Haier

Air-conditioner

ENGINEERING DATA

Split type air conditioner

MODELS:

HSU-07RD03 HSU-07LD03
HSU-09RD03 HSU-09LD03
HSU-12RD03 HSU-12LD03

Content

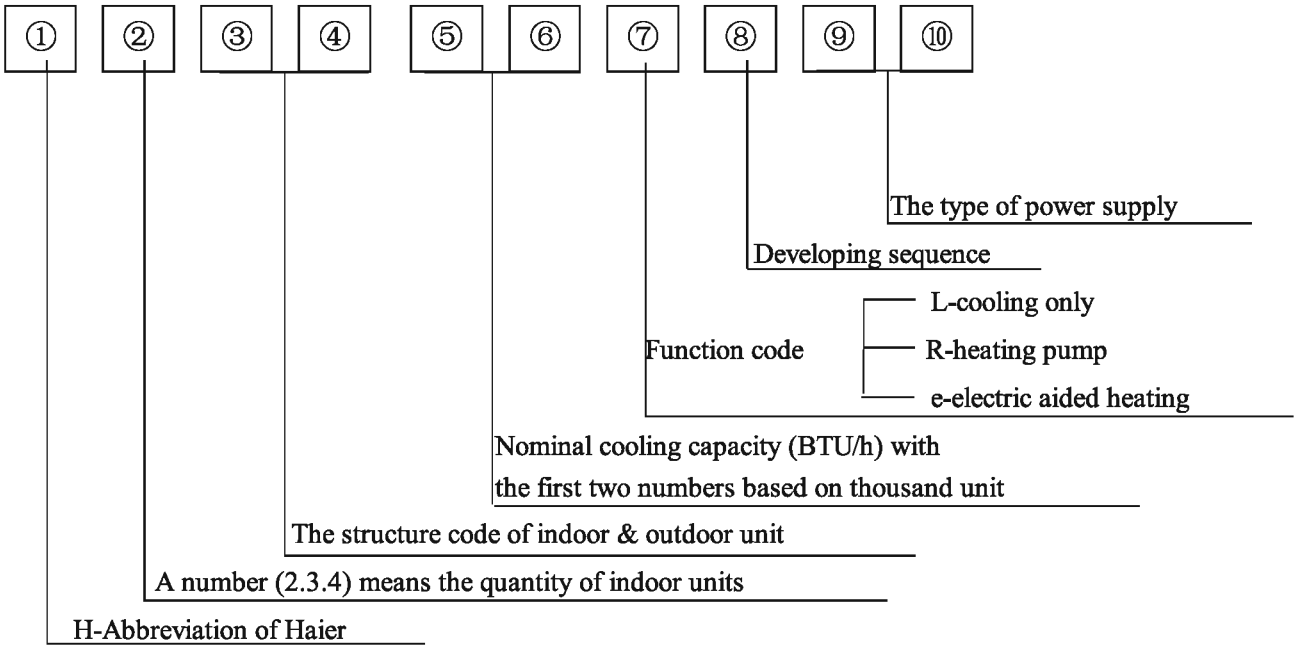
DESCRIPTION OF

PRODUCT MODEL CODING

& SERIES INTRODUCTION

A. Description of coding rules of unit model

The rules and descriptions of models are as follows:



Examples:
HSU-07RD03
It represents wall-mounted multi-type room air conditioner(heating pump). The total cooling capacity is 7000BTU/h and the power supply is 220-230V/50Hz. The “D” means the developing sequence. The refrigerant of R22.

B、Standard operating conditions

Serial no.	Operating conditions	Indoor operating conditions		Outdoor operating conditions	
		Temperature	Humidity	Temperature	Humidity
1	Nominal cooling	27.0 dB℃	19.0 WB℃	35.0 dB℃	24.0 WB℃
2	Nominal heating	20 dB℃	15(MAX） WB℃	7.0 dB℃	6.0 WB℃
3	Nominal electric heating	-	-	-	-

C、Series introduction

1.comfortable: wide-angle airflow.

The vertical dual-flap and horizontal wide-angle louvers ensure the cool (warm) air reaches every corner of the room.

2.Health air purifying

An air purifying filter with deodorizing and disinfecting functions keep the air clean and users healthy.

3.Quiet operation

Fan With Random-pitched Blades.

Random-pitched blades help reduce operating noise while maintaining a high airflow rate.

4.Energy efficient

The design of inner-grooved copper tube greatly increases the refrigerant contact area and the efficiency of cooling/heating functions.

5. Convenience

Auto restart and washable panel:

The grille can be removed easily and washed when necessary. Even if the power fails when the unit is operating, the unit will automatically return to the operating settings in use before the power failure when power is restored.

6. Wide variety of functions

24-Hour Timer:

24-hour Timer allows users to select the exact time they would like the air conditioner to turn on and to turn off. Timers on previous models operation based on the number of hours of desired operation.

Night-set models

When the air conditioner is operating on the timer-off circuit. The preset room temperature gradually rises (going down in heating) before the unit stops as shown below. Users can sleep comfortably without sudden change in temperature.

Program dry

This function automatically reduces the level of humidity while maintaining the preset indoor temperature.

SPECIFICATIONS

Specification:

Model:	HSU-07RD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	2050W	Heating capacity:	2300W
Cooling coefficient:	2.6	Heating coefficient:	3.0
cooling Power input:	770W	Heating power:	750W
Moisture removal	1.3X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	-7°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	37/35/30dB(A)	outdoor unit noise (cooling)	52dB(A)
Indoor unit noise (heating)	37/35/30dB(A)	outdoor unit noise (heating)	52dB(A)
net dimensions	795 x285x182mm	net dimensions ----------	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	28/33(net/gross) kg
Refrigerant charge	R22 540g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	860g
Compressor model	KH134VFRC	Compressor manufacturer	Hitachi
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	10m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP_2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	1/4",3/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

Model:	HSU-07LD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	2050W	Heating capacity:	
Cooling coefficient:	2.6	Heating coefficient:	----------
cooling Power input:	770W	Heating power:	----------
Moisture removal	1.3X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	18°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	37/35/30dB(A)	outdoor unit noise (cooling)	52dB(A)
Indoor unit noise (heating)	----------	outdoor unit noise (heating)	----------
net dimensions	795 x285x182mm	net dimensions	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	28/33(net/gross) kg
Refrigerant charge	R22 550g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	860g
Compressor model	KH134VFRC	Compressor manufacturer	Hitachi
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	7m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP_2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	0.65MPa
cut-off valve:	1/4",3/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

Model:	HSU-09RD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	2500W	Heating capacity:	2800W
Cooling coefficient:	2.6	Heating coefficient:	3.0
cooling Power input:	960W	Heating power:	950W
Moisture removal	1.3X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	-7°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	37/35/30dB(A)	outdoor unit noise (cooling)	52dB(A)
Indoor unit noise (heating)	37/35/30dB(A)	outdoor unit noise (heating)	52dB(A)
net dimensions	795 x285x182mm	net dimensions	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	29/34(net/gross) kg
Refrigerant charge	R22 720g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	1060g
Compressor model	2P17S225ANA	Compressor manufacturer	PANISONIC
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	7m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	1/4",3/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

Model:	HSU-09LD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	2500W	Heating capacity:	----------
Cooling coefficient:	2.6	Heating coefficient:	----------
cooling Power input:	950W	Heating power:	----------
Moisture removal	1.3X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	18°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	37/35/30dB(A)	outdoor unit noise (cooling)	52dB(A)
Indoor unit noise (heating)	----------	outdoor unit noise (heating)	----------
net dimensions	795 x285x182mm	net dimensions	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	29/34(net/gross) kg
Refrigerant charge	R22 780g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	1060g
Compressor model	2P16S225ANA	Compressor manufacturer	PANISONIC
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	7m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP_2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	0.65MPa
cut-off valve:	1/4",3/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

Model:	HSU-12RD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	3500W	Heating capacity:	3800W
Cooling coefficient:	2.6	Heating coefficient:	3.0
cooling Power input:	1300W	Heating power:	1300W
Moisture removal	1.5X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	-7°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	39/37/30dB(A)	outdoor unit noise (cooling)	55dB(A)
Indoor unit noise (heating)	39/37/30dB(A)	outdoor unit noise (heating)	55dB(A)
net dimensions	795 x285x182mm	net dimensions	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	35/40(net/gross) kg
Refrigerant charge	R22 980g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	1200g
Compressor model	48R343AL-55S	Compressor manufacturer	TCL
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	7m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	1/4",1/2"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

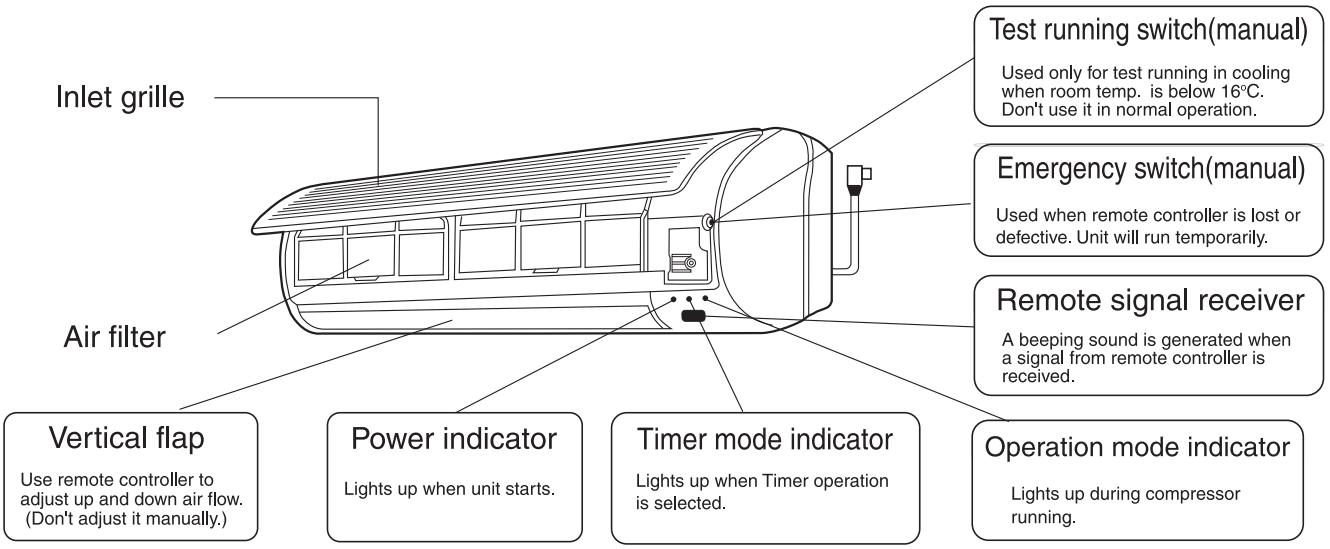
Specification:

Model:	HSU-12LD03	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	3500W	Heating capacity:	----------
Cooling coefficient:	2.6	Heating coefficient:	----------
cooling Power input:	1300W	Heating power:	----------
Moisture removal	1.5X10-3m3/h	Frequency range	50Hz
Operating voltage range	1PH, 220-230V~,50Hz	Refrigerant type	R22
Operating temp. range	18°C-43°C	Air sending angle/distance	60°
Variation of temp. adjust	±1°C	Fan type/quantity	Cross flow fan(indoor unit) Axial fan(outdoor unit)
Climate type:	T1	Class of electric shock	I
Indoor unit noise (cooling)	39/37/30dB(A)	outdoor unit noise (cooling)	55dB(A)
Indoor unit noise (heating)	----------	outdoor unit noise (heating)	----------
net dimensions	795 x285x182mm	net dimensions	700x250X182mm
Packaging dimensions (indoor unit)	865x272x330mm	Packaging dimensions (outdoor unit)	790X366X484mm
weight(indoor unit)	7.2/10.2(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	35/40(net/gross) kg
Refrigerant charge	R22 940g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	1150g
Compressor model	QX-23B030	Compressor manufacturer	LINDA
Compressor oil charge	---------	Compressor protector type	----------
Maxi. length of connecting pipe:	7m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP2Y copper tube	Length/diameter of drain hose	2000mm/ϕ15.6mm
Fan speed: (r/min)	1100/1000/900(indoor) 1060(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ7/ϕ12.7mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	0.65MPa
cut-off valve:	1/4",1/2"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

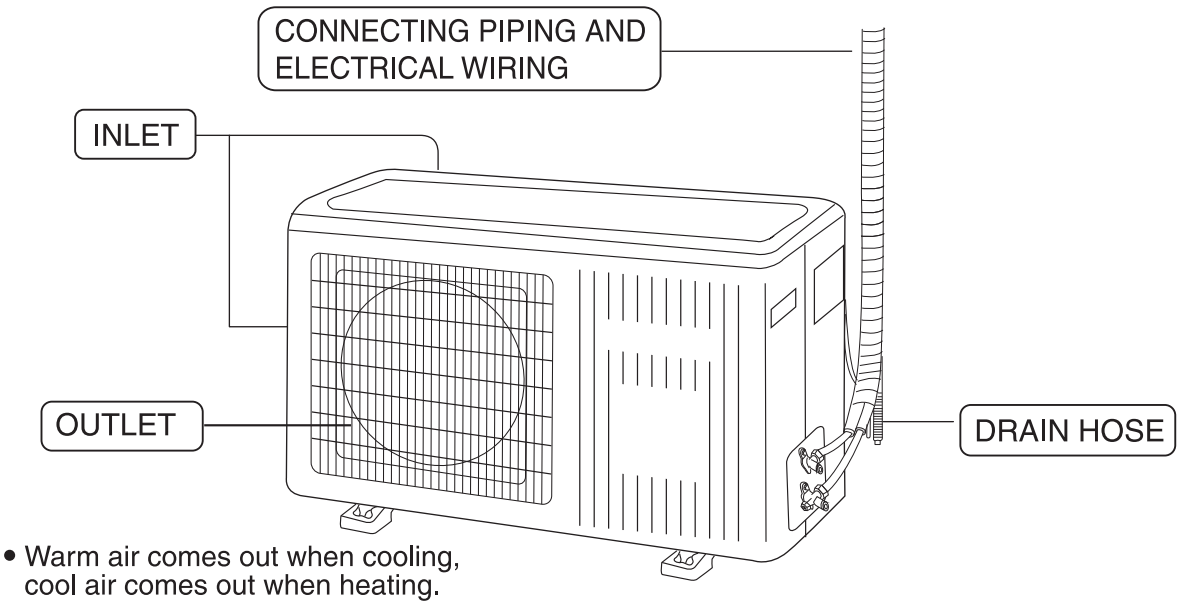
DESCRIPTION, DIMENSION & FUNCTION OF MAIN COMPONENTS AND ACCESSORIES

Description and function of main components and accessories

Indoor Unit



Outdoor Unit

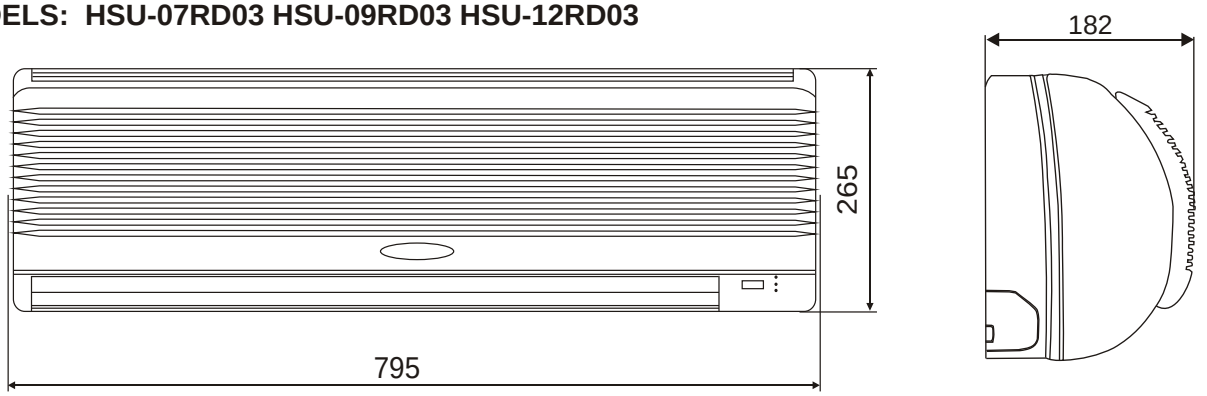


- Warm air comes out when cooling, cool air comes out when heating.

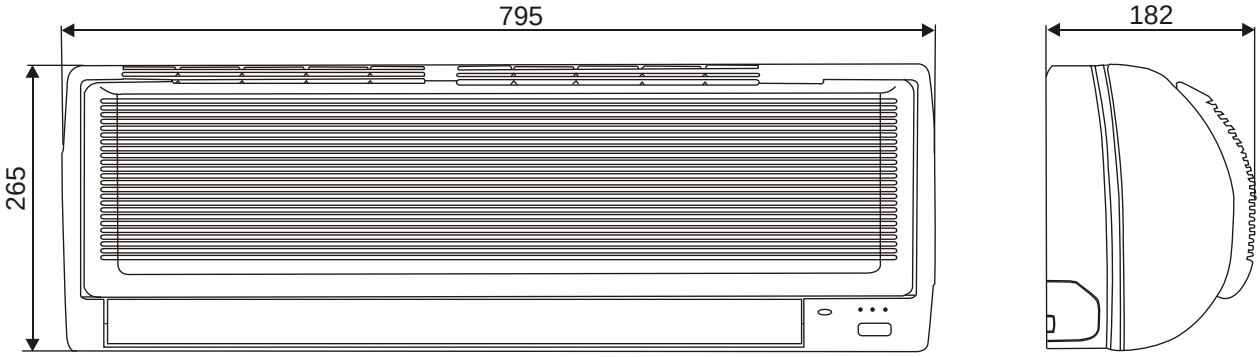
NET DIMENSIONS:

Indoor unit

MODELS: HSU-07RD03 HSU-09RD03 HSU-12RD03



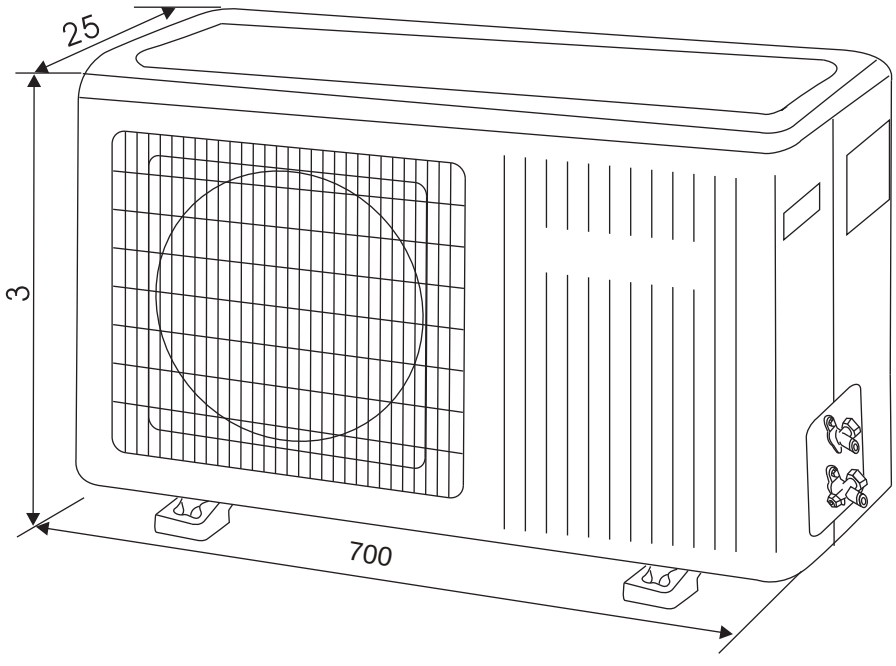
MODELS: HSU-07LD03 HSU-09LD03 HSU-12LD03



NET DIMENSIONS:

Indoor unit

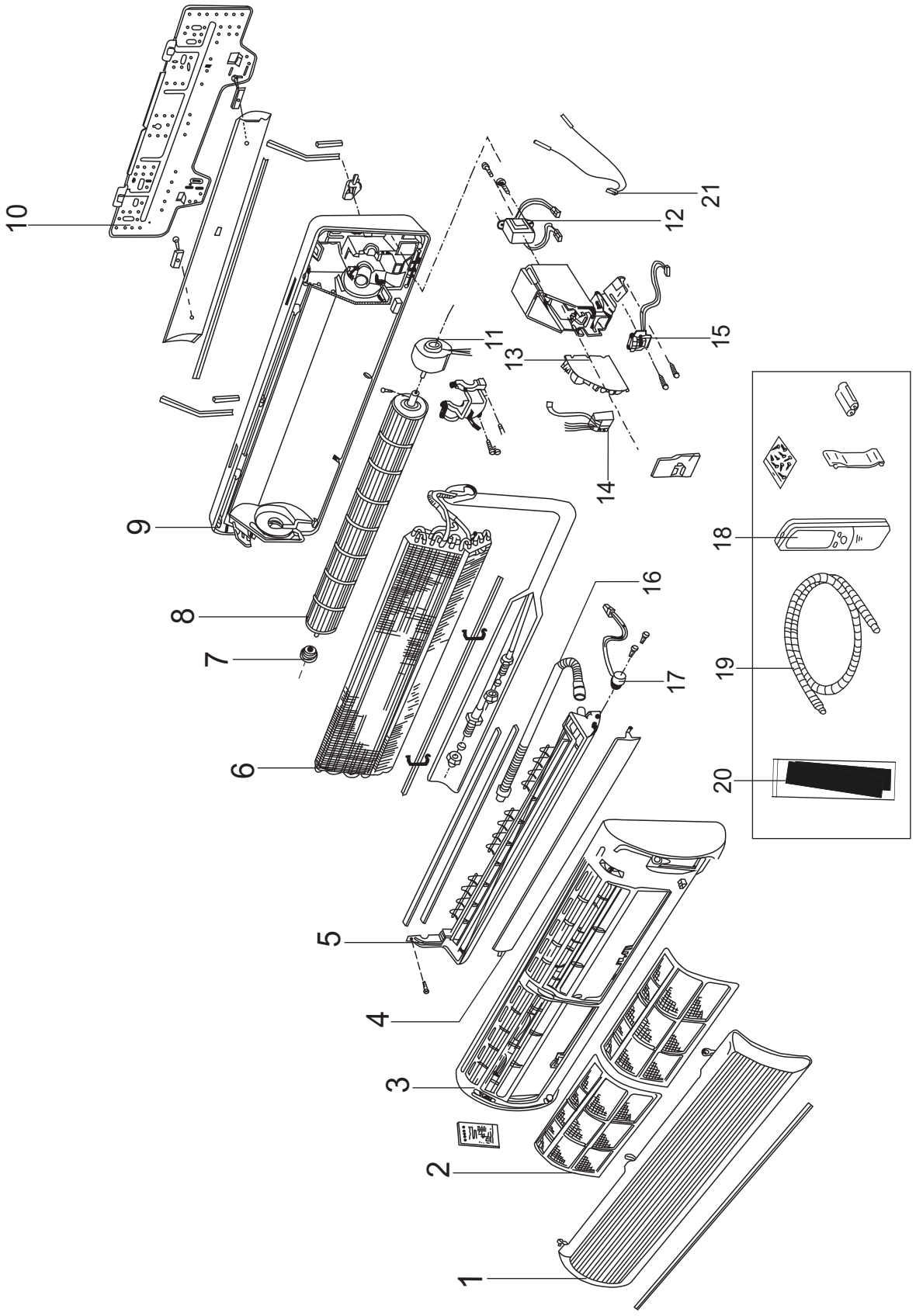
MODELS: HSU-07RD03 HSU-09RD03 HSU-12RD03
HSU-07LD03 HSU-09LD03 HSU-12LD03



KNOCK-DOWN DRAWINGS

MODELS : HSU-07RD03 HSU-07LD03
HSU-09RD03 HSU-09LD03
HSU-12RD03 HSU-12LD03

KNOCK-DOWN DRAWINGS FOR INDOOR UNIT



Knock-down drawings for indoor unit
Models:HSU-07RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232303	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A1232074	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010702790	1	
7	Bearing	001A0300005	1	
8	Fan	001A2300117	1	
9	Rear case assy.	001A0100199	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000052	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

KNOCK-DOWN DRAWINGS FOR INDOOR UNIT
MODELS:HSU-07LD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232075	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A0100198	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010702790	1	
7	Bearing	001A0300005	1	
8	Fan	001A2300117	1	
9	Rear case assy.	001A0100199	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000051	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

Knock-down drawings for indoor unit
Models:HSU-09RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232303	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A1232074	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010703919	1	
7	Bearing	001A0300005	1	
8	Fan	001A2300117	1	
9	Rear case assy.	001A0100199	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000052	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

Knock-down drawings for indoor unit
Models:HSU-09LD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232075	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A0100198	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010703919	1	
7	Bearing	001A0300005	1	
8	Fan	001A2300117	1	
9	Rear case assy.	001A0100199	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000051	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

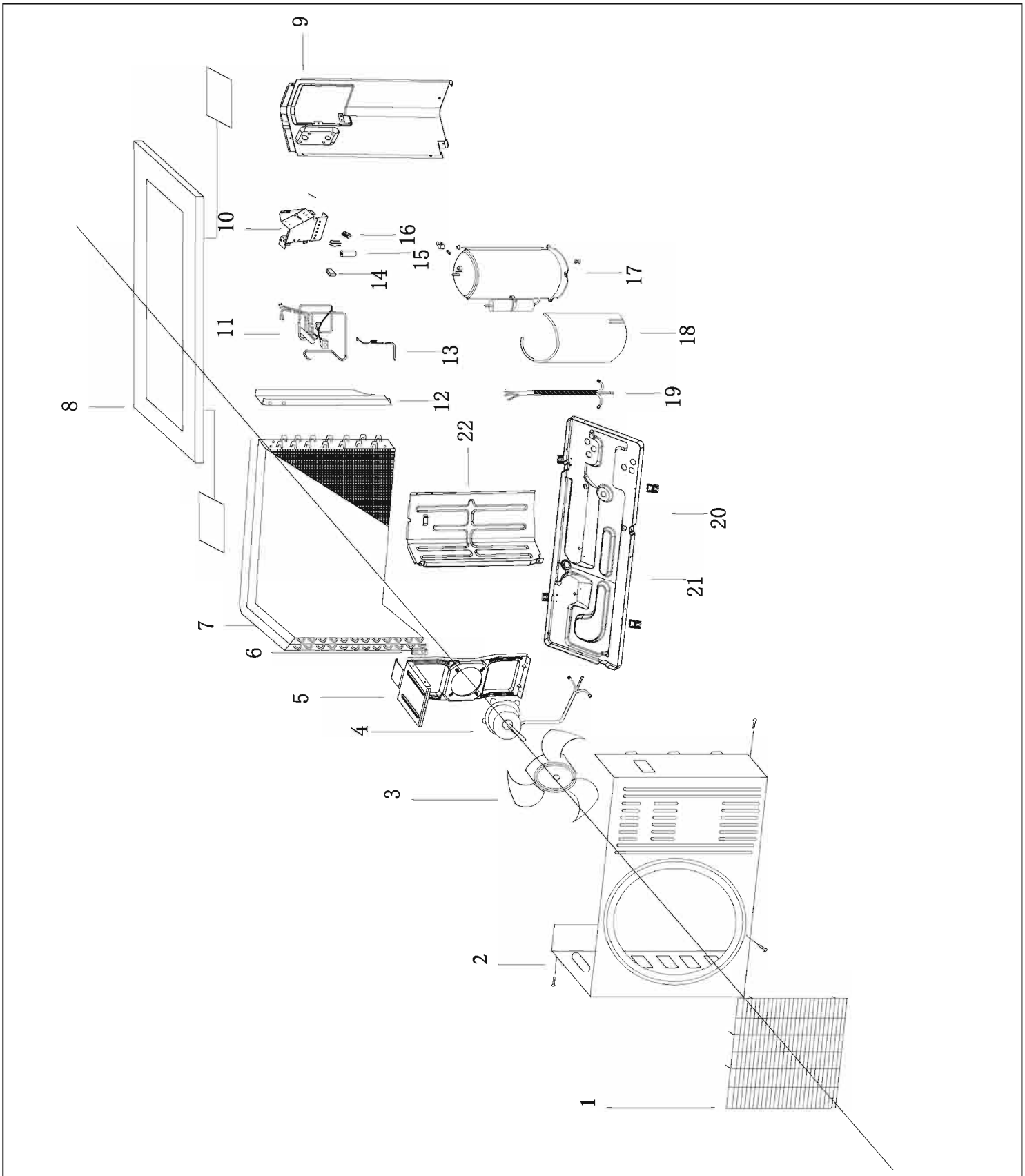
Knock-down drawings for indoor unit
Models:HSU-12RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232303	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A1232074	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010703599	1	
7	Bearing	001A0300005	1	
8	Fan	0010202415	1	
9	Rear case assy.	001A0100206	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000052	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

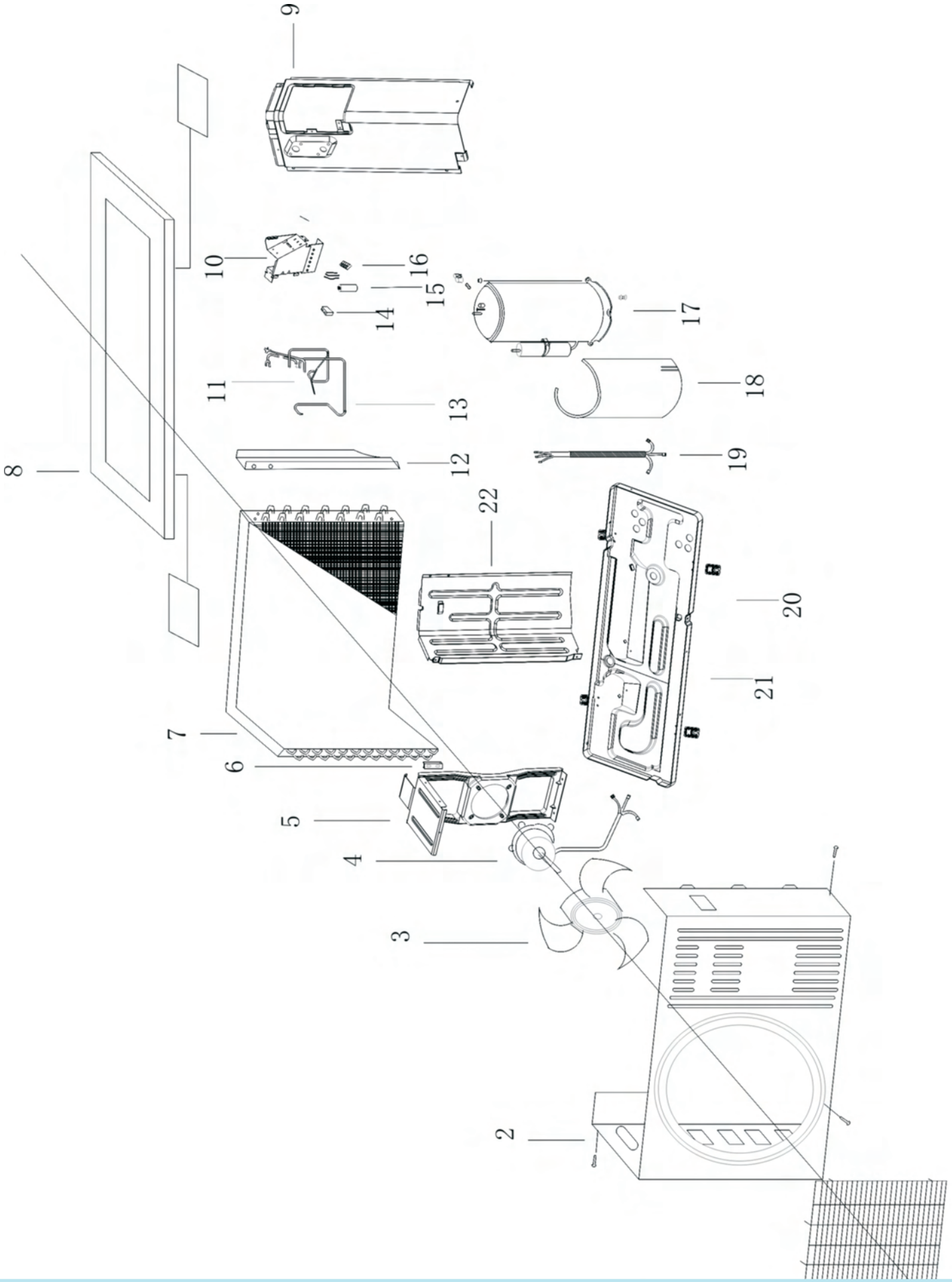
MODELS: HSU-12LD03

NO.	Part specialized code	Name of the COMPOLENT	QTY.	Easily damaged components
1	001A1232303	Front grille	1	
2	001A2400060/ 001A2400061	Air filter	1/1	
3	001A0100198	Front panel assy.	1	
4	001A1232077	Flap	1	
5	001A0900107	Drain pan assy.	1	
6	0010703599	Heat exchanger	1	
7	001A0300005	Bearing	1	
8	0010202415	Fan	1	
9	001A0100206	Rear case assy.	1	
10	001A1301216	Mounting plate	1	
11	001A3000052	Motor	1	Y
12	0010400100	Tansformer	1	Y
13	0010402623	PCB	1	Y
14	001A4000091	Terminal block	1	
15	0010402242	PCB(receiver)	1	
16	001A1434039	Drain tube	1	
17	001A3000072	Swing motor	1	Y
18	0010402639	Remote controller	1	Y
19	001A1434039	Drain tube	1	
20	001A2400059	Air purifying assy.	1	
21	001A3900059	Sensor	1	Y

Knock-down drawings for outdoor unit
Models: HSU-07RD03
HSU-09RD03
HSU-12RD03



KONCK DOWN DRAWINGS FOR OUT DOOR UNIT
MODELS: HSU-07LD03
HSU-09LD03
HSU-12LD03



KNOCK DOWN DRAWINGS FOR OUT DOOR UNIT

Model: HSU-07LD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front gril	0010100777	1	
2	Front panel	0010100775	1	
3	Fan	0010200212	1	
4	Motor	0010400279	1	Y
5	Motor support	0010100780	1	
6	Heat exchanger left plank	0010100201	1	
7	Heat exchanger	0010703459	1	
8	Tope panel	0010802046	1	
9	Right panel	0010100776	1	
10	Electric box	0010100779	1	
11	Discharge pipe	0010703437	1	
12	Heat exchanger right plank	0010100781	1	
13	Suction pipe	0010703464	1	Y
14	Capacity for motor	001A3600009B	1	
15	Capacity for compressor	001A3600093	1	
16	Terminal block	0010402287	1	
17	Compressor	0010703463	1	Y
18	Sound insulating cushion	001A3100136	1	
19	Wire bunch	0010402288	1	
20	Bottom panel	0010100778	1	
21	Bottom support	0010101037	1	
22	Side plank	0010100782	1	

KNOCK DOWN DRAWINGS FOR OUT DOOR UNIT

Model: HSU-09RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front gril	0010100777	1	
2	Front panel	0010100775	1	
3	Fan	0010200212	1	
4	Motor	0010402289	1	Y
5	Motor support	0010100780	1	
6	Heat exchanger left plank	0010100201	1	
7	Heat exchanger	0010703459	1	
8	Tope panel	0010802046	1	
9	Right panel	0010100776	1	
10	Electric box	0010100779	1	
11	Tube assay.	0010703494	1	
12	Heat exchanger right plank	0010100781	1	
13	4-way valve winding	001A2500004	1	Y
14	Capacity for motor	001A3600009B	1	Y
15	Capacity for compressor	001A3600032	1	Y
16	Terminal block	0010402287	1	
17	Compressor	0010701432	1	Y
18	Sound insulating cushion	0010201291	1	
19	Wire bunch	0010402288	1	
20	Bottom panel	0010100778	1	
21	Bottom support	0010101037	1	
22	Side plank	0010100782	1	

KNOCK DOWN DRAWINGS FOR OUT DOOR UNIT
Model: HSU-09LD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front gril	0010100777	1	
2	Front panel	0010100775	1	
3	Fan	0010200212	1	
4	Motor	0010402289	1	Y
5	Motor support	0010100780	1	
6	Heat exchanger left plank	0010100201	1	
7	Heat exchanger	0010703459	1	
8	Tope panel	0010802046	1	
9	Right panel	0010100776	1	
10	Electric box	0010100779	1	
11	Discharge pipe	0010703465	1	
12	Heat exchanger right plank	0010100781	1	
13	Sucktion pipe	0010703464	1	Y
14	Capacity for motor	001A3600009B	1	Y
15	Capacity for compressor	001A3600032	1	Y
16	Terminal block	0010402287	1	
17	Compressor	0010701550	1	Y
18	Sound insulating cushion	0010201291	1	
19	Wire bunch	0010402288	1	
20	Bottom panel	0010100778	1	
21	Bottom support	0010101037	1	
22	Side plank	0010100782	1	

KNOCK DOWN DRAWINGS FOR OUT DOOR UNIT

Model: HSU-07RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front gril	0010100777	1	
2	Front panel	0010100775	1	
3	Fan	0010200212	1	
4	Motor	0010400279	1	Y
5	Motor support	0010100780	1	
6	Heat exchanger left plank	0010100201	1	
7	Heat exchanger	0010703459	1	
8	Tope panel	0010802046	1	
9	Right panel	0010100776	1	
10	Electric box	0010100779	1	
11	Tube assay.	0010702264	1	
12	Heat exchanger right plank	0010100781	1	
13	4-way valve winding	001A2500004	1	Y
14	Capacity for motor	001A3600009B	1	
15	Capacity for compressor	001A3600093	1	
16	Terminal block	0010402287	1	
17	Compressor	0010703463	1	Y
18	Sound insulating cushion	001A3100136	1	
19	Wire bunch	0010402288	1	
20	Bottom panel	0010100778	1	
21	Bottom support	0010101037	1	
22	Side plank	0010100782	1	

KNOCK DOWN DRAWINGS FOR OUT DOOR UNIT

Model: HSU-12RD03

NO.	Name of the COMPOLENT	Specialized No.	QTY.	Easily damaged components(Y/N)
1	Front grille	001A1232303	1	
2	Air filter	001A2400058	1	
3	Front panel assy.	001A1232074	1	
4	Flap	001A1232077	1	
5	Drain pan assy.	001A0900107	1	
6	Heat exchanger	0010703599	1	
7	Bearing	001A0300005	1	
8	Fan	0010202415	1	
9	Rear case assy.	001A0100206	1	
10	Mounting plate	001A1301216	1	
11	Motor	001A3000052	1	Y
12	Tansformer	001A3800002	1	Y
13	PCB	0010402620	1	Y
14	Terminal block	001A4000091	1	
15	PCB(receiver)	0010402242	1	
16	Drain tube	001A1434039	1	
17	Swing motor	001A3000072	1	Y
18	Remote controller	0010402639	1	Y
19	Drain tube	001A1434039	1	
20	Air purifying assy.	001A2400059	1	
21	Sensor	001A3900059	1	Y

MODELS: HSU-12LD03

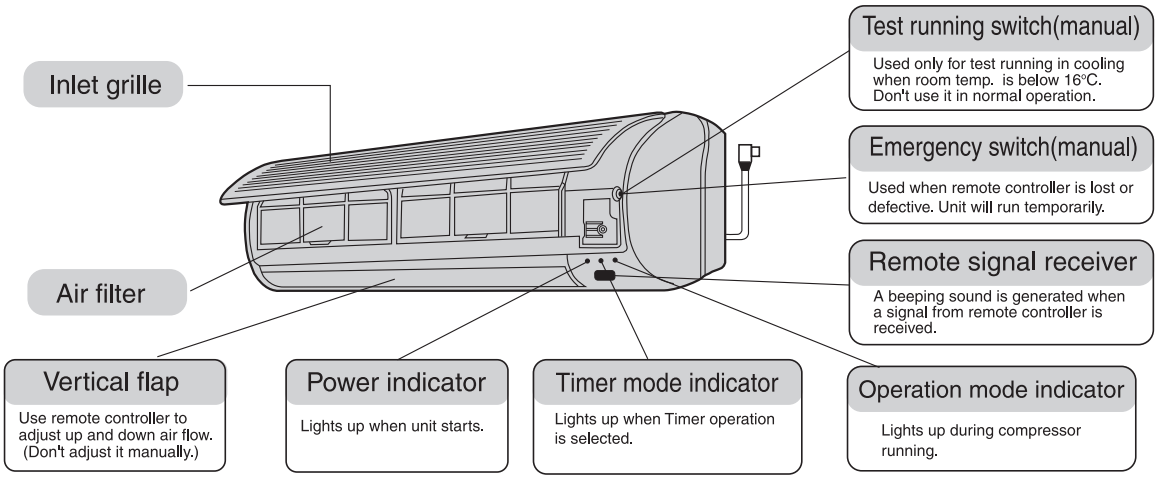
NO. In exploded view	Name of the COMPOLENT	Part specialized code	QTY.	Easily damaged components(Y/N)
1	Front gril	0010100777	1	
2	Front panel	0010100775	1	
3	Fan	0010200212	1	
4	Motor	0010402289	1	Y
5	Motor support	0010100780	1	
6	Heat exchanger left plank	0010149003	1	
7	Heat exchanger	0010749355	1	
8	Tope panel	0010802046	1	
9	Right panel	0010100776	1	
10	Electric box	0010100779	1	
11	Discharge pipe	0010749356	1	
12	Heat exchanger right plank	0010101027	1	
13	Sucktion pipe	0010749357	1	Y
14	Capacity for motor	001A3600032	1	Y
15	Capacity for compressor	001A3600032	1	Y
16	Terminal block	0010402287	1	
17	Compressor	001A2000194	1	Y
18	Sound insulating cushion	0010201291	1	
19	Wire bunch	0010402288	1	
20	Bottom panel	0010100778	1	
21	Bottom support	0010101037	1	
22	Side plank	0010100782	1	

REMOTE CONTROLLER

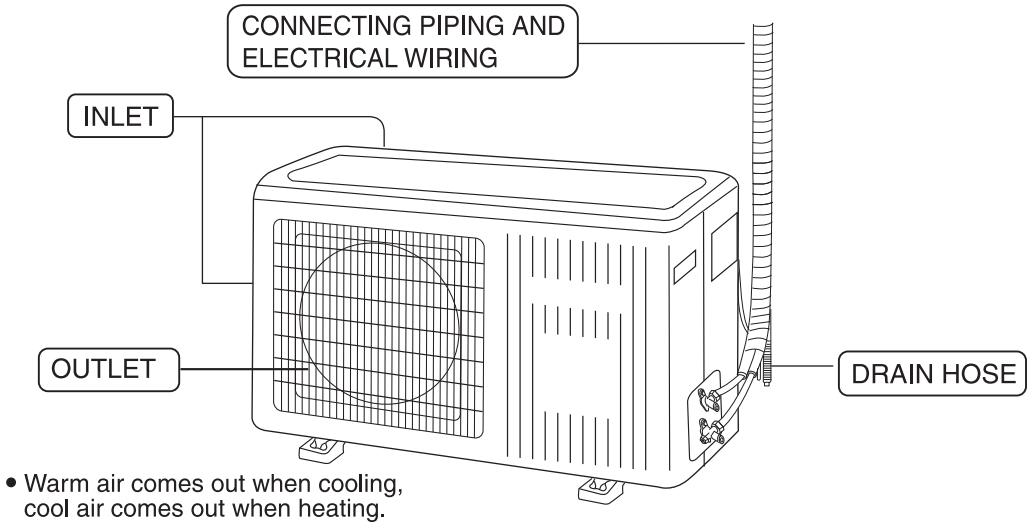
FUNCTIONS CONVERTION

Parts and Functions

Indoor Unit



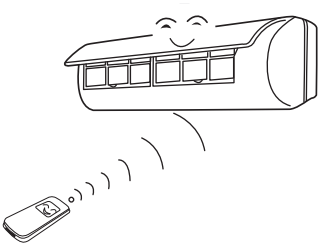
Outdoor Unit



- Warm air comes out when cooling, cool air comes out when heating.

Operation

Remote controller's operation



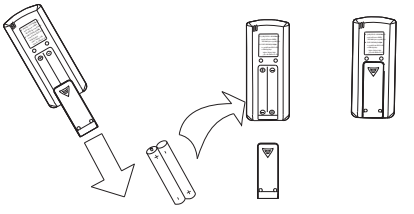
- When in use, put the signal transmission head directly to the receiver hole on the indoor unit.
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- Don't throw the controller, prevent it from being damaged.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receivering the signals so the distance to the indoor unit should be shorter.

Loading of the battery

Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder)

Remove the battery cover :

Slightly press "▼" and push down the cover.



Load the battery :

Be sure that the loading is in line with the " + " / " - " pole request as illustrated.

Put on the cover again

Confirmation indicator :

In disorderation, reload the batteries or load the new batteries after 6mins.

Note :

Use two new same-typed batteries when loading.
If the remote controller can't run normally or doesn't work at all, use a sharp pointed item to press the reset key.

Hint : Remove the batteries in case unit won't be in usage for a long period.
If there are any display after taking-out just need to press reset key.

Power failure resume(please set and apply as necessary)

With setting of power failure resume, if sudden power failure occurs, the unit will resume original operation when power is supplied again.

Setting method

with ON of remote controller (except TIMER and FAN),repeatedly press SLEEP button 10 times in 5 seconds,after 4 Beep from the buzzer,the unit comes into power failure resume mode.

To cancel:

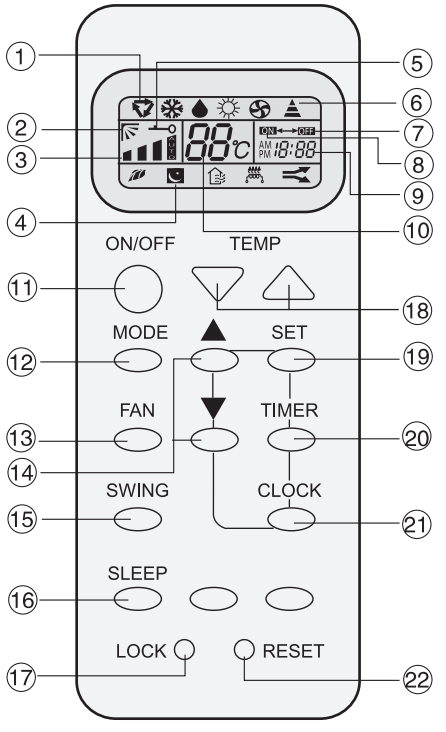
press SLEEP button continuously 10times in 5 seconds,the buzzer sounds Beep twice and power failure resume function is canceled.

Note : When sudden power failure happens during unit operation in power failure resume mode, if the air conditioner is not desired for use in a long period, please shut off the power supply in case that the unit automatically resume operation when power is re-supplied, or press ON/OFFto turn off the unit when power resumes.

Parts and Functions

Operation

Buttons and display of the remote controller.



1. Mode display
   AUTO
   COOL
   DRY
   FAN
2. SWING
3. FAN SPEED 

4. SLEEP
5. LOCK
6. SIGNAL SENDING
7. TIMER OFF
8. TIMER ON
9. CLOCK
10. TEMP
11. POWER ON/OFF
    Used for unit start and stop.
12. MODE
    Used to select AUTO run, COOL, DRY and FAN operation.
13. FAN
    Used to select fan speed LO, MED, HI, AUTO
14. HOUR
    Used to set clock and timer setting.
15. SWING
    Used to set auto fan direction.
16. SLEEP
    Used to select sleep mode.
17. LOCK
    Used to lock buttons and LCD display.
18. TEMP.
    Used to select your desired temp.
19. SET
    Used to confirm timer and clock settings.
20. TIMER
    Used to select TIMER ON, TIMER OFF, TIMER ON/OFF
21. CLOCK
    Used to set correct time
22. RESET
    Used to reset the controller back to normal condition.

Clock set

When unit is started for the first time and after replacing batteries in remote controller, clock should be adjusted as follows:
Press CLOCK button, "AM" or "PM" flashes.
Press △ or ▽ to set correct time. Each press will increase or decrease 1min. If the button is kept depressed, time will change quickly.
After time setting is confirmed, press SET, "AM " and "PM" stop flashing, while clock starts working.

Hints

After replacing with new batteries, remote controller will conduct self-check, displaying all information on LCD. Then, it will become normal.

Operation

Auto run, Fan operation

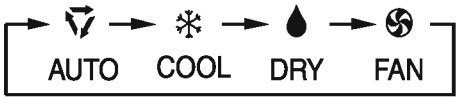
Enjoy yourself by just a gentle press.

(1) Unit start

Press ON/OFF button, unit starts.
Previous operation status appears on display.
(Not Timer setting)
Power indicator on indoor unit lights up.

(2) Select operation mode

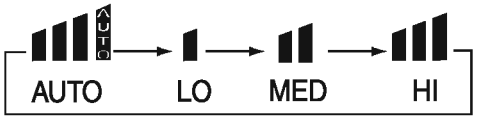
Press MODE button. For each press, operation mode changes as follows:



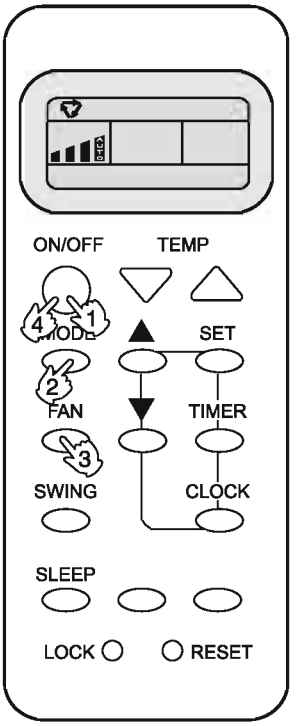
Unit will run in selected mode.
Stop display at " " AUTO or " " FAN.

(3) FAN

Press FAN button. For each press, fan speed changes as follows:



Unit will run at selected fan speed.
Note:AUTO is not available in FAN mode.
Adjust air flow direction if necessary, referring to page 8.



(4) Unit stop

Press ON/OFF button.
Only time remains on LCD.
All indicators on indoor unit go out.
Vertical flap closed automatically.

Hints

Remote controller can memorize settings in each operation mode. To run it next time just select the operation mode and it will start with the previous setting.
No reselecting is needed.(TIMER ON/OFF needs reselecting)

Cautions:
On cooling only unit, heating mode is not available,
After replacing batteries, press ON/OFF, and display becomes as follows:
Operation mode: AUTO, Temp. No
Timer mode: No, Fan speed : AUTO

Note:
The above information is the explanation of the displayed information therefore varies with those displayed in actual operation.

Operation

Comfortable SLEEP

Before going to bed at night, you can simply press the SLEEP button and unit will bring you a sound sleep in selected mode.

In COOL mode

One hour after SLEEP mode starts, temp. will become 1°C higher than temp. setting. After running for another 1 hour, temp. rises by 1°C further. Unit will run for 6 hours then stops automatically. Temp. is higher than temp. setting so that room temp. won't be too low for your sleep.(As shown in Fig.1)

In HEAT mode

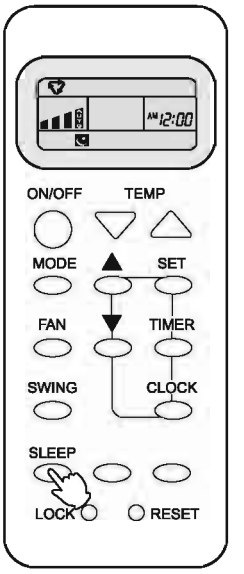
One hour after SLEEP mode starts, temp. will become 2°C lower than temp. setting. After running for another 1 hour, temp. decreases by 2°C further. Unit will run for 3 hours at this temp. then increases another 1°C and stops automatically 3 hours later. Temp. is lower than temp. setting so that room temp. won't be too high for your sleep.
(As shown in Fig .2)

Power Failure Resume Function

If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, the power indicator lights up, and 3 minutes later the compressor starts running with the indicator lighting up.

Note:

In AUTO mode, unit will run in SLEEP function according to operation mode.
In FAN mode, comfortable sleep is not available.



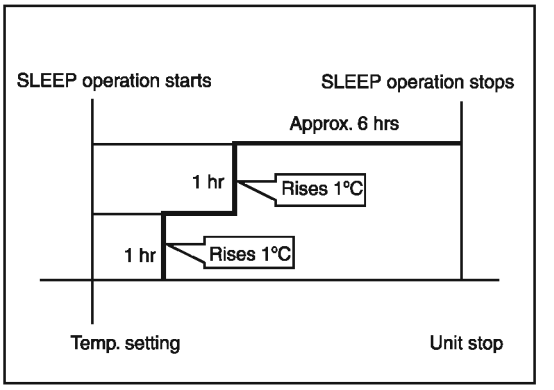


Fig.1

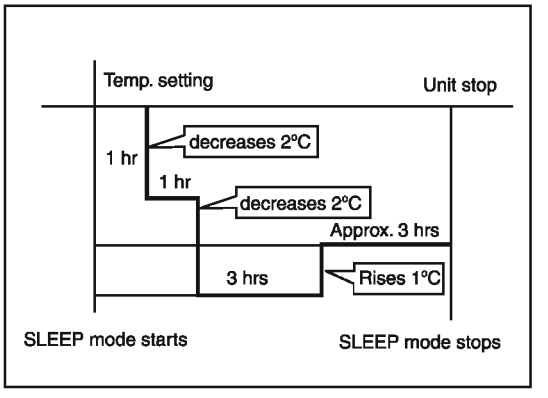


Fig.2

Operation

Comfortable SLEEP

Before going to bed at night, you can simply press the SLEEP button and unit will bring you a sound sleep in selected mode.

In COOL mode

One hour after SLEEP mode starts, temp. will become 1°C higher than temp. setting. After running for another 1 hour, temp. rises by 1°C further. Unit will run for 6 hours then stops automatically. Temp. is higher than temp. setting so that room temp. won't be too low for your sleep.(As shown in Fig.1)

In HEAT mode

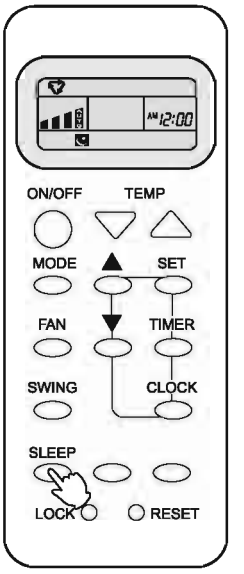
One hour after SLEEP mode starts, temp. will become 2°C lower than temp. setting. After running for another 1 hour, temp. decreases by 2°C further. Unit will run for 3 hours at this temp. then increases another 1°C and stops automatically 3 hours later. Temp. is lower than temp. setting so that room temp. won't be too high for your sleep.
(As shown in Fig .2)

Power Failure Resume Function

If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, the power indicator lights up, and 3 minutes later the compressor starts running with the indicator lighting up.

Note:

In AUTO mode, unit will run in SLEEP function according to operation mode.
In FAN mode, comfortable sleep is not available.



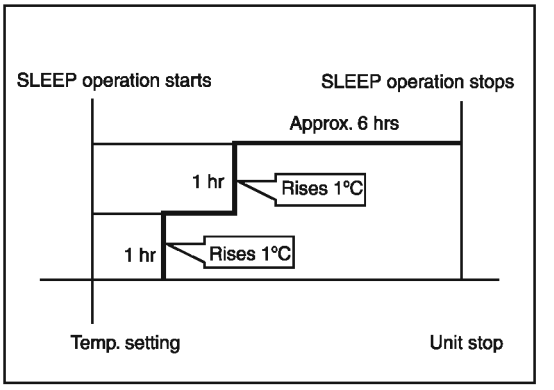


Fig.1

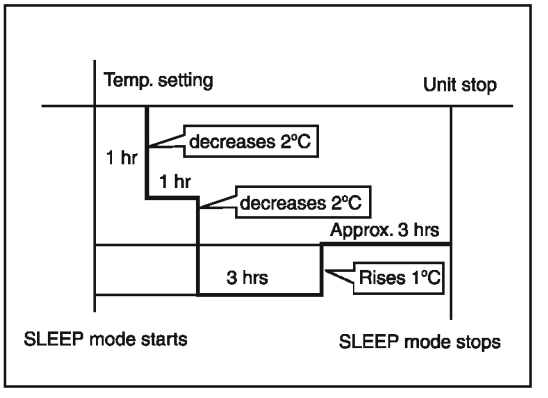


Fig.2

Operation

TIMER ON-OFF

(1)After unit start, select your desired operation mode

Operation mode will be displayed on LCD.

Power indicator on indoor unit lights up.

(2) Press TIMER button to change TIMER mode.

Every time the button is pressed, display changes as follows:

Select TIMER ON-OFF. "ON" will flash.

(3)Time setting for TIMER ON

Press HOUR button.

△Every time the button is pressed, time increases 10min.

If button is kept depressed, time will change quickly.

▽Every time the button is pressed, time decreases 10min.

If button is kept depressed, time will change quickly.

Time will be shown on LCD.

It can be adjusted within 24 hours.

AM refers to morning and PM to afternoon.

(4) Time confirming for TIMER ON

After time setting, press TIMER button to confirm.

"ON" stops blinking, While "OFF" starts blinking.

Time displayed: Unit starts at x hour x min.

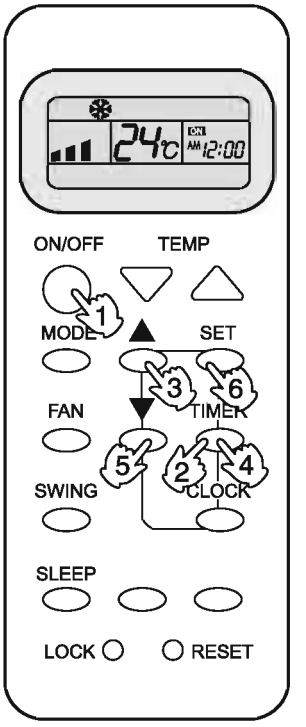
(5)Time setting for TIMER OFF

After time setting, press SET button to confirm, "OFF" stops flashing.

Time displayed: Unit stops at X hour X min.

(6) Time confirming for TIMER OFF

Follow the same procedures in "Time setting for TIMER ON".



To cancel TIMER mode

■ Just press TIMER button several times until TIMER mode disappears.

Operation

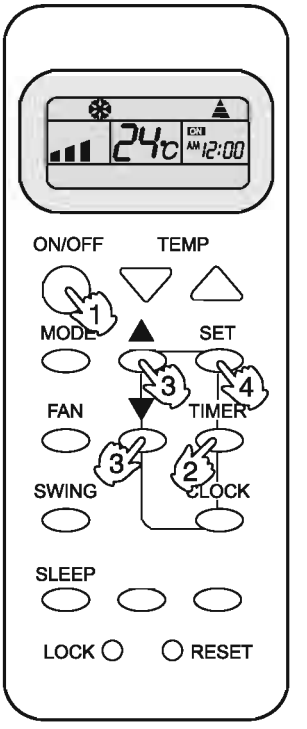
TIMER operation

Set Clock correctly before starting Timer operation(referring to page 4)

You can let unit start or stop automatically at following times: Before you wake up in the morning, or get back from outside or after you fall asleep at night.

TIMER ON/OFF

(1)After unit start, select your desired operation mode.
Operation mode will be displayed on LCD.
Power indicator on indoor unit lights up.



(2)TIMER mode selection

Press TIMER button to change TIMER mode.
Every time the button is pressed, display changes as follows:

ON → OFF → ON ⏲ OFF → blank

TIMER ON TIMER OFF TIMER ON-OFF

Select your desired TIMER mode (TIMER ON or TIMER OFF) ON or OFF will flash.

(3)Timer setting

Press HOUR△/▽ button.
△Every time the button is pressed, time increases 10 min. If button is kept depressed, time will change quickly.
▽Every time the button is pressed, time decreases 10 min. If button is kept depressed, time will change quickly. Time will be shown on LCD. It can be adjusted within 24 hours.

(4)Confirming your setting

After setting correct time, press SET button to confirm, "ON" or "OFF" stops flashing
Time displayed: Unit starts or stops at x hour x min. (TIMER ON or TIMER OFF).
Timer mode indicator on indoor unit lights up.

To cancel TIMER mode

Just press TIMER button several times until TIMER mode disappears.

Hints

After replacing batteries or a power failure happens, Time setting should be reset.
Remote controller possesses memory function, when use TIMER mode next time, just press SET button after mode selecting if timer setting is the same as previous one.

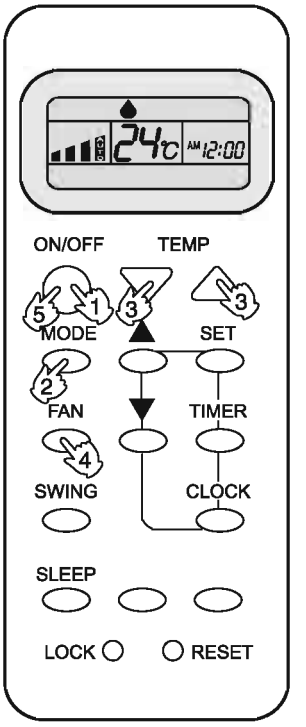
Operation

COOL ,HEAT and DRY operation

Recommendations: • Use COOL in summer. • Use HEAT in summer
• Use DRY in spring, autumn and in damp climate.

(1) Unit start

Press ON/OFF button, unit starts.
Previous operation status appears on display. (Not Timer setting)
Power indicator on indoor unit lights up.



(2) Select operation mode

Press MODE button. For each press, operation mode changes as follows:

AUTO → COOL → DRY → HEAT → FAN

Unit will run in operation mode displayed on LCD.
Stop display at your desired mode.

(3) Select temp. setting

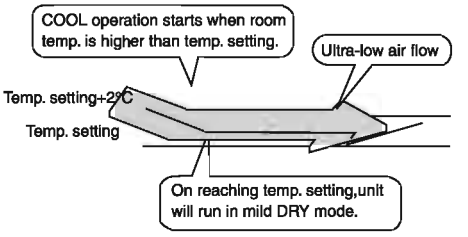
Press TEMP. button.
△ Every time the button is pressed, temp. setting increases 1°C
▽ Every time the button is pressed, temp. setting decreases 1°C
Unit will start running to reach the temp. setting on LCD.

(4) Fan speed selection

Press FAN button. For each press, fan speed changes as follows:

AUTO → LO → MED → HI

Unit runs at the speed displayed on LCD.
In DRY mode, when room temp. becomes 2°C higher than temp. setting, unit will run intermittently at LO speed regardless of FAN setting.



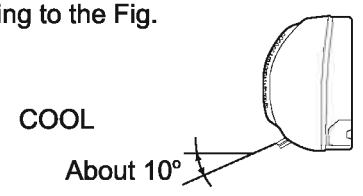
Hints

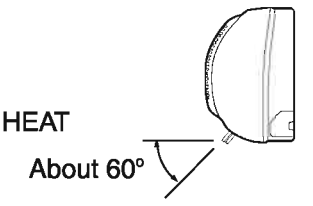
On cooling only unit, heating mode is not available.
Remote controller can memorize each operation status. When starting it next time, just press ON/OFF button and unit will run in previous status.

Operation

(5) Air flow direction adjustment

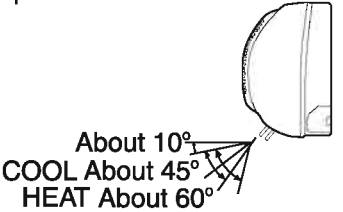
After operation mode is selected, vertical flap will open automatically according to the mode.
Referring to the Fig.





Up and down (Use remote controller)

Press SWING button, vertical flap will move within the range shown in the Fig. Press SWING button stop it at a fixed position.

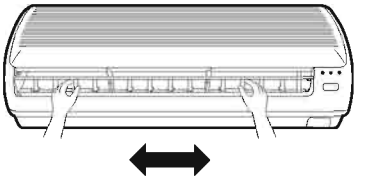


Cautions:

It is advisable not to keep vertical flap at downward position for a long time in COOL or DRY mode, otherwise, condensate water might occur.

Left and right air flow adjustment (manual)

Move the horizontal blade by a knob on air conditioner to adjust left and right direction referring to Fig.



Cautions:

When humidity is high, condensate water might occur at air outlet if all horizontal louvers are adjusted to left or right.

(6) Unit stop

Press ON/OFF button.
Only time remains on LCD.
All indicators on indoor unit go out.
Vertical flap closes automatically.

Cautions:

Unit won't restart until 3 minutes have elapsed, due to system protection.
HEAT mode is not available on cooling only unit.

Hints

As cold air flows downward in COOL mode, adjusting air flow horizontally will be much more helpful for a better air circulation.
As warm air flows upward in HEAT mode, adjusting air flow downward will be much more helpful for a better air circulation.
Be careful not to catch a cold when cold air blows downward.
It is harmful to your health in summer to go frequently in and out of places where temp. difference is above 7°C. Temp. difference of 3-5°C will remove your fatigue.
More than this, unit's load can be reduced and power consumption cut down as well. So, you'd better set a temp. diff of 3-5°C between indoor and outdoor temp. in COOL mode.

Abnorminy diagnose

Trouble shooting

Before asking for service, check the following first.

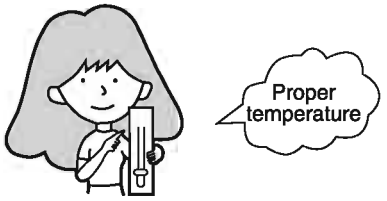
	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately. 	• When unit is stopped, it won't restart immediately until 3 minutes have elasped to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard 	• During unit operation or at stop, a swishing or gurgling noise may be heard. At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard. This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, cigarettes.
	Mist or steam are blown out. 	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
Multiple check	Does not work at all. 	• Is power plug inserted? • Is there a power failure? • Is fuse blown out?
	Poor cooling 	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before intel and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Application temp. range of air conditioner -7ºC~43ºC.

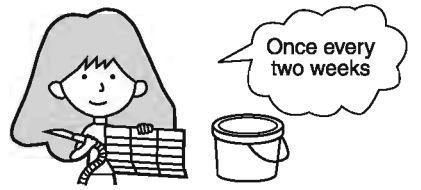
Maintenance

Better use of air conditioner

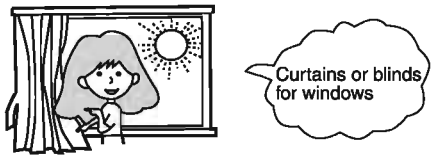
Proper room temperature.



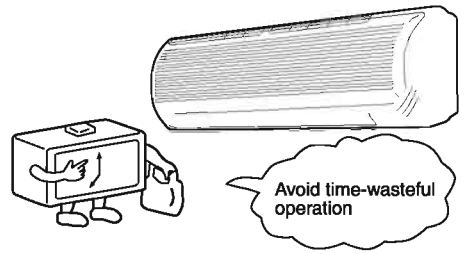
Cleaning of the air filter.



Closing of doors and windows during operation.

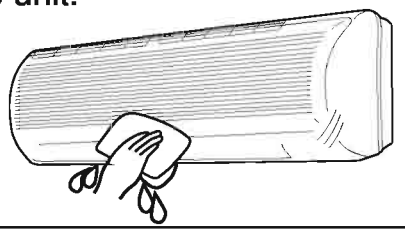


Effective use of the timer.

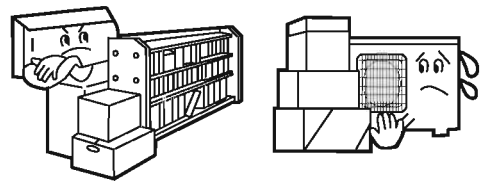


Never fail to observe the followings

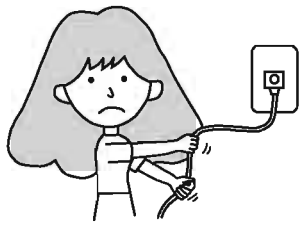
Do not sprinkle water over the unit.



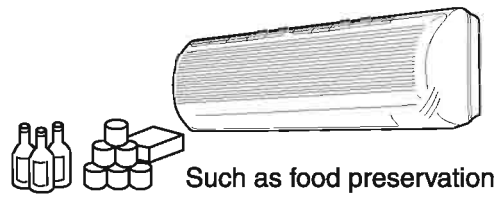
Do not block the inlet or outlet.



Do not pull power plug.



Do not use for other purposes.



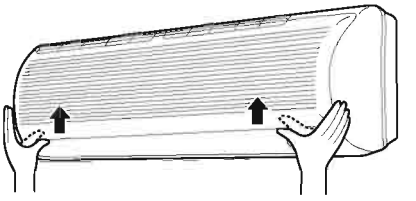
Such as food preservation plant cultivation.or animal breeding.

Maintenance

Replacement of Purifying Filter

1 Open the Inlet Grille

Open the inlet grille by pushing each ends the inlet grille upward.

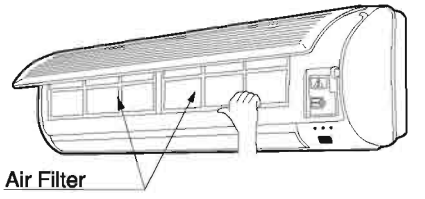


2 Detach the standard air filter

Slide the knob slightly upward to release the filter, then withdraw it.

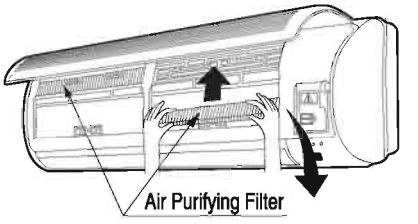
3 Detach the Air Purifying Filter

Replace the old filter with new one into the frame.



4 Attach new Air Purifying Filter

Attaching each of the Air Purifying Filter to the indoor unit as its white side faces to the front.

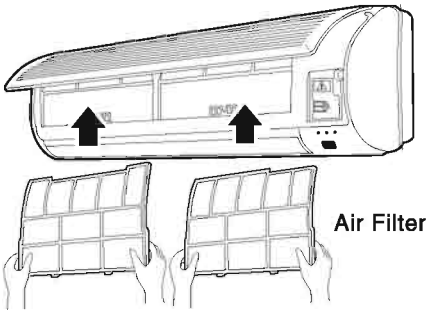


5 Attach the standard air filter as its front side faces to the front

Operating without standard air filter may cause troubles with the machine.

6 Close the Inlet Grille

Close the Grill surely.



NOTE

- Please replace the air Purifying Filter when color of the filter become same level of sample attached in the indoor unit.
- Please replace the Air Purifying Filter in 3-6 months as standard.
- Stuffed filter are not usable even washing. Please purchase new one at sales shop.

Brief introduction to electrical control functions

1. Introduction to electrical control functions

Including brief introduction to air conditioners of series models and electric control function.

1.1 Brief introduction to electric control function

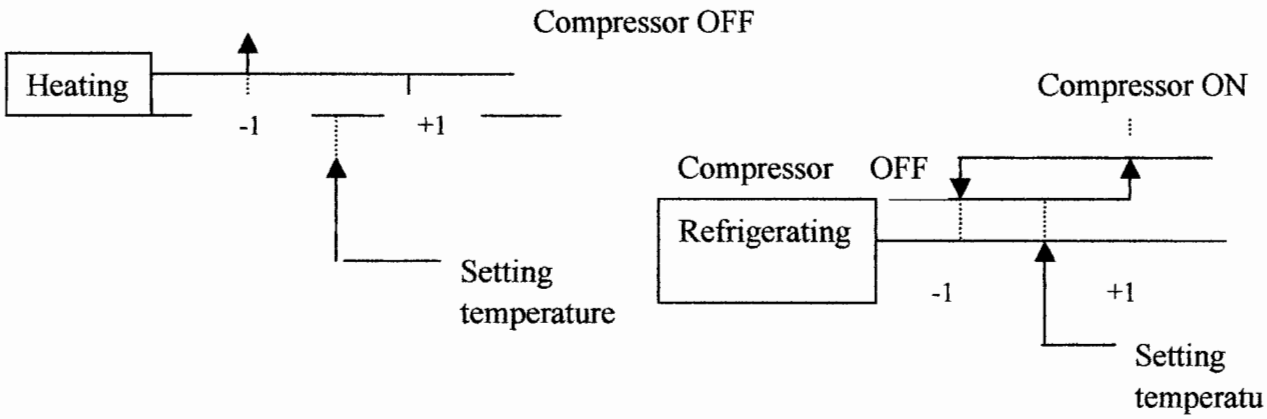
(1) Automatic running (applicable to fan-coil model)

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

a. Tr≥23℃	running refrigerating mode	Ts=26℃
b. Tr<23℃	running heating mode	Ts=26℃

After turning to the automation mode, the running mode can be switched between refrigerating mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between refrigerating mode and heating mode must be conducted after 15 minutes.

(2) Indoor temperature control



Compressor ON

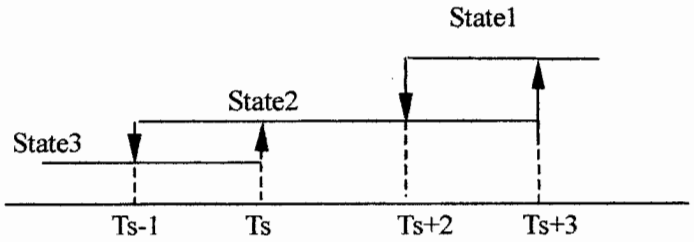
(3) Dehumidification running

The compressor, outdoor fan and indoor fan will run as per the following working pattern so as to realize the refrigerating running of dehumidification:

① Tr> Ts+2℃, compressor, outdoor fan run continuously, indoor fan runs as per setting wind speed (State 1);

② Ts+2℃≥Tr≥Ts, compressor, outdoor fan run intermittently with 10 minutes ON, 6 minutes OFF. (Compressor and outdoor fan are synchronous) indoor fan runs in fixed lower wind speed, and will cease at the stand-by time of 3 minutes (State 2)

③ Tr <Ts, compressor, outdoor fan ceases, indoor fan runs in lower wind speed. (State 3)



(4) Warm start (preventing cold wind when heating running begins, applicable to fan-coil model))

When heating running begins, indoor fan will conduct the following fan control:

① If the temperature of indoor coil pipe is ≥ 23℃, start lower wind speed;

② If the temperature of indoor coil pipe is ≥ 38℃ or the running time of compressor≥ 4 minutes, turn to setting wind speed.

(5) Control of indoor fan under heating OFF state (applicable to fan-coil model)

Under heating state, the compressor will cease; if the indoor coil pipe's temperature Tp≥23℃, indoor fan will run in lower wind speed.

(6) Defrosting control (applicable to fan-coil model)

(1) Defrosting beginning condition:

a. After the state of Tp-Tr<18℃ is continued for 5 minutes, the accumulated running time of the compressor exceeds 45 minutes, the continuous running time of the compressor exceeds 20 minutes;

b. The accumulated running time of the compressor exceeds 3 hours, the continuous running time of the compressor exceeds 20 minutes, indoor unit's Tp <42℃;

c. The continuous running time of the compressor exceeds 20 minutes, the temperature of indoor coil pipe decreases 1℃ every 6 minutes, which lasts for more than 3 times, indoor unit's Tp <42℃;

d. When the indoor unit is in the state of overload protection and the outdoor unit ceases, when the rerunning time of outdoor unit exceeds10 minutes, the accumulated running time of the compressor exceeds 45 minutes, the continuous running time of the compressor is over 20 minutes, and Tp <42 ℃.

Defrosting will begin if one of the above conditions is met.

(2) Defrosting finishing condition:

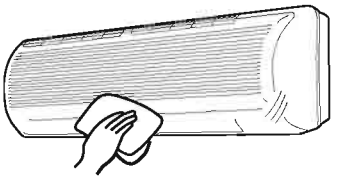
a. If the defrosting time exceeds 9 minutes, the original heating state will be resumed;

b. If the current of outdoor unit's compressor exceeds 5.8 A (different models have different currents); defrosting will be finished if either a or b is met.

Maintenance

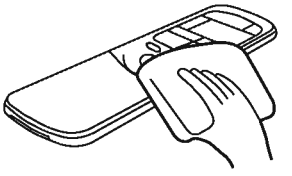
※Different models have different appearance.

Cleaning of unit casing



Cut off power supply
before cleaning wipe unit casing with soft cloth.
In case of heavy stain, clean it with neutral detergent.
squeeze water in the cloth, wipe off the detergent on unit casing completely.

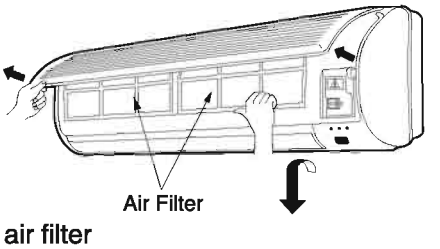
Cleaning of remote controller



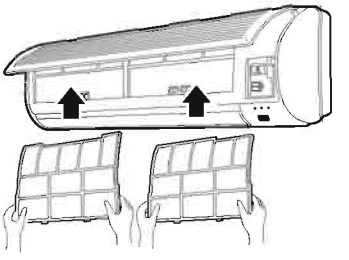
Don't use water to wash unit casing, please use dry cloth.
Don't use glass cleanner or cloth soaked with chemicals.

Cleaning of air filter

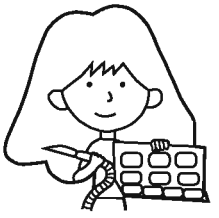
1.Open inlet grille by pulling it upward.



2.Remove air filter
Push up the filter's center tab slightly until it is caesura of the stopper. Remove it by pulling down.



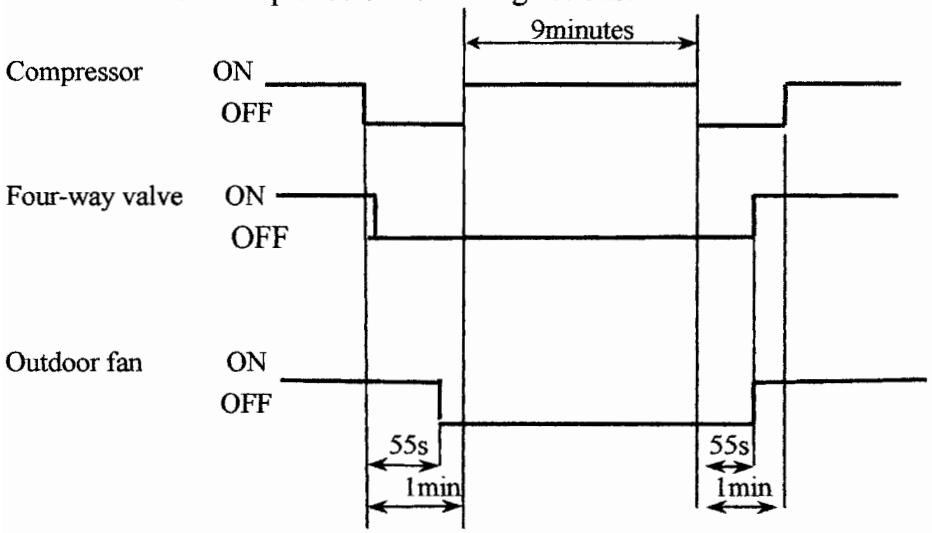
3.Clean the filter
Use a vacuum cleaner to remove dust, or wash the filter with water.
After washing, dry the filter completely in the shade.



4.Attach the filter
Attach filter behind the stopper so that the " Front " indication is facing to the front. Make sure that it is completely behind the stopper, otherwise problems might occur.

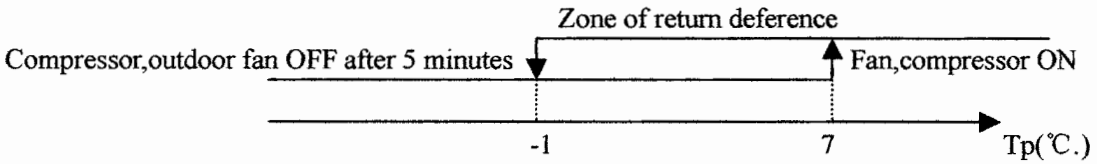
5.Close the inlet grille.

Note: Sequence of defrosting actions:



(7) Freezing prevention function

Under refrigerating and dehumidifying state, the air conditioner will control the outdoor fan as per the temperature Tp of the indoor coil pipe according to the following conditions:



(8) 3 minutes stand-by time

When the compressor ceases due to the sensor OFF, unit On or OFF or fault, it will maintain pause for 3 minutes.

(9) Overload protection during heating running

1.Temperature protection of indoor coil pipe: Under heating state, the air conditioner will control the running of the fan as per the temperature Tp of the indoor coil pipe and according to the following conditions:

a. 65℃≤Tp, outdoor fan ceases; Tp≤60℃, outdoor fan resumes; the time from ceasing to resuming is about 45 seconds;

b. 72℃≤Tp, outdoor fan of compressor ceases after 5 seconds; Tp≤64℃, compressor resumes after 3 minutes.

2.Current protection (different models have different protection currents):

a. When 5.8A ≤current of compressor, outdoor fan ceases; current of compressor ≤5A, outdoor fan resumes;

b. When 10 A≤current of compressor, compressor ceases.

(10) Compensatory function of power failure

If the unit is suddenly off during running due to power failure, or closed for maintenance or troubleshooting, it will restart to run after the power resumes with the original condition before the unit is off

Note: 1. Function setting: Pressing the SLEEP button on the remote control unit for 10 times until hearing 4 sounds from the buzzer on the panel.
2. Memory content: Running mode, setting wind speed, setting temperature, sleep state, flap state.
3. Cancellation of function: Pressing the SLEEP button on the remote control unit for 10 times until hearing 2 sounds from the buzzer on the panel.

(11) Trial run function

When the air conditioner is in OFF state, press the emergency switch for 5 seconds till hearing 2 sounds of click from the buzzer, then the air conditioner will turn to the trial run state. The unit will run in the refrigerating mode and the indoor fan will run in high wind speed mode.

(12) Emergency running mode

When the air conditioner is in stand-by state, press the emergency switch till hearing a sound from the buzzer, then the air conditioner will turn to the emergency run state. The rules of emergency run are as follows:

a. Tr≥23℃, running refrigerating mode, Ts = 26℃;

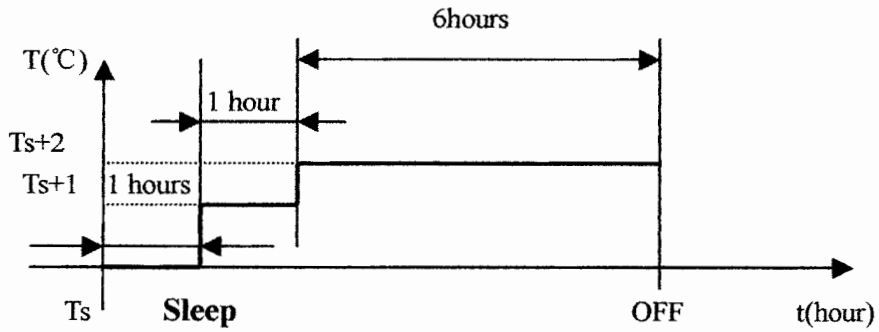
b. Tr<23℃, running heating mode, Ts = 26℃.

(13) Temperature compensation

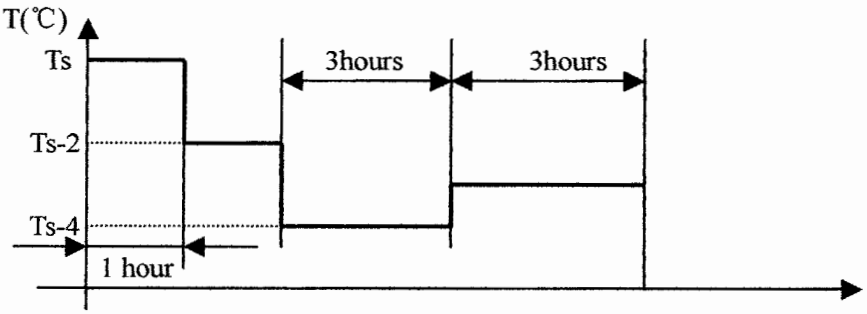
There is the function of automatic temperature compensation when heating, with heating temperature setting = Ts(remote setting) + 4℃.

(14) Sleeping function

a. After setting the sleeping function, the refrigerating mode and dehumidification mode will run as per the following rules:



b. After setting the sleeping function, the heating mode will run as per the following rules:



As shown in the above diagram, after running for 1 hour under refrigerating mode and dehumidification mode, the setting temperature will increase 1℃; after another 1 hour, it will increase 1℃ again, and after 6 hours, it will cease; after running for 1 hour under heating mode, the setting temperature will decrease 2℃, after another 1 hour, it will decrease the 2℃ again, and after 3 hours, it will increase 1℃, and after other 3 hours, it will cease.

(15) Trouble displaying method

a. The temperature sensor of coil pipe of indoor unit is in short circuit or broken circuit: the timing indicator of indoor unit is on, the power indicator is flickered in 1 Hz;
b. The room temperature sensor of indoor unit is in short circuit or broken circuit: the timing indicator of indoor unit is off, the power indicator is flickered in 1 Hz;
c. The motor of indoor unit has nor backfeed of signal, the power indicator of indoor unit and running indicator are flickered twice, then the power indicator, running indicator and timing indicator are all flickered for 1 second, then repeating the cycle.

(16) Manual defrosting function

Under heating (automatic heating) state, press continuously the SLEEP button on the remote control unit for 8 times till hearing 3 sounds from the buzzer, then the whole unit will turn to the defrosting state.

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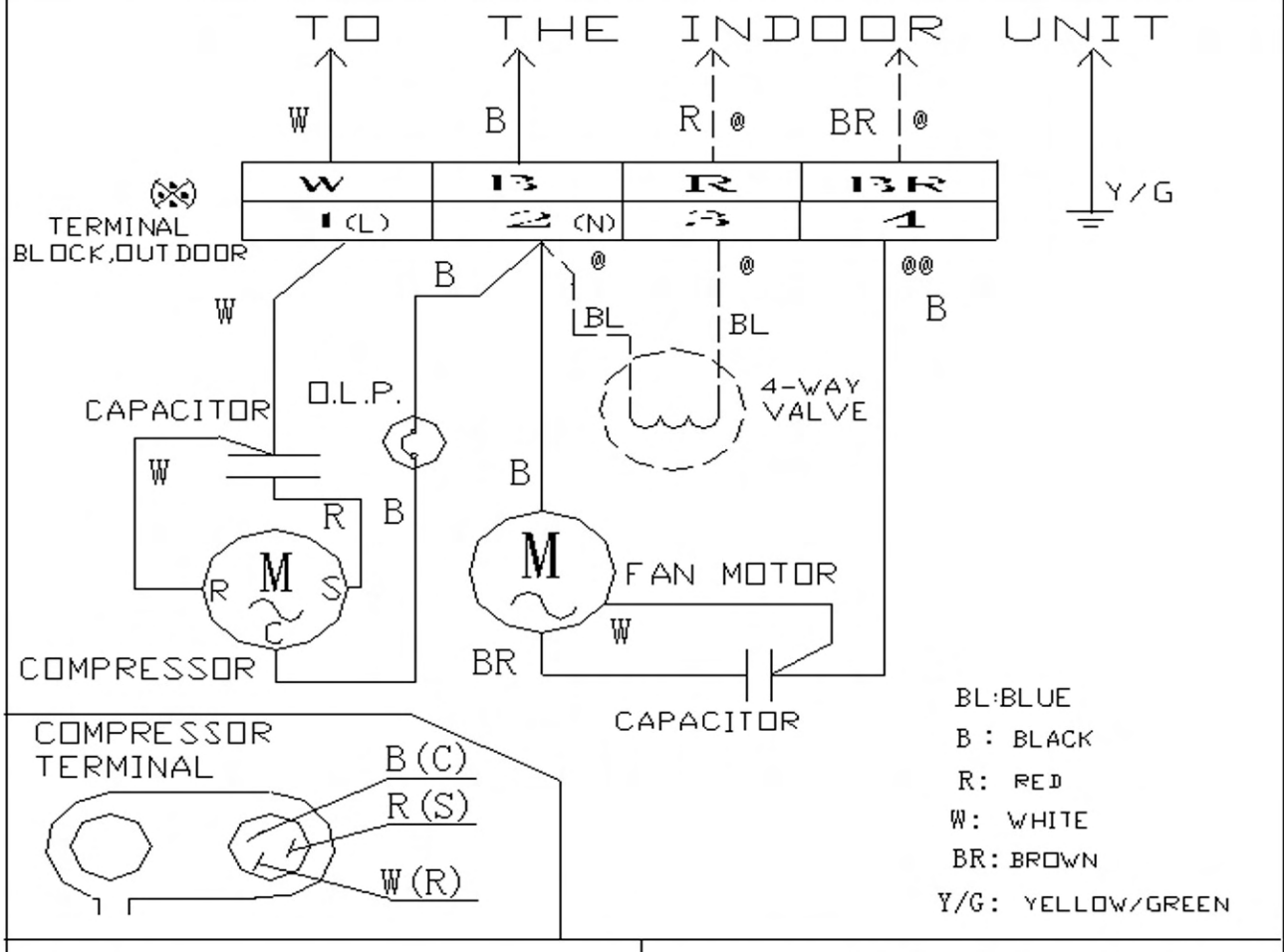
WIRING DIAGRAM OF SPLIT UNIT,OUTDOOR



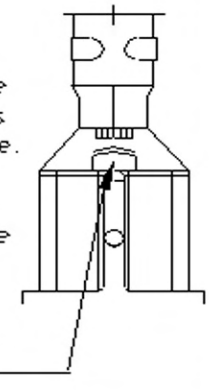
NOTE:

1. wiring as above for cool-heat models.
2. The dotted lines are needn't in cooling only models(marked with @) . Wire is connected from BR (marked with @@) on terminal block to W.
3. The O.L.P. may needn't in some models for different compressor

REMOVAL OF LOCKING TERMINAL CONTACT

Terminal contact (mark ※ in the above wiring diagram) comes with locking structure.

Please press the front lever to release the locking and pull the cable out.



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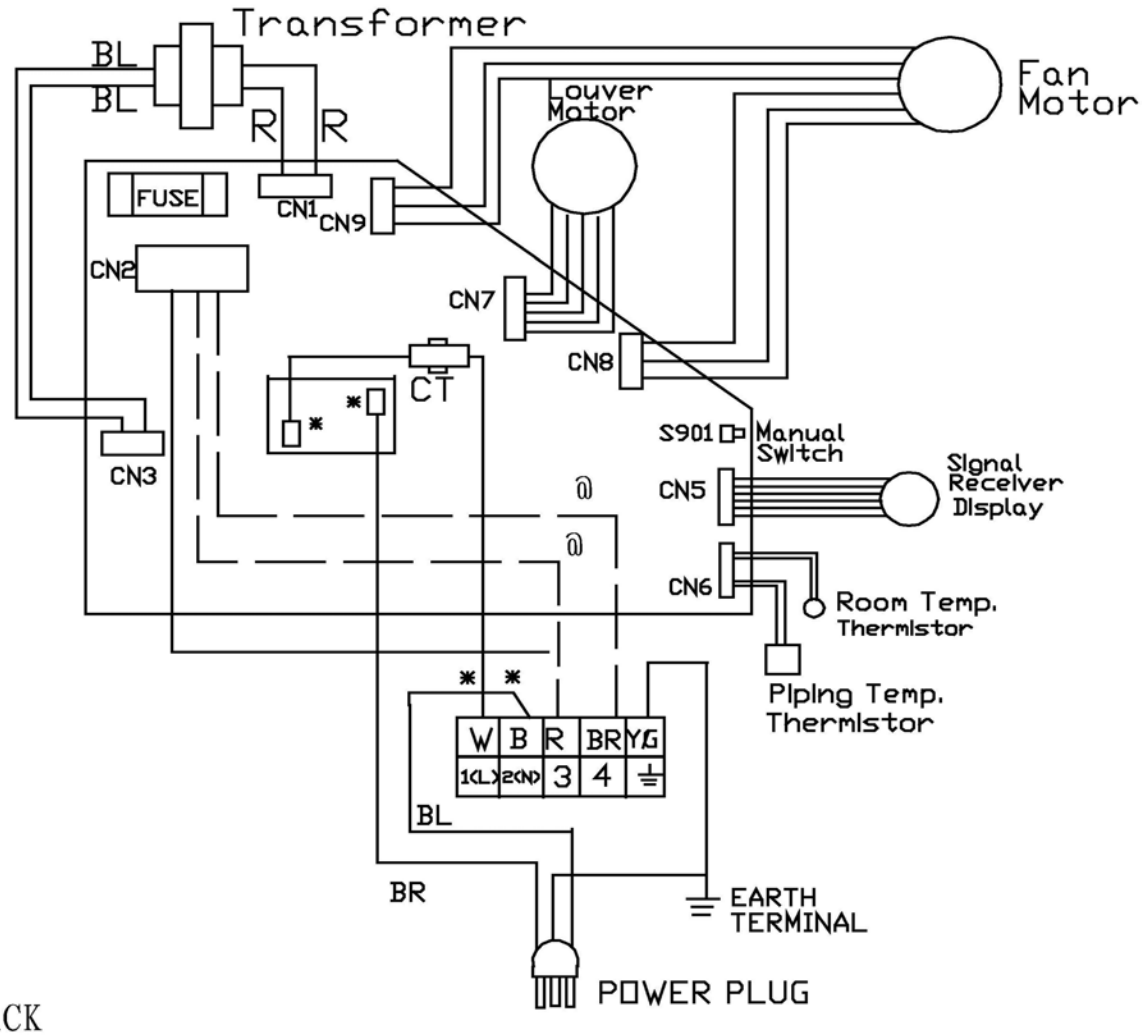
WIRING DIAGRAM OF SPLIT UNIT,INDOOR



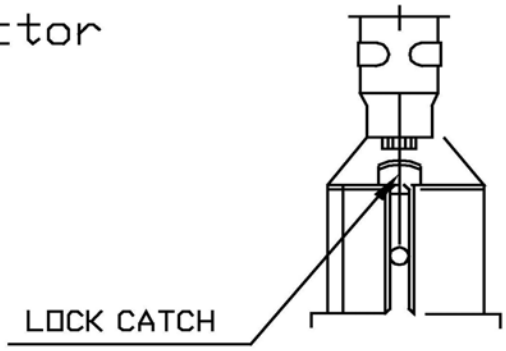
B: BLACK
R: RED
W: WHITE
BR: BROWN
Y/G: YELLOW/GREEN

Note:

1. HEAT PUMP
   Have dotted line
   (signed @)

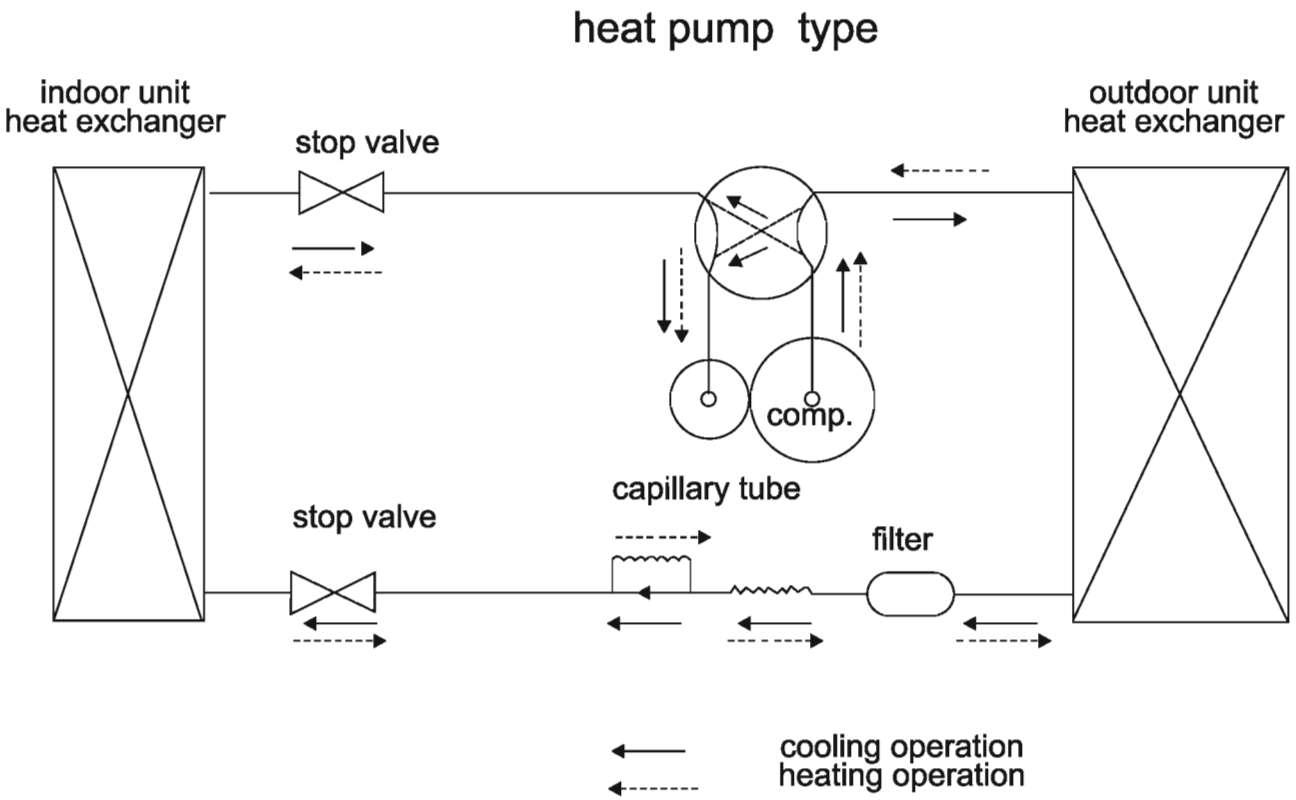
2. COOLING ONLY
   No dotted line.

Removal of the socket connector
Socket connector marked
With ※ has lock catch
when removing, press
the lock catch and
pull it backward



refrigerating cycle diagram

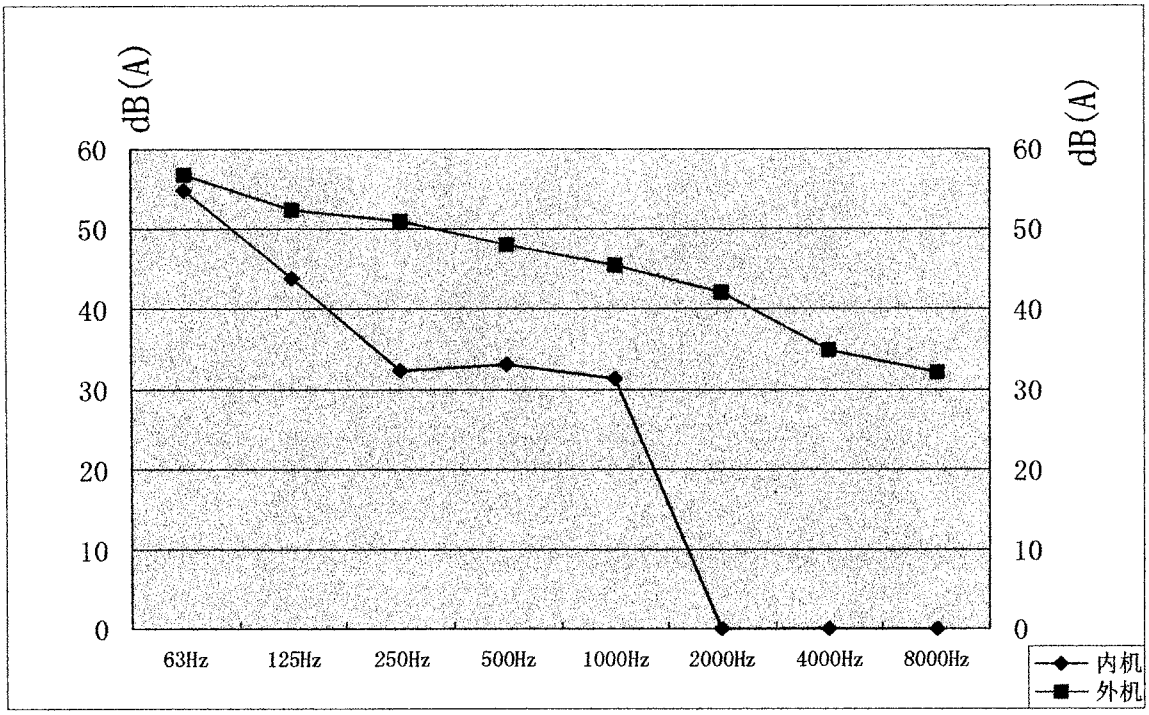
Refrigerating cycle diagram



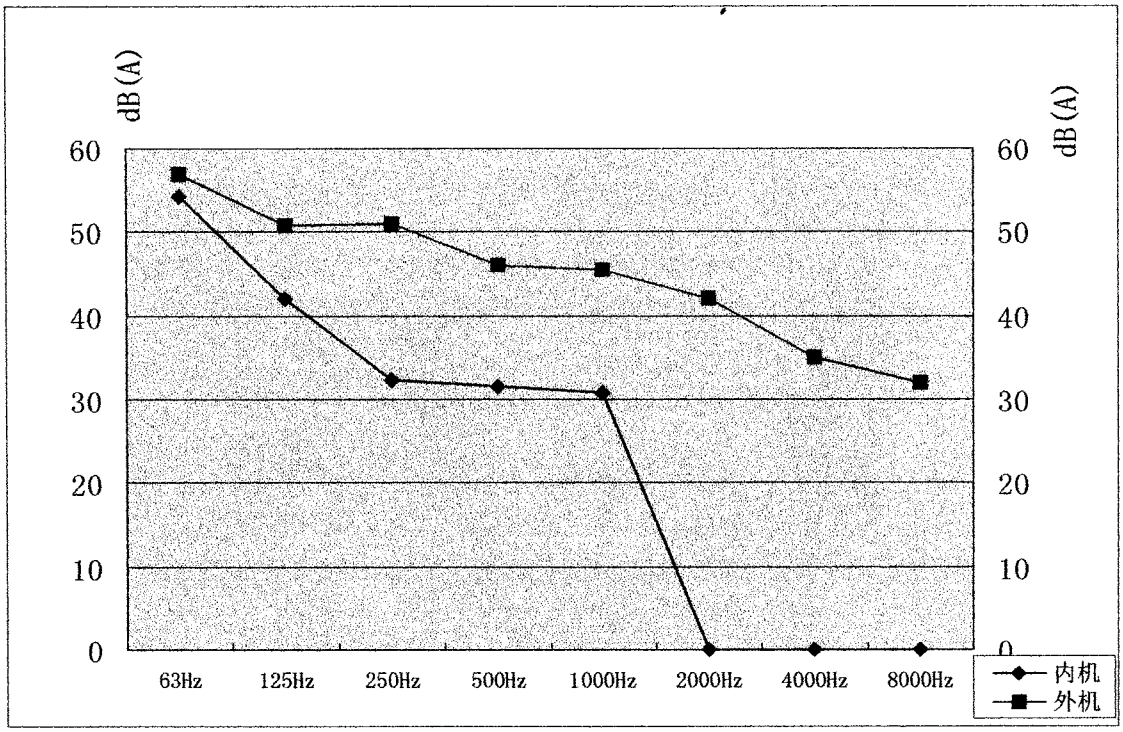
Noise level test chart and air velocity distribution

.Noise level test chart

MODELS:HSU--07RD03 HSU-07LD03 HSU-09LD03



MODELS: HSU--09RD03 HSU-12RD03 HSU-12LD03



air velocity distribution

Fig 1
Top View
Flow Control Panel: Horiz.
Louver: Center

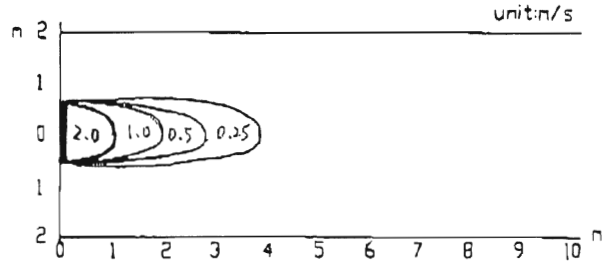


Fig 2
Top View
Flow Control Panel: Horiz.
Louver: right & left

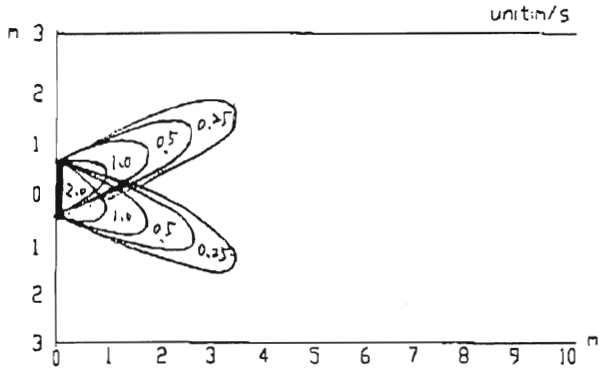


Fig 3
Side View
Flow Control Panel: Horiz.
Louver: Center

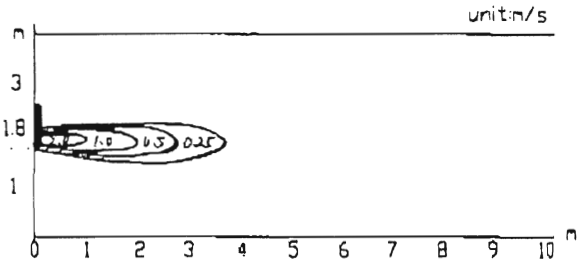
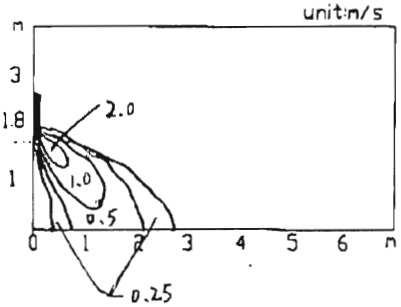


Fig 4
Side View
Flow Control Panel: Vert.
Louver: Center



Condition
Fan speed: high
Operation mode: Fan
Voltage : 230V
50Hz mode

Installation And Accessory Parts

Installation Manual of Room Air Conditioner

- Read this manual before installation.
- Explain sufficiently the operating means to the user according to this manual.

Necessary Tools for Installation

1. Driver
2. Hacksaw
3. Hole core drill
4. Hexagon wrench (5mm)
5. Spanner (14,17,19 and 24mm)
6. Torque wrench (17mm,22mm,24mm)
7. Pipe cutter
8. Flaring tool
9. Knife
10. Nipper
11. Gas leakage detector or soap-and-water solution
12. Measuring tape
13. Reamer
14. Refrigerant oil

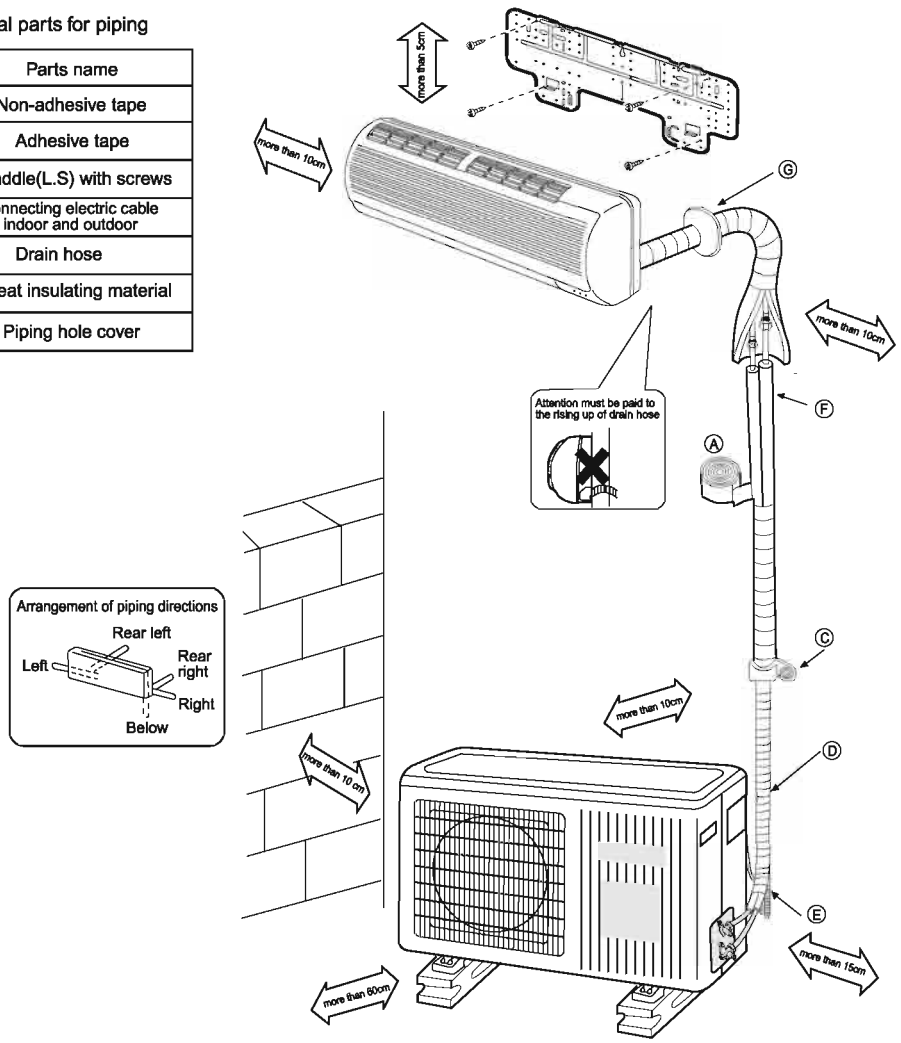
Accessory parts

No.	Accessory parts	Number of articles
①	Remote controller	1
②	R-03 dry battery	2
③	Mounting plate	1
④	Drain hose	1
⑤	ϕ4X50 Steel nail,cement	6
⑥	Main pipes	1
⑦	ϕ 4X25 Screw, Plastic cap	4
⑧	Drain-elbow	1
⑨	Cover	1
⑩	Cushion	4
⑪	Connecting cable	1
⑫	Pipe supporting plate	1

Drawing for the installation of indoor and outdoor units

Optional parts for piping

Mark	Parts name
Ⓐ	Non-adhesive tape
Ⓑ	Adhesive tape
Ⓒ	Saddle(L.S) with screws
Ⓓ	Connecting electric cable for indoor and outdoor
Ⓔ	Drain hose
Ⓕ	Heat insulating material
Ⓖ	Piping hole cover



※ The marks from Ⓐ to Ⓖ in the figure are the partsí numbers

※ The distance between the indoor unit and the floor should be more than 2m.

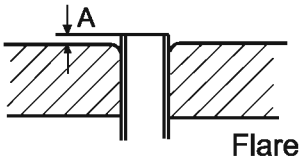
No.0010545270

1 Power Source Installation

- The power source must be exclusively used for air conditioner. (Over 10A)
- In the case of installing an air conditioner in a moist place. please install an earth leakage breaker.
- For installation in other places, use a circuit breaker as far as possible.

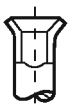
2 Cutting and Flaring Work of Piping

- Pipe cutting is carried out with a pipe cutter and burs must be removed.
- After inserting the flare nut, flaring work is carried out.



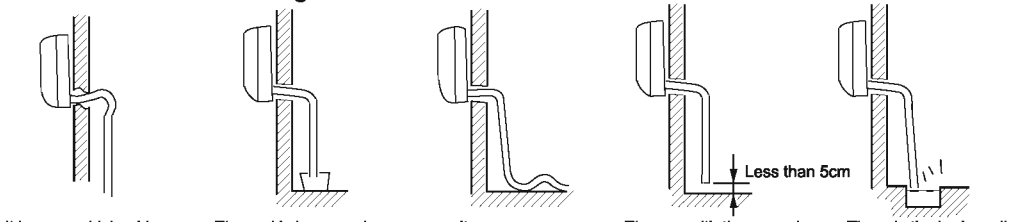
Flare tooling die

	Pipe diameter φ	Size A (mm)
Liquid side	6.35mm(1/4")	0.8 ~1.5
Gas side	9.52mm(3/8")	1.0~1.8
Gas side	12.7mm(1/2")	1.2 ~2.0

Correct	Incorrect				
	 Lean	 Damage of flare	 Crack	 Partial	 Too outside

3 On Drainage

- Please install the drain hose so as to be downward slope without fail.
- Please donít do the drainage as shown below.



It becomes high midway. The end is immersed in water. It waves. The gap with the ground is too small. There is the bad smell from a ditch.

- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

Check for Installation and Test Run

- Please kindly explain to our customers how to operate through the instruction manual.

Check Items for Test Run

☐ Put check mark ✓ in boxes

☐ Gas leak from pipe connecting?
☐ Heat insulation of pipe connecting?
☐ Are the connecting wirings of indoor and outdoor firmly inserted to the terminal block?
☐ Is the connecting wiring of indoor and outdoor firmly fixed?
☐ Is drainage securely carried out?
☐ Is the earth line securely connected?
☐ Is the indoor unit securely fixed?
☐ Is power source voltage abided by the code?
☐ Is there any noise?
☐ Is the lamp normally lighting?
☐ Are cooling and heating (when in heat pump) performed normally?
☐ Is the operation of room temperature regulator normal?

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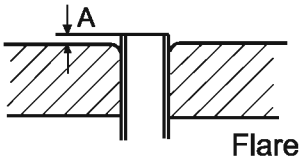

Flare tooling die

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Correct	Incorrect				
					
	Lean	Damage of flare	Crack	Partial	Too outside

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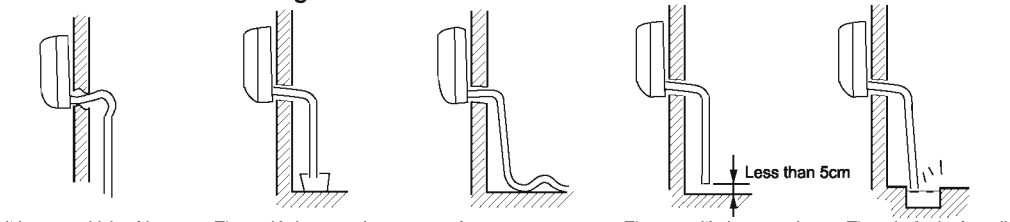
- Please donít do the drainage as shown below.



It becomes high midway. | The end is immersed in water. | It waves. | The gap with the ground is too small. | There is the bad smell from a ditch.

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☐ Is the connecting wiring of indoor and outdoor firmly fixed?
☐ Is drainage securely carried out?
☐ Is the earth line securely connected?
☐ Is the indoor unit securely fixed?
☐ Is power source voltage abided by the code?
☐ Is there any noise?
☐ Is the lamp normally lighting?
☐ Are cooling and heating (when in heat pump) performed normally?
☐ Is the operation of room temperature regulator normal?

5 Purging Method:

Push the air out of the indoor unit and piping as followes:

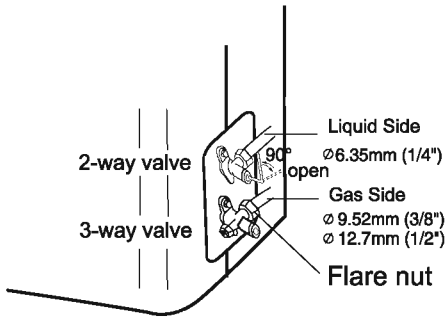
(1) Remove the valve cap on 2-way valve in outdooor unit.

(2) Loosen by 1/2 turn the flare nut of gas pipe, which is connected to 3-way valve.

(3) Loosen 2-way valve by 90° using hexagon wrench, and after approx. 6 sec tighten it up. Gas comes out through flare nut on wide pipe. If no gas is discharged, tighten flare nut with specified torque.

(4) Open 2-way and 3-way valves using specified torque.

(5) Tighten the caps on the valves with specified torque.



	Tighten torque N.m
Valve rod	7-9
Valve cap	20-25

- When connecting pipe exceeds 5 meters, 16g refrigerant shall be added per exceeding meter. Charge according to the following list.

Piping length	5m	7m	10m
Additional amount	No need	32g	80g

- Note: When extending pipng, air inside piping shall be removed by using external refrigerant gas, then discharge excess refrigerant by air purging.

  Brand new outdoor unit is charged 50g more refrigerant than regulated weight. Only for first installation, this extra 50g can be used to purge air in the pipes.

★ 1 During this procedure, 50g refrigerant will be discharged in piping. (This must be strictly controlled within 90° and 6 sec.)

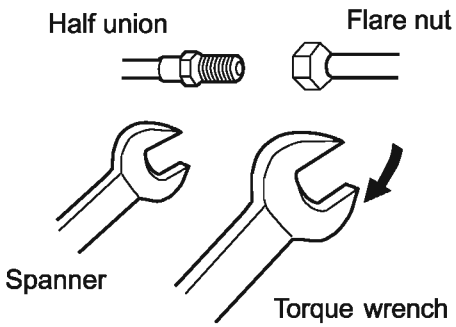
Outdoor Unit

1 Installation of Outdoor Unit

Install according to **Drawing for the installation of indoor and outdoor units**

2 Connection of Pipes

- Apply refrigerant oil on half union and flare nut.
- To bend a pipe, give the roundness as large as possible not to crush the pipe.
- Connecting the pipe of gas side first makes working easier.



Forced fastening without careful centering may damage the threads and cause a leakage of gas.

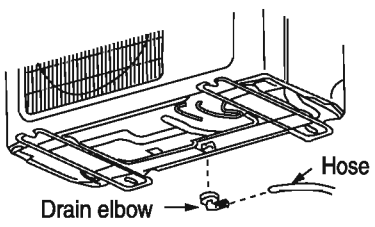
Pipe Diameter (ϕ)	Fastening Torque
Liquid Side 6.35mm(1/4")	18N·m
Gas Side 9.52mm(3/8")	42N.m
Gas Side 12.7mm(1/ 2")	50N·m

3 Connection

- Use the same method on indoor unit. Loosen the screws on terminal block and insert the plugs fully into terminal block, then tighten the screws.
- Insert the cable according to terminal number in the same manner as the indoor unit.
- If wiring is not correct, proper operation can not be carried out and controller may be damaged.
- Fix the cable with a damp.

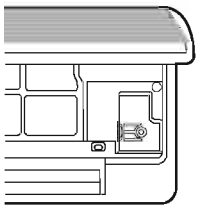
4 Attaching Drain-Elbow

- If the drain-elbow is used, please attach it as figure.



Indoor Unit

4 Connecting the indoor/outdoor Electric Cable



Removing the wiring cover

- Remove terminal cover at right bottom corner of indoor unit, then take off wiring cover by removing its screws.

When connecting the cable after installing the indoor unit

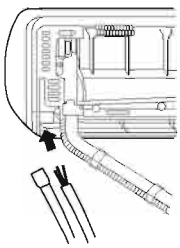
1. Insert from outside the room cable into left side of the wall hole, in which the pipe has already existed.
2. Pull out the cable on the front side, and connect the cable making a loop.

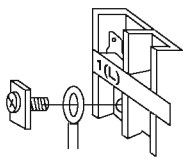
When connecting the cable before installing the indoor unit

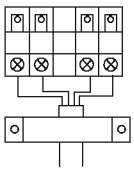
- Insert the cable from the back side of the unit, then pull it out on the front side.
- Loosen the screws and insert the cable ends fully into terminal block, then tighten the screws.
- Pull the cable slightly to make sure the cables have been properly inserted and tightened.
- After the cable connection, never fail to fasten the connected cable with the wiring cover.

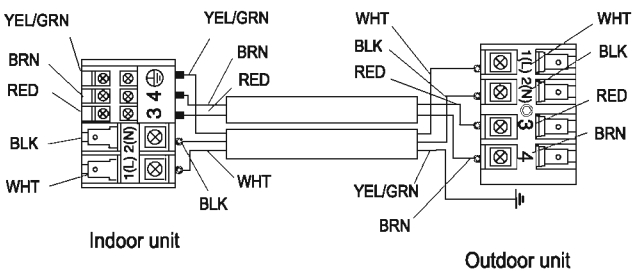
Note: When connecting the cable, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.

1. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. The type of connecting wire is H05RN-F or H07RN-F.
2. If the fuse on PC board is broken please change it with the type of T.3.15A/250V.
3. The wiring method should be in line with the local wiring standard.
4. After installation, the power plug should be easily reached.

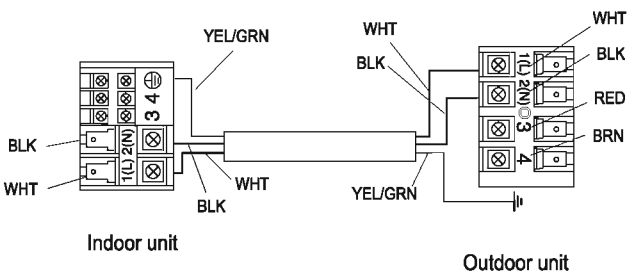








HSU-07RD03
HSU-09RD03
HSU-12RD03



HSU-07LD03
HSU-09LD03
HSU-12LD03

Indoor Unit

3 Installation of the Indoor Unit

Drawing of pipe

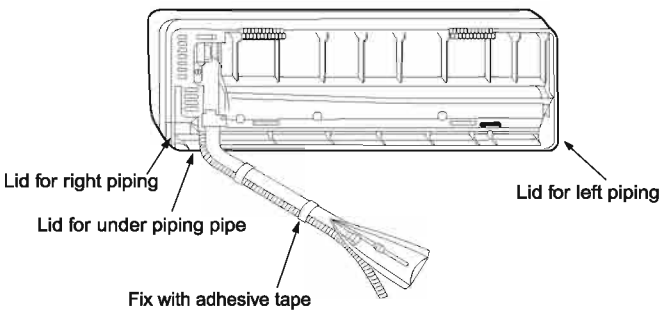
[Rear piping]

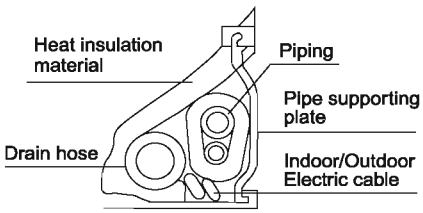
• Draw pipes and the drain hose, then fasten them with the adhesive tape.

[Left • Left-rear piping]

• In case of left side piping, cut away, with a nipper, the lid for left piping.
• In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.

1. Insert the drain hose into the dent of heat insulation materials of indoor unit.
2. Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.
3. Coat the flaring seal face with refrigerant oil and connect pipes.
   Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape.





• Indoor/outdoor electric cable and drain hose must be bound with refrigerant piping by protecting tape.

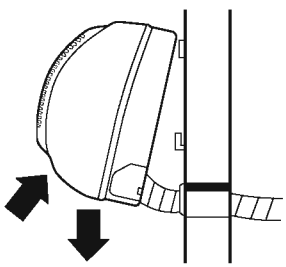
[Other direction piping]

• Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to the position of wall hole. When bending, be careful not to crash pipes.
• Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

Fixing the indoor unit body

• Hang surely the unit body onto the upper notches of the mounting plate. Move the body from side to side toverify its secure fixing.

• In order to fix the body onto the mounting plate,hold up the body aslant from the underside and then put it down perpendicularly.

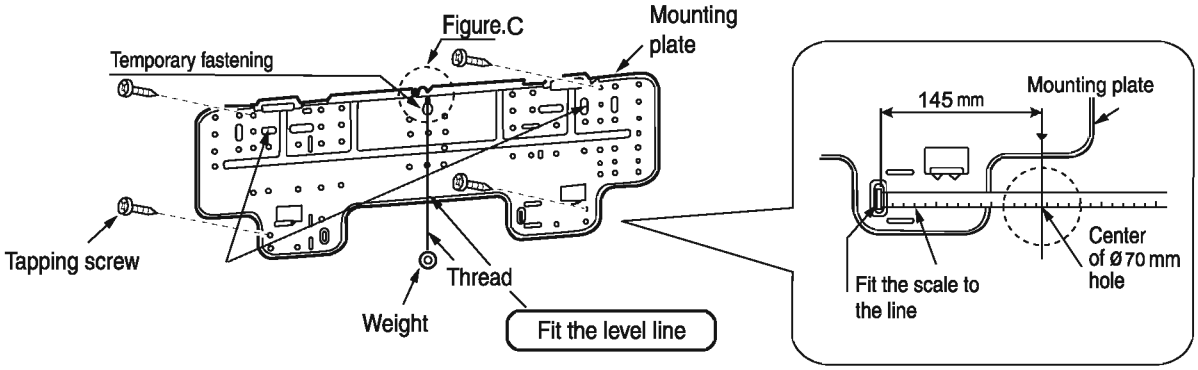


Indoor Unit

1 Fitting of the Mounting Plate and Positioning of the Wall Hole

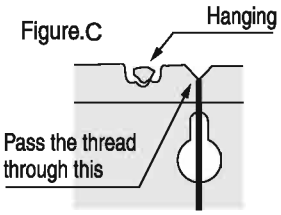
When the mounting plate is first fixed

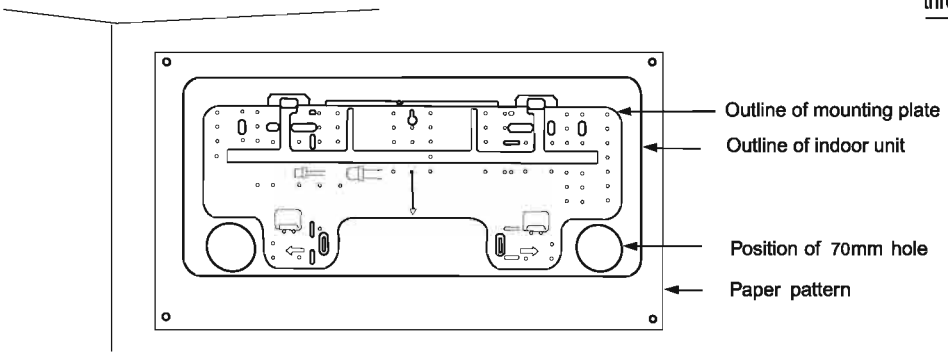
1 Carry out, based on the neighboring pillars or lintels, a proper leveling for the plate to be fixed against the wall, then temporarily fasten the plate with one steel nail.
2 Make sure once more the proper level of the plate, by hanging a thread with a weight from the central top of the plate, then fasten securely the plate with the attachment steel nail.
3 Find the wall hole location Amm using a measuring tape.



When the paper pattern is used

1 Stick a paper pattern on the wall horizontally
2 Position by using the pattern then remove the pattern



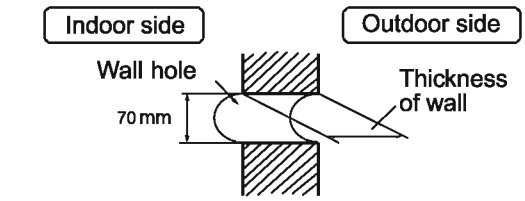


When the mounting plate is fixed to side bar and lintel

- Fix to side bar and lintel a mounting bar, Which is separately sold, and then fasten the plate to the fixed mounting bar.
- Refer to the previous article, " When the mounting plate is first fixed ", for the position of wall hole.

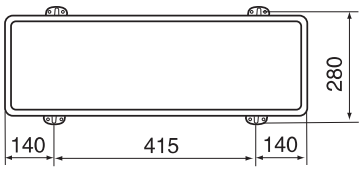
2 Making a Hole on the Wall and Fitting the Piping Hole Cover

- Make a hole of 70mm in diameter, slightly descending to outside the wall.
- Install piping hole cover and seal it off with putty after installation.

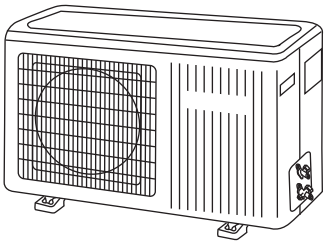


(Section of wall hole) Ⓖ Piping hole pipe

HSU-07RD03 HSU-07LD03
HSU-09RD03 HSU-09LD03
HSU-12RD03 HSU-12LD03



Floor fixing dimensions
of the outdoor unit
(Unit: mm)



Fixing of outdoor unit

- Fix the unit to concrete or block with bolts (ϕ10mm) and nuts firmly and horizontally.
- When fitting the unit to wall surface, roof or rooftop, fix a supporter surely with nails or wires in consideration of earthquake and strong wind.
- If vibration may affect the house, fix the unit by attaching a vibration-proof mat.

Selection of Installation Place

Indoor Unit

- Place, robust not causing vibration, where the body can be supported sufficiently.
- Place, not affected by heat or steam generated in the vicinity, where inlet and outlet of the unit are not disturbed.
- Place, possible to drain easily, where piping can be connected with the outdoor unit.
- Place, where cold air can be spread in a room entirely.
- Place, nearby a power receptacle, with enough space around. (Refer to drawings).
- Place where the distance of more than 1m from televisions, radios, wireless apparatuses and fluorescent lamps can be left.
- In the case of fixing the remote controller on a wall, place where the indoor unit can receive signals when the fluorescent lamps in the room are lightened.

Outdoor Unit

- Place, which is less affected by rain or direct sunlight and is sufficiently ventilated.
- Place, possible to bear the unit, where vibration and noise are not increased.
- Place, where discharged wind and noise do not cause a nuisance to the neighbors.
- Place, where a distance marked ⇔ is available as illustrated in the above figure.

Power Source

- Before inserting power plug into receptacle, check the voltage without fail. The power source is the same as the corresponded name plate.
- Install an exclusive branch circuit of the power.
- A receptacle shall be set up in a distance where the power cable can be reached. Do not extend the cable by cutting it.

Selection of Pipe

- To this unit, both liquid and gas pipes shall be insulated as they become low temperature in operation.
- Use optional parts for piping set or pipes covered with equivalent insulation material.

• Paper Pattern for Indoor Unit Installation Leave at Least 50mm between the
Please use this sheet to site the unit top of the unit and the ceiling