Honeywell

EVAPORATIVE AIR COOLER SERVICE MANUAL

CAUTION:

- Before servicing the unit, read the "Safety Precautions" in this manual.
- Only for authorized service.



MODEL NO.: CO60PM (FOR INDOOR & OUTDOOR USE)

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1. PREFACE

This manual is designed to provide you with important service information. Be sure to read the safety precautions prior to servicing the unit.

1.1 Safety Precautions

- 1 When servicing, set the POWER of the CONTROL PANEL to OFF and unplug the power cord.
- Observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
- After servicing, make an insulation resistance test to prevent the customer's exposure to shock hazards.

1.2 Insulation Resistance Test

- 1 Unplug the power cord and connect a jumper between 2 pins.
- 2 The grounding conductor (green or green & yellow) is to be open.
- 3 Measure the resistance value with an ohm meter between the jumper lead and each exposed metallic part on the equipment at all MODES (except POWER OFF).
- 4 The value should be over 1 $M\Omega$.

1.3 Specifications

MODELS	СО60РМ	
ITEMS		
Power Supply	120V, 50Hz	
Input (W)	220W	
Running Current (A)	1.83A	
Fan Type	16" metal fan blade	
Fan Speeds	3	
Operation Control	Control Panel	
Air Direction Control	Vertical Louver (Right & Left) - Auto	
Air Direction Control	Horizontal Louver (Up & Down) - Manual	
Drotoctor	Fan Motor Internal Thermal Protector	
Protector	Water Pump Internal Thermal Protector	
	3 Sides Honeycomb media	
Filter	(Back 591.5 x 538 x 40mm	
	2 Sides 591.5 x 270 x 40mm)	
Power Cord	2.5 m (3 wire with grounding)	
Water Fill System	Manual (from top cover)	
	Auto (from continuous water supply connection)	
Drain System	Manual drain plug	
Water Tank Capacity	15.8 US Gallon / 60 L*	
Net Weight	39.2 lbs / 17.8 kg	
Outer Dimension	27.56'' x 18.35" x 40.0"	
(W x D x H)	700 x 466 x 1017 mm	

^{*}Due to continuous updates to product on account of compliance requirements, tank capacity may be changed by manufacturer over a period of time

Features

- Three functions in one: air cooler, humidifier & fan.
- Very powerful airflow: up to 2610 m³/hr or 1540 CFM
- Cooling area: up to 80 m² or 850 ft²
- Air throw distance: 11 m or 36 ft.
- 3 sides honeycomb cooling media for optimum performance.
- Oscillating louvers.
- Mounted with castors for easy mobility.
- 3 speeds: high, medium and low.
- 60 liter water tank capacity.

1.4 Warning & Safety Rules

WARNING - This appliance is intended for use in outdoors, home or office environment. Any other use is not recommended by the manufacturer and may cause fire, electrical shocks or other injury to person or property.

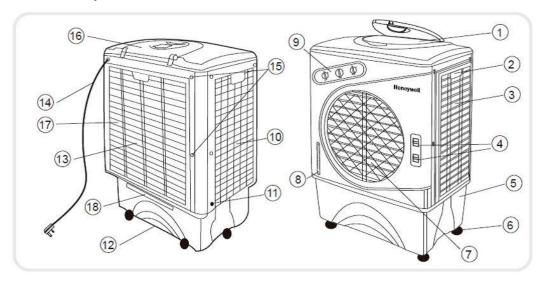
When using electrical appliances, basic safety precautions should always be followed:

- Your cooler should run on 120V Volt AC, 50 Hz current only.
- Check the household voltage to ensure it matches the appliance's rate specification.
- Before operating the product remove it from its packaging and check it is in good condition.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- DO NOT operate any product with a damaged cord or plug.
- DO NOT use an extension cord with this appliance.
- DO NOT run power cord under carpeting, or cover with rugs or runners. Arrange the cord away from areas where it may be tripped over.
- Unplug the appliance during filling and cleaning.
- Always unplug the appliance from the power source before servicing or removing the unit.
- Disconnect the power supply before servicing or cleaning operation.
- Remove the power cord from the electrical receptacle by grasping and pulling on the power cord plug-end only, never from the cord.
- DO NOT use the product in areas where gasoline, paint or other flammable goods and objects are stored.
- When using the "COOL" setting, please check the water indicator level to ensure it is above minimum water level. Operation of this unit on the "COOL" setting on or below minimum water level could result in damage to the water pump.
- DO NOT attempt repair or adjustment to any electrical or mechanical functions of the cooler.
- Verify that the voltage power source matches the appliance electrical specifications.
 Improper voltage will burn out the blower/fan, oscillating and/or pump motor windings and will void the warranty.
- DO NOT cover the air inlet or outlet on the appliance as this may cause motor damage.
- DO NOT insert or allow objects to enter any ventilation, exhaust opening or water tank as this
 may damage the product and could cause an electrical shock or fire.
- DO NOT operate with media removed as this will overload and damage the motor.
- To reduce the risk of fire or electric shock, do not use this fan with any solid state speed control device.
- DO NOT leave the appliance operating unattended for any extended period of time.
- This appliance is not intended for use by persons (including children or elderly) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- DO NOT let children play with any appliance packaging or plastic bags. Injury may result from such practice.
- Children should be supervised to ensure that they do not play with the appliance.
- If the unit is damaged or it malfunctions, do not continue to operate it.
- Place the unit on the floor only.
- This product is not intended for use in wet or damp locations. Never locate the product where it may fall into a bathtub or other water container. DO NOT use in bathrooms. When it is not in use always store in a dry area.
- Don't use indoor extension cords outside. Look for extension cords specifically marked for outdoor use. Look for extension cords that have a GFCI (Ground Fault Circuit Interrupter) built in.
- Make sure the amperage rating for the extension cord is higher than the amperage rating for the appliance. Check labels and owner's manuals on the appliance and the extension cord for amperage ratings.
- Power cords have to be contained. If they must run along the ground, make sure every inch of them is secured so they will not be tripped over.
- The wiring and connections must be waterproof. Be sure the connections (to the air cooler) never get wet. Your unit is waterproof, but everything attached to it must be waterproof, too.
- Set up your unit so it cannot be tripped over or wobble loose. It must rest on a solid support.

NOTE: OPERATE THE UNIT WHEN THE WATER TANK IS FILLED WITH CLEAN WATER

1.5 Parts Description

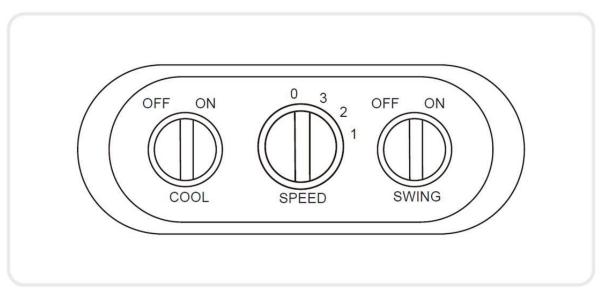


- Water Inlet and Ice Loading Compartment
- 2 Handle
- 3 Left Honeycomb Panel
- 4 Lever for Horizontal Louvers
- 5 Water Tank
- 6 Casters
- 7 Horizontal Louvers
- 8 Water Level Indicator

- 9 Control Panel
- 10 Right Honeycomb Panel
- 11 Continuous Water Supply Connection
- 12 Drain Plug
- 13 Backside Honeycomb Panel
- 14 Power Cord & Plug
- 15 Rear Grill Removal Screws
- 16 Water Fill Door
- 17 Honeycomb Cooling Media
- 18 Water Inlet (Optional) for manual refill

1.6 Operations

Control Panel:



NOTE:

Speed control may be marked as High/Med/Low in certain units.

Operation Instructions:

Cooler Location:

Place the cooler in front of an open door or window. Ensure that there is adequate cross – ventilation in the room by leaving a door or window open opposite the cooler. Following these guidelines will ensure your cooler will work as effectively as possible.

Not an Air Conditioner:

The evaporative air cooler is not an air conditioner as it does not use a compressor or refrigerant gas. It should not be expected to cool as efficiently as a refrigerated air conditioner.

The recommended maximum relative humidity level is 60% or less, which allows a noticeable temperature decrease. The temperature decrease will be greater in drier climates because higher evaporation occurs when the humidity is low.

The evaporative air cooler should not be used in enclosed spaces. It must be kept level and there must be water in the water tank. The room should have doors and windows opened to allow free air flow. The evaporative air cooler works best when placed near an open window, so that outside air is drawn into the evaporative air cooler, the air circulates in the room, and then exits via the door. The maximum cooling effect is felt when a person is in the flow of air coming out of the evaporative air cooler.

The evaporative air cooler can also be used to humidify dry air during cool weather. To be used for humidification the windows and doors should be closed to allow the humidified air to accumulate. The evaporative air cooler is not an air conditioner as it does not use a compressor or refrigerant gas. It should not be expected to cool as efficiently as a refrigerated air conditioner.

NOTE: When the product is used for the first time the Honeycomb Cooling Media will have an odor which will dissipate in a week or so of initial use.

FILL WATER:

Water can be filled into the air cooler by:

Water Inlet (Manually)

Water / Ice can be put into the tank through the top opening.

There is a hole for water to flow into the tank.

Continuous water supply (Auto Refill)

Connect a garden hose to the continuous water supply inlet.

Water Inlet (Manually)

- To refill the water tank, pull out the Water Fill Door located on the top of the unit and fill water to the Max, as indicated on the Water Level Indicator.
- Do not fill water above the Max water level mark.
- For maximum cooling performance, put ice cubes inside the lce Loading Compartment located on the top of the Air Cooler.



Filling With Water (Continuous Water Supply Connection)

CAUTION

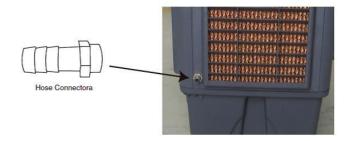
Unplug from power source before filling

This automated process eliminates the need to manually refill the water tank.

- Securely connect the continuous water supply connector (located on the lower left side panel) to the water supply.
- Turn on the water.
- The water tank will refill automatically.
- The water float valve will detect the water level and will automatically start or stop the water flow.
- Plug the unit into the power supply and turn the unit on.

Installing Hose Adapter And Float Valve

- Connect the garden hose to the water supply connector
- · Verify that connections are secure and turn on the water.



Control Knobs

Speed / On - Off

Connect to the power supply and turn the Speed knob. The fan will start. Change the speed from 1 for Low to 2 for Medium to 3 High. To switch OFF the unit turn the Speed knob to "0".

Cool

To begin cooling the desired area turn the "COOL" switch ON. The water pump will operate. You can feel the cooler air after the Honeycomb media is completely wet.

Swing

Vertical Louvers

Turn the "SWING" switch ON. The louvers will begin to move from right to left automatically. Manually adjust the horizontal louvers to change vertical airflow.

Horizontal Louvers

Manually adjust the horizontal louvers to change vertical airflow.

CLEANING & MAINTENANCE

Important - Please Read!

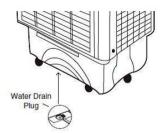
- The cooler is supplied with Honeycomb Cooling Media.
- The cleaning frequency for the Honeycomb media depends on local air and water conditions. In areas where the mineral content of water is high, mineral deposits may build up on the Honeycomb Cooling Media and restrict air flow. Draining the water reservoir and refilling with fresh water at least once a week will help reduce mineral deposits. If mineral deposits remain on the Honeycomb media, the media should be removed and washed under fresh water. The media should be cleaned every two months or sooner, depending on your needs.
- Do not run the unit in COOL mode with stale water in the tank. Empty the tank and refill it
 with fresh water if the water has been standing in the tank for an extended period of time.
- For best results, allow the Honeycomb Cooling Media to dry after each use by turning off the cool function 15 minutes before turning the unit off.

WARNING

- Before cleaning, turn the unit off and disconnect from the power source.
- Use a damp cloth to remove dirt and dust from the outside of the unit.
- Never use abrasive cleaners.
- When the unit is not in use, store it in a dry place, out of direct sunlight.
- Maximum water inlet pressure 0.5 MPa.

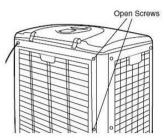
Draning and Cleaning The Water Tank

- Turn the power "off" and disconnect the air cooler from the power supply.
- Move the unit to a location where it can be drained.
- · Remove the drain plug and allow the tank to empty.
- Refill the water tank up to the maximum level with clean water and drain it completely.
- Fill water tank and rinse at least 2-3 times before use.
- · After cleaning ensure that the drain plug is back in place.
- Plug into the power supply and turn on unit.



Cleaning The Honeycomb Cooling Media

- Turn off the unit, and unplug the power cord from wall outlet.
- Rotate the unit facing the back panel, and locate the Grill Removal Screws. Remove the 4 screws with a screw driver.
- Pull the rear grill panel, until it is completely removed.
- This cooler has Honeycomb cooling media on the right and left panels. The cleaning and removal procedure is the same as rear panel.
- The Honeycomb cooling media can now be seen. Clean honeycomb with clean cloth to remove all the dust & dirt particles.
- · Once cleaning is finished, reassemble the unit.
- Plug into the power supply and turn on unit.



The air cooler is now ready to be used. This cleaning process should be repeated monthly to maintain the integrity of the unit and to remove particles filtered from the air.

2. DISASSEMBLY INSTRUCTIONS

WARNING - Before the following disassembly, POWER is set to OFF and disconnected the power cord.

2.1 How To Change Honeycomb Cooling Media(3 sides)

Back Panel.



Back Honeycomb Cooling Media.



Right Side Panel. 2.1.3



2.1.4 Right Side Honeycomb Cooling Media.

Use screw driver to remove 4 galvanized screw with plate head(ST4*12) on the honeycomb holder.

Remove the honeycomb cooling media from the right side panel.

Remove the honeycomb cooling media from the right side panel.

2.1.5 Left Side Panel.



2.1.6 Left Side Honeycomb Cooling Media.



2.2 How To Change Switch

Remove the back panel follow the procedure 2.1.1 Remove the right side panel follow the procedure 2.1.3

2.2.1. Switch Box

Use screw driver to remove 4 galvanized screws with plate head(ST3*12) on the switch box.	Remove switch box.

2.2.2. Switch(cool/speed/swing)

z.z.z. Switch(cookspeed/swing	<i>)</i>	
Use screw driver to remove 2 galvanized screws (ST3X10)	Cool switch	Speed switch
on each switch of the control panel(cool/speed/swing).		
Swing switch		
The second secon		

2.2.3. Wiring Color Connection

Wiring color connection refers to part 4.2 Wiring Color Description.

2.3 How To Change Water Pump

Remove the water pump pipe.

Remove the back panel follow the procedure 2.1.1 Remove the right side panel follow the procedure 2.1.3 Remove the switch box follow the procedure 2.2.1

2.3.1 Water pump pipe and water pump clip.

Use screw driver to remove 2 SS screws(ST4*12) on the water pump clip.



2.3.2 Cool Switch And Wiring Connector

Use screw driver to remove 2 galvanized screws (ST3X10) on cool switch of the control panel.

Remove the brown wire on the cool switch.

Remove the wiring cap (below picture shown) to get the water pump.

Note: connection is between water pump and N wire of power cord.







2.3.3 Water Pump Wiring Connection

Water pump wiring connection refers to part 4.2 Wiring Color Description.

2.4 How To Change Fan Motor

Remove the back panel follow the procedure 2.1.1
Remove the right side panel follow the procedure 2.1.3
Remove the switch box follow the procedure 2.2.1

2.4.1 Speed Switch And Wiring Connector.

Use screw driver to remove 2 galvanized screws (ST3X10) on speed switch of the control panel.

Remove the white/yellow/ blue wire on the speed switch. Remove the wiring cap (below picture shown).

Note: connection is between

Note: connection is between fan motor COM wire(black) and N wire of power cord.



Remove the wiring cap (below picture shown).

Note: connection is between motor and power cord earth wire.



Remove the wiring cap (below picture shown). Note: connection is between capacitor and the motor.



Remove the wiring cap (below picture shown).

Note: connection is between capacitor and the motor.



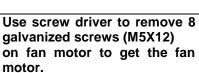




2.4.2 Fan Blade And Fan Motor

Use screw driver to remove 1 galvanized screws (M6X14) on fan blade.

Remove the fan blade.









2.4.3 Main Motor Wiring Connection

Main motor wiring connection refers to part 4.2 Wiring Color Description.

2.5 How To Change Swing Motor

Remove the back panel follow the procedure 2.1.1
Remove the right side panel follow the procedure 2.1.3
Remove the switch box follow the procedure 2.2.1

2.5.1 Swing Switch And Wiring Connector.

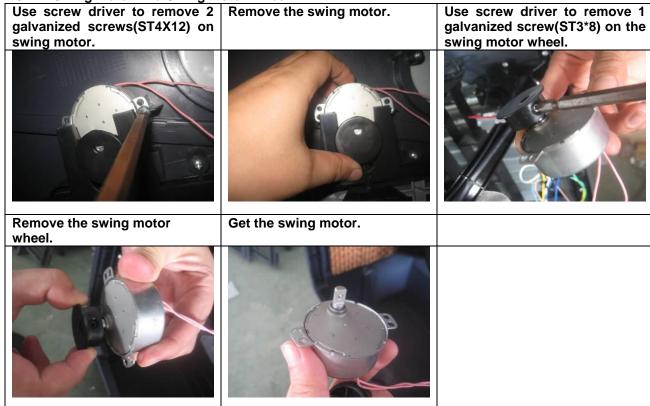
Use screw driver to remove 2 galvanized screws (ST3X10) on swing switch of the control panel.

Remove the pink wire on the swing switch.

Remove the wiring cap (below picture shown).

Note: connection is between swing motor and N wire of power cord.

2.5.2 Swing Motor And Swing Motor Wheel.



2.5.3 Swing Motor Wiring Connection

Swing motor wiring connection refers to part 4.2 Wiring Color Description.

3. TROUBLESHOOTING GUIDE

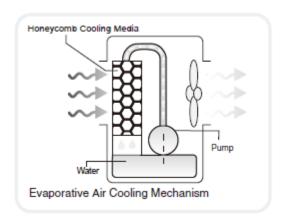
3.1 Outside Dimensions

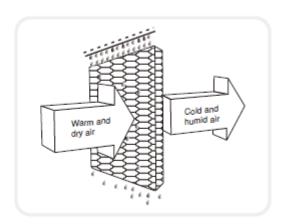


Width: 700 mm (27.56") Depth: 466 mm (18.35") Height: 1017 mm (40.0")

3.2 Cooling System

Honeywell Evaporative Air Coolers are built to maximize energy efficiency and keep costs low. Warm air is drawn into the cooler through a dust and odor-reducing carbon filter and enters the Honeycomb Cooling Media. Water pumped from the tank pours over the honeycomb media. As the warm air passes through the media, the water absorbs the heat, naturally cooling and humidifying the air. A fan propels the cooled air out into the room. This no-compressor system cools naturally, efficiently and inexpensively.





3.3 Troubleshooting Guide

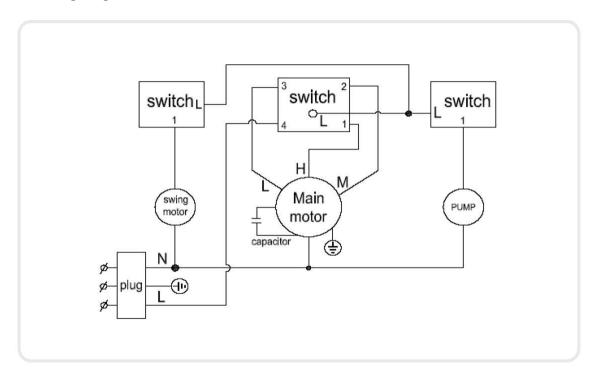
The following troubleshooting guide is intended to address the most common symptoms and is by no means exhaustive. If symptoms persist, call a qualified service provider. Only a certified electrician should complete any electrical work. Unplug and disconnect the appliance from the power source before attempting to troubleshoot any of the following symptoms.

Problem	Possible Cause	Solution
No discharge of air	Cord is not plugged in.	Make sure power cord is plugged in and the supply switch is on.
The diserial go of all	Power is not on.	Turn the unit ON.
Humidity output minimal to	Water is below minimum water level in tank.	Turn off the unit. Follow instruction to fill the water tank with clean water.
none	Water pump is damaged.	Replace the water pump according to the procedure 2.3.
Water color yellowish at initial use	Color fasts from honeycomb filter.	This is natural. After several use, the water color will be clean.
Abnormal noise inside the product	Noise of water pump when water not up-to min water level.	Turn off the product. Add water, and then turn on the product again.
	Motor or blade problem.	Turn off and unplug the product or change the main motor according to the procedure 2.4.
Musty or unpleasant odor	When the Cooler is new.	When the unit is used for the first time, the Honeycomb Cooling Media will have an odor, which will dissipate within a few hours of initial use.
	Stale or stagnant water in water tank.	Drain, flush and clean water tank
	Media mildewed or clogged.	Replace media according to the procedure 2.1.
	Pump is not turned on.	Check the water level and turn
Not cooling	Low or no water.	on the pump.
	Damaged water pump.	Replace the water pump according to the procedure 2.3.

NOTE: The form is only for reference. If any help, please call customer service.

4. SCHEMATIC DIAGRAM

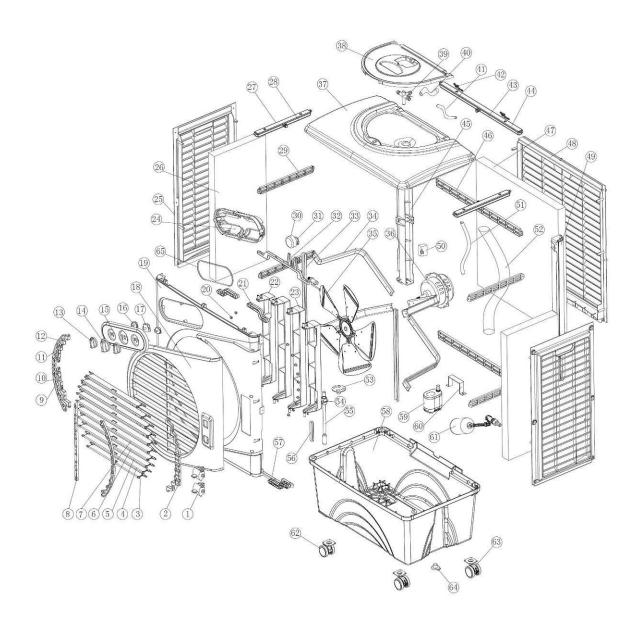
4.1 Wiring Diagram



4.2 Wiring Color Description

Power Cord: (1) Brown (2) Blue (3) Green + Yellow	Live Neutral Earth (Ground)	to speed switch(4) motor COM(black) to motor earth
Main Motor: (1) White (2) Yellow (3) Blue (4) Black (5) Red (6) Brown (7) Green + Yellow	High speed Medium speed Low speed Neutral	to speed switch(1) to speed switch(2) to speed switch(3) to N wire of power cord to capacitor by end-closed connector to capacitor by end-closed connector to power cord earth
Water Pump: (1) Brown (2) Blue		to pump control switch(1) to N wire of power cord
Swing Motor: (1) Pink (2) Pink		to swing control switch(1) to N wire of power cord

5. EXPLODED VIEW



6. REPLACEMENT PARTS LIST

Sr.	PART NAME	QUANTITY
1	Up/Down swing knob	2
2	Swing knob press board	1
3	Horizontal louver 1	2
4	Horizontal louver 2	2
5	Horizontal louver 3	2
6	Horizontal louver 4	2
7	Horizontal louver 5	2
8	Horizontal louver middle link	1
9	Horizontal louver press board A	2
10	Horizontal louver link A	2
11	Horizontal louver press board B	2
12	Horizontal louver link B	2
13	Swing/Cool knob	2
14	Speed knob	1
15	Control plane	1
16	Swing/Cool switch	2
17	Speed switch	1
18	Air outlet panel	1
19	Front panel	1
20	Rubber washer	20
21	Vertical louver base	4
22	Short vertical louver	2
23	Long vertical louver	2
24	Switch box	1
25	Side panel	2
26	Side honeycomb pad	2

27	Side water distributor cover	2
28	Side water distributor	2
29	Side honeycomb pad holder	4
30	Swing motor	1
31	Swing motor wheel	1
32	Vertical louver drive	1
33	Base of fan motor frame	2
34	Fan motor frame	4
35	Fan blade assembly	1
36	Fan motor	1
37	Top cover	1
38	Water fill door	1
39	Four directions pipe	1
40	Back water distributor tube	1
41	Left/Right water distributor tube	2
42	Water fill door link	2
43	Back water distributor	1
44	Back water distributor cover	1
45	Left stand pillar	1
46	Back honeycomb pad holder	2
47	Back honeycomb pad	1
48	Back panel	1
49	Right stand pillar	1
50	Motor capacitor	1
51	Suction pipe	1
52	Water fill pipe	1
53	Float cap	1
54	Float holder	1

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55	Float tube	1
56	Water level board	1
57	Vertical louver link	1
58	Water tank	1
59	Water pump	1
60	Water pump clip	1
61	Continuous water supply connection	1
62	Castor	2
63	Castor with brake	2
64	Water drainage plug	1
65	Silica gel ring	1