

23-OCT-2003

**BioFree®**  
**Automatic Spa Water Sanitizer**

REPLACEMENT CELL  
for the Spa Bromine Generator BioFree Model 102-BT-01

READ THE LABEL AND OPERATION/INSTALLATION MANUAL  
OF THE SPA BROMINE GENERATOR BIOFREE BEFORE USING.

PEST CONTROL PRODUCTS ACT REG. NO 27198

This cell must only be used on this model of Spa Bromine Generator.

BioQuest 4750 Longley Lane #202 Reno, NV 89502  
CUSTOMER HELP DESK 888-829-9993

23-OCT-2003

**BioFree®**  
**Automatic Spa Water Sanitizer**

DOMESTIC

READ THE LABEL AND OPERATION MANUAL BEFORE USING.  
A MINIMUM OF 3 PPM BROMINE MUST BE MAINTAINED.  
Maximum output of Hypobromous Acid equivalent to 36 g of bromine per day.

CERTIFIED TO COMPLY WITH THE LIMITS FOR A CLASS B COMPUTING DEVICE  
PURSUANT TO SUBPART J OF PART 15 OF THE FCC RULES.

SPA BROMINE GENERATOR      MODEL 102-BT-01  
INPUT: 120 VDC 1.8 Amps      CLASS 2 POWER UNIT

COMPONENT ONLY. FINAL ASSEMBLY CERTIFICATION REQUIRED  
CSA ENCLOSURE TYPE: TYPE 3

PEST CONTROL PRODUCTS ACT REG. NO 27198  
EPA Est. No. 69439-NV-001 (US)  
PATENT No. 5,676,805 OTHER PATENTS PENDING

BioQuest 4750 Longley Lane #202 Reno, NV 89502  
CUSTOMER HELP DESK 888-829-9993

23-OCT-2003

**BioFree®**  
**Automatic Spa Water Sanitizer**

REPLACEMENT SENSOR  
for the Spa Bromine Generator BioFree Model 102-BT-01

READ THE LABEL AND OPERATION/INSTALLATION MANUAL  
OF THE SPA BROMINE GENERATOR BIOFREE BEFORE USING.

PEST CONTROL PRODUCTS ACT REG. NO 27198

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BioQUEST

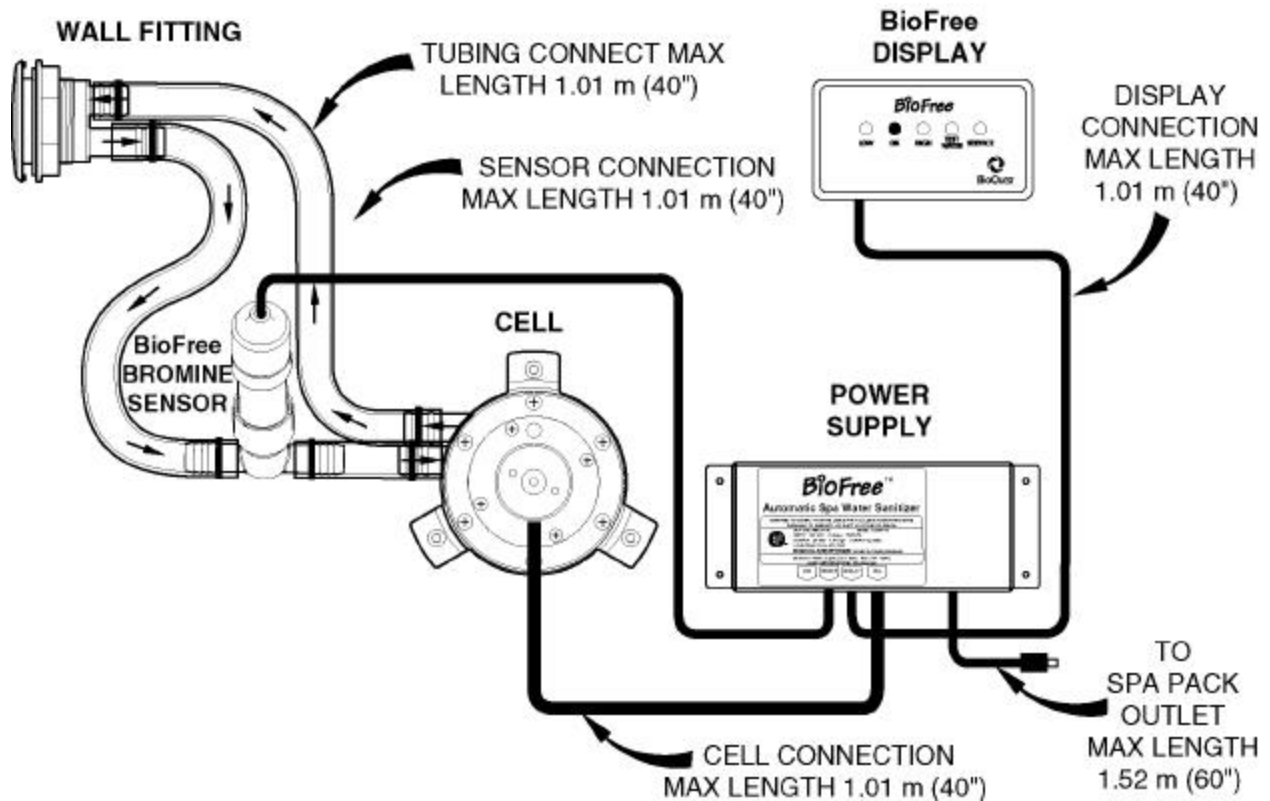
*BioFree*<sup>®</sup>

Automatic Spa Water Sanitizer

# Installation Manual (Canada) Domestic

All statements, technical information and recommendations in this manual and in any guides or related documents are believed reliable, but the accuracy and completeness thereof are not guaranteed or warranted and they are not intended to be nor should they be understood to be representations or warranties concerning the products described.

This **BioFree** spa water sanitizing system has been designed to be used exclusively on residential spas under 1900 liters in noncommercial applications. BioQuest will not be responsible for any liabilities, product warranties and/or claims that arise as a result of this system being used for a commercial application.



## Section 1: Installation Materials Needed

1. The following materials are required to ensure a successful installation of the **BioFree**:
  - A. 25 mm Drill Bit or Hole Saw
  - B. Drill
  - C. Utility Knife
  - D. Hammer
  - E. a Phillips head & a standard (blade-type) screwdriver
  - F. a Wall Fitting knockout tool (included with the **BioFree**)
  - G. #8 copper bonding wire (approximately 1 meter)

## Section 2: Installing the Tubing and Clamps

Parts: Tubing, Clamps  
(See illustration 2 and 3 below)

1. To install the tubing, please complete the following steps:
  - A. Turn the power to the spa off.
  - B. Drain the spa so that the waterline is below the BioQuest Wall Fitting.
  - C. Remove the spa panel so the backside of the BioQuest Wall Fitting is exposed.
  - D. If the spa has been foam insulated, clear away the foam from the back side of the spa shell to make room for the tubing.
  - E. The BioQuest Wall Fitting ports are sealed by a knockout which will need to be removed using the Wall Fitting knockout tool.
  - F. At the face of the Wall Fitting, insert the knockout tool through the inlet hole as shown in illustration 2.
    - 1) Strike the end of the knockout tool with a hammer so that you completely remove the knockout.
  - G. At the face of the Wall Fitting, insert the Wall Fitting knockout tool through the 12.7 mm outlet hole, as shown in illustration 2.
    - 1) Strike the end of the knockout tool with a hammer so that you completely remove the knockout.

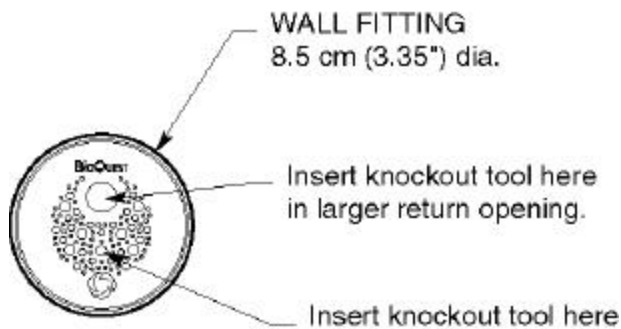


Illustration 2

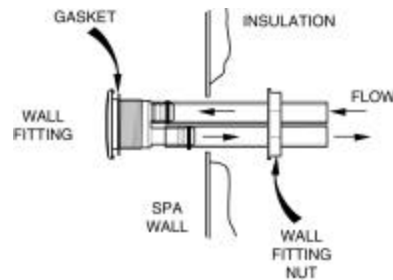


Illustration 3

- H. Slide the clamps onto the tubing.
- I. Push the tubing onto the Wall Fitting ports and match the arrow direction on the tubing to the arrow direction on the wall fitting as shown in illustration 3, above. Slide the tubing clamps down until they are over the inlet and outlet port barbs and tighten the clamps.

**Section 3: Installing the BioFree Power Supply**

### Parts: Power Supply, Screws

1. The Power Supply box should be mounted, with the screws provided, according to the Power Supply Component Location Guide found in the back of this manual.
  - A. Ensure that the Power Supply box is at least 10 cm above the base of the spa.
2. Attach a #8 bonding wire from the bonding clamp on the Power Supply box to the spa pack housing or to another bonding location.
3. Plug the Power Supply box into the dedicated **BioFree** power outlet, built into the spa power pack.

### Section 4: Installing the BioFree Cell

#### Parts: Cell, Clamps, Screws

(See illustration 4 below)

1. Slide the tubing clamps onto the inlet and outlet tubing.
2. Position the Cell according to the Component Location Guide (found in the back of this manual).
3. Match the arrow direction on the tubing with the arrow direction on the cell. Tighten the tubing clamps over the barbs of the cell port.
4. Mount the Cell, with the screws provided, as shown in illustration 4.
  - A. The Cell must be below the wall fitting height. The tubing must not drop below the level of the Cell and it cannot be looped or kinked. This will help prevent air locks in the Cell.
5. Connect the Cell cable to the Power Supply box.

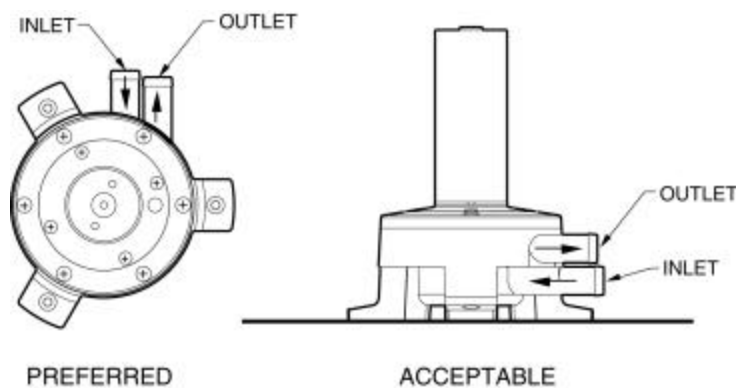


Illustration 4

### Section 5: Installing the Bromine Sensor

Parts: Sensor, Tee Fitting, 2 clamps  
(See illustration 5 below)

1. Using a utility knife, cut away a 50 mm section of the inlet tubing, about 13 cm from the Cell. The sensor must be located on the inlet tubing, which attaches to the Cell on the bottom port.
2. Slide the clamps over each piece of tubing.
3. Remove the protective cap from the Sensor.
4. Screw the Sensor into the tee fitting. Hand tighten only!
5. Insert the Sensor and tee fitting assembly into the open tubing. Tighten clamps.
6. Plug the Sensor cable into the Sensor.

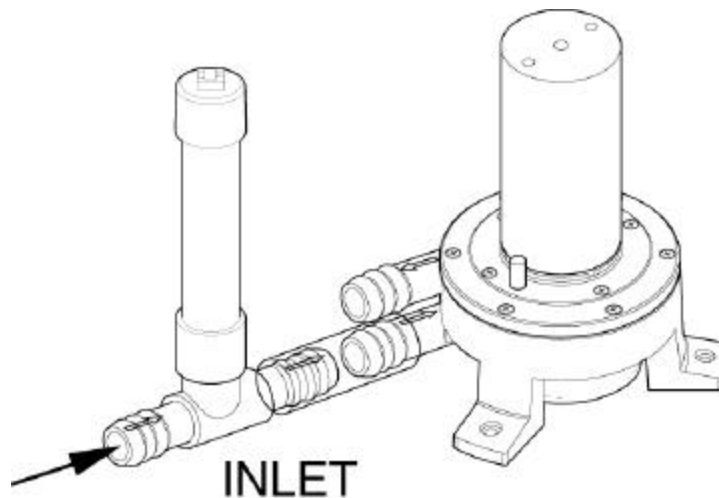


Illustration 5

## **Section 6: Installing the Display**

Parts: Display, Bracket and Screws  
( see Illustration 6 & 7 below )

1. Each spa manufacturer has identified a specific location for the installation of the Display. Please review the Component Location Guide (found at the back of this manual).
2. Mount the Display Bracket by removing the adhesive backing on the back side of the Display Bracket and attach with the screws provided.
3. Drill a 25 mm hole through the Display Bracket and the spa panel.
4. Remove the adhesive backing on the inside of the mounting bracket.
5. From the front side of the spa, thread the Display cable through the hole in the Display Bracket. (see Illustration 7)
6. Using the silicone provided, apply a small bead of silicone around the lip of the Display.
7. Push the Display into the Display Bracket so the silicone provides a complete seal. Wipe off any excess silicone.
8. Plug the Display cable into the Power Supply.

- A. After you have connected the cable to the Sensor, pull the rubber cap over the top of the connection to protect it. The cap must provide a complete seal around the end of the sensor housing.

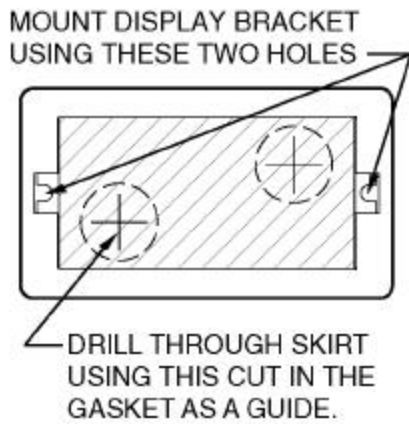


Illustration 6

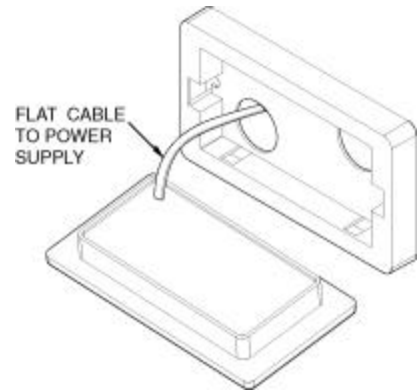


Illustration 7

### **Section 7: The Final Steps**

1. Refill the spa with water.
2. Restore power to the spa.



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