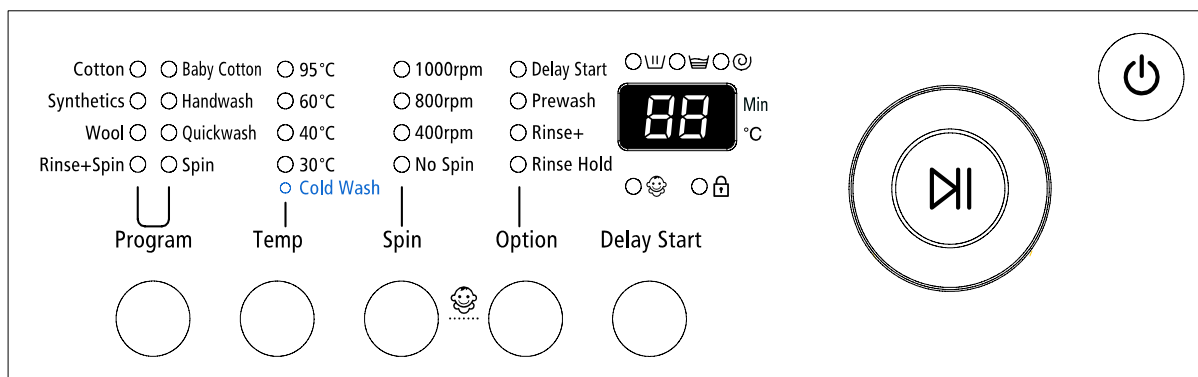


3. PRODUCT SPECIFICATIONS

3-1. OVERVIEW OF THE CONTROL PANEL



1. Display panel

Displays wash cycle and error messages.

During execution of the program, the program indicator blinks.

2. Program Select button

Press the button repeatedly to select one of the six available wash program.

Cotton → Baby Cotton → Synthetics → Handwash → Wool → Quick → Rinse+Spin → Spin

3. Temperature selection button

Press the button repeatedly to cycle through the available water temperature options (cold water, 30°C, 40°C, 60°C and 95°C).

When pressing this button during washing, you can see the selected temperature in the display panel.

4. Spin selection button

Press the button repeatedly to cycle through the available spin speed options.

5. Option button

Press the button repeatedly to cycle through the available partial wash options

Rinse Hold → Rinse+ → Rinse Hold+Rinse+ → Prewash → Prewash+Rinse Hold → Prewash+Rinse+ → Prewash+Rinse Hold+Rinse+

Note: Prewash is only available when washing cotton, synthetic or Baby Cotton.

6. Delay Start selection button

Press this button repeatedly to rotate between the retarded start options available.

(from 3 Hours to 24 Hours, in 1 hour increments)

7. Start/Pause button

Press to pause and restart programs.

8. ⏻ (On/Off) button

Press once to turn the washing machine on, press again to turn the washing machine off.

If the washing machine power is left on for longer than 10 minutes without any buttons being touched, the power automatically turns off.

● What is the "Child Lock" function?

- If you press the "Child Lock" button (Spin+Option button) longer than 2 sec during operation, this function is selected.
- If once this function is selected, no change can be done until the end of laundry.
- Press the "Child Lock" button (Spin+Option button) longer than 2 sec to cancel the function.

3-2. PROGRAMME CHART

(* user option)

PROGRAM	Max load (kg)					Detergent And Additives			Temperature (MAX) °C	Spin Speed (MAX) rpm				Delay start	Cycle Time (min)
	WF- J1462/ J1262/ J1062/ J862	WF- B1462/ B1262/ B1062/ B862	WF- R1262/ R1062/ R862	WF- F1262/ F1062/ F862	WF- S1062/ S862	Pre- wash	Wash	Soft- ener		WF- J1462/ B1462	WF- J1262/ B1262/ R1262/ F1262	WF- J1062/ B1062/ R1062/ F1062/ S1062	WF- J862/ B862/ R862/ F862/ S862		
Cotton	7.0	6.0	5.2	4.5	3.5	*	yes	*	95	1400	1200	1000	800+	*	126
Baby Cotton	7.0	6.0	5.2	4.5	3.5	*	yes	*	60	1400	1200	1000	800+	*	98
Synthetics	3.0	3.0	2.5	2.5	2.0	*	yes	*	60	800	800	800	800	*	73
Wool	2.0	2.0	1.5	1.5	1.0	-	yes	*	40	400	400	400	400	*	42
Handwash	2.0	2.0	1.5	1.5	1.0	-	yes	*	40	400	400	400	400	*	37
Quick	3.0	3.0	2.0	2.0	1.5	-	yes	*	60	1400	1200	1000	800+	*	28

PROGRAM	Type of WASH
Cotton	Averagely or lightly soiled cottons, bed linen, table linen, underwear, towels, shirts, etc.
Baby Cotton	Averagely or lightly soiled baby cottons, bed linen, table linen, underwear, towels, shirts, etc.
Synthetic	Lightly or averagely soiled blouses, shirts, etc. Made of polyester(Diolen, Trevira), polyamide(perlon, Nylon) or similar blends.
Handwash	Very light wash course like hand wash.
Wool	Only machine washable wollens with pure new wool label.
Quick	Lightly soiled cottons or linen blouses, shirts, dark coloured terry cloth, coloured linen articles, jeans, etc.

1. The programme duration data has been measured under the conditions specified in Standard IEC 456.
2. Consumption in individual homes may differ from the values given in the table due to variations in the pressure and temperature of the water supply, the load and the type of laundry.

3-3. MAIN FUNCTION

1) Auto power S/W off function

- After power on, the auto power S/W off function automatically switches power off for you if you do not press selection button for 10 minutes
- After selecting the function, the auto power S/W off function automatically switches power off for you if you do not press start/pause button for 10 minutes
- until 5 minutes past, After finishing the last function, the auto power S/W off function automatically switches power off for you if you do not re-select the course button or manual button

2) Door open function

- Door just can be opened at water level 24.80 KHz over, water temperature 55℃ below, motor off, if power is off door is not opened (only auto-door model)
- If door is open during the operating, all operating is halted, and door error message will be displayed (2-digit panel displays "dE" 4-digit panel displays "door") and error melody will coming out
- Door open error can be cleared by closing the door. the operating keeps going on

3) Rinse hold function

- If rinse hold function selected, the operating is finished , the machine do not drain the water after last rinse

4) No spin function

- If no spin function selected, the operating is finished after last rinse

5) Drain function

- Drain function is over, after pumping out the water for 2 minutes , without motor rotating

6) Pre-washing function

- Pre-washing function can be selected ,when you choice the following mode; cotton, coloreds, synthetics, delicates, baby cotton, baby coloreds, baby delicates, baby stains
- Water level/reverse time is the same with the selected course
- Pre-washing takes about 16 minutes

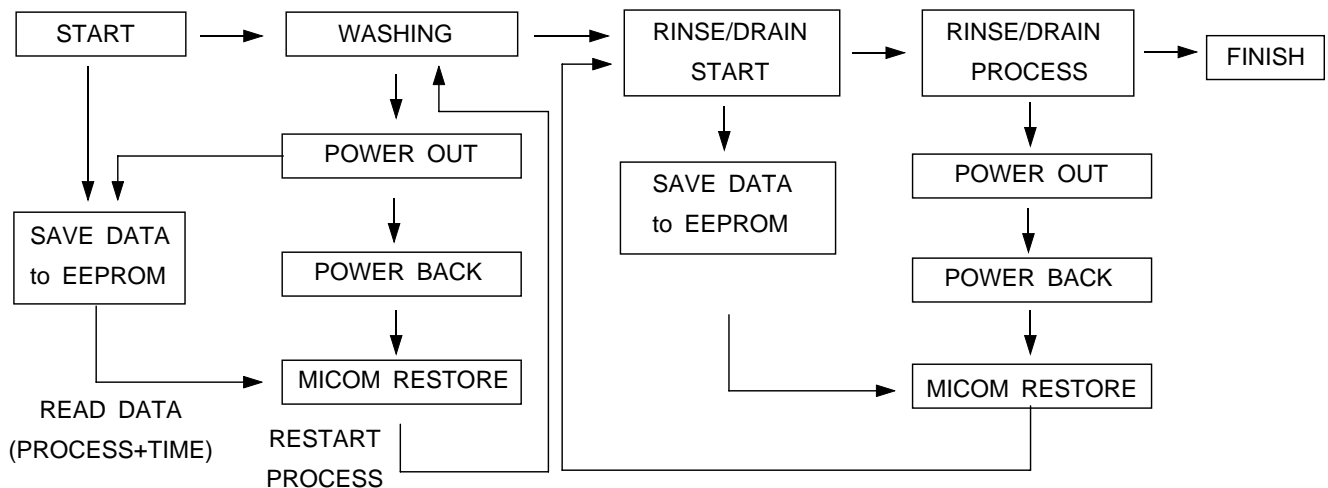
7) Rinse+ function

- This function practises rinse process once more

8) Power-out compensation function

- If power is out on selected process, the process before power out is stored to EEPROM, once power is back the process before power out continues.
- When power is back, washing process starts from the process at the point of the power out, rinse/drain process starts from the initial process.

POWER-OUT COMPENSATION FUNCTION PROCESS



9) Water heater Error function

- ① This function starts working, when the heater works abnormally.
(this function begins sensing the heater 2 minutes later, after the heater operating)
- ② The value of the initial thermistor(A1) is compared with that of the thermistor(A2) in 2 minutes
 $(Y=A2-A1)$
 - For 10 minute late, the variance of temperature(Y) is less than 2°C , "HE2" message is displayed on the panel.
- ③ The value of the initial thermistor(A1) is compared with that of the thermistor(A2) in 11 minutes
 $(Y=A2-A1)$
 - For 1 minute the variance of temperature(Y) increases more than 40°C , "HE1" message is displayed on the panel.
- ④ At this time heater, Error "HE2 (heater do not work), HE(overheated)" is displayed and all working process off
- ⑤ The heater operating continues during heating hours, if washing hour is left over, the residual washing process keeps going without heating.

10) Fuzzy washing function (weight-sensing)

After finishing initial water supply, when the fall of the water level needs supplementary water supply, Sensing function perceives the weight with the supplementary water supply numbers and starts to work. Under the course of Cotton, or Coloureds, if the supplementary water supply numbers become over 2 times the function is going at default condition (high water level), if 1 time that is going at middle level, if 0 below low water level, heating hours and rinse hours depend on the above data.

ECO PRE mode is selected, the process going on at default condition.

	Washing hours		Rinse water level
	Cotton	Coloureds	
High	Default	Default	Default
Middle	Default-20 min	Default-10min	23.80KHZ
Low	Default-30 min	Default-15min	24.10KHZ

※After sensing weight, above hours is decreased from above default hours

11) Bubble - detecting function

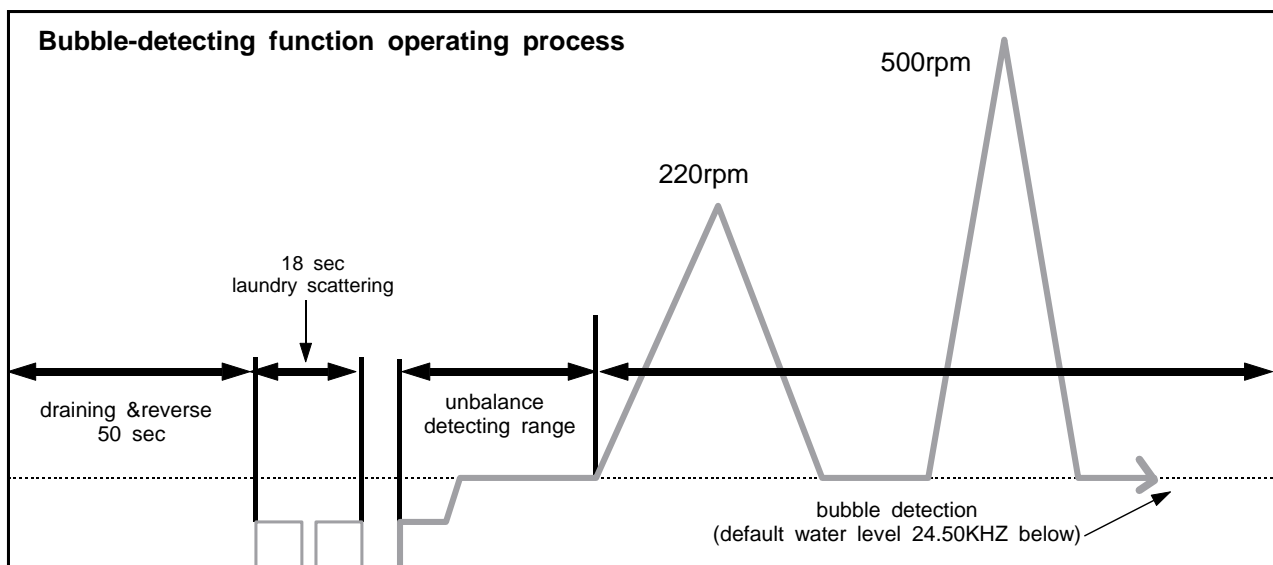
At the each condition of washing&dehydrating , rinse&dehydrating , hydrating, bubble -detecting function works, this function works 5times normally, if the function detects bubbles at 6 times , the bubble-detecting function stops and go on to the next process.

● The bubble-detecting function during washing & dehydrating to rinse & dehydrating

after 2 times instant dehydrating and before main dehydrating, if the water level is under 24.50KHZ, Bubble → Detecting function thinks there are bubbles and add the bubbles-removing rinse, needing hours are above hours and 8 Min 40 sec.

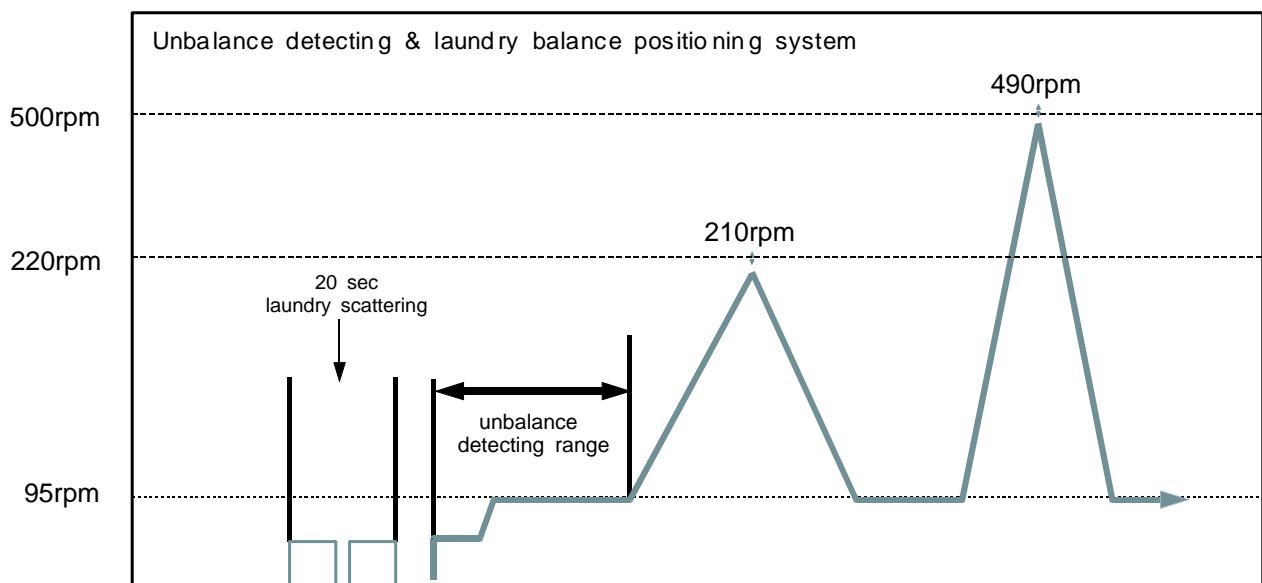
→ The bubble-detecting function during single hydrating process

after 2 times instant dehydrating and before main dehydrating , if the water level is 24.50KHZ below or during main dehydrating, water level data is 24.50KHZ below Bubble-detecting function thinks there are bubbles and add the bubbles-removing rinse 1 times, needing hours are above hours and 5 min 50 sec.



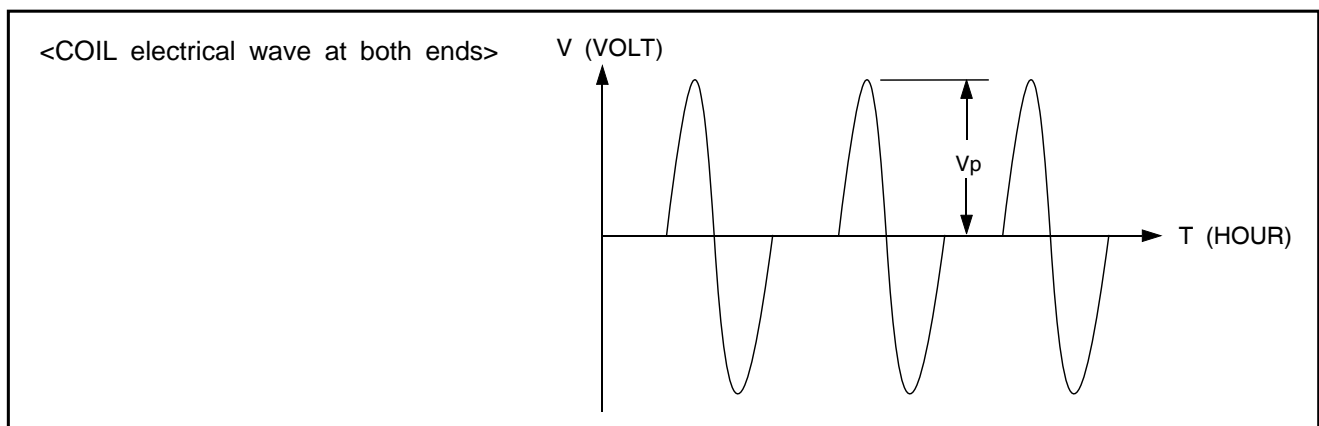
12) Unbalance detecting & laundry balance positioning system

- ① Just before the hydrating process and just after reversal rotation for balancing laundry position, this function is carried out
- ② The initial 6 sec is the period of reversal rotation for balancing laundry position , Drum rotates 50rpm for initial 6 sec
- ③ Next 12 sec, the rotation increases the speed from 50 rpm to 95 rpm slowly
- ④ During the next 8 sec, drum rotates at the speed of 95 rpm, the sensor decides the degree of laundry unbalance with TACHO data which is attached to motor
- ⑤ If the degree of unbalanced laundry is over 6 times to default value, laundry balancing system carries out feed back process 3 times



13) R.P.M control

The rotating motor enables the magnetics(i.e generator) to generate magnetic flux in proportion to r.p.m, magnetic flux induced by coil sensor in the opposite side produces the wave like the figure below to $d\Phi/dt$ and via rectangular wave generating circuit, the waves reaches MICOM and micom controls r.p.m with the pulse, count and cycle inputted by program.



3-4. TECHNICAL POINT

1) Motor on/off time at each course

unit:sec

Course	Washing				Motor r.p.m
	Cw	Off	Ccw	Off	
Cotton	13	4	13	4	50
Baby Cotton	12	8	12	8	50
Synthetics	7	8	7	8	40
Wool	2	48	2	48	50
Handwash	2	58	2	58	50
Quick	12	8	12	8	50
Pre	10	10	10	10	50

2) Final dehydrating r.p.m at each course

unit:rpm

Course \ Model	WF-F1262	WF-F1062	WF-F862
Cotton	1200	1000	800
Baby Cotton	1200	1000	800
Synthetics	800	800	800
Wools	400	400	400
Quick	1200	1000	800
Handwash	400	400	400

※ You can change the r.p.m to the above a table by use spin button under no spin situation.

3) The water supply control at each process cycle

Model Process cycle	WF-F1262, WF-F1062, WF-F862
Pre Washing	Cold water 5L/min
Washing	Cold water 10L/min + (Hot water 10L/min)
Rinse	Cold water 10L/min
Final rinse	Cold water 10L/min + Cold water 5L/min

4) The water level data at each course

unit:Khz

Water level Course		Default water level (kHz)	Supplementary water START (kHz)	Supplementary water End (kHz)
Cotton	Washing	24.60	25.00	24.80
	Rinse	23.60	24.50	24.20
Baby Cotton	Washing	24.60	25.00	24.80
	Rinse	23.60	24.50	24.20
Synthetics	Washing	23.80	25.00	24.30
	Rinse	23.65	24.55	24.30
Wools / Handwash	Washing	23.45	24.35	24.00
	Rinse	23.15	24.35	24.00
Quick	Washing	24.40	25.00	24.70
	Rinse	23.80	25.00	24.70

5) The other water level data

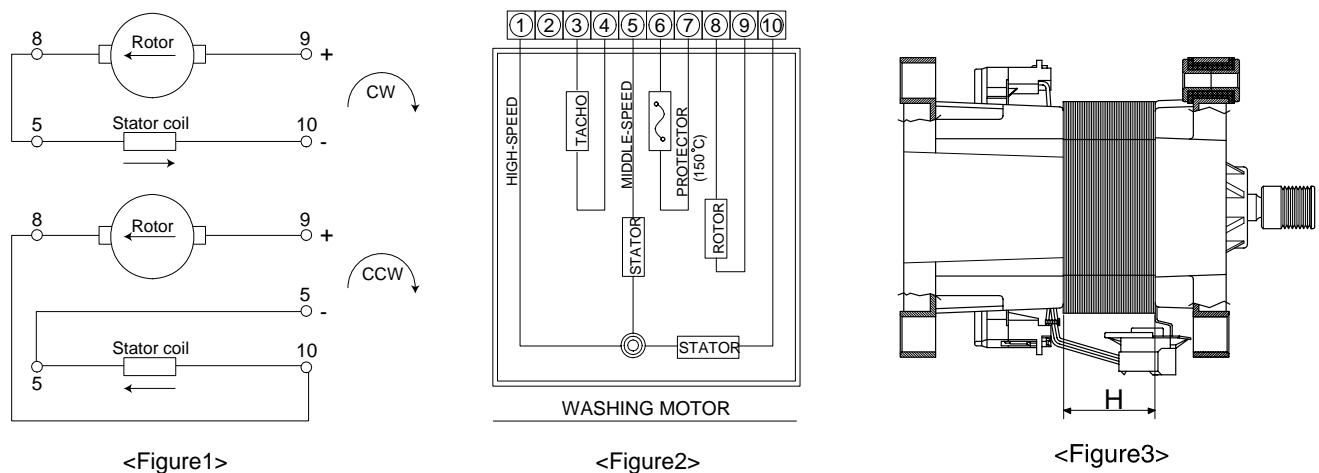
unit:Khz

The water data unter each conditon		WF-F1262, WF-F1062, WF-F862
1st water supply (only preparation)	25.50	1st water supply level to washing tub
Overflow error	21.50	The water supplied reach 2/3 of door
Bubble detectingatwashing/rinse/dehydrating	24.80	Bubble -detecting water level
Bubble detecting rinse water level	23.00	The water level which can detect bubbles
Water level which can open door	24.80 over	It is possible to open the door
Water level which can drive heater	25.50	Safety water level of wash heater
Water level which can reset the drain	25.50	The water level can be detected after 1st draining

※ If water level is 15KHZ below or 30 KHZ above , Sensor-pressure is out of order so needs changing.

3-5. DESIGNATION OF MAIN COMPONENTS

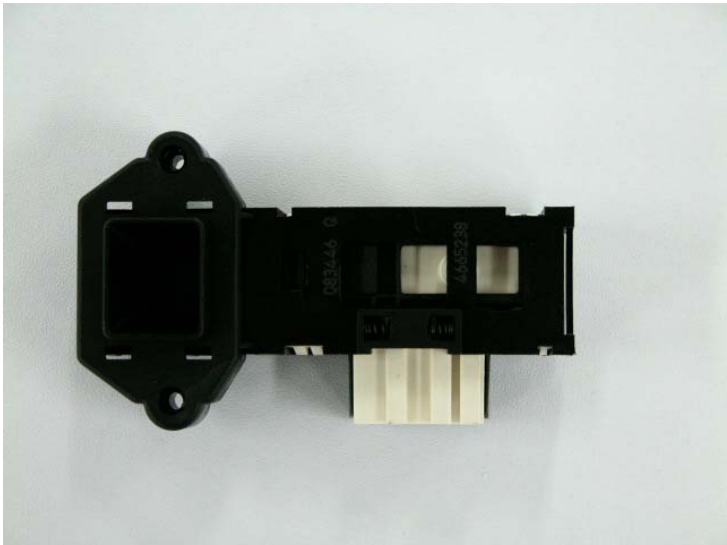
3-5-1. Normal / Reverse Revolution of Motor and R. P. M. Control



(± 7%)	STATOR(5.1)	STATOR(5.1)	ROTOR(8.9)	TACHO(3.4)	PROTECTOR(6.7)	"H"(mm)	Code-No.	Remark
Resistance value	2.07Ω	0.90Ω	2.35Ω	34.3Ω	0	45	DC31-00002H	WF-F1262 WF-F1062 WF-F862 WF-S1062 WF-S862
Rated value	220~240V/50Hz							

3-5-2. Door safety Device

When Door is closed, door stay closed. if "set" is operated, power supplied to ,wires have bimetal keep the door closed, and electronical power flows between and make it operate.



DC64-00653A (ROLD)

3-5-3. Heater

- 1) Capacity : AC 230V/1900W
- 2) Location : Bottom of TUB
- 3) Function : Raise the water temperature supplied at the wash process.
- 4) Resistance value : 23~29Ω
- 5) Thermal Fuse : 128°C



Thermistor

3-5-4. Detergent tub and water supply valve

A Detergent tub is composed of housing and 3 drawers . supplied water flows into the 3 drawer-detergent tub by way of classifier at each washing process.

three open drainage way with detergent and supplied water by way of connector located under the housing flows into washing tub.

the water supply valve is composed of a cold water valve(2way) and an optional hot water valve(1 way).

Water flow per Min in the valve is below.

	Hot water valve(1 way) (Option)	Cold water valve (2 way)	
		V1	V2
water flow(L/min)	10 ℓ	10 ℓ	5 ℓ
resistance value	4.4kΩ	4.2 kΩ	4.2 kΩ
power consumption	AC 220v ~ 240V 50/60Hz		
usable water pressure	0.5 ~ 8 kg/cm ²		



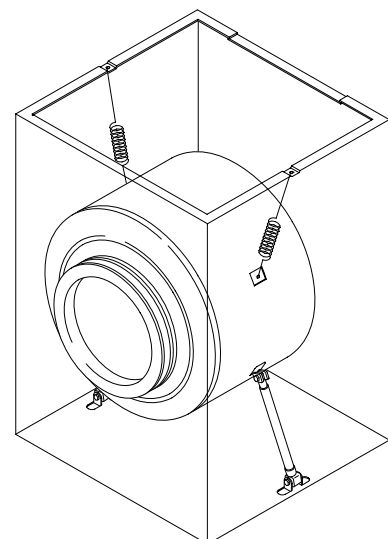
3-5-5. Shock absorber and buffer spring

This wash machine is equipped with 2 Shock absorbers with same capacity and with 2 buffer springs. 2 Shock absorber are placed under the tub and outside case , 2 buffer springs are placed on the right and left of the upper side of outside case.

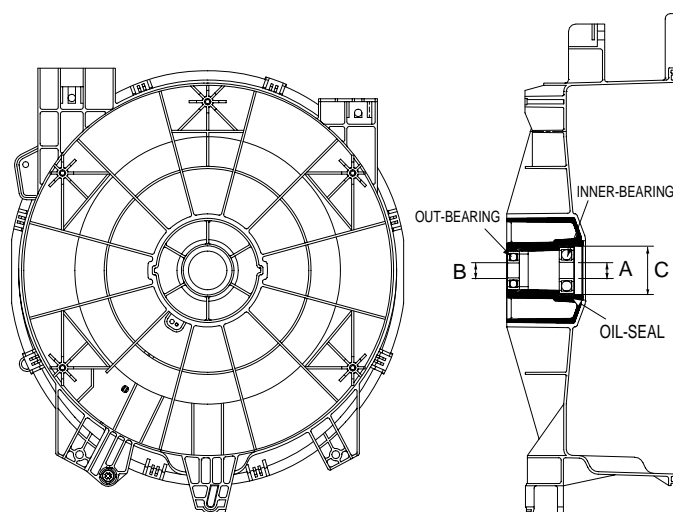
Shock absorber function: during wash, dehydration absorb the shock.

buffer spring: buffering the vibration

device	capacity of Shock absorber
Shock absorber	8±2 kg



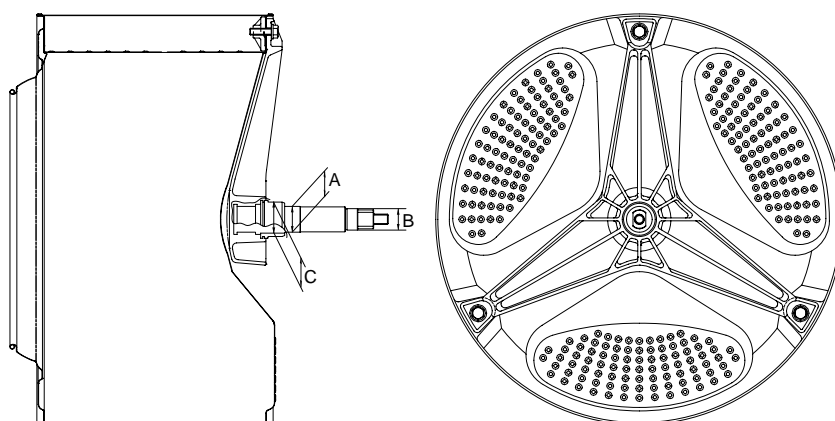
3-5-6. Assy-tub Back



(unit : mm)

TYPE	INNER-BEARING(A)	OUT-BEARING(B)	OIL-SEAL(C)	Assy-Tub Back	REMARK
I	ø 30	ø 25	ø 34.1	DC97-00214K	WF-F1261,WF-F1061,WF-F861

3-5-7. Assy- Drum



(unit : mm)

TYPE	(A)	(B)	(C)	CODE-NO.	REMARK
I	ø 30	ø 25	ø 35	DC97-01463J	WF-F1261,WF-1061,WF-F861

3-5-8. Assy-pump Drain

- 1) Capacity : AC 230V 34W
- 2) Location : Front bottom(R)
- 3) Resistance : 160Ω ~ 190Ω

