

OPERATING INSTRUCTIONS



Package Air Conditioner
KUD/KSDV/KSDH

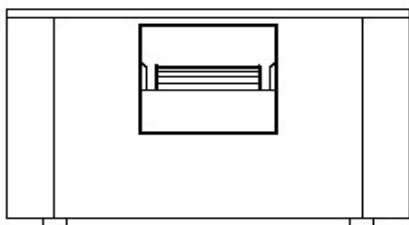
Please read these instructions completely before operating the unit

TABLE OF CONTENT

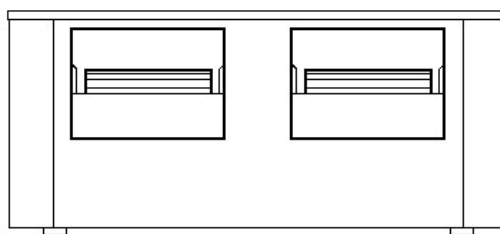
MAJOR PARTS.....	2
<i>PANGUNAHING PIYESA</i>	
INDOOR UNIT.....	3
OUTDOOR UNIT.....	4
UNITARY UNIT.....	5
UNIT CONTROLLER AND OPERATIONS.....	6
<i>UNIT CONTROLLER AT PARAAN NANG PAGGAMIT</i>	
A.1 KSDV & KSDH -60.....	6
A.2 KSDV & KSDH -60/90/120/180/240.....	7
B. KUD-60/90/120.....	8
C. KSDH-120D/180D & KSDV-120D/180D/240D.....	9
D. KSDV-180D/KUD-120D/180D.....	10
OPERATING PROCEDURE.....	12
AIRCONDITIONING TIPS.....	12
<i>MGA GABAY SA TAMANG PAGGAMIT NG “AIRCON”</i>	
CARE AND MAINTENANCE.....	14
<i>PARAAN NG PANGANGALAGA SA “AIRCON”</i>	
PRECAUTIONS.....	15
<i>MGA DAPAT PAG-INGATAN</i>	
BEFORE CALLING FOR SERVICE.....	16
<i>DAPAT TANDAAN BAGO IPAAYOS ANG “UNIT”</i>	
BEFORE INSTALLATION.....	
<i>BAGO IKABIT ANG “AIRCON”</i>	

INDOOR UNIT

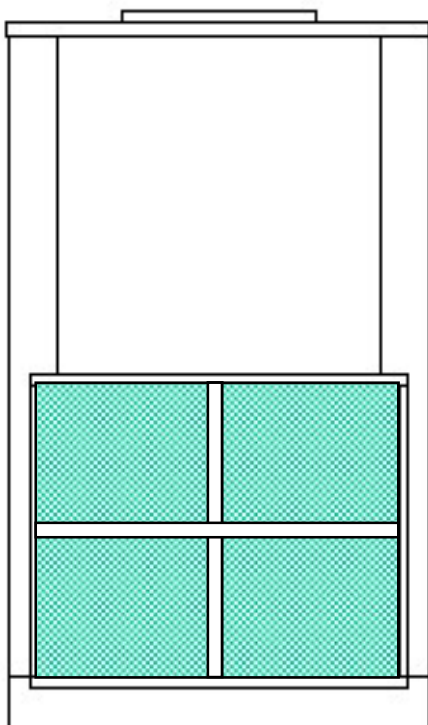
KSDH - 36/60/90



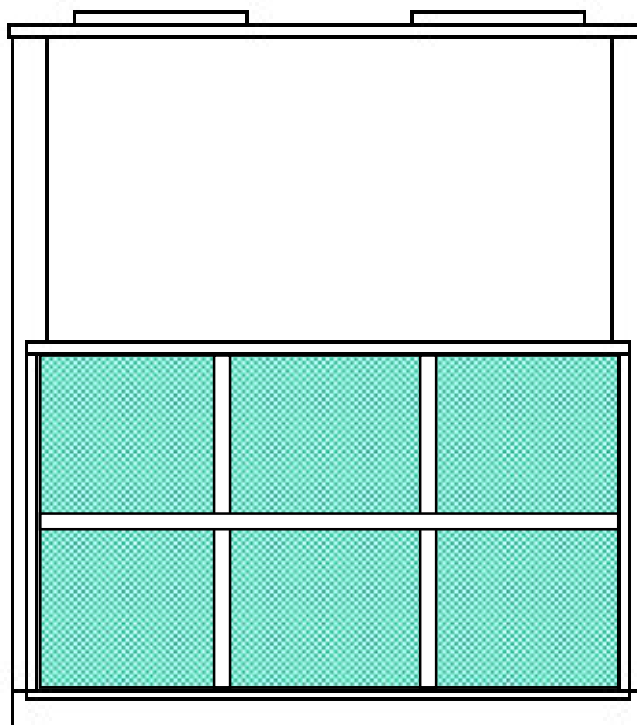
KSDH - 120/120D/180



KSDV - 36/60/90/120/120D

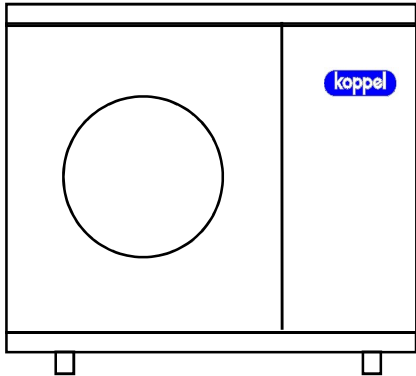


KSDV - 180 / 240

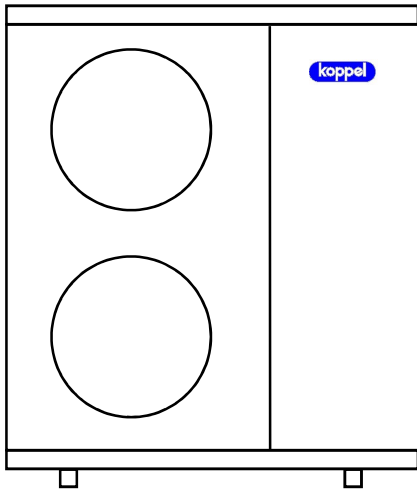


OUTDOOR UNIT

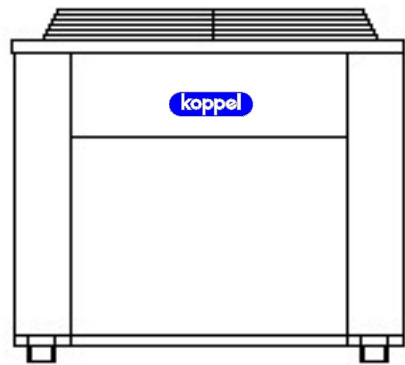
KPC-36IH0



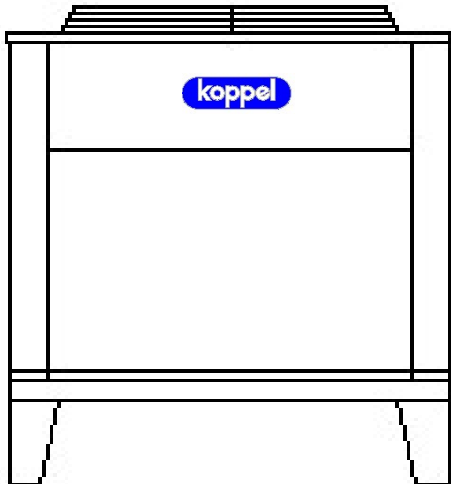
KPC-60IH0B



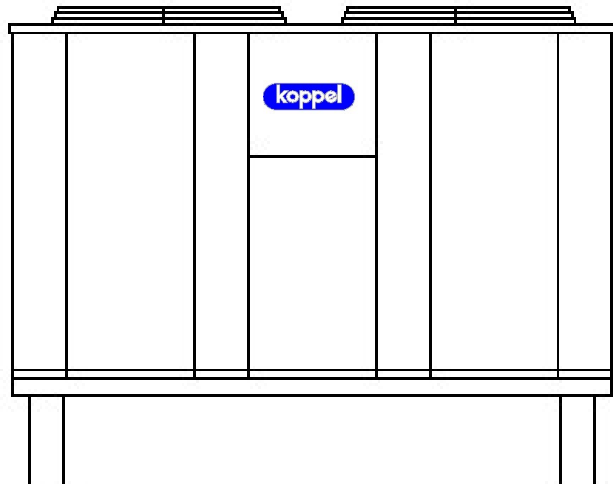
KPC-60IV0B / KPC-90IV0B



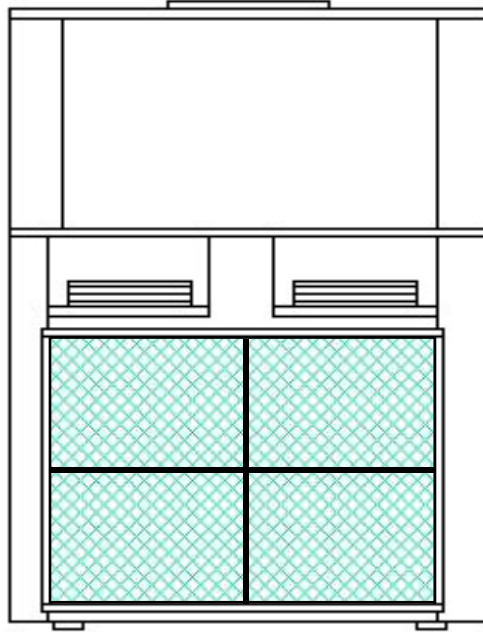
KPC-120/120D/180/180D



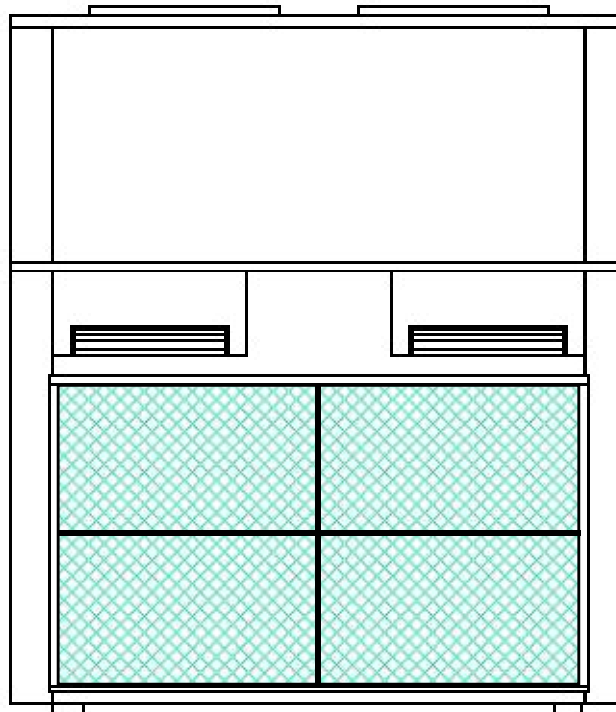
KPC-240/240D



KUD-60/90



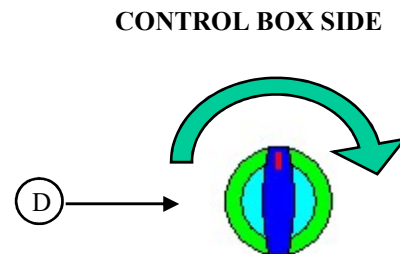
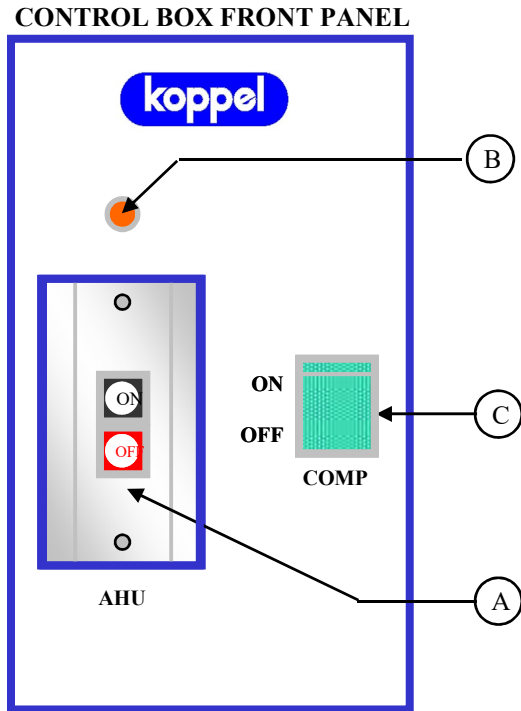
KUD-120/120D / 180D



UNIT CONTROLLER AND OPERATIONS

“UNIT CONTROLLER “AT PARAAN NG PAGGAMIT

A. KSDH & KSDV- 60/90/120/180/240 MODEL



A. “POWER” BUTTON

Used to switch **ON/OFF** the fan motor of Air Handling Unit (AHU)

Ginagamit upang gumana o huminto ang “Fan Motor” ng “Air Handling Unit”.

B. PILOT LIGHT

Indicator light for Power Button

Naka-ilaw kapag gumagana ang “Unit”

C. “COMP” SWITCH

Used to switch **ON/OFF** Compressor of Air Cooled Condensing Unit (ACCU).

Ginagamit upang gumana o huminto ang “compressor” ng “ACCU”

D. “TEMPERATURE CONTROL” KNOB

Turn **CLOCKWISE** for **COOLER** TEMPERATURE SETTING.

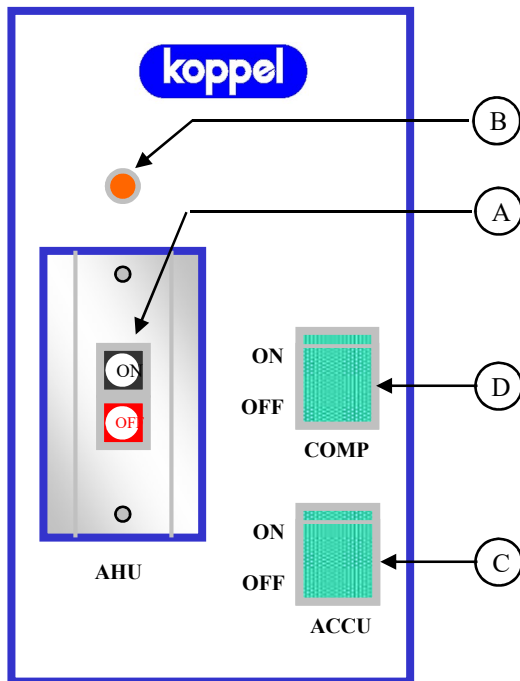
Turn **COUNTER-CLOCKWISE** for **WARMER** TEMPERATURE SETTING.

Pihitin sa KANAN para bumaba ang temperatura (mas malamig).

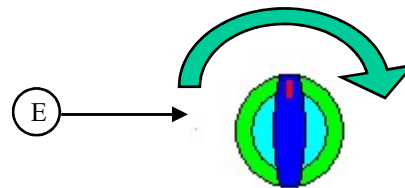
Pihitin sa KALIWA para tumaas ang temperatura (bawas ang lamig).

B. KUD - 60/90/120 UNITARY UNIT

CONTROL BOX FRONT PANEL



CONTROL BOX SIDE



A. "POWER" BUTTON

Used to switch **ON/OFF** the fan motor of Air Handling Unit (AHU)

Ginagamit upang gumana o huminto ang "Fan Motor" ng "Air Handling Unit".

B. PILOT LIGHT

Indicator light for Power Button

Naka-ilaw kapag gumagana ang "Unit"

C. "ACCU" SWITCH

Used to switch **ON/OFF** the fan motor of Air Cooled Condensing Unit (ACCU)

Ginagamit upang gumana o huminto ang "Fan Motor" ng "ACCU"

D. "COMP" SWITCH

Used to switch **ON/OFF** Compressor of Air Cooled Condensing Unit (ACCU).

Ginagamit upang gumana o huminto ang "compressor" ng "ACCU"

E. "TEMPERATURE CONTROL" KNOB

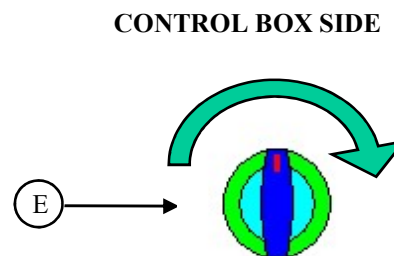
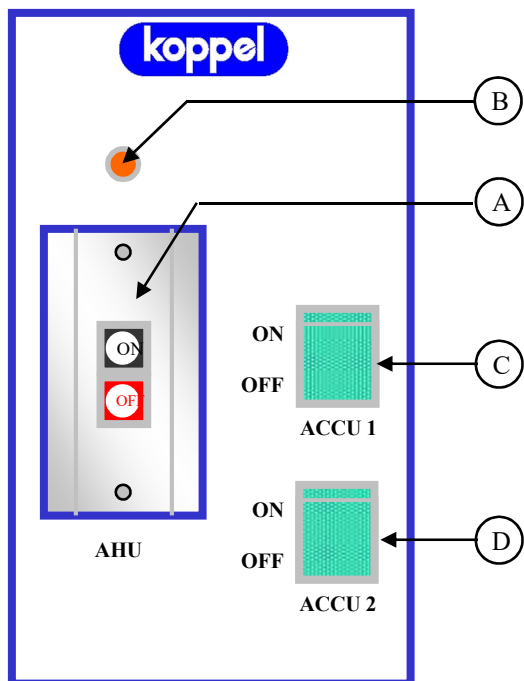
Turn **CLOCKWISE** for **COOLER** TEMPERATURE SETTING.

Turn **COUNTER-CLOCKWISE** for **WARMER** TEMPERATURE SETTING.

Pihitin sa KANAN para bumaba ang temperatura (mas malamig).

Pihitin sa KALIWA para tumaas ang temperatura (bawas ang lamig).

C. KSDH-120D/180D & KSDV-120D/180D/240D (TWO ACCU)



A. “POWER” BUTTON

Used to switch **ON/OFF** the fan motor of Air Handling Unit (AHU)

Ginagamit upang gumana o huminto ang “Fan Motor” ng “Air Handling Unit”.

B. PILOT LIGHT

Indicator light for Power Button

Nakailaw kapag gumagana ang “Unit”

C. “ACCU 1” SWITCH

Used to switch **ON/OFF** Air Cooled Condensing Unit One (ACCU 1)

Ginagamit upang gumana o huminto ang unang “ACCU”

D. “ACCU 2” SWITCH

Used to switch **ON/OFF** Air Cooled Condensing Unit Two (ACCU 2)

Ginagamit upang gumana o huminto ang pangalawang “ACCU”

E. “TEMPERATURE CONTROL” KNOB

Turn **CLOCKWISE** for COOLER TEMPERATURE SETTING.

Turn **COUNTER-CLOCKWISE** for WARMER TEMPERATURE SETTING.

Pihitin sa KANAN para bumaba ang temperatura (mas malamig).

Pihitin sa KALIWA para tumaas ang temperatura (bawas ang lamig).

E. “COMP 2” SWITCH

Used to turn **ON/OFF** Compressor Two of Air Cooled Condensing Unit (ACCU)

Ginagamit upang gumana o huminto ang pangalawang “compressor” ng “ACCU”

F. “TEMPERATURE CONTROL” KNOB

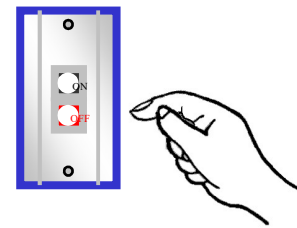
Turn **CLOCKWISE** for **COOLER** TEMPERATURE SETTING.
Turn **COUNTER-CLOCKWISE** for **WARMER** TEMPERATURE SETTING.

*Pihitin sa KANAN para bumaba ang temperatura (mas malamig).
Pihitin sa KALIWA para tumaas ang temperatura (bawas ang lamig).*

OPERATING PROCEDURE:

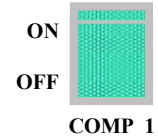
1. Press the “ON BUTTON” to turn the Blower Motor in the Air Handling Unit ON. Pilot lights (orange) indicates when the unit is on. Press the “OFF BUTTON” to turn the Fan Motor in the Air Handling Unit OFF.

*Pindutin ang “ON button” upang bumukas ang “blower motor ng “Air Handling Unit”. Mapapansin na sisindi ang ilaw sa “control box”
Pindutin naman ang “OFF button” upang huminto ang “blower motor” sa “Air Handling Unit”.*



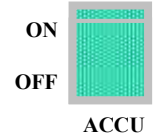
2. Set the “ACCU SWITCH” to ON to turn the Fan Motor in the Air Cooled Condensing Unit (ACCU). Green light indicates when the motor is on.

Pindutin ang “ON” sa “ACCU switch” upang bumukas ang “Fan Motor” ng “Air Cooled Condenser”. Mapapansin na magkakaroon ng berdeng ilaw sa “ACCU switch”.



3. Set the “COMP 1 SWITCH” to ON to turn the first compressor in the Air Cooled Condensing Unit (ACCU). Green light indicates when the compressor is on.

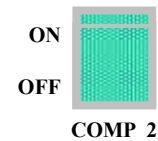
Pindutin ang “ON” sa “ACCU switch” upang gumana ang unang “compressor”. Mapapansin na magkakaroon ng berdeng ilaw sa “ACCU switch”. Sa pamamagitan nito magsisimulang lumamig ang “aircon”.



4. Set the “COMP 2 SWITCH” to ON to turn the second compressor in the Air Cooled Condensing Unit (ACCU).

Green light indicates when the second compressor is on.

Note: Full cooling capacity, for dual compressor only.



5. Turn the knob CLOCKWISE for COOLER TEMPERATURE SETTING.

Turn the knob COUNTER-CLOCKWISE for WARMER TEMPERATURE SETTING.



In case heat load is light Set the compressor no. 2 to OFF setting in-order to reduce load capacity



AIRCONDITIONING TIPS

MGA GABAY SA TAMANG PAGGAMIT NG “AIRCON”

To increase the energy efficiency and maintain a comfortable room condition consider the following:

- 1) **DO NOT OVERCOOL THE ROOM.**
This is not good for the health and wastes electricity. Select the most appropriate temperature by adjusting the temperature setting to suit your desired condition.
- 2) **KEEP BLINDS AND CURTAINS CLOSED.**
Do not let direct sunlight enter the room when the airconditioner is in operation
- 3) **KEEP DOORS AND WINDOWS CLOSED.**
Minimize opening doors and windows to keep warm air from entering the room.
- 4) **VENTILATE THE CONDITIONED ROOM OCCASIONALLY**
Since the windows are kept closed, it is a good idea to open them and ventilate the room occasionally.

Upang makatipid sa kuryente at komportable ang temperatura gawin ang mga sumusunod:

HUWAG HAYAANG SUMOBRA ANG LAMIG NG SILID.

Ito ay makasama sa inyong kalusugan at maaksaya sa kuryente. Piliin ang tamang lamig sa pamamagitan ng pag-aayos ng temperatura sa “remote control”.

PANATILIING LAGING NAKASARA ANG MGA KURTINA.

Huwag hayaang makapasok ang sinag ng araw sa loob ng kuwarto.

PANATILIING NAKASARA ANG PINTO AT BINTANA.

Upang hindi makapasok ang mainit na hangin sa loob ng kuwarto.

MAGPASOK NG SARIWANG HANGIN SA LOOB NG SILID PAMINSAN-MINSAN.

Upang mapanatiling sariwa ang hangin sa loob ng silid.

CARE AND MAINTENANCE

PARAAN NG PANGANGALAGA SA “AIRCON”

NOTE

Before performing cleaning and maintenance, be sure to turn the unit off.

PAALALA

Siguruhing nakasara ang “unit” bago isagawa ang mga paglilinis

- 1) **REGULARLY CLEAN THE AIR FILTER.**
Efficiency maybe affected as the air filter is clogged with dust. It is good to clean the air filter once every two weeks.

SIGURUHING LAGING MALINIS ANG “AIR FILTER”

Nakakasagabal sa daloy ng hangin at sa lamig ng “aircon” ang mga dumi at alikabok na naiipon sa “air filter”. Linisin ito minsan sa loob ng dalawang linggo.

**A. How to remove air filter:
(KSDV-UNITS)**

- a) Remove screw on the filter cover.
- b) Slide the upper and lower filter as shown.

**Paano tanggalin ang “air filter”:
(KSDV-UNITS)**

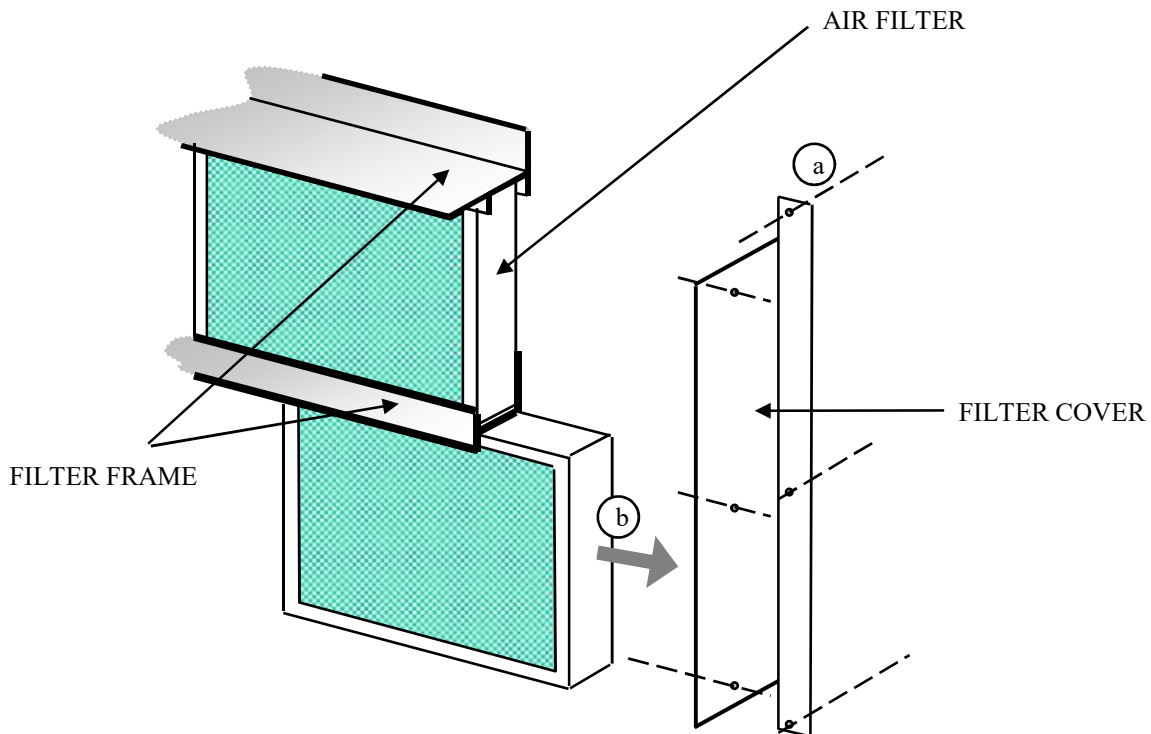
- a) Tanggalin ang turnilyo sa “filter cover”.
- b) Tanggalin ang “air filter”, katulad ng nakalarawan sa ibaba.

(KSDH/KUD-UNITS)

- a) Remove the filter by sliding it sideways from the filter rail.
(note: these units don’t have filter cover.)

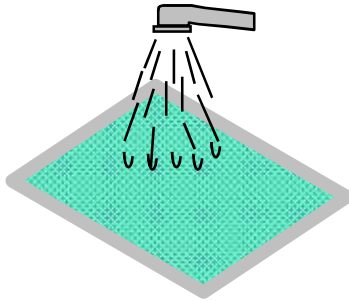
(KSDH/KUD-UNITS)

- a) Tanggalin ang “air filter” sa pamamagitan ng paghila nito sa gilid ng “filter frame”
(paalala: ang ganitong modelo ay walang “filter cover”).



- B)** Wash the air filter with using a mild detergent, and dry in shade.

Hugasan ang air filter ng tubig at sabon, pagkatapos ay patuyuin ito sa lilim.



- 2) DO NOT USE HARSH CHEMICALS TO CLEAN THE UNIT.

Volatile substance and scouring cleansers could damage the surface the unit.

IWASANG GUMAMIT NG MATATAPANG NA KEMIKAL SA PAGLILINIS NG AIRCON

Ang matatapang na kemikal ay makakasira sa mga piyesa ng "aircon".

- 4) Hire the services of an Air Conditioning Maintenance company to conduct PREVENTIVE MAINTENANCE servicing on your unit regularly (at least once every quarter).

Ipatingin sa isang "Airconditioning Maintenancen Company" ang inyong unit minsan sa loob ng tatlong buwan.

PRECAUTIONS NGA DAPAT PAG-INGATAN

- 1) DO NOT WIPE THE UNIT WITH HEAVILY DAMPED CLOTH.

There is danger of **electric shock** when water enters the unit

IWASAN ANG MABASA ANG "AIRCON UNIT" HABANG NAGLILINIS.

*Upang maiwasan ang **makuryente**.*

- 2) DO NOT BLOCK THE AIR INLET AND OUTLET VENTS.

This reduces the cooling performance and results in irregular operations.

IWASAN NA MAHARANG NG ANUMANG BAGAY SA DALUYAN NG HANGIN.

Para maging maayos ang operasyon ng "Aircon".

3) DO NOT USE ANY HEATING APPARATUS NEAR THE AIRCONDITIONER.

Plastic parts may melt or deform if exposed to excessive heat.

IWASANG MAGLAPIT NG SOBRANG MAINIT NA BAGAY SA "AIRCON".

Upang maiwasang matunaw ang mga piyesang gawa sa plastik

4) IF THE UNIT IS NOT TO BE USED FOR A LONG PERIOD OF TIME BE SURE TO TURN OFF THE CIRCUIT BREAKER.

KUNG SAKALING HINDI GAGAMITIN ANG AIRCON SA MATAGAL NA PANAHON,, SIGURUHING NAKASARA ANG "CIRCUIT BREAKER".

BEFORE CALLING FOR SERVICE

Check the following points before requesting repairs or service. If malfunction persists, please contact Koppel Inc., Service Department or its duly authorized dealer near you.

Basahin muna ang mga sumusunod bago ipaayos ang "Airconditioner. Kung sakaling ayaw pa ring gumana ang "aircon", tumawag lamang sa Koppel Inc., Service Department o sa mga awtorisadong service dealer na malapit sa inyong lugar.

Unit does not operate.

- Safety fuse could have blown or circuit breaker may have tripped.
- Check main power switch if it is on.

Unit does not operate.

- *Suriin kung sira o naputol ang "Fuse" o "circuit" breaker.*
- *Suriin kung nakabukas ang "main switch" ng kuryente.*

Unit not cooling well.

- Check and clean air filters for dirt.
- Check air inlet and outlet vents for any obstructions.
- Check thermostat (temperature) and adjust to cooler setting.
- The room may have been very hot when the airconditioner was first turned on. Allow time for the room to cool down.

Hindi lumalamig ng maayos ang "aircon".

- *Linisin ang mga "air filters" kung ito ay may dumi o may naipong mga alikabok.*
- *Suriin ang temperatura sa LCD. Kung ito ay mataas, isaayos ito sa nais na temperatura o lamig.*
- *Hintaying lumamig ang silid, maaring masyadong maiinit ang silid nang simulang paandarin ang "aircon".*

The room has a peculiar odor.

- Check if it is not a damp smell exuded by the walls, carpet, furniture or cloth items in the room

Masama ang amoy sa loob ng silid.

- *Suriin kung ang amoy ay nanggagaling sa pader, "carpet", mga kasangkapan o mga damit sa kuwarto.*

Air Conditioner does not cool for about 3 minutes after restarting.

- There is a 3 minute delay when you restart the unit after switching it off through the “OFF” or “COMP” switch or by rotating the temperature control knob clockwise. (This feature is for protection of the compressor from any power surges).

Hind pa rin lumalamig ang “aircon” sa loob ng 3 minuto matapos paganahin.

- *Hindi agad lalamig ang “airconditioner” sa loob ng 3 minuto kung ito ay kasasara lamang. Ito ay upang mabigyan ng proteksyon ang inyong “compressor”.*

BEFORE INSTALLATION BAGO IKABIT ANG “AIRCON”

BEFORE INSTALLATION AND OPERATION BE SURE:

1. This unit must be properly installed by a duly authorized installer.
2. This unit uses **230V / 60 Hz / 3 Ph** power supply for 60k and above. **1 Ph** for 36k.
3. Locate the indoor and outdoor unit where there is ample space for preventive maintenance, servicing and repairs.

BAGO IKABIT ANG “AIRCON” SIGURUHING::

1. *Ipakabit lamang ang “aircon” sa awtorisadong “Aircon Installer”.*
2. *Itong “Aircon” ay gumagana sa “230,60Hz, 3Ph.” na kuryente para sa 60k at pataas. 1 ph para sa 36k.*
3. *Iposisyon ang “Aircon” sa lugar na mayroong sapat na espasyo kung sakaling ito ay linisin o ayusin.*

Koppel, Inc.

106 Industry Drive, Carmelray Industrial Park I,
Brgy. Canlubang, Calamba City, Philippines

PN: F30010

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring any obligation.