

COMFORT PACK

PACKAGED THRU-THE-WALL
AIR CONDITIONER WITH ELECTRIC HEAT

INSTALLATION AND MAINTENANCE INSTRUCTIONS



National Comfort Products

539 Dunksferry Road • Bensalem, PA 19020 • (215) 244-1400 • 1-800-523-7138 • Fax: (215) 244-9579

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INSTALLATION AND MAINTENANCE INSTRUCTIONS

NOTE: These installation and maintenance instructions should be left with the unit for future reference.

INSTALLATION:

This unit must be installed in accordance with all applicable codes. This unit is not to be used for temporary heating of buildings or structures under construction.

General

This unit shipped with the cooling chassis installed in the cabinet. Prior to installing the unit in the wall opening, the shipping bolts located at the bottom on both sides of the cabinet must be removed to allow for removal of the cooling chassis. 1/4" hole plugs provided with the unit should be installed in the holes to prevent air leakage.

Shipping bolts are located on both sides below this sticker:

THE SHIPPING BOLTS MUST BE REMOVED PRIOR TO INSTALLATION OF THE CABINET TO PERMIT REMOVAL OF THE CHASSIS. INSTALL THE HOLE PLUGS PROVIDED.

14299588

This unit is designed and approved for through-the-wall installation only. This unit is not approved for residential garage; the entire unit must not be installed outside. The grille side of the unit should extend 3/4" beyond the exterior wall to allow moisture that may enter the outdoor section to drain. The pitch of the internal drain pans toward the outside will assure proper drainage when the cabinet is installed level. **Masonry walls must have a lintel to support the wall.**

The grille side must be kept free of any obstructions that will reduce or alter the air flow pattern. If an optional architectural grille is to be used on standard units, the stamped and louvered grille provided **must** be removed. Consult the factory prior to ordering product(s) that require an optional architectural grille.

The interior of the unit may be installed with zero clearances to adjacent combustible surfaces. **The unit shall not be installed directly on carpeting, tile or other combustible material, except wood flooring.** In order to be able to remove the chassis, 29" of open area must be left unobstructed in front of the access panels. The 3/4" O.D. drain pan connection should be connected to the building drain using the flexible tubing included and a trap.

Installation

The unit should be provided with support inside the building in the area of the return air opening. The support should be high enough to allow for return air provisions to the unit. To reduce the possible transmission of sound and vibration, a resilient material such as rubber or cork should be installed between the support and the base of the unit. All spaces around the top,

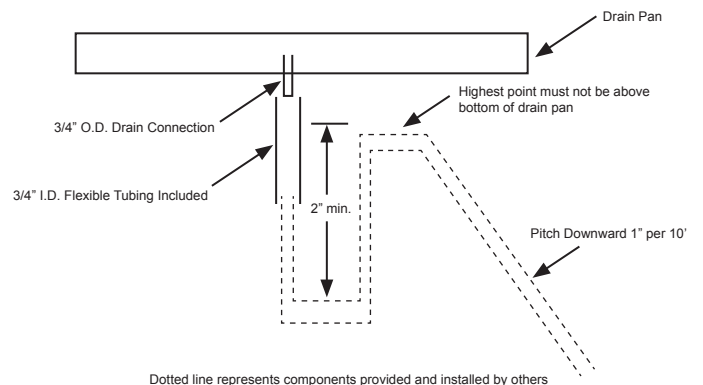
sides and bottom of the exterior grille area should be caulked and sealed to the wall, making sure that the openings for drainage in the bottom edge are not blocked.

If the optional wall sleeve is used, caulk the spaces between the sleeve and the wall. Completely fill the clearance on all sides between the unit and the wall sleeve with a polyurethane foam sealant (follow manufacturer's suggested application manual). Provide the unit with support inside the building in the area of the return air opening. Slide the unit into the wall sleeve and fasten the unit to the sleeve with the five screws provided with the sleeve.

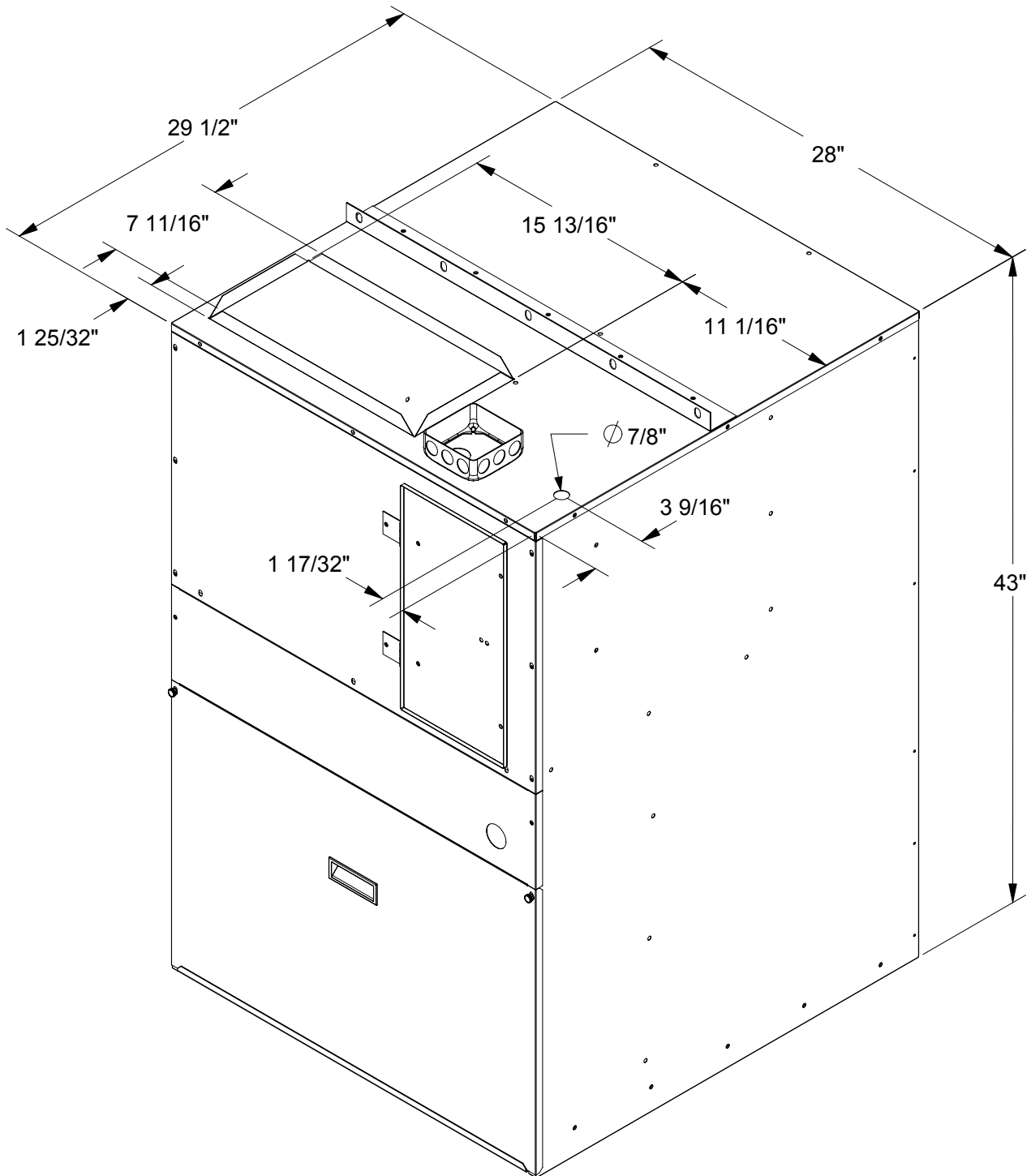
NOTE: For ease of installation, install the cabinet into the wall sleeve first without the cooling chassis. Then slide cooling chassis in after cabinet is in place.

Drain Connection

The 3/4" I.D. flexible tubing included should be connected to the Comfort Pack drain connection so that it can easily be disconnected if the cooling chassis must be removed. A trap at least 2" deep should be provided close to the drain pan. The tubing should not be higher than the bottom of the unit drain pan at any point to assure proper drainage and allow chassis removal. The drain line should pitch downward at least 1" per 10 ft. to an open building drain trap.



Comfort Pack Dimension Drawing



Electrical

All wiring must be installed in accordance with applicable codes.

The unit is factory wired for 230/1/60 power. For 208/1/60 power systems, the wiring to the primary side of the control transformer should be changed from the 240-volt connection to the 208-volt connection to provide proper operation of the control system.

The operating voltage of the unit is from 197 to 253 volts. Operating the equipment outside of these limits will void the warranty.

Controls

Field wiring between the unit and the wall thermostat (by others) may be low voltage for Class 2 systems. The location of the wall thermostat should be 4 to 5 feet above the floor and carefully selected so that the thermostat senses the temperature of the largest conditioned area, without being influenced by drafts, sun exposure or outside temperature.

Maintenance

Air Filter

The 16" x 25" x 1" filter on the cooling chassis must be maintained regularly to assure that the unit provides optimal performance and energy efficiency. The intervals between replacing depends entirely on the cleanliness of the return air to the unit and the time that the indoor blower operates. The air filter is accessible by removing the lower access panel. The filter should be inspected and replaced as needed and is not washable. Substituting the air filter with media other than the type provided with the unit is not recommended, since other materials may cause additional static pressure, which could reduce the air delivery of the unit. **The unit should never be operated without the air filter and access panels in place.**

Cooling Chassis

The cooling chassis contains all items related to the cooling functions of the unit, and also contains the indoor blower and motor for the heating function. For extensive servicing, qualified personnel may choose to remove the cooling chassis from the unit and take it to a work area. Spare chassis are recommended so that extensive servicing can be performed outside the living space. This will prevent introducing dirt or doing damage in the living area, and could help to eliminate significant disruption of the air conditioning and heating functions in the living areas.

The indoor blower motor and the outdoor fan motor have permanently lubricated bearings and do not require routine service. The refrigeration system is sealed and factory charged with Refrigerant 22 so that routine maintenance is not required. Cleaning of the outdoor coil, indoor coil, drain pan, and inside the bottom of the chassis are recommended at least once a year, and more often if the equipment is operated in a dusty or hostile environment. The electrical controls do not require routine service.

Power to the unit should always be turned off before performing service or removing the cooling chassis from the unit. One power connector and one control circuit connector are provided for easy disconnecting and re-connecting of the

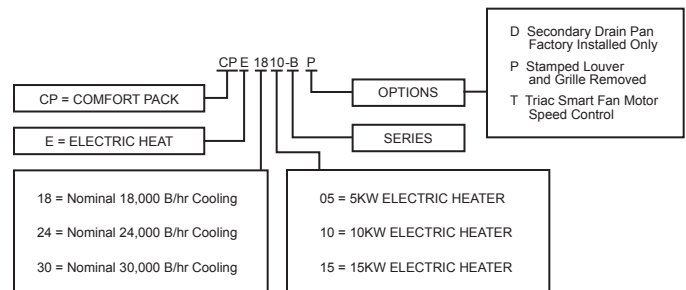
wires between the cooling chassis and cabinet. The controls enclosure cover must be removed to allow access to the screws holding the indoor blower cover plate to the cooling chassis and cabinet. **After reinstalling the cooling chassis, the indoor blower cover plate and controls enclosure cover must be reinstalled.**

Electric Heat

The cabinet includes open-wire resistance heating elements with automatic reset thermal overloads, as well as branch circuit fuses for short-circuit and electrical overload protection. Routine maintenance is not required.

Operation

The Comfort Pack is designed to be used with residential single-stage cooling and single-stage heating wall thermostats with automatic or manual mode changeover. Automatic changeover thermostats must include a deadband to prevent cycling between cooling and heating modes. **Single-pole, single-throw thermostats are not suitable for use with Comfort Pack.** The unit incorporates a 90-second time delay to keep the indoor blower operating after cooling is satisfied to reduce operating costs. The unit also contains controls to automatically adjust the indoor blower motor speed for cooling and heating modes.



Replacement parts should be ordered from:

National Comfort Products

539 Dunksferry Road • Bensalem, PA 19020 • (215) 244-1400 • 1-800-523-7138 • Fax: (215) 244-9579

REPLACEMENT PARTS GUIDE

To assure accuracy in providing the correct parts, please provide the unit model designation and serial no. with the parts order. The model designation breakdown is shown below:

CABINET			
ITEM	DESCRIPTION	PART NO.	MODEL
1	Top Panel	14256100	ALL
2	Top Mount Angle	14256101	ALL
3	Upper Louvered Panel	14256102	ALL
4	Lower Intake Grille	14256103	ALL
5	Right Side Panel	14256157	ALL
6	Left Side Panel	14256158	ALL
7	Bottom Panel	14256106	ALL
8	Rail (2 req'd)	14256114	ALL
9	Cabinet Air Divider	14256140	ALL
10	Cabinet Air Seal	14256160	ALL
11	Indoor Blower Cover	14256161	ALL
12	Upper Access Panel	14256159	ALL
13	Fuse Access Door	14256127	ALL
14	Lower Access Panel	14256123	ALL
15	Side Seal Retainer (2 req'd)	14256125	ALL
16	Air Deflector	14256145	ALL
17	Side Seal (4.33' req'd)	14231012	ALL
18	Bottom Seal (2.13' req'd)	14231013	ALL
19	Air Seal Gasket (3.50' req'd)	14231014	ALL
20	Access Hinge Door (2 req'd)	14295022	ALL
21	Power Connection Plug	14696037	ALL
22	Power Connection Pin (M) (3 req'd)	14693039	ALL
23	Control Connection Plug	14693033	ALL
24	Control Connection Pin (M) (5 req'd)	14693034	ALL
25	Catch-Fuse Access Door	14256144	ALL
CHASSIS			
1	Base	14256108	18, 24, 30
2	Base - Model 12	14256108A	12
3	Air Divider	14256109	ALL
4	Outdoor Coil Mount	14256113	ALL
5	Indoor Coil Cover	14256117	ALL
6	Indoor Coil Drain Pan	14256118	ALL
7	Controls Cover	14256143	ALL
8	Air Filter 16" x 25" x 1"	14232002	ALL
9	Indoor Coil - 2 Rows	14208305	12, 18
10	Indoor Coil - 3 Rows	14208301	24
11	Indoor Coil - 4 Rows	14208304	30
12	Outdoor Coil - 2 Rows	14208307	12, 18
13	Outdoor Coil - 3 Rows	14208302	24
14	Outdoor Coil - 4 Rows	14208306	30
15	Compressor	14210031	12
16	Compressor	14210095	18
17	Compressor	14210097	24

CHASSIS			
ITEM	DESCRIPTION	PART NO.	MODEL
18	Compressor	14210098	30
19	Indoor Blower Assembly	14214026	ALL
20	Outdoor Fan	14214027	ALL
21	Dual Capacitor 30 + 5	14225376	12, 18
22	Dual Capacitor 35 + 5	14225375	24, 30
23	Single Capacitor 7.5	14225383	ALL
24	Compressor Harness w/Plug	14230015	18, 24, 30
25	Contacto	14262082	ALL
26	Transformer 208/240-24	14262087	ALL
27	3-Pole Terminal Board	14263061	ALL
28	3-Speed Indoor Motor	14270043	ALL
29	Outdoor Fan Motor 8505	14270045	12, 18
30	Outdoor Fan Motor 1075	14270044	24, 30
31	Outdoor Motor Mount	14270101	ALL
32	Cap. Tube .054" ID x 5 Ft. (4 req'd)	14275595	12, 18
33	Cap. Tube .064" ID x 3.833' (3 req'd)	14275596	24
34	Cap. Tube .064" ID x 5.146' (4 req'd)	14275597	30
35	3/4" ID Drain Tube x 17"	14275616	ALL
36	Power Connection Receptacle	14693036	ALL
37	Power Connection Pin (F) (3 req'd)	14693038	ALL
38	Control Connection Receptacle	14693032	ALL
39	Control Connection Pin (F) (5 req'd)	14693035	ALL
40	Off Delay Timer	14262057	ALL
41	Electric Heater, 5KW	14208313	5 KW
42	Electric Heater, 10KW	14208312	10 KW
43	Electric Heater, 15KW	14208311	15 KW
44	Sequencer, Single Timing	14262055	15 KW
45	Sequencer, Seperate Timing	14262056	ALL
46	Relay, DPDT	14262058	ALL
47	Fuse, 30 Amps/250V	14693026	5 KW
48	Fuse, 60 Amps/250V	14693028	10, 15 KW
49	Fuse Panel, 2 Poles, 30 Amps	14693031	5 KW
50	Fuse Panel, 2 Poles, 60 Amps	14693030	10 KW
51	Fuse Panel, 4 Poles, 60 Amps	14693029	15 KW
52	Ground Lug	14208228	ALL
53	Drier w/Cap. Tube .054" ID x 5'	14275629	12, 18
54	Drier w/Cap. Tube .064" ID x 3.833'	14275628	24
55	Drier w/Cap. Tube .064" ID x 5.146'	14275630	30
56	TXV Bive - 3-CP100	14275651	30
57	Drier	14275635	30
58	Smart Fan Speed Control	14262059	12
59	Triac Control	14262062	12

National Comfort Products

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LIMITED EXTENDED PROTECTION WARRANTY FOR NATIONAL COMFORT PRODUCTS (NCP) BENSALEM, PA COMFORT PACK UNITS

This NCP product is warranted to be free from all manufacturing defects, material or workmanship, for a period of five years from the date of installation (receipt required), whether or not actual use begins on this date, or five years from the date of manufacture, if the date of installation cannot be verified. Immediate notice to NCP will (A) provide a new or remanufactured part to replace the defective part, without charge for the part itself, or (B) provide a replacement unit.

National Comfort Products will not be responsible for: local transportation, removing, related service, labor, diagnosis calls, refrigerant, costs incurred for returning defective parts, damage or repairs required due to faulty installation or improper application by others, damage as a result of fire, wind, floods, lightning, accidents, or corrosive atmosphere.

EXTENDED 2ND THRU 5TH YEAR COMPRESSOR WARRANTY

If the compressor should fail because of a manufacturing defect, is in the original installation, has been operated under normal conditions, and is in the 2nd to 5th year following the above determined date, NCP will provide, at its option, a new or remanufactured replacement compressor.

Replacement parts are warranted for the remainder of the original product warranty, or for one year, whichever is longer. NCP may require that defective parts be returned to verify and identify the cause of the defect.

LIMITATION OF WARRANTIES — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH EACH LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. MATERIAL IS INSPECTED AT THE FACTORY AND RELEASED TO TRANSPORTATION AGENCY IN GOOD CONDITION. WHEN RECEIVED, VISUAL INSPECTION MUST BE MADE IMMEDIATELY. APPARENT SHIPPING DAMAGE SHOULD BE NOTED ON THE DELIVERY RECEIPT AND THE MATERIAL INSPECTED IN THE PRESENCE OF THE CARRIER'S REPRESENTATIVE. IF DAMAGE IS FOUND A CLAIM MUST BE FILED WITH THE CARRIER IMMEDIATELY.

FREIGHT DAMAGE IS NOT COVERED UNDER THIS WARRANTY.

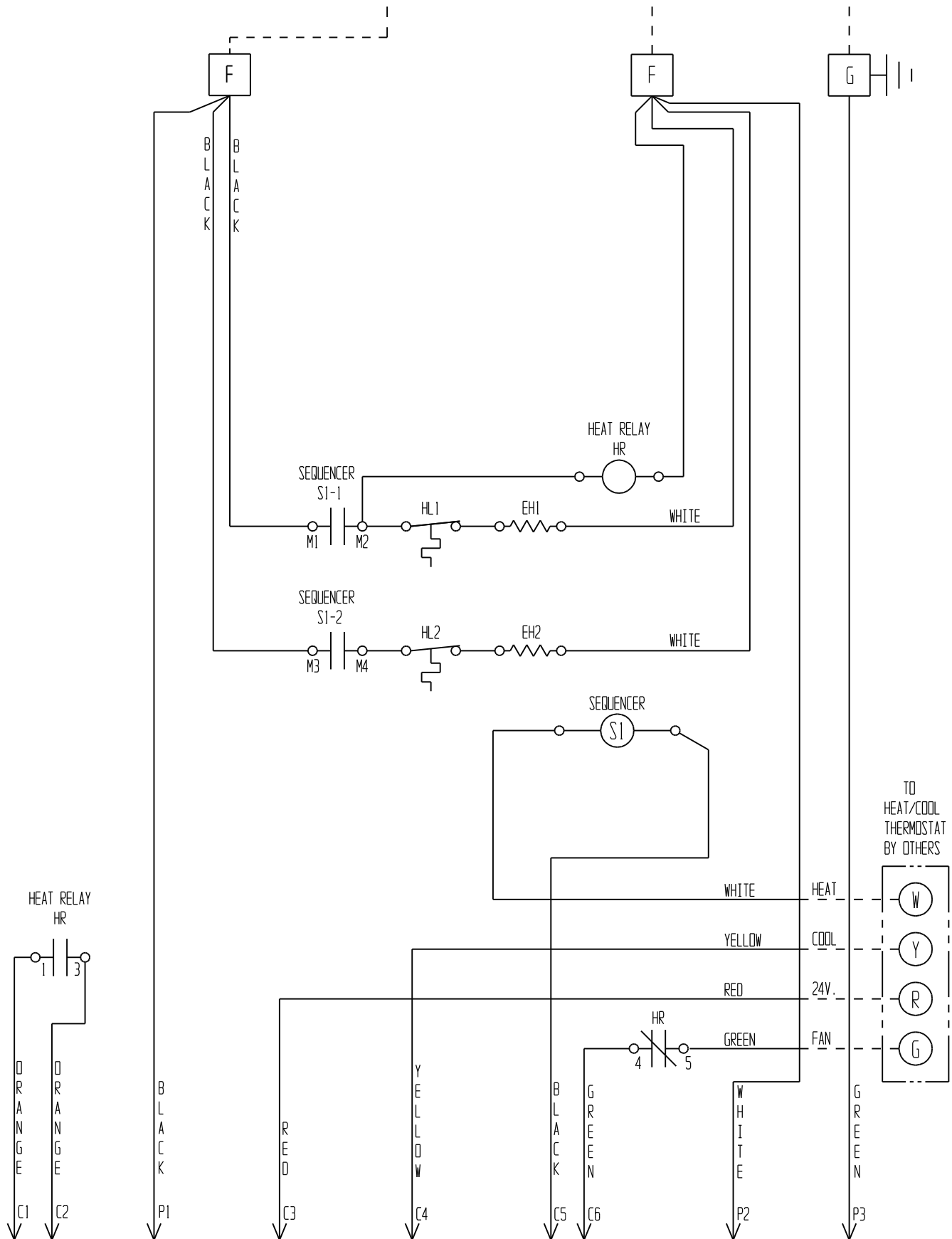
WARNING: NO WARRANTY ON NEW UNITS INSTALLED BEHIND BRICK FACADES. IN YEARS PAST, IT WAS COMMON PRACTICE TO ADD A BRICK PATTERN FACADE (PIGEON HOLES) IN FRONT OF THE THRU-THE-WALL UNIT TO CHANGE THE EXTERIOR APPEARANCE OF THE BUILDING. ALL OBSTACLES ADDED TO IMPEDE AIR FLOW OF THE CONDENSING UNIT WILL DECREASE PERFORMANCE AND CAUSE PREMATURE EQUIPMENT FAILURE AND VOID ALL WARRANTIES. CONSULT FACTORY WITH ANY QUESTIONS.

This warranty gives you specific legal rights. You may also have rights which vary from state to state.

NATIONAL COMFORT PRODUCTS, BENSALEM, PENNSYLVANIA

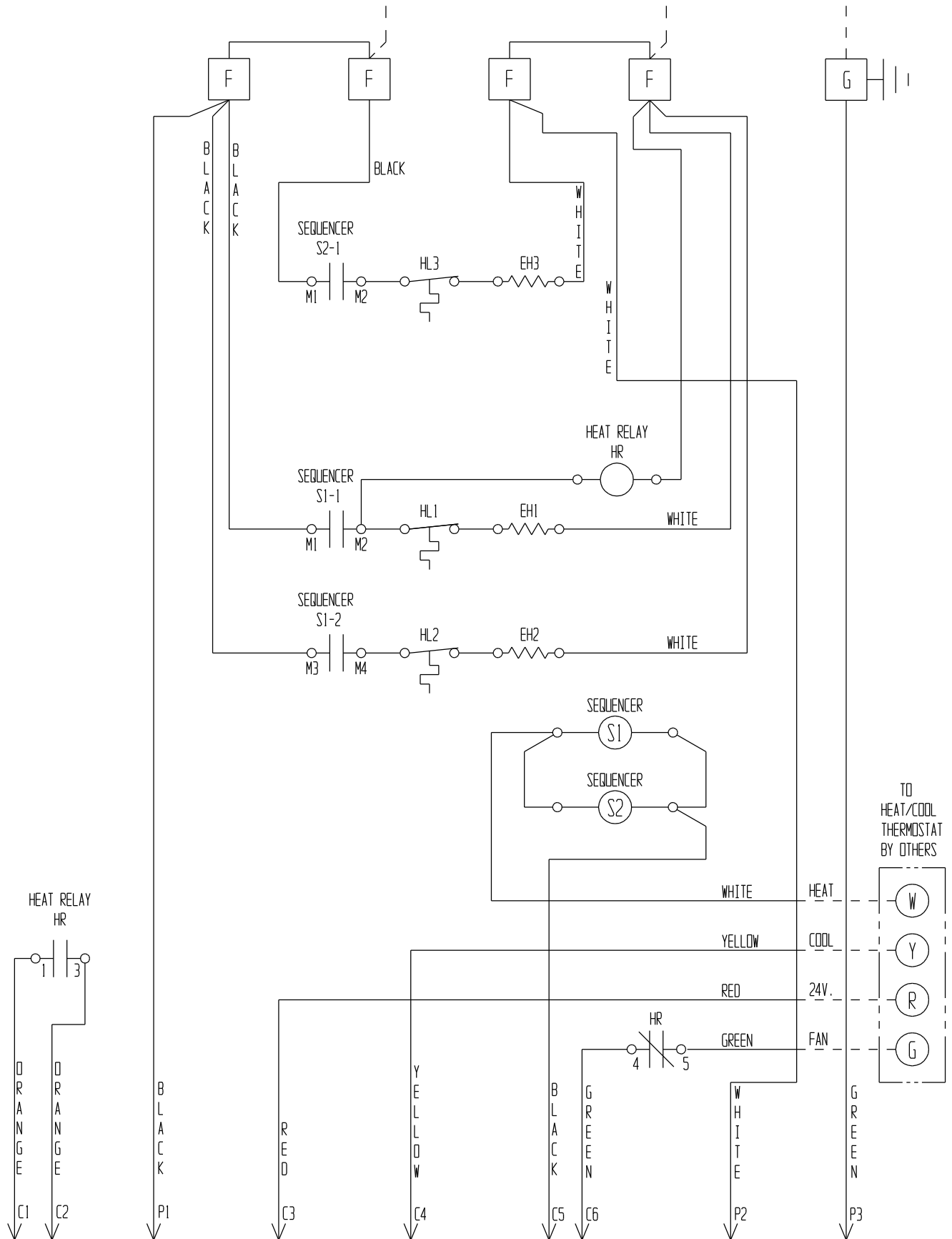
NOTE: All warranty parts and paper work must be submitted no later than 60 days after failure. Warranty requests submitted after 60 days of failure will not be processed.

Cabinet Wiring Schematic/Electric Heat - 5 & 10KW



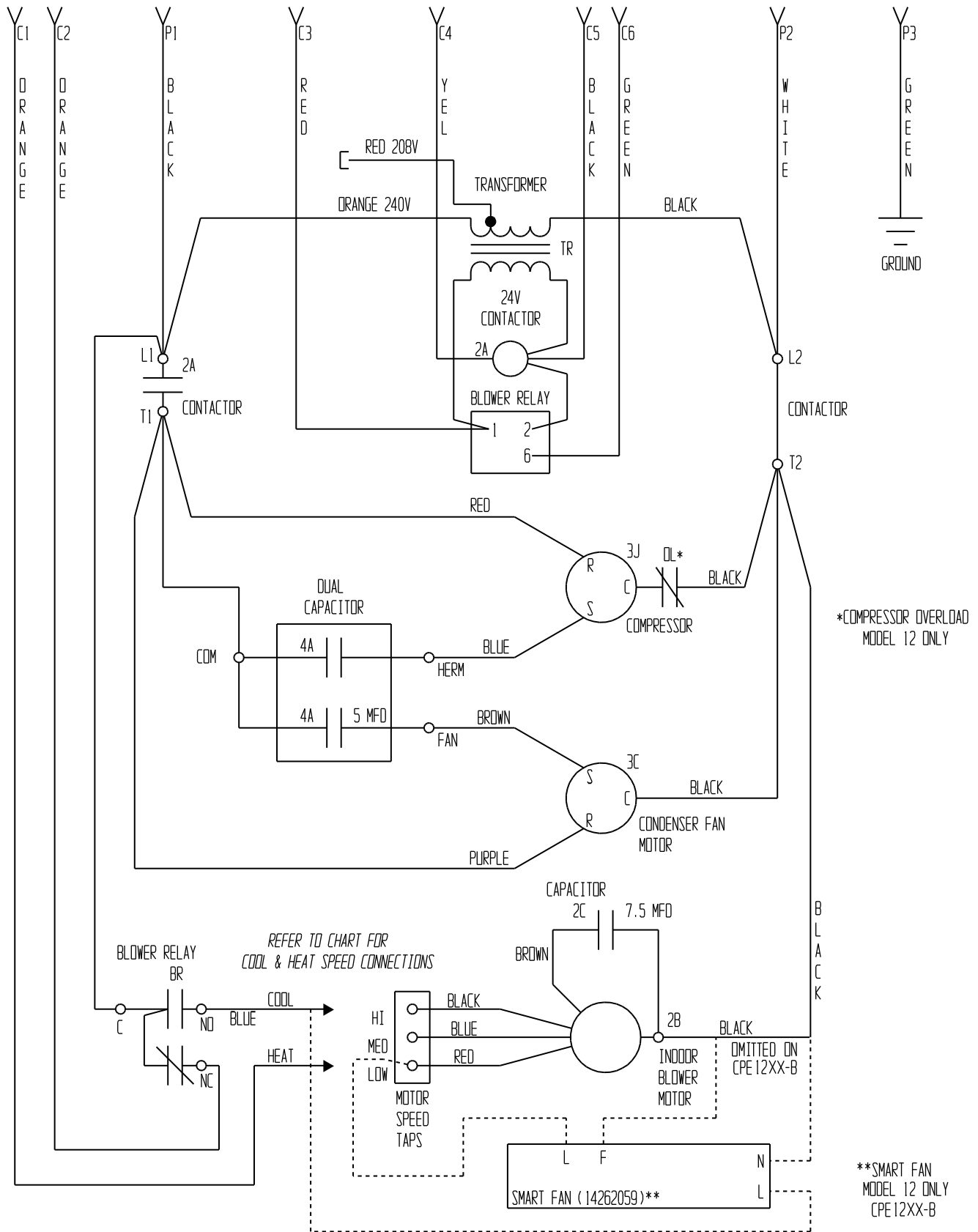
REFER TO CHASSIS WIRING SCHEMATIC FOR CONTINUATION

Cabinet Wiring Schematic/Electric Heat - 15KW



REFER TO CHASSIS WIRING SCHEMATIC FOR CONTINUATION

Chassis Wiring Schematic/Electric Heat



REFER TO CABINET WIRING SCHEMATIC FOR CONTINUATION

Legend

CABINET COMPONENTS	
C1 thru C6	Control Wiring Connector (Plug)
EH1 thru EH3	Electric Heat Element
F	Fuse
G	Ground Connector
HL1 thru HL3	Electric Heat High Temp. Limits
HR	Heat Relay
P1 thru P3	Power Wiring Connector (Plug)
S1, S2	Electric Heat Sequencer
COOLING CHASSIS COMPONENTS	
2A	Contactor/Compressor & Condenser Fan Motor
2B	Indoor Blower Motor
2C	Capacitor - Indoor Blower Motor
3C	Condenser Fan Motor
3J	Compressor
4A	Dual Capacitor/Compressor & Condenser Fan Motor
BR	Blower Relay 90-Seconds Delay on Break
C1 thru C6	Control Wiring Connector (Receptacle)
P1 thru P3	Power Wiring Connector (Receptacle)
TR	Transformer
OL	Compressor Overload (Model 12 only)

FIELD CONTROL WIRING		
TOTAL WIRE LENGTH	DISTANCE FROM UNIT TO CONTROL	MIN. RECOMMENDED WIRE GAUGE
150'	75'	#18 GAUGE WIRE
250'	125'	#16 GAUGE WIRE
350'	175'	#14 GAUGE WIRE



