

# Grundfos Spa Circulator Pump



L-UP-TL-052 Rev 08/02  
MADE IN USA

## 1. Shipment Inspection

Congratulations! You are now the fortunate owner of a UP SPA PUMP. It has been carefully inspected and tested before shipment. It should give you long, efficient, trouble-free service. For maximum performance and reliability, please follow the simple instructions in this manual.

Examine the components carefully to make sure no damage has occurred to the pump during shipment. Care should be taken to ensure the pump is NOT dropped or mishandled; dropping will damage the pump.

## 2. Pre-Installation Safety Instructions



**IMPORTANT SAFETY  
INSTRUCTIONS  
READ AND FOLLOW ALL  
INSTRUCTIONS.  
SAVE THESE  
INSTRUCTIONS.**



When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

### 1. READ AND FOLLOW ALL INSTRUCTIONS.

2. **WARNING** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. **WARNING - For Cord and Plug Connected Units** - Risk of Electrical Shock. Connect only to a ground-ing-type receptacle protected by a ground-fault-circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify the receptacle is protected by GFCI.
4. For Cord and Plug Connected Units - Do not bury cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment.
5. **WARNING - For Cord and Plug Connected Units** - To reduce the risk of electrical shock, replace damaged cord immediately.
6. **WARNING - For Cord and Plug Connected Units** - to reduce the risk of electrical shock, do not use extension cord to connect unit to electrical supply; provide a properly located outlet.
7. For Hot Tub and Spa Pumps - Do not install within an outer enclosure or beneath the skirt of a hot tub or spa unless so marked.

**8. WARNING - KNOW YOUR INSTALLATION AND APPLICATION**

- Do not install this pump unless and until a thorough analysis has been made to assure that the suction fitting(s) used comply with minimum ASME/ANSI Suction Fitting Standards. Never allow hair or body parts to come too close to suction fittings.



**WARNING!**  
To reduce the potential risk of  
fire or electric shock,  
or injury to persons



1. All electrical wiring (both installation and repair) must be done by a licensed electrician, and in accordance with local and state ordinances.
2. No modifications, additions or deletions should be made to the pump without factory approval.
3. Before starting the motor, fill spa with water to level recommended by spa manufacturer; if not specified, fill spa to same level as top of pump.  
**Never run pump dry!**
4. When servicing, be sure power is off.
5. Always reinstall safety devices after installation or servicing the pump.
6. Do not relocate the pump without prior approval from the factory.

**3. Installation****Position of terminal box:**

**Note: Prior to removing or changing terminal box position, make sure plastic foot is removed by loosening two phillip self-tapping screws.**

If the terminal box position needs to be changed, it is best to do so before installation. However, if the pump is already installed, ensure that the electrical supply is turned off and close the isolation valves before removing Allen screws.

**To change terminal box position:**

1. Remove the four (4) Allen screws (4 mm wrench) while supporting the stator (motor).
2. Carefully separate the stator from the pump chamber and rotate it to the correct terminal box orientation.
3. Replace the Allen screws and tighten diagonally and evenly (7 ft.-lb. torque).
4. Check that the motor shaft turns freely. Remove the large screw in the middle of the nameplate. Insert a small flat blade screwdriver into the end of the shaft, and turn gently. If the shaft does not turn easily, repeat the disassembly/reassembly process.

**Pump Mounting: For Indoor Use**

The pump must be installed with the motor shaft positioned horizontally. *Under no circumstances should the pump be installed with the shaft vertical or where the shaft falls below the horizontal plane.*

**Installation Requirements:**

1. Thoroughly clean and flush the system prior to pump installation.
2. Do not install the pump at the lowest point of the system where dirt and sediment naturally collect.
3. Ensure that water does not enter the terminal box during the installation process.
4. DO NOT START THE PUMP UNTIL THE SPA HAS BEEN FILLED.

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**4. Electrical**

*All electrical work should be performed by a qualified electrician in accordance with the latest edition of the National Electrical Code, local codes and regulations.*

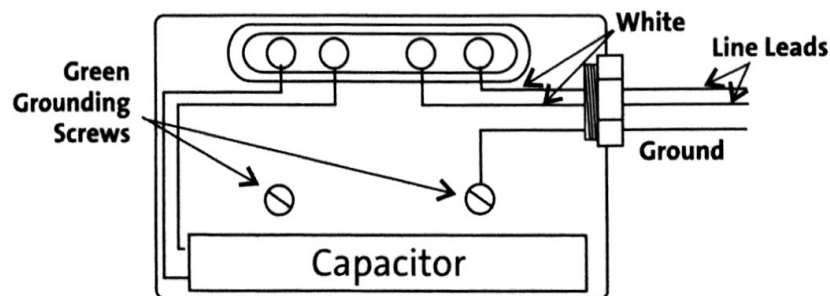


**WARNING:** The safe operation of this pump requires that it be grounded in accordance with the National Electrical Code and local governing codes or regulations. The ground wires should be copper conductor of at least the size of the circuit conductor supplying the power to the pump. Minimum ground wire size is 14 AWG. Connect the ground wire to the grounding point in the terminal box and then to an acceptable ground. Do not ground to a gas supply line.

The proper operating voltage and other electrical information can be found on the nameplate attached to the top of the motor. The Motor does not require additional external protection. The temperature of the windings will never exceed allowable limits, even if the rotor is locked.

Wire sizes should be based on the ampacity (current carrying properties of a conductor) as required by the latest edition of the National Electrical Code or local regulations. Both the power and grounding wires must be suitable for at least 194 °F (90 °C).

For all 115V and 230V models: Connect the white/yellow electrical leads from the circulator to the incoming power leads with wire nuts or other approved connectors. Attach incoming grounding wire to either of the green grounding screws.



Wiring Diagram for all 115V and 230V models

## 5. Operation

UP SPA Circulator Pump, installed properly will operate quietly and efficiently and provide years of service. Under no circumstances should pump be operated without water circulation or without the minimum required inlet pressure for prolonged periods of time. This could result in motor or pump damage.

**NOTE:** When the pump is first started, the shaft may rotate slowly until water has fully penetrated the bearings. If the pump does not run, the shaft can be rotated manually. To accomplish this, switch off the electrical supply, and close the isolation valves on each side of the pump. Remove the indicator plug in the middle of the nameplate. Insert a small flat-blade screwdriver into the end of the shaft, and gently turn until the shaft moves freely.

Replace and tighten the plug. Open the isolation valves and wait 2 to 3 minutes for the system pressure to equalize before starting the pump.

## 6. For Canadian Installation Only

### For a CIRCULATOR PUMP Used on a Portable SPA:

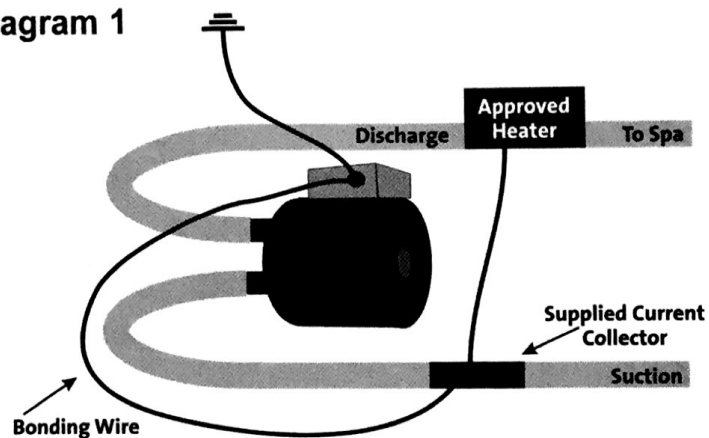
This pump and all other electrical equipment is required by the Canadian Electric Code Part 1(Clause 68-406) and CSA Standard C22.2 No. 218.1 Spas, Hot Tubs and Associated Equipment (Clause 4.9) to be installed between leakage current collectors.

A leakage current collector shall be constructed according to CSA Standard C22.2 No. 218.1 Spas, Hot Tubs and Associated Equipment (Clause 4.9.2). The leakage current collector will have the following features (A) corrosion resistant metal (B) have a minimum length that is 5 times it's diameter (C) be provided with a copper compression lug that is brazed to the body. Other styles that have been tested and approved by CSA may also be used.

If you are using an approved, self protecting heater vessel, you may install the pump as per Diagram 1. The pump is required to be installed between a current collector located in the suction piping from the Spa and the heater on the discharge side.

## SPA PUMP

Diagram 1



If you are not using an approved, self-protecting heater vessel, then you must use 2 current collectors, one on each side of the pump, bonded together as seen in Diagram 2.

Diagram 2

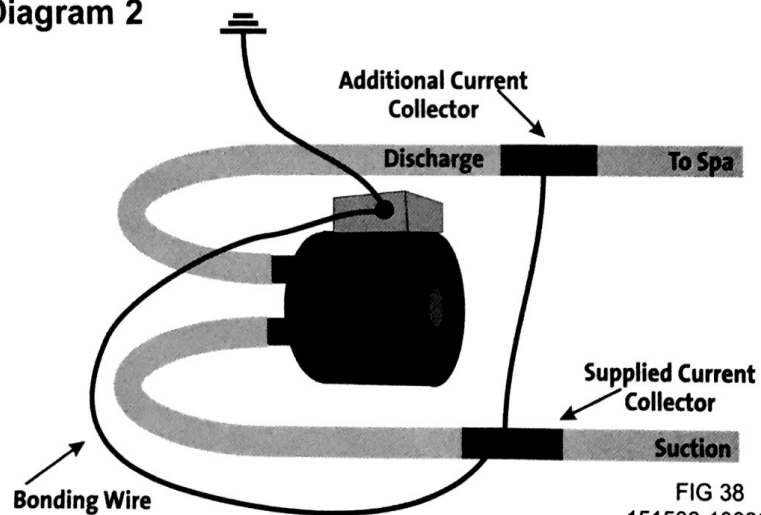


FIG 38  
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The Pump must be bonded with the supplied current connector(s). No other method of installation for this pump on a spa is allowed.