

SECTION 2. INSTALLATION

2-1. INTRODUCTION

This section provides the installation instructions for the electric and gas models of Henny Penny Pressure Fryers.

NOTICE

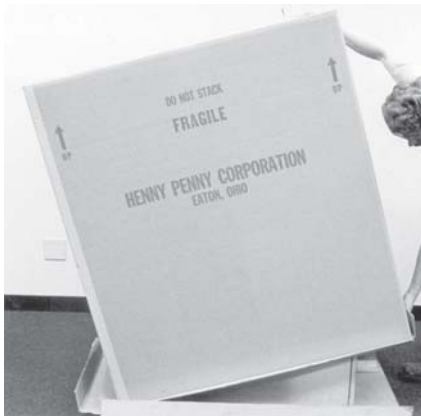
Installation of this unit should be performed only by a qualified service technician.



Do not puncture the fryer with any objects such as drills or screws as electrical shock or component damage could result.

2-2. UNPACKING INSTRUCTIONS

The fryer is shipped bolted to a wooden base and covered with a cardboard container. Both gas and electric models are shipped completely assembled. If ordered, optional casters are packaged and shipped separately.



Step 2

1. Cut the band from around the bottom of the carton.

NOTICE

Any shipping damage should be noted in the presence of the delivery agent and signed prior to his or her departure.

2. Lift the carton from the fryer.

3. Open the lid of the fryer and remove the basket plus all accessories.

4. Lay the fryer on its side, resting it in supports.



Take care when moving the fryer to prevent personal injury. The fryer weighs approximately 300 lbs. (136 kgs).



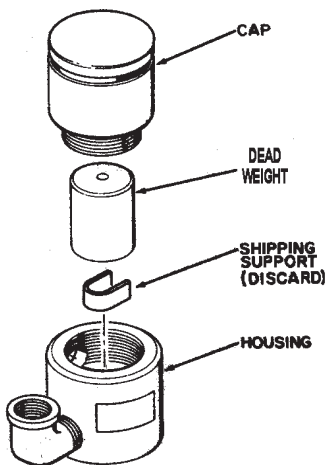
Step 4

2-2. UNPACKING **INSTRUCTIONS (Continued)**

Cap



Step 8



5. Remove the four leg bolts from the wooden shipping base. Remove and discard the wooden base.
6. Thread the shipping bolts back into the legs to provide leveling adjustment feet. If ordered, install casters into the legs, with the locking casters in front.
7. Place fryer in an upright position.
8. Prepare the deadweight assembly for operation:

NOTICE

The metal shipping support is placed within the deadweight assembly housing to protect the deadweight orifice and deadweight during shipment. This support must be removed prior to installation and start-up.

- a. Unscrew the deadweight cap.
 - b. Remove the round deadweight.
 - c. Remove and discard the shipping support.
 - d. Clean the deadweight orifice with a dry cloth.
 - e. Replace the deadweight and secure the deadweight cap.
9. Open lid and remove packing and racks from inside of frypot.
 10. Remove the protective paper from the fryer cabinet.
It is necessary to clean exterior surface with a damp cloth.

2-3. SELECTING THE FRYER LOCATION

The proper location of the fryer is very important for operation, speed, and convenience. Choose a location which will provide easy loading and unloading without interfering with the final assembly of food orders. Operators have found that frying from raw to finish, and holding the product in a warmer provides fast continuous service. Landing or dumping tables should be provided next to at least one side of the fryer. Keep in mind the best efficiency will be obtained by a straight line operation, i.e., raw in one side and finish out the other side. Order assembly can be moved away with only a slight loss of efficiency. To properly service the fryer, 24 inches (60.96 cm) of clearance is needed on all sides of the fryer. Access for servicing can be attained by removing a side panel. Also, at least 6 inches (15.24 cm) around the base of the gas units is needed for proper air supply to the combustion chamber.



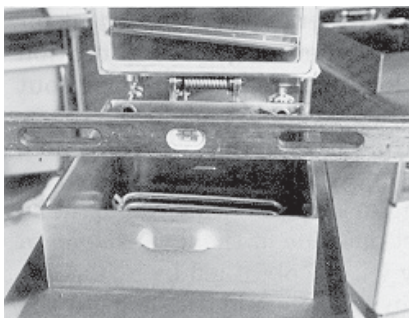
To avoid a fire, install the gas fryer with minimum clearance from all combustible and noncombustible materials, 6 inches (15.24 cm) from side and 6 inches (15.24 cm) from back. If installed properly, the gas fryer is designed for operation on combustible floors and adjacent to combustible walls.

To avoid fire and ruined supplies, the area under the fryer should not be used to store supplies.



To prevent severe burns from splashing hot shortening, position and install fryer to prevent tipping or movement. Restraining ties may be used for stabilization.

2-4. LEVELING THE FRYER



For proper operation, level the fryer from side to side and front to back, using level on the flat areas around the frypot collar.



FAILURE TO FOLLOW THESE LEVELING INSTRUCTIONS CAN RESULT IN SHORTENING OVERFLOWING THE FRYPOT WHICH COULD CAUSE SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE.

2-5. VENTILATION OF FRYER

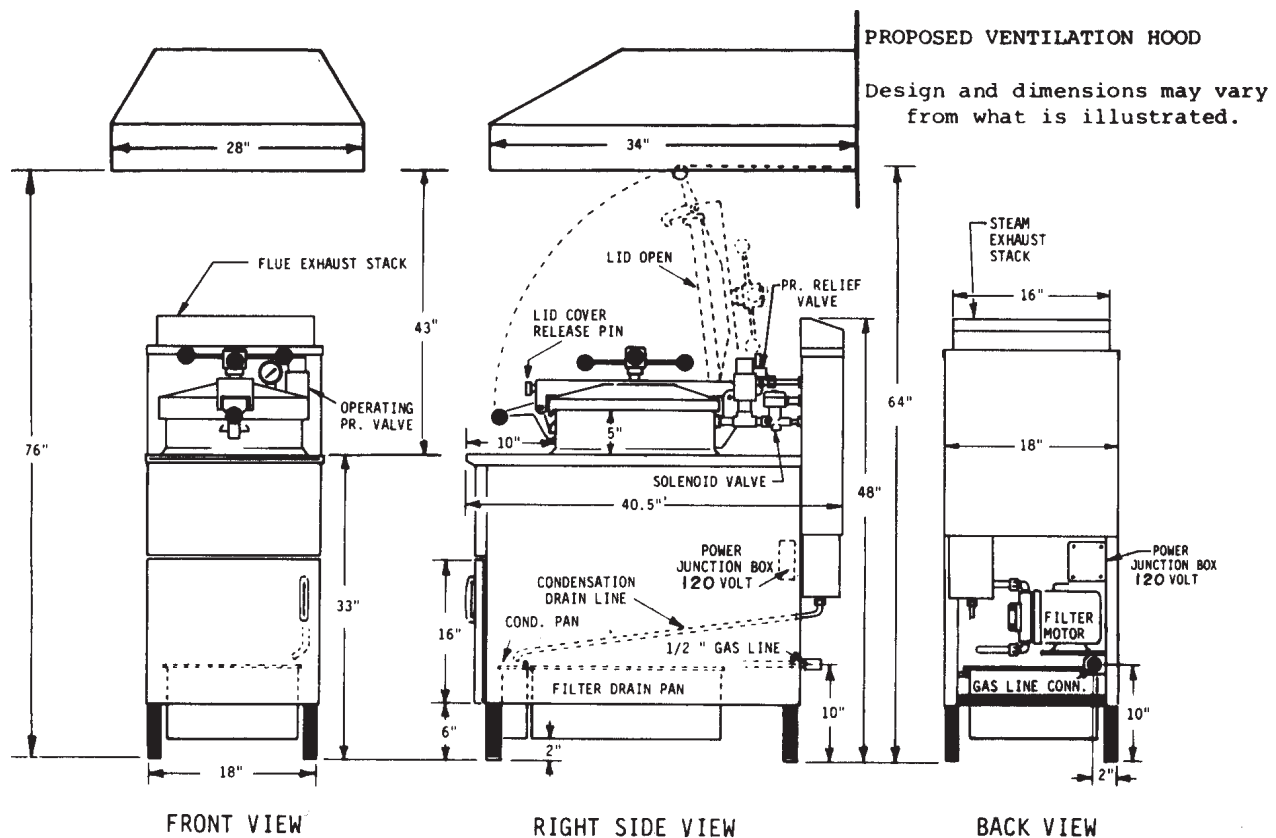
The fryer must be located with provision for venting into adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the flue gases and frying odors. Special precaution must be taken in designing an exhaust canopy to avoid interference with the operation of the fryer. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTICE

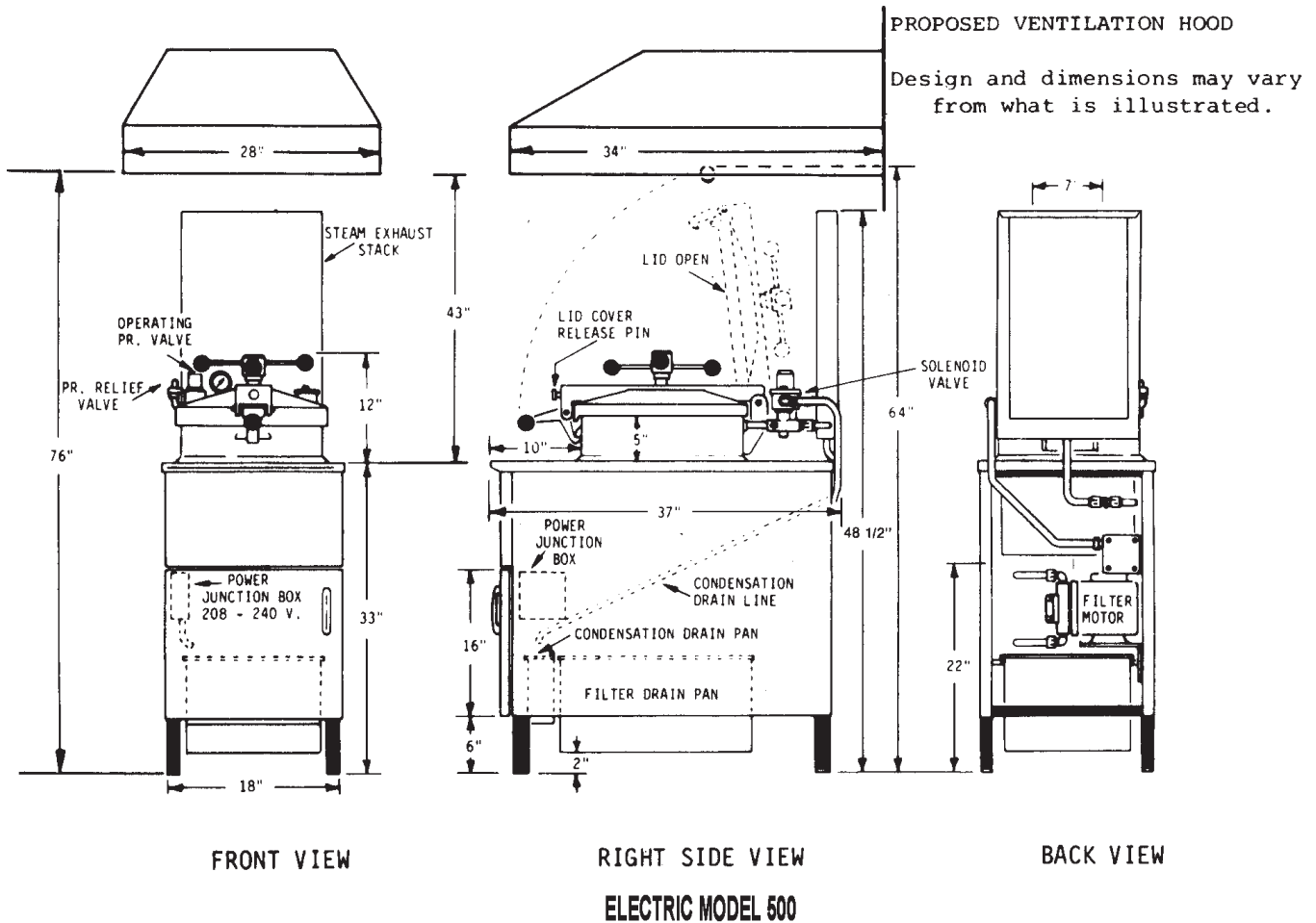
Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.

CAUTION

When installing the gas fryer do not attach an extension to the gas flue exhaust stack. This may impair proper operation of the burner, causing malfunctions and possible negative backdraft.



GAS MODEL 600



2-6. GAS SUPPLY

The gas fryer is factory available for either natural or propane gas. Check the data plate on the right side panel of the cabinet to determine the proper gas supply requirements. The minimum supply for natural gas is 7 inches water column (1.7 kPa), and 10 inches water column (2.49 kPa) for propane. Maximum gas supply is 14 inches water column (3.49 kPa, or .5 psi).



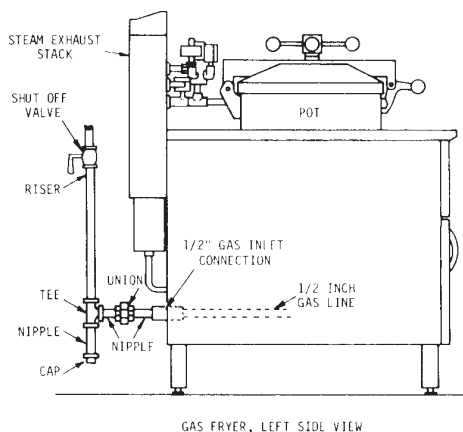
Do not attempt to use any gas other than that specified on the data plate. Conversion kits can be installed by your distributor if required. Incorrect gas supply could cause an explosion or fire resulting in severe injuries and/or property damage.

2-7. GAS PIPING

Please refer below for the recommended hookup of the fryer to main gas line supply.



To avoid possible serious personal injury:



- **Installation must conform with American National Standard Z223.1-Latest Edition National Fuel Gas Code and the local municipal building codes. In Canada, installation must be in accordance with Standard CSA B149-1&2, Installation Codes Gas Burning Appliances and local codes. In Australia, installation must conform to Australian requirements.**
- **The fryer and its manual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45 kPa) (34.47 mbar).**
- **The fryer must be isolated from the gas supply piping system by closing its manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig. (3.45 kPa) (34.47 mbar).**
- **A standard 1/2 inch, black steel pipe and malleable fittings should be used for gas service connections.**
- **Do not use cast iron fittings.**
- **Although 1/2 inch size pipe is recommended, piping should be of adequate size and installed to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the fryer. The pressure loss in the piping system should not exceed 0.3 inch water column (0.747 mbar).**

Provisions should be made for moving the fryer for cleaning and servicing. This may be accomplished by:

1. Installing a manual gas shutoff valve and a disconnect union, or
2. Installing a heavy duty design A.G.A. certified connector which complies with the Standard for Connectors for Moveable Gas Appliances, ANSI Z21.6, or CAN/CSA 6.16 with a quick disconnect coupling

2-7. GAS PIPING
(Continued)

(Henny Penny Part No. 19921), which complies with ANSI standard Z21.41, or CAN 1-6.9. Also adequate means must be provided to limit the movement of the fryer without depending on the connector and quick-disconnect device or its associated piping to limit the fryer movement.

3. See the illustration on following page for the proper connections of the flexible gas line and cable restraint.

NOTICE

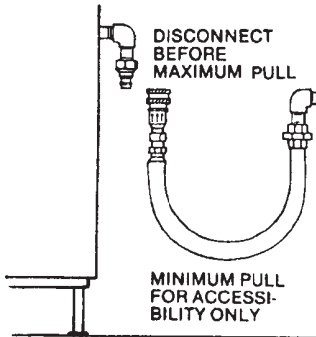
The cable restraint limits the distance the fryer can be pulled from the wall. For cleaning and servicing the fryer, the cable must be unsnapped from the unit and the flexible gas line disconnected. This will allow better access to all sides of the fryer. The gas line and cable restraint must be reconnected once the cleaning and servicing is complete.

2-7. GAS PIPING (Continued)

GAS PIPING

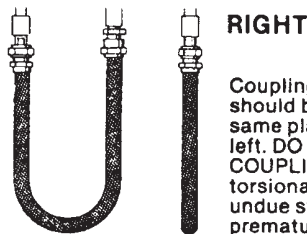
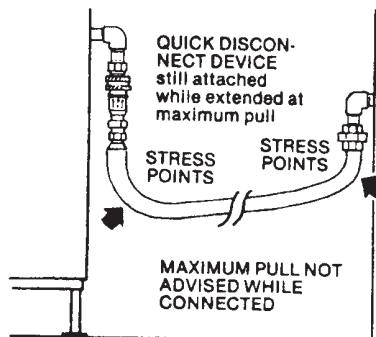
RIGHT

MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device.

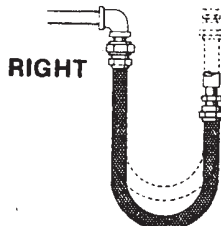
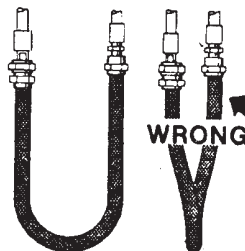


WRONG

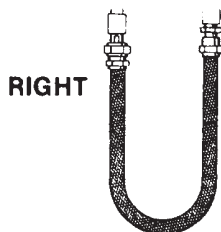
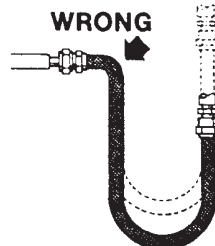
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)



RIGHT
Couplings and hose should be installed in the same plane as shown at left. **DO NOT OFFSET COUPLINGS**—this causes torsional twisting and undue strain causing premature failure.

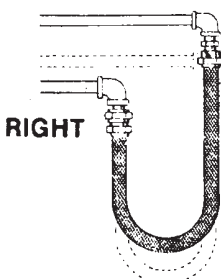


This is the correct way to install metal hose for vertical traverse. Note the single, natural loop. Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.



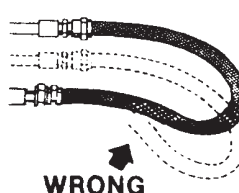
Maintain the minimum or larger bending diameter between the couplings for longest life.

Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.



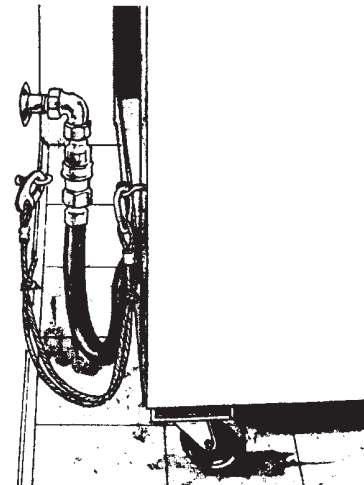
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

DO NOT CONNECT METAL HOSE HORIZONTALLY... unless "self-draining" is necessary, then use support on lower plane as shown at left.



CABLE RESTRAINT

Please refer to the illustration below when installing cable restraint on all moveable gas fryers.



I-bolt is to be secured to the building using acceptable building construction practices.

CAUTION

DRY WALL CONSTRUCTION

Secure I-bolt to a building stud. Do not attach to dry wall only. Also, locate the I-bolt at the same height as the gas service. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible gas line.

CAUTION

Utilize elbows when necessary to avoid sharp kinks or excessive bending. For ease of movement, install with a "lazy" loop. Gas appliance must be disconnected prior to maximum movement. (Minimum movement is permissible for hose disconnection).

2.8 GAS LEAK TEST

NOTICE

Prior to turning the gas supply on, be sure the gas valve knob on the gas control valve is in the OFF position.

After the piping and fittings have been installed, check for gas leaks. A simple checking method is to turn on the gas and brush all connections with a soap solution. If bubbles occur, it indicates escaping gas. In this event, the piping connection must be redone.



To avoid fire or explosion, never use a lighted match or open flame to test for gas leaks. Ignited gas could result in severe personal injury and/or property damage.

2-9. GAS PRESSURE REGULATOR SETTING

The gas pressure regulator on the automatic gas valve is factory set as follows:

Natural: 3.5 inches water column (0.87 kPa)

Propane: 10.0 inches water column (2.49 kPa)

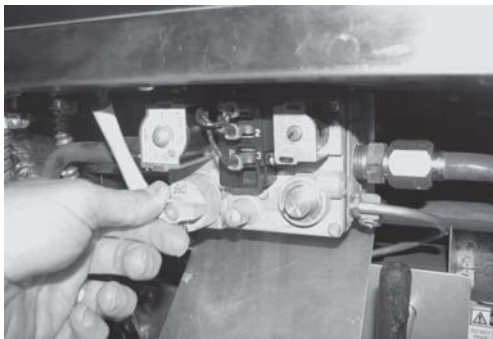
NOTICE

The gas pressure regulator has been set by Henny Penny and is not to be adjusted by the user.

2-10. GAS PILOT & BURNER LIGHTING AND SHUTDOWN PROCEDURE


Lighting Procedure - Solid State Ignition

1. The frypot should be cleaned per the instructions in Section 3.
2. The frypot must be filled to the proper level with shortening. Refer to Filling or Adding Shortening Section.
3. Turn main power switch to OFF position.
4. Turn the gas valve knob counterclockwise to the OFF position. (OFF pointed down)
5. Wait a sufficient length of time (at least 5 minutes) to allow any gas which may have accumulated in the burner compartment to escape
6. Turn the gas valve knob clockwise to the ON position. (ON pointed down)



Step 4

2-10. GAS PILOT & BURNER
LIGHTING AND
SHUTDOWN
PROCEDURE (Continued)

7. Turn main power switch to ON position.
8. Wait about 45 seconds for the burner to light.
9. Listen for the gas burner ignition.
 - It will be an audible sound due to the gas igniting at the gas jets within the burner.
10. The burner lights and operates until the shortening temperature reaches a preset temperature, and  lights.

CAUTION

Do not leave the burner on for more than 10 seconds without shortening in the frypot or damage to the frypot may result.

Shutdown Procedure

1. Turn main power switch to OFF position.
2. Turn the gas valve knob counterclockwise to the OFF position.

2-11. PILOT FLAME
ADJUSTMENT

The pilot flame is preset at the factory. If adjustment is necessary, contact your local independent Henny Penny distributor.

2-12. PRESSURE
REGULATOR
ADJUSTMENT
(GAS ONLY)

The gas regulator is preset at the factory at 3.5 inch water column (0.87 kPa) for natural gas (10.0 inch (2.49 kPa) for propane). If adjustment is necessary, contact your local independent Henny Penny distributor.

2-13. ELECTRICAL **REQUIREMENTS** **(ELECTRIC FRYER)**

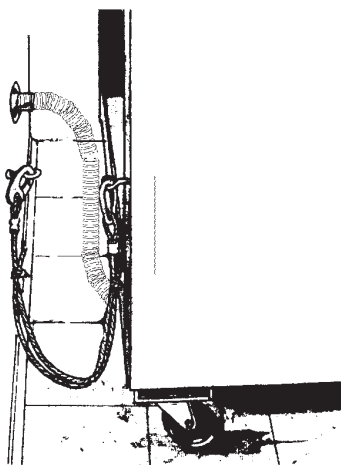
The electric fryer is available from the factory wired for 208, 220/240, or 440/480 volts, single or three phase, 60 Hertz service. The proper power service cable must be ordered as an accessory or provided at installation. Check the data plate on the inside of the fryer door to determine the correct power supply.



This fryer must be adequately and safely grounded (earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1, and/or local codes.

To avoid electrical shock, this appliance must be equipped with an external circuit breaker which will disconnect all ungrounded (unearthed) conductors. The main power switch on this appliance does not disconnect all line conductors.

CABLE RESTRAINT



I-bolt is to be secured to the building using acceptable building construction practices.

CAUTION

DRYWALL CONSTRUCTION
Secure I-bolt to a building stud. Do not attach to drywall only. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible conduit.

The field supply wiring to the fryer should be of the size indicated in the data table. It should be an insulated copper conductor rated for 600 volts and 90°C. For runs longer than 50 feet (15.24 m), use the next larger size wire.

NOTICE

Permanently connected electric fryers with casters must be installed with flexible conduit and a cable restraint, when installed in the United States. See illustration at left. Holes are available in the rear fryer frame for securing the cable restraint to the fryer. The cable restraint does not prevent the fryer from tipping.

Data Table
Supply Wiring and Fusing for Electric Fryer

Volts	Phase	KW	Amps	Supply Wire Size	Min. Fuse Size
208	Single	11.25	54	6	90
208	Single	13.50	65	4	100
208	Three	11.25	31	10	50
208	Three	13.50	38	8	60
240	Single	11.25	47	6	80
240	Single	13.50	56	6	90
240	Three	11.25	27	10	45
240	Three	13.50	33	8	50
480	Three	11.25	14	14	25
480	Three	13.50	16	14	25

2-14. ELECTRICAL REQUIREMENTS (GAS FRYER)

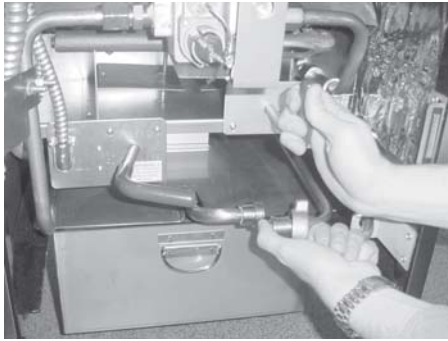
The gas fryer requires 120-volt, single-phase, 60-Hertz, 10-amp, 3-wire grounded (earthed) service, or 230-volt, single-phase, 50-Hz, 5 amp, 1 phase service. The 120-volt gas fryer is factory equipped with a grounded (earthed) cord and plug for your protection against shock, and should be plugged into a three prong grounded (earthed) receptacle. Do not cut or remove grounding (earthing) prong. A wiring diagram is located behind the right side panel, and can be accessed by removing the side panel. The 230-volt plug must conform to all local, state, and national codes.



Do not disconnect the ground (earth) plug. This fryer **MUST** be adequately and safely grounded (earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1, and/or local codes.

To avoid electrical shock, this appliance must be equipped with an external circuit breaker which will disconnect all ungrounded (unearthed) conductors. The main power switch on this appliance does **not** disconnect all line conductors.

2-15. CHECKING THE FILTER PUMP



Step 4

Use the following testing procedure on new or cold fryers.

1. Open the front door of the fryer.
2. Loosen the filter union connection.
3. Turn the main power switch to the PUMP position.
Open the filter valve. You will hear the electric motor running.

CAUTION

Only run the pump for a few seconds or damage to the pump could result.

4. Place your thumb over the open filter union flare. You should feel suction. Close the filter valve. Turn off the pump.

2-16. MOTOR BEARINGS

The electric motor bearings are permanently lubricated. **DO NOT LUBRICATE.**

This completes the testing cycle. If any of the functions did not occur, recheck the installation. If a problem persists, refer to other sections of this manual or call an authorized Henny Penny distributor.

2-17. OPERATIONAL CHECKS

1. Check to see that the indicator needle in the pressure gauge is reading in the Operating Zone.
 - If pressure does not build, contact your local Henny Penny service office.
2. Check the drain valve and filter valve for leaks.
3. At the end of cook cycle:
 - The timer will sound.
 - The fryer automatically depressurizes.