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1. IMPORTANT SAFEGUARDS

- Do not pull the power cord too strong.
  - Otherwise, electrical hazard, short circuit, and fire can occur from the cord damage.

- Do not use the damaged cord and loosen outlet.
  - Otherwise, it might cause electrical hazard and fire.

- If the power plug has foreign body or water, please use after cleaning well.
  - Otherwise, improper contact might cause fire.

- Do not use multiple plug on one outlet.
  - Otherwise, it may cause the overheating and fire.

- Do not pull out and pull in with wet hands.
  - Otherwise, it may cause electrical hazard.

- Do not use the product in excessive humidity and showering water.
  - Otherwise, it may cause electrical hazard and fire.
During shower or water cleaning, please take a caution not to put water or detergent on product or power plug.

- Otherwise, it may cause electrical hazard and fire.
- If the foreign body or water is penetrated into the product, do not pull the plug. Close the input valve on T-shape connector, and call A/S center.

Please pull off the plug during cleaning.
- Otherwise, electrical hazard may happen.

Do not use the product in failed state.
- Otherwise, it may cause the electrical hazard and fire.
- Pull out the power plug immediately, and close the input valve on T-shape connector. Then, call A/S center.

Do not disassembly, repair, or modify the product.
- Otherwise, it may cause electrical hazard and fire.

Do not separate main body and seat, seat cover.
- Inside, high voltage is running, and it may cause electrical hazard.

If the strange smell and sound comes out, please pull out the power plug immediately.
- Call A/S center.
1. IMPORTANT SAFEGUARDS

▸ Do not put in steel wire or sharp article on gap and opening in product.
  – Otherwise, it may cause electrical hazard and failure of product.

▸ Do not place heater or flammable material near product. Do not trash cigarette into toilet.
  – Otherwise, it may cause fire and distortion of product.

▸ Do not touch the warm air dryer outlet with hand.
  – Otherwise, it may cause burns and fire.

▸ Please close the input valve in T-shape connector during filter change.
  – Otherwise, it may cause electrical hazard and failure of product due to leakage.

▸ If the power cord is damaged, please stop using.
  – Otherwise, it may cause electrical hazard and failure of product. Please call A/S center to replace cord.
Please set the temperature at low (green) for children, the old, and the one who cannot control the temperature or has sensitive skin.

- Otherwise, it is possible to get low temperature burns.

※ What is low temperature burns?: Burns from prolong time contact with under 40℃ of temperature.

Do not stand up on the seat cover or put heavy item on it.

- Otherwise, it may damage the product and cause the failure.

Do not stand up on the seat cover or put heavy item on it.

- Otherwise, it may damage the product and cause the failure.

Do not lean on the seat cover excessively.

- Otherwise, it may damage and cause failure to the product.

Do not put vase, cup, cosmetics, vessel containing drug and water on the product. Also do not put small metal thing on the product.

- If they leak or smear in, it may cause electrical hazard, fire, and failure of product.

Do not close the seat and seat cover with excessive force.

- Otherwise, it may damage and cause failure to the product.

Do not pull off the hose between bidet and water cistern.

- Otherwise, it may cause leak and product.
1. IMPORTANT SAFEGUARDS

- Do not push the button with excessive force.
  - Otherwise, it may cause the failure of product.

- Do not smudge urine on nozzle and outlet of warm air dryer
  - Otherwise, it may cause smell and failure of the product.

- Please install in places avoiding the direct sunlight.
  - Otherwise, it may cause discoloring and change in color.

- Please install with tap water.
  - If industrial water or heavy water is used, it may cause damages of skin and skin disease.

- Do not use thinner, benzene, chemicals, choride detergent for cleaning. Please use soft cloth and sponge. Otherwise, metal parts may corrode, and discoloring and scratches on product might be happened.

- If the product is not used for long time, please pull off the plug, and close the water inlet valve on T-shape connector. Then drain the water of.
## 2. PRODUCT DESCRIPTION

### 2-1. Specification

<table>
<thead>
<tr>
<th>Model No.</th>
<th>BA07-R/E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power rating</strong></td>
<td>AC 220-240V, 50/60Hz (AC 120V/60Hz for USA)</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>850W</td>
</tr>
<tr>
<td><strong>Power cord</strong></td>
<td>2.5m (1.2m for USA)</td>
</tr>
<tr>
<td><strong>Water main pressure</strong></td>
<td>0.075<del>0.68MPa (0.70</del>7.5 kgf/cm²)</td>
</tr>
<tr>
<td><strong>Dimensions (WxDxH mm)</strong></td>
<td>490x510x150mm (BA07-R), 490x540x150mm (BA07-E)</td>
</tr>
<tr>
<td><strong>Weight (kg)</strong></td>
<td>5.7kg</td>
</tr>
</tbody>
</table>

### Warm water cleansing device

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear cleansing</td>
<td>Maximum 0.7ℓ /min, Forced self cleaning function on nozzle (operating time: 1min)</td>
</tr>
<tr>
<td>Front cleansing</td>
<td>Maximum 0.7ℓ /min, Forced self cleaning function on nozzle (operating time: 1min)</td>
</tr>
<tr>
<td>Water pressure control</td>
<td>3 levels control, Micom control</td>
</tr>
<tr>
<td>Wide (Spray range control)</td>
<td>3 levels of spray range control (Straight, W1, W2)</td>
</tr>
<tr>
<td>Water temperature control</td>
<td>4 levels (off: room temperature, low:34℃, moderate:36℃, high:38℃)</td>
</tr>
<tr>
<td>Power consumption of cistern heater</td>
<td>800W</td>
</tr>
<tr>
<td>Cistern capacity</td>
<td>0.8ℓ</td>
</tr>
<tr>
<td>Safety device</td>
<td>Bi-metal (Overheat protection, 55℃), Thermal fuse (overheat protection, 72℃), Temperature sensor</td>
</tr>
</tbody>
</table>

### Warm air dryer

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature control</td>
<td>3 levels (Operating time: 2min)</td>
</tr>
<tr>
<td>Power consumption of heater</td>
<td>210W</td>
</tr>
<tr>
<td>Safety device</td>
<td>Bi-metal (overheat protection, 105℃), Thermal fuse (overheat protection, 192℃)</td>
</tr>
</tbody>
</table>

### Warm seat

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature control for seat</td>
<td>4 levels (room temperature, low, moderate, high)</td>
</tr>
<tr>
<td>Wattage for heater</td>
<td>50W</td>
</tr>
<tr>
<td>Safety device</td>
<td>Temperature sensor, thermal fuse (overheat protection, 72℃)</td>
</tr>
</tbody>
</table>

### MF filter

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life span</td>
<td>4 month (2.5ton/month, for under 0.5NTU of turbidity)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>(L)136 x (Ø)48mm</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation material</td>
<td>1 ea of T-shape connector, 1 ea of bidet hose, 2 ea of fixing sliders, 1 ea of fixing plate, 2 ea of fixing bolts, 2 ea of fixing nuts, 2 ea of fixing rubbers, 2 ea of washers, 1 ea of rubber packing</td>
</tr>
</tbody>
</table>

### Other function

- Nozzle movement with gear, position control of nozzle, Twin nozzle, Move, Nozzle cleaning, Auto powersaving, Self diagnosis, Muting
2. PRODUCT DESCRIPTION

2-2. Structure and name
2-2-1. BA07-R/E

Front View

- Seat Cover
- Warm Air Dryer Outlet
- Nozzle
- Seat
- Toilet
- Control Panel
- Toilet Cistern Hose
- Water Main Pipe
- Bidet Hose
- T-shape Connector
- Main Water Valve

Rear View

- Power Cord
- Label Rating
- Cistern Plug
- Nano Silver Filter
2-3. Dimensions and appearance

2-3-1. Dimensions

TYPE : BA07-R [490(W)X510(D)X150(H)mm]

TYPE : BA07-E [490(W)X540(D)X150(H)mm]
2. PRODUCT DESCRIPTION

2-3. Dimensions and appearance
2-3-2. Appearance

TYPE : BA07-R

TYPE : BA07-E
2-4. Functions
2-4-1. BA07-R/E

Stop button
Use for stopping all functions

Rear cleansing button
Use for anal hygiene

Bidet button
Use for feminine hygiene

Air dryer button
Use for drying with warm air after feminine/anal hygiene

Move button
Use for moving function of nozzle

Indicating LED of hot Water temp
Display hot water temperature in 4 different levels

Seat temp adjustment button
Use for setting up seat temperature

Nozzle position button
Use for adjusting nozzle position

Water pressure/air dryer temp button
Use for adjusting temperature and pressure of air and water, respectively

Indicating LED of Water pressure/air dryer temp
Display water pressure and/or air dryer temperature

Move button
Use for adjusting spray range at 3 different levels

Nozzle cleaning button
Use for cleaning nozzle

Hot Water temp button
Use for setting up water temperature

Indicating LED of seat temp
Display seat temperature in 4 different levels

Power button
Use for power on and off
2-5. Features

▼ Improved convenience

1. Wide function
   User can select the spreadness of cleansing water.
   User can choose between strong and soft spray water.

2. Position control of nozzle
   User can choose the position of nozzle.

3. Auto powersaving
   If the human body is not detected from seat sensor, product is switched to auto powersaving mode after 1 minute.
   - On powersaving mode, temperature of water and seat is changed to 'low'.
     After 30 minutes, the LED of control panel in main body turns off.

4. Ergonomic seat
   Optimized seat for human body is chosen. It is convenient even for long time use.

5. Muting function
   User can turn off button sound.
▼ Improved safety

1. **Self diagnosis function**
   In case of products errors, LED control panel will blink for warning.

▼ Improved cleanliness

1. **Move function**
   If you choose move button during rear and front cleansing, nozzle will move backward/forward for more cleaning.

2. **Forced self cleaning of nozzle**
   After rear and front cleansing, cleaning water is automatically sprayed for continuous use of clean nozzle.

3. **Nozzle cleaning function**
   If nozzle cleaning is selected, nozzle is extended to maximum for easy cleaning.

4. **Twin nozzle**
   It is hygienic because the separate nozzle is used for rear and front cleansing.

5. **Nano silver ceramic filter for water purification**
   MF filter for water purification is adopted for continuous cleaning with purified water.
3. INSTALLATION

3-1. Installation material

- 2 ea of fixing bolts
- 2 ea of fixing rubber
- 2 ea of washers
- 2 ea of fixing nuts
- Bidet hose
- 1 ea of T-shape connector
- 1 ea of fixing plate, 2 ea of fixing slider
- 1 ea of rubber packing
3-2. Procedures

3-2-1. Preparation step before installation (Separation of existing seat)

- Unscrew the fixing nut, and separate existing seat and its cover. (Please keep them well for the possible use.)
- Close main water valve on main water pipe, and separate inlet hose (inlet pipe) from water cistern for toilet.
※ If the bathroom is narrow, it is convenient to connect inlet pipe first, and then install bidet.

3-2-2. Bidet installation procedure

1. Connect T-shape connector with existing water inlet pipe.

2. Connect T-shape connector with creased pipe.

3. Compose the fixing plate as picture.

4. Connect fixing plate into toilet.
3. INSTALLATION

3-2. Procedures

3-2-2. Bidet installation procedure

5. Please tighten the fixing nuts into the direction of arrow.

6. Connect tubing line from main body of bidet with valve for Open/Close.

7. Open the inlet valve for main water input.

8. Switch the valve for Open/Close to Open.

9. Connect power cord.
4. PREPARATION AND CHECKING PERFORMANCE BEFORE USE

**Preparation**: After installing bidet on toilet, please check the followings before the first use.

1. Plug the power plug into outlet.
   - Plug into outlet of AC 220-240V with earth connector.
   - **<Note>**
     - If plugged, cleaning nozzle is extracted and detracted 1 time for the initialization of nozzle movement.

2. Press the power button on control panel lightly.
   - **<Note>**
     - When power is turned on, water supply begins. When water fills up, water is running for 6 seconds to clean up nozzle.

3. With beeping sound, the LED control panel will be lighted.
   - **<Note>**
     - Don’t plug in the power cord until the installation is finished. It may cause the failure of product.
     - During filter change, please close supply valve on T-shape connector.

**Checking**

2. Check the supply valve to open.
   - Open the water valve to left (counterclockwise).

2. Turn the supply valve on T-shape connector to left (counterclockwise) until it becomes horizontal with valve and bidet hose.

3. Check the control panel.
   - Check the LED light on main body.
5. OPERATING PRINCIPLE

5-1. Basic configuration
5-1-1. BA07-R/E

- **Control of nozzle position**
  - Can adjust nozzle position from 1 to 5 level.
  - Movement of nozzle is possible only for operation of rear/front cleansing.

- **Indicating LED for water pressure/air dryer temp**
  - Display water pressure and air dryer temperature.

- **Control of water pressure/air dryer temp**
  - Can adjust water pressure from 1 to 3 level during cleansing.
  - Can adjust or dryer temperature from 1 to 3 level during air drying.

- **Wide function**
  - Can adjust spray ranges at 3 different levels.
  - By pressing buttons, the degree of spary is indicated in 3 stages of level 1 (green) - level 2 (orange) - level 3 (Red)

- **Control of hot water temperature**
  - Can adjust hot water temperature at 4 different levels.
  - Whenever you push hot water button, it indicates 4 stages of Low (Green)- Middle(Orange)- High(RED)- Off.

- **Control of seat temperature**
  - Can adjust seat temperature at 4 different levels.
  - Whenever you push seat temperature buttons, it indicates 4 stages of Low(Green)-Middle(Orange)-High(RED)-Off.
5-2. Main function

**▼ Rear Cleansing**

While sitting on the seat, press the ‘Rear Cleansing’ button.
- Cleansing water will be sprayed for 1 minute and will automatically stop.
- After rear cleansing, forced nozzle cleaning will be done for 3 seconds.

※ Set the position of nozzle with adjusting forward and backward button of nozzle movement.
※ Set the range with Wide button.
※ If Hygiene button is pressed during working, it will operate for the next 1 minute.
※ The button of water temperature, pressure control, move function is available during working.

**Move**

Press ‘Move’ button on control panel.
- Nozzle will be moved backward and forward for wide cleaning.
※ It will be moved until the Rear cleansing function is on.
※ Change the range of nozzle movement is possible via forward/backward button.
※ If you want to stop the movement of nozzle, press ‘Move’ button again.

**Air Dryer**

Press ‘Air Dryer’ button on control panel.
- Warm air will blow for 2 minutes in wet area during rear cleansing.
※ It will dry faster if the moisture is slightly removed before use.
※ Use plus/minus button, temperature of warm air can be controllable.
※ If you want to use drying function during rear cleansing, press ‘drying’ button.

**Stop**

Press ‘stop’ button on control panel.
- All function at working is halted.
5. OPERATING PRINCIPLE

5-2. Main function

▼ Front cleansing

While sitting on the seat, press ‘Front cleansing’ button on control panel.
- Cleansing water will be sprayed for 1 minute, and will automatically stop.
- After front cleansing, the forced nozzle cleaning is done for 3 seconds.
※ Please adjust the position of nozzle with nozzle position button.
※ If you press Front Cleansing button during working, it will operate for the next 1 minute.
※ The button of water temperature, pressure control, move function is available during working.

Press ‘Move’ button on control panel.
- Nozzle will be moved backward and forward for wide cleaning.
※ It will moved until the front cleansing is on.
※ Change the range of nozzle movement is possible via forward/backward button.
※ If you want to stop the movement of nozzle, press ‘Move’ button again.

Press ‘Air Dryer’ button on control panel.
- Warm air is blowed for 2 minutes in wetted area during front cleansing.
※ It will dry faster if the moisture is slightly removed before use.
※ Use strong/weak button, temperature of warm air can be controllable.
※ If you want to use drying function during cleansing, press ‘drying’ button.

Press ‘stop’ button on control panel.
- All working functions will stop.
### Description of function

<table>
<thead>
<tr>
<th>Name of function (Button name)</th>
<th>Function description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power On/Off (Power)</td>
<td>Power On/Off. If the power is on initially, initializing movement of step-motor (3 ea) will be on. If the power button is pressed, water supply begins, and at full level, water supply is continued for 6 more seconds to eliminate air in pipe.</td>
<td></td>
</tr>
<tr>
<td>Stop (Stop)</td>
<td>Stopping main function (rear cleansing/front cleansing/air drying)</td>
<td></td>
</tr>
<tr>
<td>Rear cleansing (Rear Cleansing)</td>
<td>Operation of 1 minute/1 time. Temperature (room temperature, low, moderate, high), water pressure (1 to 3 levels), wide (1 to 3 levels). To control water pressure, +/- button is used. Up/down button for nozzle position. If Rear Cleansing button is pressed during working, rear cleansing will continue for the next 1 minute (without stopping).</td>
<td>Initial movement: Wide is set on 2nd level</td>
</tr>
<tr>
<td>Front cleansing (Front cleansing)</td>
<td>Operation of 1 minute/1 time. Temperature (room temperature, low, moderate, high). To control water pressure, plus/minus button is used. Forward/backward button for nozzle position. If front cleansing button is pressed during working, front cleansing will continue for the next 1 minute (without stopping).</td>
<td></td>
</tr>
<tr>
<td>Warm air Drying (Air Dryer)</td>
<td>Operation of 2 minutes/1 time. Warm air (room temperature, 1, 2 levels). Level is indicated on LED. Warm air operation starts with fan and heater simultaneously. For stop, heater will be off immediately, but fan is off after 2 seconds. If Air Dryer button is pressed during working, warm air drying will be continued for the next 2 minutes (without stopping).</td>
<td></td>
</tr>
<tr>
<td>Move (Move)</td>
<td>Move execution during rear/front cleansing. If move button is pressed during move execution, move execution is cancelled. With forward/backward button, the range of move can be adjusted: K = 0<del>2, 1</del>3, 2<del>4, 3</del>5 (Range of 1 level: 12mm)</td>
<td></td>
</tr>
<tr>
<td>Nozzle position control (Forward/backward)</td>
<td>Nozzle position control during hygiene/bidet. Move will control the range. K=0<del>5. Using forward/backward button, the position of nozzle can be adjusted with K=0</del>5 levels (6mm of movement, total 30mm)</td>
<td></td>
</tr>
<tr>
<td>Water pressure / Hotwind (Strong/weak)</td>
<td>1 to 3 levels. Leveled control of water pressure and warm air dryer. Level is indicated on LED control panel.</td>
<td></td>
</tr>
<tr>
<td>Wide cleansing (Wide)</td>
<td>1 to 3 levels. Operates only at cleansing, and level is indicated on LED control panel. Level 1(green) → Level 2(orange) → Level 3(red) → Level 1(green) is cycled and can be selected. If rear cleansing is in operation, it is set to Level 2 of wide.</td>
<td>Wide 1st level = straight spray</td>
</tr>
<tr>
<td>Nozzle cleaning (Nozzle cleaning)</td>
<td>Operates with over 3 seconds of press. Self cleaning of nozzle will be taken with draining water. Firstly front cleansing nozzle will be cleaned and extended. By another press, rear cleansing nozzle is extended. By another press or stop button pressing, nozzle is moved back to original position. During nozzle cleaning, only nozzle cleaning and stop button is available. If stop button is pressed during nozzle cleaning, nozzle cleaning function will be halted.</td>
<td></td>
</tr>
</tbody>
</table>
## 5-2. Main function

### ▼ Description of function

<table>
<thead>
<tr>
<th>Name of function (Button name)</th>
<th>Function description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water temperature control (Water temperature)</td>
<td>Temperature setting: room temperature (LED is Off), low temperature (34°C, green), moderate temperature (36°C, orange), high temperature (38°C, red) With pressing button, cycling of room temperature → low → moderate → high → room is executed.</td>
<td></td>
</tr>
<tr>
<td>seat temperature control (seat temperature)</td>
<td>Temperature setting: room temperature (LED is Off), low temperature (34°C, green), moderate temperature (37°C, orange), high temperature (40°C, red) With pressing button, cycling of room temperature → low → moderate → high → room is executed.</td>
<td></td>
</tr>
<tr>
<td>Mute (Mute)</td>
<td>With pressing stop button for over 3 seconds, setting is on with beeping sound. With another 3 seconds of pressing, setting is off with beeping sound. During setting is on, no button sound of button pressing will be heard</td>
<td></td>
</tr>
<tr>
<td>Power saving function on/off</td>
<td>In initial state, power saving is on, and with no operation for 1 minute, power saving mode is on. Water temperature/seat temperature is set to low, and LED is also indicated as low. After 30 minutes, water temperature/seat temperature is kept on with low, and LED is off. If the sitting is sensed or button is pressed, the preset step is restored, and LED is on. Set/deactivating method: If move button is pressed over 3 seconds, with beeping sound power saving function is off. With another 3 seconds of pressing, power saving function is on with beeping sound.</td>
<td></td>
</tr>
</tbody>
</table>
Description of function

<table>
<thead>
<tr>
<th>Name of function (Button name)</th>
<th>Function description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle self cleaning</td>
<td>Automatically executed. After power input, the fill level is monitored, and 6 more seconds of water supply is on. When power is ON, with sensing sitting, the Nozzle is self cleaned for 3 seconds after rear/front cleansing is finished.</td>
<td></td>
</tr>
<tr>
<td>Drain process</td>
<td>If the nozzle position control buttons are pressed simultaneously for over 3 seconds, drain process is executed. After execution, open 1-way v/v, and sequentially open 4-way v/v, front cleansing nozzle, nozzle cleaning, rear cleansing nozzle to naturally drain the water which is remained in pipe.</td>
<td>Required for manufacturing process</td>
</tr>
<tr>
<td>Check program version (Test Mode)</td>
<td>With pressing stop and rear cleansing button simultaneously, plug the power cord. If entered to Test Mode, the program version will be displayed. (combination of water pressure level LED + wide level LED) (cf : By pressing, each button, the boozer and LED will be on for checking the error on button, LED, boozer.)</td>
<td></td>
</tr>
<tr>
<td>Frozen protection program</td>
<td>Automatically executed. If the detection temperature of water thermistor is below 5°C, heater will be on for heating up to 5°C. If not, water heating is deactivated.</td>
<td></td>
</tr>
</tbody>
</table>

5-3. Amount of water output levels during Rear/Front cleansing

Rear cleansing

<table>
<thead>
<tr>
<th>levels</th>
<th>Water output (㎖/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 (±10%)</td>
</tr>
<tr>
<td>2</td>
<td>600 (±10%)</td>
</tr>
<tr>
<td>3</td>
<td>700 (±10%)</td>
</tr>
</tbody>
</table>

Front cleansing

<table>
<thead>
<tr>
<th>levels</th>
<th>Water output (㎖/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 (±10%)</td>
</tr>
<tr>
<td>2</td>
<td>600 (±10%)</td>
</tr>
<tr>
<td>3</td>
<td>700 (±10%)</td>
</tr>
</tbody>
</table>

※ Water output is varied in each Set.
5. OPERATING PRINCIPLE

5-4. Resistance and voltage values for various temperatures on temperature sensor (T1, T2, Seat)

\((10 \text{k}\Omega/25^\circ\text{C}/2.5V)\)

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Resistance (Ω)</th>
<th>Voltage (V)</th>
<th>Temp (°C)</th>
<th>Resistance (Ω)</th>
<th>Voltage (V)</th>
<th>Temp (°C)</th>
<th>Resistance (Ω)</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>75</td>
<td>1.928</td>
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</tr>
</tbody>
</table>
6. DISASSEMBLY AND ASSEMBLY

6-1. Cautions for disassembly and assembly

▼ Before disassemble product
- Please shut off the water supply by closing the valve of main water pipe.
- Please pull out the plug for preventing electrical hazard.
- Please drain the water cistern.
  : During service, if the water splatters, it might cause electrical hazard.
  Drain the water by opening drain cap.

▼ Please return to the original state in Wiring path of product and water hose.
- Some electrical components use insulation material for safety.
- Wiring path of lead wire is needed to be careful for not being near to heating component,
  moving component, and sharp component.
- Wiring path of lead wire and united band is portion of safety device.
- Before putting cover, please check whether the connection of water hose is right.
- After servicing, please assemble to original state.

▼ After servicing, please conduct safety check.
- Check whether the nut, component, lead wire is in original state.
- Check whether the covering of lead wire is damaged.
- Please check abnormal water flow and heat after reassembly.
- Please check whether every switch function is normal.
  ※ Please take caution not to damage and distort in every component during disassembly.

6-2. Tools required

■ Monkey wrench
■ ‘+’ shape driver
■ ‘-’ shape driver
■ Nipper
■ Long nosed pliers
■ Gimlet
6. DISASSEMBLY AND ASSEMBLY

6-3. Disassembly method for each part
6-3-1. Disassembly method for main water pipe.
[Needed tool: monkey wrench]

1. Close open/close valve connected to T-shape valve.

2. Pull out the connection hose from Open/Close valve fitting.

3. Close valve of the main water pipe.

4. Separate T-shape valve with monkey wrench.
6-3-2. Disassembly method for top cover, body frame [Needed tool : ‘+’, ‘-’ shape driver]

1. Unscrew 2 cover screws on top cover.

2. Separate 2 screw using ‘+’ shape driver.

3. Separate top cover and body with putting ‘-’ shape driver into position on picture.

4. Separate top cover from body as shown in picture.

5. Separate terminal which connected to seat (shown in picture).
   ※ Do not put excessive force on separating terminal. Otherwise, it might be broken.
6. DISASSEMBLY AND ASSEMBLY

6-3. Disassembly method for each part
6-3-2. Disassembly method for top cover, body frame [Needed tool : ‘+’, '-' shape driver]

6. Top cover and body frame is completely removed in this picture.

6-3-3. Disassembly method for top cover, damper, seat cover, seat [Needed tool : ‘+’ shape driver]

1. Pull out seat cover in the direction of the arrow.

2. Unscrew the damper fixing screw inside of top cover, and pull out damper in the direction of the arrow.

3. After separating damper, disassemble seat as with sequence of arrow direction.
6-3-4. Disassembly method for Main-PCB [Needed tool : '+' shape driver]

1. Separate connected connector.  
   ※ Terminal might be damaged if too much strength is placed.

2. Extract PCB with unscrewing 5 screws on picture.

6-3-5. Disassembly method for Power-PCB [Needed tool : '+' shape driver]

1. Separate every earthing from connector on Power-PCB and power cord.

2. Separate earthing from warm water heater.
6. DISASSEMBLY AND ASSEMBLY

6-3. Disassembly method for each part

6-3-5. disassembly method for Power-PCB [Needed tool: '+' shape driver]

3. Unscrew 3 screws on back of PCB Case.

4. Separate Power-PCB as shown in picture.

6-3-6. disassembly method of Air Dryer ASS'Y [Needed tool: '+' shape driver]

1. Separate Air Dryer ASS'Y via unscrewing 3 screws on the picture.
6-3-7. Disassembly method for nozzle ass'y [Needed tool: '+' shape driver]

1. Disassemble 1 screw on the position in picture.

2. Separate rubber hose from 1-way v/v as with arrow direction.


6-3-8. Disassembly method for water cistern ass'y [Needed tool: '+' shape driver]

1. Eliminate clip on the position of picture.
6. DISASSEMBLY AND ASSEMBLY

6-3. Disassembly method for each part
6-3-8. disassembly method for water cistern ass'y [needed tool: '+' shape driver]

2. After eliminating clip, separate filter holder as with arrow direction.

3. Separate silicone hose as shown in picture.

4. Separate silicone hose as shown in picture.

5. Remove 3 fixing bolts on body.

6. Separate water tank ass'y as shown in picture.
6-3-9. disassembly method of single nozzle ass'y [Needed too : '+' shape driver]

1. First of all, separate rubber hose which is connected to self cleaning.

2. Sequentially separate 3 rubber hoses on the back of nozzle (4-WAY V/V)

3. After unscrewing 2 screws on the picture, pull out 4-WAY V/V.

4. As shown in picture, disassemble 2 screws on the bottom of nozzle ass'y, and pull out stepping motor upward.

5. After unscrewing 4 screws as shown in picture, separate 4-WAY V/V and stepping motor.
6. DISASSEMBLY AND ASSEMBLY

6-3. Disassembly method for each part

6-3-9. Disassembly method of single nozzle ass'y [Needed tool: '+' shape driver]

6. Pull out nozzle tip (rear cleansing, front cleansing) in front direction.

7. Finished disassembly.
   ※ Assembly is done in reverse manner, and please take a caution for mixed screws and wrongful connection of rubber hose. (color of rubber hose is different)

6-3-10. Remedy for constriction of nozzle due to movement error during nozzle ass'y operation

1. On nozzle operation, constriction of nozzle is happened due to failure.

2. Push the constricted nozzle with proper force till clicking sound.
   ※ Where, coming out of opposite nozzle is normal, and take a caution not to put excessive force for preventing damages on nozzle gear.

3. After finishing to push one side of nozzle, push back the other nozzle with proper force. Also, please take a caution not to put excessive force.

4. Displace power cord, and hold for 30 seconds. Reconnect power cord, and check the operation of nozzle.
### 6-4. Diagram of disassembly

#### 6-4-1. Product disassembly diagram of BA07-R/E (SMPS TYPE)

<table>
<thead>
<tr>
<th>No.</th>
<th>Part Name</th>
<th>Material and Specification</th>
<th>Q'ty</th>
<th>Remark</th>
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<tr>
<td>1</td>
<td>INLAY PANEL</td>
<td>PC/T0.25/Print</td>
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</tr>
<tr>
<td>2</td>
<td>ASS’Y COVER TOP</td>
<td>ABS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ASS’Y COVER SEAT(RE TYPE)</td>
<td>ABS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ASS’Y SEAT(RE TYPE)</td>
<td>ABS</td>
<td>1</td>
<td></td>
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<tr>
<td>5</td>
<td>BODY FRAME</td>
<td>ABS</td>
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<tr>
<td>6</td>
<td>COVER SCREW</td>
<td>SOFT PVC</td>
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<td>7</td>
<td>FIXCER BRACKET</td>
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<tr>
<td>8</td>
<td>FIXCER BRACKET SLIDER</td>
<td>SUS304/1.0T</td>
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<td>POM/M12/L100</td>
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<td>Flame retardant ABS/FR-4</td>
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<td>POWER CORD</td>
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<td>PACKING SHEETH HEATER</td>
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### 6-4. Diagram of disassembly

#### 6-4-2. Disassembly diagram of nozzle

#### Part Name | Material and specification | Qty
---|---|---
1 | BODY NOZZLE | ABS/ Shared with BA06 | 1
2 | COVER NOZZLE | ABS/ Shared with BA06 | 1
3 | COVER NOZZLE SPRING | ABS/ Shared with BA07 | 1
4 | GEAR CAM | ABS/ Shared with BA08 | 1
5 | GEAR REDUCER 1 | ABS/ Shared with BA09 | 1
6 | GEAR REDUCER 2 | ABS/ Shared with BA10 | 1
7 | GEAR DRIVER | ABS/ Shared with BA11 | 1
8 | GEAR PINION | ABS/ Shared with BA12 | 1
9 | CONNECTOR NOZZLE CLEAN | ABS/ Shared with BA13 | 1
10 | CONNECTOR NOZZLE_BIDET | ABS/ Shared with BA14 | 1
11 | CYLINDER BIDET | ABS/ Shared with BA15 | 1
12 | CYLINDER CLEAN | ABS/ Shared with BA16 | 1
13 | DUCT NOZZLE | ABS/ Shared with BA17 | 1
14 | TIP BIDET | ABS/ Shared with BA18 | 1
15 | TIP BIDET_LOWER | ABS/ Shared with BA19 | 1
16 | TIP CLEAN | ABS/ Shared with BA20 | 1
17 | TIP CLEAN_UPPER | ABS/ Shared with BA21 | 1
18 | TIP CLEAN_LOWER | ABS/ Shared with BA22 | 1
19 | SEAL SHAFT MOTOR | ABS/ Shared with BA23 | 1
20 | MOTOR MOVE | ABS | 1
21 | SPRING NOZZLE | STS304/ Shared with BA26 | 1
22 | TAPPING SCREW | STS304/ Shared with BA26 | 1
## 7. FAILURE DIAGNOSIS AND REPAIR
(Refer electrical wiring during diagnosis.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Problem</th>
<th>Check list</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| 1   | No power on. | - Check power supply.  
- Check the power cord is plugged.  
- Check PCB(Main/Power). | Supply power  
Supply power  
Replace PCB |
| 2   | Power is on, but no sound. | - Check mute option.  
- Check pattern failure in PCB Main and boozier. | Turn off muting  
Replace PCB-Main |
| 3   | Rear cleansing/front cleansing function is not working. | - Check connection of PCB connector.  
- Check PCB-Main.  
- Check hose for bending and slipping.  
- Check water supply.  
- Check inlet Sol v/v.  
- Check 4-way v/v.  
- Check 1-way v/v. | Modify connector connection  
Replace PCB-Main  
Modify hose connection  
Supply water  
Replace Sol v/v  
Replace 4-way v/v  
Replace 1-way v/v |
| 4   | Air drying function is not working. | - Check air dryer fan.  
- Check connector and wire (including polarity check)  
- Check operating power(PCB). | Replace fan  
Modify connector, replace fan  
Replace PCB |
| 5   | Only air of room temperature is blowed during air drying. | - Check open in air dryer heater.  
- Check open in thermal fuse of air dryer heater.  
- Check PCB | Replace air dryer heater  
Replace air dryer heater  
Replace PCB |
| 6   | Only warm air is blowed during air drying. | - Check open in triac of air dryer heater.  
- Check PCB | Replace PCB  
Replace PCB |
| 7   | Move operation is not working.(Including nozzle position control) | - Check connector (including polarity check)  
- Check the interference from hose connected to nozzle.  
- Check output waveform in Step Motor. | Modify polarity of connector  
Modify hose connection  
Replace PCB Main |
| 8   | Water pressure control is not working. | - Check 1-way v/v.  
- Check PCB-Main | Replace 1-way v/v  
Replace PCB-Main |
| 9   | Nozzle cleaning is not working. | - Check the running with power on.  
- Check move motor.  
- Check PCB. | Only working when power is ON  
Replace nozzle ass’y  
Replace PCB |
| 10  | Water is leaking. | - Check the leakage in water cistern.  
- Check hose for slipping. | Replace water cistern or tighten bolt  
Modify hose connection |
<table>
<thead>
<tr>
<th>No.</th>
<th>Problem</th>
<th>Check list</th>
<th>Remedy</th>
</tr>
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<tbody>
<tr>
<td>11</td>
<td>Water is coming out through nozzle during stop.</td>
<td>- Check the inlet sol v/v.</td>
<td>Replace inlet valve</td>
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<tr>
<td></td>
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<td>- Check water level sensor.</td>
<td>Replace water level sensor</td>
</tr>
<tr>
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<td>No water is supplied.</td>
<td>- Check main water.</td>
<td>Supply main water</td>
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<td></td>
<td>- Check inlet Sol v/v.</td>
<td>Replace inlet valve</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Check water level sensor</td>
<td>Replace water level sensor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Check PCB-Main operation.</td>
<td>Replace PCB-Main</td>
</tr>
<tr>
<td>13</td>
<td>Warm water is not sprayed.</td>
<td>- Check open in warm water heater.</td>
<td>Replace warm water heater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Check PCB.</td>
<td>Replace PCB</td>
</tr>
<tr>
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<td></td>
<td>- Check bimetal.</td>
<td>Replace bimetal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Check thermal fuse.</td>
<td>Replace thermal fuse</td>
</tr>
<tr>
<td>14</td>
<td>Nozzle is not extended.</td>
<td>- Check move motor.</td>
<td>Replace nozzle ass’y</td>
</tr>
<tr>
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<td>- Check PCB-Main.</td>
<td>Replace PCB-Main</td>
</tr>
<tr>
<td>15</td>
<td>On rear cleansing/front cleansing operation, nozzle is extended, but water is not sprayed.</td>
<td>Check main water.</td>
<td>Supply main water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Check inlet Sol v/v.</td>
<td>Replace inlet sol vavle</td>
</tr>
</tbody>
</table>

*7. FAILURE DIAGNOSIS AND REPAIR* (Refer electrical wiring during diagnosis.)
## 8. ERROR INDICATION MODE (LED)

On error occurrence, LED of water pressure/air dryer is blinking and buzzer is rung.
There are No. 1 to 7 errors, and details are following.

<table>
<thead>
<tr>
<th>No</th>
<th>LED indication</th>
<th>Problem</th>
<th>Possible cause</th>
<th>Indication method</th>
</tr>
</thead>
</table>
| 1  | +              | No water Full water level is not detected after 2 minutes of water supply | 1. Closed water main valve  
2. Inlet Sol valve failure  
3. Water level sensor failure  
4. Blockage in Filter  
5. PCB failure  
6. Leakage | 1. Indicate error if the full water level is not detected within 2 minutes.  
2. After indicating error, if the full water level is not sensed within 3 minutes, close inlet sol v/v. If the full water level is detected, deactivate the error indication.  
3. If the button is pressed or sitting is sensed, error indication is deactivated and repeat 1st step. |
| 2  | +              | Leakage error At stop, if water level is lowered and filled up for 7 times in 3 minutes, it is error | 1. Leakage in hose and water cistern | 1. All function is halted, and continuously error is indicated.  
2. If the power is replugged, error indication is deactivated. |
| 3  | +              | Overheating of seat If 43°C is sensed for over 2 seconds, it is error | 1. Shorted Triac of temperature control for seat and failure in surrounding circuit  
2. Wrong wiring | 1. All function is halted, and continuously error is indicated.  
2. If the power is replugged, error indication is deactivated. |
| 4  | +              | Overheating of warm water If outlet temperature sensor (T2) reads over 45°C, it is error | 1. Failure in T2 thermistor  
2. Failure in Triac of warm water heater (TR1) | 1. All function is halted, and continuously error is indicated.  
2. If the power is replugged, error indication is deactivated.  
3. If T2 detects over 45°C, water is drained through nozzle self cleaning to prevent temperature rise. |
| 5  | +              | At stop, if the warm water is set, and water temperature is not changed up to 3°C in 1 minute, it is error (only detects under 30°C in water cistern) | 1. Failure in temperature sensor for warm water  
2. Failure in warm water heater(Open in heater)  
3. Failure in PCB | 1. Rear cleansing and front cleansing is off.  
2. Continuously indicate the error.  
3. If the power is replugged, error indication is deactivated. |
| 6  | +              | Open/short in temperature sensor for inlet (T1)/Open/short in temperature sensor for outlet (T2) | 1. Failure in temperature sensor for inlet (T1)  
2. Failure in temperature sensor for outlet (T2) | 1. Halting functions, and continuously indicate the error.  
2. If the power is replugged, error indication is deactivated. |
| 7  | +              | Open/short in temperature sensor for seat | 1. Failure in seat thermistor | 1. Halting functions, and continuously indicate the error.  
2. If the power is replugged, error indication is deactivated. |
9. ELECTRICAL WIRING

9-1. BA07-R/E (POWER PCB SMPS TYPE, AC 220-240V, 50/60Hz)
9-2. BA07-R/E (POWER PCB TRANS TYPE, AC 120V/60Hz)
10. DESCRIPTION SUMMARY OF PCB CONNECTOR

10-1. Main PCB Connector

1. CN16 (4-Way Motor) : pin#1 : 24V(com), pin#2~5 : (-)
2. CN17 (1-Way Motor) : pin#1 : 24V(com), pin#2~5 : (-)
3. CN14 (Move Motor) : pin#1~4 : (-), pin#5,6 : 24V(com)
4. CN19 (temperature sensor for water outlet) : pin#1 : (+), pin#2 : GND
5. CN18 (Water level sensor) : pin#1 : GND, pin#2 : empty pin, pin#3 : signal (high:low water level, low:full water level)
6. CN12 (Main ↔ Power PCB) : pin#1 : 12V, pin#2 : 24V, pin#3 : signal(dry motor) pin#4 : signal(seat temperature), pin#5 : signal(seat sensor, high: no sensing, low : sensing) pin#6 : 5V, pin#7 : GND, pin#8 : signal(water heater), pin#9 : signal(seat heater) pin#10 : signal(dry heater)
7. CN15 (Water inlet Sol v/v) : pin#1 : 24V, pin#2 : (-)
8. CN27 (Temperature sensor for water inlet) : pin#1 : (+), pin#2 : GND
10-2. Power PCB Connector

1. 2. CN9, CN7: AC power input
3. 4. CN24, CN3: Warm water heater
5. CN4: Air dryer heater
6. CN6, CN6: Seat heater
7. 8. CN8, CN22: EARTH
9. CN25 (Air dryer motor): pin#1: signal, pin#2: GND
10. CN20 (temperature sensor for seat): pin#1: signal, pin#2: GND
11. CN 13 (Seat sensor): pin#1: GND, pin#2: 5V, pin#3: signal
12. CN10 (Power Main connection wire): pin#1: 12V, pin#2: 24V, pin#3: air dryer motor,
    pin#4: seat temperature, pin#5: seat sensor, pin#6: 5V,
    pin#7: GND, pin#8: warm water heater, pin#9: seat heater,
    pin#10: air dryer heater
### 11. LIST OF A/S COMPONENT

**▼ For BA07-R/E**

<table>
<thead>
<tr>
<th>No.</th>
<th>Component schematic</th>
<th>Details</th>
<th>Item</th>
<th>Specification</th>
<th>Sap Code</th>
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| 7   | ![Image]            | Item: CUSHION COVER  
  Sap Code: 3010071  
  Quantity: 1  
  Specification: SILICONE/GRAY |
| 8   | ![Image]            | Item: ASS’Y SEAT R  
  Sap Code: 3040113  
  Quantity: 1  
  Specification: ROUND TYPE, 230V AC/50W |
| 9   | ![Image]            | Item: ASS’Y SEAT E  
  Sap Code: 3040114  
  Quantity: 2  
  Specification: ELONGATE TYPE, 230V AC/50W |
| 10  | ![Image]            | Item: ASS’Y PCB-MAIN  
  Sap Code: 3010101  
  Quantity: 1  
  Specification: Flame retardant ABS |
| 11  | ![Image]            | Item: ASS’Y PCB-POWER  
  Sap Code: 3010102  
  Quantity: 1  
  Specification: Flame retardant ABS, SMPS |
| 12  | ![Image]            | Item: ASS’Y NOZZLE  
  Sap Code: 3010168  
  Quantity: 1  
  Specification: ABS |
## 11. LIST OF A/S COMPONENT

<table>
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<tr>
<th>No.</th>
<th>Component schematic</th>
<th>Details</th>
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| 13  | ![Component](image1.png) | Item: ASS’Y TANK SEMI  
Sap Code: 3010020  
Quantity: 1  
Specification: PP+TALC20% |
| 14  | ![Component](image2.png) | Item: ASS’Y-SOLENOID REDUCING VALVE INLET  
Sap Code: 3010184  
Quantity: 1  
Specification: DC24V |
| 15  | ![Component](image3.png) | Item: ASS’Y HEATER TANK  
Sap Code: 3040115  
Quantity: 1  
Specification: 230V AC/800W |
| 16  | ![Component](image4.png) | Item: ASS’Y BI-METAL  
Sap Code: 3010137  
Quantity: 1  
Specification: 250V AC/7.5A/55℃ |
| 17  | ![Component](image5.png) | Item: ASS’Y THERMISTOR-T1  
Sap Code: 3010119  
Quantity: 1  
Specification: 25℃ (10㏀)/L90(rod length 90mm) |
| 18  | ![Component](image6.png) | Item: ASS’Y FLOAT-SENSOR  
Sap Code: 3010103  
Quantity: 1  
Specification: 5V DC/100mA |
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| 19  | ![CAP-AIR VENT](image) | Item: CAP-AIR VENT  
Sap Code: 3010103  
Quantity: 1  
Specification: POM |
| 20  | ![STOPPER-AIR VENT](image) | Item: STOPPER-AIR VENT  
Sap Code: 3010050  
Quantity: 1  
Specification: SILICONE/WHITE |
| 21  | ![ASS’Y THERMISTOR-T2](image) | Item: ASS’Y THERMISTOR-T2  
Sap Code: 3010120  
Quantity: 1  
Specification: 25℃(10㏀)/L40(rod length 40mm) |
| 22  | ![ASS’Y VALVE-1WAY](image) | Item: ASS’Y VALVE-1WAY  
Sap Code: 3010185  
Quantity: 1  
Specification: DC24V |
| 23  | ![ASS’Y CAP-DRAIN](image) | Item: ASS’Y CAP-DRAIN  
Sap Code: 3010021  
Quantity: 1  
Specification: POM |
| 24  | ![ASS’Y CASE-DRYER](image) | Item: ASS’Y CASE-DRYER  
Sap Code: 3040116  
Quantity: 1  
## 11. LIST OF A/S COMPONENT

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| 25  | ![Component](image1) | Item: HEATER-DRYER  
Sap Code: 3040117  
Quantity: 1  
Specification: 230V AC, 210W, Bimetal 105°C, thermal fuse 192°C |
| 26  | ![Component](image2) | Item: DOOR WIND  
Sap Code: 3010056  
Quantity: 1  
Specification: Flame retardant ABS/ Commonly used with BA03 |
| 27  | ![Component](image3) | Item: ASS’Y POWER CORD  
Sap Code:  
Quantity: 1  
Specification: 220V AC/ 2.5M/ WHITE |
| 28  | ![Component](image4) | Item: ASS’Y FILTER-MF  
Sap Code: 3010171  
Quantity: 1  
Specification: MF/WHITE/ Print/ For BA07 |
| 29  | ![Component](image5) | Item: HOLDER FILTER (A/S)  
Sap Code: 3010173  
Quantity: 1  
Specification: POM/ For BA07 |
| 30  | ![Component](image6) | Item: CLIP FILTER (A/S)  
Sap Code: 3030002  
Quantity: 1  
Specification: STS316/ 0.8T |
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| 31  | ![PF 1/8", With Lever Type](image) | Item: ASS'Y VALVE-T (A/S)  
Sap Code: 3010167  
Quantity: 1  
Specification: PF 1/8", With Lever Type |
| 32  | ![PF 7/8", for USA](image) | Item: ASS'Y VALVE-T (A/S)  
Sap Code: 3008065  
Quantity: 1  
Specification: PF 7/8", for USA |
| 33  | ![PP+TALC30%/For BA07](image) | Item: ASS'Y FIXER-BRACKET (A/S)  
Sap Code: 3010022  
Quantity: 1  
Specification: PP+TALC30%/For BA07 |
| 34  | ![FIXER BRACKET-SLIDER (A/S)](image) | Item: FIXER BRACKET-SLIDER (A/S)  
Sap Code: 3010051  
Quantity: 1  
Specification: STS304/1.2T |
| 35  | ![ASS'Y-BOLT INSTALL (A/S)](image) | Item: ASS'Y-BOLT INSTALL (A/S)  
Sap Code: 3010023  
Quantity: 2  
Specification: POM/M12/L100 |
| 37  | ![ASS'Y INLET HOSE-A](image) | Item: ASS'Y INLET HOSE-A  
Sap Code: 3010156  
Quantity: 1  
Specification: Commonly used in bidet |
## 11. LIST OF A/S COMPONENT

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<th>No.</th>
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12. DDO DDO SERVICE

▼ Changing filter

**Detaching filter 1**

Hold the main body of filter, and turn it with arrow direction (unscrewed).

**Detaching filter 2**

Pull out the filter downward.

**Putting filter in**

Follow the reverse sequence of the above to put filter in.

※ Caution : Please close water inlet valve before changing filter.
12. DDO DDO SERVICE

▼ Cleaning nozzle

1. Press nozzle cleaning button for over 3 seconds
2. Extension of front cleansing nozzle (cleaning)
3. Press nozzle cleaning button shortly (retract front cleansing nozzle)
4. Rear cleansing nozzle is extended (cleaning)
5. Press Stop button (nozzle is back to initial position)
6. If there is no input for 2 minutes, automatically repositioned.

※ During nozzle cleaning, water is sprayed.
If there is no water in cistern, only nozzle is extended.
During stopping, rear cleansing nozzle will do initializing operation for positioning (This is not error).

▼ Replacing nozzle tip

- Wear plastic glove in nozzle tip replacing kit, and prepare the replacing tip. (1 ea for rear cleansing, 1 ea for front cleansing)

- On 1 and 2, hold the nozzle cylinder in one hand to fix, and pull out the existing nozzle tip. Replace the old one with new one.

- Wash with disinfection gauze, and trash into.