



**HYDROQUIP**<sup>TM</sup>

THE **SMART** CHOICE<sup>TM</sup>

Installation & Owner's  
Manual



*Silent Aire*<sup>TM</sup>

Series

High-Performance / Low Noise  
Air Blower

## IMPORTANT:

Please provide these operating instructions to the end user. All printed material should be read thoroughly prior to using the product.

These instructions are provided for reference only. Individuals not familiar with portable spas and hydro-therapy baths should seek advice from professionals before using this product or attempting its installation.

### **Technical Data - Silent Aire 600 & 800 Air Blower**

<b>Outlet:</b>	1.5" or 2.0" (DO NOT GLUE, USE SUPPLIED CLAMP)
<b>Minimum Ventilation Area:</b>	20 sq. inches
<b>Maximum Operating Temp:</b>	122F / 50C
<b>Electrical Approvals:</b>	UL / CUL / CE
<b>Electrical Requirements:</b>	120/240VAC - 50/60HZ
<b>Thermal Protection:</b>	Yes (all models)
<b>Installation Environment:</b>	Indoor Use Only



**Installation Orientation Options**

***Failure to follow these instructions will cause premature motor failure.***

## **INSTALLATION CONSIDERATIONS:**

There are many variables to consider when choosing the proper size air blower for your spa or hot tub. These include: water depth, the number and size of air holes, distance of blower from spa, number of 90 and 45 degree turns, and the size of the supply line. Together these variables create back pressure on the blower as measured in inches of water column (inches H2O). Compare your calculations with the chart below to determine the best size blower for your spa.

- ▶ Measure maximum height of water from ground to top of spa.
- ▶ For each 10 feet of 1.5" supply pipe, add 3/4" (inch) of water pressure.
- ▶ For each 10 feet of 2.0' supply pipe, add 1" (inch) of water pressure.
- ▶ For each 90 degree turn, add 1/2" (inch) of water pressure.

### **Example:**

An 8 ft. portable spa with a water depth of 38 inches with 6 feet of 1.5" supply line to the air manifold with 2 - 90 degree turns.

Calculation of total water pressure is as follows:

1. Water height in spa = 38"
2. 6 feet of supply line = .45"
3. 2 - 90 degree turns = 1.0"

Total water height is 39.45" of water pressure (inches H2O).

This spa would require a 1.0 hp blower – Refer to the chart below.

<b>BLOWER SIZE/MODEL</b>	<b>VOLTS</b>	<b>AMPS</b>	<b>INCHES OF WATER</b>
SILENT AIRE 600 (1.0HP)	120/240	4.8/2.25	UP TO 40"
SILENT AIRE 800 (1.5HP)	120/240	7.0/3.6	UP TO 50"

## **BLOWER SIZING:**

The number of air injectors or holes in the air channel determine the size of blower required. For example a 1.0hp blower should have a total hole area of approx. .85 square inches and a 1.5hp should have approx. 1.2 square inches. Use the table below to determine the correct blower size.

<b>Hole Diameter (Sq. Inches)</b>	<b>Hole Area (Sq. Inches)</b>
1/8"	0.0123
3/16"	0.0277
1/4"	0.0491

## **APPLICATION:**

The Hydro-Quip Silent Aire Spa & Bath Blower has been engineered to provide years of trouble free use provided it is installed following the parameters provided within this installation manual. Failure to follow these instructions may result in premature failure and voids all manufacture warranties.



*The limited warranty does not provide coverage when used in a commercial installation.*

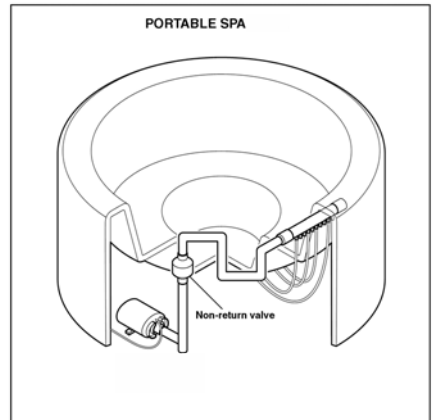
## **BLOWER INSTALLATION:**

### **PORTABLE SPAS**

#### **New and Existing Installations:**

Choose the correct blower based on the air injection system you intend to use or that is present in the tub you are retrofitting.

Always use proper blower plumbing techniques including at minimum a "Hartford Loop". A 1/4 lb. check valve may be used in addition to a Hartford Loop for added piece of mind.



## OPERATION:

### Startup Check List

- ✓ Check that all air tubing is connected to the injectors and any associated manifolds
- ✓ Check for pinched air injector lines
- ✓ Check for leaks, always
- ✓ Check power cord is connected to control
- ✓ Make sure the blower circuit voltage matches the blower voltage.

### Startup:

1. Fill the spa or bath with water. Check for leaks
2. Connect the blower to the power source, either a spa controller or other device.
3. Do not connect blower to tub plumbing
4. Activate the blower using the corresponding button on the control
5. Take an AMP reading with an AMP probe and make a note of this reading.
6. Turn off blower
7. Connect the blower to the plumbing with the hose clamp provided
8. Activate the blower using the corresponding button on the control
10. With blower running take a reading with an AMP Probe. The total AMP draw should not drop by more than ½ AMP

If the AMP draw drops by more than ½ AMP then the blower installed may be too large for the application.

***\*\*Operation of the blower should be limited to 20 minute cycles.  
Failure to follow this instruction will shorten the motor life\*\****

# TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Blower will not operate.	No Power at power point.	Check circuit breaker. A GFCI should be present. If GFCI trips repeatedly do not use blower until issue is corrected
	Moisture/Water present in housing, plumbing, and/or motor.	Verify blower is installed in accordance with the instructions. Correct any plumbing/installation issues before attempting to operate the blower.
	Air line not connected. (Airs witch model only).	Check that air line is connected from the air button to the spa blower.
	Air tubing hose kinked	Check that the air line is not kinked. If kinks are visible remove them otherwise this will stop the pulse of air that operates the micro switch inside the spa blower.
	In-built thermal overload tripped.	Check ventilation requirements. Ensure air intake is free of debris. Call your nearest agent for a replacement.
	Damaged power cord.	Turn off power at switch; inspect full length of cord for abrasions, signs of vermin damage, etc. Cord is not field serviceable. Cord must be replaced by manufacturer or service agent.
	Worn motor brushes from normal wear & tear.	Full unit replacement required – Contact your Hydro-Quip customer service agent. Your <b>Silent-Aire</b> blower has reached the end of its service life.
Blower starts on its own	Programmed purge cycle	Refer to spa control owners manual
Blower works but there is no, or insufficient, air coming into the spa.	Kinked or not attached air lines, main pipe from blower not attached to unit. HP of blower being used needs to be increased.	Assure that all lines from the air manifold, if present, are attached and not kinked. Make sure blower is connected to main air supply plumbing. A higher HP blower may be required

## MAINTENANCE



This unit contains no user serviceable parts internally.



Any maintenance required should be performed by qualified personnel only



Any damage to the power cord or supply wiring must be corrected before operation.



Always disconnect power before performing any service on the unit.



The Silent Aire blower uses special filters at the air intakes to help keep debris from entering the blower. It is suggested that these filters be inspected occasionally and cleaned if dirty. The use of compressed air and or water may be used to clean these filters. (Make sure filters are dry before reinstalling.



Always reinstall debris filters after cleaning and prior to operating the blower.

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## Limited Warranty Information

To all original purchasers, **HYDROQUIP** unit is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase.

**HYDROQUIP** will repair or replace the part, if in our opinion, the unit is defective.

This warranty excludes damage as a result of: water intrusion, normal wear, freezing, low/high voltage, chemical abuse, accident, negligence, alteration, improper installation, use or care.

To obtain warranty service, return defective products within the warranty period to **HYDROQUIP**.

Purchaser is responsible for removal or reinstallation labor, freight charges, or any other such costs incurred in obtaining warranty service.

**HYDROQUIP** assumes no responsibility for incidental or consequential damages. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

**THE DEALER MAY PROVIDE A DIFFERENT WARRANTY,  
CONTACT YOUR DEALER FOR DETAILS**



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