



# GENERAL MAINTENANCE MANUAL

## ***CLEANING GUIDE***

***CLEANING CARE TIPS FOR  
STAINLESS STEEL, VINYL, AND ALUMINUM***



COOK | HOLD | SERVE | REFRIGERATION | BARS



## **CONGRATULATIONS...**

...and thank you for purchasing FWE foodservice equipment.

Your unit has been designed and manufactured under rigid controls to assure you the most efficient service.

It is a full time unit, and may be used continuously.

Please take a moment to read through this booklet of important information pertaining to your equipment.

By following a routine of proper use and care described on the following pages, your equipment will last for many years.

**IMPORTANT:** Your **Manufacturer Registration Card** must be returned within 30 days after initial delivery to activate the warranty.



**WARNING**

*Be sure the unit is unplugged and cool before cleaning the cabinet. The electrical components should not be exposed to direct contact with water or cleaning sprays. Permanent damage to the electrical components may result.*

## RECOMMENDED “TIPS” FOR CLEANING STAINLESS STEEL

<b>Purpose</b>	<b>Frequency</b>	<b>Cleaning Agent</b>	<b>Method of Application</b>
Routine Cleaning	Daily	Soap, Ammonia Detergent and Water	Sponge with cloth, rinse with clear water and wipe dry.
Smears/ Fingerprints	As Needed	Stainless Steel Cleaner or Similar Products	Rub with cloth as directed on package. Rub in direction of grain of stainless steel. Do not use on vinyl trim.
Stubborn Spots and Stains	Daily As Needed	Any Chloride-free or Phosphate-free Cleaner	Apply with damp sponge or cloth. Rub in direction of polish lines. Rinse thoroughly after use, especially if cleaner contains chlorine bleach. Do not use on vinyl trim.
Hard Water Spots	Daily As Needed	Vinegar	Swab with cloth. Rinse with water and wipe dry.



## **WARNING**

### **HAZARD OF INJURY OR BURN!**

ALLOW UNIT TO COOL BEFORE CLEANING.

Use care not to burn yourself and never touch or attempt to adjust tray/pan slides, remove or adjust uprights or air tunnel until tunnel has cooled!

**WARNING:** Always disconnect the unit from the power supply before servicing or cleaning.

### **Helpful Preventive Deep-Cleaning Hints:**

- Wipe up spills as soon as possible.
- Clean regularly to avoid heavy dirt build-up.
- Place a sheet pan one-half full of water in the bottom rack position. The water evaporates, increasing humidity, and the pan will catch spills, grease, and drippings during operation.

### **Preventive Maintenance:**

- Proper clearance and ventilation to cool the motors.
- Create a schedule for routinely cleaning.
- Clean vent louvers and holes.
- Do not flood or allow electrical parts to become wet.
- Remove interior tray slide assemblies for full cleaning.
- A stainless steel cleaner / polish is recommended for the exterior to maintain a “like-new” appearance.

### **Service Maintenance:**

If service, parts, or repairs are required, contact your local FWE Authorized Service Agency, a factory representative, or the FWE Company directly for a complete listing.

### **Maintaining the Interior:**

Stainless steel interior may be kept clean and in good condition with a light cooking oil.

- Unplug the unit from the power source.
- Remove the racks and rack supports.
- Saturate a cloth, and wipe interior when it is cold.
- Dry with a clean cloth.

## VINYL TRIM

Vinyl trim should be washed with a chlorine-free detergent and water. Rinse thoroughly with clear water and allow to dry. Never use abrasive cleaners, waxes, car polish, or substances containing strong aromatic solvents or alcohol. Use of direct steam or hot water cleaning at temperatures above 190°F (90°C) may result in “bubbling” or loosening of vinyl adhesive.

## STAINLESS STEEL

To clean stainless steel surfaces use only cleansers, detergents, degreasers, or sanitizers that are certified to be “chloride-free” and “phosphate-free”. Use only in the recommended concentrations. **DO NOT** exceed recommended concentrations or mixing ratios. After cleaning and sanitizing, rinse all exposed surfaces thoroughly with large amounts of clear water. Wipe off any standing liquid or residue from all surfaces, corners, or near edges.



**CAUTION**

***Cleansers, detergents, degreasers, sanitizers, or bleaching agents that contain chlorides or phosphates will cause permanent damage to stainless steel products. The damage appears as pits, eruptions, voids, small holes, cracks, severe discoloration, or dulling of the metal finish. Water with high chloride content can also damage stainless steel. If unsure of your water quality, we recommend you have it tested.***

***THIS DAMAGE IS PERMANENT,  
COSTLY TO REPAIR, AND IS NOT  
COVERED BY THE WARRANTY.***

## **ADVANTAGES OF STAINLESS STEEL**

- High corrosion resistance allows it to be used in rigorous environments.
- Fire and heat resistance allows it to resist scaling and retain strength at high temperatures.
- Hygienic, non-porous, surface coupled with the ease cleaning ability makes stainless the primary choice for applications which require hygiene control, such as hospitals, kitchens, and other food processing plants.
- Aesthetic appearance provides a modern and attractive appearance for most architectural metal applications.
- Bright, and easily maintained surface makes it an easy choice for applications demanding an attractive surface at all times.
- Strength-to-weight advantage that allows it to be used with a reduced material thickness over conventional grades, often times generating cost savings.
- Resists impact even at extreme temperature variations.
- Long-term value created by its long useful life cycle often yields the least expensive material option.

## ALUMINUM *METAL CARE TIPS*

Like Stainless Steel, Aluminum is relatively resistant to corrosion. However, it is very susceptible to attack by strong acids and alkalis used in some cleaning products. Also, it is very susceptible to galvanic corrosion - if aluminum and another type of metal are in contact with a liquid food that contains an electrolyte (e.g. salt), an electric current may form resulting in dissolution of the more active metal, which will probably be the aluminum.

### **CLEANING**

**Alkalis, even baking soda, and especially stronger alkalis discolor aluminum.** Use a mild detergent and warm water when cleaning aluminum. If trying a stronger cleaner, pre-test on a hidden place to be sure it cleans satisfactorily and does not damage the aluminum. Always follow directions on the product label for aluminum. EXACTLY.

On outdoor architectural surfaces, remove bugs, sap, tree seeds, and other materials as soon as possible, as they harden with exposure to sunlight and heat, and become more difficult to remove. Suitable solvents will remove tar and similar substances. Test the solvent first if the aluminum is painted to be sure it doesn't also remove the paint. Make sure you follow the product label precautions when using solvents. Ensure that no spark or flame is in the area and make sure you have adequate ventilation.

### **WHAT NOT TO DO**

Do not use abrasive cleaners (scouring powders, steel wool, abrasive polishes, etc.) since they can permanently scratch aluminum. Painted or anodized aluminum surfaces will be permanently damaged. Do not clean aluminum when it is too hot to touch, or if ambient temperature drops below 50°F (10°C).

Aluminum is so susceptible to corrosion from alkalis that aluminum panels should be protected from splashed mortar and cement.

## **GENERAL PROBLEMS WITH CORRECTIVE ACTIONS**

### **ROUTINE CLEANING:**

Use either soap, mild detergent or ammonia solutions in warm water, applied with a soft cloth or nylon sponge. Occasionally the use of the least coarse nylon scouring pad may be required. Rinse and dry with a soft cloth.

### **Moderate Soiling, Light Staining:**

Apply the mildest abrasive cleaner, or a paste made from fine chalk or soda bicarb, using a soft cloth or a fine nylon scouring pad. A soft bristle brush may also be used. Rub the surface as softly as possible using long even strokes in the direction of the polished finish if this exists. Avoid using a circular rubbing action. Rinse well and was as described under ***Routine Cleaning***.

### **Heavy Soiling, Heavier Staining:**

Presoak in warm/hot detergent or ammonia solution. If this does not sufficiently soften burnt food or carbon deposits, a caustic cleaner will have to be used. Follow by cleaning as for ***Moderate Soiling, Light Staining***. Repeat if necessary.

**Acids:** Avoid contact. If accidental contact does occur rinse immediately and soak in ammonia or soda bicarb solution. Follow by ***Routine Cleaning***.

**Bleaches:** Avoid contact with concentrated or undiluted bleach. If accidental contact does occur rinse immediately and soak in ammonia or soda bicarb solution. Follow by ***Routine Cleaning***.

### **Carbon Deposits / Burnt Food:**

Treat as described for ***Heavy Soiling, Heavier Staining***.

**Fats, Oils and Grease:** Wipe off heavy deposits with a soft cloth or paper towel. Presoak in warm detergent or ammonia solution. Follow by ***Routine Cleaning***.

### **Finger Prints:** Use ***Routine Cleaning***.

If necessary, first treat the marks with a soft cloth or paper towel dampened with alcohol (methylated spirits), or an organic solvent (ether, benzene). Minimize the reoccurrence by applying a wax based polish to the dry, cleaned exterior surface.

## Heat Discoloration Tints

Ease of removal depends on the severity thereof. Repeated cleaning as for **Moderate Soiling** or **Heavier Staining** may prove successful. If not, use a 10% solution of Nitric Acid together with a fairly coarse household abrasive cleaner applied as a paste by hard rubbing with a coarse nylon scouring pad. NOTE: Some alteration to the surface appearance will result from these severe cleaning operations. Acid treatment must be followed by rinsing in ammonia or soda bicarb solution, and **Routine Cleaning**.

## Leakage and Spillage

Remove by thorough washing down as soon as it occurs, or at short regular intervals.

## Rust Stains

Light, superficial brown staining can be removed by **Routine Cleaning** repeated regularly for a few days. Similarly, repeated cleaning as for **Moderate Soiling, Light Staining** will remove darker stains. Rust spots with a halo around them indicate that a fragment of ordinary steel has become embedded in the surface of the Stainless Steel. Dab and spot, keeping moist for 20 - 30 minutes, with a 10% solution of **Nitric Acid**, repeating if necessary. Very severe stains will require hard rubbing with a paste of fine household abrasive and 10% **Nitric Acid**, using a fairly coarse nylon scouring pad, **Acids** treatments must be followed by rinsing in ammonia or soda bicarb solution, and **Routine Cleaning**.

## Nitric Acid (HNO<sub>3</sub>)

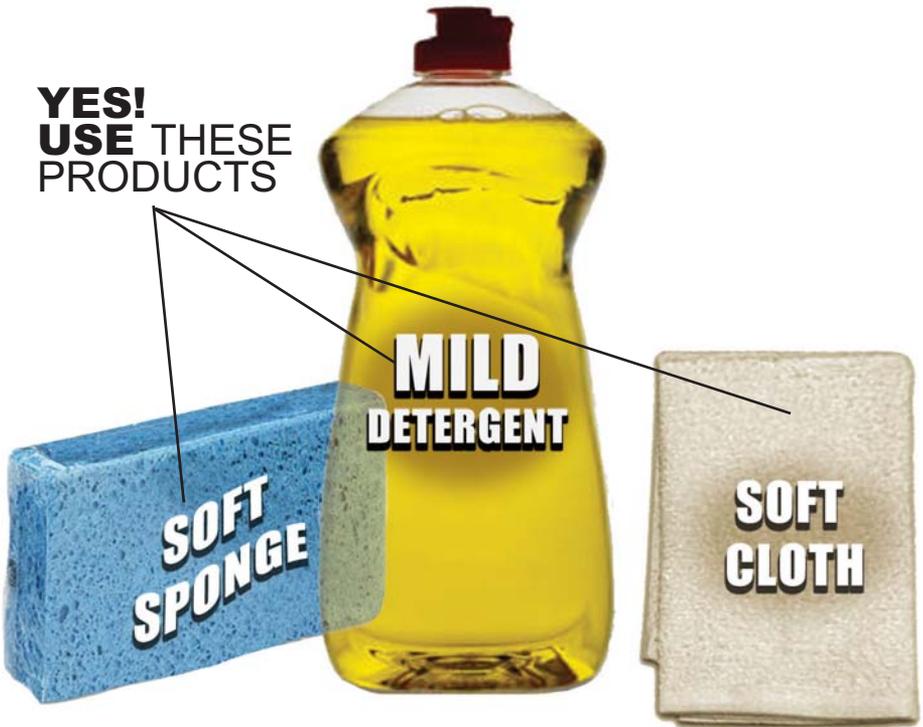
Nitric acid is a "friendly" acid towards stainless steel and is the only mineral acid which should be used to clean stainless steel. 10% solution (1 Part Nitric Acid added to 9 Parts Water) is usually used. It may be obtained from most chemists, who will make up the 10% solution. Concentrated Nitric Acid must be handled with care. Dilute 10% solutions are less dangerous, but it is advisable to wear rubber gloves and eye protection. If accidental skin contact occurs, wash well with lots of water. Mix and keep the solution in glass containers. Dilute extensively before flushing down the drain.



## Recommended Daily Cleaning Products For Stainless Steel

Use mild detergent or ammonia solutions in warm water applied with a soft cloth. Rinse with soft cloth. Dry with soft cloth. Always wipe stainless steel following direction of grain.

**YES!  
USE THESE  
PRODUCTS**



***Do NOT use cleansers, detergents, degreasers, sanitizers, or bleaching agents that contain chlorides or phosphates on Stainless Steel.***

***The damage appears as pits, eruptions, voids, small holes, cracks, severe discoloration, or dulling of the metal finish.***

***THIS DAMAGE IS PERMANENT AND IS NOT COVERED BY THE WARRANTY.***

**DO NOT USE THESE PRODUCTS**



**DO NOT USE**  
Abrasive Pads, Chlorine or Bleach  
- Liquid or Wipes -  
**ON STAINLESS STEEL**



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