



Installation and Operation Manual

This manual serves all Carver Tubs

Table of Contents

Tub Specifications	1
Installation Instructions: Framing and Support Framing and Support Illustrations	3
Access	4-5
Electrical Connections	6
Drain/Overflow	7
Plumbing	7
Water Supply	7
 <u>After Installation:</u>	
Cleaning the Tub	8
Whirlpool Jet System Operation	8
Purging the Jet System	9
Suction Cover/Strainer Maintenance	9
Carver Sport Bath Limited Warranty	14-15

Installation Instructions

Attention!

Read all instructions prior to installation.

All Carver Tubs are delivered ready for installation complete with motor, pump, and plumbing. Remove the tub from original packaging carefully without lifting by plumbing elements. Do not discard shipping carton until a thorough inspection of the product has been made. Inspect the tub immediately for any flaws or damage to the shell. If any damage is discovered, do not install the tub. Damage to the shell claimed after installation is not covered by the warranty. Manufacturer responsibility for shipping damage ceases once the product is delivered in good condition by the carrier. See warranty for coverage and limitations.

All Carver Tubs are tested for satisfactory operation and watertight connections prior to delivery.

Before installation, fill tub with water and operate to discover leaks that may be a result of shipping damage or mishandling.

Carver Tubs is not responsible for any defects that could have been detected, repaired or avoided by following the inspection procedure advised above.

Framing and Support

The overflow / drain (optional) of the tub extends beyond the bottom of the tub and requires a cutout on the floor.

The floor structure supporting the tub must be able to bear approximately 815 pounds, (the total weight of tub, water, and user) or 45 pounds per square inch.

It is recommended that a bed of mortar or low shrinkage plaster be used at the base of the tub at final setting to insure proper drainage and support.

Use only enough mortar/plaster to level the tub not to elevate it. Level the tub at the top edge of the rim when the bed is applied. Allow mortar / plaster to set completely before any weight is applied to the tub.

The rim of the tub is not designed to be weight-bearing. Any added weight in the form of finish material that overlaps or contacts the tub must be self-supporting.

The protective covering accompanying the tub should remain in place to protect the surface from damage during installation.

Installation - Framing and Support Illustrations

Figure 1 - Typical Installation - Flush to Wall

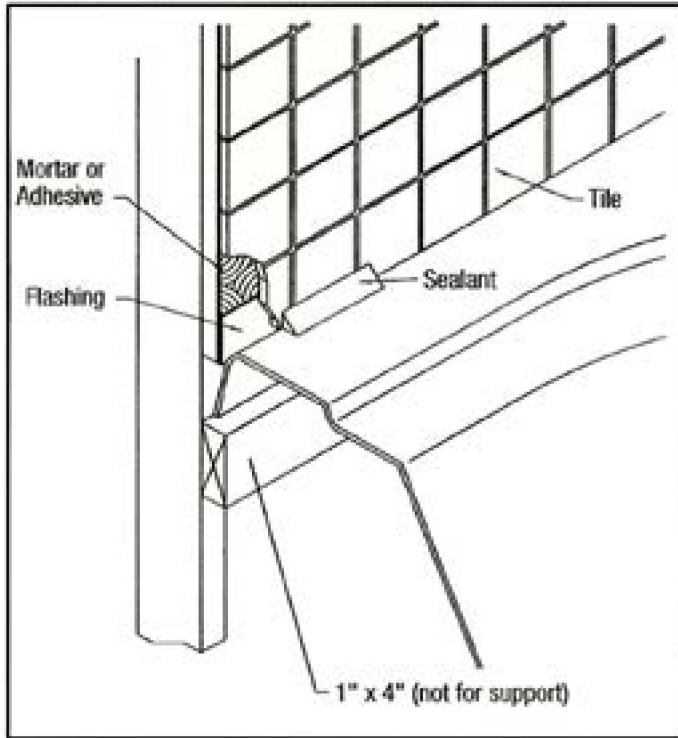


Figure 2 - Typical Installation - Semi Sunken

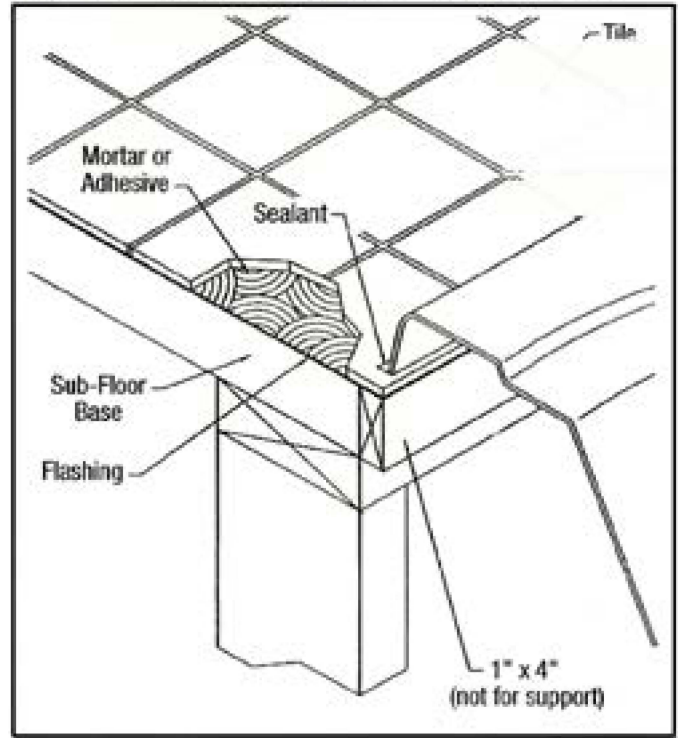
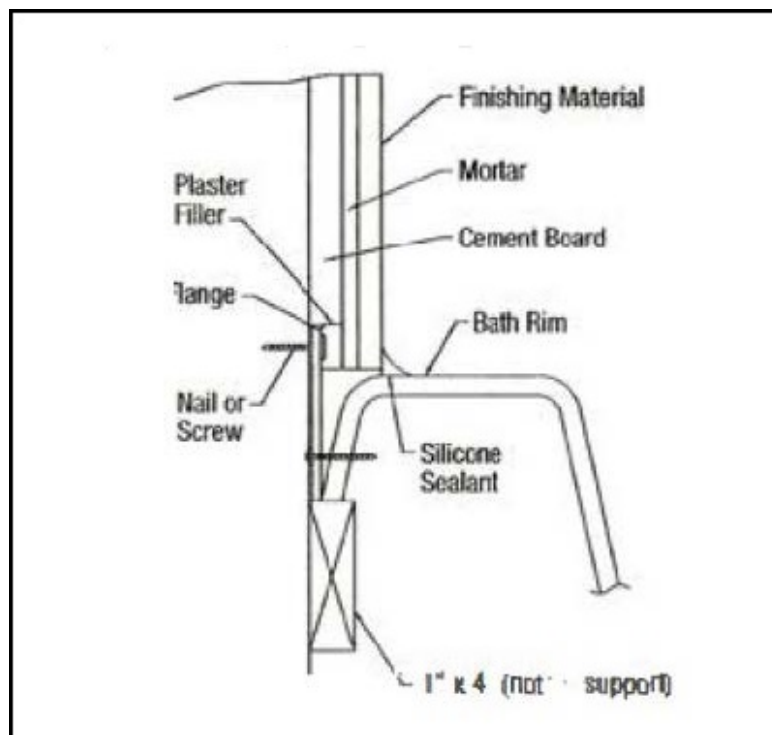


Figure 3 - Typical Installation - Optional Tile Flange Kit



Installation Instructions (continued)

Access

It is the responsibility of the installer to provide adequate access for service to the installed tub. For sunken (partial or fully) installations allocate appropriate access to service connections.

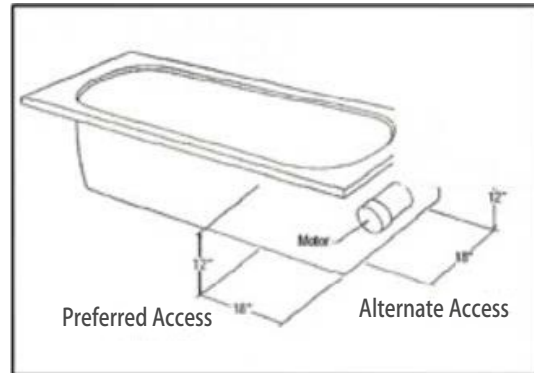
Note: Recommended minimum measurements for service areas are detailed in the "Service Access" illustration.

A minimum 30 square inch opening is recommended for proper ventilation for cooling the motor and to supply adequate air for jets.

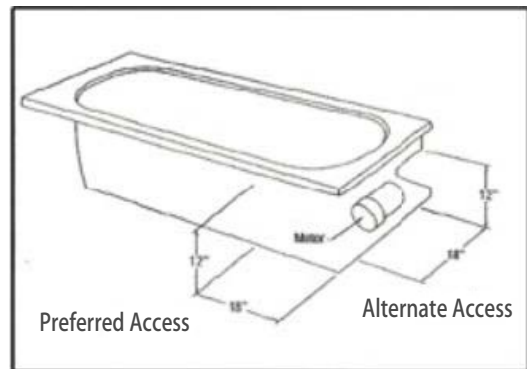
An optional skirt is available with some models to fit along the side of the tub for installations above floor level. The skirt serves as an access for servicing and requires a minimum of 8 inches for removal. The skirt is designed to accommodate tile and other floor coverings up to 1 7/8 inches above floor and will be flush with the door when flooring is installed.

Detailed instructions on skirt installation are provided with the optional assembly kit.

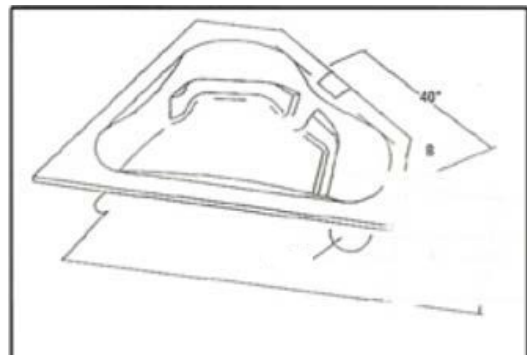
Service Access (without skirt)



Service Access (without skirt)



Service Access (60" x 60")



Installation Instructions (continued)

A separate Ground Fault Circuit Interrupter (GFCI) circuit is required to operate the Carver Tubs system.

Each tub comes complete with an on / off switch and no additional remote switch or timer is required. If installation of an optional timer is desired, refer to wiring instructions provided with a timer. Install a duplex outlet, a minimum of 4 inches above the floor to the studwall beneath the tub. (Duplex outlet not provided.)

Warning: Be certain that jet system switch is in the off position before power is applied to installed unit. Operating the motor/pump without sufficient water in the tub can cause leaking the permanent damage to the pump.

Drain / Overflow

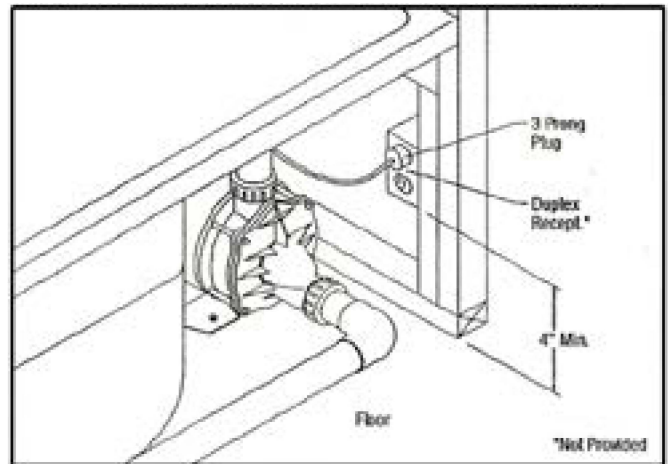
A drain/overflow assembly must be purchased separately and installed with the tub. Prior to installation of drain / overflow assembly, check for damage and proper finish. Water test assembly and connect to sanitary system of home.

Note: Correct installation of watertight drain is the responsibility of the installer. Drain leakage is not covered by Carver Tubs warranty.

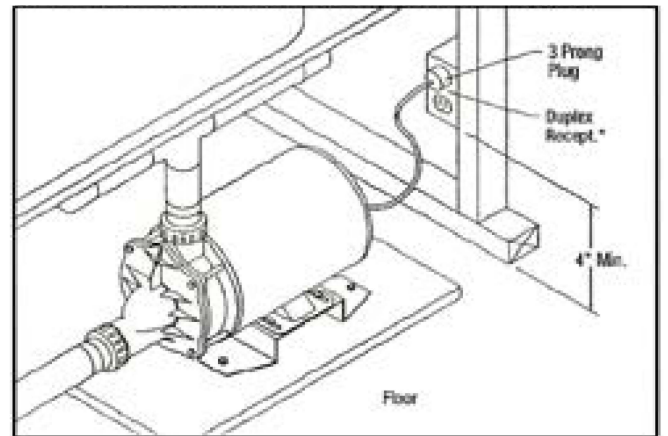
Plumbing

Pump, jets, and suction fittings for the jet system are factory plumbed in PVC schedule 40 piping. All Carver Tubs products are tested in the factory for satisfactory operation and leak-free connections prior to delivery. If a leak is detected contact your Carver Tubs dealer- do not install the unit.

Electrical Connection (for side/end baths)



Electrical Connection (for Corner baths)



Water Supply

It is the responsibility of the installer to properly install fill spout plumbing in compliance with local codes. Consult local authorities for plumbing code requirements in your area.

Note: Water supply connections, fittings, and piping, fill systems, or drain / overflow systems are not covered by the Carver Tubs warranty. Carver Tubs is not responsible for damage to the tub that may occur during installation.

A non-flammable protective barrier placed between soldering work and tub is required to prevent damage to the tub.

After Installation - Operating Instructions

Cleaning The Tub

Never use abrasive cleaners on the tub as they can cause dulling and scratching of the surface. Use a wood or plastic edge (not metal) to remove spilled plaster. Spots left by plaster or grout can be removed if lightly rubbed with a damp cloth and detergent. Use paint thinner, turpentine, or rubbing alcohol to remove difficult stains such as tar or paint.

Minor scratches that do not penetrate the color finish may be remedied by lightly sanding with 600 grit wet / dry sandpaper. A glossy finish to the acrylic surface can be restored by using Meguiar's #10 Mirror Glaze. If this special compound is not available try using automotive rubbing compound and then applying automotive paste wax. Major scratches and gouges will require professional acrylic surface refinishing. Contact Carver Tubs for this service.

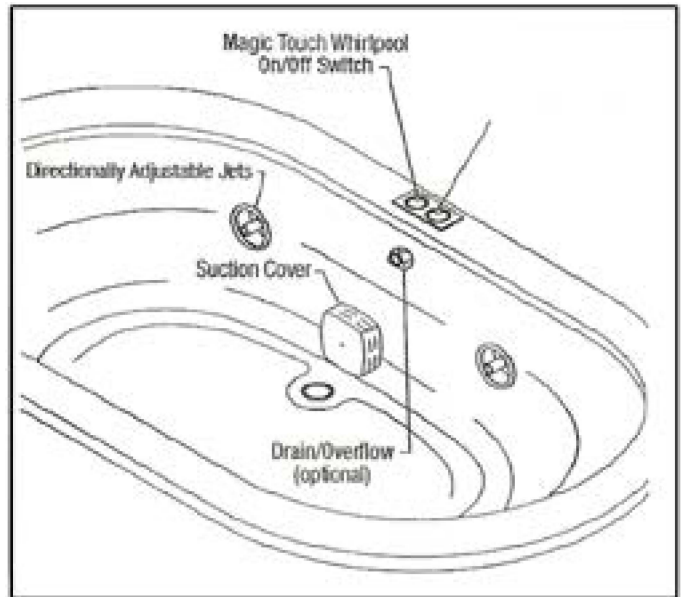
Whirlpool Jet System Operation

The following instructions apply to all Carver Tubs products, but not all features detailed in these instructions apply to all models.

All Carver Tubs should be drained after each bath and filled with fresh water for the next use. See "After Installation" section prior to first use.

The whirlpool jet system on / off switch is conveniently located on the tub allowing the user to turn the system on and off while bathing. To turn on the system press down on the button. Push down on the button again to turn off the system.

The whirlpool action in your Carver Tub features 3 components: direction of flow, force of water, and force of air. All tubs are equipped with adjustable jets that alter direction and air flow.



Typical Bath Fittings

Direction: Swivel the jet nozzle to the desired angle to change the direction of the water flow. Any part of the body can be targeted for hydro massage by directing individual jets to circulate the water in a circular motion around the bath for a whirlpool effect. Adjust the jets so that they all point in the same direction.

Air Flow: Two dials on the tub serve to control the air induction system. One dial indicates low, medium, and high pump speeds. The other controls the amount of air inducted into the water flow. As the amount of air increases the hydro massage action increases. Maximum air induction is achieved by rotating dial counter clockwise. For few air bubbles, rotate the dial clockwise.

Note: Do not use oil or oil based bath additives. If you want to use a bath additive, use only a minimal amount of low-foaming power or bath crystals. The whirlpool action of the jet stream intensifies the foaming properties of soap.

After Installation - Operating Instructions

Purging the Jet System

Carver Tubs recommends purging the jet system every three to four months to remove accumulations of bath residue. Fill the tub with hot water (not to exceed 140 degree Fahrenheit). Add 4 tablespoons of low foaming disinfectant. Turn the air induction dial completely clockwise to off. Run the jet system for 5 to 10 minutes. Drain the bath completely then refill with cold water only. Run the jet system for 5 to 10 minutes then drain completely.

Suction Cover/Strainer Maintenance

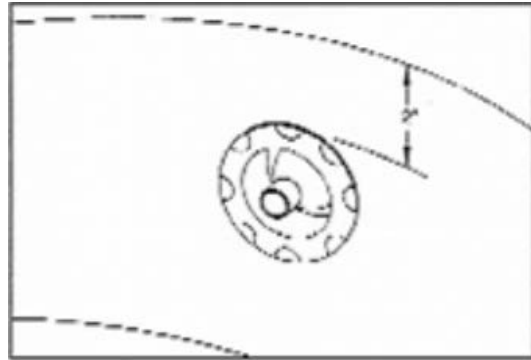
Clean the suction cover/strainer of hair and debris as necessary. Remove the center screw and detach cover. Clean the cover by back flushing debris from holes. Replace cover immediately. To replace, line up the cover with the small notch at the bottom. The gasket must be inserted into the groove of the cover before reinstalling onto the suction fitting.

Warning: Do not operate the whirlpool jet system if the suction cover is removed. Keep hair at least 6 inches away from the suction fitting at all times when system is operating. Long hair should be secured close to the head.

The suction cover is a safety device and should be in place during operation to minimize potential danger of hair and / or body entrapment.

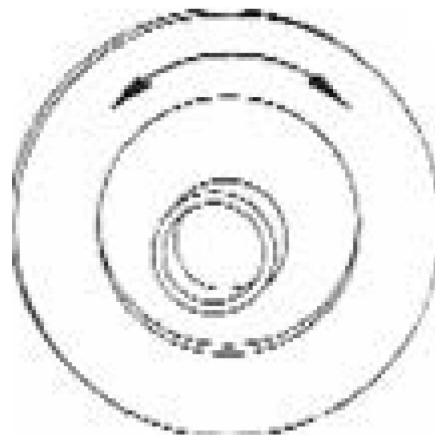
Water Level

Warning!! Fill tub a minimum of two inches above highest jet location before operating jet system pump. **Never attempt to run the pump/motor while the whirlpool bathtub is empty.**



Directionally Adjustable Jets

Note: Carver Tubs are equipped with a pneumatic on / off button for jet system operation. Individual jets may be turned on or off by rotating jet cover.



Heater (Optional)



PermaHeat™ Whirlpool Heaters

Carver Sport Bath offers an optional whirlpool heater. The PermaHeat Whirlpool Heater has been specifically designed to enhance the enjoyment of your whirlpool. Once filled, the warm relaxing temperature of the whirlpool is constantly maintained by the built-in thermostat for as long as you desire.

The PermaHeat Whirlpool Heater is totally self contained to ensure trouble-free installation and operation. As with all electrical devices, certain safety precautions should be taken during installation and use. Please read and follow these instructions carefully.

Important Safety Instructions

In addition to the following, you should have received safety instructions with your whirlpool system. Please read and follow all safety instructions closely. When using this electrical equipment, basic safety precautions should always be followed, including those below:

1. READ AND FOLLOW ALL INSTRUCTIONS!
2. To reduce the risk of injury:
 - a. The water in a whirlpool tub should never exceed 104 degrees Fahrenheit (40 degrees Celsius). A maximum water temperature of 104 is considered to be safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10-15 minutes) and for young children.
 - b. Pregnant or possibly pregnant women should consult a physician before using the whirlpool since excessive water temperatures have a high potential for causing fetal damage during early

months of pregnancy. Pregnant or possibly pregnant women should limit whirlpool to tub temperatures to 100 degrees Fahrenheit (39 degrees Celsius)

c. Before entering a whirlpool or tub, the user should measure the water temperature at several occupant locations using an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as +5 degrees Fahrenheit (+3 degrees Celsius)

d. Alcohol, drugs, or medication should not be used before or during whirlpool or tub since their use may lead to unconsciousness with the possibility of drowning.

e. Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a whirlpool or tub.

f. Persons using medications should consult a physician before using a whirlpool or tub since some medications may include drowsiness, while other medication may affect heart rate, blood pressure, and circulation.

g. Warning - Risk of Electrical Shock! Do not permit any electrical appliances (such as a light, telephone, hair dryer, radio, or television) within five feet of the whirlpool.

h. Danger! To reduce the risk of injury: Do not remove the suction cover of the whirlpool system.

i. Warning! Risk of Child Drowning! To reduce the risk of accidental drowning, do not permit children to use the whirlpool unless they are closely supervised.

3. Save these instructions!!



P.O. Box 130

Cedar Park, Texas 78630-0130

Ph: (512) 259-6500 Fax: (512) 259-6502

Heater (Optional) continued

PermaHeat Whirlpool Heaters Operating & Electrical Instructions

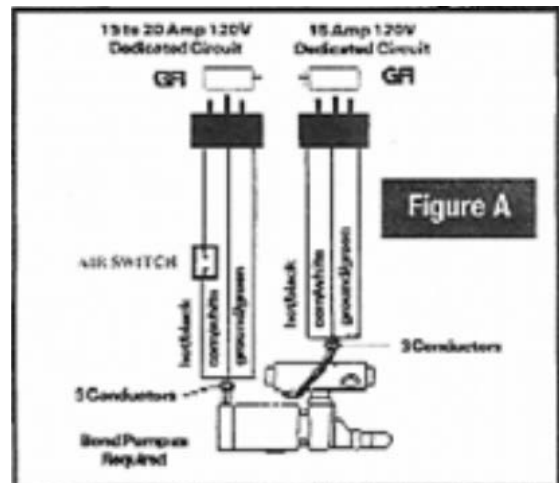
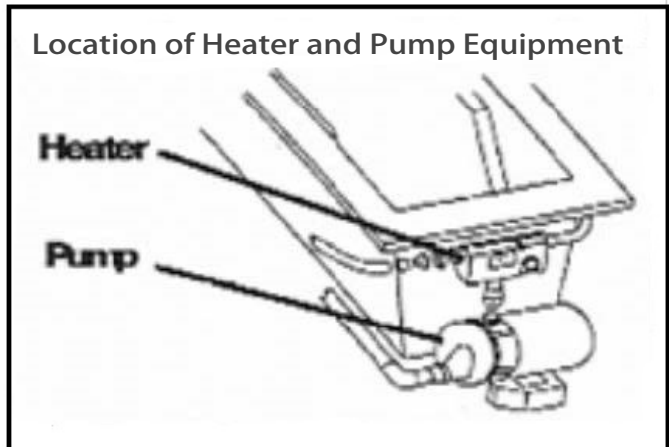
Warning! Risk of electrocution! All electrical connections should be performed by a Licensed Electrician in compliance with local and national electrical codes. In addition, a GFCI MUST protect all branch circuits to the whirlpool and every electrical component MUST be grounded.

1. Route one additional separate 120 volt, 15 amp branch circuit (see figure A) to the junction box near the whirlpool. Each branch circuit must be protected.
2. Use copper conductors only.
3. Insure the heater and pump are properly grounded and pump is bonded as required.
4. There is no need to install a timer or air switch in the heater circuit as all operations are automatic. CAUTION: Before use of the pump and heater, test the GFCI for proper operation. The pump and heater should turn off when the GFCI "test" button is pushed.

Operating Instructions:

Once the PermaHeat Whirlpool Heater is wired, operation is totally automatic. Depending on the tub size, the heater will maintain the temperature of the water in the bathtub, or increase the temperature at the rate of about two to four degrees Fahrenheit per hour. THERMOSTAT - Preset Thermostat requires no adjustment and will automatically maintain the water temperature at 104 degrees Fahrenheit. If bathtub water is too warm, simply adjust by adding cold water.

Location of Heater and Pump Equipment



HI-LIMIT - The PermaHeat Whirlpool Heater includes an exclusive "Smart Hi-Limit". This Hi-Limit will not "false trip" from hot tap water. It will only turn heater off if the thermostat fails. To reset, simply press the red button. If the Hi-Limit trips frequently, call a service person.

INDICATOR LIGHT - This light turns on when heater is operating.

SAFETY FEATURES - In addition to the thermostat and Hi-Limit, the PermaHeat Whirlpool Heater is equipped with a built-in pressure switch. This switch will not allow the heater to turn on if the pump is not running.

Heater Warranty

PermaHeat Whirlpool Heater

Warranty Information

Limited 1 Year Electrical Warranty - Hydro-Products LLC (hereafter referred to as *Hydro-Products*) warrants their electrical products, to be free from defects in workmanship and material under normal use and conditions for a period of one (1) year warranty period for *Hydro-Products* electrical products, *Hydro-Products* will repair, or at its discretion, replace the product without charge, subject to the verification of the defect or malfunction. No credits or refunds will be applied to electrical products that warrant service or replacement during the warranted period.

Hydro-Products will not be responsible for any water damage or any *Hydro-Products* system found to have been damaged by water. No responsibility will be assumed by *Hydro-Products* for loss of use of the system, inconvenience due to loss, damage to personal or real property or any other consequential damage. *Hydro-Products* will not be liable for any incidental expenses or material changes in connection with removal or replacement of any parts or system.

This warranty shall not apply to any type of failure resulting from negligence, abuse, misuse, misapplication, improper installation alteration or modification, chemical corrosion or improper maintenance. There will be a charge for replacement parts or replacement of the entire electrical unit if the defective unit is returned for any of the reasons listed above.

Hydro-Products reserves the sole authority to make any type of warranties or representations concerning *Hydro-Products* or its products. *Hydro-Products* will not be responsible for any warranties or representations made by any outside source, including dealers, retailers, distributors, contractors or manufacturers representatives.

Hydro-Products does not warrant that your tub was installed properly, or that the plumbing and electrical connection(s) will hookup to the *Hydro-Products* Whirlpool Bath System heater were installed properly. *Hydro-Products* has not installed, nor supervised or contracted for the installation of the tub on which the system is assembled. Improper or negligent installation of your tub, alterations made to your tub or spa, or alterations or modifications to the system may cause the system to malfunction. Such problems are not covered by any warranty; express or implied.

This is the only warranty expressed or implied given by *Hydro-Products*. Warranties implied under State Law, including any implied warranty of merchantability or fitness for a particular purpose, shall be limited to one (1) year from the original date of purchase. Finally, *Hydro-Products* disclaims any liability for any incidental or consequential damages.

© Copyright *HydroProducts, L.L.C.* 1998

Motor (contined)

Wire Selection Guide

Motor HP	Maximum distance from fusebox to motor			
	50 ft.	100 ft.	150 ft.	200 ft.
0.75	115V Power Line			
	12	12	10	8

The sizes shown on this chart are recommendations for copper conductors only. Always follow local and national electrical codes.

Drain Connection and System Test

Using recommeded drain opening, connect whirlpool drain to waste line. Tighten all drain joints securely. Check the pump couplings and make sure they are hand-tight. Clean the whirlpool and fill with water to a point two inches above the top of the highest jet.

Recheck the pump couplings and make certain that they are not leaking. (Although the pump couplings are factory tightened and inspected, some loosening may have occoured during transit.) Make sure the whirlpool is connected to the eletrical supply and turn the whirlpool on. Check for leaks around all piping connections while the whirlpool is running.

Post Installation Clean-Up

Remove all construction debris from bath. Tile grout can be removed with a wooden popsicle stick or tongue depressor. Do not use wire brushes or any other metal implement on bath surface.

Post installation clean-up generally can be completed using warm water and liquid dishwashing detergent. Stubborn dirt or stains may be removed using granular *Spic and Span* mixed with water.

Painter's nap can be used to remove excess adhesives and/or wet oil-base paint.

HARSH CHEMICALS SHOULD NEVER BE USED ON ACRYLIC SURFACES!

Abrasive cleaners must not be used since they will scratch and dull the surface. Dulled areas can be restored by rubbing with a white automotive-type polishing compound and waxing with a liquid wax.

SPIC AND SPAN® is a registered trademark of Proctor and Gamble

Carver Tubs Limited Warranty

Warranty Coverage

Carver Sport Bath (the "Company") offers the following express limited warranty to the original purchaser of any Carver Sport Bath product ("unit") who purchases the product for personal or single family use ("user"). The Company will repair or replace, at its option, the unit or it's equipment in accordance with the following terms and conditions.

Limited Warranty

Warranty terms are five (5) years on the tub shell and two (2) years on the whirlpool jet system. The Carver Sport Bath warranty covers the unit and factory installed components (pump, motor) against defects in material or workmanship. Warranty coverage begins on original purchase date.

Warranty Limitations

Warranty does not cover defects, damage, or failure caused by delivery, or by installer, user, or other person or resulting from without limitation of any of the following: careless handling (lifting unit by plumbing, surface abrasion, etc.); modification of any type for any reason (including modification to meet local codes); improper installation (including installation not in accordance with instructions and specifications provided with the unit); connections supplied by the installer of the equipment; improper voltage supply or unauthorized electrical modification; misuse; incorrect operation, or lack of proper routine maintenance; operation of the unit without specified minimum amount of water or at inappropriate water temperatures; use of abrasive or improper cleaners; or acts of God; such as lightning, floods, earthquakes, etc.

In addition, The Company will not be responsible for incidental or consequential damages or losses arising from any cause (water damage to carpet, ceiling, lose of use, etc.) including its own negligence; damages to, respecting or resulting from; plated parts the use of pool and/or spa chemicals in the unit; optional bath equipment not manufactured by the Company, supplied by Dealer, installer of the Company; the unit's prior usage costs incurred in the removal and/or as an operational display; or defects that should have been discovered before installation. Limited warranty does not include labor, transportation, or other

costs incurred in the removal and/or reinstallation of the original unit and/or installation of a replacement unit; any costs related to obtaining access for repair; or loss of use damage, including loss of sales, profit or business advantage of any kind under any circumstances. Bath units in commercial use are excluded from any warranty coverage if any addition, deletion, or modification any kind whatsoever has been made to the unit (or to any component).

Implied Warranties

All implied warranties of saleability and fitness for a particular purpose are equal in duration with the express warranties set forth herein.

NOTICE: Warranty gives specific legal rights and you may also have other rights that vary from state to state. There are no warranties applicable to Carver Sport Bath products except as expressly stated herein or as implied by the applicable state and federal laws. The Company will not be responsible for any statements or representations made in any form that go beyond , are broader than or are inconsistent with any authorized printed material or specification furnished by the Company.

Some states do not allow limitation on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply.

Warranty Card

The enclosed pre-addressed Warranty Registration Card MUST be completed by purchaser within thirty (30) days from purchase and mailed to Carver Sport Bath in order for this warranty to become effective.

Carver Tubs Limited Warranty

Responsibilities of Others

Inspecting the unit prior to installation is the responsibility of the installer of building contractor who acts on behalf of the user. They are responsible for ensuring the unit is free of defect or damage. Notices are included with the unit advising the installer of this responsibility. In the event of a problem, the unit must not be installed. The Company is not responsible for failures or damage that could have been discovered, repaired, or avoided by proper inspection and testing prior to installation.

Damage occurring in transit is the responsibility of the carrier. The user or installer must open the shipping carton and inspect the unit for damage when it is delivered. If damage is discovered it must be reported immediately to the seller and the carrier in writing and an inspection requested. Failure of the carrier to respond should be reported to the seller and the carrier. Your freight claims should be filed promptly thereafter.

It is the responsibility of the installer, building contractor, or user to provide access for service. The Company is not responsible for any costs relating to obtaining access for repair. The user shall bear such costs and if appropriate, must seek recovery from the installer.

Damage occurring to the unit during installation is the responsibility of the installer and/or builder contractor and damage occurring thereafter is the responsibility of the user.

Failure of any optional equipment is the sole responsibility of the equipment manufacturer. (Options and accessories manufactured by the Company are warranted under separate warranties covering individual parts only.)

The Distributor or Dealer is responsible for knowing local code requirements and notifying the installing contractor and/or user of these agreements at the time of purchase. The Company is not responsible for costs to modify any product to obtain any code approval, such as city, county, or state building codes.

Warranty Service

The Company will provide the warranty service described above when the following conditions have been met: the failure is of the nature or type covered by the warranty; the user has informed a Warranty Service Department Representative of the nature of the problem during the warranty period; conclusive evidence (proof of purchase or installation) is provided to the foregoing by the user proving that the failure occurred or was discovered within the warranty period; an authorized independent service person or Company representative has been permitted to inspect the unit during regular business hours within a reasonable time after the problem was reported by the user.

In order to obtain warranty service, replacement for factory-installed components or Company supplied options and accessories manufactured and supplied by the Company, call or write the address below. Provide a description of the problem and proof of purchase. You will be advised how to obtain service, replacements, and where to return, at your expense, the failed component(s), option(s), or accessory (ies).

Carver Sport Bath
3303 Main Street
Grandview, MO 64030
816-965-5299

All replacement parts, equipment, and repairs shall assume the remaining warranty period of the part(s) required.

The Company's warranty obligation shall be discharged upon tender of replacement or repair.

The customer's refusal to accept the tender terminates the Company's warranty obligation.

Model # _____

Name _____

Color _____

Serial # _____

Instructions Pertaining to a Risk of Fire, Electric Shock, or Injury to Persons

RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

WARNING - When using this unit, basic precautions should always be followed, including the following:

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. DANGER - To reduce the risk of injury, do not permit children to use this unit unless they are closely supervised at all times.
3. Use this unit only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
4. Never drop or insert any object into any opening.
5. Do not operate this unit without the suction inlet screen over the suction fitting.
6. The unit must be connected only to a supply circuit that is protected by a ground fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button, Power should be restored. If the GFCI tries to operate in this manner, there is a ground current flowing, indicating the possibility of electric shock. Do not use the unit. Depress the button again, leave the unit off, and have the problem corrected by a qualified service representative before using.
7. The green colored terminal (or wire connector marked "G", "GR", "Ground", "Grounding") is provided within the terminal compartment. To reduce the risk of electric shock, connect this terminal or connector to the grounding terminal of your electric service or supply panel with a continuous green insulated copper wire equivalent in size to the circuit conductors supplying this equipment, but no smaller than No. 12 AWG (3.3mm).
8. A pressure wire connector is provided on the exterior of the terminal box within this unit to permit connection of a No. 8 AWG (8.4mm) solid copper bonding conductor between this unit and all other electrical equipment and exposed metal in the vicinity, as needed to comply with local requirements.
9. Building materials and wiring should be routed away from the pump boy or other heat producing components of the unit.