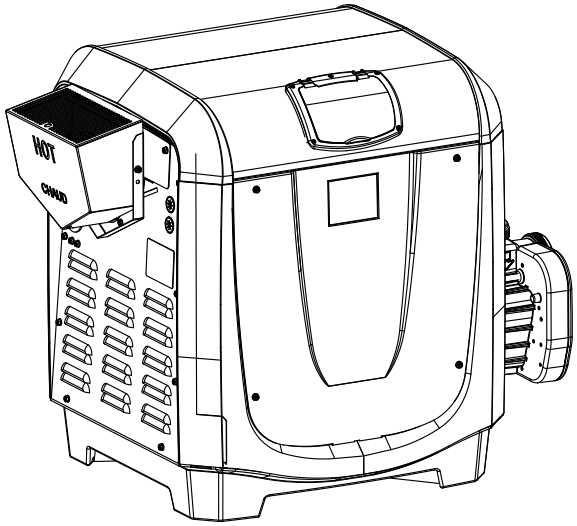


JXi™ Gas-Fired Pool and Spa Heater

Model Size 200, 260, 400

Essential installation and startup instructions are included in this manual. Additional operation and troubleshooting information is available online by scanning the QR code with your phone or visiting jandy.com

⚠ WARNING	If the information in these instructions is 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

- **Immediately switch off main gas supply.**
- **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 neighbor's 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.

⚠ WARNING

FOR YOUR SAFETY: This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exists. In the event no such state or local requirement exists, the installer or maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation can create carbon monoxide gas and flue gases which can cause serious injury, property damage, or death. For indoor installations, as an additional measure of safety, Zodiac Pool Systems LLC strongly recommends installation of suitable carbon monoxide detectors in the vicinity of this appliance and in any adjacent occupied spaces. Improper installation and/or operation may void the warranty.

EQUIPMENT INFORMATION RECORD

Date of Installation _____

Installer Information _____

Initial Pressure Gauge Reading (with Clean Filter) _____

Pump Model _____ Horsepower_____

Notes _____

_____

_____

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Section 1. General Information

READ AND FOLLOW ALL INSTRUCTIONS

1.1 Introduction

This manual provides installation and operation instructions for the Jandy JXi pool and spa gas heater product line. Read these installation and operation instructions completely before proceeding with the installation. Consult Zodiac Pool Systems LLC ("Zodiac") with any questions regarding this equipment. To obtain additional copies of this manual contact us at 1.800.822.7933.

Zodiac Pool Systems LLC
2882 Whiptail Loop #100
Carlsbad, CA 92010 USA

The blower draws air and fuel through specially designed orifices, delivering a precise mixture to the burner, located inside the sealed combustion chamber. Water flows through the heat exchanger, which surrounds the burner transferring the heat to the water. Exhaust gases are then directed through a duct where it is vented to the atmosphere.

1.2 Safety Instructions

The heater is designed and manufactured to provide many years of safe and reliable service when installed, operated, and maintained according to the information in this manual and the installation codes referred to throughout. Be sure to read and comply with all warnings and cautions.

⚠ WARNING

Improper installation or maintenance can cause nausea or asphyxiation from carbon monoxide in flue gases which could result in severe injury, or death. For indoor installations, as an additional measure of safety, Zodiac Pool Systems LLC strongly recommends the installation of suitable Carbon Monoxide detectors in the vicinity of this appliance and in any adjacent occupied spaces.

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

- Spa or hot tub 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.
- 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.
- **Pregnant women take note!** Soaking in water above 102°F (38.5°C) can cause fetal damage during the first three (3) 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.
- 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 1°F (1°C).
- 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.
- Persons taking any medication which induces drowsiness (e.g., tranquilizers, antihistamines, or anticoagulants) should not use spas or hot tubs.

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

SAVE THESE INSTRUCTIONS

1.3 Warranty

The Jandy JXi heater is sold with a limited factory warranty.

Make all warranty claims to your Jandy dealer or directly to Jandy. 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.

The warranty does not cover damage caused by improper assembly, installation, operation, winterizing, field modification, or failure to earth bond and properly ground the unit. Also, damage to the heat exchanger by corrosive water is NOT covered by the warranty.

1.4 Technical Assistance

Consult the Jandy technical support department or your local Jandy dealer with any questions or problems involving your Jandy equipment. An experienced technical support staff is ready to assist you in assuring the proper performance and application of Jandy products. For technical support call the Jandy technical support department at 1.800.822.7933.

1.5 Specifications

Supply Gas		
INSTALLATION LOCATION*	NATURAL GAS (NG)	CERTIFIED INDOOR, OUTDOOR / COVERED SHELTER
	LIQUID PROPANE (LP)	OUTDOOR / COVERED SHELTER
OUTDOOR OPERATION AMBIENT AIR	ANY	OUTDOOR OPERATION IN AMBIENT AIR DOWN TO 40°F (4°C)
GAS PIPE HEATER GAS VALVE CONNECTION†	NATURAL GAS (NG)	3/4 in NPT
	LIQUID PROPANE (LP)	
Inlet Gas Supply Pressure ‡		Min
	NATURAL GAS (NG)	4.0 in WC
	LIQUID PROPANE (LP)	
Water Pipe/Heater Connection	NATURAL GAS (NG)	• PVC/CPVC 2 in unthreaded • Jandy threaded union
	LIQUID PROPANE (LP)	
Water Flow Rate		Min
	NATURAL GAS (NG)	30 gpm (76 lpm)
	LIQUID PROPANE (LP)	
Working Water Pressure		
	NATURAL GAS (NG)	2 psi**
	LIQUID PROPANE (LP)	
Exhaust Vent Connection Size (Category I)§ See *Section 3.3.5, Exhaust Venting*.	NATURAL GAS (NG)	• Model 200: 6 in • Model 260: 7 in • Model 400: 8 in
	LIQUID PROPANE (LP)	
Exhaust Vent Connection Size (Category III)§ See *Section 3.3.5, Exhaust Venting*.	NATURAL GAS (NG)	• All Models: 4 in
	LIQUID PROPANE (LP)	
Electrical Supply	NATURAL GAS (NG)	• 120 VAC@<5amps • 240 VAC@<2.5amps
	LIQUID PROPANE (LP)	

Supply Gas		
High Altitude	NATURAL GAS (NG)	Appliances are normally derated when installed at high elevation. This is not necessary with the JXi heater because it has a special venturi-type combustion system which self-compensates for changes in barometric pressure. Air flow through the blower inlet pulls the correct flow of gas into the burner regardless of air density. JXi heaters are CSA certified for elevations of up to 4,500 feet above sea level. At elevations above 4,500 ft., the heater BTU output can be expected to be reduced by 4% for every 1,000 feet over 4,500 feet above sea level.
	LIQUID PROPANE (LP)	
* Indoor installation is not recommended for liquid propane heaters. **Adjustable water pressure switch factory set to 7 psi. See *Section 5.3, Water Pressure Switch Adjustment* for adjustment instructions. Review Special Precautions for liquid propane heaters (see *Section 4.3, Special Precautions for LP Gas*)		Any changes to the heater, gas controls, gas valve, air orifice, gas orifices, wiring, or improper installation may void the warranty. If change is required to any of the above; contact your local Jandy distributor, visit www.jandy.com or call technical support at 1.800.822.7933.
†For gas pipe size requirements see *Section 4, Gas Connections* ‡Value displayed is for operating (fired) pressure not static.		
§ Use type B double-wall gas vent, per table 13.1(a) NFPA 54		

1.6 Dimensions

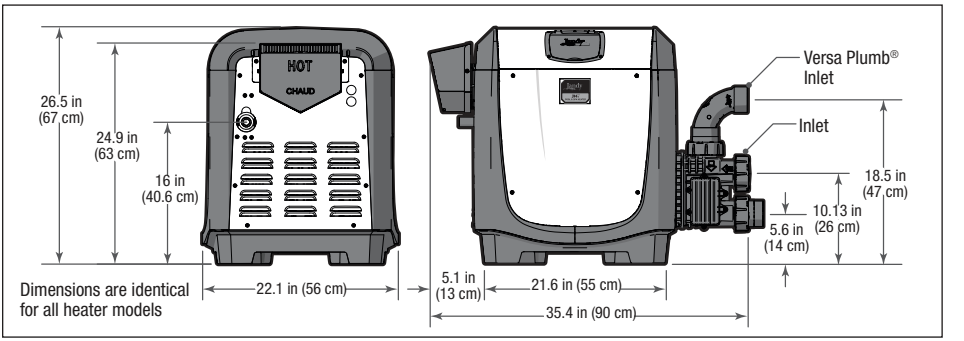


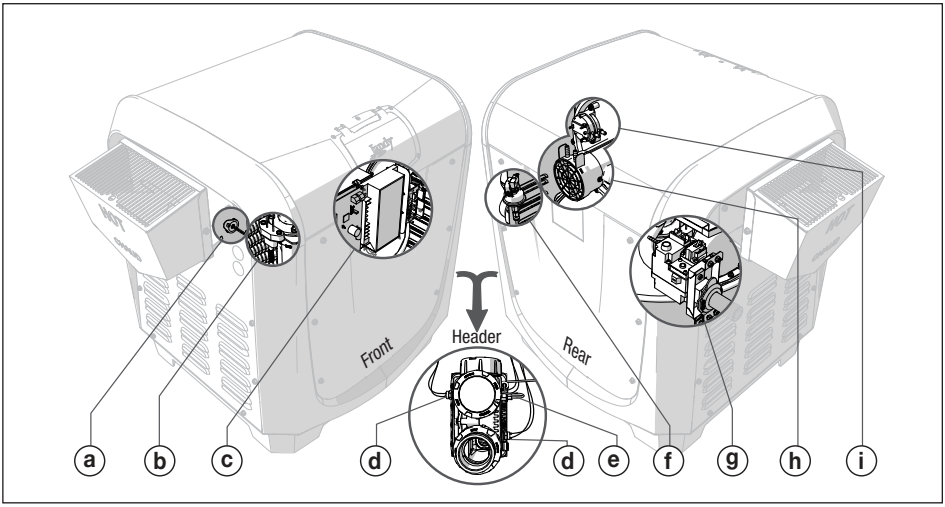
Figure 1. General Dimensions

For ASME heater models JXi400NC, JXi400PC, JXi260NC and JXi260PC please go to Section 13, Appendix A. ASME Header.

1.7 Certification Codes and Standards

	USA	CANADA
Design Certified	**CSA (Canadian Standards Association)**	
Compliant	ANSI® Z21.56 California South Coast Air Quality Management District's (SCAQMD) Rule 1146.2	CSA 4.7
National Codes	National Fuel Gas Code	Natural Gas and Propane Installation Code
	NFPA® 54/ANSI Z223.1	**CAN/CSA-B149.1**
	Pay particular attention to the chapter addressing Venting of Equipment	Minimum combustion air requirements MUST be followed for proper and safe operation. Failures may occur when only the minimum combustion air openings are used.
All Jandy heaters must be installed in accordance with the local building and installation codes as per the utility or Authority Having Jurisdiction (AHJ). In the absence of local codes, please refer to the latest edition of the national codes for installation. JXi pool and spa heaters meet or exceed the requirements of energy conservation regulations such as those in states that have disallowed the use of continuously lit pilot type ignition sources.		

1.8 Heater Components



a. **Flue Temperature Sensor:** Monitors temperature at the exhaust flue. If excessive temperatures are detected, combustion will stop and a fault will be displayed.

b. **Hot Surface Igniter:** When current is passed through the ceramic material of the igniter it will achieve temperatures great enough to initiate combustion of the air/fuel mixture.

c. **Ignition Control:** Provides energy for ignition, monitors flame quality and controls the gas valve. Upon call for heat, the blower is activated to purge the combustion chamber. Electrical power is then applied to the hot surface igniter. When ignition temperature is attained, the gas valve opens and ignition occurs. If stable flame is detected the igniter will power down. If stable flame is not detected the control system will close the valve to prevent further gas release. If a total of 3 ignition attempts fail an ignition fault is displayed.

d. **High Limit Switches:** Prevent water of excessive temperatures from being discharged from the heater. If either switch, one at the heat exchanger first pass 135°F (57°C) and one at the heat exchanger outlet 150°F (65°C), senses excessive temperature, the gas valve will close and combustion will stop.

e. **Pool/Spa Water Temperature Control:** Senses water temperature by means of a thermistor. Heater will operate to attain and maintain the water temperature according to the heater settings. Two separate thermostat settings are supported, typically used to set pool and spa temperatures.

f. **Water Pressure Switch:** Senses whether or not water is available to the heater by measuring back pressure at the header inlet. If insufficient pressure is detected, the display will indicate a “Check Flow” fault and combustion will stop.

g. **Gas Valve:** Controls gas flow into the burner. Enables flow when the temperature control calls for heat and all safety controls enable operation. It also regulates gas pressure to -0.2" WC (Water Column) below the air pressure at the blower inlet. Necessary pressure regulation cannot be accomplished with common (positive pressure) gas valves.

h. **Combustion Blower and Air Orifice:** Draws in air and fuel gas creating an air/fuel mixture that is passed through the burner for combustion. The fan will operate for several seconds before flame initiation and after the flame is extinguished to purge the combustion chamber for a clean burn and to expel any residual exhaust gas.

i. **Air Pressure Switch:** Monitors the vacuum (negative pressure) within the blower housing. This switch verifies that air is flowing through the combustion system by sensing pressure. If air flow is inadequate, combustion will stop and a fault will be displayed.

Indicates a safety control equipped to protect internal components and extend the life of the heater.

Section 2. Getting Started

Install the JXi in accordance with the procedures in this manual, local codes and ordinances, and in accordance with the latest edition of the appropriate national code. See *Section 1.7, Certification Codes and Standards*.

If the heater is to operated in below freezing conditions it should be installed in a protected outdoor shelter. See *Section 3.3, Indoor and Outdoor Shelter Installation*.

All gas-fired products require correct installation to ensure safe operation.

The requirements for pool heaters include the following:

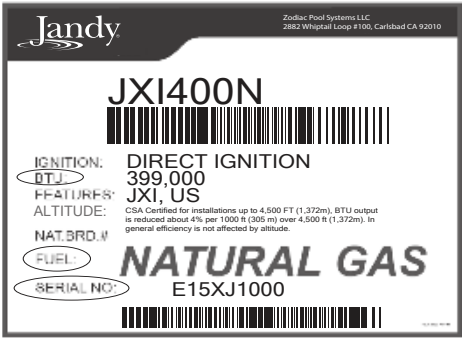
- Field assembly (if required)
- Appropriate site location, clearances and flooring. See *Section 3, Location Requirements*
- Sufficient combustion and ventilation air
- Properly sized gas meter and piping
- Proper electrical wiring
- Sufficient water flow

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

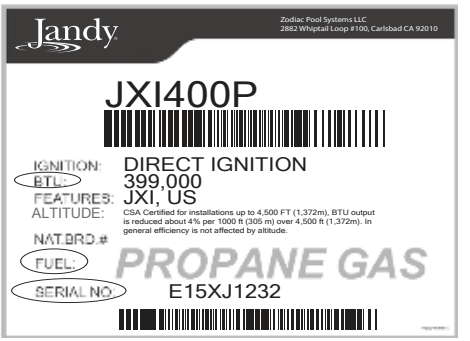
2.1 Package Contents

For ASME heater models JXi400NC, JXi400PC, JXi260NC and JXi260PC please see Section 13, Appendix A. ASME Header.

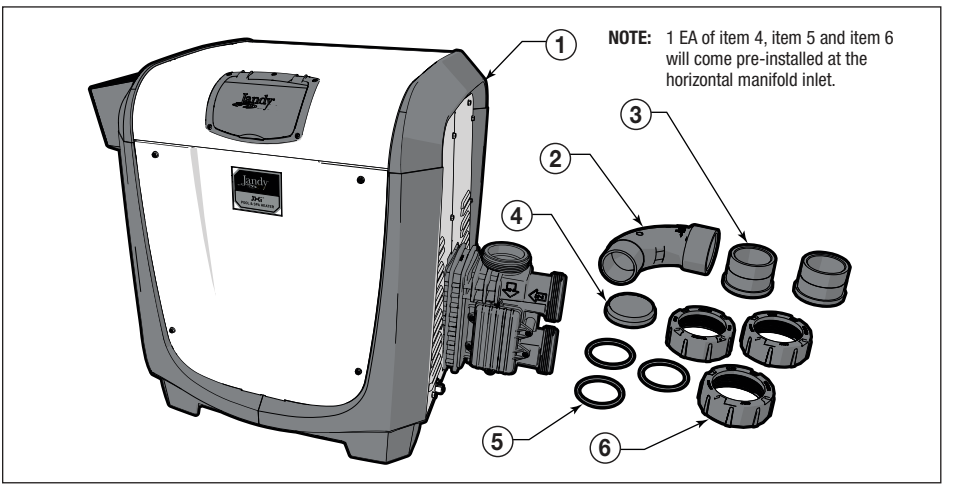
Before completely unpacking the unit please inspect carton for damage. In addition, please check the carton label to ensure that you have the correct fuel type and BTU rating for your application.



OR



Item	Description	Qty.
1	JXi Heater	1
2	Versa Plumb® Sweep Elbow	1
3	2 in Universal Union Tailpiece	2
4	2 in Universal Union Cap	1
5	2 in Universal Union O-ring	3
6	2 in Universal Union Nut	3



2.2 Required Equipment

Please ensure that the following equipment is available to the installer at the time of installation.

2.2.1 Tools



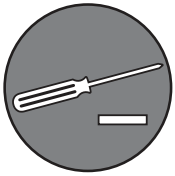
Safety Eyewear



Gloves



Phillips Screwdriver



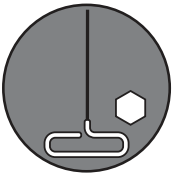
Flathead Screwdriver



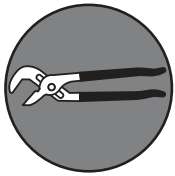
Pipe Wrench



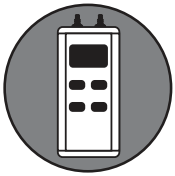
Adjustable Wrench



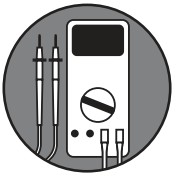
3/16 in Hex Key



Channel Locks



Digital Differential Manometer



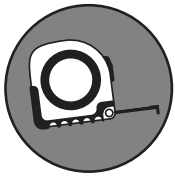
Voltage Meter



PVC Pipe Cutter



Power Drill



Tape Measure

2.2.2 Materials Supplied by Installer

Please ensure that all materials used during the installation are in accordance with local codes or the authority having jurisdiction (AHJ) requirements. If you have any questions regarding the materials that need to be used during this installation please call the Zodiac customer service center at 1.800.822.7933.

Indoor installations will require additional venting and exhaust conversion materials which are outlined in detail in *Section 3.3, Indoor and Outdoor Shelter Installation*.

NOTE: Required materials may differ from the materials listed. Be sure to confirm with all local and national codes before beginning the installation.

Gas Supplies	Electrical Supplies	Plumbing Supplies
Appropriately sized Gas Piping (see *Section 4.1, Supply Gas Requirements*)	120 or 240 VAC	PVC Piping
Manual Gas Shut Off Valve	Conduit Elbow/ Conduit connector.	PVC Cement
Gas Union	Flexible Conduit	PTFE (Teflon™) Tape
Gas Pipe Cap	Wire Nuts (3 ea.)	
Leak Solution		
1/16 in Hose "T"		
1/8 in - 1/16 in Barbed Adapter		
1/16 in Flexible Hose		

Section 3. Location Requirements

The JXi heater is shipped from the factory with an exhaust vent configured for outdoor installation. The heater is also design-certified for indoor installations, see *Section 3.3, Indoor and Outdoor Shelter Installation* for details. In Canada indoor installation must use a two pipe direct vent (combustion air and vent piping), see *Section 3.3.2, Direct Venting* for details.

Location of the heater below or above the pool water level affects operation of its water pressure switch. See *Section 5.3, Water Pressure Switch Adjustment* for more information.

Equipment must be installed on a firm, solid, non-absorbent level surface; and per the requirements of local codes and Authority Having Jurisdiction (AHJ). Equipment can weigh up to 156 lbs. (57 kg). Use suitably rated mounting surface materials to avoid risk of settlement, and never use sand to level the equipment as the sand will wash away. Check local building codes for additional requirements.

NOTE: If the heater is to be operated in below freezing conditions it should be installed in a protected outdoor shelter.

⚠ CAUTION

When pool equipment is located below the pool surface, a leak from any component can cause large scale water loss or flooding. Zodiac Pool Systems LLC cannot be responsible for such water loss or flooding or resulting damage.

3.1 Clearances

The heater must be installed in a location that allows clearances for maintenance and inspection. Minimum distances from combustible surfaces must also be maintained. All criteria given in the following sections reflect minimum clearances as stated in the national standards. However, each installation must also be evaluated, taking into account prevailing local conditions such as wind speed and direction, proximity and height of obstructions that may block ventilation, and proximity to public access areas.

Service Clearance: 36 inches (92 cm) from top of heater for removal of top panel.

18 inches in the US and 24 inches (61 cm) in Canada from the front panel of the heater. One exception to this is if the top panel is reversed such that the water plumbing is now on the left hand side of the heater and the exhaust is on the right hand side. In this case, you will need the service clearance (18" US/24" Can) from the rear panel of the heater.

Combustible Surfaces: Each heater face requires a 6 inch (15 cm) clearance from combustible surfaces. Although it is not advisable, the heater base can be placed on a combustible surface for operation. However, **do not install the heater on carpet.**

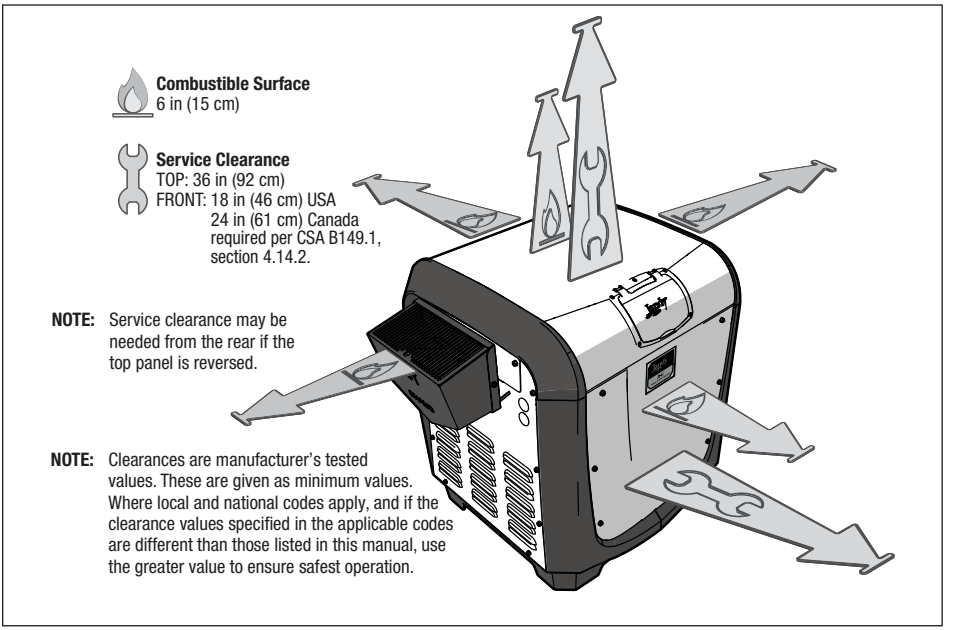


Figure 2. Clearances

3.2 Outdoor Installations

Locate the heater:

- On a level solid surface
- 5 ft (1.5 m) from inner pool edge unless separated by a permanent solid barrier, i.e. a wall or fence
- In an open area, not under a deck or other structure
- Away from doors windows or louvers that connect in any way to occupied or inhabited areas of the building

NOTE: In Canada the top of the exhaust vent must be at least 10 feet (3 m) from any building opening.

- Away from rainwater runoff
- Away from potential sprinkler water intrusion
- So that the top of the heater is at least 3 feet (1 m) below any overhang
- So that the top surface of the heater is at least 3 feet (1 m) above any forced air inlet within 10 feet (3 m)
- This heater is approved for use outdoors without additional venting attachments. If there are concerns over extreme weather conditions, we do provide the option to add up to 25 feet (7.5 m) of Category III venting material with an approved vent termination cap. Refer to *Section 3.3.8, Outdoor Heater Install with Venting for Extreme Weather Conditions* for details.

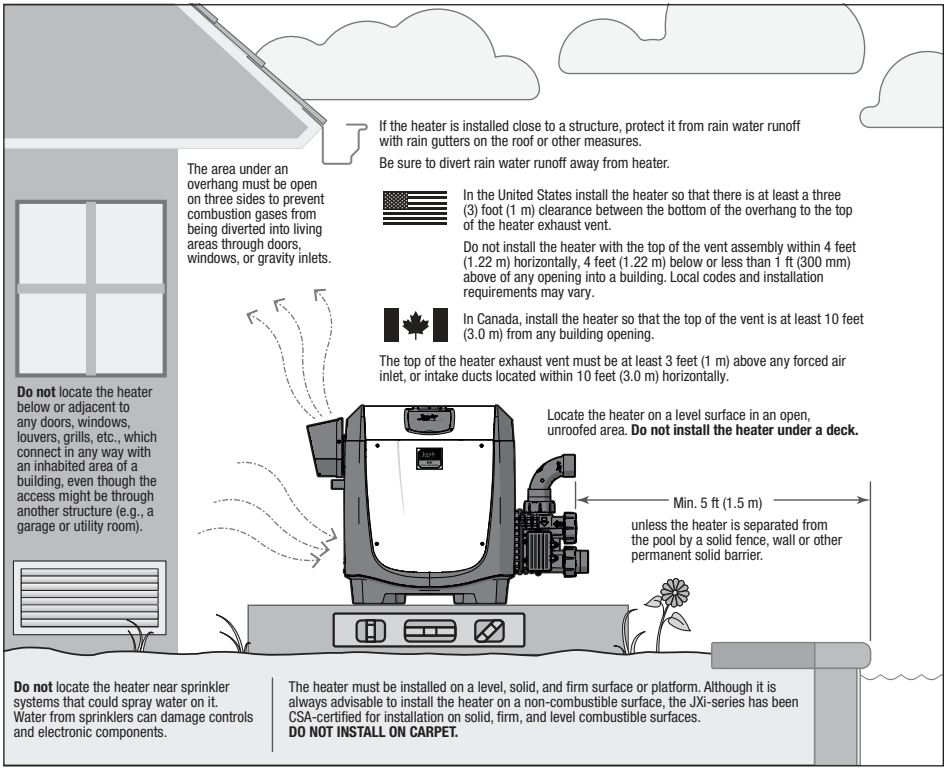


Figure 3. Location Requirements

⚠ WARNING	
United States	**Canada**
Do not install the heater with the top of the vent assembly within 4 feet (1.22 m) horizontally, 4 feet (1.22 m) below or less than 1 ft (300 mm) above of any opening into a building. Local codes and installation requirements may vary.	Do not install the heater with the top of the vent assembly within 10 feet (3.0 m) of any opening into a building. Local codes and installation requirements may vary.

3.2.1 Anchor Bracket Installation

Anchor brackets do not come standard with the JXi. If you require the anchor brackets for your installation please order kit #R0593400.

Anchor brackets should be installed in any circumstance where the heater may be subject to natural risks such as extreme weather or earthquake. In Florida, the heater is required to be securely fastened to the equipment pad to meet the applicable requirements of the Florida Building Code. Other jurisdictions may have similar requirements for extreme weather or other natural hazards. Check your local codes for details.

a. Using an adjustable wrench or equivalent tool loosen (DO NOT REMOVE) the retaining nut on the bracket. The upper and lower anchor bracket should be able to rotate freely about the retaining pin.

b. Slide the bracket into the slot located at the lower corner of the heater base.

c. Rotate lower anchor bracket into final position. Ensure that the lower anchor bracket is flush with the equipment pad surface and level.

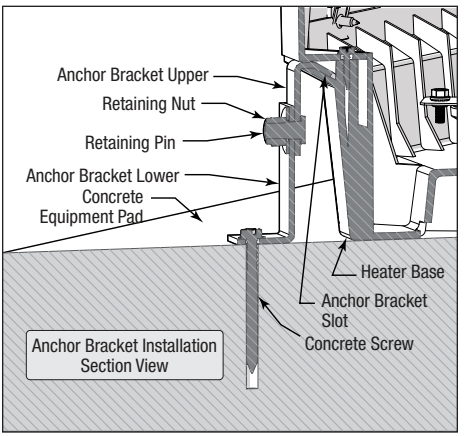
d. Tighten the retaining nut so that the anchor bracket assembly is secure.

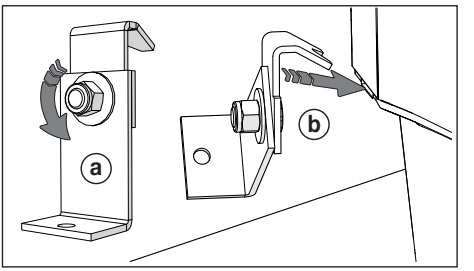
e. Drill a hole in the concrete using the lower anchor bracket hole as a guide. It is advised that a hammer drill with an appropriate concrete drill bit be used.

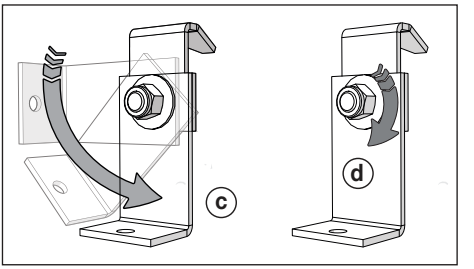
f. Place a screw in the hole and tighten to fasten the anchor bracket to the concrete pad. Do not over torque the screws.

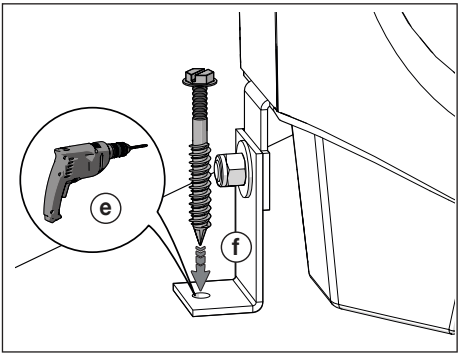
NOTE: Depending on the location of and access to the bracket, it may be necessary to mark the drill location using the lower anchor bracket hole as a guide. Remove the bracket from the heater, drill the hole and then reattach the bracket to the heater base.

NOTE: Concrete screws are not provided in the anchor bracket kit. Use size 1/4 in x 2-1/4 in galvanized or plated concrete screws and washers.









3.3 Indoor and Outdoor Shelter Installation

Due to the higher risks and hazards of liquid propane (LP) gas, Zodiac® does not encourage installation of LP gas heaters indoors, refer to *Section 4.3, Special Precautions for LP Gas*.

The heater is CSA design-certified for indoor installations. In Canada indoor installation must use a two pipe direct vent (combustion air and vent piping), see *Section 3.3.2, Direct Venting* for details. Please keep in mind the service and combustible surface clearances from *Section 3.1, Clearances* when selecting an installation location. You will also need to make considerations for intake combustion air see *Section 3.3.1, Combustion Intake Air Supply* and exhaust venting see *Section 3.3.5, Exhaust Venting*. In addition, when pool equipment is installed indoors, appropriate containment measures and drains should be considered for the prevention of property damage in the event of a water leak.

NOTE: An outdoor shelter is an unoccupied enclosure which does not communicate directly with occupied areas.

If the outdoor shelter is a completely closed structure, air openings in accordance with the size recommendations described in *Section 3.3.1, Combustion Intake Air Supply* must be maintained. If the structure does not have outside air openings then air must be provided for combustion by using our fresh air vent kit.

3.3.1 Combustion Intake Air Supply

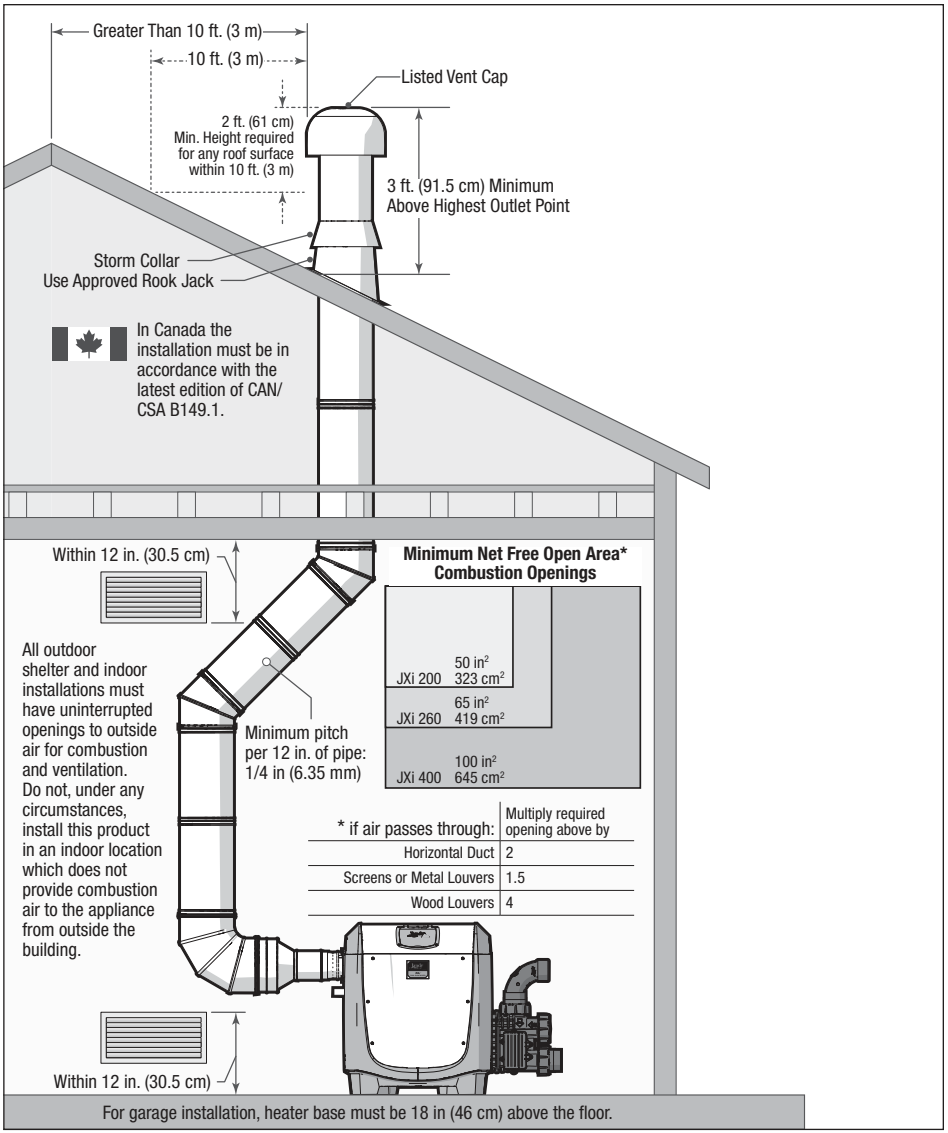


Figure 4. Indoor and Outdoor Shelter Installation