DISHWASHER
OWNER'S MANUAL

MODEL : LD-12AS1 / LD-12AW2

Please read this manual carefully before operating your dishwasher. Retain it for future reference.

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Dishwasher

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SPECIFICATIONS	

SAFETY AND CAUTION

- Please read this manual carefully before using the dishwasher for the first time.
- This manual contains very important notes regarding the installation, use and maintenance of your dishwasher.
- The manufacturer can not be responsible for problems caused by ignoring these safety and caution instructions.
- This dishwasher is designed for normal household use.
- Do not use the dishwasher for industrial and commercial use, or other purpose.
- Electrical connection must be in accordance with the rating label.
- Electrical safety is only guaranteed when the earth system of your house is in accordance with the related local regulations. (Please avoid use of an extension cable or cord.)
- Only suitable household utensils should be placed in the dishwasher. (Please avoid utensils; that are non-heartresistant, metal decorated, etc.)
- Keep detergents away from children.
- If the hot water exceeds 65˚C, adjust the water heater setting. If the hot water temperature can not be maintained below 65˚C, the dishwasher must be connected to cold water.
- Do not use any kinds of solvent in your dishwasher. They may cause an explosion or fire.
- Do not spray water on the appliance. It may cause the failure of electric parts or electric shock.
- Do not allow children to operate the dishwasher.
- Do not push down or sit on the inner door when the door opened. It may cause the deformation or failure of your dishwasher.
- Do not use the detergent for hand washing.
  The detergent for dishwasher should be used for normal operation.
- If power supply cord is damaged, it must only be replaced by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

- This appliance is fitted with a safety function that automatically stops the operation of the dishwasher when it is exposed to heavy disturbance on its mains.
- This appliance must be positioned so that the plug is accessible.
- Controls may be locked using “child lock” mode to prevent from starting dishwasher accidentally.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the appliance.
- Do not insert anything such as coin into the vapor vent.
  It may cause the failure of mechonical parts and noise.
- Do not get the body near to vapor vent.
  It may be scalded by hot water.

INSTALLATION INSTRUCTION

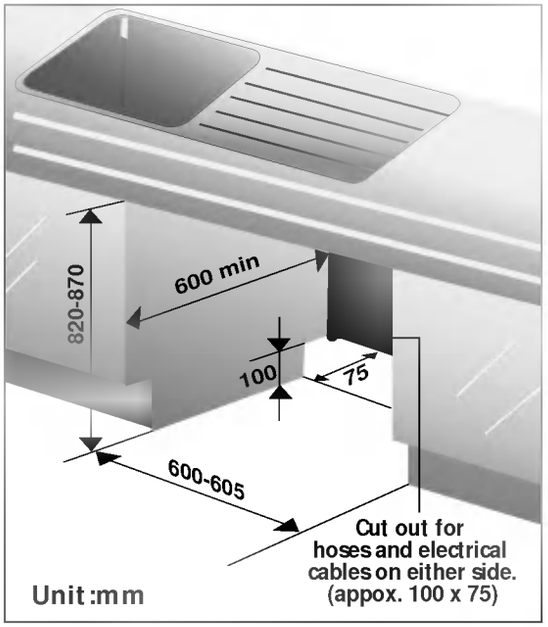
Step 1 :
PREPARE CUPBOARD OPENING

1. This dishwasher is designed to fit to the size shown as below.

2. Select a location as close to sink as possible for easy connections to water and drain lines.

3. The dishwasher should not be installed more than 3 meters from sink for proper drainage.

4. If dishwasher is to be installed in a corner, a minimum 5cm of space is required between the washer and an adjacent cabinet or a wall.



If bare chipboard is adjacent to or above the dishwasher, it should be sealed with a waterproofing paint or sealant to prevent swelling due to steam.

Step 2 :
PREPARE ELECTRICAL WIRING

CAUTION

For personal safety, remove house fuse or open circuit breaker before installation. Do not use an extension cord or adapter plug with this appliance. Electrical and grounding connections must comply with the national electrical code/provincial and municipal code and/or other local codes.

1. This appliance must be supplied with correct rating voltage and hertz as shown on instruction manual, and connected to an individual, properly grounded branch circuit, protected by minimum 15 amp circuit breaker or time delay fuse.
   Wiring must be 2 wires with ground.

2. The power point must be in a accessible location adjacent to and not behind the dishwasher and within 1.2 meters of the dishwasher side. A correctly rated, wired and earthed extension cord may be used if necessary. (See Fig. A)

3. The power point must be correctly earthed, if in doubt, have it checked by a qualified Electrician. No other appliance should be connected to the same plug outlet by a double adapter or similar plug.

Step 3 :
PREPARE DISHWASHER FOR INSTALLATION

1. Lay the dishwasher on its back.
2. Adjust the legs to the needed height of cabinet as shown by figure #1.

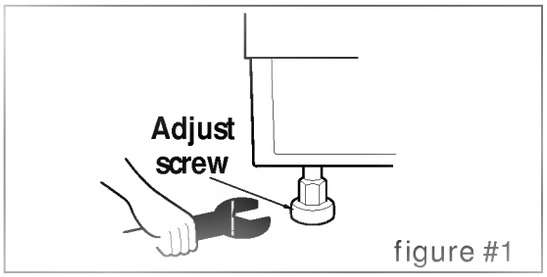
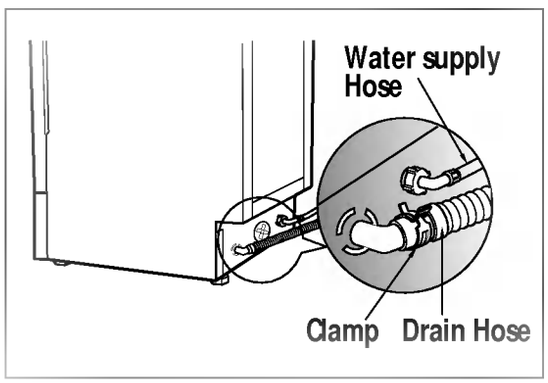


figure #1

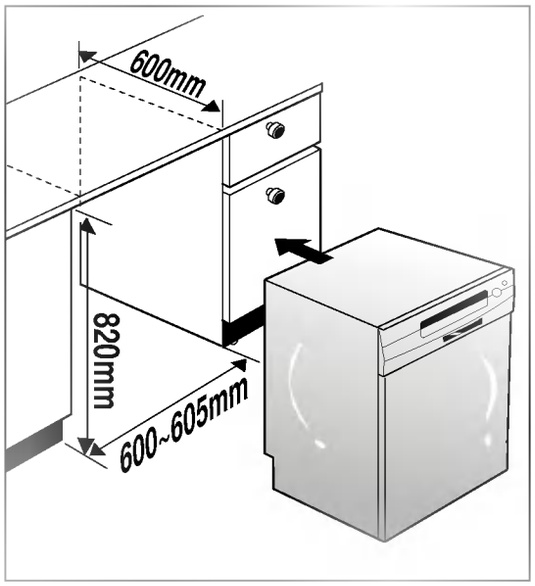
Step 4 :
CONNECT DRAIN HOSE TO DISHWASHER

1. Turn the drain connector at the back of dishwasher to drain direction
2. Connect the drain hose to the drain connector tightly using hose clamp.



Step 5 :
INSTALL THE DISHWASHER IN CUPBOARD

1. Before sliding the dishwasher into the cupboard opening, all necessary final height adjustment and balancing adjustment should be done using the spanner.
2. Slide the dishwasher into the cabinet opening carefully. Make sure that the drain hose inside the cabinet is not kinked or exceeded.



Step 6 :
DRAIN LINE CONNECTION

1. If the end of drain hose does not fit to the drain line, use a piece of rubber connector(not supplied) that must be resistant to heat and detergent and may be obtained from a plumbing shop.

2. There are 2 typical connections as shown in Figure A, B.

The recommended methods of drain hose connection must be adhered to within the areas of Water Board Authority. Several other options are commonly used outside this area and local council or plumbers should be able to advise of these.

The "S" trap spigot must be drilled out cleanly and free of obstruction to its maximum internal diameter, if used for drainage.

To prevent siphoning, one of the following instruction methods must be followed:

■ When the drainage hose is connected to a sink "s" trap or waste disposal unit, the hose must be looped up to the underside of the bench top and secured.

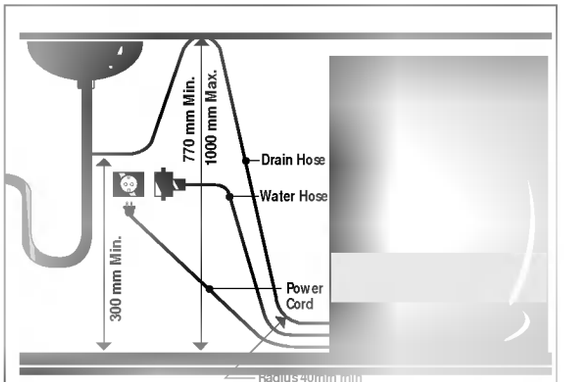


Fig. A

■ When the drain hose is connected to a separate stand pipe, it is essential that an air tight connection is made.
Refer to Fig.B

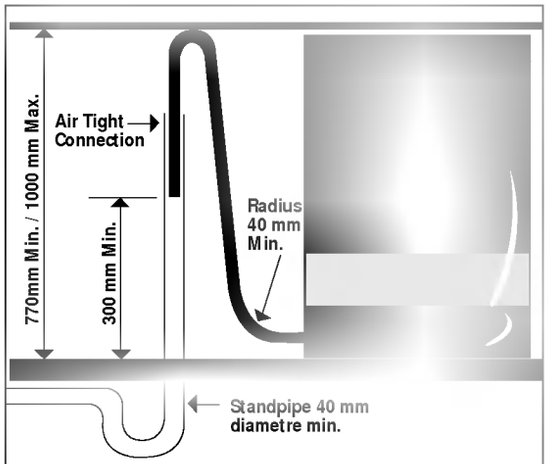
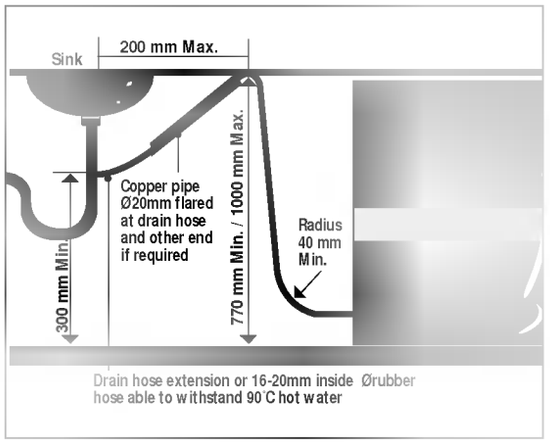


Fig. B : Drainage connection - stand pipe.

Drain Hose Extension
Extend drain Hose as shown below.

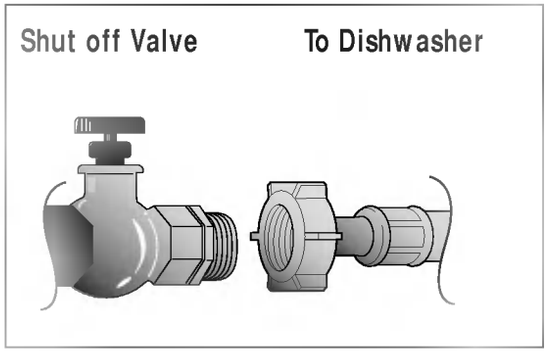


Step 7 :
WATER SUPPLY CONNECTION

1. Connect the water supply pipe to the water valve in front of dishwasher as shown in figure.

2. When connecting, the sealing tape or sealing compound should be used to avoid water leaks.

   Make sure that the line is not kinked or sharply bent.

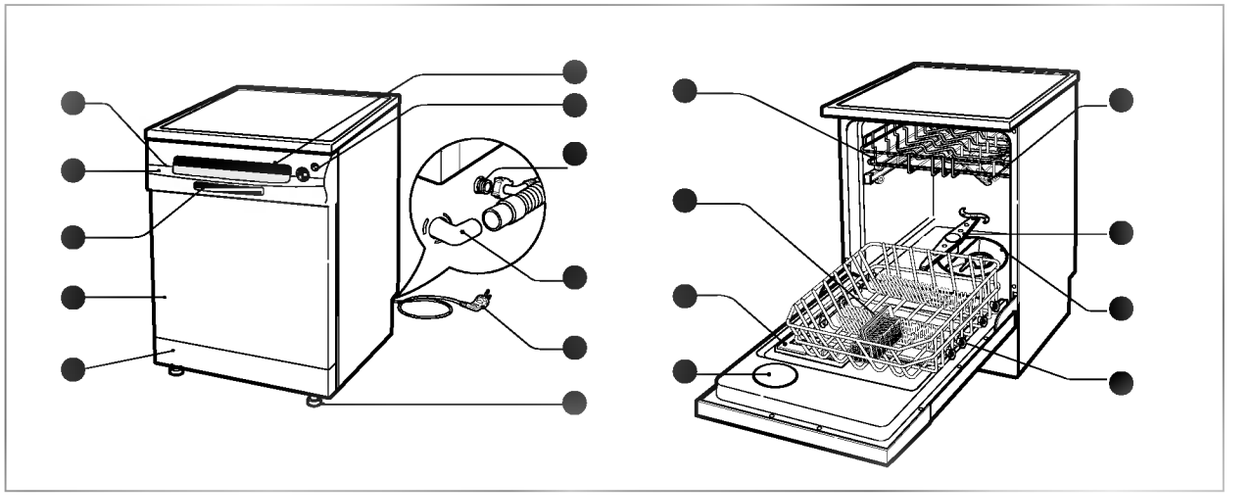


Step 8 :
FINAL CHECK AND ASSEMBLING

1. Securely hand tighten supply hose to water supply.
   Plug power cord into an earthed power point and switch on.

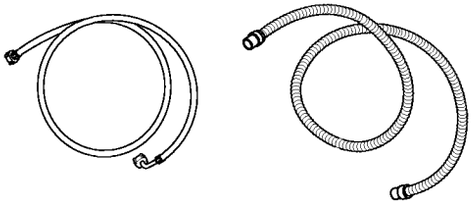
2. Operate the dishwasher through one cycle (Quick cycle is recommended) to check for water leak and operating conditions.

PARTS NAME



1. Vapor vent
2. Control Panel
3. Door Handle
4. Front Cover
5. Lower Cover
6. Process Monitor
7. Power Switch
8. Inlet valve ASM
9. Drain Hose Connector
10. Power Cord
11. Adjust Leg
12. Upper Rack
13. Cutlery Rack
14. Detergent & Rinse Aid Dispenser
15. Vapor Vent Cover
16. Upper Spray Arm
17. Lower Spray Arm
18. Filter ASM
19. Lower Rack

Accessories



Inlet Hose **Drain Hose**

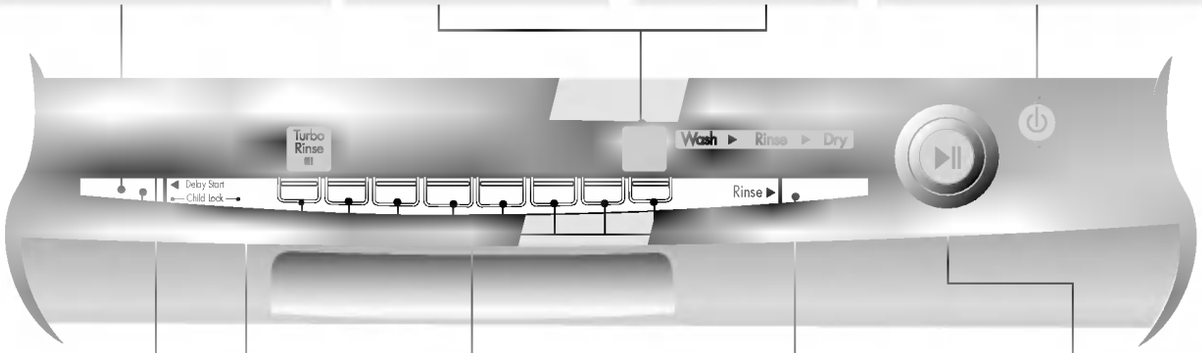
FUNCTION OF CONTROL BUTTON

- If you want to delay the start of selected program, press this button before pressing start button.
- Pressing the delay time will increase time by 1 hour.
- The delay start time can be adjusted from 1 hour to 19 hours.

- If you have a small load for washing, use this function.
- Selecting Half Load shuts off flow to the lower spray arm and reduces water and energy consumption

- Special program for a washing of special dishes like china or crystal glasses.

- For operating, press this button first for power on.
- After operating, this button automatically switches off for safety and energy saving.
- If case of irregular surge disturbances to the machine, the power may be automatically turned off for safety.



- Indication of remaining time
- Self diagnosis and error message display

- Used to lock or unlock the control buttons to prevent all the setting from being changed by a child.
- For locking/unlocking, press Delay Start and Turbo Rinse button simultaneously.

- When power is on, program is automatically set to normal.
- If you want to change the program, press the button and set the program you want to.

- With each press, rinse-plus is added.

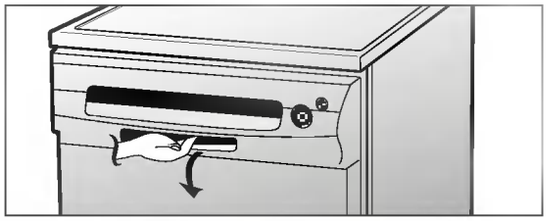
- With each press, Start and Pause is repeated during operation.
- If the machine remains in Pause mode for 10 minutes, the power is automatically turned off.

1. Loading your Dishwasher

For the best washing performance, it is important that the dishwasher is loaded according to instructions.
Before loading items into the dishwasher, you must scrape off large particles in particular non soluble items such as bones, toothpicks, pips, etc.

When loading the dishwasher, observe the following general guidelines:

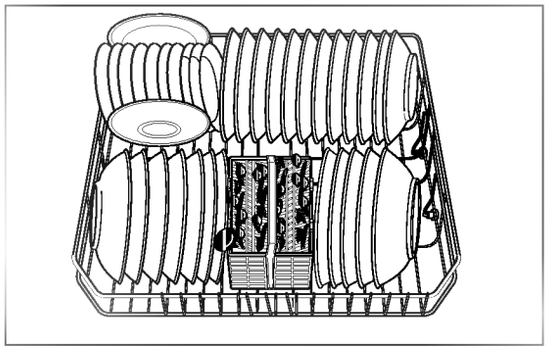
- Position crockery such that water will contact all surfaces.
- Deep based items should be placed at an angle to help water run off and dry properly.
- Items with burnt on scraps should be soaked prior to loading in the dishwasher.



2. Loading the Lower Rack

The lower basket is best loaded with dinner plates, soup bowls, dishes, pots, pans, lids and even the grill tray.
Plates should be positioned upright and facing the center of the rack.
Pots, pans and large dishes must be turned upside down.

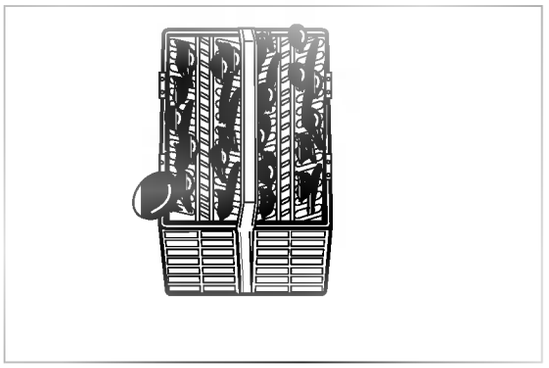
Take care not to obstruct the rotation of the spray arms, and that larger items do not prevent the detergent dispenser lid from opening.



3. Using the Cutlery Basket

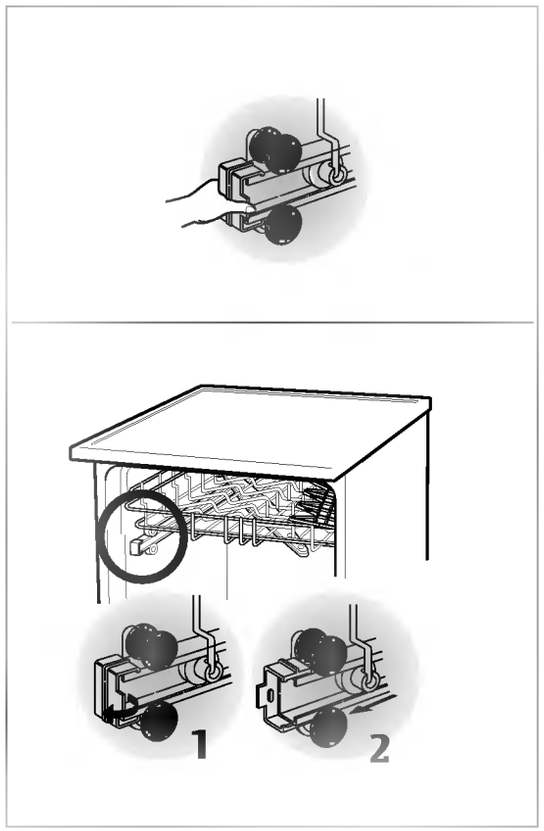
Cutlery should be mixed within each section of the cutlery basket to prevent nesting of similar items. Place the cutlery in the cover with the handles down. The cover can be hinged and clipped away from the basket if you choose not to use them.

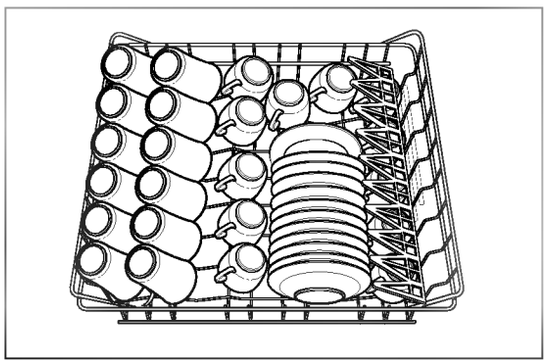
Take care when loading and unloading sharp items.



4. Loading the Upper Rack

The upper rack is best loaded with more delicate items, small plates, long cutlery, cups, glasses and dishwasher safe plastic items. Plates should be positioned upwards and facing the front of the rack.
Cups, glasses and bowls must be positioned upside down.
Extra cups or cooking utensils can be laid on the fold down cup racks which may also provide support for long stem glasses.
Take care not to obstruct the rotation of the spray arm under the upper rack.





5. Adjusting the Upper Rack

Your upper rack can be raised or lowered to cater for different size of crockery. Before adjusting, ensure rack is empty of all crockery. Remove the rail pegs in front of the rack runners by pulling back, then slide the rack out. Re insert the rack in the chosen position and replace the pegs. Fitting the rack back into the standard position reduces the space between the upper and lower rack. **After adjusting, check that the spray arm is free to rotate.**

Non Dishwasher Safe Items

The combination of high water temperatures and dishwasher detergent may damage particular items, therefore we do not recommend using the dishwasher to wash the following:

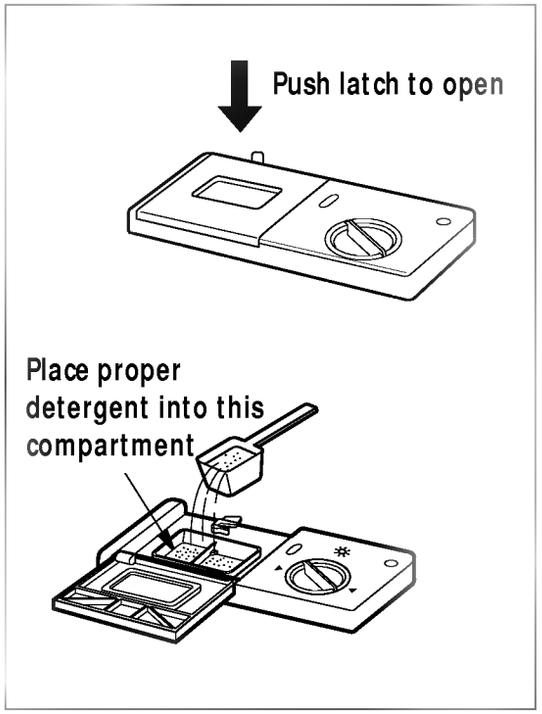
- Copper or anodized aluminum
- Hand painted silver or gold leaf crockery
- Wood or bone handled utensils
- Iron or non rust proof utensils
- Plastic items which are not dishwasher safe.

6. Adding Detergent Dispenser

- Detergent must be put into the detergent chamber before starting every program except the Rinse & Hold.
- Use only the detergent intended for household dishwashers. (Ordinary hand-washing detergent should not be used, because the foam can interfere with proper operation.)
- Chambers hold 15g and 25g.
- The amount of detergent depends on the program. Refer to the guide table.

PROGRAM	AMOUNT OF DETERGENT
Soak	25g
Heavy	25g
Normal	20g
Eco	15g
Quick	10g
Rinse/Hold	No detergent

- After the detergent is supplied, the chamber lid should be closed.
- The detergent is dispensed automatically during the operation.
- The chamber lid remains open after operation.



Detergent Information

Use only the detergent intended for household dishwashers. (Ordinary hand-washing detergent should not be used, because the foam can interfere with proper operation.)

⚠ WARNING

The detergent used is a special Dishwasher detergent and like all household chemicals should be treated as a poison and kept out of reach of children. At completion of each wash program, the detergent compartment should be checked and any remaining detergent removed.

7. Adding Rinse Aid Dispenser

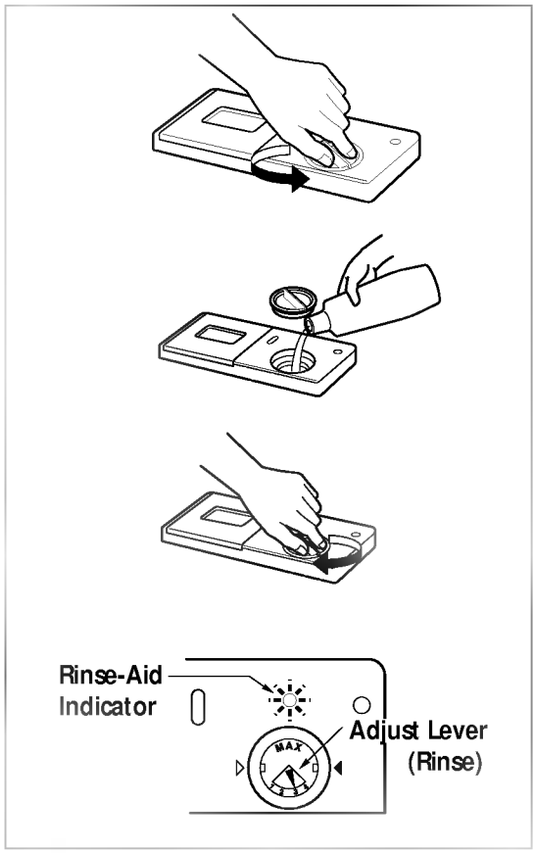
To fill the Rinse Aid chamber, rotate the round cap counter clockwise and remove. Fill the container to the maximum level with a good quality Rinse Aid, then replace and lock the cap.
The Rinse Aid is automatically dispensed during the final rinse cycle.

Depending on the dosage setting and the number of washes, the chamber may need only to be topped up once per month. The rinse aid level can be checked by looking at the indicator window when the dishwasher door is fully open.

● Black indicates sufficient Rinse Aid

O Clear indicates Rinse Aid required

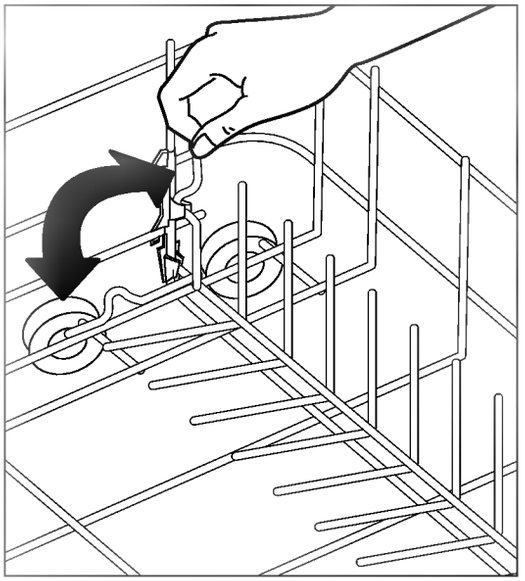
The dosage setting is factory set to suit most installations. If, after washing, you notice cloudy spots, streaks or water marks on your glassware, it may be necessary increase the setting. To do so, remove the cap and rotate the indicator arrow to a higher setting then replace the cap . If the glasses are smeared or there is foam present on the bottom of the glass or the bottom of the machine. Select a lower setting.



Rinse Aid is necessary in order to get spot and streak free dishes as well as improved drying. Using the correct amount will improve wash performance. However, using too much can produce excess foam leading to possible water leaks.

8. Fold down dividers.

■ Fold-down dividers at the back of the rack can be lowered to improve stacking of pots and pans.



WASH OPTIONS

Before select the wash program, press the power button. Then Normal program will be selected with remaining time on display window. To change the program, press the button of the program as you want.

Start or Pause Button

After selecting a wash program, press the Start or Pause button to start the wash cycle.
If at any time you want to interrupt the washing cycle, press the Start or Pause button. Your dishwasher will then pause. Press the Start or Pause button again to re-start dishwasher.

Progress Indicators

Once you select a program, the progress indicators light(Wash, Rinse, Dry). When press the Start or Pause button to start the program, the current stage light will blink.

Delay Start

This function enables the wash cycle to start anywhere between 1 to 19 hours later.

- Select the program that you want by using the program button.
- Set the delay time you want by pressing the "Delay Start" button. The delay start time is increased by 1 hour for each pressing.
- Press the start button. Then the program will be started automatically after the delayed time shown in the display has expired.

Rinse Plus

Normally when you select any program, the Rinse process is done only two (1 normal rinse +1 heating rinse) or three (2 normal rinse + 1 heating rinse) times according to selected program. But if you want to rinse more, you can use this function. As you select +1, +2 the normal rinse will be done one or two times more.

Child Lock

To reduce the possibility of children starting the dishwasher when unattended, the child lock feature can be selected.

- For locking or unlocking, press "Delay Start" and "Turbo Rinse" buttons simultaneously.

Turbo-Rinse

When you want to rinse dishes with higher temperature for sanitation, use this function at any program. If you choose this function, the water temperature goes up to 77˚C when rinsing.

Half Load*(LD-12AS1 Model)*

If you have small load for washing, use this function.
Selecting Half Load shuts off flow to the lower spray arm and reduces water and energy consumption.

Model : LD-12AS1

Program	Drain	Wash			Rinse			Dry
		Pre wash	SOAK	Main wash	Rinse 1	Rinse 2	Rinse 3	20(min)
Soak			45°C	70°C			70°C	
Heavy				70°C			70°C	
Normal				60°C			65°C	
Eco				50°C			50°C	
Quick				40°C			45°C	
Rinse & Hold								

Heavy Wash

This program is for heavily soiled loads including pots, pans and casserole dishes.

Normal Wash

This program is for normally soiled everyday loads.

Eco Wash

This program is for light soiled everyday loads.

Soak Wash

This program is for very heavily soiled loads including pots, pans and casserole dishes which may have dry food residue.

Quick Wash

This program is for that quick wash of lightly soiled recently used dishes and cutlery.

PROGRAMS

Model : LD-12AW2

Program	Drain	Wash			Rinse			Dry
		Pre wash	SOAK	Main wash	Rinse 1	Rinse 2	Rinse 3	20(min)
Soak			45°C	70°C			70°C	
Heavy				70°C			70°C	
Normal				60°C			65°C	
Eco				50°C			50°C	
Quick				40°C			45°C	
Rinse & Hold								
China & Crystal				40°C			45°C	

Heavy Wash

This program is for heavily soiled loads including pots, pans and casserole dishes.

Normal Wash

This program is for normally soiled everyday loads.

Eco Wash

This program is for light soiled everyday loads.

Soak Wash

This program is for very heavily soiled loads including pots, pans and casserole dishes which may have dry food residue.

Quick Wash

This program is for that quick wash of lightly soiled recently used dishes and cutlery.

China & Crystal

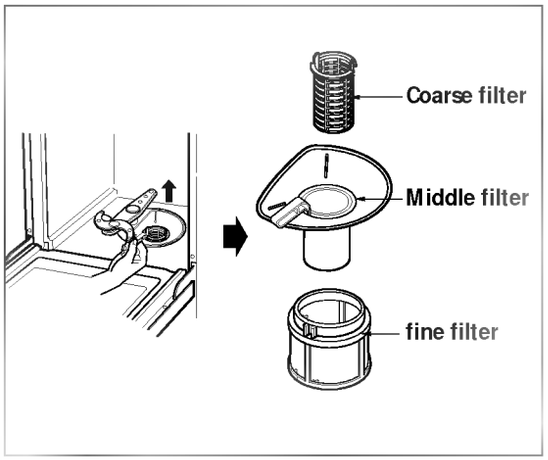
This program is for that wash of special dishes like china or crystal glasses.

CHECK AND CARE

To prevent troubles and poor operating, it is important to check and care the filters and spray arms at intervals.

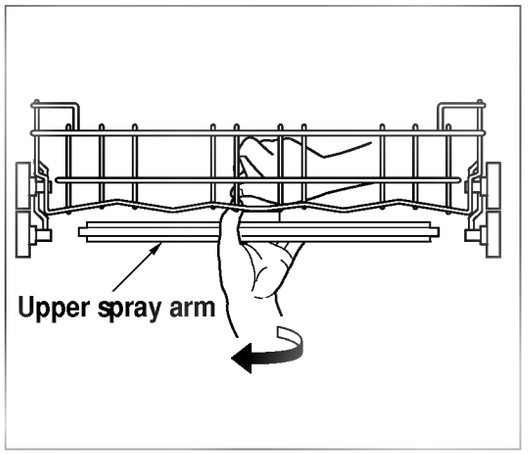
Filters

- Remove the lower rack first.
- Take the filters out with filter handle.
- Lift out the coarse filter and middle filter
- Clean them if necessary.
- Replace them in the reverse order.



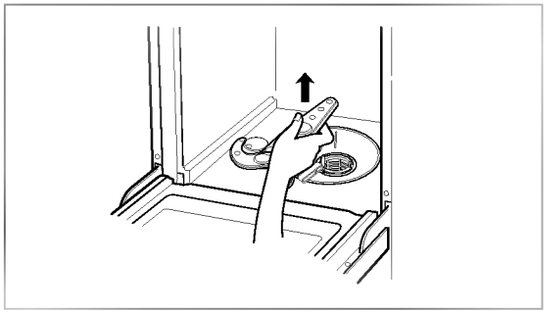
Upper Spray Arm

- Pull the upper rack forwards.
- Check that the water jet holes are not blocked by food particles.
- When necessary to clean, remove the arm by unscrewing the nut.
- Clean the spray arm and replace it in the reverse order.



Lower Spray Arm

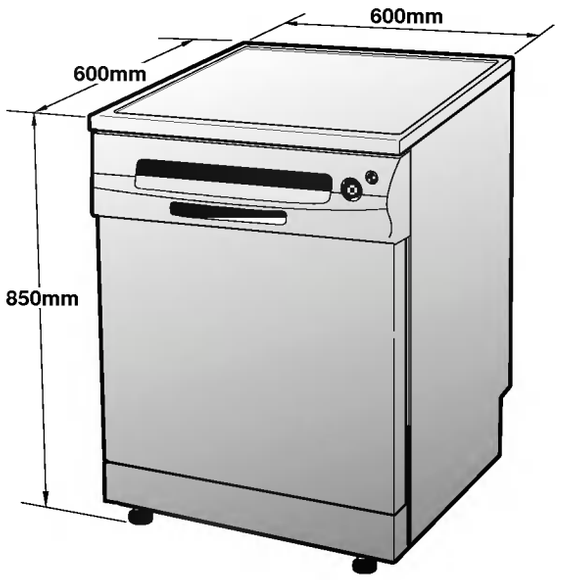
- Check that the water jet holes are not blocked by food particles.
- When necessary to clean, remove the arm by pulling up.
- Clean the spray arm and replace it pulling down.



TROUBLE SHOOTING GUIDE

- If a problem occurs in your machine, call for service.
- Before you call for service, check the below instructions to see whether the problem can be solved by yourself first.

Problem	Possible Causes
The lamps do not come on when the power switch on.	• Plug is not properly inserted in the socket. • Fuse blown or circuit breaker tripped. • The electricity of the house was cut off.
The machine does not start.	• Door is not fully closed. • The start button is not pressed.
Water is not pumped away. (The display show "dE" code)	• The drain hose is kinked. • The filter is clogged. (Clean the filter)
The display shows "AE" code	•The machine is inclined.
The display shows "1E" code	• Water is not supplied. (Water tap is not opened)
The spray arms does not rotate smoothly	• The mounting of spray arms is blocked by food particles. (Clean the holes of the spray arm)
White deposits are left on the dish washer after washing.	• The amount of detergent or rinse-aid set incorrectly. • Salt is exhausted in the salt container. • The salt container cap is not securely screwed on.
Streaks are left on glassware	• Too much Rinse-aid dispensed.
Dry results are not satisfactory.	• Too little Rinse-aid dispensed.
Washing results are not satisfactory.	• Incorrect amount of detergent. • Utensils incorrectly arranged or overloaded. • Filters are clogged. • Water jet holes of spray arms blocked. • Spray arms' rotation obstructed by utensils. • Unsuitable program selected.



	12 Place settings
Dimension	600 x 600 x 850 mm (W x D x H)
	52 kg
Power Supply	See rating label
	See rating label
Water Consumption	See rating label
Water Feed Pressure	30 ~ 800 kPa