SITE EVALUATION/ GUIDE PRE-DELIVERY





How to make delivery and installation of your new hot tub fast, easy and trouble-free.

Important Pre-Delivery Information

Please read this booklet before your scheduled delivery day.

Record your spa information below and then store this booklet in a place you can easily find it. If service is required, a service agent will ask for these details.

Spa Model		
Spa Serial Number		
Date Purcl	hased	
Date Insta	lled	
Contact T Website: Phone: Email:	hermospas: www.thern 800.876.0 support@t	nospas.com 158 hermospas.com
	To Keep Warra to ensure install becomes void if	Inty Valid: Consult your local state or city building ordinances ation is in accordance with local codes. The spa's warranty these guidelines are not followed.
NOTE:	Most cities and circuits. In addit barriers such as unsupervised ad American Socie local state or cit local codes and	counties require permits for exterior construction and electrical ion, some communities have codes requiring residential fencing and/or self-closing gates on the property to prevent ccess to a spa by children. Although our covers meet the ty of Testing and Materials (ASTM) certification, consult your y building ordinances to ensure installation is in accordance with meets safety requirements.
NOTE:	The specificatio of this book are design or delive	ns published in the Spa Dimensions and Specifications section approximate. Always measure your spa before making critical ry decisions.

Congratulations!

You've purchased a Thermospas® spa. With a little preparation and care, your spa will give you many years of enjoyment. This booklet has been designed to provide you with all of the information you'll need to ensure a safe, speedy, and trouble-free spa delivery and installation.

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Curbside Delivery Instructions* (Ensemble Series Only)

Your spa delivery will arrive CURBSIDE at the specified delivery address you provided at the time of your purchase. You will need to make prior arrangements for assistance in moving your spa into your desired spa location.

If your spa location will be more than 10 feet from an existing electrical outlet that is ready and dedicated for spa use, you may also need to hire a professional electrician to establish those electrical connections. Most cities and counties require permits for exterior construction and electrical circuits. Be aware of your local codes and laws.

Please read instructions carefully to experience a smooth spa delivery.

All listed requirements must be met prior to delivery of your spa.

- Your street must be clear from all debris and must be able to accommodate a truck
- (up to 65' long). If this is an issue, please contact us at least 48 hours before delivery.
- Delivery will be made CURBSIDE at the end of your driveway. NO EXCEPTIONS.
- Extraordinary curbside delivery requirements may prevent delivery or may require extra fees, payable by buyer to the retailer's carrier. Any extraordinary delivery requirements need to be pre-arranged prior to delivery.
- Delivery will be Monday Friday, 8 a.m. 5 p.m. and cannot be delivered without a
- signature.
- All required city/subdivision permits are the responsibility of the spa owner.
- Spa unpackaging is the responsibility of the BUYER. Spa must be inspected before delivery agent departs.
- If damage is noticed, note the damage on the freight bill and call 1-888-329-4847.

NOTE: Spa delivery will be attempted based on the information you provide. If delivery is not possible on the first attempt due to poor accessibility or missed appointments, your spa order may be canceled.

RETURNS: All product returns must be sent back in original manufacturer's packaging and crating materials including the original invoice, placed on a pallet and put curbside for pickup. Electrical disconnect charges are the responsibility of the buyer. Refunds are not processed until hot tub is successfully picked up by carrier. If original schedule pickup is not possible due to buyer's failure to meet outlined return requirements, additional fees may be assessed to the buyer.

*Applies to Charleston 100 & Memphis 100 models - Need Assistance? Call 1-888-329-4847

Now that you have purchased your hot tub, you need to decide where to install it. Do you want to install it outside or inside? There are many factors to take into consideration when making these location decisions. Answering the questions in this section can help you make the right choices.

Suggestions for Outdoor Spa Installation When deciding where to place your spa, it should be:



- Because of the risk of severe injury from electric shock or death from electrocution. Moved away from overhead power lines. A minimum of 10 feet (3 meters) is suggested. See additional safety instructions listed in the owners manual.
- Placed to face a view you enjoy. Do you have a special landscaped area in your yard that you find pleasant? Take into consideration the position of the cover and lifter (if equipped). This might obstruct a view when inside the spa, Figure 1. You will need to consider which is the best seat for you in order to determine where to mount the cover and lifter.
- Located in an area that gives you the best privacy options, Figure 2. Think of the spa's surroundings during all seasons when making your choice. During cold, winter weather, bare trees won't provide much privacy.
- Locate your spa in a sheltered location to protect yourself from the wind and harsh weather while bathing in your spa. This reduces the cost of spa operation and maintenance.
- Consider locating your spa away from any reflective surface or glass. The heat deflected from such a surface may cause damage to the synthetic cabinet panels.
- We recommend an 18" minimum clearance around all sides of the spa. Providing service access is the responsibility of the owner.



Spa with ThermoView lifter 0-10% of the cover is exposed



Spa with ThermoMount lifter 35% of the cover is exposed



Spa with ThermoScreen lifter 50% of the cover is exposed



Figure 1 Cover lifter may obstruct a view while inside the spa

Planning the Best Location for Your Spa, Continued

What kind of foundation is available?

• Because of the combined weight of the spa, water, and bathers, it is extremely important that the base upon which the spa rests can uniformly support this weight without shifting or settling for the entire time the spa is in place. The base should be smooth, flat, and level.

Which is best?

• We suggest the following pads:



Good

Spas placed on slate, bricks or pavers, must be checked regularly to ensure that the spa remains level. Periodic adjustments are usually necessary, which would require that the spa be drained and removed from the surface. The surface must be leveled before the spa can be put back. Failure to maintain a level surface will cause your shell and/or cabinet to warp, voiding your warranty.



Better

Wood decking with a concrete foundation.

Recommended Concrete pad [4 in. (10 cm) or thicker]. We recommend a poured, reinforced concrete slab with a minimum thickness of 4 in. (10 cm). It is also recommended that the foundation is raised 1-2" for the surrounding elevation to allow for proper drainage.

- **CAUTION:** When you install the foundation, be sure that water drains away from it. Placing the spa in a depression without provisions for proper drainage could cause rain or any water overflow to flood the equipment and create a wet condition in which the spa would sit.
- CAUTION: For spas that are to rest on balconies, roofs or other platforms not specifically tied into the main structural support, you should consult a professional Structural Engineer with experience in this type of application.
- **CAUTION:** If the spa is placed on a surface which does not meet these requirements, damage to the cabinet and/or the spa shell may result. Damage caused by an improper foundation is not covered under warranty. It is your responsibility to assure the integrity of the support at all times. Do not shim the spa. For proper support, the spa must sit flat on the intended foundation.

- Image: WARNING: Proper ventilation should be discussed with an Engineer or authority competent enough to understand the necessary provisions needed to vent moist or heated air and air associated with chemical odors outdoors. When the spa is in use considerable amounts of moisture will escape potentially causing mold and mildew, over time this can damage certain surfaces and or surroundings.
- Floor load capacity must be a minimum of 100 lbs. per square foot and must meet your local building codes. Swim spas and spas over 39" in depth require higher load capacity. Reference page 19 for information.
- Spa can not be installed on asphalt, laid in dead sand or on stone dust.
- Spa can not be placed directly on a gravel or lawn surface.
- **VARNING:** Do not rest your spa directly on top of a power line. Electrical shock or power failure may result. The power line to the spa should be routed to come up through the bottom of the spa cabinet or through the side wall by drilling a hole.
- Delivery crew is not equipped to level and/or repair spa sites.

Planning the Best Location for Your Spa, Continued

How will I use the spa? Consider how you intend to use your spa.

If using the spa for	Then		
Family recreation	Leave plenty of room around the spa for activities and yard furniture.		
Relaxation and therapy	Create a quiet and relaxing environment around the spa.		

Does the climate I live When deciding the best place to install the spa. consider

in make any difference	If your climate is	Then consider installing			
spa?	Cold and snowy in winter and warm in summer	The spa close to the back door or near the pool house for fast access to a warm room			
	Warm in winter and hot in summer	A patio cover or perhaps a gazebo to provide shade			
What about spa servicing?	At some time, a service technician may need to access the spa's equipment bay or plumbing components by removing one or all of the side cabinet panels. We recommend an 18" minimum clearance around all sides of the spa to avoid additional service charges. Providing service access is the responsibility of the owner.				
What other issues should I consider?	 When selecting the ideal suggestions: Keep the pathway to leaves from being training traves and be keeping trees and show the selection of th	he ideal outdoor location for your spa, consider these thway to your spa free of debris to prevent dirt and being tracked into the spa. res and bits of plants from dropping in the spa by s and shrubbery away from the spa. Insideration the position of the cover and lifter (if This might obstruct a view when inside the spa.			

Suggestions for Indoor Spa Installation

If you are installing your spa indoors, take into consideration your answers to the questions below.

When installing a spa indoors, it is extremely important to build into your What are the issues I need to plan a method of handling any excess water. Consider: think about when How should water spills be handled? installing a spa How many drains should be installed? indoors? What is the best flooring to install near the spa? • If a leak occurs, can the floor handle the entire contents of the spa? • Will the furniture and walls around my spa withstand and resist water and moisture? • What provisions should I make for the ceiling and structures that may be below the spa. Spas installed indoors must be placed on a non-porous surface with a drain. • Do not put the spa on a carpet or hardwood floors due to possible splash out from the tub. Water will accumulate around the spa, so flooring materials must provide a good grip when wet. Water damage to the homeowner's property from splashing or leaks are at the homeowner's risk. This is not covered under any ThermoSpas warrantv. Adequate ventilation must be provided in order to allow for chemical fumes to escape. Take into consideration that these fumes could enter other indoor areas. What do I need to know about If the spa is being installed on a second story or higher, consult a installing a spa on structural engineer to discuss the best way to support the spa. Special the second floor. attention is needed to plan for a spa installed on a balcony or roof. What about spa Most spa servicing is performed on the spa equipment that is located servicing? behind the side cabinet panels of the spa. It is important to install the spa to allow easy access to the spa equipment. We recommend an 18" minimum clearance around all sides of the spa to avoid additional service charges. Providing service access is the responsibility of the owner.

Suggestions for Indoor Spa Installation, continued

How can IWhen the spa is in use, considerable amounts of moisture/water are
present. Over time, this moisture may cause mold and mildew and
damage to certain surfaces and/or surroundings. Proper ventilation
should be discussed with an engineer who understands the
necessity of venting moist and heated air that is associated with
chemical emissions.

All spas installed indoors must have an adequate method of ventilation. Humidity will naturally increase with the spa installed. Water may get into woodwork and produce dry rot, mildew or other problems. Good ventilation is also required to prevent airborne bacteria.

Adequate ventilation must be provided in order to allow for chemical fumes to escape. Take into consideration that these fumes could enter other indoor areas.

What cover considerations are important? When the spa is installed indoors, adequate room must be provided to allow the cover and lifter to operate and function properly. Depending of the lifter used, up to 50% of the cover is exposed. There should be sufficient room accounted for the spa height plus cover lifter measurement, Figure 3.

What warranty considerations are important?

Consult your local state or city building ordinances to ensure installation is in accordance with local codes. Any damage caused if you do not follow these guidelines voids the spa's warranty.



Use the information below, in Figure 4, and in the Spa Dimensions and Specifications chart to plan the delivery of your spa into your yard. The Spa Dimensions and Specifications chart list your spa model and its dimensions.

Check your spa's dimensions	Check the width of gates, doors, and sidewalks to make sure your spa will pass through unobstructed.			
	During delivery, the spa must remain on the delivery cart at all times. You may have to remove a gate or part of a fence to allow an unobstructed passageway to the installation location. Note: To prevent damage to the panels and acrylic, if possible, leave the packaging on until the spa is in place.			
Plan the delivery route	 After referring to Figure 4, plan your spa's delivery route into your yard. Check off each item on the checklist below to verify your plans. If the delivery route requires a 90° turn, check the measurements at the turn to ensure the spa will fit. Are there protruding gas or water meters, or A/C units obstructing the delivery path to your yard? You must make sure that the spa has a clear unobstructed route and will not strike any objects on the path, therefore creating a detectable or non-detectable leak or damage. Are there low roof eaves, overhanging branches, or rain gutters that could be an obstruction to overhead clearance? Are there more than 6 consecutive stairs without a landing in your delivery route? 			
Use a crane	The use of a crane for delivery and installation is sometimes necessary. It is used primarily to avoid damage to your spa, your property, or to delivery personnel. If your spa delivery requires the use of a crane, the cost of a crane is not included in standard delivery service.			

Planning to Move the Spa Into Your Yard, Continued



***CAUTION:** You must make sure that the spa has a clear unobstructed route and will not strike any objects on the path, therefore creating a detectable or non-detectable leak or damage.

General Electrical System Considerations



Before the installation of your spa begins, check with the local building department to ensure this installation conforms to local building codes. In most cities and counties, permits are required for the installation of electrical circuits or the construction of exterior surfaces.

Important



When installed in the United States, the electrical wiring of this spa must meet the requirements of the National Electric Code (NEC) and any applicable state or local codes. The electrical circuit must be installed by an electrical contractor AND approved by a local building/electrical inspector.



DANGER: TO DECREASE THE RISK OF SHOCK, PRODUCT DAMAGE OR ELECTRICAL FIRE. <u>Never use an extension cord of any</u> <u>kind.</u> Using an extension cord can damage the spa equipment and void your warranty.

When a power cord over 10 ft. is required, the spas must be hard wired in accordance with state and local codes.

Before the scheduled arrival of your spa, it is necessary to set up the electrical components.

Use the checklist on the following page to prepare for the spa's installation.

A Ground Fault Circuit Interrupter (GFCI) MUST be installed by a licensed electrician, Figure A.



Figure A

Note: Delivery personnel are not licensed electricians and cannot connect your spa.

Electrical Tasks Before Spa Delivery, Continued

To Keep Warranty Valid : The manufacturer's warranty becomes void if the spa's electrical connections do not meet the specifications as stated in this document.

- Verify the power supplied to the spa is on a dedicated circuit with no other appliances or lights sharing the power.
- Verify the electrician has completed the tasks listed below before the spa is delivered. If necessary, find the information requested by looking in the Power Configuration tables.

Task Complete?	Tasks for the	electrician	
	Select the wire size based on NEC and/or local codes.		
\diamond	Note	If you use wire larger than #6 (10 mm ²), add a disconnect box near the spa, and reduce the wire to short lengths of #6 (10 mm ²) wire between the junction box and the spa.	
\diamond	Determine the length of wire that is needed between the breaker box and the spa based on the wire size and the maximum current draw. To determine this information consult your Electrician.		
\diamond	Acquire enough copper wire with THHN insulation to ensure adequate connections. Do not use aluminum wire.		

- To comply with Section 422-20 of the National Electric Code, ANSI/NFPA 70, the electrical supply for the spa must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors. The means to disconnect the electricity must be readily accessible to the spa's occupant, but installed at least 5 ft. (1.5m) from the spa water. Check with local municipalities for additional code requirements.
- As required by NEC Article 680-42, the electrical circuit for the spa must include a suitable ground fault circuit interrupter (GFCI). The appropriate wiring configuration for your spa appears elsewhere in this document.
- This spa is not intended nor designed to be used in a commercial or public application. Use of this spa in public or commercial application will **VOID** the warranty. The spa buyer shall determine whether there are any code restrictions on the use or installation of this spa since local code requirements vary from one locality to another.



Important: When installed in the United States, the electrical wiring of this spa must meet the requirements of the National Electric Code (NEC) and any applicable state or local codes. The electrical circuit must be installed by an electrical contractor AND approved by a local building/electrical inspector.

Power Configurations for All Models (North America, 60Hz)

This section describes the power configuration choices (Standard 60 Hz) for all hot tub models.

Model	Voltage	Breaker Size	No. of Wires	Wire Gauge
Atlantis Genesis 400	240V	50A GFCI	4 Wire	6/4
Atlantis Gold	240V	50A GFCI	4 Wire	6/4
Atlantis Silver	240V	50A GFCI	4 Wire	6/4
Concord II Diamond	240V	50A GFCI	4 Wire	6/4
Concord II Gold	240V	50A GFCI	4 Wire	6/4
Concord II Silver	240V	50A GFCI	4 Wire	6/4
Concord II Bronze	240V	50A GFCI	4 Wire	6/4
Chesapeake Genesis 400	240V	50A GFCI	4 Wire	6/4
Chesapeake Gold	240V	50A GFCI	4 Wire	6/4
Chesapeake Silver	240V	50A GFCI	4 Wire	6/4
Manhattan II Diamond Wave	240V	50A GFCI	4 Wire	6/4
Manhattan II Gold	240V	50A GFCI	4 Wire	6/4
Manhattan II Silver	240V	50A GFCI	4 Wire	6/4
Park Avenue II Diamond Wave	240V	50A GFCI	4 Wire	6/4
Park Avenue II Gold	240V	50A GFCI	4 Wire	6/4
Park Avenue II Silver	240V	50A GFCI	4 Wire	6/4
Madison Avenue Diamond Wave	240V	50A GFCI	4 Wire	6/4
Madison Avenue Gold	240V	50A GFCI	4 Wire	6/4
Madison Avenue Silver	240V	50A GFCI	4 Wire	6/4
Madison Avenue Bronze	240V	50A GFCI	4 Wire	6/4
Charleston 100	120V	15A GFCI	3 Wire	14/3
Memphis 100	120V	15A GFCI	3 Wire	14/3

Electrical Tasks After Spa Delivery



Important safety information for all spa models

Proper grounding is extremely important. This spa is equipped with a Current Collector system. A pressure securing wire connector is provided on the outside of the load box to permit connection of a bonding wire between the spa and any metal within 5 ft. (1.5m) of the spa. Bonding wire must be at least #8 AWG (8.4 mm²) solid copper wire.

After the spa is placed in the specified location, **the electrician must perform the tasks listed below to complete the electrical installation**. Give this information to the electrician when he begins to install your spa.

Task	Action
1	To gain access to the spa's power terminal strip, remove the spa cabinet panel ususally it is the side of the spa under the control panel (see Figure 5 on the next page).
	After removing the spa cabinet panel, remove the control box cover screws and control box cover.
2	Select the inlet you want to use, drill a hole large enough for the wires and then feed the power cable through to the control box. To allow access you might have to trim/cut the ThermoFoil blanket under the skirt. For access from underneath the spa, please contact the Service Department for help (800.876.0158).
3	Insert the power cable through the large opening provided on the control box.
4	Connect the wires, color to color, on the terminal strips and tighten securely.
5	To complete the electrical installation, secure the control box door by reinstalling its screws, then re-install the spa cabinet panel.

For specific electrical information about the spa model being installed, look through Figures 5 through 7 in this section.

Equipment Compartment for a 4-Wire 240 VAC Connection

Figure 5:

Spa equipment compartment (Spa features subject to change without notice. Component locations vary by model.) Use to reference the location of the control box.



Installing a 4-Wire 240 VAC Connection

Figure 6:

The Control Box for 4-wire, 240 VAC connection

The location of the TB1 terminal may vary between models.

Note: Control Box might vary from the one shown.



Figure 7:

4-wire/240 VAC connection to the control box (Close up view)



Ask your electrician to view the diagram below to ensure all connections are correct.

Important: When installed in the United States, the electrical wiring of this spa must meet the requirements of the National Electric Code (NEC) and any applicable state or local codes. The electrical circuit must be installed by an electrical contractor AND approved by a local building/ electrical inspector.

240 VAC Connection Configuration

A pressure sensitive terminal block (bonding lug) is attached to the outside surface of the load box. This permits the connection of a bonding wire between this point and any metal equipment chassis, metal water pipe, or metal conduit within 5 ft (1.5m) of the spa. The bonding wire must be at least #8 AWG (8.4 mm²) solid copper wire.



NOTES:

- 1. NEUTRAL AND GROUND MUST BE ISOLATED AT THE SUB PANEL.
- 2. On Balboa TS Series Pacs, ground wire must enter the Pac through strain relief and attach to ground bar on outside of Pac.
- 3. Positions of electrical connections may vary by breaker manufacturer.
- 4. For specific breaker and wire size refer to your Electrical Guide.

ELECTRICAL REQUIREMENTS FOR 120V 15AMP* (Ensemble Series)

- For 120V models, plug into a 15 amp outlet, and you are ready to enjoy. The electrical cord is 12' long so it needs to be close enough to plug directly into a three-prong grounded outlet. Do not use an extension cord. If you have decided to convert your heater to 4kW 240 volts, an electrical installation must be completed by a qualified certified licensed electrician in compliance with all codes.
- Locate your spa so that the GFCI plug and cord will reach a 120V outlet, but not closer than 5 feet (1.5 meters). To avoid nuisance circuit breaker tripping, it is best to use an outlet on a circuit which does not supply power to any other major running appliance. This can be checked by turning off the circuit breaker that supplies the intended outlet and verifying that no other electrical devices no longer work, such as a refrigerator, dishwasher, washing machine, coffee maker, hair dryer, etc.
- **Do not use an extension cord.** See owners manual for directions on extending cord.
- Do not connect to the outlet until the spa is filled with water.
- Pull out GFCI cord before using.

*Applies only to Charleston 100 and Memphis 100 models

Useful Details About the Spa

The tables below provide the spa dimensions and specifications that may be helpful when installing your spa. These specifications are approximate.

The filled weight specifications vary depending on the height of the spa's water. The filled weight is the weight of the spa (empty), plus the weight of the water at its maximum potential capacity (filled to the point of overflowing). The filled weight specifications do not include the weight of potential hot tub users who might be inside the hot tub. To ensure proper operation, the spa's water should always be above all the jets, and approximately one inch below all the pillows.

NOTE Always measure your spa before making critical design or delivery pathway decisions. These specifications are subject to change without notice and are for reference only. Pad Size is a minimum of 4" in thickness.

Model	Length	Width	Height	Approximate Shipping Weight	Average Filled Weight	Min. Pad Size
Atlantis	79.25 in.	79.25 in.	35.25 in.	750 lb.	2,618 lb.	4 in.
	(201.3 cm)	(201.3 cm)	(89.5 cm)	(340.2 kg)	(1,187.5 kg)	(102 mm)
Atlantis 400	76 in.	76 in.	35 in.	750 lb.	2,618 lb.	4 in.
	(193.0 cm)	(193.0 cm)	(88.9 cm)	(340.2 kg)	(1,187.5 kg)	(102 mm)
Concord II	83 in.	83 in.	38.95 in.	928 lb.	4,148 lb.	4 in.
	(210.8 cm)	(210.8 cm)	(98.9 cm)	(421 kg)	(1,882 kg)	(102 mm)
Chesapeake	79 in.	87 in.	38 in.	850 lb.	3,174 lb.	4 in.
	(200.7 cm)	(221.0 cm)	(88.9 cm)	(385.6 kg)	(1,429.1 kg)	(102 mm)
Chesapeake 400	76 in.	84 in.	38 in.	850 lb.	3,174 lb.	4 in.
	(193.0 cm)	(213.4 cm)	(88.9 cm)	(385.6 kg)	(1,429.1 kg)	(102 mm)
Madison Avenue	84 in.	66 in.	34.5 in.	793 lb.	2,627 lb.	4 in.
	(213.4 cm)	(167.6 cm)	(87.6 cm)	(360 kg)	(1,192 kg)	(102 mm)
Manhattan II	93 in.	93 in.	38.75 in.	1,097 lb.	4,683 lb.	4 in.
	(236.2 cm)	(236.2 cm)	(98.4 cm)	(498 kg)	(2,124 kg)	(102 mm)
Park Avenue II	93 in.	83 in.	38.95 in.	1,081 lb.	4,334 lb.	4 in.
	(236.2 cm)	(210.8 cm)	(98.9 cm)	(490 kg)	(1,966 kg)	(102 mm)
Charleston	99 in.	78 in.	36 in.	442 lb.	2,986 lb.	4 in.
	(251.5 cm)	(198.1 cm)	(91.4 cm)	(200.5 kg)	(1,354.4 kg)	(102 mm)
Memphis	99 in.	78 in.	36 in.	442 lb.	3,111 lb.	4 in.
	(251.5 cm)	(198.1 cm)	(91.4 cm)	(200.5 kg)	(1,411.1 kg)	(102 mm)
Note: Measurements and weights could vary from information shown.						

Water Capacity Reference For Chemicals

* Use approximate average fill for chemical measurement

- Total Spa Volume is the approximate measurement of water it takes to fill the total area inside the spa.
- Average Fill is the approximate measurement of water used to cover all jets but does not touch the bottom of the lowest headrest.

Model	*Approximate Average Fill			
Atlantis	225 US gal. (852 Liters)			
Concord II	380 US gal. (1,438 Liters)			
Chesapeake	280 US gal. (1,060 Liters)			
Madison Avenue	220 US gal. (833 Liters)			
Manhattan II	430 US gal. (1,628 Liters)			
Park Avenue II	390 US gal. (1,476 Liters)			
Charleston	305 US gal. (1,155 Liters)			
Memphis	320 US gal. (1,211 Liters)			
Note: Gallons could vary from information shown.				

Floor Load Determination

All structures must comply with local and national building requirements. The following recommended measurements represent maximum spans for decking floor joists (shown in feet and inches), assuming the following:

- Modulus > 0.9 MM psi (represents the majority of wood species
- Static Load \leq 10psf (standard for decking design)
- Moisture Load ≤ 19.0% (standard for pressure treated wood)
- Deflection = L/360 (standard for building codes)

NOTE These specifications are subject to change without notice and are for reference only.

100 pounds/sq. foot live load						
Joist	loist Spacing	Wood Grade				
Size (inches)	(inches on center)	Select Structural	No. 1	No. 2	No. 3	
	12	7-11	7-9	7-6	6-3	
2 x 6	16	7-2	7-1	6-6	5-5	
	24	6-4	6-1	5-3	4-5	
	12	10-5	10-3	9-8	8-0	
2 x 8	16	9-6	9-4	8-4	6-11	
	24	8-4	7-8	6-10	5-8	
2 x 10	12	13-4	12-10	12-6	9-5	
	16	12-1	11-1	10-10	8-2	
	24	10-4	9-1	8-10	6-8	
2 x 12	12	16-3	15-4	14-8	11-3	
	16	14-9	13-3	12-8	9-9	
	24	10-4	10-4	10-4	8-0	



www.thermospas.com 800.876.0158

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