condenser not warm, evaporator only partially cool, or not at all. g. Restricted capillary tube or strainer, indicated by: <ul style="list-style-type: none"> 1) Frost on capillary or strainer. 2) Low wattage. 3) Condenser not warm. 4) Evaporator partially frosted, only partially cool, or not at all. | <ul style="list-style-type: none"> d. Refer to original load calculations; recalculate heat load. e. Close them. f. *Ship cooling chassis prepaid to nearest McQuay authorized warranty station. g. *Ship cooling chassis prepaid to nearest McQuay authorized warranty station. |
| 9. Too much cooling. | <ul style="list-style-type: none"> a. Thermostat set too low. b. Defective thermostat. | <ul style="list-style-type: none"> a. Adjust. b. Replace. |
| 10. "Sweating" | <ul style="list-style-type: none"> a. Condensate drain from evaporator to condenser plugged. b. Insulating seals on equipment damaged. c. Evaporator blower motor not up to speed. d. Evaporator blower incorrectly positioned. | <ul style="list-style-type: none"> a. Remove obstructions to water flow. b. Adjust or replace. c. Check for correct voltage. Oil motor if necessary. d. Adjust. |
| 11. Blowers won't operate on Heat. | <ul style="list-style-type: none"> a. No power. b. Heat is off (equipment with heat fan lockout). c. Faulty pushbutton switch. d. Loose connections at pushbutton switch. e. Thermostat set too low. | <ul style="list-style-type: none"> a. Correct as in #1. b. Open heat valve or turn on heating system. c. Replace. d. Tighten. e. Adjust. Rotate control knob to "Warmer." |
| 12. **Equipment is noisy. | <ul style="list-style-type: none"> a. Blower rubbing against enclosure. b. Blower motor bearings are dry. c. Loose blower hold-down nuts on motor-bracket assembly. d. Refrigerant absorbed in compressor oil after extended shutdown. e. Equipment improperly installed. f. Damper solenoid hums. g. Loose terminal box cover on side of compressor. h. Loose electrical components. i. Copper tubing vibrating. j. Harmonics. k. Loose sheet metal parts. | <ul style="list-style-type: none"> a. Adjust fan position on motor shaft to reposition fan motor bracket assembly. b. Lubricate with SAE #10 oil or replace motor. c. Align blower assembly and tighten nuts. d. Noise will disappear after equipment runs awhile. e. Make necessary adjustments to components. f. Check for proper adjustment. Apply silicone oil or grease to gap between solenoid and armature. g. Tighten. h. Fasten securely. i. Adjust by bending or applying tape. j. Occasionally equipment will have noisy operation for no apparent reason. Inspection has revealed no loose components that might be the source of the noise. Due to the action of the compressor, it is possible to have internal noise develop if the refrigerant tubing has become bent even slightly. To distinguish this condition from the simple rattle producing vibration caused by loose screws, nuts, and other components, grasp the refrigerant tubing at various points throughout the system until a point is found where the noise is eliminated or reduced. Bend the copper tubing very gently until the noise disappears. k. Tighten. |
| 13. Insufficient or no heat. | <ul style="list-style-type: none"> a. No steam or hot water being applied. b. No power. c. Faulty pushbutton switch. d. Loose connection at pushbutton switch. e. Thermostat set too high. f. Thermostat faulty. g. No power output on transformer secondary. h. Inoperative valve. <ul style="list-style-type: none"> 1) Steam valve normally closed. 2) Hot water valve normally closed. | <ul style="list-style-type: none"> a. Contact building management. b. Check power supply line fuses, circuit breakers. Blown fuses would indicate circuit overloading, a short circuit, or a grounded condition in the circuit. c. Replace. d. Replace wire or tighten. e. Adjust rotate knob to "Warm." f. Replace. g. Replace. h. <ul style="list-style-type: none"> 1) Temporarily lock valve open; replace. 2) Replace. |

Notes:

This guide was prepared with standard equipment in mind. If equipment is special, it may not be entirely applicable.

*If equipment is still in warranty.

**Note: Before trying to correct the noise, determine its cause: conditioned air blower, compressor or condenser blower. Operate the conditioned air blowers only. If this doesn't cause the noise, operate on cooling. Then disconnect one compressor lead. If the noise stops, the compressor is the source. If not, it is caused by the condenser blower.

Approximate Shipping Weights

Cooling Chassis

| | |
|----------------|----------|
| Size 007 | 137 lbs. |
| Size 009 | 137 lbs. |
| Size 012 | 143 lbs. |
| Size 014 | 159 lbs. |
| Size 019 | 228 lbs. |
| Size 022 | 238 lbs. |

Hydronic Heat Section With Control

| | |
|----------------|---------|
| Size 007 | 65 lbs. |
| Size 009 | 65 lbs. |
| Size 012 | 65 lbs. |
| Size 014 | 65 lbs. |
| Size 019 | 77 lbs. |
| Size 022 | 77 lbs. |

Electric Heat Section With Control

| | |
|----------------|---------|
| Size 007 | 60 lbs. |
| Size 009 | 60 lbs. |
| Size 012 | 60 lbs. |

| | |
|----------------|---------|
| Size 014 | 62 lbs. |
| Size 019 | 70 lbs. |
| Size 022 | 70 lbs. |

Wall Box With Rear Extension of:

| | |
|--------------------------|---------|
| Sizes 007—014, 2½" | 45 lbs. |
| 3½" | 46 lbs. |
| Sizes 019—022, 2½" | 57 lbs. |
| 3½" | 59 lbs. |

Room Cabinet

| | |
|--------------------------|---------|
| Sizes 007—014, 7¼" | 44 lbs. |
| 8¼" | 48 lbs. |
| Sizes 019—022, 8½" | 60 lbs. |

Louver

| | |
|---------------------|--------|
| Sizes 007—014 | 6 lbs. |
| Sizes 019—022 | 9 lbs. |

Installation, Service & Warranty Policy

One-Year Warranty of Entire Conditioner

AAF—McQuay Incorporated, herein referred to as the "Company," warrants to the original owner that each entire Incremental Comfort Conditioner is free from defects in material and workmanship. Any part or portion thereof which becomes defective under normal use during the period of this warranty will be repaired or replaced provided the Company's examination shall prove to its satisfaction that the part was or became defective under normal use. This warranty contemplates that first year maintenance labor was arranged for with the installer or otherwise at the time the conditioner was purchased or installed. The Company's obligations under this warranty are limited to: (a) repairing the defective part or (b) furnishing a replacement part provided the defective part is returned to the factory, transportation charges prepaid. No reimbursement will be made for expenses incurred in making field adjustments or replacements unless specifically authorized in writing by the Company.

This warranty constitutes the buyer's sole remedy. It is given in lieu of all other warranties. There is no implied warranty of merchantability or fitness for a particular purpose. In no event and under no circumstance shall the Company be liable for incidental or consequential damages, whether the theory be breach of this or any other warranty, negligence, or strict tort.

No person (including any agent, salesman, dealer, or distributor) has the authority to expand the Company's obligation beyond the terms of this express warranty, or to state that the performance of the product is other than that published by the Company.

One-Year Refrigeration Circuit Warranty

Hermetically sealed motor-compressor assemblies and all components of refrigerant circuits not readily separable therefrom are warranted to the original owner for one year. Refrigerating

circuits consist of the motor-compressor assembly, evaporator coil, condenser coil and interconnecting tubing. Repairs under this warranty will be made at the Company's expense provided that the refrigerating circuit is delivered, without shipping damage, transportation prepaid to the factory or to a factory designated repair station, at the Company's option. This one-year warranty does not include any other parts of the equipment such as filters, fans, fan motors, controls, cabinet parts, electrical relays, capacitors, protective devices, or wiring. The Company is not obligated under this warranty for field labor such as service for inspection, removing, packing and/or reinstalling the refrigeration circuit, nor for return transportation.

General Conditions

The above warranties are void if the Company's equipment has been damaged, misused, subjected to abnormal use or service or its serial number has been altered, defaced or removed, or payment for the equipment is in default. The Company is not responsible for service to correct conditions due to misapplication, improper installation, inadequate wiring, incorrect voltage conditions or unauthorized opening of the refrigeration circuit, nor for consequential damages. In case the Company's equipment is installed in conjunction with cabinets, grilles, louvers, controls or other parts manufactured by others, these warranties shall apply only to the Company's manufactured portion of the equipment. The conditions of the warranty plan are effective for eighteen (18) months from date of factory shipment. The Company reserves the right to make a handling and inspection charge in the case of parts or equipment improperly returned as defective and/or as being in warranty.

NOTES

AAF-McQuay Incorporated

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