Chiltrix

5.1” Thin DC - Inverter Water Fan Coil Unit Floor, Wall or Ceiling Universal Mount

Manual

Version 1.5

CONTENTS

CHAPTER 1 GENERAL INTRODUCTION

1. Preface

Thank you for choosing the Chiltrix DC – Inverter hydronic fan coil.

- The manual includes necessary information concerning correct installation, operation, and maintenance of units. Before installing or operating machines, please carefully read this manual.
- When you are installing the vertical water fan coil, connecting the water circuit, or wiring electric or electronic devices, please adhere to the instructions listed in this manual. Do not power on or test machines until the installation is complete.
- Chiltrix reserves the right to change the specification and design of units which may lead to content change. Always use the latest version of this manual, the version number is listed on the front page.

1. Production Introduction

Our vertical water fan coil is energy-saving and environmentally friendly equipment. It not only has compact structure and beautiful appearance, but also occupies little space and is easy to

The vertical fan coil is not only for your home, but also for hotels, offices, restaurants and wherever you need a comfortable climate.

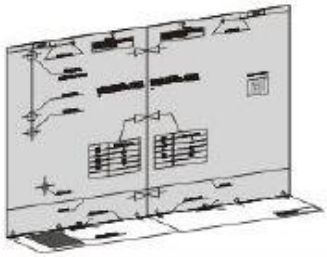
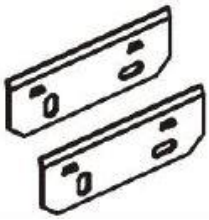
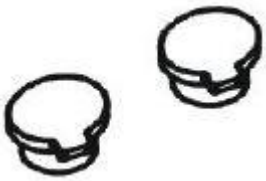
3. Measurements

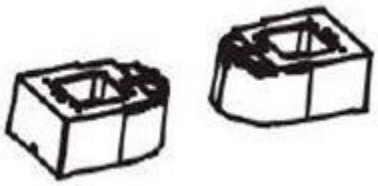
CXI	Net Dimension (inch: L/W/H)	Net weight / Gross weight (lb.)	Power Supply
CXI34	27.5 / 5.25 / 25.75	28.7 / 32	110V-1ph-50-
CXI65	35.25 / 5.25 / 25.75	37.5 / 41.9	110V-1ph-50-
CXI85	43.25 / 5.25 / 25.75	44.1 / 48.5	110V-1ph-50-
CXI120	51. / 5.25 / 25.75	50.7 / 57.3	110V-1ph-50-
CXI148	59.0 / 5.25/25.75	73.8 / 81.1	110V-1ph-50-

Note* Height listed above does not include the foot kit. With feet added, height is 29 3/8”

Accessories

The following assemblies are included in the box.

Vertical Fan Coil	Installation Template	Drain Pipe	Brackets
			
Toggle Bolts	Screws	Screw Caps	Remote Controller
			

Feet	Bellows
	

Inspecting and Handling the Unit

After delivery, the package should be checked and any damage should be reported immediately to the carrier claims agent.

When handling the unit, please take into account the following:

-  Fragile, handle the unit with care.
-  Keep the unit upright in order to avoid damage.
-  Keep the unit dry
- Move this unit with original package.
- When lifting the unit, always use protection to prevent **fork** damage.

4. Product Features

- Extremely compact structure, attractive cabinet, and easy to transport.
- It can control the temperature both in summer and winter.
- Uses a DC fan motor combined with new air-guide technology makes for low noise operation.
- Our air exchanger (fin-coil) has a hydrophilic coating.
- All units undergo general and operational testing before they are prepared for shipping.

5. Safety Precautions

To prevent the users and others from the harm of this unit, and avoid damage on the unit or other property, please use the heat pump properly, please read this manual carefully and understand the following information correctly.

2.1 Mark Notes

Mark	Meaning
WARING	A wrong operation may lead to death or heavy injury on people.
ATTENTION	A wrong operation may lead to harm on people or loss of material.

2.2 Icon Notes

Icon	Meaning
	Prohibition. What is prohibited will be nearby this icon.
	Compulsory implement. The listed action need to be taken.
	ATTENTION (include WARNING) Please pay attention to what is indicated.

2.3 Warning

INSTALLATION	PROFESSIONAL INSTALLER IS REQUIRED	Entrust a specialized personnel for installation. Improper installation will lead to water leakage, electrical shock, injury or fire.
	EARTHING IS REQUIRED.	Be sure the unit is properly grounded, or it may lead to eletric shock.
OPERATION	PROHIBITION	Do not put fingers or others into the fans and evaporator of the unit, otherwise harm may be occurred.
	SHUT OFF THE POWER	When there is something wrong or strange smell, the power supply need to be shut off to stop the unit. Continue to run may cause electrical shock or fire.
MOVE AND REPAIR	ENTRUST	When the heat pump need to be moved or installed again, please entrust dealer or qualified person to carry it out. Improper installation will lead to water leakage, electrical shock, injury or fire.
	PROHIBIT	It is prohibited to repair the unit by the user himself, otherwise electrical shock or fire may be occur.
	ENTRUST	When the heat pump need to be repaired, please entrust dealer or qualified person to carry it out. Improper movement or repair on the unit will lead to water leakage, electrical shock, injury or fire.

INSTALLATION	Meaning
	Make sure the base or pad of the heat pump is strong enough to avoid the unit tipping over.
 Need circuit breaker	Be sure to use a dedicated circuit breaker, failure to do so may lead to electrical shock or fire.

OPERATION	Meaning
 Check the installation	Please check the installation base for tilting on a regular basis, cracked or tilting should be replaced.
 Switch off the unit	Please switch off the power before cleaning or maintenance.
 Prohibit	Please use a suitable breaker and copper wire for the power connection.

Warning:

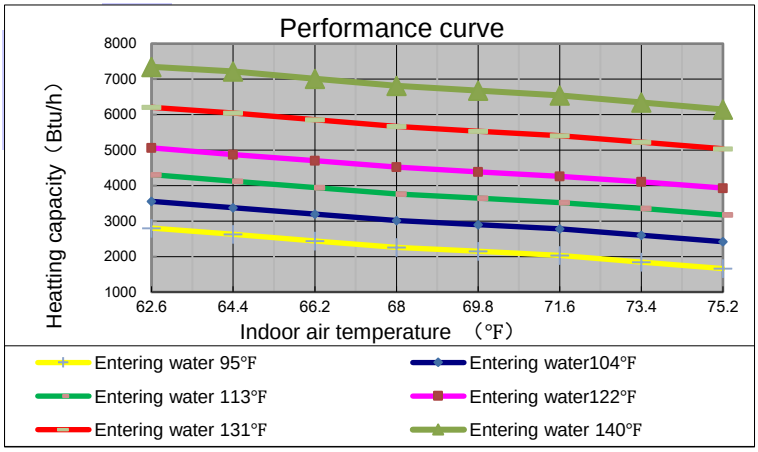
Remember that some fundamental safety rules should be followed when using a product that uses electricity and water, such as:
It is dangerous to touch the appliance with wet hands or body when barefoot.
It is dangerous to carry out any cleaning before having disconnected the appliances from the electricity power supply by turning the system master switch to OFF.
It is dangerous to modify the safety or adjustment devices or adjust without authorization and indication of the manufacturer.
It is dangerous to pull, cut or knot the electrical cables coming out of the appliance, even if it is disconnected from the power supply.
It is dangerous to poke objects or anything else through the inlet or outlet grills.
It is dangerous to dispose of or leave in the reach of children the packaging materials which could become a source of danger.
It is dangerous to climb onto the appliance or rest any object on it.
It is dangerous to touch the unit with hands directly as the external parts of the appliance can reach temperatures of more than 158°F.
This appliance is not intended for use by persons (including children) 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.
Children should be supervised to ensure that they do not play with the appliance.
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.
The appliance shall be installed in accordance with local and NEC wiring regulations.

CHAPTER 2
PERFORMANCE AND SPECIFICATION

CXI-34 Performance curve
(at 2.4GPM per each 12,000BTU) Temps in F

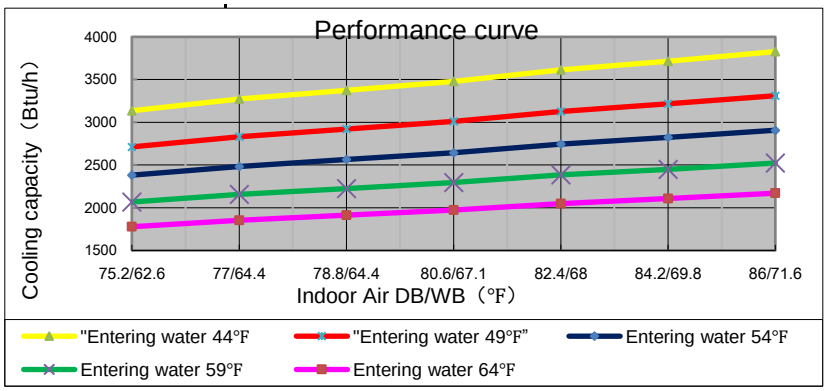
Heating capacity performance data and curve

Entering water / Indoor air	95	104	113	122	131	140
63	2802	3556	4309	5062	6205	7348
64	2626	3375	4124	4873	6043	7214
66	2441	3194	3947	4701	5857	7014
68	**2260**	3013	3767	4520	5667	6814
70	2152	2897	3643	4388	5534	6680
72	2035	2778	3521	4264	5405	6546
73	1843	2599	3354	4109	5228	6346
75	1661	2417	3174	3930	5038	6146



Cooling capacity performance data and curve

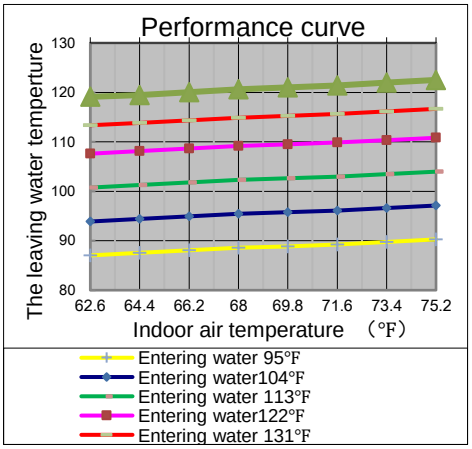
Entering Water / Indoor air	44	49	54	59	64
75.2/62.6	3135	2712	2381	2067	1778
77/64.4	3271	2830	2484	2156	1855
78.8/64.4	3376	2920	2564	2225	1914
80.6/67.1	3480	3010	**2643**	2294	1973
82.4/68	3615	3127	2746	2383	2050
84.2/69.8	3717	3215	2823	2450	2107
86/71.6	3828	3311	2907	2523	2170



CXI-34

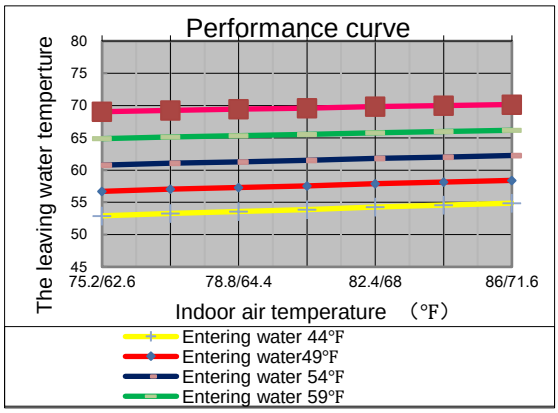
The leaving water temperature data – Heating

Entering water / Indoor air	95	104	113	122	131	140
63	87.0	93.9	100.8	107.6	113.4	119.1
64	87.5	94.4	101.3	108.1	113.8	119.5
66	88.1	94.9	101.8	108.6	114.3	120.1
68	88.6	95.4	102.3	109.2	114.9	120.6
70	88.9	95.8	102.6	109.5	115.3	121.0
72	89.2	96.1	103.0	109.9	115.6	121.4
73	89.8	96.6	103.5	110.3	116.1	122.0
75	90.3	97.1	104.0	110.8	116.7	122.5



The leaving water temperature data – Cooling

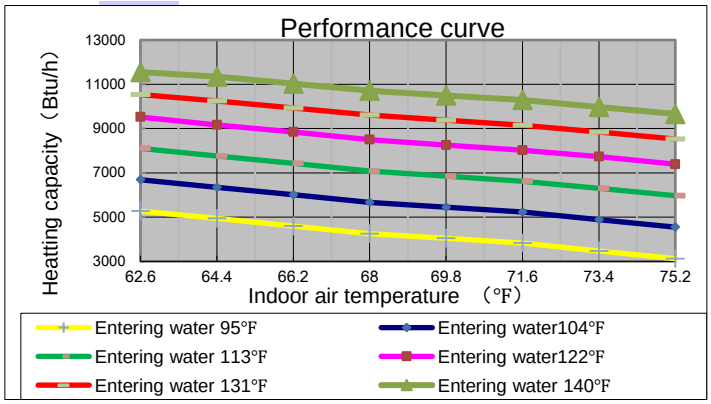
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	52.9	56.7	60.8	64.9	69.1
77/64.4	53.3	57.0	61.1	65.1	69.3
78.8/64.4	53.6	57.3	61.3	65.3	69.4
80.6/67.1	53.9	57.6	61.5	65.5	69.6
82.4/68	54.3	57.9	61.8	65.8	69.8
84.2/69.8	54.6	58.1	62.0	66.0	70.0
86/71.6	54.9	58.4	62.3	66.2	70.2



CXI-65 Performance curve
(at 2.4GPM per each 12,000BTU) Temps in F

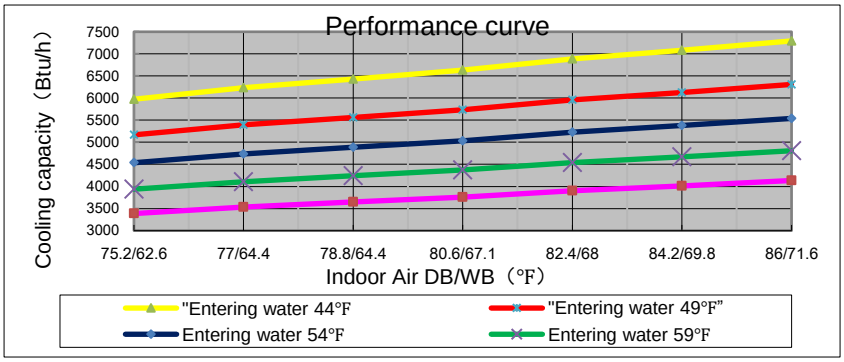
Heating capacity performance data and curve

Entering water / Indoor air	95	104	113	122	131	140
63	5270	6687	8103	9520	10535	11550
64	4939	6347	7755	9163	10252	11340
66	4590	6007	7423	8840	9933	11025
68	**4250**	5667	7083	8500	9605	10710
70	4047	5449	6851	8252	9376	10500
72	3827	5224	6621	8019	9154	10290
73	3467	4887	6307	7727	8851	9975
75	3123	4546	5969	7391	8526	9660



Cooling capacity performance data and curve

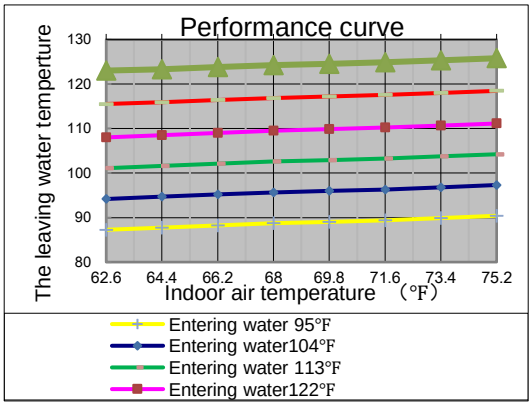
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	5974	5167	4537	3938	3387
77/64.4	6232	5391	4733	4108	3533
78.8/64.4	6431	5563	4884	4240	3646
80.6/67.1	6630	5735	**5035**	4371	3759
82.4/68	6888	5958	5231	4541	3905
84.2/69.8	7081	6125	5378	4668	4014
86/71.6	7293	6308	5539	4808	4135



CXI-65

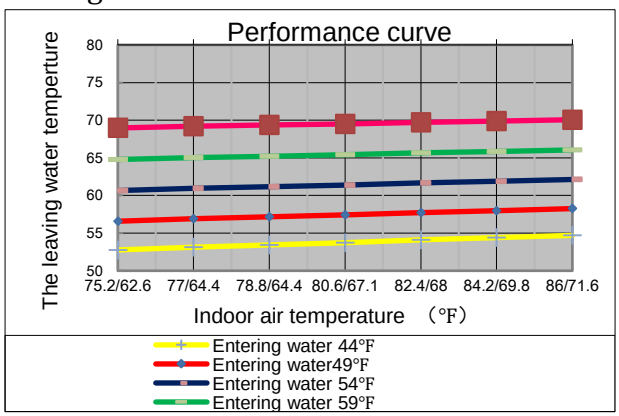
The leaving water temperature data – Heating

Entering water / Indoor air	95	104	113	122	131	140
63	87.3	94.2	101.1	108.0	115.5	123.0
64	87.7	94.7	101.6	108.5	115.9	123.3
66	88.3	95.2	102.1	109.0	116.4	123.8
68	88.8	95.7	102.6	109.5	116.9	124.3
70	89.1	96.0	102.9	109.9	117.2	124.6
72	89.4	96.3	103.3	110.2	117.6	124.9
73	89.9	96.8	103.7	110.7	118.0	125.4
75	90.4	97.3	104.2	111.1	118.5	125.8



The leaving water temperature data – Cooling

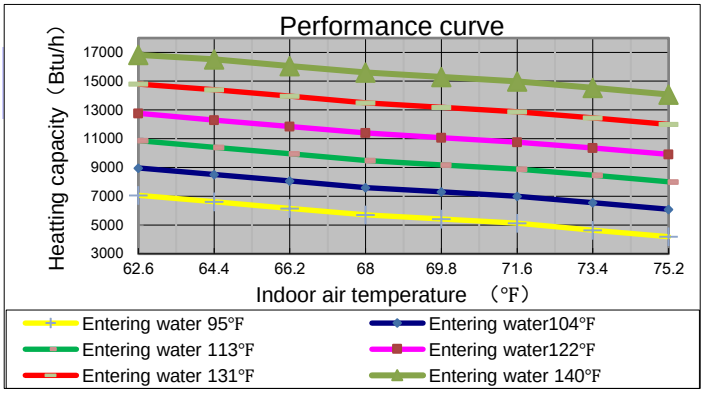
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	52.8	56.6	60.7	64.8	69.0
77/64.4	53.1	56.9	60.9	65.0	69.2
78.8/64.4	53.4	57.2	61.2	65.2	69.3
80.6/67.1	53.7	57.4	61.4	65.4	69.5
82.4/68	54.1	57.7	61.7	65.7	69.7
84.2/69.8	54.4	58.0	61.9	65.8	69.9
86/71.6	54.7	58.3	62.1	66.1	70.1



CXI-85 Performance curve
(at 2.4GPM per each 12,000BTU) temps in F

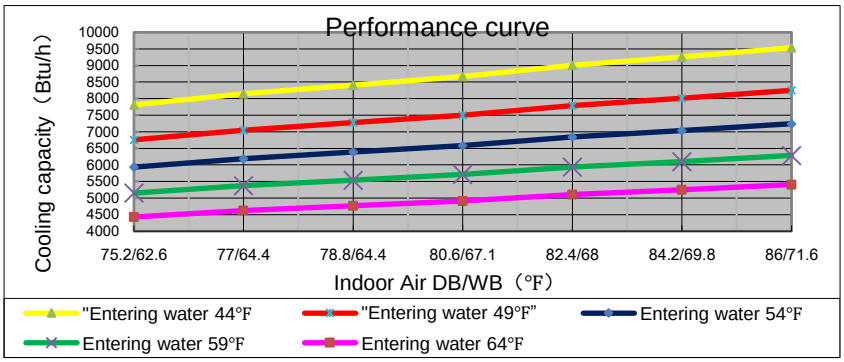
Heating capacity performance data and curve

Entering water / Indoor air	95	104	113	122	131	140
63	7068	8968	10868	12768	14799	16830
64	6623	8512	10401	12289	14407	16524
66	6156	8056	9956	11856	13961	16065
68	5700	7600	9500	11400	13503	15606
70	5428	7308	9188	11068	13184	15300
72	5132	7006	8881	10755	12874	14994
73	4649	6554	8459	10364	12449	14535
75	4189	6097	8005	9913	11995	14076



Cooling capacity performance data and curve

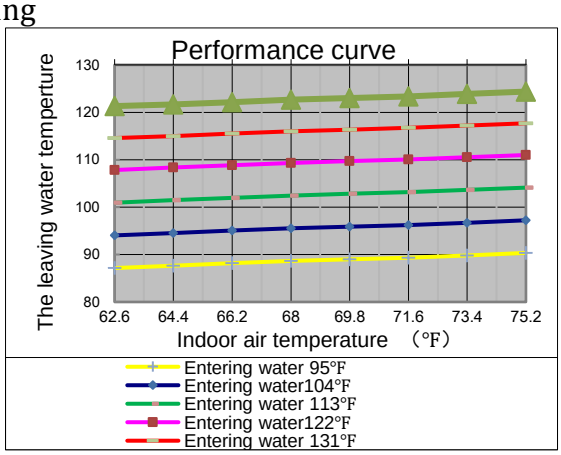
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	7812	6757	5933	5150	4429
77/64.4	8150	7050	6190	5373	4620
78.8/64.4	8410	7275	6387	5544	4768
80.6/67.1	8670	7500	6585	5715	4915
82.4/68	9007	7791	6841	5938	5106
84.2/69.8	9260	8010	7032	6104	5250
86/71.6	9537	8250	7243	6287	5407



CXI-85

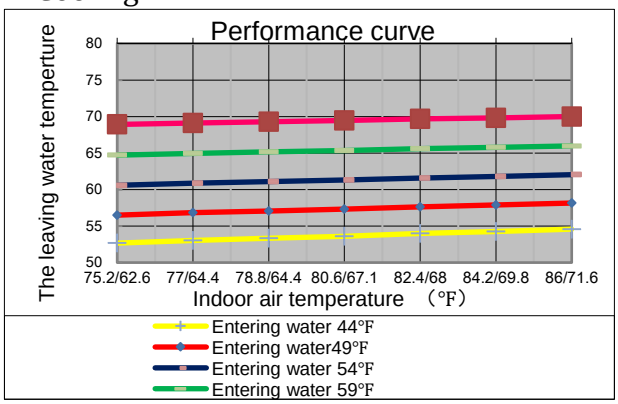
The leaving water temperature data – Heating

Entering water / Indoor air	95	104	113	122	131	140
63	87.2	94.0	100.9	107.8	114.6	121.3
64	87.6	94.5	101.5	108.4	115.0	121.7
66	88.2	95.1	101.9	108.8	115.5	122.2
68	88.7	95.6	102.5	109.3	116.0	122.7
70	89.0	95.9	102.8	109.7	116.4	123.0
72	89.3	96.2	103.1	110.1	116.7	123.4
73	89.8	96.7	103.6	110.5	117.2	123.9
75	90.3	97.2	104.1	111.0	117.7	124.4



The leaving water temperature data – Cooling

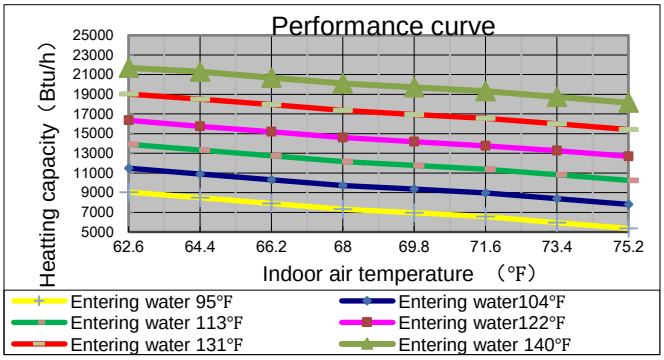
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	52.7	56.5	60.6	64.7	68.9
77/64.4	53.0	56.8	60.9	65.0	69.1
78.8/64.4	53.3	57.1	61.1	65.2	69.3
80.6/67.1	53.6	57.3	61.3	65.3	69.5
82.4/68	54.0	57.6	61.6	65.6	69.7
84.2/69.8	54.3	57.9	61.8	65.8	69.8
86/71.6	54.6	58.2	62.0	66.0	70.0



CXI-120 Performance curve
(at 2.4GPM per each 12,000BTU) Temps in F

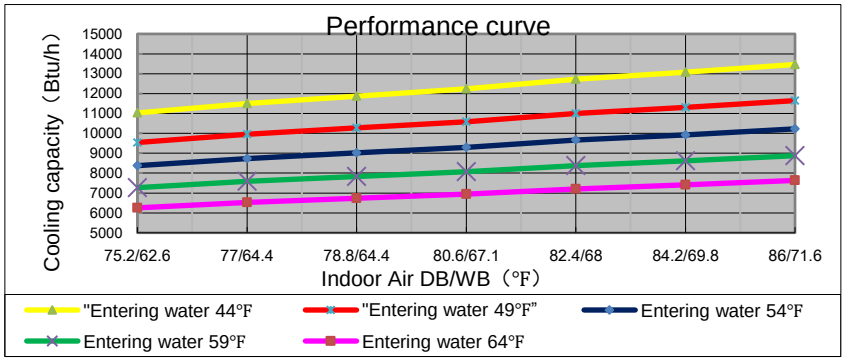
Heating capacity performance data and curve

Entering water / Indoor air	95	104	113	122	131	140
63	9052	11485	13919	16352	19022	21692
64	8483	10901	13320	15739	18518	21298
66	7884	10317	12751	15184	17945	20706
68	7300	9733	12167	14600	17357	20114
70	6951	9359	11767	14175	16947	19720
72	6573	8973	11373	13774	16550	19326
73	5955	8394	10833	13273	16003	18734
75	5365	7808	10252	12696	15419	18142



Cooling capacity performance data and curve

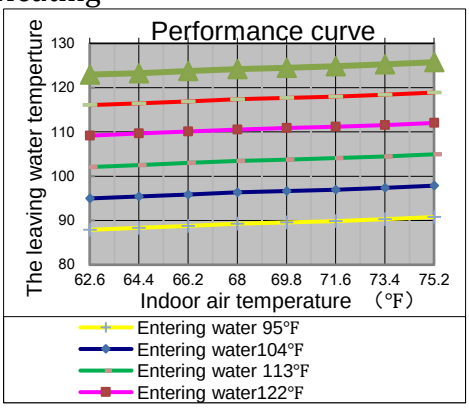
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	11028	9539	8376	7270	6252
77/64.4	11506	9952	8738	7585	6523
78.8/64.4	11873	10270	9017	7827	6731
80.6/67.1	12240	10588	9296	8069	6939
82.4/68	12716	10999	9657	8383	7209
84.2/69.8	13072	11308	9928	8618	7411
86/71.6	13464	11646	10226	8876	7633



CXI-120

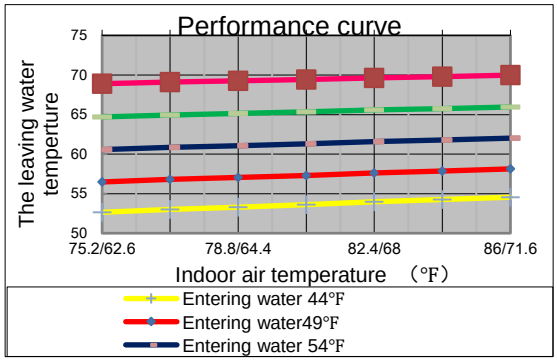
The leaving water temperature data – Heating

Entering water / Indoor air	95	104	113	122	131	140
63	87.9	95.0	102.1	109.2	116.1	123.0
64	88.3	95.4	102.5	109.6	116.5	123.3
66	88.8	95.9	103.0	110.1	116.9	123.7
68	89.3	96.4	103.5	110.5	117.4	124.2
70	89.5	96.7	103.8	110.9	117.7	124.5
72	89.8	97.0	104.1	111.2	118.0	124.8
73	90.3	97.4	104.5	111.6	118.4	125.3
75	90.8	97.9	105.0	112.0	118.9	125.8



The leaving water temperature data – Cooling

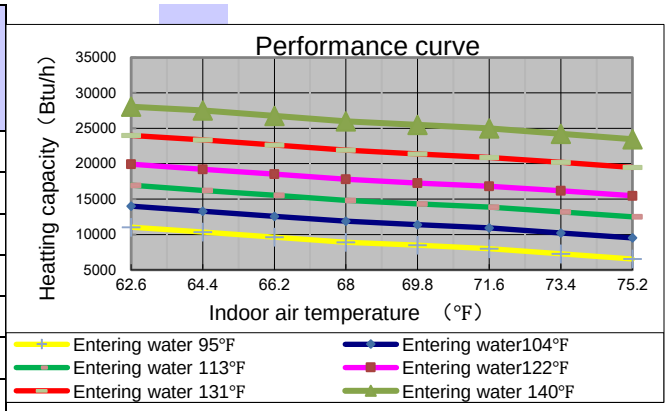
Entering water / Indoor air	44	49	54	59	64
75.2/62.6	52.6	56.5	60.6	64.7	68.9
77/64.4	53.0	56.8	60.9	64.9	69.1
78.8/64.4	53.3	57.1	61.1	65.1	69.3
80.6/67.1	53.6	57.3	61.3	65.3	69.4
82.4/68	54.0	57.6	61.6	65.6	69.7
84.2/69.8	54.3	57.9	61.8	65.8	69.8
86/71.6	54.6	58.1	62.0	66.0	70.0



CXI-148 Performance curve
(at 2.4GPM per each 12,000BTU) Temps in F

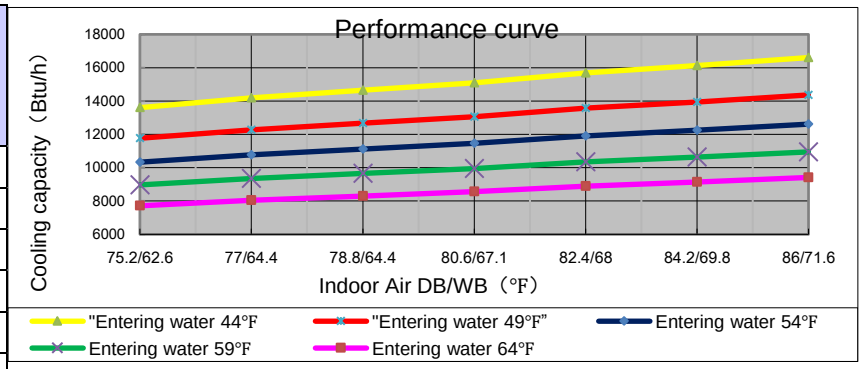
Heating capacity performance data and curve

Entering water / Indoor air	95	104	113	122	131	140
63	11036	14003	16969	19936	23993	28050
64	10342	13291	16240	19188	23364	27540
66	9612	12579	15545	18512	22644	26775
68	8900	11867	14833	17800	21905	26010
70	8475	11410	14346	17282	21391	25500
72	8014	10940	13866	16792	20891	24990
73	7260	10234	13208	16182	20203	24225
75	6540	9520	12499	15478	19469	23460



Cooling capacity performance data and curve

Entering water / Indoor air	44	49	54	59	64
75.2/62.6	13605	11768	10333	8969	7713
77/64.4	14194	12278	10780	9357	8047
78.8/64.4	14647	12670	11124	9656	8304
80.6/67.1	15100	13062	11468	9954	8561
82.4/68	15687	13569	11914	10341	8893
84.2/69.8	16127	13950	12248	10631	9143
86/71.6	16610	14368	12615	10950	9417



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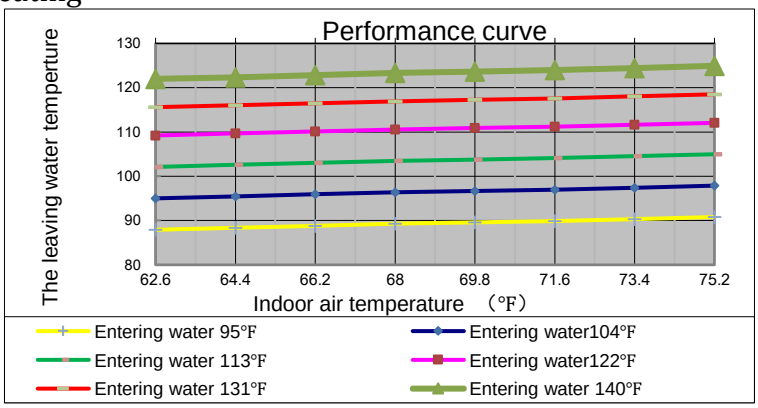
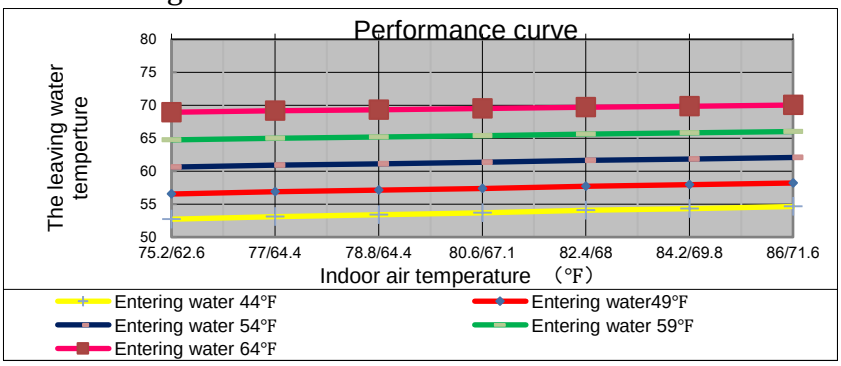
The leaving water temperature data – Heating

Entering Water / Indoor air	95	104	113	122	131	140
63	87.9	95.0	102.1	109.2	115.6	122.0
64	88.4	95.5	102.6	109.7	116.0	122.3
66	88.8	95.9	103.0	110.1	116.5	122.8
68	89.3	96.4	103.5	110.6	117.0	123.3
70	89.6	96.7	103.8	110.9	117.3	123.7
72	89.9	97.0	104.1	111.2	117.6	124.0
73	90.3	97.4	104.5	111.6	118.0	124.5
75	90.8	97.9	105.0	112.1	118.5	125.0

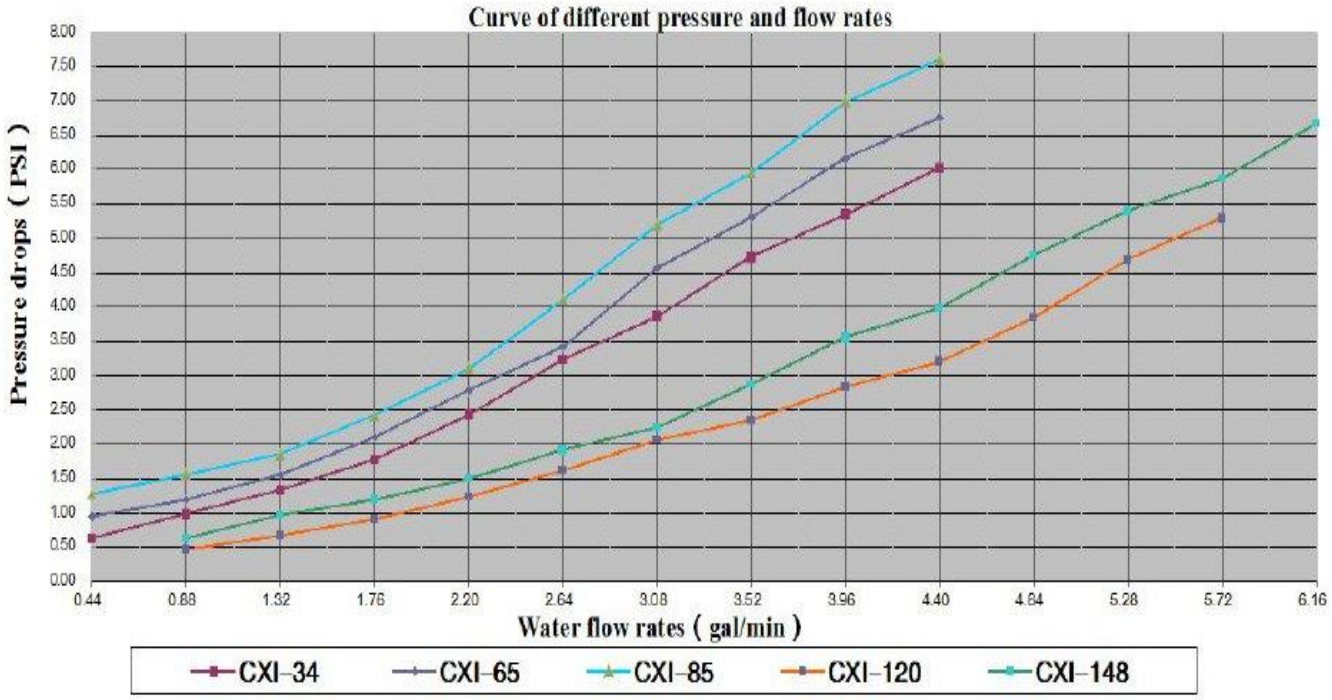


The leaving water temperature data – Cooling

Entering water / Indoor air	44	49	54	59	64
75.2/62.6	52.7	56.5	60.6	64.7	68.9
77/64.4	53.1	56.9	60.9	65.0	69.2
78.8/64.4	53.4	57.1	61.1	65.2	69.3
80.6/67.1	53.7	57.4	61.3	65.4	69.5
82.4/68	54.0	57.7	61.6	65.6	69.7
84.2/69.8	54.3	57.9	61.8	65.8	69.9
86/71.6	54.6	58.2	62.1	66.0	70.0



Fan coil pressure drop at different flow rates



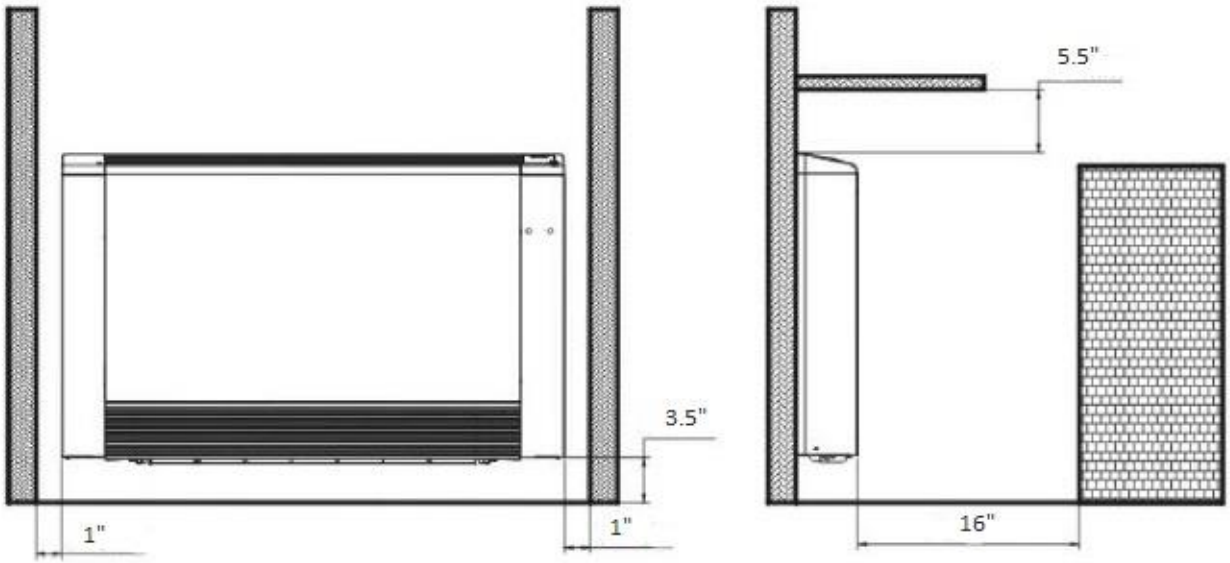
Please note;
The chart above refers to GPM per Fan Coil and not GPM per CX30

CHAPTER 3
INSTALLATION

1. **Installation precaution**
   - To ensure that the installation is performed correctly and the unit operates at optimum performance, carefully follow the instructions in this manual. Not following the instructions can cause the unit to malfunction and also invalidate the warranty. Chiltrix will not be responsible for any damage to persons, animals or property caused by improper installation or operation.
   - It is important that the electrical installation is compliant with all NEC and local electrical codes.
   - The appliance must be installed in a suitable position for easy access when cleaning the filter and general maintenance.

2. **Installation position- Wall Mount**

   The minimum distance from the floor to the lower line must be 3.25”. The minimum distance of the air outlet grill from any possible obstacle must be 5.5”. The minimum distance between the front grill and obstacles is 16”. The minimum distance between side and side wall must be at least 1”, to allow you to remove the cover.



3. **Removing the side covers**

With the fan coil lying face down on the box, locate the rubber plug on the outside cover and remove the screw behind it.

Gently tap the bottom of the side cover and remove the cover. Do the same for the right side.

4. **Wall Installation or Vertical Floor Mount**

Using the paper template, trace the position of the wall (fig.10). Drill the holes and insert the anchor bolts (2 for each bracket) (fig.11 ref. A); attach the bracket (fig.11 ref. B) included with the FCU. The bracket is a one piece that is shipped attached to the back of the fan coil.

Fig.10

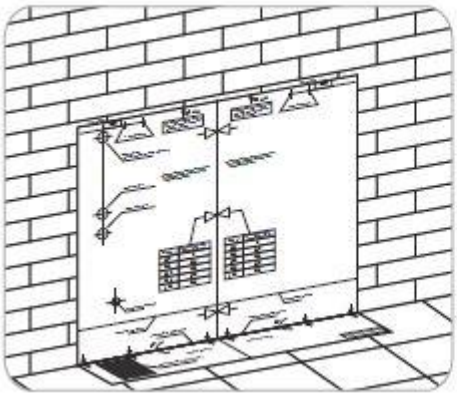
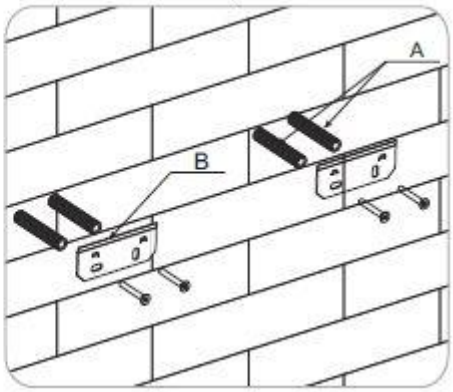


Fig.11



Attaching the Feet

Before you install the unit on the floor, the feet should be mounted. Lay the unit down on a flat surface. Take out the screws and two feet from the accessories bag, then line up the screw holes, and attach the feet with the screws. (See fig.12 and fig.13)

Fig.12

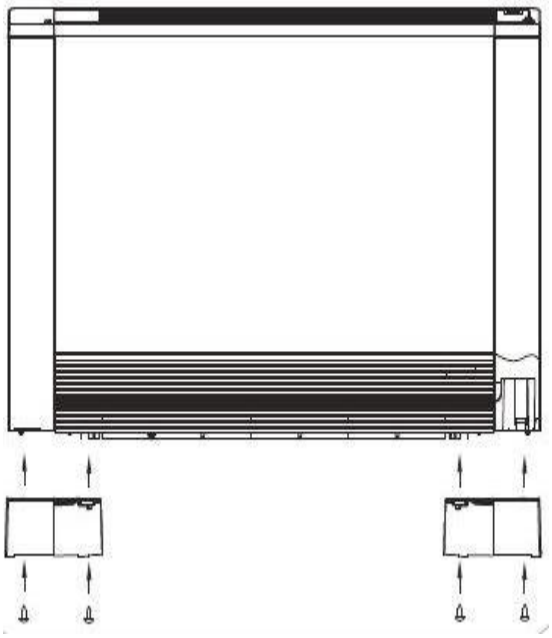
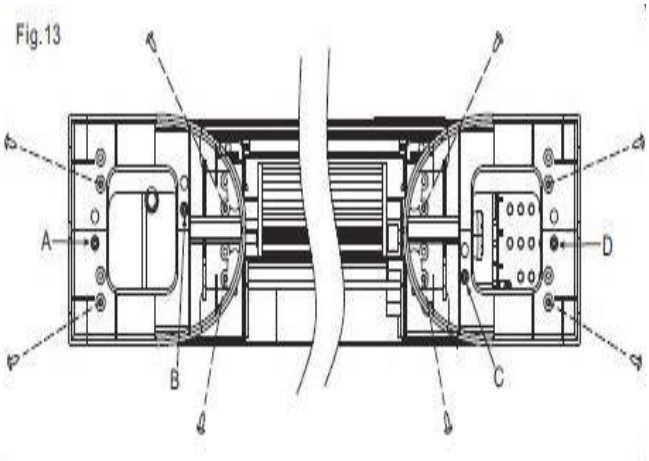


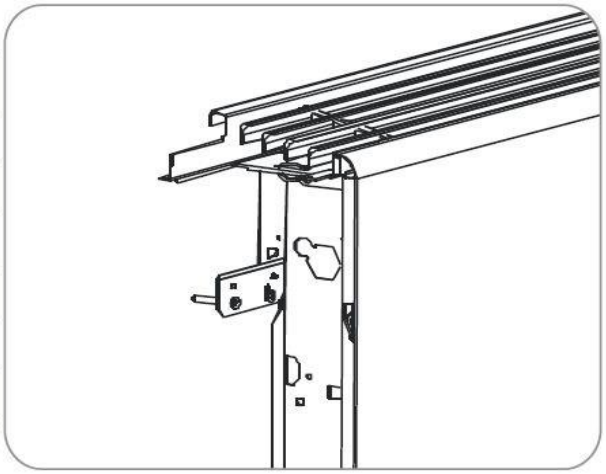
Fig.13



Do not over-tighten the screws so that the brackets can be adjusted with a spirit level (fig. 15). Then fully tighten the four screws to block the two brackets. Mount the unit, checking that it fits correctly onto the brackets and that it is stable Fig 16.

(fig. 15)

(fig. 16)

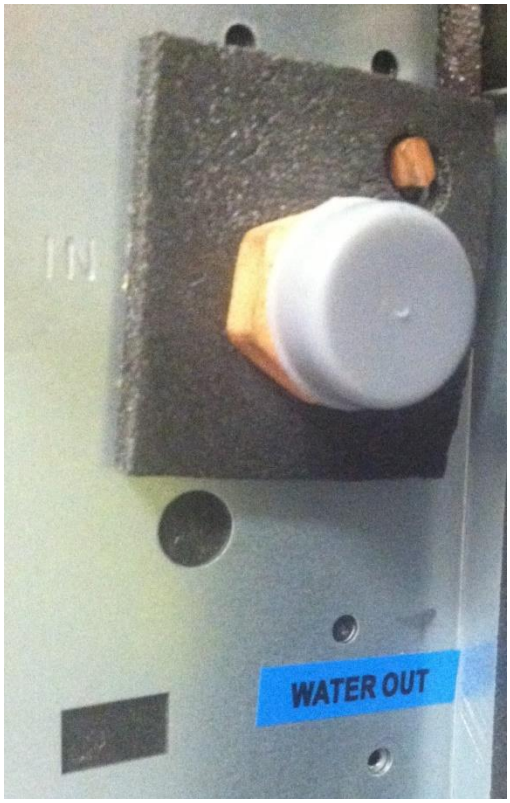


Mount the Indoor Unit Level on the Wall

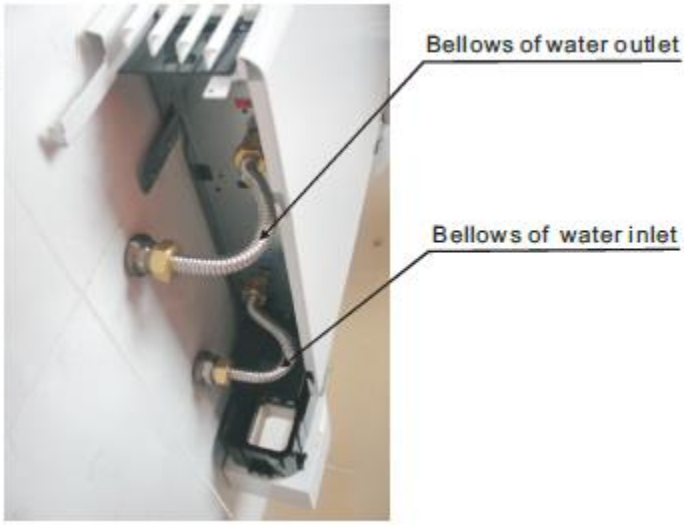
Wall mounting

1. Using the paper template, position the connecting pipes, the condensate discharging pipe and the wall box, including the power supply cable. Then mount the fastening bracket, according to the holes on the template.
2. The bracket must be fastened to the wall by the expansion screws included. To fasten the appliance to a wooden wall, use suitable screws.
3. Drill the holes in the wall and fasten the bracket without tightening the screws.
4. Use a level to position the bracket properly (level).
5. Tighten the four expansion screws.
6. Make sure that the bracket is stable, by pushing it sideways, upwards and downwards.
7. Mount the unit on the bracket.

5. **Hydronic Connections**
   Floor installation & wall installation.
   To connect the inlet and outlet water pipes, refer to the figures below.



Water in and water out ports are identified by a colored sticker. Disregard any markings that are stamped in the metal frame.

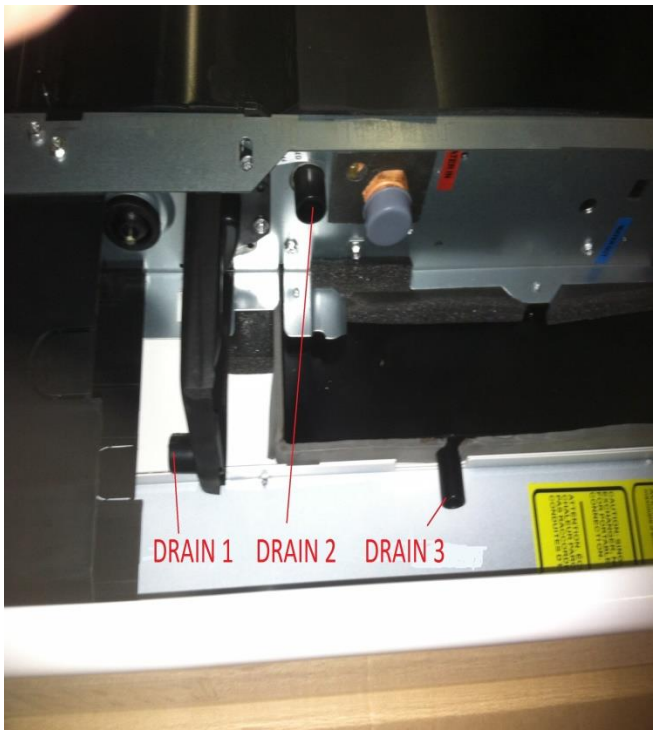


¾” NTP fittings used on bellows.

6. **Condensate discharge, floor or wall mounts only.**

The condensate discharge network must be properly sized, (minimum pipe diameter 5/8” OD) and the piping must be positioned in such a way as to keep an inclination, of at least 1%. The drain pipe is connected to the pan, positioned under the heat exchanger coil (drain 1). If the condensate is discharged into the drainage system, it is recommended to install a p-trap to prevent any pipe smell from entering the rooms. The p-trap must be lower than the drainage pan.

Condensate flow

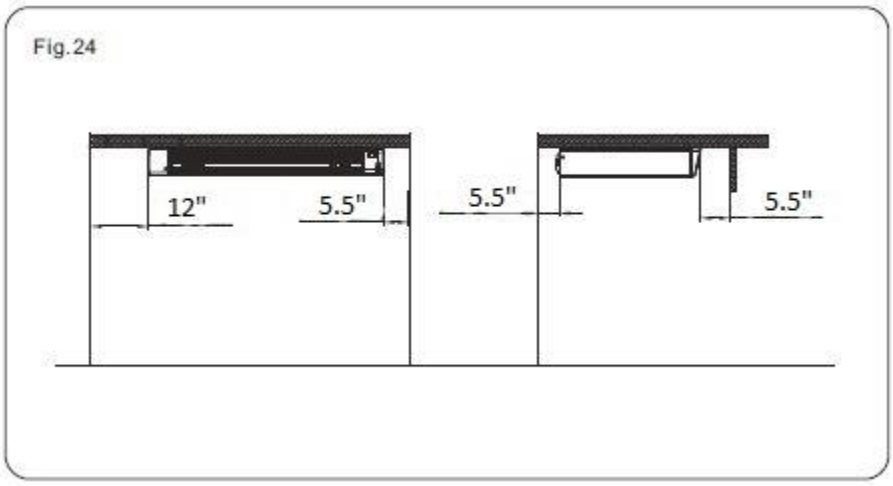


Connect condensate hose to DRAIN 1 for floor or wall mount, drain 3 is for ceiling mounts.

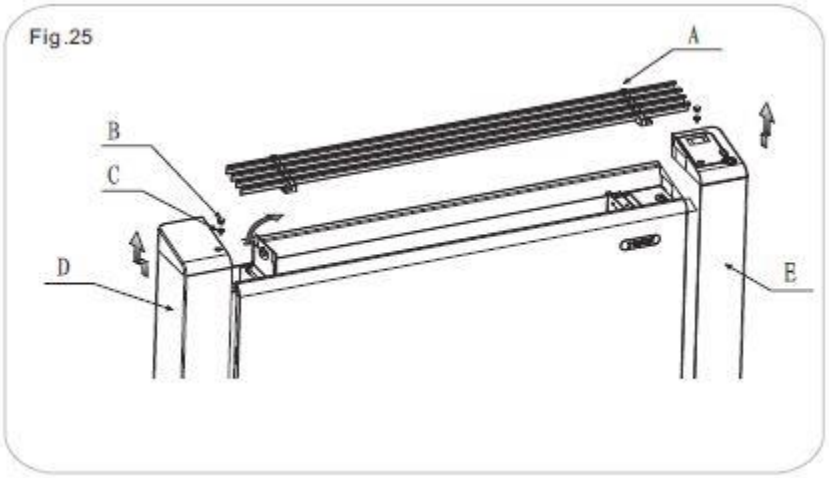
7**. Ceiling Installation**

7.1 Minimum installation distances-------horizontal Ceiling installation

Figure 24 indicates the minimum mounting distances between the wall-mounted Fan Coil and furniture present in the room.



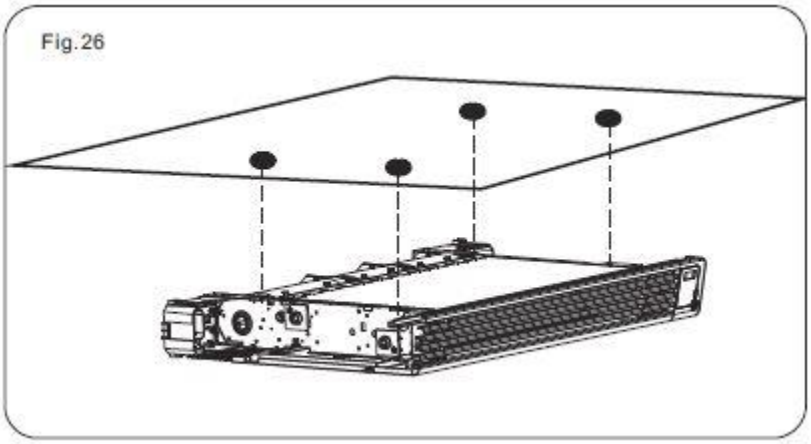
To remove the side opening refer to page 19 for detailed instructions.
Dismount the upper grill (fig.25 ref. A) by unscrewing the attaching screws.
Remove the rubber plug (fig. 25ref. B) that protects the screw (fig.25 ref. C) and remove the screw. Move the side panel slightly to the side and lift it out (fig. 25ref.D& E).



See page 19 for more detail on side cover removal.

7.2 **Ceiling Mounting**

Fig.26

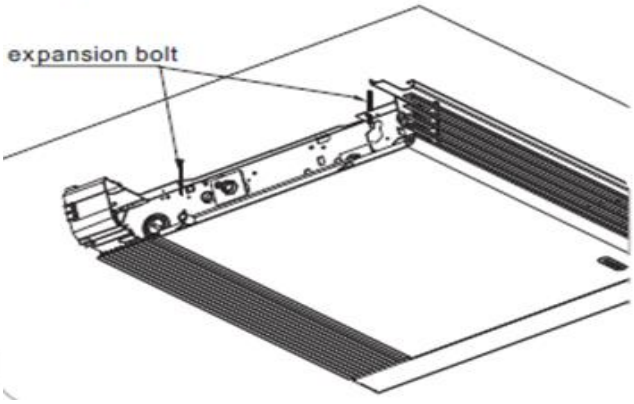


Adjust the units installation angle so that the unit is level and ensure the condensation drain-pipe is connected to the 5/8” OD port for condensation water draining when mounted on the ceiling (fig. 27).
Mount the unit, checking that it fits correctly on the brackets and it is stable (fig. 28 and 27).

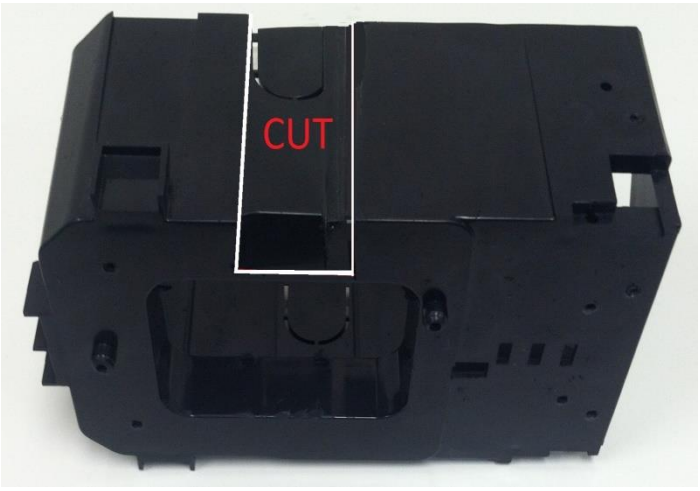
Fig. 27

Mount level with the ceiling

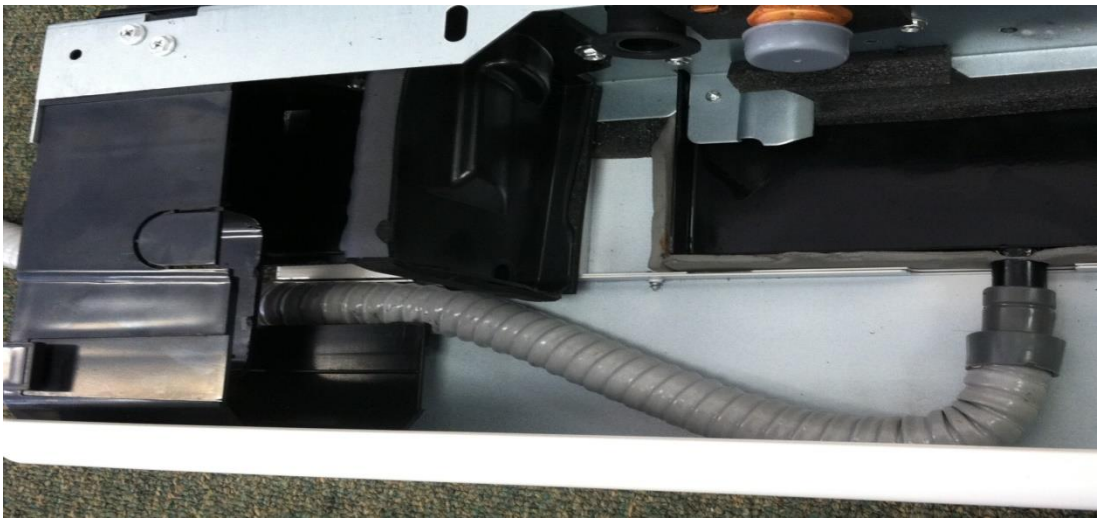
Fig.28



7.3 Condensation Drain Installation (Ceiling Mount Only)



Remove the 4 screws securing the base to the frame, then, cut a slot in the base almost as wide as the drain hose, about ¾ of its width. Reinstall the base with the 4 screws.



Install the hose so that it is flush with the metal sliding cover and the end of the hose is sticking out of the rear of the unit.

8. Hydronic connections horizontal installation

8.1 Refer to fig. 29 and fig. 30 to connect the inlet and outlet lines.

③ Connection method Ⅰ

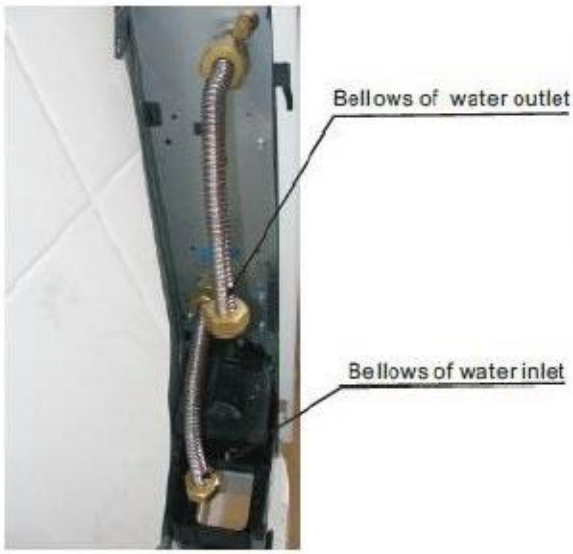


Fig. 29

④ Connection method Ⅱ

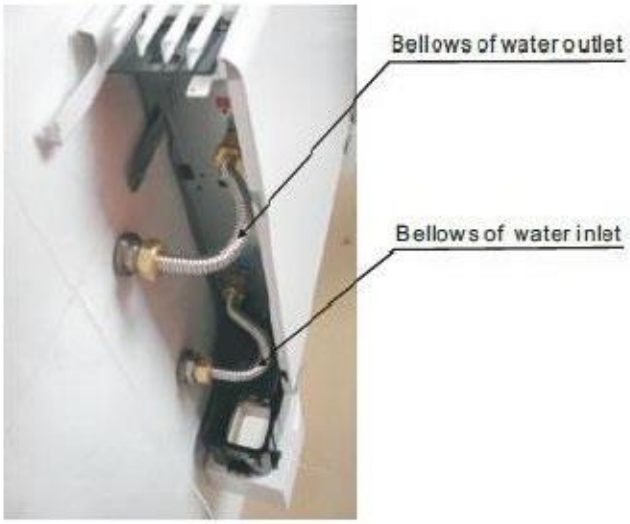


Fig. 30

Inlet and outlet water lines are ¾” NPT.

9. Maintenance

Cleaning the Filter

To keep the unit problem free, it is suggested to maintain and clean the unit every six months. Please take the following steps to clean the strainer regularly:

1) Remove the plastic tape which is used to secure the air inlet grill during shipping. (A Fig.33)
2) Next, lift the grill upward about ¼" (Fig.34), the grill will pop-up automatically. (Fig.35）
3) Remove the grill (Fig.36), and take out the strainer (Fig.37), the strainer can be washed with water. (Fig.38).
4) Replace the grill and strainer referring to (Fig.37).

Fig.33

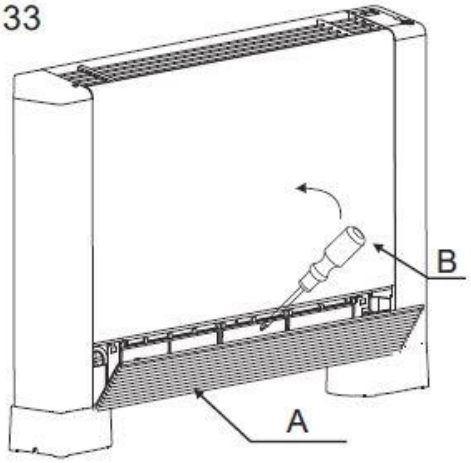


Fig.34

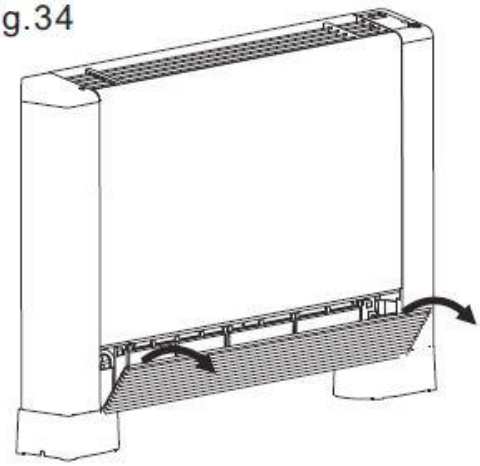


Fig.35

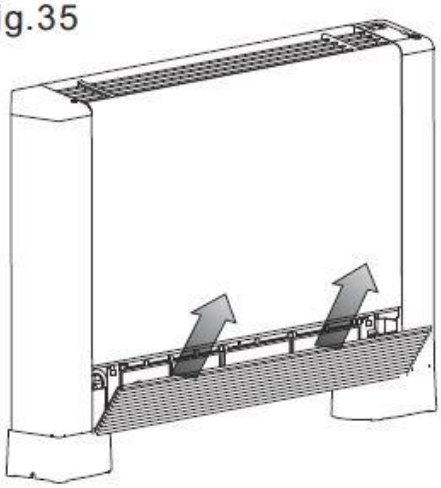
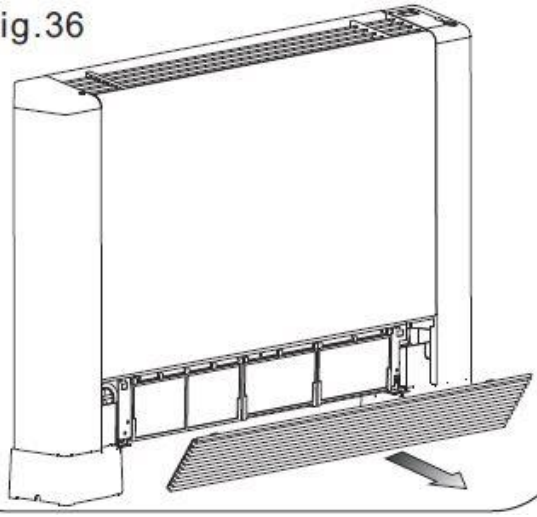
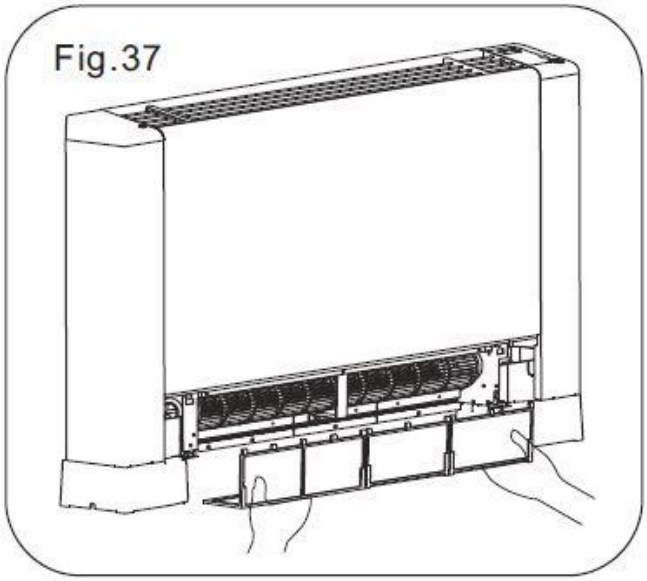
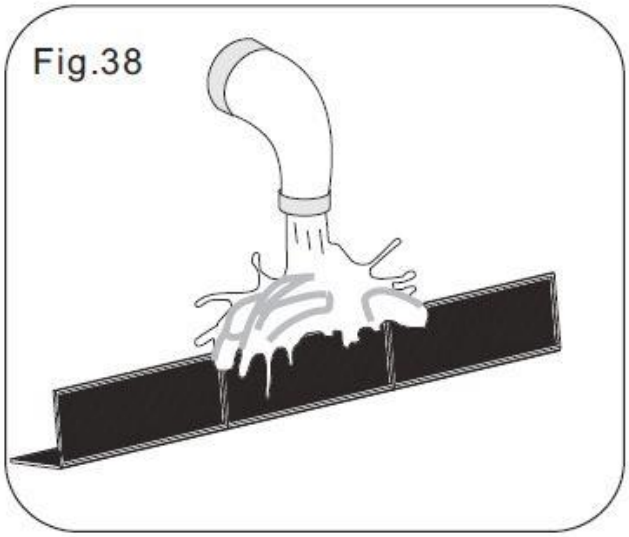


Fig.36

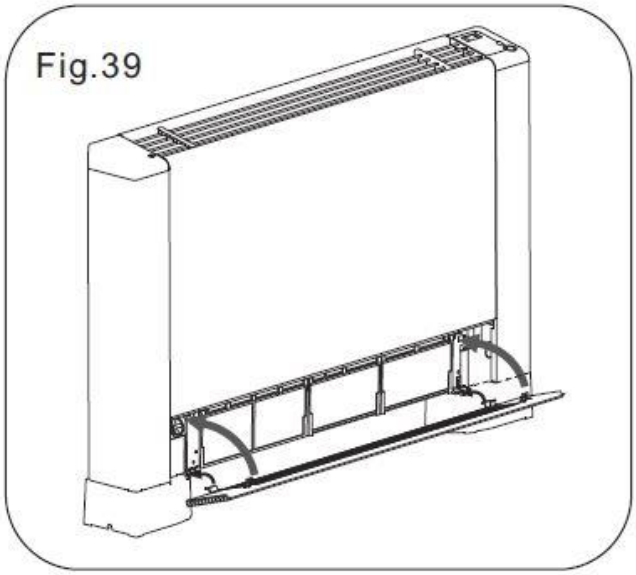


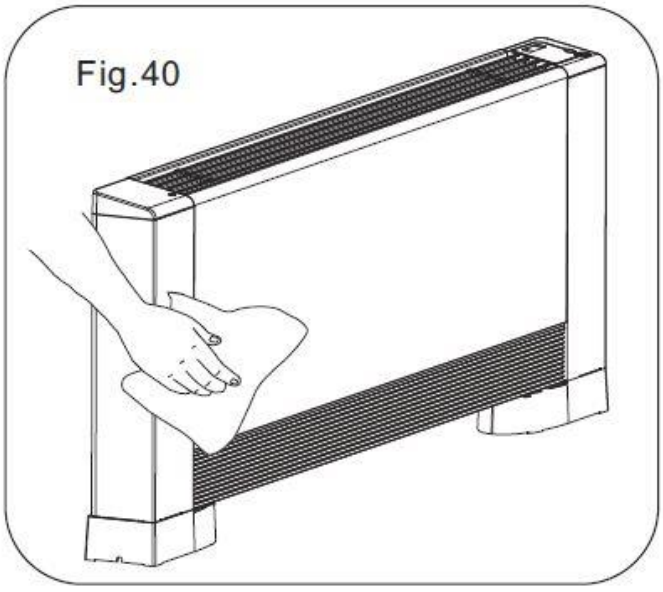




5) Set the filter net and the air return grille to the original place. (Fig.39)。

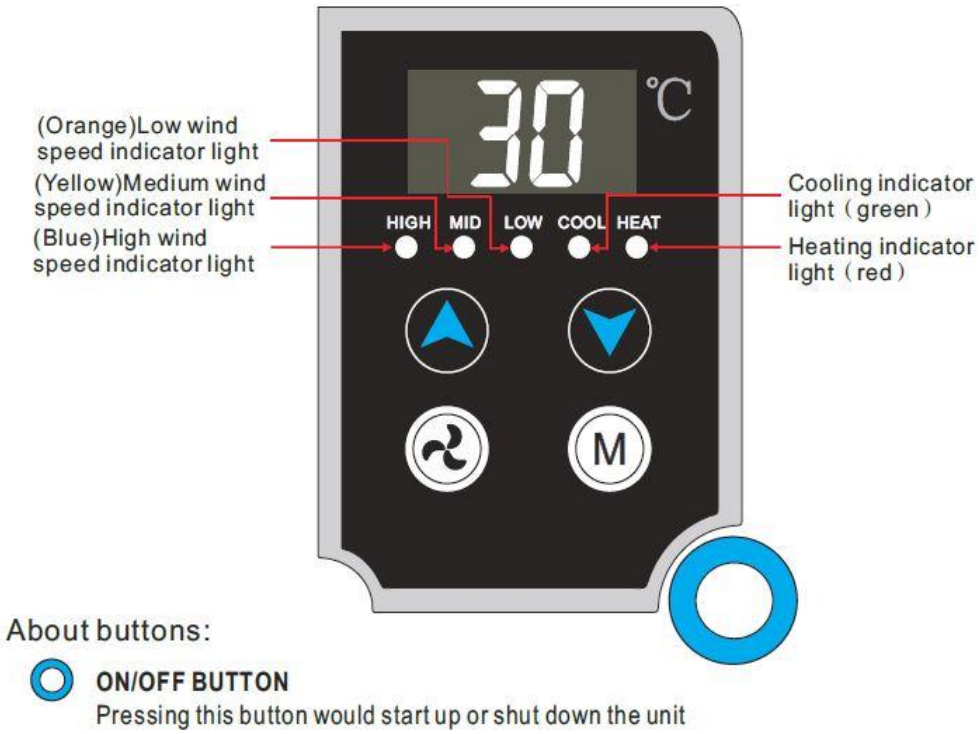
6） Clean up the units outer cover with a soft damp rag (Fig. 40). To protect the paint, use a mild detergent**.**





Warning: Cut off power supply before cleaning or maintaining the unit.

CHAPTER 4
Front Panel Operation



1. (M) **Press this button and select the mode you want to set.**
   Cooling mode: Cooling indicator light keeps on (green)
   Heating mode: Heating indicator light keeps on (red)
   Automatic mode: Cooling indicator light and heating indicator light flashes in turn.
   Ventilating mode: Cooling and heating indicator lights are off, the fan indicator light keeps on according to the chosen fan speed.
   Dehumidifying mode: Cooling indicator light keeps on for 2 seconds and off for 1 second.
   Note: Changes of mode could only be done on main interface.

Press this button and select the fan speed you want to set.
High fan speed: High fan speed indicator light keeps on (blue)
Medium fan speed: Medium fan speed indicator light keeps on (yellow)
Low fan speed: Low fan speed indicator light keeps on (orange)
Automatic: High fan speed indicator light, medium fan speed indicator light and low fan speed indicator light flashes in turn.

Note: Changes of fan speed could only be done on main interface. You could not choose the automatic fan speed when in ventilating mode. When in dehumidifying mode, the fan speed is fixed in low speed. Changes of fan speed could only be done on main interface.
Note: In auto mode, the green (cooling) and red (heating) will flash alternately.
Ventilation and dehumidifying modes can only be selected with the remote control.

You could check the setting temperature of unit by pressing this button once.
You could increase the setting temperature by pressing this button again.

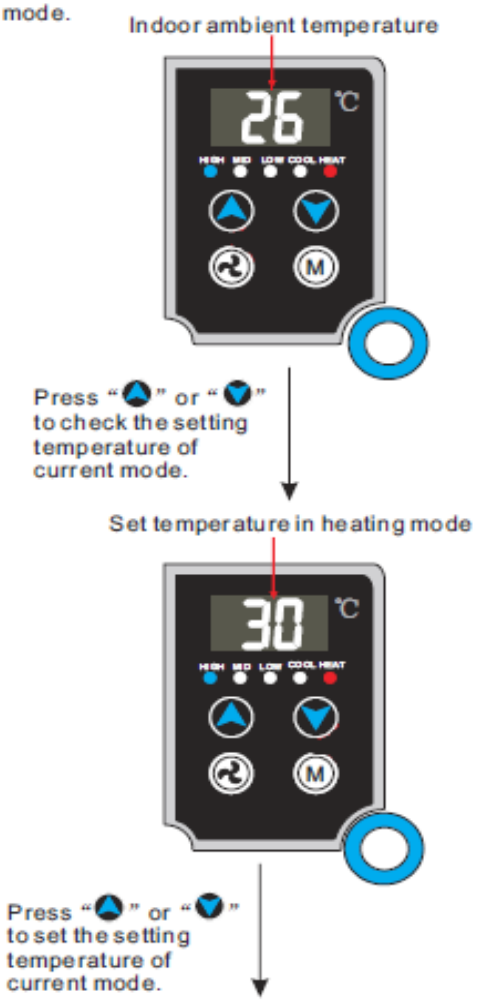
You could check the setting temperature of unit by pressing this button once.
You could increase the setting temperature by pressing this button again.

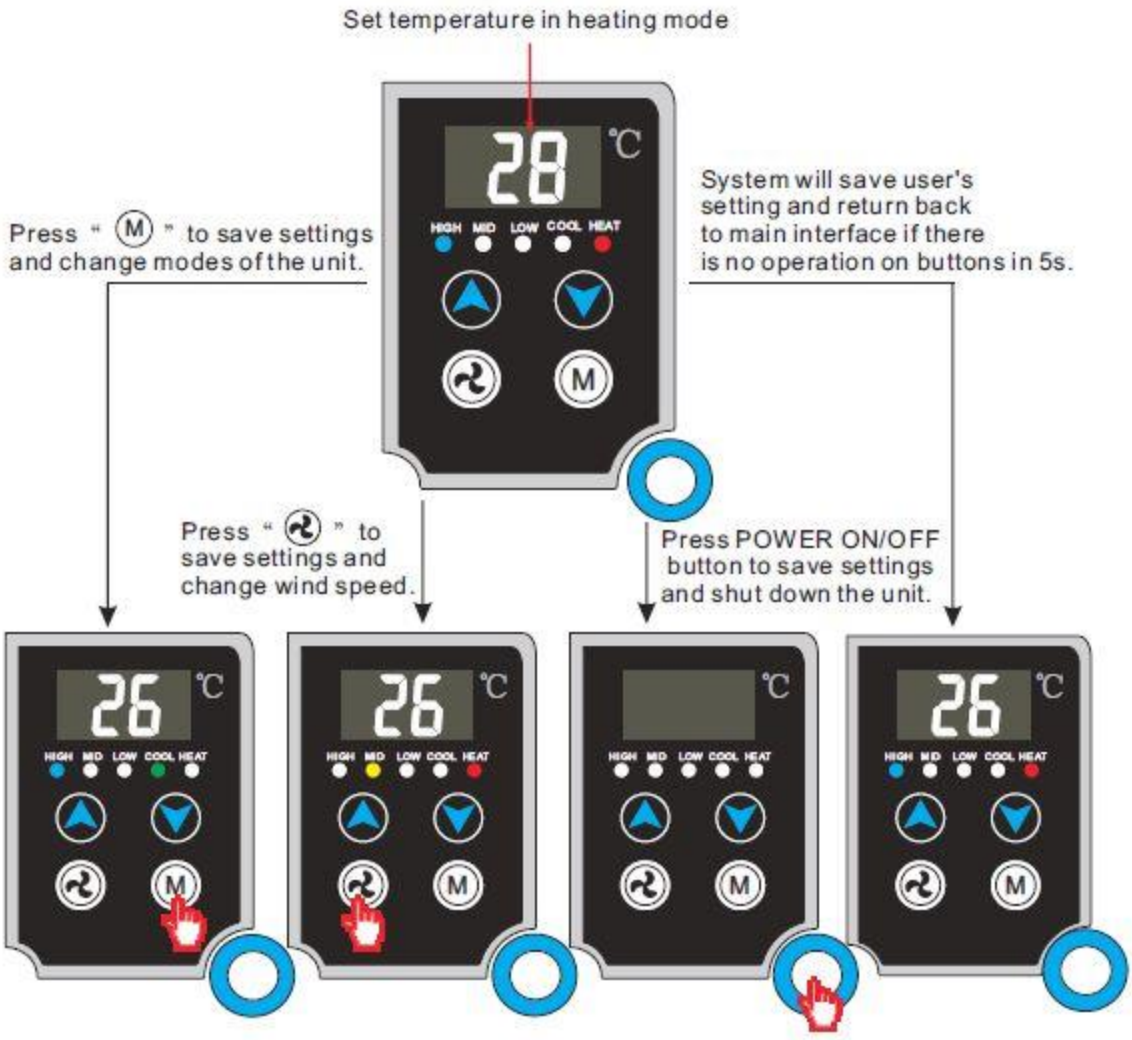
2. **Temperature Setting**

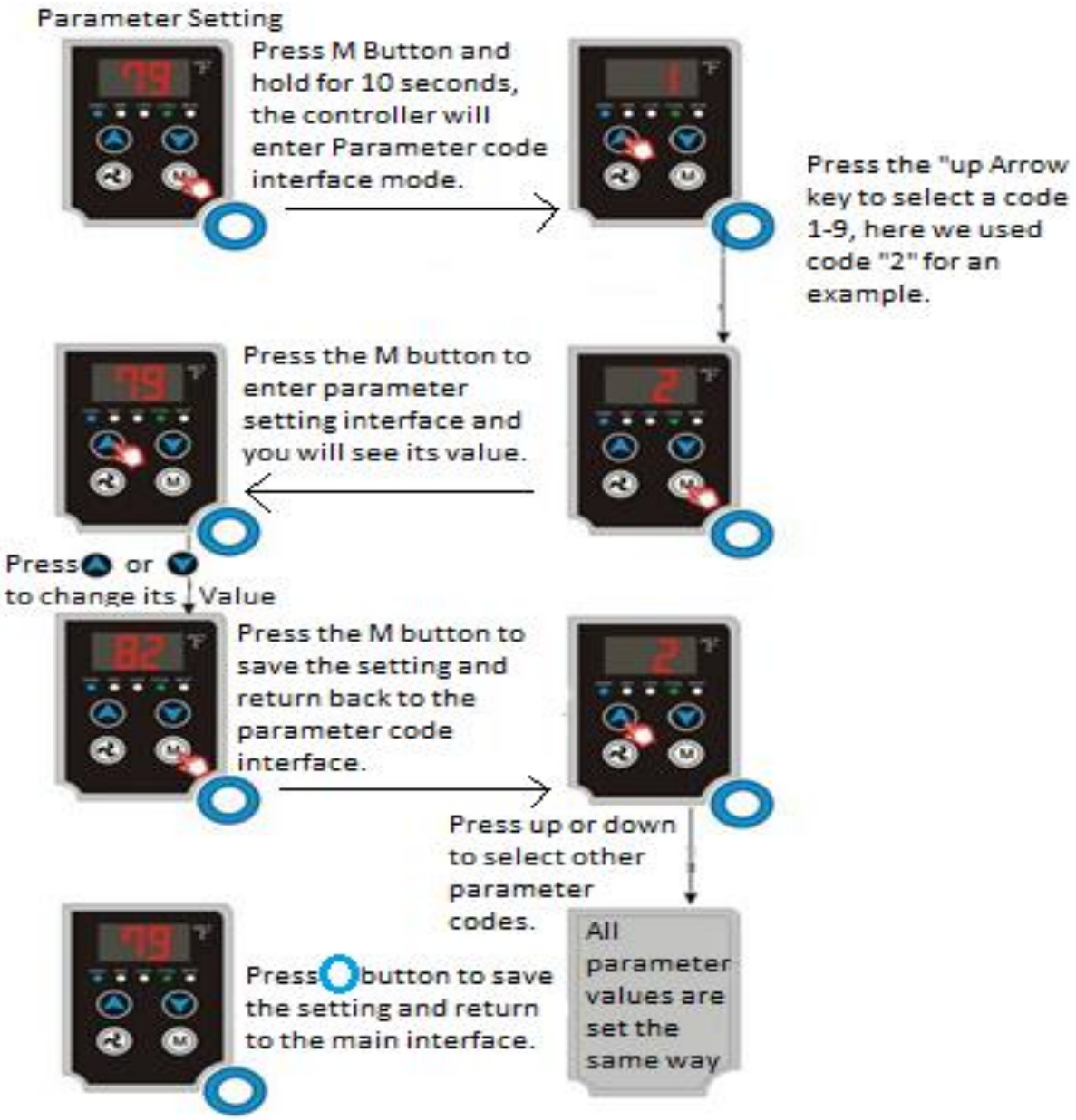
When on the main interface of the heating, or cooling mode, you can press " ▲ " or " ▼ " once to check the setting temperature. Press " ▲ " or " ▼ " again to increase or decrease the setting temperature. Press " M " , " ⟲ " or POWER ON/OFF button to change mode, wind speed or shutdown the unit and save settings.

Note: System will save user's setting and return back to main interface if there is no operation on buttons in 5 seconds.

" ▲ " or " ▼ " is invalid when the unit is in the ventilating mode, automatic mode or dehumidifying mode.




Set temperature in heating mode
28 ℃
HIGH MID LOW COOL HEAT
Press " M " to save settings and change modes of the unit.
System will save user's setting and return back to main interface if there is no operation on buttons in 5s.
Press " " to save settings and change wind speed.
Press POWER ON/OFF button to save settings and shut down the unit.
26 ℃
HIGH MID LOW COOL HEAT
M



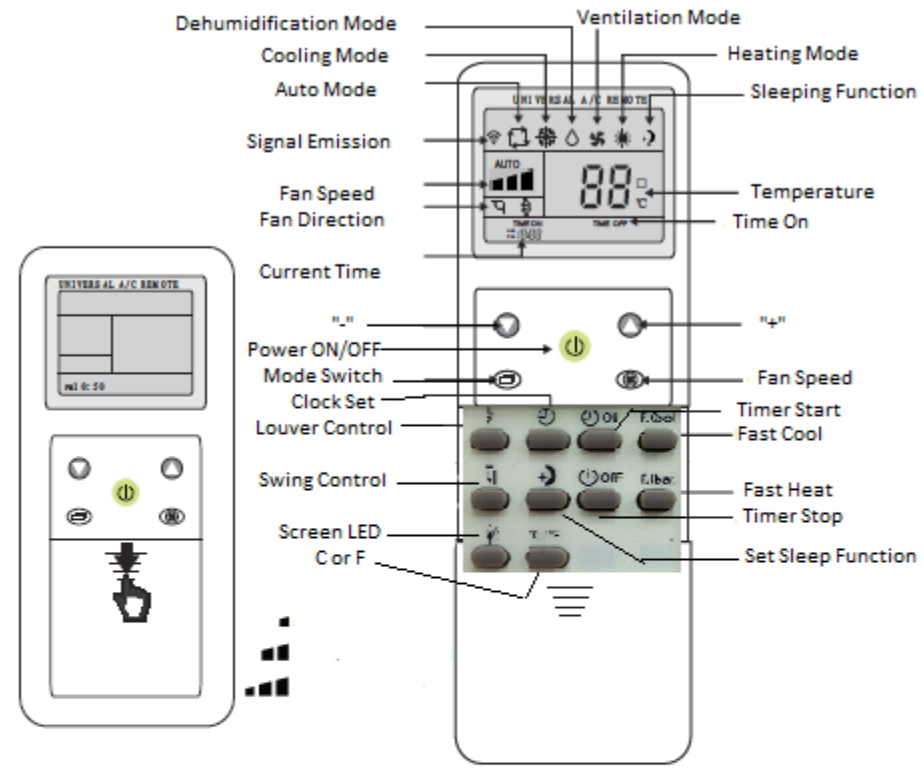
Notes:

1) **The operation of all parameter settings is the same.**
2) **If you press the on/off button when the controller is showing the parameter value, it will switch back to the main interface without saving the setting.**
3) **If there is no operation in 20 seconds, system would remember the setting and switch back to the main interface.**

3. **Parameters**

Fan coil parameter list for MD1001 controller (V2.0)				
No.	Meaning	Range	Default	Level
01	Target temp upper limit, Maximum Temperature, user setting	60°F ~ 99°F	86°F	Factory
02	Target temp lower limit, Minimum Temperature, user setting	60°F ~ 99°F	46°F	Factory
03	Target temp in cooling mode. If the room temp is ≥ 79°F, the fan will come on. If the room temp is ≤ 78°F, the fan will turn off.		78°F	End user
04	Target temp in heating mode. If the room temp is ≤ 67°F, the fan will come on. If the room temp is ≥ 68°F, the fan will turn off.		68°F	End user
05	Automatic mode target cooling temp. If the room temp is ≥ 79°F the fan will come on in cooling mode. If the room temp is ≤ 78°F and parameter 20=1,the fan coil will run for 1 min. every 15 min.		78°F	Factory
06	Automatic mode target heating temp. . If the room temp is ≤67°F the fan will come on in Heating mode. If the room temp is 68°F and parameter 20=1,the fan coil will run for 1 min. every 15 min.		68°F	Factory
07	In heating mode, if the coil temp is lower than Parameter 07, the fan motor will stop. See CX30 heating set temperature.	41°F ~ 104°F	77°F	Factory
08	In cooling mode, if the coil temp. is higher than 68°F, the fan motor will stop. (1-Yes; 0-No)	0 ~ 1	1	Factory
09	Start the ultra-low fan speed (1-Yes; 0-No)	0 ~ 1	1	Factory
10	Is there a water valve (1-Yes; 0-No)	0 ~ 1	0	Factory
11	Is there floor heating (1-Yes; 0-No)	0 ~ 1	0	Factory
12	Display in Fahrenheit (1-°F; 0-°C)	0 ~ 1	1	Factory
13	Is it the main controller (1-Yes; 0-No)	0 ~ 1	0	Factory
14	Address	1 ~ 99	15	Factory
15	Lock the button (1-Yes; 0-No)	0 ~ 1	0	Factory
16	When the button is locked, is the remote controller working? (1-Yes; 0-No)	0 ~ 1	1	Factory
17	Is there a password that should be input before locking the button? (1-Yes; 0-No)	0 ~ 1	0	Factory
18	Password 1	0 ~ 99	50	Factory
19	Password 2	0 ~ 99	50	Factory
20	In Auto mode, the fan motor will intermittently turn on and off. (1-Yes; 0-No)	0 ~ 1	0	Factory

4. **REMOTE CONTROL**



POWER ON/OFF

MODE Mode Switch
Press this key to switch the mode between Auto, Cooling, Dehumidifying, Ventilation and Heating.

FAN Fan Speed
Press this key to select the fan speed between Auto, High, Medium, and Low.

"+"
Pree this key to increase the value.

"-"
Press this key to decrease the value.

Note:

1) The key “SET” and “OK” are disabled.

2) Take out the batteries if you do not use the remote controller for a long time.

3) Take out the batteries for 35 minutes to reset the remote controller.

Using the remote controller

Function of "F.Cool" and "F.Heat"

By pressing the key "F.Cool", the system will be automatically set to the cooling mode With a high fan speed.

By pressing the key"F.Heat", the system will be automatically set to the heating mode with a high fan speed.

Time Setting

Press and hold the key "" till the time value flashes, then you can adjust the current time value by pressing the key "+" or "-". To save the setting above, please press the key "" again. Attention, the 12-hour clock is adopted to show the current time value.

Timing Start-Up or Timing Shut-Down

"" ON This key is available only when the unit is POWER OFF, but not interruption of power supply.

TIME ON / 1 One hour after setting Timing Start-Up, the unit will automatically start up. The number shown stands for the timing hours.

OFF This key is available when the unit is POWERED ON.

TIME OFF / 1 One hour after setting Timing Shut-Down, the unit will automatically shut down. Also, the number shown stands for the timing hours.

The range of timing is from 1 hour to 11 hours. If the setting value is over 11 hours, the setting of timing will be cancelled.

Sleeping Function

①To start or cancel the sleeping function, please press the key "" .

②The sleeping function can only be set in the heating or cooling mode.

③When the sleeping function is activated, the icon"" will be shown at the top right corner of the LCD screen which belongs to the remote controller. Meanwhile, "TIME OFF" and "7"will be shown at the lower right corner of the LCD screen. It means that the unit will automatically shut down 7 hours after the setting . To change the timing number, even to cancel the timing function , please press the key "OFF".

④1 hour after setting the sleeping function, the wind speed will automatically change to the low wind speed, but then you can also change the wind speed by press"".

⑤In two hours after setting the sleeping function in the cooling mode, the set temperature will increase 1 ℃ or about 2℉ per hour.

⑥In three hours after setting the sleeping function in the heating mode, the set temperature will decrease 1 ℃ or about 2℉ per hour .

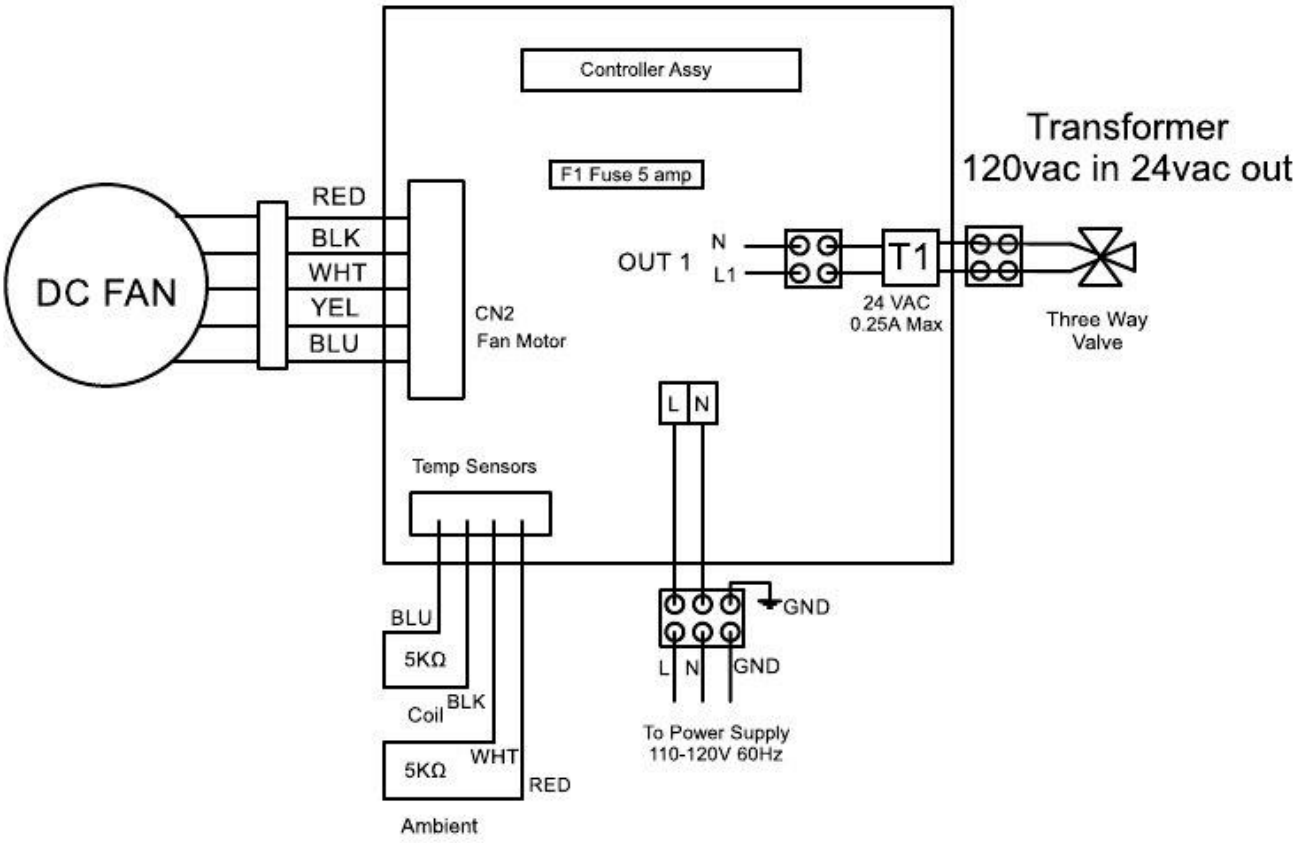
Switch to Celsius or Fahrenheit

To Switch to Celsius or Fahrenheit, please press the key "C°/F° ".

LED Screen Light Up or Not

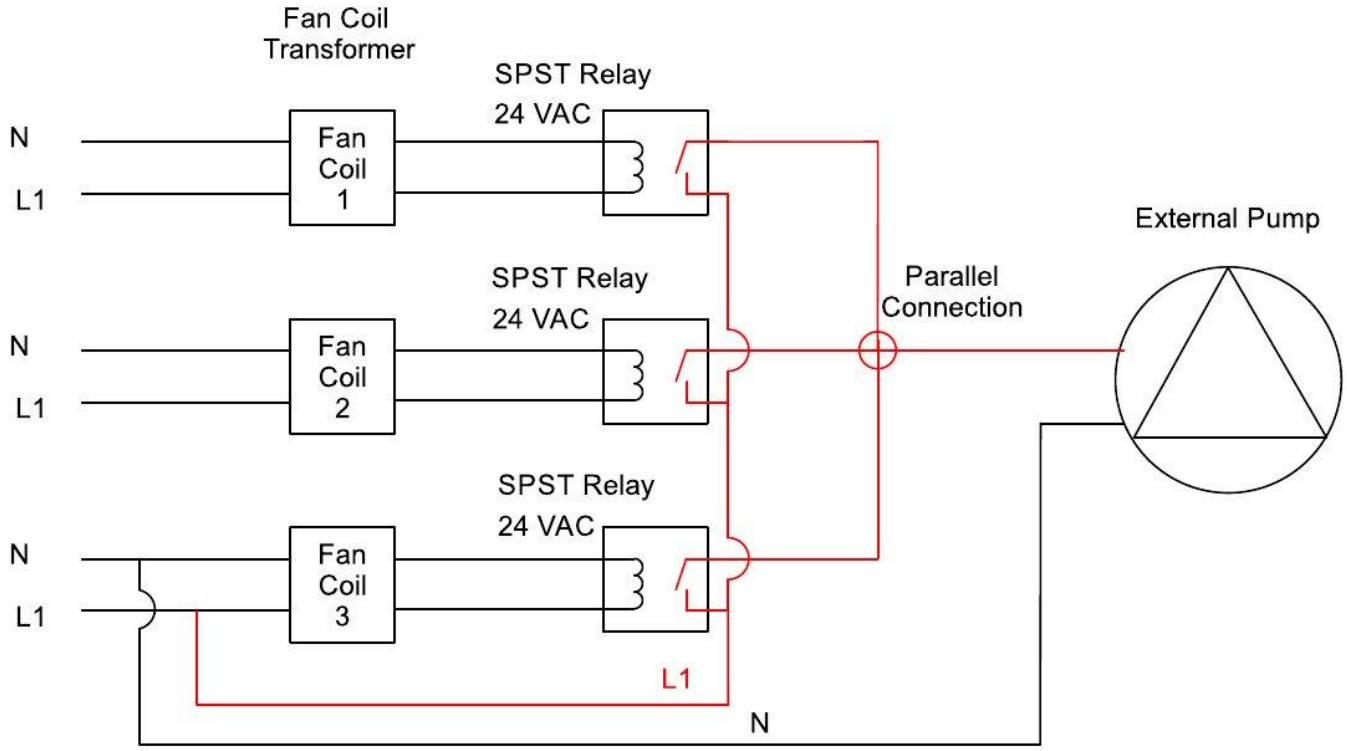
To let the LED Screen of the unit light up or not, please press the key "" .

5. **Wiring Diagram**



NO.	Signal	meaning
1	CN2	DC Fan Motor
2	TEMP Sensors	To ambient and coil temperature
3	OUT1	To electromagnetic valve
4	L	Hot wire 120 vac Power in
5	N	Neutral wire Power in

6. **Standard Fan Coil Loop Pump Wiring**



Typical control circuit for adding a second pump to a fan coil Loop using SPST 24vac coil relays. Relays must have the proper contact load rating for the selected pump.

7. **Resistance Chart**

T(°F)	R(KΩ)		T(°F)	R(KΩ)		T(°F)	R(KΩ)
-22.0	63.7306		57.2	7.7643		136.4	1.5636
-20.2	60.3223		59.0	7.4506		138.2	1.5142
-18.4	57.1180		60.8	7.1513		140.0	1.4666
-16.6	54.1043		62.6	6.8658		141.8	1.4206
-14.8	51.2386		64.4	6.5934		143.6	1.3763
-13.0	48.5994		66.2	6.3333		145.4	1.3336
-11.2	46.0860		68.0	6.0850		147.2	1.2923
-9.4	43.7182		69.8	5.8479		149.0	1.2526
-7.6	41.4868		71.6	5.6213		150.8	1.2142
-5.8	39.3832		73.4	5.4048		152.6	1.1771
-4.0	37.3992		75.2	5.1978		154.4	1.1413
-2.2	35.5274		77.0	5.0000		156.2	1.1068
-0.4	33.7607		78.8	4.8108		158.0	1.0734
1.4	32.0927		80.6	4.6298		159.8	1.0412
3.2	30.5172		82.4	4.4566		161.6	1.0100
5.0	29.0286		84.2	4.2909		163.4	0.9800
6.8	27.6216		86.0	4.1323		165.2	0.9509
8.6	26.2913		87.8	3.9804		167.0	0.9228
10.4	25.0330		89.6	3.8349		168.8	0.8957
12.2	23.8424		91.4	3.6955		170.6	0.8695
14.0	22.7155		93.2	3.5620		172.4	0.8441
15.8	21.6486		95.0	3.4340		174.2	0.8196
17.6	20.6380		96.8	3.3113		176.0	0.7959
19.4	19.6806		98.6	3.1937		177.8	0.7730
21.2	18.7732		100.4	3.0809		179.6	0.7508
23.0	17.9129		102.2	2.9727		181.4	0.7293
24.8	17.0970		104.0	2.8688		183.2	0.7086
26.6	16.3230		105.8	2.7692		185.0	0.6885
28.4	15.5886		107.6	2.6735		186.8	0.6690
30.2	14.8913		109.4	2.5816		188.6	0.6502
32.0	14.2293		111.2	2.4934		190.4	0.6320
33.8	13.6017		113.0	2.4087		192.2	0.6144
35.6	13.0057		114.8	2.3273		194.0	0.5973
37.4	12.4393		116.6	2.2491		195.8	0.5808
39.2	11.9011		118.4	2.1739		197.6	0.5647
41.0	11.3894		120.2	2.1016		199.4	0.5492
42.8	10.9028		122.0	2.0321		201.2	0.5342
44.6	10.4399		123.8	1.9656		203.0	0.5196
46.4	9.9995		125.6	1.9015		204.8	0.5055
48.2	9.5802		127.4	1.8399		206.6	0.4919
50.0	9.1810		129.2	1.7804		208.4	0.4786
51.8	8.8008		131.0	1.7232		210.2	0.4658
53.6	8.4385		132.8	1.6680		212.0	0.4533
55.4	8.0934		134.6	1.6149			

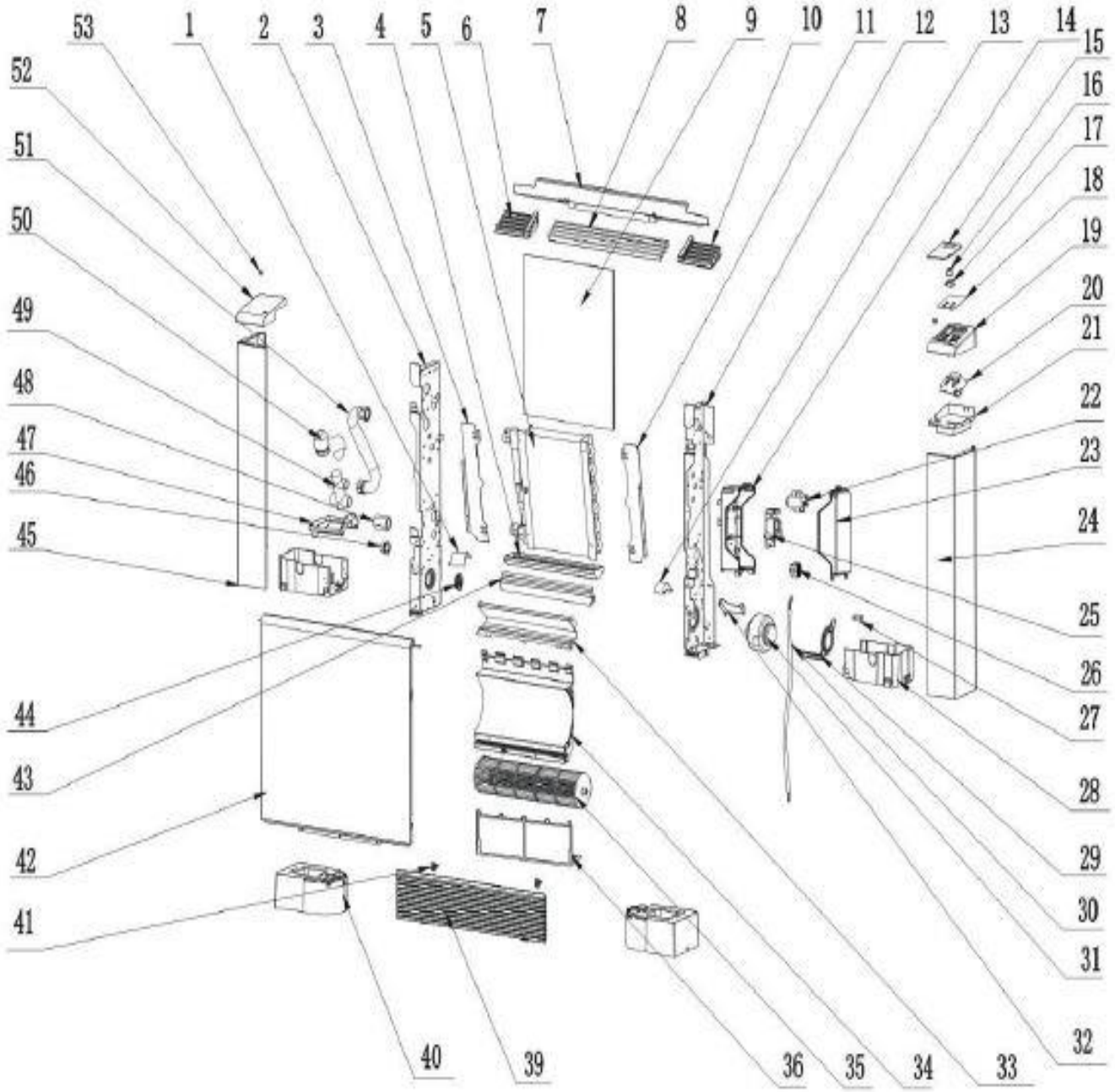
1) When there is a sensor error code, measure the resistance value of the sensor with a multimeter, and compare the ambient temperature with the table above, then you will know whether the NTC resistance sensor is faulty.
2) Generally, from above table, you can know the temperature by testing NTC resistance value.

8. Troubleshooting

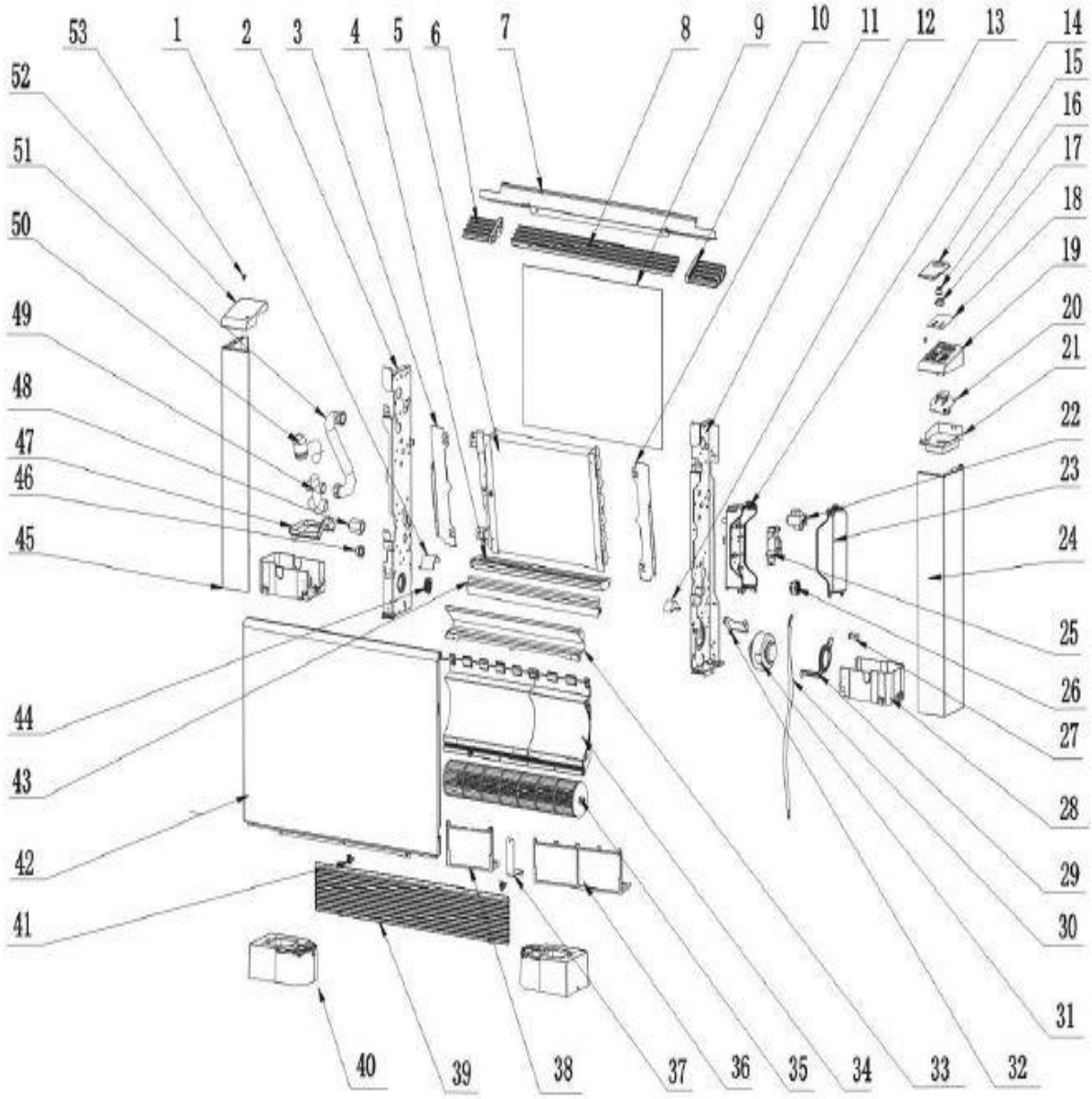
Malfunction	Code	Cause	Solution
Indoor ambient temperature sensor	P4	Ambient temperature sensor is in open circuit or short circuit	Check or replace the ambient temperature sensor
Coil temperature sensor	P5	Coil temperature sensor is in open circuit or short circuit	Check or replace the Coil temperature sensor
Motor feedback signal	E0	feedback wire is not inserted well or Fan Motor failure	Check the feedback wire or replace the motor
Front air inlet grill micro switch		Front grill is open, or sw. is not closed	Close front grill or replace micro switch

9. Exploded Views

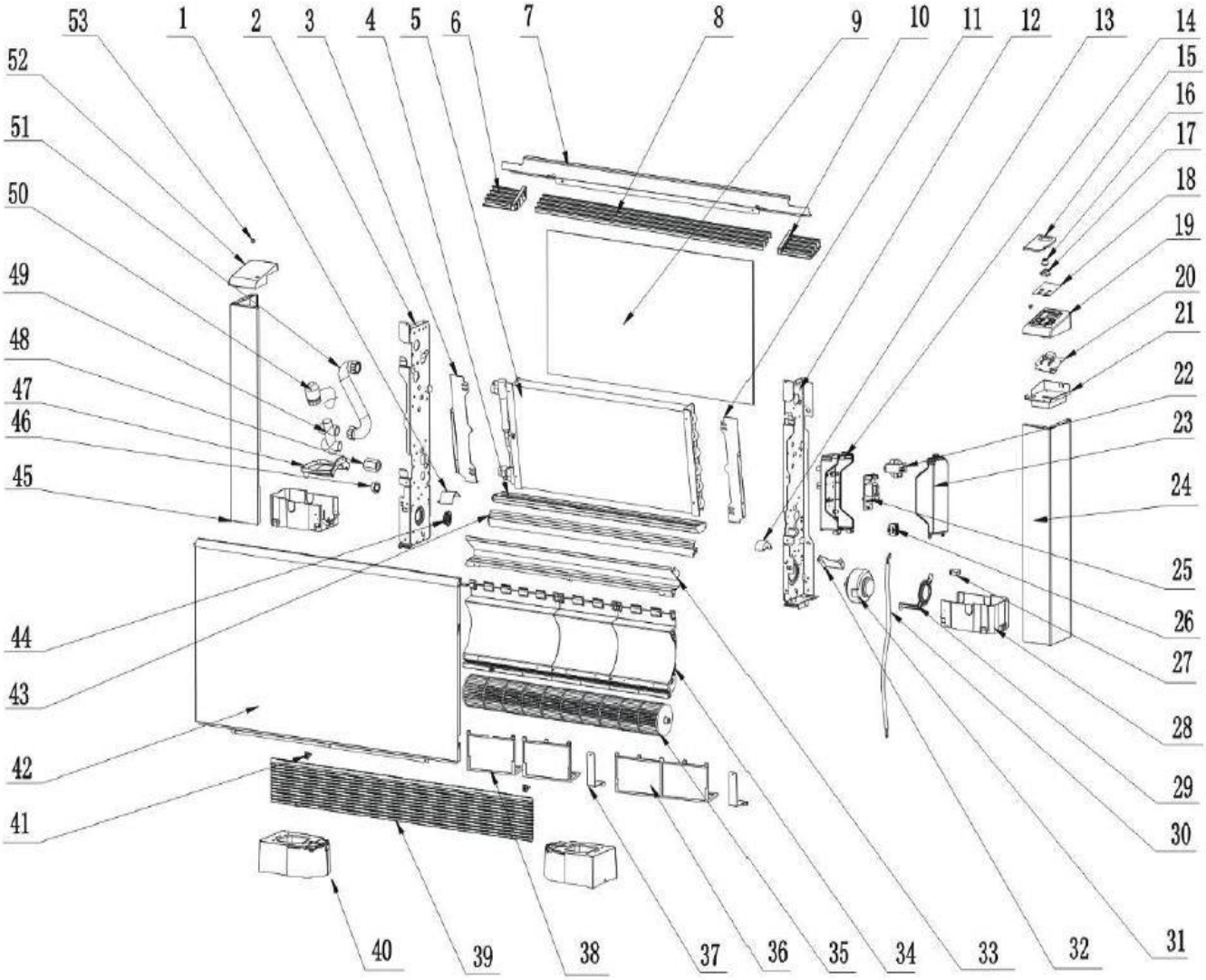
Chiltrix CXI34



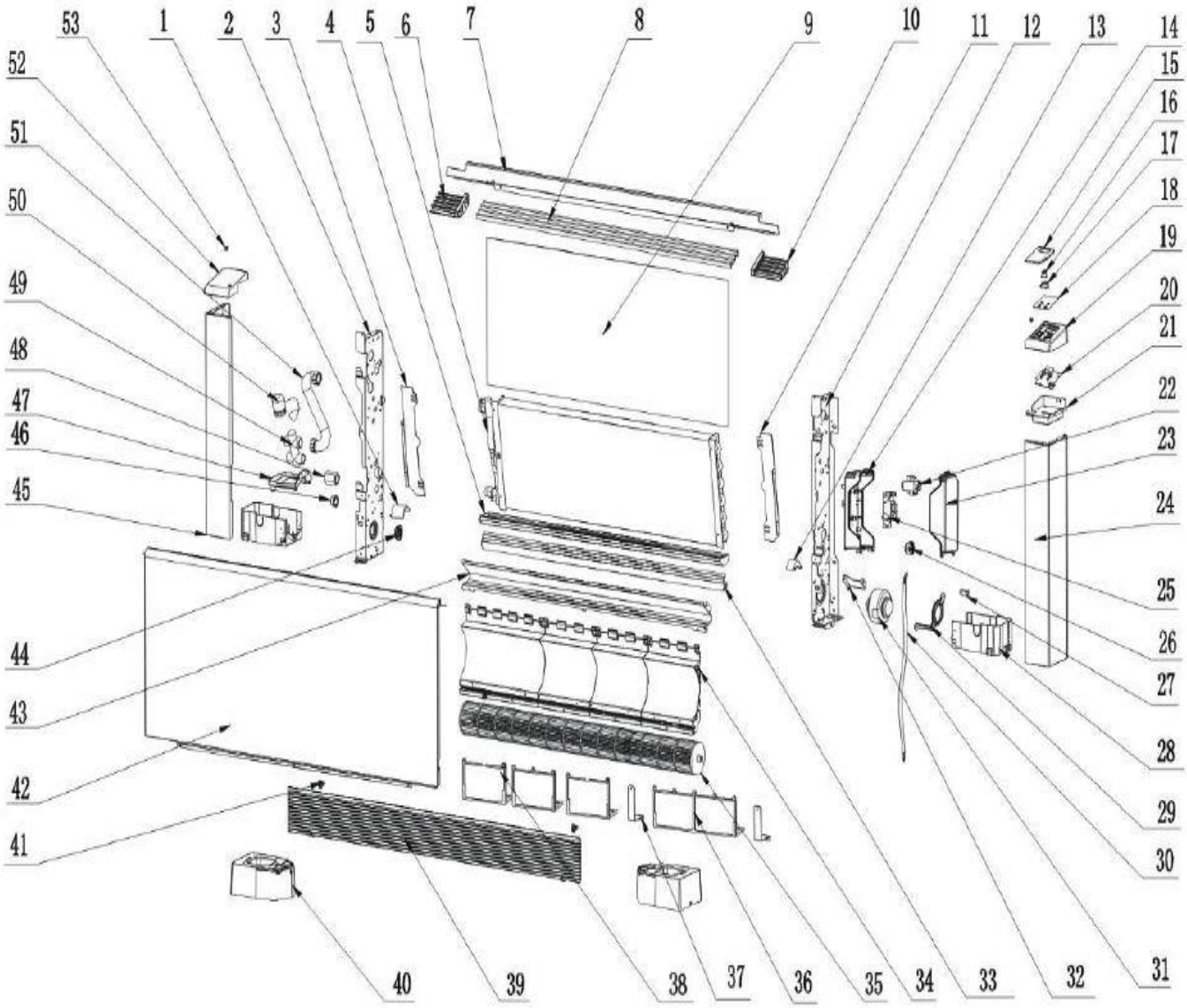
Chiltrix CXI65



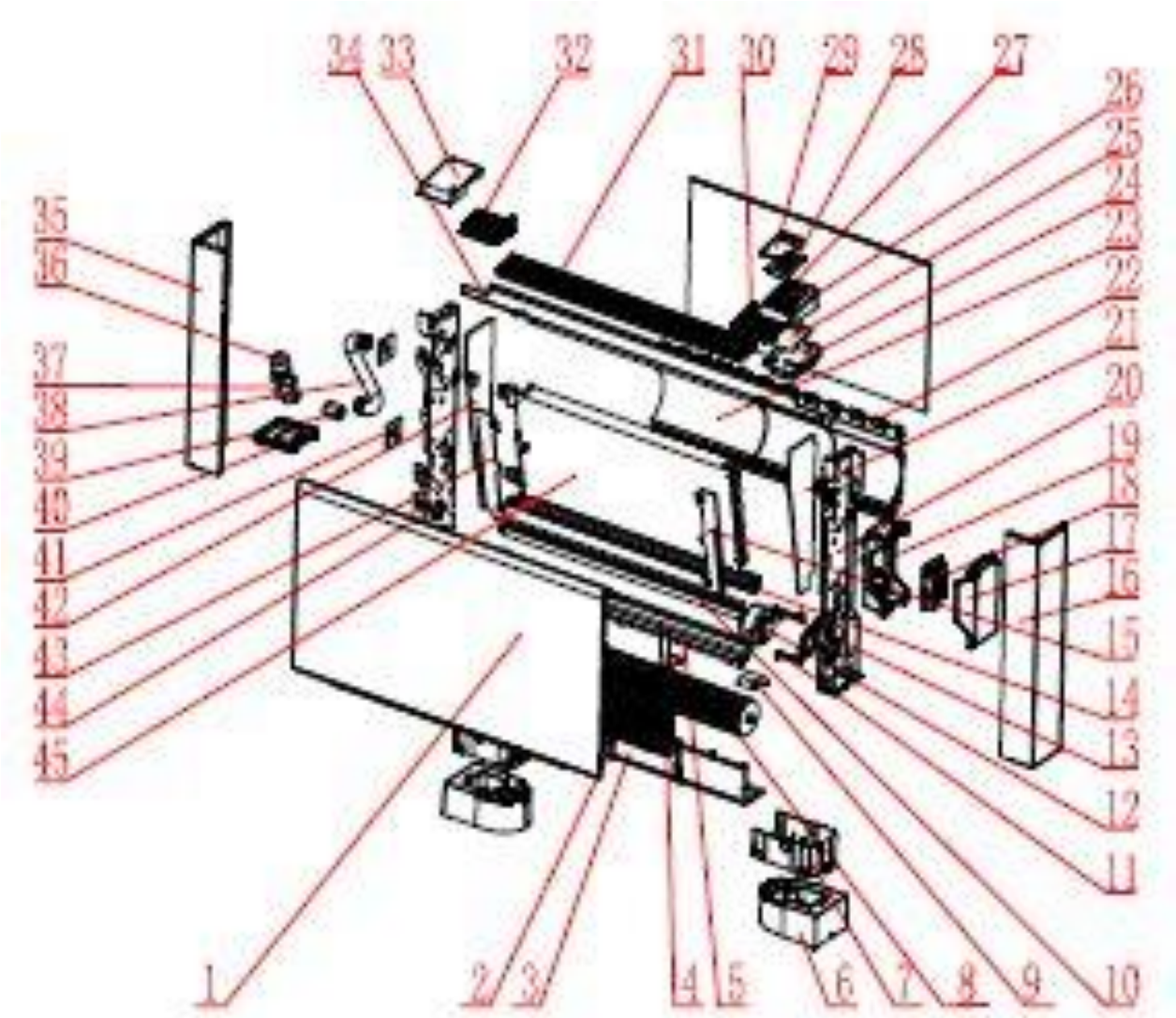
Chiltrix CXI85



Chiltrix CXI120



Chiltrix CXI148



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