



# ONE-WAY CASSETTE CHILLED WATER

IC1H-06KF-3.

## INSTALLATION MANUAL



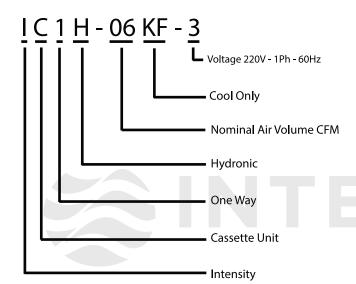


#### **CONTENTS**

#### **PAGE**

INSTALLATION PRECAUTION	1
ACCESSORIES	1
UNIT STRUCTURE INTRODUCTION	2
INSTALLATION SPACE	2
INTDOOR UNIT INSTALLATION	2
DRAIN PIPE INSTALLATION	5
INSTALL THE CONNECTING PIPE	6
THE SPECIFICATION OF POWER	7
TROUBLE SHOOTING	7

#### **NOMENCLATURA**



#### 1. INSTALLATION PRECAUTION

- Please read this installation manual carefully before installation.
- The air conditioner must be installed by qualified service person.
- If the supply cord is damaged, it must be replanced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- When installing the indoor unit, please follow this manual as strictly as possible.
- Check the piping is accomplished perfectly before electrifying the unit
- This manual is subject to changes due to technological improvement without further notices.

#### **NOTE**

The installer should illustrate to users how to correctly use and maintain the appliance and remind the users carefully reading and keeping both installation manual and owner's Manual after the installation.

#### 2. ACCESSORIES

Table.2-1

Name	Q'ty	Outline	Function
Indoor unit installation manual	1	This manual	(Please hand to user)
Installation paper plate	1		For installing the suspender and cutting the ceiling
Flexible drainage pipe	1	(	For the connection between the air-conditioner and the drainage pipe
Clasp	1	O#	For fastening the flexible drainage pipe
Big gasket	8	0	Necessary fastener for hanging the air-conditioner
Screw	8		Necessary fastener for hanging the air-conditioner
Small flathead screwdriver	1		Use for installing the wires
Panel installation bolt	6	0	For installing the panel to the air conditioner
Operation manual for remote controller	1		Please hand to the user
Remote controller	1		For controlling the remote controller
Remote controller support	1		For placing the remote controller
Battery	2	<u> </u>	Battery for remote controller
Cross-recessed countersunk head self tapping screw	2		For fixing the remote controller support
Fastening belt	10		For fastening
Adapter cable group	1		For connecting the valve actuator

- 1 Remote controller holder
- 2 Mounting screw
- 3 Remote controller





Fig.2-1

- Don't throw the remote controller or give it big impact.
- The remote controller should be in the reception range, and the transmittal part should point to the orientation of indoor unit receptor.
- Before installation, operate the remote controller to determine its location in a reception range.
- Keep the remote controller at least 1m apart from the nearest TV set or stereo equipment. (It is necessary to prevent image disturbances or noise interferences.)
- Do not install the remote controller in a place exposed to direct sunlight or close to a heating source, such as a stove.
- Note that the positive and negative poles are right positions when loading batteries.

#### 3. UNIT STRUCTURE INTRODUCTION

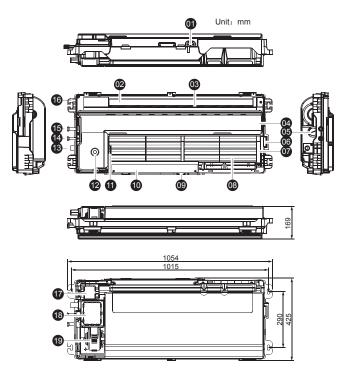


Fig.3-1

01	Access port for power and communication wires					
02	Air outlet					
03	Rotor					
04	Main water basin					
05	Cover of water level test hole					
06	Buckle hole 2 of panel					
07	Sub-water basin					
08	Air return port					
09	Maintenance hook for electric control box (2 pcs)					
10	Electric control box					
1	Buckle hole 1 of panel					
12	Water drainage plug					
13	Condensate water drainage port Φ 25					
14	Inlet Pipe DN15					
15	Outlet Pipe DN15					
16	Installation lifting lug (4 pcs)					
1	Water pump box					
18	Two Way Valve box					
19	Motor box					

#### 4. INSTALLATION SPACE

- Please avoid installing in the following places
- A place with flammable gas or material.
- A saline place such as a seashore vicinity
- A place with sulphur gas.
- A place with oil gas, such as kitchen.
- A place with high-humidity air.
- An unbearable place.
- A place where high-frequency waves are generated.
- The appliance shall not be installed in the laundry.
- Please comply with the related national electric standard to make electric insulation for construction and metal parts of air-conditioner.
- Please choose the place where the ventilation is good.
- Ceiling space requires ≥153mm;
- The installation height of the unit can not higher than 3.2 m, or it will affect the operation effect.

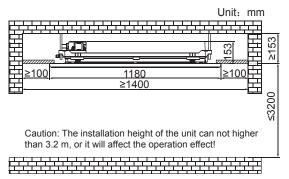


Fig.4-1

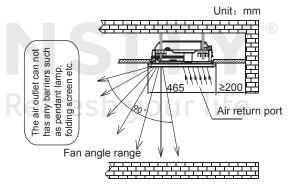


Fig.4-2

#### 5. INDOOR UNIT INSTALLATION

Please use the installation paper plate to make sure the positions of the installation screws.

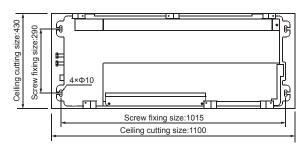
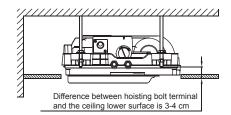


Fig.5-1

 Please accord to the follow figure's requirements to design the length of the suspender holt



- Please install with Φ10 hanging screw bolts.
- The handling to the ceiling varies from the constructions, consult the construction person for the specific condition.
- The size of the ceiling to be handled----- Do keep the ceiling flat. Consolidate the roof beam for possible vibration.
- Cut off the roof beam.
- Strengthen the place that has been cut off, and consolidate the roof beam.
- Connect wires and pipes inside the ceiling after the air conditioner is hanged.
- After the selection of installation location, position the refrigerant pipes, drain pipes, indoor & outdoor wires to the connection places before hanging up the machine.
- The installation of hanging screw bolts.

Wooden construction
Put the square timber over the roof beam, then install the hanging screw bolts.

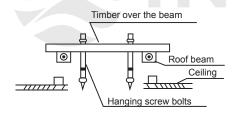


Fig.5-2

New Concrete Bricks
 Inlaying or embedding the screw bolts.



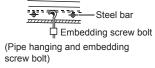


Fig.5-3

For finished concrete bricks
 Install the hanging hook with expansible bolt into the concrete deep to 45~50mm to prevent loose.



Fig.5-4

 Steel roof beam structure Install the supporting angle steel.

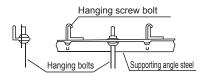


Fig.5-5

- Hoisting the indoor unit
- Adjust the height of screw 2, to make the difference between the upper surface of gasket 2 and the lower surface of the ceiling is 70mm;
- Hoisting the unit on the suspender bolt as the Fig5-7 display, use the level gauge to level-out the length and width directions, and it needs to repeatedly adjust four screw 2 of the suspender during the process. It might occur this situation: under making sure the unit level, the difference of four gasket 2 of the hoisting bolt and the lower surface of the ceiling will be discorded, can not be 70mm. At this time it should make sure the level of the unit body, and move the whole unit up and down, and make the four differences try to be close to 70mm;
- Finish adjusting the unit height and the level, fasten the screw 1 of the four suspenders, and make the unit fixed reliably.

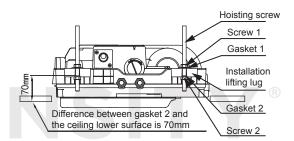


Fig.5-6

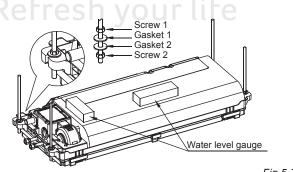
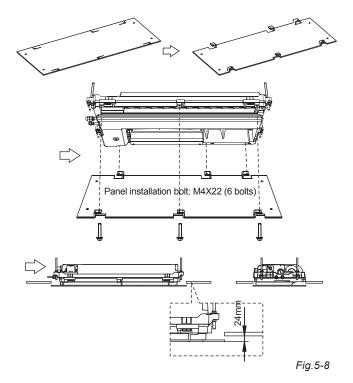
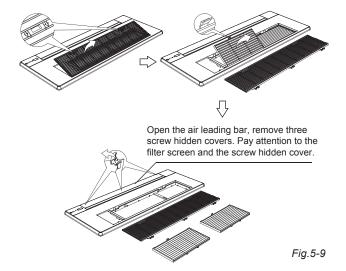


Fig.5-7

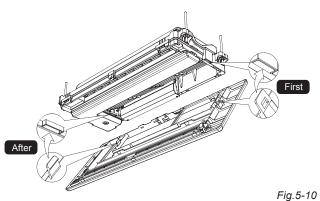
- Cutting the ceiling
- Fold the installation paper plate. Caution: Folding direction is bulged out from the no printing content side;
- Use the panel fixing screws to fix the installation paper plate under the indoor unit;
- Make the ceiling opening size be the same with the outboard size of the model paper;
- Make sure the difference between the lower sides of the ceiling and model paper plate to be about 24mm, if not fit the requirements then means the hoisting height has problem.
   Please back to the above steps to re-adjust.



- Panel component installation
- Remove the air return grille, filter screen, screw hidden cover.
- As the grille switch arrow indication direction to pull the lock catch, remove the air return grille.
- Pull the buckle as figure display, remove the filter screen.
- Open the air leading bar, remove three screw hidden covers.
- Take down the air return grille, filter screen, screw hidden cover and please safely keep them, do not lose, dirt and damage them.



- · Install the panel component, and wiring
- Two buckles on the panel component are used for assisting the panel installation, the installing method of the buckle as Fig.5.10 display.
- Panel component wiring: open the electric control panel, connect the wiring terminal of the control display box and the motor connecting terminal of the air leading bar as the figure display to the main control panel.



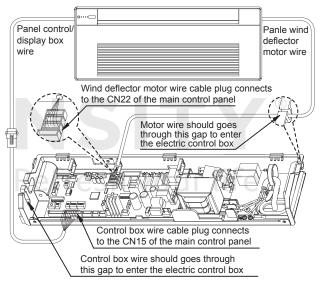


Fig.5-11

#### Install the screw

Before installation please check the connecting cable between panel and air conditioner whether has clamped, if clamped, the panel will be unfairness after fastening the screws and damage the wires.

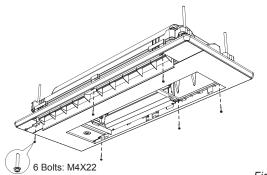


Fig.5-12

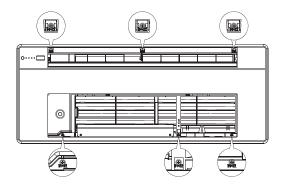


Fig.5-13

Install the screw hidden cover

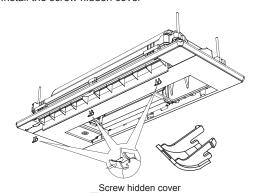
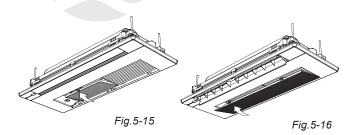


Fig.5-14

■ Install back the filter screen and the air return grille



- Panel component wiring must accord to the figure display, otherwise will cause the abnormal operation. Connecting wire installation must follow the figure display, otherwise will cause the electric control box cover can not close, if there are wire clamped will cause air leakage and condensation of the panel and so on.
- Display part of the panel should be installed at the pipe side of the unit body.
- There are 6 panel installation screws, after confirmation then to be fastened.

#### 6. DRAIN PIPE INSTALLATION

When connecting the pipe, please use the sealing material and pipe glove.

### A

#### **CAUTION**

- The drain pipe of indoorunit must be heat insulated, or it will condense dew, as well as the connections of the indoor unit.
- Make sure the connections is no leakage.
- With the connection part to the indoor unit, please note not to impose pressure on the side of indoor unit pipes.
- When the declivity of the drain pipe downwards is over 1/100, there should not be any winding.
- The total length of the drain pipe when pulled out breadthwise shall not exceed 20m. When the pipe is over long, a bracket must be installed to prevent winding.
- Refer to the following figures to install the pipes.
- Drainage system type
- · Centralized drainage of several air conditioners

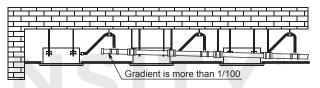


Fig. 6-1

Single air conditioner drainage

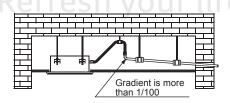


Fig.6-2

- Drainage system design requirement
- Between climbing section length (L) and pipe inner diameter (d)should satisfy the relation: L\*d\*d≤650000 (L and d units are mm).

that is water in the climbing section can not more than 500 ml, otherwise will cause poor drainage, flowing water leakage problems.

It must accord to the requirement to install the water pipe. Suggest using water pipe with the inner diameter 25mm, and the climbing length is got a contract.

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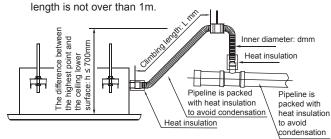


Fig.6-3

Please according to the tube hardness to choose proper support density, do not appear obvious dropping and deformation situation. Dropping part will save the water and lead to poor drainage and abnormal noise.

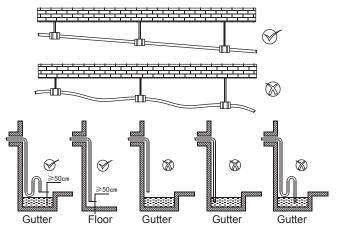


Fig. 6-4

- Drainage system design requirement
- Drainage pipe can use PVC pipe, recommended to use the pipe of 25 mm inner diameter, water pipe should has thermal insulation layer.
- The user can purchase the pipe of suitable length in the dealer place or in a local after-sale service center place, or directly to purchase in the market.
- Insert the drainage pipe port to the condensate water outlet, and use the outlet clamp (accessory) to fasten the drainage pipe and the thermal insulation sleeve.
- The pipes are needed to be packed with insulation heat preservation material. The connection of water pipe and air conditioner should use insulating sheath package, and tighten tightly to prevent water condensation to damage the ceiling decoration.
- To avoid water poured into the air conditioner inside when the
  unit operation stops, drainage pipe should be down dipped to
  outdoor side (drainage side), gradient is more than 1/100,
  drainage pipeline can not occur bending and dropping save
  water phenomenon, otherwise it will cause abnormal noise.
- During connecting pipe, please do not force pulling the drainage pipe which will cause the nozzle loose, and at the same time shall set up enough strong points, in order to avoid the drainage pipe drops.
- Drainage test
- After the unit installation then do the trial run and water drainage test. Power on the indoor and outdoor unit; operate the cooling mode and do the water drainage test.
- Open the cover of water test hole, use bottle or flexible pipe to fill water (500ml/min.), and then to observe whether has water drain out from the water drainage port. Check whether the pipeline has leakage and places which not pack with thermal material, and improve the parts with problems.
- After finishing water drainage and power off the unit, install back the cover of water test hole.

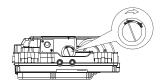


Fig.6-5

#### 7. INSTALL THE CONNECTING PIPE

Connecting the pipes.

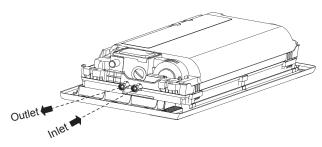


Fig.7-1

- Before connecting the pipes,make sure the seal washers located inside the connecting nut.
- Connect the unit to the water system by means of the fittings which are marked Inlet and Outlet.

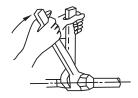


Fig.7-2

- Avoid the damage to screw thread of evaporator, do not overexertion, when screwing. For avoid non-screw up or damage of screw thread, two spanners must be used simultaneously.
- Lag the connection pipes and any valves titted with anticondensation material 10 mm thick or install the auxiliary.
- Ensure all interfaces not water leakage.
- Air Exhaust

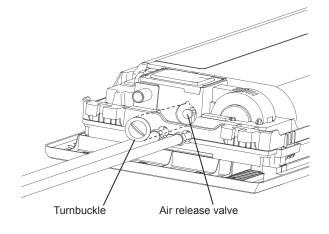


Fig.7-3

 When finished pipes and junctions connection. Turn the turnbuckle down, find the air release valve inside the unit, exhaust the air contained in the circuit.



#### **CAUTION**

When the unit stop operating or be not used after debugging, please drain off the water in the coils or inject antifreeze to the circuit, to prevent the copper pipe cracking caused by low temperature frozen water!

#### 8. The specification of power

Table.8-1

	Mode	el	IC1H-06KF-3
Davisa		Phase	1-Phase
Power	Freq	uency and volt	220-240V~60Hz
Circ	cuit break	cer/fuse (A)	5/3
Indoor	unit pow	er wiring (mm²)	2×2.5
Indoor/or		Ground wiring(mm <sup>2</sup> )	1×2.5
(mm <sup>2</sup> )	ng wiring	Electric signal	3×0.75(Shielded wire)

The power cord type designation is H05RN-F or above.



#### **CAUTIONS**

- An all-pole disconnection device which has at least 3mm separation distance in all pole and a residual current device(RCD)with the rating of above 10mA shall be incorporated in the fixed wiring according to the national rule.
- The appliance shall be installed in accordance with national wiring regulations.

