



CUSTOM PASTA SYSTEM® GAS SERIES 2009

MANUAL

■ IMPORTANT:

THIS MANUAL PROVIDES SPECIFIC OPERATING INSTRUCTIONS FOR YOUR MODEL. USE THE KEATING CUSTOM PASTA® SYSTEM ONLY AS INSTRUCTED IN THIS MANUAL.

KEEP A COPY OF YOUR BILL OF SALE.

The date on the bill establishes the warranty period should service be required. If service is performed, it is in your interest to obtain and keep all receipts.

KEEP THIS MANUAL FOR TRAINING NEW PERSONNEL.

Record the Serial number and Model number of this Custom Pasta System® in the spaces provided. **Keep these numbers for future reference.**

SERIAL NUMBER

MODEL NUMBER

Keating Custom Pasta System® is not intended for household use.

As continuous product improvement occurs, specifications may be changed without notice.

1-800-KEATING | keatingofchicago.com

NOTE:

PURCHASER SHOULD POST IN A PROMINENT LOCATION INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING THE LOCAL GAS SUPPLIER.



⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.



FOR YOUR SAFETY:

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

⚠ WARNING

IF NOT INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, THIS PRODUCT COULD EXPOSE YOU TO SUBSTANCES IN FUEL OR IN FUEL COMBUSTION WHICH CAN CAUSE DEATH OR SERIOUS ILLNESS AND WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

⚠ WARNING

PROPANE GAS MAY EVENTUALLY LOSE ITS ODOR AND PRECAUTIONS SHOULD BE TAKEN TO ASSURE THAT PROPANE GAS IS NOT PRESENT EVEN THOUGH YOU DO NOT DETECT AN ODOR. IF THERE IS ANY DOUBT, YOU SHOULD CALL YOUR LOCAL PROPANE GAS SUPPLIER FOR ASSISTANCE.

THE EQUIPMENT IS TO BE INSTALLED TO COMPLY WITH THE BASIC PLUMBING CODE OF THE BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL, INC. (BOCA) AND THE FOOD SERVICE SANITATION MANUAL OF THE FOOD AND DRUG ADMINISTRATION (FDA).



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■ INTRODUCTION

Instructions in this manual should be read thoroughly before attempting to operate this Keating Gas Pasta Cooker. All installation and service on Keating equipment must be performed by qualified, certified, licensed and/or authorized installation or service personnel.

Operating information for Keating equipment has been prepared for use by qualified and/or authorized personnel.

Keating equipment is made in the USA and has American sizes of hardware. All metric conversions are approximate.

■ INSTALLATION INSTRUCTIONS

Proper installation will assure top performance. Alterations of any kind to your equipment will void the warranty. Before uncrating, check equipment carefully for damage.

IF EQUIPMENT ARRIVES DAMAGED

Keating does not assume responsibility for loss or damage incurred in transit.

IMPORTANT

This merchandise has been thoroughly inspected and carefully packed before leaving our plant. Responsibility for its safe delivery was assumed by the carrier at the time of shipment. Claims for loss or damage to the contents should, therefore, be made upon the carrier, as follows:

CONCEALED LOSS OR DAMAGE

Concealed loss or damage means loss or damage which does not become apparent until the merchandise has been unpacked. The contents may be damaged in transit due to rough handling even though

the carton may not show external damage. When the damage is discovered upon unpacking, make a written request for inspection by the carrier's agent within fifteen days of the delivery date. Then file a claim with the carrier since such damage is the carrier's responsibility. By following these instructions carefully, we guarantee our full support of your claims to protect you against loss from concealed damage.

VISIBLE LOSS OR DAMAGE

Any external evidence of loss or damage must be noted on the freight bill or express receipt, and signed by the carrier's agent. Failure to adequately describe such external evidence of loss or damage may result in the carrier refusing to honor a damage claim. The form required to file such a claim will be supplied by the carrier.

DO NOT RETURN DAMAGED MERCHANDISE TO KEATING. FILE YOUR CLAIM AS STATED ABOVE.

Keating's Custom Pasta System is designed to give maximum production efficiency, delivering high quality food products. The following design features are incorporated in Keating's Custom Pasta System®.

STANDARD FEATURES

- Highly polished stainless steel vessel
- Highly polished stainless steel front
- Highly polished stainless steel heat transfer tubes
- Highly polished stainless steel thermostat bulb
- Highly polished stainless steel Hi-Limit sensor
- Grid screen over heat transfer tubes
- Automatic water fill with manual override
- Water solenoid and indicating light
- Starch overflow
- Two electronic timers
- Low water safety shut off
- 1" full port front drain valve on 14; 1-1/4" for 18 and larger
- High temperature limit control with manual reset
- Patented accurate temperature control system $\pm 2^{\circ}\text{F}$
- Ideal 35" working height
- 100% safety pilot shut-off
- 3/4" gas connection on single Pasta System
- One pair of perforated split baskets or one bulk basket
- Patented dual thermostat system
- Indicating lights for pilot and secondary thermostat on

STANDARD ACCESSORIES

- Keating Klenzer Sample
- Drain clean out rod
- Sensor Cleaning Brush

STANDARD PASTA SYSTEMS

- Sizes 14 to 24
- Water capacity 5-1/2 to 19 gallons
- 24 Pasta System can cook 6 lbs. of dry pasta per load up to 110 lbs. per hour
- ETL Certified
- ETL Sanitation Certified
- NSF Certified

MODEL VARIATIONS

Basket-Lift Model: Basket-Lift Model Pasta Systems come with all the same features as the standard models. The Basket-Lift mechanism lowers the baskets of food into the water when the timer button is pressed and raises the baskets when the cooking cycle is complete. Split baskets are required for these models.

SAFETY PRECAUTIONS

⚠ WARNING

THIS SYMBOL WARNS YOU THAT SERIOUS BURNS OR OTHER INJURIES MAY RESULT IF SAFETY INSTRUCTIONS ARE NOT FOLLOWED.

- This service manual should be retained in a safe place for future reference. The installation of your new Pasta System must conform to local codes or in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54 (latest edition), Natural Gas Installation Code CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2.
- Your ventilation hood, when installed, must conform to the current ANSI/NFPA 96 standard (latest edition).
- No frame or restriction shall be constructed around the Pasta System that will restrict air movement into the Pasta System's combustion area or prevent proper ventilation.
- Keating Pasta Systems are designed to operate on the gas fuel specified on the serial plate and must not be operated with another gas fuel. They cannot be converted to another gas fuel by turning or engaging a switch.

⚠ WARNING

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY APPLIANCE.



You will post, in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained from your local gas supplier.

IMPORTANT: IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNIT AT MAIN SHUT-OFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR EMERGENCY SERVICE.

- Suitable for installation on non-combustible floors.
- You must maintain this appliance free and clear from combustibles.
- You must maintain the following minimum clearances from combustible and non-combustible construction:

MINIMUM CLEARANCE

CONSTRUCTION CLEARANCES		
	COMBUSTIBLE	NON-COMBUSTIBLE
BACK	6"	0"
RIGHT SIDE	6"	0"
LEFT SIDE	6"	0"

SUITABLE FOR NON-COMBUSTIBLE FLOORS

- Adequate clearance for servicing and proper operation must be maintained. Your Pasta Cooker is designed to be serviced from the front.
- Keating commercial Pasta Systems are not intended for household use.
- ALWAYS instruct new employees on proper Pasta System operation.
- ALWAYS turn Pasta System off each night.
- ALWAYS disconnect fuel source before servicing.
- NEVER use a Pasta System with cooking oil.
- NEVER leave a Pasta System unattended during operation.
- NEVER move a Pasta System with any hot water in it.
- NEVER introduce objects or liquids into Pasta System, while operational, which are not designed or made for cooking.
- THIS PASTA COOKER MAY NOT BE ALTERED, MODIFIED OR CHANGED IN ANY WAY.

The State of California enacted the California Safe drinking water and Toxic Enforcement Act of 1986, (Prop. 65), which “prohibits any person in the course of doing business from knowingly and intentionally exposing any individual to a chemical known to the State of California to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individuals.” The Governor’s Scientific Advisory Panel added carbon monoxide to the list of hazardous chemicals known to cause reproductive harm.

In order to establish full compliance with Proposition 65, we attached a yellow warning label to each gas fired Pasta System manufactured by Keating of Chicago, Inc.

Carbon monoxide would not be present in concentrations that would pose a “significant risk” to the consumer when the equipment is installed, operated and maintained as follows:

- Installed in accordance with all local codes, or in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54 (latest edition). Natural Gas Installation CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2.
- Installed under a properly designed operating exhaust hood.
- Connected to the type of gas for which the appliance is manufactured.
- Pressure regulator is installed in the appliance and adjusted for the manifold pressure marked on the serial plate.
- If the inlet gas pressure exceeds 6" WC for natural gas and 12" WC for Propane, an in-line pressure regulator is required. In-line pressure regulators are not supplied by Keating. They are to be provided and installed by others as directed by local codes.
- Adequate air supply to the appliance.
- The equipment is operated in the manner intended using the proper utensils.
- Keep the equipment clean and have it checked periodically.
- Burner air adjustments, mechanical maintenance and repairs must be performed by qualified service personnel.

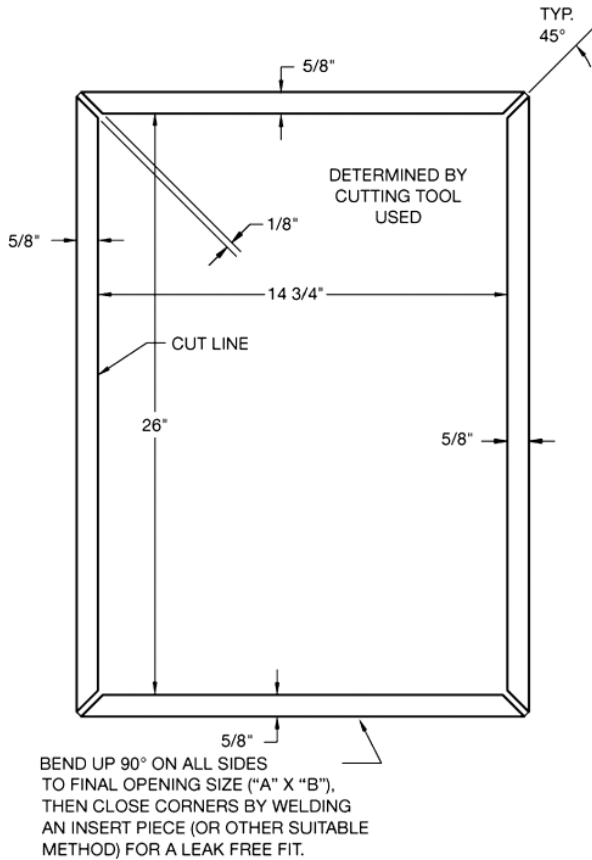
⚠WARNING

IF THE EQUIPMENT IS NOT INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE ABOVE, CONCENTRATIONS OF CARBON MONOXIDE IN EXCESS OF THE ESTABLISHED LIMITS COULD BE PRESENT IN THE KITCHEN ENVIRONMENT.

ALL PERSONNEL IN THE WORK PLACE WHO MAY BE SUBJECT TO ANY EXPOSURE OF CARBON MONOXIDE MUST BE WARNED OF SUCH POSSIBLE EXPOSURE. THIS WARNING SHOULD BE CONVEYED IN A MANNER SO THAT IT IS CLEARLY UNDERSTOOD BY THE EMPLOYEE, AND THE EMPLOYEE SHOULD BE ASKED IF IN FACT HE OR SHE UNDERSTANDS THE CORRECT METHOD OF OPERATION OF THE EQUIPMENT AND THAT A RISK OF EXPOSURE EXISTS IF THE EQUIPMENT IS OPERATED IMPROPERLY.

FIRST STEPS

DROP-IN PASTA COUNTER CUTOUT/INSTALLATION



INSTALLATION NOTES

1. Minimum of 130 sq. in. unobstructed vent area near pasta cooker required for combustion.
2. All Drop-In Pasta must be 16" from any open flame.
3. Pasta must be located no more than 5" from counter top front.
4. Cabinet must be reinforced to support full weight of Pasta in use (Pasta, water, food, etc.).
5. Pasta cooker must be properly ventilated and located under an exhaust hood.

DROPPING THE PASTA COOKER INTO THE COUNTER TOP

It is only necessary to place the Pasta Cooker in such a position that the front edge overlaps the front raised edge of the opening.

Push the Pasta Cooker forward as far as it will go holding the unit on approximately a 15° angle, and then drop the rear of the pasta cooker into its proper position lowering it down gently so you do not deform the table or equipment stand.

POSITIONING

The pasta cooker must be no closer than 6" from any combustible material. When placed under an exhaust hood with a fire retardant system it must comply with ANSI/UL 507-(Latest Edition) and ANSI/NFPA 96-(Latest Edition). No frame or restriction can be constructed around the lower part of the pasta cooker that would restrict ventilation or air movement into the pasta cooker. You must insure adequate air supply to the pasta cooker. **ALL** connections and placement must comply with local and national codes. It is the responsibility of the owner and local installer to comply with these regulations when installing the Pasta System.

MINIMUM CLEARANCE

CONSTRUCTION CLEARANCES		
	COMBUSTIBLE	NON-COMBUSTIBLE
BACK	6"	0"
RIGHT SIDE	6"	0"
LEFT SIDE	6"	0"

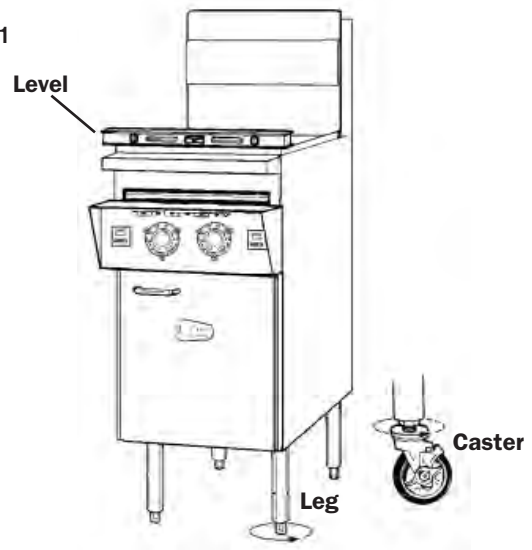
SUITABLE FOR NON-COMBUSTIBLE FLOORS

Adequate clearance for servicing and proper operation must be maintained. Your pasta cooker is designed to be serviced from the front. Do not place a pasta cooker next to a deep fat fryer. Hot oil and water can cause an unstable condition creating a hazardous situation. The pasta cooker will operate at highest efficiency when properly leveled.

Counter model and floor model Pasta System cookers **must be restrained to prevent tipping** when installed in order to avoid splashing, spilling, etc. of hot liquid. The restraining method may be a manner of installation or by separate means.

LEVELING

Figure 1



The Pasta System will operate at its highest efficiency when properly leveled. Place a level on Pasta System vessel from side to side. For Pasta Systems on legs, the bottom foot of the leg is adjustable. Turn counter clockwise to increase height or clockwise to decrease height until level. For Pasta Systems on casters, the casters are adjustable by loosening the jam nut and turning the caster in or out. When the desired level is reached, tighten the jam nut. Adjustments of more than 3/4" are not recommended on any caster. The same procedure should be followed to level the Pasta System from front to back.

RESTRAINING DEVICES



1. On Pasta System installations with casters, casters and jam nuts must be completely tightened. Adequate means must also be provided to limit the movement of the appliance without depending on the connector, the quick-disconnect device or its associated piping to limit the appliance movement.

2. Connectors must comply with ANSI Z21.69/CAN1 CAN/CGA 6.16 (latest edition) for connectors for movable gas appliances. Quick-disconnect devices must comply with ANSI Z21.41/CAN 1 6.9 (or latest edition) standard for quick-disconnect devices for use with gas fuel as applicable.

WARNING

IF DISCONNECTION OF THE RESTRAINT IS NECESSARY, IT MUST BE RECONNECTED WHEN THE KEATING GAS PASTA IS RETURNED TO ITS ORIGINALLY INSTALLED POSITION.

SPECIFICATIONS

MODELS	TOTAL NO. BURNERS	WATER CAPACITY	GAS FUEL INPUT (BTU/hr) **	
			NAT	LP
14 PASTA	3	5.5 gal.	109K	109K
18 PASTA	4	8.5 gal.	135K	90K
20 PASTA	4	13.5 gal.	135K	90K
24 PASTA	5	19.0 gal.	165K	145K

SUPPLY PIPE SIZES

MODELS	Single Pasta System Supply Pipe Sizes (For various pipe lengths)				
	6'	12'	18'	24'	30'
14 PASTA	3/4"	3/4"	3/4"	1"	1"
18 PASTA	3/4"	3/4"	1"	1"	1"
20 PASTA	3/4"	3/4"	1"	1"	1"
24 PASTA	1"	1"	1"	1"	1"

NOTE: The pipe size table shown is predicated on the fact that this is the sole supply line for a single Pasta System. If multiple Pasta Systems are to be connected, consult your local gas utility for the proper gas pipe size.

NOTE: Fuel ratings for propane gas Pasta System cookers in the U.S. may differ from natural gas models. In Canada, propane ratings are the same as U.S. natural gas ratings.

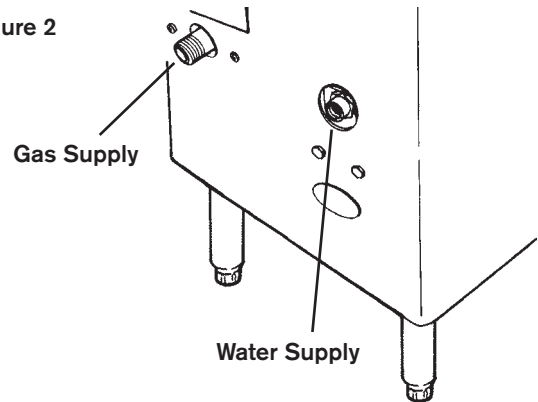
NOTE: Roughly half of all service calls result from inadequate gas supply. Do not use pipe sizes smaller than recommended in the SUPPLY PIPE SIZES table.

GAS CONNECTION

WARNING

- **HAVE YOUR PLUMBER OR GAS COMPANY CHECK FOR LEAKS.**
- **PIPE JOINT COMPOUNDS RESISTANT TO PROPANE GASES MUST BE USED.**
- **BEFORE OPERATING THIS PASTA SYSTEM, CHECK PIPE JOINTS FOR LEAKS BY USING A SOAP AND WATER SOLUTION OR SNIFFER ONLY. DO NOT USE AN OPEN FLAME!**

Figure 2



FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

In a prominent location, post instructions to be followed in the event the user smells gas. This information shall be obtained from your local gas supplier.

Connect the Pasta System to the main gas supply line at the rear of the Pasta System. See figure 2 above.

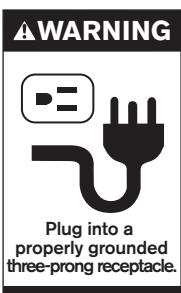
The piping should be a minimum of 3/4" NPT supply pipe for a single Pasta System at the burner manifold. Batteries require larger supply lines. Installation must conform with local codes, or in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54, Natural Gas Installation Code CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2.

A 3/4" IPS manual gas valve is shipped with each single Pasta System for field installation. Batteries have a factory installed manual gas valve for each Pasta System. The required gas pressure for proper operation of each Pasta System is 4" water column (WC) for natural gas and 10" water column (WC) for Propane gas at the burner manifold. Remove the allen head test plug on the gas valve and using a manometer to check pressure.

If the inlet gas pressure exceeds 7" WC for natural gas and 11" WC for Propane, an in-line pressure regulator is required. In-line pressure regulators are not supplied by Keating. They are to be provided and installed by others as directed by local codes.

NOTE: If more than one gas Pasta System is on the same supply line, you may require a larger line. Consult your local gas company to assure adequate volume and pressure. Refer to serial plate for proper gas requirements for your particular model.

ELECTRICAL CONNECTION



The Keating Custom Pasta Gas System is equipped with a 9' neoprene covered, 3 wire electrical cord with a three-pronged grounded plug for protection against electrical shock. This plug must be placed into a 120V properly grounded three-pronged outlet (NEMA 5-15 or 5-20). For proper grounding procedures see local codes or, in the absence of local codes, the current

National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.

NOTE: The electrical wiring diagram for the Pasta System is attached to the inside of the Pasta System door. Some of the more common versions are included in the back of this manual.

⚠ WARNING

DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.

GAS LEAK TESTING

1. Make sure all thermostats, switches and safety valves are in the "OFF" position.
2. Turn main supply gas cock (Item 18, page 18) to the "ON" position.
3. Have your plumber or gas company check for leaks with a soap solution or sniffer. (NEVER check with an open flame)
4. Have your plumber or gas company representative light the constant pilot. (Not necessary if your Pasta System has an optional spark ignitor.)

NOTE: It is estimated that half of all service calls made on Keating Pasta Gas Systems result from an inadequate gas supply. During installation, have a gas company representative make certain that the Pasta System is receiving adequate gas pressure and volume.

⚠ WARNING

PROPANE GAS MAY EVENTUALLY LOSE ITS ODOR AND PRECAUTIONS SHOULD BE TAKEN TO ASSURE THAT IT IS NOT PRESENT EVEN THOUGH YOU DO NOT DETECT AN ODOR. IF THERE IS ANY DOUBT, YOU SHOULD CALL YOUR LOCAL PROPANE GAS SUPPLIER FOR ASSISTANCE.

CHECK GAS SUPPLY PRESSURE

Special attention should be given to the supply pressure and gas flow pressure at the supply connection to the Pasta System. The nominal gas should be 4" WC for natural gas and 10" WC for propane gas.

If the supply pressure is lower or higher than the rated (nominal) pressure, then the reason should be investigated and the gas supplier contacted.

If the supply is lower than 2 1/2" WC or higher than 7" WC for natural gas or lower than 9" WC or higher than 12" WC for propane gas, then the Pasta System should be shut down and a service company or supplier notified. No adjustments should be made and the Pasta System should not be operated.

ONLY BY CERTIFIED PROFESSIONAL:

1. Turn off main gas supply valve.
2. Remove pressure measuring stud screw located at the "out-flow" (closest to gas burner) of the gas valve and attach a manometer.
3. Remove cover screw from the gas valve pressure adjustment valve.
4. Open main gas supply valve and start Pasta System according to instructions with the thermostat set at 190°F (87.8°C).
5. Once the Pasta System is in operation, adjust pressure valve to 4" WC for natural gas and 10" WC for propane gas.
6. Turn Pasta System off, close main gas supply valve, remove manometer and tighten cover screw into pressure measuring stud.

SPECIAL NOTICES

The Pasta System should be operated only in an area that has good air circulation.

The Pasta System must be installed under an electrically powered ventilating hood.

The operator should be properly trained to the functioning of the Pasta System.

This instruction manual should be supplied to the operator.

Constructional changes to the area where the Pasta System is installed shall not affect the air supply to the Pasta System. The installation, start-up and changes required when changing from one gas type to another can be performed only by a certified professional.

The Pasta System is intended only for commercial use and is to be operated only by professionals.

It is required that the Pasta System is regularly inspected for proper function. The frequency of inspections are dependent of the Pasta System usage, however it should be performed at least once a day.

After adjustment or service work the Pasta System has to be checked for gas leaks.

NOTE: After conversions, readjustments or service work, the Pasta System has to be tested for proper functioning. Basically the following applies:

CALIBRATION

For Calibration refer to page 12 – Calibration.

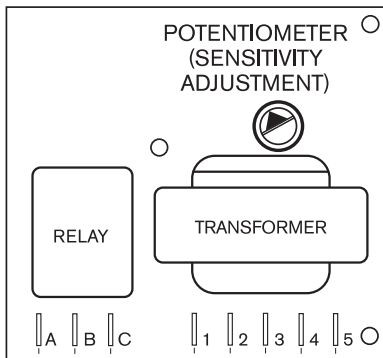
NOTE: Calibration is not covered under warranty.

SETTING WATER LEVEL CONTROL BOARDS

To ensure the proper function of Keating's Custom Pasta System, the following steps must be taken:

As water quality varies from location to location, each new pasta cooker's automatic water fill board (B board) and safety board (A board) must be adjusted upon installation.

A or B Board



A Board Adjustment -

Keating's Custom Pasta System has a safety shut off feature to shut down the unit automatically when the water level becomes low. Use the following steps to properly set this feature:

1. Fill the unit to the "FILL LINE" with water.
2. Rotate potentiometer clockwise as far as possible.

NOTE: The potentiometer does not rotate 360°.

3. Ensure unit will heat properly (see OPERATING in manual).

4. Slowly drain water.

NOTE: If unit does not shut down when water level is below the lower sensor (approximately at the top of heat tubes/elements), the following must be done:

5. Slowly rotate the potentiometer counter-clockwise until the unit shuts down.
6. Close drain valve. Repeat steps 1, 3 and 4.

B Board Adjustment (For Auto-Fill Units only) -

Auto-fill units automatically replenish the pasta cooker with water when water is absorbed in food and lost in the form of steam. Use the following steps to properly set this feature:

1. Fill the unit to the "FILL LINE" with water.
2. Rotate potentiometer clockwise as far as possible.
3. Slowly drain the water until level is visibly below the "FILL LINE".

NOTE: If the blue light does not come on and the unit does not begin to refill with water, the following must be done:

4. Slowly rotate the potentiometer counter-clockwise until the blue light comes on.
5. Close drain valve.
6. Ensure water stops filling when level is at the "FILL LINE" (a slight turn of the potentiometer clockwise may be necessary).

WATER AND DRAIN CONNECTIONS

The water supply connection, located at the bottom rear of the Pasta System and marked water inlet, is a standard 3/8" female pipe connection. The water pressure should be between 20 - 60 psi. If the pressure exceeds 60 psi, a pressure regulator must be used. The water temperature must not exceed 150°F (65.6°C). Hot or warm water is not needed due to the instant recovery of the Pasta System; however, it's use is not detrimental.

CAUTION

CONNECTIONS SUITABLE FOR HOT WATER MUST BE USED. ALL CONNECTIONS MUST BE TESTED FOR LEAKS BEFORE USING THE PASTA SYSTEM.

NOTE: For Pasta Systems with casters, flexible hose must be used to avoid leaking when the Pasta System is moved for cleaning.

If during operation the boil is killed when water automatically enters the Pasta System, turn the water pressure down until water is added without killing the boil.

The drain terminates within inches of the floor and is designed for the standard dump to drain opening. In most cases, the health department will not allow a direct connection between the Pasta System drain and the floor receptacle. Contact your local health department for specific information in your area.

⚠ WARNING

IT MAY BE NECESSARY TO INSTALL A BACK FLOW PROTECTOR OR CHECK VALVE ON THE WATER SUPPLY LINE TO THE PASTA SYSTEM. CHECK WITH EITHER YOUR LOCAL WATER OR HEALTH DEPARTMENT TO DETERMINE IF THIS IS NECESSARY IN YOUR SPECIFIC AREA.

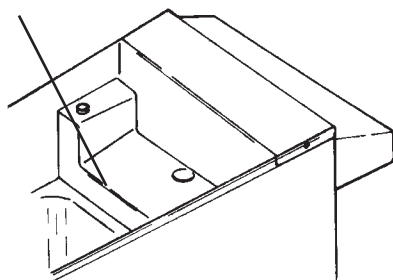
■ OPERATING

FILLING

NOTE: Before filling the Pasta System make certain the vessel is sanitized, dry and the drain valve is completely closed.

Figure 3

Manual Water Fill Level



When the water fill toggle switch (located between the green and blue indicating lights) is turned on, the Pasta System vessel automatically will be filled to the proper level. If the vessel is being manually filled with water from a faucet or through the manual fill button, fill to just below the overflow deck. The black manual fill button is located to the right of the blue water fill indicating light.

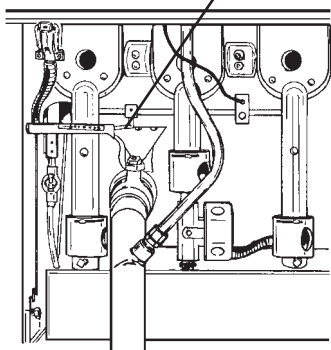
LIGHTING

In the event of a power failure, check to see if constant pilot is still burning before resuming operation. If not, wait five minutes to allow any accumulated gas to escape and then re-light the constant pilot.

Figure 4

Lighting Controls

Constant Pilot Location



1. Open the main supply gas cock.
2. Turn “On” main power On/Off switch (located between the amber and green indicating lights).
3. Light the constant pilot (located next to left burner as you face it). If your Pasta System has an optional spark ignitor, omit this step.
4. Activate pilot light momentary switch (left top corner) and hold about 30 seconds, releasing it after pilot indicating light is illuminated. If the runner pilot tube fails to stay lit, wait five minutes before attempting to relight to allow any accumulated gas to escape.
5. Set the primary (left) thermostat to 212°F (100°C) and the secondary (right) thermostat to 190°F (87.8°C) or less. Setting the secondary thermostat above 190°F (87.8°C) could allow the Pasta System to boil over or short cycle.

INDICATING LIGHTS

- Amber—shows the runner pilot is lit.
- Green—shows the secondary (right) thermostat is calling for heat from the center burner(s).
- Blue—shows water is filling into the Pasta System vessel through the Pasta System water solenoid valve.

NOTE: The black manual water fill button is located to the right of the blue indicating light. This may be used to add water manually by depressing.

COOKING

Keating Pasta Gas Systems are designed to provide maximum production efficiency and deliver high quality food products. Low-temperature cooking and highly polished stainless steel mean greater energy savings. Two thermostats are used to provide instant recovery and to save energy while water is boiling. The secondary (right) thermostat calls for additional heat at start up or occasionally when water is added. Follow cooking procedures below for your model.

NOTE: Use of sodium chloride (**salt**) during the cooking process will have a detrimental effect on the cooker tank and will void the warranty.

⚠ WARNING

- **OPERATION OF THIS PASTA SYSTEM SHOULD BE LIMITED TO PERSONNEL WHO HAVE BEEN THOROUGHLY TRAINED IN OPERATING PROCEDURES.**
- **USE ONLY KEATING APPROVED BASKETS IN YOUR PASTA SYSTEM. NEVER OVERFILL BASKETS. DO NOT BANG BASKETS ON BASKET HANGERS OR PASTA SYSTEM VESSEL.**
- **CARE SHOULD BE TAKEN WHEN LOWERING BASKETS INTO PASTA SYSTEM TO PREVENT SPLASHING HOT WATER FROM PASTA SYSTEM VESSEL.**

• **NEVER LIFT BASKETS DIRECTLY OUT OF THE PASTA SYSTEM VESSEL WITHOUT DRAINING AS SEVERE INJURY MAY RESULT.**

NOTE: For counter model Pasta Systems, always check the rear drain operating handle before attempting to use the Pasta System. A safety switch prevents the Pasta System from operating if the handle is not pushed in completely and latched.

A. Standard Pasta System

1. Fill Pasta System as described on page 8 – Filling.
2. Set primary (left) thermostat to 212°F (100°C) and secondary (right) thermostat to 190°F (87.8°C).
3. When the water starts boiling, lower baskets slowly into the hot water.
4. Set timer for left or right side basket, whichever is being lowered into water.
5. When timer sounds, lift basket out of water. Place on basket hanger rods on splashback of Pasta System to allow draining of excess water.

B. Basket-Lift Model

1. Fill Pasta System as described on page 8 – Filling.
2. Set primary (left) thermostat to 212°F (100°C) and secondary (right) thermostat to 190°F (87.8°C).
3. Fill basket(s) to proper level and place on upper basket hanger rods on splashback of Pasta System.
4. Set timers to desired cooking time using T1, T2 or T3. (For Programming Timers see pages 10-11 for 14" BL models & page 11 for all others).
5. When timer sounds, lift basket out of water. Place on basket hanger rods on splashback of Pasta System to allow draining of excess water.
6. When cooking cycle is complete, an audible alarm will sound and the basket(s) will raise automatically. Allow water to drain before removing.

SHUTDOWN

1. Turn main power On/Off switch to “OFF” position.
2. Turn gas supply valve to “OFF” position.
3. Check to make sure all burners and pilots are extinguished.

DRAINING

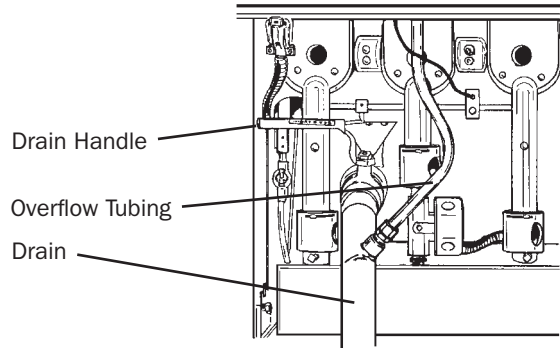
⚠WARNING

ALWAYS SHUT THE PASTA SYSTEM OFF COMPLETELY BEFORE DRAINING. THE PASTA SYSTEM SHOULD BE DRAINED ONLY UNDER THE SUPERVISION OF PROPERLY TRAINED PERSONNEL.

1. Turn off Pasta System and open the door.

Figure 5

Drain, Drain Valve and Overflow Tubing



2. Slowly turn handle. The drain valve will be completely open after 1/4 turn.

CLEANING

When cleaning and boiling out your Pasta System, use white vinegar and Keating Klenzer to keep your Pasta System in top condition. Once your Pasta System vessel is clean, use Keating Klenzer, the finest dry stainless steel polish available, to restore your Keating Gas Pasta System’s exterior to its original luster.

⚠CAUTION

Disconnect electric power source before cleaning.

⚠CAUTION

To avoid damaging the Pasta System, do not power wash, spray or hose it down while cleaning.

1. Operator should be outfitted with proper attire including:
 - Water and heat resistant gloves
 - Water and heat resistant apron
 - Safety goggles
 - Water and heat resistant footwear
2. Turn thermostats to “OFF”.
3. After water cools, drain the water.
4. Turn Pasta System on and fill vessel with water. See page 8 – Filling.

⚠WARNING

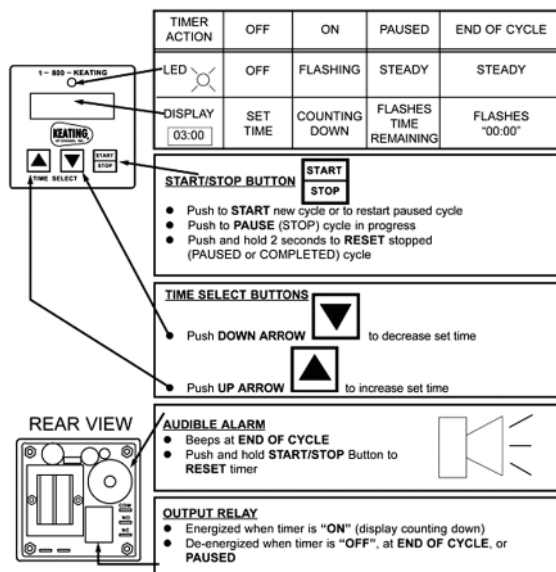
UNDER NO CIRCUMSTANCES SHOULD THE PASTA SYSTEM BE LEFT UNATTENDED DURING BOIL-OUT. TRAINED PERSONNEL MUST BE PRESENT DURING THE PROCEDURE TO PREVENT BOIL OVER OR TO TURN OFF THE POWER IF WATER DROPS BELOW HEAT TRANSFER TUBES.

5. Set left thermostat temperature to bring water to a gentle boil.
6. Once boil has been reached, turn Pasta System off.
7. Dissolve 3 cups of vinegar for every five gallons of water and let soak for one hour. If there is a large build-up of scale, allow Pasta System to soak overnight.
8. While soaking, a natural fiber brush may be used to scrub the tubes and inside walls of Pasta System vessel.
9. Drain the water and vinegar.
10. Spread Keating Klenzer liberally on tubes and sides of Pasta System vessel.
11. At this point, a non-abrasive scouring pad may be used to remove any leftover scale.
12. Thoroughly rinse Pasta System vessel with potable water to remove all Klenzer.
13. Prior to refilling with water, wipe the inside of the Pasta System vessel making sure all water and Klenzer has been removed.
14. Close drain valve.
15. Refill the Pasta System with fresh water. See page 8 – Filling.

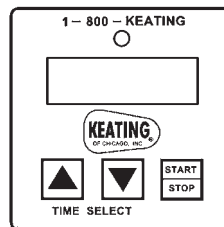
ELECTRONIC TIMERS

The electronic timers, provide a clearly visible and accurate display and are very easy to use.

A. Timer Operation

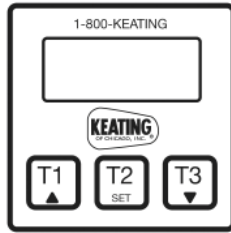


B. How to program the "Keating" Electronic Timer



- The Keating Electronic Timer is programmable to four different timer ranges with two different alarm modes for each time range.
- The timers are shipped from the factory preset to program 5: Minutes : seconds (00:01 to 59:59) with continuous alarm.
- To program another time range or alarm mode perform the following steps:
 1. Turn off the power.
 2. Press the "down arrow" button while turning the power on.
 3. Release the button after the display turns on.
 4. A number from 0 to 7 will appear.
 - 0 = Seconds (000.1 to 999.9) 5 second alarm
 - 1 = Minutes : Seconds (00:01 to 59:59) 5 second alarm
 - 2 = Seconds (0001 to 9999) 5 second alarm
 - 3 = Hours : Minutes (00:01 to 23:59) 5 second alarm
 - 4 = Seconds (000.1 to 999.9) continuous alarm
 - 5 = Minutes : Seconds (00:01 to 59:59) continuous alarm
 - 6 = Seconds (0001 to 9999) continuous alarm
 - 7 = Hours : Minutes (00:01 to 23:59) continuous alarm
- 5. Use the "down arrow" button to select the desired time range.
- 6. Turn off the power.
- 7. Wait 2 seconds.
- 8. Turn on the power. (The timer will remain in the new time range until programmed.)

**ELECTRONIC TIMER OPERATING INSTRUCTIONS
PART # 056921**



DIGITAL TIMERS

The electronic timers, standard on pasta cookers, provide a clearly visible and accurate display and are very easy to use. Three different, independent cook times can be set using this timer - T1, T2, and T3.

PROGRAMMING

To program the timers, the unit must be in the idle mode. Press and hold the set button for approximately two seconds. The display will show "SET". Press T1, T2, or T3 for the cook time to be programmed. The display will show the current setting for that cook time. Use the up or down button to increment or decrement the setting. When the setting is correct, press and hold the set button again for approximately two seconds. The display will show "StO" for approximately two seconds and the timer will return to normal operation. Repeat the process as necessary for the other timers.

OPERATING LOGIC

When the timer is powered up, the display will show the time setting for the cook time that was operated last and the relay output contacts will be open. To start a cycle, press the desired cook time button (T1, T2, T3). The display will begin to countdown from the preset time setting and the relay output contacts will close. During the countdown the colon will flash at a one-second rate. When the countdown has reached "00:00" the relay output contacts will open, the display will flash, and the audible alarm will sound. To cancel the audible alarm, press any button.

PAUSE FEATURE

To pause a cycle in progress, press any button. The relay output contacts will open, the display will flash, and the countdown will pause. To resume the countdown, press any button. The display will resume the normal countdown and the relay output contacts will close.

CANCELING A CYCLE

To cancel a cycle in progress press and hold any button for approximately two seconds. The relay output contacts will open and the display will show the time setting for the channel last used.

■ PREVENTIVE MAINTENANCE

Preventive maintenance should be done in daily, weekly, monthly and yearly intervals as necessary. The following preventive maintenance procedures will help keep your Pasta System working efficiently. Proper care and servicing will lead to years of quality performance.

NOTE: The most important part of any maintenance program is daily cleaning. Ninety percent of any maintenance problem is directly or indirectly related to cleanliness.

NOTE: Water level problems caused by the sensors not being cleaned adequately will not be covered under warranty.

PREVENTATIVE MAINTENANCE CHART

TIME FRAME	OPERATOR/OWNER
HOURLY	<ul style="list-style-type: none"> • Clean sensor tube with a brush.
AT LEAST DAILY	<ul style="list-style-type: none"> • Check lights and controls. • Check water level. • Clean all baskets.
AT LEAST WEEKLY*	<ul style="list-style-type: none"> • Boil-out Pasta Cooker (2-3 times per week). • Drain and clean Pasta Cooker.
AT LEAST MONTHLY*	<ul style="list-style-type: none"> • Verify thermostat settings (primary and secondary).
TIME FRAME	QUALIFIED SERVICE PERSONNEL
AT LEAST YEARLY*	<ul style="list-style-type: none"> • Disassemble Pasta Cooker to clean burners, orifices and runner pilot tube. • Check and replace radiants. • Align burners.

*High production facilities should be checked more often. Contact the factory or a local service company to perform maintenance and repairs.

NOTE: Use of sodium chloride (**salt**) during the cooking process will have a detrimental effect on the cooker vessel and will void the warranty.

THE WATER AUTO-FILL AND LOW WATER SAFETY SHUT-OFF SYSTEMS

The water supply connection, located at the bottom rear of the Pasta System and marked water, is a standard 3/8" female pipe connection. The water pressure should be between 20-60 psi. If the pressure exceeds 60 psi, a pressure regulator must be used. The water temperature must not exceed 150°F (65.6°C). Hot or warm water is not needed due to the instant recovery of the Pasta System.

▲ CAUTION

Connections suitable for hot water must be used. All connections must be tested for leaks before using the Pasta System.

NOTE: For Pasta Systems with casters, flexible hose must be used to avoid leaking when the Pasta System is moved for cleaning.

Control of the water level is fully automatic with the auto-fill system. The water level is controlled by two circuit boards and two sensors. The sensors are located in the tube on the right side of the overflow deck. The upper sensor controls the water level and the lower sensor controls the low water safety shut-off system. Once the water On/Off switch is turned on, the blue light will come on and start to fill until the water level reaches the upper sensor. The burners will not come on until the water level reaches the lower sensor, preventing the Pasta System from being damaged if there is little or no water in it. Both sensors must be cleaned with the sensor brush (like the one provided) on an hourly basis or whenever starch foams up to maintain the proper water level. Sensors must be cleaned more often in areas with hard water, in installations with softened water (due to the salt in the water) or when oil or salt is placed in the water for cooking.

The brush must be checked on a regular basis and replaced whenever it starts to wear. Replacement brushes can be ordered under part number 009297.

WATER FILL AND SAFETY SHUT-OFF CIRCUIT BOARD AND SENSOR CHECK

When properly maintained, the Automatic Water Fill and Low Water Safety Shut-off Systems maintain the water at the proper level and prevent the burners from coming on if the water level is too low.

⚠ CAUTION

Do not store the sensor brush in the sensor tube as it could contact the sensors, which could allow the water level to drop below the heat tubes and damage the Pasta System.

⚠ CAUTION

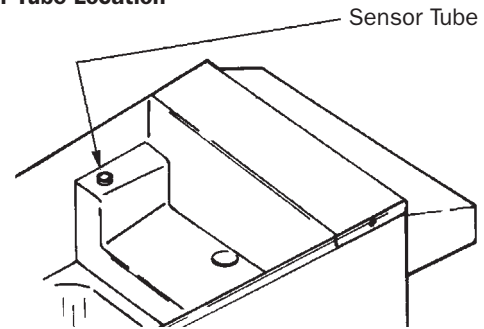
Using a worn brush could damage the sensors.

NOTE: Water level problems caused by the sensors not being cleaned adequately will not be covered under warranty.

⚠ WARNING

WHEN THE WATER LEVEL FALLS BELOW THE LOWER SENSOR THE BURNERS WILL SHUT OFF. IF THEY STAY ON, TURN THE MAIN POWER ON/OFF SWITCH TO THE "OFF" POSITION AND CLEAN THE SENSORS THOROUGHLY. IF THE PROBLEM STILL OCCURS, HAVE THE WATER AUTO-FILL SYSTEM CHECKED BY A QUALIFIED SERVICE TECHNICIAN.

Figure 6
Sensor Tube Location



LIMITED CALIBRATION

(Less than 15° difference)

A. Calibration

Calibration is not covered under warranty.

NOTE: This procedure can only be used with the primary (left side) thermostat. When calibrating the secondary (right side) thermostat.

You will need:

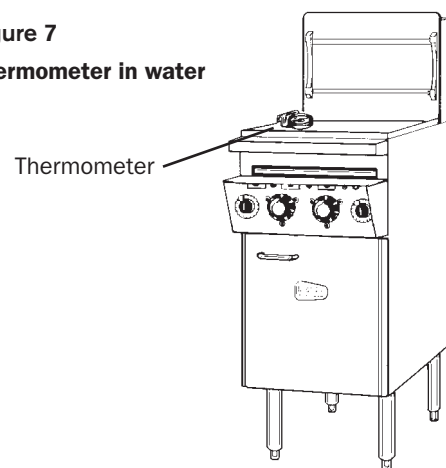
One standard flat blade screwdriver.

One accurate thermometer suitable for boiling water.

NOTE: For best results, water should be clean.

1. Set thermostat to 212°F (190°C).
2. Allow Pasta System to cycle three times.
3. Place an accurate thermometer in the water.

Figure 7
Thermometer in water



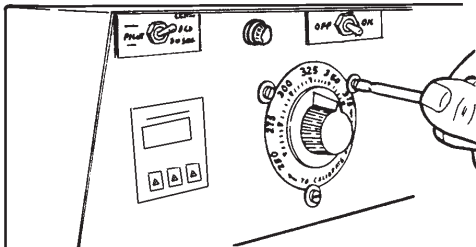
NOTE: Locate thermometer in same position for every calibration. Position near primary thermostat (center) bulb is recommended.

4. Pre-2000 model: If calibration of thermostat is found to be less than 15°F (-9.44°C) off, simply loosen three dial plate retaining screws, rotate dial plate to match thermometer reading and tighten screws.

2000 model: If calibration is found to be less than 15°F (-9.44°C) off, remove thermostat knob. Loosen four screws in thermostat dial plate. Replace knob. Reset dial plate to match thermometer reading. Remove knob to tighten screws on dial plate and replace knob.

If the thermostat is more than 15°F (-9.44°C) off then a qualified service company must be contacted to have the Pasta System properly calibrated.

Figure 8
Thermostat Calibration



SERVICE DIAGNOSIS - GENERAL

- The burners when on will produce clear blue flames directed at the inside walls of the heat transfer tubes. The radiant's fins, located towards the rear of each transfer tube, will glow bright red, helping to ensure optimum heat distribution into the Pasta System vessel. All radiants should be pushed to the rear and then pulled gently forward (until their retaining clips engage the rear of the tubes) for optimum heat distribution.
- On constant pilot models, the pilot light will be between 3/8" to 1/2" high and will use about 180 BTU's of gas per hour.
- The runner pilot tube is used to ignite the burners. Flames from the tube should be clear blue and between 3/8" to 1/2" high spread across the entire tube. The burners will ignite almost instantly after the thermostat calls for heat.

NOTE: Hard water, excessive starch and salt in water may cause water to not fill. Oil in water may cause water to not stop filling.

WARRANTY REPAIRS

Keating's warranty begins with the date of installation. In the event that your Keating Custom Pasta System, under warranty, needs repairs other than routine cleaning, you are requested to contact KEATING OF CHICAGO, INC. (1-800 KEATING).

■ SERVICE DIAGNOSIS

The following diagnosis is only to be used as a guide to qualified service personnel. Keating recommends that you use a qualified & licensed service company. (Equipment still under warranty requires it.)

NOTE: To correctly and quickly diagnose the system, the chart below should be followed in sequential order.

TROUBLE SHOOTING CHART

PROBLEM	PROBABLE CAUSE	SOLUTION
Constant pilot won't light	<ul style="list-style-type: none"> a. Gas isn't turned "ON". b. Clogged constant pilot tubing. c. Constant pilot valve isn't turned on. 	<ul style="list-style-type: none"> a. Turn manual gas valve knob on. If using flexible connector with quick disconnect, make sure quick disconnect is completely engaged. b. Turn Custom Pasta System and manual gas valve off. Clean tubing. c. Turn constant pilot valve on and adjust pilot flame height.
Runner pilot tube won't light	<ul style="list-style-type: none"> a. Gas isn't turned "ON". b. No electricity to Custom Pasta System. c. Clogged runner pilot orifice(s). d. Pilot gas cock is on "OFF" position. e. Gas valve is faulty. f. Hi-Limit has been activated. 	<ul style="list-style-type: none"> a. Turn manual gas valve on. If using flexible connector with quick disconnect, make sure quick disconnect is completely engaged. b. Plug Custom Pasta System into approved outlet. c. Turn custom Pasta System and manual gas valve off. Clean orifice(s) and other parts as necessary. d. Turn pilot gas cock to "ON" position. e. Replace gas valve. f. Push Hi-Limit reset button located under control panel.
Runner pilot tube won't stay lit	<ul style="list-style-type: none"> a. Low gas supply or pressure. b. Dirty runner pilot tube or pilot. c. Low pilot flame height. d. Flame switch is faulty. e. Momentary switch is faulty. f. Exhaust problems or drafts in kitchen. g. Delayed ignition. 	<ul style="list-style-type: none"> a. Verify if size of incoming gas line to Custom Pasta System and manifold gas pressure is adequate. b. Turn Custom Pasta System and manual gas valve orifice(s) off. Clean orifice(s) and pilot tube. c. Verify if size of incoming gas line to Custom Pasta System and manifold gas pressure is adequate. d. If it takes more than 30 seconds for pilot to stay lit, reposition or replace flame switch. e. Replace momentary switch. f. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. g. See diagnosis next page.
Delayed ignition	<ul style="list-style-type: none"> a. Dirty runner pilot tube or pilot. b. Low pilot flame height. c. Exhaust problems or drafts in kitchen. d. Low gas supply or pressure. 	<ul style="list-style-type: none"> a. Turn Custom Pasta System and manual gas valve orifice(s) off. Clean orifice(s) and pilot tube. b. Verify proper incoming gas pressure. c. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. d. Verify if size of incoming gas line to Custom Pasta System and manifold gas pressure is adequate.

PROBLEM	PROBABLE CAUSE	SOLUTION
Flames come out top of flue	<ul style="list-style-type: none"> a. Excessive gas supply or pressure. b. Collapsed burner radiants. c. Exhaust problems. 	<ul style="list-style-type: none"> a. Adjust pressure, change burner orifices or install in-line regulator. b. Replace radiants. c. Install or adjust flue restrictors. If problem persists, contact your HVAC representative.
Flames come out front	<ul style="list-style-type: none"> a. Burners misaligned. b. Exhaust problems. c. Radiants have slipped forward. d. Flue blockage. 	<ul style="list-style-type: none"> a. Adjust position of burners. b. Install deflector to block down draft. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. c. Reposition radiants. d. Turn Custom Pasta System and manual gas valve off. Let flue cool and remove foreign objects.
Custom Pasta System has poor recovery	<ul style="list-style-type: none"> a. Baskets overfilled. b. Water won't stop filling or overfills. c. Scale on heat transfer tubes. d. Radiant problem – collapsed or out of position. e. Faulty or erratic thermostat. f. Low supply or gas pressure. g. Exhaust problems. 	<ul style="list-style-type: none"> a. Don't overfill baskets. b. Check water auto-fill system. c. Boil-out Custom Pasta System d. Reposition or replace radiants. e. Replace thermostat. f. Verify if size of incoming gas line to Custom Pasta System and manifold gas pressure are adequate. g. Contact your HVAC representative.
Burners won't come on	<ul style="list-style-type: none"> a. Water level is too low (below lower sensor). b. Low water safety shut-off operated. 	<ul style="list-style-type: none"> a. Check water auto-fill system. Fill Custom Pasta System to proper level. b. Check low-water safety shut-off system.
Custom Pasta System vessel boiling over or excessive starch overflow	<ul style="list-style-type: none"> a. Product overloaded in Custom Pasta System vessel. b. Excessive amounts of starch causing foam. 	<ul style="list-style-type: none"> a. Follow recommended cooking production figures in determining proper size of loads. b. Replace water, then clean sensors and vessel.
Basket-Lift mechanism won't operate	<ul style="list-style-type: none"> a. Connections are loose or timer is faulty. b. Motor limit switch is faulty. c. Lift motor is faulty (14" model). d. Actuator is faulty (18" and above models). e. Control circuit fuse has blown or circuit breaker in rear or under control panel has tripped. f. Relay is faulty (18" and above models). 	<ul style="list-style-type: none"> a. Tighten connections. Replace timer if faulty. b. Replace limit switch (14" model). Replace actuator (18" and above models). c. Replace motor. Specify left or right side motor when ordering. d. Replace actuator. e. Replace fuse (use type SC-5 in 14" model and type SC-3 in 18" and above models) or reset circuit breaker. f. Replace relay.
Basket-Lift motor runs, but basket doesn't move	<ul style="list-style-type: none"> a. Cam is slipping on motor shaft (14" model). 	<ul style="list-style-type: none"> a. Tighten cam screw onto flat on motor shaft.
Basket-Lift basket goes down, but won't go up	<ul style="list-style-type: none"> a. Basket-Lift motor limit switch is misaligned (14" model). 	<ul style="list-style-type: none"> a. Align limit switch.
Basket-Lift buzzer won't shut off	<ul style="list-style-type: none"> a. Buzzer limit switch is misaligned (14" model). 	<ul style="list-style-type: none"> a. Align limit switch.

PROBLEM	SOLUTIONS (FOLLOW SEQUENTIALLY)
Water always filling	a. Clean sensors thoroughly with brush and vinegar. b. Adjust the sensitivity of the B Board (for the top sensor) fully clockwise. c. If filling persists, ground out the top sensor (if filling stops, replace sensor – Part #010212). d. If filling persists after grounding out the sensor, replace the B Board (Part #001166)
Water never fills	a. Turn water switch (far right) 'ON.' b. Clean sensors thoroughly with brush and vinegar. c. Adjust the sensitivity of the B Board (for the top sensor) fully counterclockwise (see page 7 - Setting Water Level Control). d. Remove the wire from the top sensor. If filling begins, replace the sensor (Part #010212). e. If water does not fill, place a jumper wire across terminals A & C on the B Board. If filling begins, replace B Board (Part #001166). f. If water does not fill, replace water solenoid (Part #008133).
Runner bar will not light	a. Remove and clean the flame switch bulb in the runner bar, enabling it to get red hot. b. Reposition flame switch bulb in the runner bar, enabling it to get red hot. c. Replace flame switch (Part #004311 or #037406).
Timers counting down in the wrong mode (Not minutes and seconds)	a. Reset the timer (see instructions on page 10).
Water leaking in the rear of the Custom Pasta System	a. Replace fill hose (Part #033495 – Sold per foot)
Burners won't come on (gas runner bar may be lit)	a. Verify operating instructions in this manual (See pages 7-8). b. Clean the sensors with brush and vinegar. c. Adjust sensitivity of the A Board (for the lower sensor) fully counterclockwise (see page 7 - Setting Water Level Control). d. Place the wire attached to the lower sensor to ground. If heating begins, replace the sensor (Part #010212). e. If heating does not begin, place a jumper wire across terminals A & C on the A Board. If heating begins, replace the A Board (Part #001167).
Unit is out of power	a. Check electrical connection. b. Check fuses. c. Check Hi-Limit control.
Unit is powered, runner bar cannot be started	a. Check gas connection. b. Check the gas valve. c. Check the spark ignition electrode and spark ignition module if there is no spark on the electrode.
Runner tube is starting, but cannot hold the flame	a. Clean flame sensor switch. b. Check electrical connection to the flame switch. c. (spark ignition only) Check spark ignition electrode. d. (spark ignition only) Check electrical grounding.

REPLACEMENT OF A & B BOARDS

1. Locate the wiring diagram. It will help later with connecting wires to the board.
2. Disconnect wires from the board.
3. Unscrew mounting screws. There are three of them per board.
4. Replace the board.
5. Reconnect the wires.
6. Adjust sensitivity.
7. Close the box.
8. Seal the box using silicone and filling all openings and gaps if the box is made out of aluminized material. Rubber sealed box does not need to be sealed.

■ ORDERING PARTS

Parts may be ordered by calling 1-800-KEATING or your local Keating service company. We recommend using genuine Keating Replacement Parts - engineered and manufactured specifically to meet exact specifications and requirements for Keating equipment.

Refer to the Keating Custom Pasta System Limited Warranty for complete service and ordering information.

The model/serial plate is attached to the inside of the front door. The serial and model numbers are necessary when ordering.

NOTE: On the Drop-In Pasta Cooker, the model/serial plate is attached to the top of the control panel.

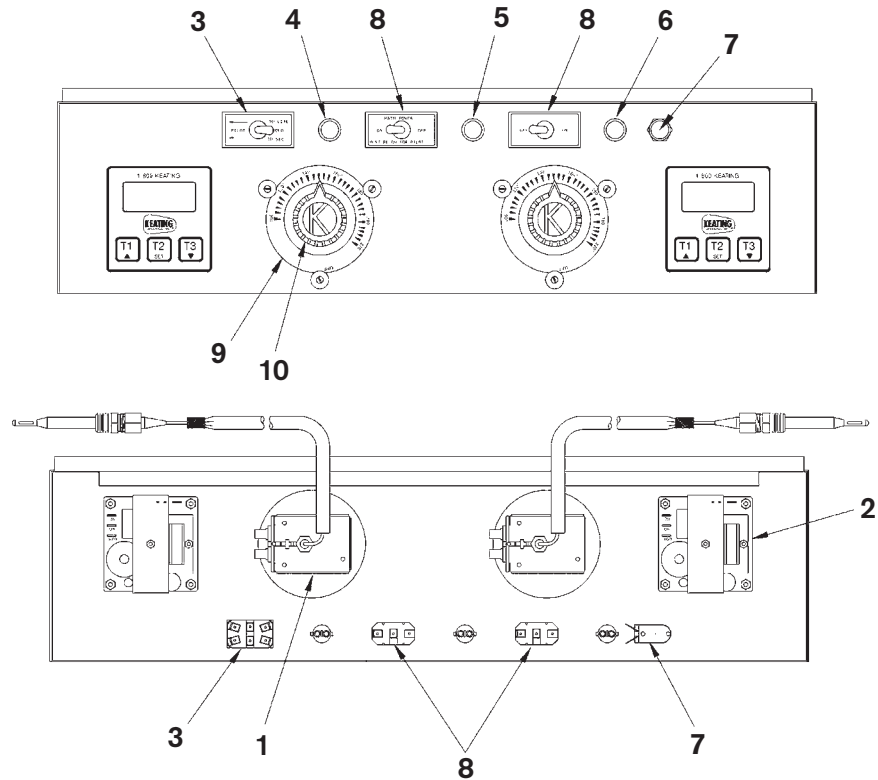
WARNING AND OPERATING PLATES

All warning and operating plates on the Keating Pasta Cooker should be in place at all times.

If plates are damaged or lost, replace them immediately.

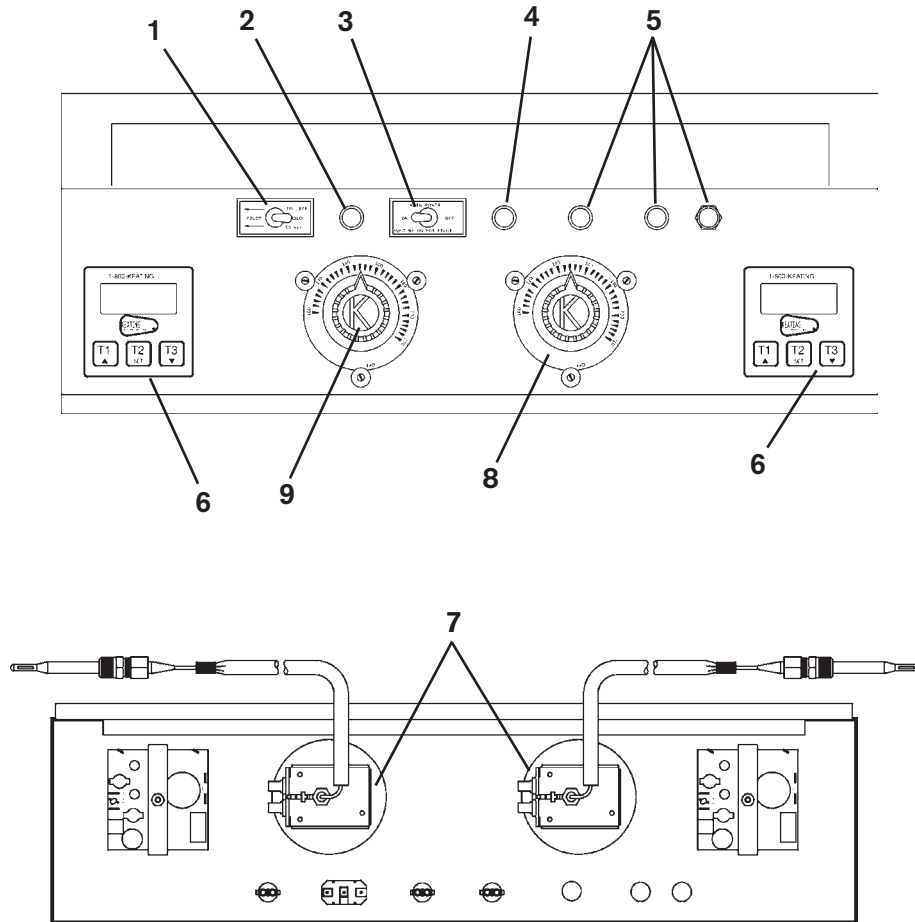
■ PARTS LIST - CUSTOM PASTA SYSTEM®

CONTROL PANEL WITH DIGITAL TIMERS



ITEM	DESCRIPTION	P/N	QTY
1	THERMOSTAT	031466	2
2	DIGITAL TIMER(S)	056921	2
3	TOGGLE SWITCH - PUSH TO LIGHT (MOMENTARY)	004501	1
4	INDICATING LIGHT, AMBER - PILOT ON	031624	1
5	INDICATING LIGHT, GREEN - SECONDARY BURNER ON	009375	1
6	INDICATING LIGHT, BLUE - WATER AUTOMATIC FILLING	009256	1
7	MANUAL FILL SWITCH	004304	1
8	TOGGLE SWITCH - MAIN ON-OFF	004499	2
9	DIAL PLATE	034975	2
10	THERMOSTAT KNOB, BLACK	060612	2
11	FLAME SWITCH (NOT SHOWN)	037406	1
12	LOW WATER SAFETY CONTROL "A" BOARD (NOT SHOWN)	001167	1
13	AUTOMATIC WATER FILL CONTROL "B" BOARD (NOT SHOWN)	001166	1

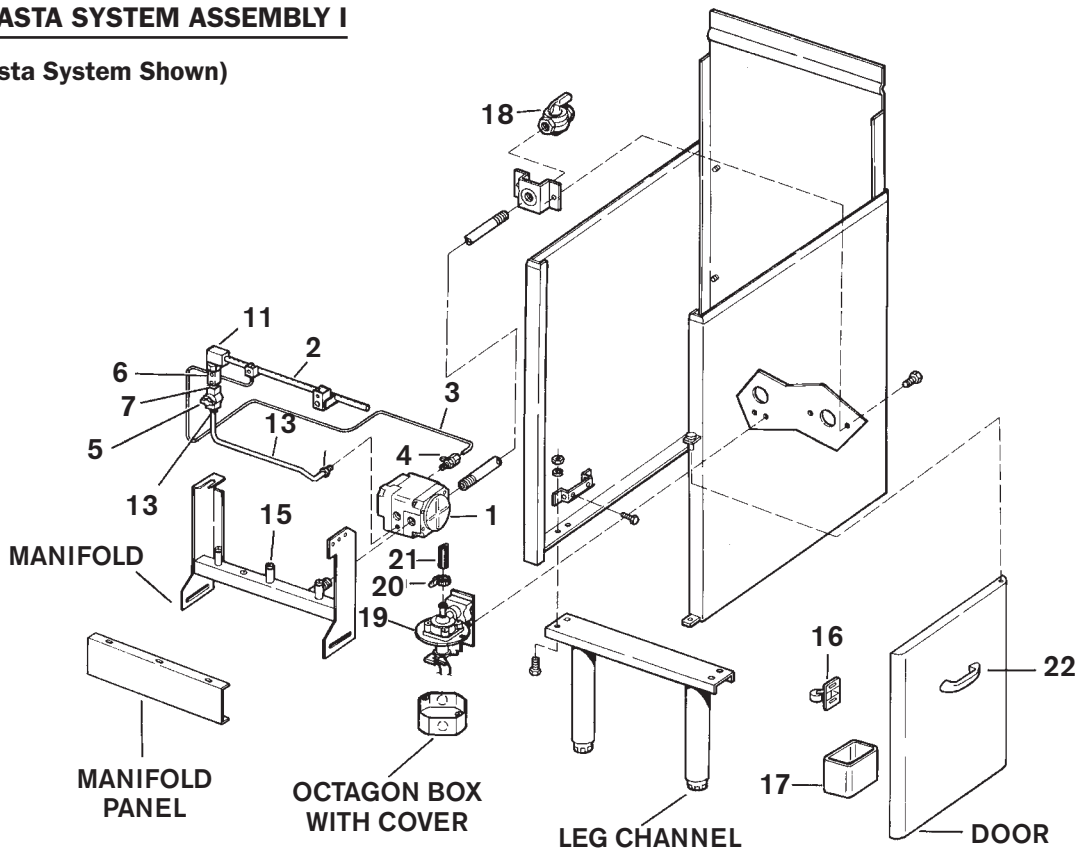
MANUAL FILL CUSTOM PASTA™ SYSTEM CONTROL PANEL WITH DIGITAL TIMERS



ITEM	DESCRIPTION	P/N	QTY
1	TOGGLE SWITCH - PUSH TO LIGHT (MOMENTARY)	004501	1
2	INDICATING LIGHT, AMBER - PILOT ON	031624	1
3	TOGGLE SWITCH - MAIN ON-OFF	004499	1
4	INDICATING LIGHT, GREEN - SECONDARY BURNER ON	009375	1
5	UNUSED	---	3
6	DIGITAL TIMER(S)	056921	2
7	THERMOSTAT	031466	2
8	DIAL PLATE	034975	2
9	THERMOSTAT KNOB, BLACK	060612	2
10	FLAME SWITCH (NOT SHOWN)	037406	1
11	LOW WATER SAFETY CONTROL "A" BOARD (NOT SHOWN)	001167	1
12	AUTOMATIC WATER FILL CONTROL "B" BOARD (NOT SHOWN)	001166	1

GAS PASTA SYSTEM ASSEMBLY I

(14 Pasta System Shown)



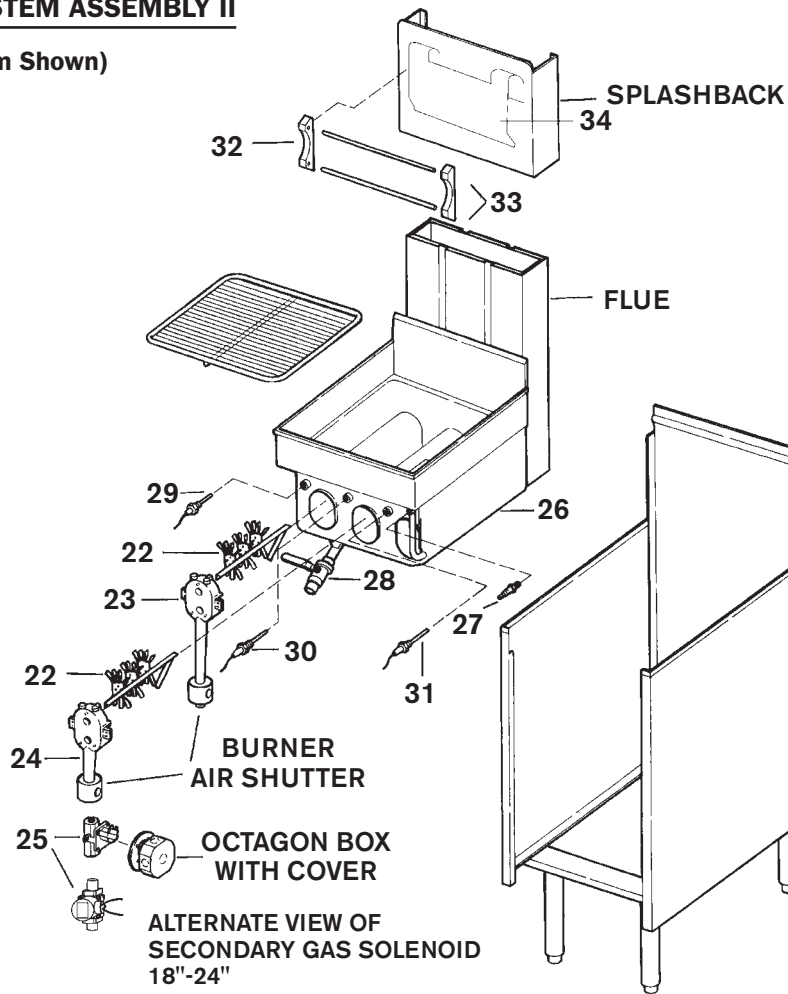
ITEM	DESCRIPTION	MODEL	PART #	Quantity Per Model			
				14	18	20	24
1	GAS VALVE, 120V NATURAL GAS & LP	ALL	038165	1	1	1	1
2	RUNNER PILOT TUBE		SEE BELOW	1	1	1	1
3	CONSTANT PILOT ASSEMBLY	ALL (1.8"x28")	004259	1	1	1	1
4	CONSTANT PILOT VALVE	ALL	004266	1	1	1	1
5	RUNNER PILOT GAS COCK STRAIGHT (W/005743)	ALL	015408	1			
	90°	ALL	004573		1	1	1
6	RUNNER PILOT AIR SHUTTER	NIPPLE W/NUT	015747	1	2	2	2
		CLIP	004090	1	2	2	2
7	RUNNER PILOT ORIFICE	CALL 1-800-KEATING					
8	RUNNER PILOT TEE*	ORIFICE HOLDER	004197		1	1	
9	(not shown)	IN TUBING	006474				1
10	RUNNER PILOT ORIFICE HOLDER*	STRAIGHT	004142		1	1	2
11	RUNNER PILOT 90° ELBOW	(1/4" - 1/8")	015746	1	2	2	2
12	RUNNER PILOT ORIFICE HOLDER*	CM	005742	1			
13	COMPRESSION FITTING		005743	2	1	1	1
	COMPRESSION FITTING	CM	005743	1			
14	FITTING, BRASS		005744		1	1	1
15	BURNER ORIFICE	CALL 1-800-KEATING		3	4	4	5
16	DOOR CATCH, ROLLER STYLE	ALL	004540	1	1	1	1
17	DRIP CUP (INSIDE DOOR)	NO LONGER AVAILABLE					
18	MAIN SUPPLY GAS COCK	3/4", MANUAL	019515	1	1	1	1
19	WATER FILL SOLENOID	ALL	008133	1	1	1	1
20	HOSE CLAMP	ALL	004167	2	2	2	2
21	WATER FILL HOSE	ALL	037390		SOLD PER FOOT		
22	DOOR HANDLE	ALL	004542	1	1	1	1

ITEM	DESCRIPTION	MODEL	14	18	20	24
2	RUNNER PILOT TUBE	CM	017213			
		CONSTANT PILOT	004241	004243	004246	004579
		SPARK IGNITION	005608	029911	030153	037623

* = not shown

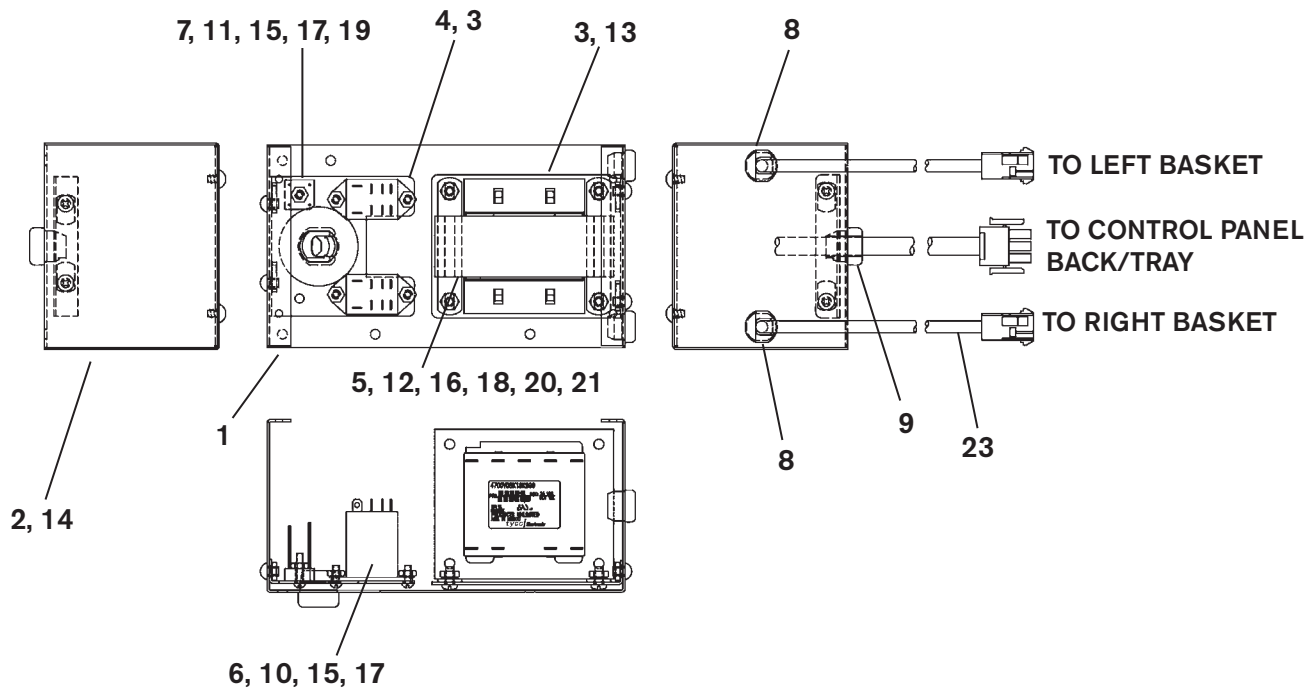
GAS PASTA SYSTEM ASSEMBLY II

(14 Pasta System Shown)



ITEM	DESCRIPTION	MODEL	PART #	14	18	20	24
				Quantity Per Model			
22	RADIANT, 3 - FINS	ALL	000041	3	4	4	5
23	BURNER		008264	2	2	2	3
	BURNER	CM	004088	2			
24	SECONDARY BURNER	ALL	004088	1	2	2	2
25	SECONDARY GAS SOLENOID	14"	059998	1			
		18"-24"	059988		2	2	2
26	PASTA VESSEL	1-800-KEATING		1	1	1	1
27	WATER LEVEL SENSORS	ALL	010212	2	2	2	2
28	DRAIN VALVE, FRONT, 1"		026813	1			
	DRAIN VALVE, REAR, 1"	CM	016341	1			
	DRAIN VALVE, FRONT, 1-1/4"		016346		1	1	1
29	HI-LIMIT CONTROL W/RESET	ALL	1-800-KEATING	1	1	1	1
	BACK MOUNT		034357				
	BOTTOM MOUNT		004341				
30	THERMOSTAT	ALL	SEE PAGE 16				
31	SECONDARY THERMOSTAT	ALL	SEE PAGE 16				
32	BASKET HANGER MOUNTING BLOCK	ALL					
	(Old Style)	LEFT	004539	1	1	1	1
		CENTER	003813		1	1	1
		RIGHT	004538	1	1	1	1
33	BASKET HANGER RODS (Old Style)	ALL	SEE BELOW	2	2	2	2
34	BASKET HANGER (New Style)	ALL	SEE BELOW	1	1	1	1
	BOLT 1/4-20x1/2 SHOULDER W/ FLATS						
	(New Style)	ALL	016782	1	1	1	1
ITEM	DESCRIPTION	MODEL		14	18	20	24
33	BASKET HANGER RODS (Old Style)	2/PASTA		003895	003935	003953	003954
34	BASKET HANGER (New Style)	ALL		018477	018556	018559	018562

BASKET-LIFT POWER SUPPLY BOX 2007 (NON-CPU MODELS)

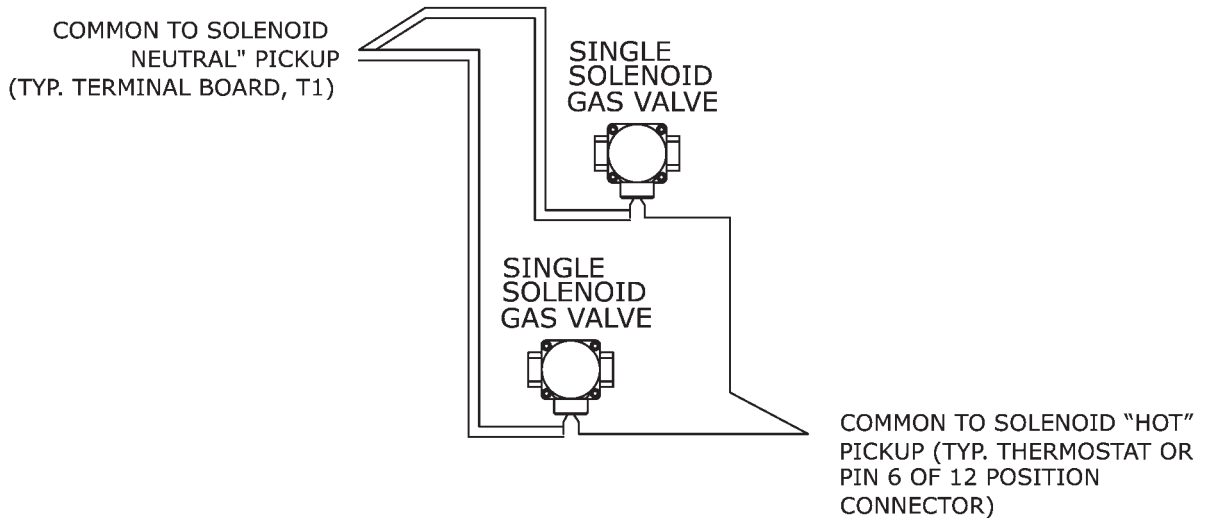


ITEM	DESCRIPTION	P/N	QTY
1	POWER SUPPLY BOX	058694	1
2	COVER POWER SUPPLY BOX	058695	1
3	BRACKET WELDMENT TRANSFORMER	058697	1
4	BRACKET WELDMENT RELAY	056011	1
5	TRANSFORMER STEPDOWN 24VAC 100VA	058359	1
6	RELAY DPDT 24VAC	030844	2
7	RECTIFIER 24VDC	018321	1
8	BUSHING STRAIN RELIEF 5/8" HOLE	000470	2
9	BUSHING STRAIN RELIEF 3/4" HOLE	033800	1
10	SCREW ROUND HEAD # 6 - 32 x 3/8"	017413	4
11	SCREW ROUND HEAD # 6 - 32 x 5/8"	000374	1
12	SCREW PAN HEAD # 8 - 32 X 3/8"	008588	4
13	SCREW ROUND HEAD PHI. # 10 - 24 x 1/4"	034380	4
14	SCREW SHEET METAL PHI. # 10 x 1/4"	000461	4
15	WASHER INTERNAL TOOTH LOCK # 6	014290	5
16	WASHER INTERNAL TOOTH LOCK # 8	016694	4
17	NUT HEX # 6 - 32	000312	5
18	NUT HEX # 8 - 32	000344	4
19	TUBING SHRINK 3/16" (LENGTHS: 4 - 1")	013510	.34"
20	WIRE NUT BLUE (NOT SHOWN)	013118	3
21	WIRE NUT GRAY (NOT SHOWN)	027134	3
22	TIE CABLE 0.093 x 3" (NOT SHOWN)	022296	14
23	WIRE HARNESS (NOT SHOWN)	058701	1

■ WIRING DIAGRAMS

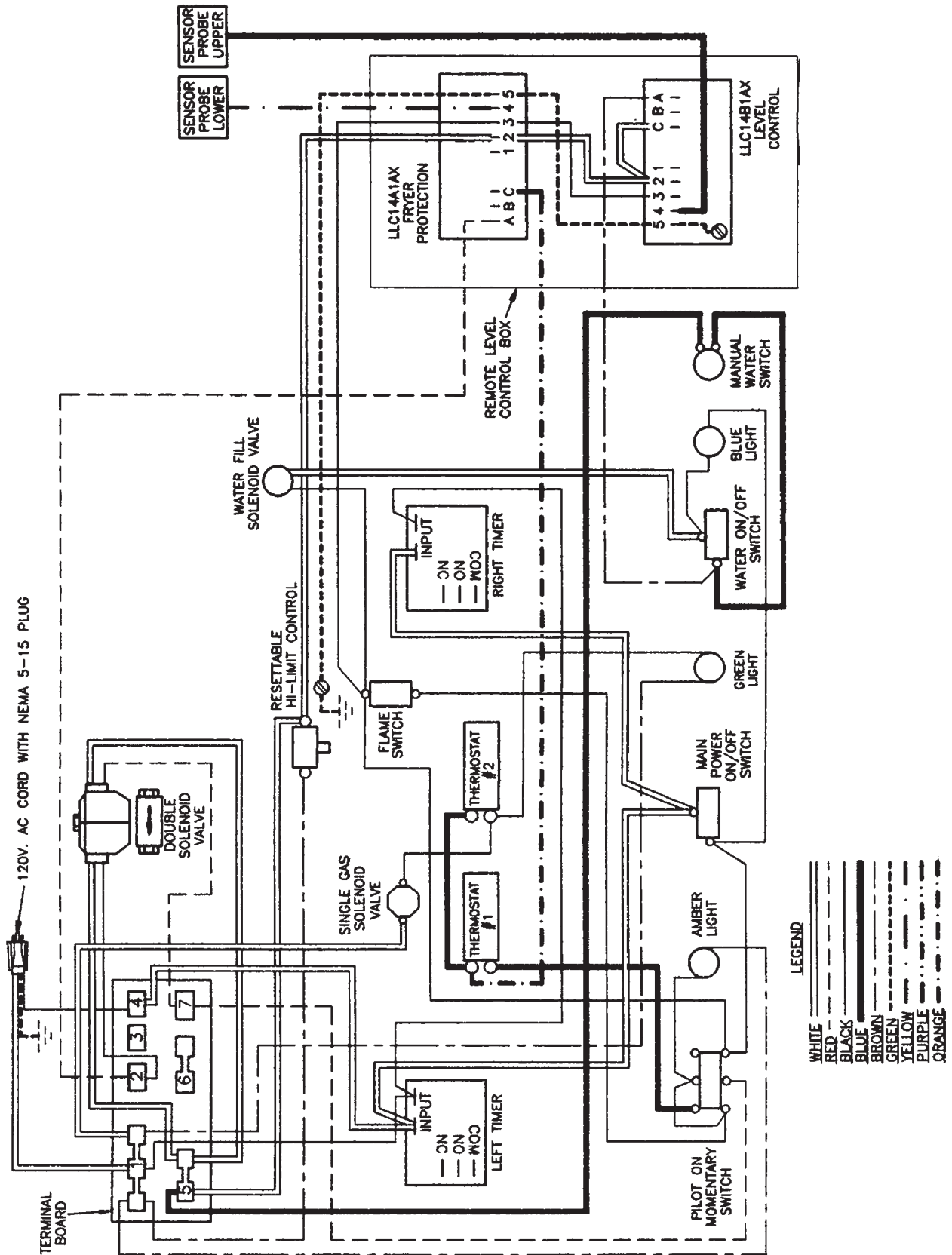
NEW WIRING DETAIL FOR 18"-24" PASTA COOKERS - PART NUMBER 059988

New 18", 20" and 24" Pasta Cookers may have a different set of Single Solenoid Gas Valves installed. These valves no longer use the octagon electrical box attached to it.

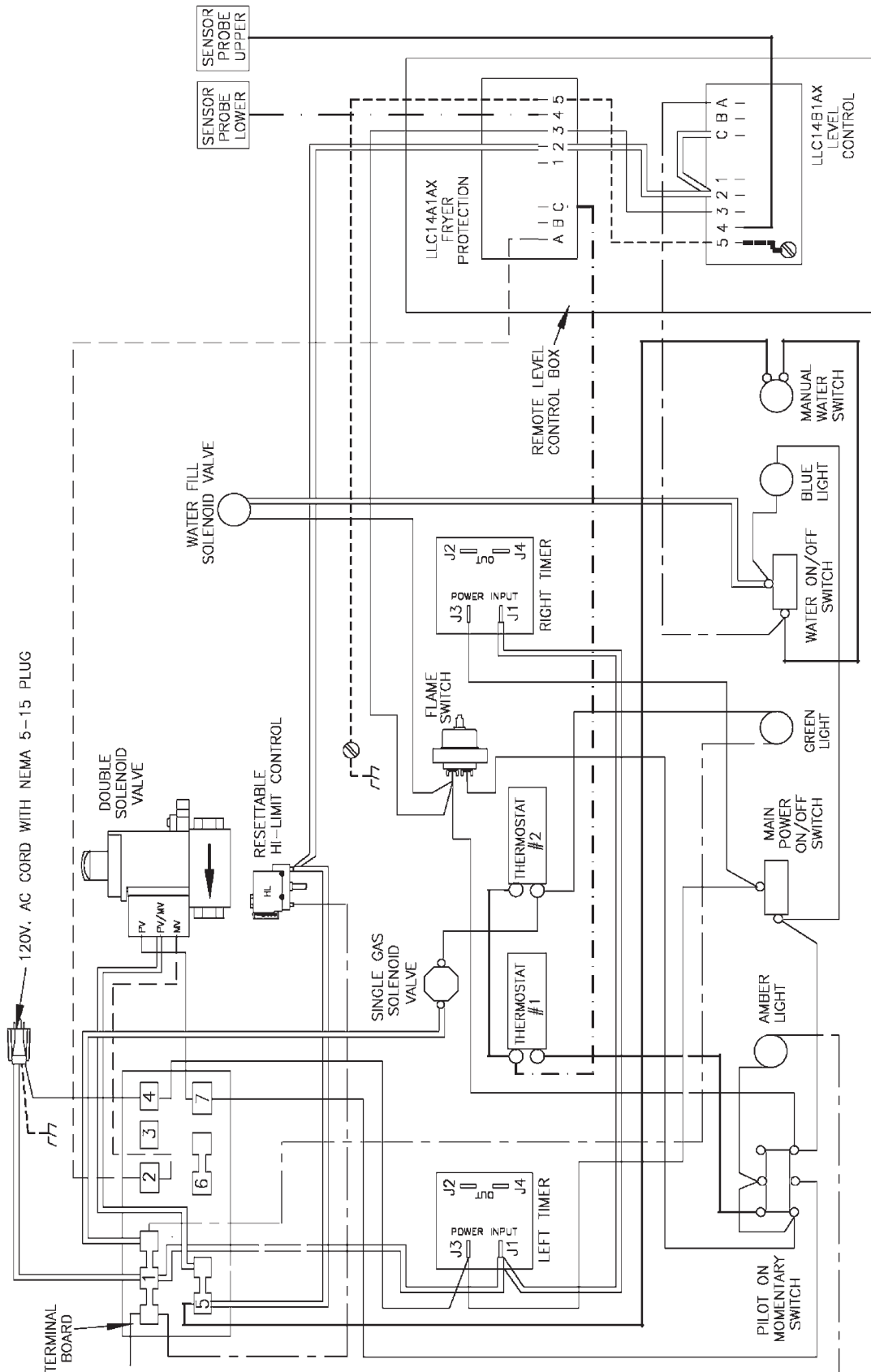


Electrical wiring to these new valves is slightly different from the older valves in that each valve is now wired directly to the neutral source and the switched hot source. See the above figure for the new wiring detail. Although each Pasta Cooker with these new valves installed ships with an updated wiring diagram, use this view when referring to wiring diagrams in this service manual.

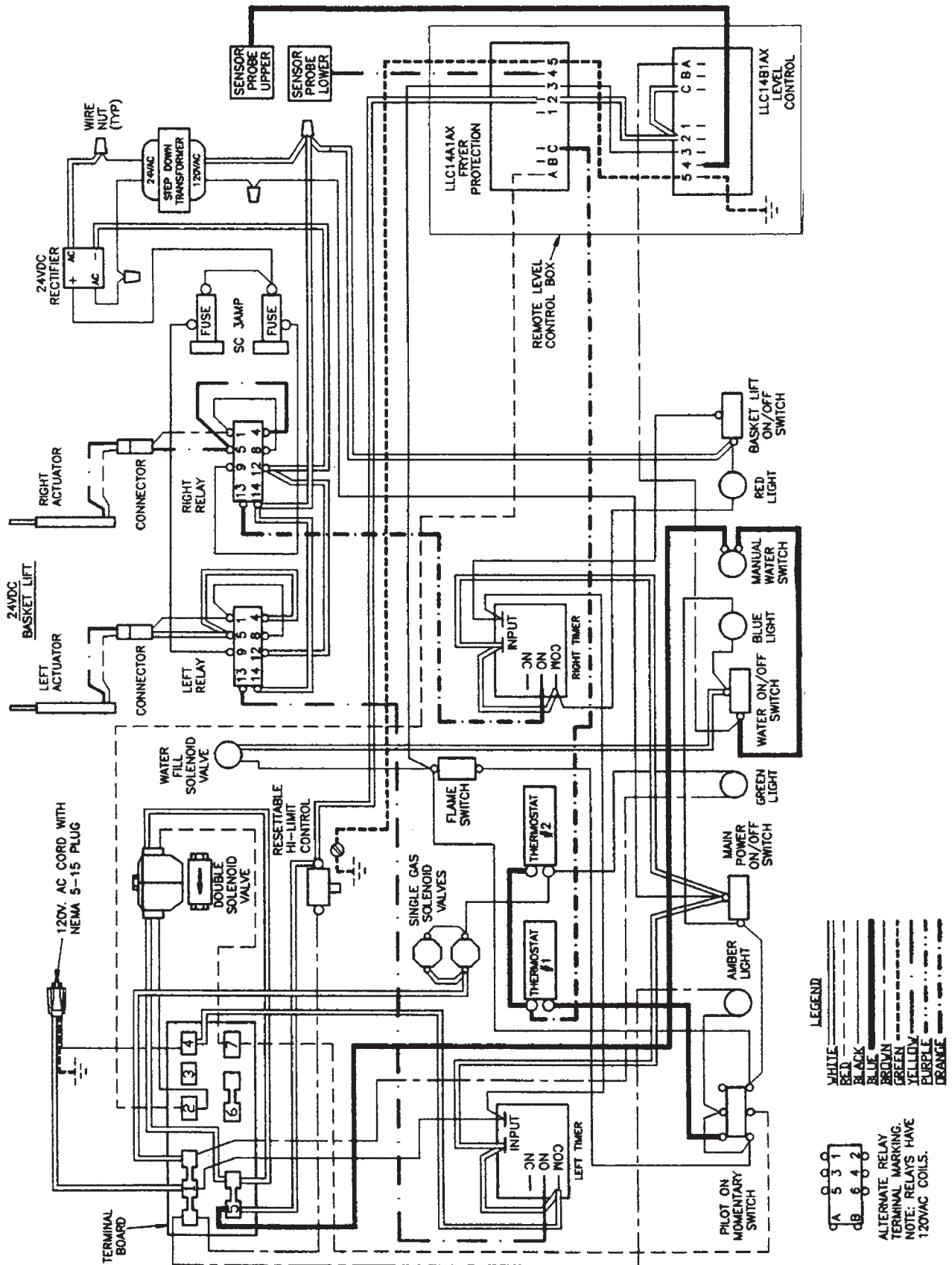
GAS PASTA SYSTEM WIRING DIAGRAM



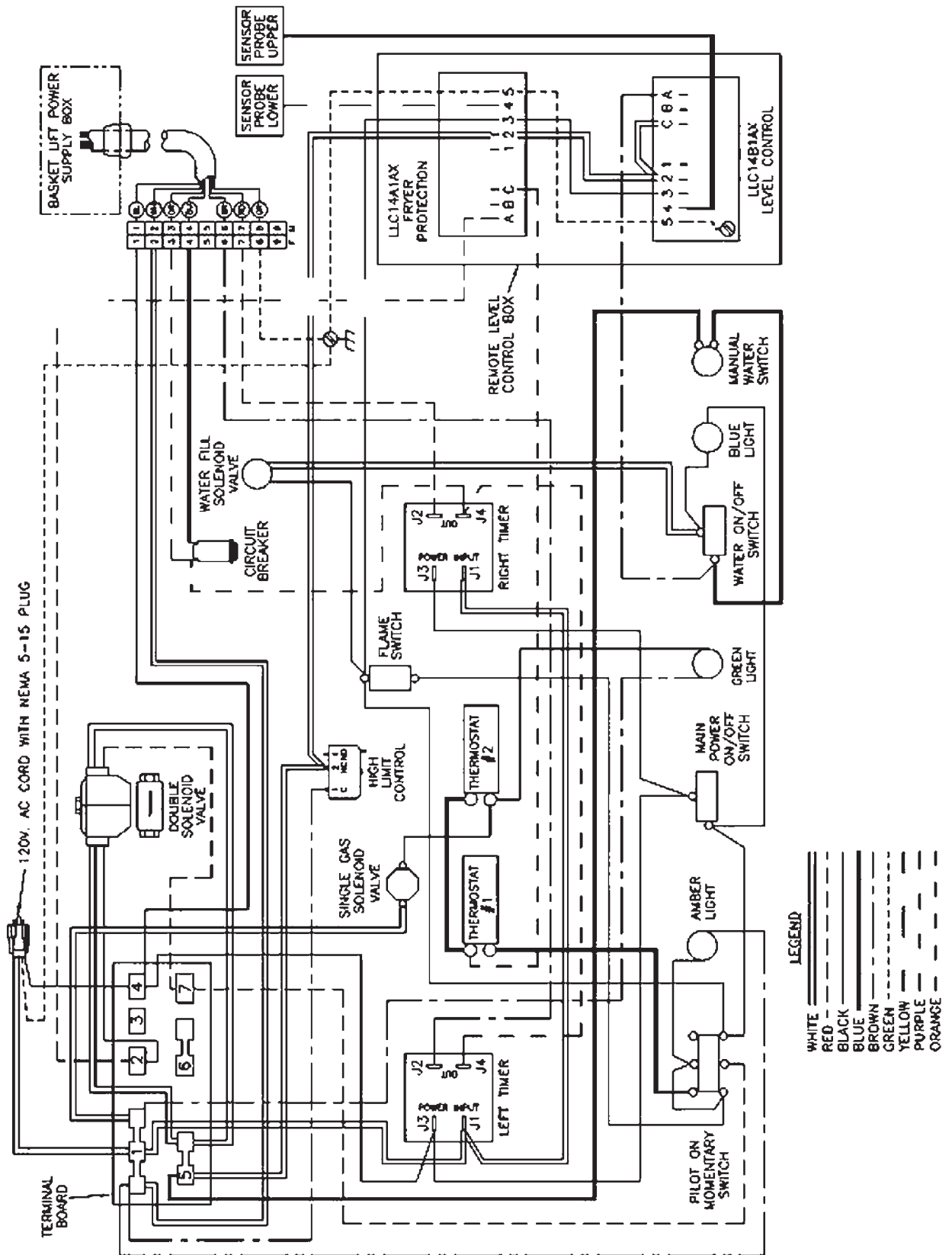
GAS PASTA SYSTEM WIRING DIAGRAM - SERIES PRE-2009



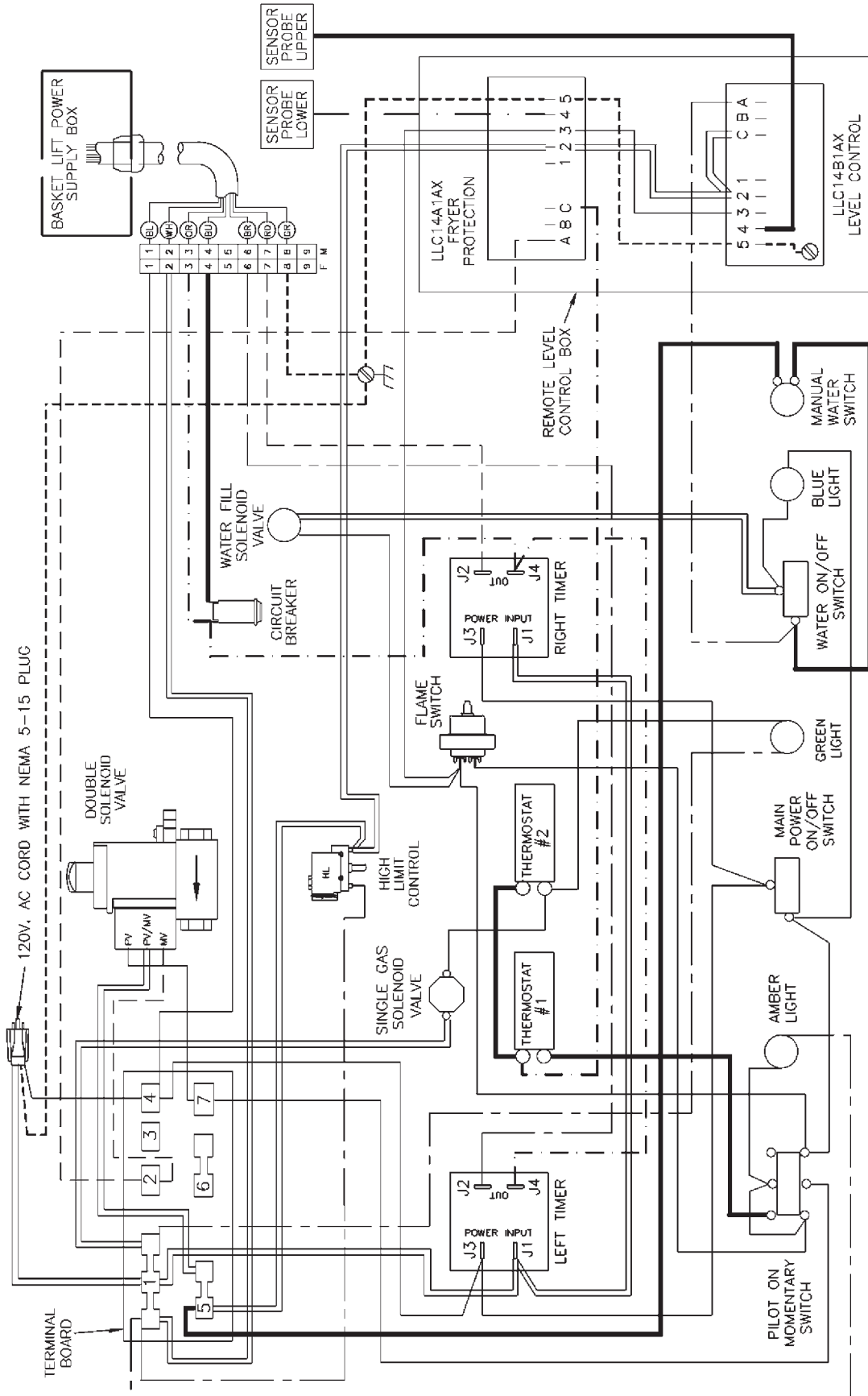
GAS PASTA SYSTEM WITH BASKET-LIFT WIRING DIAGRAM - PRE-2007



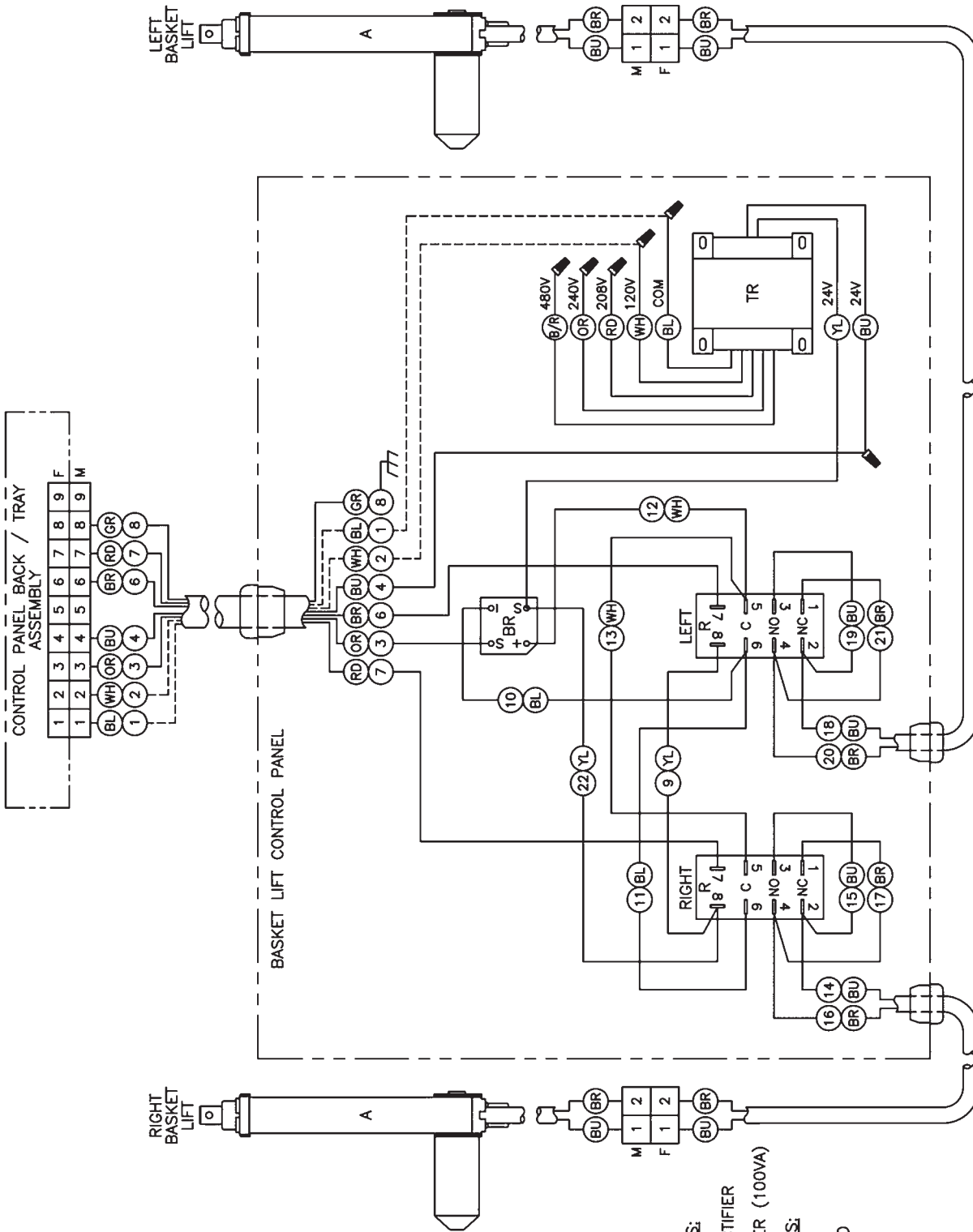
GAS PASTA SYSTEM WITH BASKET-LIFT WIRING DIAGRAM - MODEL 2007



GAS PASTA SYSTEM BASKET-LIFT CONTROL PANEL WIRING DIAGRAM



GAS PASTA SYSTEM BASKET-LIFT CONTROL PANEL WIRING DIAGRAM



- COMPONENT CODES:**
 A - ACTUATOR
 BR - BRIDGE RECTIFIER
 R - RELAY 24VAC
 TR - TRANSFORMER (100VA)
- WIRE COLOR CODES:**
 BL - BLACK
 BR - BROWN
 B/R - BLACK/RED
 BU - BLUE
 GR - GREEN
 OR - ORANGE
 RD - RED
 WH - WHITE
 YL - YELLOW
- 120 VAC
 _____ 24 VAC & VDC

NOTES:
 1. ALL WIRES ARE 18 AWG.
 2. THIS DIAGRAM SHOWN 120 VAC SUPPLY VOLTAGE.
 3. SEE CUSTOMER'S ORDER FOR THE CORRECT SUPPLY VOLTAGE, AND WIRE THE PRIMARY SIDE OF THE TRANSFORMER ACCORDINGLY.



WARRANTY

LIMITED WARRANTY

Keating of Chicago, Inc. ("Keating") warrants to the original purchaser. ("Customer"), all new Keating Fryers, Filter Systems, Griddles, Keep Krisp®, Custom Pasta Systems, Top-Side™ Cookers, Computer Timers, Fryer & Pasta Vessels and Keating replacement parts ("products") installed after June 1, 1994 to be free to defects in material or workmanship, subject to the following terms and conditions.

LENGTH OF WARRANTY

All products other than Fryer & Pasta Vessels and replacement parts shall be warranted for a period of one year from the date of original equipment installation. Keating replacement parts are warranted for a period of ninety days from the date of installation. Fryer & Pasta Vessels are warranted as described below.

FRYER & PASTA VESSEL WARRANTY

Fryers purchased after June 1, 1994 carry a prorated vessel warranty on defects in materials or workmanship to the Customer based on the following scale:

Time from Installation Date	Fryer Vessel Warranty Credit
13-60 months	100%
61-72 months	80%
73-84 months	60%
85-96 months	40%
97-108 months	20%
109-120 months	10%

The credit for the defective fryer & pasta vessel shall be applied against the cost of the replacement vessel, utilizing Keating's then current price, upon return of the vessel to Keating, (freight to be paid by Keating within the first 12 months only), only during the first 60 months, subject to the limitations described below.

LIMITATIONS OF LIABILITY

In the event of warranty claim or otherwise, the sole obligation of Keating shall be the repair and / or replacement at the option of Keating of the product or component or part thereof. Such repair or replacement shall be at the expense of Keating except that the Customer shall pay the following expenses: all freight and labor expense for Keating replacement parts; for all other products, mileage exceeding 50 miles or travel more than one hour, labor costs of more than one person, overtime rates, truck charges, difference between ground and other mode of transportation, and holiday charges. Any repair or replacement under this Limited Warranty does not constitute an extension of the original warranty for any period for the product or for any component or part thereof. Parts to be replaced under this Limited Warranty will be repaired at the option of Keating with new or functionally operative parts. Keep Krisps and Computer Timers must be returned to Keating for warranty repair or replacement. Field repairs of those items are not authorized.

THE LIABILITY OF KEATING ON ANY CLAIM OF ANY KIND, INCLUDING CLAIMS BASED ON WARRANTY, EXPRESSED OR IMPLIED, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORIES SHALL BE SOLELY AND EXCLUSIVELY THE REPAIR OR REPLACEMENT OF THE PRODUCT AS STATED HEREIN, AND SUCH LIABILITY SHALL NOT INCLUDE, AND CUSTOMER SPECIFICALLY RENOUNCES ANY RIGHTS TO RECOVER, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER INJURIES TO PERSONS OR DAMAGE TO PROPERTY, LOSS OF PROFITS OR ANTICIPATED PROFITS, OR LOSS OF USE OF THE PRODUCT.

If any oral statements have been made regarding the Keating products, such statements do not constitute warranties and are not part of the contract sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL, STATUTORY OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

EXCLUSIONS

The warranties provided by Keating of Chicago, Inc. do not apply in the following instances:

1. Defects arising out of or resulting from improper installation or maintenance, abuse, misuse, modification or alteration by unauthorized service personnel, or any other condition not attributable to a defect in material or workmanship. Proper installation and maintenance are the responsibility of the installer and Customer, respectively. Proper installation and maintenance procedures are prescribed by the Keating Service Manual.
2. In the event that the product was damaged after leaving the factory due to flood, fire, other acts of God or accident, damage during shipment should be reported to the carrier and is not the responsibility of Keating.
3. In the event the serial number or rating plate has been removed from the product or altered.
4. On parts which would normally be worn or replaced under normal conditions, including but not limited to electric bulbs, fuses, interior and exterior finishes, gaskets and radiants.
5. With regard to adjustments and calibrations such as leveling, tightening of fasteners or plumbing connections, improper gas pressure or improper electrical supply, the checking of and changes in adjustment and calibrations are the responsibility of the installer. Proper installation procedures are prescribed by the Keating Service Manual.
6. In the event of unauthorized repairs or alterations to the Keating product.
7. With the use of sodium chloride in pasta vessels or harsh chemicals in fryer or pasta vessels.
8. Installation in Household.

OTHER TERMS AND CONDITIONS

The Customer must provide proof of purchase from Keating.

This Limited Warranty is valid in the 50 United States, its territories, and Canada, and is void elsewhere.

Keating products are sold for commercial use only. If any Keating product is sold as a component of another product or used as a consumer product, such Keating product is sold As Is without any warranty.

If any provision of this Limited Warranty is held to be unenforceable under the law of any jurisdiction, such provision shall be inapplicable in such jurisdiction, and the remainder of the warranty shall remain unaffected. Further in such event, the maximum exclusion or limitation allowable under applicable law shall be deemed substituted for the unenforceable provision.

This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Illinois.

TO SECURE WARRANTY SERVICE

All repair services under this Limited Warranty must be authorized by Keating or performed at Keating. Authorization may be obtained by calling 1-800-KEATING within the Continental United States, Alaska, Hawaii, Puerto Rico and Canada during normal business hours (8 a.m. through 5 p.m. Central Time, Monday through Friday). When calling, please have the following information available: (1) name, address and telephone number of the Customer; (2) location of product, if different; (3) name, model number and serial number of the product; (4) installation date; and (5) description of defect. Keating will then issue a service authorization work order number to one of its approved independent servicing organizations, or request the product or part be shipped to Keating for repair or replacement, as appropriate. Any defective part subject to a claim under this Limited Warranty must be shipped freight prepaid to Keating for testing and examination. Keating's decision as to the cause and nature of any defect under this Limited Warranty shall be final.

■ **SERVICE INFORMATION:**

If you have a service related question call **1-800-KEATING**.
Please state the nature of the call; it will ensure speaking with the appropriate person.

Have your serial and model number available when ordering parts.

As continuous product improvement occurs, specifications may be changed without notice.

.....
KEATING LIMITED WARRANTY CARD

PLEASE COMPLETE AND MAIL AT ONCE—WARRANTY IS NOT IN EFFECT UNTIL CARD IS RETURNED, OR COMPLETE THE WARRANTY CARD ON OUR WEBSITE FOR YOUR CONVENIENCE.

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

DEALER NAME: _____

DATE OF PURCHASE: _____ INVOICE #: _____

SERIAL #: _____ MODEL: _____

FRYER GRIDDLE CUSTOM PASTA
 FILTER SYSTEM TOP-SIDE COOKER HOTPLATE

I HAVE READ THE INSTALLATION AND OPERATING INSTRUCTIONS.

SIGNED: _____ DATE: _____



KEATING OF CHICAGO, INC.
8901 West 50th Street
McCook, IL 60525-6001

1-800-KEATING
PHONE: 708-246-3000
FAX: 708-246-3100

Serving Those Who Serve the Very Best®