Библиотека СОК

CLIMATE SOLUTION FOR GREEN ENVIRONMENT

Фанкойлы - вентиляционные доводчики

Серия MKAi

Для четырехтрубной системы

Полное техническое руководство
Холодопроизводительность
2 - 13кВт

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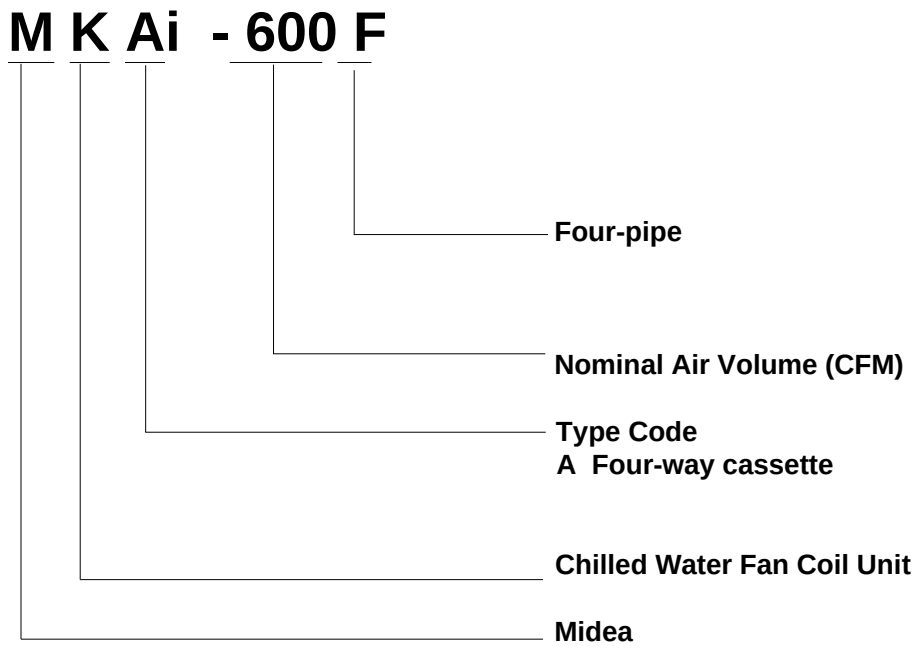
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1. Introduction

Fan coil unit is a kind of compound device which assemble fan and surface-type coil heating-exchanger together. Fan coil with fresh air supply system is a main type of center air-conditioner system, so it is an important component of AC devices. Fan coil has horizontal type, vertical type, etc. A cooling (heating) supply system usually consists of fan coil terminals and chilled water system (heated water system).

Midea® commercial AC fan coil is designed and manufactured on the base of advanced technology, and utilize qualified galvanized iron as material. Due to its supper-thin design, it has such advantages: beautiful outlook, space saving, easy installation, etc. And the most obvious advantage is that it can decrease the outlet air Temp-difference as low as possible to make room more comfortable, as well as don't decrease cooling capacity output. For the large air flow volume design, it can increase room ventilation frequency, supply more flesh air, and balance room temperature distribution. Benefiting from adoption of advanced material and technology, it can effectively decrease the running noise and keep running smoothly. With the advantages above, it can be widely applied in market, hospital, office building, hotel airport, etc..

2. Nomenclature



3. Product Schedule

No.	Type	Model	Air volume (m^3/h)	Power supply	Auxiliary Electrical Heater
1	Four-pipe Four-way Cassette	MKAi-600F	1150	220~240V-1ph-50Hz	Without
2		MKAi-750F	1460		
3		MKAi-850F	1480		
4		MKAi-950F	1720		
5		MKAi-1200F	1860		
6		MKAi-1500F	2100		

4. External Appearance



5. Features

- Four-way air distribution gives individual comfort.
- The unique design of the centrifugal fan ensures extra-quiet operation.
- Four speeds indoor unit.
- With the function of auto-restart.
- High capacity of cooling / heating performance, high efficiency and energy-saving.

6. Specifications

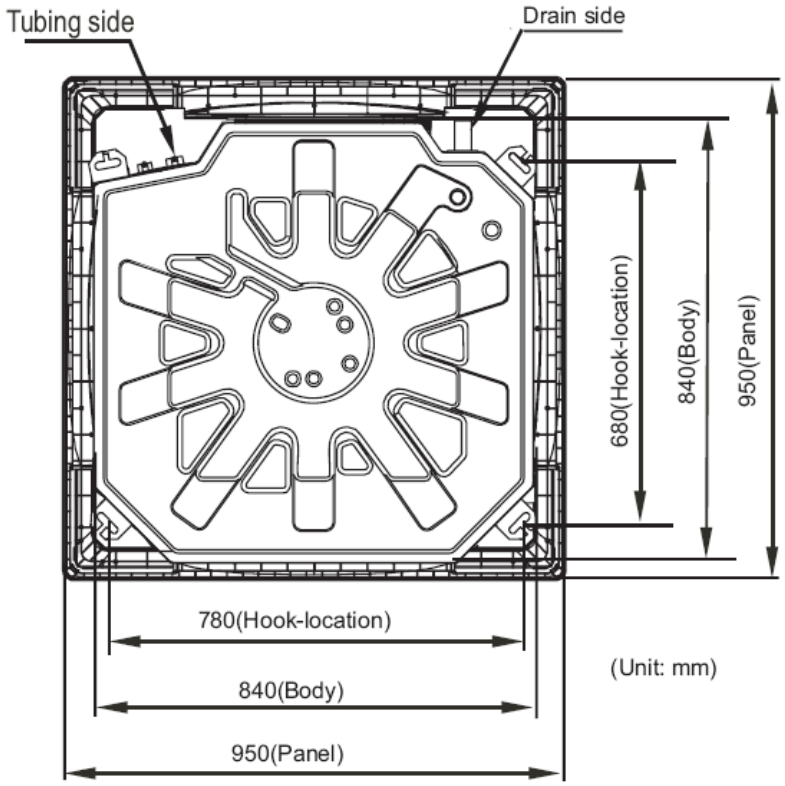
Model			MKAi-600F	MKAi-750F	MKAi-850F
Air volume	High speed	m^3/h	1150.00	1460.00	1480.00
		CFM	676.47	858.82	870.59
	Mid speed	m^3/h	844.00	967.00	1077.00
		CFM	496.00	568.00	633.00
	Low speed	m^3/h	683.00	774.00	912.00
		CFM	401.00	455.00	536.00
Cooling capacity		kW	5.10	5.93	6.17
Heating capacity		kW	6.67	7.87	8.06
Power supply		V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
Power input		W	170.00	188.00	198.00
Sound level		dB(A)	42/32/26	43/34/29	44/35.5/32
Cool water	Water flow	m^3/h	0.92	0.98	1.05
	Water pressure drop	kPa	15.20	17.10	20.00
Heat water	Water flow	m^3/h	0.55	0.68	0.67
	Water pressure drop	kPa	36.90	40.50	39.10
Fan	Type		Centrifugal fan	Centrifugal fan	Centrifugal fan
	Quantity	Pieces	1.00	1.00	1.00
	Material		ASG20	ASG20	ASG20
	Diameter	mm	476.00	476.00	476.00
	Height	mm	169.50	169.50	169.50
Motor	Model		YDK56-6-1	YDK56-6-1	YDK90-6E
	Quantity	Pieces	1.00	1.00	1.00
	Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
	Capacitor	uF	3uF/450V	4uF/450V	2.5uF/450V
	Insulation class		B	B	B
	Safe class		IPX0	IPX0	IPX0
Coil	Number of rows		2.00	2.00	2.00
	Tube pitch(a)x row pitch(b)	mm	21×13.37	21×13.37	21×13.37
	Fin spacing	mm	1.50	1.50	1.50
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic
	Tube outside dia.	mm	Φ7	Φ7	Φ7
	Tube type		bare pipe	bare pipe	bare pipe
	Coil length × height	mm	1990×252	1990×252	1990×252
	Number of circuits		9 for cool water, 3 for	9 for cool water, 3 for	9 for cool water, 3 for
	Working pressure	MPa	1.60	1.60	1.60
	Test pressure	MPa	1.00	1.00	1.00
Connection pipe	Cool water inlet/outlet	Inch	3/4”	3/4”	3/4”
	Heat water inlet/outlet	Inch	1/2”	1/2”	1/2”
	Drainage	Inch	Φ32	Φ32	Φ32
Body	Net dimension (W×H×D)	mm	840×300×840	840×300×840	840×300×840
	Packing dimension (W×H×D)	mm	955×317×955	955×317×955	955×317×955
	Net weight	kg	35.00	35.00	35.00
	Packing weight	kg	42.00	42.00	42.00
Panel	Net dimension (W×H×D)	mm	950×55×950	950×55×950	950×55×950
	Packing dimension (W×H×D)	mm	1035×90×1035	1035×90×1035	1035×90×1035
	Net weight	kg	6.00	6.00	6.00
	Packing weight	kg	9.00	9.00	9.00
Connection	Power wiring	mm^2	3×1.0	3×1.0	3×1.0
Control (Wireless remote controller)			R05/BGE	R05/BGE	R05/BGE

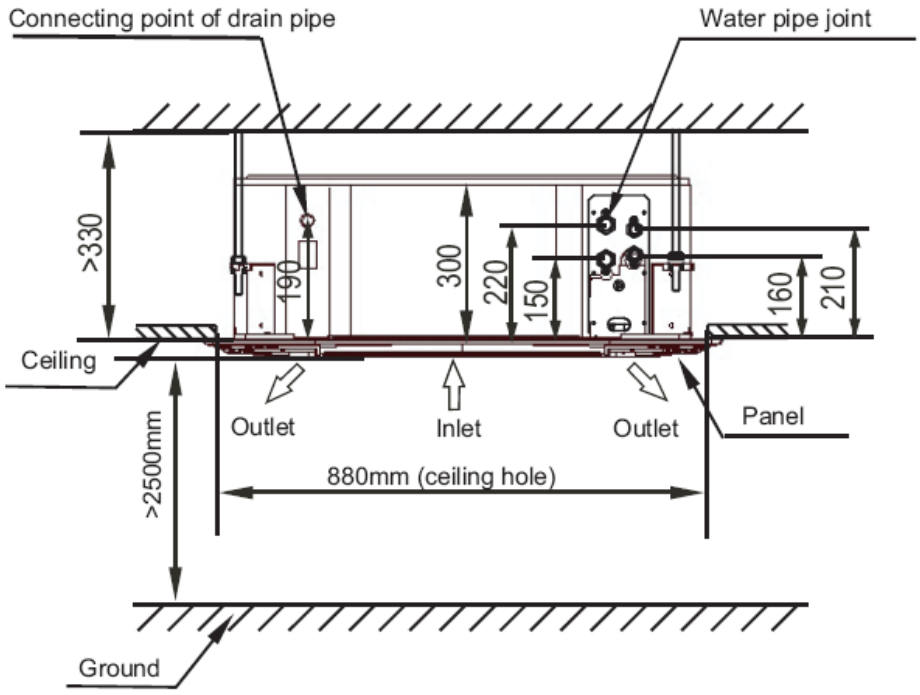
Model			MKAi-950F	MKAi-1200F	MKAi-1500F
Air volume	High speed	m^3/h	1720.00	1860.00	2100.00
		CFM	1011.76	1094.00	1235.00
	Mid speed	m^3/h	1231.00	1275.00	1275.00
		CFM	724.00	750.00	750.00
	Low speed	m^3/h	1044.00	1095.00	1095.00
		CFM	614.00	644.00	644.00
Cooling capacity		kW	6.70	9.28	10.58
Heating capacity		kW	8.67	11.65	12.62
Power supply		V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
Power input		W	205.00	197.00	234.00
Sound level		dB(A)	44.5/36/33	46/38/34	47/40/35
Cool water	Water flow	m^3/h	1.12	1.55	1.67
	Water pressure drop	kPa	22.00	32.10	37.80
Heat water	Water flow	m^3/h	0.71	1.02	1.06
	Water pressure drop	kPa	41.90	56.80	60.50
Fan	Type		Centrifugal fan	Centrifugal fan	Centrifugal fan
	Quantity	Pieces	1.00	1.00	1.00
	Material		ASG20	ASG20	ASG20
	Diameter	mm	476.00	476.00	476.00
	Height	mm	169.50	169.50	169.50
Motor	Model		YDK90-6E	YDK90-6E-1	YDK90-6E-1
	Quantity	Pieces	1.00	1.00	1.00
	Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
	Capacitor	uF	3.5uF/450V	4uF/450V	4uF/450V
	Insulation class		B	B	B
	Safe class		IPX0	IPX0	IPX0
Coil	Number of rows		2.00	3.00	3.00
	Tube pitch(a)x row pitch(b)	mm	21×13.37	21×13.37	21×13.37
	Fin spacing	mm	1.50	1.50	1.50
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.	mm	Φ7	Φ7	Φ7
	Tube type		bare pipe	bare pipe	bare pipe
	Coil length × height	mm	1990×252	2080×252	2080×252
	Number of circuits		9 for cool water, 3 for	14 for cool water, 4 for	14 for cool water, 4 for
	Working pressure	MPa	1.60	1.60	1.60
	Test pressure	MPa	1.00	1.00	1.00
Connection pipe	Cool water inlet/outlet	Inch	3/4”	3/4”	3/4”
	Heat water inlet/outlet	Inch	1/2”	1/2”	1/2”
	Drainage	Inch	Φ32	Φ32	Φ32
Body	Net dimension (W×H×D)	mm	840×300×840	840×300×840	840×300×840
	Packing dimension (W×H×D)	mm	955×317×955	955×317×955	955×317×955
	Net weight	kg	35.00	38.00	38.00
	Packing weight	kg	42.00	45.00	45.00
Panel	Net dimension (W×H×D)	mm	950×55×950	950×55×950	950×55×950
	Packing dimension (W×H×D)	mm	1035×90×1035	1035×90×1035	1035×90×1035
	Net weight	kg	6.00	6.00	6.00
	Packing weight	kg	9.00	9.00	9.00
Connection	Power wiring	mm^2	3×1.0	3×2.0	3×2.0
Control (Wireless remote controller)			R05/BGE	R05/BGE	R05/BGE

Remark:

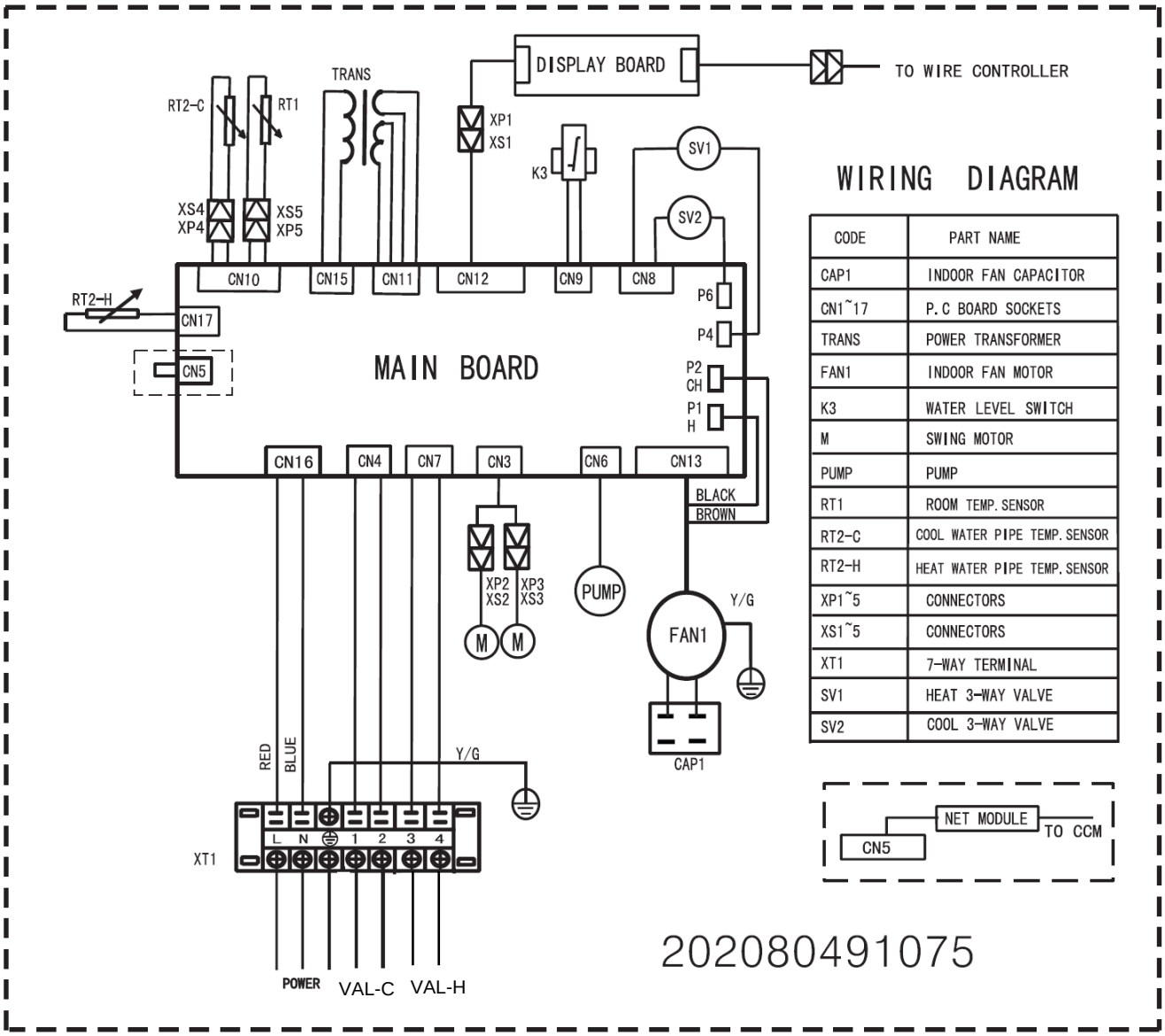
1. All performance data above is based upon 0Pa ambient static pressure.
2. Cooling conditions: 27°C DB /19°C WB entering air temperature, 7°C/12°C entering and leaving water temperature at high fan speed.
3. Heating conditions: 20°C entering air temperature, 70°C/60°C entering and leaving water temperature at high fan speed.
4. Noise level is tested in full-anechoic room.
5. Hot water temperature cannot be ＞75°C.

7. Dimension


Tubing side
Drain side
680(Hook-location)
840(Body)
950(Panel)
780(Hook-location)
840(Body)
950(Panel)
(Unit: mm)


Connecting point of drain pipe
Water pipe joint
>330
190
300
220
150
160
210
Ceiling
Outlet
Inlet
Outlet
Panel
>2500mm
880mm (ceiling hole)
Ground

8. Wiring Diagrams



9. Capacity Tables

Cooling Capacity:

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.			VE/CE	PWR	Fan Motors
		℃	℃	℃	℃	℃	Pa	rpm	m^3/h	℃	℃	kW	kW	m^3/h	kPa	kg	W	nos.
MKAi-600F	High	26.7	19.4	7	12	5	0	675	1150	16.2	14.9	5.40	4.81	0.93	16.20	35	116	1
				5.5	14.5	9	0	675	1150	17.8	16.4	2.97	2.40	0.28	5.00	35	116	1
		27	19	7	12	5	0	675	1150	16.2	14.6	5.10	4.24	0.92	15.20	35	116	1
				5.5	14.5	9	0	675	1150	17.7	16.3	2.81	2.56	0.27	4.90	35	116	1
		29	21	7	12	5	0	675	1150	17.1	16	6.90	6.10	1.19	19.70	35	116	1
				5.5	14.5	9	0	675	1150	18.6	17.2	3.80	3.20	0.36	6.00	35	116	1
	Mid	26.7	19.4	7	12	5	0	480	844	15.4	14.2	4.29	3.62	0.74	13.20	35	71	1
				5.5	14.5	9	0	480	844	16.8	16.2	2.36	2.10	0.23	4.60	35	71	1
		27	19	7	12	5	0	480	844	15.3	14.1	4.08	3.60	0.70	12.30	35	71	1
				5.5	14.5	9	0	480	844	16.7	16.1	2.24	2.08	0.21	4.50	35	71	1
		29	21	7	12	5	0	480	844	15.2	14.5	5.52	4.98	0.95	15.70	35	71	1
				5.5	14.5	9	0	480	844	18	17.2	3.04	2.56	0.29	5.00	35	71	1
	Low	26.7	19.4	7	12	5	0	390	683	13.7	12.9	3.96	3.39	0.68	10.44	35	51	1
				5.5	14.5	9	0	390	683	16.5	15.8	2.18	1.91	0.20	4.40	35	51	1
		27	19	7	12	5	0	390	683	13.7	12.8	3.76	3.16	0.65	10.00	35	51	1
				5.5	14.5	9	0	390	683	16.4	15.7	2.18	1.91	0.19	4.30	35	51	1
		29	21	7	12	5	0	390	683	13.5	12.4	5.08	4.56	0.87	15.20	35	51	1
				5.5	14.5	9	0	390	683	17.5	16.9	2.79	2.23	0.27	4.90	35	51	1
MKAi-750F	High	26.7	19.4	7	12	5	0	785	1460	16.2	14.9	6.23	5.78	1.07	18.70	35	149	1
				5.5	14.5	9	0	785	1460	17.8	16.4	3.43	2.96	0.33	5.75	35	149	1
		27	19	7	12	5	0	785	1460	16.2	14.6	5.93	4.99	0.98	17.10	35	149	1
				5.5	14.5	9	0	785	1460	17.7	16.3	3.26	2.89	0.31	5.43	35	149	1
		29	21	7	12	5	0	785	1460	17.1	16	8.02	7.00	1.38	20.06	35	149	1
				5.5	14.5	9	0	785	1460	18.6	17.2	4.41	4.00	0.42	7.35	35	149	1
	Mid	26.7	19.4	7	12	5	0	480	967	15.4	14.2	4.70	3.98	0.81	14.10	35	71	1
				5.5	14.5	9	0	480	967	16.8	16.2	2.59	2.00	0.25	4.30	35	71	1
		27	19	7	12	5	0	480	967	15.3	14.1	4.41	3.25	0.76	13.60	35	71	1
				5.5	14.5	9	0	480	967	16.7	16.1	2.43	1.89	0.23	4.00	35	71	1
		29	21	7	12	5	0	480	967	15.2	14.5	5.97	5.00	1.03	17.90	35	71	1

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.			VE/CE	PWR	Fan Motors
		℃	℃	℃	℃	℃	Pa	rpm	m^3/h	℃	℃	kW	kW	m^3/h	kPa	kg	W	nos.
				5.5	14.5	9	0	480	967	18	17.2	3.28	2.88	0.27	4.68	35	71	1
	Low	26.7	19.4	7	12	5	0	390	774	13.7	12.9	4.25	3.56	0.73	12.67	35	51	1
				5.5	14.5	9	0	390	774	16.5	15.8	2.34	1.86	0.22	3.90	35	51	1
		27	19	7	12	5	0	390	774	13.7	12.8	3.94	3.65	0.68	11.50	35	51	1
				5.5	14.5	9	0	390	774	16.4	15.7	2.17	1.78	0.21	3.70	35	51	1
		29	21	7	12	5	0	390	774	13.5	12.4	5.33	4.67	0.92	16.00	35	51	1
				5.5	14.5	9	0	390	774	17.5	16.9	2.93	2.20	0.28	4.87	35	51	1
MKAi-850F	High	26.7	19.4	7	12	5	0	770	1480	16.2	14.9	6.48	5.24	1.11	21.22	35	155	1
				5.5	14.5	9	0	770	1480	17.8	16.4	3.56	2.96	0.34	6.49	35	155	1
		27	19	7	12	5	0	770	1480	16.2	14.6	6.17	5.14	1.05	20.00	35	155	1
				5.5	14.5	9	0	770	1480	17.7	16.3	3.40	2.76	0.32	6.19	35	155	1
		29	21	7	12	5	0	770	1480	17.1	16	8.35	7.03	1.44	27.30	35	155	1
				5.5	14.5	9	0	770	1480	18.6	17.2	4.59	3.87	0.44	8.50	35	155	1
	Mid	26.7	19.4	7	12	5	0	660	1077	15.4	14.2	5.42	4.15	0.93	17.70	35	142	1
				5.5	14.5	9	0	660	1077	16.8	16.2	2.98	2.14	0.28	5.42	35	142	1
		27	19	7	12	5	0	660	1077	15.3	14.1	5.13	4.27	0.91	17.30	35	142	1
				5.5	14.5	9	0	660	1077	16.7	16.1	2.82	2.05	0.27	5.22	35	142	1
		29	21	7	12	5	0	660	1077	15.2	14.5	6.94	5.06	1.19	22.70	35	142	1
				5.5	14.5	9	0	660	1077	18	17.2	3.82	3.12	0.36	7.05	35	142	1
	Low	26.7	19.4	7	12	5	0	550	912	13.7	12.9	4.90	3.98	0.84	16.50	35	129	1
				5.5	14.5	9	0	550	912	16.5	15.8	2.70	1.98	0.26	5.06	35	129	1
		27	19	7	12	5	0	550	912	13.7	12.8	4.59	3.83	0.79	15.40	35	129	1
				5.5	14.5	9	0	550	912	16.4	15.7	2.52	1.87	0.24	4.63	35	129	1
		29	21	7	12	5	0	550	912	13.5	12.4	6.21	5.12	1.06	20.60	35	129	1
				5.5	14.5	9	0	550	912	17.5	16.9	3.42	2.75	0.33	6.34	35	129	1
MKAi-950F	High	26.7	19.4	7	12	5	0	840	1720	16.2	14.9	7.01	6.05	1.21	23.68	35	168	1
				5.5	14.5	9	0	840	1720	17.8	16.4	3.86	3.06	0.37	7.24	35	168	1
		27	19	7	12	5	0	840	1720	16.2	14.6	6.70	5.58	1.12	22.00	35	168	1
				5.5	14.5	9	0	840	1720	17.7	16.3	3.69	2.96	0.35	6.89	35	168	1
		29	21	7	12	5	0	840	1720	17.1	16	9.06	7.87	1.56	30.60	35	168	1
				5.5	14.5	9	0	840	1720	18.6	17.2	5.28	4.34	0.50	9.90	35	168	1

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.			VE/CE	PWR	Fan Motors
		℃	℃	℃	℃	℃	Pa	rpm	m^3/h	℃	℃	kW	kW	m^3/h	kPa	kg	W	nos.
	Mid	26.7	19.4	7	12	5	0	660	1231	15.4	14.2	5.76	4.89	0.99	19.46	35	142	1
				5.5	14.5	9	0	660	1231	16.8	16.2	3.17	2.08	0.30	5.96	35	142	1
		27	19	7	12	5	0	660	1231	15.3	14.1	5.48	4.58	0.94	18.50	35	142	1
				5.5	14.5	9	0	660	1231	16.7	16.1	3.01	2.12	0.29	5.73	35	142	1
		29	21	7	12	5	0	660	1231	15.2	14.5	7.42	6.32	1.28	25.06	35	142	1
				5.5	14.5	9	0	660	1231	18	17.2	4.08	3.16	0.39	7.66	35	142	1
	Low	26.7	19.4	7	12	5	0	550	1044	13.7	12.9	5.15	4.06	0.89	17.40	35	129	1
				5.5	14.5	9	0	550	1044	16.5	15.8	2.83	1.94	0.27	5.30	35	129	1
		27	19	7	12	5	0	550	1044	13.7	12.8	4.85	4.03	0.83	16.38	35	129	1
				5.5	14.5	9	0	550	1044	16.4	15.7	2.67	1.85	0.25	5.00	35	129	1
		29	21	7	12	5	0	550	1044	13.5	12.4	6.56	5.34	1.13	22.16	35	129	1
				5.5	14.5	9	0	550	1044	17.5	16.9	3.61	2.87	0.34	6.77	35	129	1
MKAi-1200F	High	26.7	19.4	7	12	5	0	770	1860	16.2	14.9	9.60	7.86	1.65	34.20	38	143	1
				5.5	14.5	9	0	770	1860	17.8	16.4	5.28	4.10	0.91	18.70	38	143	1
		27	19	7	12	5	0	770	1860	16.2	14.6	9.28	7.45	1.55	32.10	38	143	1
				5.5	14.5	9	0	770	1860	17.7	16.3	5.10	3.98	0.88	18.20	38	143	1
		29	21	7	12	5	0	770	1860	17.1	16	12.56	10.08	2.16	44.70	38	143	1
				5.5	14.5	9	0	770	1860	18.6	17.2	6.91	5.10	1.19	24.60	38	143	1
	Mid	26.7	19.4	7	12	5	0	640	1500	15.4	14.2	7.76	5.98	1.33	31.00	38	116	1
				5.5	14.5	9	0	640	1500	16.8	16.2	4.27	3.05	0.41	9.60	38	116	1
		27	19	7	12	5	0	640	1500	15.3	14.1	7.45	5.95	1.28	30.60	38	116	1
				5.5	14.5	9	0	640	1500	16.7	16.1	4.10	3.00	0.39	9.50	38	116	1
		29	21	7	12	5	0	640	1500	15.2	14.5	10.08	8.93	1.73	41.40	38	116	1
				5.5	14.5	9	0	640	1500	18	17.2	5.54	4.12	0.53	12.70	38	116	1
	Low	26.7	19.4	7	12	5	0	550	1300	13.7	12.9	6.83	5.15	1.17	28.10	38	100	1
				5.5	14.5	9	0	550	1300	16.5	15.8	3.76	2.95	0.36	8.60	38	100	1
		27	19	7	12	5	0	550	1300	13.7	12.8	6.50	5.21	1.12	27.50	38	100	1
				5.5	14.5	9	0	550	1300	16.4	15.7	3.58	2.22	0.34	7.70	38	100	1
		29	21	7	12	5	0	550	1300	13.5	12.4	8.79	6.47	1.51	31.50	38	100	1
				5.5	14.5	9	0	550	1300	17.5	16.9	4.83	3.79	0.46	9.60	38	100	1

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.			VE/CE	PWR	Fan Motors
		℃	℃	℃	℃	℃	Pa	rpm	m^3/h	℃	℃	kW	kW	m^3/h	kPa	kg	W	nos.
MKAi-1500F	High	26.7	19.4	7	12	5	0	840	2100	16.2	14.9	11.00	9.02	1.89	42.80	38	165	1
				5.5	14.5	9	0	840	2100	17.8	16.4	5.50	4.23	0.53	11.90	38	165	1
		27	19	7	12	5	0	840	2100	16.2	14.6	10.58	8.67	1.67	37.80	38	165	1
				5.5	14.5	9	0	840	2100	17.7	16.3	5.82	4.33	0.56	12.70	38	165	1
		29	21	7	12	5	0	840	2100	17.1	16	14.31	12.56	2.46	55.70	38	165	1
				5.5	14.5	9	0	840	2100	18.6	17.2	7.88	6.02	0.76	17.00	38	165	1
	Mid	26.7	19.4	7	12	5	0	640	1500	15.4	14.2	7.76	5.98	1.33	31.00	38	116	1
				5.5	14.5	9	0	640	1500	16.8	16.2	4.27	3.05	0.41	9.60	38	116	1
		27	19	7	12	5	0	640	1500	15.3	14.1	7.45	5.95	1.28	30.60	38	116	1
				5.5	14.5	9	0	640	1500	16.7	16.1	4.10	3.00	0.39	9.50	38	116	1
		29	21	7	12	5	0	640	1500	15.2	14.5	10.08	8.93	1.73	41.40	38	116	1
				5.5	14.5	9	0	640	1500	18	17.2	5.54	4.12	0.53	12.70	38	116	1
	Low	26.7	19.4	7	12	5	0	550	1300	13.7	12.9	6.83	5.15	1.17	28.10	38	100	1
				5.5	14.5	9	0	550	1300	16.5	15.8	3.76	2.95	0.36	8.60	38	100	1
		27	19	7	12	5	0	550	1300	13.7	12.8	6.50	5.21	1.12	27.50	38	100	1
				5.5	14.5	9	0	550	1300	16.4	15.7	3.58	2.22	0.34	7.70	38	100	1
		29	21	7	12	5	0	550	1300	13.5	12.4	8.79	6.47	1.51	31.50	38	100	1
				5.5	14.5	9	0	550	1300	17.5	16.9	4.83	3.79	0.46	9.60	38	100	1

Remark:
ESP: external static pressure; **DB:** dry bulb temp.; **WB:** wet bulb temp.; **EWT:** enter water temp.;
LWT: leaving water temp.; **PWR:** power; **nos:** numbers. **CE:** ceiling exposed type;

Heating Capacity:

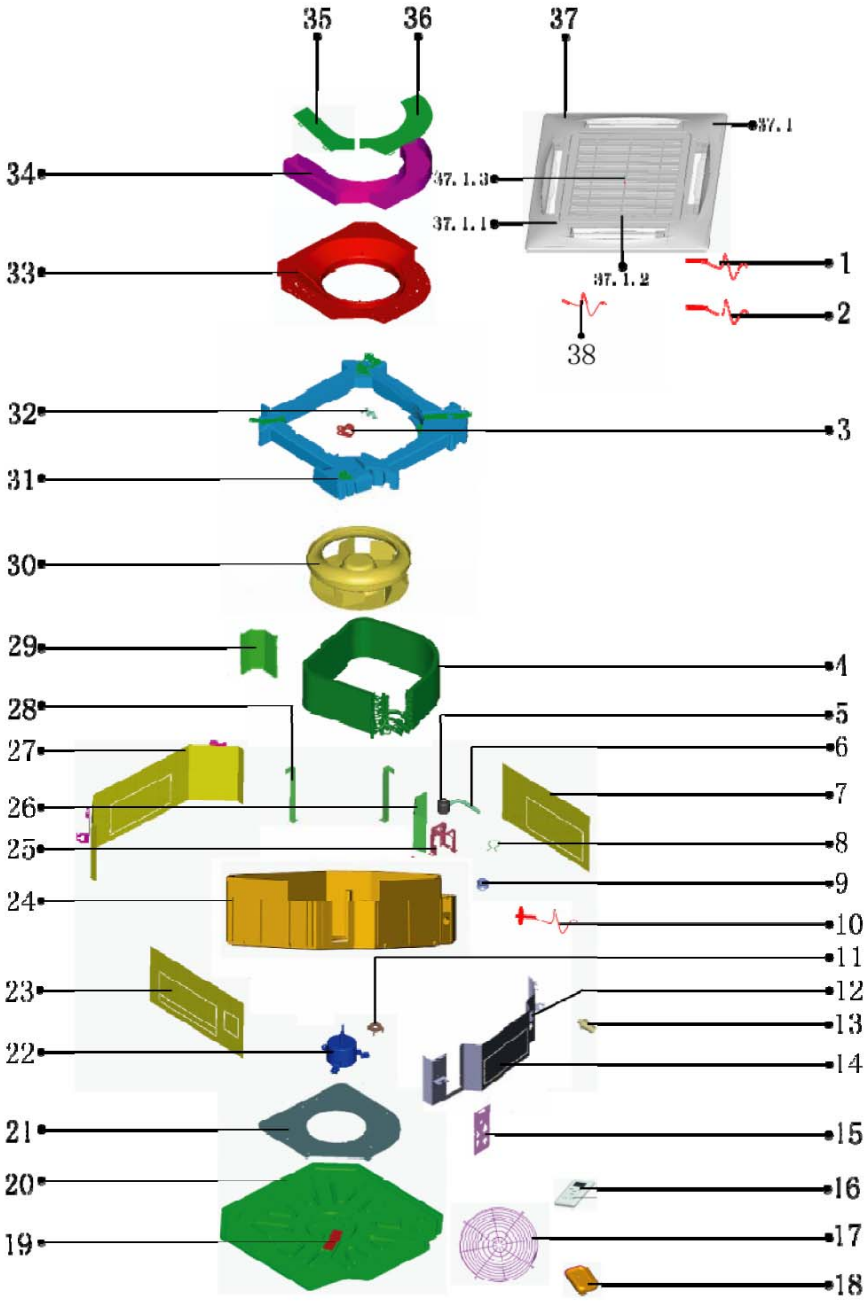
Model	Air flow volume (Hi)	Water temp. change	Air inlet temp. (20℃ DB)																							
			Water inlet temp. (℃)																							
			35			40			45			50			55			60			65			70		
			Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop
	m^3/h	℃	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa	kW	m^3/h	kPa
MKAi-600F	1150	10	0.74	0.06	4.29	1.61	0.14	9.34	2.47	0.21	14.33	3.30	0.28	19.15	4.14	0.36	24.03	4.98	0.43	28.87	5.85	0.50	33.94	6.67	0.55	36.90
		8	1.11	0.12	8.04	1.93	0.21	14.02	2.79	0.30	20.24	3.63	0.39	26.33	4.43	0.48	32.14	5.28	0.57	38.25	6.14	0.66	44.54	7.00	0.75	50.78
		7	1.26	0.15	10.42	2.09	0.26	17.35	2.96	0.36	24.56	3.76	0.46	31.19	4.60	0.56	38.10	5.43	0.67	44.96	6.32	0.78	52.36	7.20	0.88	59.69
		6	1.40	0.20	13.58	2.26	0.32	21.80	3.11	0.45	30.09	3.93	0.56	37.98	4.76	0.68	46.06	5.57	0.80	53.89	6.49	0.80	53.81	7.40	0.91	61.35
		5	1.55	0.27	18.01	2.42	0.35	23.36	3.26	0.56	37.83	4.09	0.70	47.50	4.93	0.85	57.19	5.72	0.98	66.40	6.67	1.15	77.37	7.60	1.31	88.21
MKAi-750F	1460	10	0.87	0.08	4.47	1.90	0.16	9.73	2.91	0.25	14.93	3.90	0.33	19.95	4.89	0.42	25.03	5.87	0.50	30.08	6.90	0.59	35.35	7.87	0.68	40.50
		8	1.31	0.14	8.38	2.28	0.25	14.60	3.29	0.35	21.08	4.29	0.46	27.43	5.23	0.56	33.48	6.23	0.67	39.85	7.25	0.78	46.40	8.26	0.89	52.90
		7	1.48	0.18	10.85	2.47	0.30	18.08	3.50	0.43	25.59	4.44	0.55	32.49	5.43	0.67	39.69	6.40	0.79	46.83	7.46	0.92	54.54	8.50	1.04	62.18
		6	1.66	0.24	14.15	2.66	0.38	22.71	3.67	0.53	31.35	4.64	0.66	39.57	5.62	0.81	47.98	6.58	0.94	56.14	7.66	0.94	56.06	8.74	1.07	63.91
		5	1.83	0.32	18.77	2.85	0.41	24.34	3.85	0.66	39.41	4.83	0.83	49.48	5.82	1.00	59.58	6.75	1.16	69.17	7.87	1.35	80.60	8.97	1.54	91.89
MKAi-850F	1480	10	0.89	0.08	4.48	1.95	0.17	9.77	2.99	0.26	14.98	3.99	0.34	20.02	5.01	0.43	25.12	6.01	0.52	30.18	7.07	0.61	35.48	8.06	0.67	39.10
		8	1.34	0.14	8.41	2.34	0.25	14.65	3.37	0.36	21.16	4.39	0.47	27.53	5.36	0.58	33.60	6.38	0.69	39.99	7.42	0.80	46.56	8.46	0.91	53.08
		7	1.52	0.19	10.89	2.53	0.31	18.14	3.58	0.44	25.68	4.55	0.56	32.61	5.56	0.68	39.83	6.56	0.81	47.00	7.64	0.94	54.73	8.70	1.07	62.40
		6	1.70	0.24	14.20	2.73	0.39	22.79	3.76	0.54	31.46	4.75	0.68	39.71	5.76	0.83	48.15	6.74	0.97	56.34	7.85	0.96	56.25	8.95	1.10	64.13
		5	1.88	0.32	18.83	2.92	0.42	24.42	3.94	0.68	39.54	4.95	0.85	49.65	5.96	1.02	59.78	6.92	1.19	69.42	8.06	1.39	80.88	9.19	1.58	92.21
MKAi-950F	1720	10	0.96	0.08	4.88	2.09	0.18	10.63	3.21	0.28	16.29	4.29	0.37	21.78	5.39	0.46	27.32	6.47	0.56	32.83	7.61	0.65	38.59	8.67	0.71	41.90
		8	1.44	0.15	9.14	2.51	0.27	15.94	3.63	0.39	23.01	4.72	0.51	29.95	5.76	0.62	36.55	6.86	0.74	43.50	7.99	0.86	50.65	9.10	0.98	57.74
		7	1.63	0.20	11.84	2.72	0.33	19.73	3.85	0.47	27.93	4.89	0.60	35.47	5.98	0.73	43.33	7.05	0.87	51.12	8.21	1.01	59.54	9.36	1.15	67.87
		6	1.83	0.26	15.44	2.93	0.42	24.79	4.05	0.58	34.22	5.11	0.73	43.19	6.19	0.89	52.37	7.25	1.04	61.28	8.44	1.04	61.19	9.62	1.18	69.76
		5	2.02	0.35	20.48	3.14	0.45	26.57	4.24	0.73	43.01	5.32	0.92	54.01	6.41	1.10	65.03	7.44	1.28	75.51	8.67	1.49	87.98	9.88	1.70	100.30
MKAi-1200F	1860	10	1.29	0.11	6.17	2.81	0.24	13.45	4.31	0.37	20.62	5.77	0.50	27.56	7.24	0.62	34.58	8.69	0.75	41.54	10.22	0.88	48.83	11.65	1.02	56.80
		8	1.94	0.21	11.57	3.38	0.36	20.17	4.88	0.52	29.12	6.34	0.68	37.89	7.74	0.83	46.25	9.22	0.99	55.05	10.73	1.15	64.09	12.23	1.31	73.07
		7	2.20	0.27	14.99	3.66	0.45	24.97	5.18	0.64	35.35	6.57	0.81	44.88	8.03	0.99	54.83	9.48	1.16	64.69	11.04	1.36	75.34	12.58	1.55	85.89
		6	2.45	0.35	19.54	3.94	0.56	31.38	5.44	0.78	43.30	6.86	0.98	54.66	8.32	1.19	66.27	9.74	1.40	77.55	11.34	1.39	77.44	12.93	1.59	88.28
		5	2.71	0.47	25.92	4.22	0.60	33.62	5.70	0.98	54.43	7.15	1.23	68.35	8.61	1.48	82.30	10.00	1.72	95.55	11.65	2.00	111.34	13.28	2.28	126.93
MKAi-1500F	2100	10	1.40	0.12	6.89	3.05	0.26	15.02	4.67	0.40	23.02	6.25	0.54	30.78	7.84	0.67	38.61	9.42	0.81	46.39	11.07	0.95	54.53	12.62	1.06	60.50
		8	2.10	0.23	12.92	3.66	0.39	22.52	5.28	0.57	32.52	6.87	0.74	42.32	8.39	0.90	51.64	9.98	1.07	61.47	11.62	1.25	71.57	13.25	1.42	81.59
		7	2.38	0.29	16.74	3.96	0.49	27.89	5.61	0.69	39.47	7.12	0.87	50.12	8.70	1.07	61.23	10.27	1.26	72.24	11.96	1.47	84.13	13.63	1.67	95.91
		6	2.66	0.38	21.82	4.27	0.61	35.04	5.89	0.84	48.35	7.43	1.07	61.04	9.01	1.29	74.01	10.55	1.51	86.60	12.29	1.51	86.47	14.01	1.72	98.58
		5	2.94	0.51	28.95	4.57	0.66	37.54	6.17	1.06	60.78	7.75	1.33	76.32	9.33	1.60	91.90	10.83	1.86	106.70	12.62	2.17	124.33	14.39	2.47	141.74

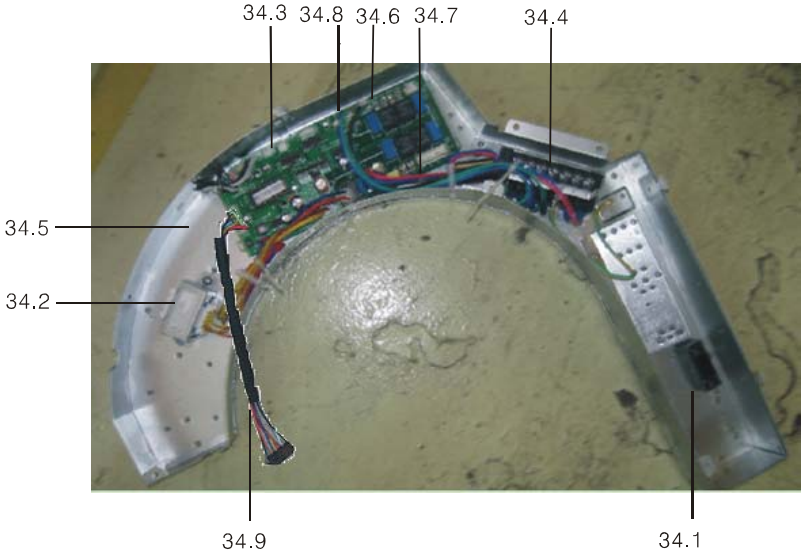
Heating capacity modification coefficient table:

Model	MKAi-600F	MKAi-750F	MKAi-850F	MKAi-950F	MKAi-1200F	MKAi-1500F
Mid-speed	1	0.87	0.86	0.88	0.9	0.9
Low-speed	1	0.75	0.75	0.76	0.76	0.75

10. Exploded View

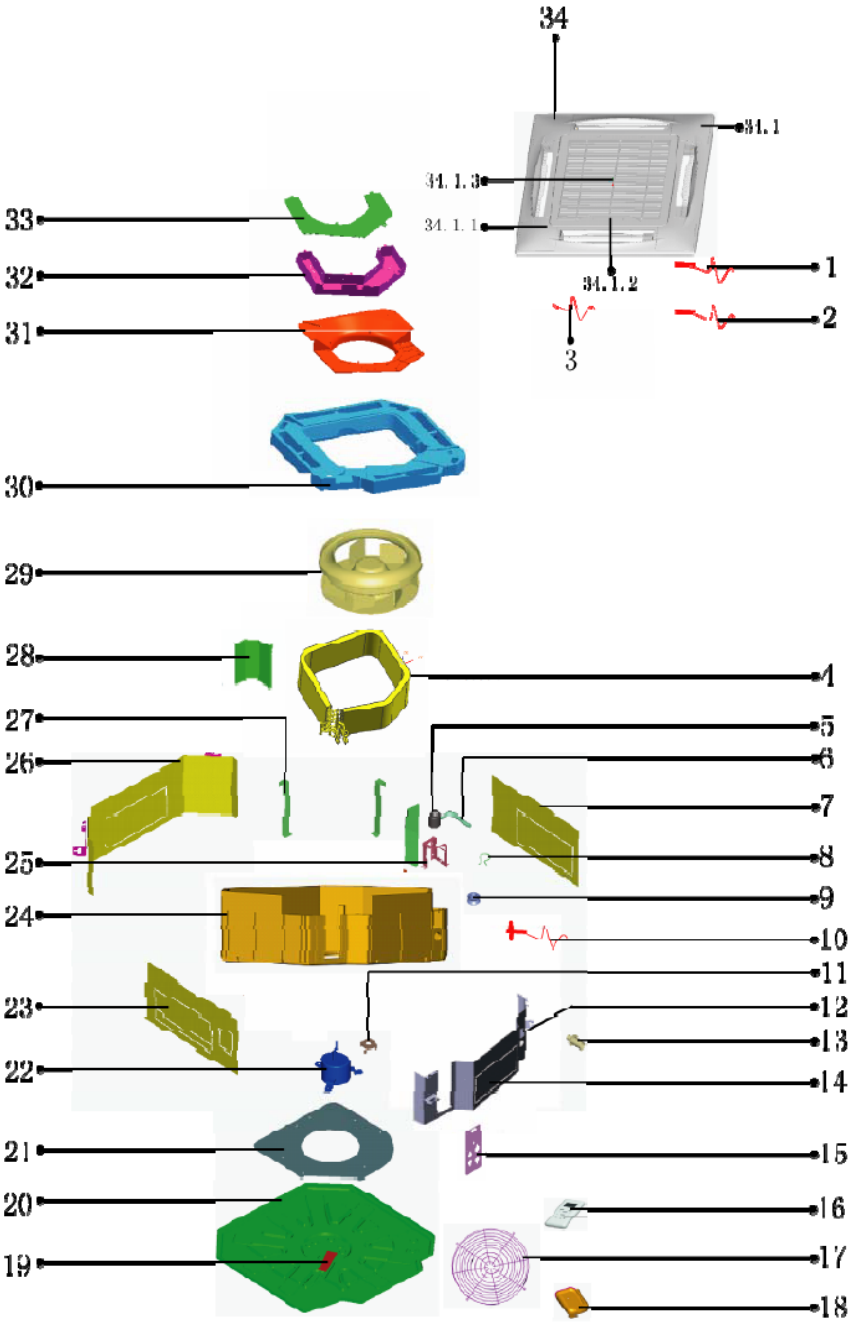
MKAi-600F MKAi-750F MKAi-850F MKAi-950F





No.	Part Name	Quantity	No.	Part Name	Quantity
1	Temperature sensor	1	27	Board ass'y	1
2	Temp. sensor ass'y	1	28	Evaporator fixing hanger	3
3	Wire clip	1	29	Evaporator fixing board	1
4	Evaporator ass'y	1	30	Fan ass'y	1
5	Drain pump	1	31	Foam ass'y	1
6	Water pipe	1	32	Wire clamp	1
7	Board ass'y	1	33	Ring ass'y	1
8	Water pipe clamp	1	34	E-part box	1
9	Pump rubber washer	3	34.1	Motor capacitor	1
10	Water level sensor ass'y	1	34.2	Transformer	1
11	Fan clip	1	34.3	Main controller ass'y	1
12	Water cover ass'y	1	34.4	Wire joint, 7p	1
13	Water pipe	1	34.5	E-part box	1
14	Board ass'y	1	34.6	Outdoor communication cable	1
15	Cover ass'y	1	34.7	Wire	1
16	Remote controller	1	34.8	Outdoor communication cable	1
17	Net	1	34.9	Signal wire	1
18	Installation bracket	1	35	Electricity control box coping II	1
19	Wire clamp	1	36	Electricity control box coping I	1
20	Base	1	37	Panel	1
21	Gasket	1	37.1	Panel ass'y	1
22	Fan Motor	1	37.1.1	Swing motor	2
23	Board ass'y	1	37.1.2	Display control box ass'y	1
24	Foam ass'y	1	37.1.3	Room temp sensor ass'y	1
25	Water Pump installation bracket ass'y	1	38	Fan motor connection cable	1
26	Water pump board	1			

MKAi-1200F MKAi-1500F



No.	Part Name	Quantity	No.	Part Name	Quantity
1	Temperature sensor	1	25	Water Pump installation bracket ass'y	1
2	Temp.sensor ass'y	1	26	Board ass'y	1
3	Fan motor connection cable	1	27	Evaporator Fixing board	2
4	Evaporator ass'y	1	28	Evaporator joint board	1
5	Drain pump	1	29	Fan ass'y	1
6	Water pipe	1	30	Foam ass'y	1
7	Board ass'y	1	31	Ring ass'y	1
8	Water pipe clamp	1	32	E-part box ass'y	1
9	Pump rubber washer	3	32.1	E-part box	1
10	Water level sensor ass'y	1	32.2	Motor capacitor	1
11	Fan clip	1	32.3	Transformer	1
12	Water cover ass'y	1	32.4	Outdoor communication cable	1
13	Water pipe	1	32.5	Outdoor communication cable	1
14	Board ass'y	1	32.6	Wire	1
15	Cover ass'y	1	32.7	Main controller ass'y	1
16	Remote controller	1	32.8	Wire joint, 7p	1
17	Net	1	32.9	Signal wire	1
18	Installation bracket	1	33	E-Part box cover	1
19	Wire clamp	1	34	Panel	1
20	Base	1	34.1	Panel ass'y	1
21	Gasket	1	34.1.1	Swing motor	2
22	Motor	1	34.1.2	Display control box ass'y	1
23	Board ass'y	1	34.1.3	Room temp sensor ass'y	1
24	Foam ass'y	1			

11. Installation

11.1 Installation space

The indoor unit should be installed in a location that meets the following requirements:

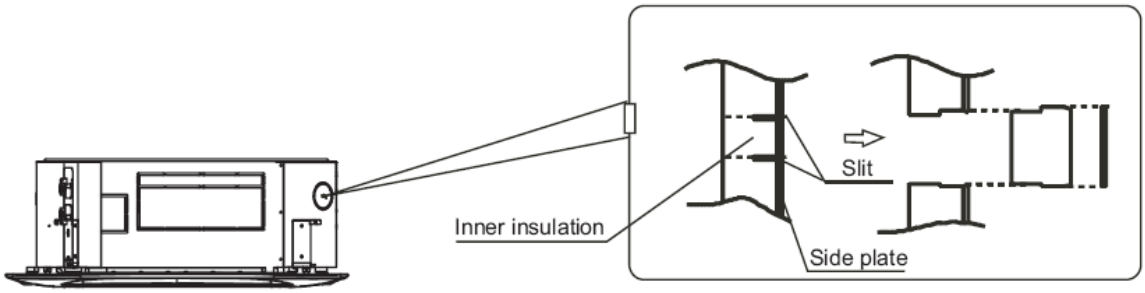
- There is enough room for installation and maintenance.
- The ceiling is horizontal, and its structure can endure the weight of the indoor unit.
- The outlet and the inlet are not impeded, and the influence of external air is the least.
- The air flow can reach throughout the room.
- The connecting water pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.

Caution:

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)

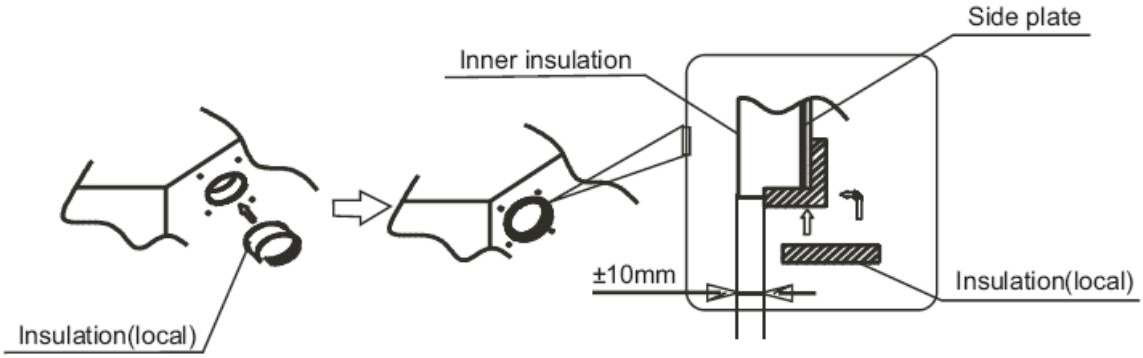
11.2 Installation procedures for fresh air intake duct connection

■ Preparing the connection hole



- Cut off the knockout hole on the side plate with a nipper.
- Cut the inner insulation of the hole portion with a cutter.

■ Placing the insulation



- Put the insulation tightly around the hole of the unit as shown. The ends of the side plate and the inner insulation must be completely adhered without leaving any clearance along the circumference of the hole. Make sure the inner surface of insulation tightly contacts the inner insulation edge and the side plate.

11.3 Install the main body

A. The existing ceiling (to be horizontal)

a. Cut a quadrangular hole of 880×880mm in the ceiling according to the shape of the installation paper board.

- The center of the hole should be at the same position of that of the air conditioner body.
- Determine the lengths and outlets of the connecting pipe, drain pipe and cables.
- To balance the ceiling and to avoid vibration, please enforce the ceiling when necessary.

b. Select the position of installation hooks according to the hook holes on the installation board.

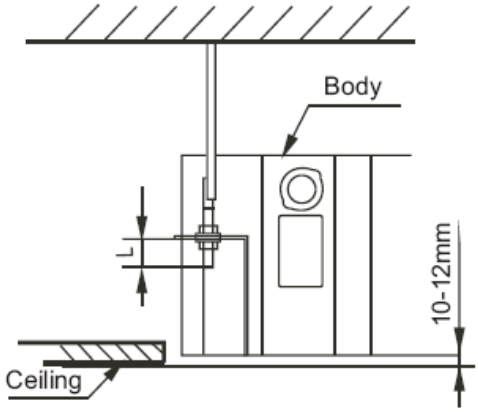
- Drill four holes of Ø12mm, 50~55mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).
- Face the concave side of the installation hooks toward the expansible hooks. Determine the length of

the installation hooks from the height of ceiling, and then cut off the unnecessary part.

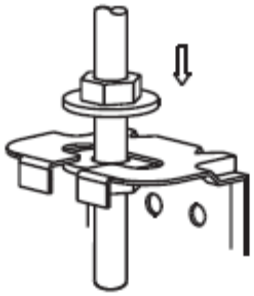
- If the ceiling is extremely high, please determine the length of the installation hook according to facts.

c. Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body.

- If the drainpipe is awry, leakage will be caused by the malfunction of the water-level switch.
- Adjust the position to ensure the gaps between the body and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10~12 mm.



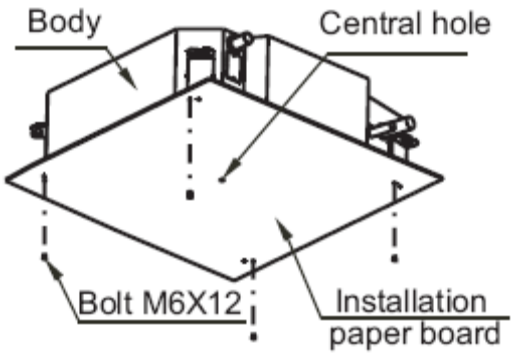
- In general, L is half of the screw length of the installation hook.
- Locate the air conditioner firmly by wrenching the nuts after having adjusted the body's position well.



B. New built houses and ceilings

a. In the case of new built house, the hook can be embedded in advance (refer to the A.b mentioned above). But it should be strong enough to bear the indoor unit and will not become loose because of concrete shrinking.

b. After installing the body, please fasten the installation paper board onto the air conditioner with bolts (M6*12) to determine in advance the sizes and positions of the hole opening on ceiling.



- Please first guarantee the flatness and horizontal of ceiling when installing it.
- Refer to the A.a mentioned above for others.

c. Refer to the A.c mentioned above for installation.

d. Remove the installation paper board.

Caution:

After installing the body, the four bolts(M6x12) must be fastened to the air conditioner onto ensure the body is grounded well.

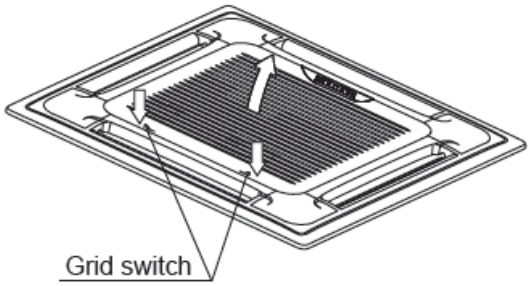
11.4 Install the Panel

Caution:

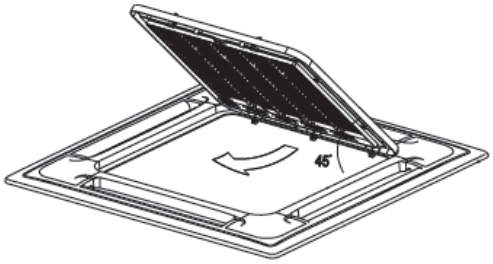
Never put the panel face down on floor or against the wall, or on bulgy objects.
Never crash or strike it.

(1) Remove the air inlet grill.

a. Slide two grid switches toward the middle at the same time, and then pull them up.

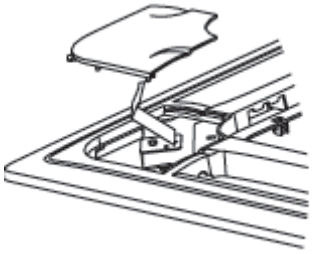


b. Draw the grid up to an angle of about 45°, and remove it.



(2) Remove the installation covers at the four corners.

Wrench off the bolts, loose the rope of the installation covers, and remove them.



(3) Install the panel

a. Align the swing motor on the panel to the tubing joints of the body properly.
b. Fix hooks of the panel at swing motor and its opposite sides to the hooks of corresponding water receiver. Then hang the other two panel hooks onto corresponding hangers of the body.

Cautions

Do not coil the wiring of the swing motor into the seal sponge.

c. Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly.
d. Regulate the panel in the direction of the arrow slightly to fit the panel's center to the center of the ceiling's opening. Guarantee that hooks of four corners are fixed well.
e. Keep fastening the screws under the panel hooks, until the thickness of the sponge between the body and the panel's outlet has been reduced to about 4~6mm. The edge of the panel should contact with the ceiling well.

If the gap between the panel and ceiling still exists after fastening the screws, the height of the indoor unit should be modified again.

You can modify the height of the indoor unit through the openings on the panel's four corners; if the lift of the indoor unit and the drainpipe is not influenced.

(4) Hang the air-in grid to the panel, and then connect the lead terminator of the swing motor and that of the control box with corresponding terminators on the body respectively.

(5) Relocate the air-in grid in the procedure of reversed order.

(6) Relocate the installation cover.

a. Fasten the rope of installation cover on the bolt of the installation cover. (Refer to chart 16-left)

b. Press the installation cover into the panel slightly. (Refer to chart 16-right)

11.5 Connect the Drain Pipe

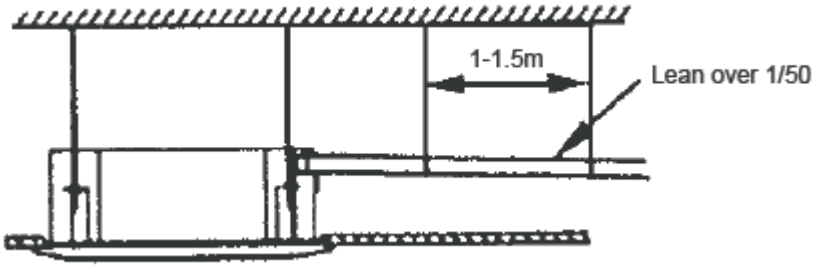
11.5.1 Install the drainpipe of the indoor unit

- You can use a polyethylene tube as the drainpipe (out-dia. 37~39mm, in-dia. 32mm). It could be bought at local market or from your dealer.
- Set the mouth of the drainpipe onto the root of the body's pump-pipe, and clip the drainpipe and the out-let pipe sheath (fittings) together firmly with the out-let pipe clasp (fitting).

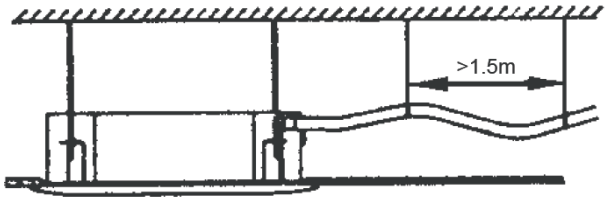
Cautions:

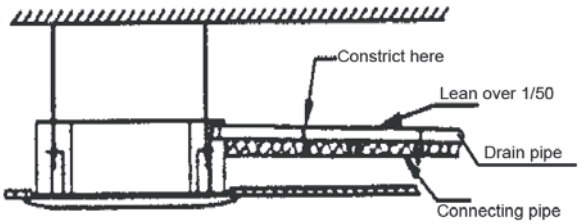
Use your strength carefully to prevent the pump-pipe from breaking.

- The body's pump pipe and the drainpipe (especially the indoor part) should be covered evenly with the out-let pipe sheath (fittings) and be bound tightly with the constrictor to prevent condensation caused by entered air.
- To prevent water from flowing backwards into the air conditioner while the air conditioner stops, please lean the drainpipe down toward outdoor (outlet-side) at a degree of over 1/50. And please avoid any bulge or water deposit. (Refer to the following)

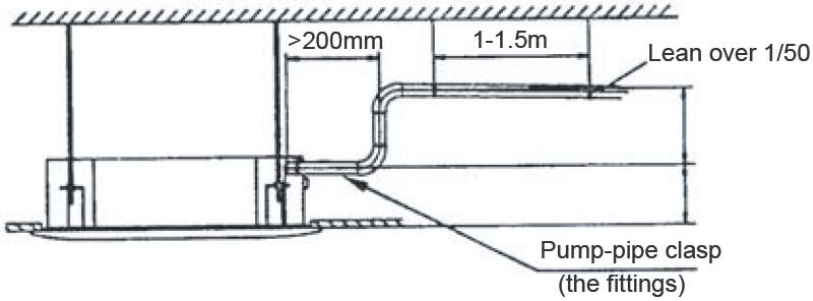


- Do not drag the drainpipe violently when connecting to prevent the body from being pulled.
- Meanwhile, one support-point should be set every 1~1.5m to prevent the drainpipe from yielding. Or you can tie the drainpipe with the connecting pipe to fix it.





- In the case of prolonged drainpipe, you had better tighten its indoor part with a protection tube to prevent it from loosing.
- If the outlet of the drainpipe is higher than the body's pump joint, the pipe should be arranged as vertically as possible. And the lift distance must be less than 750mm, otherwise the water will overflow when the air conditioner stops.



- The end of the drainpipe should be over 50mm higher than the ground or the bottom of the drainage chute, and do not immerse it in water. If you discharge the water directly into sewage is sure to make a U-form aqua seal by bending the pipe up to prevent the smelly gas entering the house through the drain pipe.

Cautions:

All the joints of the drain system must be sealed to prevent water leakage.

1. All field piping must be provided by a licensed water technician and must comply with the relevant local and national codes.
2. Do not let air, dust, or other impurities fall in the pipe system during the time of installation.
3. The connecting pipe should not be installed until the indoor and outdoor units have been fixed already.
4. Keep the connecting pipe dry, and do not let moisture in during installation.

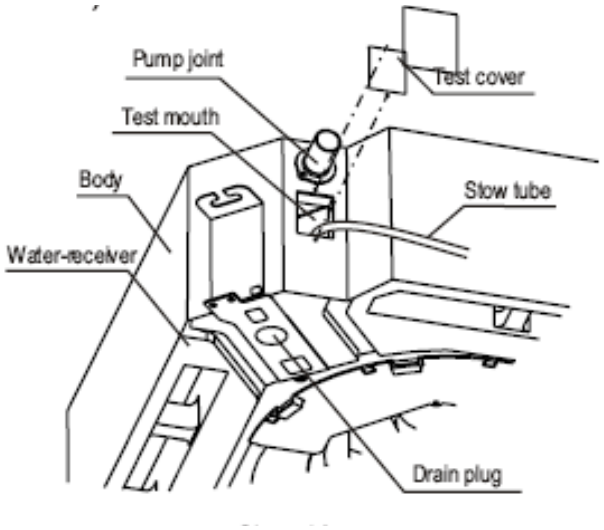
Note:

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased (depend on model).The actual shape shall prevail.

11.5.2 Drainage test

- Check whether the drainpipe is unhindered.
- New built house should have this test done before paving the ceiling.

1. Remove the test cover, and stow water of about 2000ml to the water receiver through the stow tube.



2. Turn on the power, and operate the air conditioner under the "COOLING" mode. Listen to the sound of the drain pump. Check whether the water is discharged well (a lag of 1min is allowed before discharging, according to the length of the drain pipe), and check whether water leaks from the joints.

Cautions: If there is any malfunction, please resolve it immediately.

3. Stop the air conditioner for there minutes, check if everything is ok. If the drain hose is located unreasonable, water overflow will cause the Alarm indicator lamp flashing (For both cooling and heating type or cooling only type), even the water leak out from the water receiver.
4. Check the drain pump whether drain water immediately when alarm sound for the high water lever. If the water lever can't come down below to the limited water lever, the air conditioner will stop. Restart it until turn off the power and drain off all the water.
5. Turn off the power, drain the water away.

- The drain plug is used to empty the water-receiver for maintenance of the air conditioner. Please stuff it imposition at all times during operation to avoid leakage.

11.6 Wiring

Caution:

1. The air conditioner should use separate power supply with rated voltage.
2. The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit.
3. The wiring work should be done by qualified persons according to circuit drawing.
4. An all-pole disconnection switch having a contract separation of at least 3mm in a pole should be connected in fixed wiring.
5. Be sure to locate the power wiring and the signal wiring well to avoid cross-disturbance.
6. Do not turn on the power until you have checked carefully after wiring.

Note:

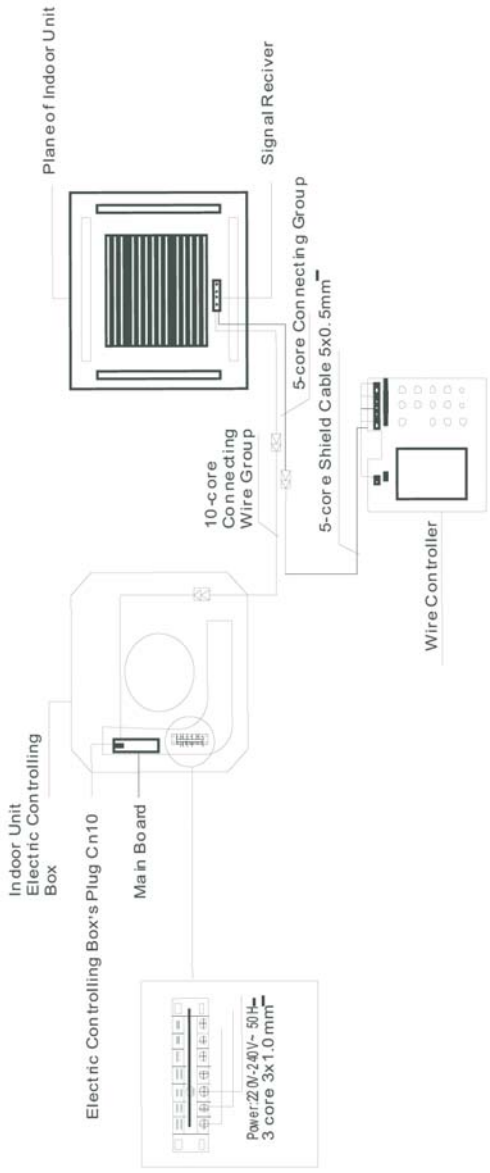
Remark per EMC Directive 89/336/EEC to prevent flicker impressions during the start of the compressor (technical process), following installation conditions do apply.

1. The power connection for the air conditioner has to be done at the main power distribution. The distribution has to be of a low impedance, normally the required impedance reaches at a 32A fusing point.
2. No other equipment has to be connected with this power line.
3. For detailed installation acceptance please refer to your power supplier, if restrictions do apply for products like washing machines, air conditioners or electrical ovens.
4. For power details of the air conditioner refer to the rating plate of the product.
5. For any question contact your local dealer.

11.6.1 Connect the cable

- Dissemble the bolts from the cover.(If there isn't a cover on the outdoor unit, disassemble the bolts from the maintenance board, and pull it in the direction of the arrow to remove the protection board.)
- Connect the connective cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.
- Re-install the cover or the protection board.

11.6.2 Wiring figure



11.7 Test operation

(1) The test operation must be carried out after the entire installation has been completed.
(2) Please confirm the following points before the test operation.
The indoor unit and outdoor unit are installed properly.
Tubing and wiring are correctly completed.
The refrigerant pipe system is leakage-checked.
The drainage is unimpeded.

The ground wiring is connected correctly.
The length of the tubing and the added stow capacity of the refrigerant have been recorded.
The power voltage fits the rated voltage of the air conditioner.
There is no obstacle at the outlet and inlet of the outdoor and indoor units.
The gas-side and liquid-side stop values are both opened.
The air conditioner is pre-heated by turning on the power.

(3) According to the user's requirement, install the remote controller when the remote controller's signal can reach the indoor unit smoothly.

(4) Test operation

Set the air conditioner under the mode of "COOLING" with the remote controller, and check the following points.

- Whether the switch on the remote controller works well.
- Whether the buttons on the remote controller works well.
- Whether the air flow louver moves normally.
- Whether the room temperature is adjusted well.
- Whether the indicator lights normally.
- Whether the temporary buttons works well.
- Whether the drainage is normal.
- Whether there is vibration or abnormal noise during operation.
- Whether the air conditioner heats well in the case of the HEATING/COOLING type.