

## **WELCOME TO WARM WATER!**

We appreciate your business and look forward to providing you with years of relaxation and enjoyment. To ensure a seamless delivery of your new hot tub, please use these documents in preparation for the delivery of your new hot tub. Provided below are additional specifications for proper electrical setup.

### **Electric Installation**

There are many ways that a hot tub can be wired **depending** on the exact model and/or brand that you purchase. This means that pre-existing wiring and electrical setups are not sufficient **unless** it is the exact same setup and model, **assuming**: 1) the manufacturer has not made any changes to the tub, and 2) the existing wiring is still in excellent condition. **Electrical disconnect breakers must always be replaced when installing a new tub.** You will find the electrical schematics for your new hot tub further in this booklet. Wiring schematics should be given to your electrician to ensure proper wiring of your hot tub.

**220V hardwired hot tubs** need a “whip” (a flexible or hard **¾” conduit** containing wires as specified on your tub wiring schematic) from your subpanel to the electrical cutout on the hot tub. **You or your electrician MUST add additional length in wiring from the opening, or where the electrical cutout is shown as an entry point on the hot tub, PLUS the width and height to the equipment compartment for the final connection to be made.** EX. Grandee with back corner entry requires approximately 15’ of wiring to electrical board. There is an electrical board inside the equipment compartment where the wires are meant to be connected and installed to run the hot tub (**wires don’t just go into the electrical opening**). This ensures that your electrician will have enough slack to connect the wires inside the hot tub. Too long is better than too short (the excess can be wound up in the equipment compartment). If the wires are too short your electrician will have to run an entire new set of wires for the hot tub to run properly and we will not be able to start your hot tub on delivery. Please have your electrician reach out to your local store or salesperson for any clarity needed.

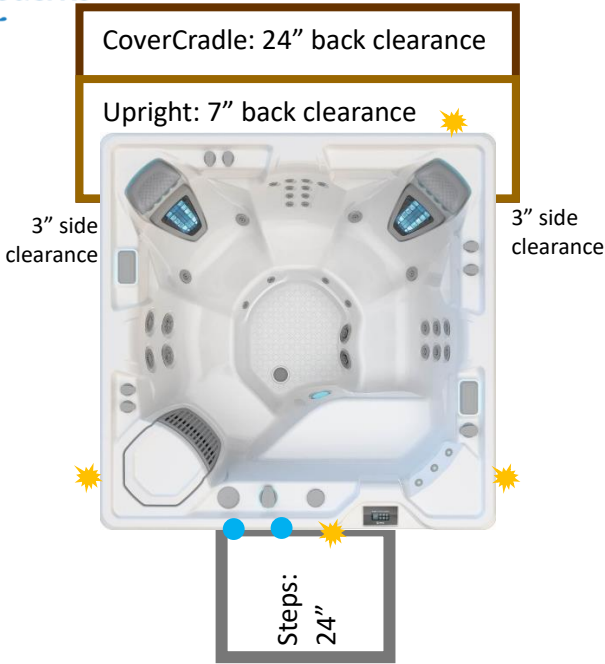


**WHIP**

**PLEASE NOTE (common error): The neutral wire in the subpanel needs to be attached to the breaker, NOT onto the grounding bar. The hot tub may not start, or the breakers may trip if the neutral wire is not connected properly.**

**PER WATKINS MANUFACTURING** – To ensure you will have an opportunity to use your spa soon after delivery, it is very important that the required electrical service has been installed. Unless otherwise stipulated by Allen Pools and Spas, **THIS IS YOUR RESPONSIBILITY.**

**IMPORTANT:** All electrical circuits must be installed by a qualified, licensed electrician. **You can NOT run a hot tub on an extension cord.**



Highlife Vanguard 230 Volt



<b>Seating Capacity</b>	3-6 People
<b>Dimensions</b>	7'3" x 7'3" x 36" / 2.21 m x 2.21 m x 0.91 m
<b>Water Capacity</b>	375 Gallons / 1,425 Litres
<b>Weight</b>	710 lbs/320 kg dry; 4,890 lbs/2,225 kg filled

Shell: Alpine White  
 Cabinet: Blackwood  
 Drain ●  
 Electrical Access ☀

**42 Jets (all with stainless steel trim)**

- 2 Moto-Massage® DX Jets
- 2 SoothingStream® Jets
- 2 JetStream® Jets
- 2 Rotary Hydromassage® Jets
- 10 HydroStream® Jets
- 22 Directional Precision® Jets

<b>Cover</b>	3.5" to 2.5" tapered, 1.5 lb. density foam core, with hinge seal
<b>Cover Lifter</b>	CoverCradle®, CoverCradle II®, Lift'n Glide®, or Uprite® (F/B)
<b>Steps</b>	Highlife – Java, Blackwood, Linen, or Charcoal Polymer – Brown, Black, or Gray
<b>Lighting</b>	Luminescence® multi-color four-zone

**Water Care System** Freshwater® Salt System Included  
 Freshwater® IQ System Ready

**Effective Filtration Area** 3255 sq. ft., top loading (5x Tri-X® filters)  
 100% No-Bypass Filtration

**Energy Efficiency** FiberCor® Insulation; Certified to California Energy Commission (CEC) and APSP 14 energy efficiency standards for portable spas

**Jet Pump 1** Wavemaster® 9000; Two-speed:  
 2.5 HP Continuous Duty  
 5.2 HP Breakdown Torque

**Jet Pump 2** Wavemaster® 9200; Two-speed:  
 2.5 HP Continuous Duty  
 5.2 HP Breakdown Torque

**Circulation Pump** SilentFlo 5000®

**Heater** No-Fault® 6,000 W / 230 V

**Control System** IQ 2020® 230 V / 50 amp, 60 Hz (includes G.F.C.I. protected sub-panel)

**CABINET COLORS**

<b>Java</b>	<b>Charcoal</b>	<b>Blackwood</b>	<b>Linen</b>	<b>Brushed Nickel</b>
Alpine White Ice Gray Ivory Tuscan Sun Pebble	Alpine White Ice Gray Tuscan Sun Pebble Platinum	Alpine White Ice Gray Platinum	Alpine White Ivory Tuscan Sun Pebble	Alpine White Ice Gray Platinum

**SHELL COLORS**

Alpine White	Ice Gray	Ivory	Platinum	Tuscan Sun	Pebble

**COVER COLORS**

VINYL		POLYESTER	



## **SITE SELECTION AND PREPARATION**

**IMPORTANT:** Site selection and preparation are your responsibility. Carefully read these instructions and consult Allen Pools and Spas if you have any questions.

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

- Always put your spa on a structurally sound, level surface WITHOUT pitching or shimming.** A filled spa can weigh a great deal. Make certain the location you choose can support the weight of your filled spa.
- Locate your spa away from any reflective surface or glass. The heat generated by some types of double-pane windows and reflective surfaces can cause serious damage to the exterior of the spa, including the siding and cover.
- Locate your equipment compartment, which houses all the electronic components, in a place where the 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 spa's subpanel is rain tight when installed correctly with the door closed.
- Leave access to the equipment compartment for periodic spa care and maintenance.

## **OUTDOOR AND PATIO INSTALLATION**

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

If you install the spa outdoors, a reinforced concrete pad at least 4" thick is recommended. The reinforcing rod or mesh in the pad should be attached to a bond wire (see your Owner's Manual). All Hot Springs spas may be installed onto a deck, provided that the load capacity of the deck is greater than the dead weight of the spa (see Deck Installation).

## **DECK INSTALLATION**

To be certain your deck can support your spa, you must know the deck's maximum load capacity. Consult a qualified building contractor or structural engineer before you place the spa on an elevated deck or indoors. To find the weight of your spa, its contents, and occupants, refer to the Spa 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 spa indoors. Water will accumulate around the spa, so flooring material must provide a good grip when wet. Proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa, it is recommended that a floor drain be installed. The humidity will naturally increase with the spa installed. Water may get into woodwork and produce dry rot, 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 spa area. An architect can help determine if more ventilation must be installed.

Allen Pools and Spas can assist you with finding sources for local information such as zoning regulations and building codes.

## DELIVERY ACCESS

First, note the dimensions of your spa below. The dimensions are the measurements of the spa in the vertical position, laid on its side as shown in the drawing below.

Next, contact your dealer to find the height and width added by the delivery cart which the dealer will use to deliver your new spa. Use the height of the cart plus the dimension shown as 'H' to determine the vertical clearance required to pass the spa and cart. Use the width of the cart, or dimension 'W', whichever is greater, to determine the maximum width of clearance necessary. Use the length dimension 'L' when making any sharp turns to determine the minimum clearance required.

**NOTE:** It may be necessary to allow for additional over-head clearance if the spa (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 you desired location.

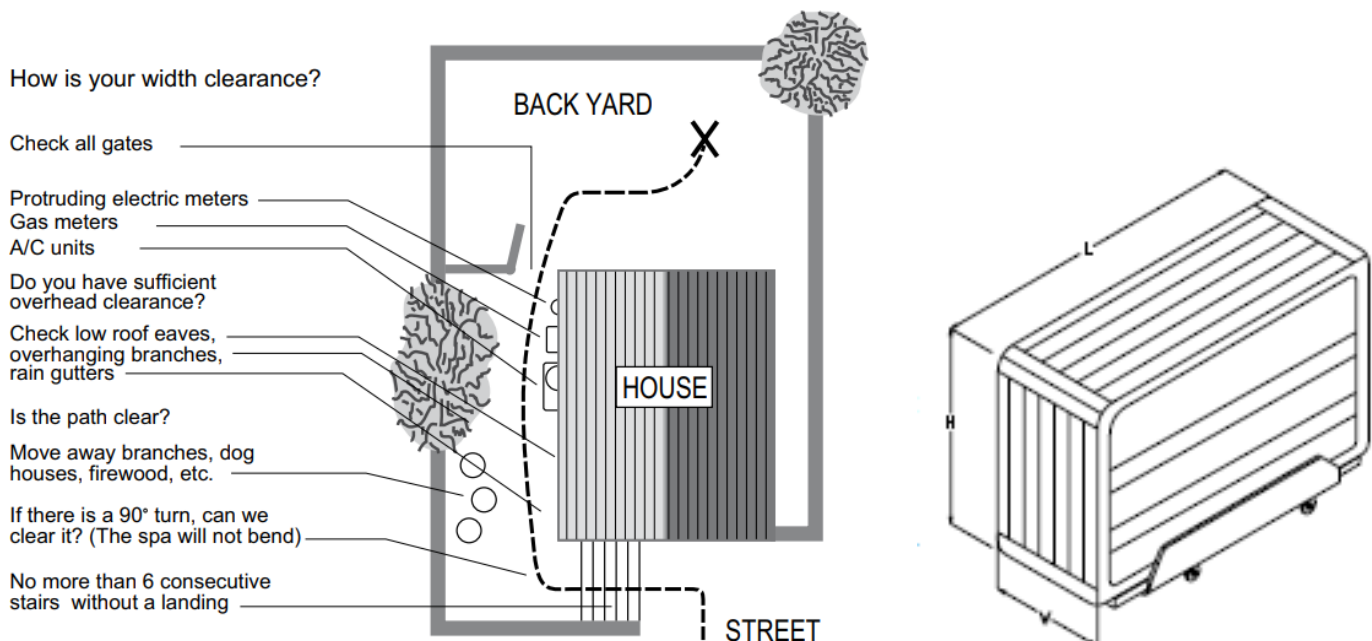
It may be necessary to remove a gate, part of a fence, or other moveable obstructions to roll the spa to its installation site. About 10% of the time, a crane is the only way to install the spa by lifting it to its final destination.

If the spa must be taken off 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!

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 spa over walls, buildings, or any other obstructions and place it as close to the installation site as possible. The Hot Spring spa delivery personnel will supervise the crane delivery and complete spa installation.

**NOTE:** if your spa delivery requires the use of a crane, you may be required to pay for the services at the completion of the delivery.

MODEL	WIDTH (W)	LENGTH (L)	HEIGHT (H)
VANGUARD (ARN)	36"/91 cm	87"/221 cm	87"/221 cm



## GROUND PREPARATION

Your Hot Spring spa 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:** Have a reinforced concrete pad at least 4 inches (10 cm) thick or a deck that can withstand the pounds per square foot listed in the Spa Specification section.

## INSTALLATION NOTES:

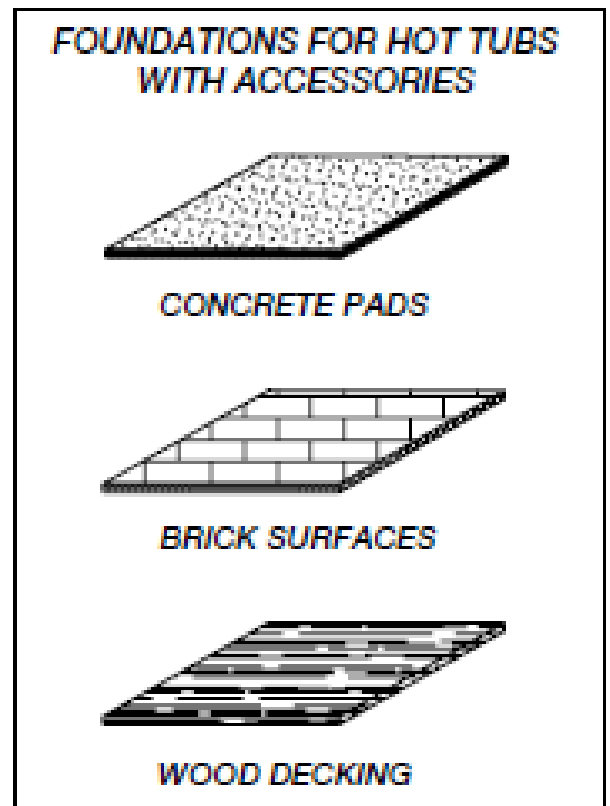
- If brick or wood decking is selected for the spa foundation, it should be placed and leveled below the entire spa to maintain even distribution of the spa weight.
- It is important to note that if bricks are used to distribute the weight of the spa there may still be a tendency to settle unevenly, resulting in an unlevel spa.
- Remember, placing the spa around grass or dirt may increase the amount of debris which is inadvertently brought into the spa on the user's feet.

If you are installing a deck or a gazebo for your spa, 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 spa. Keep in mind that most delivery crews are not equipped to level and prepare spa sites.**

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

**NOTE: For the spa to operate properly and the internal plumbing to drain completely, you must ensure that the spa surface is level before installation. Shimming or point leveling is NOT supported or recommended by the manufacturer.**



## VANGUARD SPECIFICATIONS

FOOTPRINT	HEIGHT	HEATER	WATER CAPACITY	DRY WEIGHT	FILLED WEIGHT*	DEAD WEIGHT*	ELECTRICAL REQUIREMENTS
7'3" X 7'3" 221 cm X 221 cm	36" 91 cm	4000 Watts	375 gallons 1,425 litres	710 lbs 320 kg	4,890 lbs 2,225 kg	130 lbs/ft <sup>2</sup> 630 kg.m <sup>2</sup>	230 volt, 50 amp

\*NOTE: "Filled Weight" and "Dead Weight" include the weight of 6 adults at 175 lbs (80 kg) each



## **CRUSHED STONE PREP GUIDE:**

Crushed stone pads can be created by making a hole in the earth for stone-fill and framing, or by creating a raised structure on top of earth to fill and frame. **No matter which you choose, these guidelines need to be followed:**

- Size: Make sure the pad is large enough to accommodate your new tub and any accessories that will go with it, such as steps.
- Framing: Crushed stone pads **MUST** be framed whether your stone will be placed into a hole dug into the ground or placed in a raised structure above the ground. We strongly suggest using 6x6's or 4x4's to frame your gravel pad.
- Depth: **Your stone should be at least 4-6" deep (6" is the best choice);** whether it is being placed into an above ground structure or in-ground pad.
- Choosing Stone: Crushed stone should be no larger than 3/4". You may also choose to put sand in the first 2" and finish it off with crushed stone. **Never use river gravel or any stone over 3/4".**
- Leveling: **It is EXTREMELY important that your pad is 100% level.** Hot tubs must be placed on a level surface. This is also why framing is so important. Framing will keep your stone from doing things to make the tub become off-balance, such as shaking loose when the tub is on it or washing out during heavy rainfall.

### **NOTE:**

**!! GRANDEE, ENVOY, PULSE, AND PRISM CANNOT BE USED ON A CRUSHED STONE SITE !!**

**!! FREEFLOW LOW MOUNT LIFTER CANNOT BE USED ON CRUSHED STONE SITE !!**

Example of a preferred stone pad:

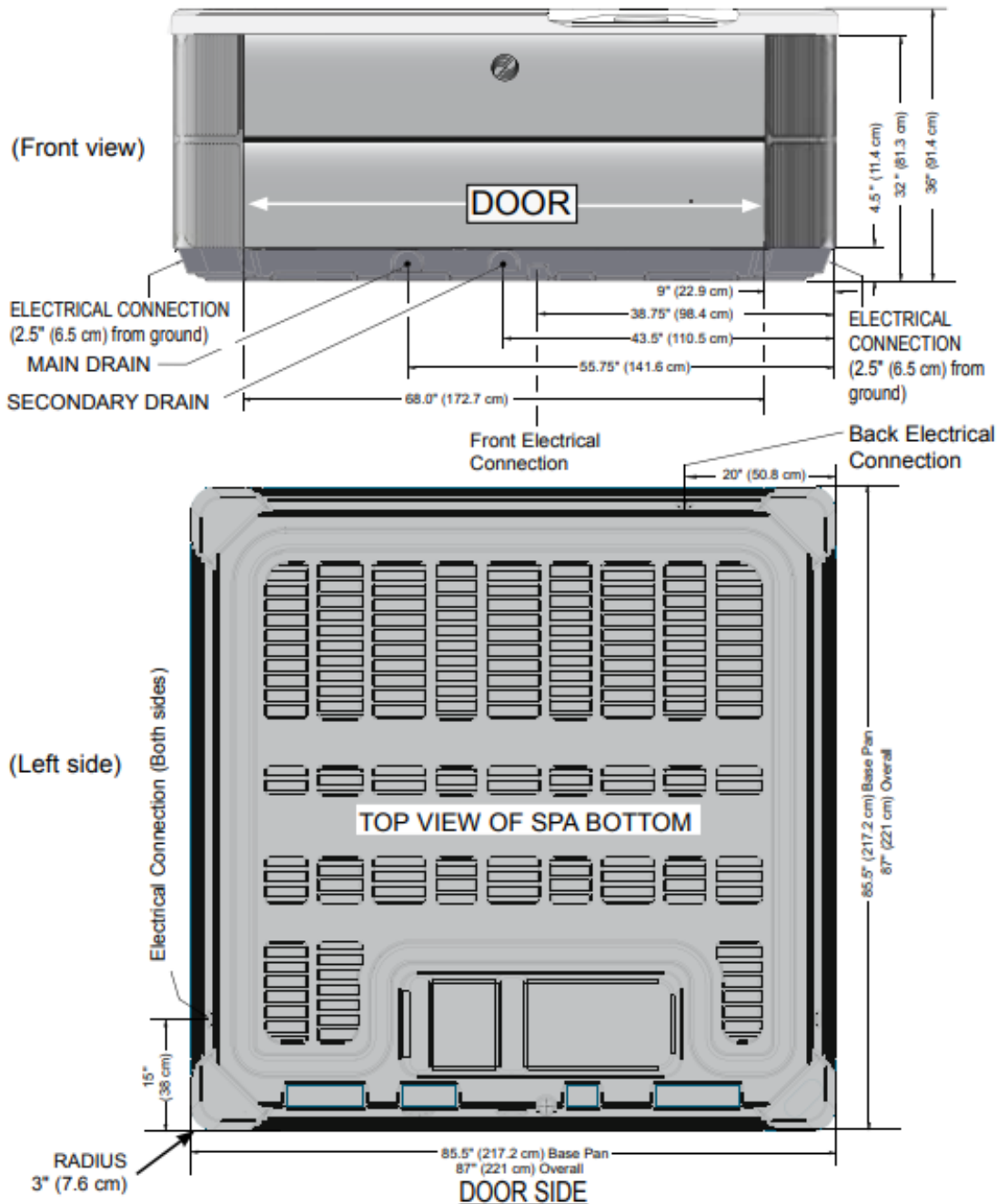


# VANGUARD (VVN) & ARIA (ARN)

## Dimensions

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

**Configuration and location may change without notice.**



**NOTE: Watkins Wellness** recommends that the **VANGUARD** be installed on a minimum 4" (10 cm) thick reinforced concrete pad or structurally sound deck that is able to support the "dead weight" found in the spa specification chart.

**WARNING: The VANGUARD must not be shimmed in any manner.**

**\*Do not block Air Vents**



## **ELECTRICAL REQUIREMENTS**

To ensure you will have an opportunity to use your spa soon after delivery, it is very important that the required 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**

230 volt models require a 50 or 70 amp, single phase, 230 volt circuit breaker in the main electrical service panel. All 230 volt Hot Spring spas must be wired in accordance with applicable local and national electrical codes, all electrical work must be done by a licensed electrician.

**NOTE: WATKINS WELLNESS REQUIRES THE USE OF A SUBPANEL TO SUPPLY POWER AND PROTECT THE SPA.** On the **VANGUARD 230 V** model, the 50 amp subpanel containing the GFCI breakers is included with the spa.

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 subpanel, and from the sub-panel to the spa per the appropriate wiring diagram as illustrated below.

The grounding conductor must be at least #10AWG. Your electrician should mount the subpanel in the vicinity of the spa but it should not be closer than 5 feet (1.5 m) to the spa water edge (NEC 680-38 to 41-A-3).

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

**NOTE:** Complete step-by-step Installation and Wiring Instructions for all 230 volt Hot Spring models are included in the Owner's Manual and with each subpanel, which can be obtained from your dealer.

**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.



## 230 VOLT VANGUARD (MODEL VVN)

