COMFORT PACK

PACKAGED THRU-THE-WALL AIR CONDITIONER WITH GAS HEAT

INSTALLATION AND MAINTENANCE INSTRUCTIONS







National Comfort Products



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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. The unit must be installed a minimum of 8" above finish floor. If this unit is installed in a residential garage, it must be installed so that the ignition source and burners are located not less than 18 inches (457 mm) above the floor, and it must be located or protected to avoid physical damage by vehicles. 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. The unit must be installed at least 4 feet (1.22 m) from electric meters, gas meters, regulators, and relief equipment. The vent of the unit is located at the front grille. Distances from adjacent public walkways, adjacent buildings, openable windows, and building openings must be consistent with the National Fuel Gas Code ANSI Z223.1 and/or CAN/CGA-B149 installation codes, as well as local codes.

If an optional architectural grille is to be used on standard units, the stamped and louvered grille provided <u>must</u> 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

Gas piping external to the unit must include: a manual shutoff valve with 1/8" NPT plugged tapping (for test gauge connection), drip leg and ground union fitting.

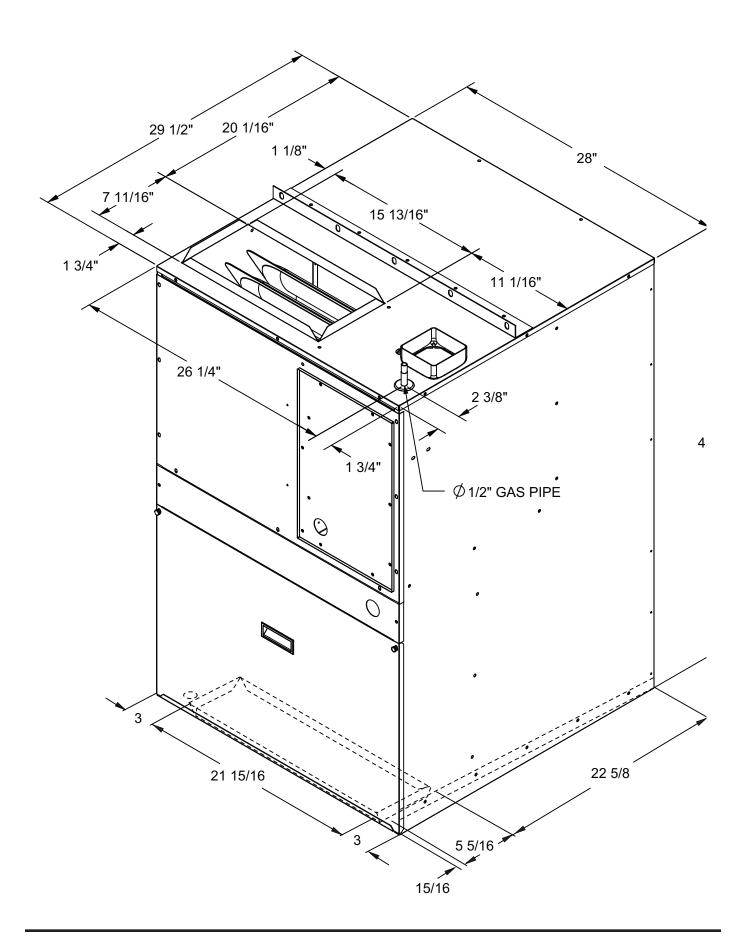
If the supply air from the unit is ducted to space(s) outside the space containing the unit, the return air must also be ducted from outside the space containing the unit and sealed to the unit cabinet return air opening.

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 <u>five screws</u> provided with the sleeve.

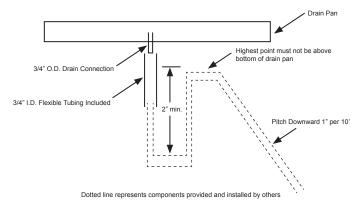
NOTE: For ease of installation, install the cabinet into the wall sleeve first without the cooling chassis. Then slide cooling chassis in after cabinet is in place.

Comfort Pack Dimension Drawing



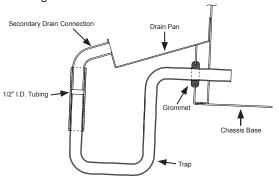
Drain Connection

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.



Optional Secondary Drain Trap Install Instructions

- The trap and 3" piece of clear flexible ¹/2" ID tubing are shipped loose to prevent damage. They should be installed after the Comfort-Pack unit is installed and the return air connection completed.
- The trap must be primed (filled with water) for proper operation of the secondary drain system. This may be done prior to installation of the trap or after.
- 3. Position the trap as shown below and slide the 3" piece of clear flexible about 1 1/2" onto the top end of the trap. Install the other end of the trap through the grommet in the slide-out chassis under the indoor coil drain pan. Slide the top of the flexible tube on the trap onto the bottom of the 1/2" OD secondary drain connection and push the top of the trap up. The trap should be positioned so that there is only a small gap between the top of the trap and the bottom of the secondary drain connection.
- 4. To avoid damage whenever the slide-out chassis has to be removed from the cabinet, remove the secondary drain trap before sliding the chassis out. After the chassis is reinstalled in the cabinet, prime the trap with water before reinstalling it.



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

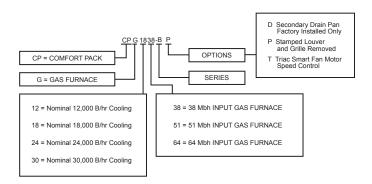
wires between the cooling chassis and cabinet. The controls enclosure cover must be removed to allow access to the screws holding the indoor blower cover plate to the cooling chassis and cabinet. After reinstalling the cooling chassis, the indoor blower cover plate and controls enclosure cover must be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

Gas Heat

The cabinet includes a gas furnace with integral flue duct, direct spark ignition, safety controls, and operating controls. Specific information on the installation, operation, service and maintenance of the gas furnace are included in the Gas Furnace Instruction and Gas Furnace User's Information manuals included with the unit. The installation of the unit and gas piping must be in accordance with local codes.

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. The lower access panel has an interlock switch to prevent unit operation when the panel is not in place.



Replacement parts should be ordered from:

National Comfort Products

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REPLACEMENT PARTS GUIDE

To assure accurancy 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	14256104	ALL	
6	Left Side Panel	14256105	ALL	
7	Bottom Panel	14256106	ALL	
8	Rail (2 req'd)	14256114	ALL	
9	Cabinet Air Divider	14256110	ALL	
10	Cabinet Air Seal	14256119	ALL	
11	Indoor Blower Cover	14256120	ALL	
12	Upper Access Panel	14256121	ALL	
13	Furnace Access Door	14256122	ALL	
14	Lower Access Panel	14256123	ALL	
15	Side Seal Retainer (2 req'd)	14256125	ALL	
16	Front Air Baffle	14256141	ALL	
17	Rear Air Baffle	14256142	ALL	
18	Deflector 38 Mbh (2 req'd)	14256154	38 Mbh	
19	Deflector 51 Mbh (2 req'd)	14256155	51 Mbh	
20	Mfg. Bracket - Switch	14256156	ALL	
21	Side Seal (4.33' req'd)	14231012	ALL	
22	Bottom Seal (2.13' req'd)	14231013	ALL	
23	Air Seal Gasket (3.50' req'd)	14231014	ALL	
24	Interlock Switch	14265025	ALL	
25	User's Information Manual	14299573	ALL	
26	Instruction Manual	14299575	ALL	
27	Access Hinge Door (2 req'd)	14295022	ALL	
28	Gas Furnace 38 Mbh1	14208309	38 Mbh	
29	Gas Furnace 51 Mbh1	14299308	51 Mbh	
30	Gas Furnace 64 Mbh¹	14299303	64 Mbh	
31	Power Connection Plug ²	14230026	ALL	
32	Power Connection Pin (M) ³ (3 req'd)	14230027	ALL	
33	Control Connection Plug ²	14230024	ALL	
34	Control Connection Pin (M) ³ (5 req'd)	14230025	ALL	
CHASSIS				
1	Base	14256108A	12	
2	Base	14256108	18, 24, 30	
3	Air Divider	14256109	ALL	
4	Outdoor Coil Mount Shroud	14256113	ALL	
5	Indoor Coil Cover	14256117	ALL	
6	Indoor Coil Drain Pan	14256118	ALL	
7	Controls Cover	14256143	ALL	

TEM	CHASSIS				
Indoor Coil - 2 Rows	ITEM	DESCRIPTION	PART NO.	MODEL	
Indoor Coil - 3 Rows	8	Air Filter 16" x 25" x 1"	14232002	ALL	
Indoor Coil - 4 Rows	9	Indoor Coil - 2 Rows	14208305	12, 18	
12 Outdoor Coil - 2 Rows 14208307 12, 18 13 Outdoor Coil - 3 Rows 14208302 24 14 Outdoor Coil - 4 Rows 14208306 30 15 Compressor 2P17SR236A-1A 14210031 12 16 Compressor H21J17BABCA 14210095 18 17 Compressor H21J2ZBABCA 14210097 24 18 Compressor H21J27BABCA 14210098 30 19 Indoor Blower Assembly 14214026 ALL 20 Outdoor Fan 14214027 ALL 21 Dual Capacitor 30 + 5/370 14225376 12, 24 22 Dual Capacitor 40 + 5/370 14225375 18 23 Dual Capacitor 7.5/370 14225372 30 24 Single Capacitor 7.5/370 14225383 ALL 25 Compressor Harness w/Plug 14230015 ALL 26 Contactor 14262082 ALL 27 Transformer 208/240-24 14262087 ALL 28 3-P	10	Indoor Coil - 3 Rows	14208301	24	
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14	12	Outdoor Coil - 2 Rows	14208307	12, 18	
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33 Drier & Cap 14275629 12 34 Drier w/Cap. Tube 4- 0.49" x 48" 14275648 18 35 Drier w/Cap. Tube 5- 0.59" x 59" 14275641 24 36 TXV Bive - 3-CP100 14275651 30 37 3/4" ID Drain Tube x 17" 14275616 ALL 38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	31	Outdoor Fan Motor 1075	14270044	24 & 30	
34 Drier w/Cap. Tube 4- 0.49" x 48" 14275648 18 35 Drier w/Cap. Tube 5- 0.59" x 59" 14275641 24 36 TXV Bive - 3-CP100 14275651 30 37 3/4" ID Drain Tube x 17" 14275616 ALL 38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	32	Outdoor Motor Mount	14270101	ALL	
35 Drier w/Cap. Tube 5- 0.59" x 59" 14275641 24 36 TXV Bive - 3-CP100 14275651 30 37 3/4" ID Drain Tube x 17" 14275616 ALL 38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	33	Drier & Cap	14275629	12	
36 TXV Bive - 3-CP100 14275651 30 37 3/4" ID Drain Tube x 17" 14275616 ALL 38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	34	Drier w/Cap. Tube 4- 0.49" x 48"	14275648	18	
37 3/4" ID Drain Tube x 17" 14275616 ALL 38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	35	Drier w/Cap. Tube 5- 0.59" x 59"	14275641	24	
38 Power Connection Receptacle 14693036 ALL 39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	36	TXV Bive - 3-CP100	14275651	30	
39 Power Connection Pin (F) (3 req'd) 14693038 ALL 40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	37	3/4" ID Drain Tube x 17"	14275616	ALL	
40 Control Connection Receptacle 14693032 ALL 41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	38	Power Connection Receptacle	14693036	ALL	
41 Control Connection Pin (F) (5 req'd) 14693035 ALL 42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	39	Power Connection Pin (F) (3 req'd)	14693038	ALL	
42 Muffler 14275639 18, 24, 30 43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	40	Control Connection Receptacle	14693032	ALL	
43 Drier 14275616 30 44 Smart Fan Speed Control 14262059 12	41	Control Connection Pin (F) (5 req'd)	14693035	ALL	
44 Smart Fan Speed Control 14262059 12	42	Muffler	14275639	18, 24, 30	
	43	Drier	14275616	30	
45 Triac Control 14262062 12	44	Smart Fan Speed Control	14262059	12	
	45	Triac Control	14262062	12	

¹ Complete heat exchangers, gas valve, vent motor, and all wiring

² Cabinet side

³ Chassis side

^{*} REFER TO THE "GAS FURNACE INSTRUCTIONS" FOR INDIVIDUAL PARTS FOR THE GAS FURNACE.

National Comfort Products

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

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.

EXTENDED 2ND THRU 10TH YEAR HEAT EXCHANGER WARRANTY

If the heat exchanger of the gas furnace should fail because of a manufacturing defect, is in the original installation, has been operated under normal conditions, and is in the 2nd to 10th year following the above determined date, NCP will provide, at its option, a new or remanufactured replacement heat exchanger.

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.

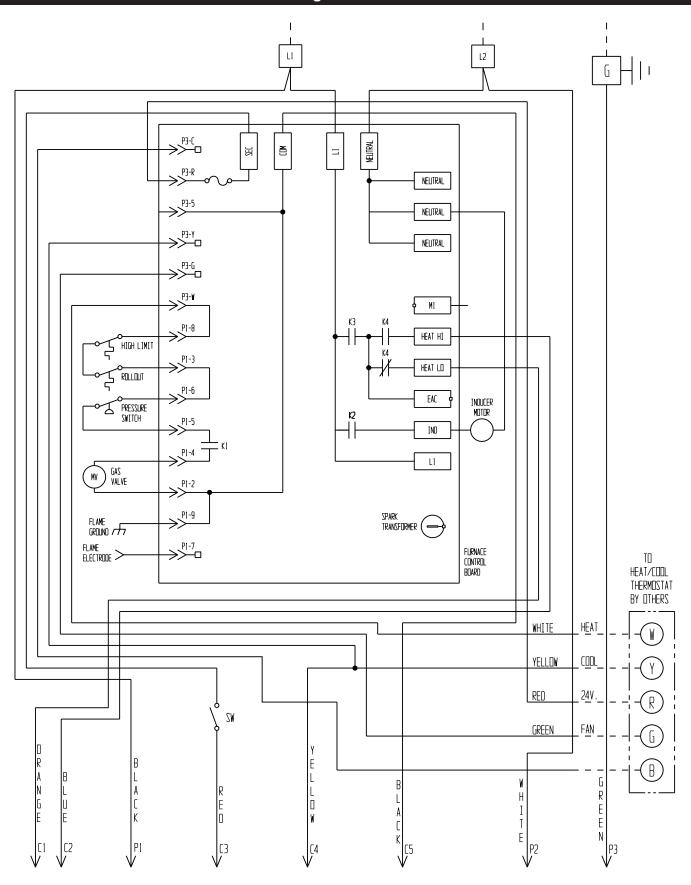
WARNING: NO WARRANTY ON NEW UNITS INSTALLED BEHIND BRICK FACADES. IN YEARS PAST, IT WAS COMMON PRACTICE TO ADD A BRICK PATTERN FACADE (PIGEON HOLES) IN FRONT OF THE THRU-THE-WALL UNIT TO CHANGE THE EXTERIOR APPEARANCE OF THE BUILDING. ALL OBSTACLES ADDED TO IMPEDE AIR FLOW OF THE CONDENSING UNIT WILL 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

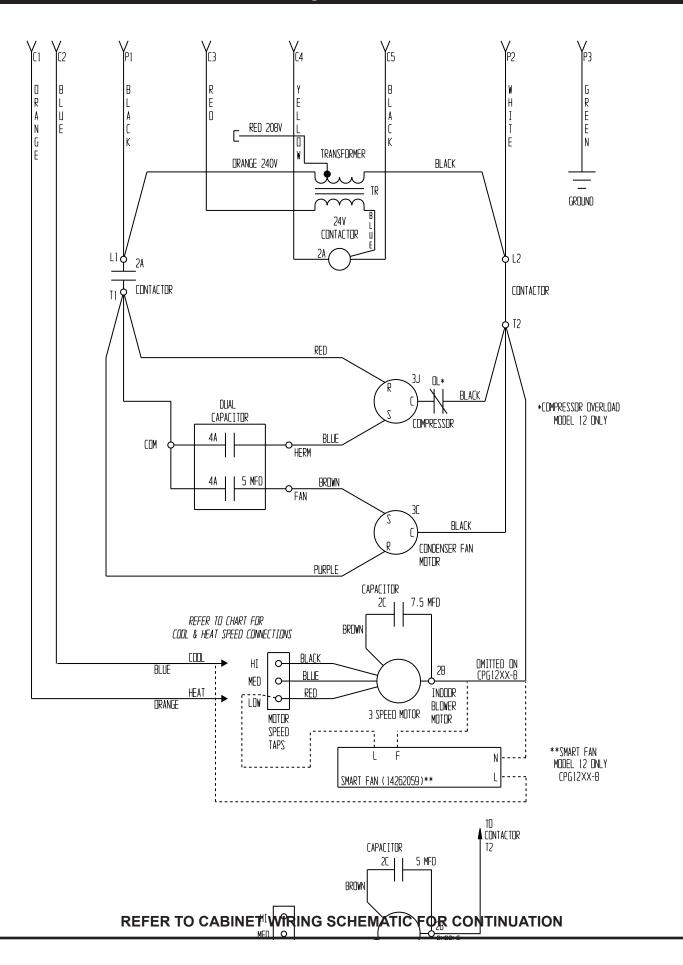
NOTE: All warranty parts and paper work must be submitted no later than 60 days after failure. Warranty requests submitted after 60 days of failure will not be processed.

Cabinet Wiring Schematic/Gas Heat



REFER TO CHASSIS WIRING SCHEMATIC FOR CONTINUATION

Chassis Wiring Schematic/Gas Heat



Legend

CABINET COMPONENTS			
C1 thru C6	Control Wiring Connector (Plug)		
F	Fuse		
G	Ground Connector		
SW	Panel Interlock Switch (open when access panel is removed)		
MV	Gas Valve		
P1 thru P3	Power Wiring Connector (Plug)		
	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		
C1 thru C6	Control Wiring Connector (Receptacle)		
P1 thru P3	Power Wiring Connector (Receptacle)		
TR	Transformer		
OL Compressor Overload (Model 12 only)			
OL	Compressor Overload (Model 12 only)		

DSI INTEGRATED CONTROL MODULE			
CONTROL STATUS	GREEN LED		
STEADY ON	Normal operation, no call for heat		
FAST FLASH	Normal operation, call for heat		
1 FLASH	In lockout from failed ignition or flame loss		
2 FLASH	Pressure switch does not close within 30 seconds		
3 FLASH	Limit switch or rollout switch open		
4 FLASH	Limit switch is closed before venter is energized		
STEADY OFF	Internal control fault or no power		
FLAME STATUS	YELLOW LED		
STEADY ON	Flame sensed		
SLOW FLASH	Weak flame (current below 1.0 microamps = +/-50%)		
FAST FLASH	ASH Undesired flame (valve open and no call for heat)		

FAN OFF DELAY			
TIME	SWITCH		
TIME	1	2	
90	OFF	ON	
120	OFF	OFF	
160	ON	OFF	
180	ON	ON	

TEST

FLAME LED

OK LED





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

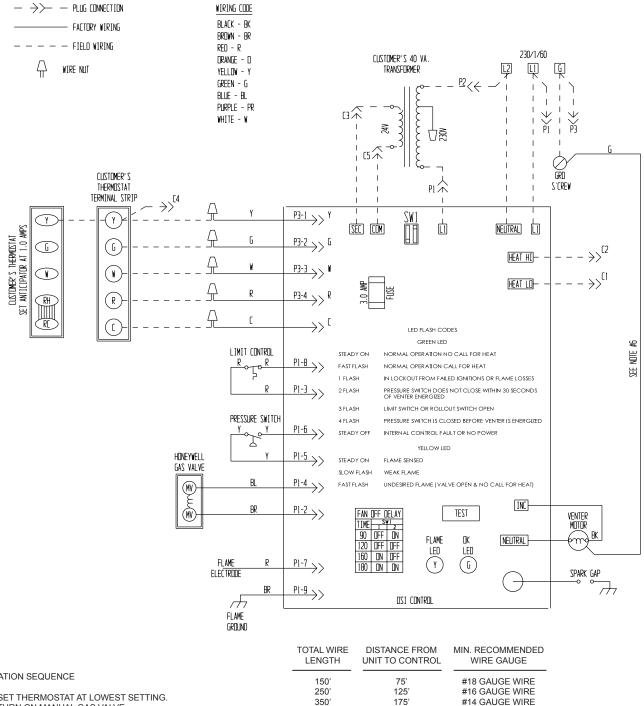
OPERATION SEQUENCE

- SET THERMOSTAT AT LOWEST SETTING.
- TURN ON MANUAL GAS VALVE.
- TURN ON POWER TO UNIT.
- SET THERMOSTAT AT DESIRED SETTING.
- THERMOSTAT CALLS FOR HEAT, ENERGIZING THE VENTER MOTOR.
- 6.
- VENTER PRESSURE SWITCH CLOSES, FIRING UNIT.
 BURNER FLAME IS SENSED, AND IN 30 SECONDS THE FAN MOTOR IS ENERGIZED.
- IF THE FLAME IS EXTINGUISHED DURING MAIN BURNER OPERATION, THE INTEGRATED CONTROL SYSTEM CLOSES THE MAIN VALVE AND MUST BE RE-8. SET BY INTERRUPTING POWER TO THE CONTROL CIRCUIT (SEE LIGHTING INSTRUCTIONS).

NOTES

- THE FOLLOWING CONTROL IS A FIELD-INSTALLED OPTION: THERMOSTAT. 1.
- DOTTED WIRING INSTALLED BY OTHERS.
- 3. CAUTION: IF ANY OF THE ORIGINAL WIRING AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C EXCEPT FOR SENSOR LEAD WIRE AND LIMIT WIRING WHICH MUST BE 150°C.
- USE 18 GAUGE WIRE FOR ALL LOW VOLTAGE WIRING ON THE UNIT OR FOLLOW CHART ABOVE.
- LINE AND FAN MOTOR BRANCH WIRE SIZES SHOULD BE OF A SIZE TO PREVENT VOLTAGE DROPS BEYOND 5% OF SUPPLY LINE VOLTAGE.
- GROUND WIRE IS USED ONLY ON MODEL 64 UNITS. 6.

DSI Integrated Controls Wiring & Codes



OPERATION SEQUENCE

- SET THERMOSTAT AT LOWEST SETTING.
- TURN ON MANUAL GAS VALVE.
- 3 TURN ON POWER TO UNIT
- SET THERMOSTAT AT DESIRED SETTING. 4
- THERMOSTAT CALLS FOR HEAT, ENERGIZING THE VENTER MOTOR. 5.
- VENTER PRESSURE SWITCH CLOSES, FIRING UNIT. 6.
- BURNER FLAME IS SENSED, AND IN 30 SECONDS THE FAN MOTOR IS ENERGIZED.
- IF THE FLAME IS EXTINGUISHED DURING MAIN BURNER OPERATION, THE INTEGRATED CONTROL SYSTEM CLOSES THE MAIN VALVE AND MUST BE RE-8. SET BY INTERRUPTING POWER TO THE CONTROL CIRCUIT (SEE LIGHTING INSTRUCTIONS).

NOTES

- THE FOLLOWING CONTROL IS A FIELD-INSTALLED OPTION: THERMOSTAT. 1.
- DOTTED WIRING INSTALLED BY OTHERS.
- 3. CAUTION: IF ANY OF THE ORIGINAL WIRING AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C EXCEPT FOR SENSOR LEAD WIRE AND LIMIT WIRING WHICH MUST BE 150°C.
- 4. USE 18 GAUGE WIRE FOR ALL LOW VOLTAGE WIRING ON THE UNIT OR FOLLOW CHART ABOVE
- LINE AND FAN MOTOR BRANCH WIRE SIZES SHOULD BE OF A SIZE TO PREVENT VOLTAGE DROPS BEYOND 5% OF SUPPLY LINE VOLTAGE.
- 6. GROUND WIRE IS USED ONLY ON MODEL 64 UNITS.





