

IMPORTANT SAFETY INSTRUCTIONS

INSTALLATION, OPERATING AND SERVICE MANUAL

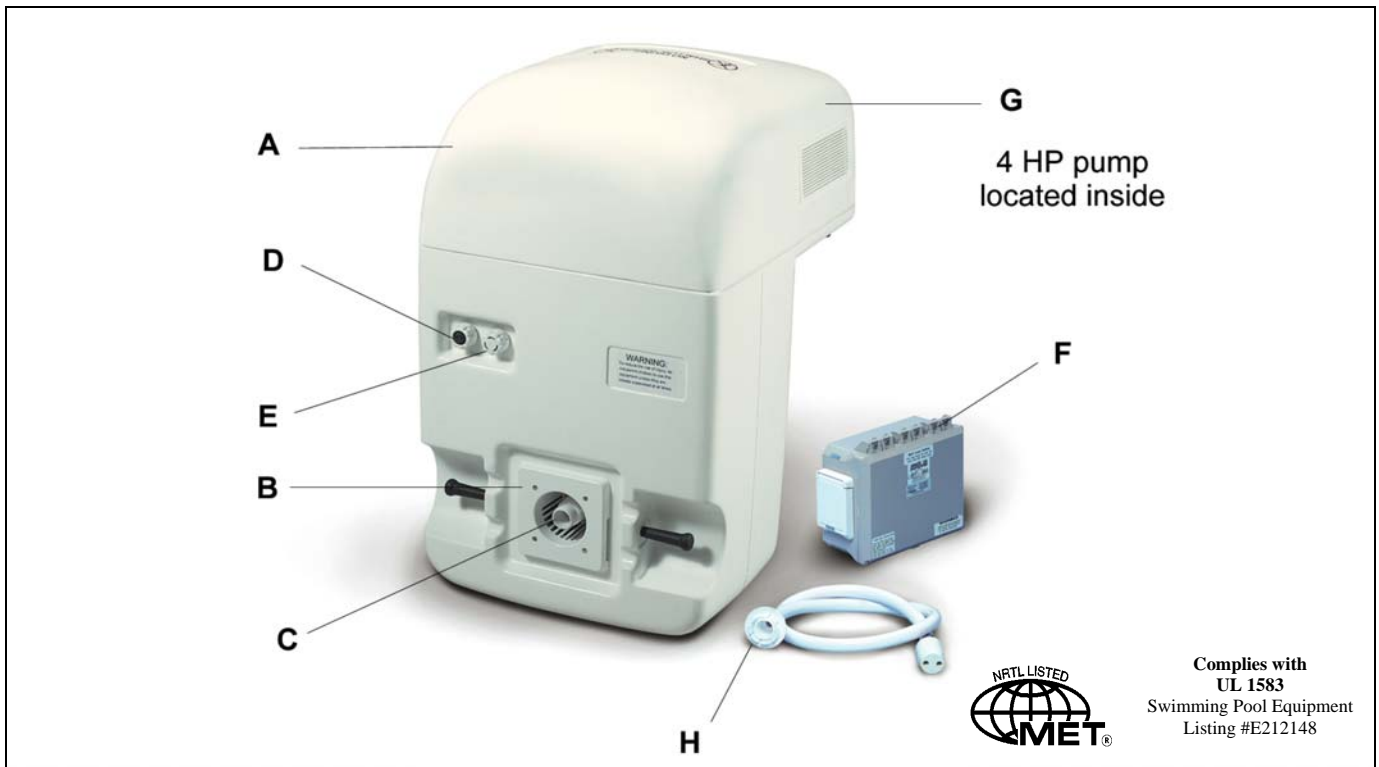
READ AND FOLLOW ALL INSTRUCTIONS

BADUSTREAM Over-the-Wall (OTW)

Counter Swim Unit

U.S. Patent No. 3.977.027

OWNER'S MANUAL



This is the BADUSTREAM Over-the-Wall (OTW) Counter Swim Unit

This self-contained unit comes complete with pump, control box, unit-to-control box cable and mounting hardware. It requires no additional equipment for installation. Just supply pool, water and electricity.

Key to illustration:

A. One-piece body is molded of a heavy-duty polyethylene plastic immune to chemicals and environmental abuse, to provide a rugged and attractively styled water treadmill.

B. Square anti-entrapment cover provides undetectable pump suction.

C. Adjustable water flow jet nozzle.

D. Pneumatic on/off button guarantees complete separation between pool water and pump motor control.

E. Air regulator controls amount of air bubbles in water flow.

F. Control box with GFCI and 24 volt door interlock switch.

G. Speck 4 HP self-priming, plastic pump, single phase with thermal overload (no motor starter required)

H. Pulsating massage hose can be attached to jet nozzle.

TABLE OF CONTENTS

1.	Important Safety Instructions	Page 3
2.	Introduction and Planning	Page 4
3.	Installation and Mounting	Page 4
4.	Top View of Unit Without Cover	Page 4
5.	Side View of Unit (Layout)	Page 5
6.	Electrical Wiring and Diagram	Page 7
7.	Operating Instructions	Page 8
8.	Winterizing	Page 8
9.	Frequently Asked Questions	Page 9
10.	Parts List and Exploded View of Pump	Page 9
11.	Parts List and Exploded View of Jet	Page 10
12.	Limited Warranty	Page 11

IMPORTANT INSTALLATION TIPS IN BOLD PRINT

1. IMPORTANT SAFETY INSTRUCTIONS

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

READ AND FOLLOW ALL INSTRUCTIONS.

- A. **WARNING:** To reduce the risk of injury, **DO NOT** permit children to use this equipment unless they are closely supervised at all times. Failure to adhere to this and all other warnings could result in serious injury or death.
- B. **WARNING:** Consult your physician before exercising with the **OTW** unit or using the massage hose.
- C. **WARNING:** Stay alert, watch what you are doing and use common sense. **DO NOT** use **OTW** unit if you are tired and/or exhausted. **DO NOT** use **OTW** unit while under the influence of drugs, alcohol, or any medication.
- D. **WARNING: DO NOT** use or operate the **OTW** unit if the square, anti-entrapment cover is missing, broken or loose.
- E. **WARNING: DO NOT** step on or dive from the **OTW** unit.
- F. **WARNING: DO NOT** step on the handles.
- G. **WARNING: DO NOT** store or use gasoline or other flammable vapors or liquids in the vicinity of this equipment. **DO NOT** store pool chemicals near the equipment.
- H. **All electrical equipment should be installed in accordance with local codes.**
- I. **WARNING:** Use **ONLY** copper conductors with a minimum 75 degrees **C** wire insulation.
- J. **WARNING:** Use **ONLY** non-conductive tubing to connect between air switch and air transmitter (button).
- K. **TO REDUCE RISK OF ELECTRICAL SHOCK,** connect all ground wires to grounding terminal located in the control box. Use no smaller than a No. 12 AWG (3.3 mm²) wire.
- L. **TO REDUCE RISK OF ELECTRICAL SHOCK,** a bonding connector is provided on the motor for bonding of local ground points such as water pipes, metal ladders/handrails, or other metal within 5 feet of the pool. All local ground points should be bonded with a No. 8 AWG (8.4 mm²) wire. Never use gas piping as an electrical ground.
- M. **TO REDUCE RISK OF ELECTRICAL SHOCK** ,turn all power off at breaker or service disconnect, before installing or servicing equipment.
- N. **TO REDUCE RISK OF ELECTRICAL SHOCK,** never attempt to jump, bypass or crossover any wiring connections. One wiring error will cause permanent internal damage.
- O. **A licensed electrician is required for all wiring connections.**
- P. **WARNING:** The control box is provided with a ground-fault circuit-interrupter (GFCI) located on the left side of the box. The GFCI must be tested before each use. With the product operating, open the GFCI cover and push the test button. This should turn off the product. Next, reset the GFCI and the product should operate normally. If the control fails to operate in this manner, disconnect the power until the fault has been identified and corrected.
- Q. **DO NOT** remove any safety alert labels such as **DANGER, WARNING** or **CAUTION**. Keep safety alert labels in good condition and replace missing or damaged labels.
- R. **KEEP AND READ ALL EQUIPMENT MANUALS. Adhere to all of their instructions.**
- S. **SAVE THESE INSTRUCTIONS!** Refer to them frequently and use them to instruct third party users.

SAVE THESE INSTRUCTIONS

2. Introduction and Planning

The **Over-the-Wall Unit (OTW)** contains all necessary hardware for installation of the unit, except the electrical conduit and conduit fittings.

The distance between the **OTW** and the control box must be at least 5'. 25' of wire is provided. This length of wire allows for a distance of up to 20' depending on the location variables.

Please check your local electrical codes.

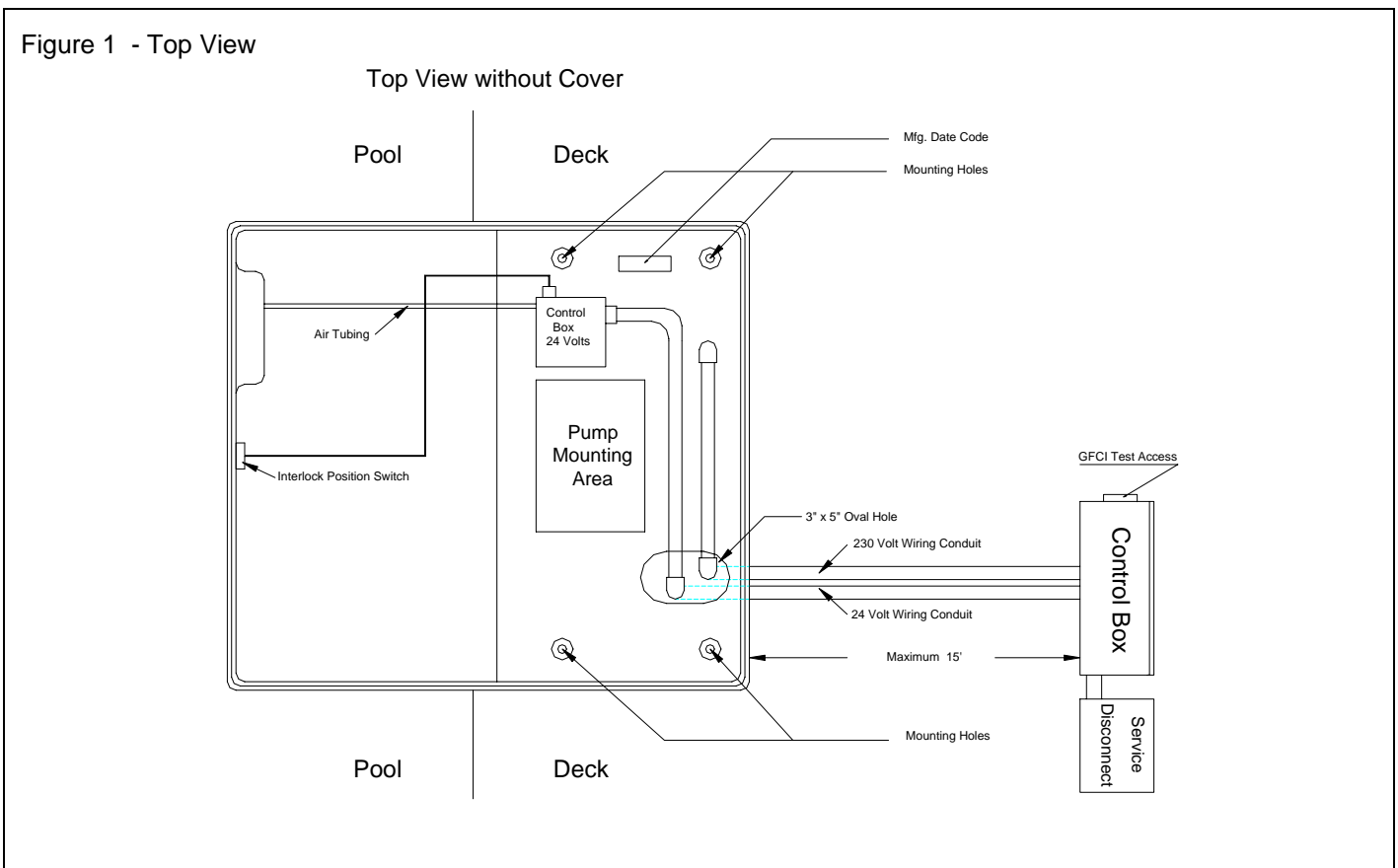
The 4 HP, self-priming, plastic pump has a single phase motor with thermal overload (no motor starter required). The 4 HP single phase motor draws a maximum of 19.4 amps at 230 V. The **OTW** unit requires a minimum circuit of 30 amps. Install a 40 amp breaker to avoid nuisance tripping when pump is turned on and off frequently. The starting amps of the 4 HP motor can reach up to 6 times the running amps. Use only the approved wire provided with the **OTW**.

A licensed electrician is required for all wiring connections.

What to look for when locating the unit:

1. Main wiring and service panel.
2. Distance between the unit and its control box.
3. Plenty of deck space to walk around the unit.
4. The unit can be installed in any size pool. We suggest a minimum pool size of 7 ft. wide, 14 ft. long and 3 ½ ft. deep in order to swim. The extra length allows the swimmer to comfortably drift back and swim upstream.
5. Control box must be placed in a location that is easily accessible to the pool user to check the GFCI.

3. Installation and Mounting



Read Manual Completely Before Installing

- The **OTW** contains all necessary hardware for mounting the unit to the deck.
- Mounting the **OTW** may vary with each installation.
- Review location for installing the **OTW**. Refer to **Section 2 . Introduction and Planning**

Warning: The **OTW** is heavy and awkward. The Unit weights 150 lbs and will require a two person crew to position. **DO NOT** lift unit by the handles. **DO NOT** drop the unit into the pool!

A. Remove the cover from the **OTW**, place the unit on the deck where it is going to be mounted. Use the unit as a template to locate the anchor holes and oval electrical 3" x 5" hole.

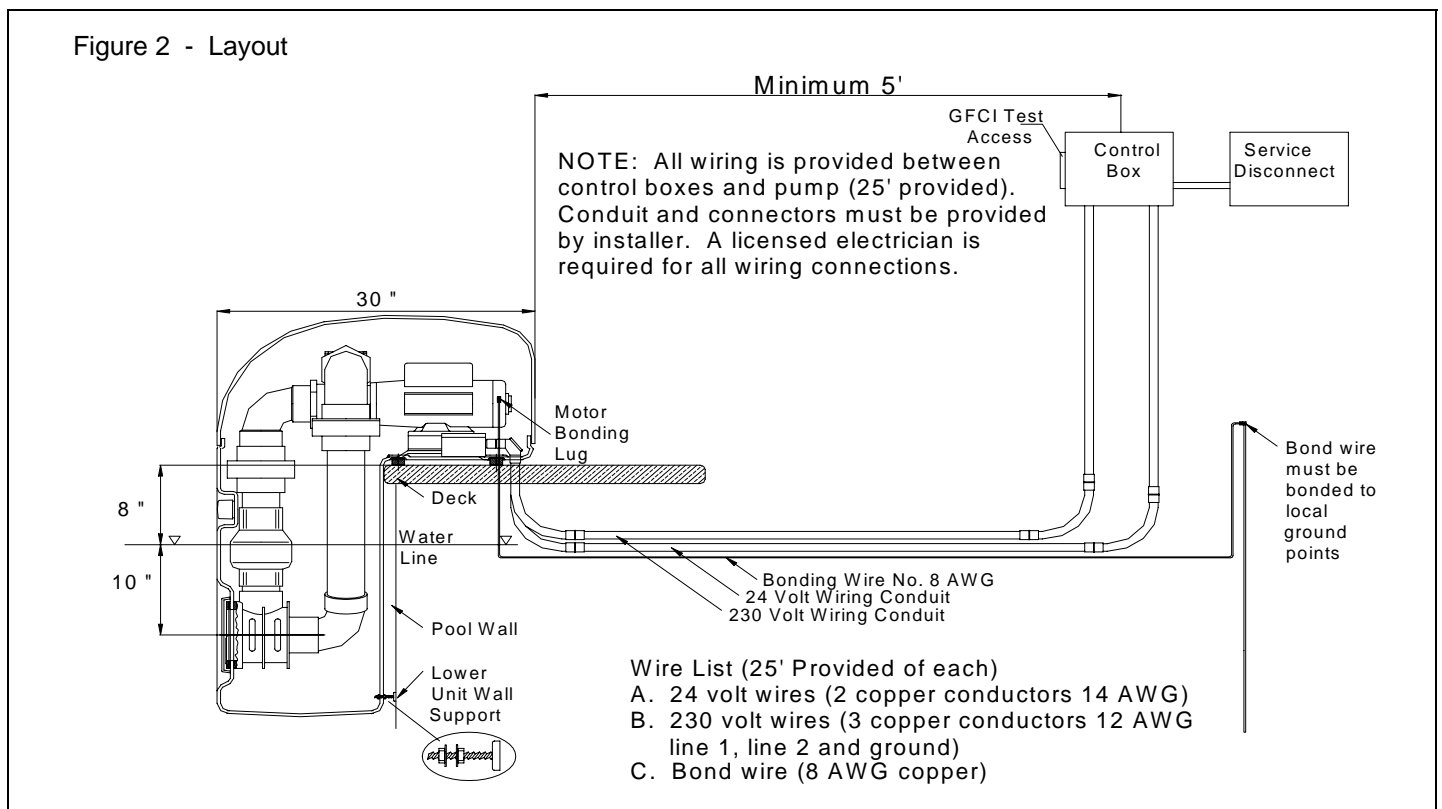
B. Using the masonry bit that is provided with the **OTW**, drill one of the back mounting holds first, then install brass insert into hole. (Note: Drill hole in concrete 1 1/4" deep.) Temporarily install M-8 bolt in insert to secure the **OTW** while the remaining holes are being drilled.

C. NOTE: The front two holes are not drilled in the **OTW** unit's base. To insure that the **OTW** is secured to the deck. The front two holes may be adjusted and drilled for brick or coping deck edged pools. Brick and coping maybe removed and replaced with concrete. Attempt to keep the **OTW** level.

D. Once the mounting holes are drilled and the electrical 3" x 5" oval hole has been marked, remove the **OTW**.

There are two conduit lines and a bonding wire that have to be placed under the deck for electrical service to the **OTW**. Two options are listed below.

- Cut and install a piece of Deck-o-drain in the deck to allow the electrician to run conduit lines and bonding wire through it.
- Cut the marked electrical 3" x 5" oval hole out. Jet one larger piece of pipe (2" minimum) under the deck, for the electrician to use as a casing pipe for two conduit lines and the bonding wire.



Mounting the OTW to the deck may vary with each installation.

- **Decks with coping:** The coping has to be removed where the **OTW** is being installed.
- **Brick decks:** The brick has to be removed and replaced with concrete.
- **Wood decks:** The **OTW** has to be bolted all the way through the wood. (Hardware not provided for this installation)

The center of the housing (the nozzle) should be 10" to 13" below the water level for maximum efficiency.

Top Deck to Water Line 7"

Pools that have approximately 7" between the top of the deck and water level.

Anchor Parts:

	Qty
■ Brass insert	4
■ Rubber mount w/threaded stud	2
■ Lock washer	4
■ Bolt M8 x 20mm	2
■ Bolt M8 x 40 mm	4
■ Fender washer	4

Instructions:

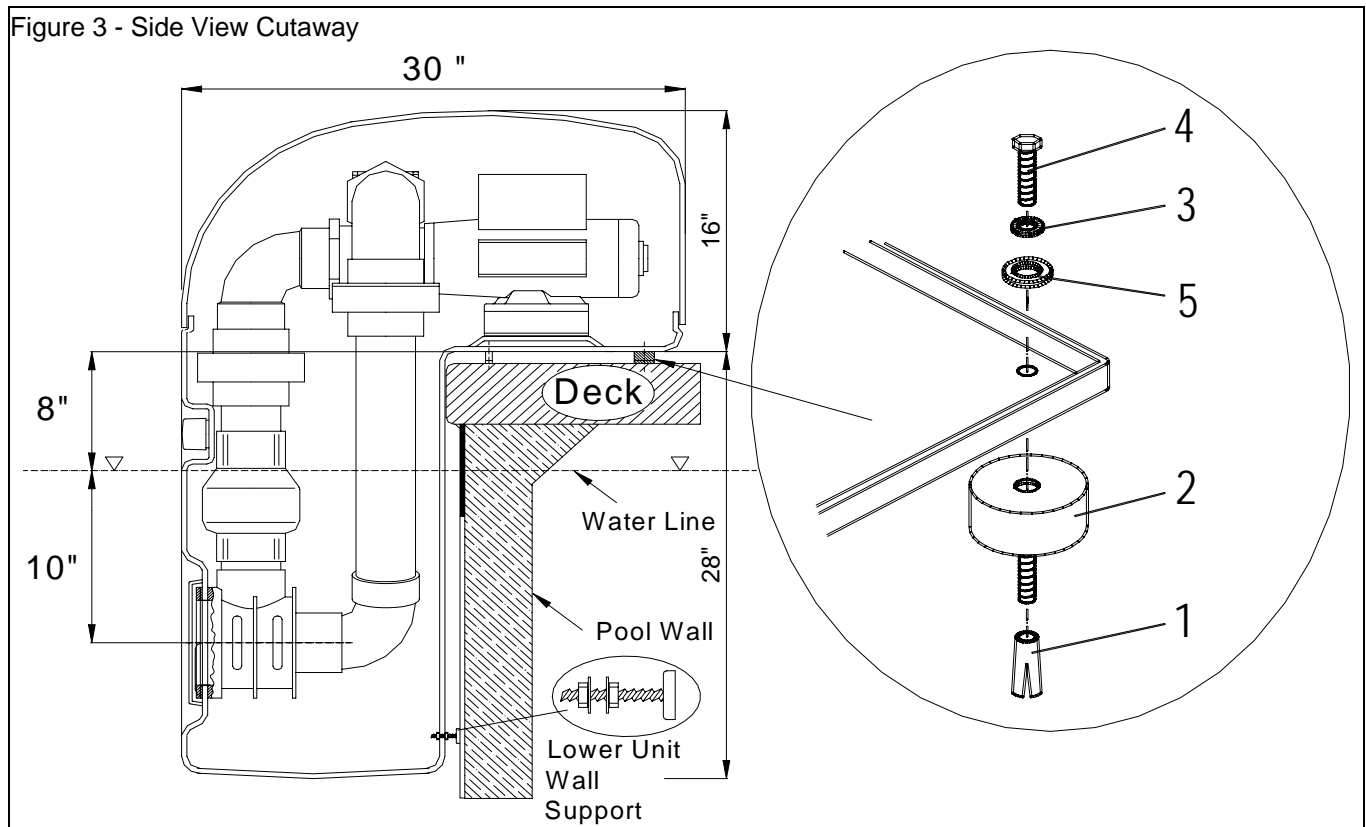
1. Press the brass insert into the pre-drilled hole.
2. Install the rubber mount with threaded stud into the two brass inserts at rear of unit. Tighten down completely.
3. Place the **OTW** on the rubber mounts. Install flat washers, lock washers and bolts. Use M8 x 20mm bolts for the rear and M8 x 40mm for the front of the installation. Tighten all bolts completely.
4. Adjust lower wall supports to level **OTW**.

NOTE: If the slope of the deck is greater than 1" in 12" use the rubber mount on the rear mounting holes only, i.e. mount the front of unit directly to the deck. If the slope is less, do not use rubber mounts. Use the four M8 X 40 bolts to secure **OTW** to deck.

Top Deck to Water Line 3" to 5"

Pools that have approximately 3" - 5" between the top of the deck and water level require a customizing kit with spacers to raise the **OTW**.

Please call for optional lift kit. Phone number is available on back cover of this manual.



A licensed electrician is required for all wiring connections.

Note: All wiring is provided between control boxes and pump.
 Use only the approved wire provided with the unit. The three wire sets are labeled A, B, C.

Wire Set A consists of 2 copper conductors 14 AWG, and is used for the 24 volt connections.

1. Each wire is labeled for each terminal connection.
2. Connect each wire in the 24 volt control box to terminals No.1 and No.2.
3. Connect each wire in the **OTW-7GFCI** control box to terminals No.8 and No.9. Refer to wiring diagram.

Wire set B consists of 3 copper conductors 10 AWG, and is used for the 230 volt connections. Each wire is labeled for each terminal connection.

1. Connect load 1 black wire to line 1 connection at the pump motor and the other end of wire to terminal No.5 (load 1) in the **OTW-7-GFCI** control box.

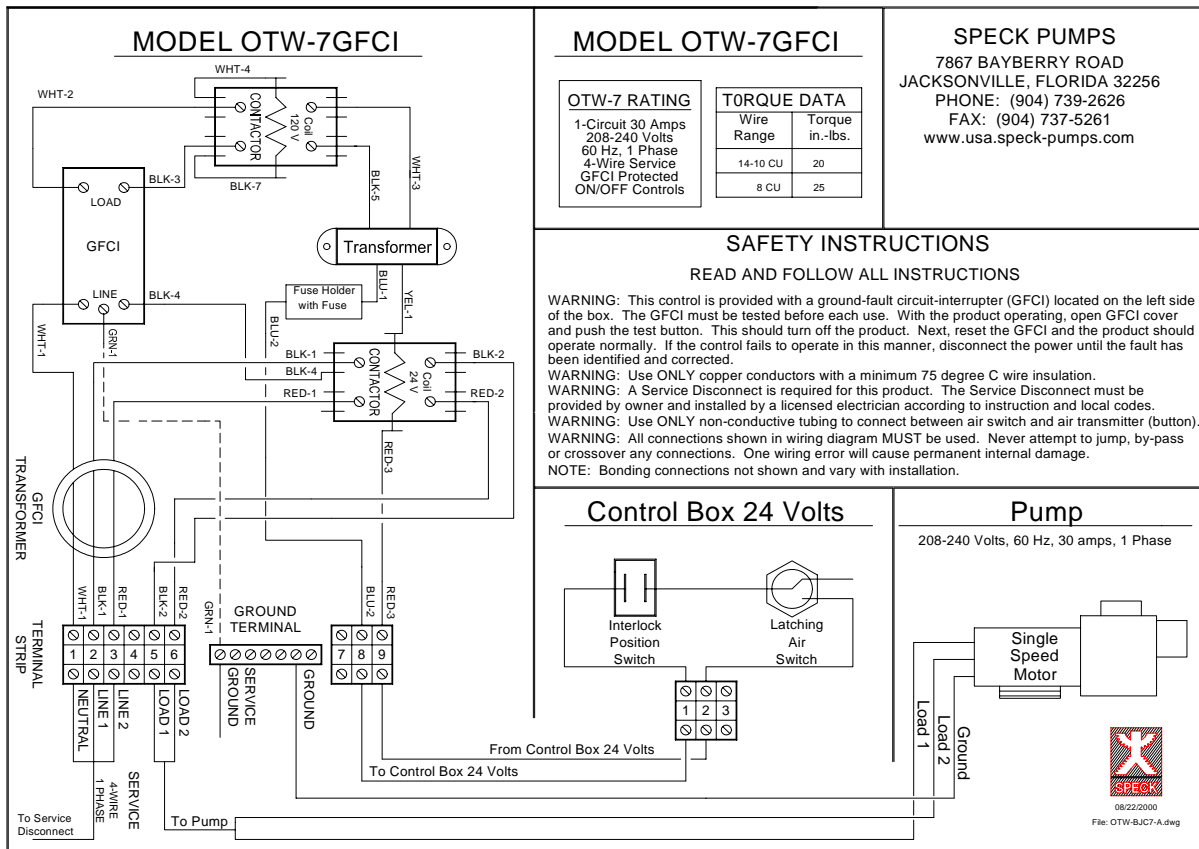
2. Connect load 2 red wire to line 2 connection at pump motor and the other end of wire to terminal No.6 (Load 2) in the **OTW-7-GFCI** control box.

3. The green ground wire is connected to ground screw in pump motor and ground terminal in the **OTW-7-GFCI** control box. Refer to wiring diagram.

Wire Set C consists of bonding wire 8 AWG.

1. Connect bonding wire to bonding lug on pump motor and the other end to an approved local ground point.

Refer to Figure 2, Page 5.



5. OPERATING INSTRUCTIONS

1. Remove cover from the **OTW** unit.
2. Remove red filler plug on pump and fill pump with water.
3. Replace red filler plug.
4. Replace **OTW** cover.

NOTE: The **OTW** cover must be installed before pump will start.

Push pneumatic button on **OTW** housing.

For the first start-up allow approximately 2 minutes for the pump to prime.

If the pump does not prime repeat above instructions and allow the pump to run for an additional five minutes.

OTW's adjustable flow nozzle enables swimmer to regulate the volume of water released through the jet.

Turning off the nozzle reduces the flow.

The swivel nozzle of the **OTW** can be positioned in various directions, allowing swimmers to use various swim styles.

The air regulator permits a controlled mixture of air into water flow and creates a unique, invigorating bubble bath effect.

The pulsating massage hose can be attached to the nozzle for an invigorating massage.

Consult your physician before using the massage hose.

Directions for use:

TO REDUCE THE RISK OF INJURY, do not permit children to use the massage hose with pulsation unless they are closely supervised at all times.

Slip the massage hose connection on the nozzle.

- Slide the ring to secure the nozzle.
- Close air regulator.
- Reduce the volume of water by turning the adjustable flow nozzle clockwise.

Consult your physician before attempting any strenuous exercise.

To start swimming, jogging or running, it is suggested that the nozzle should be pointed slightly upward so that the water "breaks" approximately 3 ft in front of the **OTW** unit.

Start swimming with only minimal force in arms and legs until you feel yourself drifting backward, then add force and swim upstream until a proper balance is found between force and endurance.

Find a pace that you can keep up for at least 20 minutes. **OUT PACING THE CURRENT IS ALWAYS POSSIBLE.**

Keep in mind that this unit is designed for a balanced work-out. The idea is to continue exercise for an extended period of time.

Under certain conditions it is possible that the current "drifts off" to the left or the right from the middle due to water bouncing off the back wall.

In the event that it interferes with your swimming action, turn unit off for a few minutes and restart.

Warning:

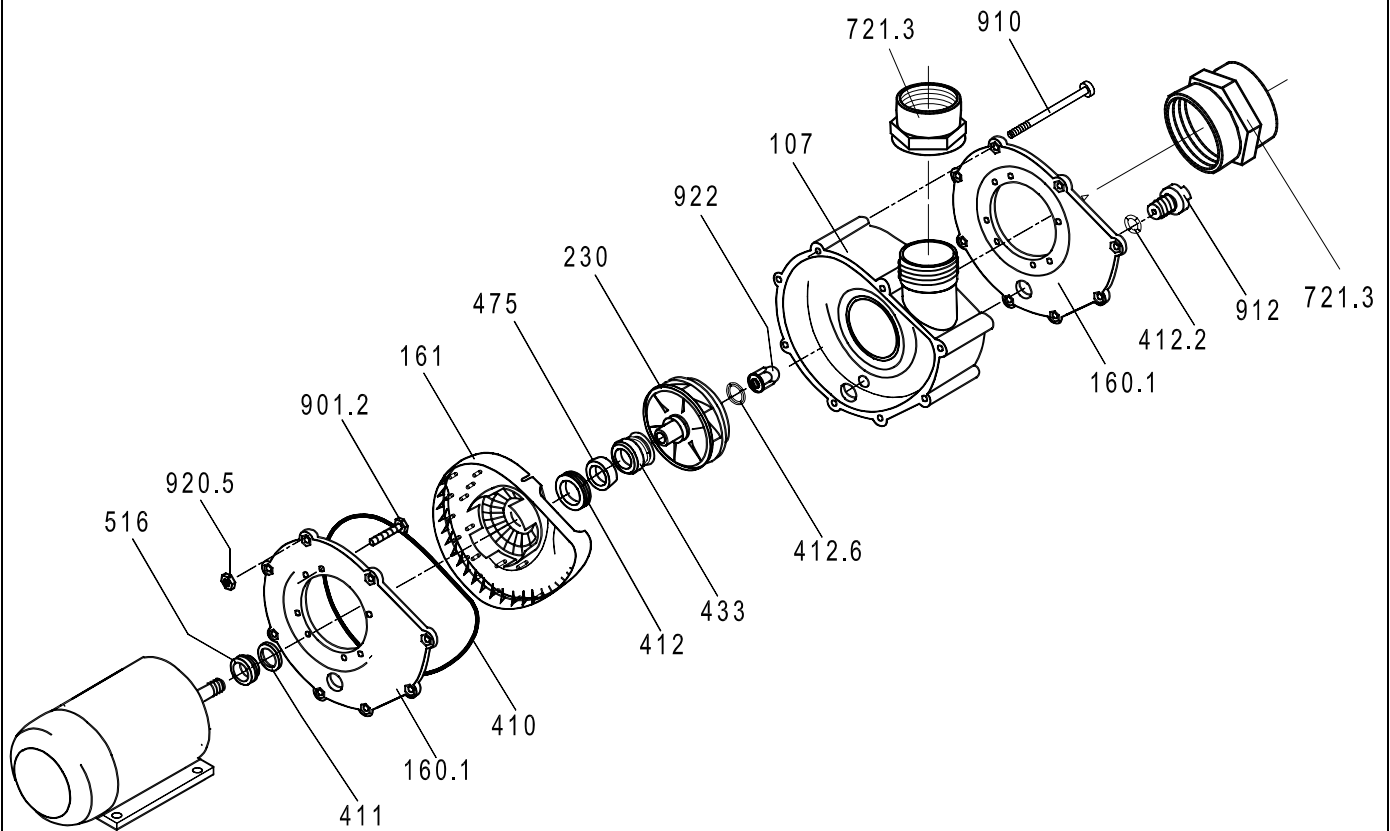
Do not use or operate OTW unit if the square, anti-vortex cover is missing, broken or loose.

6. Winterizing

In areas subject to freezing water temperatures, remove the unit, and store in a dry and frost free place. Do not store with pool chemicals.

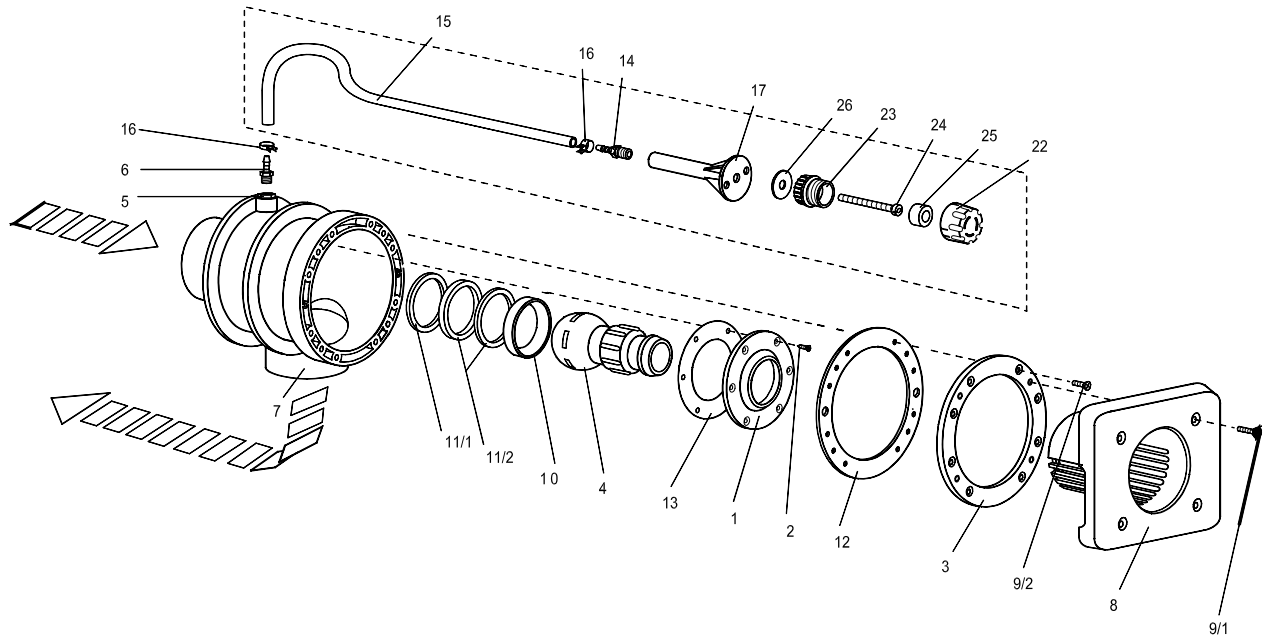
SAVE THESE INSTRUCTIONS

Figure 5 - 21-80 / 33G



ORDER #	PART #	QTY	DESCRIPTION
2923592200	922	1	Nut - Impeller M12
5879340600	920.5	8	Nut - Casing Bolt M6 ss
2920791212	912	1	Plug - Casing Drain 1/4"
2920191401	910	8	Bolt - Casing, Phillips M6 X 97mm ss
2923190120	901.2	4	Bolt - Motor, Hex M8 X 16mm
2923151601	516	1	V-ring 18mm
2920343310	475/433/412	1	Mechanical Seal 20mm
2923541229	412.6	1	O-ring - Shaft 16.9 X 2.75mm Viton
2923541220	412.2	1	O-ring - Casing Drain Plug 12 X 2.5mm
2923141240	411	1	Shaft Washer 14/22 IT400
2923141000	410	1	Gasket - Casing
2923223013	230.6	1	Impeller 3 HP, SF 1.15 106-122 / 20mm
2923223014	230.7	1	Impeller 4 HP, SF 1.25 113-122 / 20mm
2923223035	230.8	1	Impeller 6 HP, SF 1.0 120-122 / 19mm
2923116100	161	1	Seal Housing
2923116010	160.1	2	Aluminum Flange
2923110071	107	1	Casing (Specify for G)
2500223433	721.3	2	Adaptor - Casing 2-3/4" X 3" NPT/4"

Figure 6 - OTW Parts View



ORDER #	PART #	QTY	DESCRIPTION
2306002009	1	1	Face Ring - Nozzle
5879825519	2	6	Tapping Screw - Face Ring 5.5 X 19 A 2
2308002004	3	1	Ring - Clamping
2302002854	4	1	Nozzle - Adjustable Flow 40mm
5862711601	5	1	Bushing - Reducer 16 X 1/4"
2301001004	6	1	90° Hose Socket
2304910001	7	1	Housing
2304910002	8	1	Cover - Square av
2991000077	9/2	8	Bolt - Clamping Ring, Phillips/pan M6 X 20mm
2302002056	10	1	Seat - Nozzle
2302002057	11/1	1	Spacer - Nozzle 6.2mm
2302002157	11/2	2	Spacer - Nozzle 4mm
2308002003	12	2	Gasket - Clamping Ring
2301001005	14	1	Fitting - Hose, Air Regulator, Plastic 1/4"
2301001007	15	1	Hose - Air Regulator, Plastic 8 X 3mm
2301001008	16	2	Clamp - Hose, Air Regulator 14/9 SS A4
2301001009	17	1	Holder - Air Regulator
2301002021	22	1	Top Part - Air Regulator
2301002022	23	1	Bottom Part - Air Regulator
2301002023	24	1	Bolt W/hole - Air Regulator, Brass M10 X 80
2301002024	25	1	Ring - Hose, Air Regulator 16 X 30 X 18mm
2301002025	26	1	Gasket - Air Regulator 42 X 11 X 2mm
2991000059	27	2	Bolt - Jet Housing, Phillips/pan 14 X 1"

FREQUENTLY ASKED QUESTIONS

What size pool do I need? The BaduStream Over-The-Wall (OTW) can be installed in any size pool. However, we recommend a minimum length of 14' and a minimum width of 7'. The depth should be at least 3 ½' in order to swim.

How many amps does the pump need to run at? Maximum 19.4 amps @ 230V.

What size breaker do I need? You must use a 40 amp

breaker to avoid nuisance breaking.

Does it matter if center of the nozzle is installed higher or lower than the manual states? Yes, the center of the housing should be 10" to 13" below the water level for maximum efficiency.

If your installation differs, refer to Page 6 - Top deck to Water Line 3" to 5".

SAVE THESE INSTRUCTIONS! LIMITED WARRANTY

Speck Pumps-Pool Products, Inc. grants solely to the original consumer purchaser ("Buyer") of the Badu® SwimJet System(s) the following personal, non-transferable and limited warranty on the following terms and conditions (the "Limited Warranty"): the Badu SwimJet System(s) is warranted to be free of material defects in materials or workmanship under normal use for a period of one (1) year beginning on the date of the Buyer's purchase of the Badu SwimJet System(s). Notwithstanding any provisions herein to the contrary, the warranties and obligations hereunder shall not in any event extend for more than two (2) years beyond the date of shipment of the Badu SwimJet System(s) from the factory (the "Limited Warranty Period"). The Limited Warranty is subject to each of the following additional terms and conditions:

1. IN THE EVENT OF ANY BREACH OF THE LIMITED WARRANTY, SPECK PUMPS-POOL PRODUCTS, INC.'S ENTIRE OBLIGATION AND LIABILITY TO BUYER, AND BUYER'S SOLE AND EXCLUSIVE REMEDY SHALL BE AS FOLLOWS: Speck Pumps-Pool Products, Inc. will, at its option, either repair or replace the Badu SwimJet System(s) or refund to Buyer the purchase price actually paid by Buyer for the Badu SwimJet System(s) subject to the Limited Warranty. Speck Pumps-Pool Products, Inc. shall have no obligations under the Limited Warranty unless Buyer delivers timely written notice to Speck Pumps-Pool Products, Inc. of the Limited Warranty claim within the Limited Warranty Period and returns the Badu SwimJet System(s) to Speck Pumps-Pool Products, Inc. if requested. To the fullest extent permitted by law, Speck Pumps-Pool Products, Inc. expressly disclaims any liability for, and the Limited Warranty does not include or cover, any labor, costs or other expenses in connection with the removal, transportation, shipment, insurance, replacement, repair, or installation of repaired or replaced parts or for any other costs or expenses or damages to property or things including, but not limited to, those arising in connection with the use of, or inability to use, the Badu SwimJet System(s).

2. To the fullest extent permitted by law, the Limited Warranty will be void and of no force or effect and Speck Pumps-Pool Products, Inc. will have no liability, responsibilities or obligations to Buyer or with respect to the Badu SwimJet System(s) in the event of the occurrence of any one or more of the following:

- (A) Any damage to the Badu SwimJet System(s) caused by Buyer, any third party, ground movement, other natural forces, acts of God or any other sources or causes not arising from a breach of the Limited Warranty, excluding ordinary wear and tear;
- (B) Any replacement, modification, alteration or repair of any parts or components of the Badu SwimJet System(s) by anyone other than Speck Pumps-Pool Products, Inc.;
- (C) Any abuse, misuse, accident, tampering with, improper installation or modification of the Badu SwimJet System(s) or any other actions, inactions or failures to act that violate the terms and conditions of this Limited Warranty;
- (D) Buyer's failure or inability to present an invoice, bill, receipt or other documentation clearly evidencing that the Badu SwimJet System(s) was installed and maintained in strict compliance with this Limited Warranty and that the claim was timely submitted within the Limited Warranty Period; and/or
- (E) Buyer's failure to comply with the conditions and contingencies set forth in paragraph 3 below.

3. The Limited Warranty is expressly conditioned and contingent upon Buyer's strict compliance with each of the following:

- (A) Installation of the Badu SwimJet System(s) by an experienced and qualified pool industry professional and a licensed electrician who is licensed within the jurisdiction in which the Badu SwimJet System(s) is installed and will be used; and
- (B) Buyer's operation and maintenance of the Badu SwimJet System(s) in strict accordance with Speck Pumps - Pool Products, Inc.'s printed operator/maintenance manuals delivered with the Badu SwimJet System(s).

4. DISCLAIMER: THE LIMITED WARRANTY IS THE ONLY WARRANTY MADE AND IS IN LIEU OF ALL OTHER WARRANTIES, AND ANY AND ALL IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, AND THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED IN THEIR SCOPE AND DURATION TO THE ONE YEAR TERM OF THE LIMITED WARRANTY SET FORTH HEREIN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO THE BUYER.

5. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SPECK PUMPS - POOL PRODUCTS, INC. OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SHAREHOLDERS, AGENTS, OR REPRESENTATIVES BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR LOSS, INCLUDING TIME, MONEY, GOODWILL, AND LOST PROFITS IN ANY WAY WHICH MAY ARISE HEREUNDER OR FROM THE USE OF OR INABILITY TO USE THE BADU SWIMJET SYSTEM(S) OR THE PERFORMANCE OR NONPERFORMANCE OF ANY OBLIGATION UNDER THIS LIMITED WARRANTY. THIS PARAGRAPH, THE WARRANTY DISCLAIMERS IN PARAGRAPH 4 ABOVE, AND THE SOLE AND EXCLUSIVE REMEDY SET FORTH IN PARAGRAPH 1 ABOVE SHALL APPLY EVEN IF SPECK PUMPS - POOL PRODUCTS, INC. HAS BEEN NOTIFIED OF THE POSSIBILITY OR LIKELIHOOD OF SUCH DAMAGES OCCURRING, WHETHER SUCH LIABILITY IS BASED ON CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, PRODUCTS LIABILITY OR OTHERWISE, AND EVEN IF ANY REMEDY STATED HEREIN FAILS OF ITS ESSENTIAL PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR LOSS, SO THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY.

6. This Limited Warranty gives the Buyer specific legal rights, and the Buyer may also have other rights, which vary from state to state.

7. A return merchandise authorization ("RMA") must be obtained from Speck Pumps - Pool Products, Inc. before returning any product. Products returned without an RMA will be refused and returned, unopened, to the Buyer. All returned products are to be sent freight prepaid and insured for Buyer's protection to the manufacturer at 8125 Bayberry Road, Jacksonville, Florida 32256. Under no condition will products be accepted after the expiration of the Limited Warranty Period. Speck Pumps - Pool Products, Inc. shall not bear any costs or risks incurred by Buyer in shipping a defective Badu SwimJet System(s) to Speck Pumps - Pool Products, Inc. or in shipping a repaired or replaced Badu SwimJet System(s) to Buyer.

Date of Installation:	_____
Installed by:	_____
For Service Call:	_____

8125 Bayberry Road
Jacksonville Florida 32256
Phone: (904) 739-2626
Fax: (904) 737-5261
Website: www.usa.speck-pumps.com

