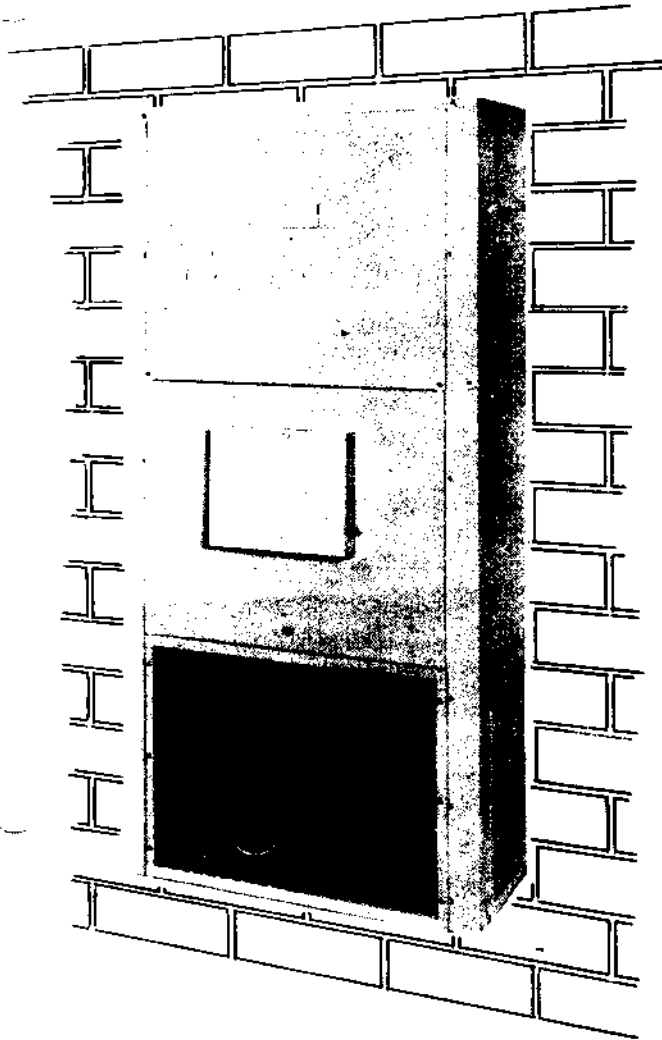


INSTALLATION INSTRUCTIONS

SELF CONTAINED WALL MOUNTED
AIR CONDITIONING

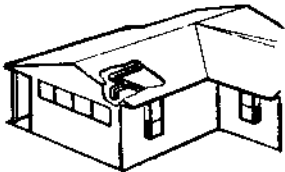


AIR CONDITIONING MODELS

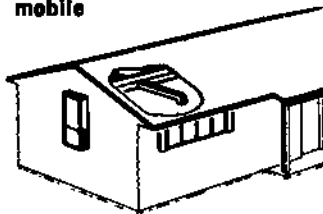
18WA
24WA
30WA
36WA1
48WA2

APPLICATIONS

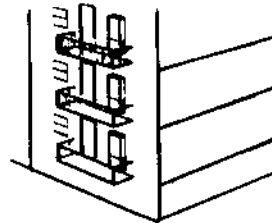
RESIDENTIAL . . . single, multiple, mobile



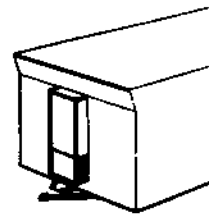
Zoned heating/cooling
control in multiple areas



Attic ducted single
unit installation

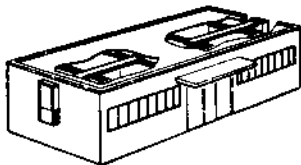


Multiple dwelling
installation

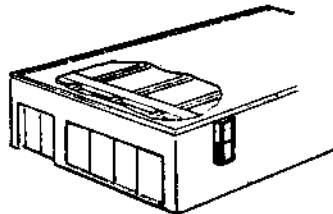


Offices/Homes on wheels

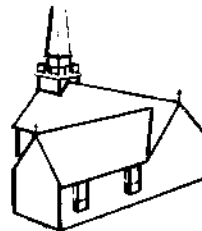
COMMERCIAL and INSTITUTIONAL



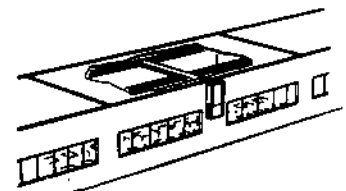
Separate offices (zoned)



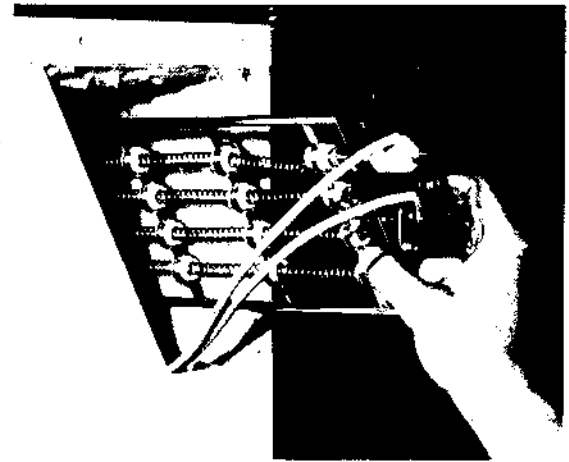
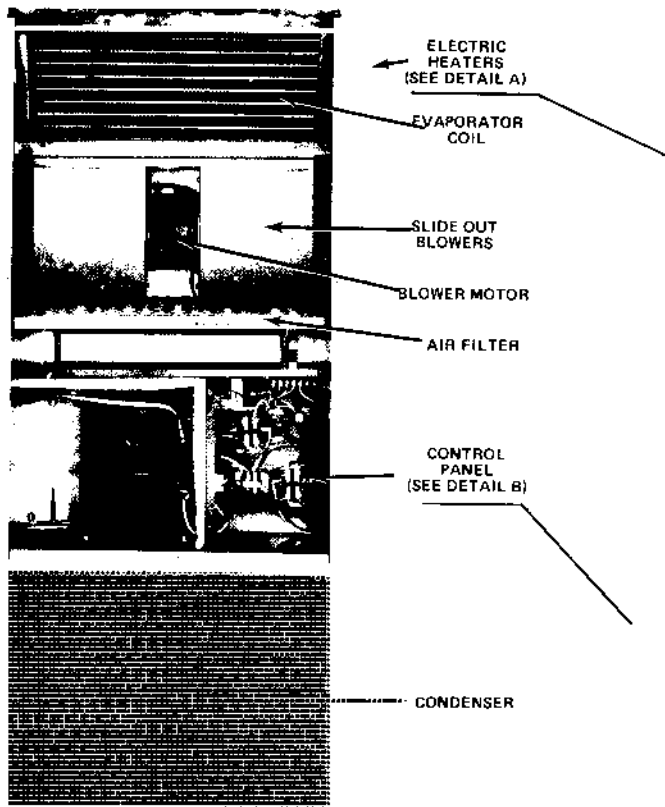
Production areas (for complete
conditioning from single unit)



Churches (zoned)

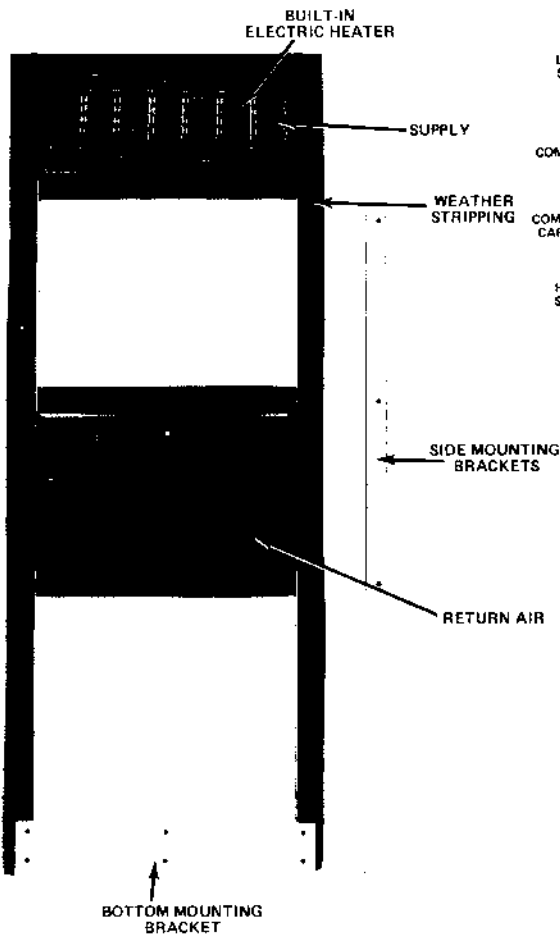


Temporary classrooms

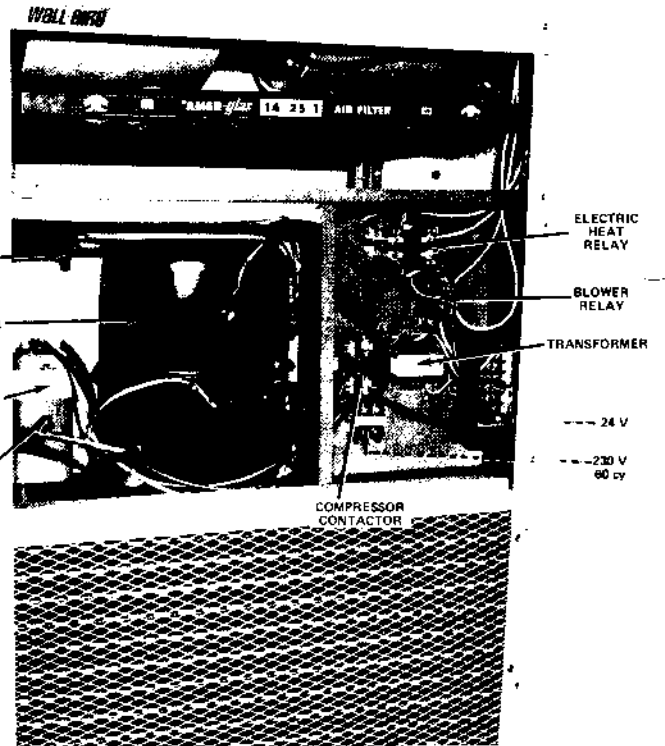


DETAIL A

NOTE:
BEFORE FASTENING
SIDE MOUNTING
BRACKETS
CHECK INSIDE
FOR CLEARANCE



BACK SIDE OF UNIT



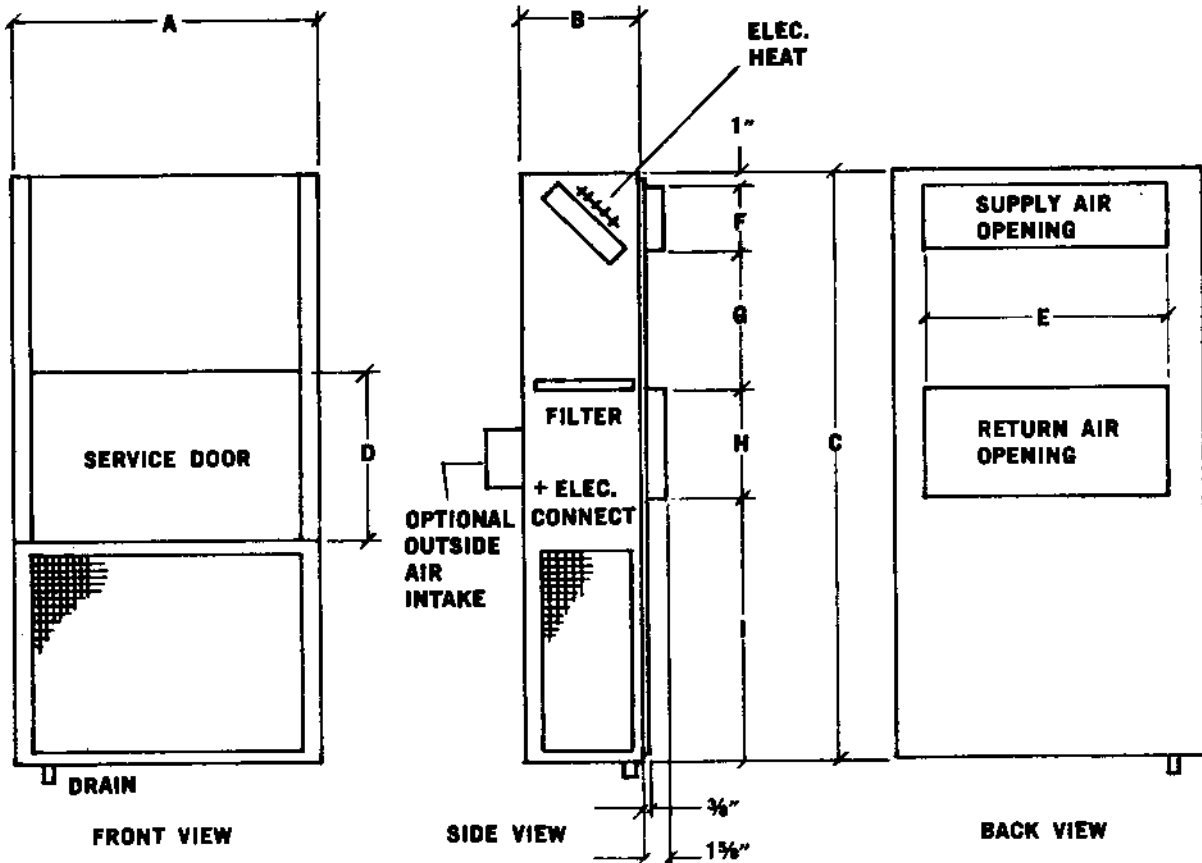
DETAIL B

DIMENSIONS *

... for architect and installation requirements

MODEL	A	B	C	D	E	F	G	H	I	FILTER SIZES*
18-24WA	32¼	13½	67½	20	20	8	20½	12	25¾	14 x 25
30-36WA1	38¼	15¼	74	22½	28	8	18¾	14	32¾	15 x 30-5/8
48WA2	38¼	18	84	32½	30	10	30¾	16	26½	(2) 16 x 16

* Dimensions and filter sizes are in inches.



ELECTRICAL INFORMATION										WIRING INFORMATION			Wiring Diagram No.
Model	Volts/Ph	Heater Kw @ 240V	Max. Unit Amps	No. Field Power Circuits	Internal Fuses		Req'd. Maximum External Fuses	Min. Ckt. Ampacity	Power Ckt. Wiring	Ground Wire Size	Ckt. A	Ckt. A	
					Ckt. A	Ckt. B							
18WA	230/1		18.6	1			35	22	10	10	10	10	D101
18WA	230/1	4	18.6	1			35	22	10	10	10	10	D110
18WA	230/1	5	22.0	1			35	28	10	10	10	10	D110
18WA	230/1	8	34.5	1			45	43	6	10	10	10	D106
18WA	230/1	10	42.8	1			60	54	6	10	10	10	D106
24WA	230/1		18.6	1			35	22	10	10	10	10	D101
24WA	230/1	4	18.6	1			35	22	10	10	10	10	D110
24WA	230/1	5	22.0	1			35	28	10	10	10	10	D110
24WA	230/1	8	34.5	1			45	43	6	10	10	10	D106
24WA	230/1	10	42.8	1			60	54	6	10	10	10	D106
30WA	230/1		27.3	1			50	32	8	10	10	10	D101
30WA	230/1	5	27.3	1			50	32	8	10	10	10	D110
30WA	230/1	10	45.0	1		30	60	56	4	10	10	10	D106
30WA	230/1	15	65.9	1		60	90	82	2	8	8	8	D355
36WA1	230/1		31.3	1			60	37	8	10	10	10	D101
36WA1	230/1	5	31.3	1			60	37	8	10	10	10	D110
36WA1	230/1	10	45.0	1			60	56	4	10	10	10	D106
36WA1	230/1	15	65.9	1		30	90	82	2	8	8	8	D355
36WA1	240/3		20.8	1			35	24	10	10	10	10	D140
36WA1	240/3	9	25.1	1			35	31	8	10	10	10	D141
36WA1	240/3	12	32.3	1			40	40	8	10	10	10	D142
36WA1	240/3	15	39.6	1			50	50	6	10	10	10	D142
48WA2	230/1		36	1			60	43	6	10	10	10	D494
48WA2	230/1	5	36	1			60	43	6	10	10	10	D495
48WA2	230/1	10	45.7	1			60	57	4	10	10	10	D496
48WA2	230/1	15	66.6	1			90	83	2	8	8	8	D497
48WA2	240/3		26.2	1		30	45	31	8	10	10	10	D498
48WA2	240/3	9	26.2	1			45	32	8	10	10	10	D499
48WA2	240/3	12	33.0	1			45	41	6	10	10	10	D500
48WA2	240/3	15	40.3	1			50	50	6	10	10	10	D500

1 Based upon the use of 60°C copper wiring material.

2 Based upon Table 250-95 of N.E.C., 1975.

APPLICATION AND INSTALLATION INSTRUCTIONS

GENERAL

Units are shipped completely assembled and internally wired, requiring only duct connections, thermostat wiring and external 220-240 volt AC power supply. The refrigerant system is completely assembled and charged.

These instructions and any instructions packaged with any separate equipment should be carefully read before beginning the installation. Note particularly any tags and/or labels attached to the equipment.

While these instructions are intended as a general recommended guide, they do not supersede any national and/or local codes in any way. Authorities having jurisdiction should be consulted before the installation is made.

SHIPPING DAMAGE

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

INSTALLATION

Size of unit for a proposed installation should be based on heat loss calculation made according to methods of National Warm Air Heating and Air Conditioning Association. The air duct should be installed in accordance with the Standards of the National Fire Protection Association for the Installation of Air Conditioning and Ventilating Systems of Other Than Residence Type, NFPA No. 90A, and Residence Type Warm Air Heating and Air Conditioning Systems, NFPA No. 90B. Where local regulations are at a variance with instructions, installer should adhere to local codes.

DUCTWORK

Design the ductwork according to methods given by the National Warm Air Heating and Air Conditioning Association. When duct runs through unheated spaces, it should be insulated with a minimum of two inches of insulation. Use insulation with a vapor barrier on the outside of the insulation. Flexible joints should be used to connect the ductwork to the equipment in order to keep the noise transmission to a minimum.

CONDENSATE DRAIN

A plastic drain hose extends from the drain pan at the top of the unit down to the unit base. There are openings in the unit base for the drain hose to pass through. In the event the drain hose is connected to a drain system of some type, it must be an open or vented type system to assure proper drainage.

WALL MOUNTING

1. Two holes, the size of the supply and return air openings must be cut through the wall as shown in Fig. 1, 2, 3, 4, 5 and 6.
2. On wood-frame walls, the wall construction must be strong and rigid enough to carry the weight of the unit without transmitting any unit vibration.
3. Concrete block walls must be thoroughly inspected to insure that they are capable of carrying the weight of the installing unit.
4. Ducts through the walls must be insulated and all joints taped or sealed to prevent air or moisture entering the wall cavity.
5. Some installations may not require any return air duct. It is recommended that on this type of installation that a filter grille be located in the wall. Filters must be of sufficient size to allow a maximum velocity of 400 FPM.

FILTER

A 1" throw away filter is supplied with each unit. The filter slides into position making it easy to service. The filter can be serviced from the outside by removing the service door.

FRESH AIR INTAKE

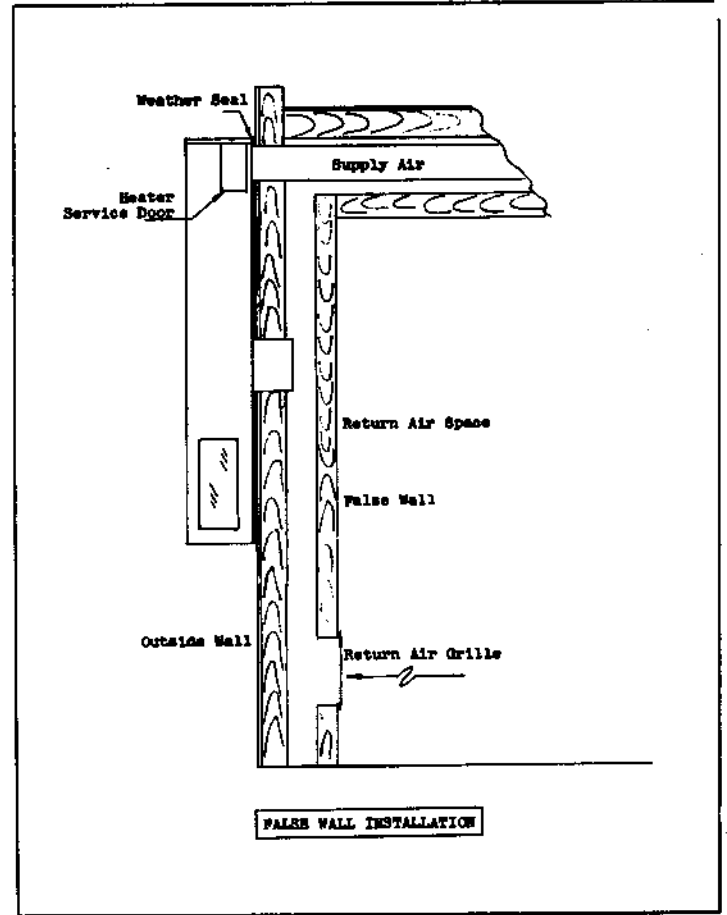
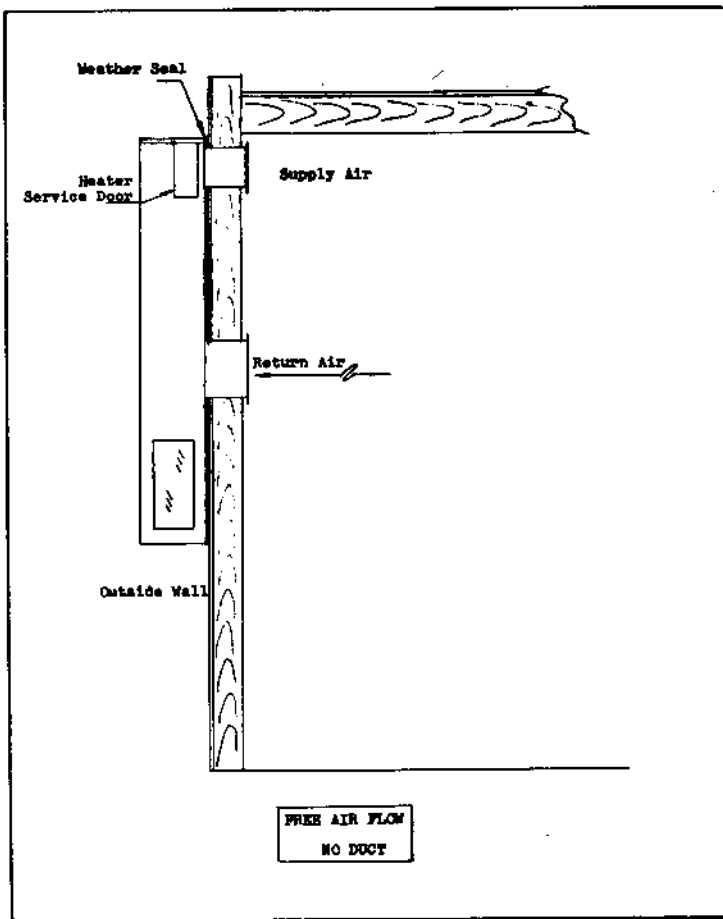
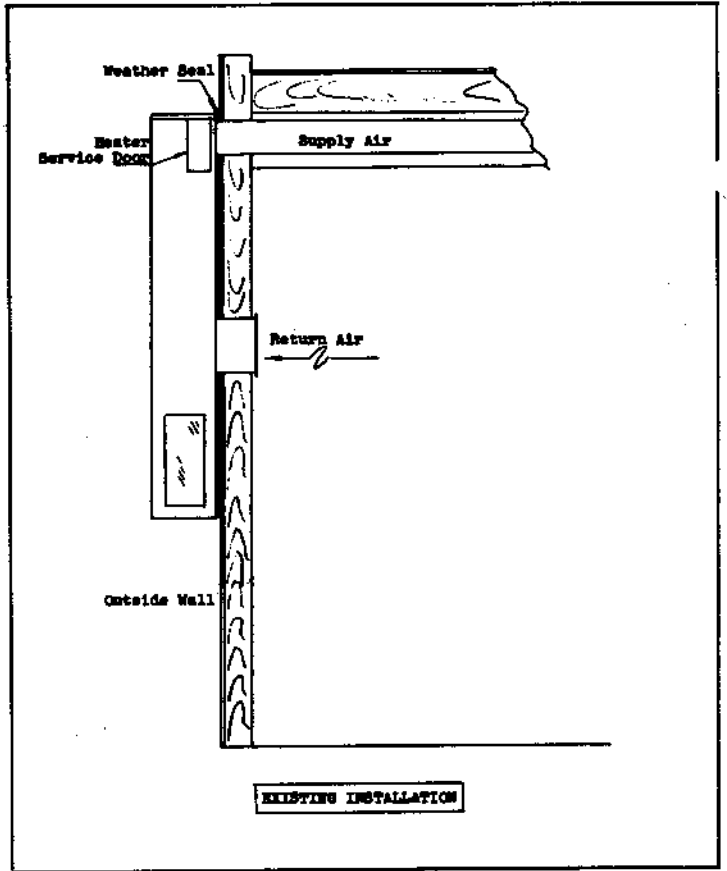
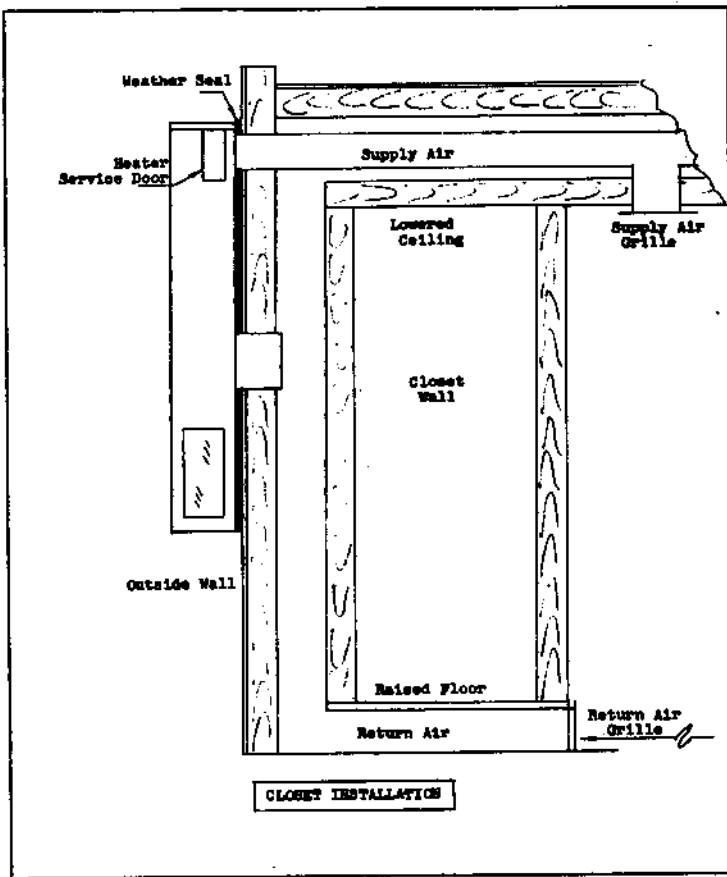
All units are made with a fresh air inlet hole punched in the service panel. If not ordered originally, a fresh air cover with shut-off damper may be ordered from the factory. The fresh air cover is so positioned that all fresh air intake is filtered by the internal unit filter.

WIRING - 24V

A low voltage terminal block is provided for connection of 24V wires from wall thermostat. Refer to unit wiring diagram for specific wiring information.

WIRING - 230V

On all models that are not built at the factory with electric heat installed, the field wiring connections are made directly at the compressor contactor. All other models built with electric heat have either a terminal block or a fuse panel for the field wiring connections. Refer to the unit wiring diagram for complete wiring information.



MOUNTING ON CONCRETE BLOCK WALL 18WA-18WH-24WA-24WH

These units are secured by wall mounting brackets which secure the unit to the outside wall surface at both sides and at the bottom. (Fig. 1).

In a standard 8 x 16 in. block wall, saw or knock out two 22 inch sections of concrete blocks normally the 7th, 8th and 11th course of blocks above floor level. In both cases this should be one whole block plus 3 in. of the block on each side.

On the wall, lay out approximately the position for the bottom and side brackets. Fasten these brackets to the wall firmly with 3/8 in. lag screws.

The side brackets should be located approximately 15 in. down from the top of the unit and fastened to both sides with metal screws. After mounting the unit on the wall a metal weather stripping should be installed at the top to insure a water tight application.

INSTALLATION SCHEMATIC

CONCRETE BLOCK WALL

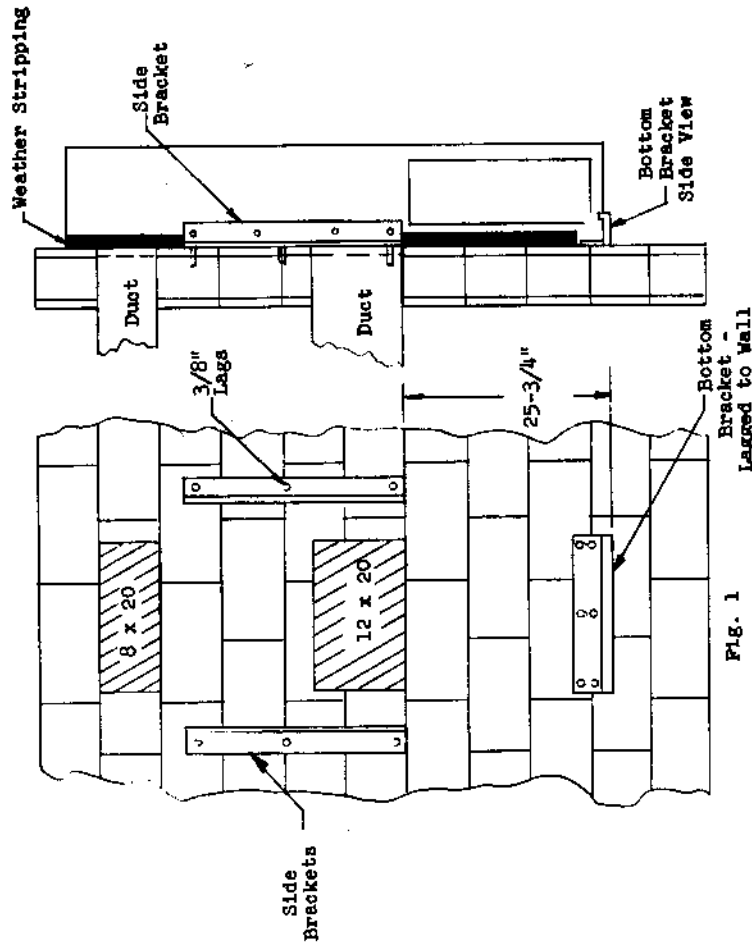


Fig. 1

MOUNTING ON WOOD FRAME WALLS 18WA-18WH-24WA-24WH

Locate and cut out two openings as shown in (Fig. 2). Cut away the outside siding to the depth of the sheathing. Install metal weather stripping at the top and caulk or otherwise seal joints between siding and sheathing. Frame in the openings between the wall studs as necessary for the particular wall involved with the plates at the bottom of each wall opening being sufficiently strong to carry the weight of the unit.

Install the two side brackets to the unit (15 in. down from the top). Mount unit on wall and pull in firmly using three 3/8 in. lag screws through each of the wall mounting brackets.

For additional mounting rigidity, each air opening collar may be screwed to the plate at the bottom of each wall opening. Drill two 1/4 in. holes in the bottom flange of each collar before hanging the unit, then fasten to wall plate with No. 10 by 1-1/2 in. wood screws.

OUTSIDE FRAME WALL SCHEMATIC

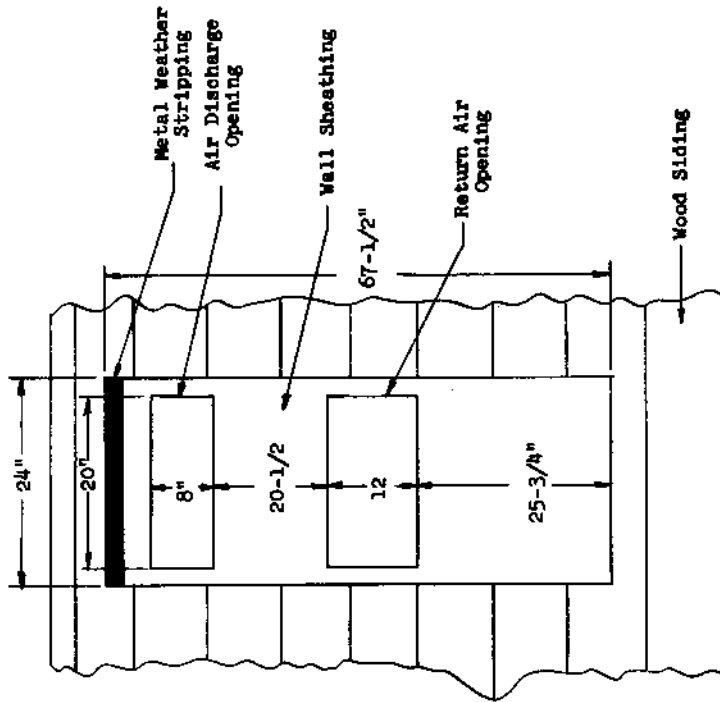


Fig. 2

MOUNTING ON CONCRETE BLOCK WALL 36WA - 36WH

These units are secured by wall mounting brackets which secure the unit to the outside wall surface at both sides and at the bottom (Fig. 3).

In a standard 8 x 16 in. block wall, knock out two 28 in. sections of concrete blocks normally the 7th, 8th, and 11th course of blocks above floor level. In both cases this should be one whole block plus 7 in. of the block on each side.

On the wall, lay out approximately the position for the bottom and side brackets. Fasten these brackets to the wall firmly with 3/8 in. lag screws.

The side brackets should be located approximately 15 in. down from the top of the unit and fastened to both sides with metal screws. Before drilling into side of casing, check inside tubing for clearance. After mounting the unit on the wall a metal weather stripping should be installed at the top to insure a water tight application.

INSTALLATION SCHEMATIC

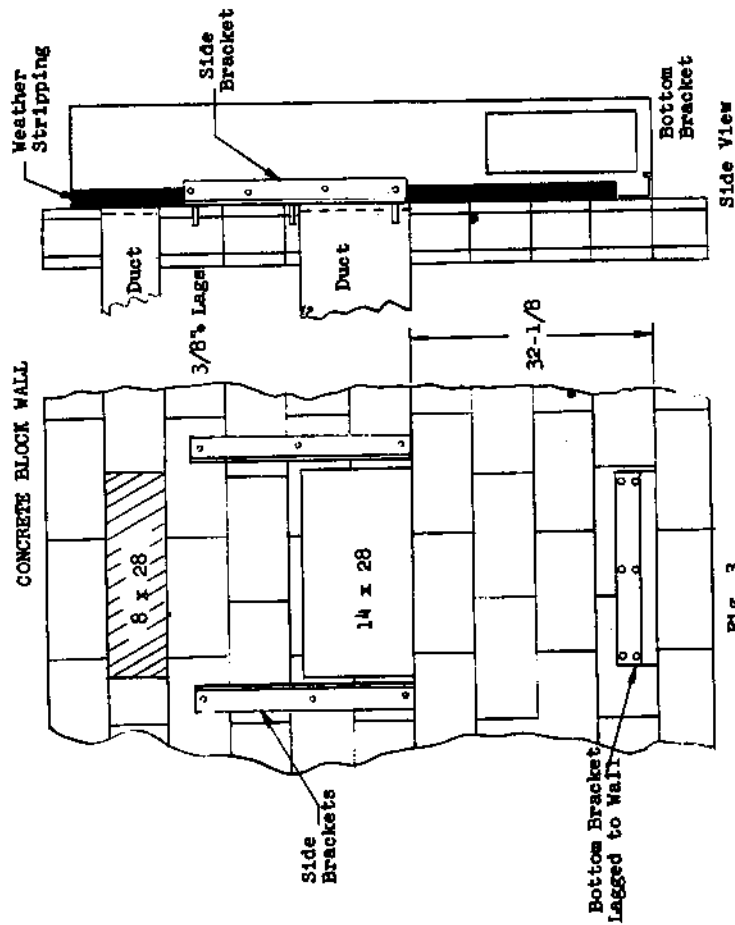


FIG. 3

MOUNTING ON WOOD FRAME WALLS 36WA - 36WH

Locate and cut out two openings as shown in (Fig. 4). Cut away the outside siding to the depth of the sheathing. Install metal stripping at the top and caulk or otherwise seal joints between siding and sheathing. Frame in the openings between the wall studs as necessary for the particular wall involved with the plates at the bottom of each wall opening being sufficiently strong to carry the weight of the unit.

Install the two side brackets to the unit (15 in. down from the top). Before drilling into side of casing, check inside tubing for clearance. Mount unit on wall and pull in firmly using three 3/8 in. lag screws through each of the wall mounting brackets.

For additional mounting rigidity, each air opening collar may be screwed to the plate at the bottom of each wall opening. Drill two 1/4 in. holes in the bottom flange of each collar before hanging the unit, then fasten to wall plate with No. 10 by 1-1/2 in. wood screws.

OUTSIDE FRAME WALL SCHEMATIC

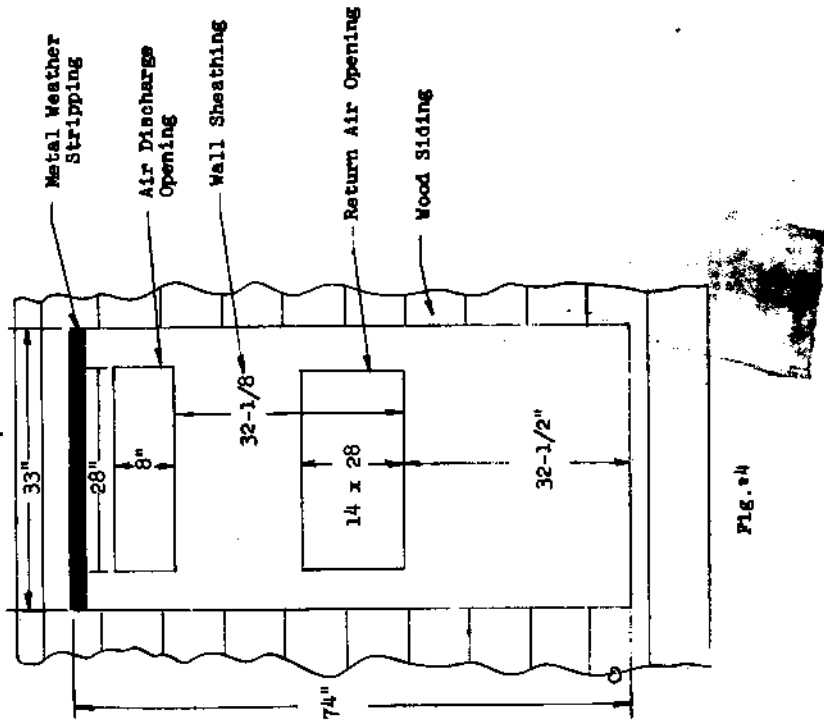


Fig. 4

MOUNTING ON CONCRETE BLOCK WALL 46WA

These units are secured by wall mounting brackets which secure the unit to the outside wall surface at both sides and at the bottom (Fig. 5).

In a standard 8 x 16 in. block wall, saw or knock out two 30 in. sections of concrete blocks normally the 8th and 11th course of blocks above floor level. In both cases this should be two whole block.

On the wall, lay out approximately the position for the bottom and side brackets. Fasten these brackets to the wall firmly with 3/8 in. lag screws.

The side brackets should be located approximately 10 in. down from the top of the unit and fastened to both sides with metal screws. Before drilling into side of casing, check inside tubing for clearance. After mounting the unit on the wall, a metal weather stripping should be installed at the top to insure a water-tight application.

INSTALLATION SCHEMATIC
CONCRETE BLOCK WALL

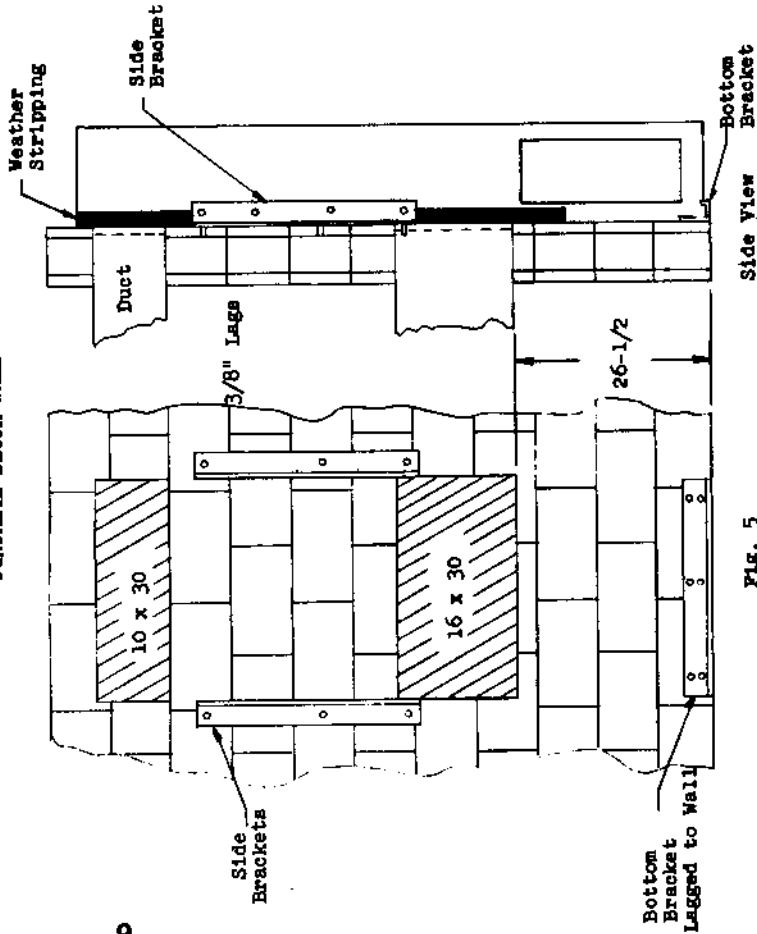


Fig. 5

MOUNTING ON WOOD FRAME WALLS 46WA

Locate and cut out two 8 x 28 in. (minimum) openings as shown in (Fig. 6). Cut away the outside siding to the depth of the sheathing. Install metal weather stripping at the top and caulk or otherwise seal joints between siding and sheathing. Frame in the openings between the wall studs as necessary for the particular wall involved with the plates at the bottom of each wall opening being sufficiently strong to carry the weight of the unit.

Install the two side brackets to the unit (10 in. down from the top). Before drilling into side of casing, check inside tubing for clearance. Mount unit on wall and pull in firmly using three - 3/8 in. lag screws through each of the wall mounting brackets.

For additional mounting rigidity, each air opening collar may be screwed to the plate at the bottom of each wall opening. Drill two 1/4 in. holes in the bottom flange of each collar before hanging the unit, then fasten to wall plate with No. 10 by 1-1/2 in. wood screws.

OUTSIDE FRAME WALL SCHEMATIC

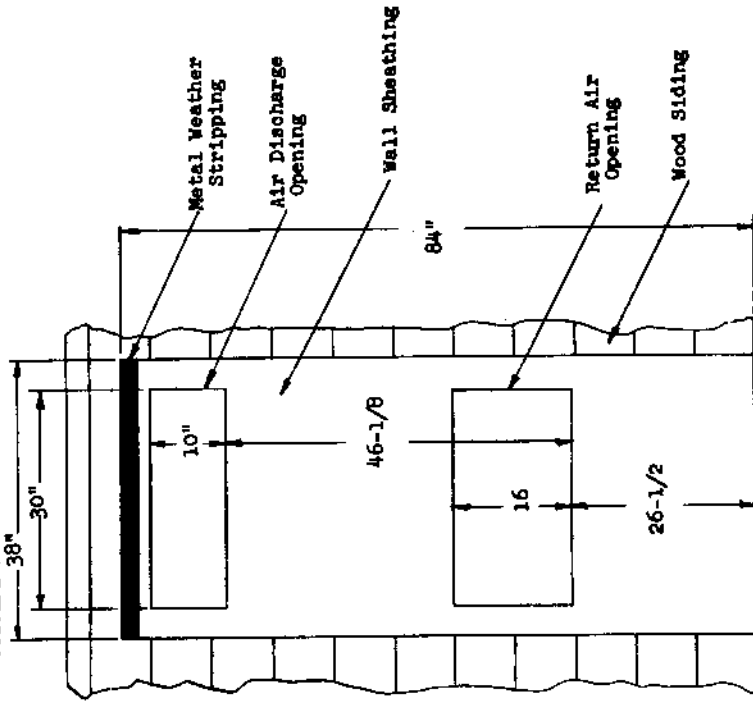
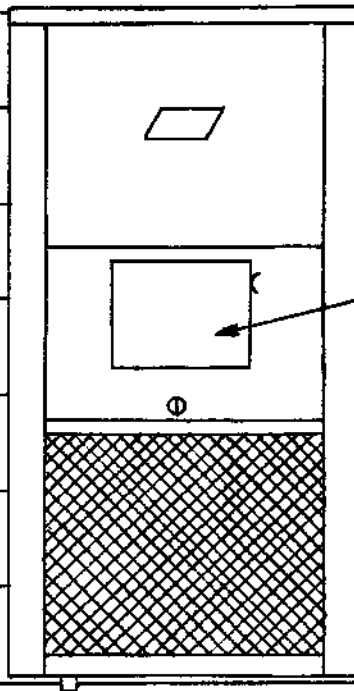
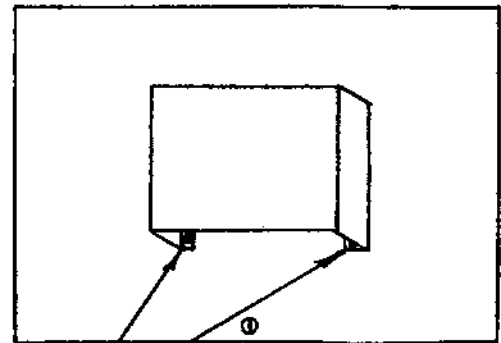
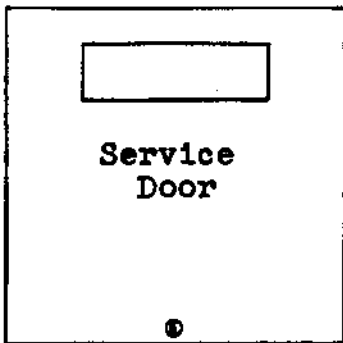


Fig. 6



Fresh Air Cover
With Adjustable
Damper

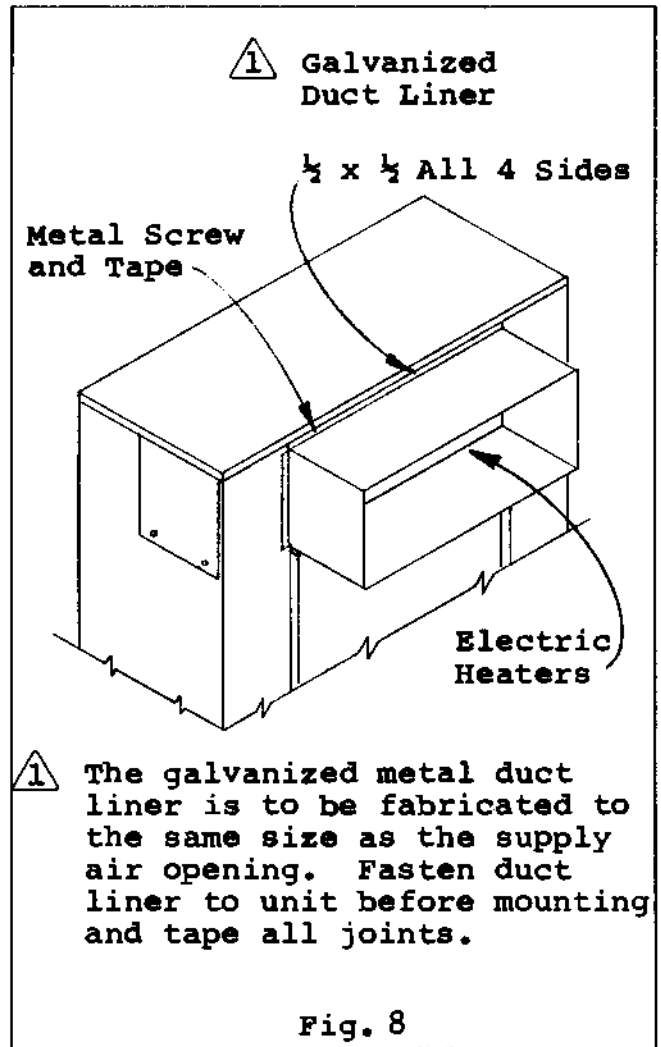
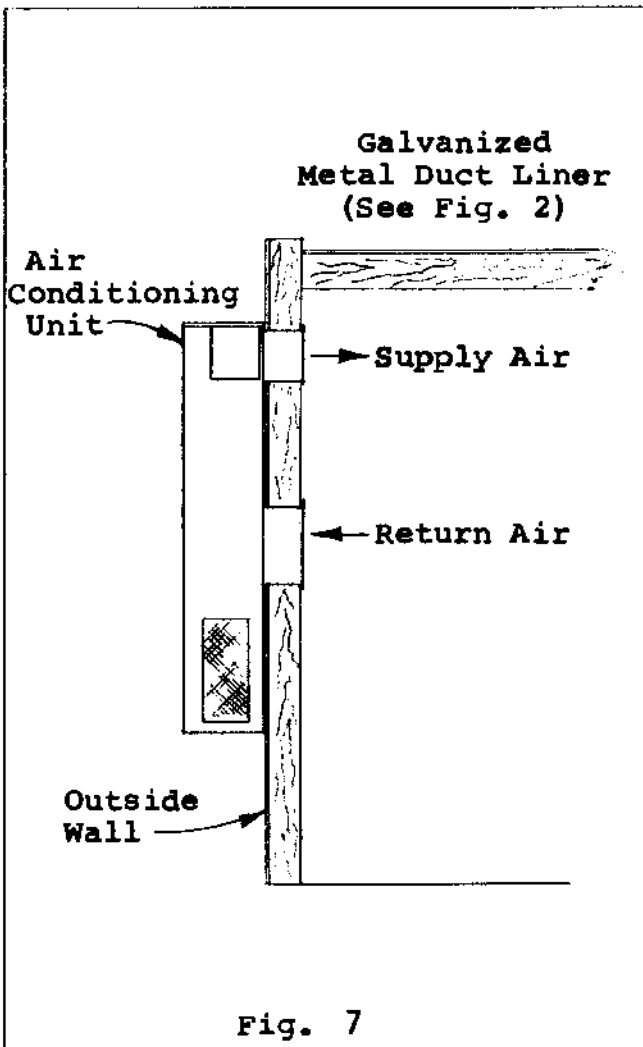


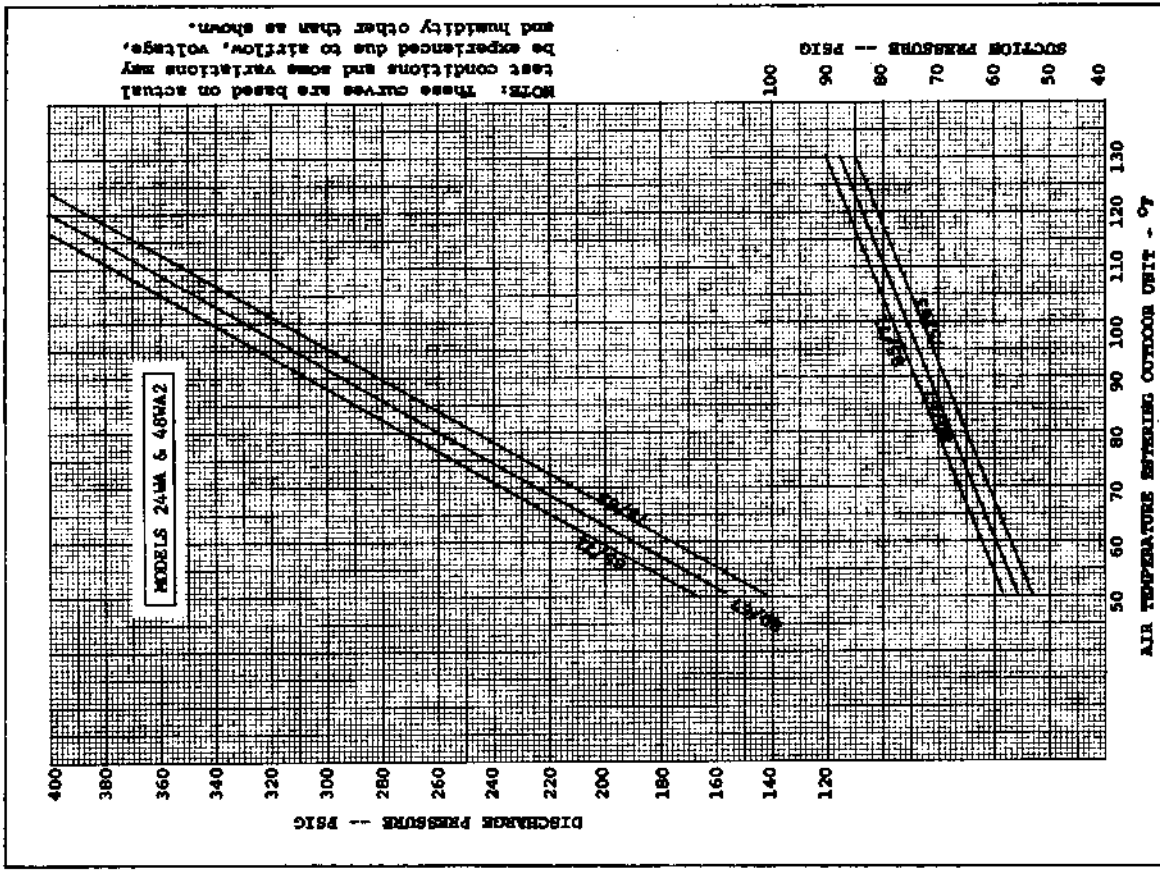
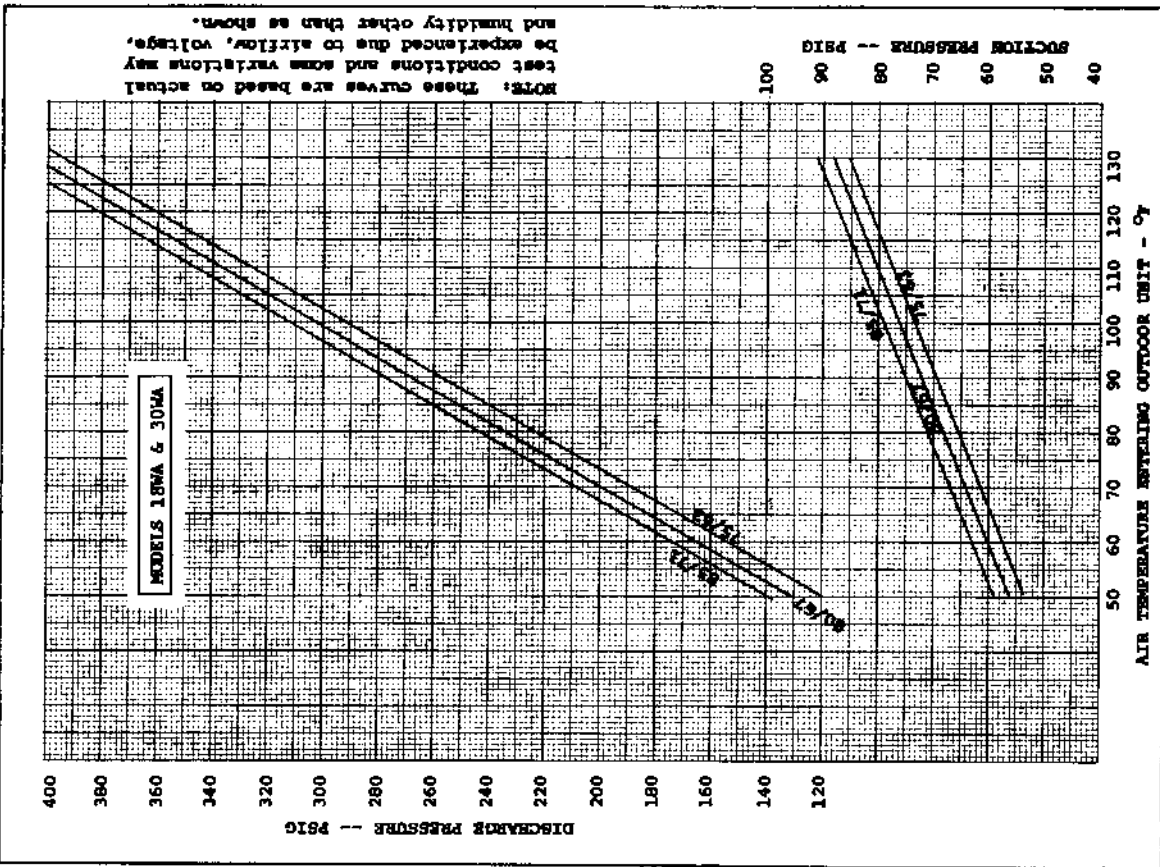
Fasten With Screw

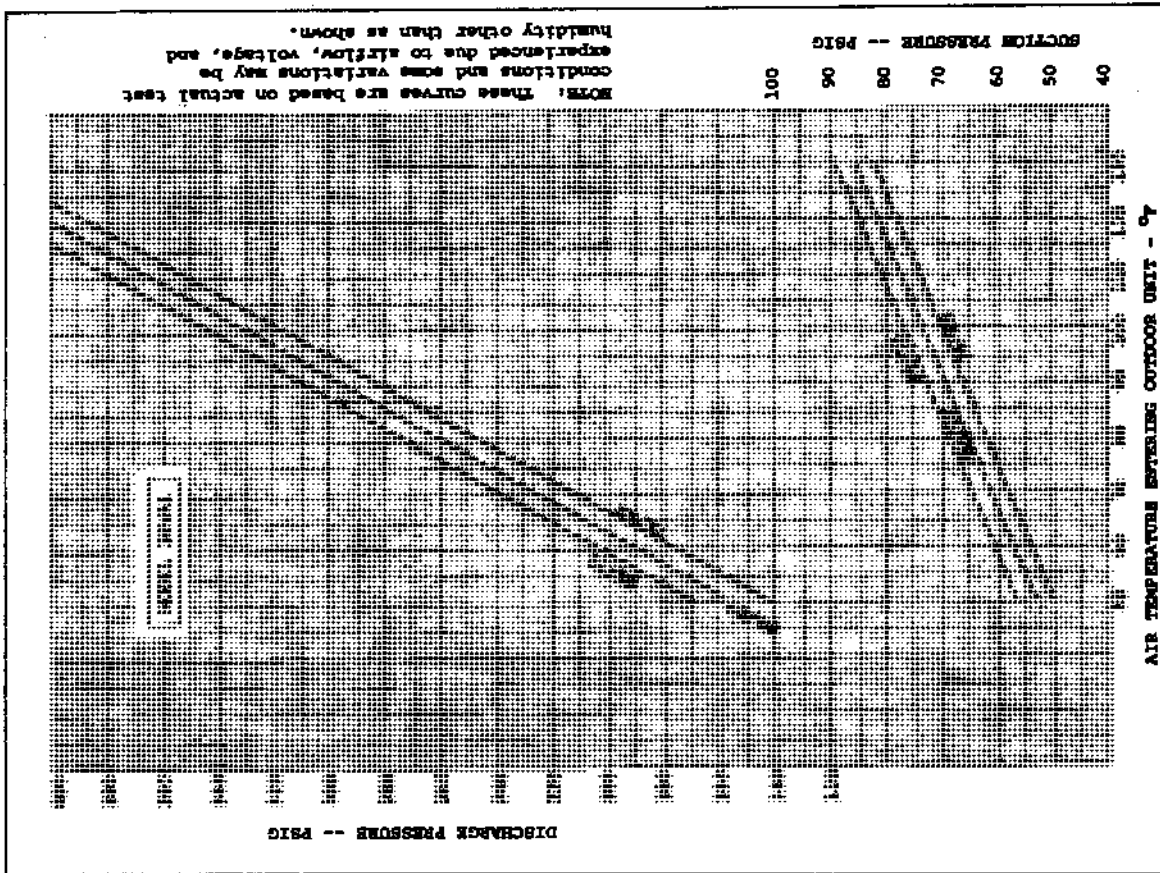
**SUPPLY AIR METAL DUCT LINER
MODELS WA AND WH**

Whenever a model WA or WH is installed, a galvanized metal duct liner must always be attached (Fig. 8). Before installing, determine the wall thickness. If the installation is free air flow, with no external duct, then the liner should be cut flush with the inside wall opening. In order to insure no sweating, the duct liner should be wrapped with a minimum of 1" insulation.

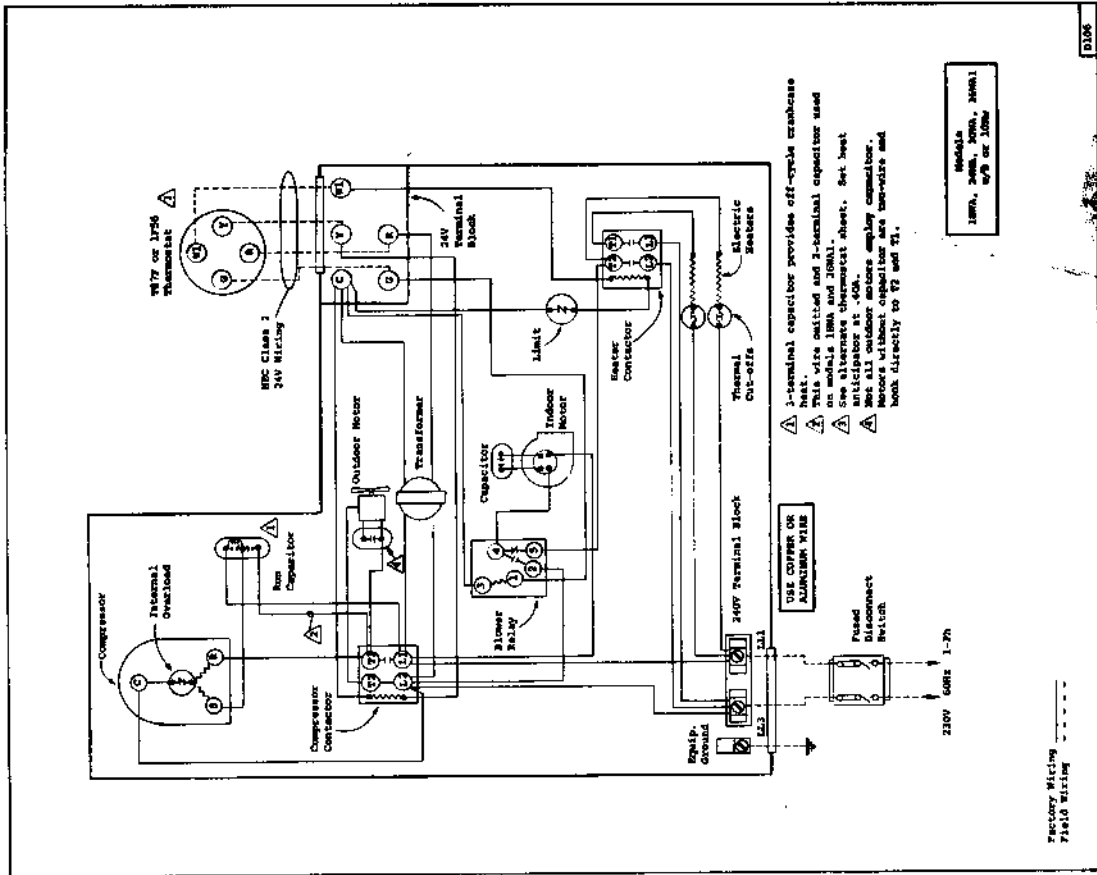
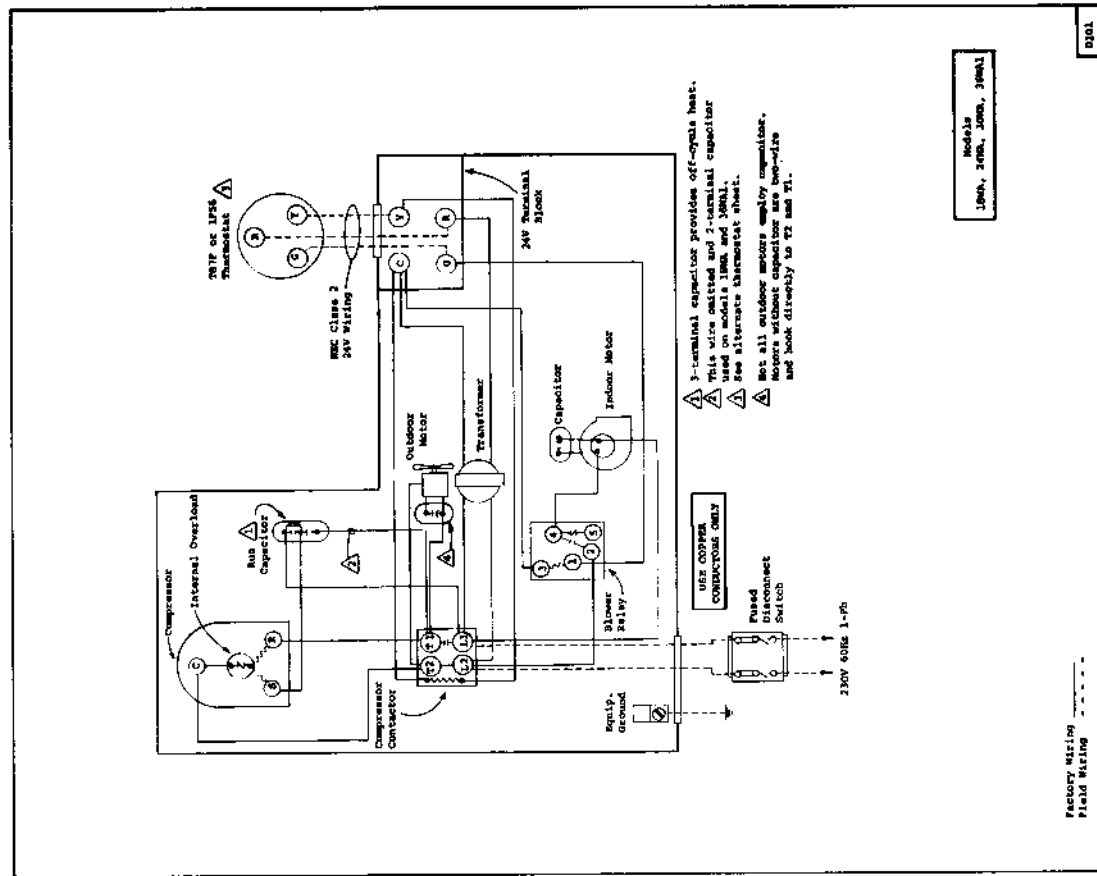
All models, with or without electric heaters, are approved for 0" clearance to combustible material. A metal duct liner, as described and illustrated in Fig. 8, will prevent the possibility of reflected radiant heat on to the internal wall structure.

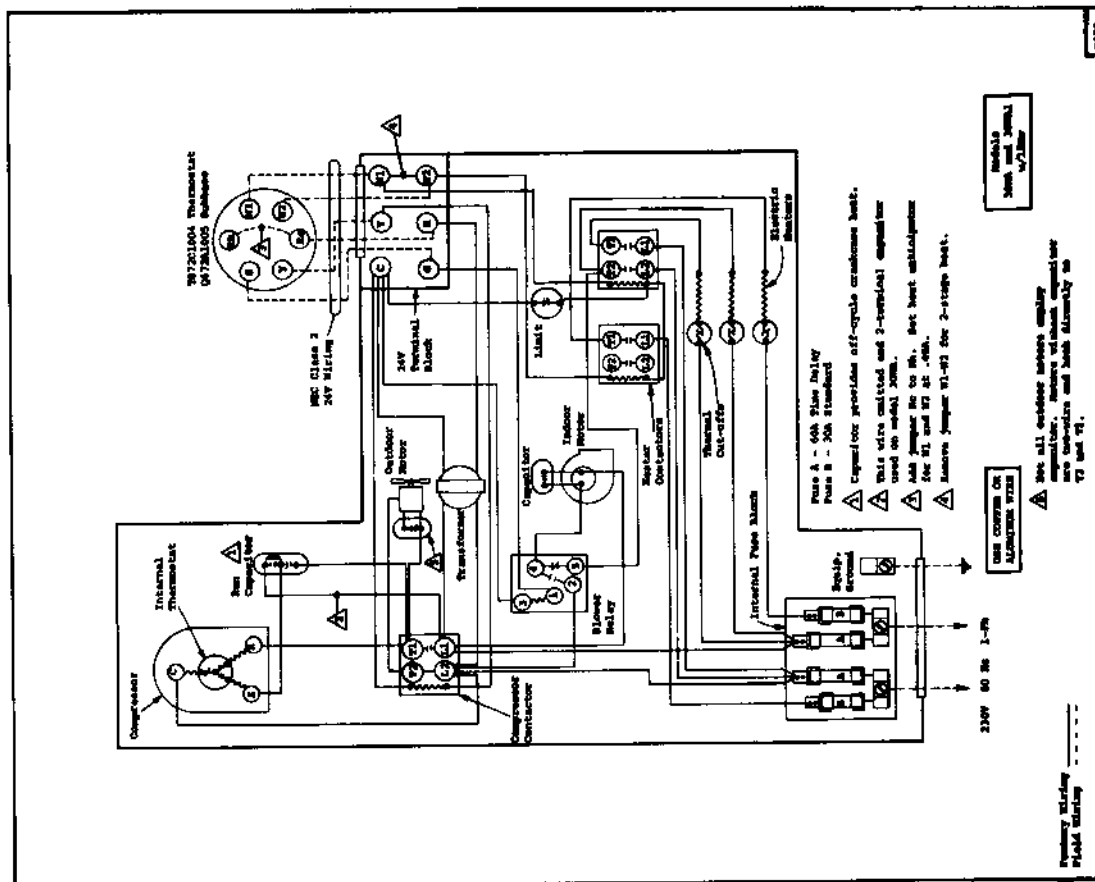
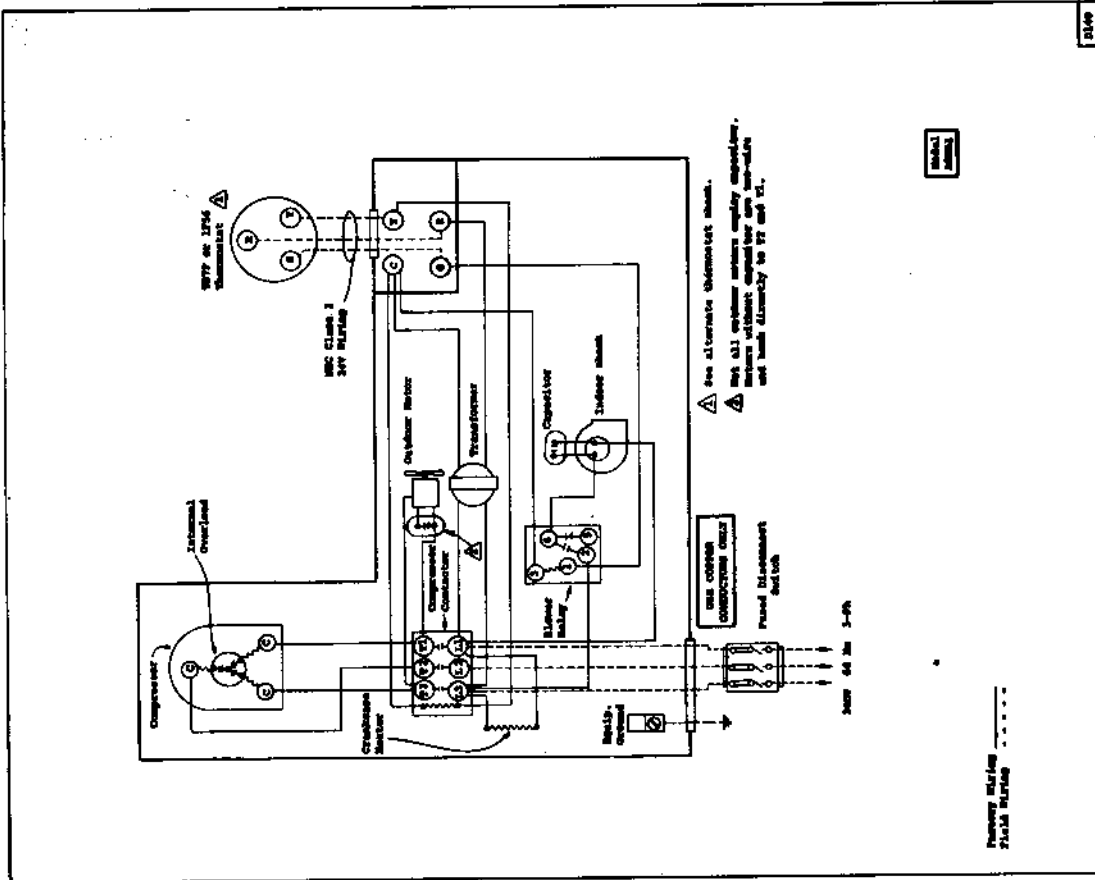


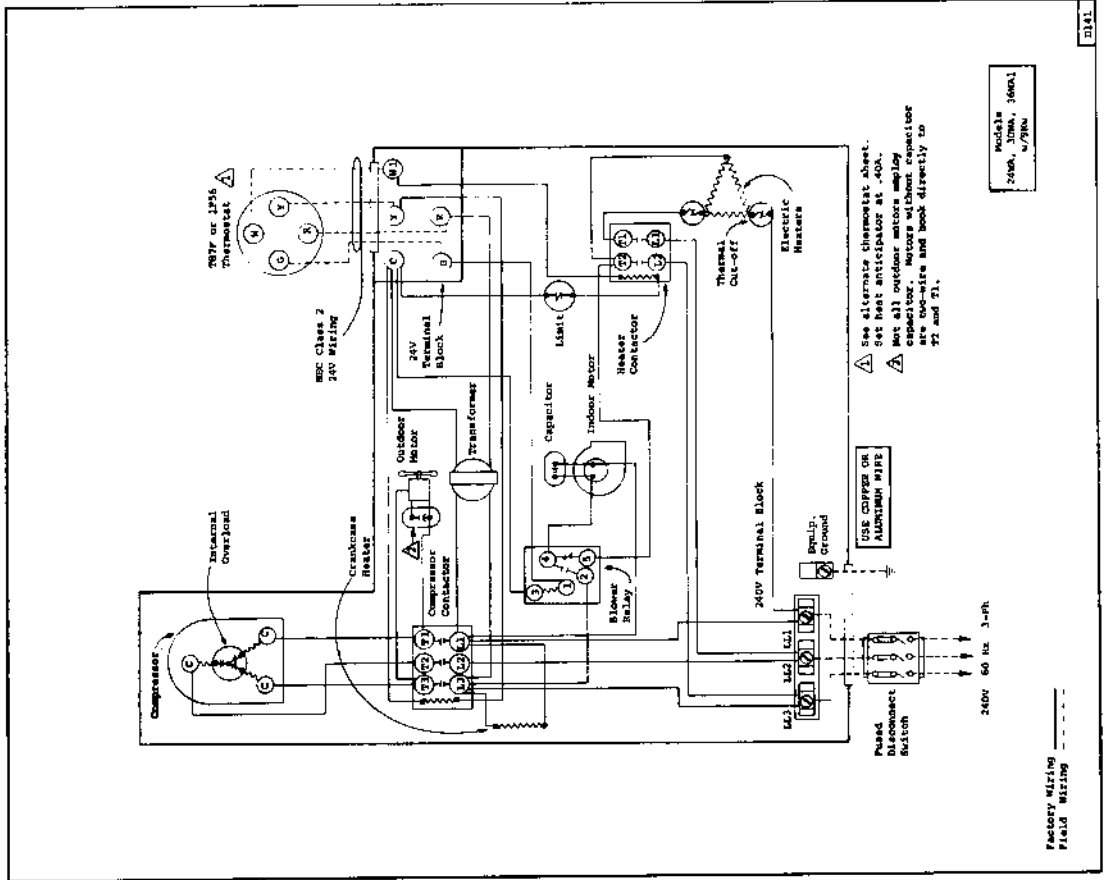
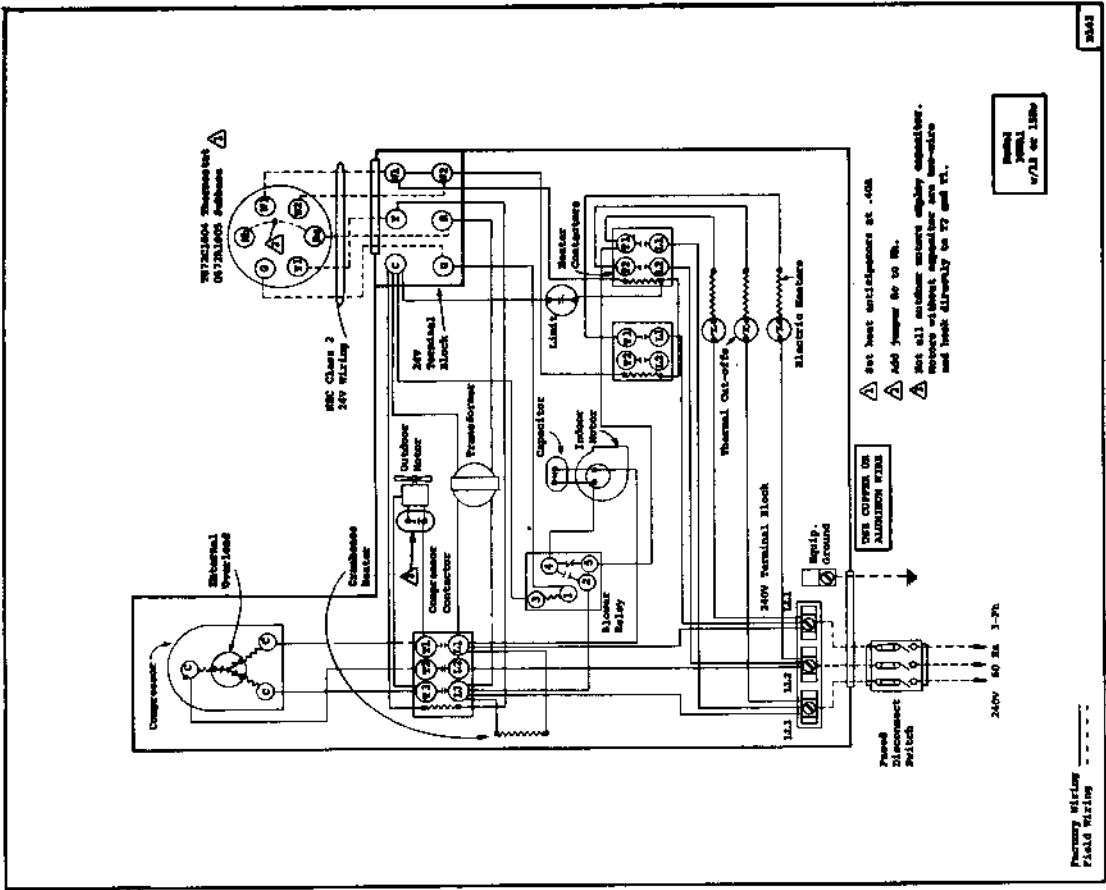


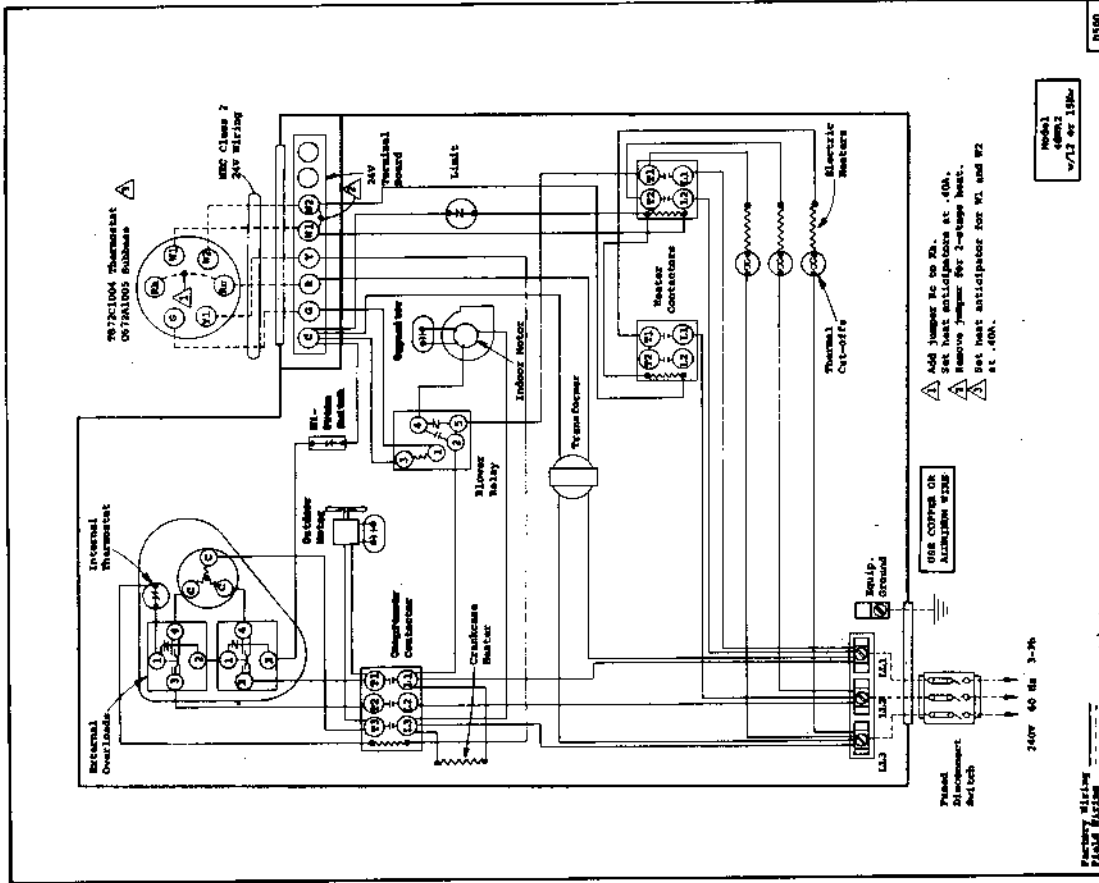
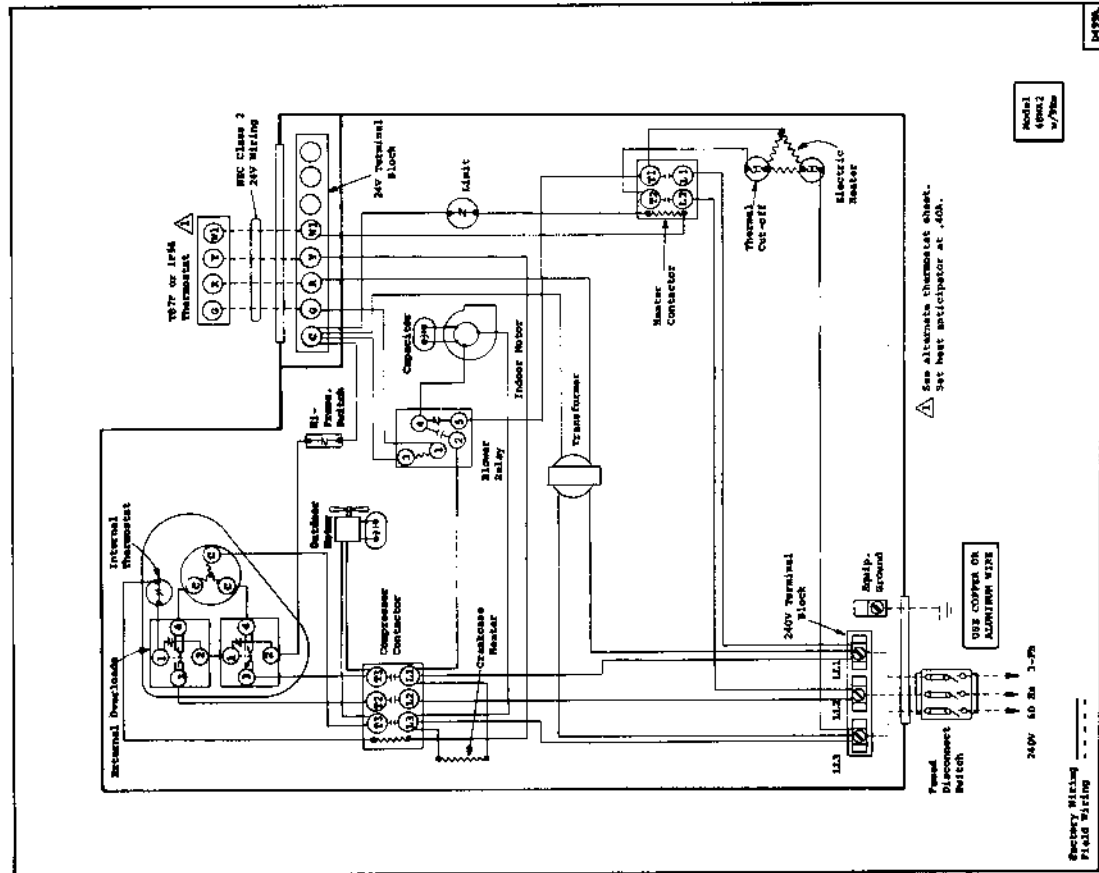


INSTALLER NOTE: Optimum unit performance will occur with a refrigerant charge resulting in a suction line temperature (near the compressor) of 53° to 58°F with 95°F outdoor temperature and 80°F dry bulb/67°F wet bulb (50% R.H.) indoor temperatures and rated airflow across the indoor coil.









ALPHABETICAL PARTS LIST SINGLE PACKAGE AIR CONDITIONERS

PART NO.	DESCRIPTION	18VA	24VA	30VA	36VA1	36VA1-3	48VA2	48VA2-3	36VA1-3	48VA2-3	48VA2-3
5151-009	Fan Blade	X	X	X	X	X					
5151-004	Fan Blade										X
5151-014	Fan Blade										X
7004-006	Filter	X	X	X	X	X					
7004-008	Filter										X
7004-009	Filter (2 req'd)										X
8614-006	Fuse - Heater										
8614-022	Fuse - Compressor										
8614-017	Fuse Block										
8604-002	Heat Strip 5kW	X	X	X	X	X					
8604-003	Heat Strip 8kW	X	X	X	X	X					
8604-004	Heat Strip 10kW	X	X	X	X	X					
8604-001	Heat Strip 4kW	X	X	X	X	X					
8604-029	Heat Strip 9kW	X	X	X	X	X					
8604-005	Heat Strip 9kW										X
8604-008	Heat Strip 12kW										X
8604-010	Heat Strip 15kW										X
8604-046	Heat Strip 12kW										X
8604-047	Heat Strip 15kW										X
8606-009	High Pressure Switch										X
8402-010	Limit Switch	X	X	X	X	X					X
8105-003	Motor - Blower	X	X	X	X	X					X
8106-005	Motor - Blower										X
8103-002	Motor - Fan	X	X	X	X	X					X
8106-006	Motor - Fan										X
8200-006	Motor Mount - Fan	X	X	X	X	X					X
8201-001	Motor Mount - Fan										X
8201-009	Relay - Blower	X	X	X	X	X					X
8201-008	Relay - Blower										X
8551-001	Start Capacitor										X
8201-020	Start Relay										X
8607-005	Terminal Board 24V	X	X	X	X	X					X
8607-002	Terminal Board 230V	X	X	X	X	X					X
8607-007	Terminal Block										X
8402-021	Terminal Board	X	X	X	X	X					X
8402-027	Thermal Cutoff	X	X	X	X	X					X
8407-007	Transformer	X	X	X	X	X					X
8407-015	Transformer										X
8407-004	Transformer - Stepdown										X
8407-003	Transformer - Stepdown										X
5210-002	Strainer	X	X	X	X	X					X
5210-004	Strainer										X
5210-003	Strainer										X

Minimum Net Billing \$5.00. Supersedes all previous lists.
Subject to change without notice. F.O.B. Bryan, Ohio

PART NO.	DESCRIPTION	18VA	24VA	30VA	36VA1	36VA1-3	48VA2	48VA2-3	36VA1-3	48VA2-3	48VA2-3
5152-030	Blower Housing	X	X	X	X	X					
5152-026	Blower Housing										X
5152-028	Blower Wheel	X	X	X	X	X					X
5152-029	Blower Wheel	X	X	X	X	X					X
5152-011	Blower Wheel cw										X
5152-012	Blower Wheel ccw										X
8552-015	Capacitor 370V	X	X	X	X	X					
8552-013	Capacitor 440V										
8552-014	Capacitor 440V										
8552-001	Capacitor 370V	X	X	X	X	X					X
8552-002	Capacitor 370V										X
8552-003	Capacitor 370V										X
5811-021	Cap Tube - Cool	X	X	X	X	X					X
5811-022	Cap Tube - Cool (2 req'd)										X
5811-008	Cap Tube - Cool (3 req'd)										X
8000-001	Compressor 1-Ph	X	X	X	X	X					
8000-002	Compressor 1-Ph										
8000-006	Compressor 1-Ph										X
8000-008	Compressor 1-Ph										X
8000-009	Compressor 3-Ph										X
8000-010	Compressor 3-Ph										X
8000-016	Compressor 1-Ph										X
8000-017	Compressor 1-Ph										X
8000-018	Compressor 3-Ph										X
83494	Compressor Overload										X
83493	Compressor Overload										X
5051-007	Condenser Coil	X	X	X	X	X					
5051-006	Condenser Coil										X
5051-001	Condenser Coil										X
5051-016	Condenser Coil										X
8401-007	Contact - Compressor	X	X	X	X	X					X
8401-003	Contact - Compressor										X
8401-002	Contact - Compressor										X
8401-001	Contact - Compressor										X
8401-006	Contact - Heater	X	X	X	X	X					X
8605-001	Crankcase Heater										X
8605-002	Crankcase Heater										X
5060-007	Evaporator Coil	X	X	X	X	X					
5060-005	Evaporator Coil										X
5060-006	Evaporator Coil										X
5060-001	Evaporator Coil										X