

THERMA-KLEEN®

Operators Manual

Therma-Steam Model 1.5, 10, Deluxe



Made in the USA

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Therma-Steem® Model 1.5, 10, Deluxe

OWNERS MANUAL

Do Not Use This System Without Reading This Manual First

You should be familiar with the information in this manual before you operate your equipment. The manual is structured so that it can be used for your reference.

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All information, illustrations and specifications contained within this manual are based on the information available at the time of production.

THERMA-KLEEN®, reserves the right to make changes at any time.



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SERVICE INFORMATION:

Therma-Steam® 1.5, 10, & Deluxe Models

Please take the time to fill out the form on this page. When completed, this reference form will provide information essential to the proper servicing and ordering of parts for your THERMA-STEEM® Industrial Models 1.5, 10, & Deluxe.

OWNER:

Name of Business: _____

Address: _____

City, _____ State: _____ Zip Code: _____

Telephone: _____ E-mail: _____

Serial #: _____ Date Shipped: _____

Our sales and parts department will be glad to answer any questions or provide troubleshooting help over the phone. All parts will be shipped via UPS unless otherwise specified. The warranty card must be filled out on our Web Site to activate your warranty.

www.THERMA-KLEEN.com

Address: Therma-Kleen, Inc.

P.O. Box 805, 2415 E. Huron Rd. Au Gres, MI 48703

Telephone: 630-718-0212 Fax: 989-876-6640

E-Mail: sales@therma-kleen.com

MACHINE SPECIFICATIONS:

Boiler Capacity:	1.5 Gallons
Steam Pressure:	100 psi / 12.25 Bar
Temperature:	330 degrees "F" / 176 degree "C"
Electrical Draw:	15.0 amps @ 120 volts
	10.0 amps @ 240 volts

TK THERMA-KLEEN
COMMERCIAL
Therma-Steam® Model 1.5, 10, Deluxe

Note: Therma-Kleen® reserves the right to change the package contents at any time, without notice.

Examine the unit and accessories for any possible shipping damage. If your unit is damaged or fails to operate, notify the shipper immediately.

Note: Only the consignee (the company or person receiving the unit) can file a claim against a carrier for shipping damage.

Record the serial number of your unit for future reference. It is recommended that you retain the original shipping carton and packing materials should you need to transport or ship the unit in the future.

WHAT IS VAPOR STEAM CLEANING:

Vapor Steam Cleaning is a unique way of cleaning. Understanding how vapor cleaning works will enable you to clean more effectively. The dry vapor, in the form of gas, penetrates the surface pores and violently expands, forcing dirt and debris to the surface where the particulate is either suspended in a re-condensed water molecule or driven into an absorbent cloth. The dry vapor is super-heated and is hot enough to kill bacteria and sanitize all surfaces. Vapor cleaning does not rely on pressure in order to clean efficiently. Once the vapor is emitted from the tool head, physics take over and the vapor works on its own. Therefore, only enough vapors are required to fill the pores under the tool head, and it is not necessary nor desirable to operate the equipment at full volume. More effective cleaning results are achieved by turning the volume down and let the vapor and heat do the cleaning. If the equipment is operated at too high of a volume, the unit will not maintain pressure for extended periods of time, it will use too much water and oversaturated the surface that you are cleaning.

SAFETY:

READ ALL INSTRUCTIONS BEFORE USING THE VAPOR CLEANING SYSTEM. Under no circumstances shall Therma-Kleen or its agents be held responsible for any injury or damage to people or property that may be caused by failure to follow the instructions below or by improper use of the equipment.



WARNING:

Your Therma-Steam unit is designed to be an entirely safe if used properly and incorporates the latest and most state-of-the art safety features.

Paying Close Attention to your system and surroundings are necessary when your Vapor Steam System is being used.

TO REDUC THE RISK OF ELECTRICAL SHOCK, FIRE OR PERSONAL INJURY, FOLLOW ALL THE INSTRUCTIONS AND ALWAYS USE BASIC PRECAUTIONS, INCLUDING THE FOLLOWING:

- 1 **ALWAYS** - Check the machine, power & steam hose for damage prior to start-up. If damage is detected, it must be repaired prior to use.
- 2 **CAUTION** - Before use check the electrical cord for damage, ware & tare, cuts or abrasion.
 - a. **DO NOT** - use your machine with a damaged electrical cord.
- 3 **NEVER** - Plug the unit into an un-grounded electrical receptacle.
- 4 **CAUTION** - The Electrical Outlet must be a GFI (Ground Fault Interrupt). If you are unsure the receptacle is grounded, contact a certified electrician.
 - a. **CAUTION** - If the Power Outlet is damaged, have a certified electrician repair the outlet.
 - b. **NEVER** - Touch the electrical plug or unplug the unit with wet hands or while standing in a wet environment.
 - c. **NEVER** - Allow the electrical power cord to lie in water while cleaning.
 - d. **NEVER** – Unplug from the receptacle by pulling on the cord, always grasp the plug itself Make sure the unit is unplugged.
- 5 **NEVER** - Touch the system with wet hands or while standing in a wet environment.
- 6 **NEVER** - Allow the machine to get wet as electrical shock may occur.
- 7 **CAUTION** - Use extra caution when using the system around water (Swimming Pools, Spas, Toilets, Etc.)



Fig. 2

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8 **DO NOT** - allow the electrical power cord or Steam Hose to be run over, stepped on or have something placed or dropped on it.

9 **DO NOT** - allow the Electrical Power Cord or Steam Hose to be caught in a closed door or pull over a sharp corner.

10 **CAUTION** - Turn off all controls prior to unplugging the unit.

11 **ALWAYS** - wear long sleeves, long pants, eye goggles, and gloves while operating your cleaner.

12 **CAUTION** - Make sure all attachments are secured before activating the gun.

a. **CAUTION** - Only operate the unit when it is in a Horizontal position.

13 **WARNING** - To prevent scalding or burning, ALWAYS keep your hands and body away from the nozzle tip during operation and wear appropriate protective clothing.

a. **DO NOT** - touch the steam nozzle while in use, or until after it cools.

b. **DO NOT** - grab the hot steam hose without appropriate gloves.

14 **NEVER** - Point or direct the wand or steam at any person, animal or electrical outlet or anything which could be damaged.

15 **DO NOT** - move or lift the machine by pulling on the electrical cord.

16 **DO NOT** - move or lift the machine by pulling on the steam hose or gun.

17 **DO NOT** - bend the steam hose past the 2" bend radius. This will shorten the life of your hose.

18 **DO NOT** - use you Vapor Steam Cleaner if it has been dropped or damaged.

19 **DO NOT** - allow the Vapor Steam System to become wet.

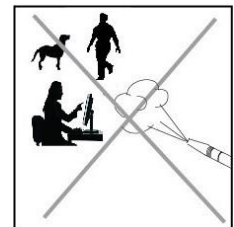
20 **DO NOT** - operate without water, this will damage the cleaner's heating element, low water sensor and/ or pump.

21 **DO NOT** - fill the water reservoir under a water tap. Always use a funnel and pour from a measured container so as not to over fill the reservoir. Consult the machine specifications to determine the reservoir capacity.

22 **NEVER UN-SCREW** - the boiler fill cap or drain plug while water is still hot or there is pressure in the unit as this may result in a dangerous release of steam or water which can cause a scalding hazard.

a. By activating the trigger on the gun will help dissipate pressure in the boiler

23 **CAUTION** - Hand tighten the boiler fill cap.



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- a. **DO NOT** - over tighten as this will lead to premature failure of the sealing gasket.
- 24 **DO NOT** - run chemicals through system, this could be harmful to people and the cleaner.
- 25 **CAUTION** - Use caution when working in confined spaces, as the steam could cause debris to kick back towards you and the steam may seem greater.
- 26 **DO NOT** - use this unit to clean items that may be harmed by steam or linger too long on surfaces that may cause damage.
- 27 **DO NOT** - leave this unit unsupervised when in use or while cooling.
- 28 **DO NOT** - allow children to use or handle machinery.
- 29 **CAUTION** - Replace worn or damaged power cords, gaskets and “O”-rings.
- 30 **DO NOT** - try to repair your machine, contact an Authorized Service Company or the factory. Retain your box for shipping.
- 31 **DO NOT** - allow objects to get into the output nozzle. Do not try to operate the Vapor Cleaning System with any of the openings blocked. Keep openings free of dust, lint, hair, or anything which may reduce the flow of Vapor
- 32 **CAUTION** - Always keep all parts of the body away from the output nozzle, moving parts.
- 33 **CAUTION** - Extra care must be taken when using the unit on stairways.
- 34 **CAUTION** - Never use the Vapor Cleaner to clean animals.
- 35 **CAUTION** - If the “Air Vent Cap” becomes damaged or is lost, DO NOT replace with any other cap as it is not a pressure cap. Please reference the service part section of this manual and contact Therma-Kleen® for a replacement.
- 36 **ALWAYS** - Turn off unit when not in use – and allow to cool before storing.
- 37 **ALWAYS** - Unplug the Vapor System Electrical Cord when the system is not in use.
- 38 **ALWAYS** - Completely empty all water from the unit when not being used.
- 39 **NEVER** - Transport the unit with any water remaining in the machine.
- 40 **NEVER** - Leave the unit outside or allow it to be exposed to Freezing Temperatures.
- a. Freezing will severely damage the unit, internal components and hose.



WARNING:

Your Therma-Kleen Vapor Steam Cleaner **MUST BE PLUGGED INTO A 20 AMP GFI GROUNDED OUTLET**, or electrical shock can occur. Check with a certified electrician if there is any doubt that the outlet is grounded. Do not modify the Power Cord/Plug provided with the Therma-Kleen Vapor System. If it will not fit the outlet, have a properly grounded outlet installed by a certified electrician.

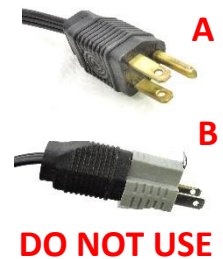


NOTE:

If an electrical extension cord is used with this system, it must be at a minimum, 12-gauge, 3 wire, grounded, SJ Quality, 60 Degree C, less than 50 ft. long.

WHY THIS UNIT MUST BE GROUNDED:

If the unit should malfunction or break down, grounding provides a path of least resistance for the electrical current to pass, reducing the risk of electrical shock. All Therma-Kleen units are equipped with a power cord with an equipment grounding conductor and plug. The plug must be inserted into an appropriate outlet which is properly grounded in accordance with national & local electrical codes and ordinances.



Therma-Kleen® units are designed for use with a normal 110/120-volt 20 Amp GFI circuit and has a grounded cord and plug such as what is illustrated in picture “A”. In no cases should a “2 prong” adaptor (which is illustrated in picture “B”) plug be used to adapt “3 prong” grounded plug to an ungrounded electrical outlet.

DO NOT remove the ground prong on the power cord. This will void the warranty on your machine and can be dangerous because it does not protect the user.

ELECTRICAL REQUIREMENTS:

This unit must be plugged into a 120 Volt, 20 Amp GFI circuit. Always wear gloves, goggles, long sleeve coat or shirt and long pants or coveralls.



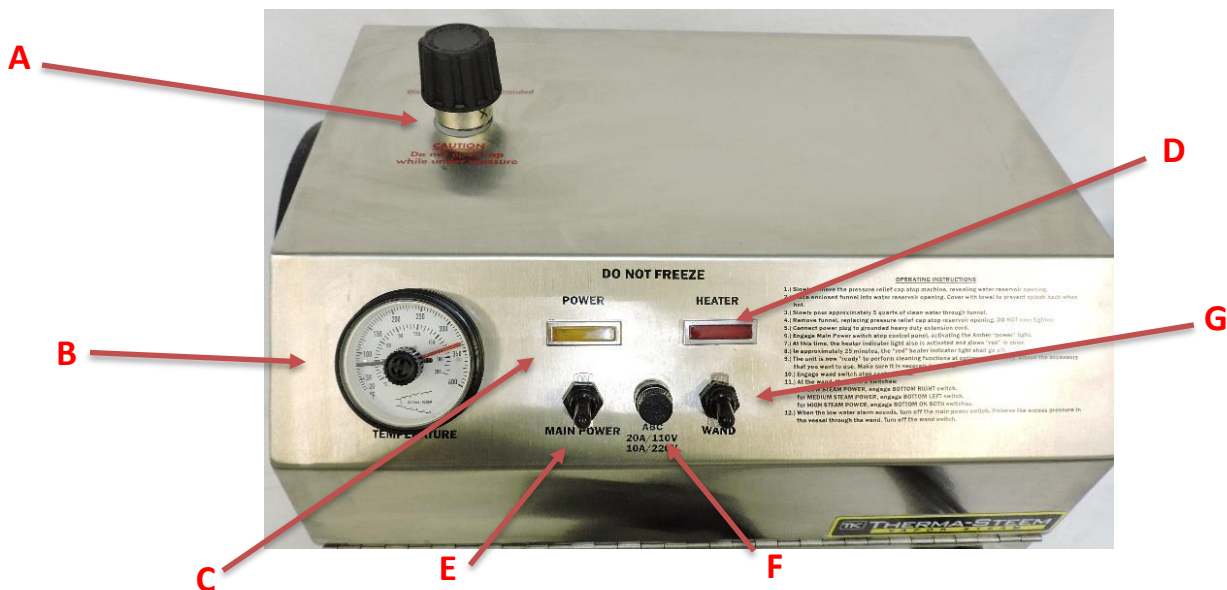
OPERATING INSTRUCTIONS:

- 1 Make sure the unit is unplugged.

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- 2 Make sure that both switches are in the “OFF” position.
- 3 Slowly remove the fill cap located on the top of the unit.
- 4 Using the funnel, carefully fill the unit with distilled water into the opening (approx. 5 quarts)
- 5 Replace the cap and hand tighten. **DO NOT OVER TIGHTEN.**
- 6 Plug the unit into a grounded 120-volt electrical outlet. (This service may be 220 volts where applicable.)
 - a) Removing the ground on the electrical cord is not only dangerous but will void your warranty. If an extension cord is used, it should be at least 12-gauge and no longer than 50 ft.
- 7 Turn the main power switch “ON”. The amber and red lights will go on. Make sure the red line on the temperature gauge is at 330°F. If the red line is less than the actual temperature indicated by the black line, the heater will not activate or come on.
- 8 Wait until the heater switch light (the red light) goes out. The temperature gauge should read around 330°F. (Time: approximately 25 minutes to heat.)
- 9 Turn the wand switch to the “ON” position. This will activate the wand. **CAUTION:** When the wand is engaged by one of the switches, excess condensation in the system will bleed out before steam occurs (this will last only a few seconds.)
- 10 Now the system is ready for cleaning. Make sure any accessory is securely fastened before cleaning.

Control Panel Diagram:



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- A - Pressure relief fill cap with gasket #3492
Remove for access to water tank
- B - Combistat. #3240
This is a temperature gauge and an adjustable high limit switch all in one.
- C - Power indicator light. #3018
- D - Heater indicator light. #3019
- E - Main power on/off switch. #3021
- F - Machine fuse. 20-amp ABC 250VAC #3503
- G - Wand power on/off switch. #3021

WAND CONTROL: LOW, MEDIUM AND HIGH

- LOW: By depressing the LEFT BOTTOM switch ONLY (1 dot) on the wand you will get LOW steam pressure.
- MEDIUM: By depressing the RIGHT BOTTOM switch ONLY (2 dots) on the wand you will get MEDIUM steam pressure.
- HIGH: By depressing BOTH BOTTOM switches on the wand will get you HIGH steam pressure.

To maintain your hose, please do not over bend the hose or over bend the hose at the gun connection. This will shorten the life of your hose.

WAND SWITCHES

ORANGE: Low Pressure RED: Medium Pressure



DEPRESS BOTH SWITCHES: together for HIGH steam pressure

NOTE: Because the valve is located in the machine, there is a slight delay from when the switches are activated on the Wand Control until steam is present.

CLEANING PRESSURES:

LOW STEAM PRESSURE SETTING: This setting is ideal for light cleaning jobs such as floors, bed bugs and mattresses.

MEDIUM STEAM PRESSURE SETTING: This setting is generally suited for general cleaning.

HIGH STEAM PRESSURE SETTING: This setting is best suited for heavily soiled areas. It can be used to pre-steam heavily soiled areas, to preheat towels and to blow out dirt from hard to reach areas, to name just a few.

REMINDER: When you first open the gun, you will experience a wet condensation for a short period of time until the lines fill with steam.

CAUTION: The higher the setting, the quicker your unit will go to “low water”.

CLEANING IDEAS

- 1.) Always work from the top down. This will keep your clean surface free of loose grease and dirt.
- 2.) Clean the small tight spaces first with the smaller brushes. Then work your way into the larger areas with the larger brushes. Remember to wipe clean with a cloth, as needed, to remove loose grease and grime while it is still warm. This will also remove the grease and grime below the surface. Do not apply too much pressure on the gun, let the steam and the brushes do the cleaning.

PRE-STEAM: Always pre-steam the surface if it is heavily soiled. With the nozzle, or a brush, set the gun on the high pressure setting and steam the surface for a few seconds. Hold the attachment close, but not directly on the surface.

LET THE STEAM DO THE WORK: Work at a pace that will allow the steam to loosen the grease or grime, but remember not all surfaces are designed to handle steam temperatures.

OPERATING TEMPERATURES:

The temperature of the steam in the vessel is generally between 300-330°F. 330°F is the maximum temperature this unit can achieve. This is controlled by the high limit red line on the temperature gauge. At this temperature, your unit will also achieve its highest pressure of 100 PSI. It is very easy to stay at the 330° range if you open and close the gun


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while cleaning. The closed position will allow the unit to reheat to greater temperatures before the wand is opened again. If you clean with the wand in the open position for a sustained period of time, you will begin to see the temperature and consequent pressure drop more quickly.

LOWER TEMPERATURE CLEANING:

There may be times when you want the temperature to be lower than the 330°F. At these times you may want to adjust the red line on the temperature gauge to a lower temperature. When you decide which temperature you want, then turn the red line to the desired temperature setting. When the unit is “ON” the heating element will “CUT OFF” when the desired temperature is attained. The water temperature in the vessel will never climb above that particular temperature setting unless you choose to re-set to a higher desired temperature. Please remember if you do change this original setting, your unit will also attain less pressure.

PRESSURE FILL CAP:

The fill cap on your unit also serves as a pressure relief safety cap. This cap is designed to release excess pressure should your unit climb above the normal working pressure. **DO NOT OPEN THIS CAP WHILE IT IS UNDER PRESSURE.** When you wish to open the cap, **RELEASE THE PRESSURE FROM THE BOILER BY OPENING THE WAND**, depressing any switch at the wand control, **ALLOWING THE TRAPPED PRESSURE TO EXIT THE SYSTEM. ONLY WHEN THIS HAS BEEN ACHIEVED, YOU MAY SLOWLY OPEN THE CAP.** When cooled, open the cap while covering it with a towel to deflect any excess steam released.



TIGHTEN SECURELY:

When you thread on the filler cap, make sure it is secure without applying too much pressure as this will crush or damage the gasket. Let the gasket seal the system.

MAINTAIN YOUR PRESSURE FILL CAP:

Inspect the seal or gasket under your cap regularly for wear and tear. You will want to maintain a good seal between the cap and the threaded fitting. Replace gasket as needed.

DO NOT SUBSTITUTE THE THERMA-KLEEN CAP FOR ANY OTHER CAP:

The cap was specifically designed for your unit. DO NOT SUBSTITUTE ANY OTHER CAP FOR THE ORIGINAL FACTORY SUPPLIED WITH YOUR UNIT.

View of the Fill Cap



Gasket



HOW TO REFILL A HOT THERMA-STEEM:

When a high pitch sound is audible, and the heater switch light goes out, your THERMA-STEEM® is low on water.

NEVER add a cleaning agent to the unit. Doing so can result in damage to the tank, boiler and heating unit.

NEVER use water from a water softener as they use an ion exchange process that replaces calcium and magnesium minerals in the water with sodium. Sodium can significantly shorten the lifespan of the boiler system and internal components of your vapor steam unit.

TO FILL:

- a.) Expend the remaining steam in the unit by turning the power switch “OFF” and continuing to clean until the pressure drops completely.
- b.) Turn the Wand power switch to the “OFF” position.
- c.) Unplug the unit from the electrical source. Wait for it to cool.
- d.) Place a towel over the top of the filler cap and slowly open it to release the remaining steam in the system. If the unit is still hot, DO NOT FILL, hot water could splash out of the opening. Use caution.



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- e.) When cool remove the filler cap and refill with distilled water into the opening using a funnel. Carefully pour the water into the system making sure not to spill inside the body of the machine. Use the dip stick to make sure you do not over fill.
- f.) Hand-tighten the filler cap.
- g.) Plug the unit into a grounded outlet.
- h.) Turn the Main Power switch “ON”. Make sure the switches on the wand are closed.
- i.) Turn the Wand switch “ON”.
- j.) Wait for the red “Heater” light to go out. This indicates that your unit is ready to use.
- k.) You are ready to clean.

BOILER:

DISTILLED WATER:

We recommend that you use distilled water with you steam cleaner. This would eliminate the possibility of creating hard water stains while you are cleaning and prevent excessive build-up of mineral deposits around the heating element in the boiler. If you are using tap water, remember that the life of the heating element may be shortened due to mineral/scale build up. The heating element will not be covered under the warranty if this situation happens.

FLUSHING OUT THE BOILER:

Located under your unit is a plug that, when unscrewed, will drain your boiler. Please use caution and only do when the unit has cooled down. Refer to the temperature gauge to determine the water temperature in you unit. (Your boiler can retain its heat for several hours.)

CHEMICALS:

VERY IMPORTANT: NEVER INTRODUCE CHEMICALS INTO THE SYSTEM.

It shall void your warranty and could result in malfunction and/or damage to your system. Also, note that our service department will not work on machines that have chemicals in the system.


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DRY TANK:

VERY IMPORTANT. NEVER ALLOW THE MAIN POWER SWITCH TO BE “ON” WHEN THERE IS NO WATER IN THE BOILER. THIS WILL OVERHEAT AND DAMAGE YOUR LOW WATER SENSOR AND HEATING ELEMENT.

SHUTTING DOWN:

1. Turn off the Power
2. Unplug the power cord from the electrical outlet.
3. Release steam pressure.
4. Drain any water which may be in the unit.
5. Store in a warm dry location.
6. NEVER store the unit in a freezing environment. Frozen water will destroy the unit.
7. NEVER ship or transport the unit unless it is completely empty of all water.

MAINTENANCE:

BOILER:

The only maintenance required on the THERMA-STEEM® is to flush out the mineral deposits from the boiler every other week. A good way of monitoring the mineral build-up in the tank is by “bleeding” the system. If the water residue from the wand is discolored in a towel, flush the boiler, using tap water, until the water runs clear.

Removing hard water scale is often the most common and overlooked of vapor steam cleaner maintenance, because it involves the part of the unit not seen. As water is heated and converted to steam any minerals in the water can be left behind in the form of mineral deposits/scale in the boiler tank. This will at some point impede the flow of water and steam through the system. Descaling the boiler is not as difficult as it may seem.

DESCALING: There are two benign methods of removing scale.

Baking Soda:

- i. Empty the tank
- ii. Mix 1 ½ ounces of baking soda with one quart of distilled water.
- iii. Fill the empty tank with this mix
- iv. Tighten the cap and allow the unit to heat up and stay warm for 1 to 2 hours.



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- v. Run the unit for about one minute, turn off and unplug the power cord and allow the unit to cool, usually about for 3 to 4 hours.
- vi. Remove the drain plug and empty the tank.
- vii. Flush the tank as many times as necessary to remove all debris in the tank.
- viii. Reinstall the drain plug.

Vinegar:

- i. Empty the tank.
- ii. Mix together a solution of ½ distilled vinegar & ½ distilled water.
- iii. Using the funnel, fill the water tank with this solution.
- iv. Turn on the unit, allow it to heat up and steam out about ½ of the mixture.
- v. Turn off the unit and let it rest for 30 minutes.
- vi. Repeat this process until the steam flow returns to normal (could be 2 to 3 times). NOTE there is an odor associated with this process.

After each use the water tank should be emptied. We realize that it's tempting to just leave the water in the tank for the next cleaning go-around but taking the time to empty the tank before storing will lessen scale build up from mineral deposits. Not to mention avoiding the musty odor that can be produced from steaming with stagnant water.

HOSE MAINTENANCE:

It is very important to protect the integrity of the hose by not exceeding the bend radius of 2" as it could cause premature failure which is not covered under the warranty. If a hose is subject to excess wear and tear it could fail and will not be covered under warranty. Please inspect your hose and cover on a regular basis for any wear.

DO NOT USE THE HOSE IF DAMAGED. DO NOT PULL OR MOVE THE MACHINE BY PULLING/TUGGING ON THE HOSE.

ACCESSORIES MAINTENANCE:

We recommend cleaning your accessories on a regular basis. You can do this by several methods.

- 1) Use the nozzle, with or without a small circular brush.
- 2) Use another nozzle to hold small brushes to be cleaned.
- 3) Accessories may be cleaned in a dishwasher.



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STAINLESS STEEL BODY:

The housing and handle on your unit are made from stainless steel. We recommend that you preserve the finish by regularly cleaning and polishing the exterior of your unit with a good stainless-steel cleaner. Rub carefully so as to not rub off the instructional decal.

ELECTRICAL REQUIREMENTS:

Your THERMA-STEEM® unit draws approximately 15 amps/110. Always make sure that your MAIN POWER SWITCH is in the “OFF” position when you plug your unit in. If possible, plug the unit into a designated electrical outlet as the combined electrical amperage with other equipment on the same electrical circuit may cause a circuit breaker to trip.

EXTENSION CORDS:

Please use a 3-prong electrical extension cord rated for a minimum of 15 amps/110 volts. 10 amps/220 volts

DO NOT use an extension cord longer than 50 ft. which could cause longer heat up times. DO NOT remove the ground on the power cord. This will void the warranty on your machine and can be dangerous because it does not protect the user.

FUSE:

Your unit has a fuse to protect the electrical system. If you need to replace the fuse.

20-amp ABC ceramic fuse for 110 volts on control panel

10-amp ABC ceramic fuse for 220 volts on control panel

Your fuse holder has a drip cap for moisture protection, but DO NOT SPRAY THE FUSE HOLDER WITH THE SPRAY & TURN OFF MACHINE BEFORE REMOVING FUSE.

ACCESSORIES:

YOUR MACHINE SHIPS WITH THESE STANDARD TOOLS:

- (1) 14’ Hose and Wand with Low, Medium & High Switches 3109
- (1) Large Triangle Brush w/Clips 3111
- (1) One Hole Nozzle 3108
- (1) Large Floor Brush w/Clips and extensions 3116
- (1) Squeegee 3570
- (3) 1” Round Nylon Brush 3113

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- (3) 1" Round Brass Brush 3114
- (3) 1" Round Stainless Steel Brush 3115
- (1) 2-1/2" Round Nylon Brush 3112
- (2) 19" Extensions 3110
- (2) Microfiber Towels (1) Small & (1) Large 3534/3910
- (2) Terry Cloth Towels 3119
- (1) Funnel 3499
- (1) Pair of High Temperature Gloves 4052

OPTIONAL ACCESSORIES:

- 1" Round Horse Hair Brush 3891
- 2-1/2" Round Horse Hari Brush 3892
- 2-1/2" Round Brass Brush 3890
- 2-1/2" Round Stainless Steel Brush 3894

ACCESSORIE DESCRIPTION:

Each of your accessories and attachments are recommended of the following specific cleaning tasks:

Triangle Brush:



The Triangle Brush may be used for diverse applications on many surfaces. It can be used on almost any dry surface type including (but on limited to), Fabric, All Metals, Ceramic, Stone, Porcelain, Vinyl, Leather and Plastic.

Generally, use of the triangle brush is dictated by the size of the object or surface being cleaned, rather than a specific surface type. The Triangle Brush is used when the surface is too large to be cleaned with the Detail Tool or too small to be cleaned by the Wide Brush. The Triangle Brush can also be used on large areas that are too dirty for the Wide Brush to work effectively.



Use of a Cloth: The Triangle Brush can be used with or without a cloth over it. When used without a cloth on a hard surface, the surface will need to be wiped with a clean, dry cloth immediately after passing over the surface with the Triangle Brush.

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Rough Textured surfaces: It is more desirable to clean without a cloth or mitten over the brush.

Fabrics: A cloth is or is not necessary when cleaning fabrics. Placing a cloth over the brush is not necessary when the desired goal is to sanitize the fabric more than to clean it. To remove certain carpet stains, place a terry cloth or microfiber cloth on the stain and gently apply the brush to the stain. The stain will incrementally be driven into the cloth. Gradually move the cloth to absorb the stain into the clean areas of the cloth, until the stain is gone.

Most of the time, better results will be achieved by placing a terry or microfiber cloth over the Triangle Brush. This is done by placing the cloth on a smooth surface and neatly folding the cloth over the brush. Push down on the clips (located on top of the brush) and tuck the cloth underneath. Release the clips and the cloth will be securely fastened to the brush. When covered with an absorbent cloth, cleaning becomes a one-step process. Simply wipe the surface slowly and all dirt and debris will be driven into the cloth, hard surfaces will usually dry in less than a minute.

WIDE BRUSH:



The 12" Wide Brush is used to clean larger areas. The Wide Brush is faster than a mop and certainly does a more effective job. The Wide Brush is generally used more for daily or weekly cleaning & sanitization rather than restoration.

MATERIALS – Fabrics, Metals, Ceramic, Stone, Porcelain, Vinyl, Leather, Plastic, Wooden Floors, Waxed Floors – Carpet (200 degrees or less for Nylon carpets), Upholstered Chairs, Draperies, Etc. or any other surface that extreme heat does not harm the surface which you intend to clean.

USE – the size of the area more than the type of surface dictates the use of the Wide Brush.

CLOTH – the wide brush can be used with or without a cloth over the it. When used without a cloth over it, on a hard surface, the surface will need to be wiped with a clean, dry cloth or mop immediately after passing over the surface. When cleaning a rough textured surface, it is more desirable to clean without a cloth over the brush. Fabric surface – same as Triangle Brush.



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VAPOR VOLUME – adjust the volume to about 3/8. Occasionally more volume will be required, however volume should always be less than ½. If the volume is turned too high the surface will become oversaturated, requiring more time to dry, also it will become difficult for the unit to maintain pressure for extended periods of time

SQUEEGEE:



The Squeegee can be used on Glass, Windows, Countertops and other smooth surfaces. As with the other tools, the Squeegee will both clean & sanitize.

Glass Cleaning – Adjust the volume to ¼ or less. Start at the top of the window in one corner and pull down to the bottom of the glass & repeat until the entire surface has been cleaned. Turn off & squeegee dry & wipe the bottom of the pane or sill with a clean dry cloth. Excessive vapor volume will result in too much water on the glass, simply turn down the vapor volume.

Smooth Surfaces – Adjust the volume to ¼ or less. Start on one corner and slowly proceed from one side the other. Wipe with a clean dry cloth when excessive water becomes present.

DETAIL TOOL:



Use – to clean small areas that are difficult or impossible to clean using any other method. You will be able to clean areas which are too small to clean with a tooth brush. Example – Faucets, Fixtures, Dishwasher Edges, Stains in Carpets, Car Interiors, Deodorize, Etc.

The detail tool should almost always be used with the detail brush attached to the end of the detail tool. Exceptions to this are when cleaning condensers, radiators, artificial plants and real plants which are sprayed with a cool vapor from a distance is the preferred method of cleaning.

Operate this tool at ¼ volume. For best results first gently rub the surface with the end of the tool, heating it. Make a second pass, after the surface is heated and dirt & debris will be completely removed. Once clean wipe the surface with a dry absorbent cloth. Clean hard to reach areas and corners first, then proceed with the appropriate larger brush.

NYLON DETAIL BRUSH:

1" Dia.

2-1/2" Dia



Use - to be used where there is a possibility of scratching the surface, such as Bath Tubs, Door Jambs, Grout, Glass Shower Doors (Pre-steam) Etc. When in doubt about which brush to use, the Nylon brush first. This brush can generally be used on almost any surface except on flat latex wall paint and

non-water proof ceiling tiles.

STAINLESS STEEL DETAIL BRUSH:

1" Dia.

2-1/2" Dia.



Use - Stainless Steel is hard and should only be used on surfaces that are scratch resistant. Always test in a small area before proceeding. This brush can be used on surfaces such as masonry, certain tiles such as Quarry tile and high quality stainless steel. This brush can be used to remove

some painted areas if the surface will undergo a sanding process prior to repainting. If in doubt test an out of the way area first. The stainless-steel brush will also leave a black mark, which is difficult to remove on certain types of tile.

BRASS DETAIL BRUSH:

1" Dia

2-1/2" Dia



Use - This brush can be used on many metal surfaces as well as on some Tile, Ovens, Etc. Always test on an out of the way area before to Use. Brass is softer than stainless steel and will consequently wear faster. This brush works well on oxidized

aluminum surfaces, it will however, have a polishing effect and make the surface look brighter than areas which have not been cleaned with this tool.

HORSE HAIR DETAIL BRUSH:

Optional

1" Dia.

2-1/2" Dia.



Use - Most commonly used on material which is delicate and has fine details. The Natural Horse Hair is naturally soft, durable and nonabrasive, and packed with thousands of genuine horse hairs which tend to wrap around a surface and because they are fine, they tend to


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penetrate deeper than other brush materials. They are perfect for delicate jobs such as leather, vinyl, cloth, porcelain, scratch sensitive plastic, Jewelry, Automotive Detaining as it works well by gently cleaning all Interior surfaces, air vents, convertible tops, etc. They are generally considered safe on all surfaces, but it is best to test on an inconspicuous area before beginning.

TROUBLE SHOOTING:

PRESSURE LESS THAN NORMAL:

Your unit is designed with two solenoids that control the switches at the wand. If you experience lower pressure than normal or notice that the steam doesn't stop when you shut off the switches, you may have a piece of debris lodged in the solenoid, so it will not operate correctly. If this is the case, cool down the unit, unplug the cord from the power and open the cabinet by unscrewing the screw on the back.

The two solenoids are located at the end of the boiler. Slide the metal clamp off the top of the solenoid and slide the top of the solenoid off of the metal bottom (piston). At this point, unscrew the piston to reveal the solenoid cavity, this will allow you to clean the center area. Blow into this area with compressed air or remove the debris with a tool. Replace the solenoid parts and re-assemble the unit. This must be repeated for both solenoids if no debris was found in the first. We recommend only doing one at a time.

BLOWING FUSES:

If you blow a fuse on this unit

- 1st: Check and make sure you are not plugged into an outlet with more than one appliance.
- 2nd: Have the right size fuse in the unit. 20 amp. ABC ceramic fuse for 120 volts. Or 10 amp ABC ceramic fuse for 240 volt. Make sure the fuse holder cap is on correctly and the fuse holder is in good shape.
- 3rd: Replace the heater and the heater gasket, if needed.


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Limited Warranty

THERMA-KLEEN®, Inc. as manufacturer, warrants to the original purchaser, each new machine for a period of one year from date of shipment from the factory, to be free from defects in material and workmanship under normal use and service. “Normal use and service” means not in excess of recommended maximum pressures, temperatures, incorrect fuels, or handling fluids not compatible with component materials, as noted in THERMA-KLEEN®, Inc. manuals. This warranty shall not apply to any machine or component which has been repaired or altered to adversely affect the performance or reliability of this product. The heating element on the THERMA-STEEM® models will not be covered if distilled water is not used or scale is present. The boiler has a lifetime warranty.

Neither this warranty nor any implied warranty apply to damage or harm caused by any or all of the following: 1.) freight damage; 2.) freezing damage; 3.) damage caused by parts and/or accessories or components not obtained from or approved by THERMA-KLEEN®, Inc.; 4.) any consequential or incidental damages arising from the use of a THERMA-KLEEN®; 5.) damage due to misapplication or misuse. Pump valves and bearings on the Ultra models are not warrantied if they are broken.

The liability of THERMA-KLEEN® under the forgoing warranty is limited to repair or replacement of a defective component or part at THERMA-KLEEN®’s option. The defective component will be returned to the original manufacturer for judgment as to whether the component failed under normal operating conditions and therefore replaced or misused. These parts must be returned to the regional office or manufacturing facility within the warranty period, at the sole expense of the purchaser. This warranty is limited to furnishing of the parts for replacement exclusive of installation labor. The liability of THERMA-KLEEN®, Inc. under any theory of recovery (except any express warranty where the remedy is set forth in the above paragraph) for loss, harm or damage, shall be limited to the lesser of the actual loss, harm, damage, or the purchase price of the involved machine.

THERMA-KLEEN®, Inc. expressly warrants its machines as above stated. There are no other express warranties. Any implied warranties, including warranty of merchantability or of fitness for a particular purpose or merchantability when this product is put to an industrial, commercial or rental use. Before using any product, customer shall determine the suitability of the product to comply with all local and state regulations for its intended

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purpose and the customer assumes all risk and liability whatsoever in connection therewith.

No person including any dealer or representative of THERMA-KLEEN®, Inc. is authorized to make any representation or warranty concerning THERMA-KLEEN®, Inc. products on behalf of THERMA-KLEEN®, Inc. or to assume for THERMA-KLEEN®, Inc. the obligations contained in this warranty. THERMA-KLEEN®, Inc. reserves the right to make changes in design and other changes and improvements upon its products without imposing any obligations upon itself to install the same, upon its existing products or products then in process or manufacture.

To receive warranty the Warranty Card must be filled out within 10 days of receiving your unit.

Go to www.THERMA-KLEEN.com