

Technical A/S Manual for Iguassu Ice (Model : CHP-5050S)



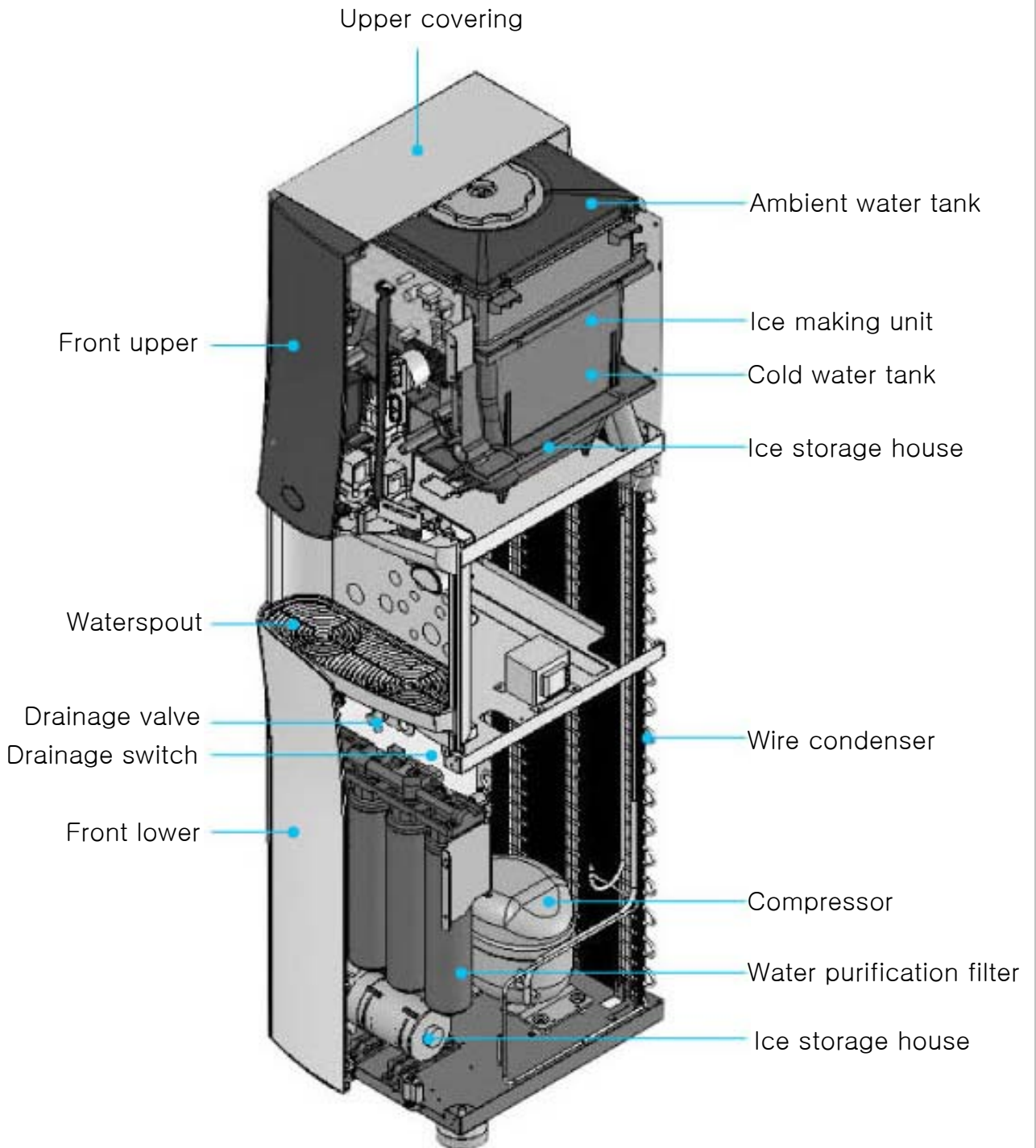
1. Part names

1-1. Front side



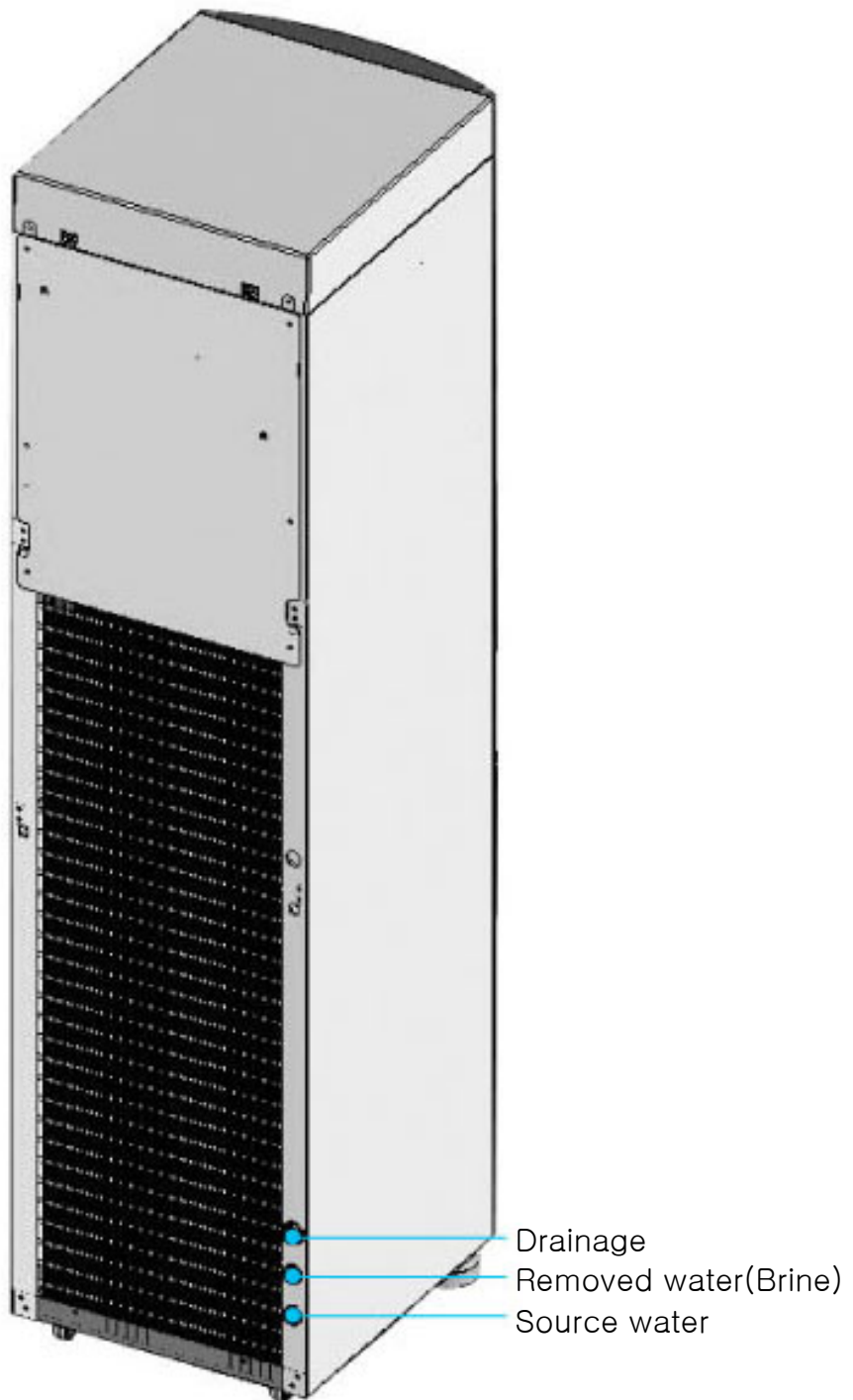
1. Part names

1-2. Inside



1. Part names

1-3. Back side



2. Characteristics

- (1) Water purification system providing an integrated ice making function
The Iguassu Ice is designed for both convenience and practicality, as it utilizes compact ice making system, designed to obtain cold water for the production of ice. With an ice making mechanism featuring an ice tray which utilizes the freezing point method as well as reverse osmotic water purification.
(Patent application: No.2005-99663, 2005-365293, 200510127096.9, 11/342,117)
- (2) 24 Hour natural water circulation system (N.W.P.W.)
This function of ChungHo purification systems is designed to allow water to continuously flow for 24 hours within the water purifier by adopting a natural circulation method. This mode, entitled N.W.P.W., applies the natural weight of water pressure in order to always supply clean and fresh water.(Patent: No.105585)
- (3) Pure ice production utilizing the freezing point method
The freezing point method produces only the purest ice by supplying purified water to the ice making unit. The freezing point principle states that purest water freezes at 0°C while non-pure water will freeze at a temperature below that.
- (4) Energy saving function
The economically designed Iguassu Ice delivers purified water to the ice making unit in order to make pure ice while simultaneously sending cooled water to cold water tank. This allows the system to maintain a constant cold water temperature, thus inherently preventing water waste and helping to conserve energy.
- (5) Automatic ice dispenser
Upon pressing the ice dispenser touch sensor button, the system then slowly rotates the ice storage plate via an integrated motor in order to automatically replenish the ice supply within the storage housing.

2. Characteristics

(6) Touch sensor application

Breaking away from traditional button applications, the Iguassu Ice has a built-in touch sensor application. This addition has been integrated into the already stellar system with customer convenience in mind. The easy-to-use sensor application allows for effortless and enjoyable drinking water with ice.

(7) Infrared water level detection sensor

With improved detection accuracy, as compared to existing mechanical detection types, the infrared OLC sensor applies an electronic water level sensor that was developed for stable water level detection. The signal is connected to a controller in order to automatically adjust purified water levels. (Patent: No.426182)

(8) Automated operation via sensor and micom

This system internally provides temperature control for the ice making process/cold water process by way of an ice detection sensor, so that ice making, ice removal, and cold water operation, via micom, may be automatically controlled in order to maintain an optimum ice making environment.

(9) 4 H₂ O (Ambient water/Cold water/Hot water/Ice) 1 product!

With improved convenience, the Iguassu ice offers more production and supply power by providing purified ambient water, cold water, hot water, and ice from the same product.

(10) Standard hot water safety function (Hot water locking function + Hot water automatic selection / Release function)

Setting the hot water locking function using the Hot Lock touch sensor button prevents hot water from being dispensed from the unit. This is in order to prevent burns and other unwanted injuries to children, the elderly and any other vulnerable user. As a furthered safety procedure, you will find that upon the use of hot water and the releasing of the hot water lock, the system, after a certain period of time, will automatically shut off the hot water even though the hot water release button has been pressed.

2. Characteristics

(11) System Display functions and safety reinforcement

The safety features of the product have been enhanced in order to prevent various problems from occurring. The system will inform the user(s) of abnormal occurrences through a flashing display icon and by automatically stopping the ice making function, cold water function, and water purification function when an abnormality in the system is detected.

(12) Power saving function

Selecting the power saving function during hot water operation activates the light detection sensor which functions in accordance with the levels of light around the water purifier. By activating the power save function, the user will ultimately reduce power consumption at night.

(13) Automatic water dispensing

This system function is convenient to the user because it enables ambient water, cold water, and hot water to be taken at the press of a button and placed into a container of any kind. Another new development, found in the Iguassu Ice, is the automatic selection of cold water. In many circumstances, cold water is found to be the most desired temperature of water for drinking. The system has a reset function which, shortly after selecting hot or ambient water, will automatically switch the cooler into cold water mode.

(14) Separate water delivery from a single spout

Ambient water, cold water, and hot water come out from a single spout, but independent water hoses are applied so that ambient water, cold water, and hot water are not mixed, improving overall satisfaction in preferred temperature from the first drink.

(15) Beep function

This provides customers a convenient reminder that a system setting has been changed as sounded via beeping(ding~, dingdong~, etc.) and as applied via system touch sensors.

2. Characteristics

(16) Noise prevention

This reduces system operating noise by applying a dual noise prevention material, utilizing a shock mitigation structure found at ice storage house, etc.

(17) Wire condenser(Natural convection)

Using natural convection, the system wire condensers are rated to reduce noise and thus provide further convenience for the user.

(18) Convenience in use

Function operations are designed as simply as possible in order to maximize convenience.

(19) Beautiful design

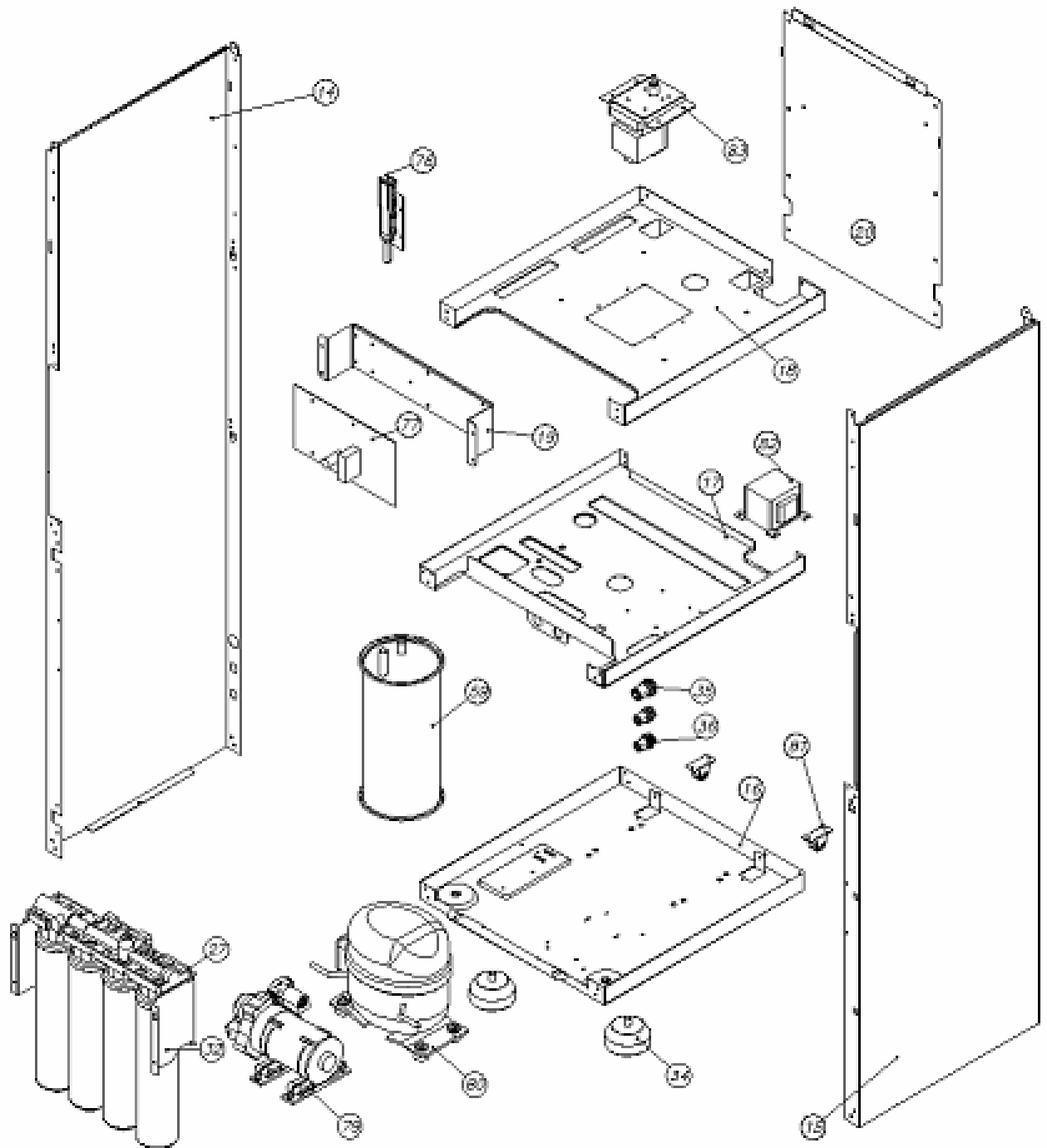
The Iguassu Ice has adopted an environmentally friendly cooling system in the new R-134a, a coolant that will not add to the problems of ozone layer destruction and global warming.

(20) Default function

Designed to automatically convert to cold water mode when in queue.

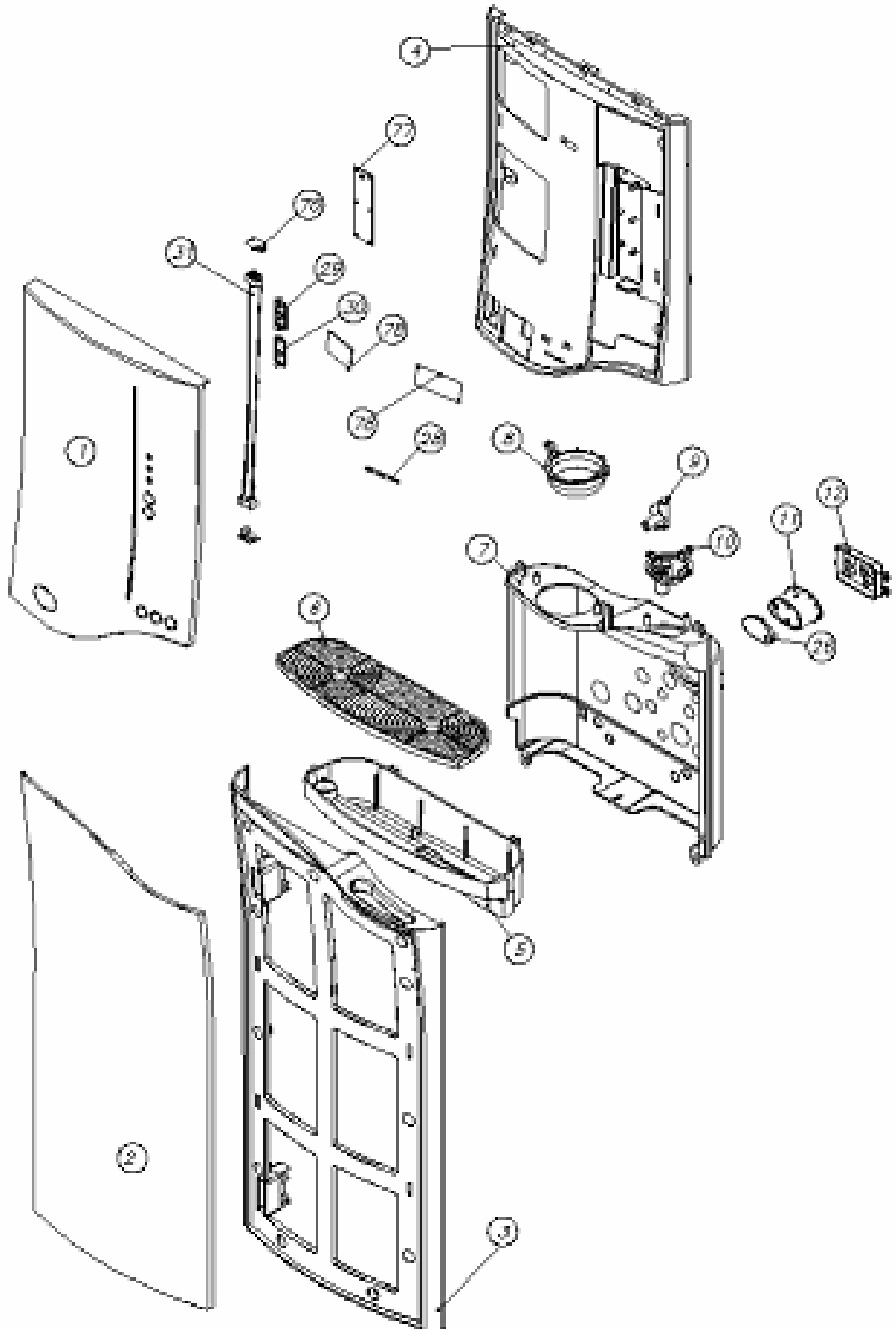
3. Expanded drawing

1/3



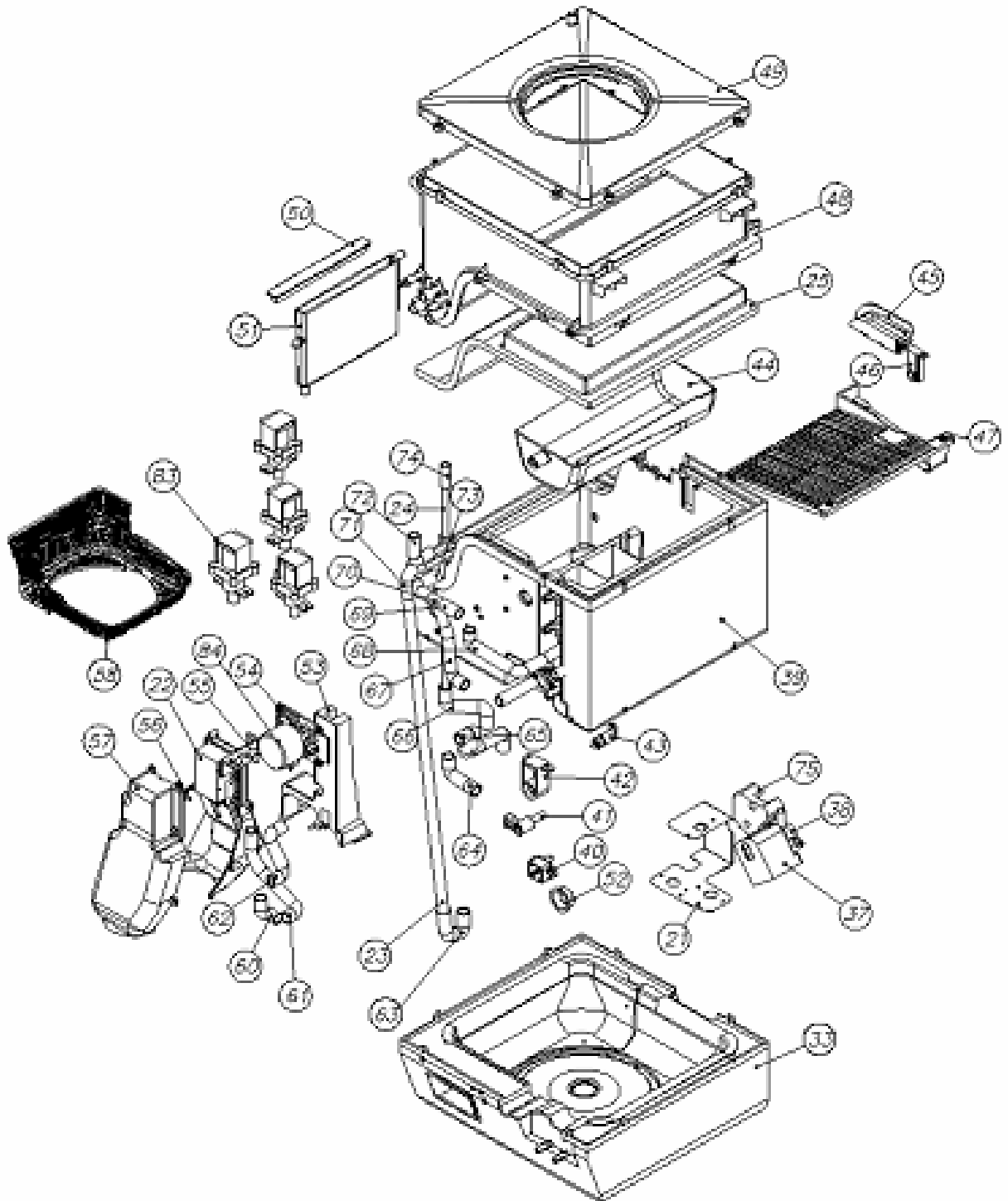
3. Expanded drawing

2/3



3. Expanded drawing

3/3

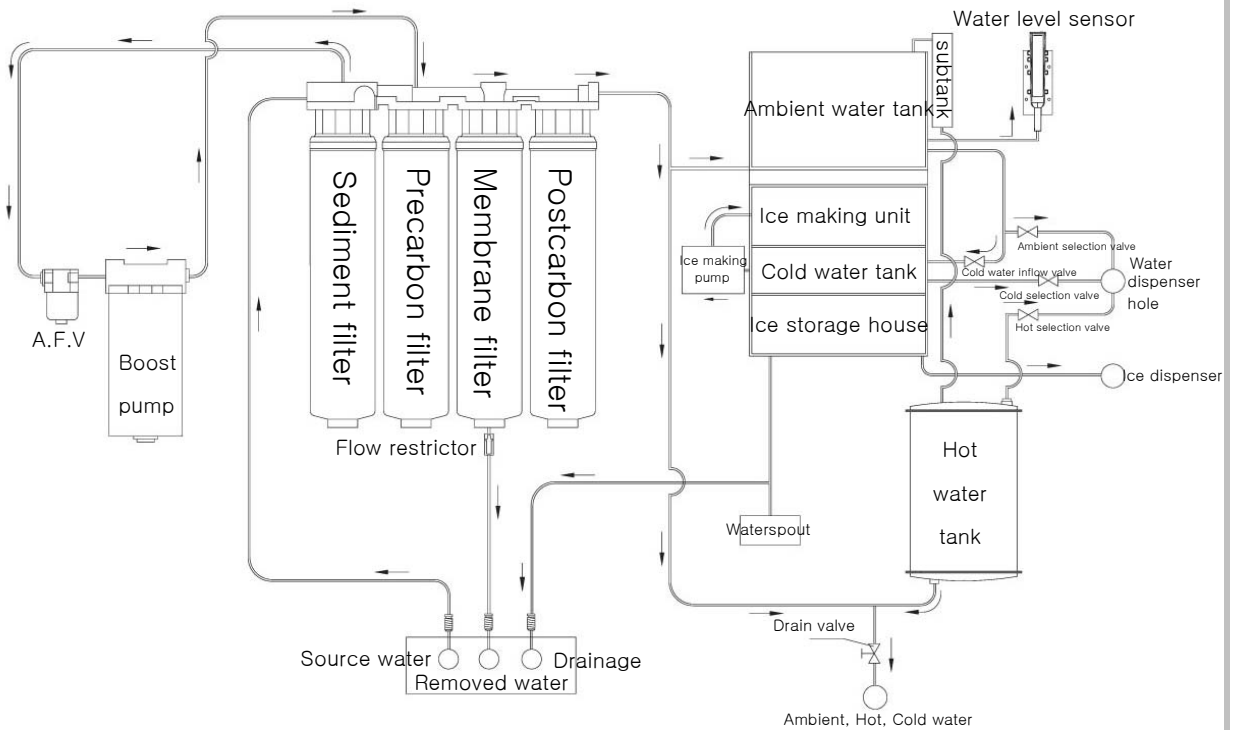


CHP-5050S PARTS LIST

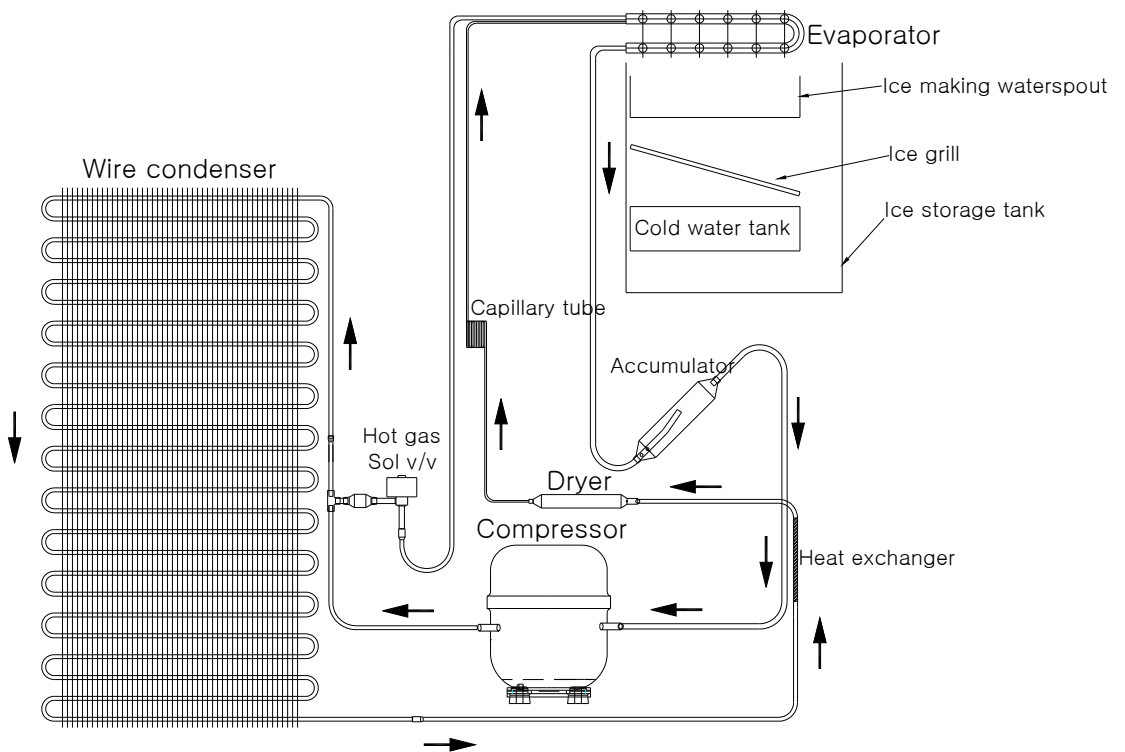
No	PART NAME	Q'TY	MATERIAL	No	PART NAME	Q'TY	MATERIAL
1	FRONT UPPER-DECO	1	MPC	45	EVA. FIXATION BRACKET	1	PC/ABS
2	FRONT LOWER-DECO	1	MPC	46	TURN WATERSPOUT BUSHING (R)	1	POM
3	FRONT LOWER-BODY	1	ABS	47	ICE GRILL	1	LLDPE
4	FRONT UPPER-BODY	1	ABS	48	AMBIENT WATER TANK	1	PP
5	WATERSPOUT	1	ABS	49	COVER-AMBIENT WATER TANK	1	PP
6	GRILL-WATERSPOUT	1	ABS	50	HOT WATER SUB TANK CAP	1	HEAT-RESISTING PP
7	FRONT MIDDLE	1	ABS	51	HOT WATER SUB TANK BODY	1	HEAT-RESISTING PP
8	DISPENSER DECO	1	ABS	52	O-RING-CIRCULATION PUMP HEAD	1	SILICONE
9	MANIFOLD(OVAL)-COLD,HOT (D/TYPE)	1	PC/ABS	53	COLD WATER TANK ICE MAKING UNIT EPS	1	EPS
10	FAUCET DECO-COLD, HOT (D/TYPE)	1	PC/ABS	54	WATERSPOUT MOTOR S/W PANEL	1	ABS
11	DRAIN BUTTON	1	ABS	55	SOLENOID VALVE BRACKET	1	ABS
12	DRAIN BUTTON COVER	1	ABS	56	ICE OUTLET GUIDE COVER (LOWER)	1	ABS
13	TOP COVER	1	ABS	57	ICE OUTLET GUIDE COVER (UPPER)	1	ABS
14	SIDE PANEL (L)	1	EGI 1.0t	58	NOISE DECREASE BASKET	1	LDPE
15	SIDE PANEL (R)	1	EGI 1.0t	59	HOT TANK ASS'Y	1	SUS 0.5t
16	BASE PANEL	1	EGI 1.0t	60	TUBE-COLD WATER DRAIN	1	ELASTOMER
17	HOT TANK PANEL	1	EGI 1.0t	61	TUBE-AMBIENT WATER DRAIN	1	ELASTOMER
18	ICE UNIT PANEL	1	EGI 1.0t	62	TUBE-COLD WATER SOL V/V WATER INLET	1	ELASTOMER
19	PCB CONTROL PANEL	1	GI 1.0t	63	TUBE-HOT WATER WATER INLET	1	SILICONE
20	REAR PANEL	1	GI 1.0t	64	TUBE-HOT WATER DRAIN	1	SILICONE
21	BRACKET-DRAIN SOL V/V	1	EGI 1.2t	65	TUBE-HOT WATER SOL V/V WATER INLET	1	SILICONE
22	Solenoid - DOOR	1		66	TUBE-HOT WATER Air Vent WATER INLET	1	SILICONE
23	LLDPE-TUBING	0.6	LLDPE	67	TUBE-AMBIENT WATER SOL V/V WATER INLET	1	ELASTOMER
24	PIPE-HOT WATER SUB TANK CONNECTION	1	SUS304	68	TUBE-COLD WATER SUPPLY SOL V/V WATER OUTLET	1	ELASTOMER
25	HEAT INSULATOR-LOWER AMBIENT TANK	1	EPS	69	TUBE-COLD WATER SUPPLY SOL O/V WATER INLET	1	SILICONE
26	RUBBER-DRAIN BUTTON	1	SILICONE	70	COLD-AMBIENT So1CONNECTION Tee	1	POM
27	SINGLE HEAD	1	PP	71	TUBE-COLD-AMBIENT So1 v/v CONNECTION	1	SILICONE
28	LED Window - COLD, HOT, AMBIENT	1	PMMA	72	TUBE-OLC	1	ELASTOMER
29	LED Window - ROUND	1	PMMA	73	TUBE-COLD-AMBIENT So1 v/v CONNECTION	1	ELASTOMER
30	LED Window - SQUARE	1	PMMA	74	TUBE-HOT WATER SUB TANK CONNECTION	1	SILICONE
31	LED Window - BAR	1	PMMA	75	COLD WATER TANK ICE MAKING Senser EPS	1	EPS
32	BRACKET-FILTER	1	EGI 1.0t	76	WATER LEVEL DETECTOR - AMBIENT	1	
33	ICE TANK	1	PP	77	PCB-CONTROLLER(2 TYPES)	1	
34	LEG	2	ABS(LG)	78	Display Module (3 TYPES)	1	
35	BULK HEAD (3/8")	1	POM	79	PUMP-AMBIENT WATER	1	
36	BULK HEAD (1/4")	2	POM	80	COMPRESSOR	1	
37	PUMP-ICE MAKING	1		81	CASTER-linear	2	STEEL ETC.
38	ICE MAKING PUMP HEAD	1	POM	82	TRANSFORMER	1	
39	COLD TANK & ICE MAKING UNIT	1	PP	83	SOL V/V - WATER SUPPLY	1	
40	COLD WATER LEVEL SENSOR CASE	1	ABS	84	SOL V/V - HOT WATER DRAIN	1	
41	WATERSPOUT MOTOR COUPLING	1	POM	85	SOL V/V - COLD WATER DRAIN	1	
42	TURN WATERSPOUT BUSHING (L)	1	POM	86	SOL V/V - AMBIENT WATER DRAIN	1	
43	FULL LEVEL ICE SENSOR CASE (L)	1	ABS	87	MOTOR-GEARED	1	
44	TURN WATERSPOUT	1	PC/ABS	88	MOTOR - BIDIRECTIONAL SYNCHRONOUS MOTOR	1	

4. Flow diagram

4-1. Purification system



4-2. The system of Ice making and Cold water



5. Specifications

Product name		Iguassu Ice	
Model name		CHP-5050S	
Dimension		W14 X D18 X H56 (in)	
Rated voltage		AC110V,220V / 50Hz,60Hz	
Consumed power	Rated consumed power	700W(hot water + ice making)	
	Hot water/Cold water	500W/170W	
	Ice making	200W	
Storage house	Ambient water	1.85 gallons	
	Hot water/Cold water	.7 gallons / .5 gallons	
	Ice	2.25 lbs.	
Monthly consumed power quantity(Cold water+Hot water)		57.8kWh/month	
Refrigerant / Refrigerant weight		R-134a (85g ±1g)	
Product weight		115 lbs.	
Effective water purification quantity		950 gallons	
Weather class		N class(90°F ±1°F)	
Daily maximum ice making quantity		33 lbs./day (when surrounding temperature is 70°F)	
Ice making capability	Surrounding temp.	70°F	86°F
	Required time	12min ±1min/one time ice making	14min ±1min/one time ice making
	Daily ice making q'ty	33 lbs./day	22 lbs./day
	Ice size	13g±1g X 12ea. per cycle (1ea. cold water tank submerging)	
Heat radiation type		Wire Condenser Type	
Cold water temperature regulation		Thermostat	
Hot water temperature regulation		Automatic bimetal (190°F±10°F OFF, 175°F±10°F ON)	
Overheating prevention system		Manual bimetal (220°F OFF)	

6. Installation method

1. Install the product on a level surface. (Change product level using the product leg adjustment and confirm the level surface a level.)
2. Close off the water supply valve as supplied to each household. Then temporarily remove the connector part as provided from your given water source. Then connect the main water line adaptor. (※If the sealing O-ring at the connection piece is removed or damaged, it can lead to leakage.)
3. Connect tubing hose into water source adaptor and then attach to the water inlet on the rear side of product.
4. Connect tubing hose into the removed water(brine) and drained water connection part on the rear side of product and then connect tubing hose into the drainage hole in sink, bathroom, or multi-purpose room, etc. (※Install the removed water(brine) line and drained water line separately. If drainage dose not function properly due to improper installation, then water may flow back toward waterspout and cause an overflow.)
5. Adjust the tubing hose so that the discharged water(brine) and tap water tubing hose so that they do not splash into surrounding areas.
6. Open the tap water valve supplied into each household, and place the water source adaptor to the open position.
7. Check to see if water is leaking at each connection part.
8. For stabilization of the cooling system and for safe use of this product, insert the power plug into an AC 110V60Hz, 220V50Hz, 240V/50Hz and 220V/60Hz power outlet after 30 minutes after the installation of the product.
9. Check whether water is supplied into the inside of product and whether there is any leakage in or around the tubing connections.
10. Check whether water is coming out by pressing the water dispensing button 1 hour after purification has begun.
11. Use after water has flowed into the storage tanks.

7. Test Board

1. Remove Top covering to reveal Test Board wire harness connection.
2. Test different parts of the product; when LED light is blinking, replace appropriate part.
3. Test Board Manual Functions
 - BYPASS : Used to move on to the next function on the checklist.
(except for when COLD WATER is being sent via circulation pump)
 - ICE RELEASE : Hot Gas released; Compressor turned Off for 60 seconds to release Ice from the Ice maker.
 - COLD WATER : Circulation Pump On; Compressor turned Off for 60 seconds to circulate cold water to the Ice maker.

LED1 COMP ON	LED7 Ice Full 5 second	LED13 Circulating Pump Error	LED 19 Ice Sensor Error	LED25 Ice Size Big
LED2 Booster Pump ON	LED8 Ice Detection (TX) 7 second	LED14 Room Temperature Above 130°F	LED20 Environment Sensor Error	LED26 Ice Size Medium
LED3 Main Sol V/V ON	LED9 Ice Complete (Time End)	LED15 Ice Temperature Above 85°F	LED21 Ice Sensor 160°F Functioning 175°F OFF -HotGas 이물질불량 시	LED27 Ice Size Small
LED4 Hot Gas Sol V/V ON	LED10 Ice Complete (Temp. End)	LED16 Cold Error (60 Minute)	LED22 Camshaft Motor Coupler Broken	LED28 Ice Making
LED5 Circulating Pump ON	LED11 S/W: Micro (Ice Error)	LED17 Night On Daytime OFF	LED23 급수 Sol v/v 냉수수위검출기 불량 (급수 5분누적불량임)	LED29 Gas Sol V/V Defrost
LED6 Ice Motor Move	LED12 S/W: Micro (Defrost Error)	LED18 Compressor 5 Minute	LED24 Operation ON/OFF	LED30 Cooling
<input type="radio"/> BYPASS <input type="radio"/> ICE RELEASE <input type="radio"/> COLD WATER				