

HITACHI FULLY AUTOMATIC WASHER

Model SF-P90CJ

Thank you for purchasing your new HITACHI Fully Automatic Washer.

- Please read this guide carefully to operate the machine properly.
- Please keep this manual for future reference.



Contents

Convenient New Features	2
Description of Main Components	3
Important Safety Precaution	4
Caution	5
Installation Procedure	7
Control Panel	12
Detection of laundry load, and indication of amount of detergent (rough measure) and water level	14
Types of laundry and how to select your desired fully automatic washing course	16
Easy-to-wash course (FUZZY course)	18
User-customized washing course for home use (MANUAL course) ..	20
Using the Washing Cap	22
Rapid Washing (SPEEDY course)	23
Washing Heavily Stained Clothes (HEAVY COURSE)	24
Washing course for clothes with Dry Cleaning label (Wool course) ..	25
Thorough washing cycle (SOAK course)	28
Washing Blanket, Bedspread (BLANKET course)	29
User-customized washing course for home use (JET course)	31
WASHING PROCEDURE	33
Manual Operation	35
Using the DELAY Timer for Washing	37
Load size and Detergent	38
Using liquid detergent, bleach and softener	39
Using powder detergent	40
Using wash water twice and starch	41
How to change sound (Melodious) of Buzzer	42
Child Lock	42
Handy Washing Hints	42
Precautions during use	43
Care and Maintenance	44
Alarm Mode Indicators	48
Trouble shooting Guide	50
Safety Check	50
Specifications	52

Convenient New Features

One Touch-Sensor Wash

Convenient one touch operation where water level, load size and fabric mix are automatically sensed to ensure correct wash action for each load.

Heavy Duty, Large Capacity (9.0 kg), Stainless Steel Wash Bowl

Large capacity wash bowl will handle a large, family sized load with ease.

Water-level Selector in 12 Levels

Economical washing can be done even for small load of laundry. Depending on a wide variety of washing load sizes (800 to 9.0 Kg.) fine adjustment for washing water level can be made automatically in 12 levels.

Double Lint Filter

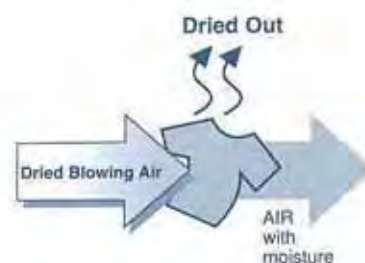
Lint can be collected assiduously through the upper and lower lint filters. Lint filters located in upper and lower sections of the washbowl enable lint to be collected effectively.

Even when washing is under way at a low water level, the lower lint filter can take away lint to a satisfactory degree. ➡ 46

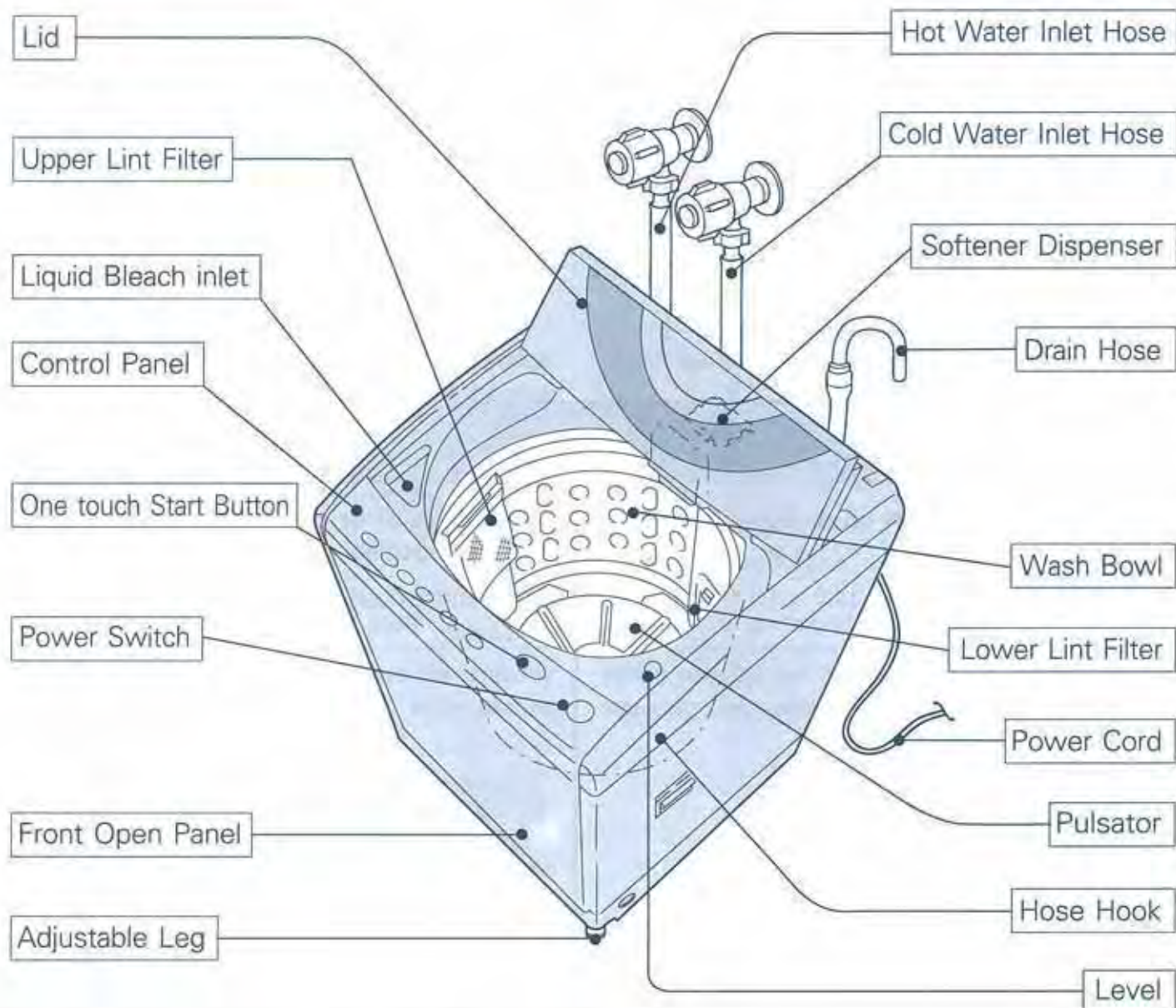


"AIR JET" (Spinning with Blowing AIR)

During the process of dry function, water content of laundries is blown away by dried blowing air and laundries can be dried earlier than usual spinning time.



Description of Main components



- If the washing machine is to be connected to the water mains, using new water supply hose and the old water supply hose should not be

Attachments

Check that the followings are contained in the washer package.
If not provided, please contact your retailer immediately.



Water supply hose x 2



Water inlet cap



Leg cap x 6



Drain hose assembly and
Hose clamp

Important Safety Precaution

Avoid breaking the lid.

- If the lid is damaged, you may get injured because laundry may be entangled with your hand or may come in contact with the washbowl rotating in spin mode.

The automatic washer of this model type will not be deformed or damaged as long as you do not place heavy objects on or apply pressure to the washer.

Whenever you open or close the lid, handle it with utmost care observing the following.

Caution

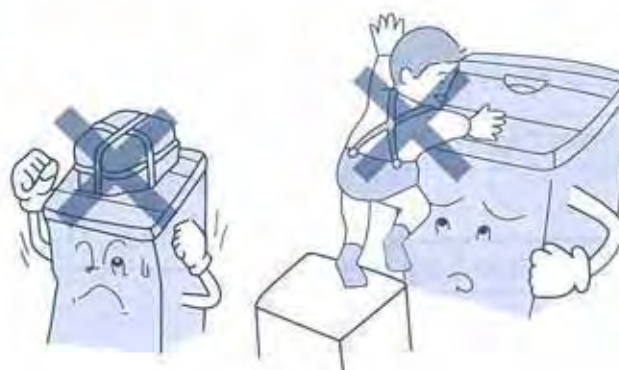
Don't rest heavy objects on or apply pressure to the lid.

- Don't bend the lid forcibly, as it may break.



Do not mount or place heavy objects on the washing machine.

- This may cause deformation or damage, leading to injury.





Caution (1)

Persons other than repair technicians must not disassemble, repair or modify the unit.

- Doing so may result in fire or malfunctioning, which may cause injury.

Be sure to pull out the power plug from the socket when maintaining the unit. Do not pull out the plug from the socket with wet hands.



- This may result in electric shock or injury.

Do not install the unit in places where the humidity level is high such as a bathroom, or in places exposed to wind and rain.



- Doing so may cause fire, resulting from electric shock or electricity leak.

Never touch the washing inside until the inner washing container comes to a full stop.

- Even slow spinning of the inner container may cause you to get caught in the washing cycle, which may cause injury. Particular care is required in this regard when children are involved.



Do not allow infants to look into the inner washing container, and do not place a stand in the proximity of the washing machine.



- This may result in your child falling into the inner washing container, possibly resulting in injury.

Use a single socket with at least AC240V specifications.

- Otherwise fire or electric shock may result.

Don't use excessively hot water, above 50°C



- Plastic parts of the washer may be deformed or damaged.

When carrying out maintenance on the unit, avoid applying water directly to any unit section.



- This may cause a short or electricity shock.

Never put kerosene, gasoline, benzene, thinner, alcohol or caustic soda, or washing stained with these substances, into or near the inner washing container.



- This may cause a fire or explosion.

Thoroughly wipe the power plug when dirt is adhering to the prong or around the base or the prong.

- Failure to do so may result in fire.



Caution (2)

Be sure to hold the plug, not the cord, when pulling out the power plug.

- Failure to do so may cause an electric shock or short resulting in fire.

Do not damage, process, forcibly bend, pull, distort or bind the power cord. Do not place heavy objects on it, or allow the power cord to be caught or pressed.

- This may damage the power cord, resulting in fire or electric shock.

Do not place your hand or foot underneath the washing machine while it is in use.



- The revolving part located in that area may cause injury.

Do not wash waterproof sheets or clothes (such as vinyl sheet or rain coats)

- Doing so may cause abnormal vibrations during the drying process, leading to injury or damage to the unit.

Be sure to fasten the nut used to join the water feed hose and the unit.

- Failure to do so may cause a water leak.

Do not use the washing cap (option) except BLANKET.

- Splash of water may occur or washing cap may be swung out of the basket.

Do not use the washing cap (option) as the figure shown.



- Splash of water may occur or washing cap may be swung out of the basket.

Do not use the unit when the power cord or power plug is damaged, or the plug insertion in the socket is loose.

- Doing so may result in electric shock, short or fires.

Be sure to keep the power plug unplugged when not using the unit for an extended period.

- Failure to do so may deteriorate the unit's insulation performance, which may cause electric shock or fires resulting from electricity leak.

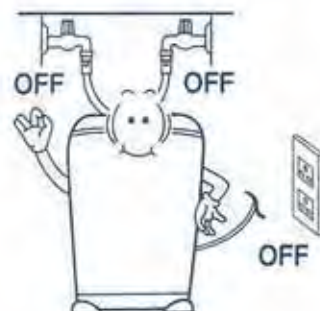
Do not wash delicate clothes using the HEAVY course.

- It may cause damage to the fabric.

Be sure to check water feed hose connection by turning on the water before washing.

- Loose screws may cause a water leak resulting in damage to your property.

After washing



- Close the water tap.
- Turn the POWER button "OFF" at the wall power outlet, if you will not be using the machine for a long period of time.
- ⚠ To prevent water leakage, fire, electric shocks, etc.

Installation Procedure



Caution

Do not install the washer in the place where it is directly exposed to sunlight, wind, rain, sea wind, etc.

- Moisture may destroy the electrical insulation causing an electrical shock hazard.
- Plastic parts and the painted cabinet may be deformed and/or fade.
- Plug the power cord of this washer into a properly grounded three-prong wall power point. This will reduce the risk of electric shock should a wiring fault occur.



Recommended installation method

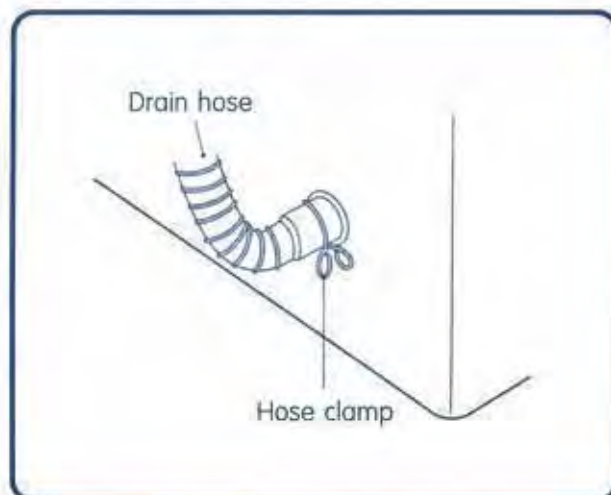


1. Attaching Drain Hose

- Connect the drain hose to drain outlet and clamp tightly by the hose clamp.
- Hook the U-shape end of the drain hose over the rim of a sink to drain

(Note)

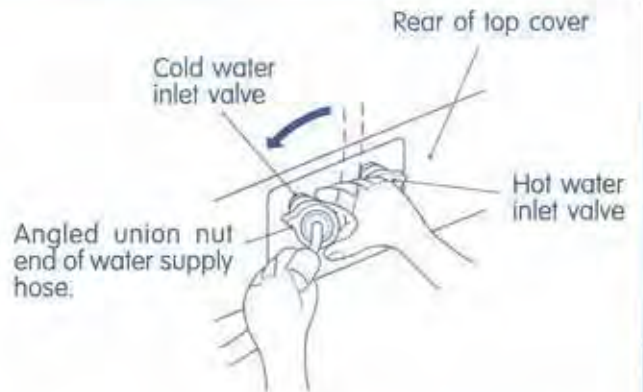
- Never lay down the drain hose, as water will be discharged.
- The discharge height should be approx. 1 m above the base of the washer.
- Be sure the drain hose is properly routed so it will not kink or lift from the sink.



2. Connecting the Water Supply Hose

- Securely connect water supply hose to the hot and cold taps and washing machine water supply inlets with the angled union nut, so use the following procedure.
- ✦ Be sure to connect the water supply hose to the washer before the main unit of washer is installed.

- ① Tighten the union nut.
 - ✦ Tighten the union nut lightly first. Then, tighten it firmly after making sure that two or three threads of the nut are engaged with the inlet valve.
- ② Hold the union nut stationary, swing the water supply hose counter clockwise about a quarter turn back from the desired final position, then tighten the union nut and water supply hose together.
- ③ If the water supply hose swings past the desired position in Step ②, hold the union nut and swing the water supply hose back as in Step ②, then tighten the union nut and water supply hose again.
- ④ Repeat these orders until the water supply hose is held securely at the desired position.
- ⑤ Prior to washing, open a water tap to make sure that washing water is supplied to the unit from the water supply hose which has been connected properly to the unit.



Make sure the hoses are connected to the correct inlet, Cold to Cold and Hot to Hot.

- If the union nut is loosened after it is used over an extended period of time, water leakage may occur, leading to unexpected damage to yourself and your property.
- If some malfunction is still found even after the union nut is further tightened and/or replaced with another one, replace the water supply hose with a new one.

Loosened union nut may invite unexpected accidents, such as water leakage or burn.

Hints:

- When you use hot water, lower its temperature as low as possible. The washer of this model type allows laundry to be washed cleanly even the washing water temperature is low.
- Washing laundry in low-temperature washing water is environmentally friendly measures as well.

✦ Connecting the cold water inlet hose only.

Make sure the water inlet cap shown below, is securely fitted to the hot water inlet valve.



Water inlet cap

To be fitted to hot water inlet valve when only cold water inlet hose is connected.

3. Where to install the machine

- Install the machine away from the wall.
 - This is to prevent abnormal vibration and sound.
- Install the machine horizontally on a firm floor.
 - A slippery or weak floor may cause major vibration and noise.



4. How to install Your Washer

- Place your Washer on dry, well-ventilated, flat and level floor in a horizontal position.
Otherwise, the Washer may stop functioning during spin cycle or cause abnormal noises.
- 1. Place your Washer in the place where you wish to install it.
- ⌘ If the Washer rattles, make the following adjustments for it:

■ If the adjustable leg rattles;

Make height adjustments for it to remove the rattling.

■ If any one of non-adjustable leg(s) rattles;

Rest the rear legs on the floor and place a proper, flat plate on the area between the front legs and the floor to remove the rattling.

- 2. Check to see if the air bubble in the level is located in a proper position.

⌘ If the air bubble stays within the inner circle, you do not have to make height adjustments for the legs.



⌘ Take a look at the level from the top immediately above it.

⌘ If the bubble does not remain in the circle, use the supplied leg cap(s) to make height adjustments for the non-adjustable leg(s)

■ About leg Caps

Three kinds of leg caps (2mm, 4mm and 8mm in height), two pieces each, are packaged with your Washer as accessories. Combine them with each other, if necessary.

If you stack them on top of each other, attach the short cap (s) in height to lower position.

- 3. Depending on a position of the bubble in the level, attach the leg cap(s) to the non-adjustable and applicable leg(s).
(For adjustable leg, turn it in either clockwise or counterclock-wise direction to make its height adjustment.)

(Example) What to do when Washer leans forward

If one-half or more of the bubble stays outside the circumferential edge of inner circle:

Attach 12mm (8mm + 4mm) leg caps to the (non-adjustable) front leg. (Turn the adjustable leg clockwise or counterclockwise to make its height adjustment.)



- For details see the information on the back of "Check Sheet for Installing Washer".
- When one-half or more of the bubble stays outside the circumferential edge of inner circle, height adjustments cannot be made only through the leg cap (s) because the floor is tilted excessively. In this case, lay a proper, flat plate or the like under the legs.

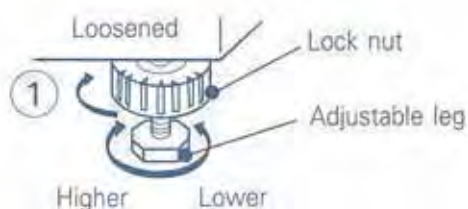


4. Make sure that Washer does not rattle.

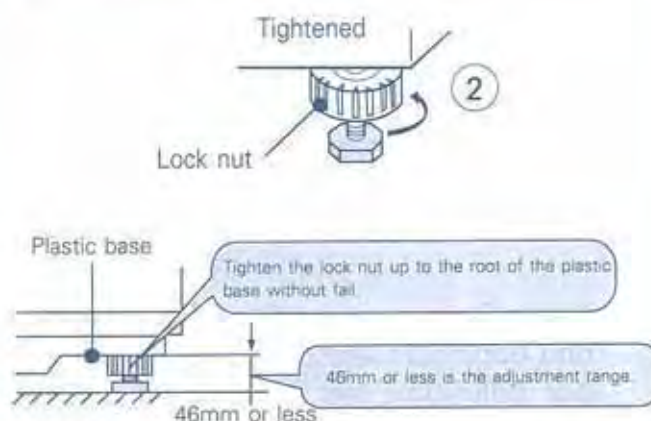
- If the Washer still rattles, adjust its height using the adjustable leg.

How to use the adjustable leg

- 1** Loosen the lock nut by turning it in the arrow direction ① and turn the adjustable leg to adjust looseness.
- The height can be adjusted by up to 14mm.



- 2** If adjustment is complete, fix the lock nut by turning it in the direction of the arrow ②



Trial Operation

- After you finish installing the Washer in place, check for its mounting condition on the floor according to the "Check Sheet for Installing Washer".


Caution

- Before washing laundry, open the water tap to make certain that the water supply hose is connected correctly to the Washer.
- Loosened mounting screw (s) may invite unexpected accidents resulting from water leakage.

Control Panel

Indication of detergent and water quantity

As soon as the operation gets started, recommendable amount of detergent (as a rough measure) and water level are indicated on the control panel.

- The amount of detergent indicated is for concentrated detergent usage.
- After laundry load is detected, recommendable amount of detergent (rough measure) will be indicated for about 5 seconds, then water level indicated.
- If you press the "WATER LEVEL" button when water is supplied into the washer during washing process, recommendable detergent quantity (rough measure) will be indicated for about 2 seconds.
- Some courses do not indicated a detergent quantity (rough measure)  14

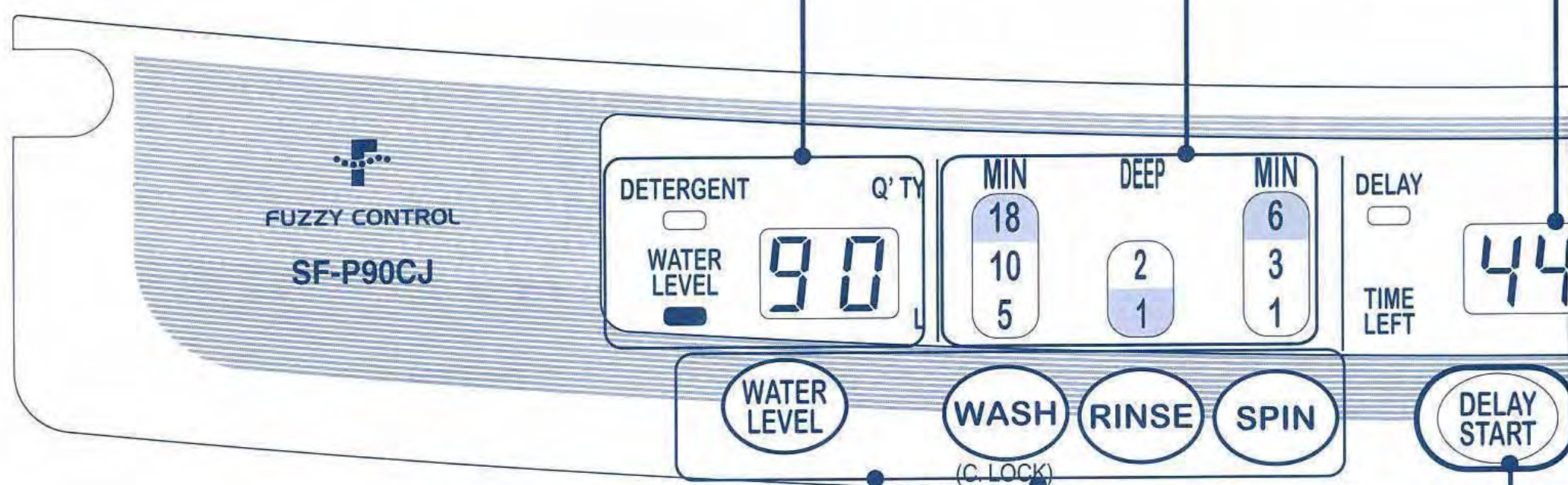
Indication of progress in washing process

Illuminated washing lamps indicate the corresponding progress in washing process.

- Flicking of lamps which indicate the ongoing washing process of the washing process when the machine is on.

Remaining time/Timer indicator

It indicates the remaining time after cycle starts. Pushing the DELAY START button will indicate preset time. (After 12 ~ 3 hours Finish)



WATER LEVEL ● WASH ● RINSE ● SPIN ● Buttons

Push this button when setting water level, wash, rinse and spin according to your need, or change preset data.


- Should you change a course to another one after cycle starts, be sure to stop the cycle and make the change. Remember that you will no longer change a washing course after the currently selected washing course is completed. (However, some courses cannot be changed.)
- Press the water level button when wishing to add water during the washing and rinsing processes. While the button is being pressed, water is continuously fed. (When the water level reaches "high", the water feed stops.)

Child Lock

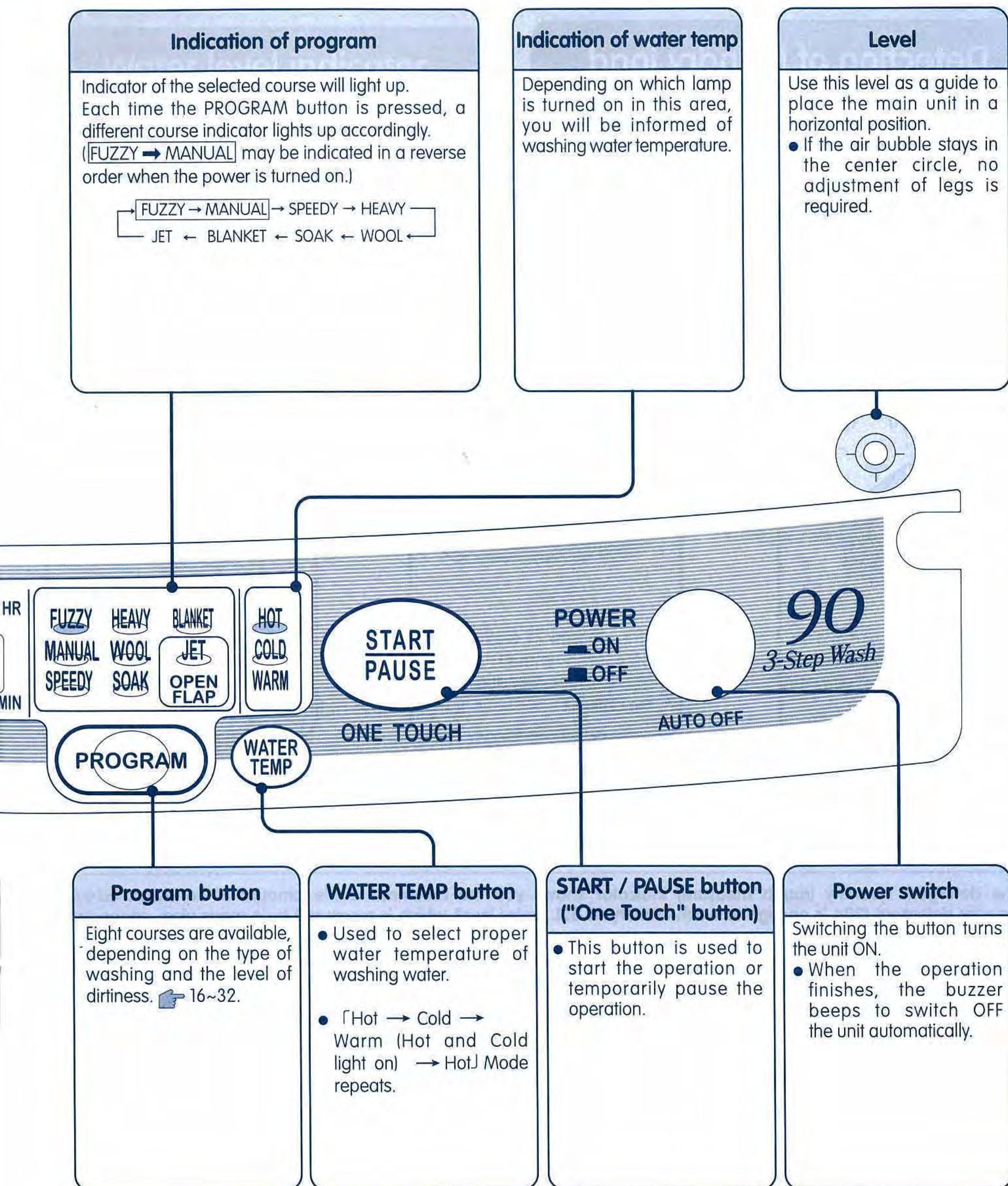
If you press and hold down the "WASH" button for 3 seconds or longer after turning on the Power switch, "CH" will be indicated to inform you that the Child Lock is activated.

 42

Delay Start button

For timed washing.  37 Washing can be set to finish at any hour within 12~3 hours.

You will hear two beeping sounds when setting the water level to "90L", washing time to "18 min.", rinsing cycle to "double rinse", spin to "6 min.", delay start to "12" hours later, water temp to "WARM" and course to "Fuzzy" course. (This is to inform you of the lamp's reference value.)



CAUTION

- Never push the two-or-more buttons simultaneously. Otherwise, malfunction may result.

Detection of laundry load, and indication of amount of detergent (rough measure) and water level

Detection of laundry load

The built-in sensor automatically detects any laundry load and indicates recommendable amount of detergent and water level as follows:

1 Put the laundry in, turn the power ON and press the START/PAUSE button

Remove tissues, hair pins etc.



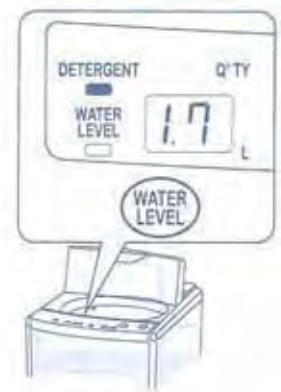
- Be sure to remove coins and the like from the laundry before washing it. Otherwise, damage to the washer may result.

2 The pulsator rotates for approximately four seconds



- The amount of washing is measured without water. (There is no risk of damaging the clothes.)

3 Indication of detergent quantity (rough measure) and water level

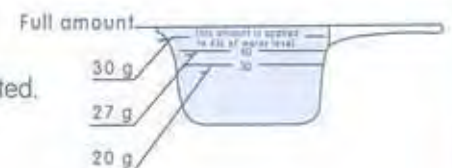


- After the recommendable detergent quantity (as a rough measure) is indicated for about 5 seconds, water level will be indicated instead.


Detergent quantity (rough measure) indicator and its recommendable amount

The detergent quantity (rough measure) indicator shows you the recommendable amount of concentrated-type powder detergent (20g is enough to wash laundry at 32L water level) which is measured by a measuring spoon (with max. capacity of 35g).

- The detergent quantity (rough measure) indication is determined based on one spoonful of measuring spoon with the max. capacity of 35g. (The capacity of a measuring spoon may vary depending on detergent manufacturer and brand.)
- See page 38 for other kinds of detergents.
- Do not use excessive amount of detergent. Otherwise, a poor rinsing performance may result or excessive foams may cause some trouble.
- For details, observe the instructions of each detergent you use.
- In "WOOL", and "BLANKET" courses, no detergent quantity (rough measure) is indicated.



Water level indicator

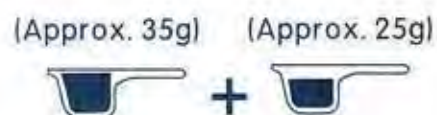
Depending on laundry load, the applicable water level that ranges from 32L to 90L is indicated in 12 levels.
(For details  38)

<Example> When water level is "90L" and recommendable detergent quantity amounts to "1.7 spoonful quantity" of measuring spoon:

Water level indication



Detergent quantity (rough measure) indication



Use about 60g of detergent in total.

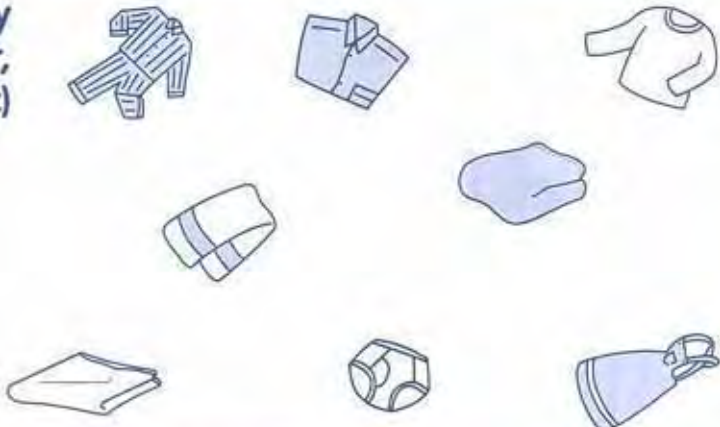





- If you press the WATER LEVEL button while a water level is appearing on the control panel, recommendable detergent quantity (rough measure) will be indicated for about 2 seconds.
(This indication is available only when washing water is fed into the washer during washing cycle. In other cases, no indication is available).

Types of laundry and how to select your desired fully automatic washing course







This washer has been designed to provide you with 8 different kinds of fully automatic washing courses.

Select your desired washing course and suitable amount or type of detergent for laundry type to ensure an effective washing.



Types of laundry		
<p>General types of laundry (cotton, synthetic fiber, and blended yarn fabric)</p> 		FUZZY
<p>Delicate clothes, including 100% wool garments with a tag indicating "Hand Washing", wool-blended yarn fabric such as knitwear, and lingerie.</p> 		
<p>Clothes that are labeled with "Dry Cleaning" only as well as "Dry Cleaning" and "Hand Washing"</p> 		
Heavily stained clothes	<p>Socks and sportswear stained with mud Bulky clothes such as jeans</p> 	
	<p>Stubborn stains, such as oil and fat fouling, on collars and cuffs</p> 	
<p>Blanket</p> 		

- Load size and detergent 38
- When using bleach, liquid detergent and softener 39
- When using powder detergent 40

Recommendable full-automatic course		Recommendable detergent
Automatic Washing suitable for laundry will be performed.	 18	Synthetic detergent (powder and liquid detergent)
Laundry mode suitable for individual home use is programmed into the built-in memory for customized washing.	 20	
Lightly-stained laundry is quickly washed.	 23	
Hand-wash-like water current enables laundry to be washed gently.	 31	Mild liquid detergent
Whirl-wash water current enables laundry to be washed gently. (An optionally available Washing Cap is required.)	 22 	Detergent for exclusive use for clothes with a tag indicating "Dry Cleaning"
Strong washing water current enables the laundry to be cleansed to a satisfactory degree.	 24	Synthetic detergent (powder and liquid detergent)
Through activation of enzyme element contained in detergent, the laundry is washed clean without damaging it.	 28	
The laundry is washed carefully with blanket-oriented washing water current. (An optionally available Washing Cap is required.)	 29 	Liquid detergent

Easy-to-wash-course ("FUZZY" course)

The sensor detects the type and quantity of the laundry, and the mode to best process the washing is automatically selected. (for course details. 33)

"Spinning rinse cycle with water injection" is performed in the "FUZZY" course to save water.

For water temperature, see Table 1 and Table 2.



1 Turn the power switch ON

POWER
ON
OFF



2 Select the (FUZZY) course



Table 1. WASH WATER TEMPERATURE GUIDE

WATER TEMPERATURE	USED FOR
Hot	White and colorfast cottons, linens with heavy or normal soil. Permanent press & synthetics with heavy or oily soil.
Warm	Dark or non-color fast fabrics. White & colored synthetics. Permanent press with normal or light soil. Wool is only selected with warm.
Cold	Normal or lightly soiled fabrics.

Table 2. FILL TEMPERATURE OF EACH CYCLE FOR PROGRAM

For each program, washing machine automatically selects a suitable fill water temperature.

PROGRAM	FILL TEMPERATURE		APPENDIX EXPLANATION
	WASH	RINSE	
FUZZY, JET MANUAL, SPEEDY, HEAVY	WARM HOT COLD	COLD	<ul style="list-style-type: none"> Fill temperature for wash is able to change for your washing style. Fill cold for rinse is not able to change because of energy saving.
WOOL	WARM	WARM	<ul style="list-style-type: none"> Fill temperature is not able to change to protect laundry transformation.
SOAK	COLD, WARM	COLD	<ul style="list-style-type: none"> Fill temperature for wash is able to change for your washing style.
BLANKET	WARM COLD	WARM COLD	<ul style="list-style-type: none"> Water temperature remains unchanged for both WASH and RINSE cycles.

A wash temperature to be selected is illuminated during a complete cycle on the control panel.

Washing actions of FUZZY HEAVY SPEEDY AND JET courses.

After closing the lid

follow the procedures given below to determine the type of washing

Step 1:

Dissolve detergent in small amount of water and do washing with the thick detergent water.



1



Step 2:

Add water. Wash in strong water flow to get the all dirt out of laundry.



2



Step 3:

Add more water and wash in regular water level.



3

3 Press the START/PAUSE button



- The pulsator rotates for approximately eight seconds to detect the amount of washing, and then the guideline for the amount of detergent and water is indicated before the water starts feeding in.

4 Put the detergent in and close the lid.

To ensure that the detergent dissolves well in the water, place the detergent in the area where the feed water falls.



According to the recommendable detergent quantity (as a rough measure) indicated on the control panel, put the measured detergent into the bowl.

- 39 when using bleach, liquid detergent and softener.
- 40 when using powder soap (natural oils and fats.)
- The spin cycle will not proceed if the cover remains open.

5 Washing finished.

The beeping buzzer indicates the completion of the washing process.



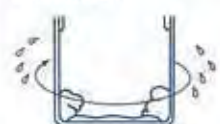
- When the buzzer stops beeping, the power switches off automatically. (Automatic switching off function)

Rinsing operations in "FUZZY" course 33

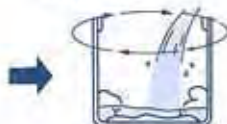
First rinsing cycle (spinning rinse cycle with water injection)

Washer spin-dries the laundry after draining wash water.

Washbowl rotates itself slowly while water is fed into it.



About 6 to 10 min.



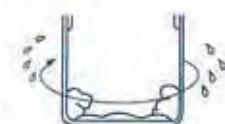
About 1 min.

Second rinsing cycle (deep rinse)

Washer spin-dries the laundry after draining wash water.



Water is filled up to the preset water level.


Laundry is stirred with water current (deep rinse).



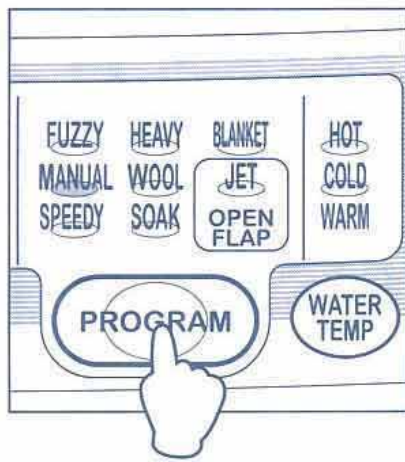
Repeat cycle 2 times

1 Turn the power switch ON

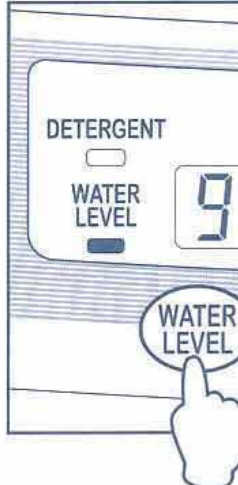
POWER
 ON
 OFF



2 [MANUAL] course



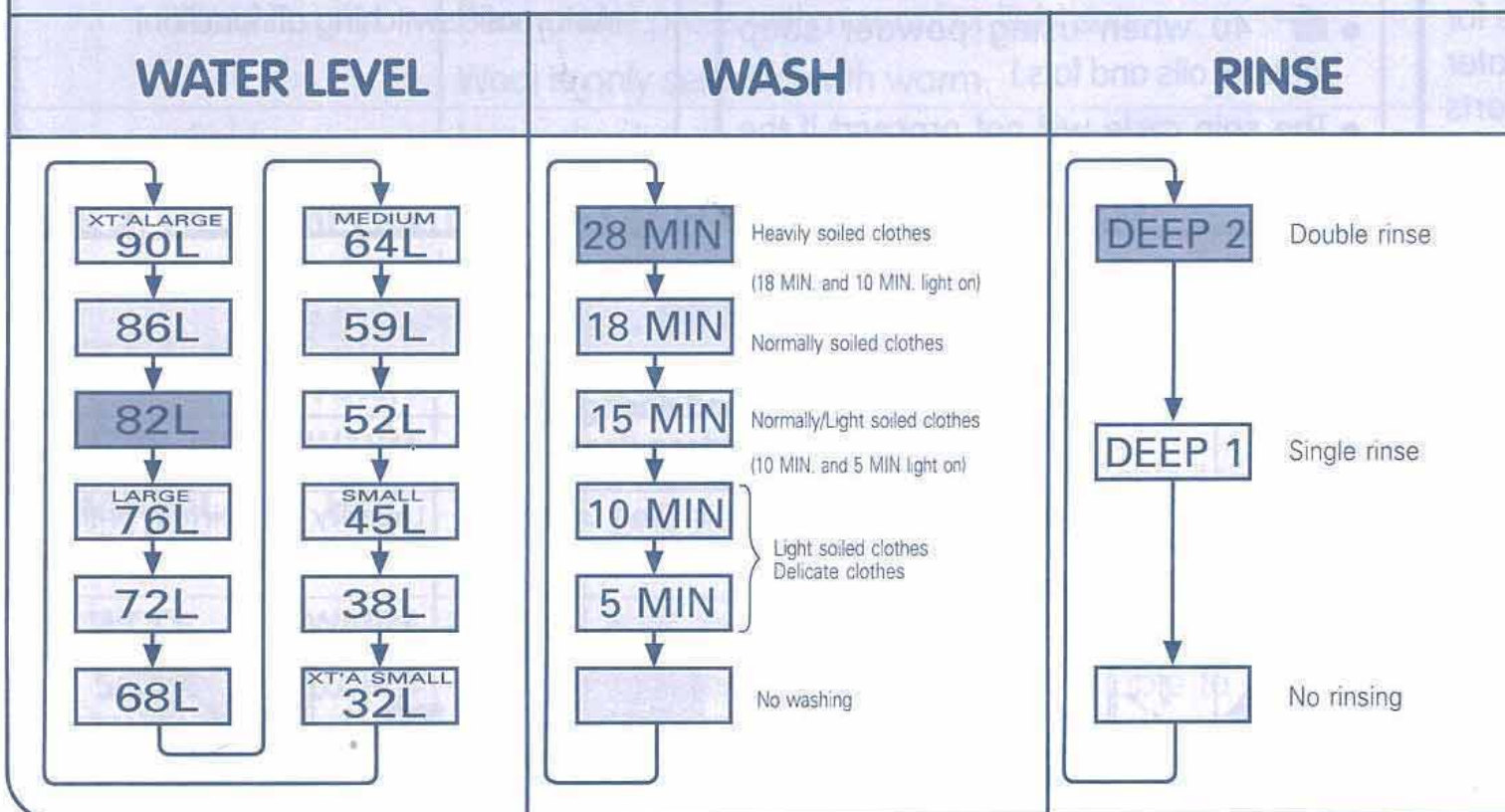
3 Select your



- By default, the water to "18 mim.", rinsing spinning time to "9 m

How to use WATER LEVEL, WASH, RINSE and S

(Different setting is made accordingly every time you pre



- Each setting enclosed by rectangle box is factory-adjusted setting (defa

4 Press the START/PAUSE button



- Your setting is stored in the built-in memory. From the next time when you use the washer in "MANUAL" course, its washing cycle will run according to this setting.

5 For the detergent

To ensure that the detergent dissolves well in the water, place the detergent in the area where the feed water is.

According to the indicated recommendable amount of detergent (rough measure), put measured detergent in the washbowl.

When you press the "WATER LEVEL" button, the detergent quantity will be indicated on the control panel for about 15 seconds. ➡ 15.

- If the lid is left opened, the amount of detergent performed.

Leave the rest of the water until the buzzer beeps.

<Example of manual course setting>

In cases such as:	Course	
<ul style="list-style-type: none"> • When it is not desirable to spin clothes in order to avoid wrinkles. • When you use the used rinsing water for the next washing process: 	Washing → Rinsing (When washer spin-dries laundry, it stops.)	15 MIN WASH
<ul style="list-style-type: none"> • If you wish to wash laundry with your own setting for complete washing to especially meet your needs for home use: 	Washing → Rinsing → Spinning	18 MIN WASH
<ul style="list-style-type: none"> • For large load (9 kg-cotton, linen, etc.), load large items first with light weight articles on top. Warm wash temperature of 40 degrees centigrade is recommended. 	Washing → Rinsing → Spinning	90 L WATER LEVEL ➡



Caution

If the washing cap is set incorrectly as shown in the figure in the right-hand section, do not use it.

- Otherwise, water may splash and the Cap can pop out of the washbowl, which may result in injury or damage to the unit and laundry.

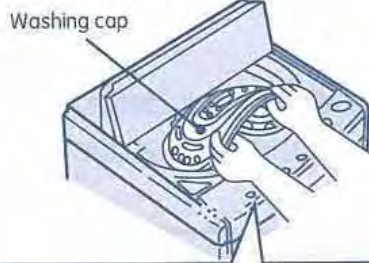


Do not use the Washing Cap except for "BLANKET" and "

- Otherwise, water may splash out of the washbowl, which may damage the unit and laundry.

Installation of Washing Cap

- 1** The side with written instructions should face up as shown in the figure, bend the washing cap and let the back parts fit into the bowl.

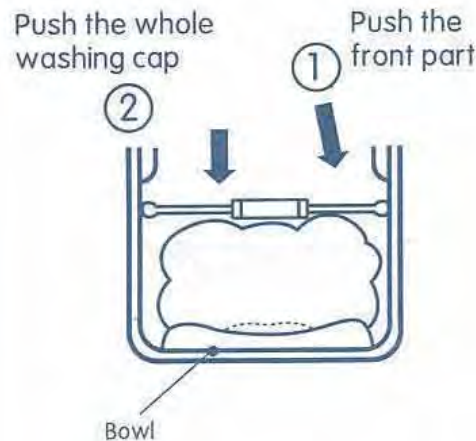


Place the Cap in position after aligning concave sections of the Cap with convex sections of the washbowl.

If the Washing Cap is set incorrectly, the Cap can pop out of the washbowl, which may invite unexpected accidents.



- 2**
- Push the front parts of washing cap down. Make sure that it is completely fits into the bowl.
 - Push the whole washing cap down to horizontal.



- 3** (For "WOOL" courses) Push the Cap up to the d... 26

(For "BLANKET" courses) While holding the Cap until it comes into contact with the fluid balancers it gets caught between the Cap and the Cap. 29

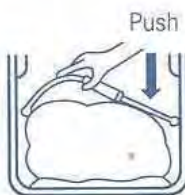
Pull out the net of line... the figure below.

CAUTION

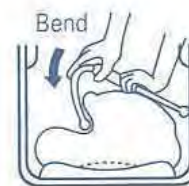
- Make sure that the washing cap is not trapped with in clothes, otherwise, damages

Taking out the Washing Cap

- 1** Push the front part of the washing cap down.



- 2** As shown in the figure, hold on to the center part and bend it to the arrowed direction.



- 3** Pull...

- Whenever you store the Washing Cap in a safe place for future use, take care not to deform it.
- Since the Washing Cap is an expendable article, please purchase it again at the nearest distributor.

Rapid Washing (SPEEDY Course)

With this course, you can wash lightly stained laundry or small amount of laundry quickly with ease.

(For details of the washing processes of each course;  33)



1 Turn the power switch ON and select the (SPEEDY) course.



- The water level is automatically set at a (64L) (Washing capacity : 4 kg)

2 Press the START/PAUSE button



3 Put the detergent in and close lid

To ensure that the detergent dissolves well in the water, place the detergent in the area where the feed water falls.





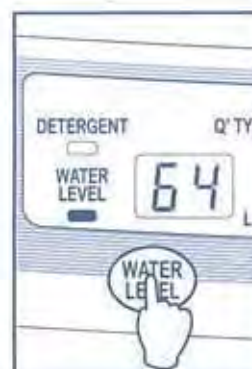
According to the indication of recommendable amount of detergent (rough measure), put measured detergent into the washbowl.
When you press the "WATER LEVEL" button, the detergent quantity will be indicated on the control panel for about 2 seconds.

- The spin cycle will not proceed if the lid remains open.


Leave the rest of the washing process to the machine until the buzzer beeps.

■ Helpful tips for effective washing

- For washing lightly stained laundry, the recommendable amount of detergent which is almost one-half the normal quantity (approx. 50 to 60%).
(For detergent quantity;  38)
- Depending on amount of laundry you wash, change water level accordingly.
(For a guidance of laundry load;  38)



Washing course for clothes with "Dry Cleaning" label ("WOOL" course)

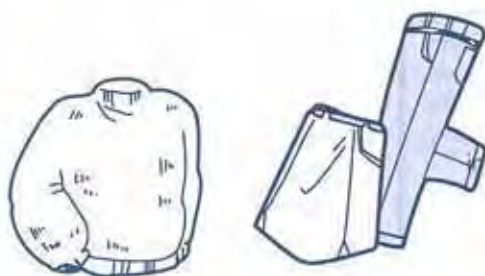
Even those clothes with "Dry Cleaning" label and/or "Hand Washing" and "Dry Cleaning" labels can be washed gently and carefully through a whirl water current produced by rotating the washbowl itself without activating the pulsator. However, since some materials cannot be washed, check to see if the laundry you wish to wash is machine-washable prior to the washing. (For details of the washing processes of each course;  33)



■ Machine-washable clothes and articles are as follows:

Machine-washable items

- Sweater, cardigan (wool, angora, cashmere, etc.)
- Trousers and skirt
- Blouse, shirt, one-piece dress (silk, hemp, etc.)



Non-machine-washable items

- Leather product, leather ornament
- Garments with ornament (feather, fur, etc.)
- Blended yarn fabric, such as rayon and cupro
- Non-colorfast articles
- Necktie, suits, and coat
- Items to which coating and resin (or adhesive) is applied or emboss (convex and concave patterns) processing is given.
- Wool or silk items using forcibly stranded threads (hard twist yarn), especially woven fabrics.
- Pile fabrics, such as velvets and corduroys

CAUTION

- When washing other items except those mentioned above, observe instructions of detergent you are using.
- **Checking laundry for colorfastness**
- Please ascertain in advance whether those clothes that may not be colorfast are easily discolored or not. (For this purpose, use a white clean towel dampened with a small amount of liquid detergent and rub it against a hidden portion of a cloth to ascertain whether or not color is transferred to the towel.)
If you find that color is transferred from the cloth to towel, do not wash it.

CAUTION

Precaution to bear in mind when washing clothes with "Dry Cleaning" label

Use a suitable amount of detergent

- You cannot make any difference in washing results even though you use larger amount of detergent than the specified amount. On the contrary, however, it may result in a poor rinsing performance, causing a cloth to be damaged. Do not use bleach.
- Because bleach is extremely alkaline, it causes damage to fabrics.

Washing course for clothes with "Dry Cleaning" label ("WOOL" course) - Continued from the previous page.

Before using the washer, read. 📖 25

- Be sure to use an optionally available Washing Cap.
- "WOOL" course cannot be used with timer. 📖 33

Preparation (Pretreatment)

- Prior to washing, wash away dirt beforehand from heavily soiled laundry, if any.
- Turn clothes inside out first to which buttons or embroideries are attached, then wash them.
- In the event that the washed laundry is shrunk excessively, it is advisable to keep its dress-pattern paper to restore its shape to the original form.



1 Put laundry into the washbowl, and put the Washing Cap on the laundry.



- Put the laundry neatly into the washbowl in such a manner that the laundry is distributed evenly and uniformly inside the washbowl, then put the Washing Cap on the laundry to prevent it from being swung out.
 - ※ This measure is required to prevent the laundry from being deformed or kept off-balance during spin-drying cycle.
- Do not perform the washing without using the Washing Cap.
- The maximum load of laundry is 1.5 kg or less.

2 Turn the power switch ON and select the "WOOL" course.



- Water level is designed to automatically reach "38L". If necessary, the level can be changed to any level in the range from "32L" to "52L". (Except the water level button, other buttons remain in operable.)
- A suitable water level should be that the whole laundry is submerged into water.

■ Helpful tips for effective washing

How to remove dirt

- Place a clean towel on the reverse side of laundry first, then apply a small amount of liquid detergent to a dirty spot. Pat the spot lightly through the use of brush or the like to remove the dirt.
- Apply a small amount of liquid detergent to a stained spot on cuffs, collars, hems and other areas around pockets of laundry. Then, give a brush finish to it unidirectionally to scour a stain away.



■ Setting position of Washing Cap

- The position (or height) into which the Washing Cap should be placed must be the height from where laundry can be lightly covered with it, depending on type, amount and thickness of the laundry to be washed.
- Refer to the guide marks for the setting position, which are indicated on the inner wall of the washbowl.

Guide marks for setting position	Available water level	Washable laundry load
	52L	Max. 1.5 kg
	45L	Max. 1.2 kg
	38L	Max. 0.8 kg
	32L	Max. 0.5 kg

- When you wash a thin cloth such as blouse, put a clean towel and so on into the washbowl to adjust a height of water level, so that the laundry will be prevented from being non-uniformly distributed inside the washing tub during spin cycle.

Washing cycle of WOOL course

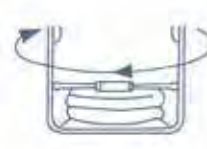
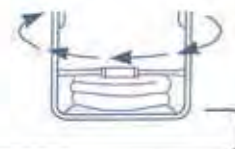
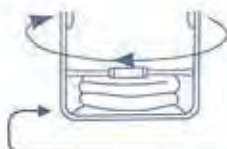
Washing (9 min).
Whirl current (2 min). + Soak (2.5 min).
(This cycle is repeated twice.)

Draining → Spinning
(1 min)

Deep rinse.
Whirl current + Soak
(30 sec.) (1.5 min)

Draining → Spinning
(1 min)

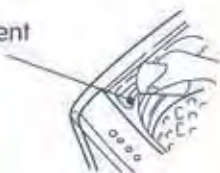
Whirl current
Washbowl rotation : 6 to 8 sec.
Pause : 12 to 14 sec.



This cycle is repeated twice.

3 Put the detergent

Liquid detergent
inlet



- When you wash a cloth with a tag indicating "Dry Cleaning", be sure to use a detergent (liquid detergent) for exclusive use for that kind of cloth. Mild detergent (liquid detergent) can also be used for those clothes that are labeled with "Hand Washing".
- For amount of detergent, follow its instruction.
- Dilute liquid detergent with water and pour it gently into the washbowl through the liquid detergent inlet.
- Do not use powder detergent because it does not dissolve well in water.

4 Close the lid and Press the START/PAUSE button



- Be sure to close the main lid completely. (Opening the lid causes the washbowl to stop rotating and indication "E3" will start blinking.)

5 When the washing finishes

- Keep sweater of wool, angora and cashmere in shape first and let it dry in the shade in a horizontal position.
- Laying these items flat on such objects ensures that they retain their shape.



- Keep the shape of blouse or onepiece dress neatly and let it dry by hanging it on a hanger in the shade.

Leave the rest of the washing process to the machine until the buzzer beeps.

■ Finish (How to correct shrunk and slightly deformed laundry)


Keep a steam iron off the laundry to spray steam onto it, so that it may keep in shape.



After spraying a large amount of steam over the laundry, use its dress-pattern paper to stretch it out until its shape is restored to the original form.




Thorough washing cycle ("SOAK" course)

This course is designed to soak load around 2 hours for thorough washing without causing any damages. ( 33 for course details)



1 Turn the power switch ON and select the (SOAK) course.



- Not indicating wash and rinse cycles. ( 33 for course details)

2 Press the START/PAUSE button



- The remaining wash time starts appearing on the control panel after it comes to "99" min.

3 Put the detergent in and close the lid

To ensure that the detergent dissolves well in the water, place the detergent in the area where the feed water falls



Add in the indicated amount of detergent.

- To prevent garments from being creased, spin cycle will not be activated except when it is preset to function.
- To set spin manually.  35

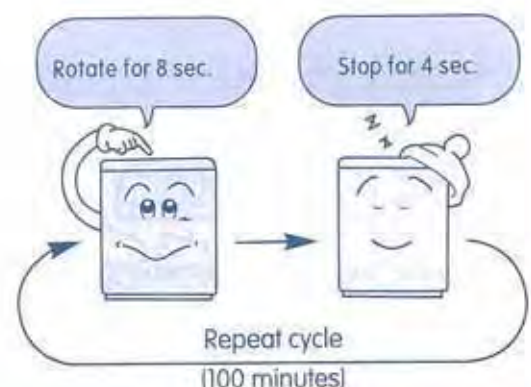
Leave the rest of the washing process to the machine until the buzzer beeps.

■ What's SOAK course?

Soaking means to soak laundry load with gentle water currents to thoroughly wash heavily stained parts such as collars and cuffs.


CAUTION

- Please do not wash clothes of easily-fadeaway colors.
- Be sure not to use powder detergent (natural oils and fats), as it may cause the whole laundry to become yellowish or blackish.



Washing Blanket, Bedspread (BLANKET Course)


The blanket rotates and creates "Blanket washing current" and "Soak" course to gently wash blanket and bedspread.

- Be sure to use an optionally available Washing Cap for this washing course
- Blanket course cannot be used with timer. ( 33 for details)



1 Turn the power switch ON and put the detergent

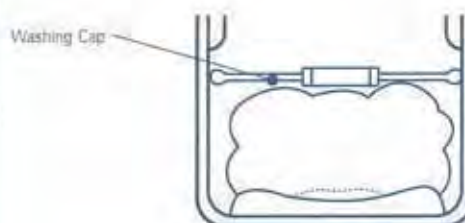


Be sure to dilute the liquid detergent with a suitable amount of water in the proportions of one part detergent to two parts water (Concentrated type : 73 ml, Regular type : 117 ml).  39

- Water level is automatically set to (90L)
- Do not use powdered detergent which is difficult to dissolve in water.
- Use fabric softener for better results.

2 Put in the blanket or bedspread and place the washing cap in position

Put the blanket or bedspread in the bowl and set the washing cap as illustrated in the Figure below.  22



- Be sure to use the Washing Cap whenever you use the "BLANKET" course.
If you fail to do so, water may splash and the Cap can pop out of the washbowl, which may result in injury or damage to the unit and laundry.

■ Washable Blanket

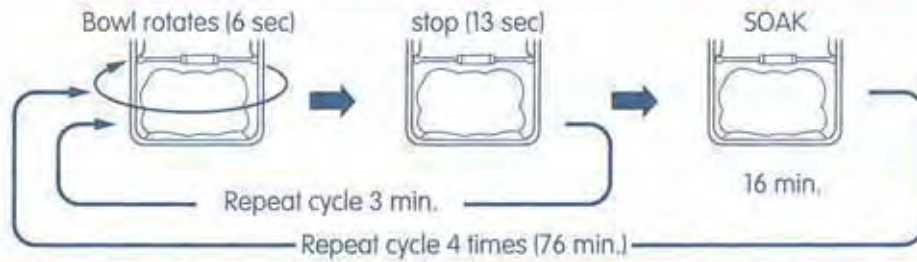
- Blankets with "Hand Washing" label
- Material Types : Acrylic, tufted and woven blankets, which are made of acrylic and polyester (double-sized blanket : 180 cm or less in width x 230 cm or less in length, weight: 4.7 kg or less per piece)
- When washing a "machine-washable electric blanket", observe its instruction manual.

■ Other machine-washable items

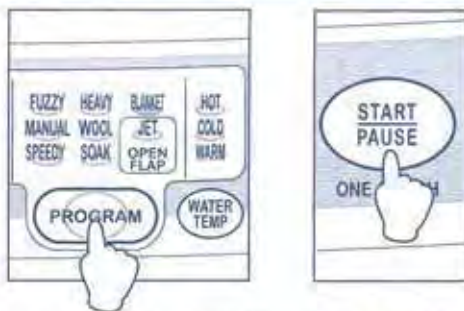
- Bed pad with "Hand Washing" label
- Cushion with "Hand Washing" label (which is stuffed with synthetic fiber, such as polyester).



Washing cycle of BLANKET course



3 Select the (BLANKET) Course and press the START/PAUSE button



- Not indicating WASH and RINSE cycle. (Refer to page 33 for details)
- The remaining wash time starts appearing on the control panel after it comes to 99 min.
- Be sure to close the lid completely. (Opening the lid causes the washbowl to stop rotating and indication "E3" will start blinking.)
- During washing cycle, make sure that blanket and bedspread is completely soak into the water.
- Water temperature remains unchanged for WASH and RINSE cycle.

Leave the rest of the washing process to the machine until the buzzer beeps.

How to put in blanket

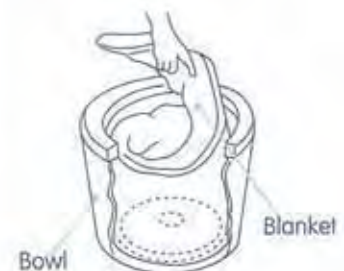
1 Put in the corner first, then the rest of the blanket slowly.



2 Put it in slowly.



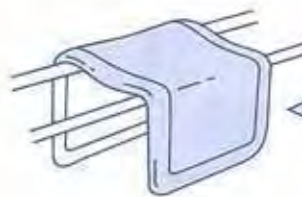
3 Taking it out



- Pull from the top of the blanket slowly.

4 When the washing finished

Hang dry at well ventilated places.



For faster drying, hang blanket as shown in left figure.

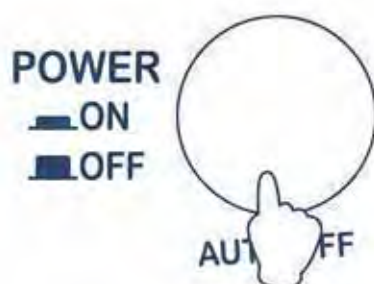
- During drying process, brush the hair of the blanket following one direction when it is still wet for grooming purpose.

User-customized washing course for home use ("JET" course)

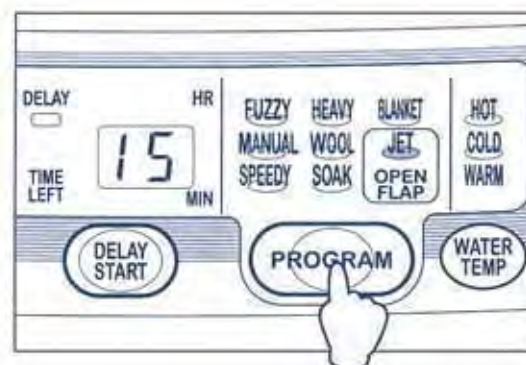


- A wide variety of washing courses, including "wash and rinse and JET course" to keep laundry from becoming wrinkled, can be made available according to your needs.
- Once you programmed your own washing course into the built-in memory, you can start the course anytime with the touch of the ONE TOUCH (START/PAUSE) button.
(For details of the washing processes of each course; 33)

1 Turn the power switch ON



2 Select the [JET] course

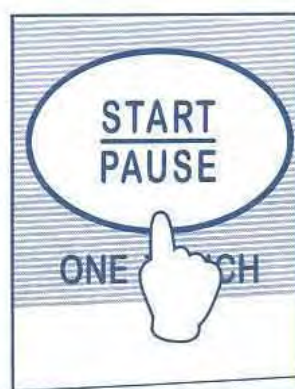


How to use PROGRAM (JET COURSE), WASH, RINSE and WATER LEVEL (Different setting is made accordingly every time you press each button)

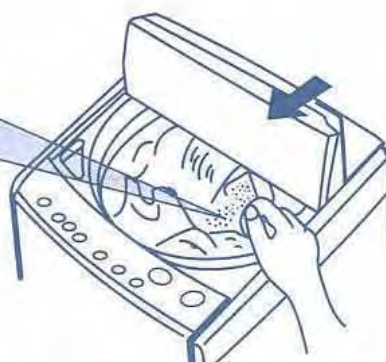
PROGRAM (JET COURSE)	WASH	RINSE	WATER LEVEL

- Each setting enclosed in rectangle box is factory-adjusted setting (default setting) prior to shipment.

3 Press the **START/PAUSE** button and put the detergent and close the lid.

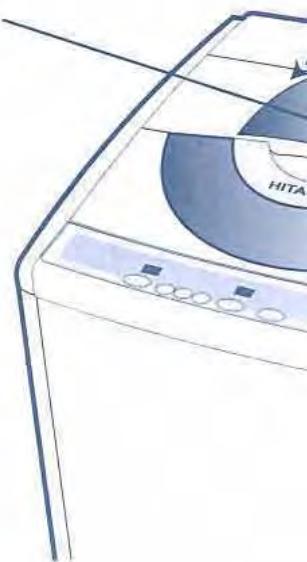


To ensure that the detergent dissolves well in the water, place the detergent in the area where the feed water falls.



4 Open the Air Jet lid




Air JET lid



Leave the rest of the washing process. The buzzer beeps.

(Example of manual course setting)

In cases such as:	Course	But
<ul style="list-style-type: none"> When it is not desirable to spin clothes in order to avoid wrinkles. When you use the used rinsing water for the next washing process: 	Washing → Rinsing (When rinsing is completed, washer will stop.)	15 MIN WASH Washer stop remains <ul style="list-style-type: none"> For drain
<ul style="list-style-type: none"> If you wish to wash laundry with your own setting for complete washing to especially meet your needs for home use: 	Washing → Rinsing → Spinning	18 MIN WASH

FUZZY (3 STEP WASH)	<div> <div>90 L</div> <div>  <div>(12 levels Automatic setting)</div> </div> <div>32 L</div> </div>	<div> <div>28 min.</div> <div>18 min.</div> <div>15 min.</div> <div>10 min.</div> <div>5 min.</div> </div>
MANUAL Each setting value enclosed by parentheses is designed to illuminate first whenever you turn on the washer if you have already programmed it into the builtin memory.	Initial Setting 82L (90L ~ 32L) (12 levels)	Initial Setting 18 min (28 min, 18 min, 10 min, 5 min)
SPEEDY (3 STEP WASH)	64L (90L ~ 32L) (12 levels)	10 min (28 min, 18 min, 10 min, 5 min)
HEAVY (3 STEP WASH)	68L (68L ~ 32L) (7 levels)	18 min (28 min, 18 min, 10 min, 5 min)
WOOL	38L (52L ~ 32L) (4 levels)	10 min (Fixed)
JET (3 STEP WASH)	<div> <div>90 L</div> <div>  <div>(12 levels Automatic setting)</div> </div> <div>32 L</div> </div>	<div> <div>28 min.</div> <div>18 min.</div> <div>15 min.</div> <div>10 min.</div> <div>5 min.</div> </div>
SOAK	<div> <div>90 L</div> <div>  <div>(12 levels Automatic setting)</div> </div> <div>32 L</div> </div>	<div> <div>110 min.</div> <div>103 min.</div> </div>
BLANKET	90L (90L ~ 32L) (12 levels)	76 min (Fixed)

<div> <div>9 min.</div> <div>6 min.</div> <div>4 min.</div> </div> <div>(3 levels)</div>	<div>64 min.</div> <div>70 min. ~ 41 min.</div>
<div>Initial Setting</div> <div>9 min.</div> <div>(9min, 6 min, 3 min, 1min)</div>	<div>74 min.</div> <div>76 min. ~ 28 min.</div>
<div>3 min.</div> <div>(9min, 6 min, 3 min, 1min)</div>	<div>42 min.</div> <div>76 min. ~ 28 min.</div>
<div>6 min.</div> <div>(9min, 6 min, 3 min, 1min)</div>	<div>68 min.</div> <div>68 min. ~ 24 min.</div>
<div>1 min.</div> <div>(Fixed)</div>	<div>34 min.</div>
<div>Initial JET Setting</div> <div>15 min.</div> <div>(45min, 25 min, 15 min)</div>	<div>55 min.</div> <div>85 min. ~ 55 min.</div>
<div>Spin in timed cycle only. Spin for 6 min. In timed cycle.</div>	<div>146 min.</div> <div>154 min. ~ 127 min.</div>
<div>6 min.</div> <div>(9min, 6 min, 3 min, 1min)</div>	<div>114 min.</div>

- the rinsing per
- The required calculated on t takes 2 to 3 m
 - When SOAK c 3 min. to fully c
 - SOAK course washing.

CAUTION

- Higher than n in greater wat down the wat

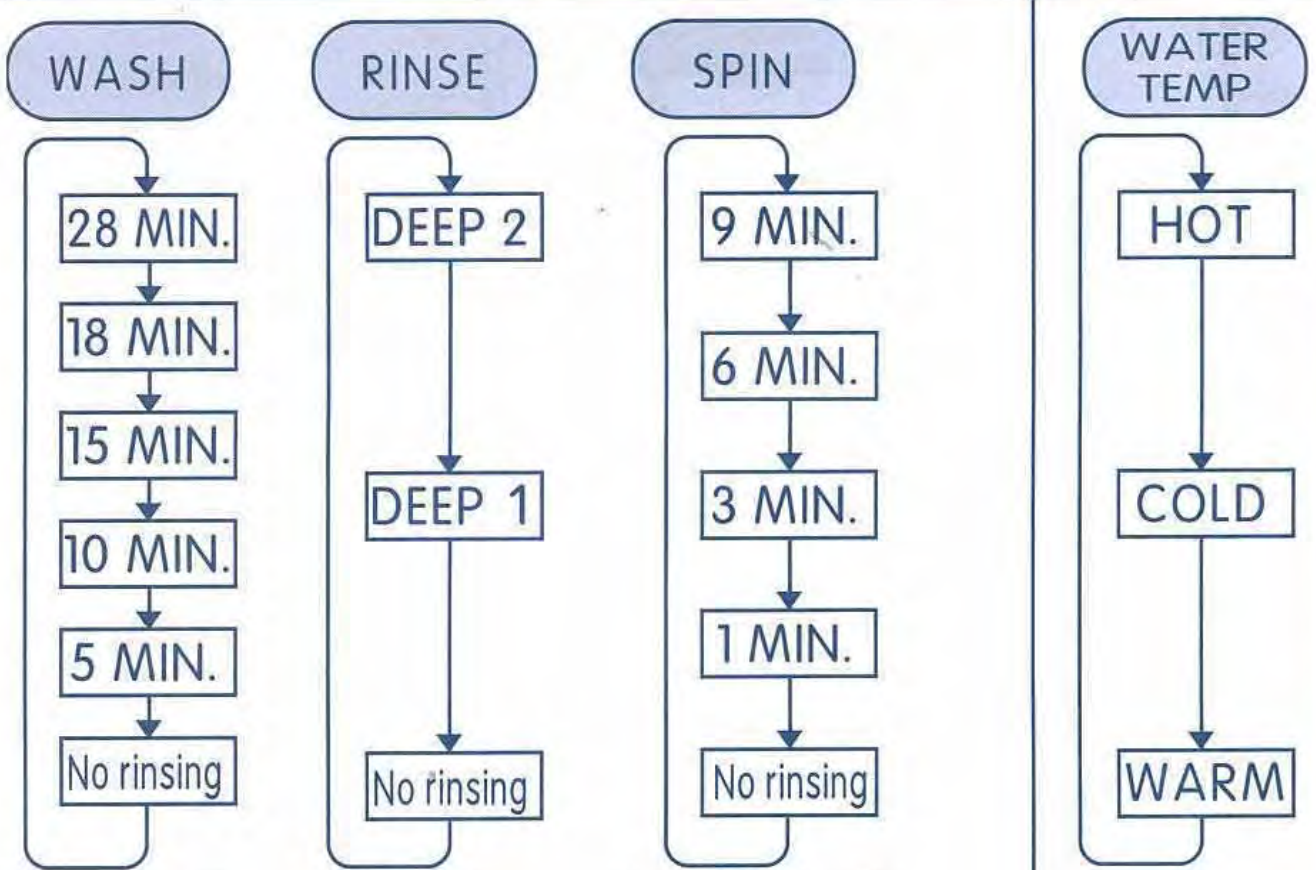
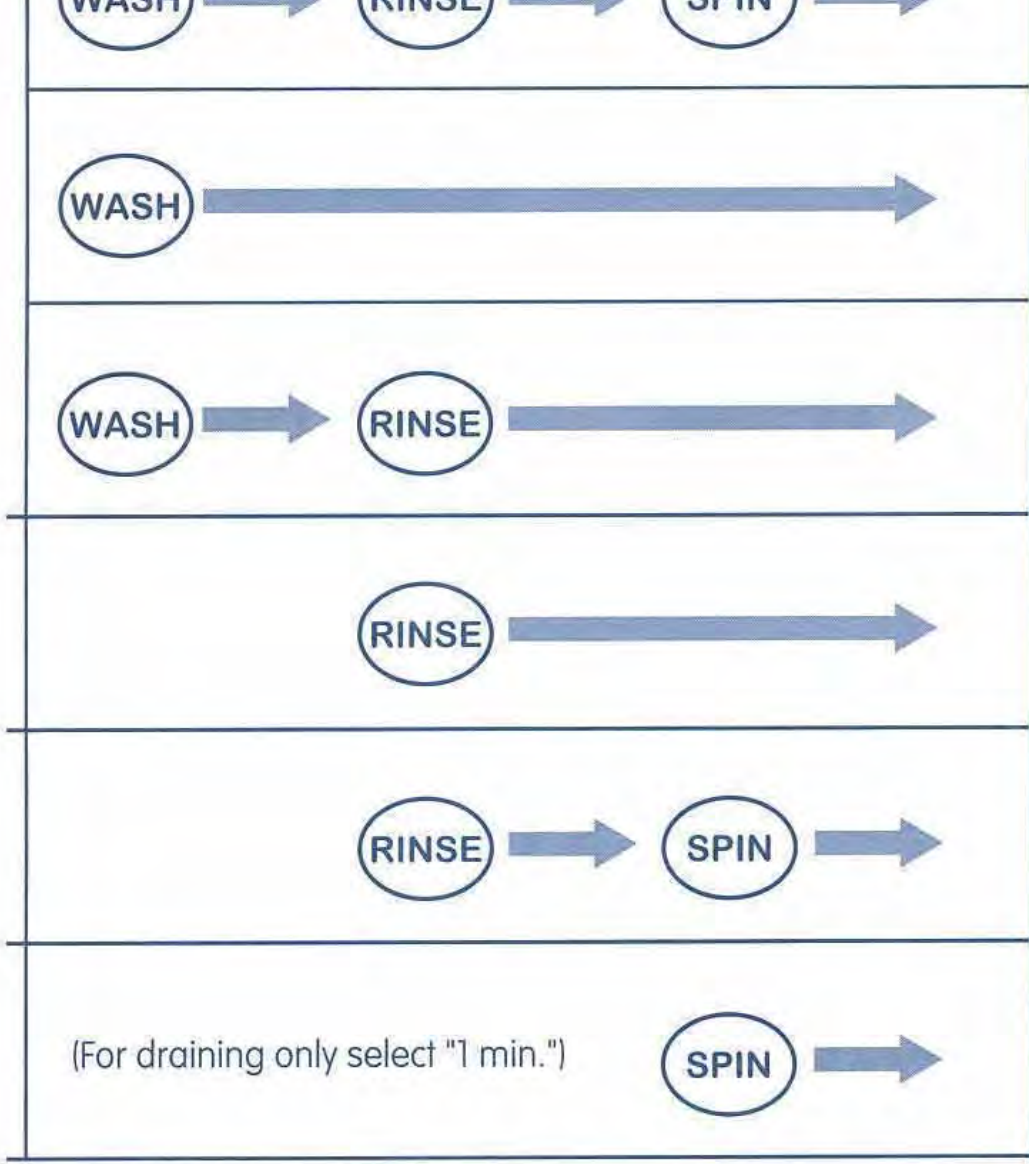
Changing

- Wash course c pressed.
- Be sure to tu changing a w

When washing liquid is to be used twice. 🖐 41	Washing only
When it is not desirable to spin clothes in order to avoid wrinkles.	Washing → Rinsing
When it is desirable to rinse clothes which have already been washes.	Rinsing only
When it is desirable to rinse and spin clothes which have already been washes. 🖐 41	Rinsing → Spinning
When it is desirable to drain water from the bowl or spin clothes before drying.	Drainage or spinning only

POWER
 ON
 OFF





CAUTION

- In case there is no detergent, the machine will not fill. (When...)

• Every time each button is pressed, a different setting can be made.

in.

POWER

ON

OFF



DELAY

HR

TIME
LEFT

12

MIN

DELAY
START



12 hours later

3 hours later

No set up

- Select finishing time by pressing the delay start button.

FUZZY HEAVY
MANUAL WOOD
SPEEDY SOAP

PROGRAM

- Pulsator rotates to be used will be
- All other indicators

4

Put the detergent in and close the lid.

Hold the bulge part at the edge of the detergent dispenser and let it all forward to fill in powdered detergent.

(Dispenser in released position)

- For concentrated powdered detergent use only.
- Put the dispenser back in position after timed washing finisheds.
- The washing process commences in accordance with the preset finish in time.
- When detergent dispenser falls 45

CAUTION

- Make sure that the detergent dispenser is dry, otherwise, detergent will stick on the surface.

CAUTION

- The timer operation will be cancelled when electricity is cut off.
- The actual washing time varies according to different types and quantities of laundry and it may differs from the preset washing time slightly.
- To prevent wrinkles, take out and hang dry laundry as soon as washing finishes.

In the follow cases

- To verify the timer setup : Keep pressing the delay start button to check progress and
- To cancel the timer washing process : Turn the power off.
- When water injection is slow (approximately below 10L/minute) or detergent re detergent in white handkerchief and put it in the middle of the basket. Make sure de

Load Size and Detergent

● Maximum mass of dry cloth 9.0 kg.

Load size		Water level	Ind. of detergent qty. (rough measure)	Compact type (20 grams or 25 milliliters for 30 liters of water)		Conventional type (40 grams or 40 milliliters for 30liters of water)	Powder Detergent (natural oils and fats) (40 grams or 30 liters of water)
				Powder	Liquid	Powder (Liquid)	
9 kg	XT'A LARGE	90L	1.7 spoonful guantity	60 g	75mL	120g (120mL)	120g
7		86L	1.6 spoonful guantity	57g	72mL	115g (115mL)	115g
6		82L	1.5 spoonful guantity	54g	68mL	109g (109mL)	109g
5	LARGE	76L	1.4 spoonful guantity	51g	63mL	101g (101mL)	101g
4		72L	1.4 spoonful guantity	48g	60mL	96g (96mL)	96g
3		68L	1.3 spoonful guantity	45g	57mL	91g (91mL)	91g
2	MEDIUM	64L	1.2 spoonful guantity	43g	53mL	85g (85mL)	85g
1		59L	1.1 spoonful guantity	39g	49mL	79g (79mL)	79g
		52L	1.0 spoonful guantity	35g	43mL	69g (69mL)	69g
	SMALL	45L	0.9 spoonful guantity	30g	38mL	60g (60mL)	60g
		38L	0.7 spoonful guantity	25g	32mL	51g (51mL)	51g
		32L	0.6 spoonful guantity	20g	25mL	40g (40mL)	40g
	XT'A SMALL						

● The detergent quantity (rough measure) indication is determined based on one spoonful of measuring spoon with the max. capacity of about 35g (for such detergent that 20g is enough to wash laundry at 30L water level)

If you are using a different measuring spoon from the said one, use a proper amount of detergent which is suitable for the desired water level, in accordance with the instruction of your detergent.

- For washing lightly stained laundry, amount of detergent which is almost one-half the normal quantity(approx. 50 to 60%) will do.
- Do not use excessive amount of detergent. Otherwise, a poor rinsing performance may result or excessive foams may cause some trouble.

■ Amount of laundry

- Each amount of laundry as shown in the table above may vary according to the type, size and thickness of the laundry to be washed.
- When washing regular clothes, the approximate amount of washing is about 70 to 80 percent of the amount indicated. If the clothes stop moving, it indicates that the load is too large. Adjust the load by looking at how the clothes are moving in the machine.

Using liquid detergent, bleach and softener

How to use liquid detergent and bleach

Liquid detergent

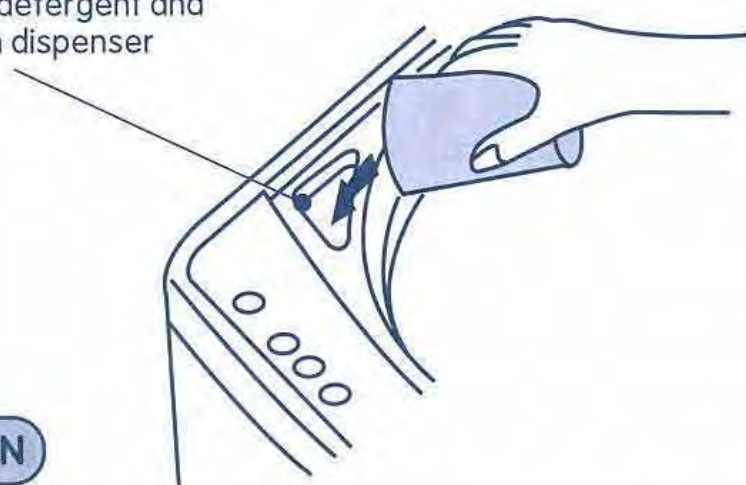
Dilute liquid detergent and gently pour into the dispenser .

- When using washer timer, dilute liquid detergent twice.

Bleach

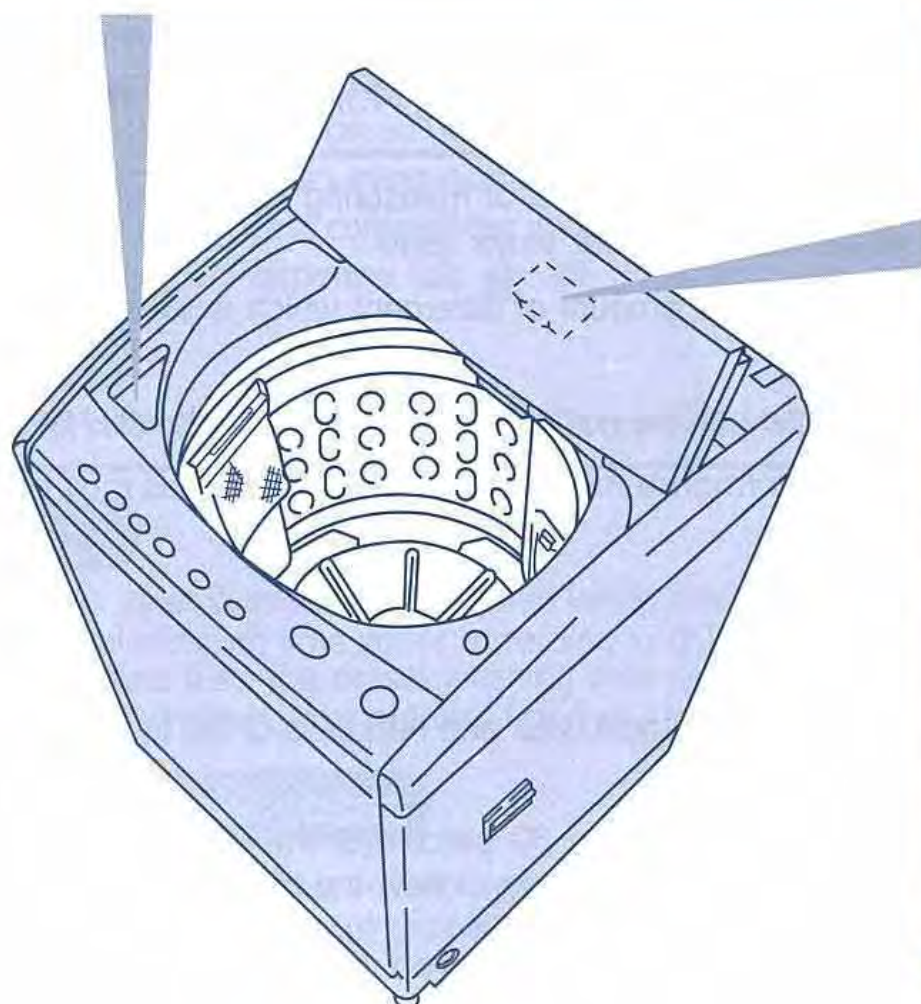
Dilute bleach with water and gently pour into dispenser before washing starts.

Liquid detergent and bleach dispenser



CAUTION

- Follow the indication shown on the liquid detergent and bleach labels for the amount to use and how to use them.
- Do not pour bleach directly onto the items being washed. Doing so may cause discoloring and damage to the clothes.



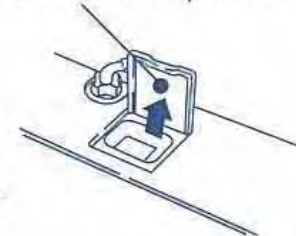
How to use softener

Automatic fabric softener dispenser is for use of concentrated fabric softener only.

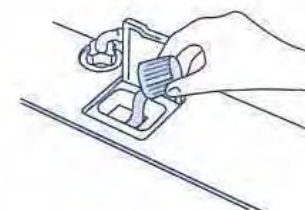
- 1 **Open the automatic fabric softener dispenser lid until it comes to a full stop.**

- Make sure the dispenser is working properly.

Automatic dispenser lid



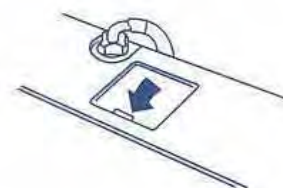
- 2 **Switch power on, select appropriate wash course and press the START button.**



- 3 **Add softener according to water level indicator.**

- 4 **Close dispenser lid.**

- Softener will be automatically injected before last rinse.



(Guidelines on the amount of softener)

Water amount	32L	38L	45L	52L	59L	64L
Amount of softener	7mL	9mL	10mL	12mL	13mL	14mL
Water amount	68L	72L	76L	82L	86L	90L
Amount of softener	15mL	16mL	17mL	18mL	19mL	20mL

- Concentrated type : use 6.6 milliliters of softener for 30 liters of water.

CAUTION

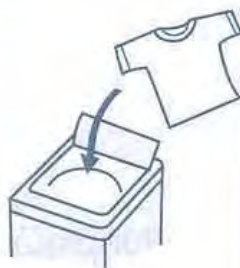
- Do not add too much softener, otherwise, discoloring may occur owing to the leakage of softener from dispenser.
- Use an appropriate amount of detergent. Too much detergent means poorer rinsing add softener performance.
- Do not add softener when unit is filling in water, otherwise, liquid may spill out.
- Maintenance of fabric softener dispenser. ➡ 47

- 2** When the agitation begins, put the powder detergent in and let it rotate for approximately three minutes.



- 3** When the powder detergent is dissolved into the water, turn OFF the power switch and load the washing.

- Be sure to sufficiently soak the laundry in the washing liquid.



- 4** Turn the power switch ON and select the course you want to wash and the water level to start washing.

- The quantity of detergent and water be indicated slightly more than the actual one when pouring water because a small quantity of water has already been in the tub.

- 2** While sufficient water is in the tub, pour the appropriate amount of detergent.

- To prevent scum or residue from forming, dissolve it sufficiently in the water before pouring it into the wash.

Helpful Hints

- When you use powder detergent, it is recommendable to mix it with synthetic detergent. The amount of the powder detergent in volume so as to prevent the detergent scum from being formed.

CAUTION

- The powder detergent is more likely to stay in the laundry than synthetic detergent. Failure to do so may cause discoloration or bad odors.
- If the amount of powder detergent used is excessive or if the powder detergent is not properly dissolved in the water, the residue of the powder detergent which is not properly dissolved may remain in the interior of the wash bowl.

In the following cases, avoid using powder detergent:

- When performing user-preset wash cycle. The powder detergent may solidify in the wash.
- When using "BLANKET", "SOAK" and "WOOL" courses. Soak course may cause the whole

Clothes with
light stains.

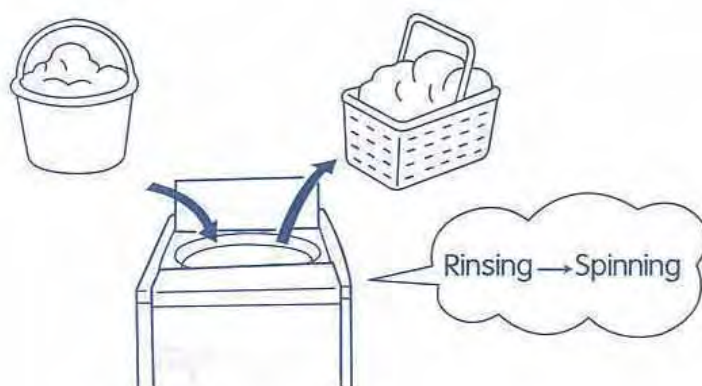
2 Load the second time of washing and select the course you want.

- A water level appropriate to the type of washing is set.



3 Carry out rinsing → spinning cycles for the first load of laundry. 35

- Set a water level appropriate to the type of washing



- **Amount of water**
Use the amount of water on the starch label as a guide.
- **Amount which can be washed**
Maximum 3.0kg.

- 1 Put ready-to-wash clothes in the bowl after washing.
- 2 Power switch to the selected course.
- 3 Select water level mode. 35

WATER LEVEL	WATER LEVEL
52L	10

- 4 Press the START button.

- 5 Pour starch into the bowl while the machine is rotating and spinning.

CAUTION

- Do not machine-wash clothes with starch.

After starching

Please wash washed clothes with starch.

- 1 Select FUZZY mode.
- 2 Select water level and spin mode.

WATER LEVEL	WATER LEVEL
90L	10

- 3 Press the START button.

2 Press **WATER LEVEL** button for at least 3 seconds.

- When restoring the original melody, connect power and press **WATER LEVEL** button for at least 3 seconds.

2 Press **START** button

- When restoring the original melody, connect power and press **START** button for at least 3 seconds.

Child Lock

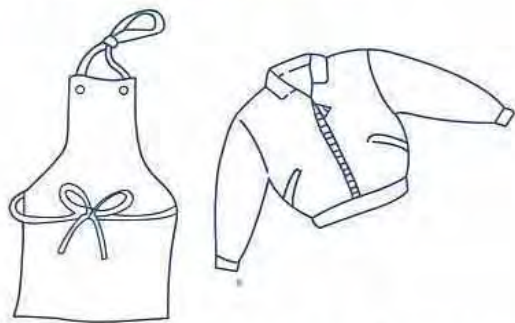
This function has been provided with the washer as a safety switch for those housewives who have children, to prevent them from tampering with the washer.

When you press the power switch first and then "WASH" button for 3 seconds or longer, "ch" appears on the display, indicating tamper-proof mode. If the lid is opened during the washing process, agitation cycle during "Wash" will stop. (At this stage, error indication "E3" appears on the control panel.)

- If you wish to cancel this function, press the "WASH" button once again for 3 seconds or longer. "ch" will disappear, indicating you that the function is disabled.
- If you set this function to active in the "FUZZY" course, on "wash" cycle will be available. In this case, you can turn it on again.

Handy Washing Hints

Before putting any items with loose strings or zippers into the machine, be sure to tie the strings, and to zip up all zippers.



- This aims at preventing damage to the clothes or fasteners.

When you are worried about the tangling of wool garments, put the item inside out.



Remember to wash items like socks, underwear, etc., separately.

Load large items or items which are likely to resurface into the wash bowl first.



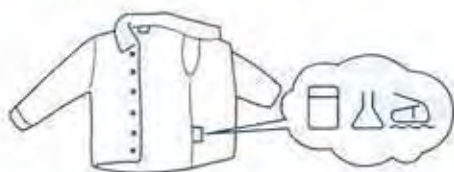
- Be sure to put large-size clothes or materials which are likely to resurface onto the water, such as synthetic textiles, in the bottom of the wash bowl. Doing so improves the movement of the clothes.

If the neck or cuffs of a shirt are heavily soiled, it is recommended to scrub the area in advance with a liquid detergent, or prewash stain remover.



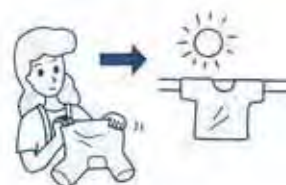
- Using the "SOAK" course enables the stubborn stains on the collar or cuffs of shirts to be washed away effectively.

Wash according to the cleaning instruction tag attached to the clothing.



Before hanging up, stretch clothes after spinning.

- ※ Good finish and reduces creasing of the clothes.



It is advisable to turn clothing inside out to minimize formation of lint.



Hang up synthetic clothes without spinning.

- ※ Good finish and reduces creasing of the clothes.



Precautions during use

Do not push the buttons with a pointed object



- This may result in damage or breakdown.

Do not allow flames near the unit such as kerosene stove or cigarettes.



- This may cause deformation or fire.

Take proper care after the washing process

- Close the water tap.
- Turn the POWER button "OFF" at the wall power outlet, if you will not be using the machine for a long period of time.
- ※ To prevent water leakage, fire, electric shocks, etc.

If the wash bowl does not stop within 15 seconds from opening the lid during the spin cycle, immediately stop using the machine.

- Request repair. Failure to do so may result in injury.

Care and Maintenance

After using the washer, perform the normal maintenance for it, taking the following procedures.

Maintenance of the wash bowl (to ensure clean washing)

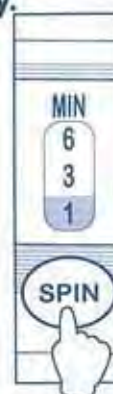
Using the washing machine for an extended period may produce a blackish soap scum in the wash bowl, which may stain the clothes. Make sure to wash the wash bowl in the procedures set below approximately once every two months.

1 Select SOAK course. ☞ 28



3 Put 250g (About one bottle) of bleach oxide which is generally available into the wash bowl.

4 Set spin cycle at "1 min." when cycle stops and spinning will start instantly. ☞ 35



2 Set water level at (90L) and press the START button.

- After filling up with water, keep pressing the water level button when the machine starts stirring until water supply stop.



REQUESTS

- Please read the instructions of the bleaching agent to be used before use.
- Warm water of approximately 40°C will increase the efficiency of cleaning.

Rusting Precautions

Stainless steel is usually rust-proof except under the following situations.

- ① If iron products which rust easily such as hair pins and pins remain in contact with the bowl they may cause rust.
- ② If water containing red rust enters the bowl and red rust adheres to the bowl. It will mark the clothing.

If you notice rust, apply a commercial cream cleanser to a sponge or cloth to remove it. (For details refer to the cleanser instruction.)

- Do not use a metal scrubbing brush because it may damage the bowl.

Observing the following will prevent rust from occurring.

- Do not leave water in the bowl for a long time.
- Do not leave a chlorine type bleaching agent in the bowl for a long time



Commercial cream cleanser is most suitable for cleaning.

Care and Maintenance (Cont.)

Cleaning the detergent dispenser

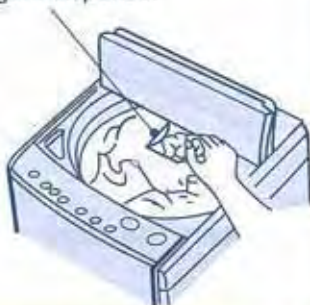
When detergent is adhering to the detergent dispenser, open the tray and wipe it with a soft cloth.

- When the level of adhesion is severe, wipe it off with a cloth while applying water with a hose.

Detergent dispenser

CAUTION

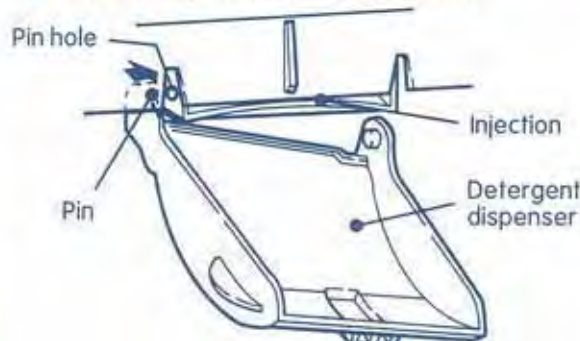
- Do not apply excessive force when it is opened. The dispenser may become detached.



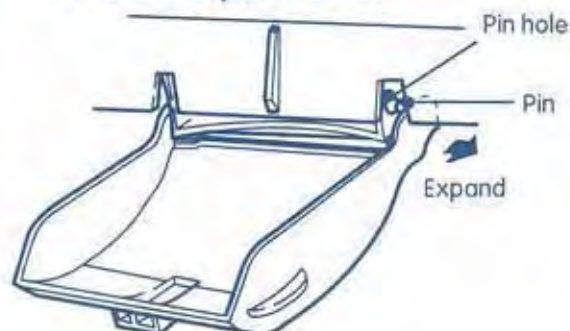
When detergent dispenser detached from the unit.

Follow instructions below for reattachment.

- Fit the left pin of detergent dispenser into the pin hole of the inlet



- Insert the pin into the pin hole while expanding the right-hand side where the pin is to fit.



REQUESTS

- When the detergent injection tray is not used, make sure return it to the original (closed) position.

When there is a fear of freezing

- Close the water taps and remove the water supply hoses.

- Hold the water supply hoses as shown in the drawing so that it does not sag.



- Set the POWER switch to "ON" and the WATER TEMP to warm.

- Press START button and operate the washing machine for 30 seconds.

- Water which remains in the water supply is removed.



- Press START/PAUSE button to stop the operation.

- Lower the drain hose and select manual spin mode.

- Press START button and operate for 30 seconds. 35

If frozen

- Remove the water supply hose, and immerse it in hot water at approx. 40°C.

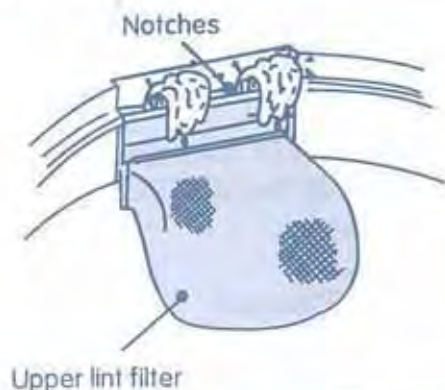
- Pour approx. 2 liters of hot water at approx. 40°C, into the bowl and let it stand for 10 minutes.

- Connect the water supply hose to the water tap, and confirm that the washing machine performs the supply and drainage of water.

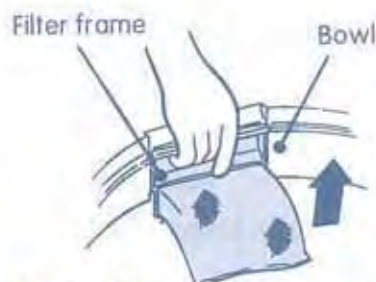
Cleaning the upper lint filter.

(Be sure to clean it each time you finish using the washer.)

Overflowing of washing water from the notches of the upper lint filter is a sign to inform you that the filter's net is fully clogged with debris.



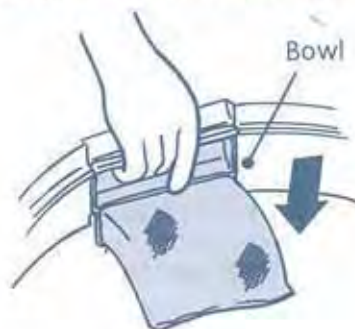
1 Remove the filter frame.



2 Turn the filter net inside out and wipe off the lint in the water.



3 Firmly insert the filter frame.



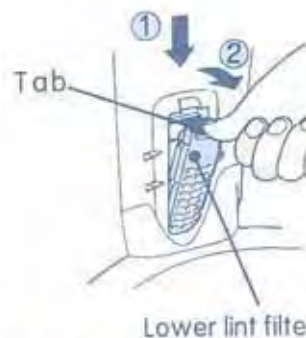
CAUTION

- Lint filters are consumable items. When you find a tear in the net, please purchase a new one at a sales outlet.

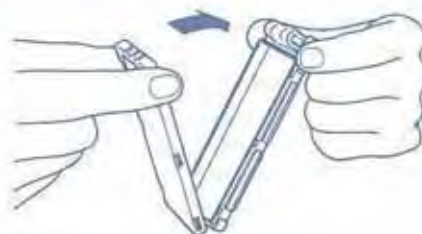
Cleaning the lower lint filter

(Be sure to clean it each time you finish using the washer.)

1 While depressing the tab, lean the filter frame toward you and remove it.



2 Open the filter and wipe off the lint.



3 Close the filter.

4 Attach the lower lint filter firmly to the bowl as illustrated.



CAUTION

- When you take away the lower lint filter, take care not to drop hair pin, coin, etc. into the grooves or openings of the washbowl.
- Do not operate the washer with the lower lint filter removed. Otherwise, damage to the laundry may result.

REQUESTS

- The lower lint filter is a consumable item.
- When the filter is damaged or lost, please purchase a new one at the nearest distributor.

Cleaning the softener dispenser

(For concentrated type only)

When residue remains in the dispenser.

- 1 Pour hot water of about 50°C into the dispenser and leave it for about 5-10 minutes.**



- 2 Remove residue using a toothbrush.**

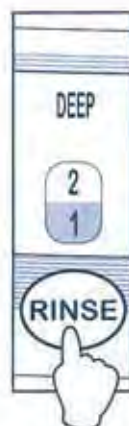
- Do not use your finger to clean the dispenser.



- 3 Connect power, set RINSE once and press the START button.** 35

After drain-spin, switch power off after water fill for about 30 seconds.

- When filling in water for rinsing purpose, softener dispenser works automatically and drain out the hot water inside.



- 4 Connect power, set SPIN cycle and run for 1 minute.**

- Conduct drain-spin cycles.

35



Note

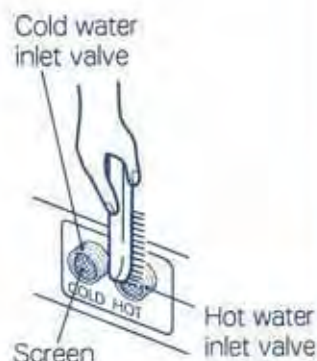
Do not supply water during cleaning because it may overflow and wet the floor.

Cleaning the water inlet valve

If dirt has accumulated, water flow will be impeded.

- 1 Close the water tap and disconnect the water supply hose.**

- 2 Remove any lint or dirt on the screen of the water inlet valves. (Use a toothbrush or similar.)**



CAUTION

- Be sure to return the screen to the original position.

Cleaning the cabinet

Wipe stains from the cabinet and the control panel with a soft cloth.



CAUTION

When performing maintenance, do not apply water directly to any unit section.

- This may cause a short or electric shock.





CAUTION

- Do not wipe with cloth wet with benzene, thinner, cleanser, alkali detergent, weak alkali detergent or wax, or scrub it with a scrub brush.
- Follow the instructions when using a rag made of a synthetic material.
- Wipe detergent off immediately when it adheres to the plastic part of the washing machine lid. Leaving it may cause damage to the washing machine.

Alarm Mode Indicators

Before requesting repair, check the following points one more time.

- Abnormality alarm : When the following cases occur, you will be alert by flashes of indicators and sound of buzzer.

Symptoms	Indicator flashes	Check items	Restart
Not running		<ul style="list-style-type: none"> Check if electricity is cut off? Check if fuse of circuit break is blown? Check if power cord is properly plugged? 	<ul style="list-style-type: none"> Make sure power is on. Make sure the power cord is properly plugged.
Not filling in water	 (Not filled with water after 30 minutes.)	<ul style="list-style-type: none"> Is the water tap closed? Is city water frozen or water supply stopped? Does dust clog the screen in the water supply inlet? 	<ul style="list-style-type: none"> Press START/PAUSE button and eliminate the cause of the trouble.
Not draining	 (Drain isn't completed with in 5 minutes.)	<ul style="list-style-type: none"> Is the drain hose crushed? Is the remaining water in the built-in drain hose frozen? 	
Not spinning		<ul style="list-style-type: none"> Is the lid open? 	<ul style="list-style-type: none"> Close the lid.
		<ul style="list-style-type: none"> Are clothes placed to one side? 	<ul style="list-style-type: none"> Evenly distribute the load and close the lid.

- If warning signs to tell you some failure or trouble, such as "F0", "F9" and "EF", are generated, immediately stop operating the washer and contact an authorized service dealer or a service agent for further inspection and or repair.

General Information

Phenomenon	Causes
<ul style="list-style-type: none"> When the washing machine is used for the first time, water may flow out of the drain hose. 	<ul style="list-style-type: none"> This is the water which remains after the performance test is conducted at factory.
<ul style="list-style-type: none"> When the water supply hose is set and the water tap is opened, a slight amount of water may come out of water supply inlet. 	<ul style="list-style-type: none"> It takes a while to close the special water hammer noise reducing valve assembly.
<ul style="list-style-type: none"> The remaining time increases or decreases. 	<ul style="list-style-type: none"> The remaining time is corrected depending on the time of water supply and drainage.
<ul style="list-style-type: none"> Water is supplied during washing. 	<ul style="list-style-type: none"> When the water level decreases during washing, water is automatically supplied.
<ul style="list-style-type: none"> When the reserved operation is in progress, the operation does not come to an end even after the preset time elapsed. 	<ul style="list-style-type: none"> If amount of washing water is in a short supply, the washer may continue functioning even after the preset time elapsed.
<ul style="list-style-type: none"> Spinning stops and water is supplied at the time of spinning before rinsing. 	<ul style="list-style-type: none"> The safety switch has functioned because the clothes have moved to one side.
<ul style="list-style-type: none"> Spinning stops during last spinning cycle and reverse back to rinse with water filling in 	<ul style="list-style-type: none"> This takes place when the safety switch is activated as a result of an uneven distribution of laundry. When water fill in and pulsator rotates, laundry can be balanced by the motion and spin cycle will resume.
<ul style="list-style-type: none"> Spinning cycle takes place intermittently. 	<ul style="list-style-type: none"> The number of spinning rotations is controlled by the rotation sensor in order to perform an effective spin-drying operation.
<ul style="list-style-type: none"> When the bowl is moved by hand, a splashing sound can be heard. 	<ul style="list-style-type: none"> This is the sound of water in the fluid balancer that eliminates vibration during spinning.
<ul style="list-style-type: none"> When the "FUZZY" course is in operation, spinning rinse cycle with water injection is not performed. 	<ul style="list-style-type: none"> The safety switch has been activated because the load is off-balance in the bowl.
<ul style="list-style-type: none"> Water not coming out from upper lint filter. 	<ul style="list-style-type: none"> Rotation speed is slow in WOOL course, as a result, water is not coming out from the lint filter. It also happens when water is at (40L).

Automatic power OFF

- When the operation finishes, power is automatically turned, off.
- Power is automatically cut off if the following situation remain for over an hour.
 - ① Pause mode.
 - ② Lid is left opened during spin cycle.
 - ③ Abnormal situations as described on page 49.
- When START button is not pressed 5 minutes after machine is being turned on, power is automatically cut off.

Trouble Shooting Guide

If there is a problem, please follow the instructions in the "Trouble Shooting Guide" carefully and check the washer before requesting repair service.

If there is still a problem, contact an authorized service dealer or a service agent.

Do not try to repair the washer by yourself.

Problem	What to check
Washer does not start	<ul style="list-style-type: none">● Check the fuses circuit breaker of the household electrical supply.● Make sure the power cord is firmly plugged in.
Water does not fill or enters slowly	<ul style="list-style-type: none">● Is the water tap closed?● Is the water pipe frozen or has the water supply been stopped?● Is dirt blocking the screen in the water inlet?
Water does not drain out	<ul style="list-style-type: none">● Make sure the drain hose is not kinked or pinched.
Washer does not spin	<ul style="list-style-type: none">● Is the load off-balance?● Is the water able to drain?● Is the lid open?

- The washing machine bottom must not be obstructed by carpeting when the washing machine is installed on a carpet floor.

Safety check

If any of these (or other) unusual conditions occur, immediately unplug the power cord to prevent accidents. Contact an authorized service dealer or a service agent for further inspection and/or repair.

- Even if timer is set ON, the machine will not operate.
- Cracks in the power cord can be seen.
- Unusual noise or vibration during operation.
- Stop of bowl rotation is taking much longer than normal.
- Water leakage detected at or around the tub, hose, joint, etc.
- There is a burning smell.
- An electric shock (tingling or strong) is felt when the machine is touched.
- Never attempt to make repairs by yourself. This could be dangerous.

Even if the machine operates without problems, it is advisable to have it inspected by an authorized service dealer or a service agent after four to five years. This will assure safe and reliable operation.

- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid hazard.



Specifications

Model	SF-P90CJ
Type	Fully automatic washer
Electrical ratings	See the rating plate attached to the rear of the washer
Standard amount of water	Approx. 90L (high Water Level)
Standard amount of water used	Approx. 180L (Fuzzy Cycle)
Washing system	Automatic reverse pulsator type
Water tap pressure	Cold water : 30~800kPa (0.3~8kgf/cm ²) Hot water : 30~500kPa (0.3~5kgf/cm ²)
Outer dimension	625 x 677 x 947 (w x D x H) mm
Weight	45kg

NOTE: Specifications are subject to change without notice for reasons of product improvement.

HITACHI

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