

DAIKIN



INSTALLATION MANUAL

**STATIC BLOWER
CHILLED WATER FAN COIL UNIT**



English

MODELS

FUD 20F

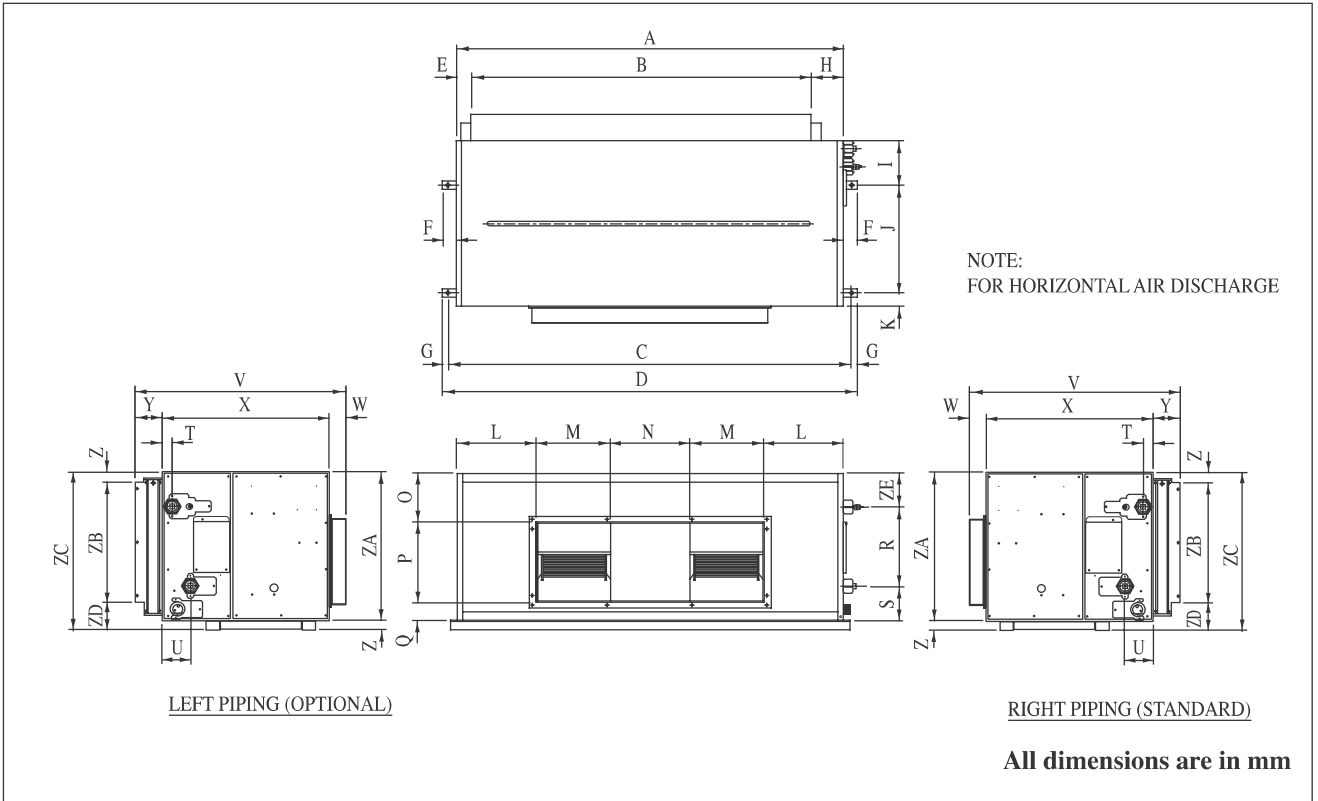
FUD 25F



IM-SBFW-0821(0)DAIKIN
Part Number: RJ0110030012878

OUTLINE AND DIMENSIONS

Indoor Unit : FUD 20/25F



| Dimension Model | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|--------------------|------|------|------|------|----|----|----|-----|-----|-----|----|-----|-----|-----|-----|-----|----|
| FUD 20F | 1402 | 1232 | 1462 | 1502 | 53 | 50 | 20 | 117 | 163 | 394 | 48 | 287 | 270 | 288 | 177 | 295 | 65 |
| FUD 25F | 1402 | 1232 | 1462 | 1502 | 53 | 50 | 20 | 117 | 163 | 394 | 48 | 287 | 270 | 288 | 177 | 295 | 65 |

| Dimension Model | R | S | T | U | V | W | X | Y | Z | ZA | ZB | ZC | ZD | ZE |
|--------------------|-----|-----|----|----|-----|----|-----|----|----|-----|-----|-----|-----|-----|
| FUD 20F | 302 | 103 | 33 | 72 | 761 | 60 | 605 | 96 | 35 | 537 | 437 | 572 | 100 | 132 |
| FUD 25F | 289 | 103 | 33 | 72 | 761 | 60 | 605 | 96 | 35 | 537 | 437 | 572 | 100 | 145 |

INSTALLATION MANUAL

This manual provides the procedures of installation to ensure a safe and good standard of operation for the air conditioner unit.

Special adjustment may be necessary to suit local requirement.

Before using your air conditioner, please read this instruction manual carefully and keep it for future reference.

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

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.



SAFETY PRECAUTIONS

WARNING

- Installation and maintenance should be performed by qualified persons who are familiar with local code and regulation, and experienced with this type of appliance.
- All field wiring must be installed in accordance with the national wiring regulation.
- Ensure that the rated voltage of the unit corresponds to that of the name plate before commencing wiring work according to the wiring diagram.
- The unit must be GROUNDED to prevent possible hazard due to insulation failure.
- All electrical wiring must not touch the water piping or any moving parts of the fan motors.
- Confirm that the unit has been switched OFF before installing or servicing the unit.
- Risk of electric shock, can cause injury or death. Disconnect all remain electric power supplies before servicing.
- DO NOT pull out the power cord when the power is ON. This may cause serious electrical shocks which may result in the fire hazards.
- Keep the indoor and outdoor units, power cable and transmission wiring, at least 1m from TVs and radios, to prevent distorted pictures and static. {Depending on the type and source of the electrical waves, static may be heard even when more than 1m away}.

CAUTION

Please take note of the following important points when installing.

- **Ensure that the drainage piping is connected properly.**
 If the drainage piping is not connected properly, it may cause water leakage which will dampen the furniture.
- **Ensure that the unit's panel is closed after service or installation.**
 Unsecured panels will cause the unit to operate noisily.
- **Sharp edges and coil surfaces are potential locations which may cause injury hazards. Avoid from being in contact with these places.**
- **Before turning off the power supply set the remote controller's ON/OFF switch to the "OFF" position to prevent the nuisance tripping of the unit.** If this is not done, the unit's fans will start turning automatically when power resumes, posing a hazard to service personnel or the user.
- **Do not install the units at or near doorway.**
- **Do not install the units at area like hot spring or oil refinery plant where sulphide gas exists.**
- **Do not operate any heating apparatus too close to the air conditioner unit or use in room where mineral oil, oil vapour or oil steam exist, this may cause plastic part to melt or deform as a result of excessive heat or chemical reaction.**
- **When the unit is used in kitchen, keep flour away from going into suction of the unit.**
- **This unit is not suitable for factory used where cutting oil mist or iron powder exist or voltage fluctuates greatly.**
- **Ensure the color of wires of the outdoor unit and the terminal markings are same to the indoors respectively.**
- **IMPORTANT : DO NOT INSTALL OR USE THE AIR CONDITIONER UNIT IN A LAUNDRY ROOM.**
- **Don't use joined and twisted wires for incoming power supply.**
- **The equipment is not intended for use in a potentially explosive atmosphere.**

NOTICE

Disposal requirement

Your air conditioning product is marked with this symbol. This means that electrical and electronic products shall not be mixed with unsorted household waste.

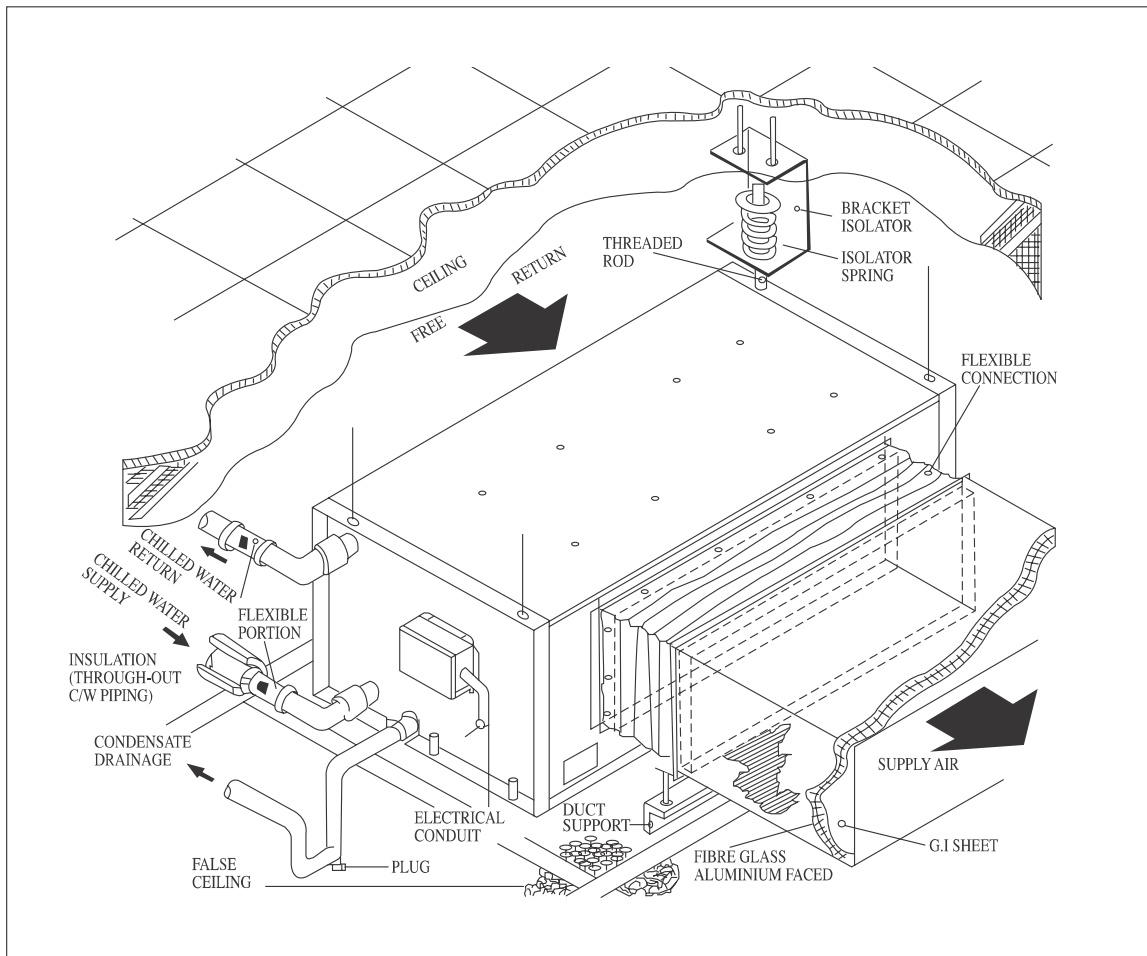
Do not try to dismantle the system yourself: the dismantling of the air conditioning system, treatment of the refrigerant, of oil and of other parts must be done by a qualified installer in accordance with relevant local and national legislation.

Air conditioners must be treated at a specialized treatment facility for re-use, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information.

Batteries must be removed from the remote controller and disposed of separately in accordance with relevant local and national legislation.

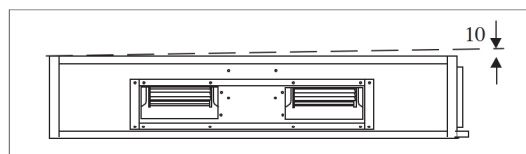


INSTALLATION OF INDOOR UNIT

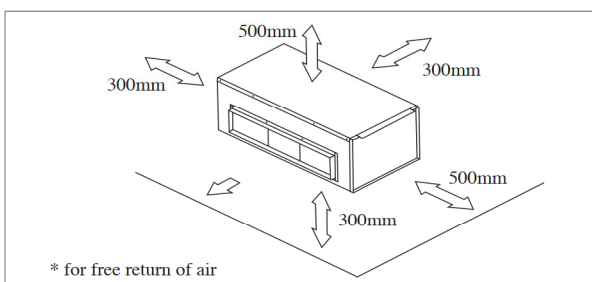


Mounting

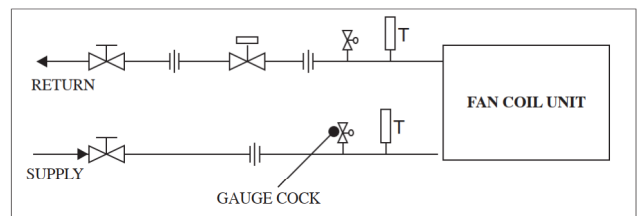
Ensure that the overhead supports are strong enough to hold the unit's weight. Position hanger rods and check for alignment with the unit. Check that hangers are secure and that the base of fan-coil unit is level in the two horizontal directions, taking into account the gradient recommended for drainage flow as shown. Check the gradient recommended for drainage flow as follow.



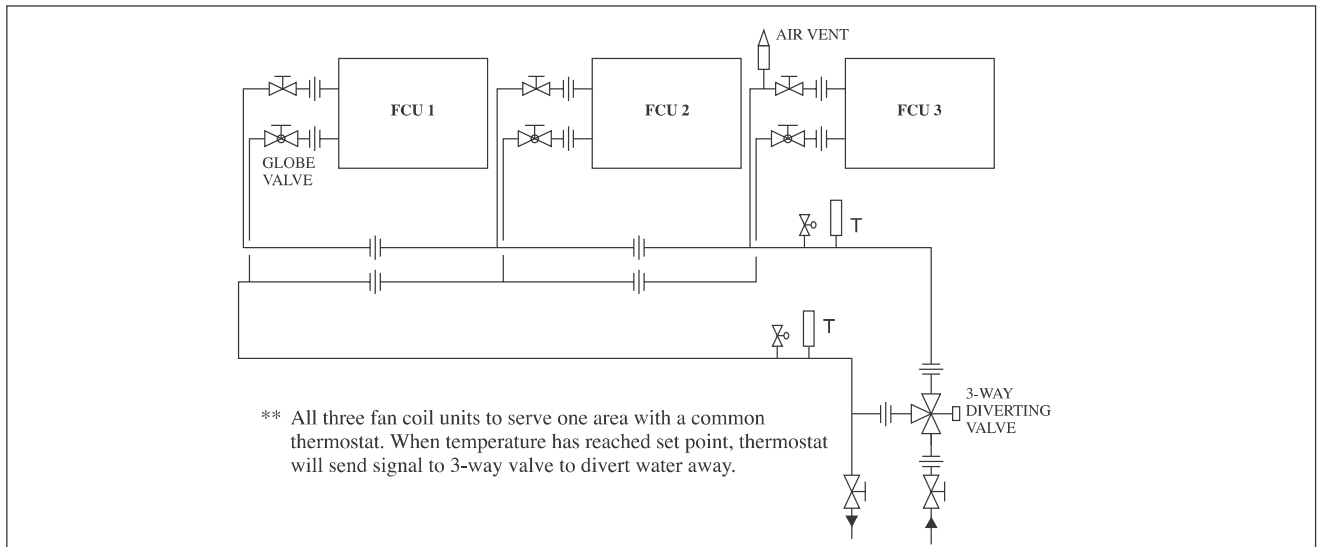
Provide clearance for servicing and optimal air flow as shown in the diagram. The indoor unit must be installed such that there is no short circuit of cool discharge with air discharge. Respect the installation clearance.



Horizontal installation



Multiple fan coil unit installation



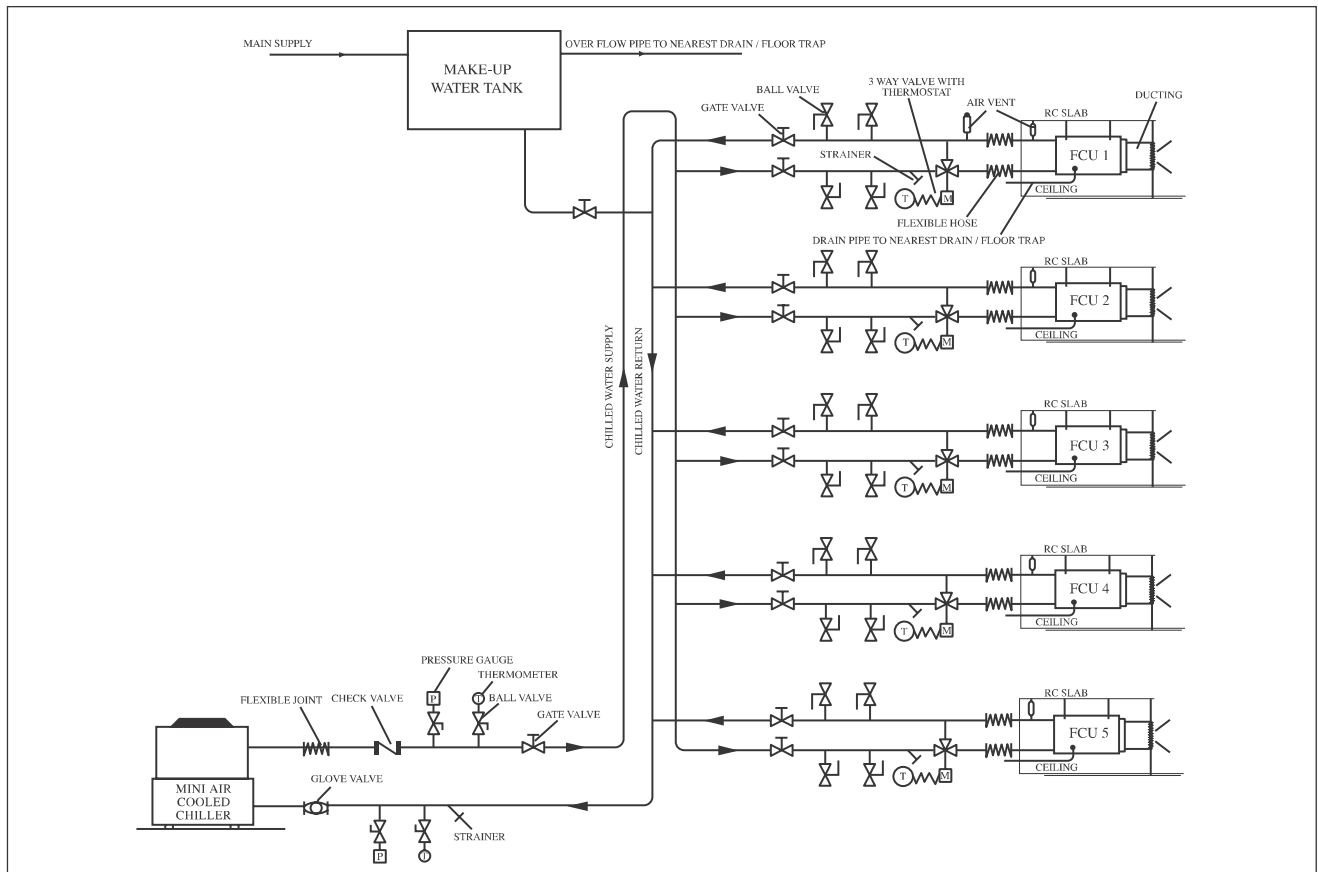
GUIDELINES FOR VALVE AND FITTING INSTALLATION

- Gate valves (shut-off) are installed in the entering and leaving piping to the chiller and fan coil unit. This is to permit servicing and replacement of the equipment without draining the system. A globe valve may be used to serve as one of the shut-off valve and in addition to balance the rate.
- Valves and fittings using threaded or welded joints will require unions to permit easy removal for servicing or replacement. Unions are usually located between each gate valve and the equipment. Unions are also placed before and after the control valve, and in the branch of the 3-way valve.
- Locate the control valve in between the gate valve and the equipment to permit removal of the control valve without draining the system.
- Strainers, thermometers and pressure gauges are located between the gate valve and the equipment.

The following diagrams illustrate examples of piping layout:

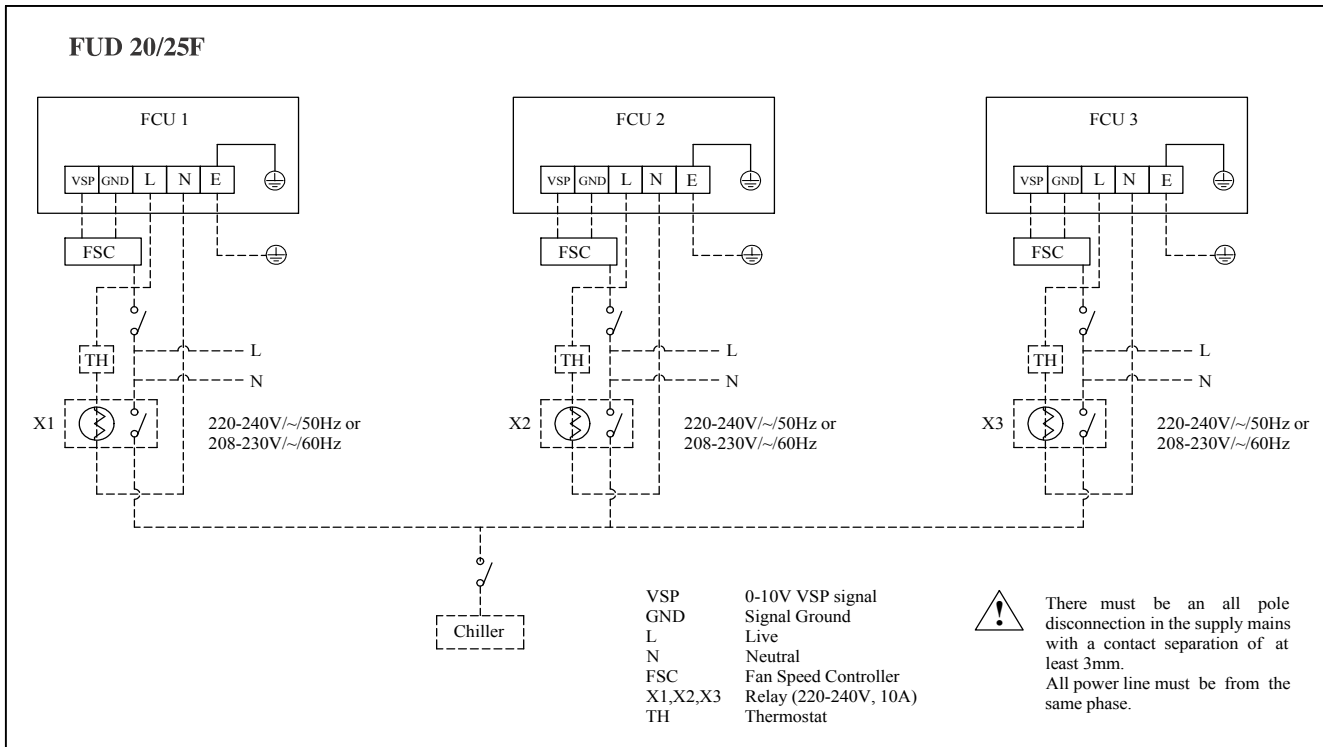
If flange joints are used, the need for unions is eliminated.

Schematic Diagram For Mini Air Cooled Chiller Installation



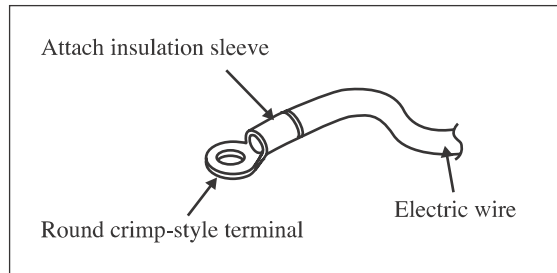
ELECTRICAL CONNECTION

IMPORTANT: * The figures shown in the table are for information purpose only. They should be checked and selected to comply with the local/national codes of regulations. This is also subject to the type of installation and conductors used.
 ** The appropriate voltage range should be checked with label data on the unit.

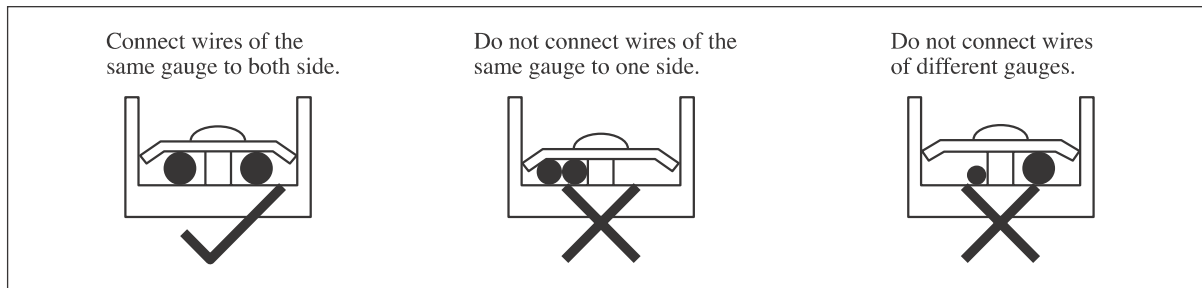


| Model | FUD 20/25F | |
|----------------------|--|-----|
| Voltage Range** | 220V-240V/ ~ /50Hz or 208V-230V/ ~ /60Hz | |
| Recommended Fuse* | (A) | 10 |
| Power Supply Cable* | (mm ²) | 1.5 |
| Number of Conductors | 5 | |

- All wires must be firmly connected.
- Make sure all the wire do not touch the refrigerant pipings, compressor or any moving parts.
- The connecting wire between the indoor unit and the outdoor unit must be clamped by using provided cord anchorage.
- The power supply cord must be equivalent to H07RN-F which is the minimum requirement.
- Make sure no external pressure is applied to the terminal connectors and wires.
- Make sure all the covers are properly fixed to avoid any gap.
- Use round crimp-style terminal for connecting wires to the power supply terminal block. Connect the wires by matching to the indication on terminal block. (Refer to the wiring diagram attached on the unit).



- Used the correct screwdriver for terminal screws tightening. Unsuitable screwdrivers can damage the screw head.
- Over tightening can damage the terminal screws.
- Do not connect wire of different gauge to same terminal.
- Keep wiring in an orderly manner. Prevent the wiring from obstructing other parts and the terminal box cover.



OPERATING RANGE

Operating Limits:

Thermal carrier : Water

Water temperature : 4°C ~ 10°C (Cooling), 35°C ~ 50°C (Heating),

Maximum water pressure : 16 bar

Air temperature : (as below)

Cooling Mode

| Temperature | Ts °C/°F | Th °C/°F |
|----------------------------|-------------|-------------|
| Minimum indoor temperature | 19.0 / 66.2 | 14.0 / 57.2 |
| Maximum indoor temperature | 32.0 / 89.6 | 23.0 / 73.4 |

Heating Mode

| Temperature | Ts °C/°F | Th °C/°F |
|----------------------------|-------------|----------|
| Minimum indoor temperature | 15.0 / 59.0 | - |
| Maximum indoor temperature | 27.0 / 80.6 | - |

Ts: Dry bulb temperature.

Th: Wet bulb temperature.

OVERALL CHECKING

• Ensure that:

- 1) The unit has been mounted solidly and rigid in position.
- 2) The piping and connections are leak-proof.
- 3) Proper wiring has been installed.

• Drainage check

- pour some water into the left side of the drain pan (the drainage is at the right side of the unit).

• Test run:

- 1) Conduct a test run on the unit after having perform the water drainage test and the gas leakage test.
- 2) Check the following items:
 - a) Is the electrical plug inserted firmly into the socket?
 - b) Is there any abnormal sounds from the unit?
 - c) Is there any abnormal vibrations on the unit or the piping?
 - d) Is the drainage of water smooth?

• Confirm that:

- 1) The evaporator blower is running and discharge cool air.

Note:

- The installation guide above covers only the fan coil unit. For installation of outdoor (mini chiller etc) please refer to the installation guide for such unit.
- The installation of fan coil unit may vary according to the type of outdoor unit.
- Installation must be done by qualified personnel who is familiar with this type of product.

SERVICE AND MAINTENANCE

| Service Parts | Maintenance Procedures | Period |
|--------------------------|--|--|
| Indoor Air Filter | <ol style="list-style-type: none"> 1. Remove any dust adhered on the filter by using a vacuum cleaner or wash in lukewarm water (below 40°C) with neutral cleaning detergent. 2. Rinse well and dry the filter before placing it back onto the unit. 3. Do not use gasoline, volatile substances or chemical to clean the filter. | <p>At least once every 2 weeks.</p> <p>More frequently if necessary.</p> |
| Indoor Unit | <ol style="list-style-type: none"> 1. Clean any dirt or dust on the grille or panel by wiping it using soft cloth soaked in lukewarm water (below 40°C) with neutral detergent solution. 2. Do not use gasoline, volatile substances or chemical to clean the indoor unit. | <p>At least once every 2 weeks.</p> <p>More frequently if necessary.</p> |

CAUTION

Avoid direct contact of any coil treatment cleaners on plastic part. This may cause plastic part to deform as a result of chemical reaction.

TROUBLESHOOTING

For any enquiries on spare parts, please contact your authorized dealer. If any malfunction of the air conditioner unit is noted, immediately switch off the power supply to the unit. Check the following fault conditions and causes for some simple troubleshooting tips.

| Fault | Causes / Action |
|---|--|
| 1. The air conditioner unit does not operate. | <ul style="list-style-type: none"> – Power failure, or the fuse need to be replaced. – The power plug is disconnected. – It is possible that your delay timer has been set incorrectly. |
| 2. The air flow is too low. | <ul style="list-style-type: none"> – The air filter is dirty. – The doors or windows are open. – The air suction and discharge are clogged. – The regulated temperature is not high enough. |
| 3. Discharge air flow has bad odor. | <ul style="list-style-type: none"> – Odors may be caused by cigarettes, smoke particles, perfume etc. which might have adhered onto the coil. |
| 4. Condensation on the front air grille of the indoor unit. | <ul style="list-style-type: none"> – This is caused by air humidity after an extended long period of operation. – The set temperature is too low, increase the temperature setting and operate the unit at high fan speed. |
| 5. Water flowing out from the air conditioner unit. | <ul style="list-style-type: none"> – Switch off unit and call local dealer / serviceman. |

If the fault persists, please call your local dealer / serviceman.

MEMO

- The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.
- All images are for illustration purposes only.

***DAIKIN REFRIGERATION MALAYSIA
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