



Whitehall Manufacturing
Manufacturer of Healthcare and Rehabilitation Products since 1946

User Manual

Whitehall **WHIRLPOOL** SINCE 1946

Mobile Models

Podiatry	WHP-10-M, WHP-10-MH, WHP-10-MU
Extremity	WHE-15-M, WHE-15-MH, WHE-15-MU, WHE-22-M, WHE-22-MU, WHE-27-M, WHE-45-M
Hi-Boy	WHH-60-M, WHH-75-M, WHH-90-M, WHH-105-M
Lo-Boy	WHL-75-M, WHL-90-M, WHL-105-M
Sports	WHS-85-M, WHS-90-M, WHS-110-M
Slant Back	WHSB-100-M
Hydrolift	WHHYL-10-M, WHHYL-15-ML, WHHYL-22-M



WHP-10-M-SDP



WHH-105-M

P.O. Box 3527 • City of Industry, CA 91744-0527 U.S.A.
800-591-9280 • 626-968-6681 • www.whitehallmfg.com



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WARNING

READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE OPERATING THE WHIRLPOOL
Failure to follow the instructions in this manual could result in Whirlpool damage and/or bodily injury

Symbols



Waste Electrical and Electronic Equipment (WEEE)

Indicates that the product must not be disposed of with regular waste. It is the user's responsibility to dispose of waste equipment according to local laws. For information about where to drop off the waste equipment for recycling, contact your local waste collection authority.



General Warning or Caution

Indicates personal injury or damage to the equipment is possible



Electric Shock

Indicates a hazard arising from dangerous voltage. Any mishandling could result in irreparable damage to the equipment and/or personal injury or death.



Warning; Crushing of hands

To warn of a closing motion of mechanical parts of equipment



Refer To Manual (Instructions for Use)

Indicates that user manual shall be referred to before performing any installation, operation or maintenance



Alternating Current

Indicates alternating current is present



Manufacturer

Indicates manufacturer of device



Manufacture Date

Indicates manufacture date of device



Warnings

Operation:

- Whirlpools are intended for use by a professional only, e.g., Athletic Trainer, Coach.
- During treatment, the professional must stay with user at all times.
- The maximum allowable user mass is 135 kg (298 lbs)
- Ensure water in tub is no greater than 43.3°C (110°F). Higher temperatures may result in injury to user.
- Usage should terminate if the user experiences dizziness, light-headedness, shortness of breath, or nausea
- To avoid user cross-infection, drain and clean equipment after each user, and disinfect equipment surfaces and components by using an EPA registered product in accordance with the manufacturer's instructions
- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Use of accessories and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation
- Use only Whitehall-approved items on the Whirlpool
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Whirlpool, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- If there is visible damage to the Whirlpool or packaging upon receipt, report this damage to shipping company and Whitehall. Do not use the Whirlpool if damage to it is suspected.
- Operate with the bottom of the turbine submerged in at least 15.2 cm (6 inches) of water
- Keep hair and loose items (gown straps, gauze, etc.) out of the tub. These items can be pulled into the pump and cause injury or damage to the turbine.
- Use the Whirlpool only for the purpose described in this manual
- Position the Whirlpool so that the power cord is easily accessible.
- To avoid damage to the thermometer, do not drop the thermometer or expose it to temperatures above 60°C (140°F)



- No parts shall be serviced or maintained while in use with a user.
- The turbine is top-heavy. Follow transport instructions in this manual.
- To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- Connect the power cord to a Ground Fault Circuit Interrupter (GFCI) medical grade receptacle.
- No parts of the Whirlpool, including the power supply cord, are repairable or replaceable by service personnel.
- No modification of the Whirlpool is allowed.
- To protect stainless steel surfaces, use soft water (i.e., water with low concentrations of ions and in particular low in ions of calcium and magnesium) in the tub.
- For models with a separate drain pump (-SDP, see Figure 2):
 - Only plug the turbine into the receptacle on the Whirlpool. Do not connect a multiple-socket outlet, extension cord, or any other electrical equipment to the receptacle.
 - Do not operate the turbine and drain pump simultaneously. This will cause increased current load and may result in the turbine running dry, causing damage to the turbine.

Incident Reporting

Any serious incident that has occurred in relation to the Whirlpool should be reported to Whitehall manufacturing.



User Skills

The professional using the Whirlpool must have the following skills:

- The ability to assist the user
- Knowledge of Whirlpool protocols
- To have read and understood this manual
- To have become familiar with the Whirlpool before using it with a user

Whirlpool Description

The Whirlpool consists of a welded stainless steel tub for holding water and a turbine assembly mounted to the side of the tub. The turbine assembly is a motor-operated centrifugal pump that circulates the water. The pump position can be adjusted up or down and rotated to change the position of the water outlet, then locked with a handle. Depending on the model and options, water can be drained either by diverting the water from the pump to a drain hose mounted at the top of the turbine, by an optional drain pump located below the tub, or by opening up the drain valve at the bottom of the tub. Four casters, all of which are lockable to prevent tub movement, are mounted to the bottom of the tub to assist in moving an empty tub between use. The interior of the tub and tub rim are considered Type B Applied Parts, since they are likely to be touched by the user.

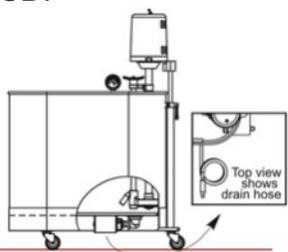
Water temperature may be adjusted by the operator depending on the desired usage. A thermometer mounted to the side of the tube is included with the Whirlpool. The Whirlpool does not control water temperature.

For smaller Whirlpools, the user sits comfortably next to the tub and places their extremity (hand, foot, arm or leg) in the tub. For larger Whirlpools, the user can enter the tub and sit inside.



Options and Accessories

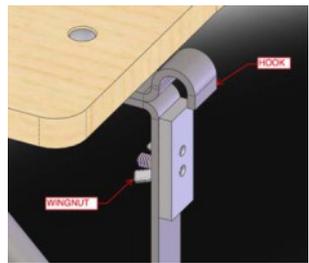
The following options are incorporated into the Whirlpool device and are not detachable.

#	Description	Used on Models
SDP 	Separate Drain Pump	All except Slant Back
GFI 	In-line Ground Fault Circuit Interruption Cable	All
EGXX, where XX indicates the color of the powder coat	Powder Coat Paint	All except Slant Back
LOGO	Logo selected by customer	All except Slant Back

The following accessories are available:

#	Description	Used on Models	Instructions
HL-10-M	Hydrolift for 37.8 L (10 US gallons) Whirlpool	WHP-10-M	Refer to instructions provided with Hydrolift 
HL-15-M	Hydrolift for 56.8 (15 US gallons) Whirlpool	WHE-15-M	
HL-22-M	Hydrolift for 83.3 L (22 US gallons) Whirlpool	WHE-22-M	
RS 	Reclining Seat	WHL-75-M WHL-90-M WHL-105-M	Hang seat on back edge of tub as shown. Bottom of seat rests on bottom of tub. For maintenance, see the <i>Disinfecting and Cleaning Instructions</i> section.



#	Description	Used on Models	Instructions
TTS1 	Tank Top Seat for 508 mm (20 inch) wide tubs	WHH-60-M WHH-75-M WHH-90-M WHS-85-M	<ol style="list-style-type: none"> Loosen wing nuts on the lower mounting clip assemblies Position tank top seat assembly over radius of tank and align hooks with tank rim Push up on the lower mounting clip assemblies and tighten wing nuts to clamp seat to the Whirlpool rim For maintenance, see the <i>Disinfecting and Cleaning Instructions</i> section.
TTS2 	Tank Top Seat for 610 mm (24 inch) wide tubs	WHH-105-M S-90-M S-110-M L-75-M L-90-M L-105-M	
ARS 	Arm Rest Support	All	Hang support on edge of tank as shown. For maintenance, see the <i>Disinfecting and Cleaning Instructions</i> section.
AS1	Adjustable Suspension Seat for 508 mm (20 inch) wide tubs	WHH-60-M WHH-75-M WHH-90-M WHS-85-M	Hang seat supports on sides of tub. Hang seat on seat supports. Adjust height of seat as desired. For maintenance, see the <i>Disinfecting and Cleaning Instructions</i> section. 
AS2	Adjustable Suspension Seat for 610 mm (24 inch) wide tubs, except Lo-Boy	WHH-105-M WHS-90-M WHS-110-M	
AS3	Adjustable Suspension Seat for Lo-Boy tubs	WHL-75-M WHL-90-M WHL-105-M	



Facility Requirements

The following are needed prior to using your Whirlpool:

- Clean water source for filling tub
- A sink or floor drain
- Medical-grade GFCI receptacle, installed by licensed electrician
- Environmental conditions within those specified in the Specification section of this manual

NOTE: The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.



Instructions

Assembly Instructions



1. The turbine assembly can weigh as much as 22 kg (48 lbs). It is recommended that 2 people mount the turbine assembly onto the tub.
2. Do not rest the turbine on the impeller housing (12). This can damage the turbine.

To install thermometer, insert sensing rod (7) through upper bracket (8) and into lower bracket (9), then tighten screw (10).

To install turbine (1) onto tub, loosen handle

1. Lock tub wheels.
2. Loosen handle (4) then lower turbine support rod (3) into turbine support tube (2) of tub. Tighten handle (4) when turbine is at desired height.
3. Place discharge nozzle (5) into storage socket (6). For -SDP only (Figure 2): water will flow through hose if discharge nozzle (5) is lower than water level.
4. Turn the pressure control valve handle (11) fully clockwise, then fully counterclockwise to completely lubricate the plunger assembly.
5. For Whirlpools with -SDP only (Figure 2): Insert electrical cord twist-lock plug (15) into socket (16) and turn clockwise a quarter turn to lock in place. Ensure plug cover is firmly against the receptacle (16).
6. Turn the turbine power switch (13) off.
7. Plug Whirlpool power cord into medical-grade GFCI outlet.

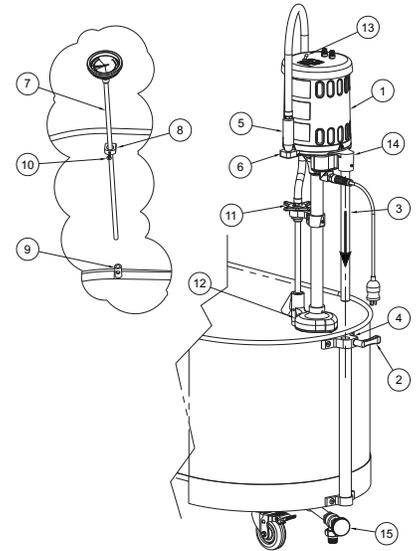


Figure 1: Whirlpool without -SDP option

Operating Instructions



Refer to warnings on page 5 before operating the Whirlpool.

1. If required, move tub to ensure there is enough room to access the drain (15) or a sink (depending on the model), since tub cannot be moved with water in the tub. See instructions for moving your Whirlpool below.
2. Lock tub wheels and ensure Whirlpool power cord is plugged into medical-grade GFCI outlet.
3. Fill tub with water so that the bottom of turbine is at least 15.2 cm (6 inches) below surface of water.

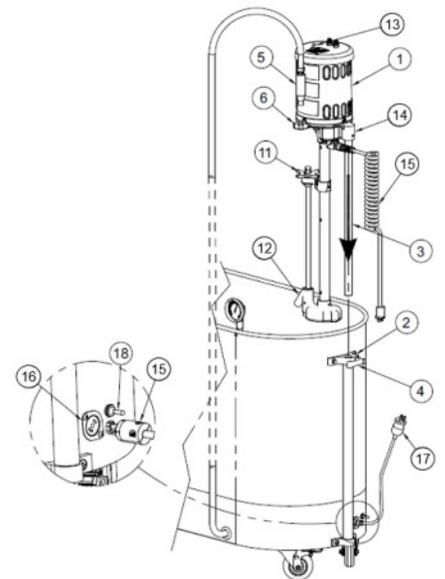


Figure 2: Whirlpool with -SDP option



4. Turn the pressure control valve handle (11) fully clockwise. This will generate maximum water circulation.
5. Turn the turbine power switch (13) on.
6. Adjust position of turbine by slowly pushing down on and rotating the top of the motor support casting (14) until the bottom of the turbine (12) is at the desired location. Tighten handle (4) to lock in place.
7. Adjust pressure control valve handle (11) to change level of water circulation.
8. Turn the turbine power switch (13) off to stop water circulation.
9. To electrically isolate the Whirlpool from supply mains, simply unplug the Whirlpool at the wall outlet.

Draining Instructions

Turn the turbine power switch (13) off to stop water circulation.

Whirlpools without separate drain pump (Figure 1):

1. If using a floor drain, connect hose to drain valve (15) and open the drain valve.
2. If using a sink:
 - a. Rotate pressure control valve (11) counterclockwise.
 - b. Lower the pump (12) to the bottom of the tub.
 - c. Place discharge nozzle (5) into the sink, floor drain, or standpipe.
 - d. Turn the turbine power switch (13) on.
 - e. When water stops discharging from the nozzle, turn off the switch.
 - f. Drain remaining water using drain valve (15) or by using a dry sponge.

Whirlpools with separate drain pump (Figure 2)

1. Place discharge nozzle (5) into floor drain, sink, or standpipe.
2. Turn the drain pump switch (18) on. When water stops discharging from the nozzle, turn the drain pump switch off.
3. Some residual water will remain in the drain pump. To remove this water, lower the discharge nozzle (5) to the floor and clean with a towel or sponge.
4. Any residual water in the tub may be removed by sponge drying.
5. Place discharge nozzle (5) into socket (6). Note: water will flow through hose if discharge nozzle (5) is lower than water level.

Moving your Whirlpool

Drain all water from the tub, lower the turbine assembly to its lowest position and lock the turbine assembly. Ensure that wheels are unlocked. Carefully push the Whirlpool to its desired location. Before filling the tub with water in preparation for usage, ensure the tub is close enough to a floor drain or sink to allow for draining and make sure drain valve is closed. Lock wheels. Do not move the Whirlpool with water in the tub.





Thermometer Calibration Instructions

1. Fill the tub so that the bottom of the thermometer tip is immersed in at least 10.2 cm (4 inches) of water.
2. Place the stem tip of a calibrated thermometer next to the tip of the Whirlpool thermometer.
3. Turn on the turbine assembly.
4. If the reading on the Whirlpool thermometer is not the same as that of the calibrated thermometer, turn the external adjustment screw (a) so that the Whirlpool thermometer reading is identical to the calibrated thermometer.
5. Re-calibration shall be performed at least every 12 months or as needed.

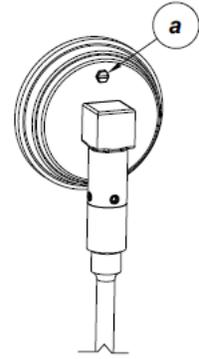


Figure 10: Calibrating the thermometer



Disinfecting and Cleaning Instructions



Important:

1. Do not use abrasive compounds or applicators such as metal brushes - they can damage the whirlpool's appearance. Do not allow steel wool to come in contact with stainless steel. Steel particles can embed into the stainless steel surface and create rust.
2. Avoid cleaning or disinfecting products that contain strong acids or contain chlorine, fluorine, bromine, or iodine, as these products can damage the protective chromium oxide layer, resulting in corrosion and leaks. If such products are used on stainless steel, keep the exposure brief (less than 15 minutes) and thoroughly rinse stainless steel surfaces of all residue.

Recommended cleaning materials:

- a. Sponge (natural or artificial)
- b. Soft-bristle brush
- c. Soft cloth (e.g. microfiber cloth)

The tub, thermometer, and turbine shall be disinfected and cleaned after each user.

Disinfecting and Cleaning the Tub and Thermometer

1. Drain the tub following the draining instructions above.
2. Verify that the turbine is off.
3. Remove any loose objects or debris that may be present in the Whirlpool tub.

To disinfect, use a stainless steel hard surface disinfectant per the manufacturer's instructions with one of the recommended cleaning materials above.

To clean, use a mild soap solution with one of the recommended cleaning materials above.

Rinse thoroughly prior to use.

Disinfecting and Cleaning the Turbine

1. Drain the tub following the draining instructions above.
2. For tubs greater than 75.7 L (20 US gallons), raise turbine, place a large clean bucket in the tub and lower the bottom of the turbine into the empty bucket.
3. Fill the bucket or tub with water so the bottom of the turbine is at least 15.2 cm (6 inches) below the surface of the water.
4. Add a disinfectant solution to the water per manufacturer's instructions.
5. Ensure the pressure control valve is in the open position.
6. Turn on the turbine for 5 seconds and turn it off. Wait 10 minutes.



7. Spray or wipe all exposed surfaces with a mixture of suitable disinfectant solution per manufacturer's instructions. Exposed surfaces shall remain wet for at least 10 minutes.
8. Drain the turbine bucket into the tub and open drain.
9. Rinse all exposed surfaces with warm or hot water.
10. Fill the bucket with clean water and run turbine for five seconds to rinse impeller cavity.

Turbine Maintenance

Motors are equipped with sealed greased ball bearings that do not require lubrication so are maintenance-free. Clean vent holes in the motor cover shell periodically to allow free air flow and prevent overheating.

Troubleshooting

Symptom	Possible Cause	Remedy
Loss in pressure	Foreign material caught in pump inlet holes	1. Turn off and unplug turbine assembly 2. Remove foreign materials from bottom of pump
	Turbine pump is not submerged fully in water	Ensure that water level is at least 6" above bottom of turbine assembly
Water does not circulate	No power to turbine	Check the power source Reset the GFCI(s) if tripped Replace the fuses (see instructions below) Contact Whitehall
	Shaft has seized	Contact Whitehall
Turbine stops operation	Motor is overloaded	Check for blocked motor ventilation holes Check for excessive current load NOTE: The motor is equipped with a thermal overload protector. In an overheated condition, the motor will automatically shut off until it has returned to a normal operating temperature, then resume operation.

Fuse Replacement Procedure:

1. Turn off and unplug the turbine
2. Push down and turn each of the round black fuse covers counter-clockwise on top of the turbine and set aside
3. Remove the fuses and discard



4. Replace the fuses with 6525-608-000 for the 125V~ turbine and 6525-612-000 for the 230V~ turbine (or equivalent)
5. Replace the fuse covers by pushing down and turning clockwise
6. Plug in the turbine

Classification

Electric Shock Protection	Class I
Applied Parts	None
Ingress Protection	IP24
Mode of Operation	Continuous



Specifications

Mechanical							
Mass, kg (lbs) The –SDP option adds approximately 4.5 kg (10.0 lbs) to the mass of the Whirlpool	WHP-10-M	WHP-10-MH	WHP-10-MU	WHE-15-M	WHE-15-MH	WHE-15-MU	WHE-22-M
	15 (33)	16 (35)	18 (39)	18 (38)	19 (41)	21 (46)	21 (47)
	WHE-22-MU	WHE-27-M	WHE-45-M	WHH-60-M	WHH-75-M	WHH-90-M	WHH-105-M
	23 (51)	26 (57)	27 (63)	36 (80)	41 (90)	44 (96)	49 (108)
	WHL-75-M	WHL-90-M	WHL-105-M	WHS-85-M	WHS-90-M	WHS-110-M	WHSB-100-M
	43 (95)	44 (98)	49 (108)	44 (96)	44 (98)	50 (110)	79 (175)
	WHHYL-10-M	WHHYL-15-M	WHHYL-22-M				
38 (83)	41 (90)	46 (101)					
Water capacity Liters (US Gallons)	WHP-10	WHE-15	WHE-22	WHE-27	WHE-45	WHH-60	WHH-75
	54.1 (14.3)	78.7 (20.8)	119.6 (31.6)	140.4 (37.1)	190 (50.2)	312.7 (82.6)	367.6 (97.1)
	WHH-90	WHH-105	WHL-75	WHL-90	WHL-105	WHS-85	WHS-90
	425.5 (112.4)	445.9 (117.8)	344.9 (91.1)	398.6 (105.3)	445.9 (117.8)	367.6 (100.1)	419.4 (110.8)
	WHS-110	WHSB-105					
518.2 (136.9)	515.6 (136.2)						
Water flow rate	0-56.8 L/min (0-15 US gallons/min)						
Electrical							
Input voltage	115/230 V~ 230 V~ models are for export only						
Line Frequency	50/60 Hz						
Rated Current	6.9/3.5 A						
Electromagnetic Compatibility	All Whirlpool models comply with the latest international electromagnetic compatibility standard (IEC 60601-1-2), as shown below:						
Description	Standard	Specifications					
Radiated Emissions	CISPR 11	30 MHz – 1 GHz, Class A					
Conducted Emissions, AC Mains	CISPR 11	150 kHz – 30 MHz, Class A					
Harmonic Emissions	IEC 61000-3-2	10 min, Class D (no limits for < 75W)					
Flicker	IEC 61000-3-3	120 min (no limits for < 75W)					
Electro-Static Discharge (ESD)	IEC 61000-4-2	Contact: ± 2kV, ± 4kV, ± 8kV; Air: ± 2kV, ± 4kV, ± 8kV ± 15kV					
Radiated RF EM fields	IEC 61000-4-3	3 V/m, 80% AM at 1 kHz, 80MHz – 2.7GHz					
Electrical Fast Transient (EFT)	IEC 61000-4-4	Power Supply Lines, ± 2kV, 100 kHz PRF					
Surge	IEC 61000-4-5	Line to line ± 0.5kV, ± 1kV					
RF Conducted Immunity	IEC 61000-4-6	Power Supply Lines: 3 Vrms, 0.15 - 80MHz; ISM Bands Input/Output Lines: 3 Vrms, 0.15 - 80 MHz; 6 Vrms, ISM bands, 80% AM at 1 kHz					
Magnetic Field	IEC 61000-4-8	30 A _{rms} /m, 50Hz or 60Hz					
Short Interruption	IEC 61000-4-11	0 % U _r : 250/300 cycles, 0°, 90°, 270°					
Environmental Conditions							
Operational	10 - 33°C (50 - 90°F)						
Transportation and Storage	0 - 60°C (32 - 140°F)						
Relative humidity	5 - 95%, non-condensing						
Atmospheric Pressure	70 – 106 kPa						
Thermometer							
Range	Dual scale: 5-60°C and 40-140°F						
Accuracy	± 1.1°C (2°F)						



Mailing Address:

P.O. Box 3527 • City of Industry, CA 91744-0527 U.S.A

Physical Address:

15125 Proctor Avenue • City of Industry, CA 91746 U.S.A

Phone 800-591-9280 • 626-968-6681

Web: www.whitehallmfg.com

E-mail: info@whitehallmfg.com

MANUFACTURER'S WARRANTY

Go to www.whitehallmfg.com to fill out eWarranty Registration, keyword search: WARRANTY.

Whitehall Manufacturing Company warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of shipment. Whitehall's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Whitehall is notified in writing within one year from date of shipment, F.O.B. City of Industry, California.

This warranty does not cover installation or labor charges, and does not apply to materials which have been damaged by other causes such as mishandling or improper care or abnormal use. The repair or replacement of the defective materials shall constitute the sole remedy of the Buyer and the sole remedy of Whitehall under this warranty. Whitehall shall not be liable under any circumstances for incidental, consequential or direct charges caused by defects in the materials, or any delay in the repair or replacement thereof. This warranty is in lieu of all other warranties expressed or implied. Product maintenance instructions are issued with each fixture, and disregard or noncompliance with these instructions will constitute an abnormal use condition and void the warranty. Stainless steel must be properly maintained after water has been introduced into the fixture, or Whitehall's limited warranty is void. If you have any questions or require technical assistance, please call 800-743-8219.

NOTICE TO KEEP ORIGINAL PACKAGING - Regarding warranty claims: customer must retain original packaging for one year upon receipt of product. If packaging is discarded, it is the customer's responsibility to provide adequate packaging. Any shipping claims that are a direct result of customer-provided packaging materials will be handled by the shipper.