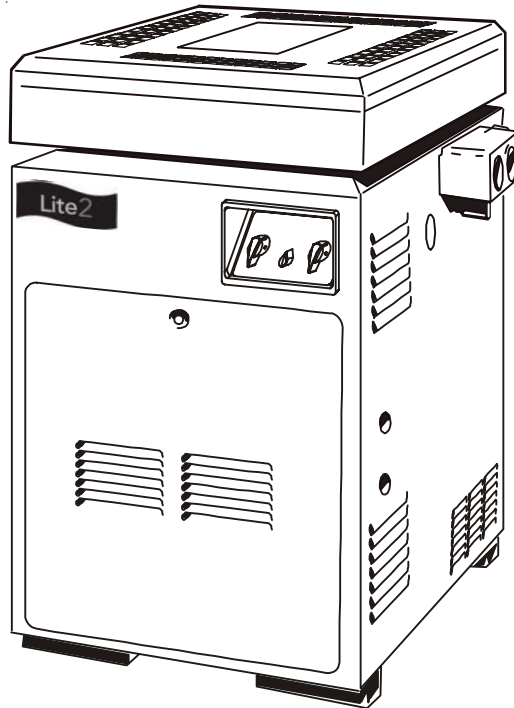


FOR YOUR SAFETY - This product must be installed and serviced by a professional service technician, qualified in pool heater installation. Improper installation and/or operation could create carbon monoxide gas in flue gases which could cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

Installation and Operation Manual

Lite 2™ Low NOx Pool and Spa Heater

Model LD-Low NOx
Natural Gas Only



⚠ WARNING: If these instructions are not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

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

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a nearby phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

TABLE OF CONTENTS

SECTION 1.

General Information

1A.	Introduction	1
1B.	Description	1
1C.	Warranty	2
1D.	Technical Assistance	2

SECTION 2.

Installation Instructions

2A.	General Information	2
2B.	Field Assembly	2
2C.	Site Location	2
2C-1.	Installation Information	2
2C-2.	Outdoor Installation	3
2C-3.	Flooring - Typical Installation	4
2C-4.	Indoor Installation	4
2D.	Combustion and Ventilation Air Supply	4
2E.	Gas Supply and Piping	4
2E-1.	General Instructions	4
2F.	Electrical Wiring	5
2F-1.	General Information (LD Only)	5
2F-2.	Auxiliary Time Clock Wiring	7
2F-3.	Remote Operation (Model LD Only)	8
2G.	Water Flow System	8
2G-1.	Flange Installation	8
2G-2.	Reversible Water Connections	8
2G-3.	Check Valve Installation	11
2G-4.	Chlorinators, Ozone Generators, and Sanitizing Chemicals	11
2G4a	Water Chemistry	11

2G-5.	Pressure Relief Valve	11
2G-6.	Adjusting the Pressure Switch	12
2G-7.	Automatic Flow Control Valve	12
2G-8.	Temperature Rise	12
2G-9.	Adjusting the Manual Bypass Valve	13

SECTION 3.

Operating Instructions

3A.	General Information	14
3B.	Lighting and Shutdown Procedures	14
3C.	Setting the Temperature Control	14
3D.	Seasonal Care	14
3D-1.	Spring and Fall Operation	16
3D-2.	Winterizing	16
3D-3.	Spring Startup	16
3E.	Water Chemistry	16
3F.	Spa/Hot Tub Safety Rules	17
3G.	Swimming Pool Energy Saving Tips	17
3H.	Periodic Inspection	17
3H-1.	Owner Inspection	17
3H-2.	Professional Inspection	18

SECTION 4.

Parts List for Lite 2 Heater

4A.	General Information	18
4B.	Parts List	18

SECTION 1. General Information

1A. Introduction

This manual provides installation and operation instructions for the Lite 2, Model LD Low NOx pool and spa heaters. Read these installation and operation instructions completely before proceeding with the installation. Consult the factory, or local factory representative, with any questions regarding this equipment. Experience has shown that most operating problems are caused by improper installation.

The Lite 2 Low NOx heater is design certified by Canadian Standards Association (CSA, formerly the

American Gas Association and Canadian Gas Association) as complying with the latest edition of the Standard for Gas-Fired Pool Heaters, ANSI Z21.56 and CSA4.7.

1B. Description

The Lite 2 Low NOx heater is powered by an external 120VAC or 240VAC source. The heater provides a dual temperature control system for pool/spa combinations or preheat convenience. Also, the heater complies with California state energy requirements for intermittent ignition gas appliances and California South Coast Air Quality Management District, (CSAQMD) Rule 1146.2 for Nitrogen Oxides (NOx) emissions.

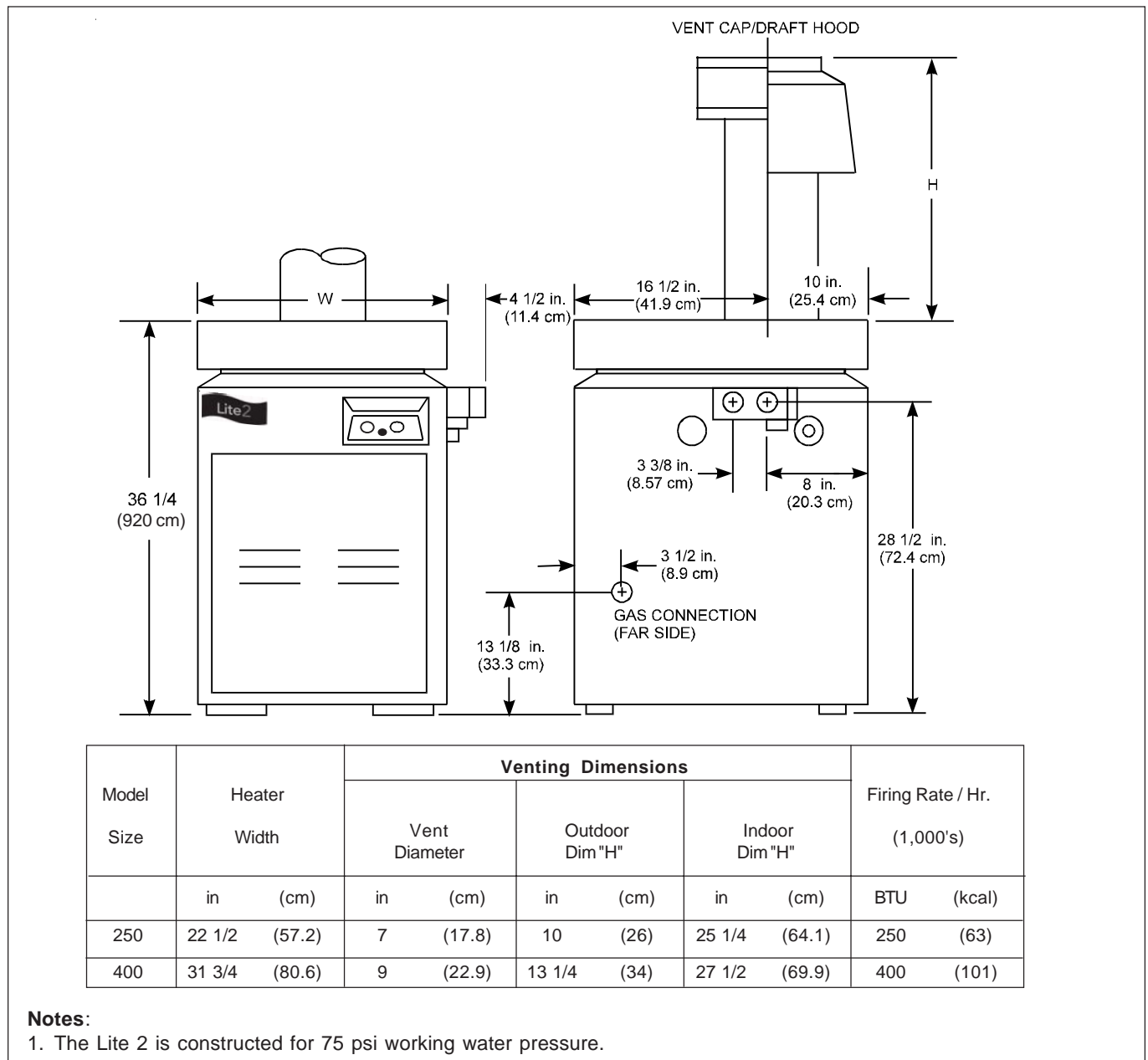


Figure 1. General Configuration.

The Lite 2 Low NOx heater is specifically designed for heating swimming pools and spas. Do not use it as a general service water heater. There is a specially designed model of Lite 2 for heating salt water pools. Consult your dealer for the appropriate products for these applications.

1C. Warranty

The Lite 2 Low NOx heater is sold with a limited factory warranty. Details are specified on the back cover of this manual. A copy of the warranty and a warranty registration card are included in the plastic bag shipped with the heater. Fill out and return the warranty registration card.

Make all warranty claims to an authorized representative or directly to the factory. Claims must include the heater serial number and model (this information can be found on the rating plate), installation date, and name of the installer. Shipping costs are not included in the warranty coverage.

Damage caused by improper installation or assembly, or to the heat exchanger by corrosive water, is NOT covered by the Warranty. See Section 3E for maintaining proper pool water chemistry.

NOTE: Keep this manual in a safe place for future reference when inspecting or servicing the heater.

1D. Technical Assistance

Consult your local distributor with any questions or problems involving the specifications, installation, and operation of your equipment. An experienced technical support staff is ready to assist in assuring the proper performance and application of Jandy products. For technical support call 707.776.8200 extension 260.

SECTION 2. Installation Instructions

2A. General Information

Install the Lite 2 Low NOx heater, vent cap and draft hood in accordance with the procedures in this manual, local codes and ordinances, and in accordance with the latest edition of the National Fuel Gas Code, ANSI Z223.1. The authority having jurisdiction may require that the installation conform to the Standard for Gas-Fired Pool Heaters, ANSI Z21.56. Any changes to the heater, gas controls, gas orifices, wiring, draft diverter, or improper installation may void the warranty. If field conditions require change to any of the above, consult the factory.

All gas-fired products require correct installation to assure safe operation. The requirements for pool heaters include the following:

1. Field assembly (if required)
2. Appropriate site location (clearances) and flooring
3. Sufficient combustion and ventilation air
4. Properly sized gas meter and piping
5. Proper electrical wiring
6. Adequate water flow

This manual provides the information needed to meet these requirements. Review all application and installation procedures completely before continuing the installation.

2B. Field Assembly

The Lite 2 Low NOx heater is shipped from the factory with the top assembly in the low-profile configuration for outdoor. The Lite 2 Low NOx heater is design certified for indoor installation when equipped with a draft hood, which must be installed without modification.

Check the rating plate on the heater or the Parts List (Sec. 4) of this manual for the correct draft hood or vent cap part number. See instructions supplied with the draft hood or vent cap for installation and attachment. When the draft hood is used, locate the heater so as to be in the same atmospheric pressure zone as the combustion air inlet to the heater.

When installed in an enclosed structure, a draft hood must be used and it must be connected to a vent pipe which stops at least 2 feet (0.61 meters [m]) above the highest point of the roof or other object that is within 10 feet (3.05 m) from the vent termination. The vent pipe must have a listed vent cap which allows a full equivalent opening for flue products (see Figure 2).

2C. Site Location

WARNING

Improper installation or maintenance can cause nausea or asphyxiation from carbon monoxide in flue gases which could result in severe injury, or death.

2C-1. Installation Information

Avoid placing the heater in locations where it can cause damage by water or condensate leakage. If this is not possible, provide a suitable drain pan to catch and divert any leakage. The pan must not block natural flow of air around the heater.

When installing the heater indoors, adequate fresh air must be supplied for proper combustion and ventilation. Openings must be provided near the floor and the ceiling of the room through the walls to the

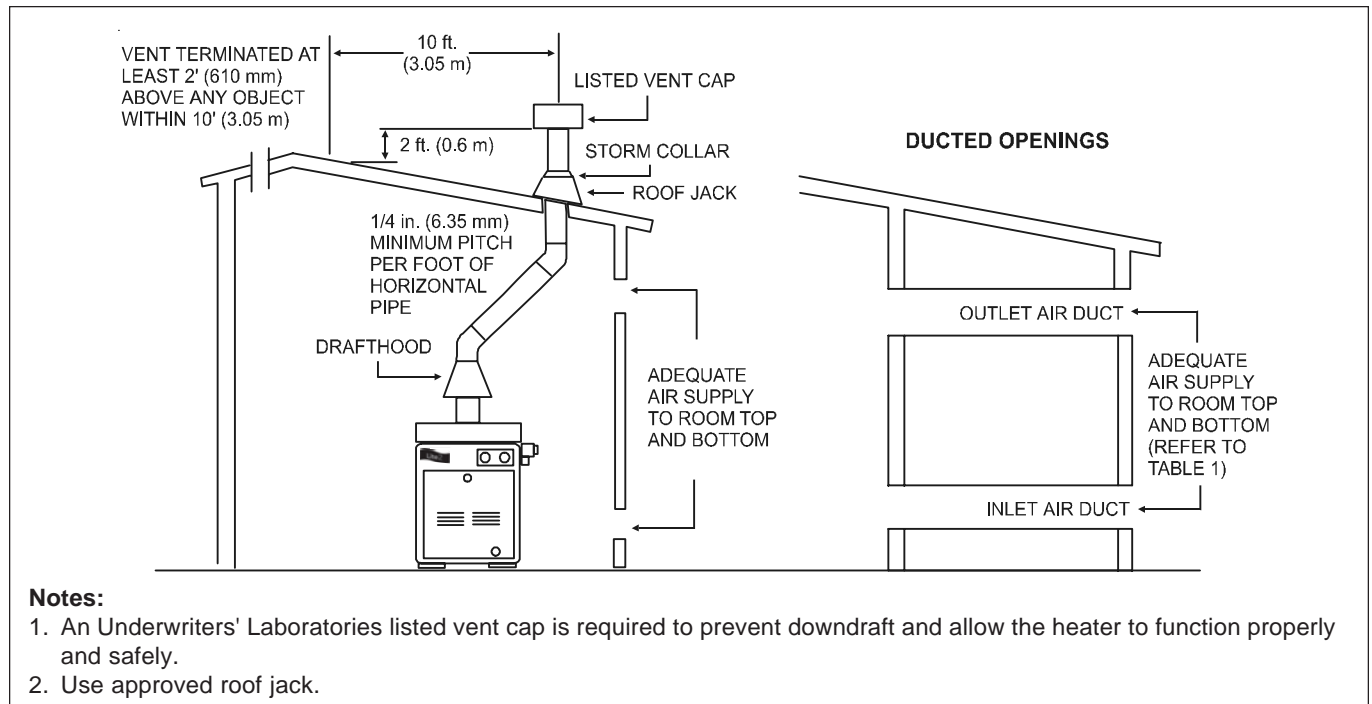


Figure 2. Indoor Installation Venting.

Table 1. Air Openings to Outside.

Model	Required Net Free Open Area for Combustion Air Openings		Duct from outside	
	Direct from outside			
	in ²	(cm ²)	in ²	(cm ²)
250	63	(406)	126	(813)
400	100	(645)	200	(1290)

Note: If using screens and/or louvers, compensate by adding 50% additional area to each opening.

outside (see Figure 2). To determine the size of the openings needed, refer to Table 1. The numbers shown in Table 1 represent the **Net Free Open Area** that is required for proper combustion. Note that if the air is ducted into the room, then the **Net Free Open Area** is larger than if the openings directly access fresh air through only one wall. Also, if screens, louvers or other covers are installed over the opening, the size of the opening must be increased by 50% over the numbers listed in Table 1.

Locate the heater so the clearances from combustible surfaces shown in Table 2 are met.

Table 2. Minimum Heater Clearances From Combustible Surfaces

Side of Heater	Indoor Installation		Outdoor Installation	
	Inch	(cm)	Inch	(cm)
Blank	6	(15.2)	6	(15.2)
Rear	6	(15.2)	6	(15.2)
Piping	12	(30.5)	12	(30.5)
Top	44	(111.7)	Open Unroofed Area	
Front	18	(45.7)	18	(45.7)

2C-2. Outdoor Installation

Lite 2 Low NOx heaters can be installed in the low-profile, grate top configuration as received from the factory, or with an optional high wind vent cap/stack.

Locate the heater in an **open, unroofed area**. Do not install the heater under a deck. Do not locate the heater below or adjacent to any doors, glass openings, louvers, grills, etc., which connect in any way with an inhabited area of a building, even though the access might be through another structure (e.g., a garage or utility room). Government regulations state that there must be a minimum of 4 feet (1.22 m) horizontally or vertically between the heater and any door, glass opening, or gravity inlet to a building (see Figure 3).

⚠ WARNING

Do not install the heater with the top of the vent assembly within 4 feet (1.22 m) of any opening into a building.

If the heater is installed under an overhang, there must be a minimum clearance of 5 feet (1.5 m) above the top of the heater and the structure should not overhang the heater more than 12 inches (0.30 m). The area under the overhang must be open on three sides. This prevents combustion gases from being diverted into living areas through doors, windows, or gravity inlets.

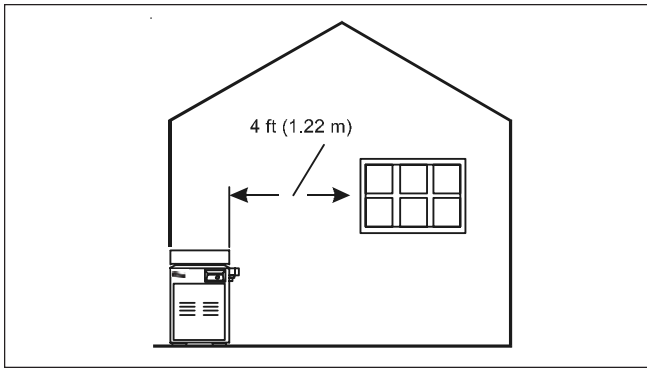


Figure 3. Outdoor Heater Installation.

If the heater is installed close to a structure, protect it from rain water runoff with rain gutters on the roof or other measures. Do not locate the heater near sprinkler systems that could spray water on it.

Avoid locations where wind deflection off nearby structures might cause downdraft conditions. Where downdraft conditions exist, locate the heater at least 3 feet (0.91 m) from vertical surfaces (e.g., nearby buildings and walls). The addition of a vent cap may be necessary.

2C-3. Flooring - Typical Installation

Do not install the heater directly on a combustible wood or carpet floor without placing a noncombustible platform between the floor and the heater. The National Fuel Gas Code allows a heater to be placed on a combustible surface when there is a platform under the heater made of hollow masonry no less than 4 inches (102 millimeters [mm]) thick, covered with sheet metal at least 24 gauge thick and extending beyond the full width and depth of the heater by at least 6 inches (76.2 mm) in all directions. The masonry must be laid with ends unsealed, and joints matched to provide free circulation of air from side to side through the masonry (see Figure 4). If the heater is installed in a carpeted alcove, the entire floor of the alcove must be covered by a noncombustible panel. You can obtain a noncombustible base from Jandy, see the Parts List (Sec. 4) of this manual.

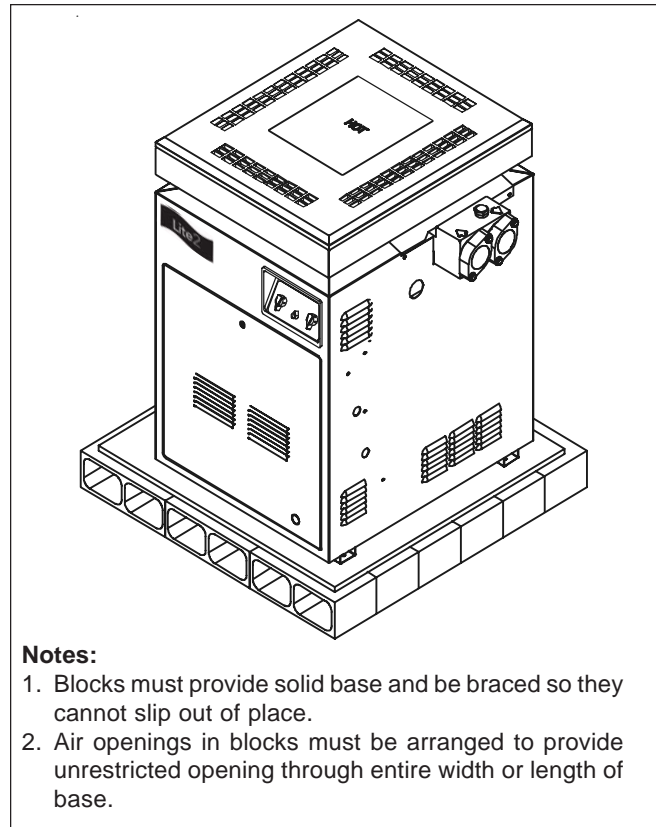
2C-4. Indoor Installations

All indoor installations require the addition of a factory approved draft hood. The draft hood must be installed without modification and in accordance with all local, state, and national codes.

Proper ventilation of exhaust and combustion air are essential for the safe operation of the heater.

2D. Combustion and Ventilation Air Supply

All indoor installations must have openings to outside air for combustion, ventilation, and dilution of flue gases from inside the building (see Figure 2 and



Notes:

1. Blocks must provide solid base and be braced so they cannot slip out of place.
2. Air openings in blocks must be arranged to provide unrestricted opening through entire width or length of base.

Figure 4. Non-Combustible Platform.

Table 1). Jandy does not recommend indoor installations that do not provide combustion air from outside the building.

If the heater is installed in a residential garage, or where flammable vapors will be present, the burners must be 18 inches (457 mm) above the garage floor. Refer to the latest edition of the National Fuel Gas Code for more information.

2E. Gas Supply and Piping

⚠ WARNING

The Lite 2 Low NOx pool/spa heater was designed for use **only** with natural gas.
DO NOT ATTEMPT TO CONVERT THIS HEATER FOR USE WITH ANY OTHER TYPE OF FUEL.

2E-1. General Instructions

Review the following general instructions before continuing the installation.

1. Gas piping installation must be in accordance with the latest edition of ANSI Z223.1 and all local codes.

2. Check the rating plate to make sure the heater is fitted for the type of gas being used. Jandy heaters, as shipped from the factory, are certified to operate at an altitude of 0 to 3000 feet (0 to 915 m).
3. Use the figures in Table 3 to size the gas inlet piping from the gas meter to the heater. Check all local codes for compliance before installing the heater.

Table 3. Natural Gas Pipe Size Requirements

Heater Size	Distance from Gas Meter					
	0-50 feet (0-15 m)		50-100 feet (15-30 m)		100-200 feet (30-60 m)	
	in.	(mm)	in.	(mm)	in.	(mm)
250	1	(25.4)	1-1/4	(31.75)	1-1/4	(31.75)
400	1-1/4	(31.75)	1-1/2	(38)	1-1/2	(38)

Notes:

1. These numbers are for natural gas (0.65 Sp. Gr.) and are based on 1/2 inch (13 mm) water column pressure drop. Check supply pressure with a manometer, and local code requirements for variations.
2. Check supply pressure and local code requirements before proceeding with work.
3. Pipe fittings must be considered when determining gas pipe sizing.

4. Install a sediment trap (drip leg) ahead of the gas controls (see Figure 5). Fit the trap with a threaded cap which can be removed for cleaning.
5. Install a manual gas shutoff valve for service and safety. Do not use a restrictive gas cock. **DO NOT USE FLEXIBLE GAS PIPING.**
6. Disconnect the heater and its individual shutoff valve from the gas supply system during pressure testing of the system at pressures higher than 1/2 pounds per square inch (psi). If the test pressure is equal to or less than 1/2 psi, close the manual shutoff valve on the heater during the piping pressure test.

⚠ Caution
Permanent damage to the gas valve will occur if the following procedures are not followed.

7. If the gas supply pressure is less than required, check for undersized pipe between the meter and the heater, a restrictive fitting, or an undersized gas meter. Gas supply pressures to the heater are listed in Table 4.

NOTE: The maximum inlet gas pressure must not exceed the specified value. The minimum value listed is for the purpose of input adjustment. Refer to Table 4.

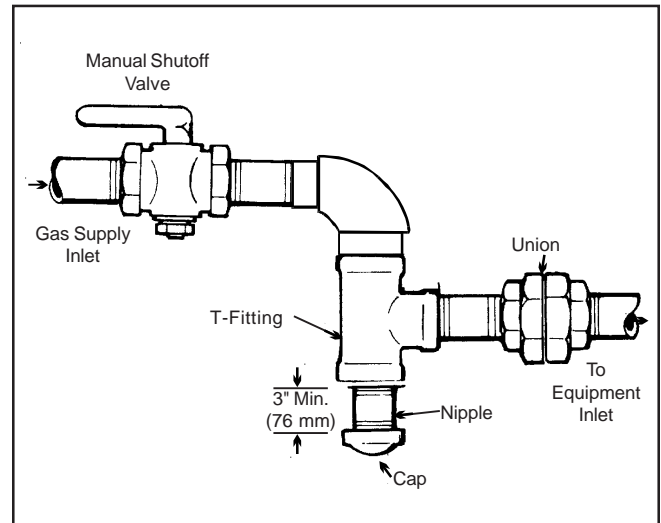


Figure 5. The proper design for a sediment trap / drip leg.

Table 4. Gas Supply Pressure Requirements

Supply Pressure Water Column	Natural Gas	
	in.	(mm)
Minimum	5.5	(140)
Maximum	10.0	(254)

8. Before operating the heater, test the complete gas supply system and all connections for leaks using a soap solution. Do not use an open flame.

⚠ Caution
Some leak test solutions (including soap and water) may cause corrosion or stress cracking. Rinse the piping with water after testing.

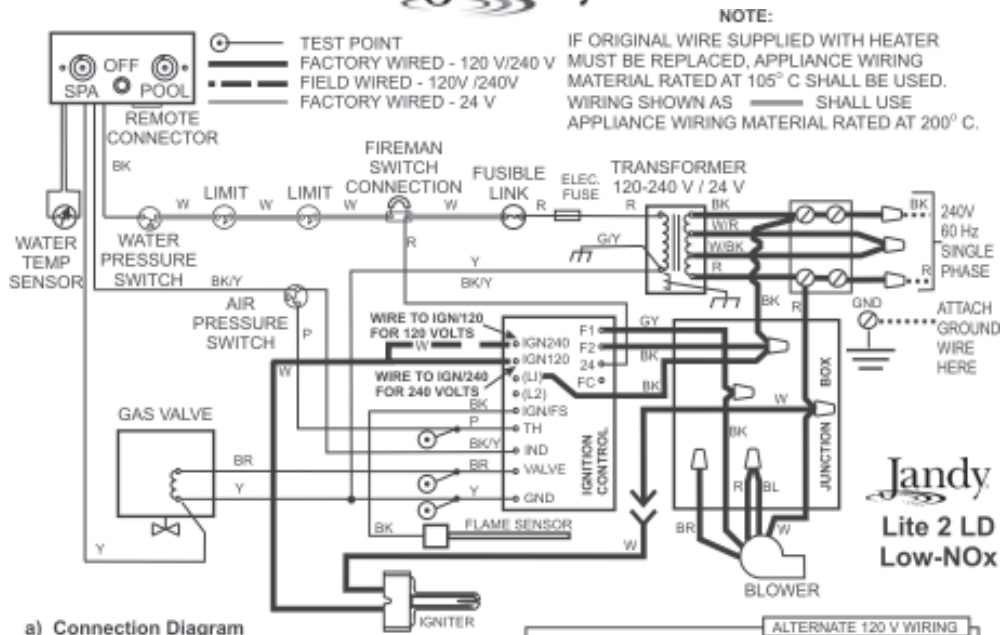
2F. Electrical Wiring

⚠ Caution
Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

2F-1. General Information

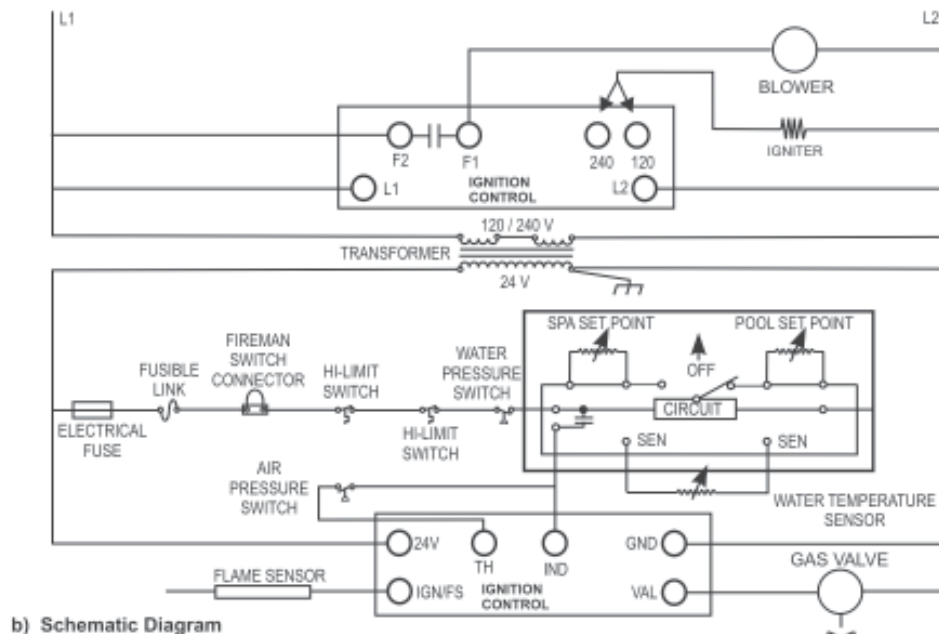
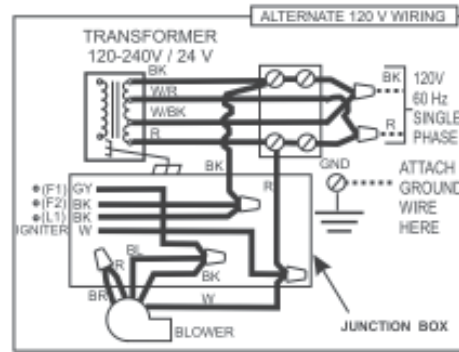
Wiring connections must be made exactly as shown in the wiring diagram found on the inside of the heater (see Figure 6 for typical example) . The heater must include a definite means of grounding. In addition, there is a bonding lug on the right side of the heater, where a bond wire must be attached.

MODEL LD Low NOx WIRING DIAGRAM



a) Connection Diagram

- | | |
|------------|------------------------------|
| BK - Black | BK/Y -Black w/ Yellow tracer |
| BL - Blue | |
| BR - Brown | W/BK -White w/ Black tracer |
| GY - Gray | |
| P - Purple | W/R - White w/ Red tracer |
| R - Red | |
| W - White | G/Y - Green w/ Yellow Tracer |
| Y - Yellow | |



DIGITAL IGNITION CONTROL

H0241900C

Figure 6. Connection/Schematic Wiring Diagram

The heater comes factory-wired intended for use with 240 Volt, 60 Hz AC field electrical supply. To use 120 Volt, 60 Hz AC requires rewiring of the heater. This should be done by a certified electrician only, as with all wiring. To wire the heater for 120 Volt, 60 Hz AC, follow the alternate 120V wiring method depicted in Figure 6. Additionally, the ignition control module must be rewired. The wire from the terminal marked IGN/240 must be removed from that terminal and placed on the terminal marked IGN/120. The blower wiring must also be modified to accommodate a 120v source (see the wiring diagram in Fig. 6 for modification.)

Electrical wiring must be in accordance with the latest edition of the National Electric Code (NEC), ANSI/National Fire Protection Association (NFPA) 70, unless local code requirements indicate otherwise.

To wire the Lite 2 model LD heater to a 120V or 240V /60 Hertz (Hz) electrical source:

1. Remove the screw located to the lower right side of the transformer and open the hinged cover of the wiring enclosure.
2. Connect the wires from the power source to the leads on the right side of the heater in the space behind the ignition control (see Figure 7). Be sure to follow the wiring diagram on page 6 to configure the transformer for the correct input voltage.
3. Attach the ground wire to the green ground screw located on the back panel of the wiring enclosure.
4. Close the cover of the wiring enclosure and replace the screw to hold it in place.

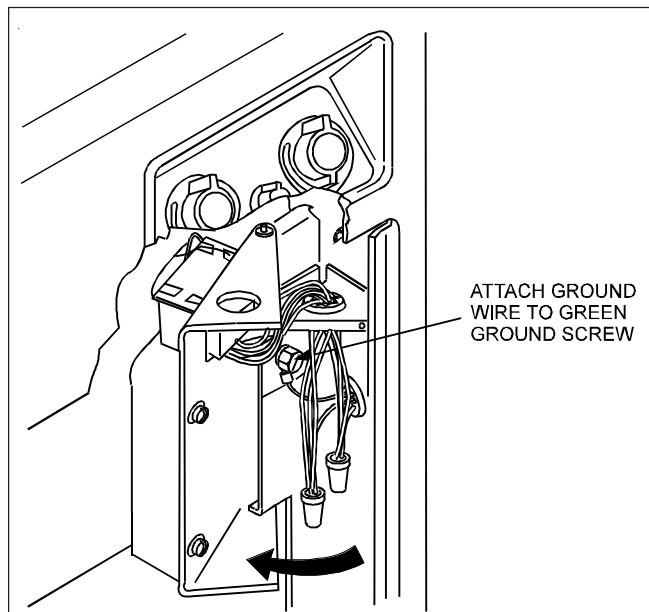


Figure 7. Field Wiring Connections.

5. Connect a bonding wire (8 ga copper) to the bonding lug on the right side of the heater.

NOTE: No external junction box is required.

2F-2. Auxiliary Time Clock Wiring

If you install a time clock to control the filter pump operation, it is recommended that the time clock have its own low voltage (Fireman's) switch to turn off the heater before turning off the pump. The switch should shut off the heater about 15 minutes before the filter pump shuts off. This will allow for a more efficient operation by removing any residual heat contained in the heat exchanger back to the pool.

⚠ Caution

Do not provide power to the heater from the high voltage side of the time clock. Doing so may cause damage to the heater or surrounding plumbing.

To install a time clock auxiliary switch into the heater wires (see Figure 8):

1. Remove heater door.
2. Remove the factory installed wire between terminals 1 and 2 on the terminal strip (see Figure 8).
3. Connect the wires from the time clock auxiliary switch to the two terminals. Use American Wire Gage (AWG) No. 14 gauge stranded copper wire with a temperature rating of 221°F (105°C) or greater.

The length of the wire between the heater and the time clock should not exceed 10-15 feet (4.57 m). The contact points of the time clock switch should be silver, or a low resistance alloy.

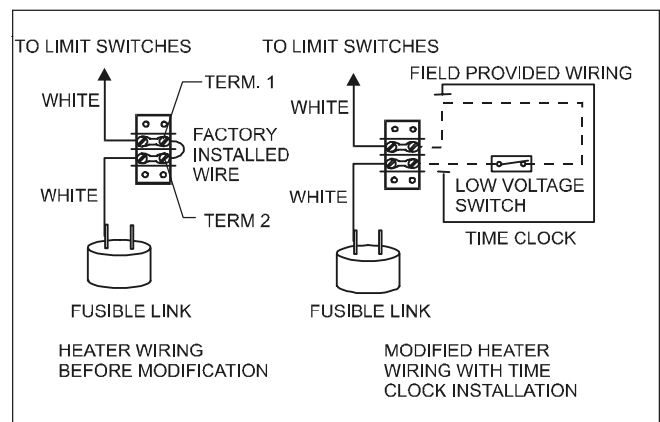


Figure 8. Time Clock Wiring.

2F-3. Remote Operation

The Lite 2 Low NOx pool/spa heater controls can be wired for remote operation. The CS-02 remote control permits switching from one temperature controller to the other and turning the heater on and off from a remote location. The CS-04 includes the same features as the CS-02 plus a remote temperature controller. Contact Jandy for further information. Reference part numbers CS-02 and CS-04.

An interrupt (on/off) type remote can be connected by removing the jumper wire on the terminal block located in the control compartment (see Figure 6) and connecting the two wires from the remote to the two terminals on the terminal block. This type of remote control will turn the heater on or off, but will not switch between the two temperature controllers on the temperature control panel or allow for temperature adjustments.

To connect a 3-wire remote (not supplied by Jandy) to a Lite 2 Low NOx heater, order a wire harness assembly (part No. E0120000) which connects to the temperature control panel. Installation instructions are included with the wire harness assembly.

Consult with Jandy Service Department for questions about installing remotes other than Jandy.

2G. Water Flow System

2G-1. Flange Installation

The heater has 2" NPT universal header couplings. You can connect threaded 2" NPT iron pipe, unthreaded 1-1/2" iron pipe, 1-1/2" or 2" copper pipe without an adapter (see Figure 9).

Plastic piping (PVC Schedule 40) can be connected to the heater if local codes allow it, by using the CPVC nipples included with your heater.

To install plastic piping (see Figure 10):

1. Remove CPVC nipples from plastic bag.
2. Screw CPVC nipples into metal flange until tight, using teflon tape on plastic threads.
3. Attach PVC plumbing to CPVC pipes using PVC to CPVC cement only.

2G-2. Reversible Water Connections

Jandy ships the Lite 2 Low NOx heater with the water connections on the right side. The Lite 2 Low NOx heater can be installed with the water connections on either side. It could be necessary, or helpful, to switch the connections to the left side to improve access for installation and service. Perform this

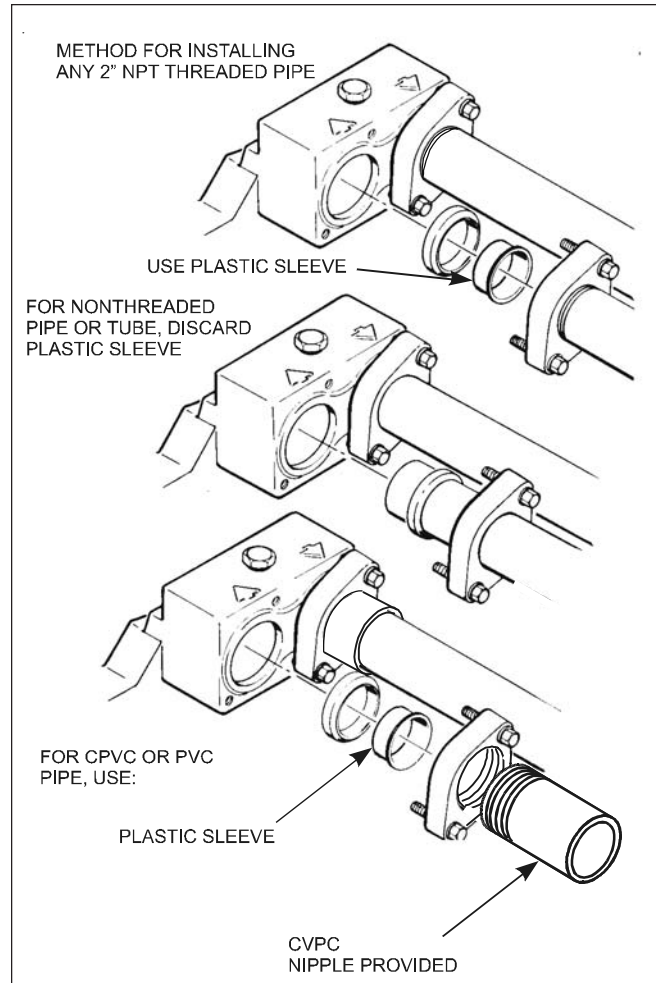


Figure 9. Piping installation.

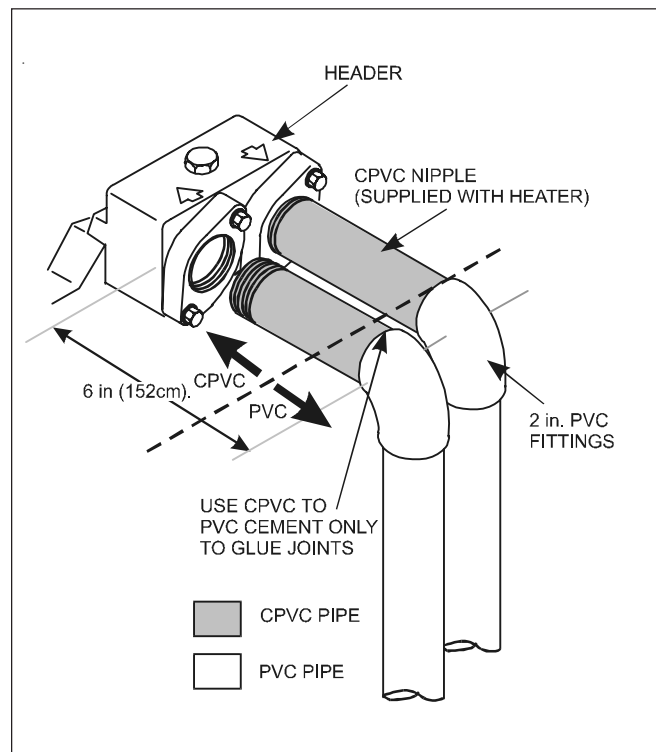


Figure 10. Plastic piping connections.

modification before installing the heater using the following procedures:

1. Remove heater door.
2. If there is a vent cap or drafthood (indoor) on top of the heater, remove it.
3. Remove all 8 hex-head screws fastening the top and lift the top assembly straight up (see Figure 11).
4. Remove rainshield assembly and set it aside.

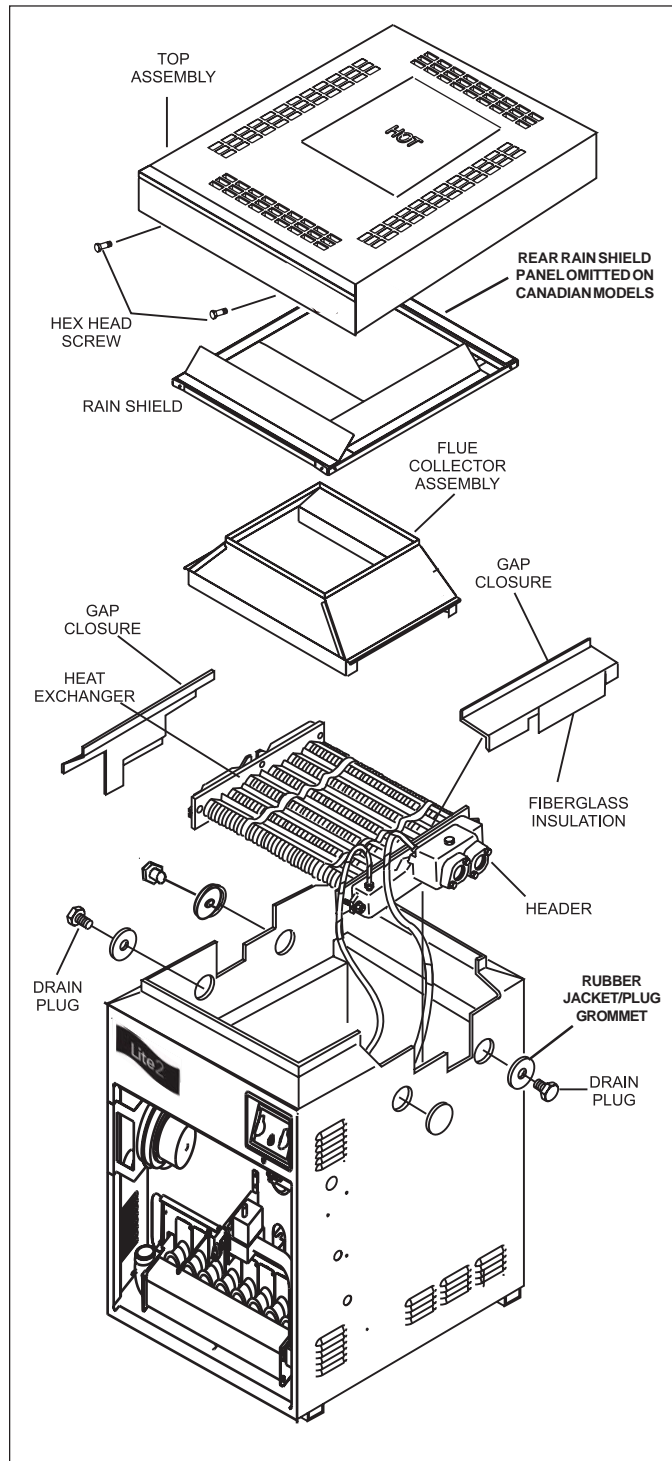


Figure 11. Heat exchanger reversal.

5. Remove screws that fasten the gap closures to the jacket and put them aside. Remove gap closures.
6. Remove the screws securing the two flue collector hold down clamps and remove the clamps (see Figure 12). Remove flue collector.
7. Remove the three rubber jacket/plug grommets and drain plugs (see Figure 11). One is located under the water connections on the right side. The other two are on the left side toward the front of the heater.
8. Tag and disconnect the white wire on the pressure switch (PS) and the white wire on the Fireman's switch terminal (see Figure 6) which leads to the high limit switch.
9. Remove plastic tie wraps and pull the white wires out of the front compartment through the vestibule cover and coil them on the heat exchanger.

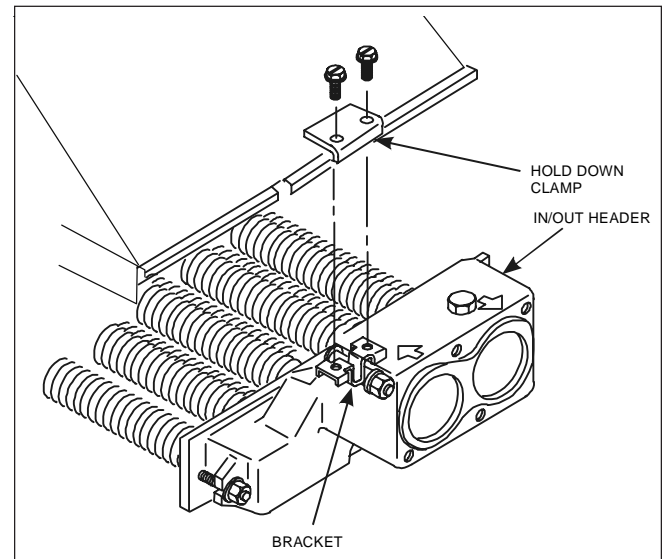


Figure 12. Flue collector hold-down brackets.

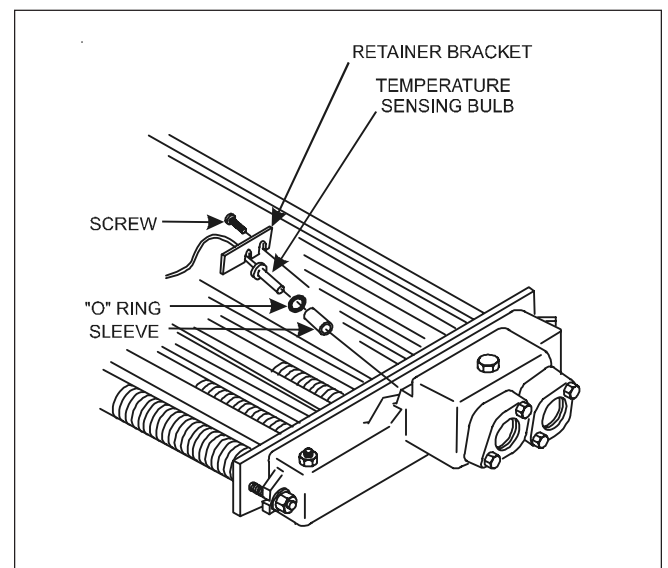


Figure 13. Temperature sensing bulb.

10. Unscrew the brass compression fitting securing the pressure switch to the inlet/outlet header. Remove tube from header and gently bend it out of the way.
11. Loosen the screw securing the temperature sensing bulb retainer bracket. Slide the retainer bracket off the bulb flange and remove the bulb from the header (see Figure 13). Pull pressure switch tube through the hole in the vestibule cover and into the vestibule (controls compartment), then pull thermostat bulb assembly through same hole (see Figure 14).
12. When removing the heat exchanger from the heater, the end baffles of the heat exchanger must be removed. There are two baffles covering part of the front and rear tubes of the heat exchanger. Each baffle is held in place by screws which mount to the top of the combustion chamber wall. Remove the screws and the baffles before attempting to lift the heat exchanger out of the heater (see Figure 15).

⚠ Caution

It may be necessary to have help lifting the heat exchanger out and replacing it.

13. Lift the heat exchanger assembly out of the heater. Reinstall heat exchanger 180 degrees (inlet/outlet header left) from it's original position.
14. After replacing the heat exchanger into the heater, the end baffles must be replaced. Each one is held in place by screws which mount to the top of the combustion chamber wall. Reinstall the baffles on the front and rear of the heat exchanger before continuing with the "Reversible Water Connections" procedure.

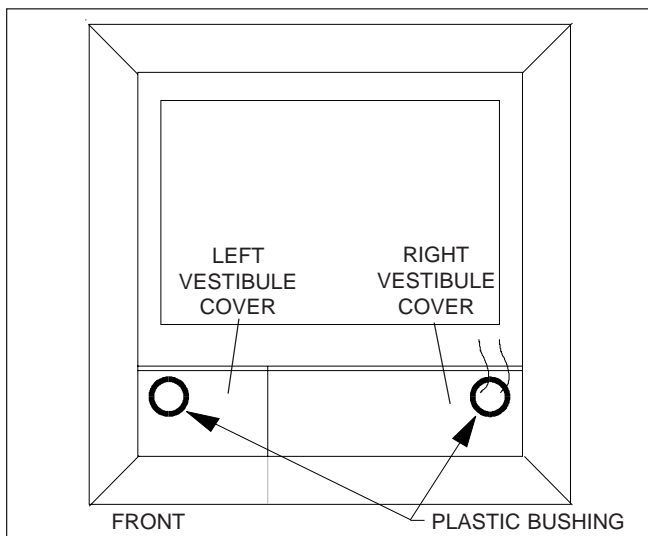


Figure 14. Vestibule covers.

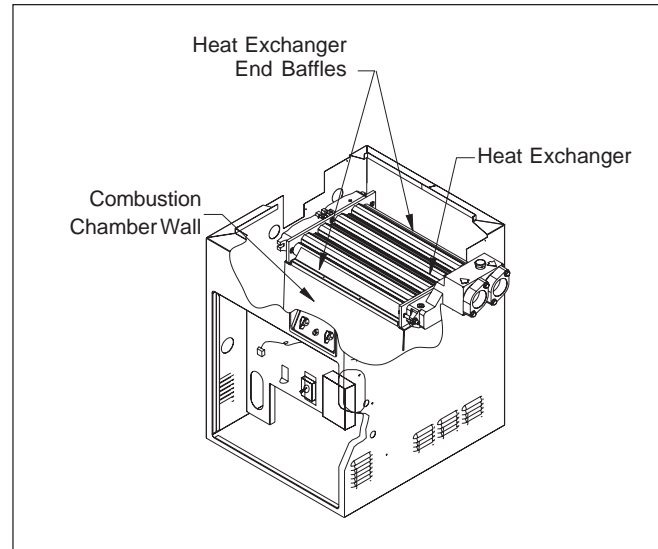


Figure 15. Heat exchanger and end baffles.

15. Remove pressure switch retainer (plastic cable clamp) from the inner panel (allow pressure switch to float).
16. Reroute pressure switch tube and thermostat bulb assembly through hole in left side of vestibule cover in reverse order.
17. Reinstall the temperature sensing bulb in the header, and fasten it with the retainer bracket and screw.
18. Reinstall the compression fitting at end of pressure switch tube into inlet/outlet header and tighten the fitting.
19. Route the white wiring from the high limit switches beside the heat exchanger and down to the original location following the pressure switch tubing. Secure white wires to the pressure switch tube with plastic wire ties.
20. Connect the white wire labeled PS to the pressure switch and the other white wire to its original location on the Fireman's switch.
21. Reinstall the drain plugs and tighten securely. Replace jacket/plug grommets.
22. Install the flue collector assembly. Be sure the front and rear panels of the flue collector are installed into the grooves on the front and rear combustion chamber heat shield panels. Be sure the sheet metal panels are not pinching any wires.
23. Attach the flue collector hold down clamps to the clips located under the two center header bolts.
24. Replace the gap closures and tighten the screws securely.

25. Double-check to make sure the wiring is not pinched against sharp edges, or resting on the flue collector assembly.
26. Reinstall rainshield assembly.
27. Replace the top assembly. Make sure the tabs are outside the heater jacket. Fasten the top assembly with the hex-head screws.
28. Install plastic tie wraps on wiring in the vestibule (controls compartment).
29. Install heater door.
30. Reinstall the vent cap or drafthood, if one was removed.

2G-3. Check Valve Installation

Install a check valve if there is any chance of back-siphoning when the pump stops. Do not install any other valve in the piping between the heater outlet and the pool, unless it is being used as a diverter valve.

2G-4. Chlorinators, Ozone Generators, and Sanitizing Chemicals

The Lite 2 Low NOx heater is manufactured with materials that are not compatible with high concentrations of ozone, chlorine, bromine, or other sanitizing chemicals. Heater damage caused by excessive chemicals or improper ozonation is not covered by the warranty. Be sure to adhere to the following:

- When ozone is injected upstream of the heater, install an offgas mixing chamber, or an ozone bypass system between the heater and the ozone injector to prevent ozone and air from entering the heater.
- When chemical feeders are used, plumb the feeder downstream of the heater and install an in-line check valve between the heater and the feeder (a minimum of 18" is required between the heater and the check valve).
- Never deposit chemicals directly in the pool skimmer.

2G-4a. Water Chemistry

Proper chemical balances are necessary for sanitary bathing conditions as well as ensuring your heater's long life. Be sure to keep your chemical levels within the values indicated in Table 5. **Jandy does not warrant heat exchangers damaged by corrosive chemical levels or excess dissolved solids in pool or spa water.**

Table 5. Mineral Concentration Levels

Test	Recommended Level
Free chlorine	1.0 to 3.0 ppm
Bromine	3.0 to 5.0 ppm
pH	7.2 to 7.8
Total alkalinity (TA)	80 to 120 ppm
Calcium hardness (CH)	200 to 400 ppm
Langelier saturation index (LSI)	-0.5 to +0.5
Total dissolved solids (TDS)	Less than 2000 ppm
Cyanuric acid	30 to 150 ppm
Copper	0 ppm

For spas, it is also necessary to perform water changes in addition to chemical treatment. It is recommended to change the spa water every 60 days for light usage and every 30 days if usage is heavy.

2G-5. Pressure Relief Valve

A pressure relief valve is not furnished with the Lite 2 Low NOx heater. However, it is recommended that a pressure relief valve be installed and may even be required by local codes.

To install a pressure relief valve, remove the 3/4 inch (19 mm) brass plug located on the top of the inlet/outlet header (see Figure 16). Install the pressure relief valve in the threaded hole from which the plug was removed. The pressure rating of the valve should be at or below the lowest working pressure of any component in the filter system. Any pressure relief valve installed must comply with provisions of the Standard described in ANSI Z21.22.

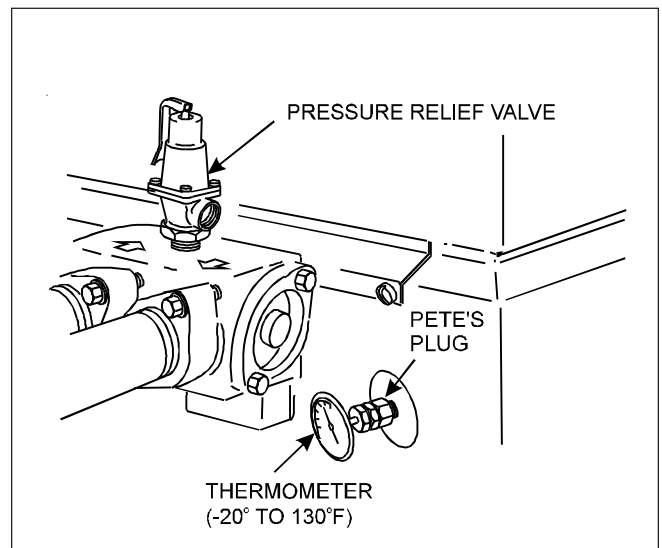


Figure 16. Thermometer and pressure relief valve.

2G-6. Adjusting the Pressure Switch

Caution

The pressure switch should be adjusted to turn the heater off when the pump is off. Setting the switch to close at too low of a flow can damage the appliance. Adjust the switch to turn the heater off, not on.

The pressure switch is preset at the factory for activation at 2 psi. Adjust the pressure switch only if any part of the filter system piping is 3 feet (0.91 m) or more above the top of the heater jacket.

Do not adjust the pressure switch if the heater is installed more than 15 feet (4.57 m) below or 6 feet (1.83 m) above the pool surface. Consult your local representative for recommendations.

On some installations, the piping from the heater to the pool is very short. The back pressure could be too low to trigger the pressure switch. If this happens, it may be necessary to install a directional fitting or elbows where the return line enters the pool. This will increase back pressure enough for the heater to operate properly.

Make sure the pool filter is clean before making any pressure switch adjustment: A dirty filter will restrict the water flow and the pressure switch cannot be adjusted properly. To adjust the pressure switch:

1. Set the control panel rotary switch to the OFF position (see Figure 17).

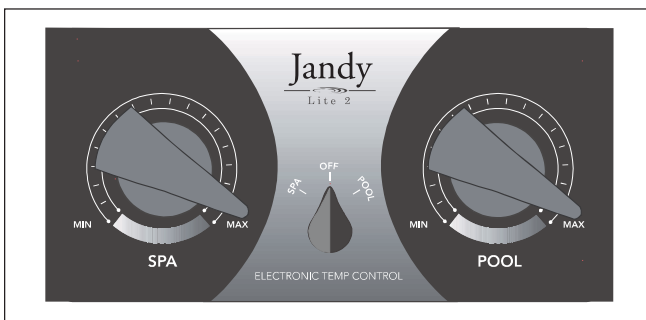


Figure 17. Temperature controls.

2. Set the Pool temperature control to the Max position.
3. Turn filter pump on. If a two-speed pump is used, make sure it is at high speed.
NOTE: Heater should not be allowed to fire on low speed.
4. Turn rotary switch to ON. Heater should start.
5. Pry out the top rubber dust plug on the top of the pressure switch.
6. Use a 7/32 inch (5.55 mm) Allen wrench to turn the adjustment screw very slowly clockwise until the heater goes off (see Figure 18).

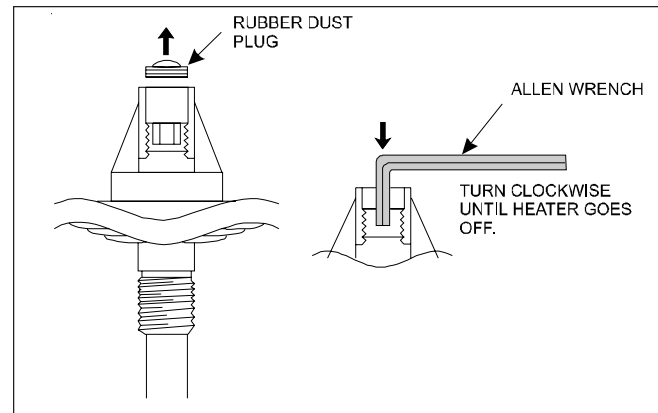


Figure 18. Pressure switch adjustment.

7. Slowly turn the pressure switch adjustment screw **counterclockwise** one-quarter turn. The heater should come back on.
8. Check the adjustment by turning the filter pump OFF. The heater should shut off immediately. If it does not, restart the filter pump and repeat Steps 6 and 7. Check the adjustment again.
9. Return the pool temperature control to the desired temperature.

2G-7. Automatic Flow Control Valve

The automatic flow control valve maintains the proper flow through the heater at rates up to approximately 125 Gallons Per Minute (GPM). If the system filter-flow rate is higher than approximately 125 GPM, install a manual bypass valve (see Figure 19), then perform a temperature rise test (see Section 2G-8) and adjust the flow using the bypass valve until the proper temperature rise is obtained.

2G-8. Temperature Rise

A temperature rise test confirms proper water flow through the heater. The temperature rise is the difference between the temperature of the pool or spa water before and after heating, as measured in the header. Perform the following temperature rise test when the installation is complete:

1. Make sure the pool filter is clean.
2. Set the rotary switch on the temperature control panel (see Figure 17) to OFF.
3. Turn the filter pump off.
4. Remove the drain plug located on the inlet/outlet header of the heater and replace it with a Pete's plug (see Figure 16).
5. Insert a pocket thermometer (see Figure 16) through the Pete's plug into the header.

6. Turn the filter pump on and wait 3 minutes. The heater remains off. This allows water from the pool to reach the heater.
7. Record the temperature indicated by the thermometer (cold water).
8. Turn the heater ON following the lighting instructions found on the inside of the heater.
9. Allow the heater to run for about 3 minutes. Record the new temperature reading (heated water).
10. Subtract the first temperature reading (cold water) from the second temperature reading (heated water). The difference between the two readings is the *temperature rise*. The temperature rise should be within the range shown in Table 6.

Table 6. Temperature Rise and Minimum Flow Rates

Size	Minimum	Minimum		Maximum	
	GPM	°F	(°C)	°F	(°C)
250	25	33	(19)	42	(24)
400	30	30	(17)	39	(22)

11. If the temperature rise is below the minimum range indicated, two possibilities arise:
 - a. The supply gas volume is too low.
 - b. The system's water flow exceeds 125 GPM, and requires a manual bypass valve for proper operation (see Figure 19).

12. If the temperature rise is above the maximum, there is not enough water flowing through the heater. Check for clogging in the water filter or restriction in the water pipes.

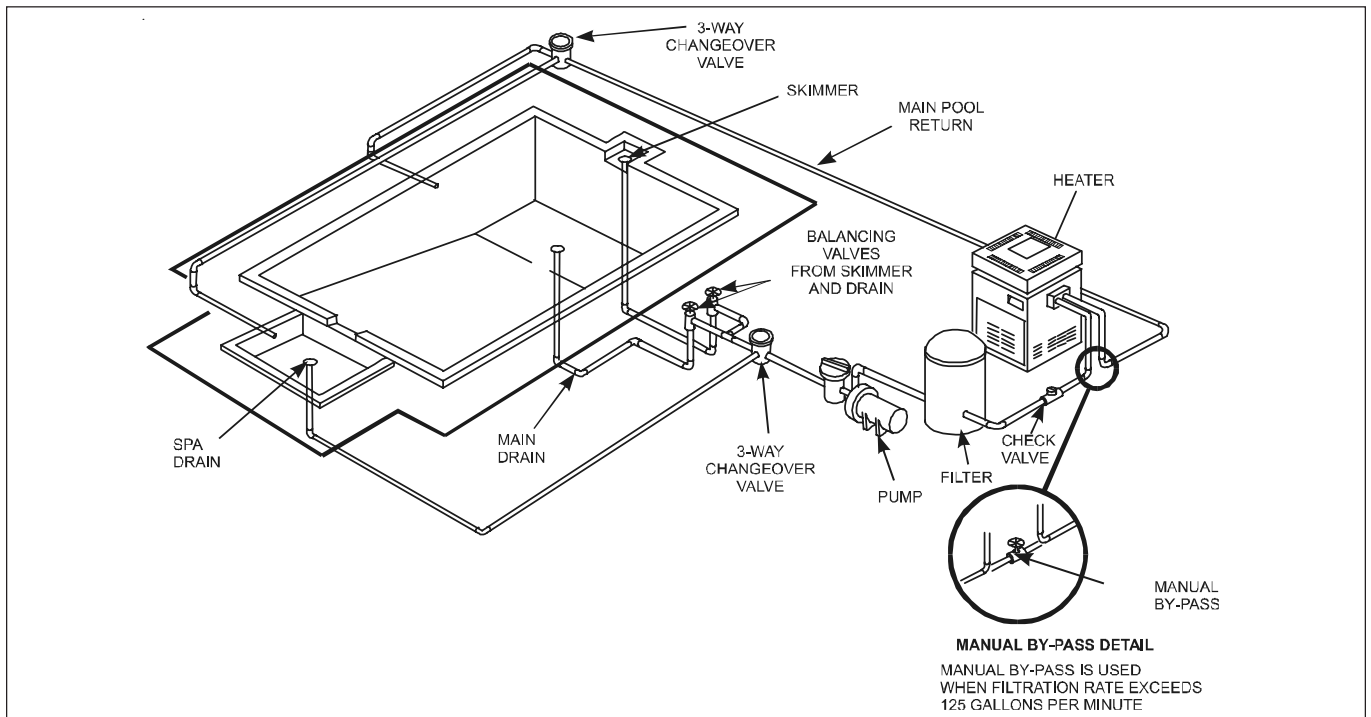
⚠ Caution
 Operation with the temperature rise above maximum or below the minimum can damage the heater and may void the warranty.

13. If the temperature rise is within the correct range, complete the procedure as follows:
 - a. Turn heater off.
 - b. Wait 3 minutes, turn filter pump off.
 - c. Remove thermometer and Pete's plug.
 - d. Replace the drain plug.

2G-9. Adjusting the Manual Bypass Valve

After the manual bypass valve is installed, use the following procedures to adjust the bypass valve:

1. Clean pool filter.
2. Remove drain plug located on the inlet/outlet header of the heater and replace it with a Pete's plug.
3. Insert a pocket thermometer (see Figure 16) through the Pete's plug into the header.
4. Close manual bypass valve.
5. Turn rotary switch on the temperature control to the OFF position.



Note: When using metal pipe as heat sink, join metal and PVC/CPVC, using metal male and PVC/CPVC female connection.

Figure 19. Typical installation.

6. Repeat steps 6 through 10 of the temperature rise test (see Section 2G-8).
7. If the temperature rise is below the minimum stated in Table 6, open the manual bypass valve until temperature rise climbs between the min. and max. range for your size heater. If the minimum temperature rise stated in Table 6 cannot be reached with the manual bypass fully open, then the gas supply volume is too low.
8. If the temperature rise is above the maximum, there is not enough water flowing through the heater. Check for clogging in the water filter or restriction in the water pipes.
9. Once the temperature is within the correct range, safety wire the handle of the manual bypass valve in place and tag the valve to prevent change in the water flow.

SECTION 3. Operating Instructions

3A. General Information

With any new pool or spa installation, operate the filter pump with the heater off long enough to completely clean the water. This will remove any installation residue from the water. Clean the filter at the end of this operation before starting the heater. When raising the temperature of a cold pool, remove all time clock settings. This lets the filter system and heater operate continuously until the water reaches the temperature setting on the temperature control. When that happens, the heater will automatically shut off, but the filter pump will keep running.

Caution

Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and replace any part of the control system and any gas control which has been under water.

Caution

Should overheating occur or the gas supply fail to shut off, turn off the manual gas control valve to the heater.

Caution

Keep all objects off the top of the heater. Blocking air flow could damage the heater, and may void the warranty.

WARNING

Vent pipes, drafthoods, and heater tops get hot! These surfaces can cause serious burns. Do not touch these surfaces while the heater is in operation. Adding a vent cap reduces the temperature on the top.

WARNING

For your safety, when starting the heater, keep your head and face well away from the lower firebox opening to prevent any risk of personal injury.

3B. Lighting and Shutdown Procedures (see Page 15).

NOTE: The heater must be relit following the instructions found on the inside of the heater. DO NOT attempt repairs on the gas control or heater. Tampering is dangerous and voids all warranties.

3C. Setting the Temperature Control

The temperature control (see Figure 17) is calibrated at the factory and covers a range from approximately 70°F to 104°F (21°C to 40°C). Use an accurate pool thermometer to determine the best water temperature for your uses.

The Lite 2 Low NO_x heater has dual temperature controls, which allows two different temperature settings, selected by the rotary switch in the middle of the panel. One control can be set for normal use and the other for standby; or one can be set for pool and the other for a spa. Placing the rotary switch in the middle turns off the heater (see Figure 17).

IMPORTANT: The temperature controls cannot be calibrated in the field. If the control is faulty, shut down the heater and have a qualified service technician replace the control. DO NOT use the thermostat switch to completely shut down the heater.

3D. Seasonal Care

Caution

Do not operate this heater outdoors at temperatures below 20 degrees Fahrenheit (°F) (-7 degrees Celsius [°C]).



3B Lighting and Shutdown

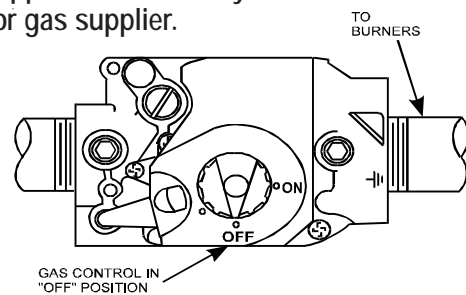
FOR YOUR SAFETY READ BEFORE OPERATING

⚠ WARNING: If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.


- A. This appliance does not have a pilot light. It is equipped with an ignition device which automatically lights the heater. Do NOT try to light the burners by hand.
- B. BEFORE OPERATING, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to lowest setting and turn appliance switch to "OFF".
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the heater. Do not try to light the burners by hand.
5. Remove the heater door.
6. Turn gas control knob clockwise  to "OFF".
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.
8. Turn gas control knob counterclockwise  to "ON".
9. Replace control access panel
10. Turn on all electric power to appliance.
11. Set thermostat to desired setting and turn appliance switch from "OFF" to either "POOL" or "SPA".
12. If the appliance will not operate, check that the filter pump is on, the filter is clean and water is flowing to the pool. Otherwise, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to lowest setting and turn appliance switch to "OFF".
2. Turn off all electric power to the appliance if service is to be performed.
3. Turn gas control knob clockwise  to "OFF".
4. Replace control access panel.

3D-1. Spring and Fall Operation

During periods when the pool is only going to be used occasionally, turn the temperature control down to the MIN setting. This prevents the pool water from becoming chilled, and minimizes the time required to raise the pool water back up to the desired temperature.

In areas subject to only short freeze periods, turn off the heater and run the pump continuously for the length of the freeze period.

If the heater is not going to be used for a long period of time, shut it down completely. Follow the instructions found on the inside of the heater, or page 17 of this manual.

3D-2. Winterizing

In areas where freezing temperatures occur in winter, and the pool or spa will not be used, have your service technician perform the following steps:

1. Turn off the main gas supply valve to the heater, outside the heater jacket.
2. Remove heater door.
3. Shut down the heater following the shutdown instructions found on the inside of the heater.
4. Remove the drain plug from the return header (see Figure 20), loosen the drain plug from the inlet/outlet header, and completely drain the heater before the first frost.
5. After all water has drained from the heater, remove the drain plug from the inlet/outlet side. Check for mineral buildup in the openings.
6. Use compressed air to blow out any standing water remaining in the heat exchanger.
7. Grease the threads on the drain plugs and reinstall plugs, but do not tighten.
8. Disconnect the pressure switch from the siphon loop (copper tubing) (see Figure 21).

3D-3. Spring Start-up

To restart the heater in the Spring, have a professional service technician reassemble the heater as follows:

1. Fill the siphon loop with approximately 5cc of SAE 50, non-detergent oil. Attach the copper tubing to the pressure switch (see Figure 21).
2. Tighten the drain plugs.
3. Turn on the filter pump and circulate water through the heater for 5 minutes. Check for leaks while circulating.
4. Turn on the main gas supply valve to the heater, outside the heater jacket.
5. Turn on the heater following the lighting instructions found on the inside of the heater, or page 15 of this manual.

3E. Water Chemistry

For notes on water chemistry please consult sections 2G-4, 2G-4a and Table 5 on page 11 of this manual.

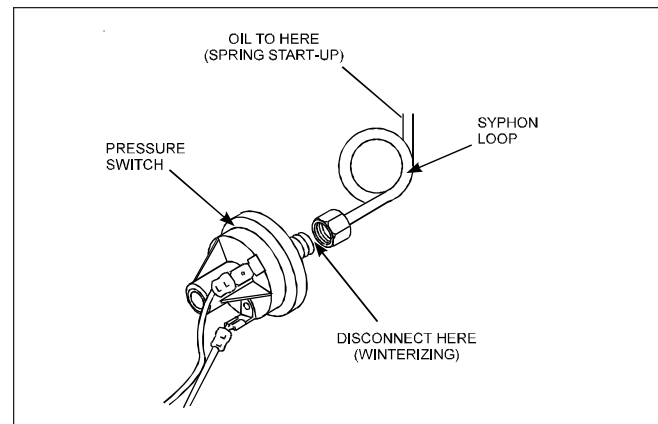


Figure 21. Pressure switch copper tubing.

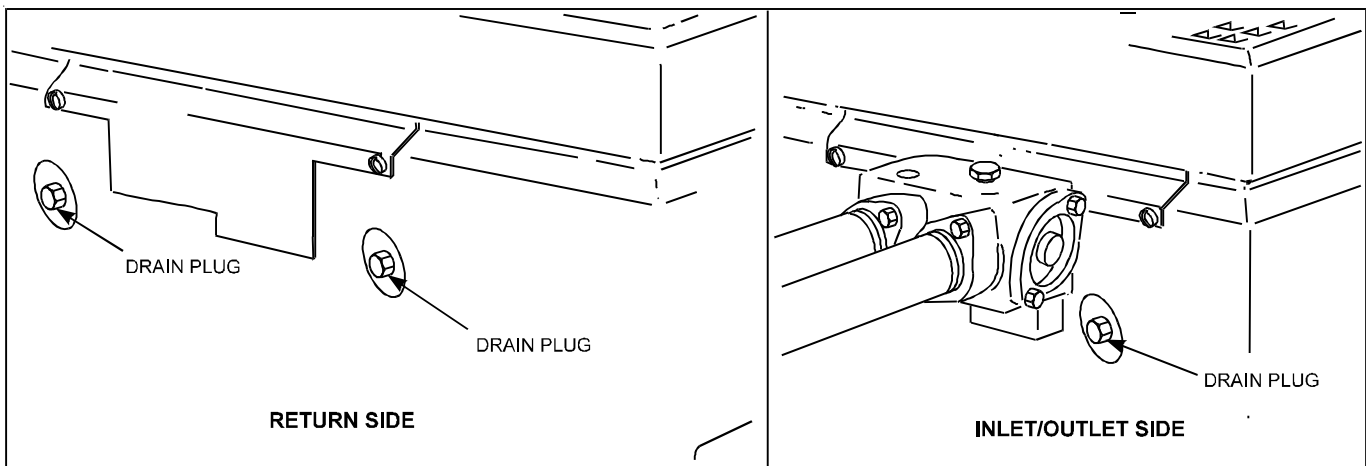


Figure 20. Heater drain locations.

3F. Spa/Hot Tub Safety Rules

WARNING

The following “Safety Rules for Hot Tubs,” recommended by the U.S. Consumer Product Safety Commission, should be observed when using the spa.

1. Spa or hot tube water temperature should never exceed 104°F (40°C). One hundred degrees Fahrenheit (100°F [38°C]) is considered safe for a healthy adult. Special caution is recommended for young children.
2. The drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness which could lead to unconsciousness, and subsequently result in drowning.
3. **Pregnant women take note!** Soaking in water above 102°F (38.5°C) can cause fetal damage during the first three months of pregnancy (which could result in the birth of a brain-damaged or deformed child). If pregnant women are going to use a spa or hot tub, they should make sure the water temperature is below 100°F (38°C) maximum.
4. The water temperature should always be checked with an accurate thermometer before entering a spa or hot tub. Temperature controls may vary by as much as 4F° (2C°).
5. Persons with a medical history of heart disease, diabetes, circulatory or blood pressure problems should consult their physician before using a hot tub or spa.
6. Persons taking any medication which induces drowsiness (e.g., tranquilizers, antihistamines, or anticoagulants) should not use spas or hot tubs.
7. Prolonged immersion in hot water can induce hyperthermia.

Hyperthermia occurs when the internal body temperature reaches a level several degrees above the normal body temperature of 98.6°F (37°C). Symptoms include dizziness, fainting, drowsiness, lethargy, and an increase in the internal body temperature. The effects of hyperthermia include:

- Lack of awareness of impending hazard
- Failure to perceive heat
- Failure to recognize need to leave spa
- Physical inability to leave spa
- Fetal damage in pregnant women
- Unconsciousness resulting in a danger of drowning

3G. Swimming Pool Energy Saving Tips

Jandy offers the following recommendations to help conserve fuel and minimize the cost of operating your pool heater without sacrificing comfort.

1. The American Red Cross recommends a maximum water temperature of 78°F (25°C). Use an accurate pool thermometer. A difference of 4F° (3C°), between 78°F and 82°F (25°C and 28°C), will use as much as 40% more gas.
2. Carefully monitor the water temperature of your pool in the summertime. You can reduce heater usage due to warmer air temperatures.
3. Find the proper setting on the pool heater temperature control and use the TEMP-LOK to discourage further adjustments.
4. Set the filter time clock to start the pump no earlier than 6:00 AM during the pool heating season. This is the time when nightly heat loss balances.
5. If the pool is only going to be used on weekends, reduce the heater temperature control setting by 8 or 10 degrees during the week. Reset it to the 78°F (25°C) level a day or so before you plan to use the pool.
6. During the winter or when on vacation for longer than a week, shut down the heater by following the shutdown instructions found on the inside of the heater.
7. Where possible, shelter the pool from prevailing winds with well-trimmed hedges or other landscaping, cabanas, or fencing.
8. Always use a pool cover when practical. Besides providing a valuable safety feature, a pool cover will reduce heat loss, conserve chemicals, and reduce the load on filter systems.

3H. Periodic Inspection

WARNING

Improper installation or maintenance can cause nausea or asphyxiation from carbon monoxide in flue gases which could result in severe injury, or death.

3H-1. Owner Inspection

Jandy designs and constructs the Lite 2 Low NOx heater to provide long performance life when installed and operated properly under normal conditions. The following basic guidelines are suggested for your inspection:

1. Keep the top and surrounding area of the heater clear of all debris.
2. Keep the heater area clean and free of all combustible materials, flammable liquids and vapors, as well as sanitization chemicals.
3. Do not use the heater if any part has been under water. Immediately call a qualified professional technician to inspect the heater and replace any part of the control system which has been submerged.
4. If the heater is equipped with a pressure relief valve, check for corrosion in and around the valve. With the filter pump on, lift the release lever on the top of the valve to make sure that water runs freely through it. If corrosion is found, replace the pressure relief valve. When replacing the valve, be sure that the pump is off. Install the valve so that the discharge is directed away from any area that may be damaged by water.
5. Be sure all combustion air and ventilation openings are not blocked.
6. Check the blower's intake and outlet for leaves or other debris that may restrict the air flow into the mixing chamber.

3H-2. Professional Inspection

In addition, annual inspections by a qualified professional technician are recommended to keep the heater operating safely and efficiently through the years. The following basic checks should be performed.

1. Check for loose or broken wires and terminal connections.
2. Verify pressure switch operation by cycling the spa pump on and off a few times. The heater should go off immediately after the pump stops.
3. Inspect the electrical controls, specifically the following:
 - a. High limit controls.
 - b. Pressure switch.
 - c. Temperature control.
 - d. Automatic gas valve.
4. Inspect the venting system for blockage, leakage, and corrosion.
5. Check for spider webs in the pilot and main burner orifices - especially at Spring start-up.
6. Conduct a normal operating cycle and observe that the sequence proceeds as intended.

7. Inspect the external surfaces of the heat exchanger tubes for black carbon soot buildup by placing a mirror between and under the burners when the heater is firing. Remove any soot that has collected on the tubes, and correct the cause.

NOTE: After installation and first start-up, check the heat exchanger for black carbon soot buildup after the following periods of operation: 24 hours, 7 days, 30 days, 90 days, and once every 6 months thereafter.

Proper flames appear:

- a. Blue in color.
- b. 1 to 4 inches (25 to 102mm) high above burner surface.

SECTION 4. Parts List for Lite 2 Heater

4A. General Information

To purchase parts or obtain a comprehensive maintenance manual for the Lite 2 Low NOx heater, contact your nearest Jandy dealer or distributor. If they cannot supply you with what you need, contact the Customer Service Manager at Jandy Pool Products, Inc., P.O. Box 6000 Petaluma, Ca. 94955-6000, Telephone 707.776.8200 extension 245.

4B. Parts List

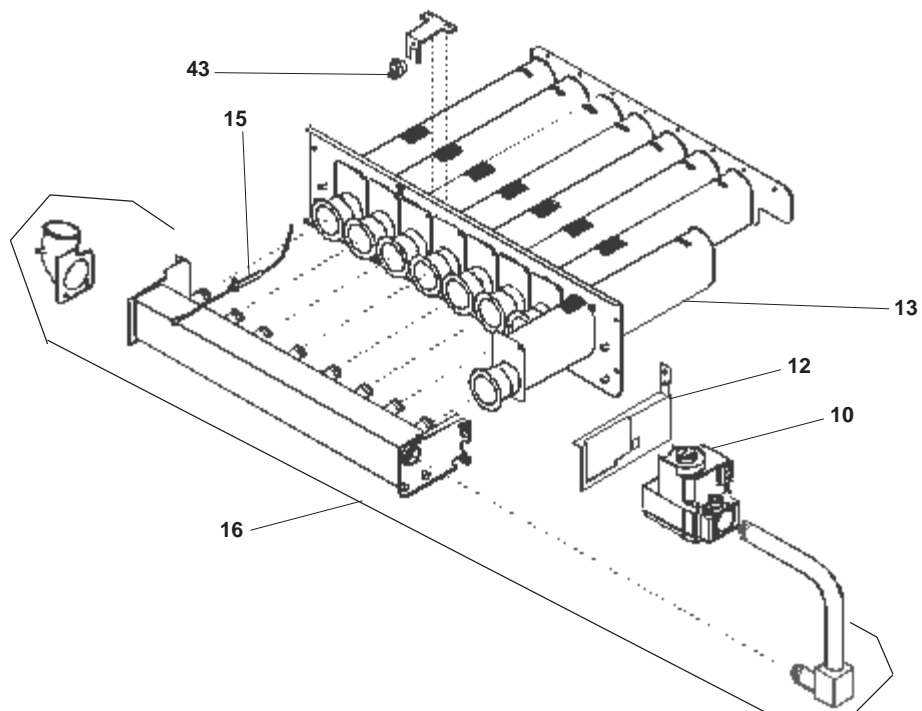
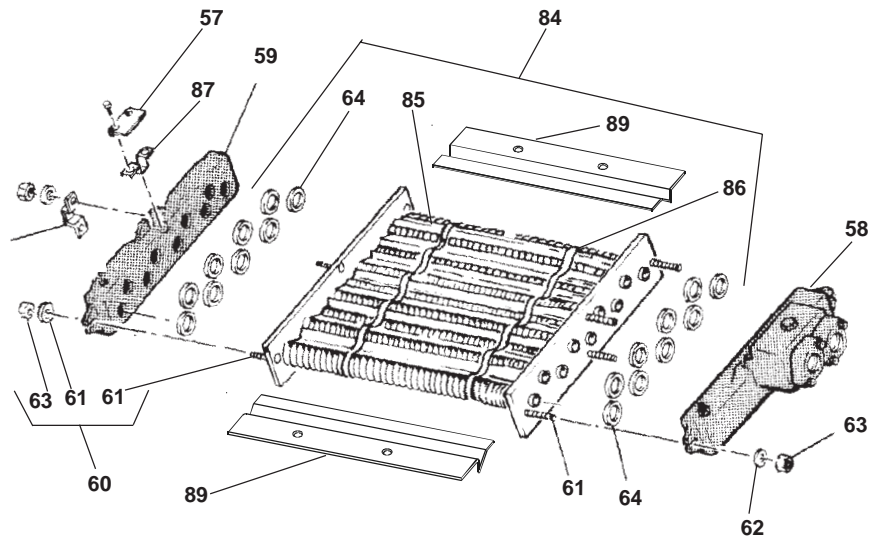
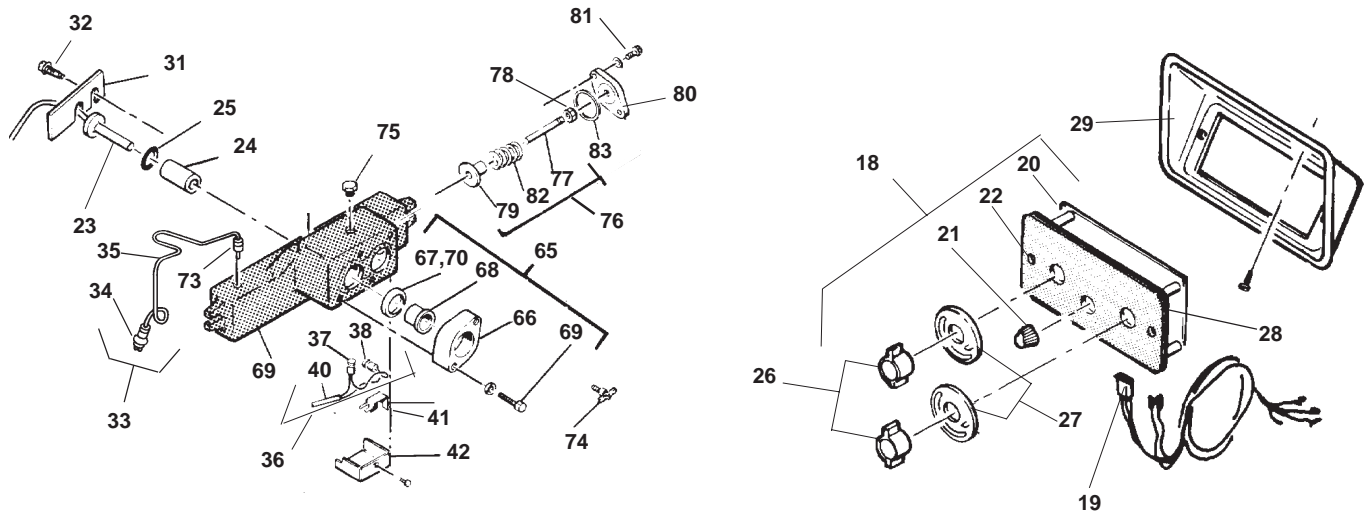
The following three pages contain a parts list, general exploded view and detailed exploded views to aid in parts identification. Please refer to these pages when ordering parts for your Lite 2 Low NOx pool heater.

Key No	Description	Model No	ORDER PART NO
IGNITER SYSTEM			
1	Ignition Control Assembly	All	R0362000
2	Ignition Control	All	R0408100
3	Harness Assembly (Not Shown)	All	R0059800
4	Transformer (115V/220V-24V) (Not Shown)	All	R0061100
5	Ignition Control Panel (Not Shown)	All	10451200
6	In-Line Fuse Assembly (Not Shown)	All	10480000
7	Hot Surface Ignitor	All	R0317200
MAIN GAS ASSEMBLY			
8	Burner Tray Assy	250,400	R0360003,05
9	Air Inlet Elbow	250,400	R0365803,05
10	Gas Valve	All	R0336800
11	Gas Orifice Set	250,400	R0365803,05
12	Anti-Rotation Bracket	All	R0331800
13	Burner, Main	All	R0360400
14	Gas Pipe with Attachment	250,400	R0365803,05
15	Flame Sensor	All	R0360900
16	Manifold	250,400	R0365803,05
17	Air Inlet Hose	All	R0360600
ELECTRICAL SYSTEM			
18	Temperature Control Assembly	All	R0011700
19	Wire Harness Assembly	All	10457800
20	Plate Assembly	All	10594600
21	Knob, Single Bar	All	R0099900
22	Temperature Control Label	All	H0166500
23	Temperature Sensor	All	R0011800
24	Protector Sleeve, Bulb	All	10444900
25	"O" Ring, Temperature Control Bulb	All	E0116400
26	Thermostat Knob, Black	All	R0010700
27	Stop Plate, "Temp-Lok"	All	10583100
28	Temperature Control Gasket	All	S0070000
29	Bezel	All	S0069800
30	Stop Plate Screw (Not Shown)	All	F0033300
31	Temperature Sensor Retainer Bracket	All	10447300
32	Retainer Bracket Screw	All	F0009100
33	Pressure Switch & Siphon Loop Assembly (2 PSI)	All	R0097600
34	Pressure Switch, 2 PSI	All	R0013200
34	Pressure Switch, 1 PSI	All	R0011300
34	Pressure Switch, 1-10 PSI	All	R0015500
35	Siphon Loop Assembly	All	R0057800
36	High-Limit Switch Assembly	All	R0023200
37	High-Limit Switch, 135° F	All	R0022700
38	High-Limit Switch, 150° F	All	R0023000
39	High-Limit Switch Retainer Boot	All	S0098900
40	High-Limit Switch Wire Harness	All	10419300
41	High-Limit Switch Retainer Clip	All	10418400
42	High-Limit Switch Cover	All	10418300
43	Fusible Link Assembly	All	R0012200
44	Fusible Link Bracket	All	not available
45	Terminal Block	All	R0097800
46	Blower	All	R0360500
47	Air Pressure Switch with Tubing	All	R0360700
VENT SYSTEM			
48	Top Enclosure	250,400	R0343403,05
49	Top Filler Plate	250,400	R0343703,05
50	Rainshield Kit	250,400	R0318303,05
51	Flue Collector Assembly	250,400	R0316403,05
52	Outdoor Vent Cap	250,400	10561503,05
53	Indoor Drafthood	250,400	10561403,05
54	Flue Transition Plate	250,400	10861903,05
55	Adapter Plate	250,400	10535303,05
56	Clip	All	10211000
57	Flue Collector Hold Down Clamp	All	10726000
WATER SYSTEM			
58	Inlet/Outlet Header, 2"	All	R0056400
58	Inlet/Outlet Header, Bronze, 2"	All	R0016800
59	Return Header (Includes set of 9 gaskets)	All	R0058300
59	Return Header, Bronze (Includes set of 9 gaskets)	All	R0054600
60	Header Bolt Assembly (Set of 8)	All	R0057000
61	Bolt for Headers, 2 1/2"	All	F0046100
62	Washer for Headers	All	F0011100
63	Nut for Headers	All	F0003100
64	Header Gasket Assembly (Set of 18)	All	R0050800
65	Flange & Gasket Assembly (Set of 2)	All	R0055000
66	Flange, 2"	All	10573500

Key No	Description	Model No	ORDER PART NO
67	Flange Gasket, 2"	All	S0078000
68	Flange Sleeve, 2"	All	S0078200
69	Flange Bolt	All	F0031700
70	Flange Gasket, 1 1/2 - 2"	All	S0078100
71	Rubber Grommet for Drain Plug	All	R0316300
72	Grommet, Slitted (Not Shown)	All	S0071100
73	Brass Connector Body	All	P0019701
74	Brass Drain Plug 1/4"	All	P0026800
75	Brass Plug, 3/4"	All	P0027000
76	By-Pass Assembly w/o spring (Iron Cap)	All	R0013100
76	By-Pass Assembly with spring (Bronze Cap)	250,400	10701403,05
77	By-Pass Valve Rod	All	S0079800
78	Brass Nut (For Rod)	All	F0048400
79	By-Pass Valve Disc	All	R0011500
80	By-Pass Valve Control Cap (Iron)	All	10452200
80	By-Pass Valve Control Cap (Bronze)	All	10557400
81	Control Cap Bolts (2 Required)	All	F0041600
82	By-Pass Valve Spring, Red	250	S0061300
82	By-Pass Valve Spring, Black	400	S0071000
83	By-Pass Valve Gasket	All	R0011400
84	Heat Exch. Tube Assy. (Incl. set of 18 gaskets)	250,400	R0018103,05
85	Heat Exchanger Baffle (8 Required)	250,400	10697403,05
86	Baffle Retainer	All	S0083900
87	Heat Exchanger Support Clip (2 Required)	All	10457000
88	Flow Restrictors (2 Required) (Not Shown)	125	S0000300
89	Heat Exchanger End Baffles (2 Required)	250,400	R0365903,05
FIREBOX COMPONENTS			
90	Complete Combustion Chamber Assy.	250,400	R0316703,05
JACKET COMPONENTS			
91	Door with Latch	250,400	R0360803,05
92	Jacket Assembly, Less Top Assembly	250,400	R0343503,05
93	Gap Closure, Inlet/Outlet	All	R0344300
94	Gap Closure, Return	All	R0344400
95	Button Plug, 1-3/4"	All	F0035300
96	Button Plug, 7/8"	All	F0032300
97	Button Plug, 2" (With hole for gas line)	All	F0056600
OPTIONAL COMPONENTS			
98	Non Combustible Base	250,400	10521703,05
99	Pressure Relief Valve 3/4" NPT, 75 PSI	All	R0040400
100	Touch Up Spray Paint, Pewter and Black	All	R0335800
101	Touch Up Spray Paint, Pewter Only	All	X0022700
102	Touch Up Spray Paint, Black Only	All	X0022900

Notes:

1) The Lite 2 Low NOx heater is designed for operation only with natural gas up to an altitude of 2000 feet. The orifice set listed in the above parts list reflects these conditions. For other applications contact your authorized Jandy dealer or our customer service department at (707)-776-8200 Ext. 245.



LITE 2 Low NOx LIMITED WARRANTY

Your Lite 2 LD Low NOx pool/spa heater is backed by this double warranty to assure your complete satisfaction.

1. Controls, copper heat exchanger tubes, combustion air blower and combustion chamber panels are warranted against defects in materials and workmanship for two (2) years from date of purchase.
2. All other parts are warranted against defects in materials and workmanship for five (5) years from date of purchase.

The above warranty applies only if the installation and operating instructions applicable to the model purchased are expressly and completely followed. These instructions are furnished with the unit and are also available by writing to the Jandy Pool Products, Inc., factory. The liability of Jandy Pool Products, Inc., shall not exceed the repair or replacement of defective parts by factory authorized technicians, and shall not include transportation to or from factory, any labor costs, and consequential or incidental damages. Ship inoperative

parts or complete heater with Serial number, Model number and purchase date, transportation prepaid, directly to address below, attention Customer Service, for evaluation and warranty consideration.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state, and by province. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.



6000 Condor Dr., Moorpark, CA 93021 USA* 707.776.8200



Jandy®, Lite®, LX® and HI-E2® are registered trademarks of Jandy Pool Products, Inc. All other brand names, products names or trademarks belong to their respective holders.



Jandy Pool Products, Inc.
6000 Condor Drive, Moorpark, CA, USA 93021 • 707.776.8200 FAX 707.763.7785
1758 Corporate Circle, Petaluma, CA, USA 94954 • 707.776.8200 FAX 707.763.7785