



Limelight™

HOT TUBS

***Congratulations on your decision to
enjoy the finest hot tub available...***

***Welcome to the growing family of
Limelight™ hot tub owners.***

Pre-Delivery Instructions

Please take the time to read this booklet carefully, as it will provide you with the information you will need to ensure the safe, secure, and timely installation of your new hot tub. The following sections are guidelines on how to prepare for delivery and set-up of your new hot tub. Specifically covered are site selection, delivery access, ground preparation, and electrical requirements.

Remember to carefully read the Owner's Manual that accompanies your hot tub, and to complete the Warranty Card within 10 days of delivery. These items, along with other valuable information, will be found in the Owner's Package which has been placed in the equipment compartment of your hot tub, where you will also find its serial number.

Watkins Manufacturing Corporation reserves the right to change features, specifications and design without notification and without incurring any obligation.

DATE PURCHASED: _____

DATE INSTALLED: _____

DEALER: _____

ADDRESS: _____

TELEPHONE: _____

In most cities and counties, permits will be required for the installation of electrical circuits or the construction of exterior surfaces (decks and gazebos). In addition, some communities have adopted residential barrier codes which may require fencing and/or self-closing gates on the property to prevent unsupervised access to a pool (or hot tub) by children under 5 years of age. Your Limelight hot tub is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers and as a result, is usually exempt from most barrier requirements. As a general practice, your local Building Department will inform you of any applicable barrier requirements at the time a permit is obtained for the installation of an electrical circuit. Your Limelight dealer can provide information on which permits may be required.

Site Selection and Preparation

IMPORTANT: Site selection and preparation are your responsibility. Carefully read these instructions and consult your authorized Limestone™ dealer if you have any questions.

You probably have a spot picked out for your new hot tub, whether it's indoors or outdoors, on a patio or on a deck. Just make sure you check the following:

- Always put your hot tub on a structurally sound, level surface. A filled hot tub can weigh a great deal. Make certain that the location you choose can support the weight of your filled hot tub.
- Locate your equipment compartment, which houses all of the electrical components, in a place where water will drain away from it. Allowing water into the equipment compartment can damage the electronics, or may result in tripping your house's circuit breaker.
- Leave yourself easy access to the circuit breakers in the subpanel.
- Never let water get into the subpanel. Your hot tub's subpanel is raintight when installed correctly with the door closed.
- Leave access to the equipment compartment for periodic hot tub care and maintenance.

OUTDOOR AND PATIO INSTALLATION

No matter where you install your new hot tub, it's important that you have a solid foundation to support it. Structural damage to the hot tub resulting from incorrect installation or placement on an inadequate foundation is not covered under the spa's limited warranty.

If you install the hot tub outdoors, a reinforced concrete pad at least four inches thick is recommended. The reinforcing rod or mesh in the pad should be attached to a bond wire (see your Owner's Manual). All Limestone hot tubs may be installed onto a deck, provided that the load capacity of the deck is greater than the dead weight of the hot tub (see Deck Installation).

DECK INSTALLATION

To be certain your deck can support your hot tub, you must know the deck's maximum load capacity. **Consult a qualified building contractor or structural engineer before you place the hot tub on an elevated deck or indoors.** To find the weight of your hot tub, its contents and occupants, refer to the Hot Tub Specification chart located further into these instructions. This weight per square foot must not exceed the structure's rated capacity, or serious structural damage could result.

INDOOR INSTALLATION

Be aware of some special requirements if you place your hot tub indoors. Water will accumulate around the hot tub, so flooring materials must provide a good grip when wet. Proper drainage is essential to prevent a build-up of water around the hot tub. When building a new room for the hot tub, it is recommended that a floor drain be installed. The humidity will naturally increase with the hot tub installed. Water may get into woodwork and produce dryrot, mildew, or other problems. Check for airborne moisture's effects on exposed wood, paper, etc. in the room. To minimize these effects, it is best to provide plenty of ventilation to the hot tub area. An architect can help to determine if more ventilation must be installed.

Your Limestone dealer can help you with local information such as zoning regulations and building codes.

DELIVERY ACCESS

First, locate the dimensions of your hot tub on the following chart. The dimensions shown are the measurements of the hot tub in the vertical position, laid on its side.

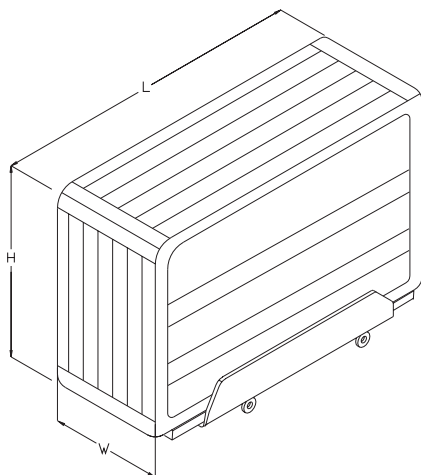
Next, contact your dealer to find the height and width added by the delivery cart which the dealer will use to deliver your new hot tub. Use the height of the cart plus the dimension shown as H to determine the vertical clearance required to pass the hot tub and cart. Use the width of the cart, or dimension W, whichever is greater, to determine the maximum width of clearance necessary.

NOTE: It may be necessary to allow for additional over-head clearance if the hot tub (with cart) will be pushed up or down an incline or moved up or down a short flight of stairs.

Use the information below to determine the requirements for access to your desired location.

It may be necessary to remove a gate, part of a fence, or other movable obstructions in order to roll the hot tub to its installation site. About ten percent of the time, a crane is the only way to install the spa by lifting it to its final destination.

If the hot tub has to be taken off of the cart to go over a wall (either because the entry area is too narrow, the eaves are too low, the corner is too tight, or the stairway is too steep), a crane will be required. Don't be alarmed!



Model	Width W	Length L	Height H
Limelight Pulse™ (PLS)	38"	7' 5"	7" 5"
Limelight™ Flair™ (FLR)	36"	7' 0"	7' 0"
Limelight™ Glow™ (GLW)	33"	7' 0"	6' 4"

How is your width clearance?

Check all gates

Protruding electric meters

Gas meters

A/C units

Do you have sufficient overhead clearance?

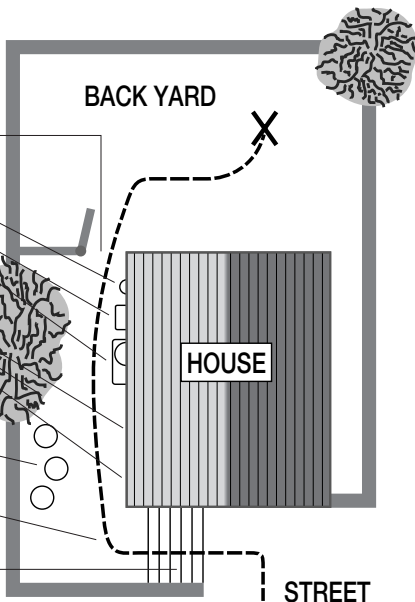
Check low roof eaves, overhanging branches, rain gutters

Is the path clear?

Move away branches, dog houses, firewood, etc.

If there is a 90° turn, can we clear it? (The spa will not bend)

No more than 6 consecutive stairs without a landing



The crane has a truck-mounted boom which can fit right in your driveway. Crane operators are licensed and insured. For a charge, the crane operator will lift your hot tub over walls, buildings, or any other obstruction and place it as close to the installation site as possible. The Limelight™ hot tub delivery personnel will supervise the crane delivery and complete the hot tub installation. Crane delivery typically takes an average of 30 minutes to complete.

NOTE: If your hot tub delivery requires the use of a crane, you may be required to pay for its services at the completion of the delivery.

GROUND PREPARATION

Your Limelight hot tub has been engineered to perform on several kinds of surfaces. While a concrete slab is best for long-term use*, other foundations are acceptable so long as a level base is prepared prior to delivery.

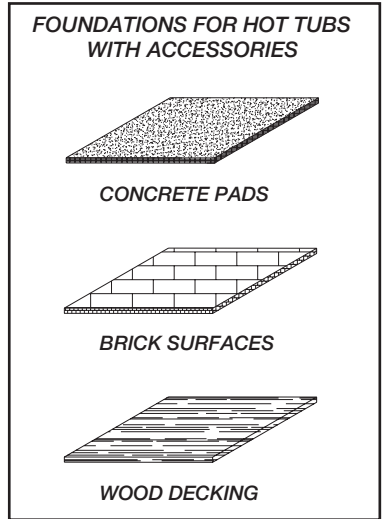
***NOTE:** A reinforced concrete pad at least four inches thick or a deck that is able to withstand more than 115lbs. per square foot is recommended for the Pulse™ hot tub, 110lbs. per square foot is recommended for the Flair™ hot tub and 105lbs. per square foot is recommended for the Glow™ hot tub.

INSTALLATION NOTES:

If you are purchasing a deck package or a gazebo with your hot tub, a solid foundation becomes mandatory. Placing them on any surface other than a single level pad could create problems with their installation. Pictured at right are a few of the recommended surfaces.

As a homeowner, it is your responsibility to provide a suitable, level foundation for your hot tub. Keep in mind that most delivery crews are not equipped to level and prepare hot tub sites.

If you are interested in having a concrete slab, brick surface, or wood deck installed, your Limelight dealer should be able to suggest a qualified, licensed contractor.

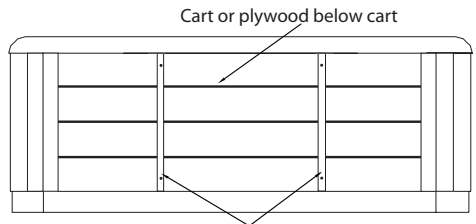


HANDLING INSTRUCTIONS

READ IMPORTANT HANDLING INFORMATION BEFORE MOVING THE HOT TUB!

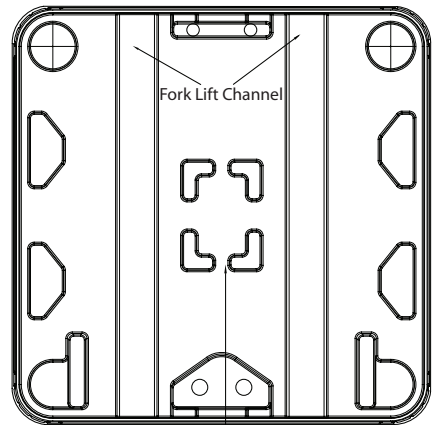
DO's

- DO:** If operating a forklift, use only the forklift channels that run from front to back.
- DO:** Use two (2) straps when securing hot tub to delivery truck.
- **Recommended: space straps equally at vertical frame members. Do not strap over control panel**
- DO:** When standing hot tub on edge, place on right or left side only - do not place on front or back side.
- **Recommended: left side.**
- DO:** When hot tub is on edge, ensure full side is properly supported.
- **Recommended: Plywood or equivalent, 48" x 32" x 3/4" in size, with additional padding. Must span across vertical frame members.**
- DO:** Use "hand grab areas" molded into basepan when lifting hot tub by hand.
- **Recommended: use front and back locations, as sides are less accessible.**
- DO:** When placing cart under hot tub ensure entire center of hot tub is supported.
- **Recommended: Plywood or equivalent, 48" x 32" x 3/4" in size. Must support entire center of hot tub.**
- DO:** Place crane straps in forklift channels for crane delivery.



Hidden Hot tub vertical frame members 27" apart

NOTE: Cart or plywood below cart must be 48" long in order to rest on both hot tub vertical frame members



When using a cart below hot tub, entire center of hot tub must be supported as illustrated

DON'Ts

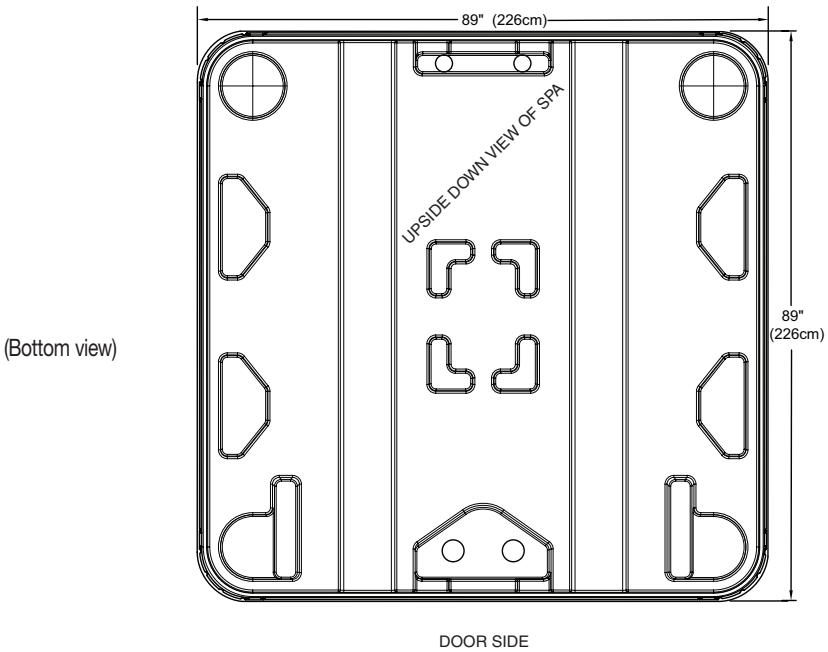
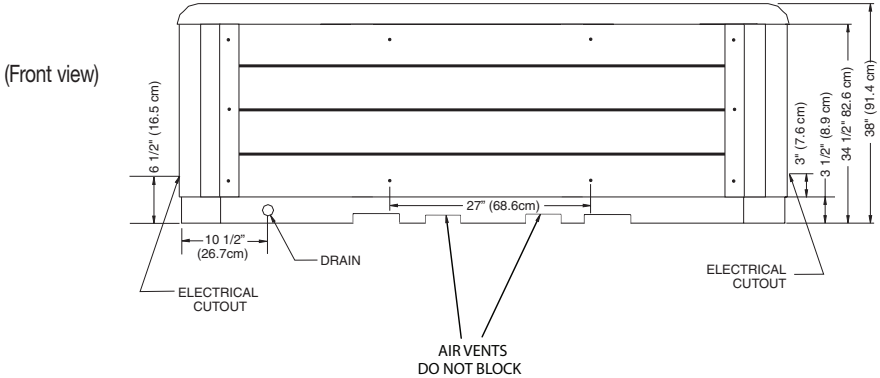
- DO NOT:** Roll the hot tub onto its corner as support is limited in this area.
- DO NOT:** Lift the hot tub by the underside of the corner (by hand or forklift).

IMPORTANT: DAMAGE TO THE HOT TUB WILL OCCUR IF ALL OF THE HANDLING INSTRUCTIONS ABOVE ARE NOT FOLLOWED. THIS TYPE OF DAMAGE IS CONSIDERED ABUSE AND IS NOT COVERED UNDER WARRANTY!

PULSE™ (Model PLS)

Dimensions

NOTE: All dimensions are approximate; measure your spa before making critical design or pathway decisions.



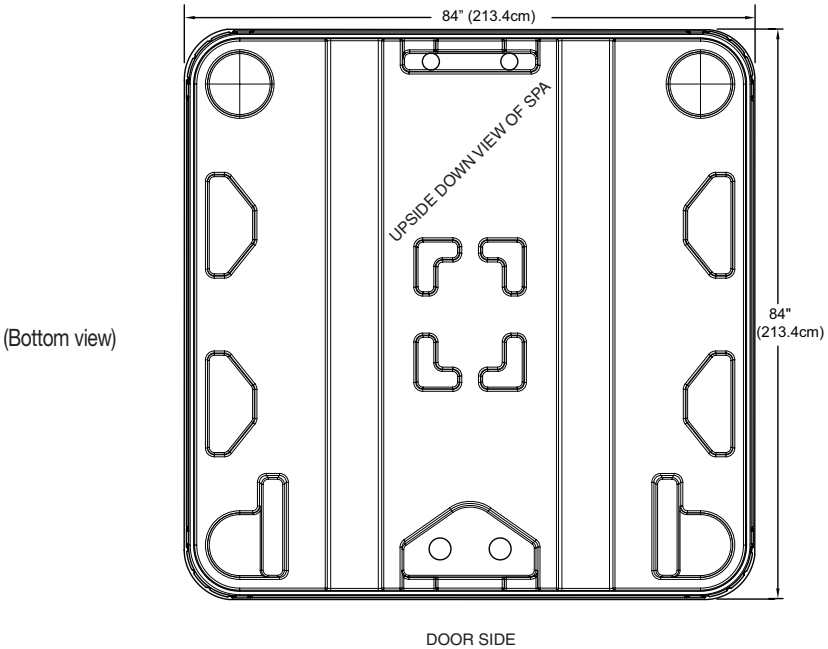
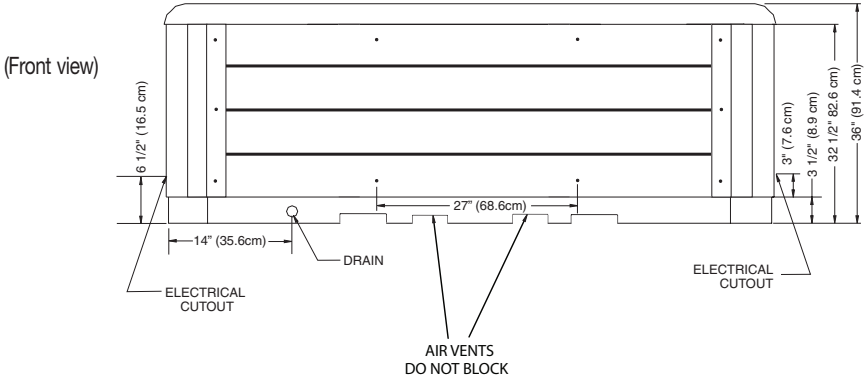
NOTE: Watkins Manufacturing Corporation recommends that the Pulse be installed on a minimum 4" thick reinforced concrete pad or structurally sound deck able to support the "dead weight" found in the hot tub specification chart.

WARNING: The Pulse must not be shimmed in any manner.

FLAIR™ (Model FLR)

Dimensions

NOTE: All dimensions are approximate; measure your spa before making critical design or pathway decisions.



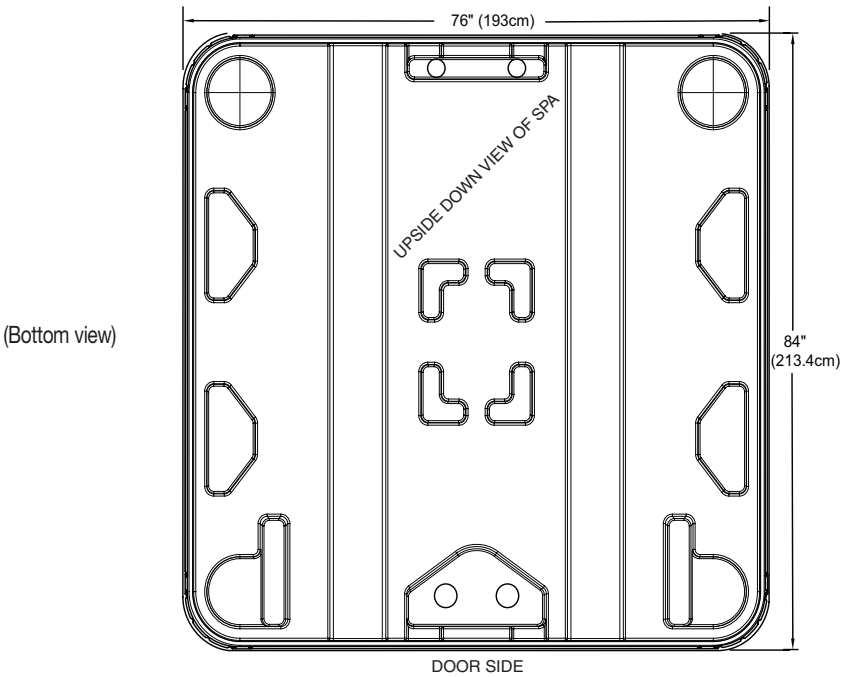
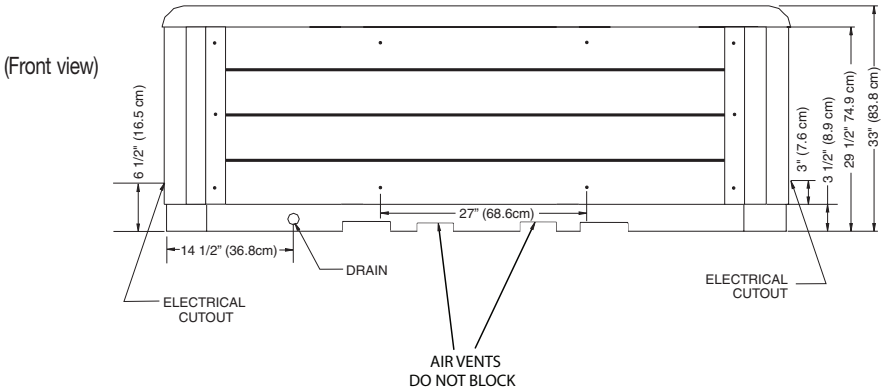
NOTE: Watkins Manufacturing Corporation recommends that the Flair be installed on a minimum 4" thick reinforced concrete pad or structurally sound deck able to support the "dead weight" found in the hot tub specification chart.

WARNING: The Flair must not be shimmed in any manner.

Glow™ (Model GLW)

Dimensions

NOTE: All dimensions are approximate; measure your spa before making critical design or pathway decisions.



NOTE: Watkins Manufacturing Corporation recommends that the Glow be installed on a minimum 4" thick reinforced concrete pad or structurally sound deck able to support the "dead weight" found in the hot tub specification chart.

WARNING: The Glow must not be shimmed in any manner.

ELECTRICAL REQUIREMENTS

To ensure you will have an opportunity to use your hot tub soon after delivery, it is very important that the required electrical service has been installed. Unless otherwise stipulated by your dealer, **THIS IS YOUR RESPONSIBILITY.**

IMPORTANT: All electrical circuits must be installed by a qualified, licensed electrician.

230 VOLT OPERATION REQUIREMENTS

The Limelight™ models require a 50 amp, single phase, 230 volt circuit breaker in the main electrical service panel.

All 230 volt hot tubs must be wired in accordance with applicable local and national electrical codes, all electrical work must be done by a licensed electrician.

NOTE: Watkins Manufacturing Corporation REQUIRES THE USE OF A SUBPANEL TO SUPPLY POWER AND PROTECT THE HOT TUB. The subpanel containing GFCI breakers is included with the hot tub.

A licensed electrician should install a four-wire electrical service (two line voltages, one neutral, one ground) from the main electrical service panel to the sub-panel, and from the sub-panel to the hot tub per the appropriate wiring diagram as illustrated below.

The grounding conductor must be the same gauge as the line conductor, but at least #10 AWG. Your electrician should mount the subpanel in the vicinity of the hot tub but it should not be closer than five (5) feet from the hot tub water edge (NEC 680-6c).

INSTALLATION NOTE: After the hot tub has been installed by the dealer's delivery crew, your electrician can connect the conduit from the subpanel to the hot tub's IQ 2020® hot tub control box and then complete the wiring connections in the control box.

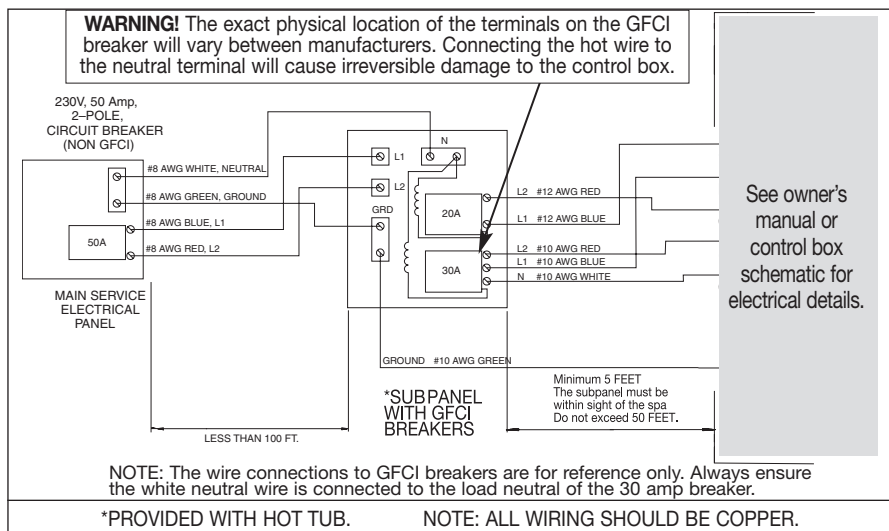
NOTE: Complete step-by-step Installation and Wiring Instructions for all Limelight hot tubs are included in the Owner's Manual and with each sub-panel, which can be obtained from your dealer.

WARNING: Removing or bypassing the GFCI breakers in the subpanel at any time will result in an unsafe hot tub and will void the warranty.

WIRE SPECIFICATION NOTE: Long electrical runs may require a larger gauge feed wire than stated. We recommend that a maximum voltage drop of 3% be used when calculating the larger wire size.

Refer to the Wiring Diagrams below for the electrical requirements of the 230 volt Pluse & Flair models.

230 VOLT PERMANENTLY CONNECTED MODEL



Hot Tub Specifications

	Footprint dimensions	Height	Effective filter area	Heater (Watts)	Water capacity	Dry weight	Filled weight*	Dead weight*	Electrical Requirements
Limelight™ Pulse™ (Model PLS)	7'5" x 7'5" 2.26m x 2.26m	38" 97cm	65 square feet	4,000	380 gallons 1,430 litres	920 lbs. 417 kg.	5,154 lbs. 2,337 kg.	115 lbs. per square foot	230v System: 230 volt, 50 amp single phase GFCI protected circuit
Limelight Flair™ (Model FLR)	7'0" x 7'0" 2.13m x 2.13m	36" .91m	65 square feet	4,000	310 gallons 1170 litres	789 lbs. 358 kg.	4,267 lbs. 1,935 kg.	110 lbs. per square foot	230v System: 230 volt, 50 Amp single phase GFCI protected circuit
Limelight Glow™ (Model GLW)	6'4" x 7'0" 1.93m x 2.13m	33" .84m	65 square feet	4,000	270 gallons 1022 litres	689 lbs. 312 kg.	4,204 lbs. 1,907 kg.	105 lbs. per square foot	230v System: 230 volt, 50 Amp single phase GFCI protected circuit

CAUTION: Watkins Manufacturing suggests a structural engineer or contractor be consulted before the hot tub is placed on an elevated deck.

* **NOTE:** The "Filled weight" and "Dead weight" of the hot tub includes the weight of the occupants (assuming an average occupant weight of 175 lbs).

CONTRACTOR SUGGESTIONS

Electrician

Name: _____

Telephone: _____

Name: _____

Telephone: _____

Masonry

Name: _____

Telephone: _____

Name: _____

Telephone: _____

General

Name: _____

Telephone: _____

Name: _____

Telephone: _____

SERVICES AVAILABLE FROM YOUR LIMELIGHT™ DEALER

Service

Cost

Pre-Delivery site inspection

Deliver hot tub to installation site

Unwrap hot tub and haul away packaging material

Set up

Fill the hot tub with water

Explain and test the hot tub's operation

- Jet system
- Air Control system
- Set temperature control
- Control panel functions

Explain the safety features

- GFCI
- Heater high limit
- Heater thermal cut-off

General hot tub operation & maintenance orientation

Water quality and maintenance orientation

Adjust the water's Total Alkalinity, Calcium Hardness and pH

Sanitize the water

Inspect the hot tub cover, place on hot tub

Review winterizing instructions

Review Owner's Manual & Warranty Card

Follow-up call

In-store hot tub water analysis

TOTAL COST

ADDITIONAL PRODUCTS AVAILABLE FROM YOUR LIMELIGHT™ DEALER

- EverFresh® water care system
- FreshWater® III high output ozone purification system
- Hot Spring® MPS chlorine-free oxidizer
- MPS test strips
- FreshWater® Reduce™ Waterline Control
- FreshWater Refresh™ Oxidizer
- FreshWater Revitalize™ Sanitizer
- FreshWater Cleanser
- FreshWater Multi-Purpose
- FreshWater Filter Cleaner
- FreshWater Biguanide Test Strip
- FreshWater Stain and Scale Defense
- FreshWater Spa Shine
- FreshWater Instant Filter Cleaner
- FreshWater Filter Cleaner
- FreshWater Ph-Alkalinity Down
- FreshWater Ph-Alkalinity Up
- FreshWater Defoamer
- FreshWater Concentrated Chlorinating Granules
- FreshWater Calcium Hardness Increaser
- FreshWater 4-way test strips
- Hot Spring Cover Shield
- Retractable cover system with clearance requirements:
 - Cover Cradle® - 24" Clearance required
 - Cover Cradle II - 24" Clearance required
 - UpRite® - 7" Clearance required
 - Lift 'n Glide® - 14" Clearance required
- Vinyl covers
- Hot tub vacuums
- Hot tub steps
- Replacement filter cartridges
- Pillows

NOTES

NOTES

NOTES

Watkins

The Home Relaxation Specialists

WATKINS MANUFACTURING CORPORATION

1280 Park Center Drive

Vista, California 92081

(800) 999-4688 extension 8432

©2008 Watkins Manufacturing Corporation. Limelight, Hot Spring, Pulse, Flair, Glow, IQ 2020, CoverCradle, UpRite, Lift 'nGlide, Cover Shield, EverFresh, FreshWater, Reduce, Refresh, Revitalize and The Home Relaxation Specialists are trademarks of Watkins Manufacturing Corporation.

Part #62668 Rev. C (5/08)