

6. FUNCTIONS OF THE CONTROL PANEL

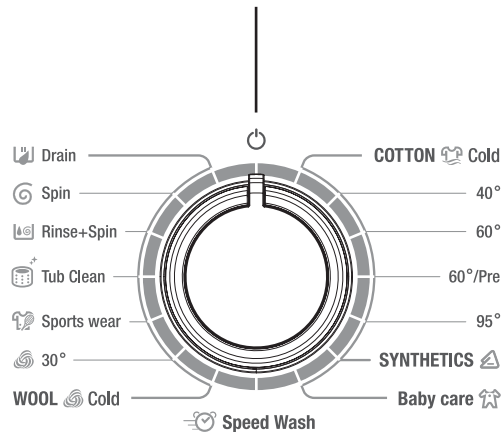
Program selector

For switching the washing machine on and off and for selecting the program.

Can be rotated in both direction.

Even if the program selector rotates while the program is running, the program is not changed (except for off ).

(All program is electronically controlled by PCB)



Spin selector

You can select the spin programs (Spin 400rpm, 600rpm, 800rpm, 1000rpm) by pressing the Program selector.

400rpm of spin velocity is selected automatically with WOOL/WOOL 30°C program in order to protect damage on laundry.

800rpm of spin velocity is selected automatically with COTTON / SYNTHETIC / Baby care / Speed Wash / Tub Clean / Sportswear / Spin / Rinse+Spin programs.

*Warning : If value of unbalance is extremely high, spin speed can't reached that r.p.m of selected by spin selector.

Indicator light

The respective indicator lights up, when the required program segment runs.

Time delay

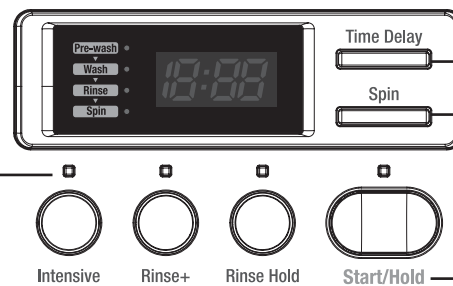
To pre-engage time for washing.

As the button is pressed, the delayed time is repeated as following;

2hours → 3hours → 4hours → ...

→ 10hours → 11hours → max 12hours

This option is enabled with COTTON, SYNTHETIC, Speed Wash, Intensive, Sports wear, Rinse+Spin and Baby care programs.



Button for options

(in addition to the program if required)

Intensive wash Extended washing time.

Rinse + Extra rinse cycle.

Rinse Hold No final spin cycle

- The indicator lamp of the buttons lights up if options are active.
- Canceling options : Press button again.

Start/Hold button

For starting the washing cycle.

(program must have been selected)

Note

The washing time may vary by the amount of laundry, water pressure, water temperature and other washing conditions. If an unbalanced load is detected or if subs removing program operate, the washing time maybe extended. (Maximum increasing time is about 1 hour.)

By turning right the Program Selector, the program is selected in order of

COTTON COLD → COTTON 40°C → COTTON 60°C → COTTON 60°C/Pre → COTTON 95°C → SYNTHETIC → Baby care → Speed Wash → Wool Cold → Wool 30°C → Sports wear → Tub Clean → Rinse+Spin → Spin → Drain → OFF → COTTON COLD → COTTON 40°C

7. FUNCTIONS OF THE CONTROLLER

■ SEQUENCE CHART

Division		Progress Time	Cotton								
			Cold	40℃		60℃		60℃		PRE95℃	
			small	small	low	small	low	small	low	small	low
PREWASH	Sensing	20sec.									
	Water Supply	2min.						■	■		
	Pre Wash	10min.									
		8min.						■	■		
	drain	1min.						■	■		
	B-Spin	2min.						■	■		
	Middle Spin	3min.						■	■		
WASH	Sensing	20sec.	■	■	■	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■	■	■	■
	Wash 1 (Heating)	70min.									■
		60min.								■	■
		35min.					■		■	■	■
		30min.				■	■	■	■	■	■
		20min.			■	■	■	■	■	■	■
		15min.	■	■	■	■	■	■	■	■	■
	Wash 2	83min.									
		33min.									
	23min.	■	■	■	■	■	■	■	■	■	
RINSE	Drain	1min.	■	■	■	■	■	■	■	■	■
	B-Spin	2min.	■	■	■	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■	■	■	■
	water supply	2min.	■	■	■	■	■	■	■	■	■
	Rinse 1	3min.	■	■	■	■	■	■	■	■	■
	drain	1min.	■	■	■	■	■	■	■	■	■
	B-Spin	2min.	■	■	■	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■	■	■	■
	water supply	2min.	■	■	■	■	■	■	■	■	■
	Rinse 2	3min.	■	■	■	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■	■	■	■
	B-Spin	2min.	■	■	■	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■	■	■	■
	water supply	2min.	■	■	■	■	■	■	■	■	■
	Rinse 3	3min.	■	■	■	■	■	■	■	■	■
	drain	1min.	■	■	■	■	■	■	■	■	■
	B-Spin	2min.	■	■	■	■	■	■	■	■	■
SPIN	Main Spin	7min.	■	■	■	■	■	■	■	■	■
		5min.	■	■	■	■	■	■	■	■	■
		3min.	■	■	■	■	■	■	■	■	■
	Untangle	2min.	■	■	■	■	■	■	■	■	■
END	End	10sec.	■	■	■	■	■	■	■	■	■
Total Time			1:13	1:28	1:33	1:43	1:48	1:59	2:04	2:13	2:23
NOTE		• The washing time may vary by the amount of laundry, water pressure, water temperature and other washing conditions. If an unbalanced load is detected or if suds removing program operate, the washing time maybe extended. (Maximum increasing time is about 1hour.) • The default Spin RPM of courses : Cotton course (800), Synthetic course(800), Woolcourse(400).									

Division		Progress Time	Synthetic	Baby Care	Speed Wash	Wool		Sports wear	Tub Clean	Rinse+ Spin	Spin	Drain
			40°C	95°C	Cold	Cold	30°C	Cold	Cold			
			small	low	low	low	low	small	small			
PREWASH	Sensing	20sec.										
	Water Supply	2min.		■								
	Pre Wash	10min.										
		8min.		■								
	Drain	1min.		■								
	B-Spin	2min.		■								
	Middle Spin	3min.		■								
WASH	Sensing	20sec.			1min.							
	Water Supply	2min.	■	■	■	■	■	■	■			
	Wash1 (Heating)	60min.		■								
		25min.		■								
		20min.	■	■								
		15min.	■	■								
		10min.	■	■			■					
	Wash2	33min.										
		28min.										
		23min.	■									
		20min.	■	■		■	■	■	■			
		18min.	■	■	3min.	■	■	■	■			
		13min.	■	■	■	■	■	■	■			
RINSE	Drain	1min.	■	■	■	■	■	■	■	■		
	B-Spin	2min.	■	■	■ 1min.	■	■	■	■	■		
	Middle Spin	4min.	■	■	■ 2min.	■	■	■	■	■		
	Water Supply	2min.	■	■	■ 1min.	■	■	■	■	■		
	Rinse 1	3min.	■	■	■ 1min.	■	■	■	■	■		
	Drain	1min.	■	■	■	■	■	■	■			
	B-Spin	2min.	■	■	■ 1min.	■	■	■	■			
	Middle Spin	4min.	■	■	■ 2min.	■	■	■	■			
	Water Supply	2min.	■	■	■ 1min.	■	■	■	■			
	Rinse 2	3min.	■	■	■ 1min.	■	■	■	■			
	Drain	1min.	■	■								
	B-Spin	2min.	■	■								
	MiddleSpin	4min.	■	■								
	Water Supply	2min.	■	■								
	Rinse 3	3min.	■	■								
SPIN	Drain	1min.	■	■	■	■	■	■	■	■	■	■
	BSpin	2min.	■	■	■ 1min.	■	■	■	■	■	■	
	Main Spin	7min.	■	■		■	■	■	■	■	■	
		5min.	■	■		■	■	■	■	■	■	
		3min.	■	■	■ 2min.	■	■	■	■	■	■	
	Untangle	2min.	■	■	■	■	■	■	■	■	■	■
END	End	10sec.	■	■	■	■	■	■	■	■	■	■
Total Time			1:33	2:26	22	58	1:08	58	58	24	12	3
NOTE												

Division		Progress Time	COTTON			
			IEC standard course 40°C	IEC standard course 60°C		
P r e W a s h	sensing	20sec.				
	Water Supply	2min.				
	Pre Wash	15min.				
		8min.				
	Drain	1min.				
	BSpin	2min.				
	Middle Spin	3min.				
M a i n W a s h	Sensing	20sec.				
	Water Supply	2min.	■	■		
	No Heating	15min.	■	■		
	Wash1 (Heating)	NO heating time	15min.	15min.		
		35min.		35min.		
		30min.	20min.			
		20min.	■			
		15min.				
		10min.	■			
	Wash2		71min.	160min.		
		20min.	■	■		
		15min.				
R i n s e	Drain	1min.	■	■		
	BSpin	2min.	■	■		
	Middle Spin	4min.	■	■		
	Water Supply	2min.	■	■		
	Rinse 1	3min.	■	■		
	Drain	1min.	■	■		
	BSpin	2min.	■	■		
	Middle Spin	4min.	■	■		
	Water Supply	2min.	■	■		
	Rinse 2	3min.	■	■		
	Drain	1min.	■	■		
	BSpin	2min.	■	■		
	Middle Spin	4min.	■	■		
	Water Supply	2min.	■	■		
	Rinse 3	3min.	■	■		
S p i n	Drain	1min.	■	■		
	BSpin	2min.	■	■		
	Main Spin	7min.	17min.	17min.		
		5min.	■	■		
		3min.	■	■		
End	Untangle	2min.	■	■		
	End	10sec.	■	■		
Total Time			2:46	4:30		
NOTE		• Set program at "Cotton 40/60 + tensive+1000rpm" course for test in accordance or in conformity with EN60456 and IEC60456 . This option has longer setting time for washing.				

8. FUNCTION OF THE CONVENIENT SERVICE

■ The test mode of the load movement

You can check the PCB ASS'Y and the condition of each load movement simply.

• The method to test the load movement

- ① Plug the power cord.
- ② Turn the program selector to arbitrary program (except for OFF  position).
(The indicator light of the Start/Hold button is on but not twinkles. If the indicator is twinkles, press the Start/Hold button and turn the program selector to the off.)
- ③ Press the Rinse+ button 3times while press the Intensive button.
- ④ Whenever the Rinse Hold button is pressed, each load movement is occurred as follows;
Door lock close → Hot valve on → Cold valve on → Pre wash valve on → Bubble pump on → Drain pump on

9. TROUBLESHOOTING GUIDE

This washer is equipped with automatic safety function which detects and diagnoses faults at an early stage and copes properly.

When the washer does not operate properly, check the following points.

■ Simply Check Guide

Problem	Cause	Solution
Program dose not start.	Plug is loose or not plugged in.	Insert plug tightly.
	Power failure.	An interrupted program will be resumed when the power return.
	Loading door is not closed.	Check whether laundry is trapped in door. Close the loading door. (a click should be heard)
	Program is not selected.	Select the desired program.
	Start/Hold button is not pressed.	Press the Start/Hold button.
Water dose not enter the washing machine.	Water tap is not turned on.	Turn the water tap on.
	Inlet hose is kinked or folded.	Straighten the inlet hose.
	Filters is blocked in water inlet filter.	Clean the water inlet filter.
Washing machine is not drain.	Drain hose is kinked or clogged.	Straighten and clean the drain hose.
	Pump filter is clogged.	Clean the pump filter.
Washing machine is not spin.	The amount of laundry is too small.	Add the laundry to balance. And repeat the Spin cycle.
	The laundry is unbalanced.	Rearrange the laundry. And repeat the Spin cycle. If articles of heavy clothing (e.g. bath robe) are loaded, washing machine may skip or stop the spin cycle.
Spin result is unsatisfactory.	Drain hose is placed over 1m above the floor.	Place the drain hose under 1m above the floor.
Foam come out of the detergent case.	Too much detergent or unsuitable detergent used.	Repeat the Rinse cycle.
Serious noise and vibration.	Transit bolts are not removed.	Remove the transit bolts.
	Washing machine is installed on uneven floor.	Reinstall washing machine on even floor.
	Washing machine is not leveled.	Adjust the level of washing machine using adjustable legs.

■ DISPLAY ERROR MESSAGE

MESSAGE	ERROR	CAUSE	SOLUTION
IE	WATER INLET ERROR	The water tap is closed.	Open the water tap.
		The filter of the valve inlet is clogged.	Clean the filter of the valve inlet.
		The valve inlet is an inferior product or broke down.	Change the valve inlet.
		The water level sensor (sensor pressure) is an inferior product or broke down.	Change the water level sensor (sensor pressure).
		The drain motor works during water supply.	Change the drain motor.
		The PCB ASS'Y does not check the water level.	Change the PCB ASS'Y.
OE	DRAIN ERROR	The drain hose is kinked or clogged.	Clean and straighten the drain hose.
		The drain motor is an inferior product.	Change the drain motor.
		The valve inlet works during drain.	Change the valve inlet.
		The water level sensor is an inferior product.	Change the water level sensor.
		The PCB ASS'Y does not check the water level.	Change the PCB ASS'Y.
UE	UNBALANCE ERROR	The laundry is concentrated to one side of the drum during spin.	Rearrange the laundry.
LE	DOOR OPEN ERROR	The Start/Hold button is pressed while the door is opened.	Close the door.
		The switch door lock is an inferior product.	Change the switch door lock.
		The PCB ASS'Y does not check the door lock.	Change the PCB ASS'Y.

MESSAGE	ERROR	CAUSE	SOLUTION
E2	OVERFLOW ERROR	The water is supplied continuously due to an inferior valve inlet.	Change the valve inlet.
		The valve inlet is normal, but the water level sensor (sensor pressure) is inferior.	Change the water level sensor (sensor pressure).
		The drain motor dose not work. (The drain motor is an inferior product or broke down.)	Change the drain motor.
E4	LEAKAGE ERROR	Water leaks from the tub or the hose drain.	Check the leak of the tub or the hose drain. Then change the tub or the hose drain.
E7	DIRECTION ERROR	The motor spins into an opposite direction.	Change the PCB ASS'Y or the motor.
		The motor hall IC is an inferior product or broke down.	Change the motor hall IC or the motor.
E8	MOTOR ERROR	The motor is not normally connected.	Check the connector of the motor.
		The motor does not work. (The motor is an inferior product or broke down.)	Change the motor.
E9	SENSOR PRESSURE ERROR	The water level sensor is an inferior product.	Change the water level sensor.
H2	THERMISTOR WASH ERROR	The thermistor wash is an inferior product or broke down.	Change the thermistor wash.
		The thermistor wash is not connected normally.	Check the connector of the thermistor wash.
H4	THERMISTOR WASH OVERHEATING ERROR	The heater worked without the water in the tub.	Check the water level.
		The thermistor wash is an inferior product or broke down.	Change the thermistor wash.
H5	WATER TEMP. ERROR	The water temp. is over 45°C in delicate & wool course. (The thermistor wash is an inferior product or broke down.)	Change the thermistor wash.
H6	HEATER WASH ERROR	The heater wash dose not work. (The water temp. doesn't rise over 2°C during 10min.)	Change the heater wash.
H8	HEATER WASH OVERHEATING ERROR	The heater worked without the water in the tub.	Check the water level and the heater wash.
PFE (E0)	PUMP FILTER ERROR	The drain pump filter is clogged.	Clean the drain pump filter.
		The drain pump does not work during spin.	Change the drain pump.
		The large amount of detergent was used.	Use the proper amount of detergent.
		The drain hose is placed higher than 1m above the floor.	Place the drain hose 1m below the floor.

10. WIRING DIAGRAM

