

Dishwasher Use & Care Manual

HDW2401SS



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Important safety instruction

WARNING

For your safety, the information in this manual must be followed to minimize the risk of fire or explosion, electric shock, and to prevent property damage, personal injury.

Proper installation

Please install your dishwasher properly follow the installation guide.

- Water supply temperature should be 120°F or 149°F.
- Dispose of the discarded appliance and packing material properly.
- The dishwasher must be grounded, or it can result in a risk of electric shock.
- If there is any damage of the Dishwasher, please contact to your Dealer, not to attempt to repair or replace any part by yourself.

Basic precaution before use

- Read all instructions before using the dishwasher.
- The manual does not cover every possible condition and situation that may occur.
- Use the dishwasher only for intended function as described in this manual.
- When loading items to be washed :
 - Load sharp items and knives so that they are not likely to damage the door seal and tub.
 - Load sharp items and knives with the handles up to reduce the risk of cut-type injury.
- Do not wash plastic items unless marked dishwasher safe or the equivalent, if not marked, check with manufacture for recommendation, items that are not dishwasher safe may melt and create a potential fire hazard.
- If the dishwasher drains into a food disposer, make sure disposer is completely empty before running dishwasher.
- Do not tamper with control.
- Do not operate your dishwasher unless all enclosure panels are in the properly place.
- Do not touch the heating element during or immediately after use, especially if the sanitize option has been selected.
- Do not let children abuse, sit or stand on door or racks of a dishwasher.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. Hydrogen gas is explosive. If the hot water system has not been used for such a period, before using dishwasher, turn on all hot water faucets and let water flow from each for several minutes. This will release any accumulated hydrogen gas. Hydrogen gas is flammable. Do not smoke or use an open flame during this time.
- Do not store or use combustible materials, gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Use only detergents or rinse agents recommended for use in a dishwasher and keep them out of the reach of children.
- Keep young children and infants away from dishwasher when it is operating.
- Do not use the dishwasher if it has a damaged power line or plug, and do not plug the dishwasher into a damaged outlet, failure to observe these instructions may result in electrical shock.
- Remove the door to the washing compartment when removing an old dishwasher from service or discarding it.

Features of your new dishwasher

Specification

Capacity	14 place settings
Dimension	606 x 650 x 857 mm (W x D x H)
Weight	unpacked 94lb (42.5kg)
Power Supply	120volts, 60Hz
Rated power usage	Wash motor 50W Heater 840W
Water Feed Pressure	20 ~ 120 psi (138 ~ 828kPa)



- | | |
|------------------------------------------------------------|--------------------------------|
| 1 Top light | 8 Cup Shelf |
| 2 Upper Spray Arm | 9 Adjustable Upper Rack |
| 3 Middle Spray Arm | 10 Tub Gasket |
| 4 Vortex wash arm (Located on the left side of tub) | 11 Silverware Basket |
| 5 Low Spray Arm | 12 Bottom Rack |
| 6 Rinse Aid Dispenser | 13 Heating Element |
| 7 Detergent Dispenser | |

Features of your new dishwasher

Features

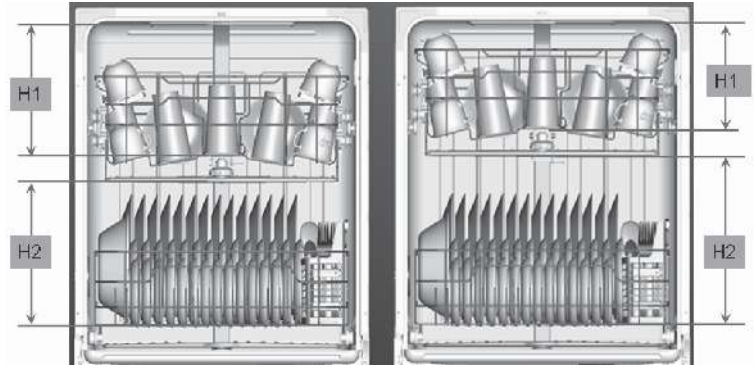
Filter System

Your dishwasher has a multiple Filter System. In the System there are four filter-meshes. It can separate soiled water and clean water in different chambers. The multiple filter system helps your dishwasher to get better performance with less water and less energy.



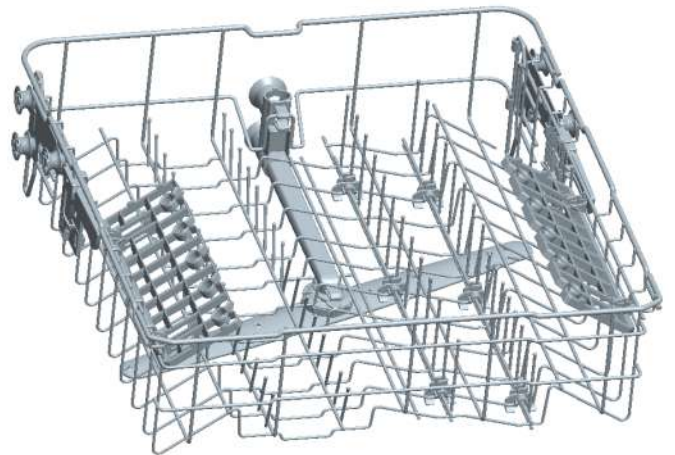
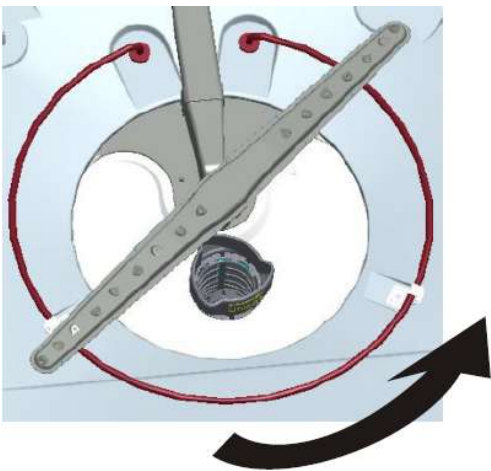
Adjustable Upper Rack

The Upper Rack can be raised or lowered to accommodate loading taller dishes in either rack. The Upper Rack clearance height H1 goes from 8" to 10". The Bottom Rack clearance height H2 is 11" to 13".



Smart Wash System

Your dishwasher has Smart Wash System. When a partial load of lightly soiled dishes is placed in the unit, a wash cycle similar to a short wash will automatically be performed. When a full load of heavily soiled dishes is placed in the unit, a heavy wash cycle will automatically be performed. It can determine the type of cycle required to clean the dishes and will clean more efficiently every time.



How your dishwasher cleans

Your dishwasher cleans by spraying a mixture of hot water and detergent through the spray arms against soiled surfaces.

The dishwasher fills with water covering the filter area. Water is then pumped through the multiple filter and spray arms. Separated soil particles go down the drain as the water is pumped out and replaced with clean water.

The number of water fills will vary with the cycle being used.

Getting Started

1. Load dishwasher (See preparing and loading dishes).
2. Add detergent (See Fill detergent to the dispenser).
3. Add rinse aid, if needed (See Fill rinse to dispenser).
4. Close door to latch.
5. Select desired CYCLE (See Cycle Chart). The indicator light above the pad will glow when selected.
6. Select desired OPTIONS (See Energy Options). The indicator light above the pad will glow when selected.
7. Run hot water faucet nearest dishwasher until water is hot. Turn water off.
8. To start, press Start/Cancel (See Start/Cancel) pad.

Your dishwasher has the front control panel. Your selections will only be activated when the door is firmly closed.

NOTE

The dishwasher is programmed to remember your last cycle so you do not have to reset each time. To start the dishwasher using the same cycle and options selected on the previous wash, just press the Start/Cancel pad.

Wash Cycle Selections

Cycle times are approximate and will vary with options selected. Hot water is necessary to activate dishwasher detergent and melt fatty food soils. An automatic sensor will check the incoming water temperature and if it is not hot enough, the timer will be delayed for automatic water heating in the main wash of all cycles. This happens even when HI-TEMPWASH is selected. An even higher temperature will be guaranteed to handle heavier soil loads.

Control panel



Wash Cycle Selections

1 Pots & PANS

This cycle is for hard-to-clean, heavily soiled dishes, pots, pans and dishes.

2 Normal wash

This cycle is for regularly soiled dinner dishes or silverware.

3 China crystal

This cycle is for lightly soiled china and crystal.

4 Quick wash

This cycle is for lightly soiled and pre-rinsed dishes and silverware.

5 Rinse only

This cycle is for pre-rinsing dishes or glasses. This is only a rinse that keeps food from drying on your dishes and reduces odor buildup in your dishwasher until you are ready to wash a full load. Do not use detergent.

6 ENERGY SAVER

For light soiled or pre-rinsed dishes and silverware.

7 Air exchange

Select the "Air exchange function, the dishwasher will exchange the air every 6 hours to keep the air in the dishwasher fresh.

8 Steam wash

For use with heavily soiled items, this STEAM option adds 30 minutes to the cycle time. The option is available with the cycles of "POTS & PANS" and "Normal wash".

9 Child lock

You can lock all controls to prevent children from accidentally changing the dishwasher cycle or starting the dishwasher.

Press the "Steam wash" and the "Vortex wash" simultaneously to select or cancel the function.

After the function is selected and the corresponding indicator light will turn on.

10 Vortex wash

Use this option when you want to wash pots and pans, durable serving bowls, and other large, very dirty, hard to clean dishes.

Use Vortex wash, place the dishes face down in the lower rack directly above the vortex wash arm in the back left corner.

11 Heated Dry

When the "Heated Dry" function is selected, the heater will work during the drying process.

12 Sanitize

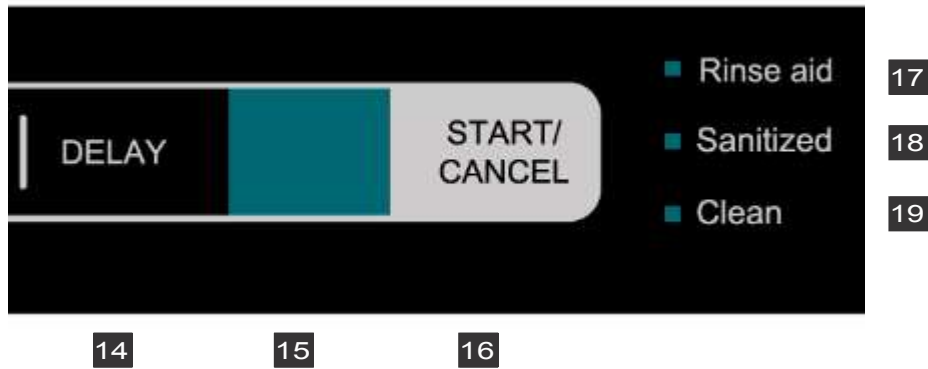
To sanitize your dishes and glassware, select the Sanitize option. When the "Sanitize" function is selected, the temperature of water will be maintained at 70 °C (158°F) max.

Note: It is possible that 70 °C (158°F) may not be reached, if the temperature of the incoming hot water does not reach the suggested temperature.

13 Hi Temp Wash

When the "Hi Temp wash" function is selected, the temperature of water will be maintained at 60 °C (140°F) max.

Operating dishwasher



16 Start/Cancel

Push door firmly closed. The door latches automatically. Select the wash cycle and options desired, the indicator light above the pad will turn on. To start press the Start/Cancel key once, the light will glitter and the wash action begins. To cancel when a cycle is running, press Start/Cancel pad once and the dishwasher will start a 60 second drain and then shut off. At the end of the drain, you can select the desired cycle.

When you want to load more dishes or pause the dishwasher while it is already running, make sure to open the door slowly and carefully as there is a possibility of injury from the hot steam inside the dishwasher. You can add more dishes before the main wash starts. Open the door and check the detergent dispenser. If the main wash section of the detergent dispenser is still closed, you can add items. If the door is opened while the dishwasher is running, a safety mechanism is activated and stops the cycle.

14 Delay

To delay the start of a selected cycle, press Delay Start pad until the desired delay time shows in the LED display screen, it allows you to automatically start your dishwasher for 1 to 24 hours delay.

To cancel the Delay Start option and begin the cycle, before the delay period is over press the Start/Cancel pad.

15 Display window

To display the remained hours and minutes of the running cycle, delay hours and error codes etc.

17 Rinse aid indicator light

Turns on when the dishwasher needs to add Rinse aid.

18 Sanitized indicator light

If a cycle with the sanitize function is finished, the sanitized indicator light turns on.

If you open the door, it will turn off after 30 seconds.

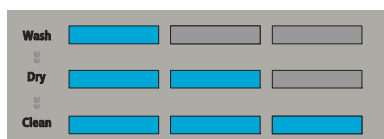
18 Clean indicator light

Turns on after a cycle finished.

If you open the door, it will turn off after 30 seconds.

Cycle progress indicator

Located on right side of the front of the dishwasher, these lights indicate how far along is the current wash cycle while the dishwasher is running.



1 WASH	When the dishwasher is in a wash or rinse portion of a cycle, the Wash lights are illuminated.
2 DRY	When the dishwasher is in a drying portion of a cycle, the Wash and Dry lights are illuminated.
3 CLEAN	After the dishwasher has completed all portions of a cycle, all indicator lights are illuminated. If you open the door when the Cleaning lights are illuminated, all the portion lights will turn off after 30 seconds.

Operating dishwasher

Status Window

01-24

If the Delay Start option is selected, the number of delay start hours shows in the Status Window. If the dishwasher is working and the wash cycle time is more than a hour, number of hours and minutes left shows alternately in the Status Window.

CL

Flashes once the program has been entered and the Start/Cancel key is pressed. It also flashes if the door is opened during a wash cycle. Close the dishwasher door to begin or continue a wash cycle.

MINUTES

Number of minutes left in a cycle (0-59 or 1H-2H). It shows hours and minutes alternately.

NOTE

The time remaining could suddenly increase or drop several minutes. This means the Smart Sensor has checked the soil level and determined if additional water fills are needed or if water fills can be deleted.

Error indication

In certain situations which are critical to the machines function and safe operation, the control shall shut down and indicate an error code Er (See Error Codes on page 18).

If Er codes are displayed, contact the dealer or servicer. They will be able to provide assistance in trouble shooting the problem and or locate an authorized service technician if needed.

Cycle Chart

Program	Description of Cycle	Water (L)	Cycle time (min)
POTS & PANS	Pre Wash	22.8	140
	Pre Wash		
	Wash(48°C)		
	Rinse		
	Rinse		
	Rinse(58°C)		
NORMAL WASH	Drying	10.8~23.0	105~135
	Pre Wash		
	Auto(42~48°C)		
	Rinse(50~58°C)		
CHINA CRYSTAL	Drying	19.3	120
	Pre Wash		
	Pre Wash		
	Wash(48°C)		
	Rinse		
	Rinse(58°C)		
QUICK WASH	Drying	15.5	60
	Pre Wash		
	Wash(40°C)		
	Rinse(50°C)		
RINSE ONLY	Rinse Only	8	20
ENERGY SAVER	Drying	19.3	105
	Rinse(50°C)		
	Rinse		
	Wash(40°C)		
	Pre Wash		
	Pre Wash		

Adjustable Upper Rack

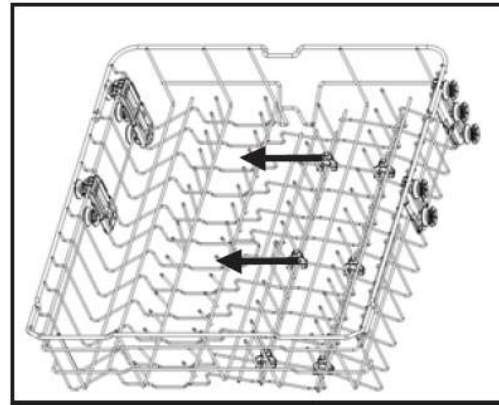
The upper rack height can be easily adjusted to accommodate loading taller dishes in either rack.

To accommodate taller dishes in the bottom rack, there are 2 positions available :

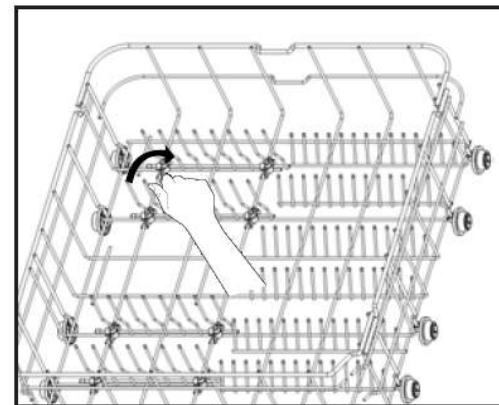
1. Lift the rack for upper position



The upper rack in the upper position



Upper rack



Lower rack

2. Up press the handle to lower the rack



The upper rack in the lower position

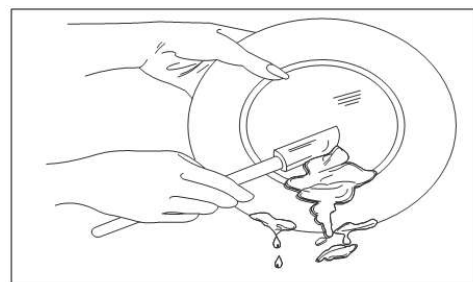


Dish Preparation

Scrape away large pieces of food, bones, pits, toothpicks, etc. The continuous filtered wash system will remove the remaining food particles. Burned-on foods should be loosened before loading. Empty liquids from glasses and cups.

Foods such as mustard, mayonnaise, vinegar, lemon juice and tomato based products may cause discoloration of stainless steel and plastics if allowed to sit for a long period of time. Unless the dishwasher is to be operated at once it's best to rinse off these food soils.

If the dishwasher drains into a food disposer, be sure disposer is completely empty before starting dishwasher.



Note :
Height should be adjusted without dishes in the racks.

Loading the Upper Rack

The upper rack is designed for cups, glasses, small plates, bowls and plastic items marked safe etc.

For best results, place the bowls, cups, glasses, sauce pans with soiled surface facing down or toward the center. Tilt slightly for better drainage.



Make sure the loaded dishes do not interfere with the rotation of the middle spray arm, which is located at the bottom of the upper rack. (Check this by rotating the middle spray arm by hand.)

Loading the Bottom Rack

The bottom rack is designed to load plates, soup bowls, plates, saucers and cookware. The adjustable rack space will allow you to load maximum 13 inch items.



Large items should be placed along the edge so they do not interfere with the middle spray arm rotation, and make sure they not prevent the detergent dispenser from opening.

Large items should be turned so that the inside faces downward, and make sure these items do not interfere with the lower spray arm rotation.

The fold-down tines in the bottom rack make it easy to load those extra large and hard-to-fit items. The tines may be left up for normal use or folded down for more flexible loading. Fold down for more space to load large pots or pans.



Upper Rack 8 place settings



Upper Rack 12 place settings



Upper Rack 14 place settings



Bottom Rack 8 place settings



Bottom Rack 12 place settings



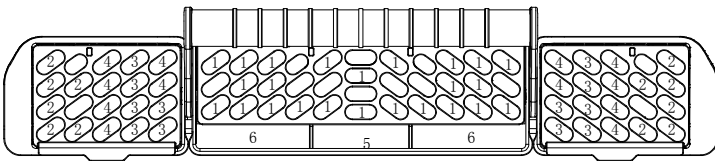
Bottom Rack 14 place settings

Preparing and loading dishes

Loading the Silverware Basket

The silverware basket could be divided into three separate modules that can be used in both upper and lower racks

1. Spoons
2. Knives
3. Salad forks
4. Forks
5. Large spoons
6. Large forks



! WARNING!

Do not let any item extend through bottom.



Be sure nothing protrudes through bottom of the basket or rack to block the lower spray arm.

Adding A Dish

To add or remove items after wash cycle starts :

- 1 Open door slightly and wait a few seconds until wash action stops before completely opening.
- 2 Add the item.
- 3 Close door firmly to latch and cycle will automatically resume.



CAUTION

TO AVOID BURN INJURY :Slightly open door and wait until spray arms and wash action stop. Hot water may splash out of dishwasher. Failure to do so may result in injury.

Filling the rinse aid dispenser

Rinse aid greatly improves drying and reduces water spots and filming. Without rinse aid your dishes and dishwasher interior will have excessive moisture. The Heated Dry option will not perform as well without rinse aid. The rinse aid dispenser, located next to the Detergent cup, automatically releases a measured amount of rinse aid during the last rinse.

If spotting and poor drying is a problem, increase the amount of rinse aid dispensed by rotating the dial to a higher number. The dial is located under the dispenser cap.

If the rinse aid is low, the Rinse Aid light is illuminated at the beginning and end of the cycle indicating that it is time to refill.

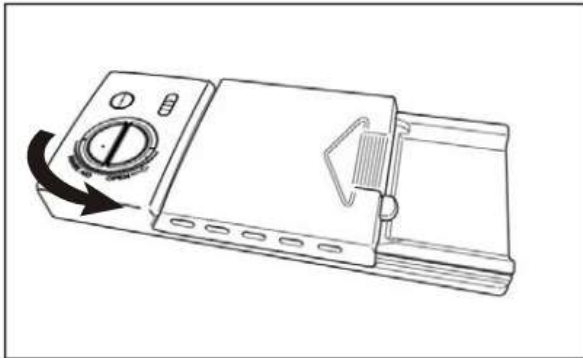
Preparing and loading dishes

Filling the rinse aid dispenser

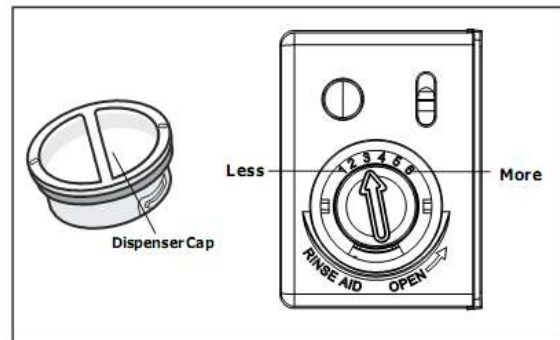


Your dishwasher is designed to use a liquid rinse aid. The use of rinse aid greatly improves drying performance after the final rinse. Do not use a solid or bar-type rinse aid. Under normal conditions, the rinse aid will last approximately one month, try to keep it full, but do not over fill.

1. Open the door, turn the dispenser cap to left and lift it out.



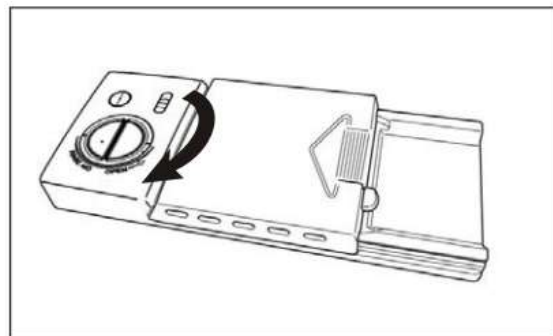
3. You can adjust the amount of the rinse aid released during the rinse operation, the greater number indicates the larger amount of rinse aid released.



2. Add rinse agent until the indicator point to max

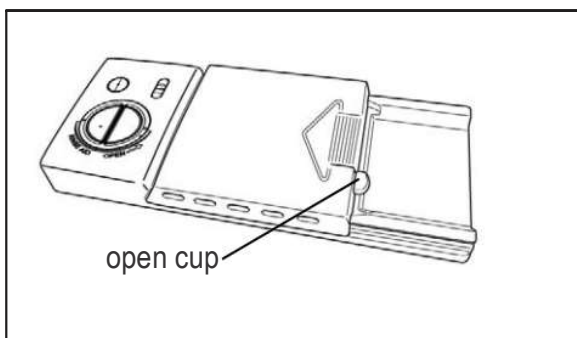


4. Replace the dispenser cap

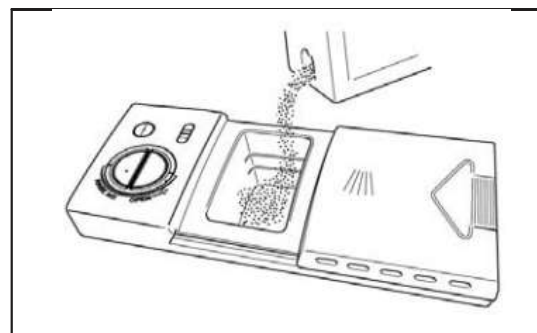


Filling the detergent dispenser

1. Push the dispenser cover latch downwards and open it

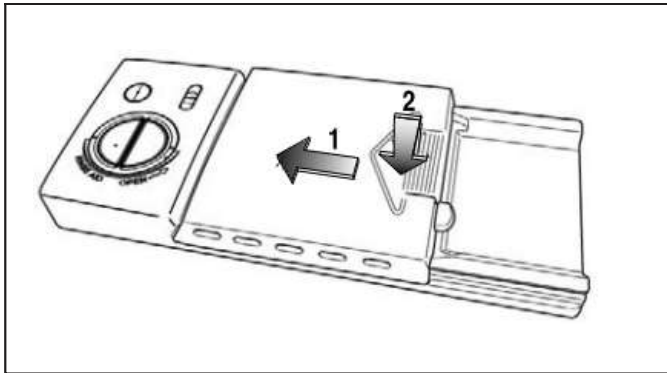


2. Add the detergent to the main wash compartment



Preparing and loading dishes

3. Close the dispenser cover



The amount of the detergent needed depends on the cycle and soil level of dishes, refer to the table below and adjust the recommended amount as necessary for your load.

Cycle	Soft Water (0–3 Grains)	Medium Hard Water (4–8 Grains)	Hard Water (9–12 Grains)	Very Hard Water* (Over 12 Grains)
Auto wash, Pots&wash, Normal wash	2 Teaspoons (Main Wash Cup – 1/4 Full)	5 Teaspoons (Main Wash Cup – fill to line above "Regular")	8 Teaspoons (Main Wash Cup Completely Full)	Each Cup – Completely Full (Water Softener Recommended)
Quick wash, China crystal	2 Teaspoons (Main Wash Cup – 1/4 Full)	5 Teaspoons (Main Wash Cup fill to line above "Regular")	8 Teaspoons (Main Wash Cup completely full)	Main Wash Cup – Completely Full (Water Softener Recommended)
Rinse	No Detergent	No Detergent	No Detergent	No Detergent (Water Softener Recommended)

Cleaning the exterior door and panel

1. Stainlesssteel panel

Clean the stainless steel door and handle regularly to remove the debris with cleaning soft cloth.

Do not use appliance wax, polish, bleach or products containing chlorine to clean the stainless steel door.

2. Controlpanel

Clean the control panel with a lightly dampened cloth, clean it gently.

Clean the Stainless Steel Inner Door and Tub

The tub is made of Stainless Steel, it will not rust or corrode if the dishwasher should be scratched or dented.



Clean the spots on the steel inner door and tub with a damp nonabrasive cloth.

Clean the Cylinder Filter

The Cylinder Filter is designed to collect some big items such as broken glass, bones and pits. The Cylinder Filter needs to be cleaned to maximize wash performance.

Remove the bottom rack, rotate the cylinder filter as shown, lift it out, empty and clean it by holding it under running water and replace.

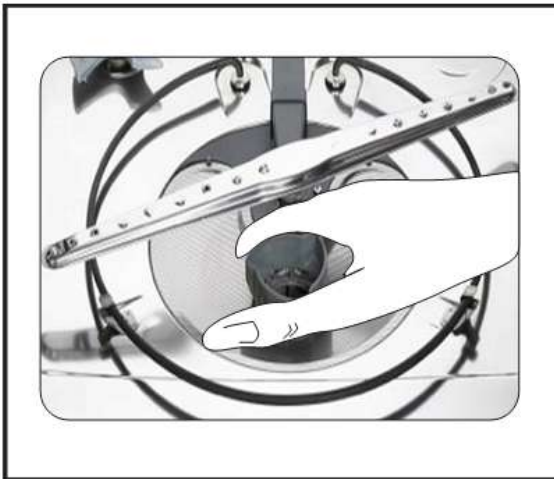


WARNING

Burn Hazard

Allow heating element to cool before cleaning the interior.

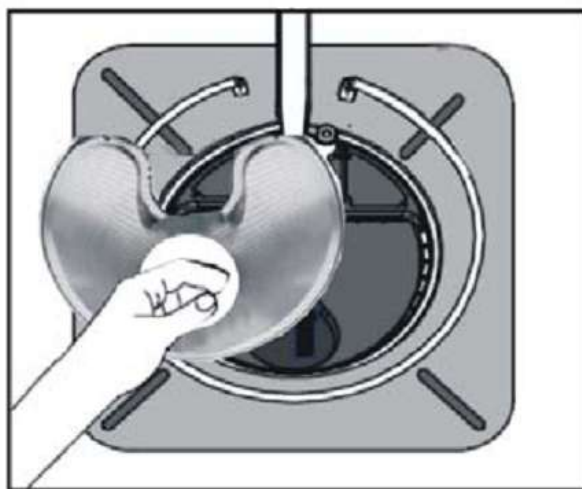
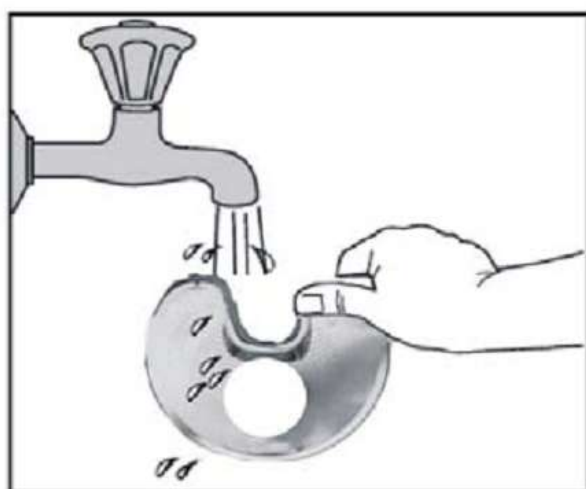
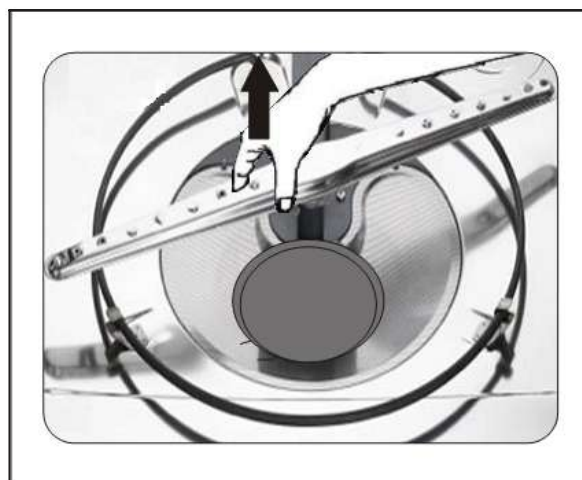
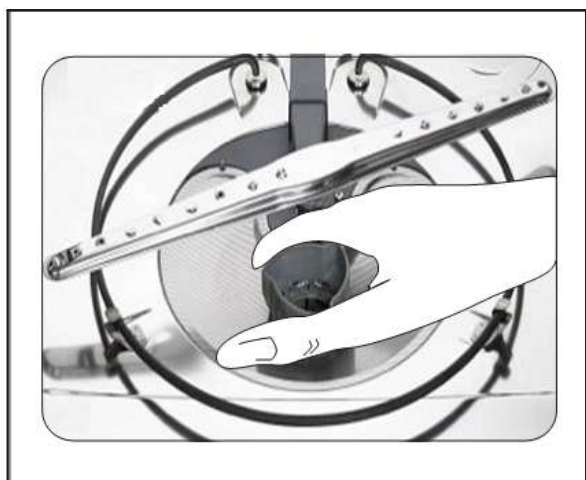
Failure to do so can result in burns.



Clean the Fine Filter

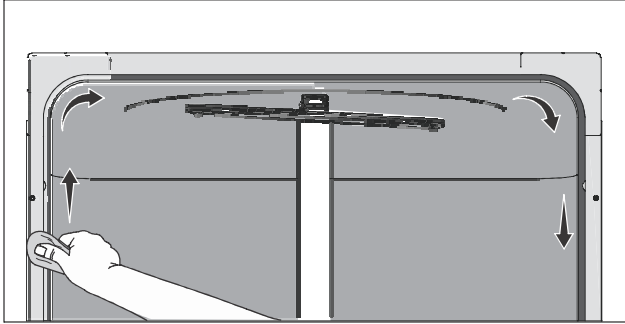
Take out the Cylinder Filter and remove the Fine Filter from the dishwasher tub bottom. To remove the Fine Filter you must first remove the bottom spray arm as shown below.

Flush the Fine Filter by holding it under running water and replace.



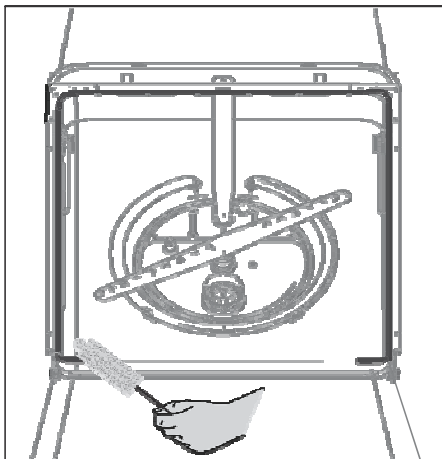
Clean the door gasket

Clean the door gasket with a damp cloth to remove food particles regularly.



Inside

The inside of the dishwasher is self-cleaning with normal use. If needed, clean the tub gasket with a damp cloth and use a brush similar to the ones shown below to clean the opening in the end of the gasket.



Air gap

If there is an air gap installed with your dishwasher, make sure it is clean so the dishwasher will drain properly.

Air gap is not part of your dishwasher.

Before you clean the air gap, turn off the dishwasher firstly and lift off the cover

Remove the plastic cap and clean with a toothpick.

Protect against freezing

Your dishwasher should be protected from freezing properly if it was left in an unheated place. Have a qualified person do the following:

To Disconnect Service:

1. Turn off electrical power to the dishwasher at the supply source by moving fuses or tripping circuit breaker.
2. Turn off the water supply
3. Place a pan under the inlet valve. Disconnect water line from inlet valve and drain into pan.
4. Disconnect drain line from pump and drain water into pan.

To Restore Service:

1. Reconnect the water, drain and electrical power supply.
2. Turn on water and electrical power supply.
3. Fill both detergent cups and run dishwasher through a Heated-Washcycle.
4. Check connections to make sure they do not leak.

Troubleshooting

before calling for service

Problem	Possible cause	Solution
Dishwasher won't start	Door may not be closed properly	Shut the door completely make sure it is latched
	Power supply or power line is not connected	Check and connect the power supply
	Delay Start option has been selected	Refer to Delay Start section in this manual to rese
	Child Lock activated (selected models)	Deactivate the child lock, refer to child lock section in this manual
Dishwasher beeps at the end of the cycle	It indicates the wash cycle finished, the dishwasher will beep	
Rinse Aid light on	The rinse aid level is low	Add rinse aid
Dishwasher operates too long	The dishwasher is connected to cold water	Check the dishwasher, make sure it connected to the hot water supply
	The cycle time will vary due to the soil	When heavy soil is detected, the auto, normal, pots&pan cycle will automatically increase the cycle time
	The sanitize option is selected	When sanitize option is selected, the cycle time will be increase to meet the sanitized temperature request
Dishes are not clean enough	Water pressure is temporarily low	Use you dishwasher when the water pressure is normal
	The inlet water is low	Make sure the dishwasher is connected to the hot water supply Try not use your dishwasher when hot water is being used elsewhere in the house
	Dishes are loaded too close together improper use of detergent	Load the dishes again as the manual introduced Add detergent depending on the water hardness and the cycle you chose. Use fresh detergent.
	The selected cycle is not suitable for food soil condition	Choose another cycle for longer washing time
	Spray arms is blocked by some items	Make sure the spray arm is rotated fluently
Dishes not drying enough	Detergent dispenser is empty	Fill rinse aid dispenser or increase the amount of rinseaid.
	Improper loading of dishes	Load the dishes again as the manual introduction
	The cycle you chose did not included the drying.	Choose the proper cycle with drying
Spots and filming on dishes	Water hardness is too high	For extremely hard water install a water softener
	Improper loading of dishes	Load the dishes again as the manual indicates
	Old or damp powder rinse aid is used	Use fresh rinse aid
	Rinse dispenser empty	Add rinse aid to the dispenser
Etching	Using too much detergent	Use less detergent if you have soft water
	The inlet water temperature exceeds 150 °F	Lower the inlet water temperature
Detergent left in dispenser cup	Detergent may be too old	Use fresh detergent
	Spray arm is blocked	Load the dishes, making sure the spray arms are notblocked.

Troubleshooting

Problem	Possible cause	Solution
Detergent dispenser will not shut	Improper operation of the detergent cover	Add the detergent and rinse aid as indicated by the manual
Water remains in the dishwasher	Previous cycle has not finished or has been interrupted	Select the proper cycle as introduced by the manual
Dishwasher does not drain properly	Drain is clogged	Check the air gap if you have Make sure the disposer is empty if the dishwasher is connected to the disposer
	Drain hose is kinked	Make sure the drain hose is properly connected to the sink
Suds in the tub	Improper detergent is used	Make sure to use only the automatic dishwasher detergent
Dishwasher leaks	Excessive suds caused by using the improper detergent	Make sure to use only the automatic dishwasher detergent
	Dishwasher is not level	Leveling the dishwasher (see the installation manual)
Black or gray marks on dishes	Aluminum utensils have rubbed against dishes	Chose a higher cycle Make sure the inlet water is no less than 120°F
Stained tub interior	Coffee and tea soil	Using a spot cleaner to remove the soil
	Reddish stain	Some tomato food will cause this, use of the rinse only cycle right after loading this will decrease the staining
Noises	Detergent cup opening \ Drain pump sound	This is normal
	A hard object has entered the wash module. When the object is ground up, the sound should stop.	If the noise persists after a complete cycle, call for service.
Dishwasher won't fill	Water valve is turn off	Check if the water valve is turn on
	Door latch may not be properly seated	Make sure the door is closed

Error Codes

When some malfunctions come on, the appliance will display error codes to warn you:

<i>Codes</i>	<i>Meanings</i>	<i>Possible Causes</i>
E1	Longer inlet time.	Faucets is not opened, or water intake is restricted, or water pressure is too low.
E4	Overflow.	Some element of dishwasher leaks .
E8	Failure of orientation of distributary valve.	Open circuit or break of distributary valve.
E9	Keep touching a button more than 30 seconds.	Water or something on the button.

⚠ WARNING!

- If overflow occurs, turn off the main water supply before calling a service.
- If there is water in the base pan because of an overflow or small leak, the water should be removed before restarting the dishwasher.