



Therma-Steem® Model XL1

# THERMA-KLEEN®

## Operators Manual

Therma-Steem® Model XL1



**Made in the USA**



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January 14, 2019



**Therma-Steem® Model XL1**

**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.



**Therma-Steem® Model XL1**

**SERVICE INFORMATION:**

**Therma-Steem® Model XL1 & XL2**

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 XL-1 & XL-2 Model.

**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](http://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

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## Therma-Steem® Model XL1

### **MACHINE SPECIFICATIONS:**

Water pressure:	155 psi / 10.7 bars
Maximum water temperature:	365° F / 185° C
Size:	23"W x 38" L x 30" H (includes side brackets, 17" without)
Weight (Empty):	260 lbs.
Electrical Requirements:	208/220V, 480V, 575V, 3 phase
Amps:	208/220 volt: 60 amps 480 volt: 23 amps 575 volt: 20 amps
Heating Element:	20 kW
Boiler Capacity:	5 gallons
Reservoir Tank:	7 gallons
Locking Wheels:	5"
Semi-pneumatic Wheels:	10"

### **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 into 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:

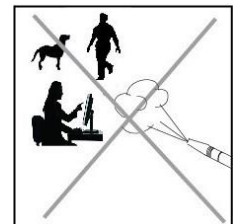
- 1 **ALWAYS** - Check the machine, power & steam hose for damage prior to start-up. If damage is detected, it must be repaired prior to use.
- 2 **CAUTION** - Before use check the electrical cord for damage, wear & tare, cuts or abrasion.
  - a. **DO NOT** - use your machine with a damaged electrical 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.





Fig. 2

**Therma-Steam® Model XL1**

- 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.)
- 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.



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- 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.
- 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. 



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- a. Freezing will severely damage the unit, internal components and hose.

### **WARNING:**

Your Therma-Kleen Vapor Steam Cleaner **MUST BE PLUGGED INTO A 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:**

The 25 ft. length of the input power cord should not normally be increased. If additional length is required, consult the national & local electrical codes and ordinances as well as seeking the advice of a qualified electrical engineer before proceeding.

### **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. (Plugs are not normally supplied for higher voltage machines). An appropriate plug must be inserted into an appropriate outlet which is properly grounded in accordance with national & local electrical codes and ordinances.

Therma-Kleen Model XL1 are designed for use with a normal 208/240, 480, 575 volt 3-phase grounded circuit.

### **OPERATING INSTRUCTIONS:**

Note: See machine control panel for power requirements for your particular model prior to operating this machine. Always wear gloves, goggles, and long sleeves and pants.

1. Before plugging in the electrical cord, Check to insure ALL switches are in the "OFF" position.

**NOTE:** when the machine is plugged into an electrical outlet, there is always electrical power going to the machine.



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2. Remove the air vent cap from the reservoir (on top of machine). Using the funnel provided. Fill the reservoir with clean water, from a measured container, taking care not to spill or overfill the reservoir tank (approx. 7 gal. when empty). Distilled water is recommended.
3. Plug the Vapor Steam Cleaner into an appropriate grounded outlet.
4. Turn the MAIN Power switch to the "ON" position.
5. Insert the 4 prong (208/220, 480, 575 volt), 3 phase power cord plug into an appropriate electrical socket
6. Insert the 4 prong, 3 phase power cord plug end into an appropriate electrical socket. Plug end may have to be supplied by the customer to match the existing socket in the building. Make sure the voltage is still correct.
7. Then turn the MAIN POWER switch to the "ON" position. The green light will then activate.
8. If the boiler requires water, the pump will activate, indicated by the blue light and a "vibrating-type" sound. The boiler will fill with approx. 4 gallons of water. It will take approximately 30 minutes to fill the boiler when the boiler is empty.
9. After the pump sound ends and the blue light goes out, indicating the pump has stopped, it is now safe for you to activate the HEATER switch. **IMPORTANT: NEVER** turn "ON" the HEATER switch until the pump has stopped, indicating the boiler is full.
10. Temperature reading is indicated by temperature gauge on panel. Temperature is set by factory. **DO NOT** tamper with.
11. You may now top off the reservoir (at opening) with water, if desired, replacing the reservoir vent cap.
12. When the boiler is at maximum temperature (about 365° F), the amber HEATER light will cycle ON and OFF, indicating highest temperature. It will take approximately 15 minutes to reach maximum temperature.
13. Place attachments on gun, ensuring that the connections are hand tightened.
14. Then, open the flow of steam with the steam control knob situated on the side of the machine.
15. When the ADD WATER white light illuminates, the reservoir is empty. You may elect to remove the reservoir vent cap and refill with water and resume cleaning.
16. When the blinking red light is activated, this indicates low water in the boiler, the alarm will sound and the heater is de-activated. To re-activate the heater, fill the reservoir. The pump will then fill the boiler from the reservoir. When the boiler has cooled sufficiently (approx. 340°F), the reset button (located under the red



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indicator light) can then be pushed, which will then re-activate the heater. An empty boiler takes approx. 30 minutes to fill.

**SHUT DOWN:**

1. Turn HEATER and MAIN power switches to “OFF” positions
2. Unplug machine.
3. Release steam from boiler by depressing trigger on gun.
4. Close the steam control knob on the side of the machine.
5. Unscrew the steam hose before storing on brackets.
6. Drain any water which may be in the unit.
7. Store in a warm dry location.
8. **NEVER** store the unit in a freezing environment. Frozen water will destroy the unit.
9. **NEVER** ship or transport the unit unless it is completely empty of all water.



**CONTROL PANEL;**

- A On/Off switch (left) for Main Power with GREEN indicator light (right).
- B On/Off switch (left) for heater with AMBER indicator light (right).
- C Add water WHITE indicator light.
- D BLUE indicator light comes on when the boiler is being filled.
- E Low water (RED blinking) indicator light.
- F Reset button for low water alarm.
- G Fuse holder with ABC 3 amp/ 110-volt fuse
- H Temperature Control-DIN.
- I Water Reservoir vent cap (on top of machine, not shown).
- J Operating Instructions (on the top of machine, not shown).



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**STEAM CONTROL KNOB:**

This knob is located on the side of the machine and controls the volume of steam. Turn counter-clockwise to increase volume, clockwise decreases volume. For maximum pressure and temperature, leave the knob turned to the highest pressure setting. Always close when you are finished cleaning and/or when you want to remove the hose.



**RESERVOIR TANK:**

The reservoir tank with your unit holds approx. seven (7) gallons of water. The reservoir is designed to contain the water supply, which is fed to the boiler and additional water as the boiler calls for it. When you engage the MAIN power switch, when the boiler is empty, the boiler will require water and the pump will then turn "ON". DO NOT turn on the heater to the boiler before the pump stops pumping, indicating that the boiler is full. The blue light indicates that the boiler is calling for more water and water is pumping to the boiler. The reservoir has a reservoir vent cap, which covers the fill opening; this can be removed to add more water at any time. This cap is an air vent fitting. DO NOT substitute or replace with a garden hose fitting. Do not run the pump dry. DO NOT fill the reservoir with a garden hose. Use distilled water to protect the heating element.



**LOW WATER ALARM:**

When the reservoir is out of water and the boiler is almost empty, a low water alarm will sound, and the red light will flash to let you know that the heater has shut off and you are out of water. If you elect to refill, you may do so, but the heater will not reactivate until the temperature reads approx. 340°F, at which time you may press the reset button on the control panel to reactive the heater and resume prior working temperatures of 365°F. This sensor protects your heating element.



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### **BOILER:**

#### **DISTILLED WATER:**

We only recommend the use of distilled water. This would eliminate the possibility of creating hard-water stains while you are cleaning and prevent excessive build-up of mineral deposits 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 and/or the boiler will not be covered under warranty if this situation happens.

#### **CHEMICALS:**

**VERY IMPORTANT: NEVER** INTRODUCE CHEMICALS INTO THE SYSTEM.

It may void your warranty and may result in malfunction and/or damage to your system.

#### **DRAIN:**

Your machine has two drains. One is for the reservoir and the other one is for the boiler. The boiler drain plug is located underneath and toward the back (by the handle end) of the machine. The reservoir drain plug is the other. A flathead screwdriver may be used to remove plugs. This will release the water. Use caution since the water in the boiler may remain hot for a significant period of time. Replace plugs carefully.

**NOTE:** The machine must never be exposed to freezing temperatures without water being completely removed from the system. If any water remains in the system damage will occur.

### **HOSE MAINTENANCE:**

This unit is supplied with a high temperature, all stainless-steel hose. It is very important to protect the integrity of this hose by not exceeding the bend radius of 2". If a hose is subjected to excessive wear and tear, it will not be covered under warranty. Please inspect your hose and cover on a regular basis for any wear. Always remove the hose from the machine before winding the hose on the hose brackets to eliminate excess

bending. DO NOT USE THIS HOSE IF IT IS DAMAGED. DO NOT PULL OR MOVE THE MACHINE BY PULLING/TUGGING ON THE HOSE. DO NOT OVERTIGHTEN SWIVEL CONNECTOR WHEN ATTACHING THE HOSE, THIS WILL SHORTEN THE LIFE OF THE "O" RING IN THE SWIVEL.

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**COOLING FANS:**

The THERMA-STEEM® XL1/XL2 has 3 cooling fans built into the housing to reduce internal temperatures. DO NOT use this machine if you notice that the one or more of fans are not operating. DO NOT spray steam or water into the fans.

Fans are located on the sides of the machine.



**TRIGGER GUN:**

Your machine comes with a trigger gun on the steam hose. When you change the attachments, it is very important that you lock the trigger gun in the locked closed position so you cannot accidentally squeeze the trigger and release steam. To lock simply swing the red lever down toward the handle.

Locked



Unlocked



**MAINTENANCE:**

**BOILER:**

Use distilled water to prevent accumulation of mineral deposits. WARNING – Exposing the unit to freezing temperatures will damage the boiler as well as any other part of the machine which has water in it.

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. Decaling the boiler is not as difficult as it may seem.





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**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.
- 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. Remove the drain plug on the bottom of the unit.
- 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.

**STAINLESS STEEL BODY:**

The housing and handle on your THERMA-STEEM® XL1 are made of stainless steel. We recommend that you preserve the finish by keeping the machine dry and polished.

Use a good stainless-steel cleaner, being careful not to remove any instructions. DO NOT wash down or spray water on controls or fans.

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**FILTER CONNECTED TO THE PUMP:**

The filter connected to the pump (see below) needs to be checked on a regular basis. Even if distilled or filtered water is being used in this machine, the filter may still get clogged with mineral sediment. To check the filter, look for discoloration and/or detach from the pump line and see if you are able to blow air through it. If discolored or little or no air goes through, the filter should be replaced. When reinstalling a filter make sure it is installed the same way and direction as it was originally installed.



**ELECTRICAL REQUIREMENTS:**

Check your serial plate on the back of your machine to determine the voltage. Only plug your machine into the correct voltage. 220/480/575-3 phase.

**480 volt models:**

This unit draws 23 amps. Replace with 25 amp fast acting fuse. See inside panel for style.

**575 volt models:**

This unit draws 20 amps. Replace with 25 amp fast acting fuses. See inside panel for style.

If you need to replace the fuse on the control panel:

- 1.) Turn all the switches to the "OFF" position to cut the power to the machine.
- 2.) Unplug your machine from the power outlet.
- 3.) Push down and twist on the fuse cap to release the cap and fuse.
- 4.) Pull the fuse from the cap and replace with an ABC fast acting 3-amp fuse.
- 5.) Place the fuse and cap back in the fuse holder and push down while twisting. This will lock the cap into place. Make sure it is locked.

If you need to replace a fuse on the inside:

DO NOT act as a service technician.

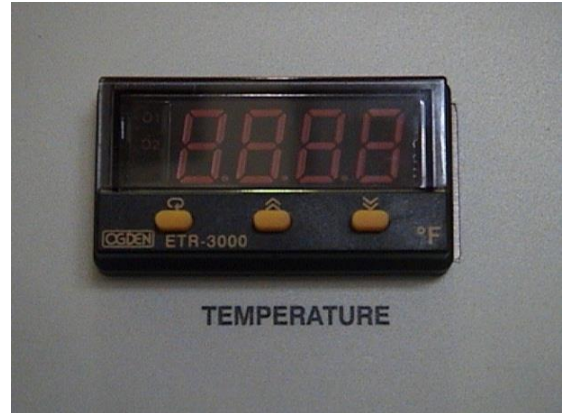
Contact an electrician to inspect and handle repairs for your machine.

If needed, call our Factory for technical service.

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**OPERATING TEMPERATURES:**

The maximum temperature in the boiler is 365°F. This is controlled by a DIN digital controller, which is located on the control panel of the machine. The temperature control is set at the factory; DO NOT tamper with. Your warranty will be voided. At this temperature, your unit will achieve its highest pressure of 155 PSI. The temperature on this model will be controlled with this component to maintain a constant temperature and pressure as it is being used.



**STANDARD ACCESSORIES INCLUDED:**

(1) - 25 ft. Stainless Steel Hose with Trigger Gun	4031
(1) - Curved Nozzle Attachment	5013
(1) - Triangle Brush	5016
(1) - Blast Nozzle Attachment	5014
(2) - Microfiber Cloth	3534
(1) - 3 ft. Extension	5009
(1) - 20" Extension	5008
(3 Each) -1" Nylon, Brass & Stainless-Steel Brushes	4010/4011/4012
(1) - 2 ½" Nylon Brush	4009
(1) - 2 ½" Brass Brush	4008
(1) - 2 ½" Stainless-Steel Brush	4102
(1) - Funnel	3499
(1) - Pair of Gloves	4052
(1) - Goggles	4053
(2) – Towels	3199

**ACCESSORIE DESCRIPTION:**

All attachable accessories for the Model XL1 use threaded ends due to the higher pressures.

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



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**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. If a cloth is to be



used, there are clips on the brush to attach the cloth. 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.

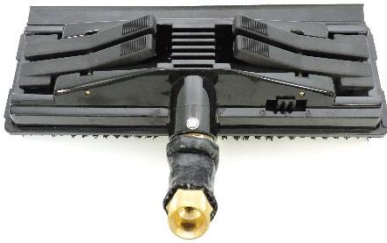
Rough Textured surfaces: It is more desirable to clean without a cloth or mitten over the brush.

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.

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**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** – Use of a Cloth: The Triangle Brush can be used with or without a cloth. If a cloth is to be used, there are clips on the brush to attach the cloth. 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.

**VAPOR VOLUME** – adjust the volume to about 3/8. Occasionally more volume will be required, however volume should always be less than 1/2. 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 1/4 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 1/4 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.

**Therma-Steam® Model XL1**

**DETAIL & BLAST TOOLS:**

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. has an 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.

Because of the increased pressure of the Model 400, the detail tool has a threaded end. 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.

**Therma-Steam® Model XL1**

**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 arras 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 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.

**TRIGGER GUN:**

A safety feature on your machine is a Steam Hose Trigger Gun with a Trigger Lock. Whenever the system is powered up and you set the steam gun/wand down it is very important that you engage the trigger lock to avoid accidental steam discharge. Also, whenever you change attachments, it is very important you place the guns trigger in the locked position towards the handle.

To Lock the Trigger simply slide the red lever, located on the trigger, toward the handle

Unlocked Position



Locked Position



**Therma-Steam® Model XL1**

**WAND EXTENSIONS:**

One 18" & One 36" insulated wand extensions, which attach to the end of the Vapor Steam hose. These extensions allow the operator to easily reach places which otherwise would be difficult to clean.



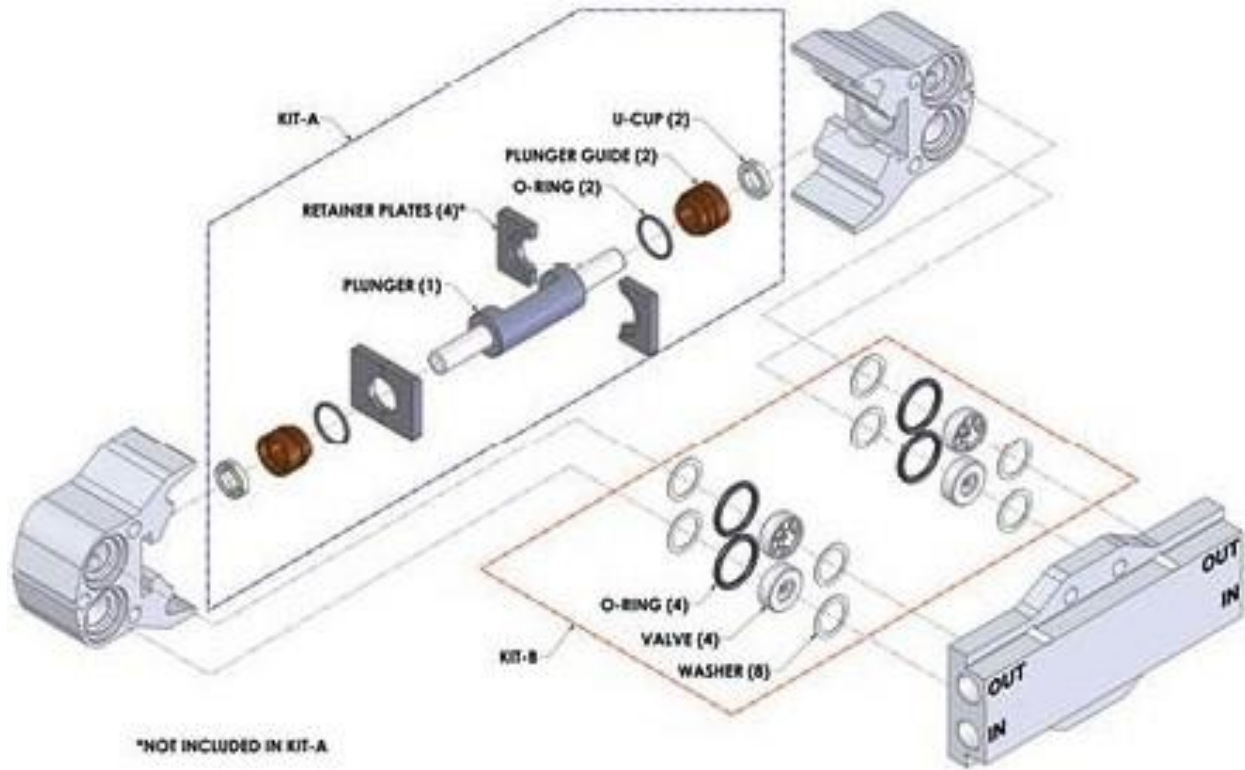
**PARTS LIST:**

25 ft. Hose w/gun	Part# 4031	¼" Female Swivel Fitting	Part# 4069
Gun	Part# 4034-A	¼" Male Swivel Fitting	Part# 4070
S.S. Swivel for Gun	Part# 4065	¼" European Plug	Part# 4071
36" Extension	Part# 5009	Fuse 3 amp/110v	Part# 5002
20" Extension	Part# 5008	Fuse 208V, 3 phase	Part# 5021
Curved Nozzle Attachment	Part# 5013	Fuse 220V, 3 phase	Part# 5021
Zero Degree Blast Nozzle	Part# 5014	Fuse 480V, 3 phase	Part# 5010
Triangle Brush	Part# 5016	Fuse 575V, 3 phase	Part# 5010
1" Nylon Brush	Part# 4010	Pump for XL 1 Model	Part# 4020
1" Brass Brush	Part# 4011	Adaptors for Pump (2)	Part# 4087
1" Stainless Brush	Part# 4012	DIN Temp Control	Part# 5001
Sm, Microfiber Cloth	Part# 3534	Limit Controller	Part# 5000
Floor Brush (optional)	Part# 5011	Solid State Relay	Part# 5004
Lg. Microfiber Cloth	Part# 3910	5" Brake Wheel	Part# 5003
2 1/2" Nylon Brush	Part# 4009	Funnel	Part# 3499
2-½" Brass Brush	Part# 4008	Goggles	Part# 4053
2-½" Stainless Brush	Part# 4102	Gloves	Part# 4052



**XL PUMP BREAKDOWN:**

For your convenience, we have included a breakdown of the XL pump. This pump can be repaired with the parts listed on the previous page.





## Therma-Steem® Model XL1

### **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 applies 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 warranted 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



### **Therma-Steem® Model XL1**

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 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.