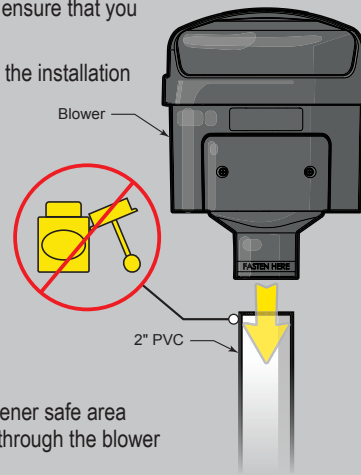




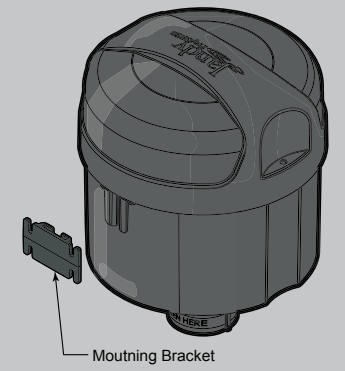
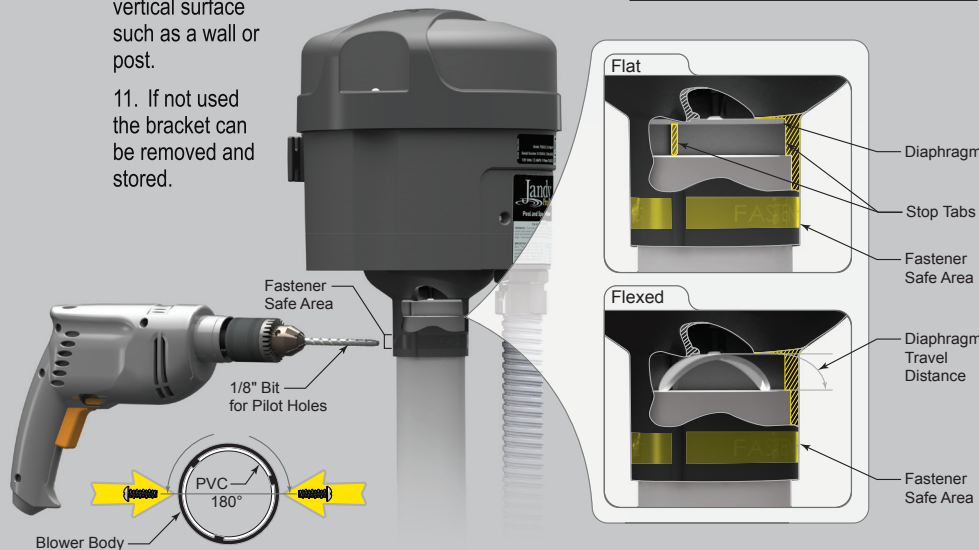
**4. INSTALL BLOWER**

Installation must be done in accordance with the National Electrical Code® (“NEC®” or NFPA-70®) in the US, the Canadian Electrical Code (“CEC” or CSA C22.1) in Canada, and/or any other local and national installation codes.

1. Refer to the “Select Blower” section (facing page) to ensure that you have the correct blower size for your application.
2. Pressure tests to the system should be done prior to the installation of the blower. See Warning Section on adjacent page.
3. Use 2" PVC pipe from the blower to jets or bubblers.
4. Slide Blower onto PVC Pipe. Lower until the stop tabs make contact with the PVC pipe.
5. Blower should be installed vertically, away from direct sunlight.
6. **Do not glue** or otherwise permanently attach the blower to plumbing.
7. Do not remove the blower check valve diaphragm.
8. Drill two (2) 1/8" pilot holes through the textured fastener safe area marked on the blower body. The holes should be drilled through the blower body and PVC pipe. The holes should be oriented 180° from one another.
9. Install one (1) 1/2" 8-18 thread forming screw into each of the previously drilled pilot holes. The screws and pipe should not interfere with the normal travel of the check valve diaphragm.
10. The blower also comes equipped with a mounting bracket which can be used to secure the blower to a vertical surface such as a wall or post.
11. If not used the bracket can be removed and stored.



**WARNING**  
Do not use chemical adhesives to affix the blower to the air inlet line. Fumes from chemical adhesives may accumulate in the piping and explode causing property damage, serious injury or death.



**CAUTION**  
Blower must be affixed to the plumbing using the fasteners recommended in these instructions. Failure to do so may allow the blower to come free of the plumbing during operation which could damage equipment and prevent proper blower operation.

**WARNING**  
Blower must be installed in an area well away from sources of exhaust such as gas pool and spa heater. Please ensure that this blower is installed according to local codes and Authority Having Jurisdiction (AHJ) requirements.

**IMPORTANT SAFETY INSTRUCTIONS  
READ AND FOLLOW ALL INSTRUCTIONS**

**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 exist, the 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 will void the warranty. Improper installation and/or operation can create unwanted electrical hazard which can cause serious injury, property damage, or death. Turn off all circuit breakers required in order to prevent the possibility of electric shock. If you have any questions or need further details please contact Zodiac Pool Systems Customer Support at: **1.800.822.7933**

**WARNING: RISK OF ELECTRIC SHOCK** - Install at least 5 feet (1.5 m) from tub water using nonmetallic plumbing. Install blower no less than 1 foot (305 mm) above the maximum water level or with an approved Hartford loop configuration as outlined in section 2 “Plumbing” to prevent water from contacting electrical equipment. Install in accordance with the installation instructions.

To minimize the risk of severe injury or death the appliance should not be subjected to the piping system pressurization test. Local codes may require the pool piping system to be subjected to a pressure test. These requirements are generally not intended to apply to the pool equipment. Zodiac® pool equipment is pressure tested at the factory. However, if the WARNING cannot be followed and pressure testing of the piping system must include the appliance, **BE SURE TO COMPLY WITH THE FOLLOWING SAFETY INSTRUCTIONS:**

- Check all clamps, bolts, lids, lock rings and system accessories to ensure they are properly installed and secured before testing.
- **RELEASE ALL AIR** in the system before testing
- Test water pressure must **NOT EXCEED 35 PSI**.
- Water temperature for test must **NOT EXCEED 100°F (38°C)**.

Limit test to 24 hours. After test, visually check system to be sure it is ready for operation.  
**NOTICE:** these parameters apply to Zodiac equipment only. For non-Zodiac equipment, consult equipment manufacturer.

Installation must be done in accordance with the National Electrical Code® (“NEC®” or NFPA-70®) in the US, the Canadian Electrical Code (“CEC” or C22.1) in Canada, and/or any other local and national installation codes.

**RISK OF ELECTRIC SHOCK, FIRE, PERSONAL INJURY, OR DEATH.** When required by applicable local codes and/or by the Authority having jurisdiction (AHJ); Connect only to a branch circuit that is protected by a ground-fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI. Make sure such a GFCI is provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the blower without the test button being pushed, a ground current is flowing, indicating the possibility of electrical shock. Do not use the device. Disconnect the device and have the problem corrected by a qualified service representative before using.

- To reduce the risk of injury, do not permit children to use this product.
- Jandy Blowers are powered by high-voltage electric motors and must be installed by a licensed or - certified electrician or a qualified swimming pool service technician.
- Incorrectly installed equipment may fail, causing severe injury or property damage.
- Do not install on a plumbing line that can be closed or shut off. The blower may create severe enough pressures to cause property damage or injury.

**To Reduce the Risk of Injury -**

- a) The water in a spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
- b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C).
- c) Before entering a spa or hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices varies.
- d) The use of alcohol, drugs, or medication before or during spa or hot tub use may lead to unconsciousness with the possibility of drowning and can greatly increase the risk of fatal hyperthermia.
- e) Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.
- f) Persons using medication should consult a physician before using a spa or hot tub since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
- g) People with infectious diseases should not use a spa or hot tub.
- h) Exercise care when entering or exiting the spa or hot tub.
- i) Water temperature in excess of 100°F (38°C) may be injurious to your health.
- j) Do not use a spa or hot tub immediately following strenuous exercise.
- k) Prolonged immersion in a spa or hot tub may be injurious to your health.
- l) Do not permit any electric appliance (such as a light, telephone, radio, or television) within five 5 feet (1.5m) of a spa or hot tub.



**Attention installer:** This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

**SAVE THESE INSTRUCTIONS**

# Pool and Spa Air Blower

**Models:**  
 PSB110 PSB115 PSB120  
 PSB210 PSB215 PSB220

## 1. SELECT BLOWER

Correctly sizing the blower for your application is a critical step to the sustained operational quality of your Jandy Pro Series Pool and Spa Blower. Damage or failure due to an improperly sized blower is not covered under warranty.

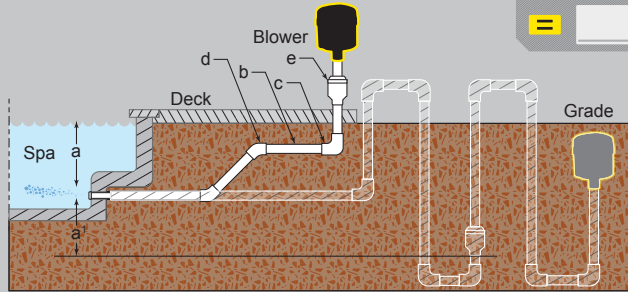
**SIZING WORKSHEETS:** The worksheets below will guide you through the proper sizing calculations for your application.

### Calculate Back Pressure

<b>a</b>	Vertical Measure from Pool/Spa surface to air outlet	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>a'</b>	Vertical Measure from air outlet to lowest check valve (See Note)	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>b</b>	Number of feet of 2" Pipe	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>c</b>	Number of 90° Elbows	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>d</b>	Number of 45° Elbows	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>e</b>	Number of 1/2 lb check valves	<input type="text"/>	<input type="text"/>	<input type="text"/>
				<b>Total Back Pressure (Inches of Water)</b>

Calculate back pressure as a measure of "inches of water". Verification of this figure can be made by using a manometer.

**NOTE:** Include a' for installations with a check valve below the air outlet only. See "Below Grade Installation" on facing page for details. For above grade installations enter 0 for a'.



### Calculate Airflow

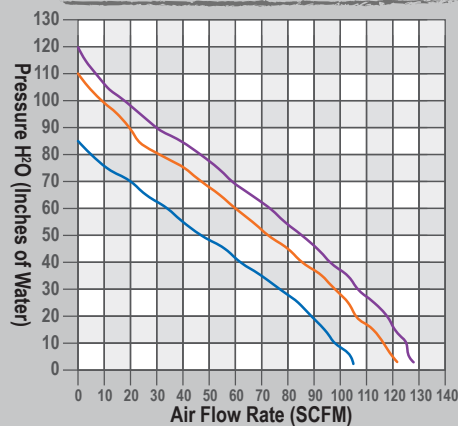
AIR HOLE SIZE	CONVERSION FACTOR
1" / 8"	2.4
5" / 32"	1.5
3" / 16"	1.1
1" / 4"	0.6
3" / 8"	0.27
1.2"	0.15
Jet	0.1

Choose an air hole size from the chart at left and apply the conversion factor in the formula below to determine total airflow in standard cubic feet per minute.

<input type="text"/>	No. of Holes
<input type="text"/>	Conversion Factor
<input type="text"/>	Total Airflow SCFM (Standard Cubic Feet Per Minute)

**WARNING**  
Installing an insufficiently sized blower will increase back pressure. Failure to accurately follow the blower sizing calculations provided could result in excessive back pressure. Excessive pressure can cause damage that could result in electrocution causing severe injury or death.

### Determine Blower Needed



Locate the total back pressure, calculated above and draw a horizontal line. Locate the total airflow from previous step and draw a vertical line. These lines will intersect on the performance curve of the minimum HP blower required for your application.

#### Performance Curves (60 HZ)

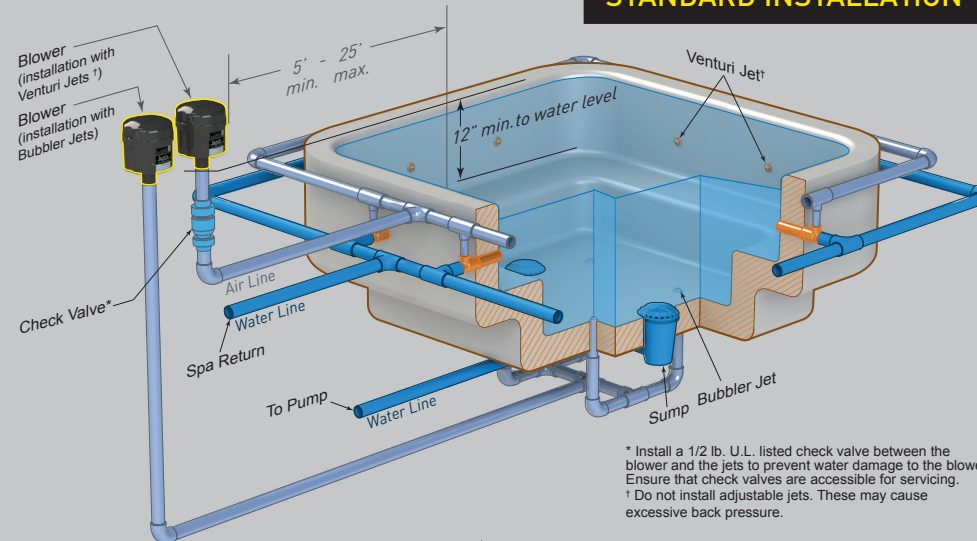
- Models: PSB110 — Max Back Pressure 40"
- Models: PSB210 — Max Back Pressure 40"
- Models: PSB115 — Max Back Pressure 50"
- Models: PSB215 — Max Back Pressure 50"
- Models: PSB120 — Max Back Pressure 65"
- Models: PSB220 — Max Back Pressure 65"

#### Blower Selection

Voltage	1.0 HP	1.5 HP	2.0 HP
120V	<input type="checkbox"/> PSB110	<input type="checkbox"/> PSB115	<input type="checkbox"/> PSB120
240V	<input type="checkbox"/> PSB210	<input type="checkbox"/> PSB215	<input type="checkbox"/> PSB220

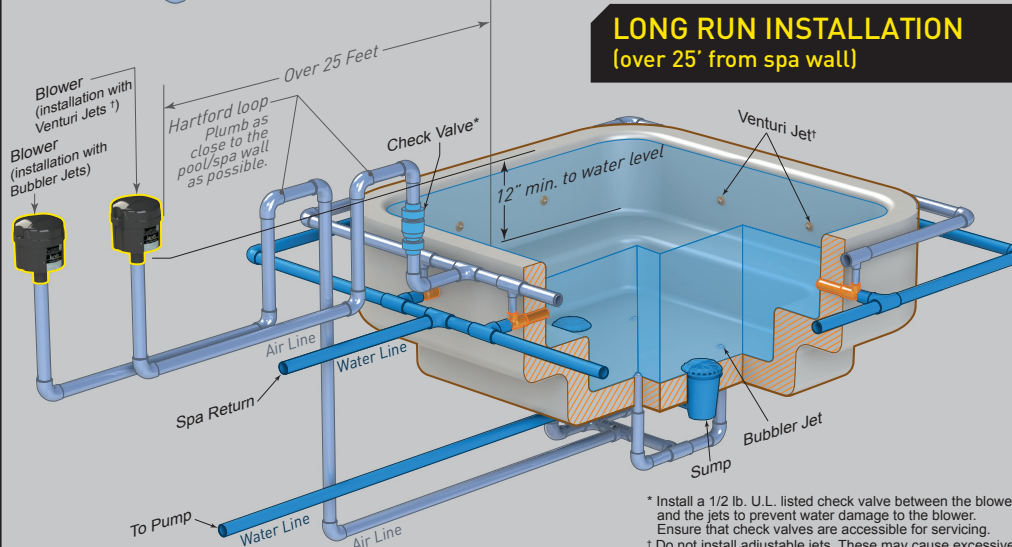
## 2. PLUMBING

### STANDARD INSTALLATION



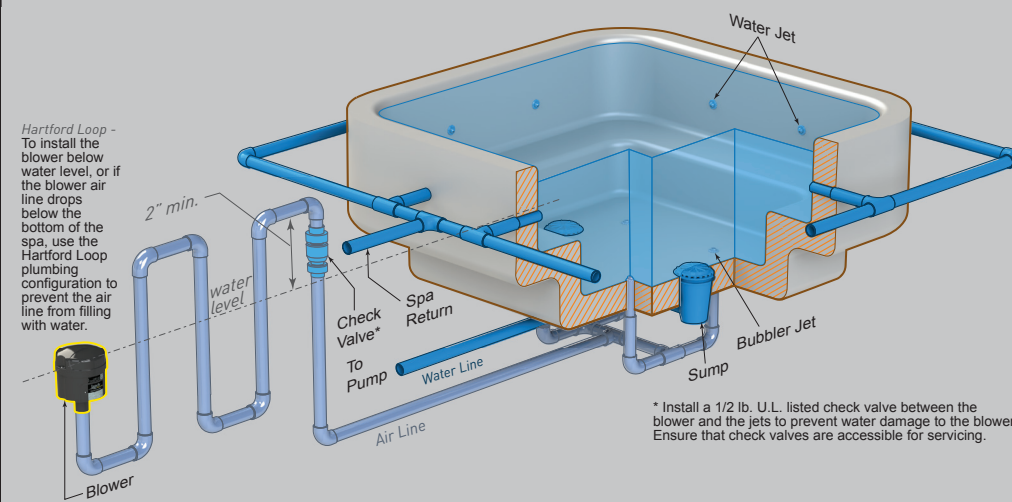
\* Install a 1/2 lb. U.L. listed check valve between the blower and the jets to prevent water damage to the blower. Ensure that check valves are accessible for servicing.  
\* Do not install adjustable jets. These may cause excessive back pressure.

### LONG RUN INSTALLATION (over 25' from spa wall)



\* Install a 1/2 lb. U.L. listed check valve between the blower and the jets to prevent water damage to the blower. Ensure that check valves are accessible for servicing.  
\* Do not install adjustable jets. These may cause excessive back pressure.

### BELOW GRADE INSTALLATION

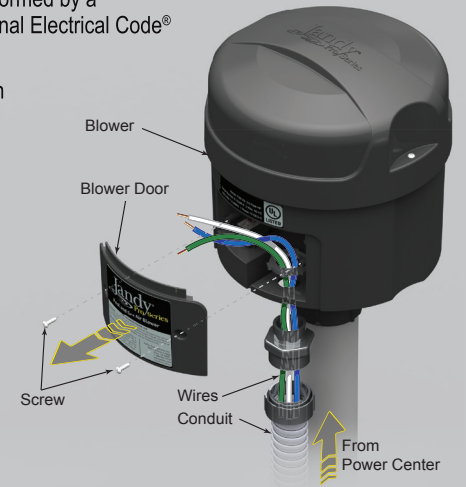


\* Install a 1/2 lb. U.L. listed check valve between the blower and the jets to prevent water damage to the blower. Ensure that check valves are accessible for servicing.

## 3. WIRING

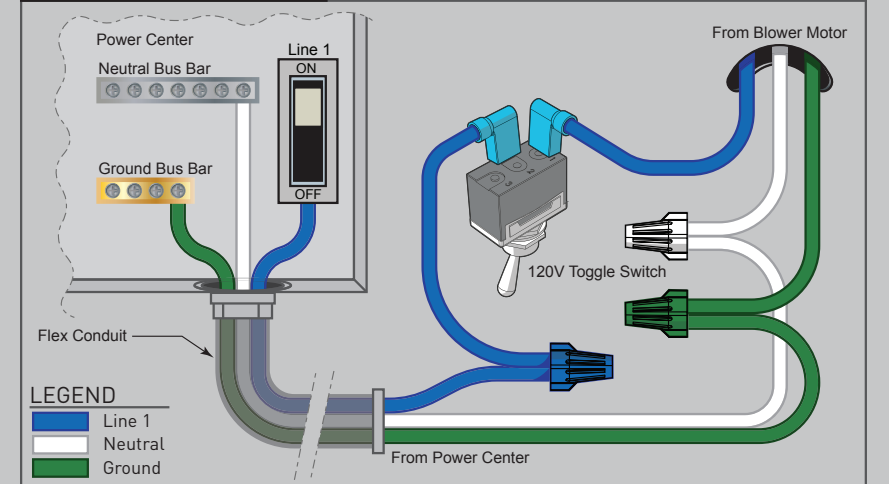
Installation of this equipment should be performed by a licensed electrician and conform to all National Electrical Code® (NEC®), state and local codes.

1. Ensure all power to the blower has been disconnected at the main breaker.
2. Remove blower front door by removing the two (2) screws sliding the door downward and pulling the door free.
3. Pull in voltage source and ground wire from Power Center.
4. Connect wires from power center to the corresponding wires from the blower motor. Use the wiring diagrams below for reference. The 120 or 240 toggle switch will come preinstalled with flag terminals. Connections will need to be made with Wire nuts.



### 120V Wiring

**RISK OF ELECTRIC SHOCK WHICH CAN RESULT IN SERIOUS INJURY OR DEATH.** Before attempting installation, ensure that all power to the device is disconnected/turned off at the circuit breaker. Be careful not to damage or abrade any wiring or other components.

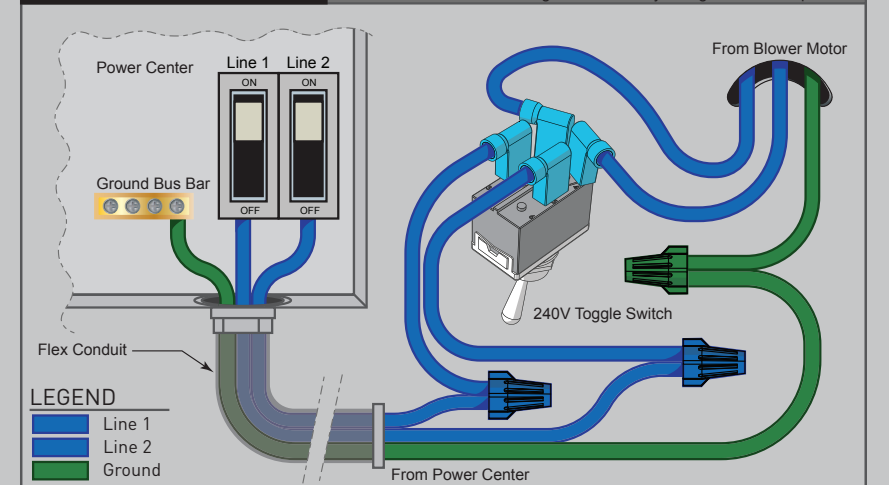


#### LEGEND

- Line 1
- Neutral
- Ground

### 240V Wiring

**RISK OF ELECTRIC SHOCK WHICH CAN RESULT IN SERIOUS INJURY OR DEATH.** Before attempting installation, ensure that all power to the device is disconnected/turned off at the circuit breaker. Be careful not to damage or abrade any wiring or other components.



#### LEGEND

- Line 1
- Line 2
- Ground