

S/M No. WFWM1_1701

DAEWOO 
ELECTRONICS

Service Manual

Wall-Mounted Front-Load Washer MINI

MINI 1.0(WFWM111*) : D-CV701*

MINI 1.5(WFWM122*) : ODW30-999B

ODW30-999G

DWM30-999PG



In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://webportal.dwe.co.kr/sic>)

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1. What is Wall-Mounted Front Load Washer MINI?

1. What is the Wall-Mounted Front-Load Washer MINI?

Mini is the world's first ever wall-mounted front-load washer, which is installable in bathroom, pantry, kitchen and various locations.

2. Features of Wall-Mounted Front-Load Washer MINI

Low Noise

Mini's customized low-noise motor reduces noise during wash, and the 4-layered dustproof pad prevents vibrations to ensure silent washing.



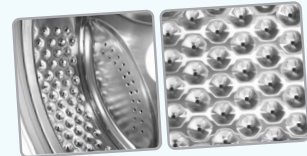
Spoon-Shaped Detergent Container

Containers for detergent and softener are discretely designed to prevent mixture. The spoon-shaped design enables you to apply the proper amount of detergent conveniently.



Star Drum

Star-shaped concave-convex drum prevents damage to fabric to keep clothes fresh.



Transparent Door

Transparent door allows you to view the contents and check laundry process. (D-CV701*)



Child Protection

'Button Lock' and 'Door Lock' functions apply to prevent kids from touching buttons and opening doors during wash.

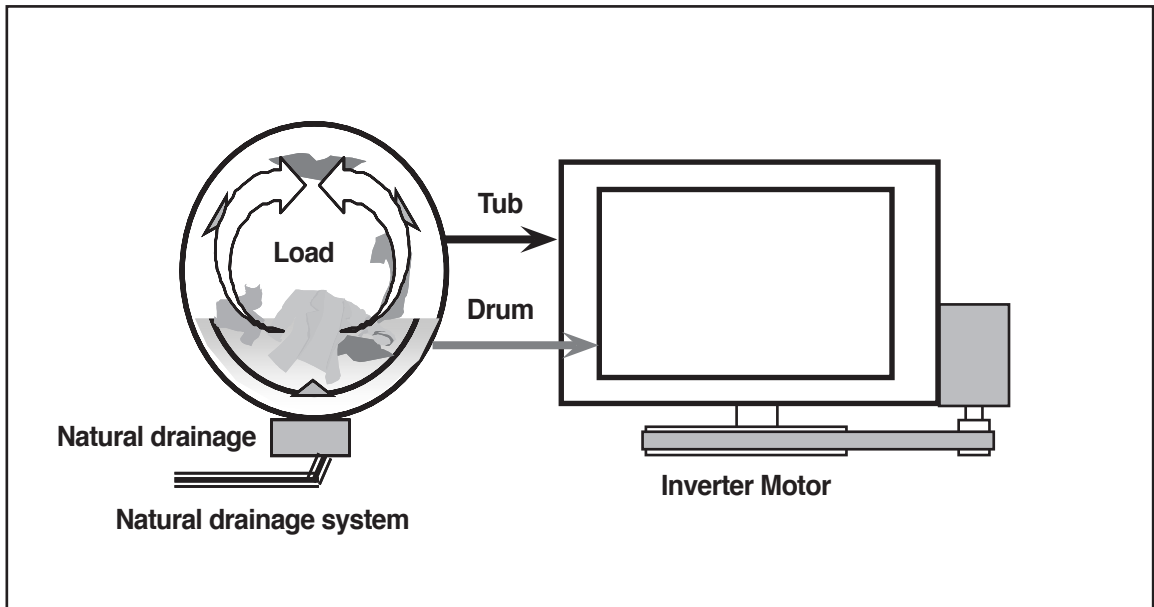


Cleaning Programs

Mini's program features for various cleaning purposes and fabrics.



3. Power Train of Wall-Mounted Front-Load Washer MINI



- Inverter Motor: Transforms electric energy into mechanical energy
- Highly powerful and functional inverter motor rotates the system.

4. Major Features of Wall-Mounted Front-Load Washer MINI

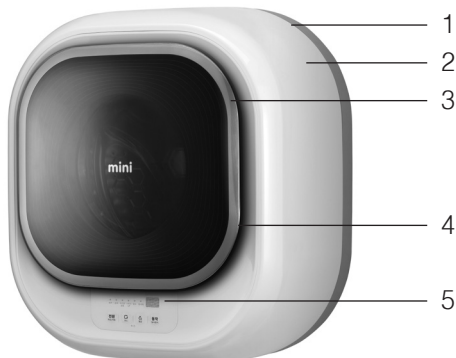
1. Powerful Daily Cleaning
Mini enables daily washes of towels, shirts, underwear and socks for cleaner home environment.
2. 29-Minute Wash
As the Normal cycle takes only 29 minutes, it speeds up the laundry process and reduces water and power consumption by 64% compared to regular front-load washers.
3. Baby Clothes Cleaning
Mini's 'Baby Care' cycle enables a complete steam wash and rinse function to protect sensitive baby skin from irritation.
4. Delicate Cleaning for High-Quality Clothes
Mini enables daily washes of towels, shirts, underwear and socks for cleaner home environment.

2. Specifications

1. Parts and Components



NO	Parts
1	TUB REAR
2	BODY
3	DOOR PROTECTOR
4	DOOR HANDLE
5	DOOR FRAME *O
6	COVER BODY AS

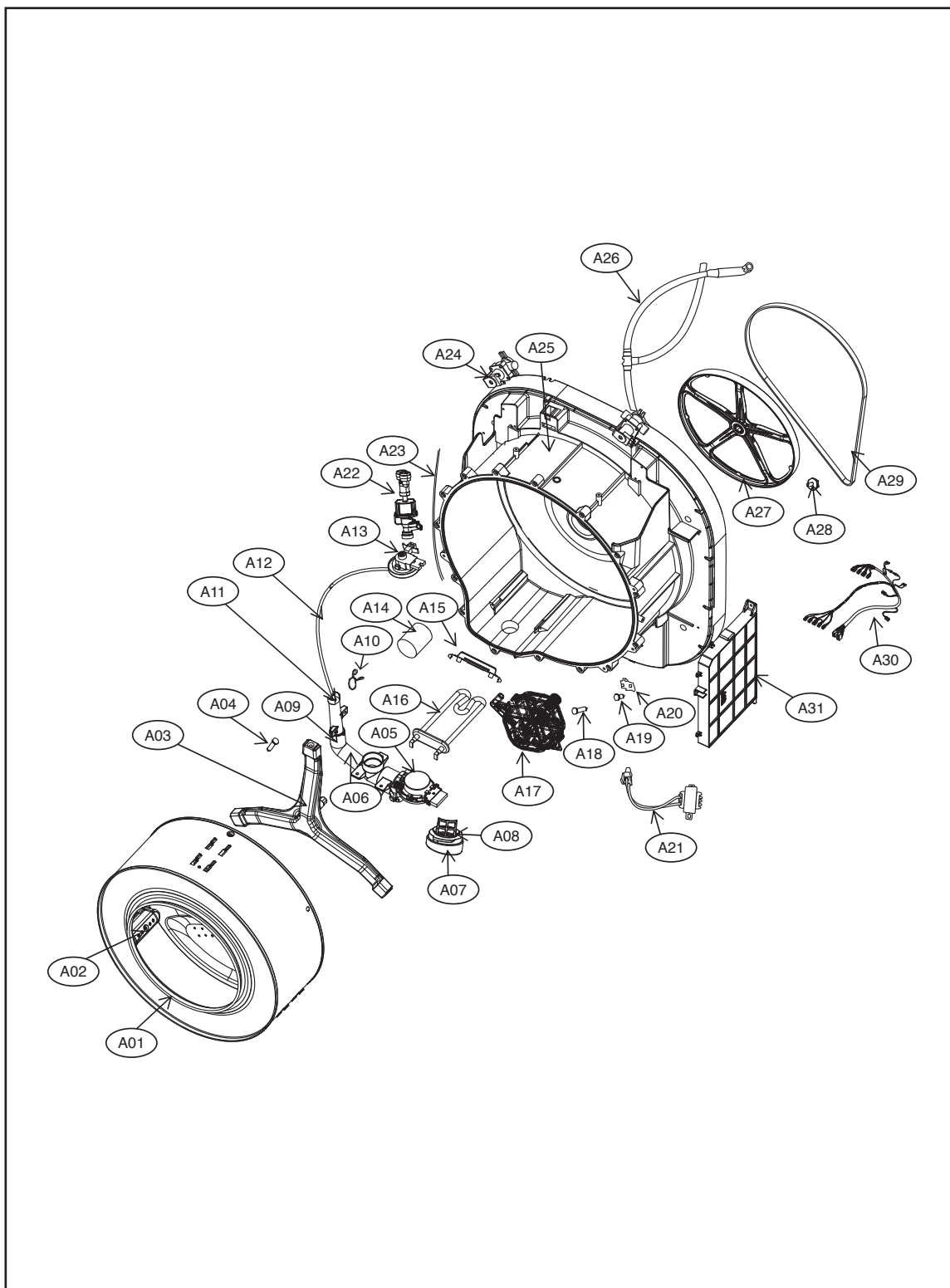


NO	Parts
1	TUB REAR
2	BODY
3	PROTECTOR GLASS AS
4	DOOR AS
5	COVER BODY AS

Category		Specifications	Notes
Dimension		550mm X 600mm X 292mm(mini 1.0) / 302mm(mini 1.5)	
Weight		16.5KG	
Standard Volume		28L(mini 1.0), 33L(mini 1.5)	
Power		220V/50Hz	CHINA
Power Consumption	Wash	100W	D-CV701PC**/701AW**/701AW**01
	Heating 220~240V	1300W(mini 1.5), 1500W(mini 1.0)	
Max Load	Wash	2.5KG	
	Spin	2.5KG	
Washer Type		Front Load	
Installation		Mounted on Wall	
Water Pressure		0.8 ~ 8.0 kgf/cm ²	

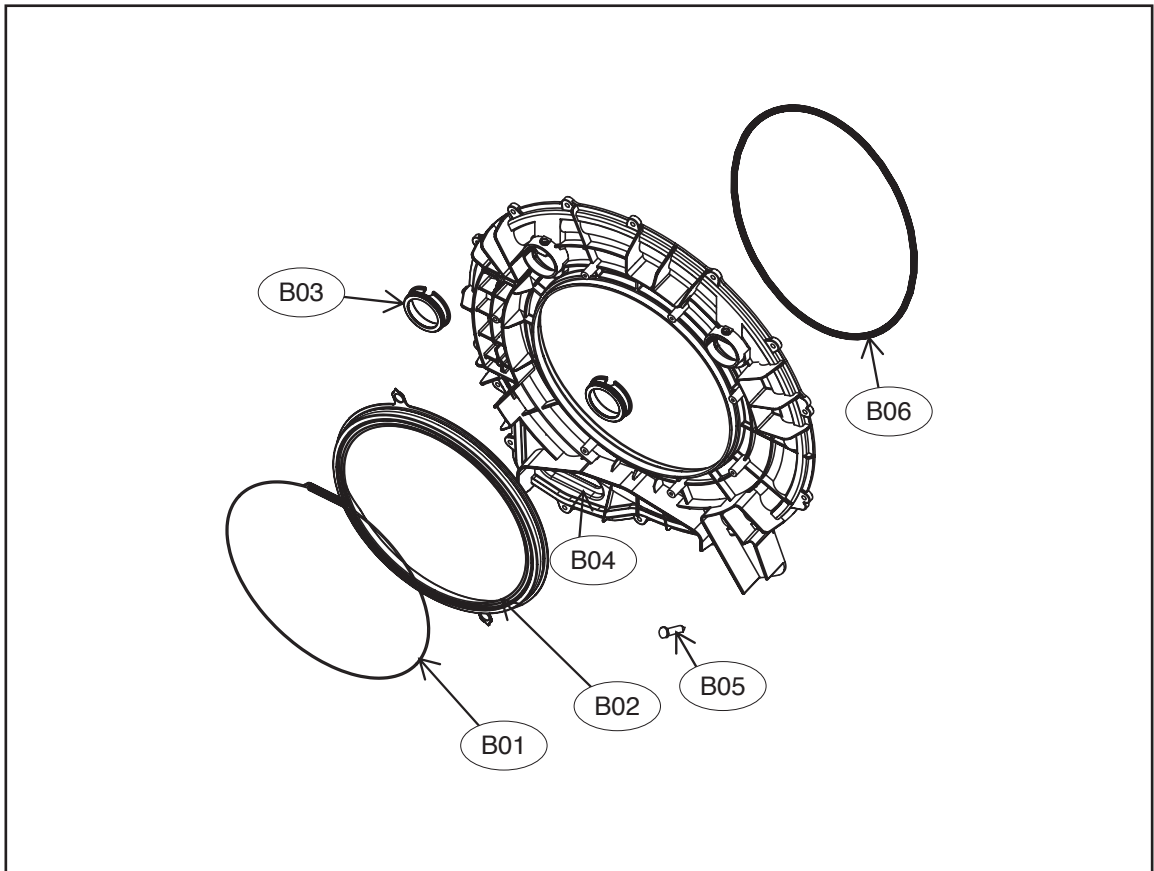
3. Assembly Part List

1. TUB AS



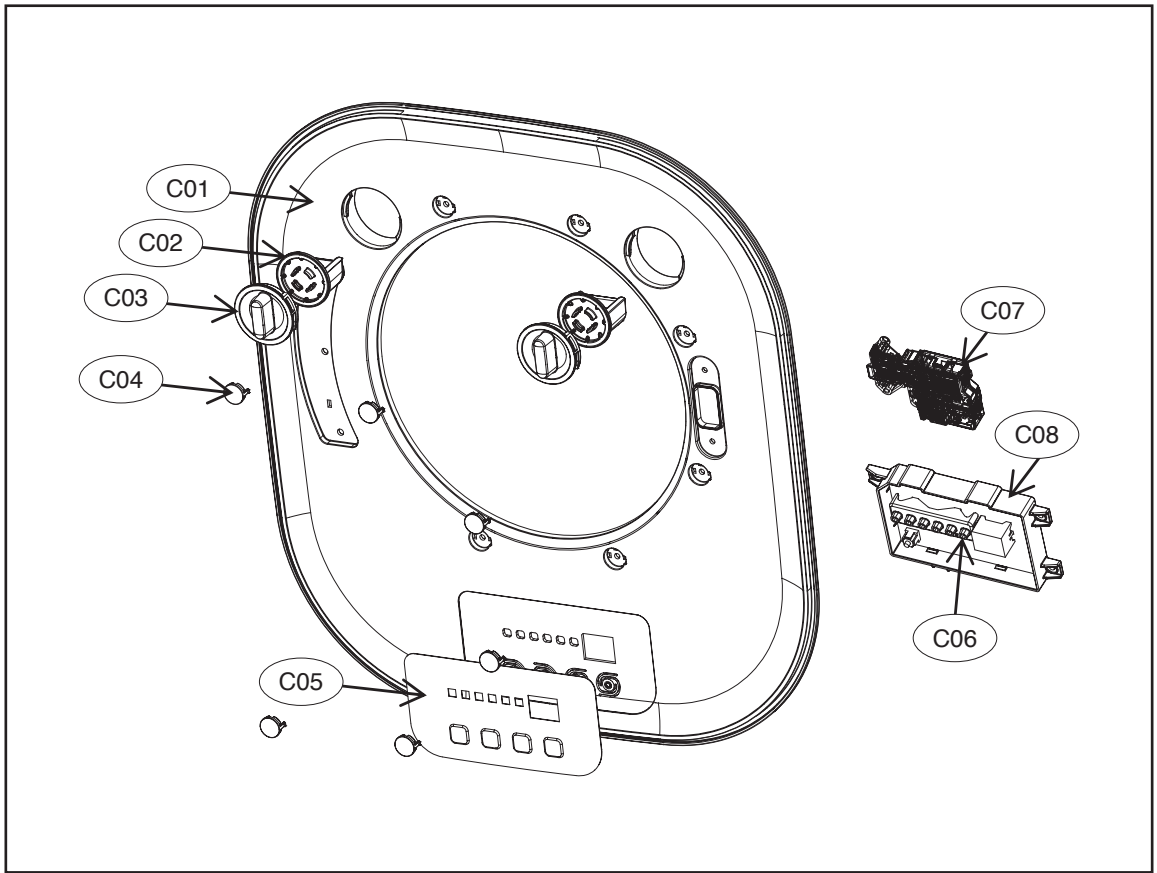
No.	PART NAME	PART CODE	DESCRIPTION	Q'TY	SVC	REMARK
A01	DRUM SUB AS	3617030010	D-M300	1	Y	
A02	LIFTER WASH	361A401901	D-M300, PP	3	Y	
A03	SPIDER AS	361A301610	D-M300	1	Y	
A04	SPECIAL BOLT	3616063000	STS430 M6*21 SI-LOCK	3	Y	
A05	DRAIN MOTOR AS	3919601110	DRAIN MOTOR AS NAKAGAW,220-240V-.50/60HZ, BV-DW23 2.5W	1	Y	DRAIN MOTOR ASSEMBLY
		66149-0005701-00	BE-3502A, NAKAGAW,220-240V-.50/60HZ, BV-DW23 2.5W	1	Y	
A06	DRAIN HOUSING	36169-0000400-02	D-M300, FRPP, FILTER TYPE	1	Y	
A07	CAP FILTER DRAIN	36109-0006400-01	CAP FILTER DRAIN D-M300, FRPP, FILTER TYPE	1	Y	
		36109-0006401-00	BE-3502A, D-M300, FRPP, FILTER TYPE			
A08	PACKING CAP FILTER DRAIN	36196TC060	D-M300, NBR 40	1	Y	
A09	HOSE AIR TRAP	3613276800	D-M300, EPDM	1	Y	
A10	CLAMP HOSE	3611204700	ID27	2	Y	
A11	AIR TRAP	361A500300	D-M300, PP	1	Y	
A12	HOSE AIR	3613276900	D-M300, EPDM ID=4 OD=8, L=455	1	Y	
A13	SENSOR PRESSURE	361482532A	DL-DW12-H AIR INLET 270 HOOK TYPE	1	Y	
A14	EMI FILTER	3611913100	DFC-2712D ,250V 12A,	1	Y	OPTION
A15	FIXTURE HEATER	36119-0003300-00	SUS 304 0.7T 440X45 1	1	Y	OPTION
A16	HEATER WASH	3612804011	230-240V.140MM.1400W.WIRE 1R0X350002.IRCA FUSE 2EA	1	Y	230-240V
		3612804010	220V.140MM.1400W.TERMINAL 1R8A721.IRCA FUSE 2EA	1	Y	220V
		3612804012	120V.140MM.1000W.WIRE 1R0X350007.IRCA FUSE 2EA	1	Y	120V
		3612804013	110V.140MM.1000W.WIRE 1R0X350005.IRCA FUSE 2EA	1	Y	110V
A17	MOTOR BLDC	36189L8000	UNIT MOTOR BLDC DWD200BL(NEWMOTECH),DC 310V,125W,CL.F.EARTH/T-X	1	Y	
		36189L8500	UNIT MOTOR BLDC GJ-2BA003A(GNJ),DC 310V,125W,CL.F.EARTH/T-X	1	Y	
		66182-0012500	UNIT MOTOR BLDC PM92-20(TONLON), DC 310V,125W,CL.F.EARTH/T-X	1	Y	
A18	SPECIAL BOLT	3616067010	SPECIAL BOLT T/S-3 F/L 5*16 SEAL LOCK STS430	4	Y	
A19	SPECIAL SCREW	7S422X4081	TT3 TRS 4X8 SE MFZN	2	Y	
A20	BRACKET BODY	3610603500	SBHG1 T1.2	1	Y	
A21	REATOR	3615800500	RT-028 L=3.6MH(0A),L=5.2MH(1A)	1	Y	
A22	PCB PART(Y DIVIDER)	3612512900	D-M300, ATWD0404 1/4' DMT	1	Y	
A23	HOSE INLET	3613270980-001	DFE04 LLDPE ID=4,OD=6	0.575	Y	
A24	VALVE INLET	3615401000	AC 220~240V,50/60HZ, SV-11CWB-01,1WAY	2	Y	
		3615401120	120~127V,50/60HZ, SV-11CWB-27 1WAY,CHECK VALVE	2	Y	
A25	TUB REAR SUB AS	3618831620	D-M300. TUB REAR+BEARING HOUSING	1	Y	SVC_CODE
	BEARING INNER	3616305900	D-M300,6203ZZ,ID=17,OD=40	1	Y	
	WATER SEAL	361A600900	D-M300,NBR ID=25,OD=50	1	Y	
	DRAIN HOUSING	36196TC010	DRAIN HOUSING D-M300, FRPP, FILTER TYPE	1	Y	
	BOND	2224050106	218W	0.005	N	
A26	HOSE VENT	3613217940	D-M300 HOSE VENT AS	1	Y	
A27	PULLEY	3618434300	D-M300, ALDC	1	Y	
A28	SPECIAL BOLT AS	3616063110	M8X27 S/W P/W SI-LOCK HEX:13	1	Y	
A29	BELT V	3616591700	BELT V M300/3PJ1031/GATES	1	Y	
A30	HARNESS AS	66126-0014704-01	FULL OPTION Dong-Yang DWD-M301 CLAMP CORE	1	Y	
A31	WM PCB INVERTER ASSY	PRPSSWDV09	D-M301 VE PCB AS, H/T, N-0.5W, 220V(CHINA ver.A#)	1	Y	
		40302-1032300-00	D-M301 VE PCB AS, H/T, N-0.5W, 220V(CHINA ver.q#)	1	Y	
		40302-1086300-00	D-M301 VE PCB AS, H/T, N-0.5W, 220V(CHINA ver.u#), ON-LINE	1	Y	
		40302-1086400-00	D-M301 VE PCB AS, H/T, N-0.5W, 220V(CHINA ver.J#), OFF-LINE	1	Y	

2. COVER TUB AS



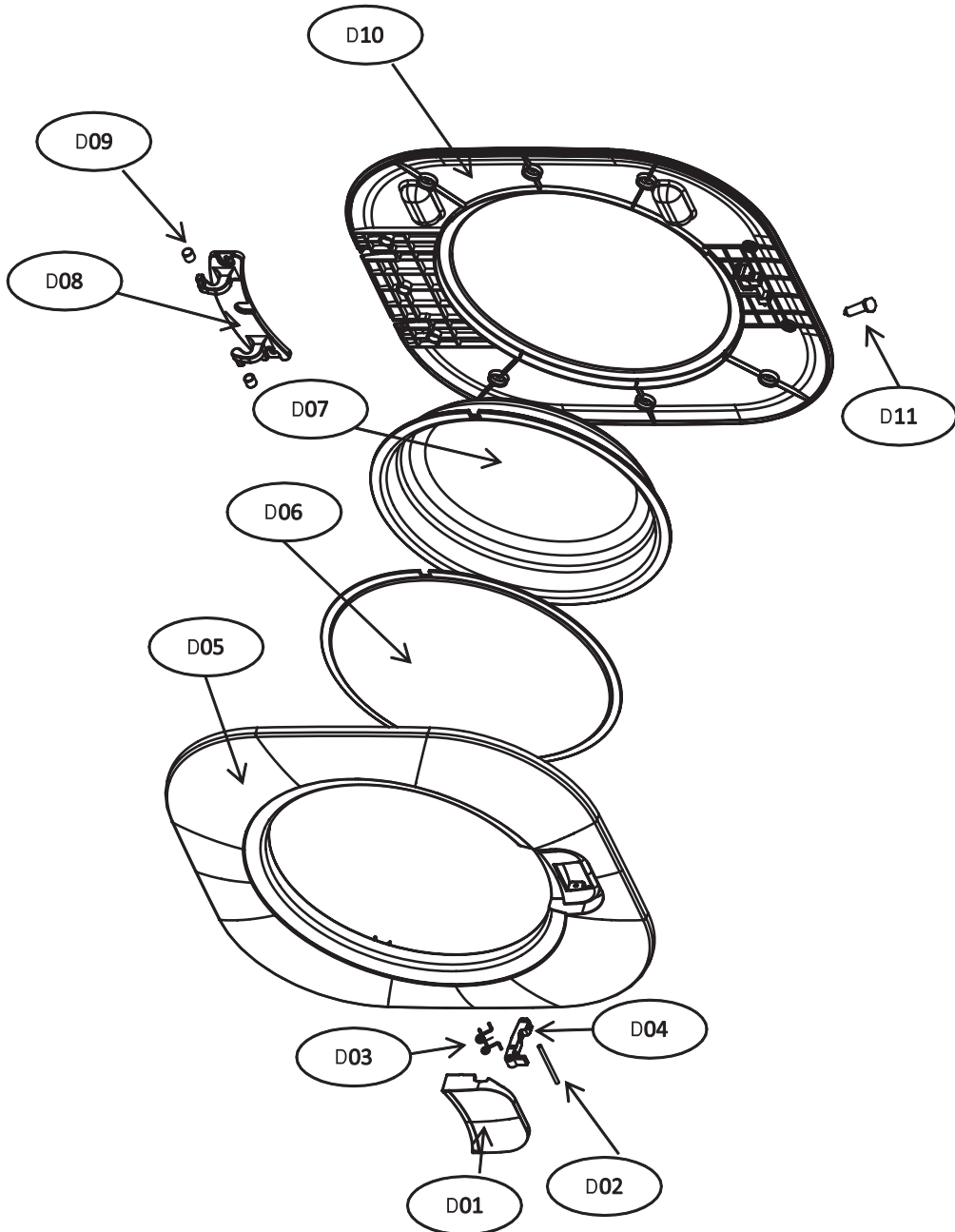
NO.	PART NAME	PART CODE	DESCRIPTION	QTY	SCV	REMARK
B01	CLAMP GASKET AS	3611204540	CLAMP GASKET AS D-M300, D1.4	1	Y	
B02	GAKSET	3612328000	GASKET DOOR D-M300,EPDM	1	Y	
B03	PACKING DETERGENT	PRPKCA3R90	PACKING DETERGENT D-M300, SILICONE	2	Y	
B04	COVER TUB	3618831700	COVER TUB D-M300, FRPP	1	Y	
B05	SCREW TAPPING	90007-0002801-00	MFZN F/L T/S-2 5*25 / H	13	Y	
B06	GASKET TUB	3612326100	GASKET TUB D-M300,PI=4.5,EPDML=1385	1	Y	

3. COVER BODY AS



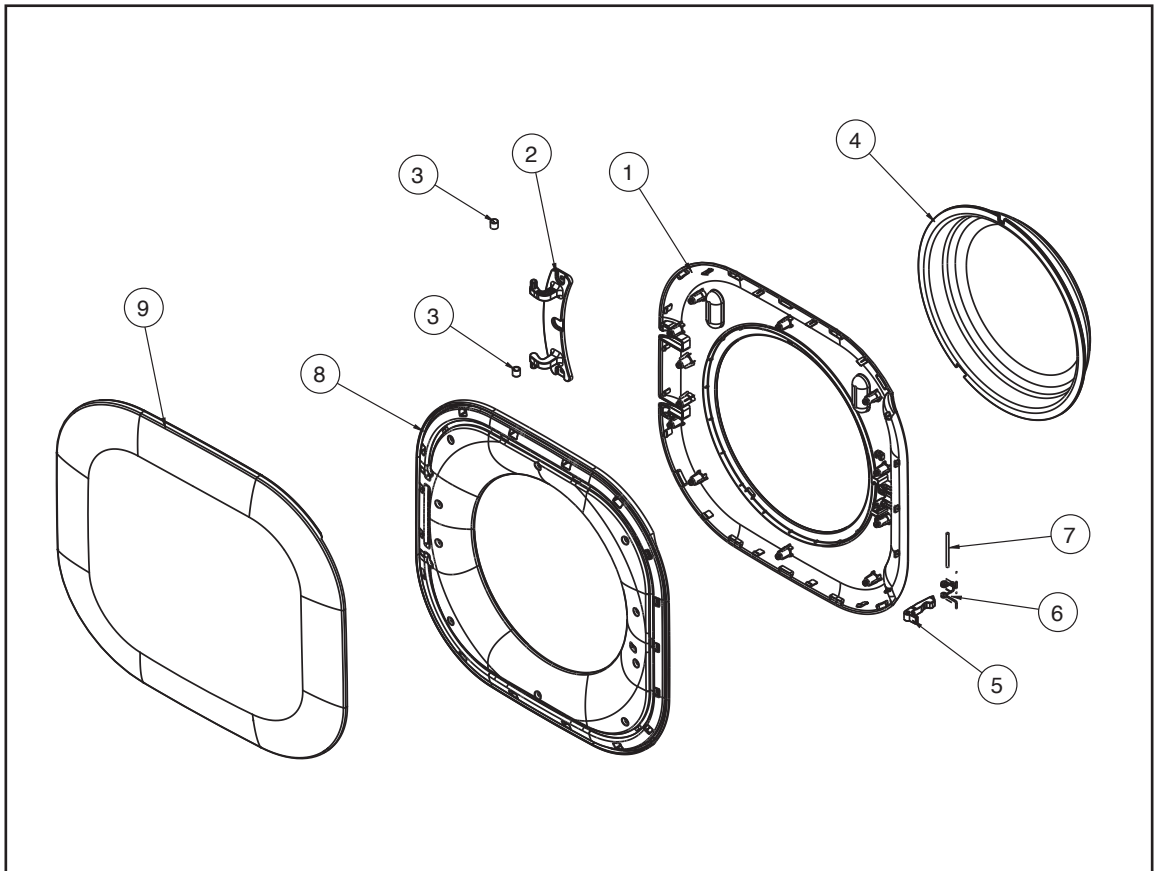
NO.	PART NAME	PART CODE	DESCRIPTION	QTY	SVC	REMARK
C01	COVER BODY SUB AS	361081WG10	COVER BODY SUB AS D-M301 SPRAY	1	Y	D-CV701PCNCX, D-CV701JCNCX, D-CV701PCNCX
		361081WG11	COVER BODY SUB AS D-M301 GOLD SPRAY	1	Y	D-CV701GCNCX
		36113-0026400-00	COVER BODY MINT BLUE, NO SPRAY, CHINA	1	Y	D-CV701MWNCX
		36113-0026300-00	COVER BODY GRAY, IRON SILVER SPRAY, CHINA	1	Y	D-CV701JCNCX
		36113-0026500-00	COVER BODY BEIGE, CHAMPAGNE GOLD SPRAY, CHINA	1	Y	D-CV701GGNCX
		36113-0020800-00	COVER BODY SUB AS D-CV701AWNCX SPRAY	1	Y	D-CV701AWNCX
		36113-0020801-00	SPRAY (WH-1208BP)	1	Y	D-CV701, CHINA, ODW-JDM883
		36113-0031500-00	COVER BODY(GY-349A)+SPRAY(BK-103), D-M300	1	Y	ODW30-999B
		36113-0009307-00	SPRAY(SV-2802BP) D-M301	1	Y	D-CV701SCNCX
		36113-0009306-00	D-M301 SPRAY(GY-7801BP)	1	Y	D-CV701TCNCX
		36113-0020801-00	SPRAY (WH-1208BP)	1	Y	D-CV701WWNCX
	COVER BODY	36113-0020301-00	ABS.HG173/WH1404A, MINI 1.5-PJT	1	Y	DWM30-999PG
C02	CASE DETERGENT	36111T3J20	CASE DETERGENT D-M300, PP, NEW	1	Y	
C03	HANDLE DETERGENT	3612613130	HANDLE DETERGENT D-M300, FRPP, NEW	1	Y	
		36125-0003005-00	D-M300, FRPP(GY-349A), NEW	1	Y	D-CV701TCNCX, ODW30-999B, DWM30-999PG
		36125-0003006-00	D-M300, FRPP(BE-3502A), NEW	1	Y	D-CV701GGNCX, D-CV701GCNCX
C04	CAP SCREW	3610917731	CAP SCREW D-M300, ABS, SPRAY	1	Y	
		3610917732	CAP SCREW D-M300, ABS, SPRAY FOR GOLD	1	Y	D-CV701GGNCX, D-CV701GCNCX
		36109-0002309-00	D-M300, ABS (WH-011A) SPRAY	1	Y	D-CV701, CHINA, ODW-JDM883, D-CV701WWNCX
		36109-0002311-00	ABS (WH1404A), MINI 1.5	1	Y	MINI 1.5, CHINA, DWM30-999PG
C05	DECORATOR FILM	36116DWQ01	D-M301, PET	1	Y	
		36167-0030004-00	PLATINUM SILVER HAIR-LINE CCC (SPEED WASH)	1	Y	D-CV701TCNCX
		36167-0030005-00	CHAMPAGNE GOLD CCC (SPEED WASH)	1	Y	D-CV701GCNCX
		36167-0030006-00	PEARL WHITE (SPEED WASH)	1	Y	D-CV701, CHINA, ODW-JDM883, D-CV701WWNCX
		36167-0030007-00	LIGHT SILVER HAIR-LINE (SPEED WASH)	1	Y	D-CV701SCNCX
		36167-0076500-00	PET, WFWM122CONN01BCCX(DWM30-999PG) MINI 1.5-PJT	1	Y	MINI 1.5, CHINA, DWM30-999PG
		36167-0076502-00	PET, CHINA, WFWM122B0NN01BCCX(ODW30-999B) MINI 1.5	1	Y	MINI 1.5, CHINA, ODW30-999B
C06	WM PCB SET ASSY	PRPSSWD100	D-M301 FRONT PCB AS, H/T, NON 0.5W	1	Y	
		PRPSSWD110	D-M301 FRONT PCB AS, H/T, 0.5W			D-CV701JCNCX
C07	SWITCH DOOR LOCK	3619047230	SWITCH DOOR LOCK DM, 250V 16A, CONCORE	1	Y	
		3619047250	SWITCH DOOR LOCK DL-S2, 250V 16A, BITRON VE_TYPE			D-CV701SCNCX
C08	CASE PCB *F	36111T3L03	CASE PCB F D-M300 HIPS V0	1	N	

4-1. DOOR AS(MINI 1.0: D-CV701*, WFWM11*)



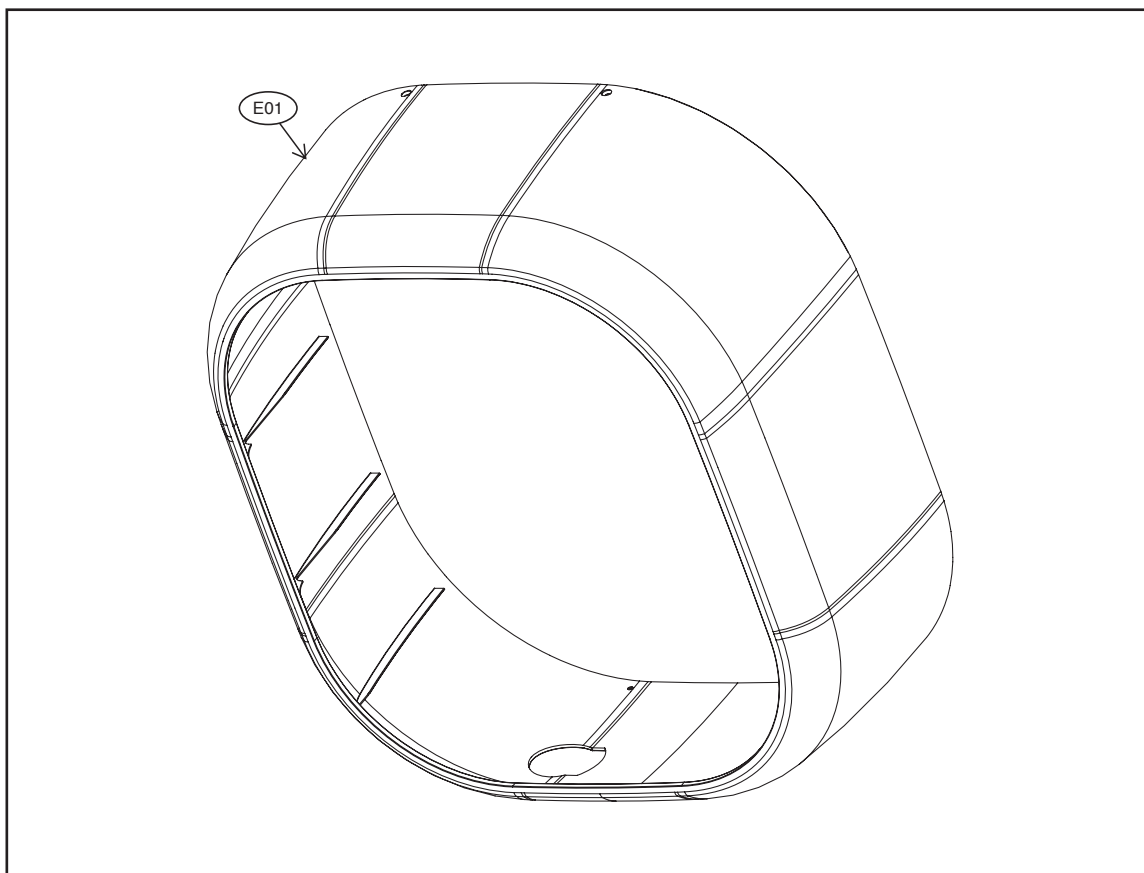
NO.	PART NAME	PART CODE	DESCRIPTION	Q'TY	SVC	REMARK
D01	HANDLE DOOR	3612614801	D-M301,ABS, CR-GILDING	1	Y	D-CV701PCNCX, D-CV701JCNCX, D-CV701GCNCX, D-CV701SCNCX, D-CV701TCNCX, D-CV701PCNCX
		3612614802	D-M301,ABS, SPRAY			D-CV701MWNCX, D-CV701AWNCX
		3612614803	D-M301,ABS, SPRAY FOR GOLD			D-CV701GGNCX
		36125-0004004-00	ABS (BG-2501A), D-M300			D-CV701, CHINA, ODW-JDM883
D02	PIN HANDLE	3618200201	PIN HANDLE SWCH1018A+HEAT+GILT, D3, L48	1	Y	
D03	HOOK SPRING	3615119400	HOOK SPRING D-M300, SUS304 D1.6 L36.6	1	Y	
D04	HOOK DOOR	3613102000	HOOK DOOR D-M300, ZNDC	1	Y	
D05	FRAME DOOR * O	36117AE101	D-M301,ABS, CR-GRDLING	1	Y	D-CV701PCNCX, D-CV701JCNCX, D-CV701GCNCX, D-CV701SCNCX, D-CV701TCNCX, D-CV701PCNCX
		36117AE102	D-M301,ABS, SPRAY			D-CV701MWNCX, D-CV701AWNCX
		36117AE103	D-M301,ABS,SPRAY FOR GOLD			D-CV701GGNCX
		36121-0005304-00	ABS (BG-2501A), D-M300			D-CV701, CHINA, ODW-JDM883
D06	PROTECTOR GLASS	3618304900	D-M300, TR ABS	1	Y	
D07	DOOR * I	361A114500	TR-PETG HT91-SK GRAY-MASTER BATCH DWD-M300	1	Y	
D08	HINGE DOOR	3612904800	D-M300, ALDC	1	Y	
D09	CAP HINGE DOOR	3610916500	POM	1	Y	
D10	FRAME DOOR * I	36117AE200	D-M300, PP	1	Y	
D11	SCREW TAPPING	7115401629	T1 FLT 4X16 SUS	11	Y	

4-2. DOOR AS(MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*)



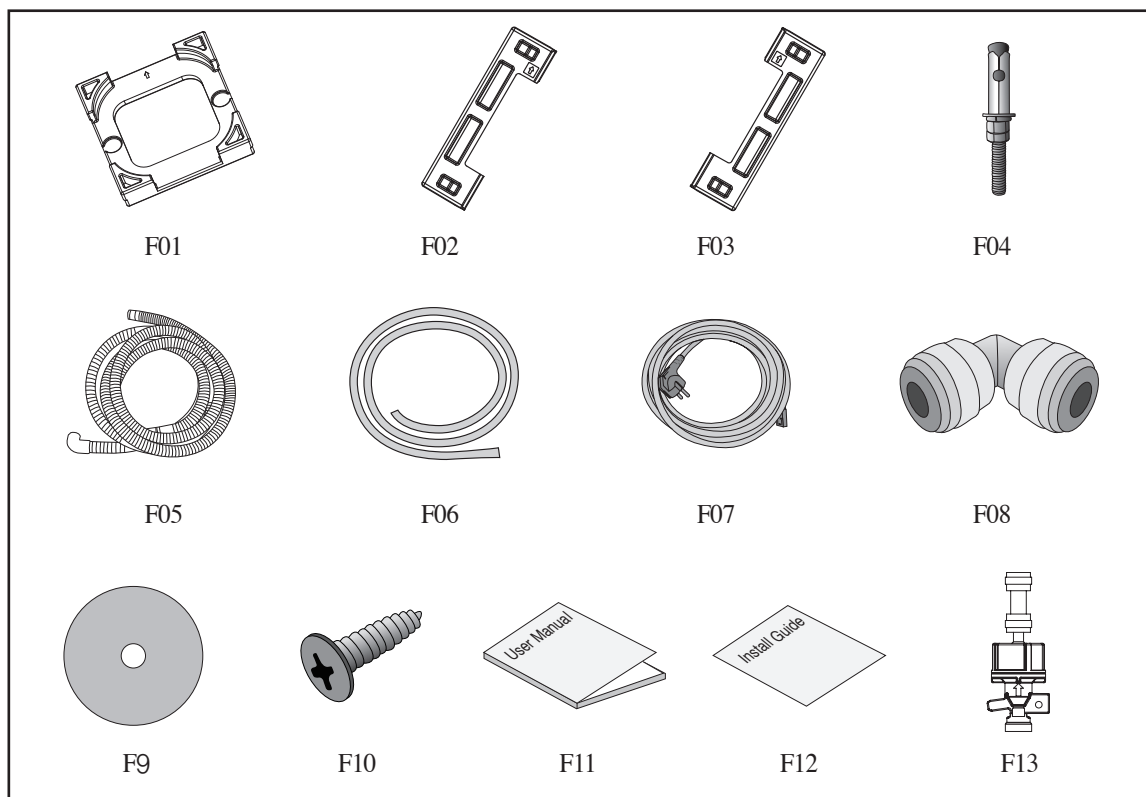
NO.	PART NAME	PART CODE	DESCRIPTION	QTY	SVC	REMARK
1	FRAME DOOR I	36121-0021400-02	PP 419*397*28 1 MINI 1.5	1	Y	
2	HINGE DOOR	36128-0004400-01	ALDC 2 MINI 1.5	1	Y	
3	CAP HINGE DOOR	3610916500	POM	2	Y	
4	DOOR INNER	361A114500	TR-PETG HT91-SK GRAY-MASTER BATCH DWD-M300	1	Y	
5	HOOK DOOR	3613102000	D-M300, ZNDC	1	Y	
6	HOOK SPRING	36130-0001801-00	SUS304 D1.4, L36.6, D-M300	1	Y	
7	PIN HANDLE	3618200201	SWCH1018A+HEAT+GILT, D3, L48	1	Y	
8	FRAME DOOR O	36121-0021300-01	ABS 419*397*26 1 MINI 1.5	1	Y	
9	PROTECTOR GLASS AS	36185-0005700-00	PROTECTOR GLASS+DECORATOR FILM INMOLD, mini 1.5	1	Y	ODW30-999B, DWM30-999PG
		36185-0005701-00	PROTECTOR GLASS+INMOLD((METAL BAND C.GOLD), mini 1.5	1	Y	ODW30-999G

5. BODY AS



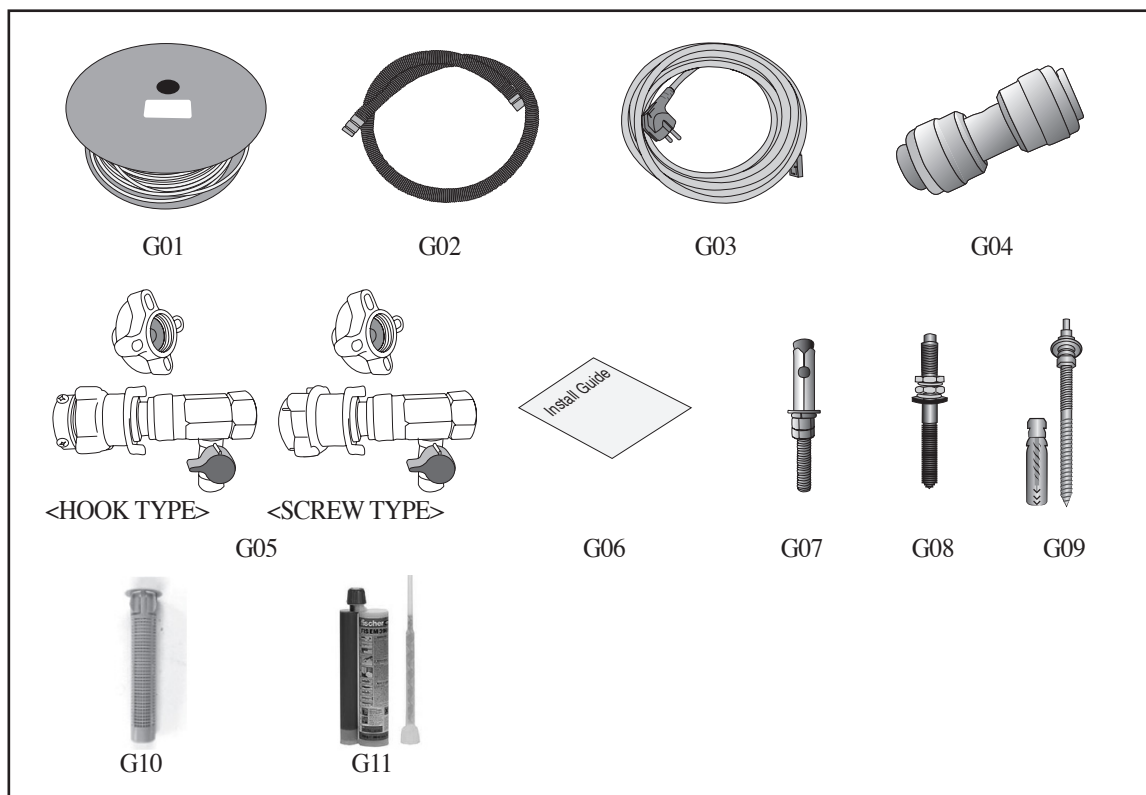
NO.	PART NAME	PART CODE	DESCRIPTION	QTY	SVC	REMARK
B01	BODY AS	361081WF10	D-M300	1	Y	D-CV701MWNCX, D-CV701AWNCX
		361081WF11	D-M301			D-CV701PCNCX, D-CV701JCNCX, D-CV701PCNCX
		361081WF12	GOLD SPRAY			D-CV701GGNCX, D-CV701GCNCX, ODW30-999B
		36104-0001806-00	D-M301, SPRAY(GY-7801BP)			D-CV701TCNCX
		36104-0001807-00	D-M300 (WH-1802A)			D-CV701SCNCX
		36104-0001809-00	D-M300 SPRAY(WH-1208BP)			D-CV701WWNCX
		36104-0001811-00	220V, CHINA, Cream White, WH-1404A MINI 1.5			DWM30-999PG, ODW30-999G

6. PACKING AS



NO.	PART NAME	PART CODE	DESCRIPTION	QTY	SVC	REMARK
F01	CUSHION BOTTOM AS	3611580100	CUSHION BOTTOM AS D-M300	1	Y	
F02	CUSHION CORNER *L	3611578000	CUSHION *L D-M300.EPS	1	Y	
	CUSHION SHOULDER	36114-0027200-00	EPS 45 MINI 1.5	1		
F03	CUSHION CORNER *R	3611579000	CUSHION *R D-M300.EPS	1	Y	
	CUSHION SHOULDER	36114-0027200-00	EPS 45 MINI 1.5	1		
F04	SPECIAL BOLT AS	3616067100	ANCHOR BOLT AS 3/8"(M10),SAE 1008B,L=6"/BASIC, P/W 2T 30MM	4	Y	
F05	HOSE DRAIN *O AS	36131-0009404-00	D-M300. PE-LD, L=2.5M, CLAMP, ID=14,OD=18	1	Y	
F06	HOSE INLET AS	3613270995	HOSE INLET AS D-M300. DFE04 LLDPE ID=4,OD=6, L=5000	1	Y	
F07	CORD POWER AS	66112-0004303-00	DTII-3P-07 250V 10A, RVV 3X1.0 CCC CHINA 2.5M WH	1	Y	See page 47
F08	ELBOW UNION	3612512800	ELBOW UNION D-M300, AEU0404W 1/4" DMT	3	Y	
F09	CUSHION PAD	3611535360	CUSHION PAD D-M300, EPDM 3T ID=10, OD=70	4	Y	
F10	SCREW TAPPING	7115401629	SCREW TAPPING T1 FLT 4X16 SUS	4	Y	
F11	MANUAL OWNERS	36136-0001014-00	(SPEED WASH) 1 color print WFWM111##NN00BCCX	1	Y	D-CV701SCNCX, D-CV701GCNCX, D-CV701SCNCX, D-CV701TCNCX, D-CV701WVNCX
		36136-0001015-00	MINI, CHINA, DEAC, 1 color print XQG30-88*E			D-CV701MWNXCX, D-CV701JCNCX, D-CV701AWNXCX, D-CV701PCNCX
		36136-0001016-00	MINI, CHINA, DEAC, 1 color print ODW-MGD881			D-CV701GGNCX
		36136-0001017-00	MINI, CHINA, DEAC, 1 color print ODW-JDM883			D-CV701, CHINA, ODW-JDM883
		36136-0008400-00	WFWM122C0NN01BCCX(DWM-30-999PG) MINI 1.5-PJT			DWM-30-999PG
		36136-0008401-00	CHINA, WFWM122C0NN02BCCX(ODW30-999G) MINI 1.5			ODW30-999G
		36136-0008402-00	CHINA, WFWM122B0NN00BCCX(ODW30-999B), MINI 1.5			ODW30-999B
F12	MANUAL GUIDE	3612513000	INSTALL GUIDE D-M300	1	Y	
		36136-0000104-00	CHINA, 120 Vellum paper, MINI			ODW30-999B
F13	VALVE CHECK UP	66150-0003401-00	CHECK VALVE + FILTER, 1/4", POM, MINI	1	Y	

7. Further parts for install



No.	PART NAME	PART CODE	DESCRIPTION	Q'TY	SVC	REMARK
G01	HOSE INLET	3613270980	DFE04 LLDPE ID=4,OD=6	1	Y	300M/1Roll
G02	HOSE DRAIN *O	3613275839	SVC,D-M300. PE-LD, ID=14,OD=18,L=1M	1	Y	
G03	POWER CORD AS	66112-0004303-00	DTIII-2P-05 250V 16A,H05VV-F 3X1.5,5M,EURO	1	Y	See page 46
G04	CONNECTOR	3612512810	UNION CONNECTOR D-M300,AUC0404W 1/4' DMT	1	Y	
G05	HOSE INLET AS	3613278000	ADAPTER INLET VALVE AS D-M300, HOOK TYPE	1	Y	
		3613279000	ADAPTER INLET VALVE AS D-M300, SCREW TYPE			
G06	MANUAL GUIDE	3612513000	INSTALL GUIDE D-M300	1	Y	
G07	SPECIAL BOLT AS	3616067100	ANCHOR BOLT AS 3/8"(M10),SAE 1008B,L=6"/BASIC, P/W 2T 30MM	4	Y	
G08	SPECIAL BOLT AS	361A2-0000100-00	3/8"(M10),SUS,L=8"/OPTION, P/W 2T 30MM,LOCK NUT	4	Y	
G09	ANCHOR BOLT AS & ANCHOR PLASTIC	36198-0012100-00	3/8"(M10),SUS,L=8"/OPTION, P/W 2T 30MM,LOCK NUT UX 14 X75 / FISCHER/ MINI DRUM	4	Y	
G10	ANCHOR NET	361A2-0000300-00	FIS H16 X 85K MINI DRUM	4	Y	Used with G08
G11	CHEMICAL	36160-0000100-00	FIS VS 360S	1	Y	

4. PCB Functions

1. Cycle Programs

1.1.1 SEQUENCE CHART (MINI 1.0: D-CV701*, WFWM11*)

Program Ver: "q1"

Category	Progress Time	Normal	Delicate	Baby Care	Night Time	QUICK 15	INTENSIVE			
							(COLD)	40	60	
Wash	Water Supply	2min	■	■	■	■	■	■	■	
	Wash 1 (Heating)	47min			■				15 min	80 min
		10min			■				■	
	Wash 2	228min							25 min	
		27min				12 min		10 min		
		11min		■		■		■	■	
		10min		■		■		■	■	
		8min	■		15 min					
4min			■		■					
Rinse	Drain	1min	■	■	■					
	Middle Spin	2min					3min	3min	3min	
	Water Supply	2min								
	Rinse 1	2min				1min	5min	5min	5min	
	Drain	1min								
	Middle Spin	2min					3min	3min	3min	
	Water Supply	2min								
	Rinse 2	2min	■	■			5min	5min	5min	
	Drainage	1min								
	Middle Spin	2min					3min	3min	3min	
	Water Supply	2min								
	Rinse 3	2min					5min	5min	5min	
Spin	Drain	1min	■	■	■	■				
	Main Spin	3min				2min			20min	
	Unlocking	1min	■	■	■	■	■	■	■	
TOTAL			29 min	32 min	90 min	40 min	15 min	50 min	80 min	365 min

NOTE

1. The water temperature is set at 90°C for the steam wash of baby clothes.
2. The speed for the main and interim spin cycles is set at 700RPM except the Delicate, Night Time, and Intensive 60 cycles. 400RPM and 500RPM apply to the Delicate and Night Time cycles, respectively. (Intensive 60 : 500RPM)
3. The drainable water must be 45°C or colder.
4. As many as 5 additional rinse cycles are available for all programs except QUICK15.

1.1.2 SEQUENCE CHART (MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*)
 Program Ver: "u1"

	Division		SELECTABLE		WASHER				
	PROCESS		TIME(min)	Normal	Delicate	Baby Care	Speed Wash	Spin Only	Tub Clean
WASH	Water Supply	Water Supply Time(min)							
		23.84 KHz Low	2			2	2		
		23.68 KHz Mid	2	2	2				2
		23.48 KHz High	2						
	Wash1 (Before-Heating)	Wash Time(min)							
		-	2/4/5	4	5	2	4		5
	Wash2 (Heating)	Wash Time(min)							
		-	47			47			
	Wash3 (After-Heating)	Wash Time(min)							
		-	4	4					5
		-	5						
		-	6		6				
		-	7						
-		8							
-		9							
-	10								
-	13				13				
Wash Time				0:10	0:13	1:04	0:06	0:00	0:12
RINSE	Drain	Drain Time(min)							
		25.80 KHz	1	1	1	1		1	
	Middle Spin	Spin Time(min)							
		Low(400RPM)	2		2				
		Mid(500RPM)	2						
		High(700RPM)	2	2		2	2	2	
	Water Supply	Water Supply							
		23.48 KHz	2	2	2	2	2	2	
	Rinse 1	Rinse Time(min)							
		-	1/2	2	2	2	1	2	
	Drain	Drain Time(min)							
		25.80 KHz	1	1	1	1		1	
	Middle Spin	Spin Time(min)							
		Low(400RPM)	2		2				
		Mid(500RPM)	2						
		High(700RPM)	2	2		2		2	
	Water Supply	Water Supply							
		23.48 KHz	2	2	2	2		2	
	Rinse 2	Rinse Time(min)							
		-	2	2	2	2		2	
Drain	Drain Time(min)								
	25.80 KHz	1				1			
Middle Spin	Spin Time(min)								
	Low(400RPM)	2							
	Mid(500RPM)	2							
	High(700RPM)	2			2				
Water Supply	Water Supply								
	23.48 KHz	2			2				
Rinse 3	Rinse Time(min)								
	-	2			2				
Rinse Time				0:14	0:14	0:21	0:06	0:00	0:14
Spin	Drain	Drain Time(min)							
		25.80 KHz	1	1	1	1	1	1	
	Main Spin	Spin Time(min)							
		Low(400RPM)	3		3				
		Mid(500RPM)	2						
		High(700RPM)	2/3	3		3	2	3	
	Crease Care	Unlocking(min)							
-		1	1	1	1	1	1		
Spin Time				0:05	0:05	0:05	0:03	0:05	0:05
Total Time				0:29	0:32	1:30	0:15	0:05	0:31

NOTE

1. The water temperature is set at 80°C for the steam wash of baby clothes.
2. The speed for the main and middle spin cycles is set at 700RPM except the Delicate 400RPM and 500RPM apply to the Delicate and Night Time cycles, respectively.
3. The drainable water must be 50°C or colder.
4. As many as 5 additional rinse cycles are available for all programs except Speed Wash cycles.

1.2. Button Functions

No.	Buttons	Functional Description	Note
1	Power	When the power button is turned off, the power relay is cut off to sever the common line for electric supply and, accordingly, ensure electrical safety.	
2	Program	<p>1. MINI 1.0: D-CV701*, WFWM11* Program Ver: "q1" -Premium: Normal->Delicate->Baby Care->Night Time->QUICK15->Intensive->Intensive40->Intensive60 -Regular: Normal->Delicate->Night Time->QUICK15->Intensive</p> <p>2. MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12* Program Ver: "u1" -Premium: 1) ON-LINE: Normal->Delicate->Baby Care->Tub Clean->Speed Wash->Intensive->Intensive40->Intensive60 2) OFF-LINE: Normal->Delicate->Tub Clean->Baby Care->Spin->Speed Wash->Intensive->Intensive40->Intensive60 -Regular: Normal->Delicate->Tub Clean->Spin->Speed Wash->Intensive</p>	
3	Add Rinse	<p>1. MINI 1.0: D-CV701*, WFWM11* Program Ver: "q1" Up to 5 cycles are addable for all program except "QUICK15" Up to 8 cycles are available for "Baby Care", "Night Time", "Intensive", "INtensive40" and "Intensive60" while 7 additional cycles are available for "Normal" and "Deicate". Up to 5 additional cycles are availavle for "QUICK15".</p> <p>2. MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12* Program Ver: "u1" Up to 5 cycles are addable for all program except "Speed Wash" and "Tub Clean" Up to 8 cycles are available for "Baby Care", "Tub Clean", "Intensive", "INtensive40" and "Intensive60" while 7 additional cycles are available for "Normal" and "Deicate". Up to 5 additional cycles are availavle for "Speed Wash".</p>	
4	Start/Pause	The LED lamp for 'Program' button flickers during and remains on when the washer stops the cycle.	

2. Program Functions

2-1. Wash Program

1) Wash Programs

- ① The default washing times and water levels apply for all the programs without sensing the load.

2) Wash Times

1. MINI 1.0: D-CV701*, WFWM11*

Category Program	Water level	Time of water supply	Heating time	Wash time	Total wash time
Normal	Default	2min	-	8min	10min
Delicate	Default	2min	-	11min	13min
Baby Care	Default	2min	47min	15min	64min
Night Time	Default	2min	-	12min	14min
QUICK15	Default	2min	-	4min	6min
INTENSIVE	Default	2min	-	10min	12min
INTENSIVE40	Default	2min	15min	25min	42min
INTENSIVE60	Default	2min	60(NO Heating)+20min	228min	310min

2. MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*

Category Program	Water level	Time of water supply	Wash 1 time	Heating time	Wash 3 time	Total wash time
Normal	Default	2min	4min	-	4min	10min
Delicate	Default	2min	5min	-	6min	13min
Baby Care	Default	2min	2min	47min	13min	64min
Speed up	Default	2min	4min	-	0min	6min
Tub Clean	Default	2min	5min	-	5min	12min

* Washing time after the water temperature reaches the target level.

- ① The washing time consists of heating cycle and post-heating main wash cycle. The time displayed for heating cycle elapses immediately on completion of heating cycle or remains unchanged until the heating cycle is over.
- ② The heating cycle is complete when the water temperature reaches the target level.
- If the water temperature doesn't reach the target level after the heating cycle under the Baby Care, Cotton 40, Cotton 60, Intensive 40, Intensive 60, program, the time on display stops declining and an additional heating cycle applies for 10 minutes. If the water temperature doesn't reach the target level after the additional cycle, the heating cycle is suspended and the main wash cycle starts.
- ③ The water heater does not resume its operation after it is turned off when the water temperature reaches the target level.

3) Resupply of Water

- ① The water level is measured every two minutes after the initial water supply to add water if the level is lower than the pre-determined level.
- ② The motor stops running during the resupply of water.
- ③ Water is resuppliable up to 20 times during wash. On the occurrence of the 21st water supply, the "E4" error is displayed and the wash cycle is suspended. -> This error doesn't usually take place because of the short duration of wash program.
- Start the pump on the occurrence of the "E4" error.
- ④ If the water level is below the reset level during the resupply of water, the 'IE' error is displayed and the heater is turned off.

4) Detection of Overflow

- ① The water level is measured every two minutes after the initial water supply to drain water if the level is above the overflow level.
- ② If the water level is measured above the overflow level three times, the 'E3' error is displayed and the wash cycle is suspended. However, the water continues to be drained.
- ③ If the water level is first measured to be above the overflow level during the "Baby Care" program, the heating cycle is skipped. The 'E3' error is displayed on the third occurrence of overflow detection, and the wash cycle is suspended. However, the water continues to be drained.
- ④ If the water level is measured to be above the overflow level when the wash cycle is suspended, the 'E2' error takes place but the water continues to be drained.

5) Water Level for Heating Cycle

- ① If the water level is measured below the preset level, the heater is turned off to prevent overheating or short circuit during the heating cycle.

2-2. Rinse Cycle

1) Drainage

- ① If the water is 55°C or hotter, cold water is added to lower the water temperature. When the water temperature decreases to 50°C or lower, water drainage resumes.
- ② After the water drainage starts, the drain pump continues to work.
- ③ If the water level lowers to the reset level within 60 seconds, the waiting time of 20 seconds applies. Otherwise, the waiting time of 40 seconds applies.

2) Intermediate Spin

- ① Intermediate spin is run at the pre-determined speed for each program.

MINI 1.0: D-CV701*, WFWM11*

MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*

Program \ Category	RPM
Normal	700
Delicate	400
Baby Care	700
Night Time	500
QUICK15	700
INTENSIVE(40,60)	700

Program \ Category	RPM
Normal	700
Delicate	400
Baby Care	700
Speed up	700
Tub Clean	700

3) Water Supply

- ① Only cold water is supplied to the rinse cycle.
- ② Fabric softener is added to the final rinse cycle.

4) Resupply of Water

- ① The water level is measured a minute after the rinse cycle starts to determine whether water needs to be added to raise the water level to the preset level.

2-3. Spin Cycle

1) Drainage

- ① It is equivalent to the drainage cycle for rinsing.

2-3. Spin Cycle

1) Termination of Door Lock

- ① After the electric signal to door lock is cut off, the door is shaken horizontally until it becomes mechanically openable.

3. Functional Structure

3-1. Water Supply Level

1) Water Supply Level

① RESET

: It is the water level to start drainage. The spin cycle starts 30 seconds after the reset level is reached. It is the minimum water level to start operating the heater.

② HEATER OFF

: It is the minimum water level to start operating the heater. The heater starts running only when the water level is above this measure.

※ MINI 1.0: D-CV701*, WFWM11*

③ Wash 1: Water level for Baby Care program.

④ Wash 2: Water level Normal, Night time, QUICK15, Intensive program.

⑤ Wash 3: Intensive40, Intensive60 Program.

※ 2. MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*

③ Wash Low: Water level for Baby Care program.

④ Wash Mid: Water level Normal, Delicate, Night time.

⑤ Wash 3: -

⑥ LOCK OFF (Water level to unlock door)

: Water level to enable to open the door

⑦ LOCK ON (Water level to lock door)

: Water level to lock the door automatically due to the water in the tub.

⑧ Overflow Level

: Water level to start draining water due to overflow risk. The water supply is suspended and the water is drained to lower the level to the reset level if the overflow level is reached.

3-2. DOOR S/W

1) DOOR S/W

① Locking of Door

A pulse of 20m sec duty is transmitted twice to the solenoid 3 seconds after the bimetal door switch starts running until the door is locked. The bimetal starts running as soon as the power button is pressed.

② Unlocking of Door

A pulse of 20m sec duty is transmitted to the solenoid after the bimetal door switch is turned off until the door is unlocked

③ The wash cycle is startable as the motor and other parts become available for operation when the door is locked.

④ The door is locked when the water is measured at 61°C or hotter or the water level is above the safety level after the Power button is turned on.

⑤ The door is unlocked promptly after the cycle is complete.

⑥ The door is unlocked if it is openable when the cycle is suspended.

3-3. Child Lock

1) Mechanism

① If the 'Program' and 'Add Rinse' buttons are pressed simultaneously, the Child Lock mode starts running.

② In the Child Lock mode, all buttons except the Power button (press it for over 1.5 seconds) are unavailable for use.

③ The Child Lock mode is terminated if the 'Program' and 'Add Rinse' buttons are pressed simultaneously.

④ If the Power button is pressed for over 1.5 seconds, the Child Lock mode is terminated.

4. TEST MODE

4-1. Part Test Mode

1) Test Start

- ① Press the 'Program' button and then select 'Delicate' program. With the 'Program' button pressed, press the 'Add Rinse' button three times to start a test.
- ② The product version is displayed after starting a test.
- ③ Press the 'Program' button to run the washer in the following sequence.

Sequence	Description	Display
1	Lock the door	'LC' or 'LO'
2	Display the durability number	'm', 'number'
3	Number of hall sensor errors	'b1', 'number'
4	Number of IPM fault errors	'b2', 'number'
5	Number of motor overload errors	'b3', 'number'
6	Number of errors in motor arrangement	'b4', 'number'
7	Number of failures in tracking the motor speed	'b5', 'number'
8	Number of errors in DC LINK overvoltage	'b6', 'number'
9	Number of errors in DC LINK low voltage	'b7', 'number'
10	Number of failures in starting motor	'b8', 'number'
11	Operate the cold water valve	'C'
12	Operate the softener valve	'r'
13	Operate the drainage valve	'dr'
14	Unlock the door	'LC', 'LO'

5. Error Alerts

5-1. IE (Input Error) Error - Failure in Water Supply

1) Conditions

- ① The preset water level is not reached within 20 minutes after the water supply starts or resumes.
- ② During wash: The error occurs 4 minutes after the water level remains unchanged or 20 minutes after the water level starts changing.
- ③ During rinse: The error occurs 20 minutes after the cycle starts.

2) The "LE" error flickers on the display panel.

3) If the Power button is turned off and on, the error display disappears.

5-2.OE (Output Error) Error - Failure in Water Drainage

1) Conditions

- ① The preset water level is not reached within 10 minutes after the water starts being drained.
- ② Overload situations caused by failures in drainage take place 18 times during the final main spin cycle.

2) The "LE" error flickers on the display panel.

3) If the Power button is turned off and on, the error display disappears.

5-3. LE (Lock Error) Error - Failure in Door Unlocking

1) Conditions

- ① The Start/Pause button is pressed to run the cycle when the door is open.
- ② The error disappears promptly when the door is closed and the subsequent cycle starts.

2) The "LE" error flickers on the display panel.

3) If the Power button is turned off and on, the error display disappears.

5-4. E1 Error - Error in Water Level Detection

1) Conditions

- ① The water level is below the reset level or above the overflow level in the line test mode.
- 2) The drainage synchronous motor continues to work until the water level drops to the reset level.
- 3) If the Power button is turned off and on, the error display disappears.

5-5. E2 & E3 Errors - Overflow Error

1-1) Conditions for E2

- ① The water supply valve is running when the washer is turned off and the operation is suspended so that the water level reaches the overflow level.

1-2) Conditions for E3

- ① If the errors are detected three times or more during operation, the 'E3' error appears on the display panel. The operation is suspended, but water continues to be drained.
- ② If the water level is first measured to be above the overflow level during the "Baby Care" program, the heating cycle is skipped. The 'E3' error is displayed on the third occurrence of overflow detection, and the wash cycle is subsequently suspended. However, the water continues to be drained.
- 2) The drainage synchronous motor continues to work until the water level drops to the reset level.
- 3) The "E2" or "E3" error flickers on the display panel.
- 4) If the Power button is turned off and on, the error display disappears.

5-6. E9 Error - Error in water level sensor

1) Conditions

- ① The water level sensor transmits a frequency of 15KHz or lower or 30KHz or higher due to malfunctions.
- 2) The "E9" error flickers on the display panel.
- 3) The error warning is sounded for 10 seconds every 10 minutes.
- 4) If the Power button is turned off and on, the error display disappears.

5-7. E4 Error - Error in the Detection of Water Leaks

- 1) Water is resupplied over 20 times during a wash cycle. -> This rarely occurs due to the short cycle duration.
- 2) The motor stops running and the 'E4' error appears on the display panel.
- 3) If the Power button is turned off and on, the error display disappears.

5-8. Errors in Motor

- 1) b1 Error (Error in HALL IC signals)
- 2) b2 Error (EMG or IPMFAULT)
 - ① The error occurs when electric current of 15A or higher flows into the shunt resistance of IPM-MODULE.
The function is to protect PCB from the motor overheating.
 - ② The motor stops running, and 30 retrials are made. Then, the 'b2' error appears on the display panel.
 - ③ If the Power button is turned off and on, the error display disappears.
- 3) b3 Error (Motor overload error)
- 4) b4 Error (Failure in motor arrangement)
- 5) b5 Error (Failure in tracking the motor speed)
- 6) b6 Error (Error in DC LINK overvoltage)
- 7) b7 Error (Error in DC LINK low voltage)
- 8) b8 Error (Failure in starting motor)
 - ① The error is caused by failure to rotate the motor due to the initial overrunning of motor.
 - ② The motor stops running, and 30 retrials are made. Then, the 'b8' error appears on the display panel.
 - ③ If the Power button is turned off and on, the error display disappears.

'b1', 'number'	Number of hall sensor errors
'b2', 'number'	Number of IPM fault errors
'b3', 'number'	Number of motor overload errors
'b4', 'number'	Number of errors in motor arrangement
'b5', 'number'	Number of failures in tracking the motor speed
'b6', 'number'	Number of errors in DC LINK overvoltage
'b7', 'number'	Number of errors in DC LINK low voltage
'b8', 'number'	Number of failures in starting motor

5-10. Errors in Temperature Sensor (Available for premium model only)

1) H2 Error - Open/Short error in washer temperature sensor (Available for premium model only)

- ① The washer temperature sensor fails to work or is not properly connected.
- ② The error warning is sounded for 10 seconds every 10 minutes.
- ③ If the Power button is turned off and on, the error display disappears.

2) H4 Error - Overheated washer temperature sensor (Available for premium model only)

- ① The sensor temperature turns out to be 125°C or higher.
- ② If the Power button is turned off and on, the error display disappears.

3) H5 Error - Error in water temperature for Delicate program (Available for premium model only)

- ① The water temperature is 45°C or higher in the Delicate program. (The error occurs during operation only when the tub contains water)
- ② If the Power button is turned off and on, the error display disappears.

4) H6 Error - Malfunction of water heater (Available for premium model only)

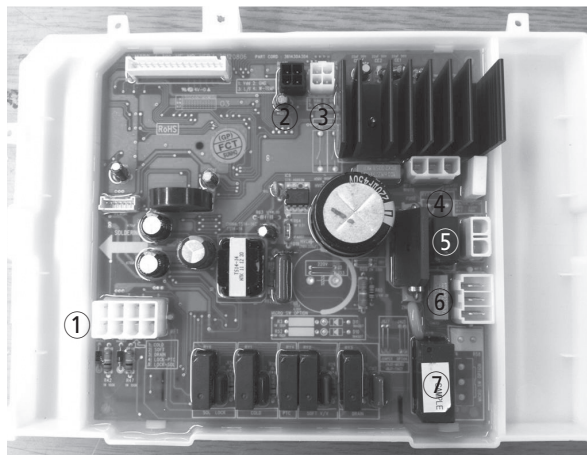
- ① The water temperature fails to rise by 2°C within 30 minutes after the heater starts running.
- ② If the Power button is turned off and on, the error display disappears.

5) H8 Error - Overheated water heater (Available for premium model only)

- ① The water temperature rises by 6°C or more within 30 seconds after the heater starts running due to the lack of water in tub or other reasons.
- ② The water heater doesn't operate although it is functional. The washer is running with the heater turned off.

6. PCB PIN

1. MINI 1.0: D-CV701*, WFWM11*



- ① FW1(WHITE 8PIN)
1: COLD V/V
2: SOFT V/V
3: DRAIN V/V
4: LOCK-PTC
5: LOCK-SOL
7: DRAIN-CHECK
8: LOCK-CHECK

- ② WF9(BLACK 4PIN)
1: Vdd
2: GND
3: LEVEL SENSOR
4: W-TEMP

- ③ WF10(WHITE 4PIN)
1: Vdd
2: GND
3: Ha
4: Hb

- 1: W
2: V
3: U

- ④ WF7(WHITE 3PIN)

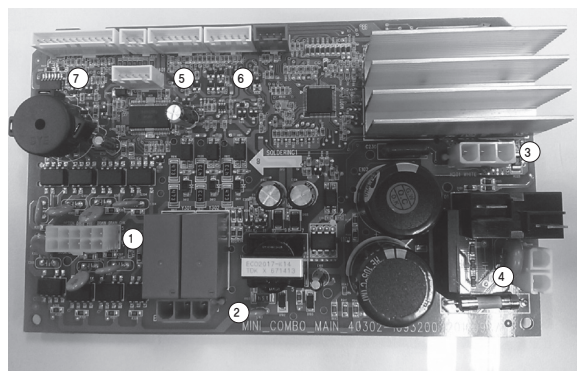
- ⑤ WF6(WHITE 2PIN) :
HEATER OPTION
1: HEATER
2: HEATER

- ⑥ WF5(WHITE 3PIN)
1: POWER RELAY
2: P/CORD
3: P/CORD

- ⑦ WF5(RED 3PIN)
POWER OPTION

- ⑧ WF2(BLUE 2PIN)
REACTOR OPTION

2. MINI 1.5: ODW30-999B, ODW30-999G, DWM30-999PG, WFWM12*



- ① N301(WHITE 10PIN)
1: OPTION
2: COLD V/V
3: SOFT V/V
4: DRAIN PUMP
5: DRAIN CHECK
6: LOCK CHECK
7: DETERGENT PUMP
8: RINSE PUMP
9: DRY V/V
10: DOOR LOCK

- ② N303(BLUE 3PIN)
1: DRY_HEATER_RELAY
2: WASH_HEATER_RELAY
3: AC1(LIVE)

- ③ N201(WHITE 3PIN)
1: W
2: V
3: U

- ④ N101(WHITE 2PIN)
1: 無
2: AC1(LIVE)

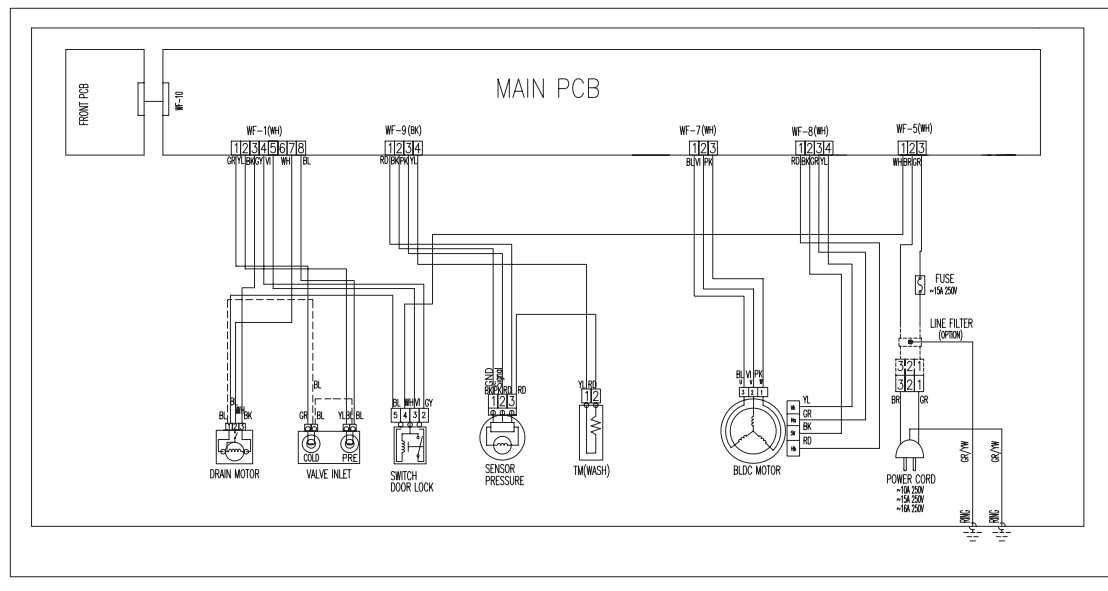
- ⑤ N501(WHITE 7 PIN)
1: RESET
2: RX_FROM_FRONT
3: TX_TO_FRONT
4: POWER KEY
5: 5V
6: GND
7: 15V

- ⑥ N502(WHITE 6PIN)
1: GND
2: GND
3: 5V
4: RX_FROM_WIFI
5: TX_TO_WIFI
6: RESET

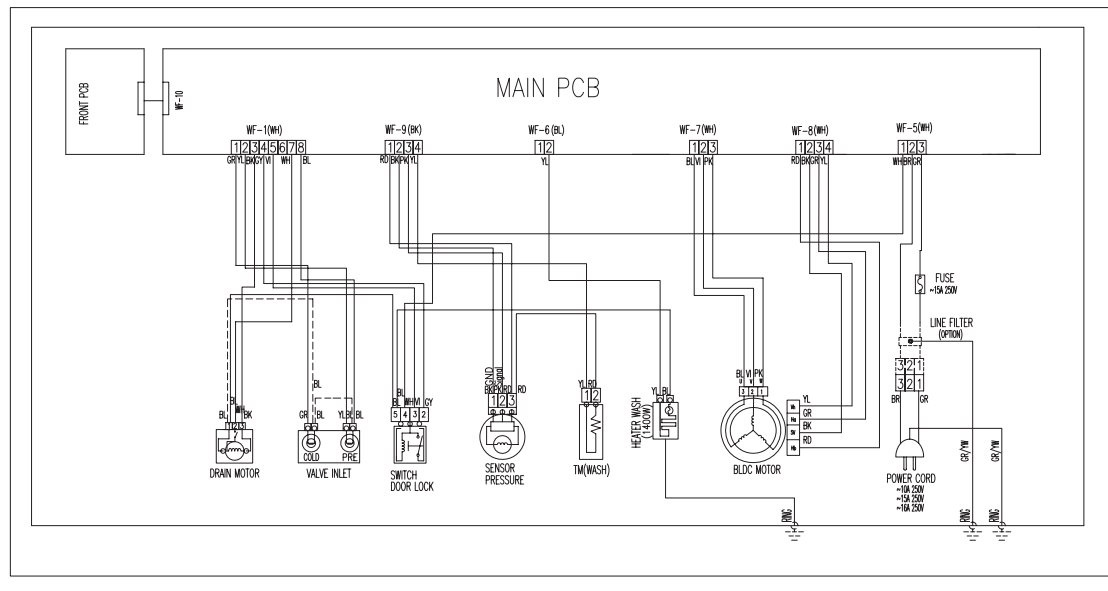
- ⑦ N601(WHITE 12PIN)
1: 5V_STANBY
2: GND
3: HALL_A
4: HALL_B
5: 5V
6: WASH_TEMP
7: DRY_TEMP
8: GND
9: L/S OUT
10: L/S IIN
11: RINSE_SENSING
12: DETERGENT_SENSING

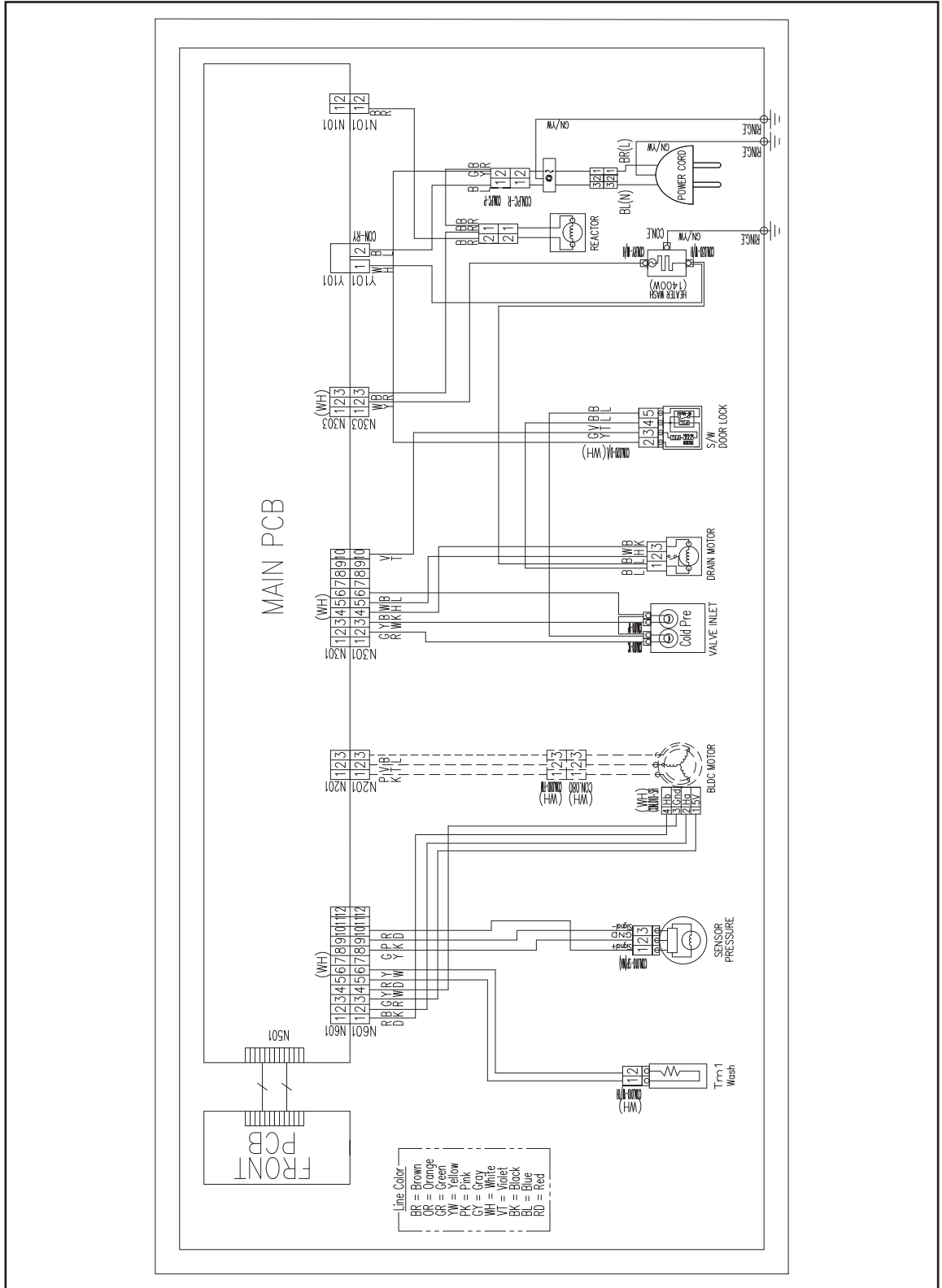
5. Wiring Diagram

D-CV701***01



D-CV701****





6. Part List and Major Specifications

NO	PART NAME	PART CODE	SPEC	MAKER	REMARK
1	Wash Motor	36189L8000	DWD200BL, DC 310 V, 125 W, Class F	New Motec	
	Wash Motor	36189L8500	GJ-2BA003A, DC 310 V, 125 W, Class F	G&J	
	Tonlon Motor	-	-	Tonlon	
2	Drain Motor	3919601110	BV-DW23, 220-240 V, 2.5 W, Class E	Gyeong Nam Nakagawa	
	Drain Motor	3919601001	SDPV-1, 220 V, 3 W, Class E	SAMCO	
3	Wash Heater	66127-0001504-00	DHDH-XY600, 230 V, 1400 W	Donghai	
4	CORD POWER AS	66112-0004303-00	DTII-3P-07 250V 10A, RVV 3X1.0 CCC CHINA 2.5M WH	Longwell, UNION Electronics	
	Power Cord	-	H05VV-F, 3Gx1.5mm ²	Hongchang	
	Power Cord	-	H05VV-F, 3Gx1.5mm ²	Longwell	
	Power Cord	-	H05VV-F, 3Gx1.5mm ²	KKDK	
	Power Cord	-	H05VV-F, 3Gx1.5mm ²	Seshin	
	Power Cord	-	H05VV-F, 3Gx1.0mm ²	HongChang	
	Power Cord	-	H05VV-F, 3Gx1.0mm ²	Longwell	
	Power Cord	-	H05VV-F, 3Gx1.0mm ²	KKDK	
5	Power Plug	-	DTIII-2P-05, 250 V, 16 A	Hongchang	
	Power Plug	-	LP-33, 250 V, 16 A	Longwell	
	Power Plug	-	KKP-4819, 250 V, 16 A	KKDK	
	Power Plug	-	SEE-72GE, 250 V, 16 A	Seshin	
6	Fuse (M-PCB)	40504-0002700-00	250 V, 8 A	ORISEL	MINI 1.5
	Fuse (M-PCB)	-	250 V, 6.3 A	ORISEL	MINI 1.5
	Fuse (M-PCB)	40504-0002700-00	250 V, 8 A	Littel Fuse	MINI 1.5
	Fuse (M-PCB)	-	250 V, 6.3 A	Littel Fuse	MINI 1.5
7	EMI FILTER	3611913100	EMI FILTER RDFC-2720, MINI DRUM, 250V 12A,,BRACKET	Ruikai	
	EMI FILTER	-	LFT-215W-**, 250 V, 12 A	SangShin Electronics	
8	X-Capacitor	40C01-0014300-00	PCX2 335M, 275 V, 0.1 μ F	Pilkor	MINI 1.0/1.5
	X-Capacitor	40C01-0014300-00	CMPP, 275 V, 0.1 μ F	SUNGHO	MINI 1.0/1.5
	X-Capacitor	-	CMPP, 275 V, 0.68 μ F	SUNGHO	MINI 1.0/1.5
	X-Capacitor	-	PCX2 335M, 275 V, 0.68 μ F	Pilkor	MINI 1.0/1.5
9	Relay	40507-0000300-00	GT-1A-12D, 250 V, 25 A	GOLDEN	MINI 1.5
	Relay	40507-0000300-00	SFK-112DM, 250 V, 20 A	SANYOU	MINI 1.5
	Relay	40507-0000300-00	HF160F, 250 V, 25 A	HONGFA	MINI 1.5
	Relay	40507-0000600-00	SMIH-S-112LM, 250 V, 16 A	SANYOU	MINI 1.5
	Relay	40507-0000600-00	OMIH-SH-112LM, 250 V, 16 A	TYCO	MINI 1.5
	Relay	40507-0000600-00	GA-1A-12LH, 250 V, 16 A	GOLDEN	MINI 1.5
	Relay	5SC0101190-00	PCJ-112D3MH, 250V, 3A,	TYCO	MINI1.0
	Relay	5SC0101190-00	Y5-1A-12L, 250V, 3A,	GOLDEN	MINI1.0
	Relay	5SC0101190-00	SRB-S-112DM, 250V, 3A,	SANYOU	MINI1.0
	Relay	5SC0101130-00	GA-1A-12L, 250 V, 10 A	GOLDEN	MINI1.0

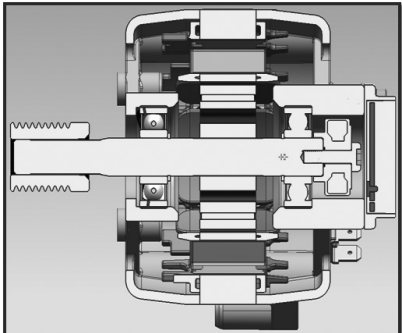
NO	PART NAME	PART CODE	SPEC	MAKER	REMARK
9	Relay	5SC0101250	SJ-S-112DM, 250V, 10A	SANYOU	MINI1.0
10	Transformer	40512-0017800-00	40512-0017800, Input : DC 310 V, output : DC 5 V, 15 V, Class E	TDK	MINI 1.5
	Transformer	5EM102806C	220-240V~ 50/60Hz	Namseong Electric	MINI1.0
11	Varistor	40D09-0000700-00	SVC561-14, 560 V, 50 A	SamHwa Condenser	MINI 1.0/1.5
	Varistor	40D09-0002300-00	SVC681-14, 680 V, 50 A	SamHwa Condenser	MINI 1.0/1.5
12	Photo coupler	40101-0025400-01	EL817C, 5 kV	everlite	MINI 1.0/1.5
	Photo coupler	40101-0025400-01	PC17K1, 5 kV	KODENSHI	MINI 1.0/1.5
	Photo coupler	40101-0025400-01	PC-817, 5 kV	SHARP	MINI 1.0/1.5
13	PCB	40302-1093300-00	KB-3151C, V-0	KING BOARD	MINI 1.5
	PCB	40302-1093200-00	KB-6160C, V-0	KING BOARD	MINI 1.5
	PCB	3614353010	KB-3151C, V-0	KING BOARD	MINI 1.0
	PCB	361430A304	KB-6160C, V-0	KING BOARD	MINI 1.0
	PCB	-	KB-6160, V-0	KING BOARD	MINI 1.0/1.5
	PCB	-	KB-6150, V-0	KING BOARD	MINI 1.0/1.5
	PCB	-	KB-3151, V-0	KING BOARD	MINI 1.0/1.5
	PCB	-	DS-7405, V-0	Doosan	MINI 1.0/1.5
14	Inlet Valve	3615401000	DR23AS, 220-240 V, Class B	DREAM TECH	
15	Door Lock S/W	3619047230	DM, T85	Wenzhou Tianjian Electric Co.,Ltd	
	Door Lock S/W	3619047250	DL-S2, 250 V, 16 A	Bitron	
16	Fuse	4414A25110	326, 250V, 15A	Littelfuse	
	Fuse		65TL, 250V, 15A	Orisel	
	Fuse		61TS, 250V, 15A	Orisel	
17	SENSOR PRESSURE	361482532A	SENSOR PRESSURE DL-DW12-H AIR INLET 270 HOOK, TUBE	NANTONG HYAGUAN ELECTRIC CO., LTD	
18	THERMISTOR WASH	361AAAAB10	THERMISTOR WASH UL. R25=11.981K R80=1.704K	SST	
19	HARNESS EARTH	3612794420	HARNESS EARTH UL AWG18 DWD-F1XXX EARTH HEATER	DongYang Electronics	
20	HARNESS AS	66126-0014704-01	FULL OPTION DONG YANG DWD-M301 CLAMP CORE	DongYang Electronics	
21	HARNESS SUB(EMI)	361279A621	EMI SUB HARNESS D-M301, TR29 X 19 X 15 G5B 8TURN, FUSE	DongYang Electronics	
22	THERMAL FUSE	-	WASHER HEATER(2EA), 220V, 16A, G5X167, G5X184, ON/OFF 184°C	THERMO-	

* MINI 1.0: D-CV701PCNCX, D-CV701MWNCX, D-CV701JCNCX, D-CV701GGNCX, D-CV701GCNCX,
D-CV701AWNCX, D-CV701, CHINA, ODW-JDM883, D-CV701SCNCX, D-CV701TCNCX
D-CV701TCNCX, D-CV701WWNCX, D-CV701PCNCX

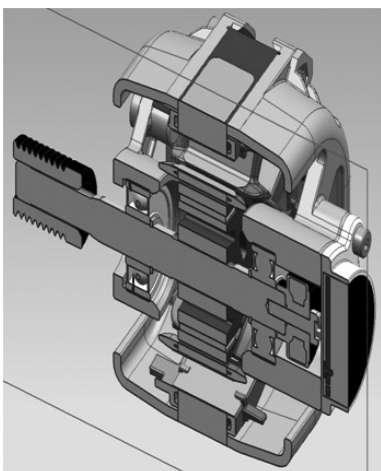
* MINI 2.0: MINI 1.5, CHINA, ODW30-999B, MINI 1.5, CHINA, DWM30-999PG, ODW30-999G

1. Specifications, Operation, and Defect Inspection of Inverter Motor

1) Specifications

Category	Specifications	Configuration
Motor Type	Ternary Phase Brushless DC Motor	
Ventilation/Cooling	Open/magnetic ventilation	
For Use Load	Front load washer	
Stator Pole	9 POLE	
Rotor Pole	6 POLE	
Voltage (V)	DC 240 - 310V	
Max. Output (W)	125 W	
Stator Coil	AIEIW AL	
Hall Sensor Assembly	HALL IC A329 1K	
Power Consumption (W)	25	
Current (A)	1.0	
Revolution per Minute (RPM)	1500	
Wire Round Resistance (Ω)	2.25 \pm 5%	

2) Operation



① ROTOR

The rotor is designed in inner rotation type to transform the electric energy from stator into mechanical energy. It consists of the shaft and pulley to transmit the mechanical energy to outside. Belt is fixed on the pulley to enable set rotation.

② STATOR

The stator has a magnetic function, which requires coil winding for electric transmission to produce iron cores and electromagnets for magnetic functionality.

③ MAGNET

The magnet transmits energy and is permanently functional at all times. It doesn't require recharges even after repetitive uses.

④ SENSOR ASS'Y

It provides power to the coil of stator. It contains the hall IC to enable the assessment of motor speed.

□ Motor's Functional Mechanism

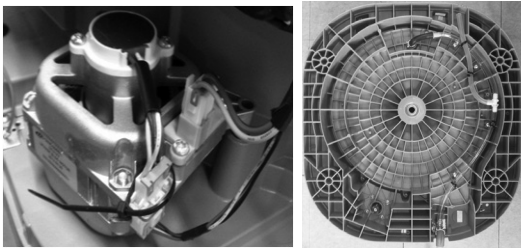
- The device transforms electric energy into mechanical energy.
- The motor contains a costly auxiliary driving gear, is controlled by semiconductors, causes low electric/mechanical noises, and is capable of running at high speed.
- The hall IC applies to locate the rotor. It acts as a brush-type commutator.
- The hall IC locates the active rotor with the magnet attached to the rotor and sends signals from the current rotor location to the base of transistor connected to the coil producing torques.
- TR approved for signals acts as an electronic switch to send the electric current to coil, causing forces (F) between the field magnet and coil to rotate the rotor.
- As the hall IC detects the pole opposite to the initially detected one when the rotor is running, the initially started TR is turned off and another TR is turned on to send the electric current in an opposite direction to the current over coil. This leads to cause the forces (F) between the field magnet and coil consistently.
- The mechanism reiterates to run the motor consistently.

3) Motor Malfunctions and Inspections

- ◎ Malfunction: * The b8 error (Failure in starting motor) occurs when the power is not supplied or other malfunction takes place.
 - * The b8 error occurs even when the motor fails to rotate properly due to defective connection of connector.
 - * The b2 error occurs when an excess current (15A or higher) flows into PCB.

Inspection	Repairs
* Inspect the power connector	* Normalize the connection of connector
* Inspect the connection of hall sensor connector	* Normalize the connection of harness connector
* Inspect the operation of motor * Assess the resistance in motor coil	* Exchange the motor
* Check the items specified above	* Take corrective measures after inspecting the corresponding parts (PCB, harness, drum components, etc.)

4) Motor Exchange Service



[Disassembly]

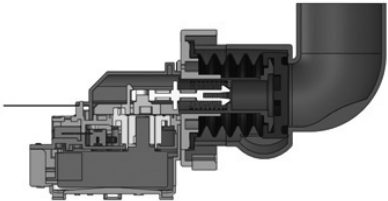
- ① Separate the power supply device and hall sensor connector from the motor
- ② Separate the belt
- ③ Disconnect 4 motor-fixing bolts

[Assembly]

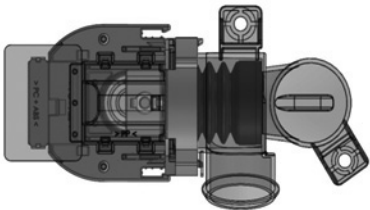
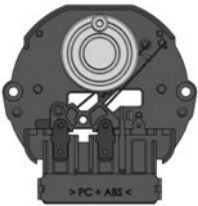
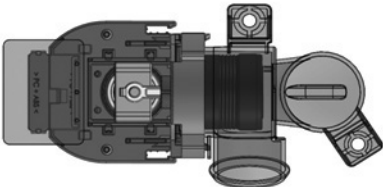
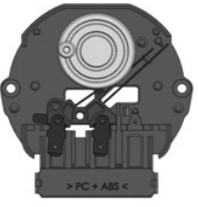
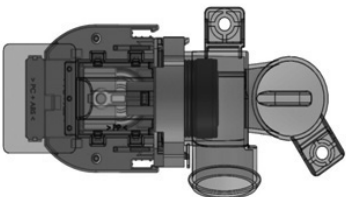
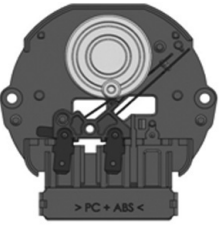
Re-assemble the parts in the opposite sequence to disassembly

2. Specifications, Operation, and Defect Inspection of Drain Motor

1) Specifications

Category	Specifications	Configuration
Type	Combination of Housing and Synchronous Motor	
Pole	Negative Pole Synchronous Motor	
Revolution per Minute	5/6R.P.M. (50/60Hz)	
Electric Current	35mA or lower	
Power Consumption	3.0W or lower	
Voltage	AC220~240V, 50/60Hz	
Opening of Bellows	11mm or higher	
Operating Duration of Bellows	1 cycle (10 seconds), opening (5 seconds)	
Blocking Power of Bellows	Water pressure of 0.09kgf/cm ² at inlet	
Coil Resistance	13.2k \pm 5%(20°C)	

2) Operation

Valve Operation	Location of Cam	Description
		The bellows are completely closed, the location of cam is set at 0 degree, and the connection is off. The wash cycle does not start yet.
		After the power supply is connected, the synchronous motor starts operating and the cam begins to rotate at the same time to open the bellows. (Location of cam is set at 90 degrees, and the connection is on)
		After the power supply is connected and the internal connection is turned on, the operation continues for a while (pulse signal) and the cam is set at 180 degrees to start drainage. After drainage is complete, the power supply is reconnected from PCB to maintain the operation for a while and turn off the connection, which leads to close the bellows.

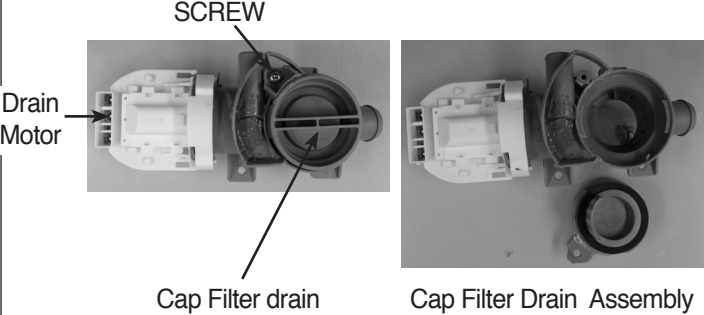
☞ Set Operation

- ▷ When the drainage valve is on
When the internal switch is off, signals continue to be transmitted to the drain motor until the internal switch is turned on. If the internal switch is turned on, signals are sent to the drain motor for about 3.6 seconds, which is subsequently turned off.
- ▷ When the drainage valve is off
When the internal switch is on, signals continue to be transmitted to the drain motor until the internal switch is turned off. If the internal switch is turned off, signals are sent to the drain motor for about 1.2 second, which is subsequently turned off.

3) Drainage Malfunctions and Inspections

◎ Defects:

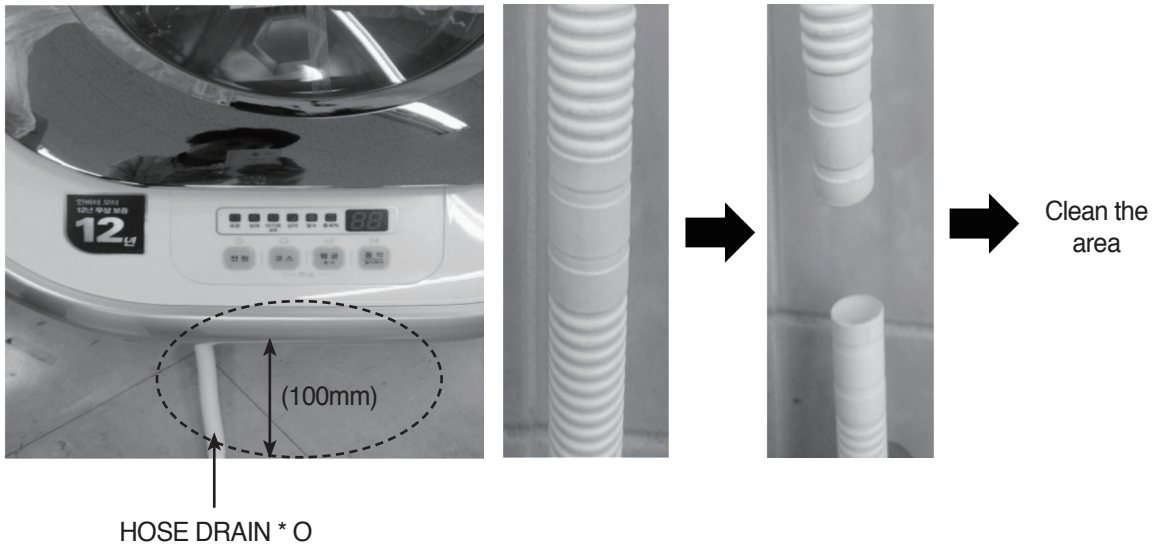
- * The IE (INPUT ERROR) occurs as the water level doesn't change after the water supply starts.
(The preset water level is not reached within 20 minutes)
- * The OE (OUTPUT ERROR) occurs due to poor drainage.
(The water level fails to reach the reset point within 10 minutes after the drainage starts)

Inspection	Repairs
* Inspect whether the hose drain is twisted or located too high	* Reinstall the hose drain normally
<ul style="list-style-type: none"> * Inspect whether the drainage valve is clogged with dust and impurities * Inspect whether any impurities exist between the bellows and housing to cause minor drainage (leaks) 	<ul style="list-style-type: none"> * Detach the cap filter drain to the clockwise after detach the base screw * Clean the cap filter drain removing any impurities * After cleaning, turn the cap filter drain counterclockwise tightly <div style="text-align: center;">  <p>SCREW</p> <p>Drain Motor</p> <p>Cap Filter drain</p> <p>Cap Filter Drain Assembly</p> </div>
<ul style="list-style-type: none"> * Examine the operation of drain motor * Examine the motor coil resistance 	<ul style="list-style-type: none"> * Exchange the drain motor * Take corrective measures after inspecting relevant parts (water supply valve, pcb triac, etc.)

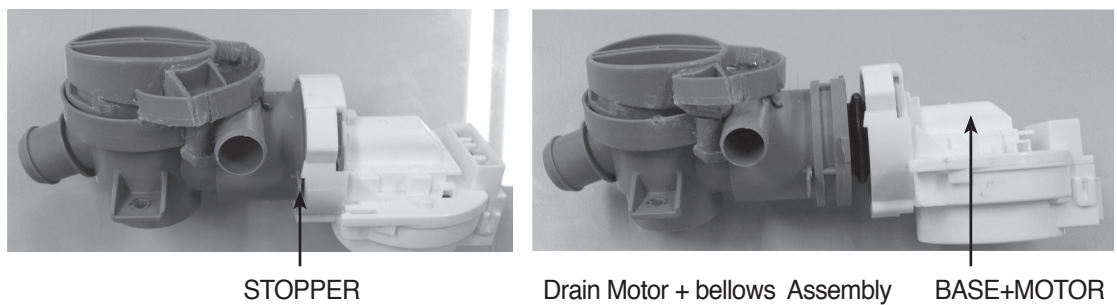
4) In the event of OE after remedy, follow the below directions.

Inspection method: Remove the join area around "100mm" from the hose drain.

After removal, clean the area where the foreign object was located .



5) Cleaning and Exchange of Drain Housing



[Disassembly]

- ① Push the stopper of housing and turn the motor base counterclockwise to detach the bellows.
- ② Examine the inside to remove any impurities.
- ③ Exchange only the motor if the motor causes poor operation.

[Assembly] Re-assemble the parts in the opposite sequence to disassembly.

3. Specifications, Operation, and Defect Inspection of Inlet Valve [Valve for cold water and softener]

1) Specification

Category	Specifications	Configuration
Type	1/4 Inch Fitting Solenoid Valve	
Voltage	AC 220 VOLT 50/60hz	
Electric Current	30mA or lower	
Rating Time	60 minutes (Unloaded = 40 minutes)	
Power Consumption	5.5W or lower	
Terminal Angle	180 degrees (Clockwise at water inlet)	
Fluid in Use	Tap water	
Flux (4kgf/cm2)	7L or more	
Fluid Pressure	0.2 - 8kgf/cm2	
Opening and Closing Speed	1.0 sec or shorter	
Max. Temperature	60°C or lower	
Coil Resistance	4.31k \pm 5% (20°C)	
Diaphragm Opreation	2.0mm or more	

2) Operation

If the power supply is connected to the water inlet valve, the rod valve is drawn by the coil's magnetic field to open the diaphragm hall and push up the diaphragm with water pressure. This leads to open the water flow and start the water supply. If the power supply is cut off, the coil's magnetic field disappears and the force of internal spring leads the rod valve to close the diaphragm hall, leading to block the water flow.

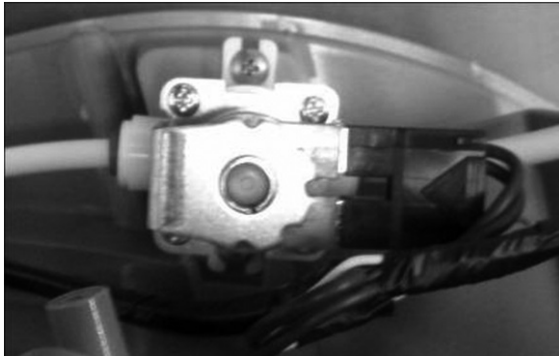
3) Inspection and Repairs of Water Inlet Valve

Defects	Descriptions	Causes	Inspection Method	Repair Method	PCB Error Mode
Water supply unavailable	Water is not supplied despite the "drone"	Faucet is turned off.	Check whether the faucet is turned on	Turn on the faucet	"IE"
		Short coil	Check whether the inter-terminal resistance of inlet valve is 4.3kΩ	Exchange the part if it is open	"IE"
		Excessive impurities on SUS filter	Unplug the inlet hose and then check the impurities	Remove impurities and "cleanse" the filter	"IE"
Water supply unavailable	Water supply continues with the power "ON"	Impurities in valve	Check the malfunctions in valve	Exchange the inlet valve	"IE"
		Disconnected connector	Check the connection of connector with naked eyes	Reconnect the connector	"IE"
		Coil wire	Check whether the inter-terminal resistance of inlet valve is 4.3kΩ	Exchange the inlet valve	"IE"
		Disconnection in wiring	Check any disconnections in wiring -> Inspect circuit	Exchange the harness	"IE"
Constant water supply (into tub)	Power is "OFF" Constant leaks on sides	Defective water level sensor	See the inspection of "Water Level" defects	Exchange the water level sensor	"E2"
		Inspect any openings and blockages in pressure hoses	Inspect any openings and blockages in pressure hoses	Exchange the defective part	"E2"
		Defective valve	Check the malfunctions in valve	Exchange the inlet valve	-
Others		Check any leaks from the sides of inlet valve	Check any leaks from the sides of inlet valve	Exchange the inlet valve	-

4) Defects and Relevant Parts

Unavailable water supply	PCB	1. Inspect the insertion of PCB pin	Easily detachable if the wire is pulled	Housing on pin connection not properly inserted	Insert the housing on pin connection completely
		2. Unavailable power or water supply to inlet valve terminal	Open or destroyed PCB inlet circuit (Water relay unavailable)	Defective inlet circuit	Exchange the PCB
Incessant water supply	PCB	1. Water supply starts promptly when the power is turned "ON".	Short circuit in PCB inlet circuit or water relay (Incessant electric transmission to valve)	Short circuit in water relay	Exchange the PCB
	Inlet Valve	1. Examine whether the water supply continues even when the power supply is cut off	Deformed water inlet valve bellows	Defective inlet valve	Exchange the inlet valve
	Synchronous Drain Motor (Valve Housing)	1. Examine the operation/ water supply of inlet valve 2. Examine the drainage through the drainage hose 3. Check any impurities in valve housing	• Unclosed due to impurities in drainage housing	• Impurities in valve housing • Impurities • Error in returns of synchronous motor	• Remove impurities • Remove impurities • Exchange the synchronous motor

5) Disassembly and Assembly for Part Exchange



[Disassembly]

- ① Turn off the faucet
- ② Detach the housing
- ③ With the snap fit on inlet (red) pressed, separate the inlet hose. With the snap fit on outlet (gray) pressed, separate the inlet hose.
- ④ Unscrew a bolt

* Notes

- ① Connect the inlet hose properly to the inlet (red) and outlet (gray)
- ② Fasten the screw properly to prevent abrasion
- ③ Insert the inlet hose into valve tightly [Assembly of Inlet Valve]

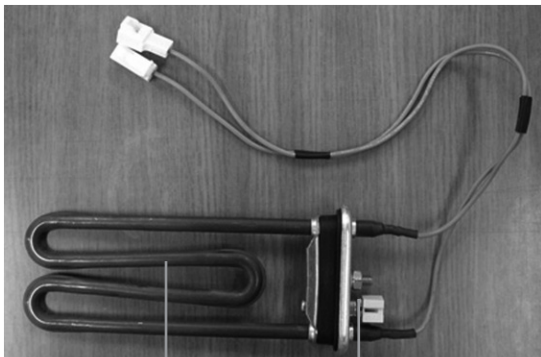
4. Specifications, Defect Inspection, and Repairs of Heater

1) Specifications

Category	Specifications	Note
Maker	IRCA	
Voltage	220V	
Power Consumption	1400 W \pm 5%	
Resistance	34.570hm	
Current Density	11.9	
Temperature Fuse	184°C	
Thermister	Included in heater	
Materials	AISI321	
Max. Temperature	WATER	
Part Code	3612804000	

1. Temperature Fuse of Water Heater (184 °C Cutoff Type)

- If the heater is running without water due to a malfunction in water level sensor and other defects, it may cause fire. The inter temperature fuse is designed to be cut off about a minute after overheating to prevent such problems. The heater temperature is set at around 270°C.
- The water heater must be used in water.



Water Heater

Water Temperature Sensor

2) Defect Inspection

Defects and Errors	Causes	Inspection of Defects and Errors	Resolution	PCB Error Mode
Water is not heated (Applicable for all front load washers)	Wire disconnection	Inspect the wire connection: Applicable to all models	Reconnect the disconnection	"H6"
	Disconnection in water heater or temperature fuse	Inspect the wire connection: If the inter-terminal resistance is within $34.57\Omega \pm 5\%$, it is normal. -> Applicable to all front load models	Exchange the water heater	"H6"
	Detachment of connector/terminal	Inspect the connection: Applicable to all front load models	Insert the terminal	"H6"
	Defective water heater or temperature sensor	Assessment of inter-terminal resistance of sensor: See the attached Water/Resistance Table	Exchange the temperature sensor	"H2"
Water is overheated	Defective water heater or temperature sensor	Assessment of inter-terminal resistance of sensor: See the attached Water/Resistance Table	Exchange the temperature sensor	"H2" or "H4"

Exchange of Heater

<p>Exchange of Water Heater</p> <p>[Disassembly]</p> <ol style="list-style-type: none"> 1. Remove 4 body-fixing screws 2. Remove the detergent and softener containers 3. Remove 2 screws fixing the door hinge 4. Remove 6 cover screws fixing the cover tub 5. Remove 6 screws fixing the cover tub 6. Remove the connector of water heater 7. Remove the nut for water heater <p>[Assembly]</p> <p>Re-assemble the parts in the opposite sequence to disassembly</p>	<p>* Error Modes</p> <ol style="list-style-type: none"> 1. "H2": Open/Short error in washer temperature sensor (Defective sensor or disconnection) 2. "H4": Overheated washer temperature sensor (The sensor temperature turns out to be 95°C or higher) 3. "H5": Overheated washer temperature sensor (The water temperature is 45°C or higher in the Delicate program) 4. "H6": Malfunction of water heater (The water temperature fails to rise by 2°C within 30 minutes after the heater starts running) 5. "H8": Overheated water heater (The water temperature rises by 6°C or more within 30 seconds after the heater starts running due to the lack of water in tub)
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5. Specifications, Operation, and Defect Inspection of Water Level Sensor

1) Specifications

O/F: Water level at which the water must be drained due to excessively high level. Water supply is suspended and water drained until the level drops to the reset level.

RESET:

1. Drainage level. A spin cycle starts 20 to 40 seconds after the reset level is reached.

Water Level to Turn off Heater:

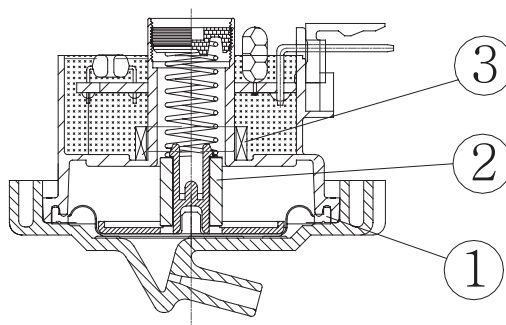
1. Water level at which the heater is suspended

Model	Part Code	Category	Reset	Heater Off	Lock Off	Lock On	Wash 1	Wash 2	Water Level for Rinse	Overflow
DWD-M301WP	3614825320	Frequency	25.80KHZ	24.56 KHZ	24.32 KHZ	24.0 KHZ	23.84 KHZ	23.68 KHZ	23.68 KHZ	22.0 KHZ
DWD-M300WA	DL - DW12 - H									

2) Functions and Operations of Pressure Sensor

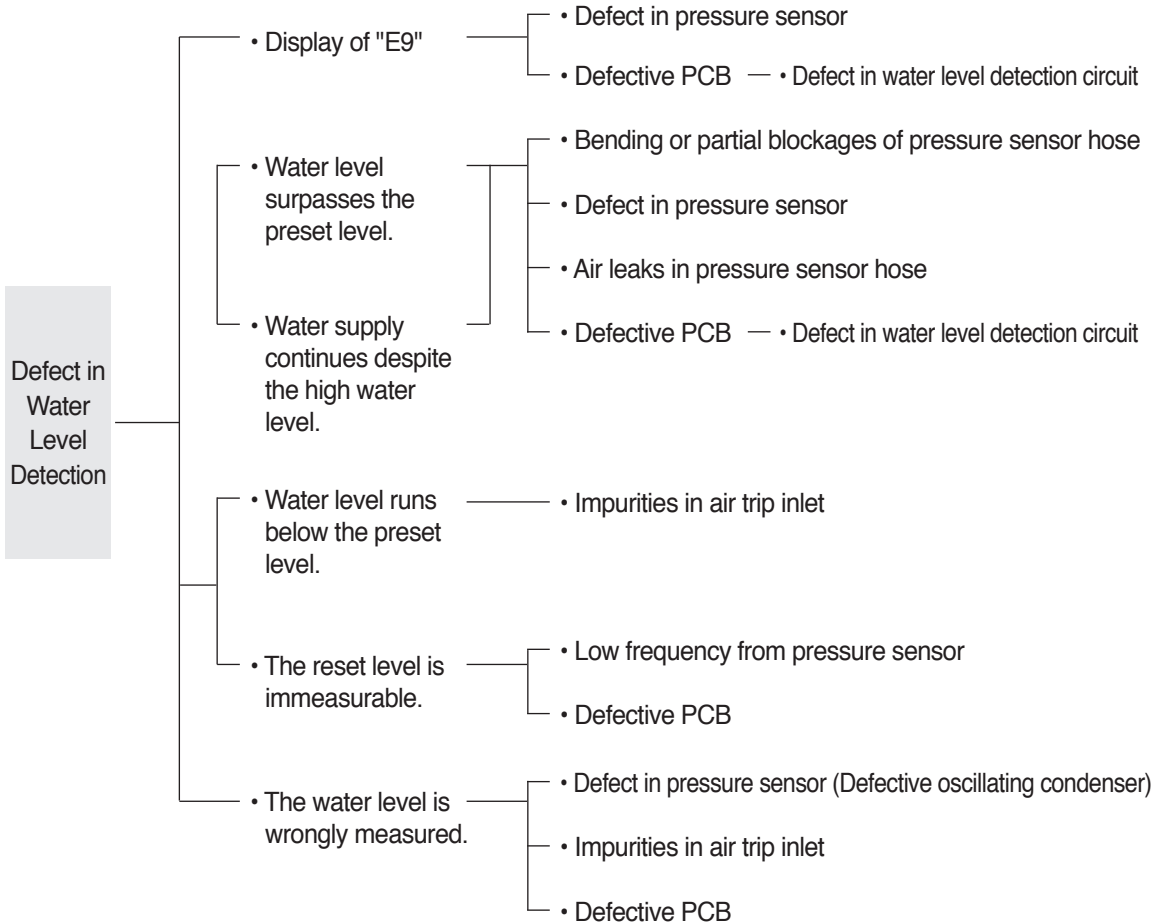
After the water begins to be supplied through the inlet valve of washer, the tub is filled with water. The rising water level in the tub delivers the head pressure (mmH₂O), which passes through the pressure delivery hose between the tub and pressure sensor to the enclosed space. The pressure is transmitted to the $\text{\textcircled{A}}$ diaphragm, which rises as the pressure increases. The delivered pressure immediately leads to the $\text{\textcircled{E}}$ metal core. As the metal core rises into the $\text{\textcircled{O}}$ COIL-ASSY that is rolled in a specific format, the condensers and resistances connected to IC- 4069 buffer, a frequency oscillation circuit on C-MOS inverter using the induced electromotive force and magnetic force according to the contact of coil, are oscillated through RC, which leads the SIGN wave in frequency from the inductor to pass through the outlet buffer to be transformed into digital signals and transmit a square wave to display the oscillation cycle in a frequency format.

The frequency signals predetermined in the set play switching functions to control the head pressure in the tub. After the wash cycle is complete at the preset level and the water is drained, the head pressure declines to return the metal core to the original condition, enabling the repetitive application of function during the cycle.



2) Defect Inspection

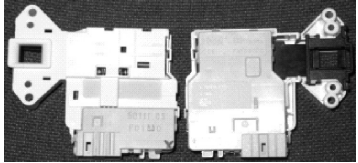
Defects and Errors	Details	Causes	Inspection of Defects and Errors	Resolution	PCB Error Mode
Incessant water supply	Water continues to be supplied although the inlet valve is functioning well.	Defect in the bellows of water level sensor	Check the frequency	Exchange the water level sensor	"E2"
		Defect in pressure sensor hoses	Check the frequency	Exchange the hose	"E2"
			Inspect any openings	Exchange the hose	"E2"
		Blockages in pressure sensor hoses	Inspect with naked eyes	Remove impurities	"E2"
Occurrence of "E9"	The water level sensor transmits the frequency of 15KHz or lower or 30KHz or higher.	Disconnected connector	Inspect the connection of connector with naked eyes	Re-insert	"E9"
		Defect in water level sensor	Check the frequency	Exchange the water level sensor	"E9"
		Disconnected wire	Inspect the wire connection -> Inspect the circuit		"E9"



6. Specifications, Operation, and Defect Inspection of Door Lock Switch

1) Specifications of Door Lock Switch

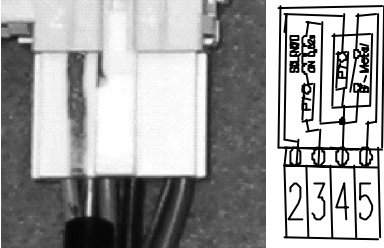
TYPE	Part Code	Model	Power	Locking Mechanism
DF F01 007 DWD-M300WA	36169047230	DWD-M301WP	250V 16A	Bimetal operation on the PTC heat

Lock "On/Off" Time	Lock Off Type	Configuration
1. Forced unlocking by Solenoid	1. Forced unlocking by Solenoid	

2) Defect Inspection of Door Lock Switch

Defects and Errors	Details	Causes	Inspection of Defects and Errors	Resolution	Error Mode
A single "snapping" sound or two consecutive "snapping" sounds	A single "snapping" sound and two consecutive "snapping" sounds occur during the early operation and in the pause mode respectively: Applicable to "DF" type only	Normal noise	The noise is caused by the operation of solenoid to lock or unlock the "sliding cam" to lock or unlock the door.		-
Occurrence of "LE" Error	"LE" error occurs as the "snapping" sound continues to occur: Applicable to "DE" type only	Disconnected connector	Inspect the connection of connector with naked eyes	Insert connector	"LE"
		Terminal disconnected from connector	See the disassembly and inspection manual for door lock switch below	Insert terminal: S/W No.4 or 5 terminal	"LE"
		Door poorly closed	-	Close the door completely	"LE"
		Defect in door hook	-	Exchange the door	"LE"
	1. "LE" error occurs without any "snapping" sounds in "DF" type.	Defect in catch cam	The abnormal "snapping" sound continues to occur.	Exchange the door switch	"LE"
		Disconnected connector	Inspect the connection of connector with naked eyes	Insert connector	"LE"
		Terminal disconnected from connector	See the disassembly and inspection manual for door lock switch below	Insert terminal: S/W No.2 or 3 terminal	"LE"
		Disconnected solenoid coil	See the picture below	Exchange the door switch	"LE"
		Disconnected connector	Inspect the connection of connector with naked eyes	Insert connector	"LE"
2. "LE" error occurs in "DA" type.	Terminal disconnected from connector	See the disassembly and inspection manual for door lock switch below	Insert terminal: S/W No.2 or 3 terminal	"LE"	

Defects and Errors	Details	Causes	Inspection of Defects and Errors	Resolution	Error Mode
Non-openable Door	Power cutoff or forced shutdown during operation	After the "power cutoff" or "forced shutdown" during operation, "PCB MICOM" is not able to open the door. At least 5 minutes must pass before the door becomes openable.			
	The washer is "ON" without any power cutoffs.	Water in tub	Check whether the water level is above the safety level.		
		High temperature in tub	The door is automatically locked to prevent damage from hot laundry after the spin cycle is complete.		
	Others		The door is automatically locked when the connector, terminal, or solenoid wire gets disconnected during operation. The following instructions must apply to inspect defects.		

<p>* Exchange of Door Lock Switch</p> <p>[Disassembly]</p> <ol style="list-style-type: none"> 1. Remove 4 body-fixing screws 2. Remove the detergent and softener containers 3. Remove 2 screws fixing the door hinge 4. Remove 6 cover screws fixing the cover tub 5. Remove 6 screws fixing the cover tub 6. Remove 2 screws fixing the door lock switch 7. Detach the door lock switch and F-PCB connector <p>[Assembly]</p> <p>Re-assemble the parts in the opposite sequence to disassembly .</p>	<p>* Check the wire connections in Door Lock Switch</p> <div style="text-align: center;">  <p>PIN Arrangement</p> <p>2 3 4 5 (No.1 wire unavailable)</p> </div>
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7. Specifications and Assembly of Cord Power Assy

1) Specifications

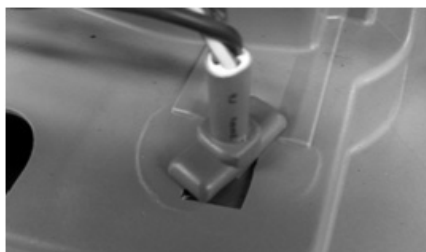
NO	COUNTRY	PART CODE				COMPANY
		cord power (3m)	cord power (5m)	cord power as(3m)	cord power as(5m)	
1	USA, MEXICO	3611340450	3611340470	3611340460	3611340480	LONGWELL
		WHITE 125V 13A,SJT 16AWG 3C UL,MEXICO/COLOMBIA				
2	Australia	3611340240	3611340260	3611340250	3611340280	LONGWELL
		WHITE 3X1.5SQ 250V 15A LONGWELL AUSTRALIA				
3	EU	3611339660	3611339680	3611339670	3611339690	HONGCHANG
		DTIII-2P-05 250V 16A,H05VV-F 3X1.5,EURO				
4	Chile	3611342840	3611342860	3611342850	3611342870	HONGCHANG
		DTIII-3P-01 250V 10A,H05VV-F 3X1.5,CHILE				
5	U.K(UAE)	3611342900	3611342920	3611342910	3611342930	LONGWELL
		LP-61L H05VV-F 3X1.5SQ 250V 13A, IMPORT-UK				
6	CHINA	3611342700	3611342720	3611342710	3611342730	LONGWELL
		LSG-31L 250V 16A,RVV 3X1.5 CCC CHINA				
7	KOREA	3611308111	3611308211	3611308101	3611308201	SEASIN
		MINI DRUM, WHITE, EU-2PIN				
8	Brazil	3611342390	3611343390	3611342391	3611343391	LONGWELL
		LP-46SL 250V 16A,3X1.5,WHITE,BRAZIL ANGLELP-33				
9	Germany	3611343200	3611343220	3611343210	3611343230	LONGWELL
		250V16A, H05VV-F GY P-FREE,EUR				

2) Specifications and Major Test Items

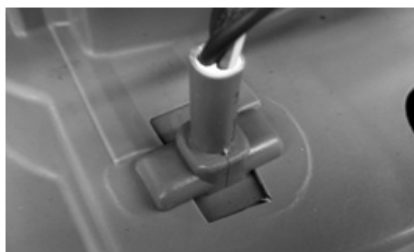
- Size of conductor: 1.5mm²
- Thickness of sheath: 0.8mm
- Thickness of insulator: 0.6mm
- External diameter of insulator: 8.4±1mm

3) Assembly

- Before fastening



- After fastening



7. Installation

Follow the installation guide to install the washing machine more conveniently.

Before installation

Do not plug in the power cord when installing.

After installation

Make sure to perform a test run to check for any water leakage or abnormal noise.

7-1. WHEN INSTALLING WITH THE BASIC INSTALLATION MATERIALS

1. Determine installation location

- determine the installation site, considering the structure of the area



- ※ It is easy to use when installed in a breast-high location
- ※ It is easier to use and install near the water pipe, drain and the outlet.

2. Inspect the wall

- Knock on the wall to check if the wall is concrete.



- ※ Install the machine on the even surface of the wall.

3. Attach the installation manual

- Attach it using a level.
- After attaching the install guide, mark the hole area.



- ※ Consider the actual size of the product and attach the manual according location.

4-1 Drill a hole into the tile

- Make a notch under the marked holes beforehand.
- Drill the holes, holding the tool perpendicular to the wall



- ※ Do not drill a hole on the edge of the wall tile.
- ※ Do not install the machine right below a faucet.
- ※ Use TE 2-S Soft Hammer drill from HILTI or a Drill.

4-2, Drill a hole into the retaining wall

- Set the hammer drill or a drill perpendicular to the surface of the wall and drill a hole into the retaining wall.



- ※ Follow the instructions on the diameter and depth specifications for the holes.
- ※ Remove dirt from the holes after drilling.

5. Insert set anchors (4 units)

- Insert set anchors into the holes
- Set anchors are included in the product packaging



- ※ Insert set anchors into the end of each hole.
- ※ the set anchor bolt parts must be 75mm or longer above the wall.

6. Fix the set anchors

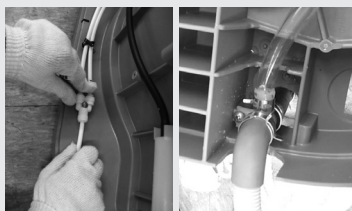
- Fix set anchors with an anchor punch



- ※ If the anchor cap is above the wall surface after fixation, repeat the step.

7. Connect inlet and drain hoses.

- Insert the inlet hose until the elbow makes a snapping sound.
- Fix the drain hose to the synchronous motor and connect the clamp inside the synchronous motor.



- ※ Connect hoses properly to prevent any leakage.
- ※ Insert inlet and drain hoses into the back holes after connection.

8. Plug in the power cord

- Connect the power as requested by the customer (upward or downward)
- Connect the connector and fix the grounding cable.



- ※ Fix the power cord tightly with clamp when connected upward.
- ※ Fix the grounding cables with flat screws.
- ※ Do not use multiple grounding cables in one spot.

9. Inject chemical anchor and insert cushion pads

- Inject chemical anchors into the fixed set anchors
- Insert cushion pads onto the fixed anchors
- Push the pads to the wall.



※ When injecting the chemical anchor, discard the first 10~15cm as the glue and hardener may not be mixed.

10. Install the washing machine.

- Install the washing machine stick to the wall surface.



11. Organize hoses

- Organize and place hoses in the hole.



※ Caution: Be careful not to jam the hoses between the wall and the washing machine.

12. Fix the washing machine

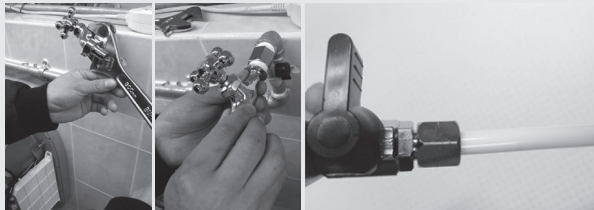
- Connect plane washer (1EA) and spring washer (1EA), and connect a regular nut (1EA) and connect a fixing nut (1EA) last.
- Tighten the nuts with $\phi 14$ spanner.



※ Excessive fastening of the nut may cause damage to the washing machine or the wall tile.
 ※ Fixing nut must be fastened to the end.

13-1. Install the inlet hose – Regular faucet

- ① Close the water supply valve
- ② Disassemble the water supply valve
- ③ Install the branching adapter
- ④ Branch off the inlet hose.



※ Wrap the connection of the branching adapter and water supply valve with Teflon tape.
 ※ Check leakage after installation.

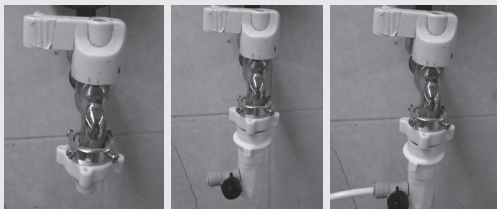
13-2 Install the inlet hose – a kitchen sink or a shower

- ① Close the water supply valve
- ② Disassemble the water supply valve
- ③ Install the branching adapter (install adapters accordingly on cold and hot water taps)
- ④ Branch off the inlet hose.



13-2 Install the inlet hose – a kitchen sink or a shower

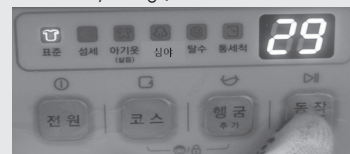
- ① Install the water tap connector on the faucet (skip if it is a buried faucet)
- ② Install the branching adapter.
- ③ Connect the inlet hose.



※ Check leakage after installation.

14. Test operation

- Run a test operation to check if there is any malfunction / leakage.



15. Organize the inlet and drain hoses and power cord

– Organize the inlet and drain hoses using molding and hose guide.



※ Wipe and clean the attachment area with a dry patch and attach the molding and hose guide tightly.

16. Mount the Body

– Connect the 4 upper and lower bolts after mounting the body.



※ Check if there is any space on either side.

The washing machine is recommended to be installed by a professional service engineer.



– Follow the table below when drilling the tiles with tools.

Note

Wall type	Depth of Hole	Bit diameter of hammer drill	Bit diameter of tile hole
Cement wall	45mm	ø 14mm	–
Concrete wall	45mm	ø 14mm	–
Tiled wall	The distance between the actual wall and the tile + 45mm		ø 16mm

7-2. WHEN THE MACHINE CANNOT BE INSTALLED WITH BASIC INSTALLATION MATERIALS.

1. Determine installation location

- determine the installation site, considering the structure of the area



- ※ It is easy to use when installed in a breast-high location
- ※ It is easier to use and install near the water pipe, drain and the outlet.

2. Inspect the wall

- Knock on the wall to check if the wall is concrete.



- ※ Install the machine on an even surface of the wall.

3. Attach the installation manual

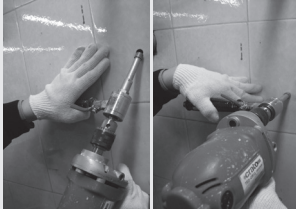
- Attach it using a level.
- After attaching the instal guide, mark the hole area.



- ※ Consider the actual size of the product and attach the manual according location.

4-1 Drill a hole into the tile

- Make a notch under the marked holes beforehand.
- Drill the holes, holding the tool perpendicular to the wall



- ※ Do not drill a hole on the edge of the wall tile.
- ※ Do not install the machine right below a faucet.
- ※ Use TE 2-S Soft Hammer drill from HILTI or a Drill.

4-2, Drill a hole into the retaining wall

- Set the hammer drill or a drill perpendicular to the surface of the wall and drill a hole into the retaining wall.



- ※ Follow the instructions on the diameter and depth specifications for holes.
- ※ Remove dirt from the holes after drilling.

5. Insert the plastic set anchors (4 units)

- Insert the plastic anchor into the hole.



- ※ Insert the plastic anchor perpendicularly on the wall.

6. Fix the anchor bolts on the plastic anchor

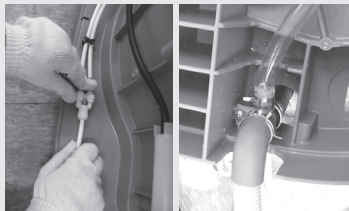
- Fix the anchor bolt in the plastic anchor using a drill or a spanner



- ※ Fix the anchor bolt by inserting it to the end of screw.
- ※ Connect and insert the bolt to the anchor using M6 fix.
- ※ If the bolt falls out with the drill due to a lack of depth, drill and insert again.

7. Connect inlet and drain hoses.

- Insert the inlet hose until the elbow makes a snapping sound.
- Fix the drain hose to the synchronous motor and connect the clamp inside the synchronous motor.



- ※ Connect hoses properly to prevent any leakage.
- ※ Insert inlet and drain hoses into the back holes after connection.

8. Plug the power cord

- Connect the power as requested by the customer (upward or downward)
- Connect the connector and fix the grounding cable.



- ※ Fix the power cord tight with clamp when connected upward.
- ※ Fix the grounding cables with flat screws.
- ※ Do not use multiple grounding cables in one spot.

9. Insert the cushion pad

- Attach pads on the fixed anchors.
- Push the pad to the wall.



10. Install the washing machine.

- Install the washing machine stick to the wall surface.



11. Organize hoses

- Organize and place hoses in the hole.



※ Caution: Be careful not to jam the hoses between the wall and the washing machine.

12. Fix the washing machine.

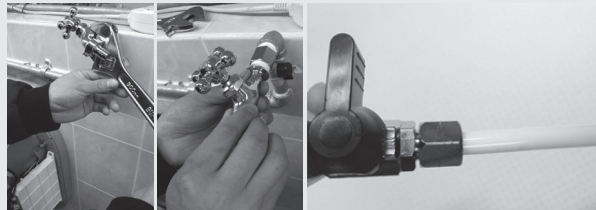
- Fix the items as follows: Rubber pad (tea) → Plain washer (tea) → Spring washer (tea) → Nut (tea) → Spring washer (tea) → nut (tea)
- Fasten the nut with a spanner.



- ※ Excessive fastening of the nut may cause damage to the washing machine or the wall tile.
- ※ Fixing nut must be fastened to the end.

13-1. Install the inlet hose – Regular faucet

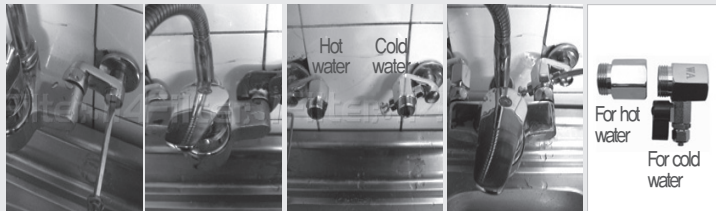
- ① Close the water supply valve
- ② Disassemble the water supply valve
- ③ Install the branching adapter
- ④ Branch off the inlet hose.



- ※ Wrap the connection of the branching adapter and water supply valve with Teflon tape.
- ※ Check leakage after installation.

13-2 Install the inlet hose – a kitchen sink or a shower

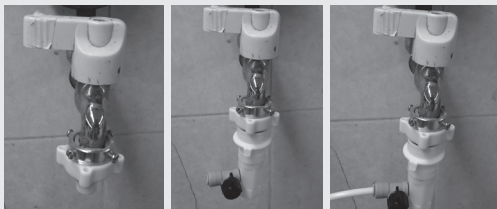
- ① Close the water supply valve
- ② Disassemble the water supply valve
- ③ Install the branching adapter (install adapters accordingly on cold and hot water taps)
- ④ Branch off the inlet hose.



13-2 Install the inlet hose – a kitchen sink or a shower

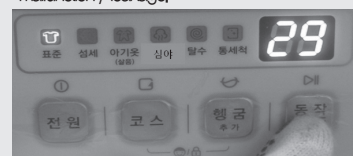
- ① Install the water tap connector on the faucet (skip if it is a buried faucet)
- ② Install the branching adapter.
- ③ Connect the inlet hose.

- ※ Check leakage after installation.



14. Test operation

- Run a test operation to check if there is any malfunction / leakage.



15. Organize the inlet and drain hoses and power cord

– Organize the inlet and drain hoses using molding and hose guide.



※ Wipe and clean the attachment area with a dry patch and attach the molding and hose guide tightly.

16. Mount the Body

– Connect 4 upper and lower bolts after mounting the body.



※ Check if there is any space on either side.

The washing machine is recommended to be installed by a professional service engineer.



– Follow the table below when drilling the tiles with tools.

Note

Wall type	Depth of Hole	Bit diameter of hammer drill	Bit diameter of tile hole
Hollow wall	Tile + 100mm	ø 14mm	ø 16mm
perforated wall			
Concrete wall			

7-3 WHEN IT CANNOT BE INSTALLED ACCORDING TO THE TWO INSTRUCTIONS ABOVE.

1. Drill a hole into the retaining wall.

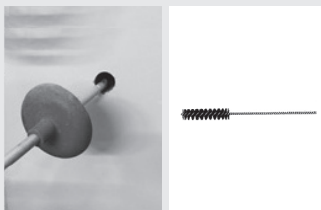
- Set the hammer drill or a drill perpendicular to the surface of the wall and drill a hole into the retaining wall.



- ※ Follow the instructions on the diameter and depth specifications for the holes.
- ※ Remove dirt from the holes after drilling.

2. Clean the drilled area with compressed air and a brush.

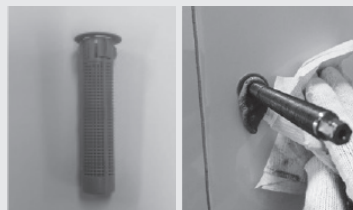
- Clean the drilled hole at least 3 times with compressed air.
- Clean the inside of the drilled hole with a brush.



- ※ This is to achieve a higher adhesive stress.

3. Inject the chemical into the wall and fix the anchor.

- Insert a plastic net and inject the chemical.
- Insert and fix the anchor after injection.



- ※ If the chemical is running over the wall, it must be cleaned.
- ※ Start the process after 30 minutes to allow for the chemical to harden.



- Follow the table below when drilling the tiles with tools.

Note

Wall type	Depth of Hole	Bit diameter of hammer drill	Bit diameter of tile hole
Hollow wall	Tile + 100mm	ø 16mm	ø 18mm
perforated wall			
Concrete wall			
Light weight wall			



CAUTION

- ▶ Make sure to ground to prevent electric shocks. Check if an earth leakage breaker is installed.
 - Contact the sales store or service center for more details.
- ▶ When the power outlet has no ground terminal
 - Grounding must be done for safe use of the washing machine.
 - Grounding can only be installed by the service center engineers or a qualified person.
 - Contact nearby service center.
- ▶ Grounding is prohibited in the following locations.
 - Gas pipe (It may cause explosion or fire.)
 - Telephone line or lighting rod (It is dangerous when struck by lightning.)
 - Water pipe (Many water pipes are plastic pipes.)

Exchange power cord

If the power cord is damaged, contact a nearby service center or the sales store as special tools are required.

Relocation

Contact a nearby service center to relocate the washing machine (Additional charges apply)

DAEWOO 
ELECTRONICS

ABOUT THIS MANUAL

(주) 신광씨링
광주광역시 서구 하남대로
502번길 14

담	당	김현규 님
M O D E L		MINI 1.0(WFWM111*) : D-CV701*
		MINI 1.5(WFWM122*) : ODW30-999B, ODW30-999G, DWM30-999PG
		영문 _ Service Manual
접	수	2017.02.02
M E M O		총 57p
<p>17.02.02-표지, 4p, 5p, 6p, 8p, 10p, 13p _ 7p 17.02.13-1p, 4p, 5p, 6p, 7p, 8p, 9p(페이지 추가) _ 7p 17.02.14-15p, 54p, 55p (페이지 추가) _ 3p (권중하 님) 17.02.16-11p, 12p, 13p, 14p, 15p, 55p _ 6p (김현규 님) 17.02.17-6p, 15p, 32p, 33p, 55p _ 5p</p>		

NO NEED PRINT