DAIKIN

TM-FTKF-1020-B

R32

Engineering Data

Inverter Split Unit Air Conditioner
Wall Mounted
Cooling Only [50Hz]

FTKF-A Series

INVERTER

Table of Contents

Introduction

Model Name and Power Supply

Indoor Unit	Outdoor Unit	Power Supply
FTKF25AV1MF	RKF25AV1M	1Phase, 220-240V, 50Hz
FTKF35AV1MF	RKF35AV1M	
FTKF50AV1MF	RKF50AV1M	
FTKF71AV1MF	RKF71AV1M	

Nomenclature

Indoor Unit

Definition	Description
Unit Category	**F** : Air-Cooled Split Indoor Unit
Product Type	**T** : Wall Mounted
System	**K** : Inverter , Cooling Only
Refrigerant & Grade	**F** : R32 , Entry Inverter
Capacity Indication*	**25** : 2.5 kW
Major Design Category	**A** : A Series
Power Supply	**V1** : 1Phase / 50Hz / 220-240V
Country	**M** : Malaysia
Minor Design Category	**F** : Wireless Controller with Network Adaptor

Outdoor Unit

Definition	Description
Unit Category	**R** **:** Air-Cooled Split Outdoor Unit
System	**K** : Inverter , Cooling Only
Refrigerant & Grade	**F** : R32 , Entry Inverter
Capacity Indication*	**25** : 2.5 kW
Major Design Category	**A** : A Series
Power Supply	**V1** : 1Phase / 50Hz / 220-240V
Country	**M** : Malaysia

Remark:
*Capacity value under Nomenclature is an indication.
Please refer to Engineering and Physical Data for exact capacity value.

Functions

Category	Functions	FTKF25/35/50A RKF25/35/50A	FTKF71A RKF71A
Basic Function	Inverter	●	●
	Operation Limit for Cooling (°CDB)(O/D)	19.4 - 46	19.4 - 46
	Operation Limit for Cooling (°FDB)(O/D)	66.9 - 114.8	66.9 - 114.8
	Operation Limit for Heating (°CWB)(O/D)	-	-
	Operation Limit for Heating (°FWB)(O/D)	-	-
Compressor	Scroll Compressor	-	-
	Swing Compressor	●	●
	Rotary Compressor	-	-
Comfortable Airflow	Power-airflow Flap	●	-
	Power-airflow Dual Flaps	-	●
	Power-airflow Diffuser	-	-
	Wide Angle Louvers	●	●
	Vertical Auto-Swing (Up and Down)	●	●
	Horizontal Auto-Swing (Right and Left)	-	-
	3D Airflow	-	-
	Breeze Airflow	-	-
Comfort Control	Auto Fan Speed	●	●
	Indoor Unit Quiet Operation	●	●
	Intelligent Eye Operation	-	-
	Automatic Defrosting	-	-
Operation	Automatic Operation	-	-
	Programme Dry Function	●	●
	Fan Only	●	●
Lifestyle Convenience	Powerful Operation (Non Inverter)	-	-
	Inverter Powerful Operation	●	●
	Energy Saving Function	●	●
	Sleep Mode	●	●
	Indoor Unit ON/OFF Button	●	●
	R/C with Backlight	-	-
	Signal Receiving Sign (R/C)	●	●
	Set Temperature Display (R/C)	●	●
Health & Clean	Saranet Filter	-	-
	Catechin Filter / Green Tea Filter	●	●
	Titanium Apatite Air-Purifying Filter	-	-
	PM 2.5 Filter	●*	●*
	Streamer	-	-
	Plasma	-	-
	Wipe Clean Flat Panel	●	●
Timer	Weekly Timer Operation (Wired R/C)	-	-
	24-hour ON/OFF Timer (R/C)	●	●
	Countdown ON/OFF Timer (R/C)	-	-
Worry Free (Reliability & Durability)	Auto Restart (after Power Failure)	●	●
	Self-diagnosis	●	●
	Anti-corrosion Treatment of Outdoor Heat Exchanger	●	●
Flexibility	Pre-charged Piping Length	7.5m	7.5m
	Either Side Drain (Right or Left)	●	●
Remote Control	BAG Connectivity	-	-
	WIFI Connectivity	●	●
	DIII-NET Connectivity	-	-
Remote Controller	Wireless (ARC486A1)	●	●
	Wired	-	-

Note: ● : Available
- : Not Available
●* : Optional

Specifications

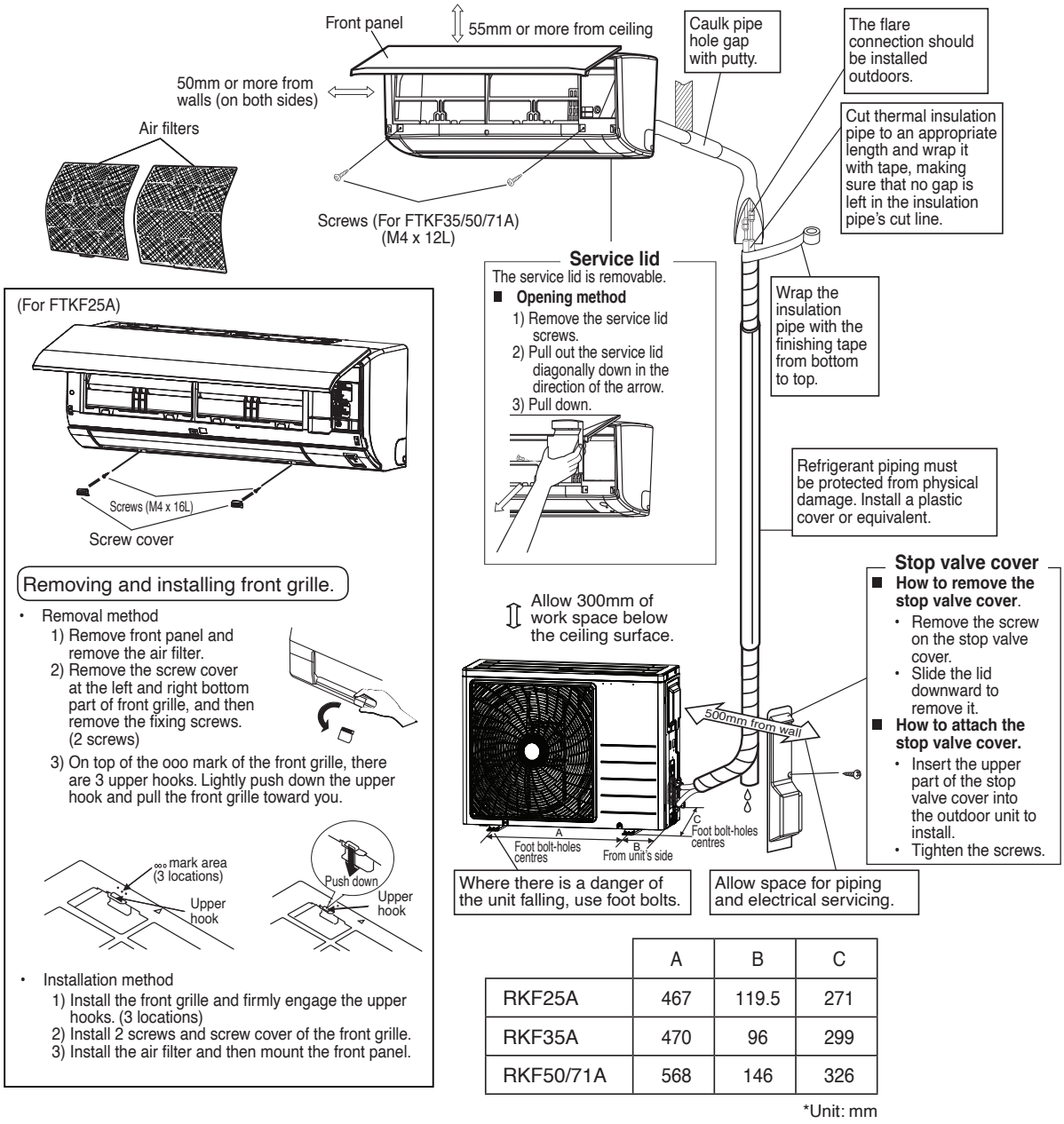
MODEL	INDOOR UNIT		FTKF25A	FTKF35A	FTKF50A	FTKF71A
	OUTDOOR UNIT		RKF25A	RKF35A	RKF50A	RKF71A
Rated Capacity (Min-Max)		kW	2.64 (1.00 - 2.70)	3.60 (1.20 - 3.81)	5.28 (1.52 - 5.42)	7.03 (1.93 - 7.18)
		Btu/h	9000 (3400 - 9200)	12300 (4100 - 13000)	18000 (5200 - 18500)	24000 (6600 - 24500)
Rated Running Current (Min-Max)		A	3.93 (1.96 - 4.75)	5.37 (1.66 - 5.59)	8.24 (2.72 - 8.54)	8.61 (2.40 - 10.1)
Rated Power Consumption (Min-Max)		W	860 (200 - 1050)	1200 (200 - 1250)	1880 (380 - 1950)	1965 (380 - 2300)
EER		W/W	3.07	3.00	2.81	3.58
CSPF		Wh/Wh	4.60	5.22	5.02	6.00
Power Factor (Rated)			0.951	0.972	0.992	0.992
Piping Connections	Liquid	mm	6.4			
	Gas	mm	9.5		12.7	
Refrigerant	Type		R32			
	Charge	kg	0.38	0.50	0.65	1.05
Max. Interunit Piping Length		m	20		30	
Max. Interunit Height Difference		m	15		20	
INDOOR UNIT			FTKF25A	FTKF35A	FTKF50A	FTKF71A
Front Panel Colour			WHITE			
Airflow Rate	Turbo	CFM	350	420	450	720
	High	CFM	340	400	430	640
	Medium High	CFM	290	370	400	600
	Medium	CFM	260	330	380	560
	Medium Low	CFM	225	290	325	520
	Low	CFM	205	250	290	480
	Quiet	CFM	150	200	260	360
Sound Pressure Level (H/M/L/Q)		dBA	39/33/26/21	39/34/26/21	42/39/32/29	43/41/36/30
Fan	Type		CROSS FLOW			
	Drive		DIRECT			
Fan Motor	Type		1-PHASE SCR		DIRECT CURRENT	
	Motor Output	W	18	21	38	38
	Running Current (Rated)	A	0.18	0.20	0.19	0.32
	Power Consumption (Rated)	W	35	39	24	35
Air Direction Control			UP, DOWN, LEFT, RIGHT			
Air Filter			CATECHIN			
Dimensions (H x W x D)		mm	280 X 730 X 213	288 X 770 X 234	288 X 770 X 234	297 X 990 X 273
Packaged Dimensions (H x W x D)		mm	293 X 796 X 360	327 X 830 X 363	327 X 830 X 363	371 X 1073 X 375
Weight		kg	8.5	9.0	9.5	13.0
Condensate Drain Size		mm	19.05			
OUTDOOR UNIT			RKF25A	RKF35A	RKF50A	RKF71A
Casing Colour			IVORY WHITE			
Airflow Rate		CFM	725	1035	1630	1390
Sound Pressure Level		dBA	48	49	52	52
Fan	Type		PROPELLER			
	Drive		DIRECT			
Fan Motor	Type		DIRECT CURRENT			
	Index of protection (IP)		23			
	Insulation Grade		E			
	Running Current (Rated)	A	0.47	0.26	0.84	0.42
	Power Consumption (Rated)	W	33	34	48	53
	Motor Output	W	28		61	
	Poles		14		8	
Compressor	Type		HERMETIC SWING			
	Oil type		DAPHNE FW50DA		DAPHNE FW68DA	
	Oil amount	cm^3	275		350	
	Running Current (Rated)	A	3.28	4.91	7.21	7.87
	Power Consumption (Rated)	W	792	1127	1808	1877
Heat Exchanger Type			FIN TUBE			
Dimensions (H x W x D)		mm	418 X 695 X 244	550 X 658 X 273	615 X 845 X 300	615 X 845 X 300
Packaged Dimensions (H x W x D)		mm	480 X 807 X 340	610 X 781 X 363	679 X 1002 X 419	679 X 1002 X 419
Weight		kg	19	21	33	37
Drawing No.			3D124829	3D124829	3D124829	3D124829
Document No. (Set)			3D124829-1	3D124829-2	3D124829-3	3D124829-4

1)ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 (NON-DUCTED UNIT) OR ISO 13253 (DUCTED UNIT).
2)ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Cooling
INDOOR: 27°CDB / 19°CWB
OUTDOOR: 35°CDB

Installation Guideline

Installation Diagram



	A	B	C
RKF25A	467	119.5	271
RKF35A	470	96	299
RKF50/71A	568	146	326

*Unit: mm

Refrigerant Piping

Indoor	FTKF25/35A	FTKF50/71A
Outdoor	RKF25/35A	RKF50/71A
Max. allowable piping length	20m	30m
Min. allowable piping length**	3m	
Max. allowable piping height	15m	20m
Additional refrigerant required for refrigerant pipe exceeding 7.5m in length*	10g/m	17g/m
Gas pipe	3/8 inch (9.5mm)	1/2 inch (12.7mm)
Liquid pipe	1/4 inch (6.4mm)	

* Be sure to add the proper amount of additional refrigerant.
Failure to do so may result in reduced performance.

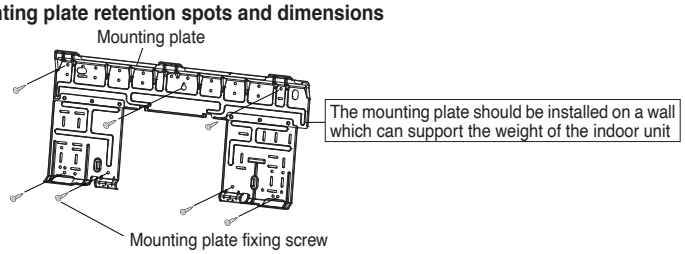
** The suggested shortest pipe length is 10ft (3m), in order to avoid noise from the outdoor unit and vibration. (Mechanical noise and vibration may occur depending on how the unit is installed and the environment in which it is used.)

Indoor Installation Guideline

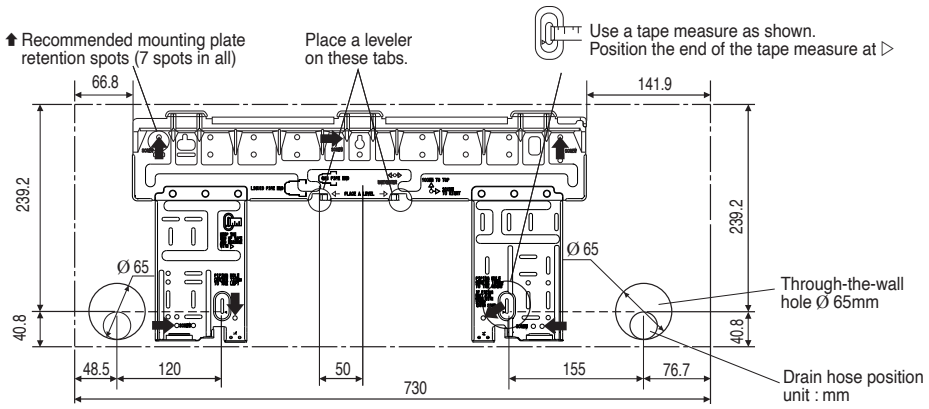
1 INSTALLING THE MOUNTING PLATE

- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
  1) Temporarily secure the mounting plate to the wall, make sure that the panel is completely level, and mark the drilling points on the wall.
  2) Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions

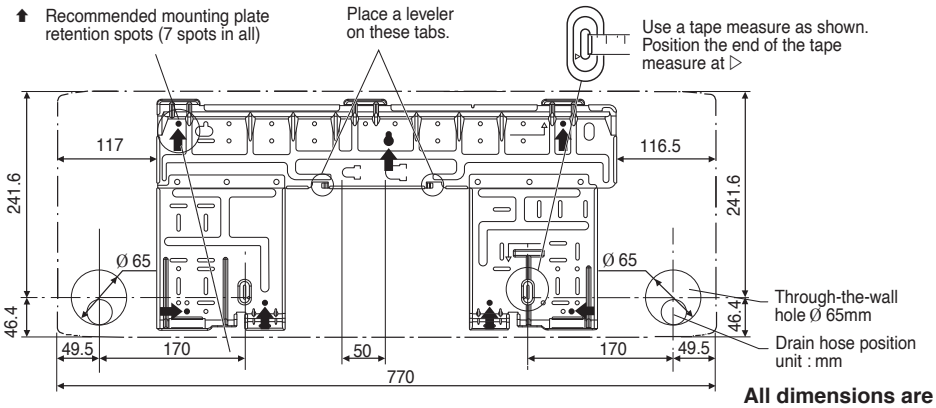


INDOOR UNIT FTKF25



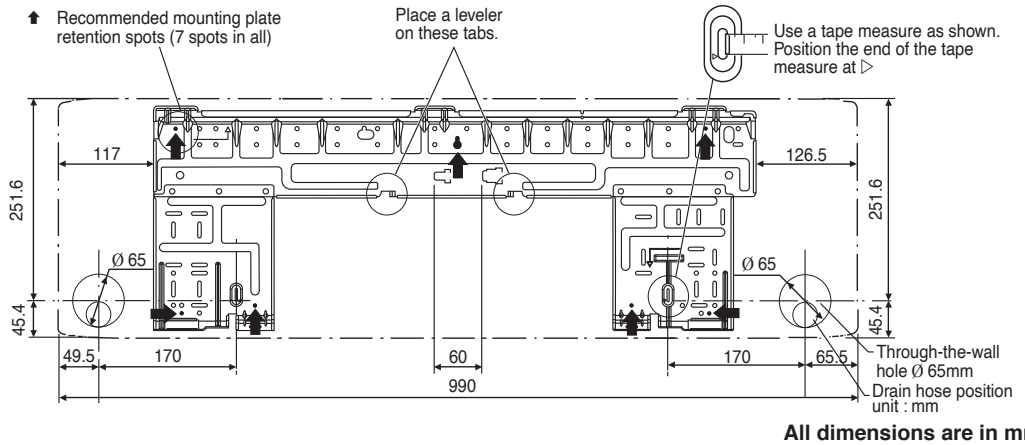
All dimensions are in mm

INDOOR UNIT FTKF35/50



All dimensions are in mm

INDOOR UNIT FTKF71

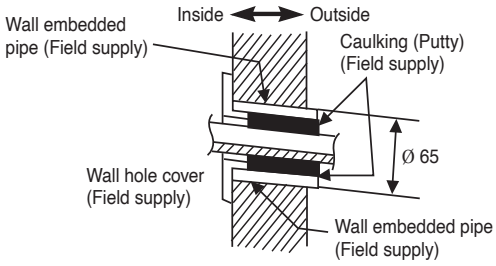


All dimensions are in mm

2 DRILLING A WALL HOLE AND INSTALLING WALL EMBEDDED PIPE

- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.

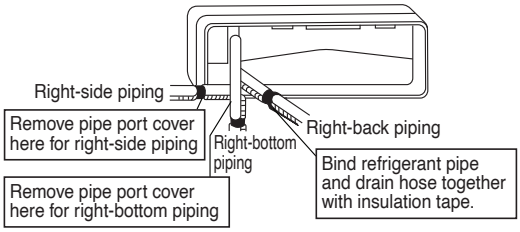
1) Drill a feed-through hole of 65mm in the wall so it has a down slope toward the outside.
2) Insert a wall pipe into the hole.
3) Insert a wall cover into wall pipe.
4) After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.

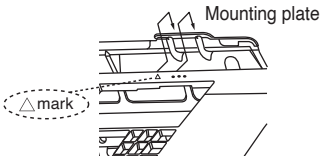


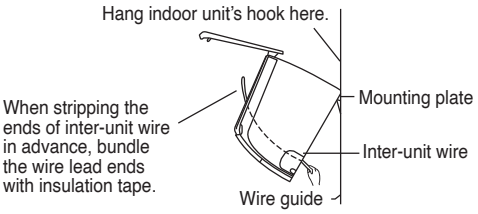
3 INSTALLING INDOOR UNIT

Right-side, right-back, or right-bottom piping.

1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
2) Wrap the refrigerant pipes and drain hose together with insulation tape.
3) Pass the drain hose and refrigerant pipes through the wall hole, then set the indoor unit on the mounting plate hooks by using the △ markings at the top of the indoor unit as a guide.
4) Open the front panel, then open the service lid. (Refer to installation tips.)
5) Pass the inter-unit wire from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side. Bend the ends of cable tie wires upward for easier work in advance. (If the inter-unit wire ends are to be stripped first, bundle the wire lead ends with adhesive tape.)
6) Press the bottom frame of the indoor unit with both hands to set it on the mounting plate hooks. Make sure the wire leads do not catch on the edge of the indoor unit.







Left-side, left-back, or left-bottom piping.

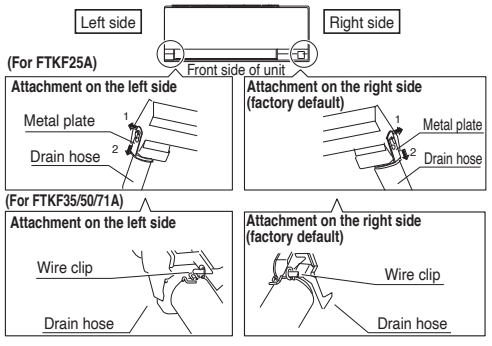
How to replace the drain plug and drain hose

- **Removal method (FTKF25A)**
  1) Use suitable tool to detach metal plate from hook at right.
  2) Remove the drain hose.
  3) Remove the drain plug on the left side and attach it to the right side.
  4) Insert the drain hose and tighten by fixing the metal plate to hook.
- **Removal method (FTKF35/50/71A)**
  1) Rotate to detach wire clip from hook on the right and remove the drain hose.
  2) Remove the drain plug on the left side and attach it to the right side.
  3) Insert the drain hose and tighten by rotating the wire clip to hook.

⚠ CAUTION
Forgetting to tighten this may cause water leakages.

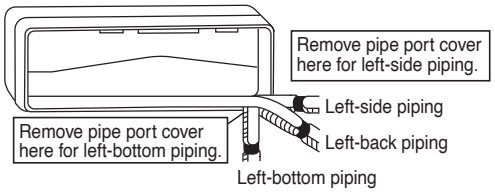
Drain hose attachment position

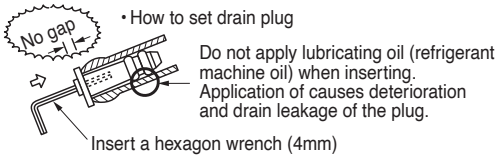
The drain hose is on the back of the unit.

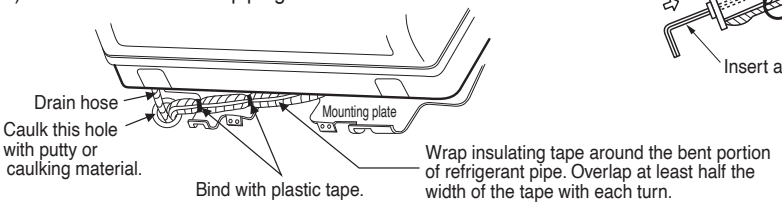


3 INSTALLING INDOOR UNIT

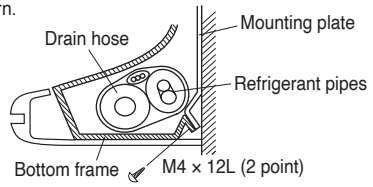
1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
2) Be sure to connect the drain hose to the drain port in place of a drain plug.
3) Shape the refrigerant pipe along the pipe path marking on the mounting plate.
4) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the △ markings at the top of indoor unit as a guide.
5) Pull in the inter-unit wiring.
6) Connect the inter-unit piping.







7) Wrap the refrigerant pipes and drain hose together with insulation tape as right figure.
8) Take extra care while going through activities so that the interconnecting wires do not damaged by indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with the screws (M4 × 12L).

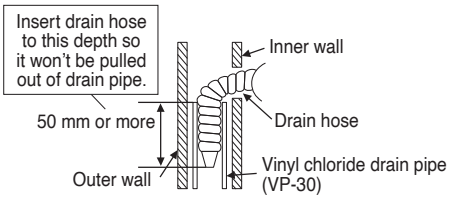


Wall embedded piping.

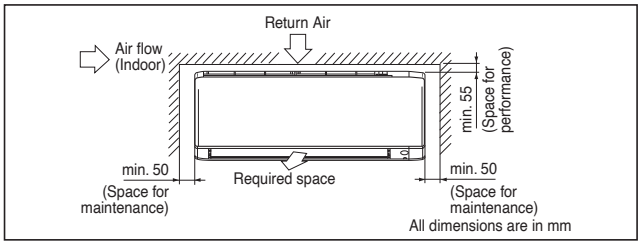
Follow the instructions given under

Left-side, left-back, or left-bottom piping

1) Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

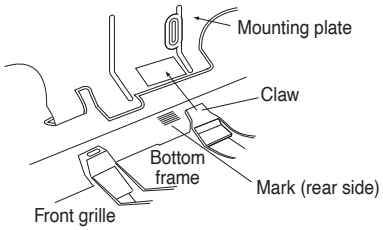


The indoor unit must be installed in such a way so as to prevent short circuit of the cool discharged air with the hot return air. Please follow the installation clearance shown in the figure. Do not place the indoor unit where there could be direct sunlight shining on it. Also, this location must be suitable for piping and drainage, and be away from doors or windows.



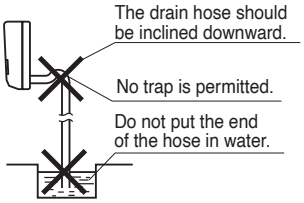
■ **How to attach the indoor unit**
Hook the claws of the bottom frame to the mounting plate.

■ **How to remove the indoor unit.**
Push up the marked area (at the lower part of the front grille) to release the claws.

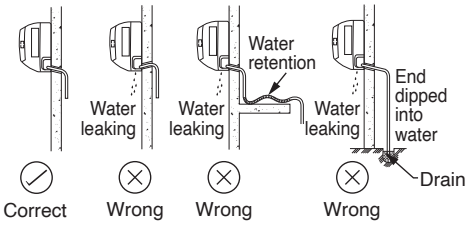


4 DRAIN PIPING

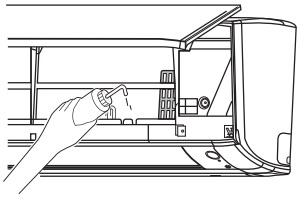
- Connect the drain hose, as described below.



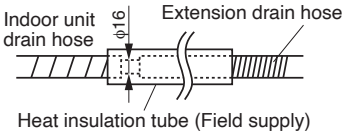
- Water Drainage



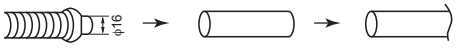
- Remove the air filters and pour some water into the drain pan to check the water flows smoothly.



- When drain hose requires extension, obtain an extension hose commercially available. Be sure to thermally insulate the indoor section of the extension hose.



- When connecting a rigid polyvinyl chloride pipe (inside diameter 16mm) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (inside diameter 16mm) as a joint.

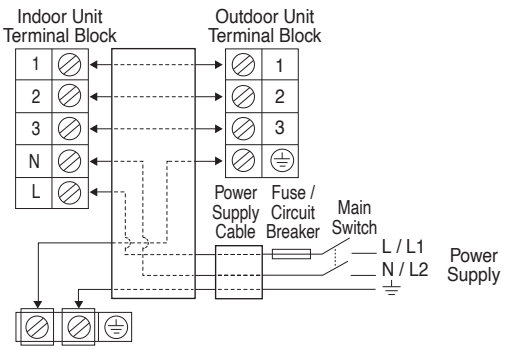


Drain hose supplied with the indoor unit | socket (inside diameter 16mm) | polyvinyl pipe (diameter 16mm)

5 WIRING

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.

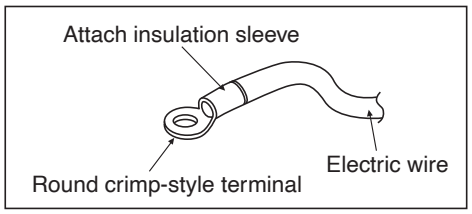
** The appropriate voltage range should be checked with label data on the unit.



There must be an all pole disconnection in the supply mains with a contact separation of at least 3mm.

Model			
	Indoor (FTKF)	25/35A	50/71A
	Outdoor (RKF)	25/35A	50/71A
Voltage range**		220-240V/~/50Hz + ⏚	
Power supply cable size* mm²		1.5	2.5
Number of conductors		3	3
Interconnection cable size* mm²		1.5	2.5
Number of conductors		4	4
Recommended fuse /circuit breaker rating A		16	20

- All wires must be firmly connected.
- Make sure all the wire do not touch the refrigerant piping, 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).

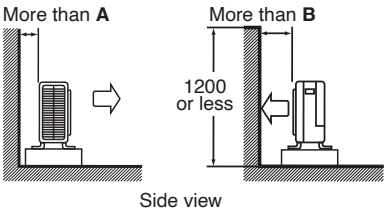


Outdoor Installation Guideline

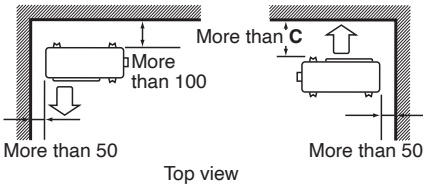
INSTALLATION GUIDELINES

- Where a wall or other obstacle is in the path of outdoor unit's inlet or outlet airflow, follow the installation guidelines below.
- For any of the below installation patterns, the wall height on the exhaust side should be 1200mm or less.

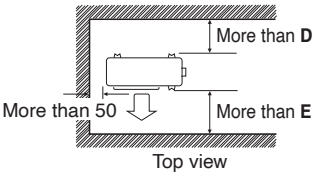
Wall facing one side



Walls facing two sides



Walls facing three sides



Unit: mm

	More than				
	A	**B**	**C**	**D**	**E**
RKF25A	50	100	150	150	300
RKF35/50/71A	100	350	350	150	550

SPECIAL PRECAUTIONS WHEN DEALING WITH R32 UNIT

Model	R32 charge, kg for 7.5m piping	Minimum floor area, Xm^2 (based on 7.5m piping)	R32 charge, kg for max allowable pipe length*	Minimum floor area, Xm^2 (based on max allowable pipe length*)
FTKF25A-RKF25A	0.38	0.14	0.51	0.24
FTKF35A-RKF35A	0.50	0.24	0.63	0.37
FTKF50A-RKF50A	0.65	0.40	1.03	1.02
FTKF71A-RKF71A	1.05	1.05	1.43	1.96

*** Calculation based on Installation Height of 1.8m**

*** Max. Allowable Length (L),m for:-**

FTKF25/35A-RKF25/35A: 20

FTKF50/71A-RKF50/71A: 30

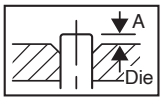
- Installation of pipe work shall be kept to a minimum and pipe work shall be protected from physical damage and shall not be installed in an unventilated space;
- Reusable mechanical connectors and flare joints shall be accessible for maintenance purposes;

1 FLARING THE PIPE END

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring is properly made.

Flaring

Set exactly at the position shown below.

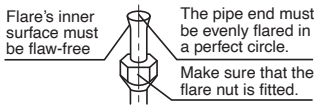


Pipe Size, mm (in)	A (mm)		
	Flare Tool for R32/R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Ridgid-type)	Wing-nut type (Imperial-type)
6.4 (1/4")	0-0.5	1.0-1.5	1.5-2.0
9.5 (3/8")	0-0.5	1.0-1.5	1.5-2.0
12.7 (1/2")	0-0.5	1.0-1.5	2.0-2.5
15.9 (5/8")	0-0.5	1.0-1.5	2.0-2.5
19.1 (3/4")	0-0.5	1.0-1.5	2.0-2.5

⚠ WARNING

- Do not use mineral oil on flared part.
- Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- Never use piping which has been used for previous installations.
- Only use parts which are delivered with the unit.
- Do never install a drier to this R32 unit in order to guarantee its lifetime.
- The drying material may dissolve and damage the system.
- Incomplete flaring may cause refrigerant gas leakage.

Check



⚠ CAUTION

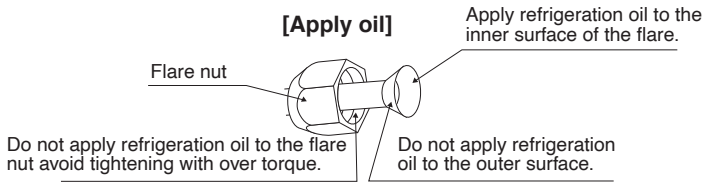
Do not reuse joints which have been used once already.

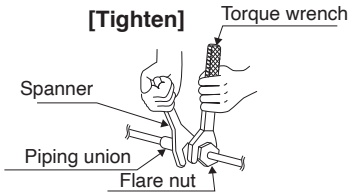
2 REFRIGERANT PIPING

⚠ CAUTION

1) Use the flare nut fixed to the main unit. (To prevent cracking of the flare nut by aged deterioration.)
2) To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R32.)
3) Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.





Pipe Size, mm (in)	Torque, Nm/(ft-lb)
6.4 (1/4")	18 (13.3)
9.5 (3/8")	42 (31.0)
12.7 (1/2")	55 (40.6)
15.9 (5/8")	65 (48.0)
19.1 (3/4")	78 (57.6)

1. Cautions on pipe handling.

1) Protect the open end of the pipe against dust and moisture.
2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.

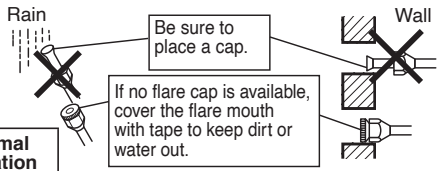
2. Selection of copper and heat insulation materials.

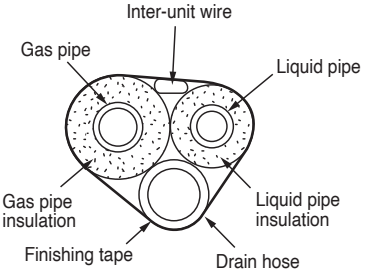
When using commercial copper pipes and fittings, observe the following:

1) Insulation material: Polyethylene foam
Heat transfer rate: 0.041 to 0.052 W/mK (0.035 to 0.045 kcal/(mh • ˚C))
Refrigerant gas pipe's surface temperature reaches 110˚C max. Choose heat insulation materials that will withstand this temperature.
2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Piping size, mm (in)	Minimum bend radius	Piping thickness	Thermal insulation size	Thermal insulation thickness
6.4 (1/4")	30mm or more	0.8mm (C1220T-O)	I.D. 8-10mm	10mm Min.
9.5 (3/8")	30mm or more		I.D. 12-15mm	
12.7 (1/2")	40mm or more		I.D. 14-16mm	
15.9 (5/8")	50mm or more	1.0mm (C1220T-O)	I.D. 16-20mm	
19.1 (3/4")	50mm or more		I.D. 20-24mm	

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.





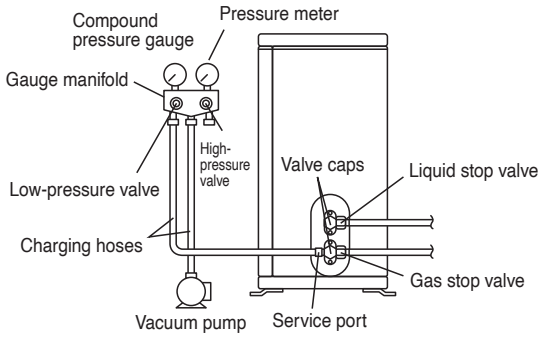
3 PURGING AIR AND CHECKING GAS LEAKAGE

- When piping work is completed, it is necessary to purge the air and check for gas leakage

⚠WARNING

1) Do not mix any substance other than the specified refrigerant (R32) into the refrigeration cycle.
2) When refrigerant gas leaks occur, ventilate the room as soon and as much as possible.
3) R32, as well as other refrigerants, should always be recovered and never be released directly into the environment.
4) Use a vacuum pump for R32 exclusively. Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.

- If using additional refrigerant, perform air purging from the refrigerant pipes and indoor unit using a vacuum pump, then charge additional refrigerant.
- Use a hexagonal wrench (4mm) to operate the stop valve rod.
- All refrigerant pipe joints should be tightened with a torque wrench at the specified tightening torque.



1) Connect projection side of charging hose (which comes from gauge manifold) to gas stop valve's service port.

2) Fully open gauge manifold's low-pressure valve (Lo) and completely close its high-pressure valve (Hi). (High-pressure valve subsequently requires no operation.)

3) Do vacuum pumping and make sure that the compound pressure gauge reads – 0.1MPa (– 760mmHg)*1.

4) Close gauge manifold's low-pressure valve (Lo) and stop vacuum pump. (Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.)*2.

5) Remove covers from liquid stop valve and gas stop valve.

6) Turn the liquid stop valve's rod 90 degrees counterclockwise with a hexagonal wrench to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods. After the check is complete, wipe all soapy water off.

7) Disconnect charging hose from gas stop valve's service port, then fully open liquid and gas stop valves. (Do not attempt to turn valve rod beyond its stop.)

8) Tighten valve caps and service port caps for the liquid and gas stop valves with a torque wrench at the specified torques.

*1. Pipe length vs. vacuum pump run time

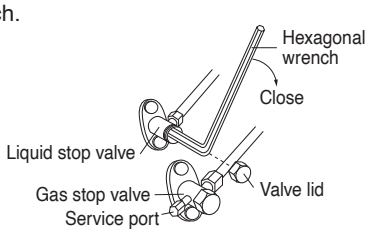
Pipe length	Up to 15 metres	More than 15 metres
Run time	Not less than 10 min.	Not less than 15 min.

*2. If the compound pressure gauge pointer swings back, refrigerant may have water content or a loose pipe joint may exists. Check all pipe joints and retighten nuts as needed, then repeat steps 2) through 4).

4 PUMP DOWN OPERATION

In order to protect the environment, be sure to pump down when relocating or disposing of the unit.

1) Remove the valve lids from liquid stop valve and gas stop valve.
2) Carry out forced cooling operation.
3) After five to ten minutes, close the liquid stop valve with a hexagonal wrench.
4) After two to three minutes, close the gas stop valve and stop forced cooling operation.



Forced cooling operation

- **Using the indoor unit ON/OFF switch**

Press the indoor unit ON/OFF switch for at least 5 seconds.
(The operation will start.)

- Forced cooling operation will stop automatically after around 15 minutes. To stop the operation, press the indoor unit ON/OFF switch.

⚠ CAUTION

After closing the liquid stop valve, close the gas stop valve within 3 minutes, then stop the forced cooling operation.

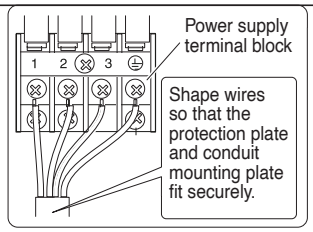
5 WIRING

⚠ WARNING

1) Be sure to install an earth leak detector. (One that can handle higher harmonics.)
   (This unit uses an inverter, which means that it must be used an earth leak detector capable handling harmonics in order to prevent malfunctioning of the earth leak detector itself.)
2) Use an all-pole disconnection type breaker with at least 3mm between the contact point gaps

- Do not turn ON the safety breaker until all work is completed.

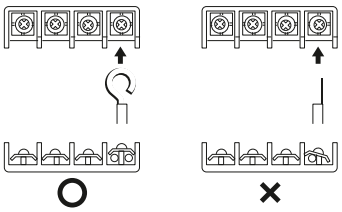
1) Strip the insulation from the wire (20 mm).
2) Connect the connection wires between the indoor and outdoor units **so that the terminal numbers match**. Tighten the terminal screws securely. We recommend a flathead screwdriver be used to tighten the screws.



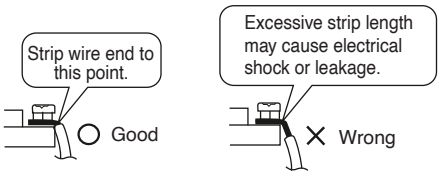
Observe the notes mentioned below when wiring to the power supply terminal board.
Precautions to be taken for power supply wiring.
(Use a round crimp-style terminal for connection to the power supply terminal board. In case it cannot be used due to unavoidable reasons, be sure to observe the following instruction.)

⚠ CAUTION

When connecting the connection wires to the terminal board using a single core wire, be sure to perform curling.
Problems with the work may cause heat and fires.



Stripping wire at terminal block



3) Pull the wire and make sure that it does not disconnect. Then fix the wire in place with a wire stop.

⚠ WARNING

Prior to installation, ensure risk of ignition is minimised and avoid working in confined space.
Ensure adequate ventilation is available by opening windows or doors.

- When flared joints are reused indoors,the flare part shall be re-fabricated.
- Avoid installation of the air conditioner in a place where there is danger of exposure to continuously operating open flames (for example an operating electric heaters).
- Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.

- **Checking for presence of refrigerant**

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. nonsparking, adequately sealed or intrinsically safe.

- **Presence of fire extinguisher**

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO^2 fire extinguisher adjacent to the charging area.

- **No ignition sources**

All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. “No Smoking” signs shall be displayed.

- **The following checks shall be applied to installations:**
  - marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
  - refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

- **Initial safety checks shall include:**
  - that capacitors are discharged, this shall be done in a safe manner to avoid possibility of sparking
  - there shall be no live electrical components and wiring are exposed while charging, recovering or purging the system;

- **Repair to intrinsically safe components**

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
Replace components only with parts specified by the manufacturer.

- **Leak detection methods**

Ensure that the detector is not a potential source of ignition (for example a halide torch) and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant (for R32, LFL is 13%) and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

• **Removal and evacuation**

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:

- remove refrigerant;
- purge the circuit with inert gas;
- evacuate;
- purge again with inert gas;
- open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task. Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

This operation is absolutely vital if brazing operations on the pipe-work are to take place. Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

• **Labelling**

This unit shall be labelled 'de-commissioned and emptied of refrigerant'. This label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

• **Charging procedures**

In addition to conventional charging procedures, the following requirements shall be followed.

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.
b) Isolate system electrically.
c) Before attempting the procedure ensure that:
   - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
   - all personal protective equipment is available and being used correctly;
   - the recovery process is supervised at all times by a competent person;
   - recovery equipment and cylinders conform to the appropriate standards.
d) Pump down refrigerant system, if possible.
e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
f) Make sure that cylinder is situated on the scales before recovery takes place.
g) Start the recovery machine and operate in accordance with manufacturer's instructions.
h) Do not overfill cylinders. (No more than 80 % volume liquid charge).
i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely. When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

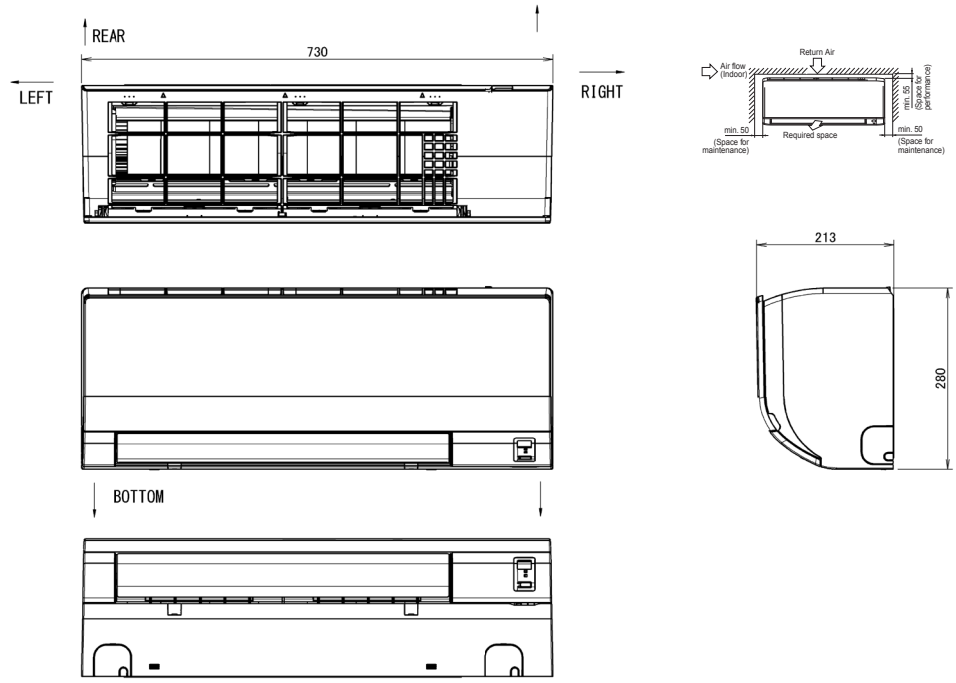
If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

Dimensions

Indoor Unit

Model : FTKF25A

FOR ILLUSTRATIVE PURPOSES ONLY

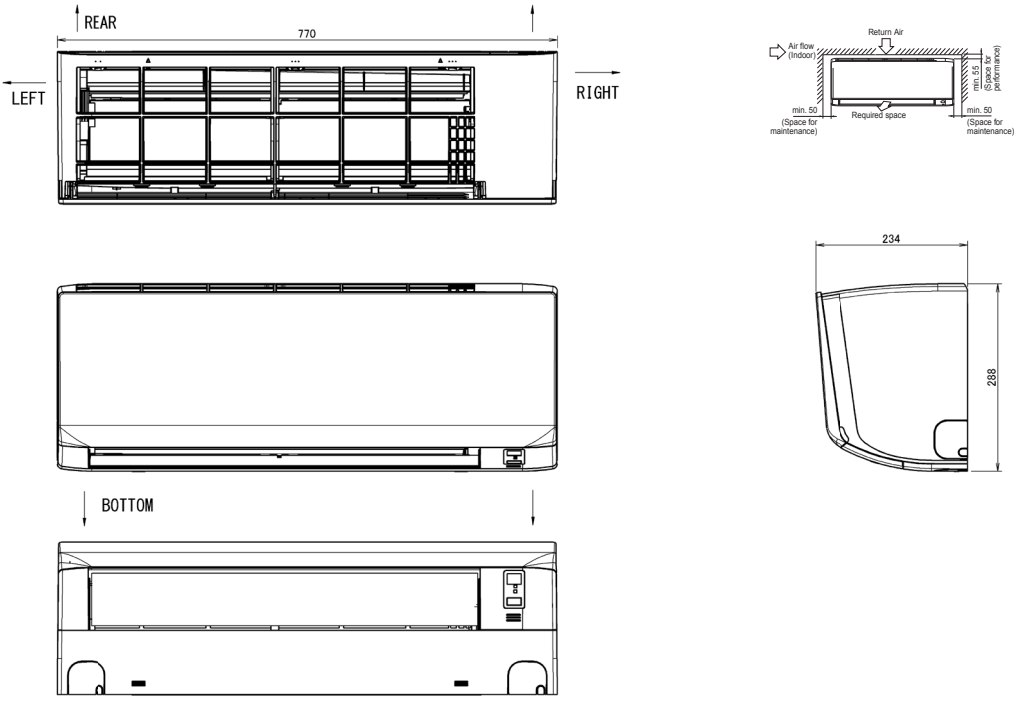


3D126844

Note: Dimension in mm

Model : FTKF35/50A

FOR ILLUSTRATIVE PURPOSES ONLY

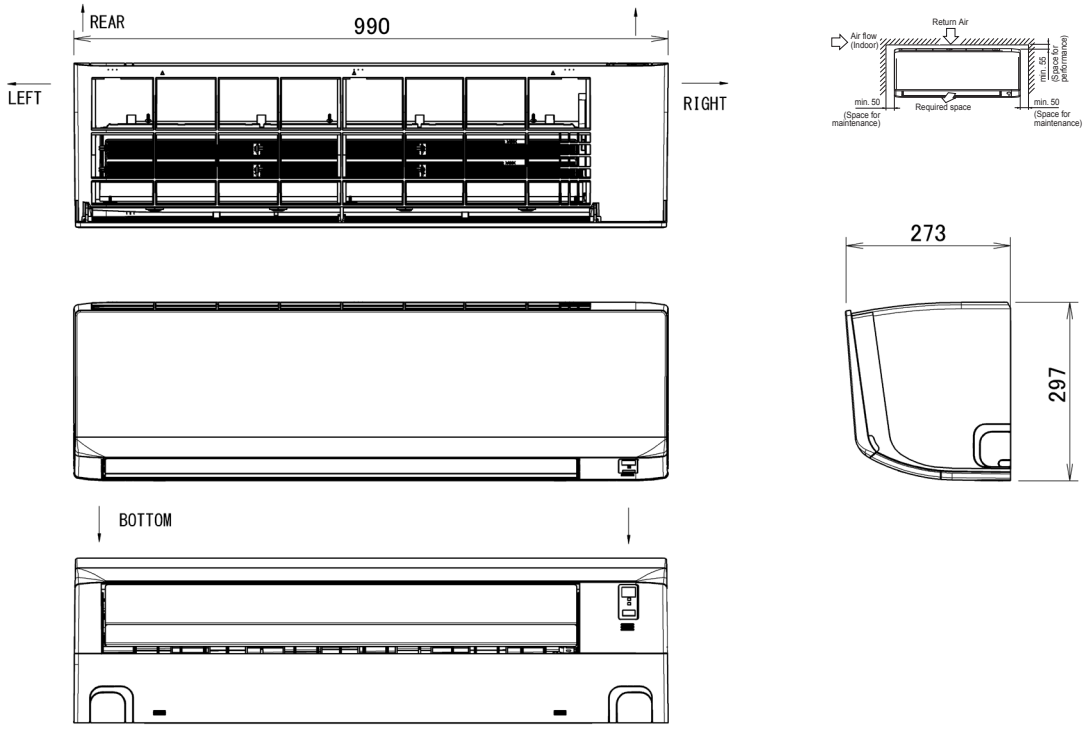


3D126813

Note: Dimension in mm

Model : FTKF71A

FOR ILLUSTRATIVE PURPOSES ONLY



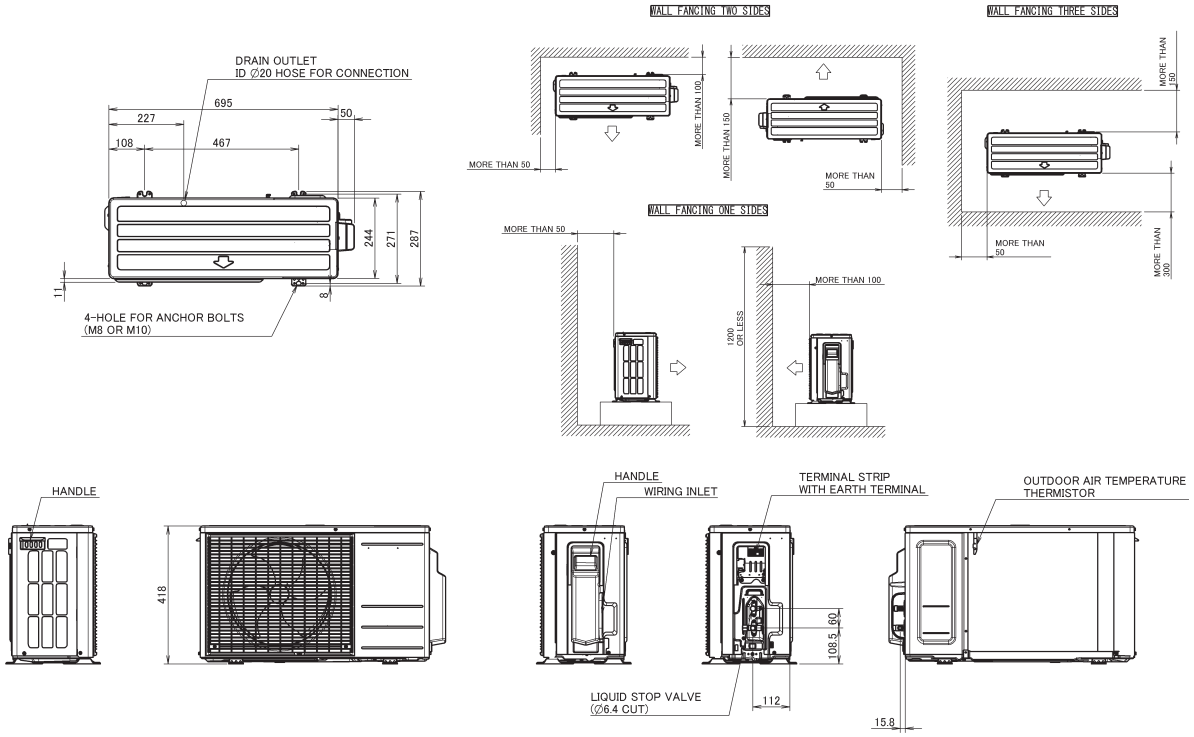
3D126824

Note: Dimension in mm

Outdoor Unit

Model : RKF25A

FOR ILLUSTRATIVE PURPOSES ONLY

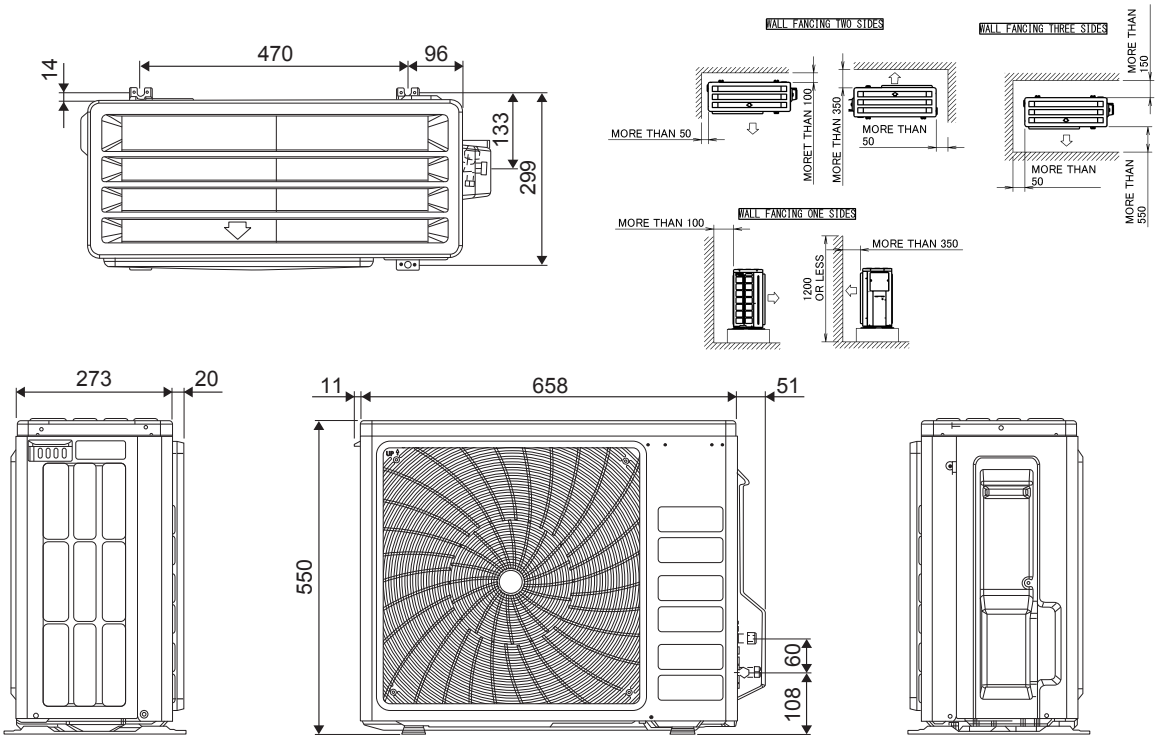


3D124838

Note: Dimension in mm

Model : RKF35A

FOR ILLUSTRATIVE PURPOSES ONLY

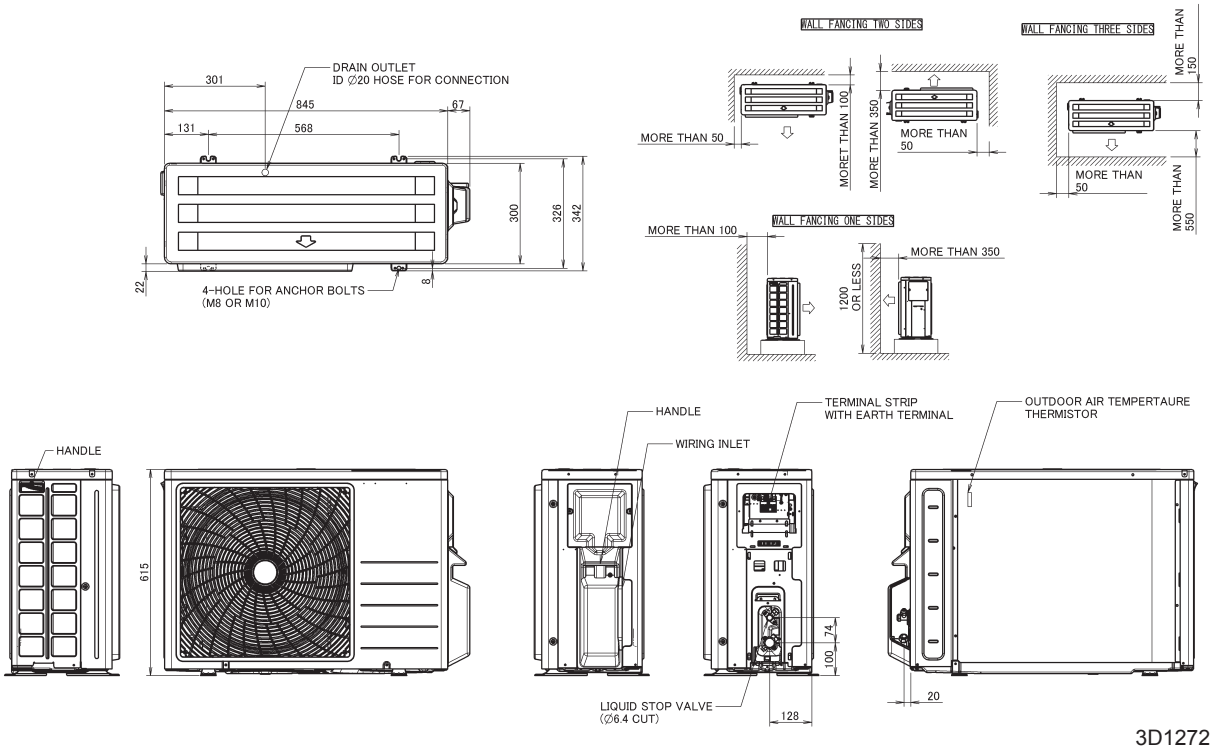


3P519688-1A

Note: Dimension in mm

Model : RKF50/71A

FOR ILLUSTRATIVE PURPOSES ONLY

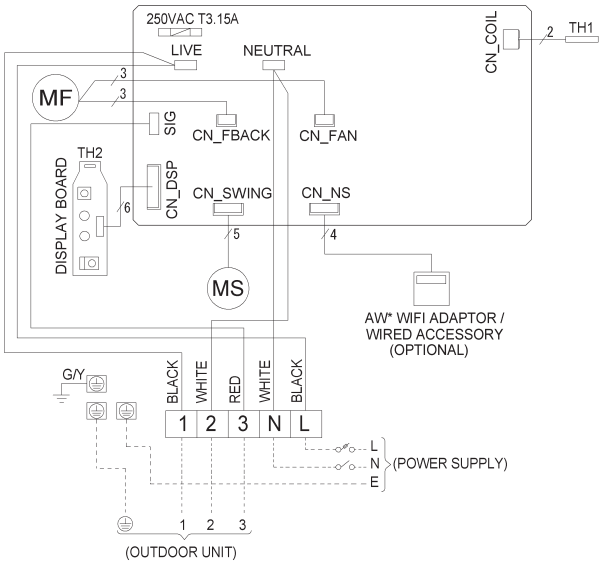


Note: Dimension in mm

Wiring Diagrams

Indoor Unit

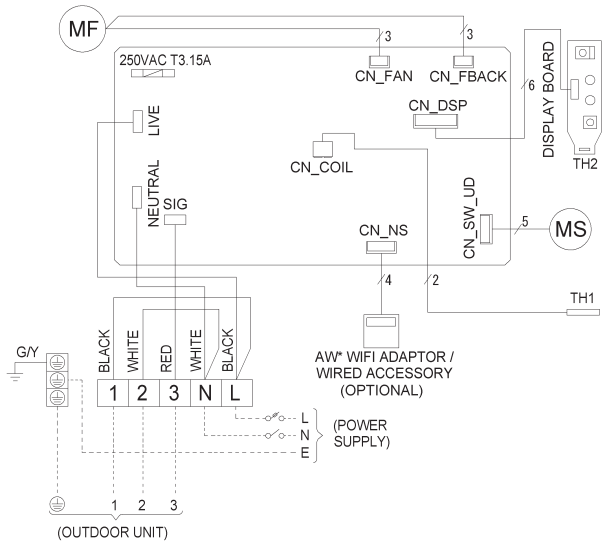
Model : FTKF25A



NOTATION:
MS : AIR SWING MOTOR
MF : FAN MOTOR
TH1 : INDOOR COIL THERMISTOR
TH2 : ROOM THERMISTOR
– – – : FIELD SUPPLY WIRING
—N— : N INDICATES NUMBER OF WIRES

3P593982-1 B

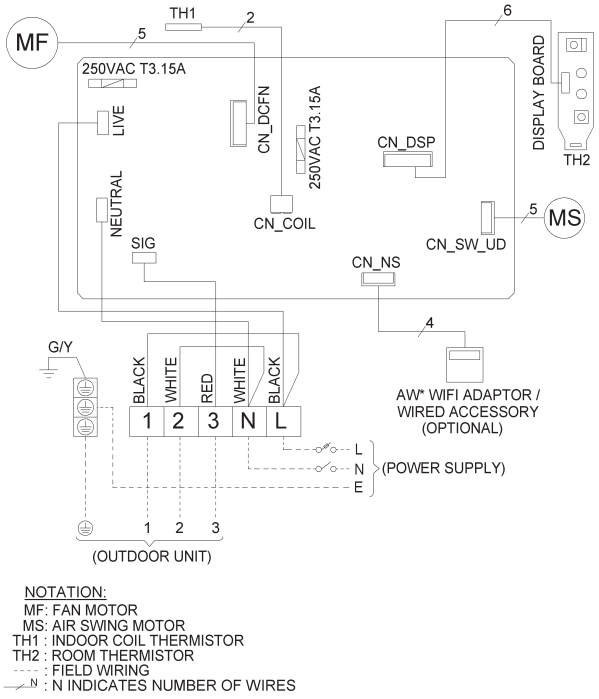
Model : FTKF35A



NOTATION:
MS : AIR SWING MOTOR
MF : FAN MOTOR
TH1 : INDOOR COIL THERMISTOR
TH2 : ROOM THERMISTOR
– – – : FIELD SUPPLY WIRING
—N— : N INDICATES NUMBER OF WIRES

3P594145-1 B

Model : FTKF50/71A

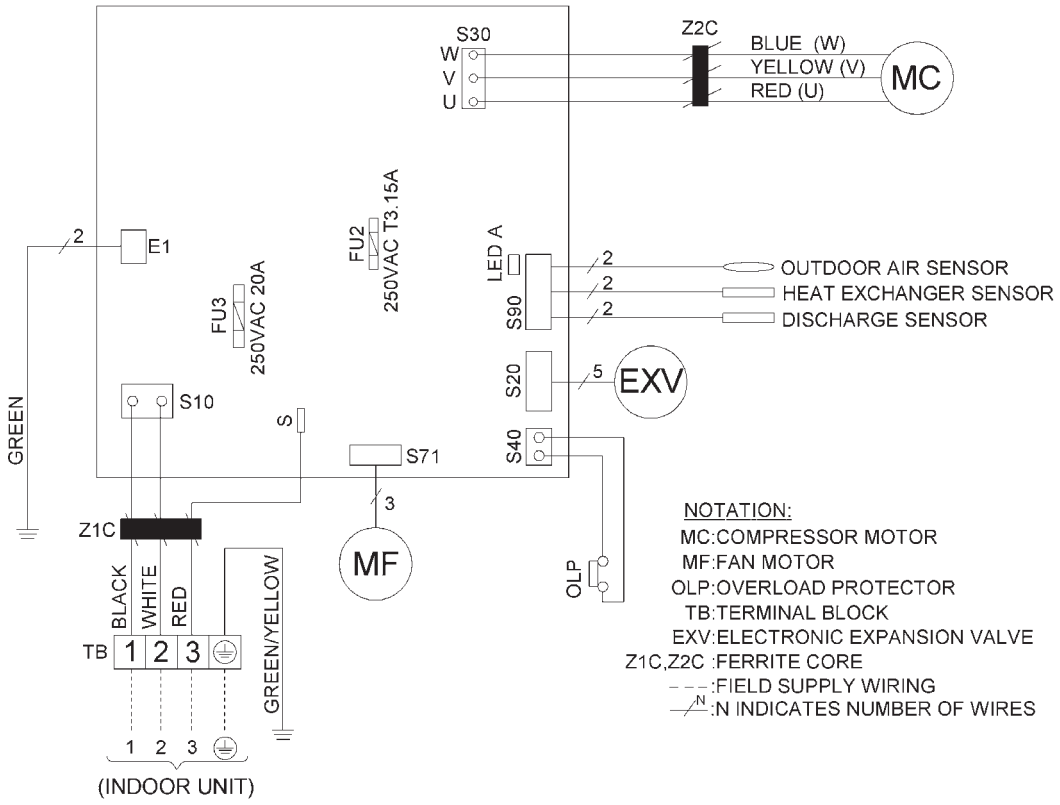


NOTATION:
MF: FAN MOTOR
MS: AIR SWING MOTOR
TH1 : INDOOR COIL THERMISTOR
TH2 : ROOM THERMISTOR
---- : FIELD WIRING
N : N INDICATES NUMBER OF WIRES

3P594146-1 B

Outdoor Unit

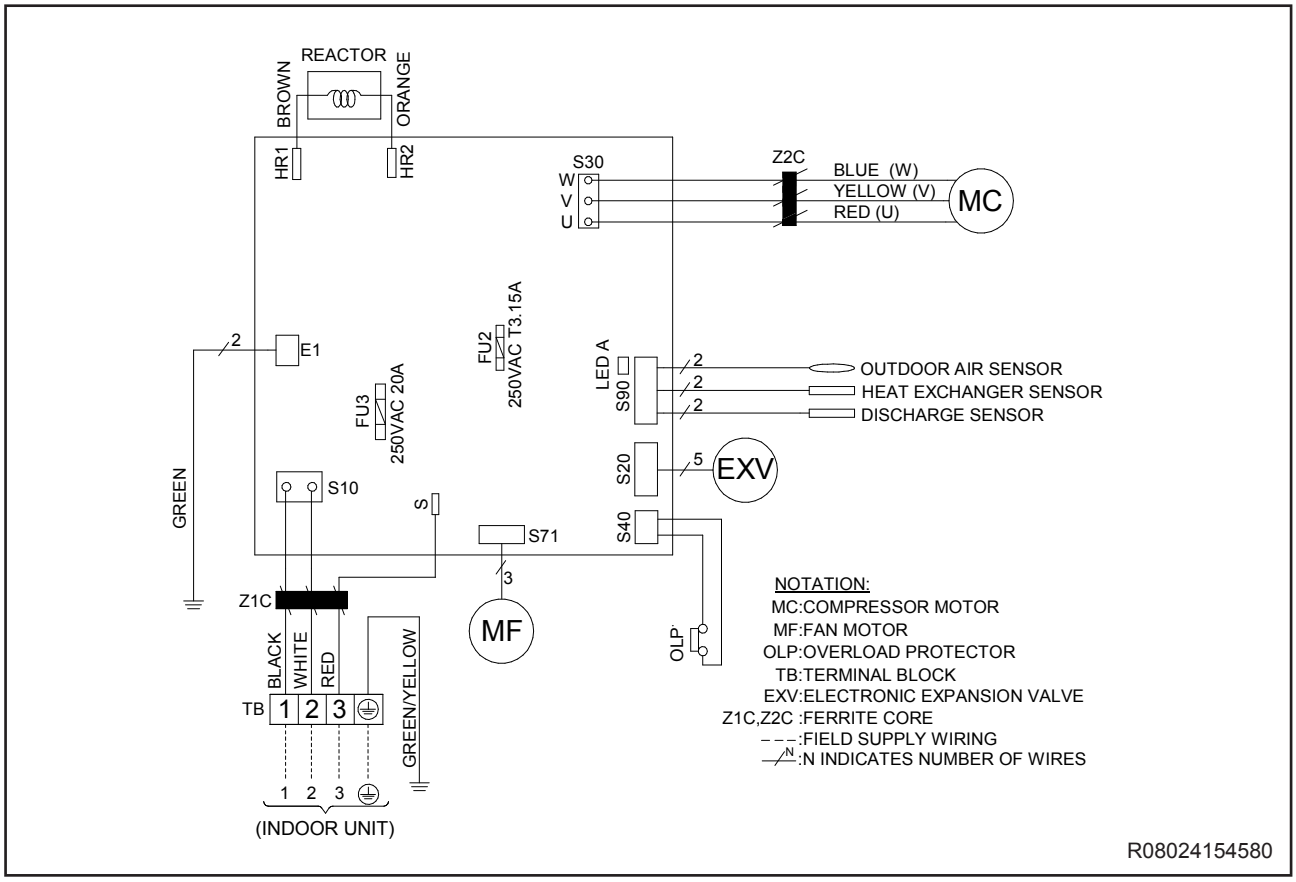
Model : RKF25A



NOTATION:
MC:COMPRESSOR MOTOR
MF:FAN MOTOR
OLP:OVERLOAD PROTECTOR
TB:TERMINAL BLOCK
EXV:ELECTRONIC EXPANSION VALVE
Z1C,Z2C :FERRITE CORE
---:FIELD SUPPLY WIRING
N :N INDICATES NUMBER OF WIRES

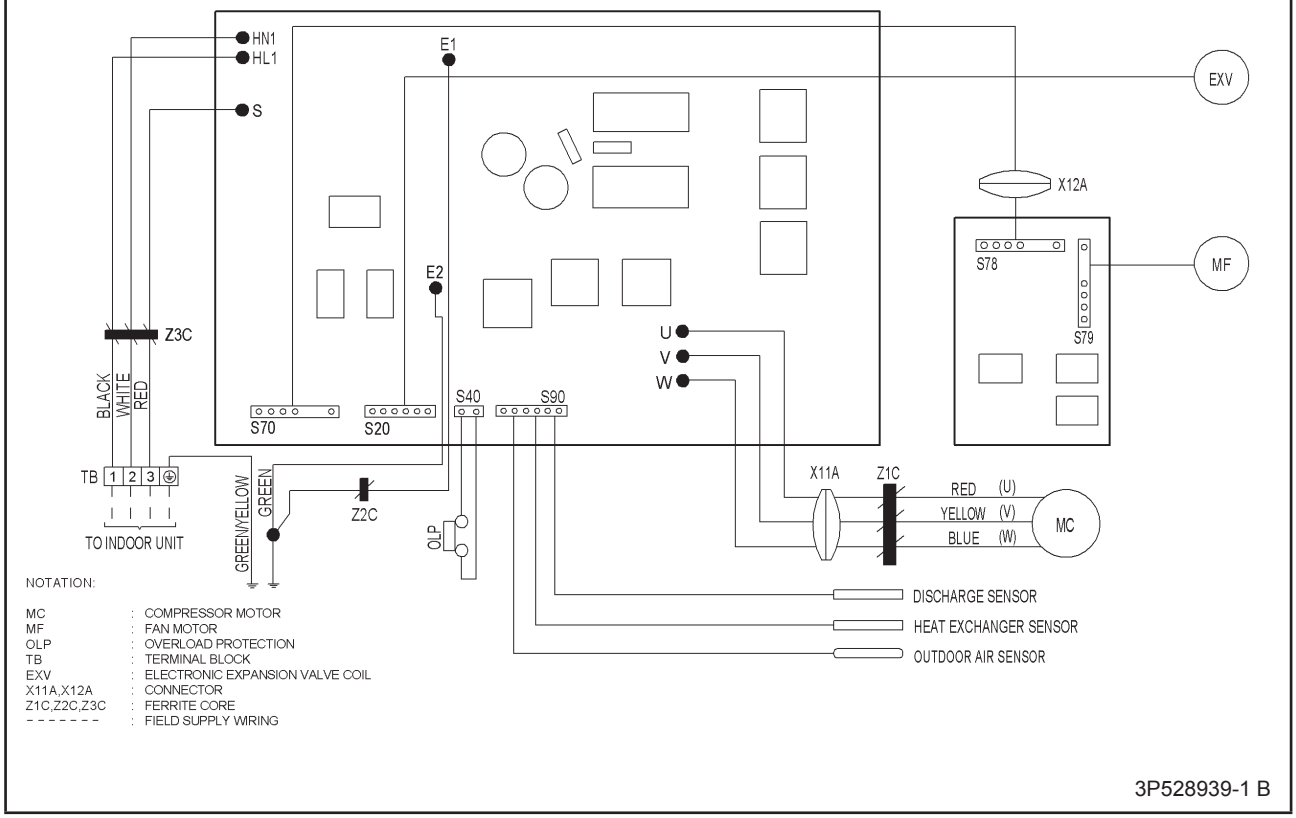
3P593414-1 A

Model : RKF35A



R08024154580

Model : RKF50/71A

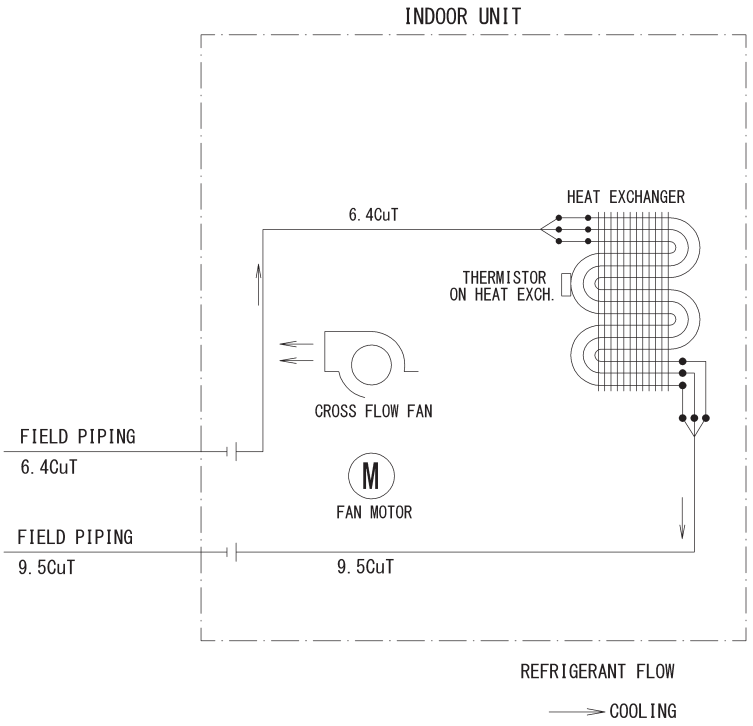


3P528939-1 B

Piping Diagrams

Indoor Unit

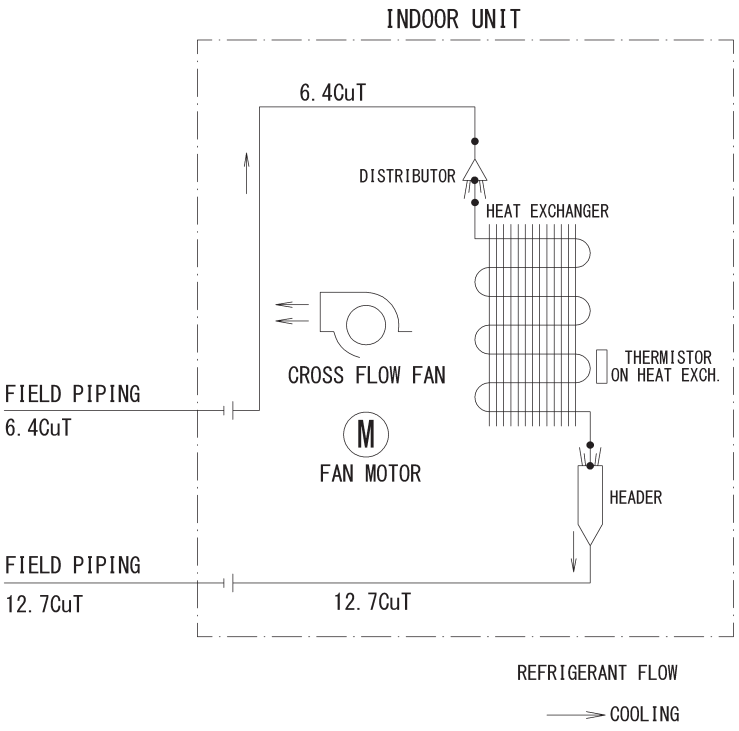
Model : FTKF25/35A



3D124215 A

Note: Dimension in mm

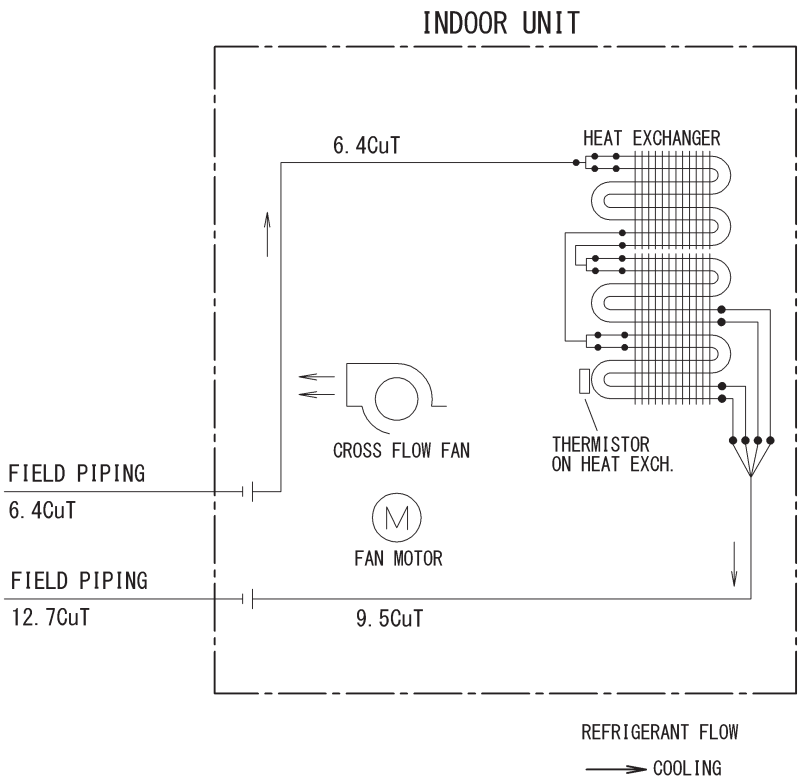
Model : FTKF50A



3D115341 C

Note: Dimension in mm

Model : FTKF71A

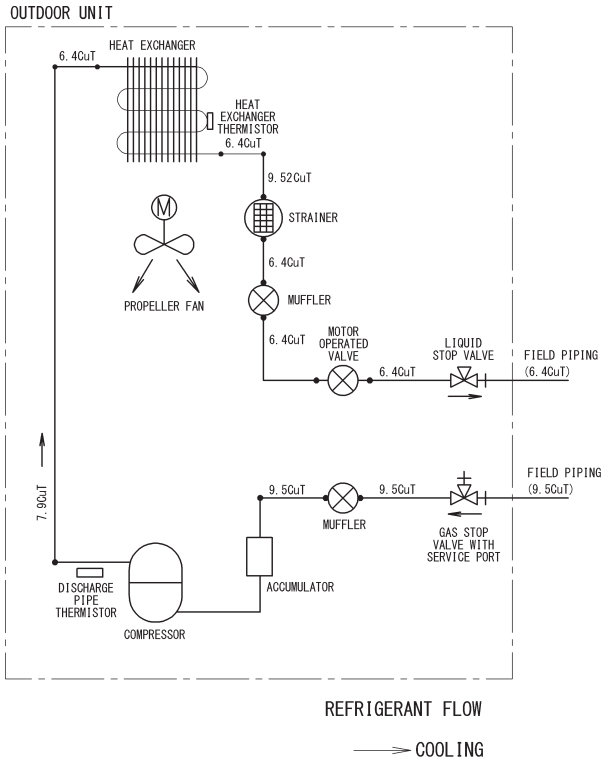


3D115348 B

Note: Dimension in mm

Outdoor Unit

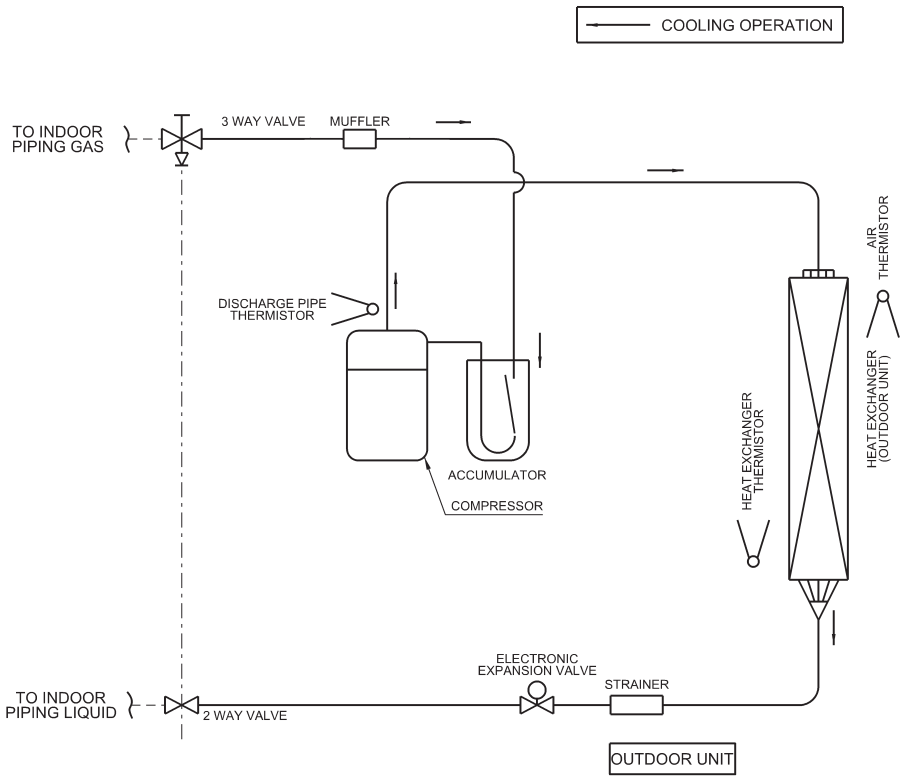
Model : RKF25A



3D127435

Note: Dimension in mm

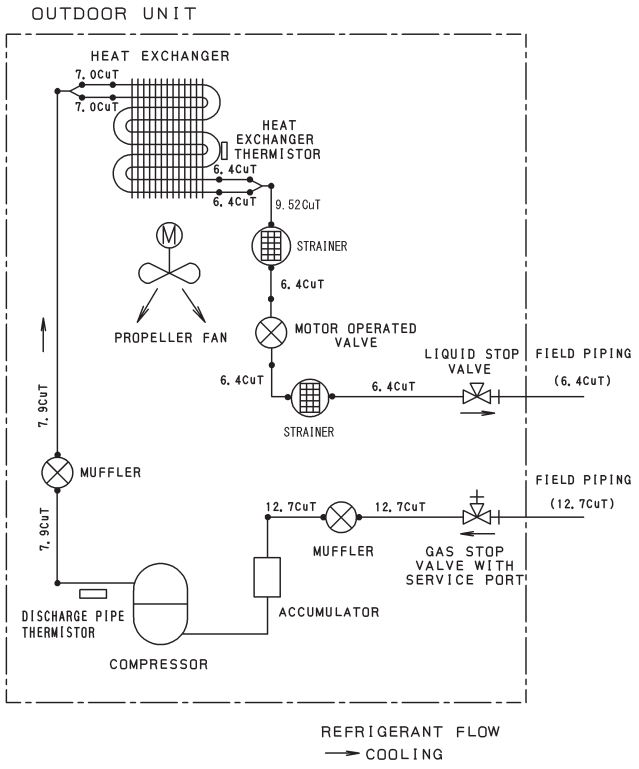
Model : RKF35A



R70034147210

Note: Dimension in mm

Model : RKF50/71A



3D121244A

Note: Dimension in mm

Capacity Tables

Cooling Only

Model : FTKF25A - RKF25A

Cooling: 230V 50Hz

AFR	9.63
BF	0.149

Indoor Temperature		Outdoor temperature [°C DB]																	
EWB	EDB	20			25			30			32			35			40		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14	20	2.71	2.36	0.66	2.58	2.29	0.72	2.46	2.21	0.78	2.41	2.19	0.81	2.34	2.14	0.85	2.21	2.06	0.91
16	22	2.83	2.32	0.66	2.70	2.25	0.73	2.58	2.18	0.79	2.53	2.16	0.82	2.46	2.11	0.85	2.34	2.05	0.92
18	25	2.95	2.43	0.67	2.83	2.36	0.73	2.70	2.29	0.79	2.66	2.27	0.82	2.58	2.23	0.86	2.46	2.17	0.92
19	27	3.01	2.55	0.67	2.89	2.48	0.73	2.76	2.42	0.79	2.71	2.40	0.82	2.64	2.36	0.86	2.52	2.30	0.93
22	30	3.19	2.46	0.67	3.07	2.40	0.74	2.94	2.34	0.80	2.90	2.33	0.83	2.82	2.29	0.87	2.70	2.23	0.93
24	32	3.31	2.39	0.68	3.19	2.34	0.74	3.07	2.29	0.81	3.02	2.27	0.83	2.94	2.23	0.87	2.82	2.18	0.94

Symbols

AFR	:Air flow rate	(m^3/min)
BF	:Bypass factor	
EWB	:Entering wet bulb temp.	(°C)
EDB	:Entering dry bulb temp.	(°C)
TC	:Total capacity	(kW)
SHC	:Sensible heat capacity	(kW)
PI	:Power input	(kW)

NOTES:

1 shows nominal (rated) capacities and power input.

2 TC, PI and SHC must be calculated by interpolation using the figures in the above tables.

3 Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference : 0.0m

3D127012

Model : FTKF35A - RKF35A

Cooling: 230V 50Hz

AFR	11.33
BF	0.162

Indoor Temperature		Outdoor temperature [°C DB]																	
EWB	EDB	20			25			30			32			35			40		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14	20	3.69	2.86	0.92	3.52	2.77	1.01	3.35	2.68	1.09	3.28	2.64	1.13	3.18	2.59	1.19	3.01	2.50	1.28
16	22	3.86	2.81	0.93	3.69	2.72	1.01	3.51	2.64	1.11	3.45	2.61	1.14	3.35	2.55	1.19	3.18	2.48	1.28
18	25	4.02	2.94	0.93	3.86	2.86	1.02	3.69	2.78	1.11	3.62	2.74	1.14	3.51	2.69	1.20	3.35	2.62	1.29
19	27	4.10	3.08	0.93	3.94	3.01	1.02	3.77	2.93	1.11	3.70	2.90	1.14	3.60	2.85	1.20	3.43	2.79	1.29
22	30	4.35	2.97	0.94	4.19	2.90	1.03	4.02	2.84	1.12	3.95	2.81	1.15	3.85	2.77	1.21	3.69	2.70	1.30
24	32	4.52	2.89	0.95	4.35	2.83	1.04	4.19	2.77	1.13	4.11	2.74	1.16	4.02	2.70	1.21	3.85	2.64	1.31

Symbols

AFR	:Air flow rate	(m^3/min)
BF	:Bypass factor	
EWB	:Entering wet bulb temp.	(°C)
EDB	:Entering dry bulb temp.	(°C)
TC	:Total capacity	(kW)
SHC	:Sensible heat capacity	(kW)
PI	:Power input	(kW)

NOTES:

1 shows nominal (rated) capacities and power input.

2 TC, PI and SHC must be calculated by interpolation using the figures in the above tables.

3 Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference : 0.0m

3D127014

Model : FTKF50A - RKF50A

Cooling: 230V 50Hz

AFR	12.17
BF	0.154

Indoor Temperature		Outdoor temperature [°C DB]																	
EWB	EDB	20			25			30			32			35			40		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14	20	5.41	3.70	1.45	5.16	3.58	1.59	4.91	3.46	1.72	4.82	3.42	1.78	4.67	3.34	1.87	4.30	2.57	2.20
16	22	5.66	3.64	1.46	5.41	3.52	1.59	5.15	3.41	1.74	5.06	3.37	1.80	4.91	3.30	1.87	4.55	2.69	2.21
18	25	5.90	3.80	1.47	5.66	3.70	1.61	5.41	3.59	1.74	5.31	3.55	1.80	5.15	3.48	1.89	4.78	3.00	2.22
19	27	6.02	3.99	1.47	5.77	3.89	1.61	5.52	3.79	1.74	5.43	3.75	1.80	5.28	3.69	1.89	4.90	3.43	2.23
22	30	6.38	3.84	1.48	6.14	3.75	1.62	5.89	3.67	1.76	5.79	3.64	1.82	5.64	3.58	1.91	5.26	3.40	2.24
24	32	6.63	3.74	1.49	6.38	3.66	1.63	6.14	3.58	1.78	6.04	3.55	1.83	5.89	3.49	1.91	5.49	3.47	2.25

Symbols

AFR	:Air flow rate	(m^3/min)
BF	:Bypass factor	
EWB	:Entering wet bulb temp.	(°C)
EDB	:Entering dry bulb temp.	(°C)
TC	:Total capacity	(kW)
SHC	:Sensible heat capacity	(kW)
PI	:Power input	(kW)

NOTES:

1 shows nominal (rated) capacities and power input.

2 TC, PI and SHC must be calculated by interpolation using the figures in the above tables.

3 Capacities are based on the following conditions.

Corresponding refrigerant piping length :7.5m

Level difference : 0.0m

3D126760

Model : FTKF71A - RKF71A

Cooling: 230V 50Hz

AFR	18.12
BF	0.181

Cooling Performance Table:

Indoor Temperature		Outdoor temperature [°C DB]																	
EWB	EDB	20			25			30			32			35			40		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14	20	7.20	5.04	1.50	6.87	4.88	1.65	6.54	4.72	1.79	6.41	4.66	1.85	6.22	4.56	1.94	5.73	3.50	2.28
16	22	7.53	4.96	1.51	7.20	4.79	1.65	6.86	4.65	1.81	6.74	4.60	1.86	6.54	4.50	1.94	6.05	3.67	2.29
18	25	7.86	5.17	1.52	7.53	5.04	1.67	7.20	4.89	1.81	7.07	4.83	1.87	6.86	4.75	1.96	6.36	4.08	2.30
19	27	8.01	5.43	1.52	7.69	5.30	1.67	7.35	5.17	1.81	7.22	5.11	1.87	7.03	5.03	1.96	6.53	4.67	2.31
22	30	8.50	5.24	1.54	8.17	5.11	1.68	7.84	5.00	1.83	7.71	4.96	1.88	7.51	4.88	1.98	7.01	4.64	2.32
24	32	8.82	5.09	1.55	8.50	4.99	1.69	8.17	4.88	1.84	8.04	4.84	1.90	7.84	4.76	1.98	7.31	4.73	2.33

Symbols

AFR	:Air flow rate	(m^3/min)
BF	:Bypass factor	
EWB	:Entering wet bulb temp.	(°C)
EDB	:Entering dry bulb temp.	(°C)
TC	:Total capacity	(kW)
SHC	:Sensible heat capacity	(kW)
PI	:Power input	(kW)

NOTES:

1 shows nominal (rated) capacities and power input.

2 TC, PI and SHC must be calculated by interpolation using the figures in the above tables.

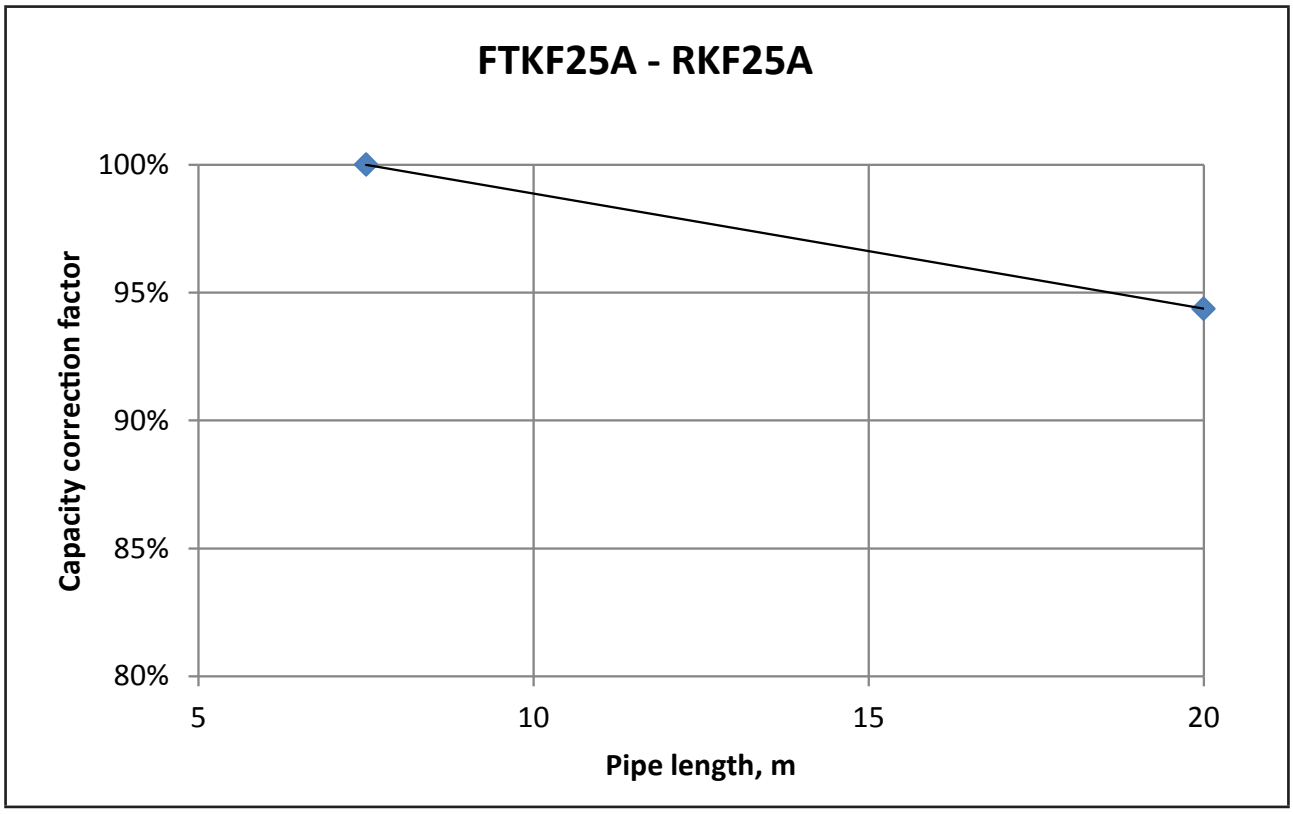
3 Capacities are based on the following conditions.

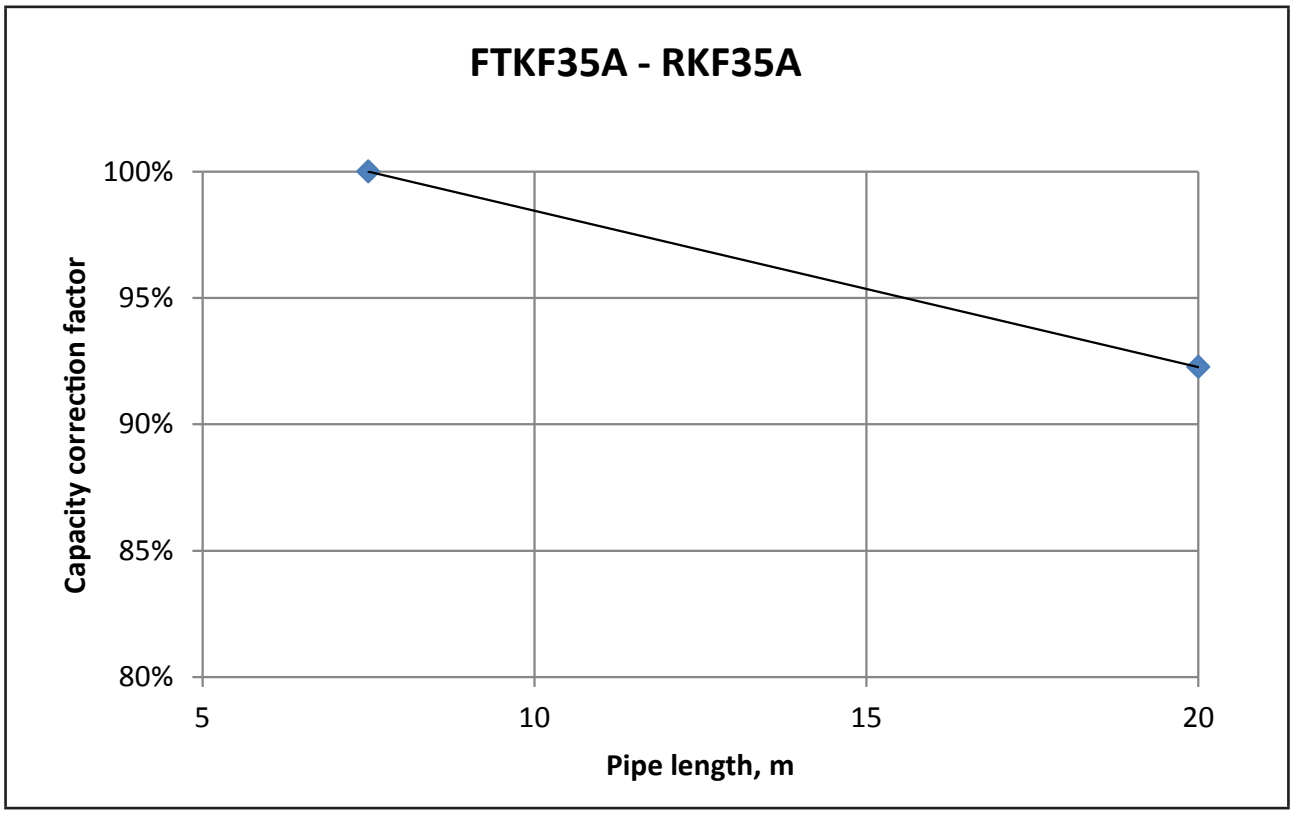
Corresponding refrigerant piping length :7.5m

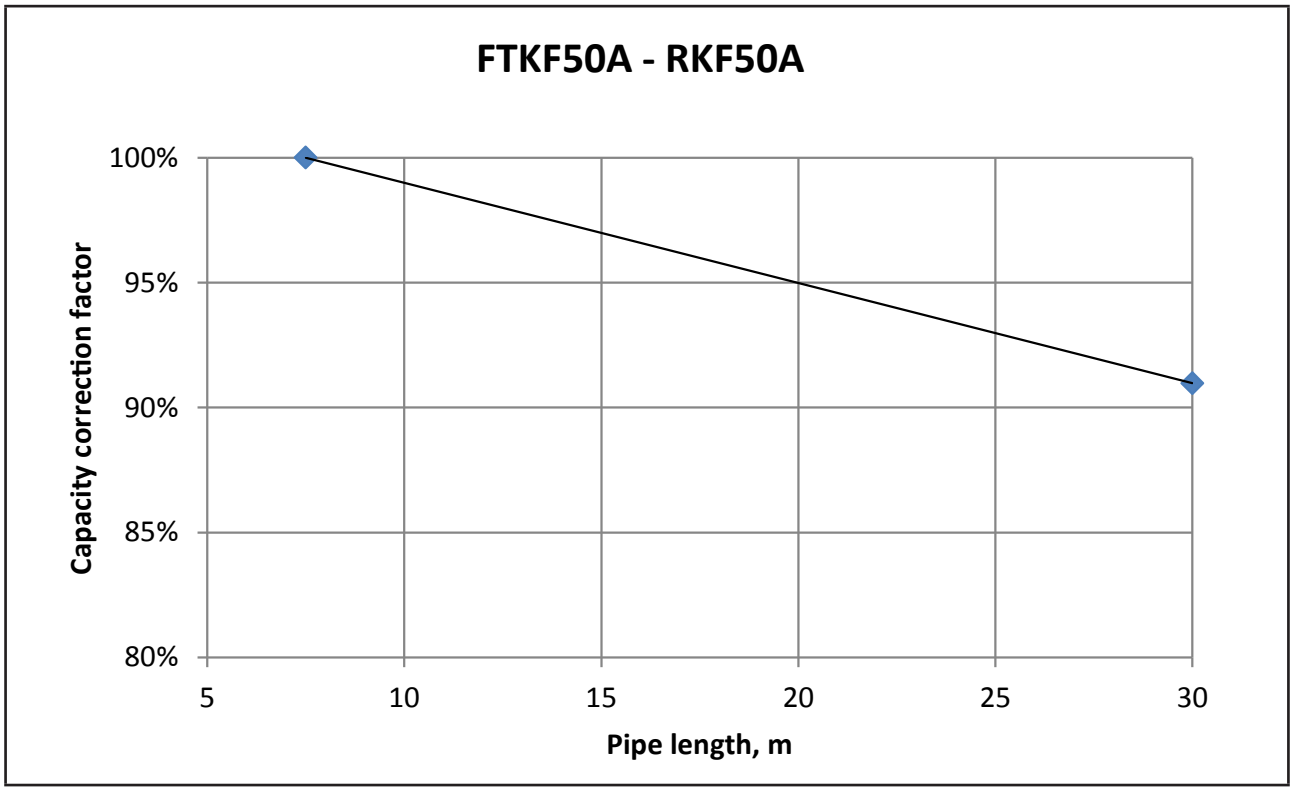
Level difference : 0.0m

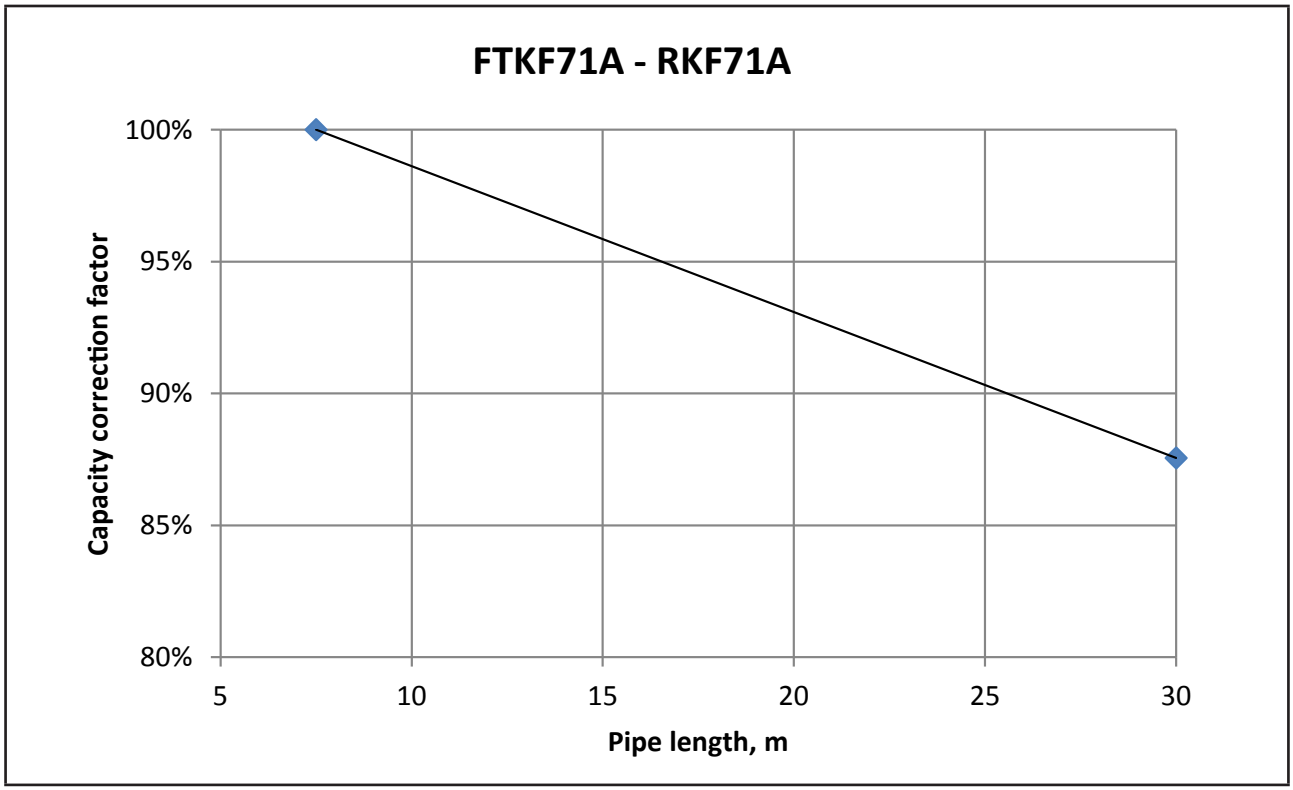
3D126769

Capacity correction factor by the length of refrigerant piping







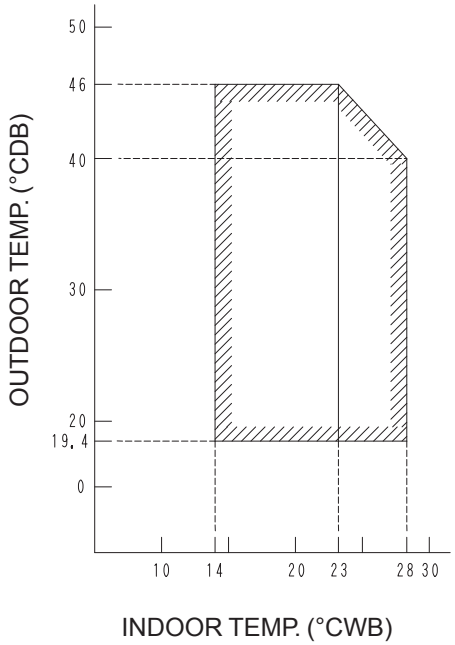


Notes:

1.-------- represents the capacity correction factor for the capacity when additional refrigerant of the proper quantity is charged.
2.The correction ratio remains the same whether the outdoor unit is to be installed above or below the unit.
3.Calculation method for capacity
Capacity = capacity obtained from engineering data x capacity correction factor
4.The actual unit piping length shall not exceed the maximum piping length shown on the table.

Operation Limit

Model : RKF-A



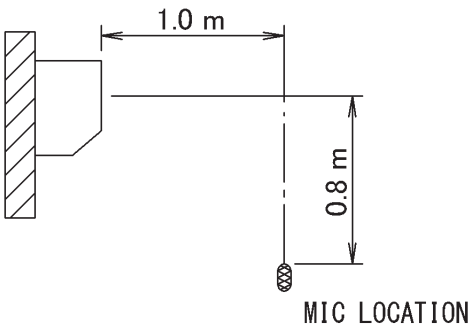
⚠ Caution :

The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

3P593641-1

Sound Level

Measuring Location

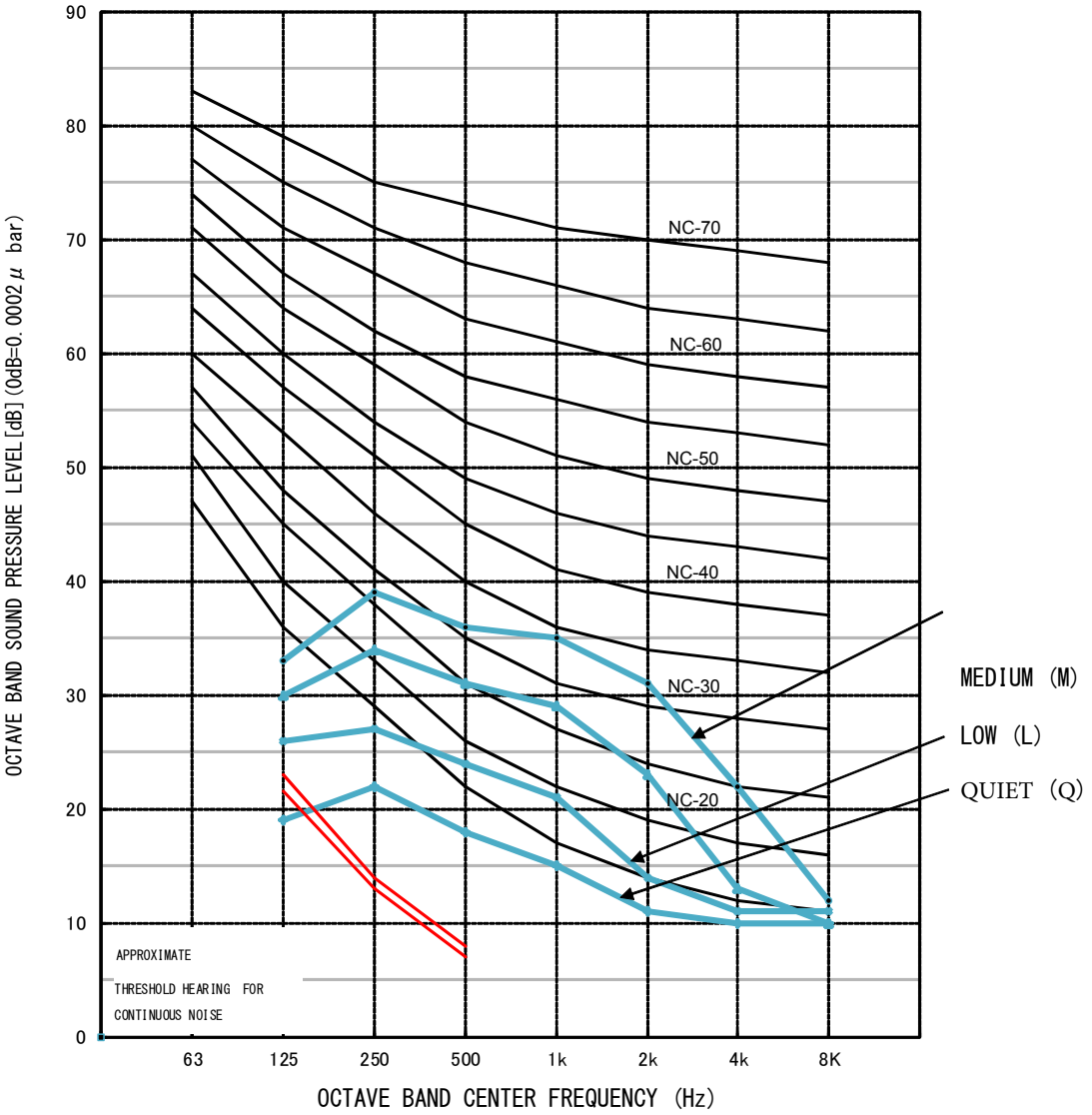
Model	Measuring Location
FTKF25A **FTKF35A** **FTKF50A** **FTKF71A**	

Notes:
1. Operation sound is measured in an anechoic chamber.
2. The operation noise measuring method is in accordance with **JISC9612.**

Sound Pressure Level

Model	Speed	1/1 Octave A-weighted Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
FTKF25A	High	33	39	36	35	31	22	12	39	34
	Med	30	34	31	29	23	13	10	33	28
	Low	26	27	24	21	14	11	11	26	19
	Quiet	19	22	18	15	11	10	10	21	N/A

NC Curve

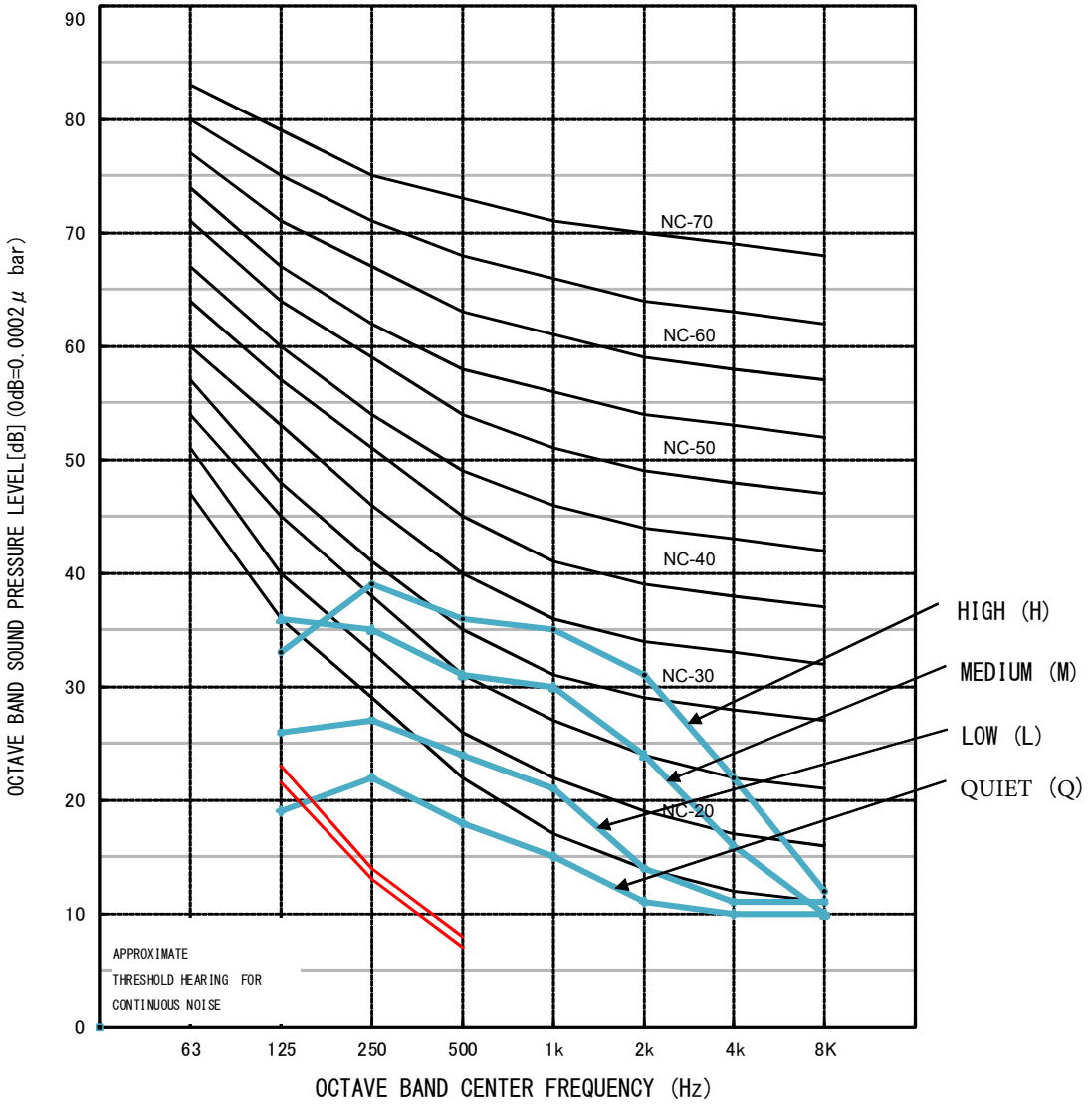


3D127554A

Sound Pressure Level

Model	Speed	1/1 Octave A-weighted Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
FTKF35A	High	33	39	36	35	31	22	12	39	34
	Med	36	35	31	30	24	16	10	34	29
	Low	26	27	24	21	14	11	11	26	19
	Quiet	19	22	18	15	11	10	10	21	N/A

NC Curve

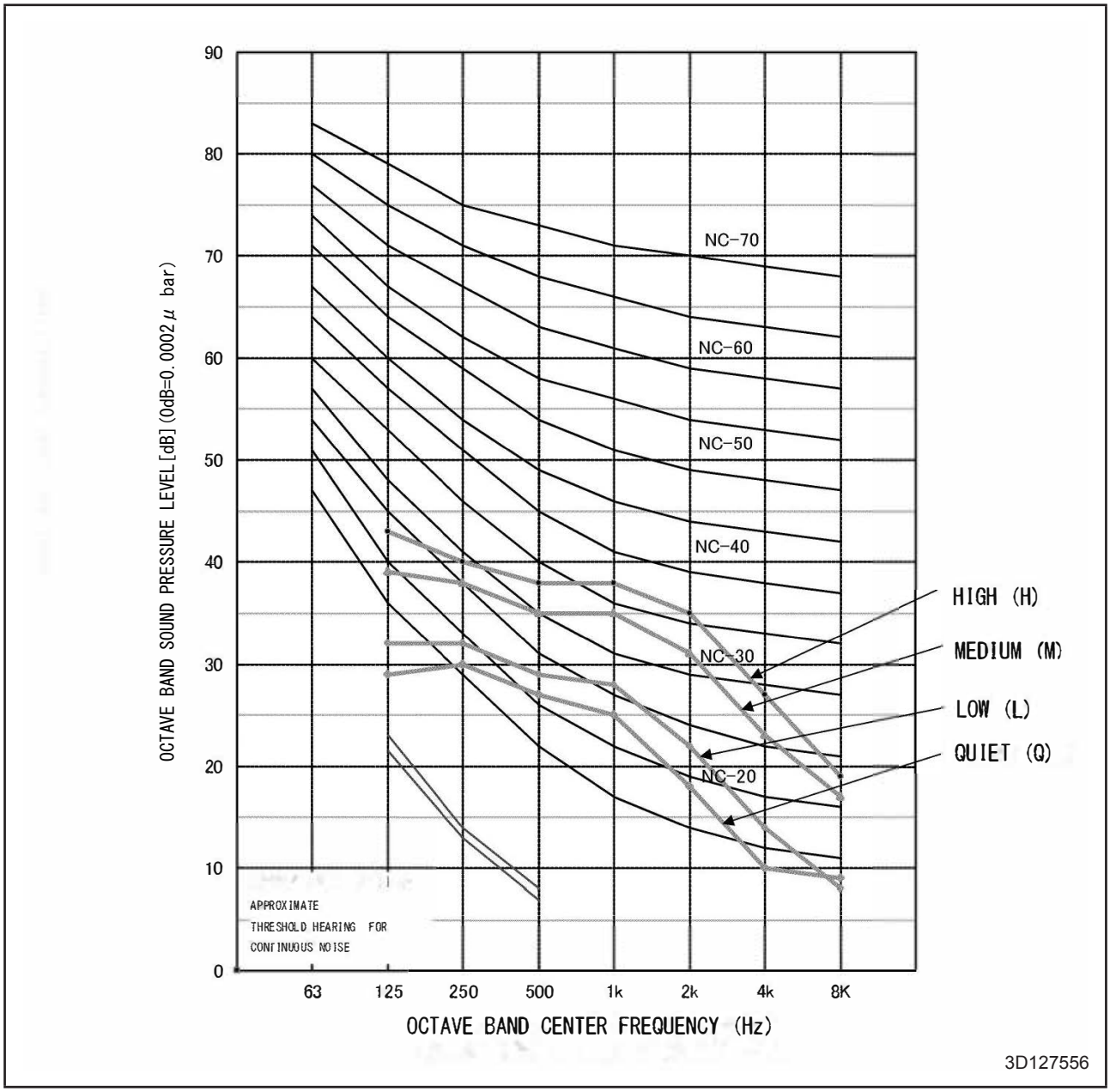


3D127553A

Sound Pressure Level

Model	Speed	1/1 Octave A-weighted Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
FTKF50A	High	43	40	38	38	35	27	19	42	37
	Med	39	38	35	35	31	23	17	39	34
	Low	32	32	29	28	22	14	8	32	26
	Quiet	29	30	27	25	18	10	9	29	23

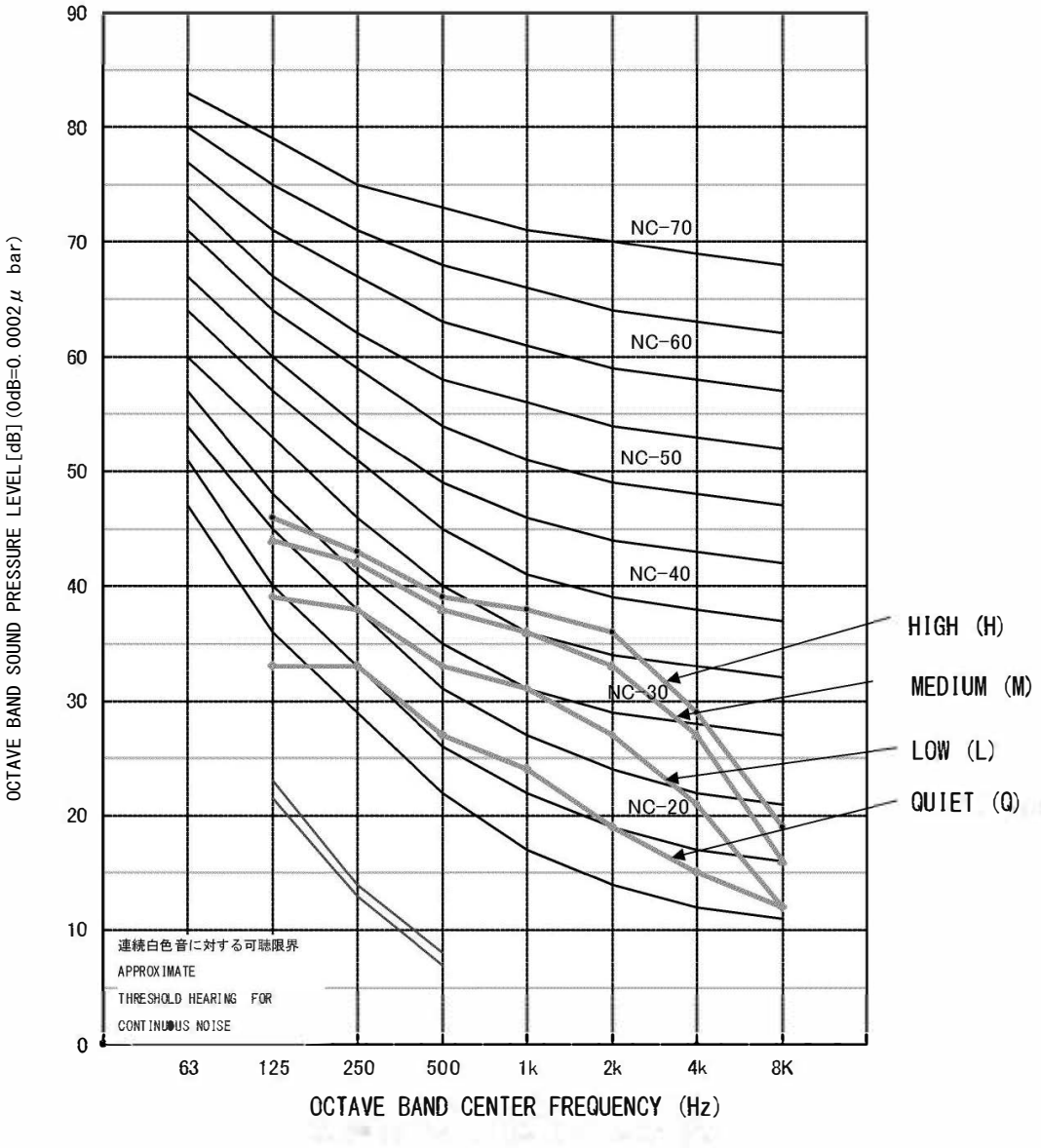
NC Curve



Sound Pressure Level

Model	Speed	1/1 Octave A-weighted Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
FTKF71A	High	46	43	39	38	36	29	19	43	37
	Med	44	42	38	36	33	27	16	41	35
	Low	39	38	33	31	27	21	12	36	30
	Quiet	33	33	27	24	19	15	12	30	22

NC Curve



3D127555

Electric Characteristic

Unit Combination		Power Supply					COMP		OFM		IFM	
Indoor Unit	Outdoor Unit	Hz	Volts	Voltage Range	MCA	MFA	RHZ	RLA	kW	FLA	kW	FLA
FTKF25A	RKF25A	50	220	Max. 50Hz 264V Min. 50Hz 198V	10.0	16	62	3.28	0.028	0.47	0.018	0.18
		50	230									
		50	240									
FTKF35A	RKF35A	50	220	Max. 50Hz 264V Min. 50Hz 198V	10.0	16	91	4.91	0.028	0.26	0.021	0.20
		50	230									
		50	240									
FTKF50A	RKF50A	50	220	Max. 50Hz 264V Min. 50Hz 198V	11.5	20	85	7.21	0.061	0.84	0.038	0.19
		50	230									
		50	240									
FTKF71A	RKF71A	50	220	Max. 50Hz 264V Min. 50Hz 198V	11.5	20	88	7.87	0.061	0.42	0.038	0.32
		50	230									
		50	240									

Symbols:

MCA : Min. circuit amps (A)
MFA : Max. fuse amps (A)
RHz : Rated operating frequency (Hz)
RLA : Rated loads amps (A)
OFM : Outdoor fan motor
IFM : Indoor fan motor
kW : Fan motor rated output (kW)
FLA : Full load amps (A)

Notes:

1. RLA is based on the following conditions.
   Indoor temp. 27°CDB / 19°CWB.
   Outdoor temp. 35°CDB.
2. Maximum allowable voltage variation between phases is 2%.
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.
5. Be sure to install an earth leak detector.
   (This unit uses an inverter, which means that an earth leak detector capable of handling high harmonics must be used in order to prevent malfuctioning of the earth leak detector.)

3D127430A

Service and Maintenance

⚠ WARNING

- Disconnect from main supply before servicing the air conditioner.
- The unit is designed to give long life operation with minimum maintenance required. However, it should be regularly checked and the following items should be given due attention.

Components	Maintenance Procedures	Period
Air Filter (Indoor Unit)	1. Remove any dust adhering to the filter by using a vacuum cleaner or wash in lukewarm water (below 40˚C) with a neutral cleaning detergent. 2. Rinse the filter well and dry before placing it back onto the unit. 3. Note: Never use gasoline, volatile substances or chemicals to clean the filter.	At least once every 2 weeks. More frequently if necessary.
Indoor Unit	1. Clean any dirt or dust on the grille or panel by wiping it with a soft cloth soaked in lukewarm water (below 40˚C) and a neutral detergent solution. 2. Note: Never use gasoline, volatile substances or chemicals to clean the indoor unit.	At least once every 2 weeks. More frequently if necessary.
Condense Drain Pan & Pipe	1. Check the cleanliness and clean it if necessary. 2. Check the condensate water flow.	Every 3 months.
Indoor Fan	Check if there is any abnormal noise.	If necessary.
Indoor / Outdoor Coil	1. Check and remove the dirt between the fins. 2. Check and remove any obstacles which hinder air flow through the indoor or outdoor.	Every month.
Power Supply	1. Check the running current and voltage for indoor and outdoor unit. 2. Check the electrical wiring and tighten the wire onto the terminal block if necessary.	Every 2 months. Every year.
Compressor	No maintenance needed if refrigerant circuit remains sealed. However, check for refrigerant leak at joint and fitting.	Every 6 months.

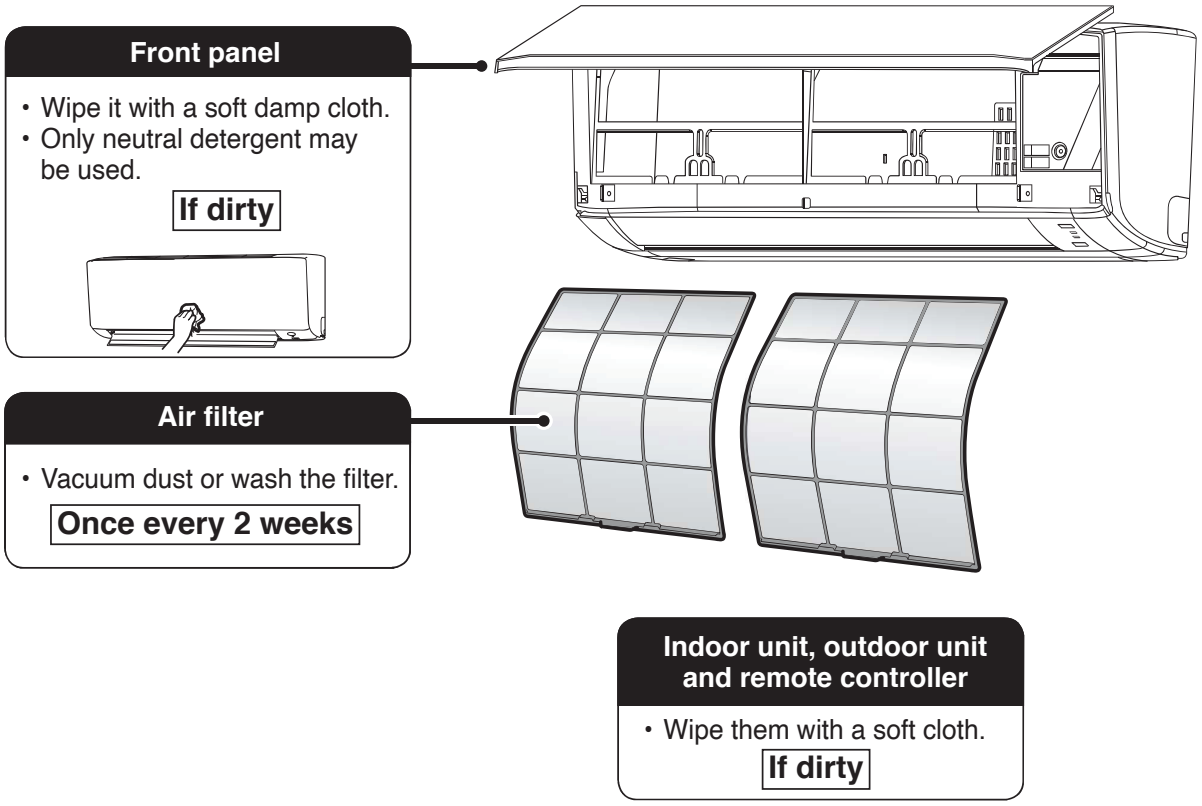
Care and Cleaning

⚠ CAUTION

- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminium fins of the indoor unit. If you touch those parts, this may cause an injury.
- Avoid direct contact of any coil treatment cleaners on plastic part. This may cause plastic part to deform as a result of chemical reaction.

■ Quick reference

Cleaning parts



NOTE

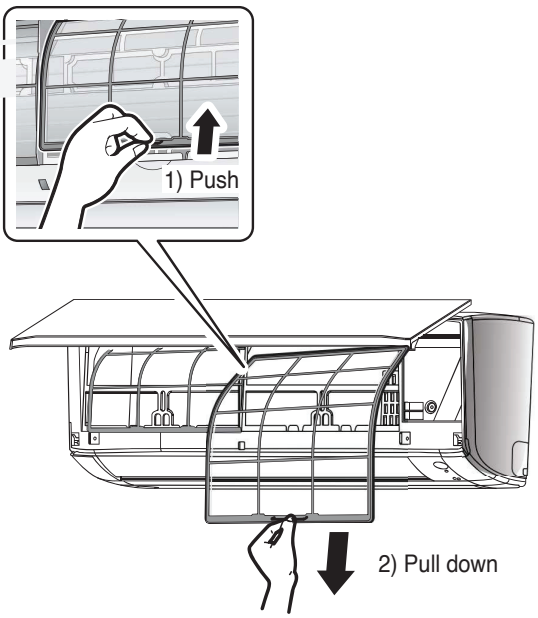
For cleaning, do not use any of the following:

- Water hotter than 40°C/104°F
- Volatile liquid such as benzene, gasoline and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush

Air Filter

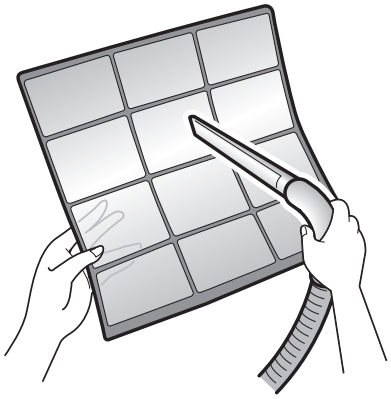
1. Pull out the air filters.

- Open the front panel.
- Push the filter tab at the centre of each air filter a little upwards, then pull it down.



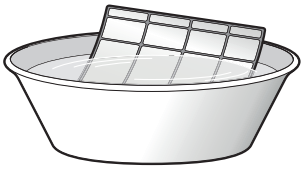
2. Wash the air filters with water or clean them with vacuum cleaner.

- It is recommended to clean the air filters every 2 weeks.



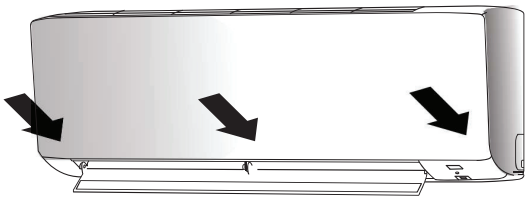
If the dust does not come off easily

- Wash the air filters with neutral detergent thinned with lukewarm water, then dry them up in the shade.



3. Set the filters as they were and close the front panel slowly.

- Press the front panel at both sides and the center.



*Appearance of the indoor unit may differ from some models.

⚠ CAUTION

- Do not touch the aluminium fins by bare hand at the time of dismounting or mounting the filter.

How to open Front Panel

1. Open the front panel.

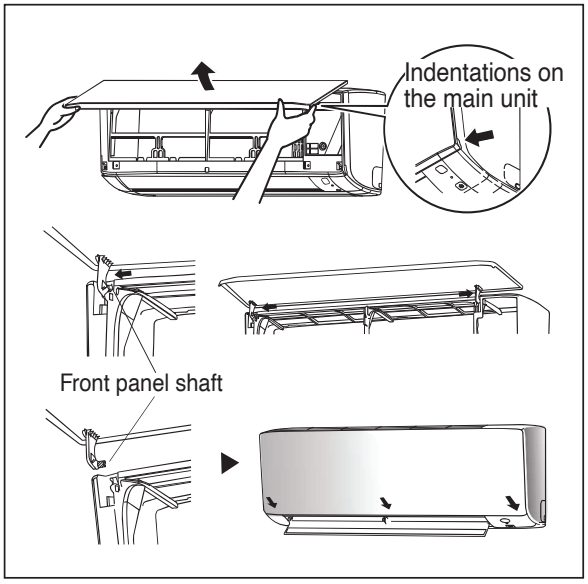
- Hold the panel at the recesses on the main unit (2 recesses on right and left sides) and lift it until it stops.

2. Remove the front panel.

- While lifting the front panel further, slide it to the right and pull it to the front side. The left rotating shaft is detached. Slide the right rotating shaft to the left and pull it to the front side to remove it.

3. Attach the front panel.

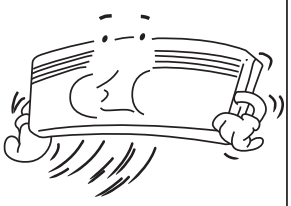
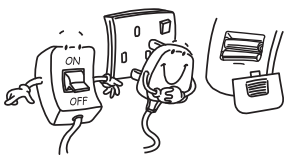
- Align the right and left rotating shafts of the front panel with the grooves and push them all the way in.
- Gently close the front panel. (Push both ends and the center on the front panel.)



⚠ CAUTION

- Don't touch the metal parts of the indoor unit. It may cause an injury.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleansing, do not use hot water above 40°C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

When The Unit Is Not To Be Used For An Extended Long Period Of Time

Operate the unit for 2 hours with the following setting. Operating mode : cool Temperature : 30°C/86°F		Remove the power plug. If you are using an independent electric circuit for your unit, cut off the circuit. Remove the batteries in the remote control.	

Pre Start Up Maintenance

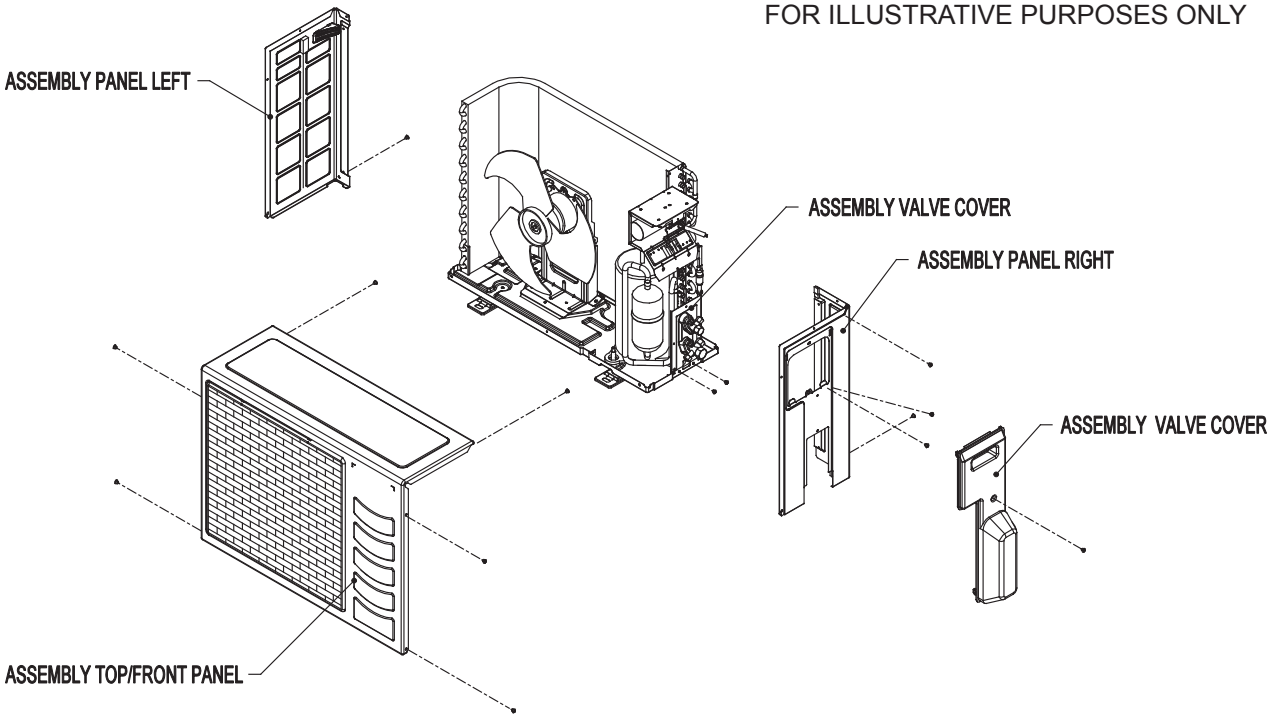
(After Extended Shutdown)

- Inspect thoroughly and clean indoor and outdoor units.
- Clean or replace air filters.
- Clean condensates drain line.
- Clean clogged indoor and outdoor coils.
- Check fan imbalance before operation.
- Tighten all wiring connections and panels.
- Check for refrigerant leakage.

Outdoor Models

The design of the RKF-A outdoor series allows servicing to be carried out easily. The removal of the top, front and side panels makes almost every part accessible.

FOR ILLUSTRATIVE PURPOSES ONLY



Under normal circumstances, these outdoor units only require a check and cleaning of air intake coil surface once every 3 months. However, if a unit is installed in areas subjected to much oil mist and dust, the coils must be regularly cleaned by qualified Air Conditioner Service Technicians to ensure sufficient heat exchange and proper operation. Otherwise, the systems life span may be shortened.

⚠ CAUTION

- Do not charge **OXYGEN, ACETYLENE OR OTHER FLAMMABLE** and poisonous gases into the unit when performing a leakage test or an airtight test. These gases could cause severe explosion and damage if exposed to high temperature and pressure.
- It is recommended that only nitrogen or refrigerant be charged when performing the leakage or airtight test.

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 compressor does not operate 3 minutes after the air conditioner unit is started.	– Protection against frequent starting. Wait for 3 to 4 minutes for the compressor to start operating.
2. The air conditioner unit does not operate.	– 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. – If the fault persist after all these verifications, please contact the air conditioner unit installer.
3. The air flow is too low.	– 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
4. Discharge air flow has bad odor.	– Odors may be caused by cigarettes, smoke particles, perfume etc. which might have adhered onto the coil.
5. Condensation on the front air grille of the indoor unit.	– 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.
6. Water flowing out from the air conditioner unit.	– Switch off unit and call dealer.

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

INDICATION LIGHTS

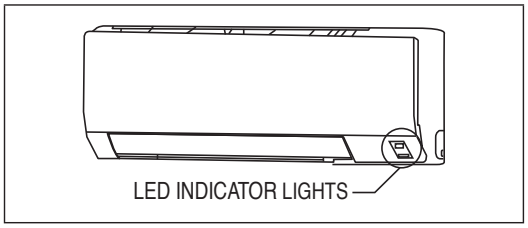
IR Signal Receiver

When an infrared remote control operating signal has been transmitted, the signal receiver on the indoor unit will respond as below to confirm acceptance of the signal transmission.

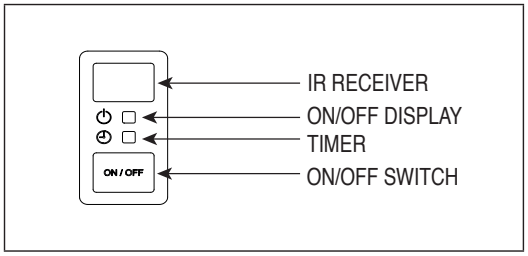
ON to OFF	1 Long Beep
OFF to ON **Pump down/Cool force on**	2 Short Beep
Others	1 Short Beep

Cooling Unit

The table shows the LED indicator lights for the air conditioner unit under normal operation and fault conditions.
The LED indicator lights are located at the side of the air conditioner unit.



LED Indicator Lights for Cooling Unit



LED Indicator Lights : Normal Operation & Fault Conditions For Cooling Unit

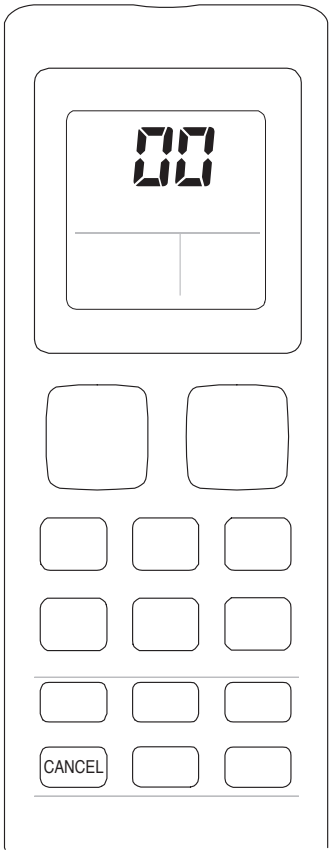
Green	Yellow	Operation
○		Cool mode
○		Fan mode
○		Dry mode
○	○	Timer ON/OFF
○ (Dimmed)		Sleep mode
○ (Dimmed)	○ (Dimmed)	Sleep mode + Timer ON/OFF
◑		Unit error

○ ON ◑ Blinking

Error Code Diagnosis By Wireless Handset

Fault Diagnosis

■ To perform error code diagnosis



1. Press and hold CANCEL button for 5 seconds.

• 00 blinks.

2. Press CANCEL to check on the error code.

• Keep pressing on the button until a long "beep" acknowledgement heard from the indoor unit.

■ To exit from error code diagnosis

3. Press and hold CANCEL button for 5 seconds.

▪ Note

- A short "beep" and two consecutive "beep" acknowledgement from the indoor unit indicates a non-corresspondence error code.
- A long "beep" acknowledgement from the indoor unit indicates a correspondence error code.
- User shall not attempt to repair or modify the air conditioner as any incorrect work may result in electric shock or fire.
- Consult the service personnel in case the air conditioner is found to be faulty.

Error code definition

Error Code	Meaning
00	Normal
A1	Malfunction of indoor unit PCB
A3	Drain level control system abnormal
A5	Antifreeze
A6	Indoor fan motor abnormal
AH	Electrical air cleaner abnormal
C4	Indoor heat exchanger (1) thermistor short / open
C5	Indoor heat exchanger (2) thermistor short / open
C7	Louver limit switch error
C9	Indoor room thermistor short / open
CC	Malfunction of humidity sensor system
E1	Outdoor PCB error
E3	High pressure protection
E5	Compressor motor lock / compressor overload
E6	Compressor start-up error
E7	Outdoor DC fan motor lock
E8	AC input overcurrent
EA	4 way valve error
F3	Discharge pipe overheat
F6	Abnormal high pressure
F8	-
FA	Heat exchanger overheat
H0	Compressor sensor system error
H3	High pressure switch error
H6	Compressor feedback detection error
H7	Malfunction of outdoor unit fan motor signal

Error Code	Meaning
H8	AC current sensor error
H9	Outdoor air thermistor short/open
J3	Compressor discharge pipe thermistor short / open / misplaced
J6	Outdoor heat exchanger thermistor short / open
J8	Liquid pipe thermistor short / open
J9	Gas pipe thermistor short / open
L3	Outdoor control box overheat
L4	Heat sink overheat
L5	IPM error / IGBT error
P4	Heat sink thermistor short / open
U0	Insufficient gas
U2	DC voltage out of range
U3	Transmission error
U4	Communication error
UA	Installation error
UF	Piping & wiring installation mismatch / wrong wiring / insufficient gas
UH	Antifreeze (other rooms)

Warning

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

AK

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