Haier

Split Type Air Conditioner

ENGINEERING DATA

MODELS:

AS222AJAAA+AU222AHAAA(HSU-22HD03)
(10102857800,10102857900)
AS222AJMAA+AU222AHMAA(HSU-22CD03)
(10102873500,10102873600)
AS222AJAAA+AU222AHAAA(HSU-22HD03(ion))
(10102891400,10102891500)

Content

Knock-down drawings for outdoor unit

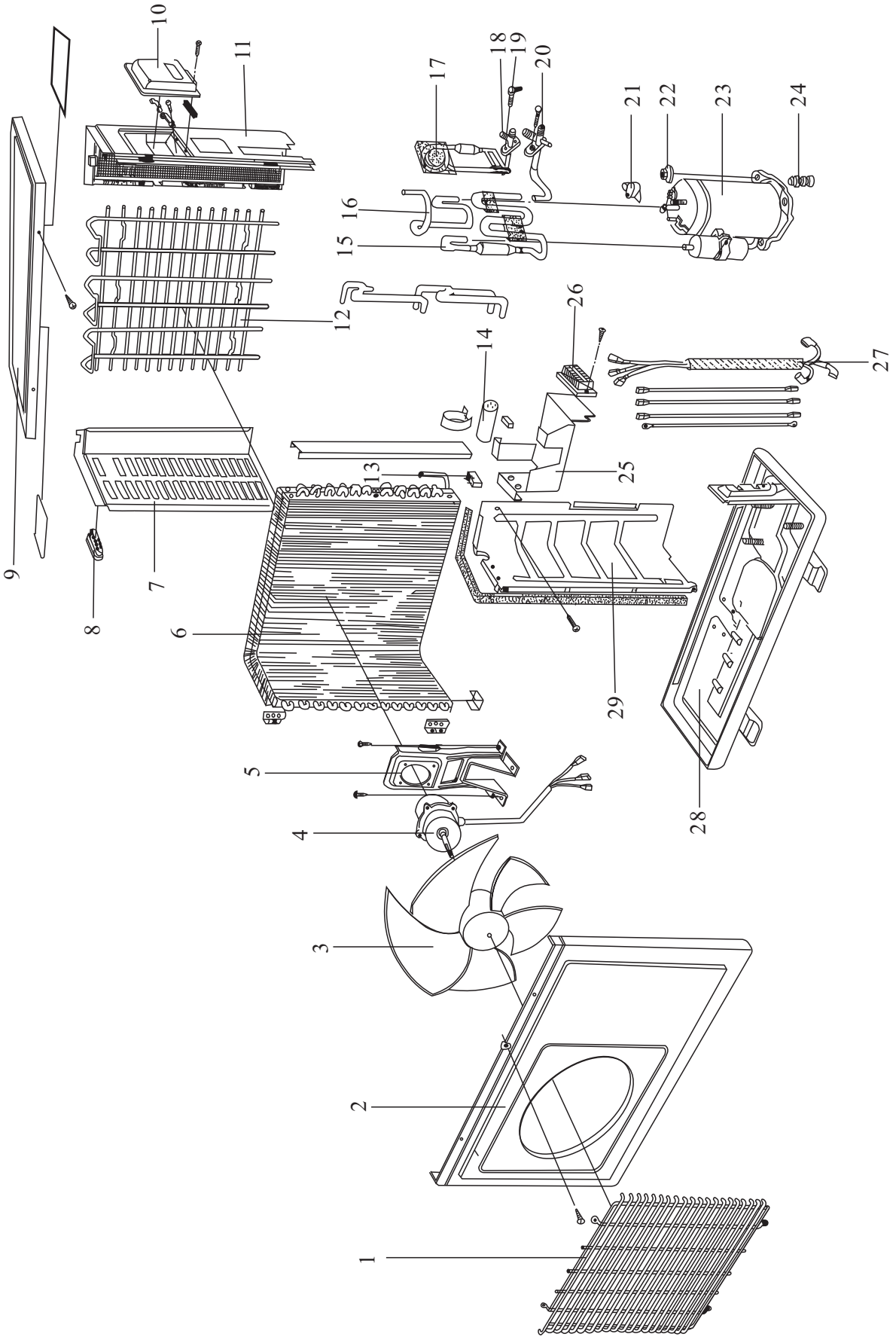
Models:

AU222AHMAA(HSU-22HD03)

NO.	Specialized No. HSU-22HD03(ion)	Name of the component	Qty./unit	Description	Easily damaged components (Y/N)
1	front grille	001A1236199	1		
2	front panel	001A1101106	1		
3	fan	001A2331043	1		
4	motor	001A3000223	1		Y
5	motor support	001A1301427	1		
6	heat exchanger	001A0400135	1		
7	side panel (L)	001A1101107	1		
8	handle	001A1436182	1		
9	top panel	001A1101108	1		
10	cover	001A1431175A	1		
11	side panel (R)	001A1101109	1		
12	back grille	001A1301415	1		
13	capacitor for motor	001A3600009B	1		Y
14	capacitor for compressor	001A3600030	1		Y
15	suction pipe	001A21111151	1		
16	discharge pipe	001A21111150	1		
17	capillary tube	0010701241	1		
18	stop valve	0010702420	1		
19	bolt	001A5002074	1		
20	stop valve	0010702420	1		
21	cover for compressor	001A1440064	4		
22	nut	001A5102050	3		
23	compressor	0010701322	1		Y
24	cushion	001A1752164	1		
25	electric box	001A1301510	1		
26	terminal block	001A4000098	1		
27	wires	001A4400698	1		
28	bottom plate	001A0100655	1		
29	seperating plate	001A0100753	1		

KNOCK-DOWN DRAWINGS FOR OUTDOOR UNIT

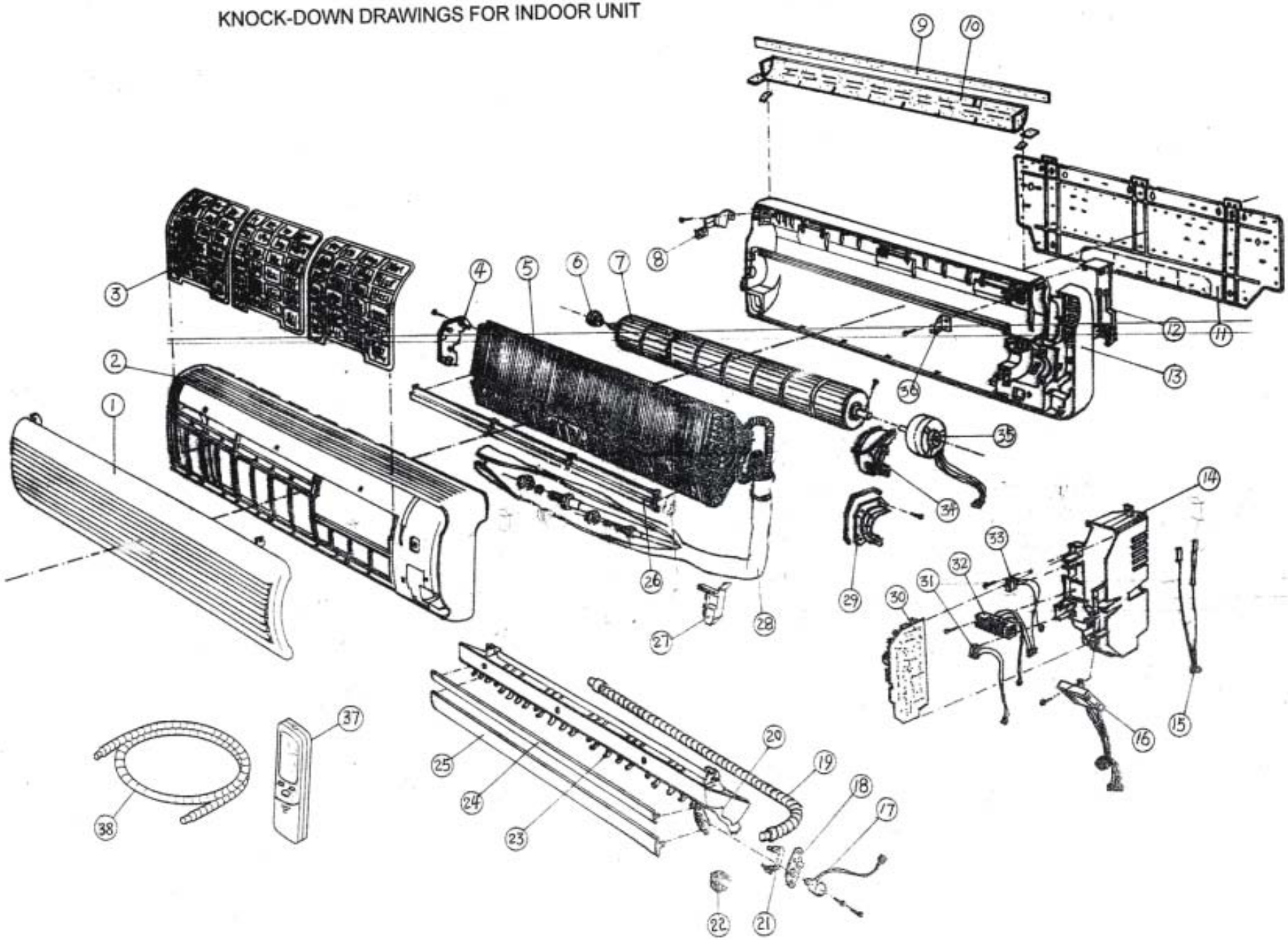
AU222AHMAA(HSU-22HD03)



Model:HSU-22HD03

No. in exploded view.	Name of part	Part specialized code	QTY.	Easily damaged components(Y/N)	remark
1	front grillle	001A1231360	1		indoor unit
2	front panel	001A1231356	1		indoor unit
3	air filter	001A2400136	3		indoor unit
4	seperating plate(L)	001A14311040	1		indoor unit
5	heat exchanger	0010703510	1		indoor unit
6	bearing	001A0300060	1		indoor unit
7	fan	001A2300098	1		indoor unit
8	left support	001A1301857	1		indoor unit
9	cushion	0010200074	1		indoor unit
10	cushion	0010200075	1		indoor unit
11	mounting plate	001A1301856	1		indoor unit
12	fix plate	001A14311029	1		indoor unit
13	bottom plate	001A1231361	1		indoor unit
14	control box	001A14311047	1		indoor unit
15	temperature sensor	001A3900059	1	Y	indoor unit
16	indicating panel	0010401745	1		indoor unit
17	swing motor	001A3000273	1	Y	indoor unit
18	support plate	001A14361036	1		indoor unit
19	drain hose	001A0900011	1		indoor unit
20	drain pan	0010800157	1		indoor unit
21	link	001A14361035	1		indoor unit
22	shield	0010200035	1		indoor unit
23	vane	001A14361031	15		indoor unit
24	flap	001A1231357	1		indoor unit
25	flap	001A1231358	1		indoor unit
26	wind shield	0010200036	3		indoor unit
27	dew-defend	001A14361030	1		indoor unit
28	heat-insulation tube	0010200003	1		indoor unit
29	seperating plat(R)	001A14311041	1		indoor unit
30	PC board	0010402487	1	Y	indoor unit
31	switch	001A3400243	1		indoor unit
32	terminal block	001A4000151	1		indoor unit
33	switch	----------	1		indoor unit
34	motor cover	001A14311043	1		indoor unit
35	motor	0010400576	1	Y	indoor unit
36	right support	001A1301858	1		indoor unit
37	remote controller	001A3400179	1	Y	indoor unit
38	drain hose	001A1434039	1		indoor unit

KNOCK-DOWN DRAWINGS FOR INDOOR UNIT



Knock-down drawings

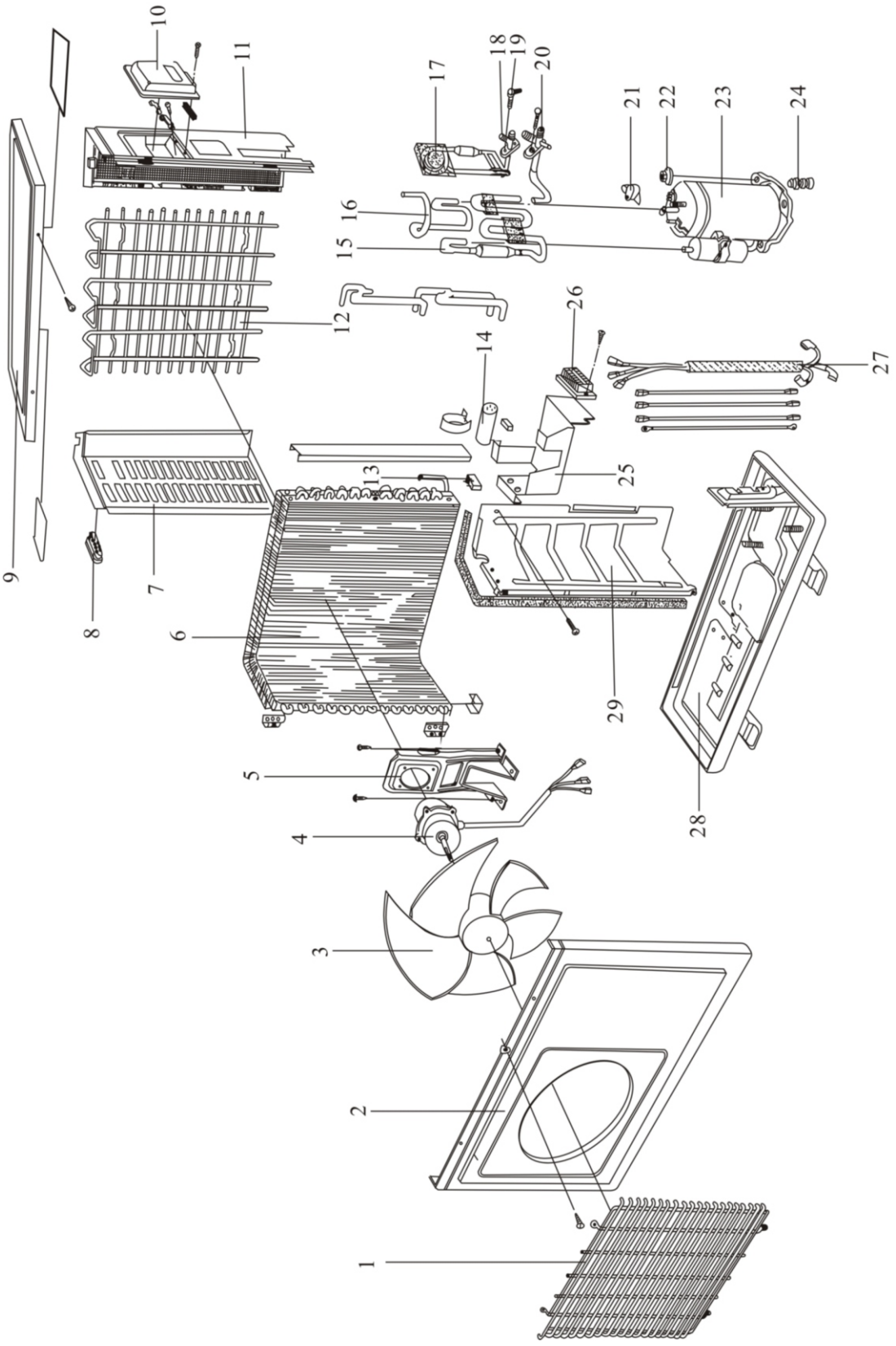
Model:HSU-22CD03

No. in exploded view.	Name of part	Part specialized code	QTY.	Easily damaged components(Y/N)	remark
1	front grille	001A1236199	1		
2	front panel	001A1101106	1		
3	fan	001A2331043	1		
4	motor	001A3000223	1	Y	
5	motor support	001A1301427	1		
6	heat exchanger	001A0400135	1		
7	side panel (L)	001A1101107	1		
8	handle	001A1436182	1		
9	top panel	001A1101108	1		
10	cover	001A1431175A	1		
11	side panel （R）	001A1101109	1		
12	back grille	001A1301415	1		
13	capacitor for motor	001A3600009B	1	Y	
14	capacitor for compressor	001A3600030	1	Y	
15	suctiong pipe	001A21111151	1		
16	discharge pipe	001A21111150	1		
17	capillary tube	0010701241	1		
18	stop valve	0010702420	1		
19	bolt	001A5002074	1		
20	stop valve	0010702420	1		
21	cover for compressor	001A1440064	4		
22	nut	001A5102050	3		
23	compressor	0010701322	1		
24	cushin	001A1752164	1		
25	elctric box	001A1301510	1		
26	terminal block	001A4000098	1		
27	wires	001A4400698	1		
28	bottom plate	001A0100655	1		
29	seperating plate	001A0100753	1		

Model:HSU-22CD03

KNOCK-DOWN DRAWINGS FOR OUTDOOR UNIT

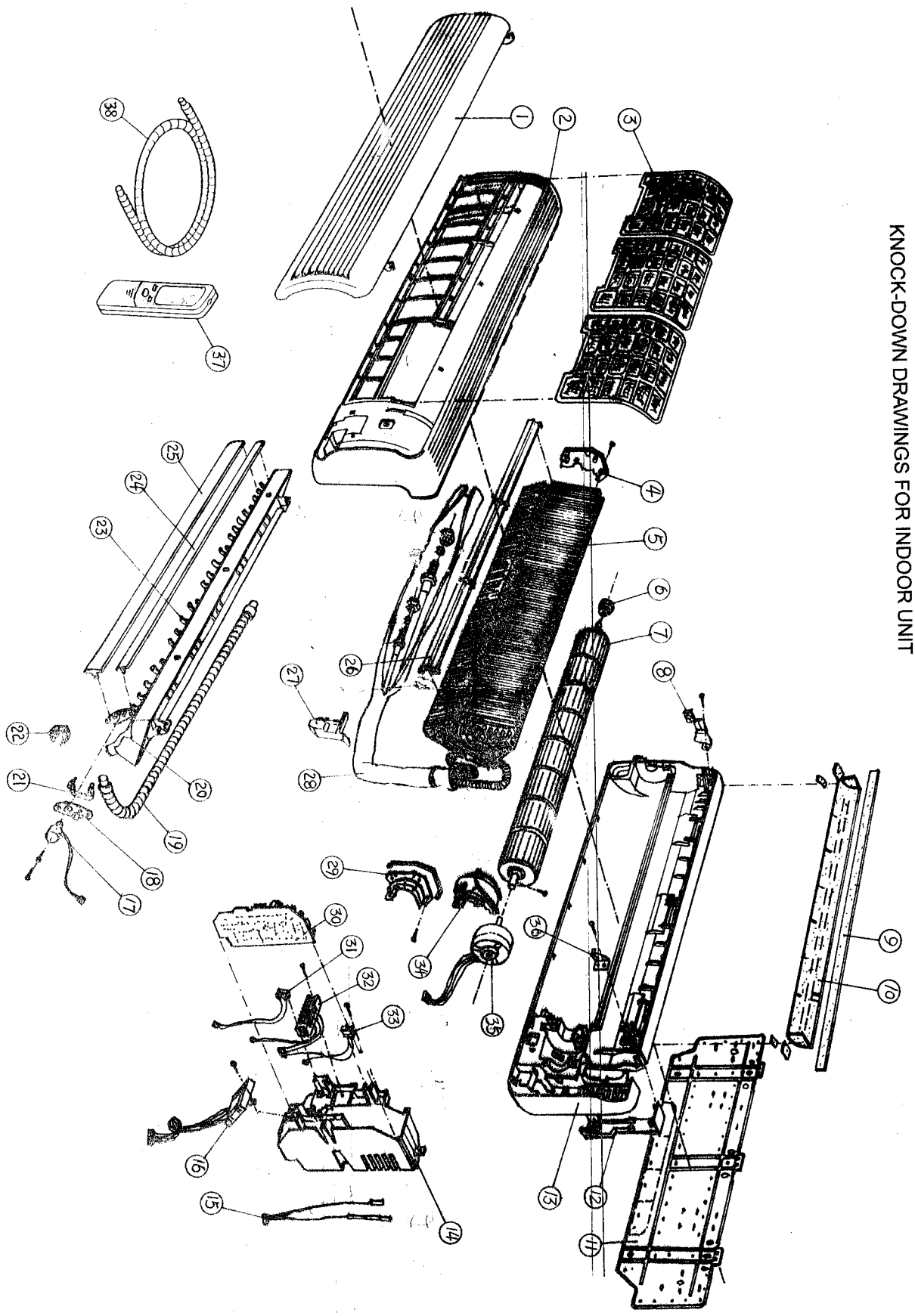
AU222AHMAA(HSU-22CD03)



HSU-22CD03

No.	Name of part	Part specialized code	QTY.	Easily damaged components(Y/N)	remark
1	front grillle	001A1231360	1		
2	front panel	001A1231356	1		
3	air filter	001A2400136	3		
4	seperating plate(L)	001A14311040	1		
5	heat exchanger	0010702476	1		
6	bearing	001A0300060	1		
7	fan	001A2300098	1		
8	left support	001A1301857	1		
9	cushion	0010200074	1		
10	cushion	0010200075	1		
11	mounting plate	001A1301856	1		
12	fix plate	001A14311029	1		
13	bottom plate	001A1231361	1		
14	control box	001A14311047	1		
15	temperature sensor	001A3900059	1	Y	
16	indicating panel	001A3400236	1		
17	swing motor	001A3000273	1	Y	
18	support plate	001A14361036	1		
19	link	001A14361035	1		
20	drain hose	001A0900011	1		
21	drain pan	001A1231359	1		
22	shield	0010200035	1		
23	vane	001A14361031	1		
24	flap	001A1231357	1		
25	flap	001A1231358	1		
26	wind shield	0010200036	1		
27	dew-defend	001A14361030	1		
28	heat-insulation tube	0010200003	1		
29	seperating plat(R)	001A14311041	1		
30	PC board	0010401362	1	Y	
31	switch	001A3400243	1		
32	terminal block	001A4000151	1		
33	switch	001A3400243	1		
34	motor cover	001A14311043	1		
35	motor	0010400576	1	Y	
36	right support	001A1301858	1		
37	remote controller	001A3400078	1	Y	
38	drain hose	001A1434039	1		

HSU-22CD03



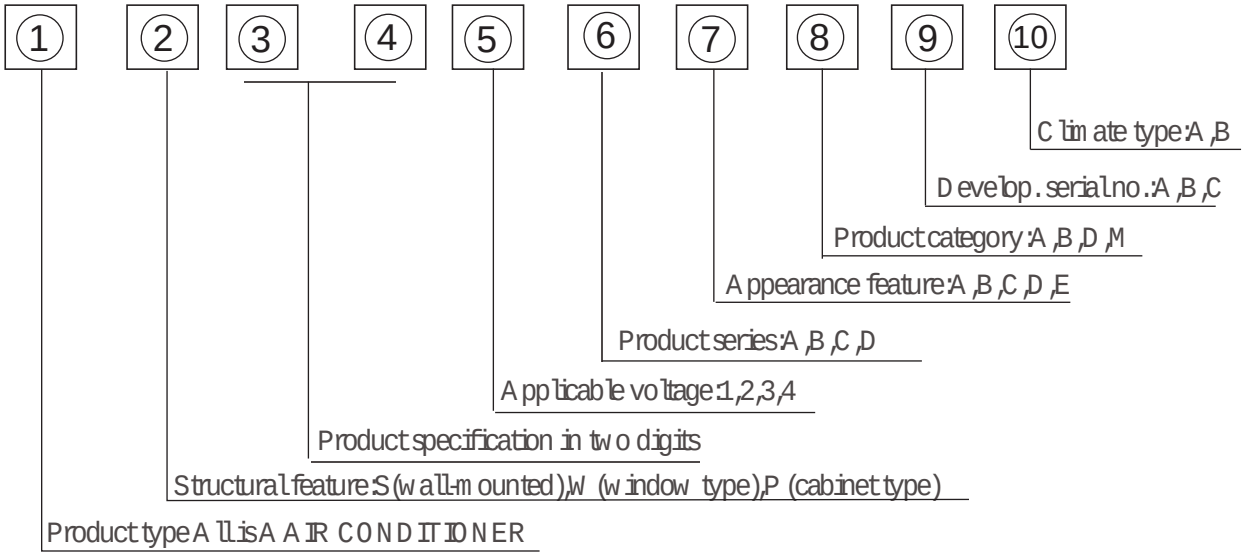
Description of product model coding and series introduction

Introductory Remarks

A. Description of coding rules of unit model

Coding rules and descriptions of new models are as follows:

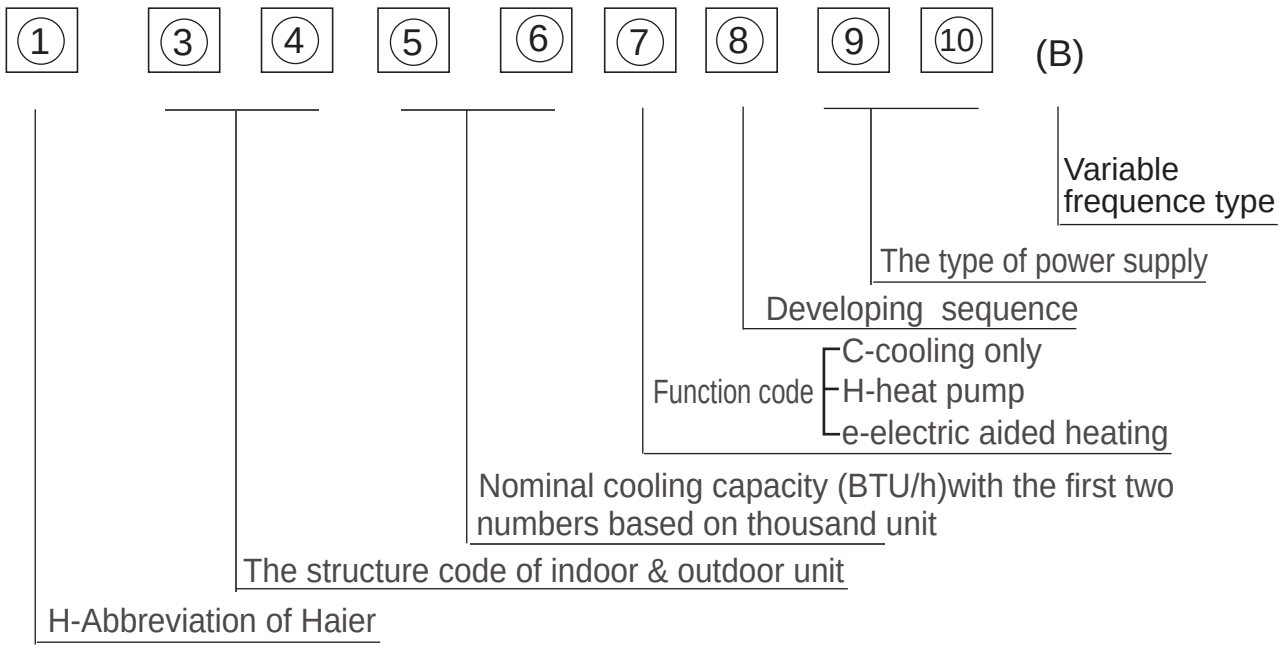
Indoor unit model and outdoor unit model of exported air conditioners shall be separately worked out in 10 digits combining English letters and Arabian numbers. The composition and representation are as follows:



E.g.: in, AS222AJAAA "A" represents air conditioner; "S" means wall mounted indoor unit; "22" indicates heating capacity of 22000BTU/h; "2" means applicable voltage of 220-240V/50Hz; "A" represents single split system; "J" is for appearance characteristics; "A" means heat pump type and refrigerant of R22; "A" is development serial number; "A" represents climate type.

In, AU222AHAAA "A" represents air conditioner; "U" means wall mounted outdoor unit; "22" indicates heating capacity of 22000BTU/h; "2" means applicable voltage of 220-240V/50Hz; "A" represents single split system; "H" is for appearance characteristics; "A" means heat pump type and refrigerant of R22; "A" is development serial number; "A" represents climate type.

B Another model identification



1.Standard Situation/conditions

NO.	operating condition	indoor air status		outdoor air status	
		DB℃	WB℃	DB℃	WB℃
1	Nominal cooling	27	19	35	24
2	Nominal heating	20	----	7	6
3	Nominal electrical	----	----	----	----

C series brief introduction

1.High efficiency for saving energy

applying for efficient compressor,the air-conditioner starts smoothly and changes its cooling or heating capacity automaticaly according to your room's demand,so that the air conditioner will always run in high efficiency for saving energy

2.Lower noise

3.Healthy and comfortable

An air purifiing filter with deodorizing and disinfecting functions keeps the air clean.

4.Convenience

Washable panel:the front grille of the indoor unit can be removed easily and washed when necessary..

5.Power failure resume function

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.

Specifications

Specification:

Model:	AS222AJMAA+AU222AHMAA (HSU-22CD03)	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	6000W	Heating capacity:	/
Cooling coefficient:	2.72	Heating coefficient:	/
cooling Power input:	2200W	Heating power:	/
Moisture removal	2.75X10^{-3}m^3/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)	48/44/38dB(A)	outdoor unit noise (cooling)	54/48dB(A)
Indoor unit noise (heating)	49/45/39dB(A)	outdoor unit noise (heating)	55/49dB(A)
net dimensions	1150 x308x224mm	net dimensions	860x308X730mm
Packaging dimensions (indoor unit)	1230x372x300mm	Packaging dimensions (outdoor unit)	1005X425X800mm
weight(indoor unit)	17/20.5(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	67/75(net/gross) kg
Refrigerant charge	R22 2100g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	2260g
Compressor model	SHV33YC6-U	Compressor manufacturer	shanghai Hitachi
Compressor oil charge	320cc	Compressor protector type	----------
Maxi. length of connecting pipe:	15m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP_2Y copper tube	Length/diameter of drain hose	2000mm/ϕ17.5mm
Fan speed: (r/min)	1320/1260/1180(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ9.52/ϕ15.88mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	0.65MPa
cut-off valve:	3/8",5/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

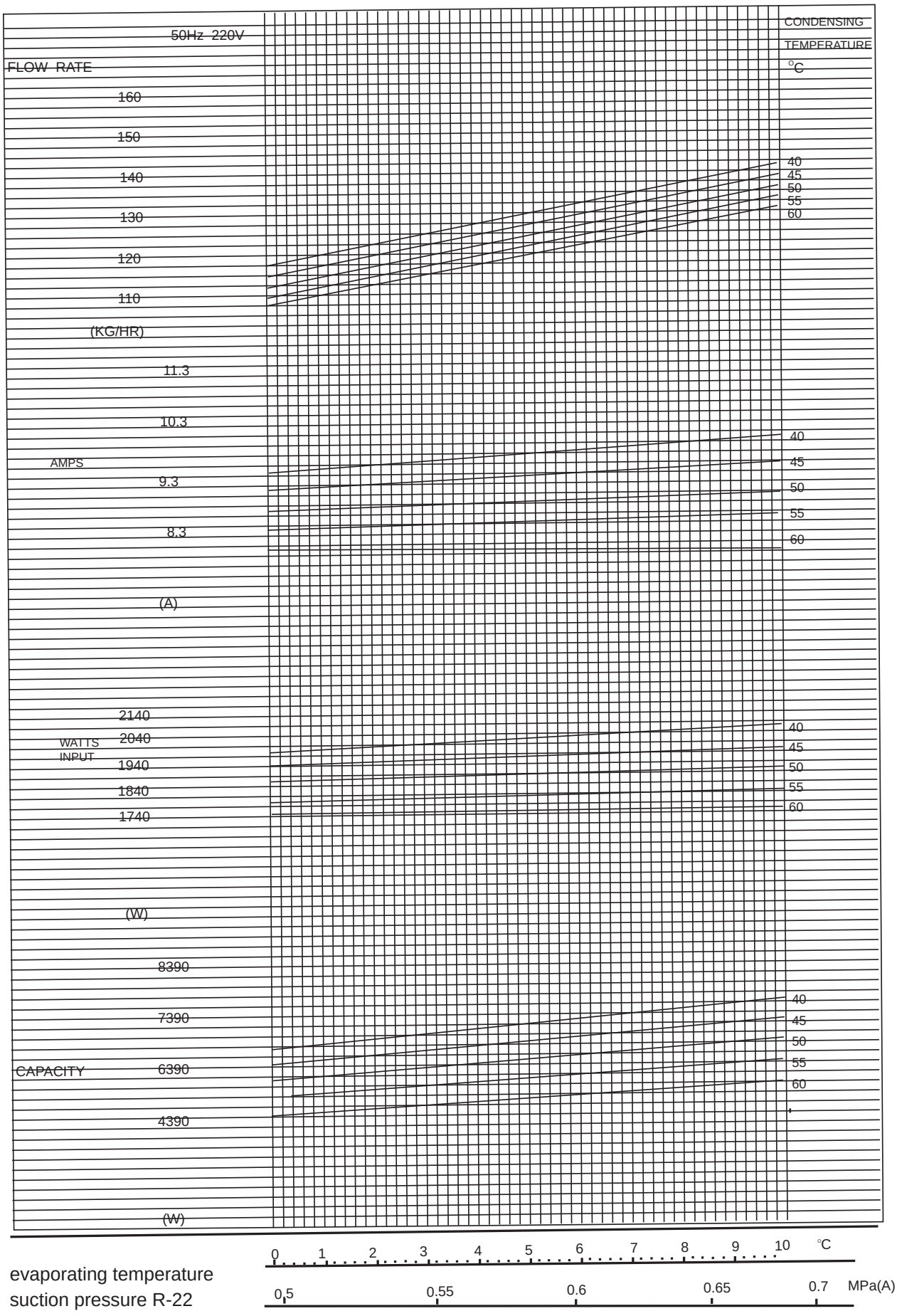
Model:	AS222AJAAA+AU222AHAAA (HSU-22HD03)	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	22000BTU/h	Heating capacity:	23000BTU/h
Cooling coefficient:	2.72	Heating coefficient:	2.8
cooling Power input:	2300W	Heating power:	2300W
Moisture removal	$2.75X10^{-3}m^3/h$	Frequency range	50Hz
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)	48/46/44dB(A)	outdoor unit noise (cooling)	52/48dB(A)
Indoor unit noise (heating)	49/47/45dB(A)	outdoor unit noise (heating)	52/48dB(A)
net dimensions	1150 x308x224mm	net dimensions	860x308X730mm
Packaging dimensions (indoor unit)	1230x372x300mm	Packaging dimensions (outdoor unit)	1005X425X800mm
weight(indoor unit)	17/20.5(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	67/75(net/gross) kg
Refrigerant charge	R22 2250g	Current entering side (indoor/outdoor)	indoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	2410g
Compressor model	SHV33YC6-U	Compressor manufacturer	shanghai Hitachi
Compressor oil charge	320cc	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/ϕ17.5mm
Fan speed: (r/min)	1320/1260/1180(indoor) 860/500(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe ϕ9.52/ϕ15.88mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	3/8",5/8"	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Specification:

Model:	AS222AJAAA+AU222AHAAA (HSU-22HD03(ion))	Appearance color (indoor/outdoor):	White/White
Cooling capacity:	6000W	Heating capacity:	6800W
Cooling coefficient:	2.6W/W	Heating coefficient:	3.02W/W
cooling Power input:	2300W	Heating power:	2300W
Moisture removal	2.75X10^{-3}m^3/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	10°~60°/7m
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)	48/46/44dB(A)	outdoor unit noise (cooling)	52dB(A)
Indoor unit noise (heating)	48/46/44dB(A)	outdoor unit noise (heating)	52dB(A)
net dimensions	1155x308x224mm	net dimensions	860x308x730mm
Packaging dimensions (indoor unit)	1230 x372x295mm	Packaging dimensions (outdoor unit)	995x420x805mm
weight(indoor unit)	17/20.5(net/gross)kg	Piling layers for indoor/outdoor unit	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	69/75(net/gross) kg
Refrigerant charge	R22 22 50g	Current entering side (indoor/outdoor)	outdoor
Frequency of filter cleaning	Once/2 weeks	Max. refrigerant charge	2320
Compressor model	SHV33YC6-U	Compressor manufacturer	Shanghai Hitachi
Compressor oil charge	875cc	Compressor protector type	----------
Maxi. length of connecting pipe:	15m	model of 4-way valve:	----------
Cap. tube type muffle model:	TP$_2$Y copper tube	Length/diameter of drain hose	996 mm/Ø17.5mm
Fan speed: (r/min)	1320/1260/1180(indoor) 860(outdoor)	Type/size of evaporator and condenser	Internal treaded pipe Ø7/Ø9.52mm
Max. operating pressure warm side:	2.65MPa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	3/8 ,5/8	Appearance features	Indoor unit:plastic:Outdoor unit: iron

Curves of performance

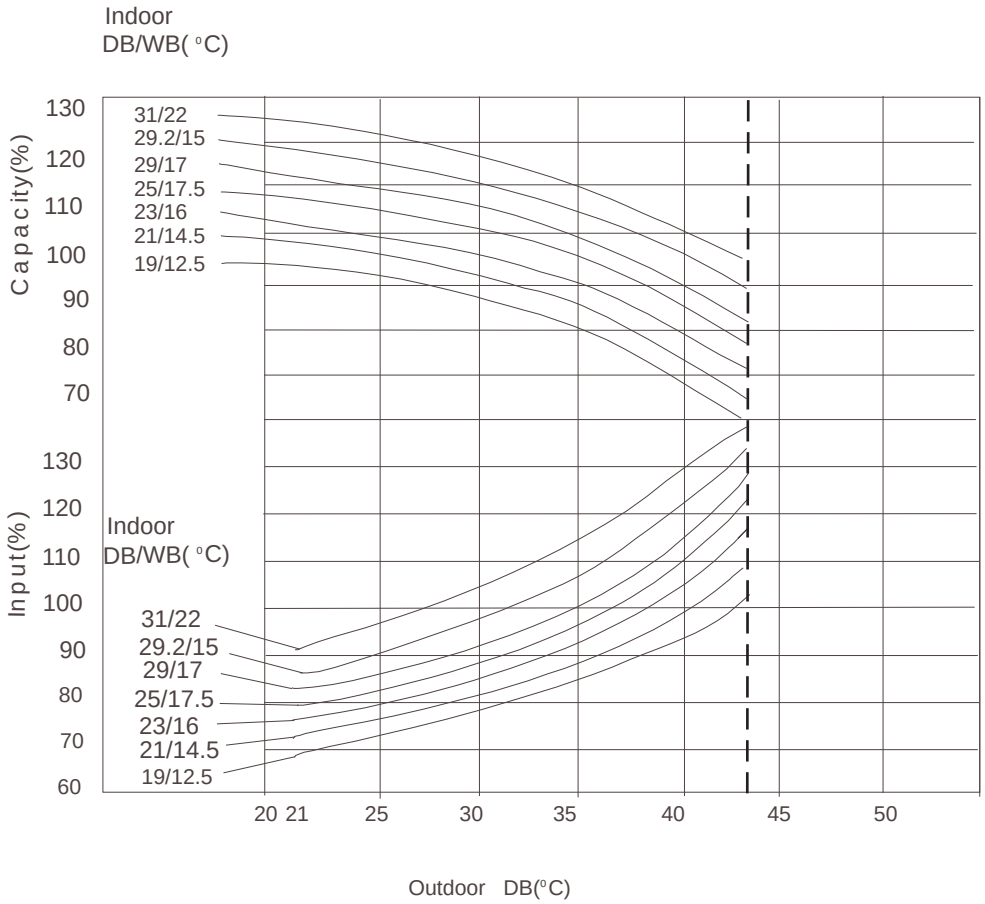
SHV33YC6-U


50Hz 220V
FLOW RATE
160
150
140
130
120
110
(KG/HR)
11.3
10.3
AMPS
9.3
8.3
(A)
2140
2040
WATTS INPUT
1940
1840
1740
(W)
8390
7390
CAPACITY
6390
4390
(W)
CONDENSING TEMPERATURE °C
40
45
50
55
60
40
45
50
55
60
40
45
50
55
60
40
45
50
55
60
0 1 2 3 4 5 6 7 8 9 10 °C
evaporating temperature
suction pressure R-22
0.5 0.55 0.6 0.65 0.7 MPa(A)

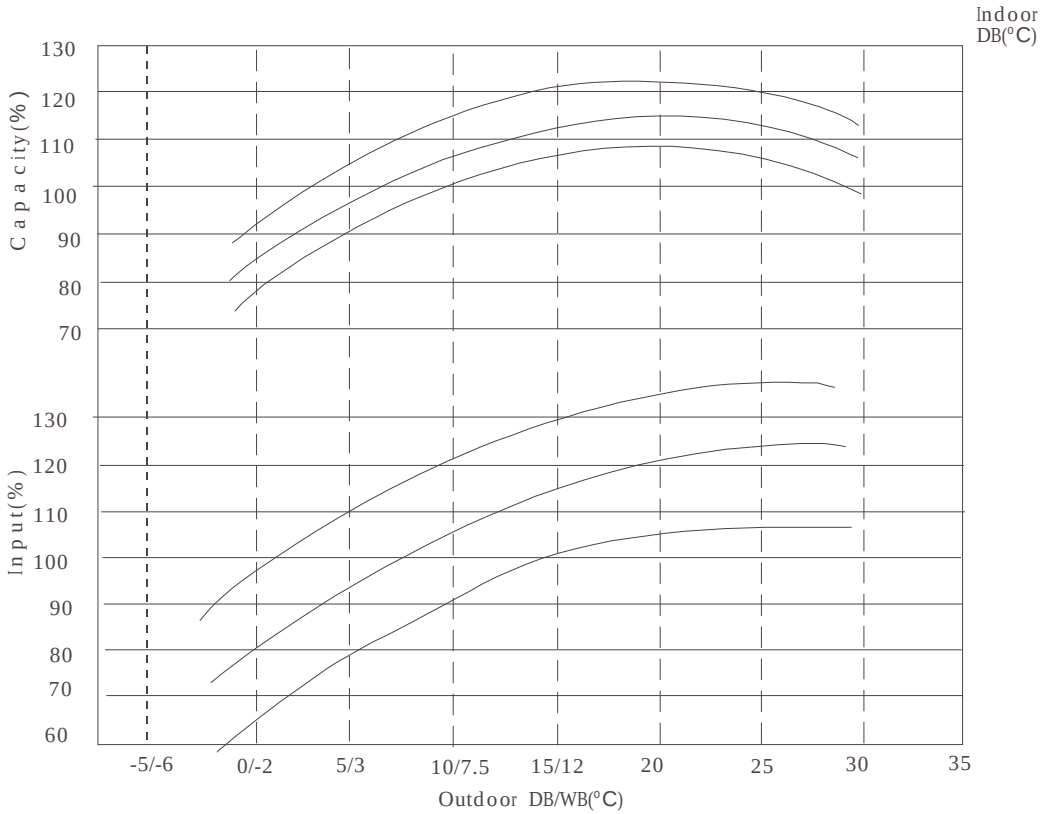
B. curves of performance

Adjust temperature range: -7°C ~ 43°C

Cooling

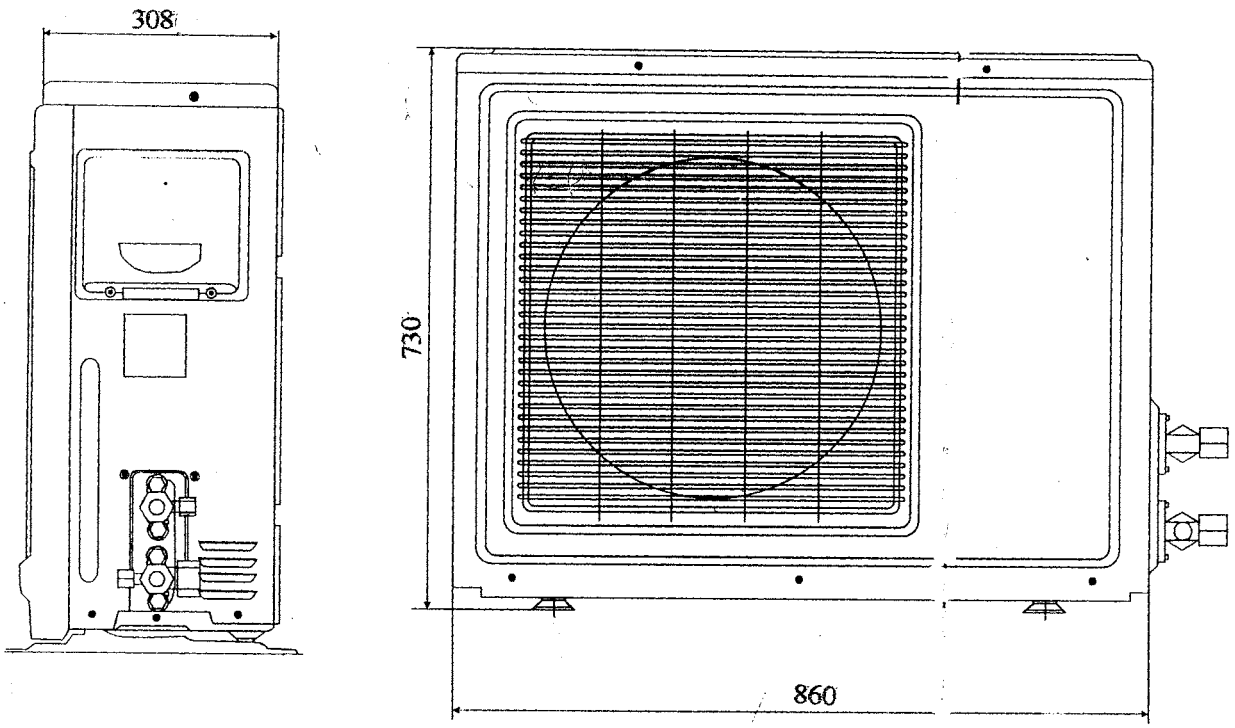


Heating

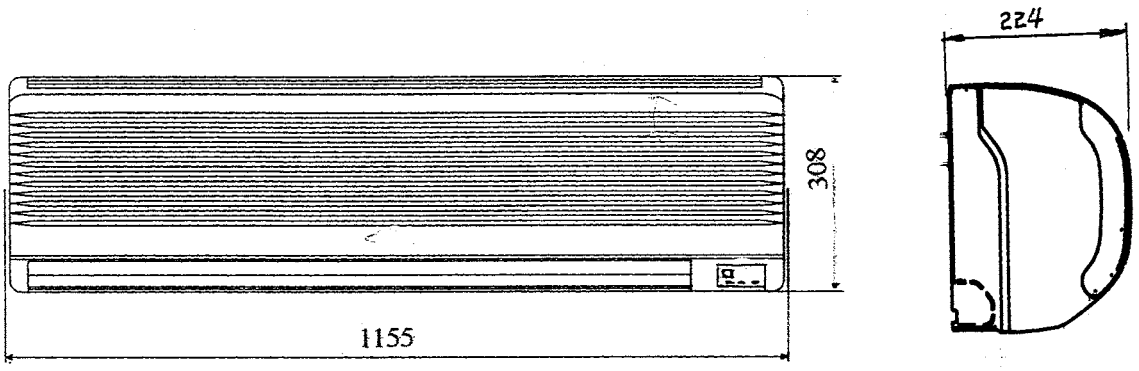


Description, dimension and function of main components and accessories

OUTDOOR UNIT



INDOOR UNIT



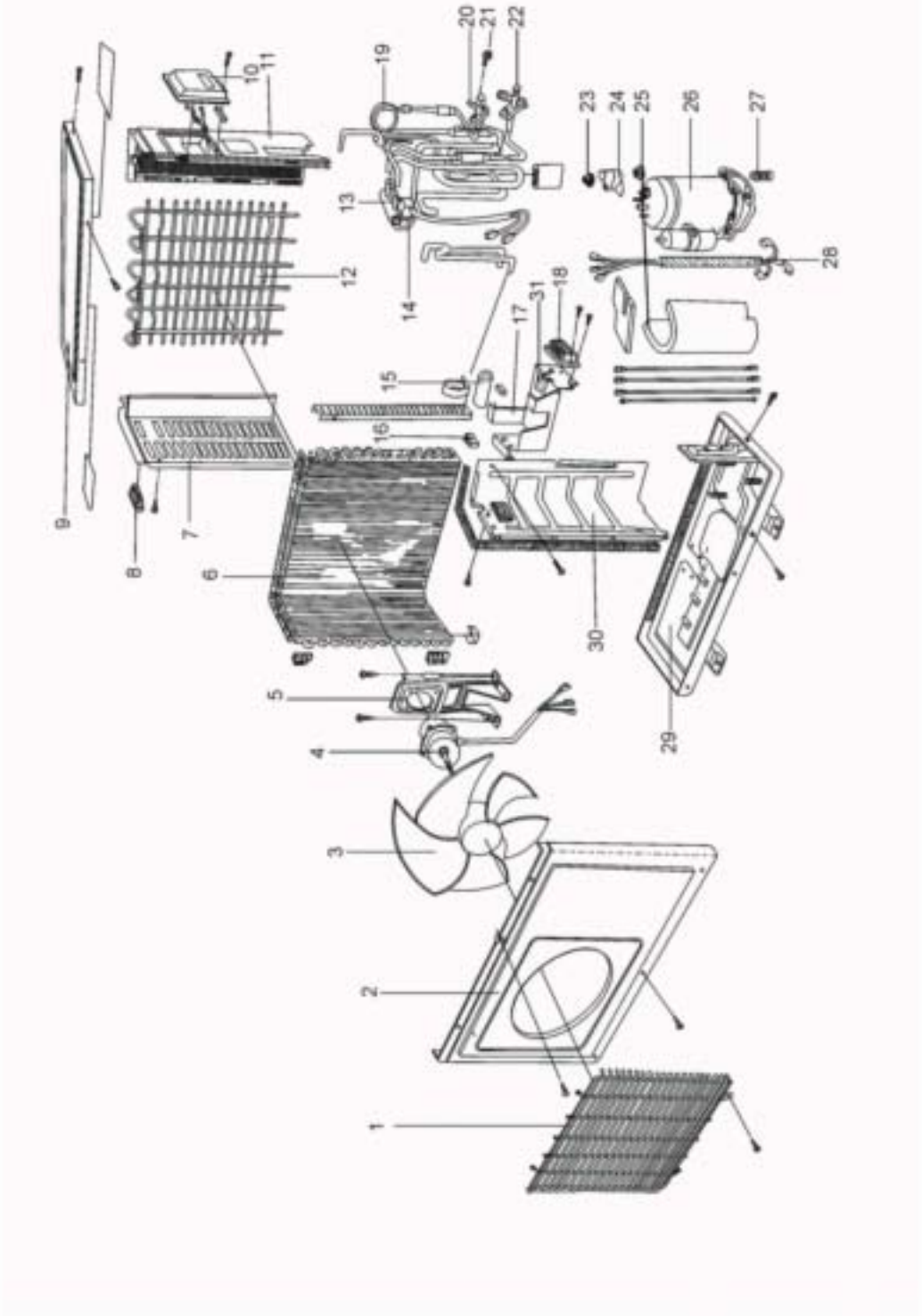
Knock-down drawings for indoor unit

Models:

AS222AJAAA(HSU-22HD03 (ion))

NO.	Specialized No. HSU-22HD03(ion)	Name of the component	Qty./unit	Description	Easily damaged components (Y/N)
1	front grille	001A1231360	1		
2	front panel	001A1231356	1		
3	air filter	001A2400136	3		
4	seperating plate(L)	001A14311040	1		
5	heat exchanger	0010703510	1		
6	bearing	001A0300060	1		
7	fan	001A2300098	1		
8	left support	001A1301857	1		
9	cushion	0010200074	1		
10	cushion	0010200075	1		
11	mounting plate	001A1301856	1		
12	fix plate	001A14311029	1		
13	bottom plate	001A1231361	1		
14	control box	001A14311047	1		
15	temperature sensor	001A3900059	1		Y
16	indicating panel	0010401745	1		
17	swing motor	001A3000273	1		Y
18	support plate	001A14361036	1		
19	drain hose	001A0900011	1		
20	drain pan	0010800157	1		
21	link	001A14361035	1		
22	shield	0010200035	1		
23	vane	001A14361031	15		
24	flap	001A1231357	1		
25	flap	001A1231358	1		
26	wind shield	0010200036	3		
27	dew-defend	001A14361030	1		
28	heat-insulation tube	0010200003	1		
29	seperating plat(R)	001A14311041	1		
30	PC board	0010402487	1		Y
31	switch	001A3400243	1		
32	terminal block	001A4000151	1		
33	switch	----------	1		
34	motor cover	001A14311043	1		
35	motor	0010400576	1		Y
36	right support	001A1301858	1		
37	remote controller	----------	1		Y
38	drain hose	001A1434039	1		

KNOCK-DOWN DRAWINGS FOR OUTDOOR UNIT



Knock-down drawings for indoor unit

Models:

AU222AHAAA(HSU-22HD03 (ion))

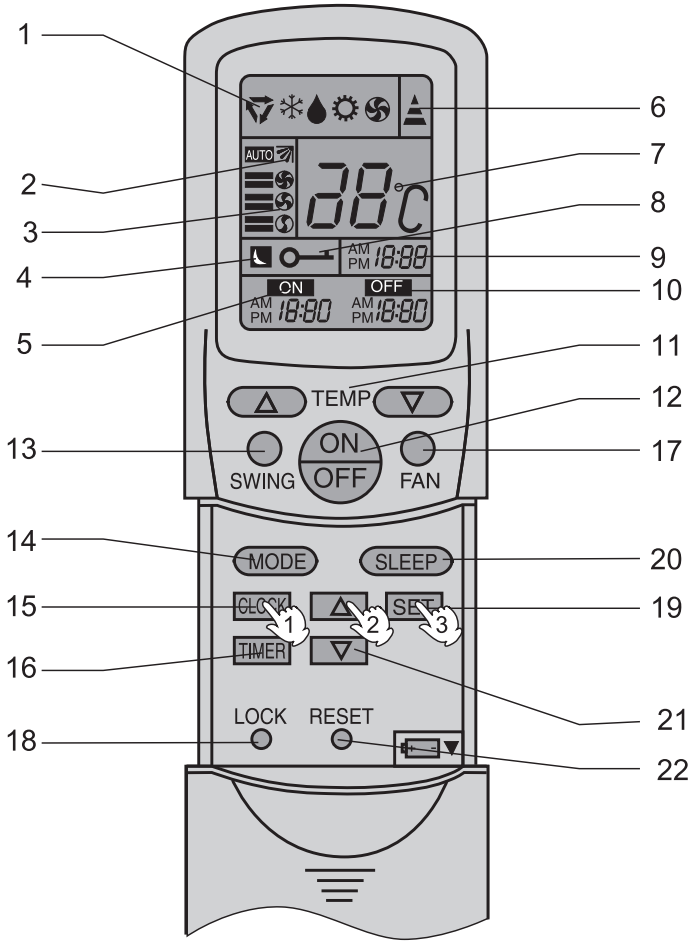
NO.	Specialized No. HSU-22HD03(ion)	Name of the component	Qty/unit	Description	Easily damaged components (Y/N)
1	front grille	001A1236199	1		
2	front panel	001A1101106	1		
3	fan	001A2331043	1		
4	motor	001A3000223	1		Y
5	motor support	001A1301427	1		
6	heat exchanger	001A0400240	1		
7	side panel (L)	001A1101107	1		
8	handle	001A1436182	1		
9	top panel	001A1101108	1		
10	cover	001A1431175A	1		
11	side panel (R)	001A1101109	1		
12	back grille	001A1301415	1		
13	four-way valve	001A2500015	1		
14	4-way valve coil	001A2500015	1		
15	capacitor	001A3600030	1		
16	capacitor	001A3600009B	1		
17	controller box	001A1301510	1		
18	terminal block	001A4000098	1		
19	capillary tube	001B0700886	1		
20	stop valve	0010702420	1		Y
21	bolt	001A5002075	4		
22	stop valve	0010702454	1		
23	nut	001A5102004	1		
24	cover for compressor	001A1762341	1		
25	Sound insulating cushion	001A1762657	1		Y
26	compressor	0010701322	1		
27	cushin	001A1752164	3		Y
28	wires	0010402490	1		
29	bottom plate	001A0100655	1		Y
30	seperating plate	001A1301417	1		Y
31	PC board	0010401414	1		
32	compressor heating-set	001A4500004	1		

Remote controller functions conversion

Parts and Functions

Operation

Buttons and display of the remote controller.



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

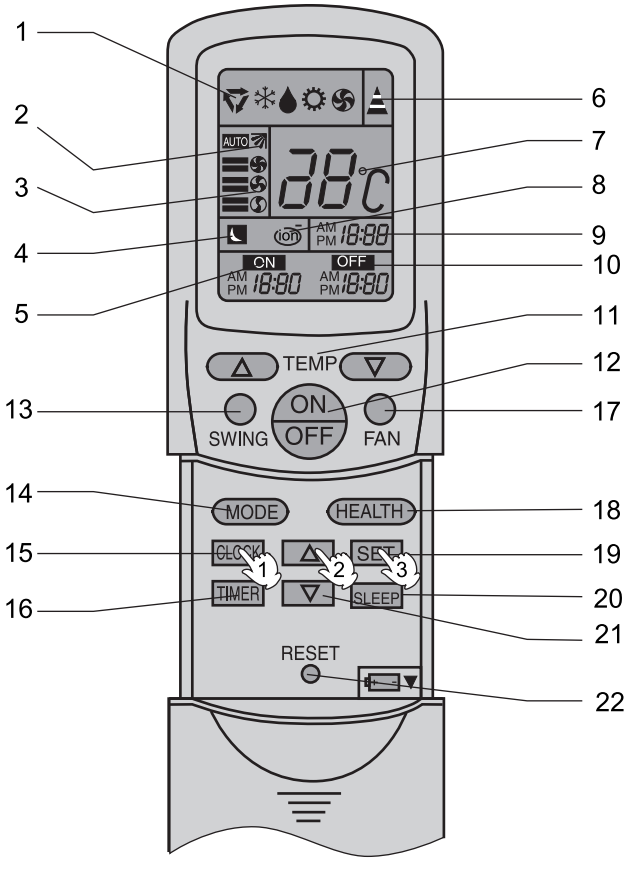
After replacing with new batteries, remote controller will conduct self-check, displaying all information on LCD. Then, it will become normal.

Parts and Functions

Operation

If the unit which you purchased has healthy function, Remote controller should like the following figure: (The introduction in this book about the remote controller has no an example for the once with healthy function.)

Buttons and display of the remote controller.



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

4. SLEEP
5. TIMER ON
6. SIGNAL SENDING
7. TEMP
8. HEATHY DISPLAY
9. CLOCK
10. TIMER OFF
11. TEMP.
    Used to select your desired temp.
12. POWER ON/OFF
    Used for unit start and stop.
13. SWING
    Used to set auto fan direction.
14. MODE
    Used to select AUTO run, COOL, DRY,HEAT and FAN operation.
15. CLOCK
    Used to set correct time
16. TIMER
    Used to select TIMER ON, TIMER OFF, TIMER ON/OFF
17. FAN
    Used to select fan speed LO, MED, HI, AUTO
18. HEALTHY BUTTON
    Press the "Health" button once "ion" is displayed now the air conditioners is operating the healthy function.
    Press the "Health" button again then the healthy operation stops.
19. SET
    Used to confirm timer and clock settings.
20. SLEEP
    Used to select sleep mode.
21. HOUR
    Used to set clock and timer setting.
22. RESET
    Used to reset the controller back to normal condition.

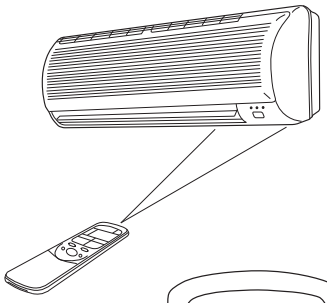
Brief Introduction to Health Operation

The anion generator in the air conditioner can generate a lot of anion to effectively balance the quantity of posion and anion in the air and also to kill bacteria and speed up the dust sediment in the room and finally clean the air in the room.

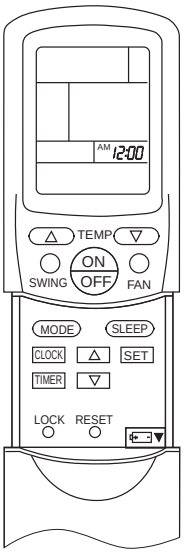
Notes: When the fan in the indoor unit does not work, the health lamp lights up, but the anion generator does not release anion.

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 receiving 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.

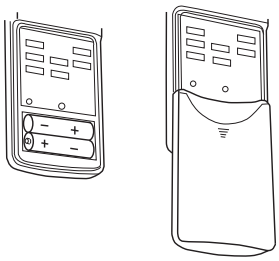
Put on the cover again

Confirmation indicator:

In disorderation, reload the batteries or load the new batteries after 5mins.

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.

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

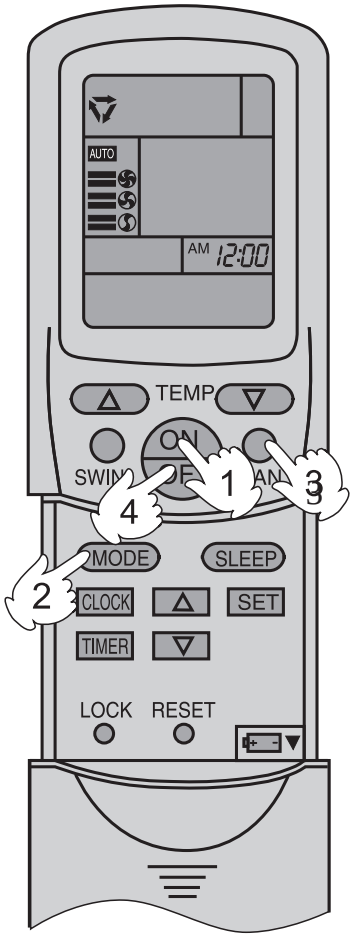
Press MODE button. For each press, operation mode changes as follows:

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



(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.

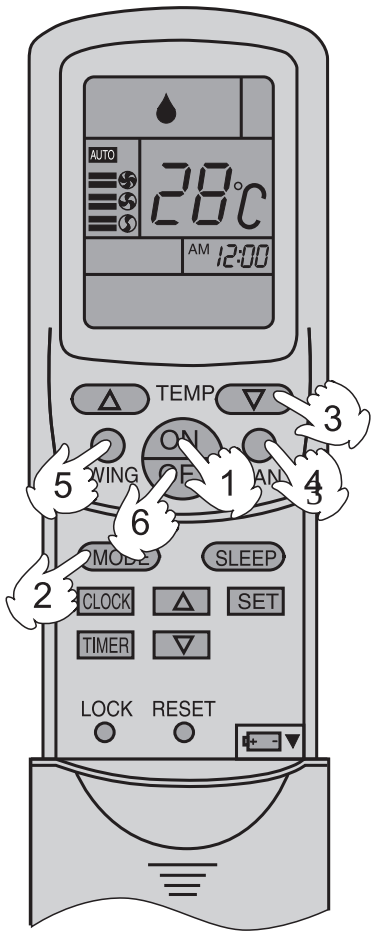
Operation

COOL, HEAT and DRY operation

Recommendations:
- Use COOL in summer.
- Use HEAT in winter.
- 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:

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

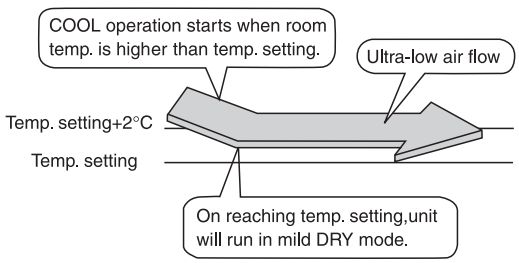
(3) Select temp. setting

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:

Unit runs at the speed displayed on LCD.
In HEAT mode, warm air will blow out after a short period of time due to cold-draft prevention function.
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

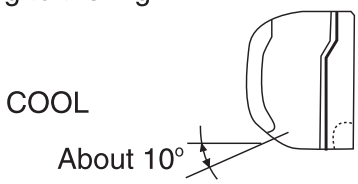
Remote controller can memorize each operation status. When starting it next time, just press ON/OFF button and unit will run in previous status.

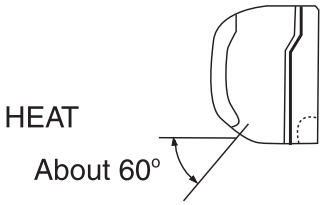
Operation

(5) Air flow direction adjustment

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

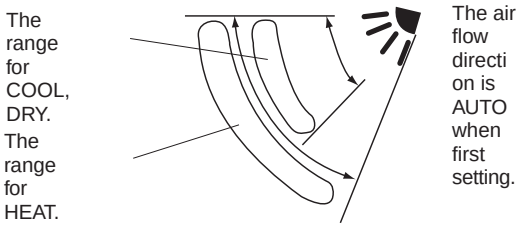
Referring to the Fig.





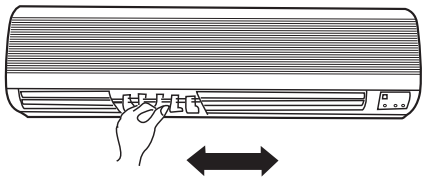
Up and down (Use remote controller)

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



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:

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.

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.

Operation

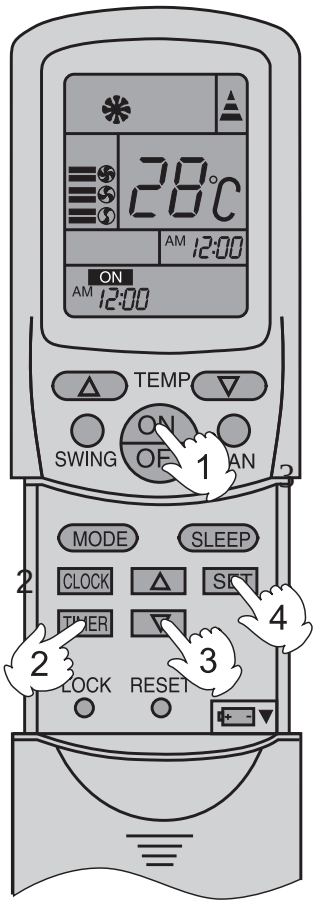
TIMER operation

Set Clock correctly before starting Timer operation

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

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

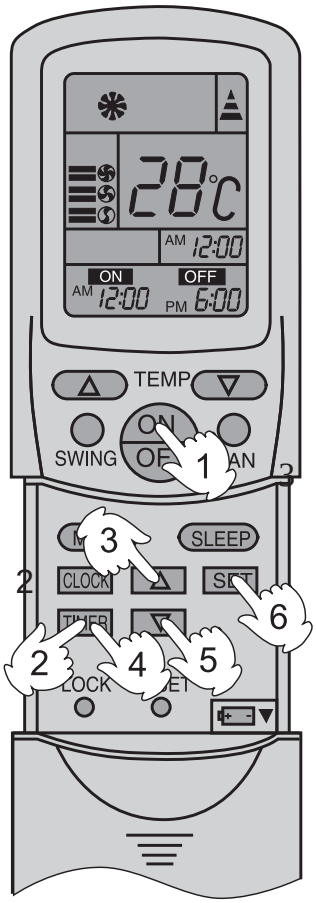
After time setting, press TIMER button to confirm.
"ON" stops blinking, While "OFF" starts blinking.
Time displayed: Unit starts at x hour x min.

(5)Time setting for TIMER OFF

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

(6) Time confirming for TIMER OFF

After time setting, press SET button to confirm, "OFF" stops flashing.
Time displayed: Unit stops at X hour X min.



To cancel TIMER mode

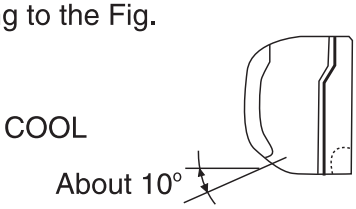
- Just press TIMER button several times until TIMER mode disappears.
- According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

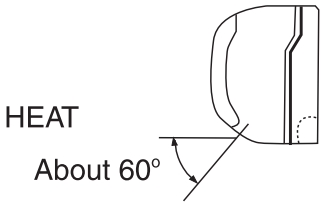
Brief introduction to electrical control functions

Operation

(5) Air flow direction adjustment

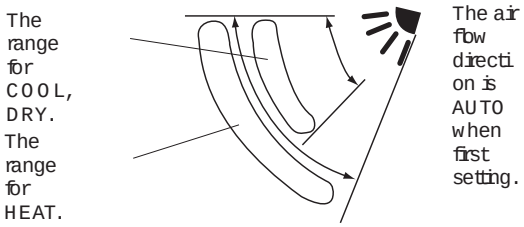
After operation mode is selected, vertical flap will open automatically according to the mode.
Referring to the Fig.





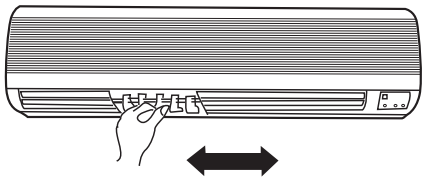
Up and down (Use remote controller)

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



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:

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.

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.

Operation

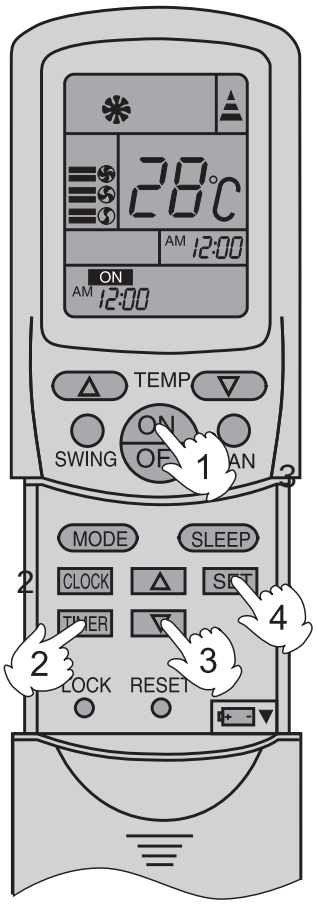
TIMER operation

Set Clock correctly before starting Timer operation

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

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

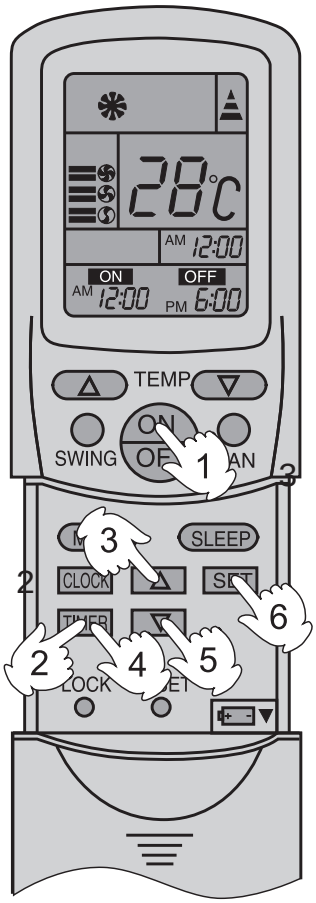
After time setting, press TIMER button to confirm.
"ON" stops blinking, While "OFF" starts blinking.
Time displayed: Unit starts at x hour x min.

(5)Time setting for TIMER OFF

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

(6) Time confirming for TIMER OFF

After time setting, press SET button to confirm, "OFF" stops flashing.
Time displayed: Unit stops at X hour X min.



To cancel TIMER mode

- Just press TIMER button several times until TIMER mode disappears.
- According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

Brief introduction to electrical control functions

1.Introduction to electrically controlled functions

1.1General about electrically controlled functions

(1) Automatic operation (applicable to heating & coling type)

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°C running refrigerating mode Ts=26°C

b. Tr ≤ 23°C running heating mode(with temp.compensation) Ts=23°C

After turning to the automation mode, the running mode can be switched between refrigerating 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 trm perature control

(to see Fig.1)

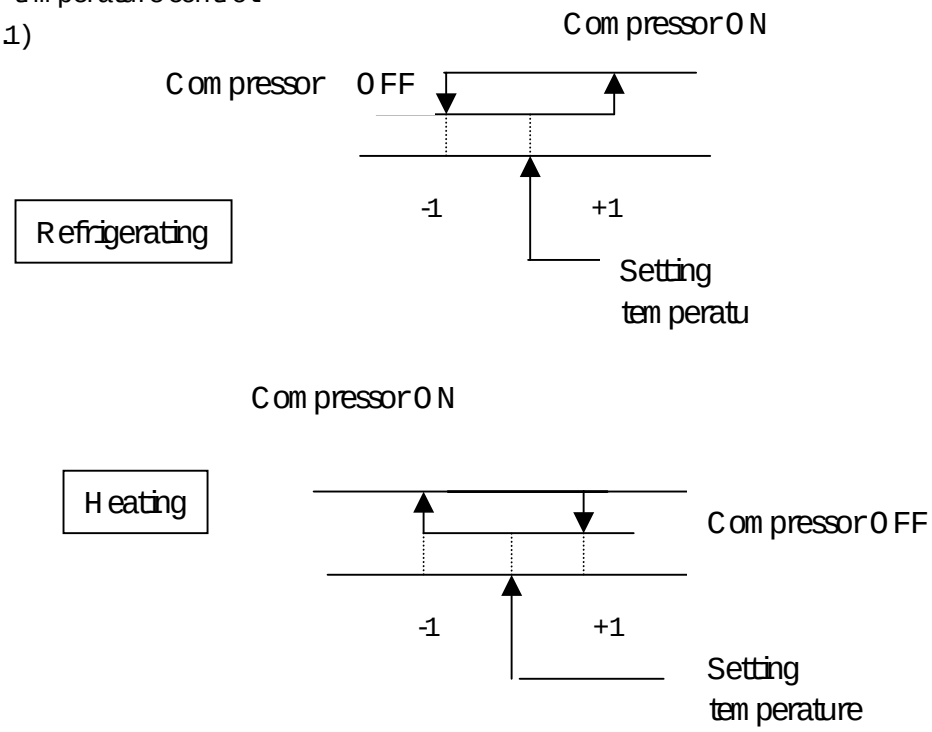


Fig.1

(3) DRY operation

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°C, compressor, outdoor fan run continuously, indoor fan runs as per setting wind speed (State 1);

② Ts+2°C ≥ 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)

(to see Fig.2)

(4) Cold draft prevention in HEAT mode

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

① If the temperature of indoor coil pipe is ≥ 28°C, start lower wind speed;

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

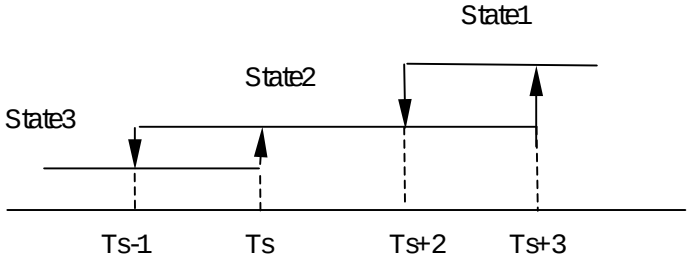


Fig.2

(5) Residual heat blowing in HEAT mode

When compressor stops in HEAT mode,in door fan will at last run at LO speed for 30 sec,Then if one of the follow conditions is met,the fan will stops:

A. The Tp is lower than 20 °C

B. The compressor has stoped more than 2min

(6) Defrost control

1.Defrosting beginning condition:

a. After the state of Tp-Tr<18°C the accumulated running time of the compressor exceeds 45 minutes, the continuous running time of the compressor exceeds 20 minutes; indoor unit's Tp <43°C;

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 <43°C;

c. The continuous running time of the compressor exceeds 20 minutes, the temperature of indoor coil pipe decreases 1°C every 6 minutes, which lasts for more than 3 times, indoor unit's Tp <43°C;

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 <43°C.

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 14 A (different models have different currents)

3.Sequence of defrosting actions: (to see Fig.3)

.

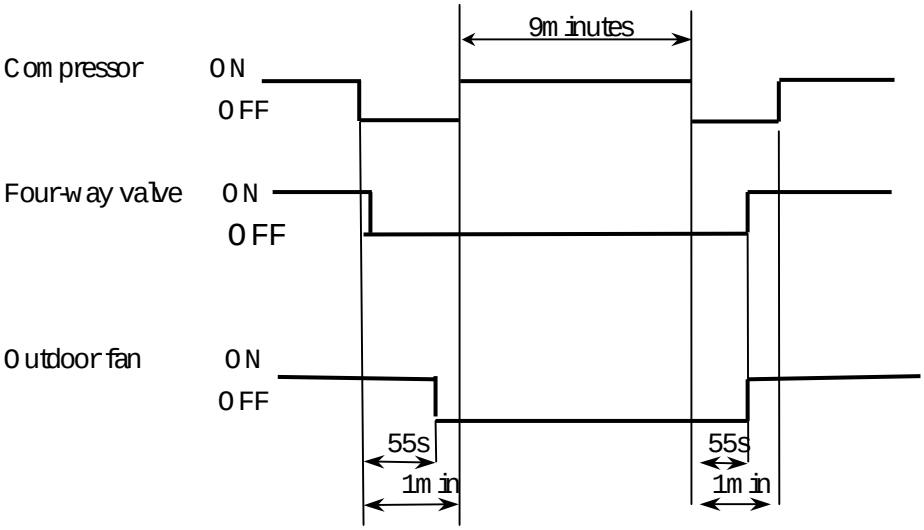


Fig.3

(7) Temperature compensation

The requisition for automatic temperature compensation is that,the time from compressor reaches temperature condition and stops to restarting is less than 5 min.Rules for temperature compensation are as follow:

IfTs+4 -Tr≥2°C, △T=2°C; ifTs+4 – Tr=1°C时, △T=1°C;

IfTs+4– Tr≤0°C时, △T=0°C。

Upon initally entering HEAT mode, △T=0°C After the compressor stoped, △T=0°C

When there is temperature compensation,pressing temp.“ -” button will get△T=0°C;While pressing temp.“ +” button, △Tw illkeep originalvalue.

(8)Subcooling protection in COOL mode

In COOL mode, after compressor has operated for 9 min,indoor coil temperature will be detected.if the value is less than 0°C, compressor and outdoor fan will stop.After compressor has stopped, if the following two conditions are met at the same time,compressor and outdoor fan will restart

a. Compressor off-time has exceeded 3min,

b. Indoor coil temperature rises to above 7°C

(9)3 min standby

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

(10)Overload protection in HEAT mode

Anti-overload protection: In HEAT mode,The indoor fan runing and the compressor has runing more than 2min,if indoor coil temperature is>58°C,outdoor fan stops,ande resumes when indoor coil temperature becomes≤55°C,If indooor coil temperature keeps >68°C for 10 sec,compressor and outdoor fan stop.After compressor stops,if indoor coil temperature is <46°C,compressor and outdoor fan resume normaloperation

Overcurrent protection: In Heat mode, 60sec after compressor started, if current transformer tests that system work current keeps>13.5A for 5 sec, outdoor fan stops;if current is <11A ,outdoor fan will restore normal operation(the outdoor fan must be stoped more than 45 sec); If working current keeps 21 A for 3 sec, compressor and outdoor fan stop, After 3 mins, compressor and outdoor fan resumes normal operation , fan indoor operates according to cold draft prevention condiions.

In Refrigerat mode, 60sec after compressor started, if current transformer tests that system working current keeps 21 A for 3 sec, compressor and outdoor fan stop, After 3 mins, compressor and outdoor fan resumes normal operation , fan indoor operates according to cold draft prevention condiions.

If compressor overcurrent protection triggers 3 times in 30min,compressor will not restart,and the system will alarm for overcurrent fault.

(11) Power failure resumption function

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

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, flap status and HEALTH

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.

(12) Emergency ON/OFF and forced COOL

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°C running refrigerating mode Ts=26°C

b. Tr≤ 23°C running heating mode(with temp.compensation) Ts=23°C

Press the emergency switch for 5 seconds till hearing 2 sounds of click from the buzzer, then the air conditioner will turn to the forced COOL state. The unit will run in the refrigerating mode and the indoor fan will run in high wind speed mode. In this mode, the system will not alart for fault in 5 min,and it will stop after 30min.If use the remote to control the unit,then cancel forced cooling function.

While unit is ON, press ON/OFF button, the buzzer beeps once, and the system turns off.

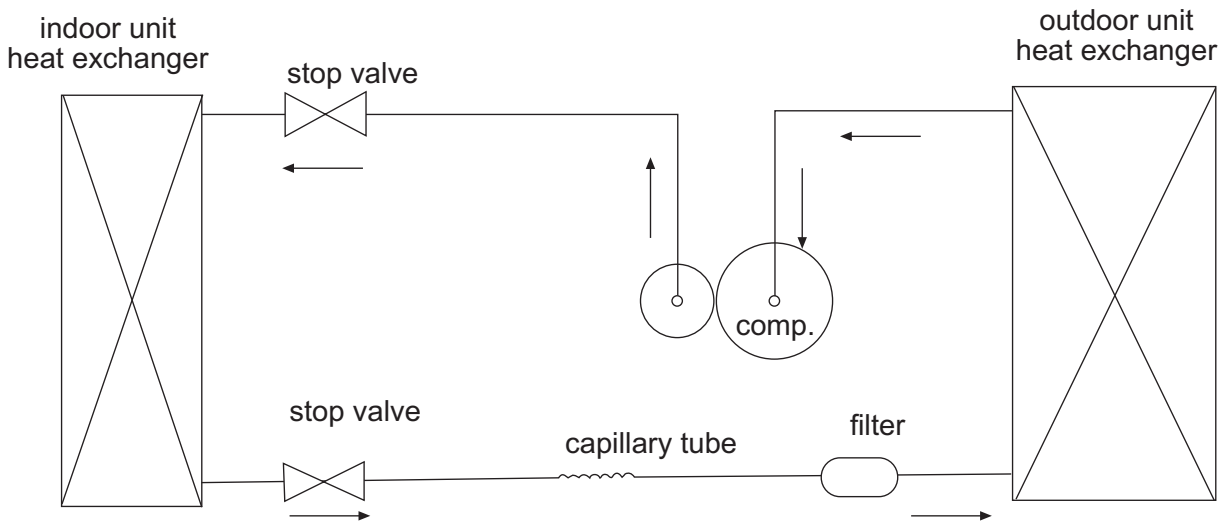
Abnormality diagnose

Trouble shooting

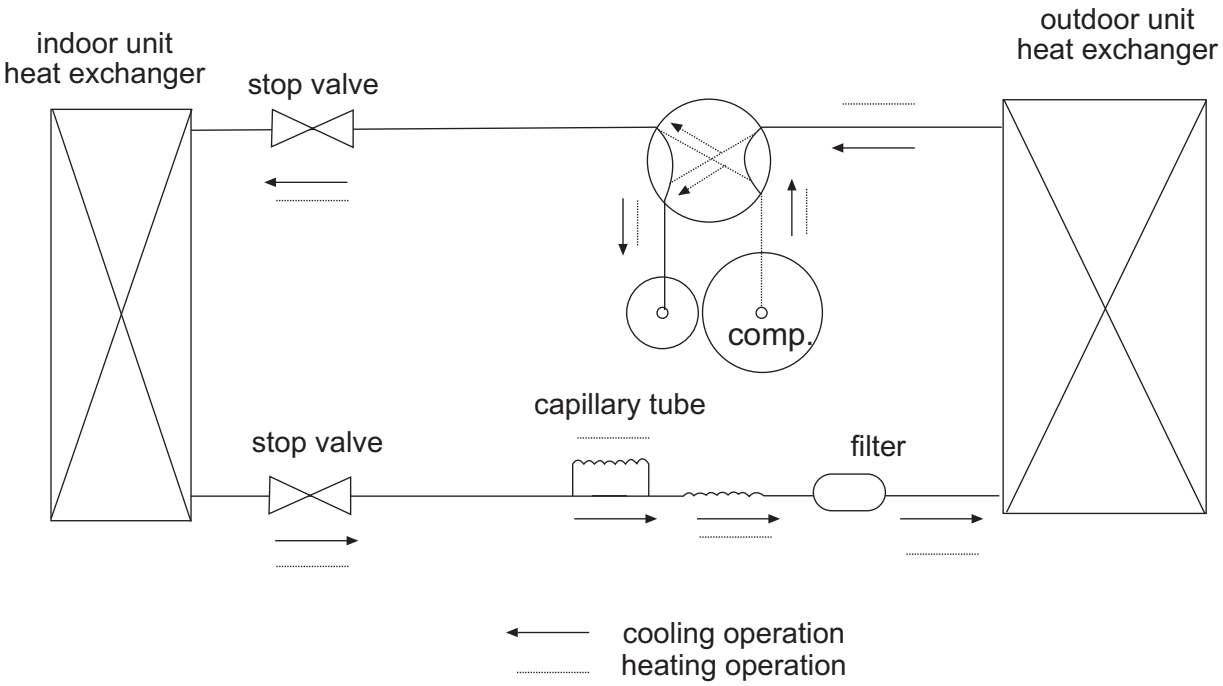
Before asking for service, check the following first.

	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 elapsed 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 inlet 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?

AS222AJMAA+AU222AHMAA(HSU-22CD03)

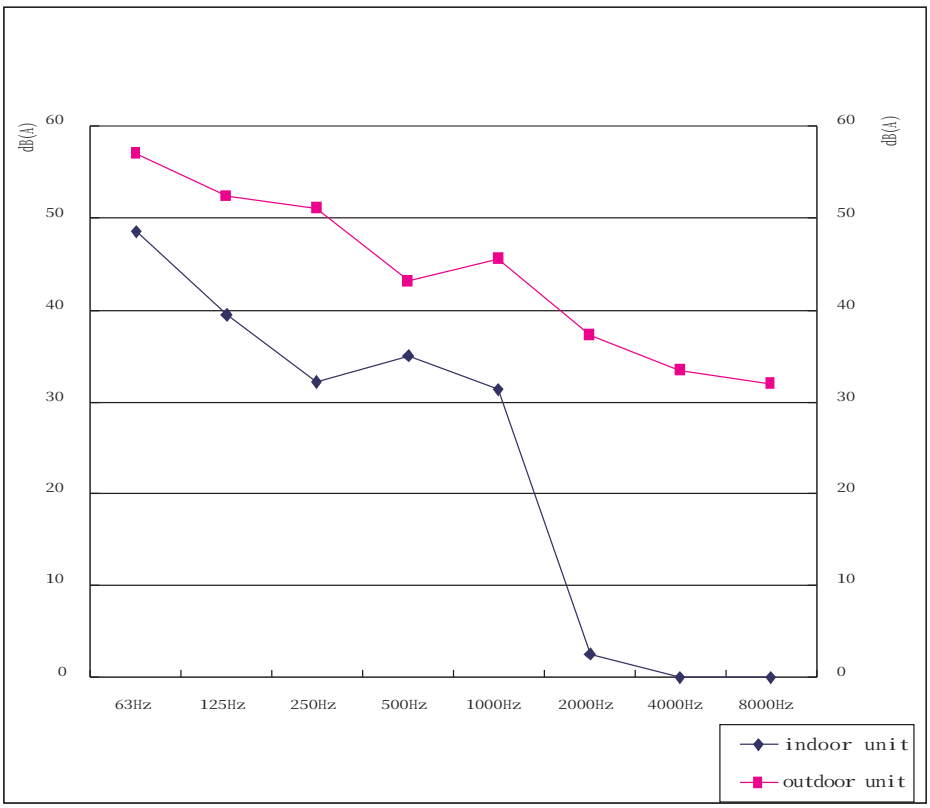


AS222AJAAA+AU222AHAAA(HSU-22HD03)
AS222AJAAA+AU222AHAAA(HSU-22HD03(ion))

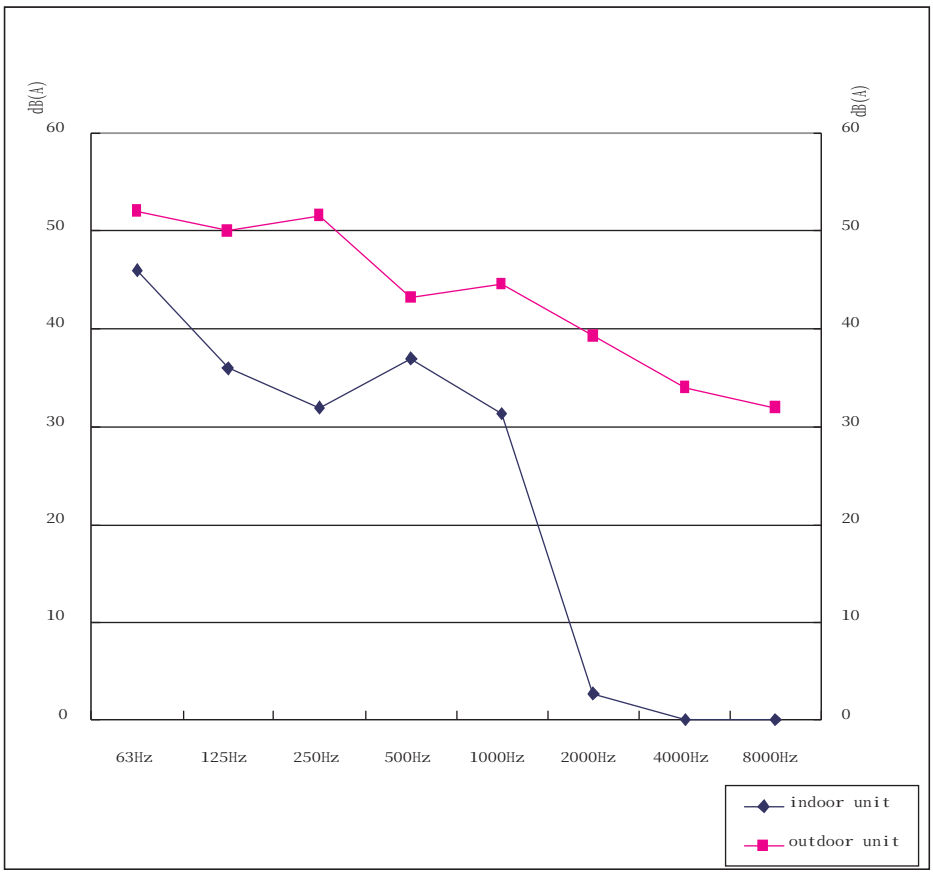


Noise level test chart and air velocity distribution

HSU-22HD03　HSU-22HD03(ion)



HSU-22CD03



Air velocity distribution

HSU-22CD03
HSU-22HD03
HSU-22HD03(ion)

Fig 1
top view
flow control panel horizal
lourer:center

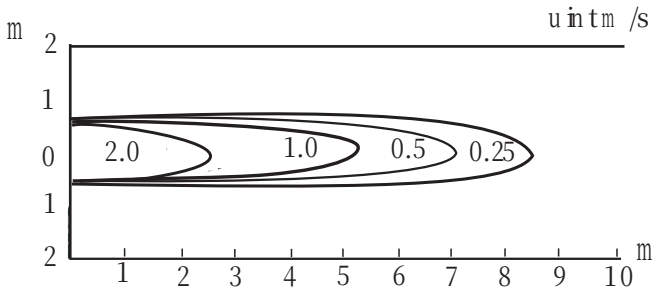


Fig 2
top view
flow control panel horizal
lourer:right and left

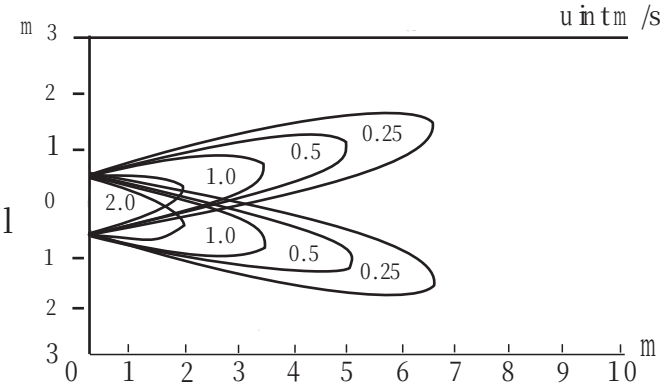


Fig 3
top view
flow control panel horizal
lourer:center

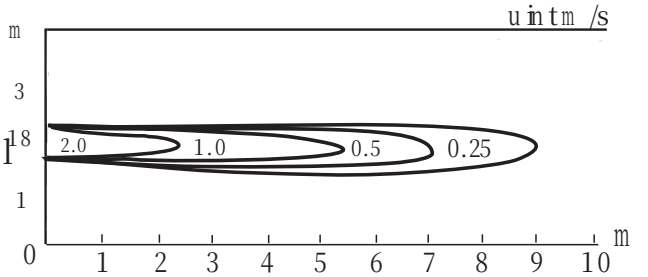
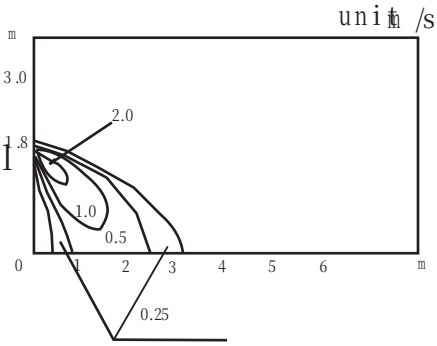


Fig 4
top view
flow control panel vertical
lourer:center



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

Installation and accessary 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

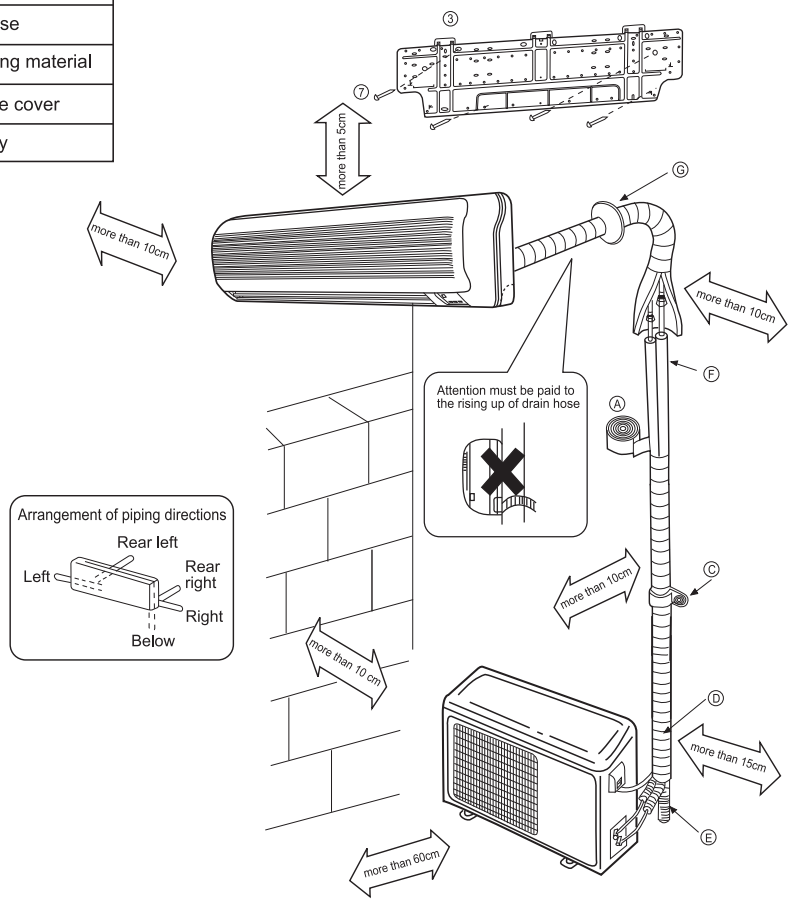
Accessory parts

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	8
⑥	Main pipes	1
⑦	ϕ 4X25 Screw, Plastic cap	6
⑧	Drain-elbow	1
⑨	Hexagon wrench	1
⑩	Cover	1
⑪	Cushion	4
⑫	Plastic clamp	1
⑬	Connecting cable	1

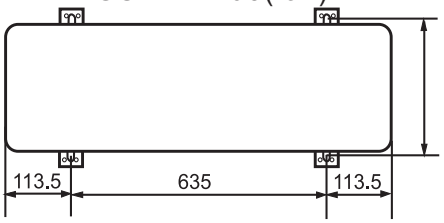
Drawing for the installation of indoor and outdoor units

Optional parts for piping

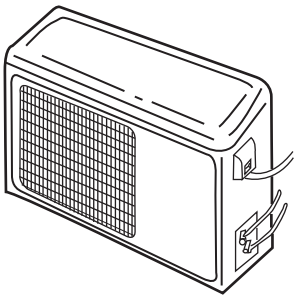
Mark	Parts name
Ⓐ	Non-adhesive tape
Ⓑ	Adhesive tape
Ⓒ	Saddle(L.S) with screws
Ⓓ	Connecting electric cable for indoor and outdoor
Ⓔ	Drain hose
Ⓕ	Heat insulating material
Ⓖ	Piping hole cover
Ⓗ	Putty



HSU-22HD03
HSU-22CD03
HSU-22HD03(ion)



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.

Indoor Unit Selection of Installation Place Outdoor 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.
- 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.

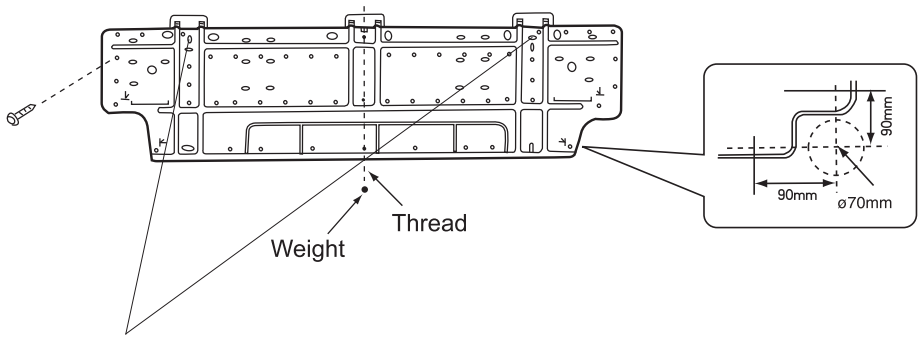
	For series 22
Gas pipe (ϕ)	9.52mm (3/8")X0.8mm
Gas pipe (ϕ)	15.88mm(5/8")X0.8mm

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 90mm using a measuring tape.



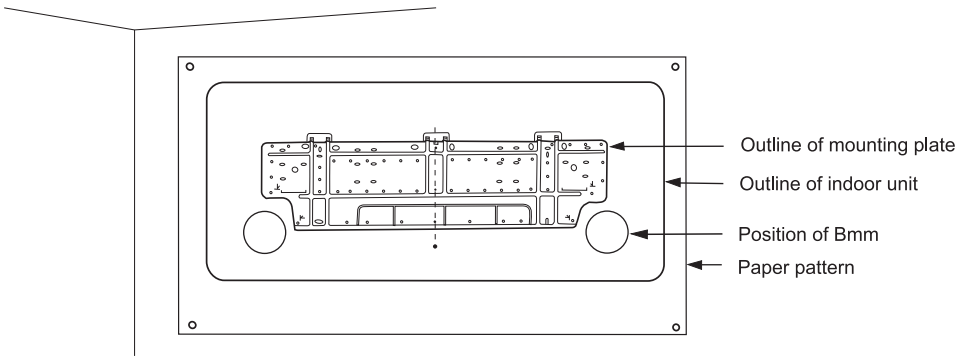
Holes for fixing the mounting plate

Fit the level line

When the paper pattern is used

hole

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

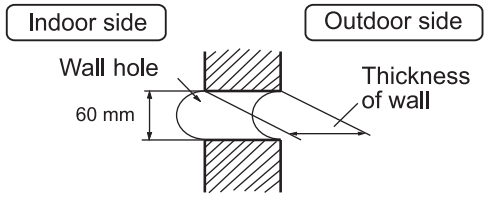


When the mounting plate is fixed to side bar and lintel

- 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 60mm 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

Indoor Unit

3 Installation of the Indoor Unit

Drawing of pipe

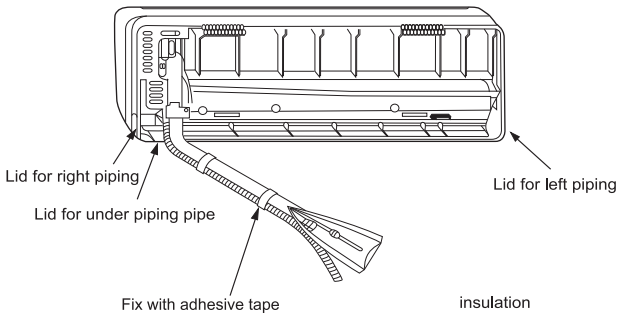
[Rear piping]

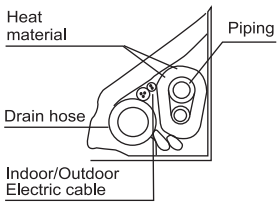
- Draw pipes and the drain hose, then fasten them with the adhesive tape.

[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.





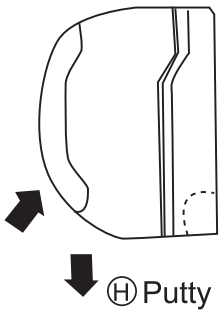
- Indoor/outdoor electric cord and drain hose must be bound with refrigerant piping by protecting tape.

[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.



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

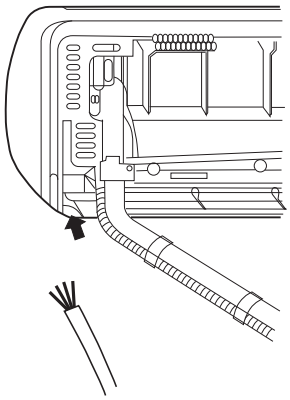
1. Insert from outside the room cord into left side of the wall hole, in which the pipe has already existed.
2. Pull out the cord on the front side, and connect the cable making a loop.

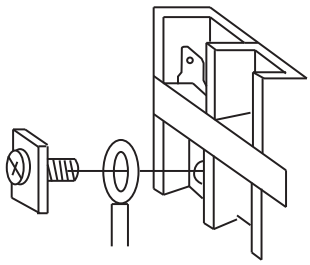
Indoor Unit

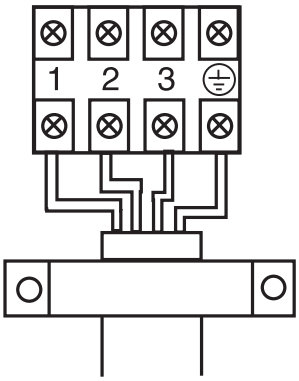
When connecting the cord before installing the indoor unit

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

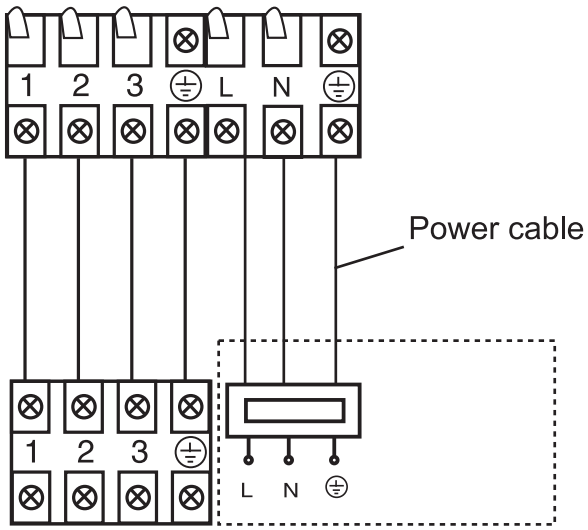
Note: When connecting the cord, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.







Outdoor unit



Indoor unit

(Please prepare the part in the dashed frame by self.)

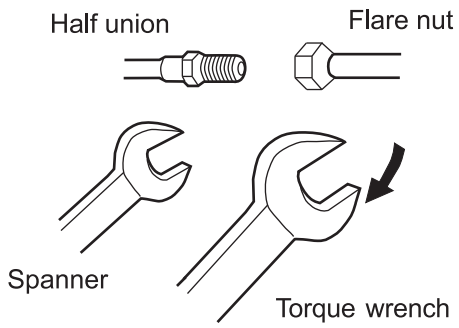
Outdoor Unit

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.



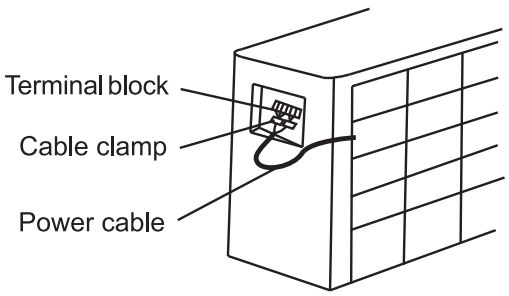
Forced fastening without careful centering may damage the threads and cause a leakage of gas.

Pipe Diameter (ϕ)	Fastening Torque
Gas Side 9.52mm(3/8")	42N.m
Gas Side 15.88mm(5/8")	60N.m

Be careful that foreign matters, such as wastes of sands, etc. shall not enter the pipe.

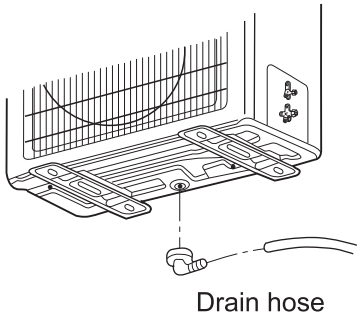
3 Connection

- 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 clamp.



4 Attaching Drain-Elbow

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



Outdoor Unit

5 Purging Method:

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

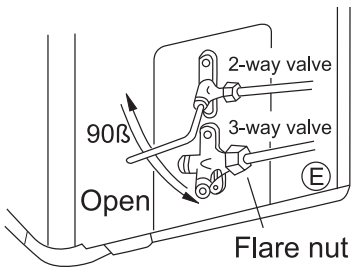
(1) Remove the valve cap on 2-way valve in outdooor unit.

(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.



Liquid Side
9.52mm (3/8")

Gas Side
15.88mm (5/8")

	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, Charge according to the following list.

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.

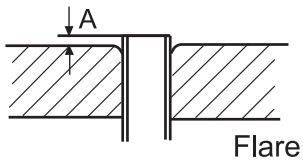
★ 1 During this procedure, 50g refrigerant will be discharged in piping. (This must be strictly controlled within 90¡ and 6 sec.)

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.

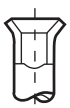
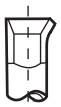
2 Cutting and Flaring Work of Piping

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



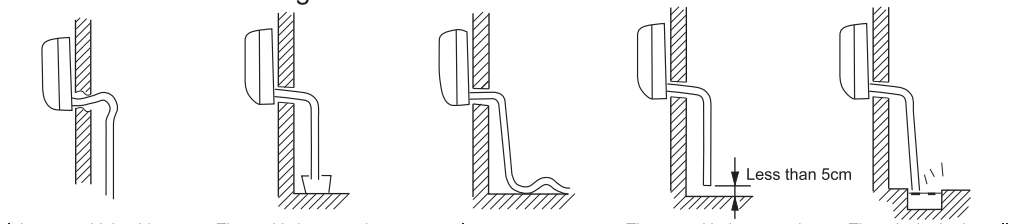
Flare tooling die

	Pipe diameter Φ	Size A (mm)
Gas side	9.52mm(3/8")	1.0 ~1.8
Gas side	15.88mm(5/8")	1.2

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 don't 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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- Paper Pattern for Indoor Unit Installation
  Please use this sheet to site the unit

Leave at Least 50mm between the top of the unit and the ceiling