
SAFETY-KLEEN MODEL 81.8

IMMERSION AGITATION

PARTS WASHER

Operator Booklet



Customer should read and retain this booklet

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LOCAL SAFETY-KLEEN BRANCH

OFFICE ADDRESS

PHONE NUMBER

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SAFETY MEASURES



Safety-Kleen's primary focus is the safety of its customers. Safety in the workplace is dependent upon the proper use of this equipment and the cleaning solution used in it. Therefore, it is important to carefully follow all safety instructions and operational procedures provided in this booklet and on the labels, as well as all instructions included in the cleaning solution's Safety Data Sheet (SDS). Failure to do so may create a dangerous working environment.

Keep a copy of this booklet and the SDS near the equipment for quick and easy reference.



In accordance with Occupational Health and Safety Administration (OSHA) in the U.S. and the Workplace Hazardous Materials Information System (WHMIS) in Canada, this parts washer model has been tested by a Nationally Recognized Testing Laboratory (NRTL), Intertek Services, and is found to be in compliance with the following standards:

- UL 1204: The Standard for Parts Cleaners
- CSA C22.2 No. 68 : The Standard for Motor Operated Appliances

Important Safety Instructions


1. Read and understand the Operator's Booklet for this Safety-Kleen equipment before operating. Use only as described in this booklet. Use only manufacturer's supplied attachments.
2. Consult the Safety Data Sheet (SDS) for the cleaning fluid used in this equipment. The SDS provides detailed information regarding the cleaning fluid's health hazards, first aid, shipping, storage, emergency and environmental information.
3. In an emergency, turn off the equipment and any air or electrical supply.
4. Do not allow this machine to operate if trained operator is not on the premises.
5. Do not operate equipment that has been dropped or damaged until it has been examined by a qualified service technician.
6. Do not operate this machine in any manner that will cause splashing or cause mist to form.
7. To reduce the risk of fire, do not operate equipment in the vicinity of any open containers of flammable liquids (e.g., gasoline) or near any ignition source. Keep away from heat, spark, or flame.
8. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain. Do not operate any electrical apparatus inside the equipment.
9. Do not use below garage floor or grade level.
10. Use only in a well-ventilated area.
11. Avoid contact with cleaning fluid or vapor. Always wear appropriate personal protective equipment (gloves, apron, eyewear, respirator [where required] to meet OSHA and WHMIS protection standards. Always wear safety glasses. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses. Consult the SDS and follow all recommended safety information.
12. Do not smoke, eat, or drink in the work area. Use good personal hygiene. Wash hands thoroughly with soap and water after handling. Clean water should be available in the work areas for flushing the eyes and skin.
13. Keep hands away from tank top edges. Care must be taken as burns can occur from touching hot parts.

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14. Do not modify this equipment. Modification may cause personal injury and/or property damage and will void equipment warranty. Do not operate this equipment in any manner that can cause splashing or mist to form.
15. Do not lean into this equipment.
16. Do not place hot parts in contact with the cleaning fluid.
17. Do not clean friction materials (e.g., brake linings and clutch surfaces) in this equipment. Do not clean or degrease porous or absorbent materials, such as; cloth, leather, wood, or paper in this equipment.
18. Do not use compressed air to dry parts.
19. In an emergency, turn off the equipment and any air or electrical supply.
20. Do not operate the equipment if a leak is apparent or occurs during use. Slippery conditions can result.
21. Use caution when attempting to stop the leak (only attempt if possible, to do so without risk). Any leaked solvent or solvent spilled during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately. Wipe rags or other absorbent material used for cleanup shall be immediately stored in covered containers for disposal or recycling. Consult the SDS for further clean-up measures. Contact your Safety-Kleen Representative.
22. Do not replace, modify, or obstruct the fusible link. Do not obstruct or hang anything on the lid. Do not leave unattended objects in the equipment that can interfere with lid closure. Lid will close automatically during a fire. Close the lid when the equipment is in use.
23. Do not attempt to manually open the lid on this equipment while it is agitating. Accidental exposure and splash over of cleaning fluid could occur. In addition, manually lifting the lid could disengage the lid linkage causing the lid to fall unexpectedly.
24. Do not directly agitate cleaning fluid by injecting gases or air.
25. Installations shall be made in accordance with the Flammable and Combustible Liquids Code, NFPA 30 or the Automotive and Marine Service Station Code, NFPA 30A, as appropriate to the intended use of the pump.

Save These Instructions

THE CLEANING SOLUTION

 Repeated exposure to the cleaning solution may cause skin, eye, and digestive tract irritation. Product may be heated during use and could cause serious thermal burns. High concentrations of vapor or mist may irritate the respiratory tract.

Use ONLY the cleaning solution provided such as ARMAKLEEN™ 4 in 1 Cleaner or other aqueous solution offered by Safety-Kleen Systems, INC. Do not spray aerosols into or around this equipment. Do not add any other cleaning solutions or chemicals to the cleaning solution. The use of other chemicals may cause a hazardous condition. Do not remove cleaning solution from the equipment.

This equipment has only been investigated for use with non-flammable and non-combustible water based cleaning solutions with a pH in the range of 7.0 to 12.6

SAFETY-KLEEN M81.8 IMMERSION AGITATION PARTS WASHER

Safety-Kleen's Model 81.8 is an air-operated parts washer designed for cleaning large, heavily-soiled metal parts. Features include the wash tank with an agitating platform, the heater assembly, and an automated lid. The air pressure, platform agitation and lid operation are regulated via the control panel knobs located on the right side of the equipment.

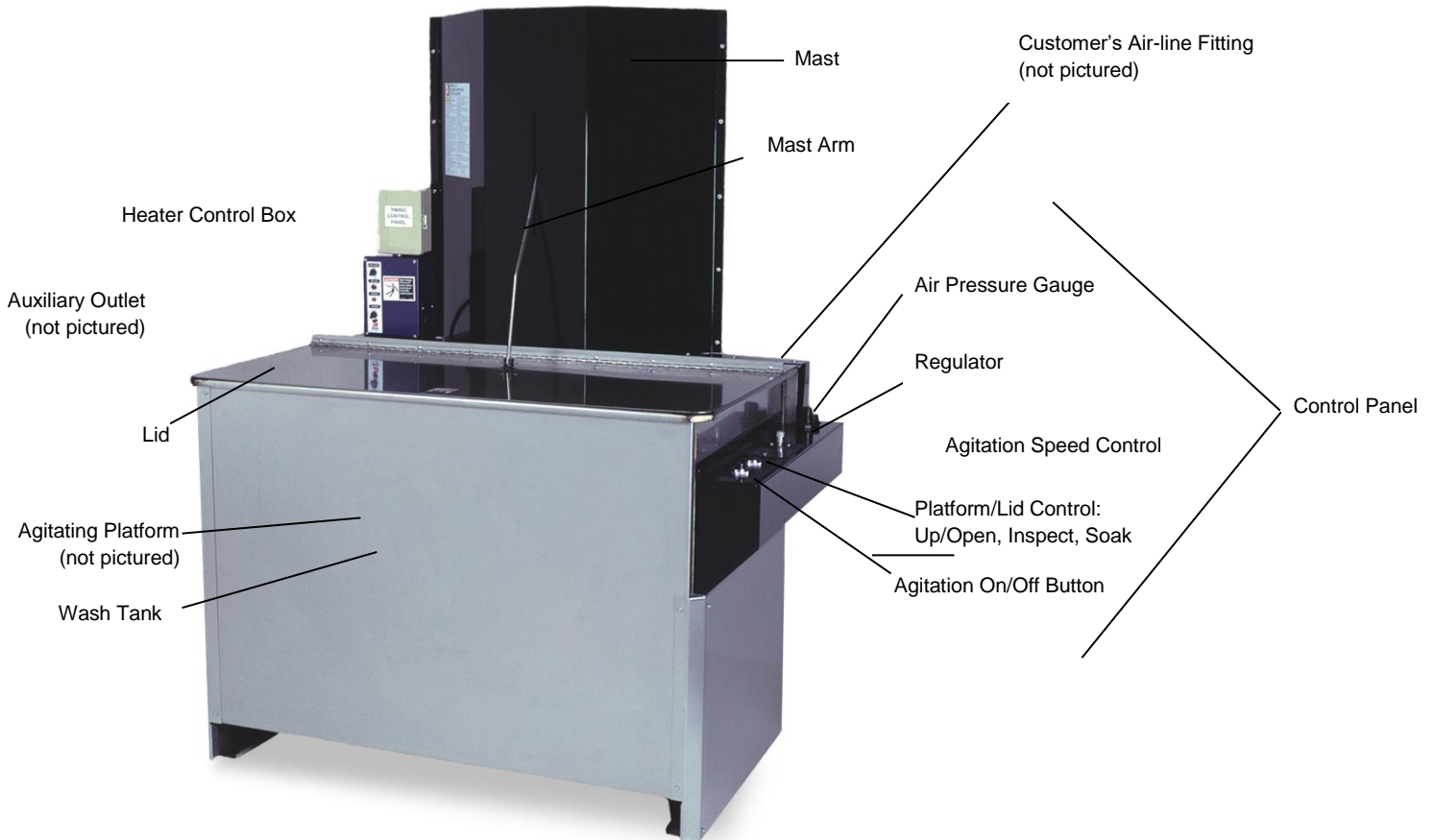
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The equipment's 240V heater heats the aqueous cleaning solution to 160°F. (There is an optional 480V heater assembly also available to accommodate 480V electrical outlets). Once the heater is powered on, allow approximately four hours for the cleaning solution to reach 160°F. Both heaters are controlled with the lower power switch located on the Heater Control Box.

The M81.8 is equipped with a fusible link that will melt in the event of a fire, allowing the lid to automatically close. Do not leave parts unattended in the tank area that will interfere with lid closure in the event of a fire.

Additionally, there is a 120V auxiliary outlet located on the rear of the Heater Control Box that is intended for connecting Safety-Kleen's FluidKleen™ Equipment to the M81.8. The FluidKleen™ is a multipurpose aqueous solution conditioning equipment designed to skim, filter and remove the layer of oil that may result when the tank of aqueous cleaning solution is exposed to oil-based contaminants.

In many instances, the FluidKleen™ will extend the life of the M81.8 cleaning solution as it removes oil and particulates and then replenishes the M81.8 with purified cleaning solution. An adaptor kit, part number SK1609, is available for purchase. Check with your Safety-Kleen Representative for further information.



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The Model 81.8 heating cycle is regulating via a timing module, located in the Timer Control Box. This Box contains live electrical terminals carrying currents of 240V-480V. At no time should the operator remove the padlock and access the box. Trained Safety-Kleen personnel are the only users authorized to access the Timer Control Box.

The heater is controlled via the power switch located on the Heater Control Box. This Box, located beneath the Timer Control Box, includes the power switch for the heater and the auxiliary outlet, as well as indicator lights. This Control Box also contains live electrical terminals; note the permanently attached Box Panel designed to protect the operator. Trained Safety-Kleen personnel are the only users authorized to access the Heater Control Box.



- Timer Control Box
- Auxiliary Outlet Power Switch
- Heater Power Switch
- Heater Control Box

SPECIFICATIONS

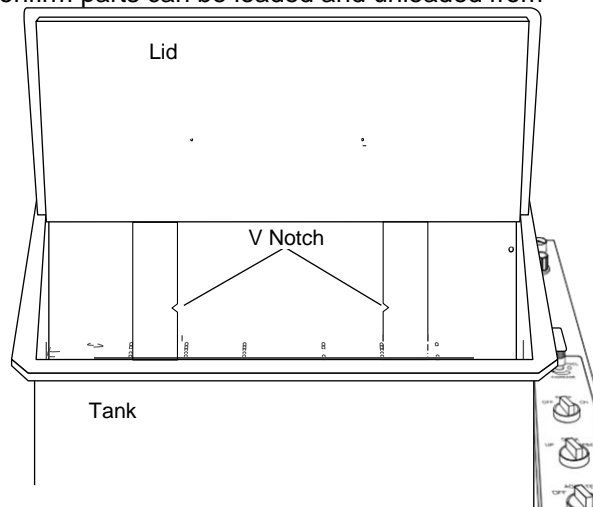
Floor Space	
Length	52" (132.1 cm)
Depth	37" (91.4 cm)
Height	69" (175.3 cm)
Tank Size	
Length	45" (114.3 cm)
Depth	21" (53.3 cm)
Height	36" (91.4 cm)
Platform Size	
Length	44" (111.8 cm)
Depth	19" (48.3 cm)
Surface area	836 in ² (5393.5 cm ²)
Maximum weight of dirty parts	250 lbs. (113 kg)
Maximum size of dirty parts	12" x 19" x 44"
Volume Capacity	

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Maximum Fill	80 U.S. Gallons (304 L)
Liquid Freeboard	14" (35.6 cm)
Weight	
Shipping weight	660 lbs. (300 kg)
Filled Weight	1320 lbs. (600 kg)
Miscellaneous	
Air Supply Requirement	80 – 120 psi
Flow Rate	3 CFM
Platform Agitation Speed	Approx. 100 cycles / min. @ 2-4" max. stroke
Heater Outlet Requirements	
240V Heater	240V, 60 Hz, 4.25kW, 20A Twist-lock, 3-prong plug w/ 6ft power cord
480V Heater	480V, 60 Hz, 3 phase, 4.25kW, 9A 4-prong plug w/ 6ft power cord
Maximum Watts	4600 W
Heating Time to Reach 160° F	Approximately 4 hours
Auxiliary Outlet	120V, 0.7A, 60 Hz
Cleaning Solution Temperature	160°F (71.7°C)
Listing	cETLus

ASSEMBLY

1. Position the parts washer at the desired location. Confirm parts can be loaded and unloaded from the parts washer without obstruction.
2. Fill the M81.8 tank with cleaning solution up to the "V" notch. Do not allow solution level to drop more than 5" below the "V" notch as this could damage the heater.
3. Locate the Air-Line Fitting at the rear right back corner of the M81.8, and use an appropriately sized coupling to connect your compressed air-line to the equipment. The M81.8 requires an 80-120 psi compressed air supply. If a flexible air-line is used, be sure it is rated for the indicated air pressure. **IMPORTANT:** The control panel air pressure gauge should read 78 psi. If it does not read 78 psi, pull up on the knob located just below the gauge and turn it to set the air pressure to 78 psi.
4. Insert the heater's power cord receptacle into the electrical outlet and give it a slight clockwise turn to activate and lock the power cord in place. Confirm the electrical outlet meets the required specifications, depending upon whether the M81.8 includes the 240V or 480V heater. Check the [Technical Specifications Table](#) in this document for specific requirements.



OPERATION

- The lid incorporates a fusible link. Do not leave parts, large enough to prevent the fusible link from disengaging and allowing the lid to close in the case of fire, unattended in the vat.
 - Pre-clean all dirty parts of foreign grime and fluids before placing them in the parts washer for cleaning. Do not deposit this debris into the vat. Doing so will cause the equipment to malfunction.
1. Put on protective eyewear, gloves, clothing, and shoes.
 2. Confirm the M81.8 is plugged into the appropriately rated electrical outlet.
 3. Reset the GFCI by pressing the GFCI's reset button.
 4. Confirm the M81.8 tank is filled to the "V" notch
 5. Power on the heater via the power switch located on the Heater Control Box.
 6. Turn "UP/SOAK/INSPECT" knob to "UP" position. The lid will open, and the platform will rise.
 7. Place parts to be cleaned onto platform. **NOTE: The maximum size of parts to be cleaned is 12" x 19" x 44" with a maximum load of 250 lbs. Do not exceed this weight.**
 8. Cleaning Options:
 - a. Soaking Parts
 - Turn the "UP/SOAK/INSPECT" knob to "SOAK"
 - Platform will lower and the lid will close
 - b. Agitating Parts
 - Turn the "UP/SOAK/INSPECT" knob to "SOAK"
 - Turn the "AGITATE" knob to "ON"
 - Platform will lower, the lid will close and the platform will agitate
 - Set the desired agitating speed via the Agitation Speed Control knob
 - c. Inspecting Parts
 - Turn the "UP/SOAK/INSPECT" knob to "INSPECT"
 - Agitation will stop and the lid will rise
 - To resume cleaning turn the "UP/SOAK/INSPECT" knob to "SOAK"
 - The lid will close and agitation will resume
 - d. Removing Parts
 - Turn the "UP/SOAK/INSPECT" knob to the "UP" position.
 - Lid will open, agitation will stop and the platform will rise.
 - Allow parts to drain on platform until dripping has ceased then remove parts

TROUBLESHOOTING

The platform does not rise when the knob is in the "up" position.	<ul style="list-style-type: none"> ▪ Confirm platform load is less than 250 lbs. and dirty parts are no larger than 12" x 19" x 44".
	<ul style="list-style-type: none"> ▪ Confirm the equipment is receiving 80-120 psi.

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	<ul style="list-style-type: none"> ▪ Check that the incoming compressed airline connection to the M81.8 is secure.
	<ul style="list-style-type: none"> ▪ Check the air-lines for kinks or blockages.
	<ul style="list-style-type: none"> ▪ Contact your Safety-Kleen Representative.
<p>The platform does not lower when the knob is moved to the “soak” position.</p>	<ul style="list-style-type: none"> ▪ Confirm the equipment is receiving 80-120 psi.
	<ul style="list-style-type: none"> ▪ Check that the incoming compressed airline connection to the M81.8 is secure.
	<ul style="list-style-type: none"> ▪ Check the air-lines for kinks or blockages.
	<ul style="list-style-type: none"> ▪ Contact your Safety-Kleen Representative.
<p>The platform goes “up” and down to “soak” but does not “agitate”.</p>	<ul style="list-style-type: none"> ▪ Confirm the equipment is receiving 80-120 psi.
	<ul style="list-style-type: none"> ▪ Confirm platform load is less than 250 lbs. and dirty parts are no larger than 12” x 19” x 44”
	<ul style="list-style-type: none"> ▪ Check that the incoming compressed airline connection to the M81.8 is secure.
	<ul style="list-style-type: none"> ▪ Check the air-lines for kinks or blockages.
	<ul style="list-style-type: none"> ▪ Contact your Safety-Kleen Representative.
<p>The equipment is not working</p>	<ul style="list-style-type: none"> ▪ Confirm the Heater Power Switch is “ON”.
	<ul style="list-style-type: none"> ▪ Reset the GFCI.
	<ul style="list-style-type: none"> ▪ Confirm the electrical outlet is operating at the required specifications as outlined in the <u>Technical Specifications Table</u> in this document.
	<ul style="list-style-type: none"> ▪ Confirm the power cord receptacle is locked in place. If not, give it a slight clockwise turn.
	<ul style="list-style-type: none"> ▪ Confirm the equipment is receiving 80-120 psi.
	<ul style="list-style-type: none"> ▪ Check that the incoming compressed airline connection to the M81.8 is secure.
	<ul style="list-style-type: none"> ▪ Check the air-lines for kinks or blockages.
	<ul style="list-style-type: none"> ▪ Contact your Safety-Kleen Representative.

The cleaning solution is cold.	<ul style="list-style-type: none">▪ Confirm the Heater Power Switch is "ON" and reset the GFCI.
	<ul style="list-style-type: none">▪ Confirm that the electrical outlet is operating at the required specifications as outlined in the <u>Technical Specifications Table</u> in this document.
	<ul style="list-style-type: none">▪ Confirm the power cord receptacle is locked in place. If not, give it a slight clockwise turn.
	<ul style="list-style-type: none">▪ Contact your Safety-Kleen Representative.

SERVICE AND REPAIR

In accordance with your service agreement with Safety-Kleen Systems, Inc., a Safety-Kleen service representative will:

- Install and set up the Safety-Kleen equipment
- Be your primary contact with Safety-Kleen
- Put the name and phone number of the nearest Safety-Kleen branch on the equipment and/or on the inside lid of this booklet
- Provide information about your service contract with Safety-Kleen
- Explain what cleaning solution is provided with the equipment, provide SDS's and answer any questions about the cleaning solution

This equipment is to be serviced only by authorized Safety-Kleen personnel using an approved cleaning solution . If you have any questions, require repairs, or need early service, contact your local branch or Safety-Kleen at 1-800-669-5740. Additional assistance can be found at www.safety-kleen.com.



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