

Instruction Manual

HITACHI

Washing Machine

Fully Automatic

Model

SF-250ZVAD
SF-220ZVAD



SF-250ZFV
SF-220ZFV



Thank you for purchasing a Hitachi fully automatic washing machine.

- Please read this Instruction Manual carefully for proper operation of the machine.
- Please keep this Instruction Manual for future reference.

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For household use only

Environmentally Friendly Waste Disposal

Disposing of the packaging

The shipping package has protected your new washing machine on its way to your home. All materials are ecologically harmless and recyclable. Please contribute to a better environment by disposing of packaging materials in an environmentally conscious manner.

Ask your dealer about current means of disposal.

Risk of choking!

Do not let children play with packaging and associated parts.

There is a risk of suffocating with plastic bags and collapsible boxes.

Disposing of your old appliance

Old appliances are not worthless rubbish. Environment-conscious recycling can reclaim them to valuable new materials.

Risk of death!

Unplug the power plug from appliances you are no longer using. Cut off the power cord and dispose of it with the plug.

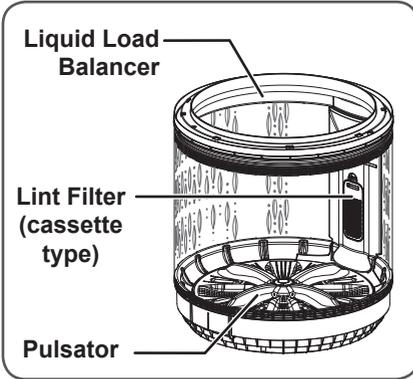
If you wish to discard this product, contact your local authorities or dealer and ask for the correct method of disposal.

Hints and Tips for Eco-friendly Washing

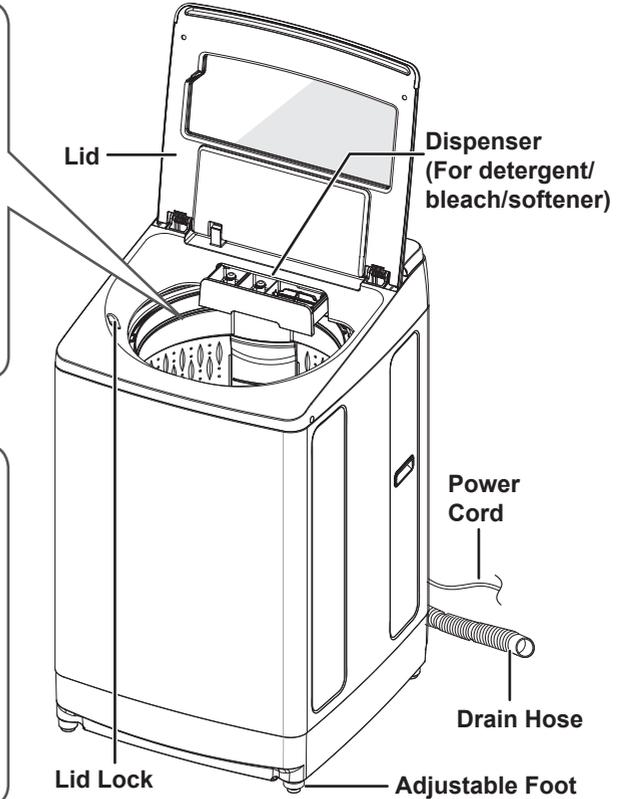
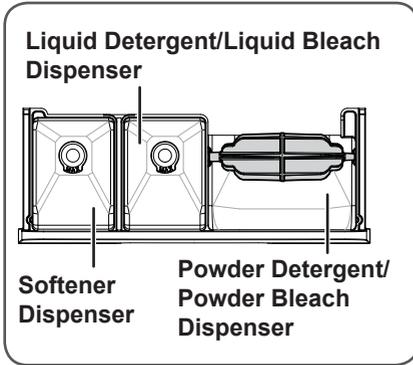
- Keep the load limit of each program.
- This washing machine features power-saving operations with a built-in inverter controller which enables the machine to optimize operations according to the conditions of your clothes.
- Add detergent according to the degree of soiling, laundry size, and water hardness. Follow the detergent manufacturer's instructions regarding the amount of detergent to use.
- You may enjoy further enhanced water-saving technology such as "Spin Shower Rinse".

Parts and Accessories

Tub

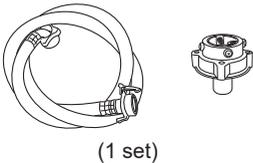


Dispenser

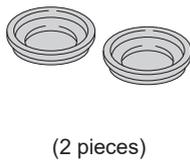


Accessories

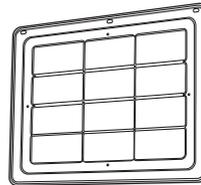
Water Supply Hose and One-touch Joint



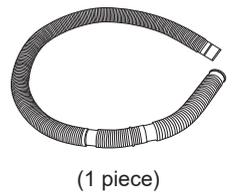
Foot Caps



Rat Guard



Drain Hose



Optional accessories

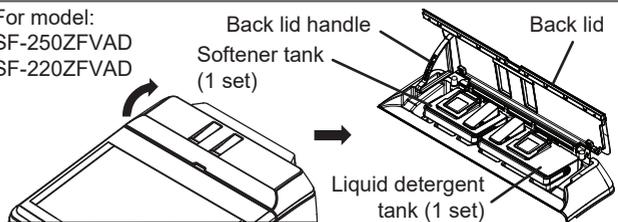
Laundry Net



Refer to page 19
Part number PTSF-200XWV 014

Accessories for Auto dosing function

For model:
SF-250ZFVAD
SF-220ZFVAD



Safety Instructions

This washing machine is designed for home use only.

Before operating the washing machine, please read these safety instructions carefully.

- This appliance is intended to be used in household and similar applications such as: (IEC 60335-2-7)
 - staff kitchen areas in shops, offices and other working environments;
 - farm houses;
 - by clients in hotels, motels and other residential type environments;
 - bed and breakfast type environments;
 - areas for communal use in blocks of flats or in launderettes.

WARNING

Issues which could cause death or serious injury.

General safety

- Do not dismantle, repair or modify the washing machine.
 - This could cause malfunction, fire, electric shock or injury.
 - Contact your local service center for repairs.
- Do not put fire sources or anything inflammable in or near the washing machine (gas, diesel, petroleum, thinner, alcohol, or clothes stained with these substances).
 - This could cause an explosion or fire.
- Do not pour water on the washing machine during operation.
 - This could cause an electric shock.
- Do not climb on the washing machine. Do not place heavy object, drop any object or apply impact on the lid glass.
 - This could cause lid glass breakage. If any scratch or breakage is found on lid glass, stop using the washing machine and contact your local service center to request inspection and repair.
- Do not forcibly open the lid during operation:
Lid Lock Switch is designed to prevent from opening the lid during operation. This is because touching the washing tub while it is spinning may result in serious injury. If you can open the lid during operation, please stop using the Washing Machine immediately and refrain from touching the inside.
 - Contact your local service center for repair.
- This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge (including children) unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Installation

- Do not install the washing machine in an extremely humid place, such as a bathroom or a place exposed to rain.
 - Risk of fire, electric shock, current leakage, corrosion or product damage.
- Do not install the washing machine on a board with castors or on an unstable surface.
 - This may cause injury or malfunction due to abnormal vibration.
- The washing machine must be grounded if you use a two-pin plug adapter on the three-pin plug.
 - Failing to do so could cause an electric shock, electronic substrate and electronic parts damage.
- Use new accessory hose with the appliance. Reusing old hoses can cause a water leak and subsequent property damage.

Power source and cord

- Do not insert or remove the power plug with wet hands.
 - This could cause an electric shock.
- Use the rated voltage. Do not connect other devices to the same outlet.
 - Using the washing machine and other electric appliances on the same outlet may cause the plug to overheat and result in fire.
- Clean off any dust on the power plug.
 - A dirty or dusty plug may cause a fire.
- Do not use an electric socket or outlet that is damaged or loose.
 - This could cause an electric shock, short circuit, or fire.
- Do not damage, cut, modify, bend, or fold the power cord.
 - This could damage the power cord and cause a fire or electric shock.
- Do not use an extension cord on the power cord.
 - This could cause an overheating or fire.
- If the power cord is damaged, it must be replaced by a service agent or repair shop authorized by the manufacturer to avoid risks.

Safety Instructions

Child safety

- Keep packaging out of reach of children and infants.
→ Danger of suffocation.
- Do not let children climb onto the washing machine or to get into the tub. Do not leave boxes or chairs near the washing machine that children could use to climb onto it.
→ This may cause injury.
- Children should be supervised to ensure that they do not play with the appliance.

CAUTION

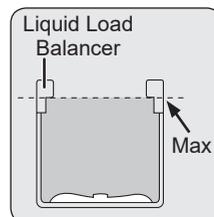
Issues which could cause injury or damage property.

General safety

- If there is a water outage or if you are removing the water supply hose to reattach it, close the tap and press the Start/Pause button, then wait 40 seconds and slowly open the tap.
→ Air pressure from a large amount of air in the water pipes could damage the washing machine.
- Periodically check that the union nut on the water supply hose is tight.
→ A loose nut may cause a water leak.
- Remove the power plug from the socket and close the water tap if you will not use the washing machine for a long time.

Use

- All packaging materials must be removed before using the washing machine.
→ This could cause malfunction or abnormal vibration.
- Check inside the tub before operating the washing machine.
→ Check that no pets or small animals are in the tub.
- Do not wash items through which water does not flow easily such as raincoats, wet suits, ski suits, sleeping bags, cushions, pillows, shoes, shower curtain.
→ The washing machine may not work properly, or it could cause injury or damage the washing machine.
→ Do not wash the laundry even if it is labeled as washable with waterproof clothing.
- Do not fold and stack large items such as blankets together when washing them.
- Do not use a laundry net that is larger than 40cm on a side.
→ The clothes may become off balance and cause abnormal vibration during the spin cycle.
- Do not load laundry over the lower part of the liquid load balancer (dotted line as per figure).
→ Doing so could cause laundry to fly out of the tub during the spin cycle and damage the clothes or the washing machine, or cause a water leak.
- Always put detergent into the detergent dispenser when washing laundry. This model * is equipped with the Auto dosing function and the Auto dosing function is turn on, the appropriate input amount is automatically input.
(*For SF-250ZVFAD, SF-220ZVFAD)
- Do not use water supply inlet hotter than 50°C.
- Do not wash items together with coins, pins, or stones.
→ This may damage clothes or the washing machine, or cause a water leak.
Check inside pockets before washing.
- Do not press the buttons with sharp pointed objects.
- Do not put heavy objects, liquid-filled containers or equipment which produces heat on the washing machine.
→ This may damage the washing machine or its top.



Care and maintenance

- If detergent, fabric softener or bleach spills on the surface of the machine, clean it up with a damp cloth immediately.
→ The plastic or steel parts of the washing machine may be damaged.
- Do not place equipment that produces heat near the washing machine.
→ This may cause deformation of the washing machine.

How to Install the Washing Machine

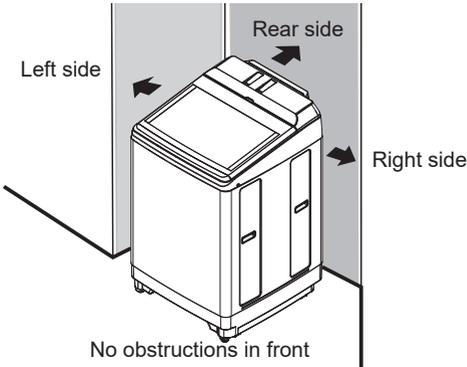
- The symbol is for checking whether you install the washing machine correctly.

Safety precautions

- Do not use a damaged power plug for your safety. Contact a repair center that is certified by the manufacturer to replace the plug.
- If the outlet you are using is a 2-pin outlet, use an adapter to change from three pins to two pins. When you do this, be sure to connect an earth wire. There are risk of electric shock, electronic substrate and electronic parts damage if you do not connect an earth wire.
- Do not connect an earth wire to a gas pipe, telephone wire, water pipe, or lightning rod. Remove the power plug from the electric outlet when you are attaching an earth wire.
- You do not need to attach an earth wire if the electric outlet is a 3-pin type with earth terminal.

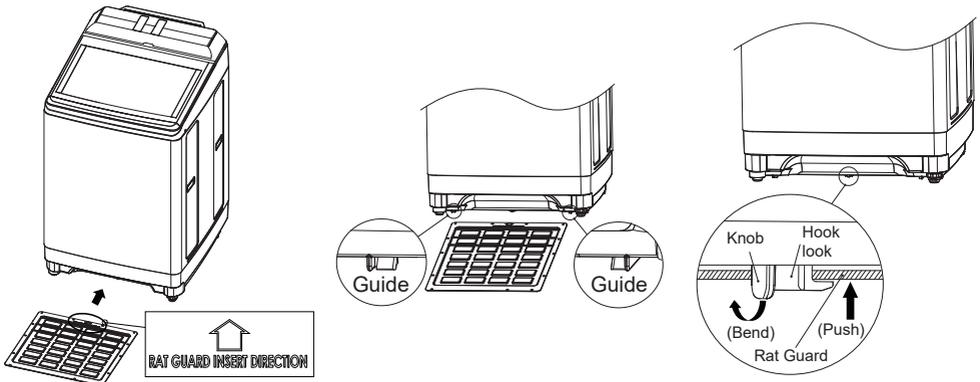
Where to install the washing machine

- The hoses may be damaged if they are frozen. Do not install the washing machine outside or any other place with a risk of freezing.
- Install the washing machine on a solid level floor to avoid excessive vibration and noise.
- Do not install the washing machine in an extremely humid place, such as a bathroom or a place exposed to rain.
- Do not install the washing machine in a slippery or unstable location. Doing so could cause abnormal vibration.
- Install the washing machine away from walls as shown below to avoid abnormal noise and vibration.
- Drain Hose can be moved by the pressure of drain water or the vibration. If the drain port is big or shallow, please fix drain hose so that it does not come off.



Area	Gap
Left	At least 9 cm
Right	At least 9 cm
Rear	Should be 10 cm or more for the rear with the Water Supply Hose.

How to Install The Rat Guard



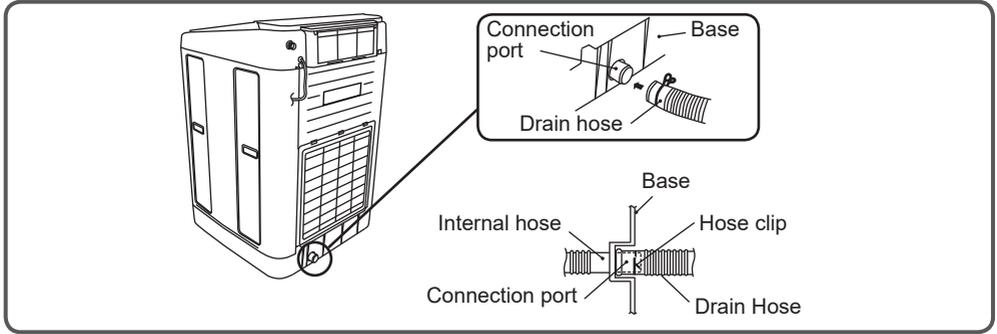
1. Before inserting "Rat Guard", Please make it as shown in the figure above.
2. Set this parts into the guide at front side of body and push into forward.
3. Use the knob of hook look to bend and push "Rat Guard" in.

How to Install the Washing Machine

Installing the drain hose

- The symbol is for checking whether you install the washing machine correctly.

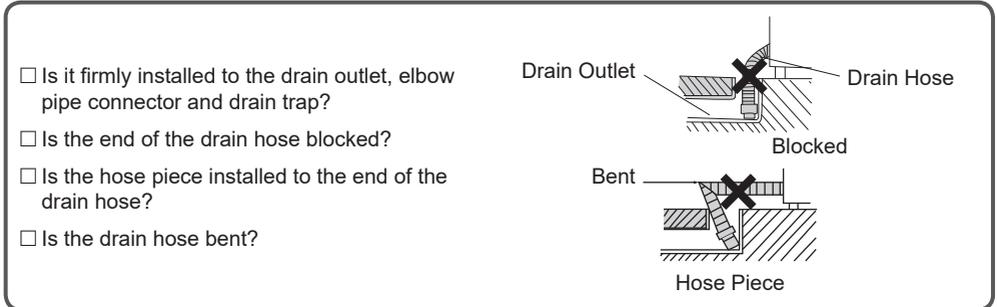
1. Push the drain hose into the connection port and hold it tightly with the hose clip (enclosed in the package.)



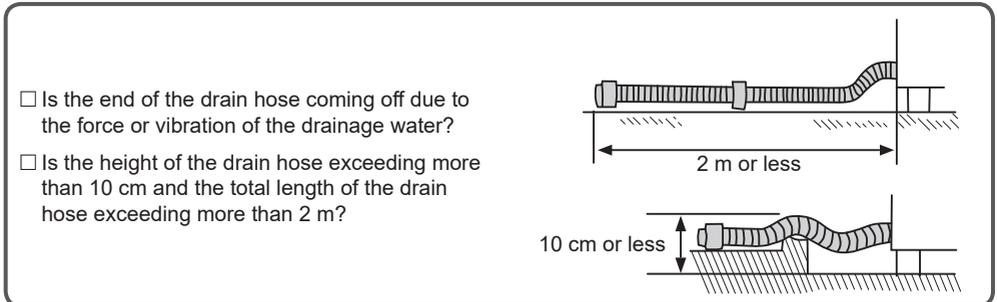
- Hose clip (set it correctly in the direction indicated in the figure)

2. Insert the end of the drain hose into the drain outlet.

- Do not allow the drain hose to be bent, twisted, pulled out and damaged, stepped on, or crimped.
- Spread a cloth on the ground before laying the washing machine down on its back to prevent damaging it.
- Use a knife to cut the end of the drain hose at a 45 degree angle because if the drain channel is shallow and the end of the drain hose is blocked, it could cause a malfunction.



- Keep the top of the drain hose no more than 10 cm above the floor if it crosses a door sill or something else. If it is higher than this, the water has difficulty draining and a "C2" error (water does not drain) may occur.
- Do not extend the drain hose more than 2 meters from the washing machine.
- Please use the Extension Hose that is sold separately. For good draining effect, please follow below. In case of using the general extension hose, if inner diameter of hose is small, it cannot drain water efficiently and the unit may not work normally.



How to Install the Washing Machine

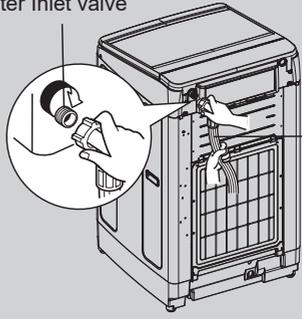
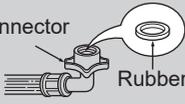
Connecting to the tap

- The symbol is for checking whether you install the washing machine correctly.

- Water supply hose



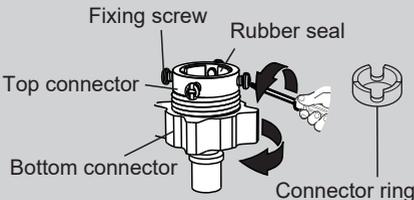
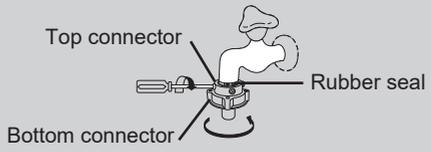
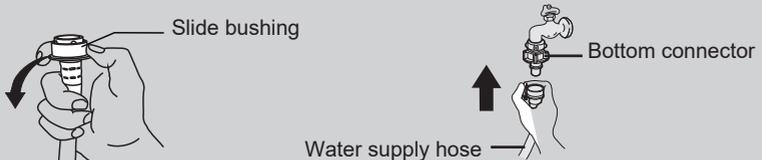
- The optimum water pressure is 0.03 to 0.8 MPa.

<p>Horizontal tap</p>  <p>Extension tap</p> 	<p>Water Inlet valve</p>  <p>Water supply hose</p> <p><input type="checkbox"/> Connect the water supply hose to the water inlet valve on the washing machine.</p>
<p>Hose connector</p>  <p>Rubber seal</p> <p><input type="checkbox"/> Check that the rubber seal is in the hose connector.</p>	

- Make sure the union nut between the water supply hose and the washing machine is firmly tightened.
- Before operating the washing machine, open the tap to confirm that the water supply hose is correctly connected. If the union nut is loose, water will leak.

- Water supply hose with one-touch joint



<p>1. Loosen the top connector.</p>  <p>• If the diameter of the tap is larger than the connector ring, remove the ring.</p>	<p>2. Press up on the top connector so the rubber seal and the tap are firmly sealed. Next, tighten the 4 screws.</p>  <p>• Rotate the bottom connector so there is no water leakage.</p> <p>• Close the tap so you can remove the water supply hose from the bottom connector. Next, pull off the hose and lower the clasp.</p>
<p>3. Attach the water supply hose to the bottom connector and lower the clasp.</p> 	

How to Install the Washing Machine

- The symbol is for checking whether you install the washing machine correctly.

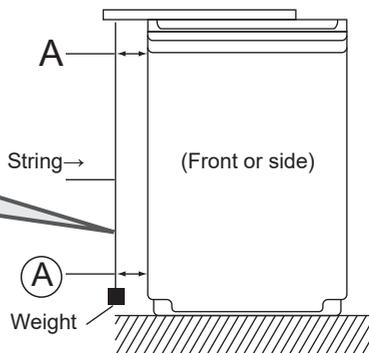
1. Installation of Washing Machine

- Move the Washing Machine to the setting area.
- Connect the Washing Machine correctly to a grounded AC power supply.
- The voltage of the power supply must match the voltage rating of the Washing Machine.
- Do not use extension cords or overload the power outlet by using power strips.

2. Check the horizontal level

- According to the figure on the right, check the level by using a simple jig which can be made with string, pen and weight such as coin.

If the gap between A and \textcircled{A} are same, your Washing Machine is well leveled ($\pm 5\text{mm}$).



3. Check the level

- If the Washing Machine is not stable or when the floor itself is not leveled, please adjust the leg.

Loosen lock nut

Lock nut

Adjust leg height

Raise this leg

Lower this leg

Tighten lock nut

Lock nut

Adjustable leg

Foot Caps

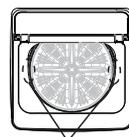
- Rotate the lock nut in the direction of the arrow to loosen it and then rotate the adjustable leg to stabilize the Washing Machine.

- When the adjustment is finished, rotate the lock nut in the direction of the arrow to tighten it.

4. Check the center of tub

- When the Washing Machine is leveled, please also make sure that the washing tub is positioned approximately in the center.

Note : Failing to do so may cause a vibration or abnormal operation.



Check the difference between left and right

Checking after installation

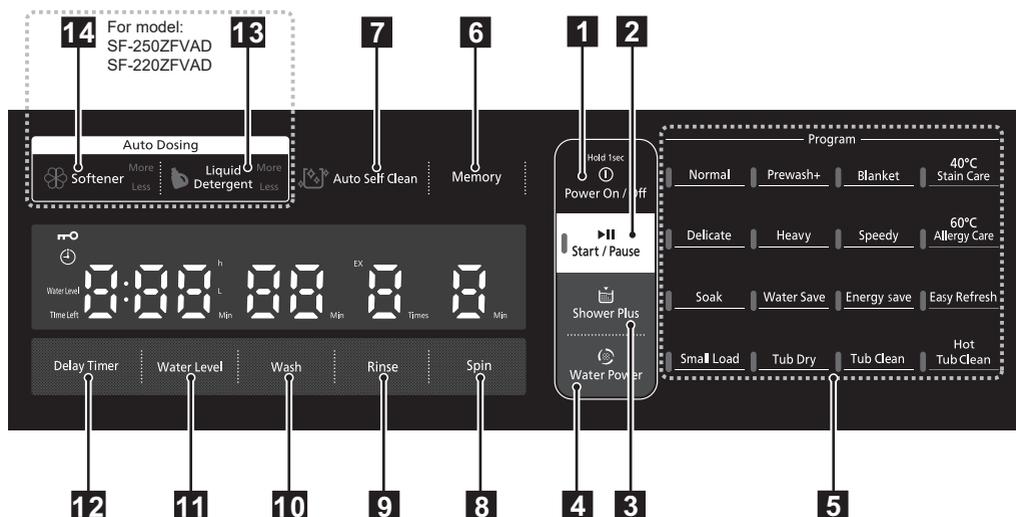
If any of the following problems or other abnormalities occur, immediately unplug the power plug and contact your local service center.

- The Washing Machine does not operate when the power is turned on.
- The power cord is damaged.
- There are abnormal vibrations or sounds during operation.
- There is a smell of burning.

Control Panel and Display

NOTICE

- Directly touch the buttons on the Control Panel with your bare finger.
- If you find water drops, detergent or other foreign substances on the Glass Lid, please clean them up with a dry cloth.



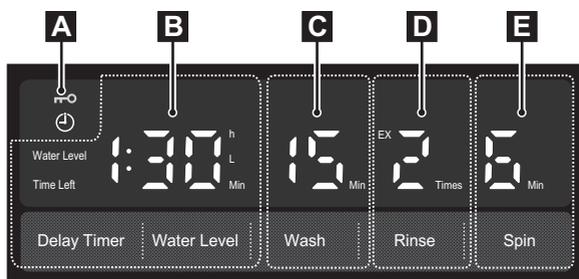
<p>1 Power button</p> 	<p>Press this button to switch power on and off (when power on, please hold 1sec and display  is on). The washing machine automatically switches off when operations are finished. The washing machine also turns off automatically if it is not operated or no button is pressed for 10 minutes after the power has been turned on.</p>
<p>2 Start/Pause button</p> 	<p>Press this button to start or pause the operation. When the washing machine is paused for over 24 hours without any operations, it turns off automatically.</p>
<p>3 Shower Plus button</p> 	<p>To add the water shower during the operation, press this button. Extra amount of water supplied depends on load amount or program. If you want to cancel this option, press this button again. This function is available during the washing and normal rinsing processes. This button does not function if the water level has already reached at the highest level of each program.</p>
<p>4 Water Power button</p> 	<p>The strength of the water flow changes each time this button is pressed. Water flow strength is shown on the Water Level/Timer indicator. (0: normal, 1: strong, 2: stronger, -1: weak, -2: weaker) This function is available during the washing and normal rinsing processes.</p>
<p>5 Program button</p>	<p>Press this button to select the program. The program changes each time the button is pressed.</p>
<p>6 Memory button</p>	<p>To record your customized washing course, press this button for more than 3 seconds after selecting each detail such as water level, wash time, rinse time and spin time. From the next laundry, you can recall this memorized course just by pressing this button after turning the Washing Machine on.</p>

Control Panel and Display

During Operation (lid closed)

<p>7 Auto Self Clean button</p> 	<p>“Auto Self Clean” function automatically cleans both inner and outer tubs to keep the washing machine clean. This function is switched off at the time of shipment from the factory. Once switched on, the “Auto Self Clean” function operates every time you wash your laundry.</p>
<p>8 Spin button</p>	<p>Press this button to change the spin time. The spin time can be set between 1 and 9 minutes.</p>
<p>9 Rinse button</p>	<p>Press this button to change the rinse time.</p>
<p>10 Wash button</p>	<p>Press this button to change the washing time. The washing time can be set between 3 to 24 minutes.</p>
<p>11 Water Level button</p>	<p>You can set the amount of Water each time you press the Water Level button.</p>
<p>12 Delay Timer button</p> 	<p>The delay time can be set between 3 and 12 hours. Lights in the Delay Timer mode. When this mode is on, Delay Timer button is lighted.</p>
<p>13 Liquid Detergent button</p>  <p>For model: SF-250ZFVAD SF-220ZFVAD</p>	<p>Press this button when want to put liquid detergent into tub automatically during washing process. This function cannot operate in the Tub clean, Tub dry, 40°C Stain care, Easy refresh and Hot tub clean. When you want to change the input amount ...page 17</p>
<p>14 Softener button</p>  <p>For model: SF-250ZFVAD SF-220ZFVAD</p>	<p>Press this button when want to put liquid softener into tub automatically during washing process. This function cannot operate in the Water save, Tub clean, Tub dry, Easy refresh and Hot tub clean. When you want to change the input amount ...page 17</p>

Displays all cycle Information, remaining time and error codes.



<p>A</p>	<p>Lid lock  : The Lid is locked when this symbol is lighted.</p>
<p>B</p>	<p>→ Adjust the “Water Level” of program (shown as ‘Water Level’) → Remaining time of the program (shown as ‘Time Left’)</p>
<p>C</p>	<p>Time of the Wash.</p>
<p>D</p>	<p>Time of the Rinse.</p>
<p>E</p>	<p>Time of the Spin.</p>

Preparation Before Use

Preparation of the laundry

- Remove foreign objects, if any (coins, safety pins, etc.).
- Put delicate clothes (knits, lingerie, etc.) in a net.
- Remove large lumps of lint, mud, sand, hair, and pet hair from laundry, if any.
- Tie strings and close fasteners, if applicable.



Check the care label

Put delicate clothes
in a net

Remove foreign
objects

Knot the long strips,
zip or button

Separate colored and
white items

Sorting of the laundry

- Sort laundry according to the type of fabric and care label symbols (cottons, blended fabrics, synthetics, wool, hand washable items, etc.).
- Do not wash extremely small loads, such as only a pair of jeans.
→ This may cause abnormal vibration during the spin cycle.
- Separate colored and white items.

Risk of injury!

Do not wash the following items whose the water could not through easily, because it will create an abnormal vibration during the spin cycle and could cause injury or malfunction.

- Waterproof items, such as wetsuit, ski suit, shower curtain, sleeping bag, raincoats, diapers, diaper covers, bicycle covers, motorcycle covers, car covers, carpets, waterproof seat cushions, waterproof bedding cover, foot pads and other hard and thick items, (Even though "the care label" mentions that it can be washed by the washing machine, but please do not put them in the washing machine for washing).
- Items with non-slip rubber backing, such as door mats.
- Cushions, pillows, shoes, etc.

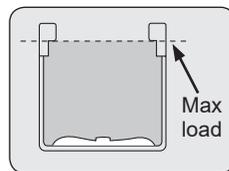
Detergents and additives

- In order to use the Auto dosing function of liquid detergent and fabric softener correctly, it is necessary to set the standard amount of liquid detergent and fabric softener for the first of using, when changing the type liquid detergent or fabric softener. The standard amount should be set follow...page 17.
- To use the detergent and softener dispenser, should input an appropriate amount of detergent according to the detergent indicator of the washing machine. The type and amount of detergent vary depend on the type of fabric, volume, load size, degree of soiling, and hardness of the water used. By the way, if the model * is equipped with the Auto dosing function and the Auto dosing function is turned on, the appropriate input amount is automatically input.
(*SF-250ZFVAD, SF-220ZFVAD)
Use less detergent if:
 - The load is small.
 - The laundry is not very dirty.
- Too much detergent can result in excess foam, which reduces rinse efficiency or may cause a water overflow.
- Detergent may not dissolve completely in the detergent tray if the water pressure is low or the water is too cold, depending on the detergent brand.
→ Page 34: Care and Maintenance
- When using softeners or bleaches, follow the instructions on the package.
- If water pressure is unstable during operation, it may cause the water remaining in Detergent and Softener box.

How to Use the Washing Machine

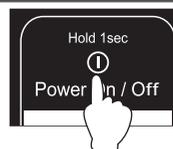
1 Sort the laundry

- Sort the laundry according to the type of fabric, care label symbol, and degree of soiling.
→ Page 12: Preparation of the laundry
- Do not exceed the maximum load.
- Laundry shall not exceed this line.
Otherwise, laundry may jump out from the washing tub while spinning and it may cause damage.



2 Press the Power button to turn on the power

- If no program is selected within 10 minutes, the washing machine automatically switches itself off.
Press the Power button again to turn on the power.

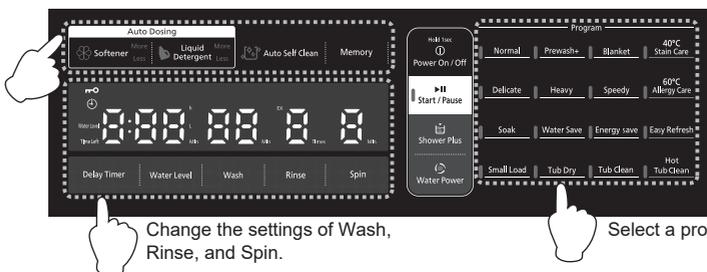


3 Select and adjust the program

- Select a program with the Program button.
→ Page 18: Program overview, Page 25: List of Programs
- You can change the combination or settings of wash, rinse, and spin operations by the Wash, Rinse, and Spin buttons.
- You can activate the "Auto Self Clean" function by the Auto Self Clean button.
→ Page 15: How to use the "Auto Self Clean" function
→ Once switched on, the "Auto Self Clean" function operates every time you do your laundry.
To deactivate, press the same button again while the power is on.
- You can activate the "Auto dosing" by the "Detergent" and "Softener" button.
→ Page 16: How to use the "Auto dosing" function.
→ Once switched ON, the "Auto dosing" function operates every time you do your laundry.
To deactivate, press the same button again while the power is ON.

Set the operations

Select a function.

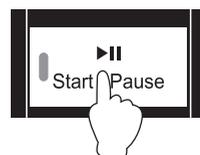


Change the settings of Wash, Rinse, and Spin.

Select a program.

4 Press the Start/Pause button

- Before operation starts, the laundry is weighted. Then, the necessary amount of water shall be displayed.
- If there is a power outage
The washing machine is equipped with a restart function.
If a power outage occurs while the washing machine is operating, the cycle (i.e., wash, rinse, or spin) at that time saved, and when the power is restored, automatically restart from the interrupted cycle.
If there is a power outage during the spin cycle, the lid is locked and cannot be opened. After the power is restored, the lock is released.



How to Use the Washing Machine

5

Put detergent into the detergent dispenser and close the lid

(When using the Auto dosing function, see page 16)

- Open the detergent dispenser, add the amount of detergent shown on the package, and then close the detergent dispenser.
- The amount of detergent is based on a type of “20-gram per 30-liter”. Since the required amount of detergent varies depending on the type of detergent, follow the instructions on the package of detergent.
- For liquid detergent, follow the instructions on the package and add it to the liquid detergent/liquid bleach dispenser.
- Add softener to the softener dispenser according to the instructions on the package of softener. Then, softener shall be added to the tub automatically in the final rinse.
- For liquid bleach, follow the instructions on the package and add it to the liquid detergent/liquid bleach dispenser.
- The speed that the lid closes may vary, depending on the temperature; however, this is not an abnormality.

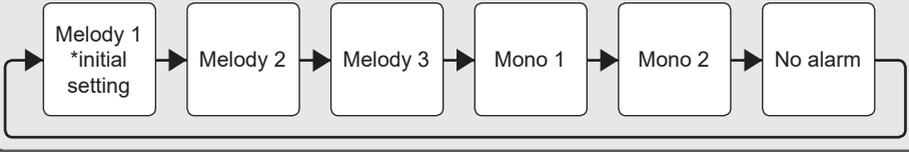
Pausing a program:	Press the Start/Pause button. The washing machine will switch itself off if it is not restarted within 24 hours.
Adding clothes partway through a program:	Press the Start/Pause button to pause operation and add your clothes. The lid is locked while the tub is spinning, so wait until the tub stops completely and the lid lock is automatically released. After adding the clothes, close the lid and press the Start/Pause button to restart the operation. * Note: It is not recommended to add a large amount of clothes as the washing machine first measures the load size to determine optimum operation.
Adding water partway through a program:	Press the Shower Plus button to add water. To stop adding, press the same button again. If the water level is already at the maximum level, water cannot be added anymore. * Note: This function cannot operate in the Tub Dry, Tub Clean, Easy Refresh, Blanket, Hot Tub Clean and Water Save.
Changing strength of water flow:	Press the Water Power button. You can repeatedly press the button to adjust the strength through five levels. * Note: This function cannot operate in the Blanket, Energy Save, Heavy and Easy Refresh. Depending on the program, maximum/minimum water power you can change with this button is different. Also, when a load amount is large, changes of water strength might not always be visibly distinctive.
Terminating a program:	Press the Start/Pause button, then press the Power button to turn off the power.

How to Use the Washing Machine

6 Take out the laundry (End of the program)

- The alarm sounds when a program ends.

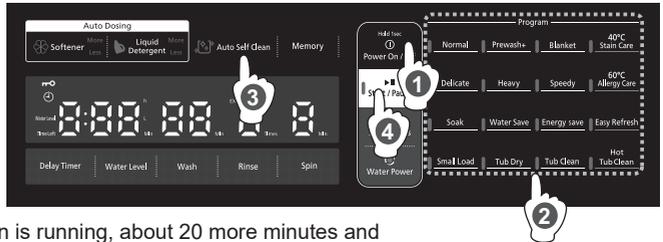
The alarm can be deactivated or the sound can be changed in 5 types by the button of Water Level is pressed for at least 3 seconds on every sound changed.



- The washing machine automatically switches off when the operations are finished. Open the lid and take out the laundry to dry.

How to use the “Auto Self Clean” function

- 1 Press the Power button to turn on the power.
- 2 Select a program.
- 3 Press the Auto Self Clean button.
- 4 Press the Start/Pause button.



- When the “Auto Self Clean” function is running, about 20 more minutes and 15 more liters of water are needed.
- This setting is switched off at the time of shipment from factory. Once activated, the “Auto Self Clean” function operates every time you do your laundry.
- Prior to the final spin cycle, the outside of the tub, the back side of the pulsator, and the inside of the outer tub are washed to eliminate dirt and mold.
- To deactivate the “Auto Self Clean” function, press the Auto Self Clean button again while the power is on.

- The “Auto Self Clean” function runs just before the spin cycle begins in each program.
- The “Auto Self Clean” function runs even when the washing machine has started operation from rinsing.
- The “Auto Self Clean” function cannot be set or cancelled during operation.
- The “Auto Self Clean” function is automatically cancelled when:
 - The spin time is manually set to 1 minute.
 - Spin-only operation is set.
 - No spinning is set.
- Depending on the type and degree of dirt, some dirt may not be washed with the “Auto Self Clean” function.
- If the washing machine is seldom used, some dirt may not be washed with the “Auto Self Clean” function.
- To clean the tub more completely, we recommend using the Tub Clean program along with the “Auto Self Clean” function.

- The “Auto Self Clean” function is deactivated when one of the following programs is selected.

- Blanket
- Tub Dry
- Tub Clean
- Easy Refresh
- Hot Tub Clean

- When the “Auto Self Clean” function is running, some water may flow out from the softener dispenser. This is the normal operation of the washing machine and does not indicate a malfunction.

How to Use the Washing Machine

How to Use Auto dosing function

How to replenish liquid detergent and fabric softener when using "Auto dosing" function

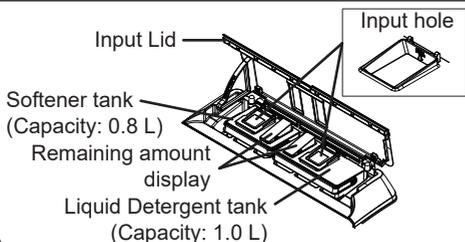
■ Liquids are the only detergents and fabric softeners that can be automatically added.

Do not put powder detergent, bleach, or additives in the tank.

When using detergents or fabric softeners other than liquids → Page 14

With the liquid detergent tank and fabric softener tank attached to the main unit, check the scale of the remaining amount, and refill so that the liquid level does not exceed the position indicated as "FULL"

When use "Auto dosing" function



- If liquid detergent or fabric softener adheres to the tank, wipe it off with a damp cloth.
- Depending on the type of liquid detergent or fabric softener, the capacity for refilling may not fit. Please check the refill capacity before inserting.

Put directly in the washing tub

- Powdered soap (natural fats and oils)
- Gel ball type detergent
- Detergents for tablets, sheets, cube type, etc.
- Bead finish
- Washing starch

Cannot be used

- Baking soda
It may cause a malfunction.

- When using Auto dosing function, water flows into the Dispenser, but this is not malfunction.
- Condensation may form on the remaining amount display due to humidity, but this is not a malfunction.

When changing the type of liquid or fabric softener

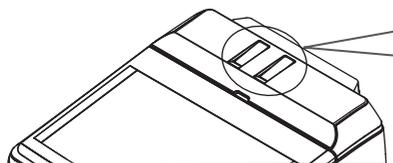
■ Clean the Auto dosing part and tank mounting part first. (Page 35)

Mixing different types of detergents or fabric softener can cause clogging of the Auto dosing section and routes.

■ Change the setting of the standard amount of liquid detergent and fabric softener. (Page 17)

If you operate without changing the standard amount, the laundry may get dirty easily, and it may cause darkening or yellowing. In addition, a large amount of bubbles may be generated, which may cause water leakage or overflow from the drain.

Timing of replenishment of liquid detergent and fabric softener



It will appear yellow as the liquid detergent or fabric softener decreases.

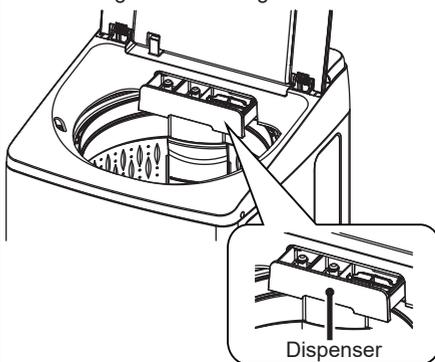
Liquid level of liquid detergent or fabric softener

Use the "E" as a guide to replenish the liquid detergent or fabric softener.

When manually inputting

Liquid detergents and fabric softeners cannot be replenished from detergent and fabric softener tanks.

– When you put it in Dispenser, please cancel the setting of Auto dosing



- What to put in Dispenser
- Liquid detergent / softener
 - Powder detergent
 - Liquid neutral detergent
 - Liquid soap
 - Oxygen bleach

*If liquids left in a tank with a low amount, the liquid detergent or fabric softener may become jelly-like, harden or separate, and the undissolved residue may clog the path.

How to Use the Washing Machine

How to Use Auto dosing function

The standard amount setting:

When using Auto dosing for the first times, when changing the type of liquid detergent or fabric softener to be used, check the following sections.

- It is necessary to set the standard amount (the amount used for 30 L of water) according to the type and brand of detergent and fabric softener.
- Liquid detergent and fabric softener cannot be set at the same time.

Procedure

- 1 Press button to turn on the power.
- 2 [When setting the standard amount of liquid detergent] | [When setting the standard amount of Softener]
Press button for 5 seconds or longer | Press button for 5 seconds or longer

*The standard amount is displayed as shown in the display example. (as per figure)

At the time of shipment from the factory, the standard amount is set for a water volume of 30 L.

- For liquid detergent 18 mL
- For fabric softener 14 mL



- 3 Set the standard amount of liquid detergent and fabric softener to be used.

Press button to increase the reference amount

Press button to reduce the reference amount

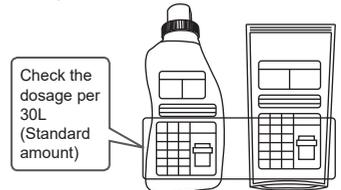
(Press and hold to switch the amount of liquid detergent or fabric softener continuously)

- 4 Press button, the above operation completes the setting. The settings are saved until they are changed again, even if machine is switched off.

Standard amount of typical liquid detergent and fabric softener (Amount used per 30 L of water)

Liquid detergent in Thailand (*)	Standard amount	Fabric softener in Thailand (***)	Standard amount
Breeze (**)	18 mL	Comfort	11 mL
Attack	18 mL	Hygiene	14 mL
Hygiene	18 mL	Downy	14 mL
Downy	18 mL	Fineline	14 mL
Pao	18 mL	Essence	14 mL
Omo	18 mL		

- When you want to use other liquid detergents or softeners.



*If the packaging doesn't indicate the standard amount, please contact the maker of liquid detergent or softener.

We recommend to use a concentrated type of liquid detergent or fabric softener.

The following detergents cannot be used. Please insert it manually.
(Page 16 "When manually inputting")

* Avoid using in low temperature environment except for Attack.

** Avoid using below 20°C.

*** Avoid using Essence in cold environment.

When you want to increase or reduce the amount of liquid detergent or fabric softener

- 1 Press button to turn on the power.
- 2 [When setting the amount level of liquid detergent] | [When setting the amount level of Softener]
Press button | Press button

Ex) Auto dosing off (Light off)

Set (Amount level; Normal) (First press)

Set (Amount level; Less) (Second press)

Set (Amount level; More) (Third press)



The display changes each time you press

Depending on the course you choose, it may be canceled or not accepted automatically.

- 3 Press button, the above operation completes the setting.

*When you press the start button, the settings will be memorized and the set course will start operating.

How to Use the Washing Machine

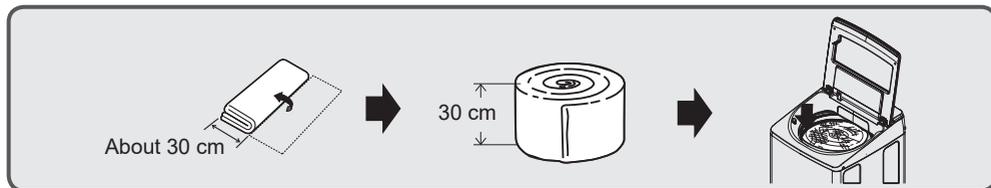
Program Overview

Program	Type of Laundry / Notes	Model / Max Load	
		SF-250ZFVAD/ SF-250ZFV	SF-220ZFVAD/ SF-220ZFV
Normal (page 25)	For daily washing of cotton and linen items such as shirts, underwear, towels, bed linen and table linen.	25 kg	22 kg
Prewash+ (page 21, 25)	You can wash your heavily soiled laundry first, then add the regular laundry to wash off all together at a time.	14 kg	14 kg
Delicate (page 25)	This is a gentle wash program for delicate items such as lingerie and thin lace curtains.	9 kg	9 kg
Speedy (page 26)	This program lets you wash small loads of lightly soiled clothes and small items such as underwear.	8 kg	8 kg
Soak (page 26)	For washable large items and heavily soiled durable clothes.	20 kg	17.6 kg
Blanket (page 19, 26)	For washable large items such as duvets, blankets, bedspreads, etc.	4.5 kg	4.5 kg
Energy Save (page 27)	This program provides an Eco operation by saving energy while assuring the same washing performance as the Normal program.	25 kg	22 kg
Water Save (page 27)	This program provides an Eco operation by saving water while assuring the same washing performance as the Normal program.	25 kg	22 kg
Heavy (page 27)	Select this program to wash heavily soiled durable clothes (jeans, sportswear, etc.)	25 kg	22 kg
Small load (page 28)	This program lets you wash small loads of lightly soiled clothes and small such as underwear.	1 kg	1 kg
40°C Stain Care (page 22, 28)	Use this program to remove and prevent yellowing and stain of your laundry.	6 kg	6 kg
60°C Allergy Care (page 23, 28)	Remove allergens such as house dust mites, mold, bacteria and virus.	6 kg	6 kg
Easy Refresh (page 24, 28)	Remove the smell of cigarettes from the clothes by hot steam.	1.5 kg	1.5 kg
Tub Dry (page 20)	This course is used when you want to dry the inside of the tank.	-	-
Tub Clean (page 20)	This course is used when are concerned about the dirt and smell of the washing tub. Regular driving is recommended. A washing tub cleaner will be more effective.	-	-
Hot Tub Clean (page 20)	This course is used when are concerned about the smell of the washing tub or when you want to sterilize the area around the pulsator using warm water. [Warning] Do not put the washing tub cleaner. Hazardous gas may be generated.	-	-

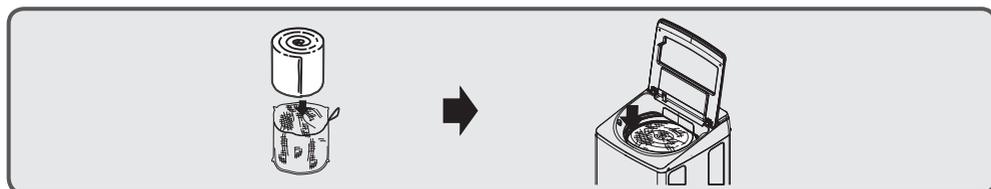
How to Use the Washing Machine

How to use the Blanket program

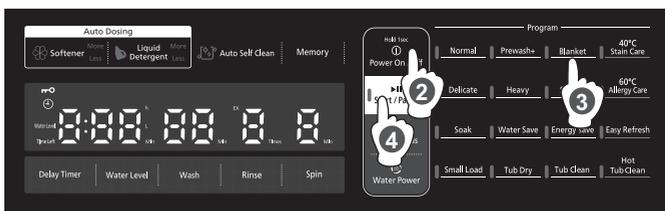
- 1 Prepare the laundry.
 - Fold large items, such as quilts or blankets, as follows.
They should not be taller than 30 cm after they are folded.



If it exceeds 30 cm, use a laundry net, which is sold separately.
(Laundry net: Product number PTSF-200XWV 014)



- 2 Press the Power button to turn on the power.
- 3 Select the Blanket program.
- 4 Add detergent and close the lid.
- 5 Press the Start/Pause button.



NOTICE

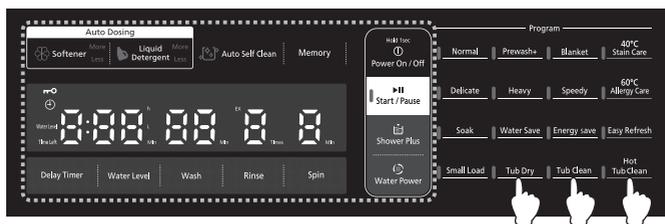
- If you have a model that has “Auto dosing” function and already set this function, you don't need to input detergent manually.

Items you can wash with the Blanket program are as follows:

- Washable quilts
Blanket can be washed without laundry net when its size is:
150 cm x 200 cm or smaller, and less than 1.5 kg
Blanket should be washed in the laundry net when its size is:
Bigger than 150cm x 200cm up to 174cm x 225cm, heavier than 1.5kg up to 2.0kg
(Laundry net: Product number PTSF-200XWV 014)
- Washable blankets
Up to 3 kg of synthetic blankets that are labeled as hand washable.
– For electric blankets, follow the instructions for the electric blanket.
- Washable curtains
Up to 5 kg of curtains that are labeled as hand washable.
– Do not use laundry net for washing curtains.
- Other washable items
Mattress pads labeled as hand washable.

- Do not fold and stack large items together (such as sheets) when washing them.
→ The clothes may become off balance and cause abnormal vibration during the spin cycle.

How to Use the Washing Machine



How to use the Tub Dry program

■ Use this program separately from other washing programs. (Do not put laundry into the tub.)

- 1 Press the Power button to turn on the power.
- 2 Select the Tub Dry program.
- 3 Close the lid and press the Start/Pause button.

■ The tub spins quickly as same as the regular spin cycle to remove the water from the tub.

How to use the Tub Clean program

■ Use this program separately from other washing programs. (Do not put laundry into the tub.)

- 1 Press the Power button to turn on the power.
- 2 Select the Tub Clean program.

■ The Tub Clean program can be set to 3 or 11 hours. At first, “11 hours” is set. Press the Tub clean button again to set “3 hours”.

- 3 Close the lid, and press the Start/Pause button. (Close the lid when C3 is displayed)
- 4 The washing machine starts pouring water into the tub. Press the Start/Pause button and open the lid, add tub cleaner to the tub by following the instruction given on its package. (Liquid peroxide-based bleach is also effective as a tub cleaner. Since the required amount of bleach varies depending on the type, follow the instructions given on its package.) Close the lid, press Start/Pause button again for operate the Tub Clean program.

■ Water is added to the maximum level to wash away invisible dirt from both outer and inner tubs. Then, normal rinse operation will be performed twice to flush out any remaining dirt and tub cleaner.

How to use the Hot Tub Clean

CAUTION

Do not put the washing tub cleaner. Hazardous gas may be generated.

■ Use this program separately from other washing programs. (Do not put laundry and tub cleaner into the tub.)

- 1 Press the Power button to turn on the power.
- 2 Select the Hot Tub Clean program.
- 3 Close the lid, and press the Start/Pause button. The washing machine starts pouring water into the tub. (Close the lid when C3 is displayed)
- 4 Press the Start/Pause button to operate the Hot Tub Clean program.

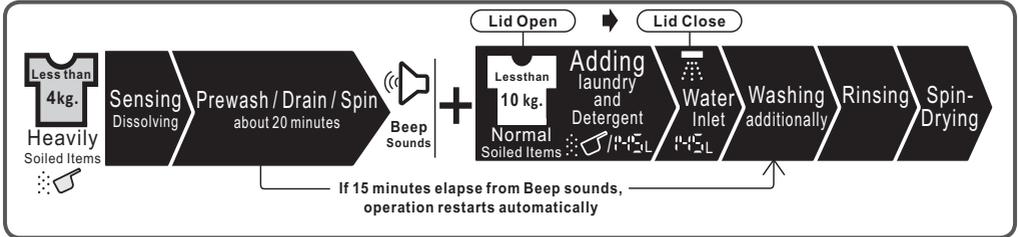
■ Water is added to the 55 L level to wash away invisible dirt from both outer and inner tubs. Then, normal rinse operation will be performed twice to flush out any remaining dirt and tub cleaner.

How to Use the Washing Machine

How to use the Prewash+ program

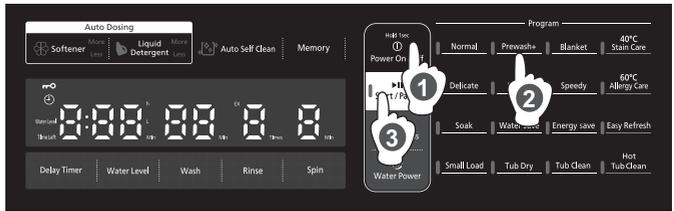
- You can wash your heavily soiled laundry first, then add the regular laundry to wash off all together at a time. With a guidance of Beep sound which is generated in about 20 minutes after starting the operation, put additional laundry and detergent.

* Recommended amount of heavily soiled laundry is less than 4 kg.
Additional amount of regular laundry should be less than 10 kg.



Operation:

- 1 Press the Power button to turn on the power.
- 2 Select the Prewash+ program.
- 3 Press the Start/Pause button.
- 4 Put the detergent and close the lid. (Please see notice below)
- 5 When the Beep sounds, open the lid to add the Laundry and Detergent. Then close the lid. (Please see notice below)



Others:

- Please put additional laundry and detergent within 15 minutes after the Beep sounds. If 15 minutes elapse from Beep sounds, operation restarts automatically.
- In this case, rinsing starts without adding washing cycle.

How to use the Delay Timer

- 1 Press the Power button to turn on the power.
 - 2 Select a program.
 - 3 Press the Delay Timer button and select the time to finish washing. Each press of the button starting from 3 hours to 12 hours later.
 - 4 Press the Start/Pause button.
 - 5 Add detergent and close the lid. The power turns off after a short time. (Please see notice below)
 - 6 Operations finish at the set time.
- The Delay Timer is unavailable for the Blanket, Tub Dry, Hot Tub Clean and Tub Clean programs.
 - To change the setting, press the Power button and do the settings again.
 - If there is a power outage while the timer is set, the timer setting is cancelled. If this happens, press the Power button again and reset the timer.
 - To prevent your laundry from wrinkling, take them out from the Washing Machine to dry once the operation is completed.

NOTICE

- If you have a model that has "Auto dosing" function and already set this function, you don't need to input detergent manually.

How to Use the Washing Machine

How to use the 40°C Stain Care program

■ Use this program to remove and prevent yellowing and stain of your laundry.

→ It soaks the laundry in soapy water of 40°C (up to 6 kg).

→ Total operation time is about 3 hours.

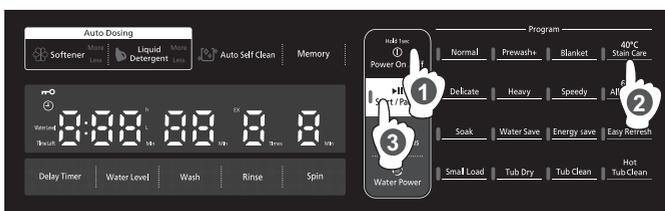
→ To remove and prevent yellowing and stain, we recommend to put twice the standard amount of powder detergent.

→ Some extremely stubborn yellowing might not be removed.



Operation:

- 1 Press the Power button to turn on the power.
- 2 Select the 40°C Stain Care program.
- 3 Press the Start/Pause button.
- 4 Put the standard amount or twice the standard amount of detergent according to the water amount indication and close the lid.



⚠ CAUTION

- Do not wash with clothes which are susceptible to color fading.
- Do not wash easy-to-shrink clothes such as wool.
- Do not wash easily damageable clothes such as rayon or silk.
- Beware of burns when opening the lid by temporary stopping the operation as the washing water and inside components might be hot.

NOTICE

- If you have a model that has "Auto dosing" function and already set this function, you don't need to input detergent manually. (Fabric softener only)
- Water droplets might stick to inside of the lid. Please wipe with a dry cloth after using the washing machine.
- As additional heating is carried out when temperature does not reach to the specified degree, operation time might be extended.
- Depending on the temperature of tap water, it may be faster than the initial display time.
- When the tap water temperature is low, operation time might be extended to a maximum of approximately 4 hours.
- The glass lid and the display screen may become foggy with this program, but this is not failure. The fog disappears in approximately 24 hours and it does not affect the operation.

How to Use the Washing Machine

How to use the 60°C Allergy Care program

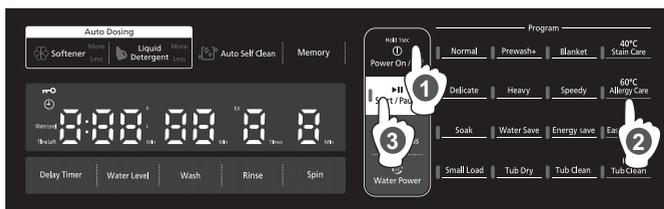
- You can wash away the bacterium that causes unpleasant smell from your laundry by using hot water of 60°C (up to 6 kg).

→ Total operation time is about 5 hours.



Operation:

- 1 Press the Power button to turn on the power.
- 2 Select the 60°C Allergy Care program.
- 3 Press the Start/Pause button.
- 4 Put the standard amount of detergent according to the water amount indication and close the lid.



⚠ CAUTION

- Do not wash with clothes which are susceptible to color fading.
- Do not wash easy-to-shrink clothes such as wool.
- Do not wash easily damageable clothes such as rayon or silk.
- Beware of burns when opening the lid by temporary stopping the operation as the washing water and inside components might be hot.

NOTICE

- If you have a model that has "Auto dosing" function and already set this function, you don't need to input detergent manually.
- Water droplets might stick to inside of the lid. Please wipe with a dry cloth after using the washing machine.
- As additional heating is carried out when temperature does not reach to the specified degree, operation time might be extended.
- Beware of burns as the water temperature reaches more than 60°C.
- Beware of burns since hot water of more than 60°C might be drained.
- After washing cycle, water is supplied for cooling.
- Depending on the temperature of tap water, it may be faster than the initial display time.
- When the tap water temperature is low, operation time might be extended to a maximum of approximately 6 hours.
- Do not soak your laundry for too long in hot water of 60°C.
- The glass lid and the display screen may become foggy with this program, but this is not failure. The fog disappears in approximately 24 hours and it does not affect the operation.

How to Use the Washing Machine

How to use the Easy Refresh program

- You can remove the smell of cigarettes from the clothes.

* Not all kinds of smell can be removed.



Type of clothes and preparation of the laundry:

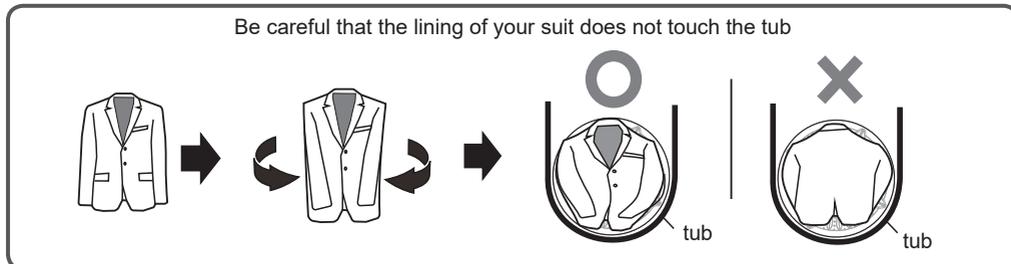
- Suit (Polyester / Wool)

→ Do not use this program with cashmere, alpaca or camel as these fabrics might be shrunk.

→ Do not use this program with silk, fur, leather, sweater (wool) or knitwear (wool).

How to put the clothes:

- Please put the clothes in the tub without folding it.



Operation:

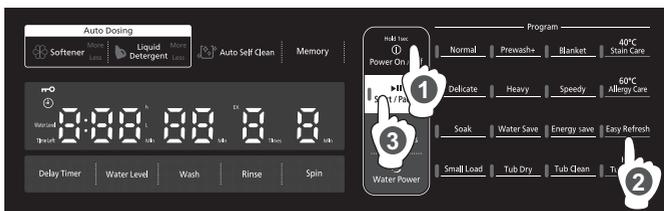
- 1 Press the Power button to turn on the power.

- 2 Select Easy Refresh program.



(If pushed twice, operation time can be changed.)

- 3 Press the Start/Pause button.



CAUTION

- Quickly take out the suit after the operation to dry it in the shade with a breeze.
- If the suit is left over in the tub for long, smell might be transferred.
- Beware of burns since hot water of more than 60°C might be drained.
- Beware of burns when opening the lid by temporary stopping the operation as the washing water and inside components might be hot.

NOTICE

- Do not put any detergent, bleaching or fabric softener.
- Water droplets might stick to inside of the lid. Please wipe with a dry cloth after using the washing machine.
- The spin time display keeps blinking "1 minute" for a while, but this is not a malfunction. Drainage will begin when the hot water in the tub cools.

List of Programs

 : Default settings

 : Changeable settings (via corresponding button)

Program		Normal	Prewash+		Delicate
			Pre	Add	
Maximum load	250ZFVAD/ 250ZV	25 kg	4 kg	10 kg	9 kg
	220ZFVAD/ 220ZV	22 kg	4 kg	10 kg	9 kg
Amount of water	250ZFVAD/ 250ZV	65 to 165 L (adjusted automatically)	65 to 105 L	145 L	95 L
		55 to 165 L	55 to 105 L	-	70 to 145 L
	220ZFVAD/ 220ZV	65 to 155 L (adjusted automatically)	55 to 105 L	140 L	95 L
		55 to 155 L	55 to 105 L	-	70 to 140 L
Wash		15 min	49 min		6 min
		3, 9, 15, 18, 21, 24 min, or none	-	-	-
Rinse		Spin Shower Rinse 2 times + Normal Rinse 1 time (In case of laundry exceeds 80%, the process will be Spin Shower Rinse 1 time and Normal Rinse 1 time.)	Normal Rinse 2 times		Normal Rinse 1 time
		Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, none, Normal Rinse 1 time, or Spin Shower Rinse 1 time	Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 1 time, Spin Shower Rinse 1 time, Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, or none		
Spin	Time	6 min			3 min
		1, 3, 6, 9 min, or none			1, 3, 6, 9 min, or none
Required time (guide)	250ZFVAD/ 250ZV	51 to 71 min	82 to 87 min		32 min
	220ZFVAD/ 220ZV	51 to 71 min	82 to 87 min		32 min

List of Programs

: Default settings

: Changeable settings (via corresponding button)

Program		Speedy	Soak				Blanket
			30 min	1 hrs	3 hrs	5 hrs	
Maximum load	250ZVAD/ 250ZV	8 kg	20 kg				4.5 kg
	220ZVAD/ 220ZV	8 kg	17.6 kg				4.5 kg
Amount of water	250ZVAD/ 250ZV	83 L	65 to 165 L (adjusted automatically)				165 L
		55 to 115 L	55 to 165 L				135 to 165 L
	220ZVAD/ 220ZV	83 L	65 to 155 L (adjusted automatically)				165 L
		55 to 115 L	55 to 155 L				135 to 165 L
Wash		3 min	30 min	60 min	180 min	300 min	25 min
		3, 9, 12, 15, 18, 24 min, or none	-	-	-	-	-
Rinse		Normal Rinse 1 time	Normal Rinse 2 times				Normal Rinse 2 times
		Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 1 time, Spin Shower Rinse 1 time, Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, or none	Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, or none, Normal Rinse 1 time, or Spin Shower Rinse 1 time				-
Spin	Time	3 min	6 min				9 min
		1, 3, 6, 9 min, or none	1, 3, 6, 9 min, or none				
Required time (guide)	250ZVAD/ 250ZV	31 min	70 to 83 min	100 to 113 min	220 to 233 min	340 to 353 min	77 min
	220ZVAD/ 220ZV	31 min	70 to 83 min	100 to 113 min	220 to 233 min	340 to 353 min	77 min

List of Programs

: Default settings

: Changeable settings (via corresponding button)

Program		Energy Save	Water Save	Heavy
Maximum load	250ZFVAD/ 250ZFV	25 kg	25 kg	25 kg
	220ZFVAD/ 220ZFV	22 kg	22 kg	22 kg
Amount of water	250ZFVAD/ 250ZFV	65 to 165 L (adjusted automatically)	65 to 155 L (adjusted automatically)	65 to 165 L (adjusted automatically)
		55 to 165 L	55 to 155 L	55 to 165 L
	220ZFVAD/ 220ZFV	65 to 155 L (adjusted automatically)	65 to 145 L (adjusted automatically)	65 to 155 L (adjusted automatically)
		55 to 155 L	55 to 145 L	55 to 155 L
Wash		48 min	15 min	18 min
		-	3, 9, 15, 18, 21, 24 min, or none	15, 18, 24, 31, 38 min, or none
Rinse		Normal Rinse 2 times	Spin Shower Rinse 4 times	Normal Rinse 2 times
		-	Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, none, Normal Rinse 1 time, or Spin Shower Rinse 1 time.	
Spin	Time	5 min	6 min	6 min
		-	1, 3, 6, 9 min, or none	
Required time (guide)	250ZFVAD/ 250ZFV	89 to 99 min	50 to 78 min	58 to 88 min
	220ZFVAD/ 220ZFV	89 to 99 min	50 to 78 min	58 to 88 min

List of Programs

 : Default settings

 : Changeable settings (via corresponding button)

Program		40°C Stain Care	60°C Allergy Care	Small Load	Easy Refresh	
					24 min	45 min
Maximum load	250ZVAD/ 250ZV	6 kg	6 kg	1 kg	1.5 kg	
	220ZVAD/ 220ZV	6 kg	6 kg	1 kg	1.5 kg	
Amount of water	250ZVAD/ 250ZV	65 to 70 L (adjusted automatically)		55 L (adjusted automatically)	-	
		55 to 70 L	55 to 70 L	55 to 70 L	-	
	220ZVAD/ 220ZV	65 to 70 L (adjusted automatically)	65 to 70 L (adjusted automatically)	55 L (adjusted automatically)	-	
		55 to 70 L	55 to 70 L	55 to 70 L	-	
Wash		150 min	140 min	9 min	24 min	45 min
		-	-	-	-	
Rinse		Normal Rinse 2 time	Spin Shower Rinse 2 times + Normal Rinse 1 time (In case of laundry exceeds 80%, the process will be Spin Shower Rinse 1 time and Normal Rinse 1 time.)	Normal Rinse 1 time	-	
		Each time you press the Rinse button, the setting changes in sequence from Normal Rinse 2 times, Spin Shower Rinse 2 times, Normal Rinse 3 times, Spin Shower Rinse 3 times, none, Normal Rinse 1 time, or Spin Shower Rinse 1 time.		-	-	
Spin	Time	3 min	3 min	3 min	1 min	
		1, 3, 6, 9 min, or none		-	-	
Required time (guide)	250ZVAD/ 250ZV	186 min	214 to 260 min	31 min	40 min	61 min
	220ZVAD/ 220ZV	186 min	214 to 260 min	31 min	40 min	61 min

List of Programs

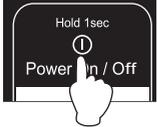
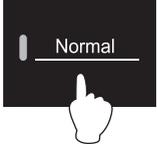
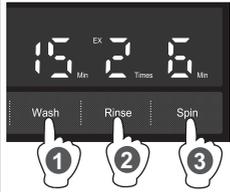
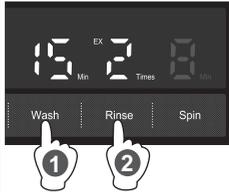
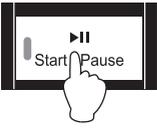
- The wash time and the spin time may change during the program depending on the weight and type of laundry being washed.
- The displayed times are guidelines. More time may be required depending on the water pressure and the type of laundry.
- Programs cannot be changed once they are started. To change them, turn the power off and then on again to re-select a program.
- When the “Auto Self Clean” function is running, about 20 more minutes and 15 more liters of water are needed.
- We do not recommend using fabric softener when the Water Save program is selected.
- The Water Save program cycle is the recommended program cycle for a normally soiled load of laundry at the rated capacity.
- Spin Shower Rinse* is used in the Normal and Energy Save programs to enhance water-saving performance without compromising the efficiency of rinsing.
* Spin Shower Rinse: A powerful shower and centrifugal force to rinse the detergent more effectively.
- The clear part of the lid and control panel may become foggy or may form dew on the edge of lid if you use hot water to wash your laundry; however, this is not an abnormality. Wipe it off after washing your laundry.
- Depending on the type of clothes, maximum loading amount may slightly differ.
- Even if you set the delay timer, it may start soon according to the required time of the program.
- Water flow is adjusted automatically according to the amount of load and water level. When loads are heavy and water level is high, water flow is adjusted at slower rate to maintain the performance of washer.
- Amount of detergent is indicated according to following table as a guide.

	Load (guide) 	Water Level 	Amount of detergent 
SF-250ZEVAD/ SF-250ZEV	10~25 kg	125~165 L	80~95 g
SF-220ZEVAD/ SF-220ZEV	10~22 kg	125~155 L	80~90 g
	4~10 kg	83~115 L	55~72 g
	0~3 kg	60~70 L	41~50 g

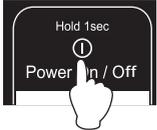
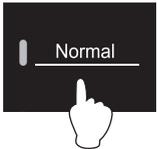
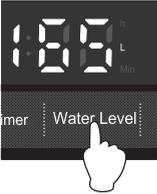
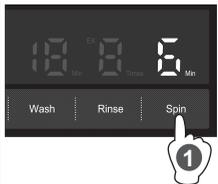
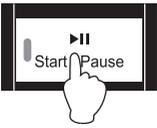
* The amount of detergent is based on a type of “20-gram per 30-liter”.

Since the required amount of detergent varies depending on the type of detergent, follow the instructions on the package of detergent.

How to Customize the Program

If you want...	To customize the wash program	To reuse the wash water and separate your laundry	To not spin the laundry because you are worried about wrinkles	
Operations	Wash → Rinse → Spin	Wash only	Wash → Rinse	
Setting method				
1.		Turn on the power.		
2.		Select the Normal program.		
3.		Set the amount of water. If you do not set the amount of water, it is set automatically based on the weight of the laundry.		
4.	 <p>Set the operations</p>	 <ol style="list-style-type: none"> 1 Set the wash time with the Wash button. 2 Set the number and type of rinses with the Rinse button. 3 Set the spin time with the Spin button. 	 <ol style="list-style-type: none"> 1 Set the wash time with the Wash button. 2 Set the number and type of rinses with the Rinse button. 	 <ol style="list-style-type: none"> 1 Set the wash time with the Wash button. 2 Set the number and type of rinses with the Rinse button.
5.		Press the Start/Pause button to start.		
Remarks	Operates according to the wash, rinse, and spin settings.	Stops while the wash water is still in the tub.	After rinse the rinse water is still in the tub.	

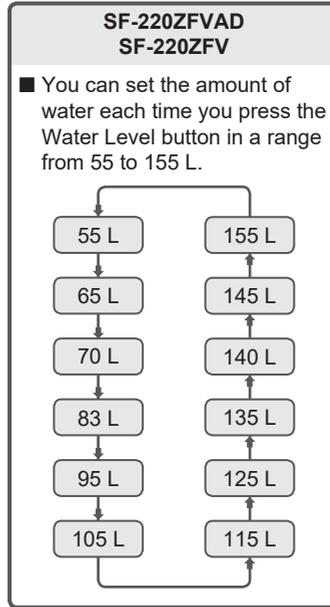
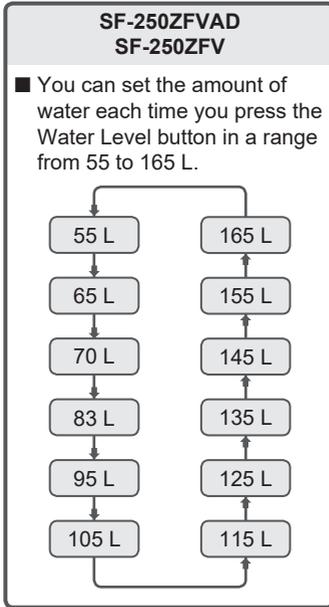
How to Customize the Program

If you want...	To rinse only	To rinse and spin	To drain and spin
Operations	Rinse only	Rinse ⇨ Spin	Drain ⇨ Spin
Setting method			
1.	 <p>Turn on the power.</p>		
2.	 <p>Select the Normal program.</p>		
3.	 <p>Set the amount of water. If the amount of water is not set, then maximum water level is used.</p>		Cannot be used.
4.	 <p>① Set the number and type of rinses with the Rinse button.</p>	 <p>① Set the number and type of rinses with the Rinse button. ② Set the spin time with the Spin button.</p>	 <p>① Set the spin time with the Spin button.</p>
5.	 <p>Press the Start/Pause button to start.</p>		
Remarks	Drains water and spins before rinsing. After rinse the rinse water is still in the tub.	Drains water and spins before rinsing.	Drains water and spins.

How to Customize the Program

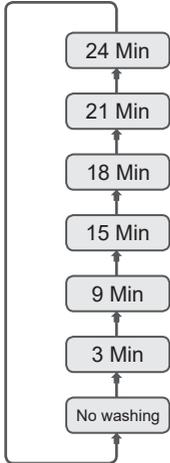


- Press the Water Level button until your desired setting of wash, rinse and spin are displayed.
If the indicator is not lit, that operation is not performed.

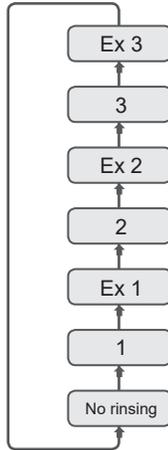


How to Customize the Program

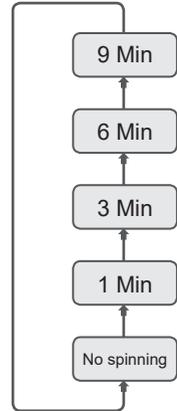
- You can set the wash time each time you press the Wash button in a range from 3 to 24 minutes and no washing.



- You can set the number and type of rinses by pressing the Rinse button. Each time you press the Rinse button the setting changes in sequence, from Shower Rinse 2 times, Normal Rinse 2 times, Shower Rinse 1 time, Normal Rinse 1 time, no rinsing, Shower Rinse 3 times, Normal Rinse 3 times.



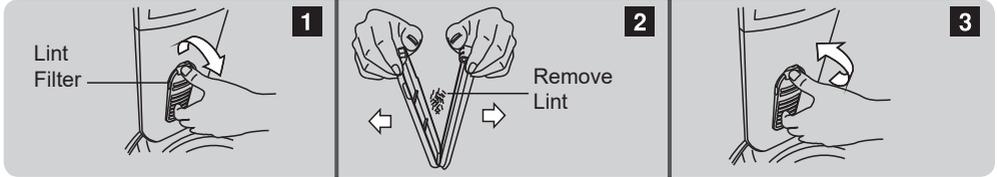
- You can set the spin time each time you press the Spin button in a range of 1 to 9 minutes and no spinning.



Care and Maintenance

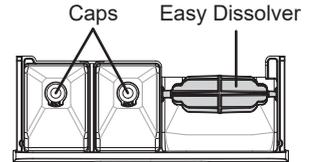
Cleaning the lint filter (cassette type)

- 1 Press down on the knob on the top of the lint filter (cassette type) and pull it towards you.
- 2 Open the lint filter (cassette type) to the sides and remove the lint that is inside.
- 3 Reverse the procedure to replace the lint filter (cassette type).

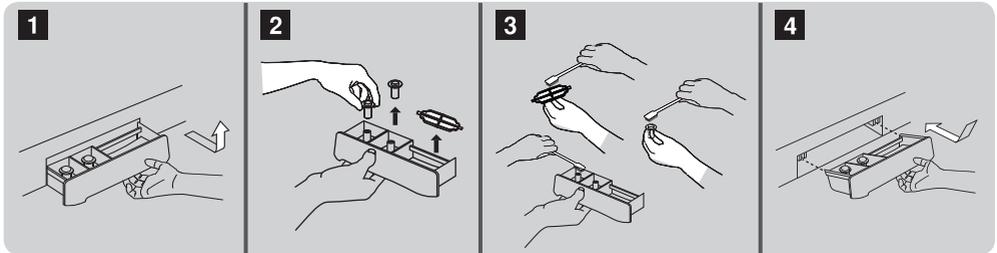


Cleaning the dispenser

- 1 Pull the dispenser and tilt it upwards to remove it.
- 2 Pull off the caps and Easy Dissolver.
- 3 Clean with some tool such as brush.
- 4 To remount, tilt the dispenser, align the rib to guide and insert it.

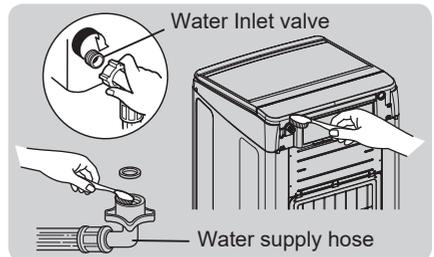


- When you replace the caps, press it until it stops completely. If it is not pressed all the way in, the softener, liquid detergent and liquid bleach will not be added to the tub completely and some will remain in the dispenser.



Cleaning the water supply inlet

- 1 Close the tap.
- 2 Disconnect the water supply hose from the top of the washing machine. (Water in the hose may be drained when you disconnect the hose.)
- 3 Use a brush or something to clean the water supply inlet of the washing machine.
- 4 Reverse the procedure to replace the water supply hose.



Care and maintenance of the washing machine

- Clean the machine body.
- Wipe the outside of the washing machine with a soft cloth. Do not use solvents such as alcohol or benzene.
- If you use a chemically treated cloth, use it according to the instructions given for the product.
- If detergent or softener gets on the washing machine, quickly wipe it off. The surface could be damaged.

Care and Maintenance

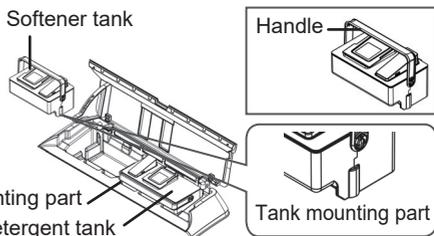
Cleaning Auto dosing part (Detergent/Softener Tank) and Tank mounting part

- Clean the Auto dosing part in the following cases.
 - In case of no maintenance for 2-3 months.
 - When changing the type of liquid detergent or fabric softener.
 - When the Auto dosing function is not used for more than one month.
 - When dirt remains on the tank mounting part.
 - When leaving the lid of the Auto dosing part open or when the remaining amount is low.
 - When the liquid detergent or softener in the automatic dosing tank become jelly-like.
- * Please be careful not to get your finger or hands caught when opening or closing the tank lid.

1 Hold the handle of the liquid detergent tank or fabric softener tank and pull it up to remove it.

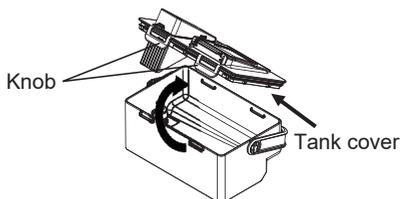
When pulling up the liquid detergent tank or fabric softener tank, the liquid detergent or fabric softener may drip on the bottom mounting part of the tank. Wipe it off with a soft cloth.

Ex) In the case of a liquid detergent tank



2 Clean Tank cover and Indicator piece (1)

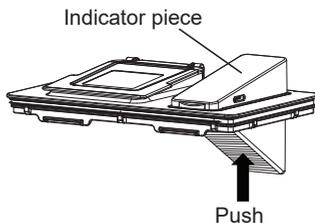
- (1) Hold the tank and remove Tank cover while gently opening the knob on the tank cover.
- (2) Push Indicator piece from the back of Tank cover to remove it.
- (3) Clean Tank cover and Indicator piece
 - Rinse until there is no foaming or sliminess.
 - If it is very dirty, soak in hot water (about 40°C) for about 10 minutes or more and rinse it.
 - After rinsing, wipe it off with a dry cloth or let it air dry.



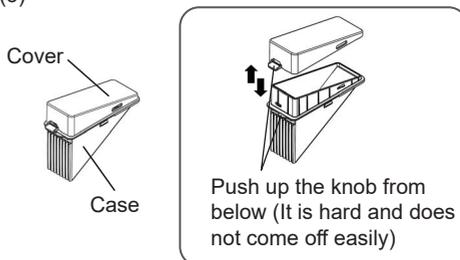
*If the inside of the indicator piece becomes dirty

- Use the knob to remove the case and cover.
Please be careful not to get injured as it is hard and does not come off easily.
- Gently wipe off any water droplets on the case with a damp cloth.
- Do not rub strongly as the yellow indicator sticker may come off.

(2)



(3)

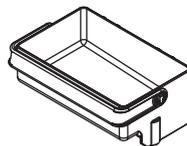


Care and Maintenance

Cleaning Auto dosing part (Detergent/Softener Tank) and Tank mounting part

3 Clean Tank

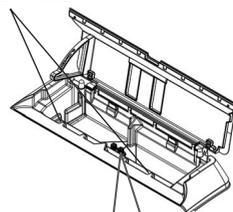
- Rinse until there is no foaming or sliminess.
- If it is very dirty, soak it in hot water (about 40°C) for about 10 minutes or more and rinse it.
- After rinsing, wipe it off with a dry cloth or let it air dry.



4 Clean the tank mounting part

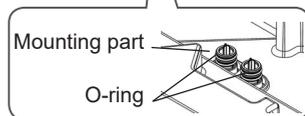
- Wipe the area around mounting part with a damp cloth.
- If liquid detergent or fabric softener residue or dirt adheres to the area around the tank mounting part, it may cause clogging of the liquid detergent / fabric softener path or mold. After cleaning, make sure there is no water or dust left.
 - The color may transfer to the O-ring depending on the type of liquid detergent or fabric softener used.
 - Do not rub the O-ring part strongly with a brush. The O-ring may be damaged and cause liquid leakage.
 - There are two drain holes, and you can wash it by running water. However, do not pour water vigorously. Water flows into the washing tub. If you put water in it, please dehydrate it.

Drain hole



Mounting part

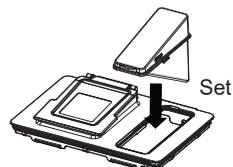
O-ring



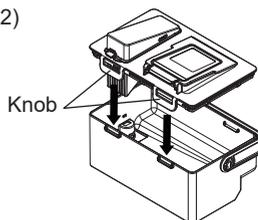
5 Restore the liquid detergent tank or fabric softener tank to its original state

- (1) Attach the indicator piece to the tank cover
 - Insert Indicator piece from the surface of Tank cover. You will hear a click.
- (2) Attach the tank cover to the tank
 - Please put it on the two knobs.
 - Make sure that the entire tank cover is fitted.
- (3) Return the tank to the tank mounting part
 - Rotate the handle as shown figure until it's locked.
 - Push in the tank so that it can be inserted all the way into the mounting part.
 - If the tank is raised, it will not be Auto dosing during operation and may cause liquid detergent or fabric softener to leak out of the tank.

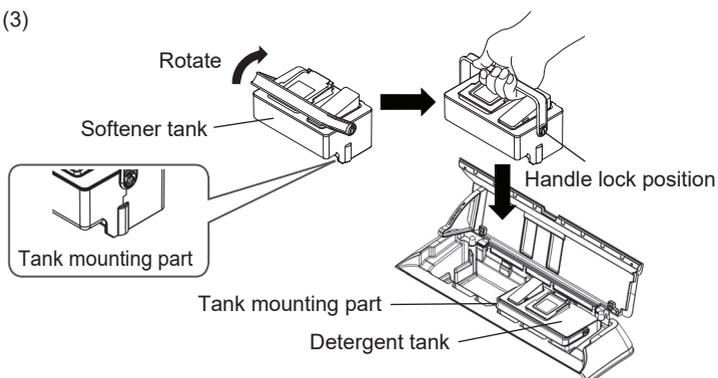
(1)



(2)



(3)



* Liquid detergent tanks, fabric softener tanks and indicator pieces are consumables. It is damaged, please contact your dealer.

Care and Maintenance

Cleaning Auto dosing route for liquid detergents and fabric softeners

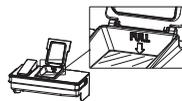
■ After cleaning the liquid detergent tank, fabric softener tank, and tank mounting part, it is recommended to clean the liquid detergent and fabric softener route.

* Do not put clothes in the tub as water will flow into the tub.

How to clean liquid detergent route

★ Keep the faucet open.

1 Put hot water (about 40°C) in the cleaned liquid detergent tank not over “FULL” position.



2 Start operation according to the following procedure.

*It is not possible to clean the fabric softener route with this operation.

(1) Press  button to turn on the power.

(2) Press  button for 5 seconds or longer.

(3) Press  button and choose a time.

– Each time you press the button, “more” or “less” lights up, and the time is displayed on the remaining time display.

If you frequently use Auto dosing function

Set “4 minutes course”

Ex)



If you do not frequently use Auto dosing function

Set “9 hours course”

Ex)



(4) Press  button to start operation.

After the set time has elapsed, a beep sounds and the power turns off automatically.

How to clean fabric softener route

★ Keep the faucet open.

1 Put hot water (about 40°C) in the cleaned fabric softener tank not over “FULL” position.



2 Start operation according to the following procedure.

*It is not possible to clean the liquid detergent route with this operation.

(1) Press  button to turn on the power.

(2) Press  button for 5 seconds or longer.

(3) Press  button and choose a time.

– Each time you press the button, “more” or “less” lights up, and the time is displayed on the remaining time display.

If you frequently use Auto dosing function

Set “4 minutes course”

Ex)



If you do not frequently use Auto dosing function

Set “9 hours course”

Ex)



(4) Press  button to start operation.

After the set time has elapsed, a beep sounds and the power turns off automatically.

* After cleaning, remove the liquid detergent tank or fabric softener tank, discard any remaining water, and wipe off the water with a soft cloth.

Troubleshooting

Problem	Thing to check	Instructions
Washing Machine fails to operate.	Is the power plug not inserted in the power outlet?	Insert in the power outlet.
	Is there a power outage?	Check your other product in your home.
	Is the Delay Timer set?	Please check this function.
Washing Machine is wet, even though it is the first time to use it (drain hose, tub, etc.)	At factory, we are checking the actual performance of each product before shipment. Some water drops might remain in the product, but this is not a malfunction. We ask for your kind understanding.	Please clean with a soft cloth and use "Tub Dry" function for Tub drying.
The remaining time increases during operation	Is remaining time adjusted to compensate for the speed of the incoming water?	Adjust water volume to high speed.
Water is added again during the washing process	Is water added automatically up to the set water level if the water level falls because water is absorbed by the laundry?	To keep the preset water level, water may be added during operation.
Wash time is longer than the time that was set manually	Is the water pressure low?	The operating time may increase due to a longer water supply time, depending on the pressure level of tap water.
The washing machine stops during the spin cycle and starts adding water	Are loaded clothes unbalanced?	If the laundry is extremely off balance when the spin cycle starts, the spin cycle stops and the rinse cycle starts to rebalance the laundry. After the load is rebalanced, the spin cycle starts again.
The lid does not open	Is the lid locked?	When the lid lock indicator is on, lid is still locked for your safety.
		Turn on the power and wait for the lock symbol lighting is off.
The display screen becomes foggy	This is not the failure.	The fog disappears in approximately 24 hours and it does not affect the operation.

Troubleshooting

Problem	Thing to check	Instructions
Auto dosing function is not working	Please make sure that Auto dosing function is set. When the following courses are selected, the Auto dosing function of liquid detergent will not work. Tub clean, Tub dry, Stain care, Easy refresh and Hot tub clean. When the following course is selected, the Auto dosing function of fabric softener not work. Water save, Tub clean, Tub dry, Easy refresh and Hot tub clean.	Please set the Auto dosing function (page 16)
	Make sure that the liquid detergent tank and fabric softener tank are installed correctly.	Install the liquid detergent tank and fabric softener tank correctly.(page 16)
	Liquid detergent and fabric softener tanks <ul style="list-style-type: none"> • Check the remaining amount of liquid detergent and fabric softener in the tank. 	Replenish with liquid detergent or fabric softener (page 16)
	In the following cases, altered components may remain in the liquid detergent tank and fabric softener tank. <ul style="list-style-type: none"> • When the lid of input hole is left opened or when the remaining amount in the tank is low. • When the liquid detergent or fabric softener in the tank becomes jelly-like • When using highly viscous, solidified, or separated products • When the Auto dosing function is not used for more than a month 	Clean the liquid detergent tank, fabric softener tank, and their routes. Select 9 hours when cleaning their routes. (page 35-37)
	Since the used amount of each time is small, it may not be possible to tell visually whether it was automatically loaded correctly.	Increase the amount of clothing and check that the remaining amount in the tank has been changed.
When you put detergent or fabric softener in Dispenser and also set "Auto dosing" function.	Too much detergent and fabric softener will be added.	We recommend that you wash it again.
When you want to use bleach with "Auto dosing" function.	After the start, add bleach to Dispenser according to the detergent amount (approximate) indication.	Be careful where you put the bleach. (page 16)
The inside of Tank lid and Indicator piece are wet	Condensation may occur due to humidity, but this is not a malfunction.	Wipe it off with a soft cloth.
When the liquid detergent or fabric softener is automatically added, it makes a frog-like sound.	Please check the following. <ul style="list-style-type: none"> • Check if the tank is empty. • Make sure the tank filter is not clogged. 	This is the sound of a piston. We recommend the following: <ul style="list-style-type: none"> • Replenish with liquid detergent or fabric softener to fill up • If the inside of the tank is stuck, perform maintenance. (page 35)
Power outage	-	The washing machine is equipped with a restart function. If a power outage occurs while the washing machine is operating, the cycle (i.e., wash, rinse, or spin) at that time is save, and when the power is restored, automatically restart from the interrupted cycle. If there is a power outage during the spin cycle, the lid is locked and cannot be opened. After the power is restored, the lock is released.

Error Codes

Error code	Description	Things to check	Solution
E0	Overloaded Laundry	Check if the laundry is overloaded?	Decrease the amount of laundry according to the instructions on page 18.
E1	Water is not supplied	Is the tap open?	Check the tap, water supply inlet filter, water pipes, and water supply hose.
		Has dirt collected in the water supply inlet filter?	
		Is the water pipes or water supply hose frozen?	
		Has the water supply been disrupted?	
E2	Water does not drain	Is the drain hose blocked?	Check the drain hose and the drain outlet.
		Is the drain hose twisted, crushed, or frozen?	
		Is the drain hose connected correctly?	
		Is the drain outlet too high?	
E3	The tub does not spin	Is the lid open?	Close the lid.
E4		Is the laundry all on one side of the tub?	Add a few more items to wash. (If there is only one item in the tub, it is likely to become unbalanced.)
	Does the laundry include too many thick items like cotton blankets or jeans or too many large items like sheets?		
	Is the washing machine wobbling, or is the floor under the washing machine slanted?	Wait until the tub stop spinning, press Start/ Pause to unlock and open the lid then balance the clothes in the tub. Close the lid and press Start/ Pause to restart.	
	Are there any unwashable things in the tub? →Page 12: Preparation of the laundry (sorting the laundry)		
E8	The lid cannot be locked	Is the lid closed?	Check that the lid is completely closed. Check that there are no foreign objects in the lock switch.
		Are there any foreign objects in the lock switch?	
E9	The lid lock cannot be released	Are there any foreign objects in the lock switch?	Turn the power off and then on again and wait a little while. If the lid is still locked, contact a service center for repair.
E4	The spinning speed does not reach the specified value.	Check if there is too much detergent?	Check the amount of powder detergent used.
		Check if the drain hose is clogged?	
		Check if the drain hose is installed correctly?	Check the drain hose and its installation.

■ If warning sign such as “F0”, “F9” ..etc. are shown in the display, stop operating the washer immediately and contact an authorized service dealer or a service agent for further inspection and/or repairing.

Customer Service

If the washing machine malfunctions, check the Instruction Manual thoroughly before you call for repairs.

If you are unable to identify or solve the problem, contact your local service center.

When you call the service center, you will need to tell them the model of the washing machine, describe the malfunction, and give them your address and phone number.

Specifications

Model	SF-250ZFVAD
Power supply	See the rating plate on the back of the washing machine.
Standard water level	165 L (maximum water level)
Standard amount of water used	275 L (Normal program)
Water pressure	0.03 to 0.8 MPa (0.3 to 8 Kgf/cm ²)
Dimensions	Width 724 mm x Depth 777 mm x Height 1145 mm
Weight	68 kg

Model	SF-220ZFVAD
Power supply	See the rating plate on the back of the washing machine.
Standard water level	155 L (maximum water level)
Standard amount of water used	270 L (Normal program)
Water pressure	0.03 to 0.8 MPa (0.3 to 8 Kgf/cm ²)
Dimensions	Width 724 mm x Depth 777 mm x Height 1145 mm
Weight	68 kg

Model	SF-250ZFV
Power supply	See the rating plate on the back of the washing machine.
Standard water level	165 L (maximum water level)
Standard amount of water used	275 L (Normal program)
Water pressure	0.03 to 0.8 MPa (0.3 to 8 Kgf/cm ²)
Dimensions	Width 724 mm x Depth 777 mm x Height 1124 mm
Weight	66 kg

Model	SF-220ZFV
Power supply	See the rating plate on the back of the washing machine.
Standard water level	155 L (maximum water level)
Standard amount of water used	270 L (Normal program)
Water pressure	0.03 to 0.8 MPa (0.3 to 8 Kgf/cm ²)
Dimensions	Width 724 mm x Depth 777 mm x Height 1124 mm
Weight	66 kg

