THOR K I T C H E N®

USE & CARE MANUAL

USE AND CARE MANUAL

24 INCH BUILT-IN DISHWASHER

HDW2401SS





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IMPORTANT SAFETY INSTRUCTIONS

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 to the dishwasher, please contact your dealer, do not attempt to
- repair or replace any part 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 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.

Capacity 14 place settings

Dimension 606 x 650 x 857 mm (WxDxH)

Weight unpacked 94lb (42.5 kg)

Power Supply 120v, 60Hz

Rated Power Usage Wash motor 50W Heater 840W

Water Feed Pressure 20-120 psi (138 - 828kPa)



- 1 Top Light
- 2 Upper Spray Arm
- 3 Middle Spray Arm
- 4 Vortex wash arm (Located on the left side of tub)
- 5 Low Spray Arm
- Rinse Aid Dispencer
- 7 Detergent Dispencer

- 8 Cup Shelf
- 9 Adjustable Upper Rack
- 10 Tub Gasket
- 11 Silverware Basket
- 12 Bottom Rack
- 13 Heating Element

FEATURES

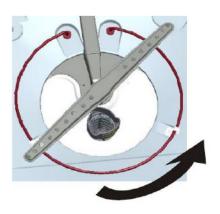
Filter System

Your dishwasher has a multiple Filter System. In the System there are four filter-meshes .I tcan 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 .



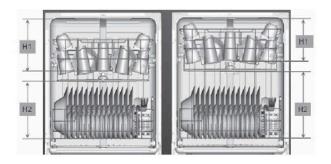
Smart Wash System

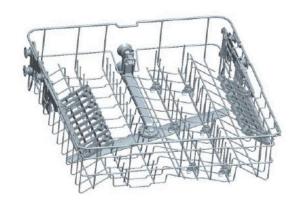
Your dishwasher has Smart. When Wash System. a partial load of lightly soiled dishes is placed in the unit, a wash cycle similar to a short wash will automatically be performed. When a full load of heavily soiled dishes is placed in the unit, a heavy wash cycle will automatically be performed. can determine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



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".





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 dills with water covering the filter area. Water is then pumped through the multiple filter and spray arms. Seperated 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

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/Cancelpad.

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-TEMP WASH is selected an even higher temperature will be guaranteed to handle heavier soil loads.

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 pad

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

Control Panel



Wash Cycle Selections

Pots and Pans

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

Normal Wash

This cycle is for regularly soiled dinner dishes or silverware.

3 Chinese 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-rinsingdishes 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 solied or pre-rinsed dishes and sliverware.

Functions

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 accidently changing the dishwasher cycle or starting the dishwasher.

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

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

10 Votex Wash

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

Touse 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.

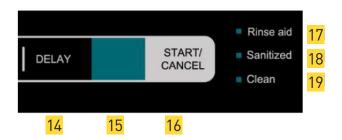
12 Sanitize

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 dose 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 $60~^{\circ}\text{C}$ (140°F) max.



16 Start/Cancel

This information covers several different models. Your dishwasher may not have all the cycles and options described.

This built-in dishwasher's function control and cycle selections will be void when dishwasher door is firmly closed. When setting up the dishwasher, please keep the dishwasher door open and select the wash cycle and options desired. The indicator light above the pad will turn on. To start, press the Start/Cancel key once and close the door firmly within 4 seconds after you select start. The indicator light will flickering and the wash cycle will begin after the door is closed. To cancel wash cycle once the dishwasher is running, carefully open the door slowly to access the controls and avoid water spill. Long press Start/Cancel for 8 second, the dishwasher will start a 60 second draining process to prevent water and moister trap inside the dishwasher. The dishwasher will be power off automatically when draining process is completed. You may then open the unit and/or start a new cycle.

When opening the door, use caution as there is a possibility of injury from hot steam coming out from the unit. If the door is opened while the dishwasher is running, a safety switch will stop the cycle. You may add more dishes before the main wash starts.

<mark>14</mark> Delay

To delay the start of a selected cycle, press Delay

Start pad until the desired delay time shows in the

LED display s creen, it allows you to automatically

start your dishwasher for 1 to 24 hours dela y. 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

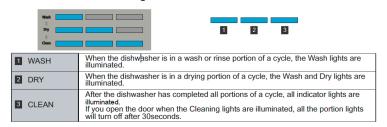
If a cycle with the sanitize function is finished, the sanitized indicator light turns on. If you open the door, it will turn off after 30 seconds.

19 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 ride side of the front of the dishwasher, these lights indicate how far along is the current wash cycle while the dishwasher is running.



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. Thismeans 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)
	Pre Wash		
	Pre Wash		
	Wash(48°C)		140
POTS & PANS	Rinse	22.8	
	Rinse		
	Rinse(58°C)		
	Drying	<u> </u>	
	Pre Wash		
NORMAL WASH	Auto(42~48°C)	10.8~23.0	105~135
NORWAL WASH	Rinse(50~58°C)	10.6~25.0	105~135
	Drying		
	Pre Wash		
	Pre Wash		120
CHINA CRYSTAL	Wash(48°C)	19.3	
CHINA CKISTAL	Rinse	15.5	
	Rinse(58°C)	Ī	
	Drying		
	Pre Wash		
QUICK WASH	Wash(40°C)	15.5	60
QUICK WASH	Rinse(50°C)	13.5	00
	Drying		
RINSE ONLY	Rinse Only	8	20
	Pre Wash		
ENERGY SAVER	Pre Wash	19.3	105
	Wash(40°C)		
ENERGY SAVER	Rinse		103
	Rinse(50°C)		
	Drying		

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

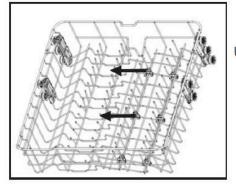


2. Up press the handle to lower the ra

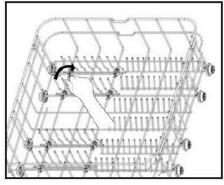


The upper rack in the lower position





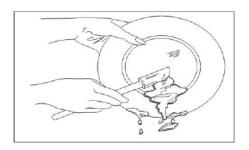
Upper rack



Lower rack

Dish Preparation

Scrape away large pieces of food, bones, p its, toothpicks, etc. The continuous filtered wash system will remove the remaining food particles. Burned-o n 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 opertated at once i tis best to rinse off these food soils. If the dishwasher drains into a food disposer, be sure disposer is completely empty before starting dishwasher.



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 bow ls, plates, saucers and cookware. The adjustable rack space wil lallow 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 detergen tdispenser 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



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

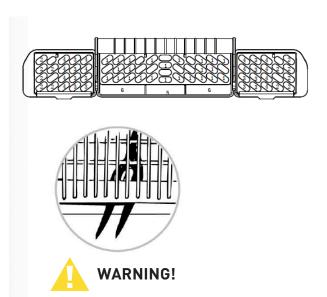


Bottom Rack 14 place settings

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



Do not let any item extend through bottom.



Be sure nothing protrudes though 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 RINSE AID DISPENSER

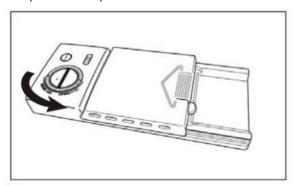
Rinse aid greatly improves drying and reduces water spots and filming. Without rinse aid vour dishes and dishwasher interior will have excessive moisture. The Heated Dry option will not perform as well without rinse aid. The rinse aid dispenser, located next to the Detergent cup, automatically releases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

FILLING RINSE AID DISPENSER

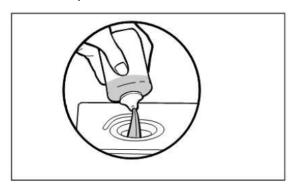


Your dishwasher is designed to use a liquid rinse aid. The use of rinse greatly improves drying performance after the final rinse. Do not use a solid or bartype rinse aid. Under normal conditions, the rinse aid will last approximately one month, try to keep it full, but do not over fill.

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

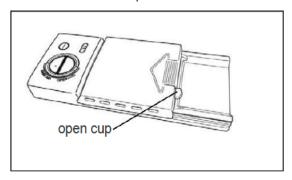


2.Add rinse agent until the indicator point to max

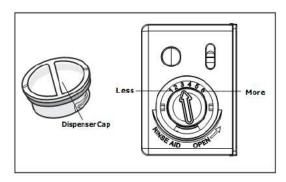


FILLING THE DETERGENT DISPENSER

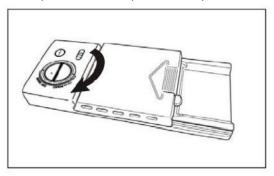
1. Push the dispenser cover latch downwards and open it



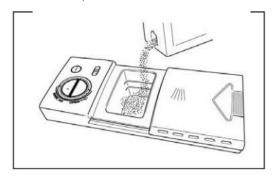
3. You can adjust the amount of the rinse aid released during the rinse operation, the greater number indicates the larger amount of rinse aid released.



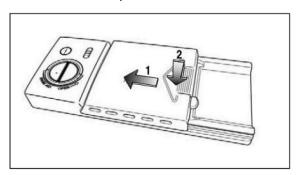
4. Replace the dispenser cap



2. Add the detergent to the main wash compartment



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* (Over12 Grains)
Auto wash, Pots&wash, Normal wash	2 Teaspoons (MainWash Cup- 1/4Full)	5 Teaspoons (MainWash Cup – fill to line above "Regular")	8 Teaspoons (MainWash Cup Completely Full)	Each Cup – Completely Full (WaterSoftener Recommended)
Quick wash, China crystal	2 Teaspoons (Main Wash Cup-1/4 Full)	5 Teaspoons (MainWash Cup fill to line above "Regular")	8 Teaspoons (MainWash Cup completely full)	Main Wash Cup – Completely Full (WaterSoftener Recommended)
Rinse	No Detergent	No Detergent	No Detergent	No Detergent (Water Softener Recommended)

Cleaning the exterior door and panel

1. Stainless steel 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. Contro lpanel

Clean the control panel with a light ly dampen ed cloth, clean it g en tly.

Cleaning the Inner Steel 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 Cyinder 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.

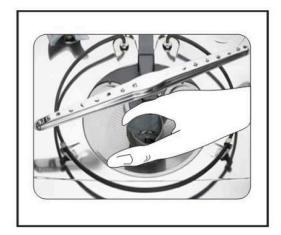
Remove the bottom rack, rotate the cylinder filter as shown, lift it out, empty and clean it by holding it under running water and replace.



WARNING

Burn Hazard

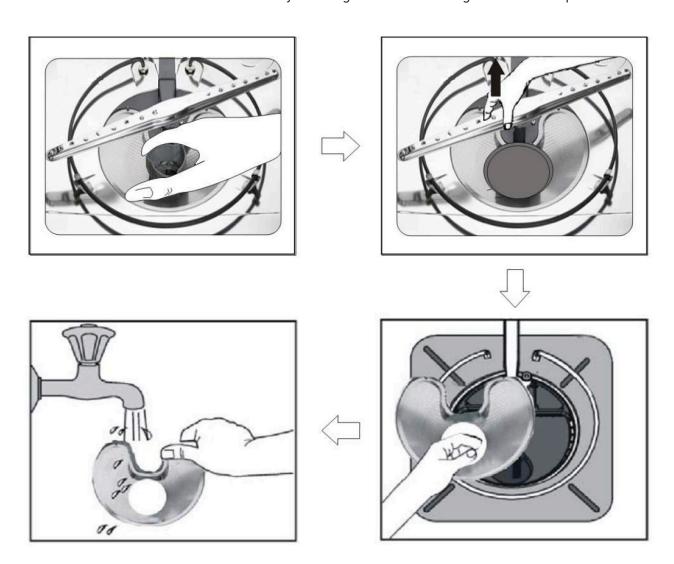
Allow heating element to cool before cleaning the interior. Failure to do so can result in burns.





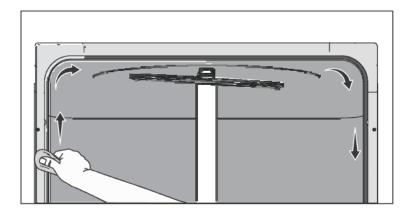
Clean the Fine Filter

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.



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:

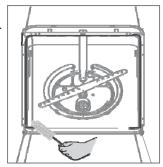
- 1. Turn off electrical power to the dishwasher at the supply source by moving fuses or tripping circuit breaker.
- 2. Turn off the water supply.
- 3. Place a pan under the inlet valve. Disconnect water line from inlet valve and drain into pan.
- 4. Disconnect drain line from pump and drain water into 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-Wash cycle.
- 4. Check connections to make sure they do not leak.

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.



TROUBLESHOOTING

Before Calling For Service

Problem	Possible cause	Solution
	Door may not be closed properly	Shut the door completely make sure it is latched
Dishwasher won't start	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
	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 not clean	Dishes are loaded too close together	Load the dishes again as the manual introduced
enough	improper use of detergent	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 anther cycle for longer washing time
	Spay arms is blocked by some items	Make sure the spay 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 $^{\circ}\mathrm{F}$	Lower the inlet water temperature
Detergent left in	Detergent may be too old	Use fresh detergent
dispenser cup	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 orhas 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 (seethe 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
	Coffee and tea soil	Using a spot cleaner to remove the soil
Stained tub interior	Reddish stain	Some tomato food will cause this, use of the rinse only cycle right after loading this will decrease the staining
	Detergent cup opening \Drain pump sound	This is normal
Noises	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
DISTIMASTICI WOLLT IIII	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:

Codes	Meanings	Possible Causes
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 overfill or small leak, the water should be removed before restarting the dishwasher.

Warranty

This product has been manufactured by Thor Group, 13831 Oaks Ave, Chino, California 91710.

Thor Group disclaims all express warranties except for the following:

This warranty applies to products purchased and located in the United States. Products purchased or located outside this area are excluded.

The warranty does not apply to damage resulting from abuse, accident, natural disaster, loss of

WELCOME TO THE CLUB

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WARRANTY



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