

## **SWM - Single Split Series**

### **R-410A Ultra High Efficiency Ductless Heat Pump**

2,6 – 7 kw Capacity



SolarCool now offers ductless single split heat pumps that use the more efficient and environmentally friendly refrigerant (R-410A). The ductless system allows very easy integration into existing surroundings without major investment in ducts or radiators. It contains one outdoor and one indoor unit and is especially dedicated to straight forward applications where only one indoor unit is needed.

The new SWM Series of SolarCool heat pumps offers outstanding performance as well as environmental protection. These models with their high efficient compressors in DC-Inverter technology offer when matched with our Solarcool™ panel the highest efficiency rates in the industry: SEER: 8 (Cooling) and SCOP: 5,5 (Heating).

***SolarCool™ ...The Hotter it Gets, The Better It Works!***

## Table of Contents

<b>Topic</b>	<b>Page</b>
1. Name and Descriptions of the parts	3
2. Instructions before installation and use	4
3. Remote Control Description and Manual	6
4. Battery change	7
5. How to operate the unit	7
6. Care and maintenance	9
7. Trouble shooting	11
8. Location of installation	13
9. Electric wiring	14
10. Installation indoor unit	15
11. Installation outdoor unit	17
12. Air purge and leakage test	18
13. Fill with refrigerant for connection pipes	18
14. Test operation	19
15. Check after installation	19
16. Warranty	20

---

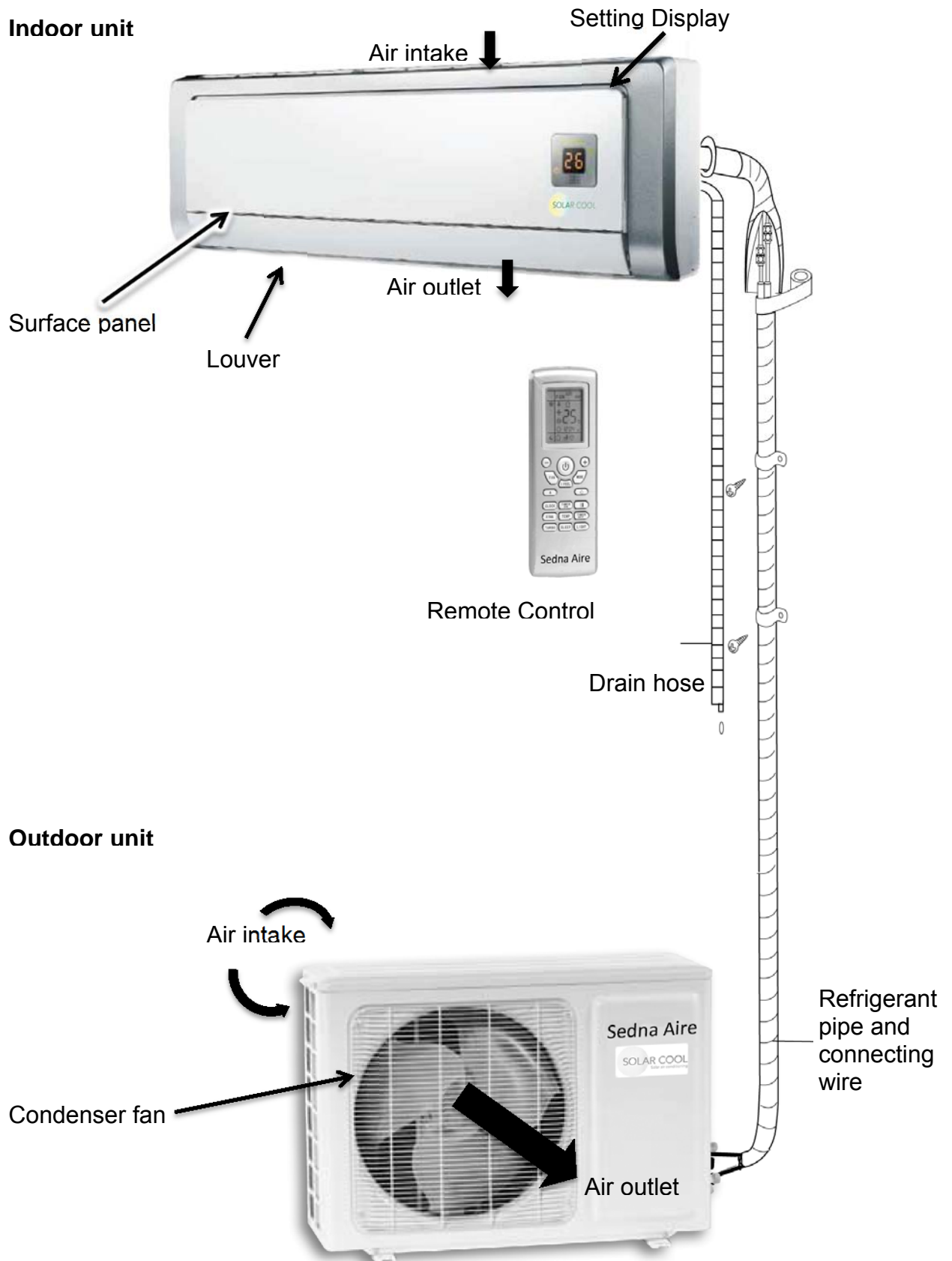
 **IMPORTANT**

---






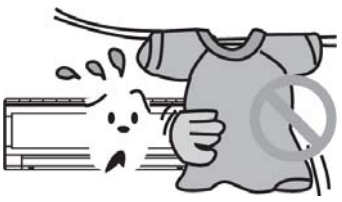


**The installation and especially the connection between the outdoor unit and the Solarpanel shall be only performed by trained and skilled service personnel having the appropriate instruments. SolarCool does not take over any responsibility for direct and indirect damages causing from installation by unskilled and/or untrained persons.**

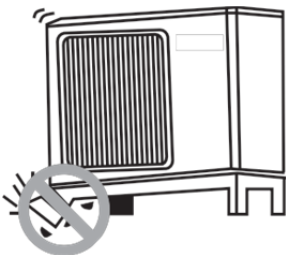

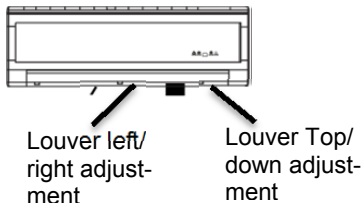
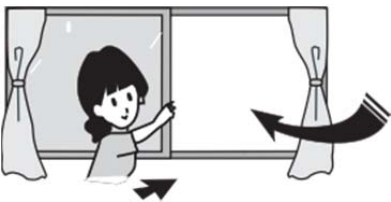
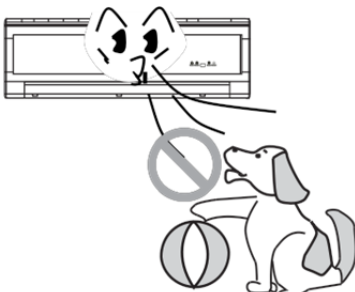


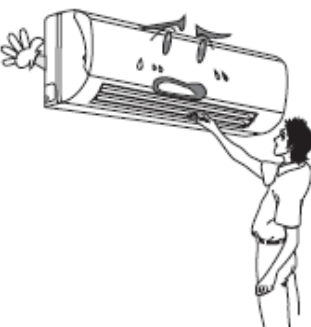
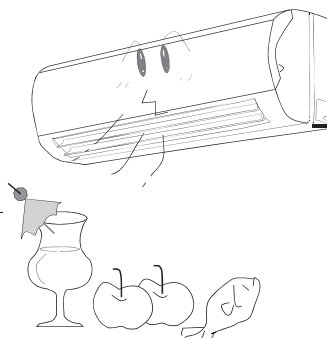
---

**1. NAME AND DESCRIPTION OF THE PARTS**



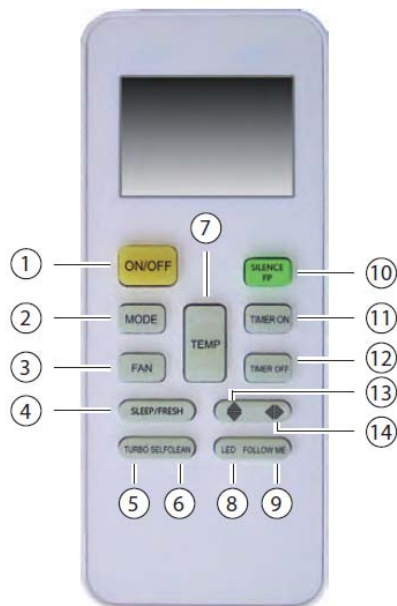
**! 2. INSTRUCTIONS BEFORE INSTALLATION AND USE !**

<p><b>! Earth:</b> The Ground wire of your outdoor and indoor units must be wired to the earth of your electricity supply acc. To local electrical building codes. If this lacks, please ask your service personnel to install it. Don't connect the earth wire to gas pipes, water pipes, drainage pipes or any other improper conductors.</p>	<p><b>★ Air conditioners are to operate at 200-230V / 1 phase. All other voltages are not permitted.</b> They may destroy the unit. Be sure to have switched off the power supply when you are not using the unit for a longer time</p> 	<p><b>★ Don't attempt to repair the air conditioner by yourself</b> Wrong repair may cause an electric shock and may kill you</p> 
<p><b>★ Don't apply cold wind over longer time on you</b> It may cause a cold and harm your health, especially over night when you sleep.</p> 	<p><b>★ If your detect unusual phenomenons like smell or burning smoke, turn off immediately the unit.</b> It may cause damage, electrical shocks and impact your health.</p> 	<p><b>★ Don't place a heater near the indoor unit of the air conditioner.</b> Air flow from the combustion can cause insufficient heating up by the indoor unit.</p> 
<p><b>★ Don't block the inlet and outlet openings of indoor and outdoor unit.</b> It can decrease the air conditioning capacity or a malfunction</p> 	<p><b>★ Don't step on the top of the outdoor unit and place something heavy on it.</b> Falling off the outdoor unit may cause damage to you and somebody else</p> 	<p><b>★ Keep flammable sprays and liquids at least 1 m away from the units.</b> It may cause fire or explosion</p> 

<p>★ <b>Please check, if the planned stand is firm</b> If it is not, the unit may fall down and cause injury</p> 	<p>★ <b>Select an appropriate temperature depending on outside temperature</b> Setting very low temperatures consumes very much electricity and money</p> <p>Max 5 °C difference between in and out</p> 	<p>★ <b>Adjust direction of airflow appropriately</b> Direct air flow by adjusting the louvers for vertical and horizontal direction by use of remote control</p> 
<p>★ <b>Don't leave windows and doors open for a longer time while running the unit.</b> It can decrease the air conditioning capacity</p> 	<p>★ <b>Don't blow the air directly to and plants.</b> It may impact their health, when not properly controlled</p> 	<p>★ <b>Don't damage the power and signal cords.</b> Don't damage or cut the cords. If this has happened, contact service center or other trained and skilled electricians, since wrong repairs may kill you.</p> 
<p>★ <b>Don't splash water on the indoor units.</b> It can cause an electric shock and kill you</p> 	<p>★ <b>Don't insert your hands or stick into the air intake or outlet vents</b> It destroy the air guidance and unit.</p> 	<p>★ <b>Don't use the air conditioner for any other as not designed purposes like, drying clothes, food, etc.</b> It may overheat and the unit may be damaged.</p> 

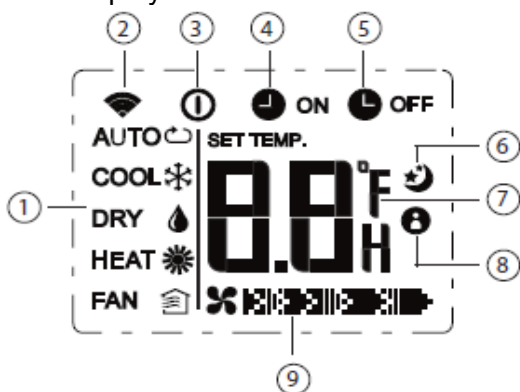
### 3. REMOTE CONTROL DESCRIPTION AND MANUAL

Actual remote control may vary, but functionality remains



- 1 Turns unit on and off
- 2 Changes operation mode:
  - Auto, automatical heat or cool
  - Cool ❄️
  - Fan 🌀
  - Heat ☀️
- 3 Set fans speed 3-steps
- 4 Sleep mode (Temperature increase 1°C/hour in cooling mode, resp. Decrease in heating mode)
- 5 Turbo Mode for fast cooling or heating
- 6 Selfclean to clean air conditioner
- 7 Set target temperature in room in 1°C steps (max 30°C, min 17°C)
- 8 Switches light at remote control display on or off
- 9 “Follow me”: measures temperature at location of remote control instead of at indoor unit. Transmits that signal in 3 minutes interval until you have hit again the button
- 10 Silent mode (minimal Fan), Frost protection. (Maintain a minimum value of 8°C for heating)
- 11 Timer on – for predefined switch-on of unit. Each press on the button increases the time by 30 min or 60 min., when the time has reached 10,0. For reset set time on 0,0
- 12 Timer off – for predefined switch-off of unit: Data entry analog as Time-on
- 13 Moves blow louvers up or down by 6°
- 14 Swingmode for louvers

LCD Display indoor unit



- 1 Display operational mode
- 2 Signaltransfer from/to remote control
- 3 On/Off air conditioner
- 4 Timer on
- 5 Timer off
- 6 Sleep Function
- 7 Shows set temperature. Is not shown, when Fan modes chosen
- 8 Follow me Function
- 9 Fan Ventilator

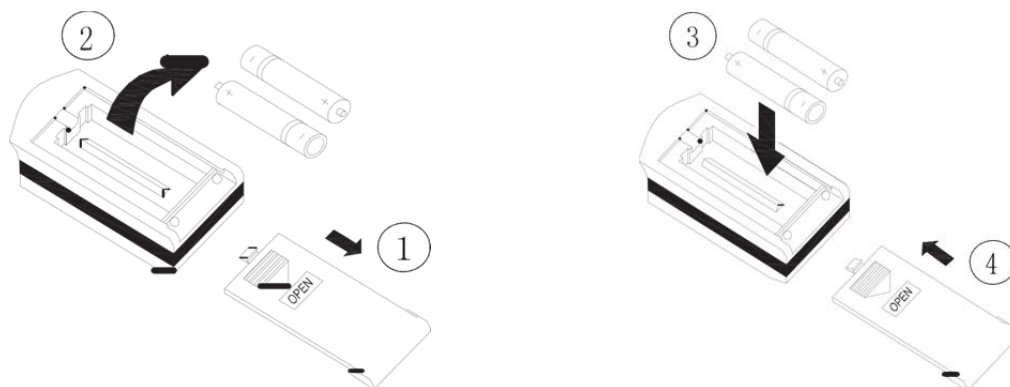


### 4. BATTERY CHANGE

- 1 Press lid and remove it
- 2 Take old batteries out (2 AAA dry cells)
- 3 Insert new batteries (2 AAA dry cells)
- 4 Insert lid again

#### NOTE

- Don't mix new and used batteries
- Remove batteries when unit is not be used for a longer time
- The batteries hold for appx. one year under usual conditions
- The remote control should be 1 m away from television or audio device, since it could interact under unfavorable conditions with them
- Displace batteries correctly. They are not standard household waste.



### 5. HOW TO OPERATE THE UNIT

- 1 Connect the unit with power and set eventually breaker on and the buzzer will send a tone. In the meantime the Power/Run indicator is red and the air conditioner is waiting to start. (Note: Once the air conditioner is connected to power or it receives a signal from the remote control, the buzzer will send out a tone)
- 2 When you press the ON/OFF button, the Power/Run indicator switches over to green and shows the running mode (Cool, Heat, Auto). The air conditioner starts now to run.
- 3 Press the MODE button to switch between the various running modes.
- 4 Press the SWING button to start or stop the automatic swing mode of the indoor units
- 5 Press the FAN button to set the desired fan speed.
- 6 Press the TEMP button to set the desired room temperature. (This is controlled by a temperature sensor in the indoor unit or in the "I FEEL" mode by a temperature sensor in the remote control)
- 7 Press the SLEEP button to set the unit to sleep
- 8 Press the TIMER button to set a predefined start and Stop time, for example when you are not around and want to get it started half an hour before you return

#### Note:

In the AUTO mode the unit will automatically adjust its running mode according to the room temperature.

## **SPECIAL FUNCTIONS IN THE COOLING MODE**

### **Principle:**

The air conditioner absorbs heat from indoor air and transmits it outdoors for discharge, hence to decrease the indoor ambient temperature. The cooling capacity decreases with the rise of outdoor ambient temperature.

### **Anti-freeze Function:**

If the air conditioner is running in the low-temperature cooling, frost will appear on the surface of the indoor heat exchanger. When the temperature of the indoor unit heat exchanger is decreased to 0 °C or lower, the microcomputer control will stop the compressor to protect the complete unit.

## **SPECIAL FUNCTIONS IN THE HEATING MODE**

### **Principle:**

- The air conditioner absorbs heat from outdoor air and transmits it indoors for emission, hence to increase the air temperature in the room. The heating capacity decreases with decreasing outdoor ambient temperature
- It takes only a short time for this type of hot air circulating to increase the indoor temperature
- Use this air conditioner with other heating equipment, if the outdoor temperature is extremely low

### **Defrost:**

- When the outdoor temperature is low but the humidity is high, the heat exchanger of outdoor unit may be frosted after the air conditioner has run for a period of time. This will decrease the heating effect. In this case, auto defrost function will be activated and the heating mode will temporarily stopped for 8-10 minutes.
- Both the indoor fan and outdoor fan will be stopped during auto defrost.
- During defrost, the indicator on indoor unit will blink and steam might flow from the indoor unit. This is caused by quick defrost other than fault.
- Heating mode will automatically resume upon completion of defrost process.

### **Anti-cool Air Function:**

In heating mode, if the indoor heat exchanger fails to reach a specific temperature under following conditions, so the indoor fan will not be started, so as to avoid blowing of cold air (within 3 min.):

- Start of heating mode
- End of auto defrost
- Heating under low-temperature environment

## **Conditions for the air conditioner unable to run normally:**

Protection device might be activated within such temperature range as specified below, so that the unit could be stopped

Heating mode: Outdoor temperature above 24°C, Outdoor temperature below -7°C, Room temperature above 27°C

Cooling mode: Outdoor temperature above 43°C, Room temperature below 21°C

Dehumidify mode: Room temperature below 18°C

If the unit is running for long time in the cool or humidify mode with relative humidity higher than 80% (door and windows are open), dew might drop near the air outlet.

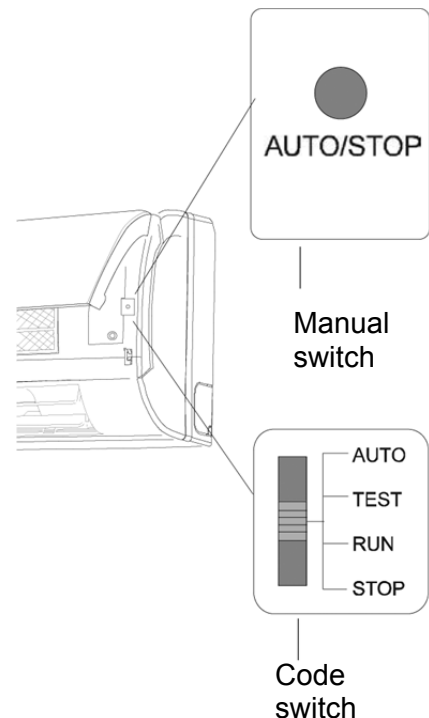


### Emergency operation for lost remote control:

When the remote control was lost or is damaged, emergency operation can be carried out as following:

Open the cover front surface lit and you will see two handling switches. The manual switch is labeled AUTO/STOP, the other code switch differentiates between four different modes

- Manual switch: Press to switch between Auto mode and Off. In the Auto mode the unit will run and set the appropriate heating or cooling mode depending on set temperatures and current measured room temperature.
- Code switch: Move the lever to Auto and the unit starts the Auto mode as described above. Move it to Stop and the units shuts off. TEST and RUN are only for service personnel during installation.



## 6. CARE AND MAINTENANCE



### CAUTION

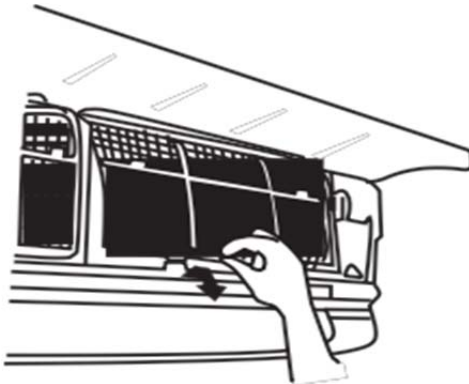
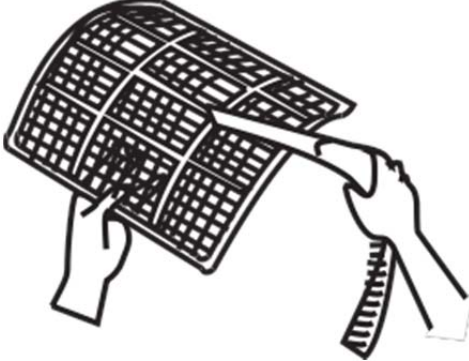
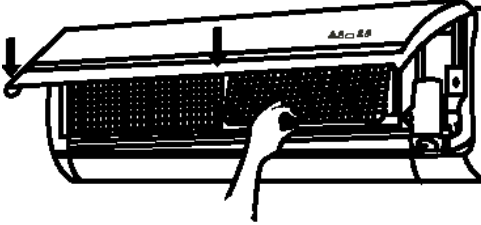
- Turn off power and pull out the power plug before cleaning the air conditioner.
- Never spray or sprinkle water on the indoor unit for cleaning. You may get an electrical shock which could kill you
- Volatile liquids (e.g. thinner or gasolines) will damage the air conditioner. So wipe the units with a dry soft cloth or slightly moistened with water or cleanser.

#### Clean the front panel

When the indoor unit front panel is dirty, please use a cloth which is slightly moistened with warm water/cleanser under 40 °C, then dry it and wipe off the dirty spots.

#### NOTE:



The indoor units contains microcomputer components and circuit board in the display which are very sensitive against water. So don't put any water into the interior of the indoor unit.



<b>Clean the air filters in the indoor unit - (all 3 months recommended)</b>	
<p><b>Take out the air filters:</b> Open the surface panel, hold the tab of the air filter and raise it slightly. Then take it out along the direction of the arrows (see right figure)</p>	
<p><b>Clean the filter</b></p> <ul style="list-style-type: none"> <li>• Use a vacuum cleaner for removing the dust from the filter or</li> <li>• Wash them with water and a mild cleanser and dry them in the shade (no full sun exposure)</li> </ul> <p>NOTE: Before cleaning the unit, remove the displayer box (if present) first, then wash the panel. Never use water above 45°C to wash filter. This can cause deformation or discoloration. Never parch it by fire, since this could cause fire, deformation or discoloration.</p>	
<p><b>Reinsert the filter</b> Reinsert the filter along the direction of the arrow, then cover the surface panel and clasp it</p>	

<b>Maintenance of outdoor unit</b>
<ul style="list-style-type: none"> <li>• Turn power off</li> <li>• Clear dust from outdoor unit</li> <li>• Repaint the rubiginous place on the outdoor unit to prevent it from spreading</li> </ul>

<b>Check before you use the unit</b>
<ul style="list-style-type: none"> <li>• Be sure that nothing obstructs the air outlet and intake vents</li> <li>• Check that the unit is „earthened“, i.e. that the earth wire from the unit is connected with the ground/earth of your power supply in the house.</li> <li>• Check whether the batteries in your remote control are still operational</li> <li>• Check if the outdoor unit is standing firm on its base or rack. If not, contact your service center.</li> </ul>

### 7. TROUBLE SHOOTING

 Don't try to repair the air conditioner by yourself. It may cause an electric shock and kill you or damage the unit. Contact authorized service center.  Following checks prior to contact may save you money	
Fault	Cause analysis
Air conditioner does not run upon immediate restart after a stop	To protect the air conditioner upon immediate restart after a stop, the microcomputer controller will delay the unit for 3 minutes before the air conditioner will run.
Air conditioner blows out bad smell when it is initially started.	The air conditioner itself has no bad smell. If any, is the bad smell accumulated from environment. Solution: Clean the air filter . If still any problem, the air conditioner shall be cleaned (Please contact Authorized Service Center)
You may hear "water flowing" noise when the air conditioner is running.	When the air conditioner is started, or the compressor is started or stopped during running or the air conditioner is stopped, sometimes you may hear "hua-hua" or "di-du-di-du" noise. This is the flowing sound of refrigerant other than fault.
Sometimes a thin fog will flow out of the outlet when air conditioner is running in cooling mode.	This might occur when indoor temperature and humidity are high. This is because the indoor air is quickly cooled down.  After a period of time, the fog will disappear with the decrease of indoor temperature and humidity.
You may hear a slight crack when the air conditioner is started or stopped.	This is the sound of friction caused by expansion of panel or other parts due to the change of temperature.
Air conditioner does not run.	<ul style="list-style-type: none"> <li>• Check if power failure?</li> <li>• Has circuit protection device has tripped?</li> <li>• Is the voltage too high or too low? (To be tested by professional technicians).</li> <li>• Is timer function correctly used?</li> </ul>
Air conditioner has poor cooling (or heating) effect.	<ul style="list-style-type: none"> <li>• Air inlet or outlet of outdoor unit blocked?</li> <li>• Air filter clogged by dust?</li> <li>• All doors and windows closed?</li> <li>• Air flow set to "LOW FAN"?</li> <li>• Any other heating source in the room?</li> <li>• Proper temperature setting ?</li> </ul>
Remote controller cannot execute control.	<ul style="list-style-type: none"> <li>• Remote controller sometimes cannot execute control if the air conditioner is subject to abnormal interference or frequent switch of functions. To resume normal operation, just pull out the power and reinsert it properly.</li> <li>• Is the remote control too far away from indoor unit or blocked by any obstacles?</li> <li>• Check the battery in remote controller for power level. If low power, replace the battery.</li> <li>• Check, if remote controller is damaged.</li> </ul>

 Don't try to repair the air conditioner by yourself. It may cause an electric shock and kill you or damage the unit. Contact authorized service center. 	
Following checks prior to contact may save you money	
Fault	Cause analysis
Water leaks from indoor unit.	<ul style="list-style-type: none"> <li>• Air humidity is too high.</li> <li>• Condensing water overflows.</li> <li>• Joint of indoor unit drain pipe is loose.</li> </ul>
Water leaks from outdoor unit.	<ul style="list-style-type: none"> <li>• Under cooling mode, water might condense on pipe or pipe joint due to cooling.</li> <li>• Defrosted water flows out under heating or defrost (auto defrost) mode.</li> <li>• Under cooling mode, water attached on heat exchanger will drip.</li> </ul>
No air blows out from indoor unit.	<ul style="list-style-type: none"> <li>• When the temperature of indoor heat exchanger is low during heating process, the indoor unit will stop air blowing to prevent blowing of cold air (within 3 minutes).</li> <li>• In HEAT mode: when outdoor temperature is low or humidity is high and much frost on the heat exchanger has developed, unit switches into automatic defrost mode. Indoor unit stops blowing air for 3-12 min. During this water may flow out or steam will appear</li> <li>• In dehumidify mode, the fan of indoor unit might be stopped sometimes to prevent evaporation of condensing water and inhibit the rise of temperature</li> </ul>
Moisture exists on outlet grill.	<ul style="list-style-type: none"> <li>• If the air conditioning is long running under high humidity, moisture might condense on the grill and drop down.</li> </ul>
Indoor unit gives out noise.	<ul style="list-style-type: none"> <li>• The sound that the fan or compressor relay is switching (close/open).</li> <li>• Air conditioner may give out sounds under defrost or when it is stopped. This is caused due to inverse flow of refrigerant in the unit.</li> </ul>
H1: Defrosting	<ul style="list-style-type: none"> <li>• Is normal</li> </ul>

In the case of following events, please contact authorized service center	
<ul style="list-style-type: none"> <li>• Air conditioner gives out shrill noise during running.</li> <li>• Air conditioner gives out bad smell during running.</li> <li>• Water leaks indoors.</li> <li>• Air break switch or leakage protection switch trips frequently.</li> <li>• Liquids or water are poured into the machine or remote controller.</li> <li>• Abnormal overheating of power cord and plug.</li> </ul>	<p><b>STOP THE AIR CONDITIONER AND PULL OUT THE POWER PLUG</b></p>

## 8. LOCATION OF INSTALLATION

Choose a proper location for the indoor and outdoor unit

### Indoor unit

- The intake and outlet should not be covered, so that the outflowing air can reach all the parts of the room
- Install in a location, from where the condensation water can be drained easily out and that allows a short and easy connection to the outdoor unit
- Avoid close heat sources, steam or flammable gas
- Choose a location which is strong enough to withstand the weight and vibration of the unit
- Allow enough clearance space to have access for routine maintenance e.g. replacing the filters .
- The height of the installation should be min. 2,2 m above the floor.
- Stay away 15 cm from the ceiling (measured from air intake to ceiling), 15 cm on the left and right side of the unit to any walls.
- Stay away at least 1m from other electric appliances like TV, audio devices etc.
- Do not locate the indoor unit in the immediate proximity of a laundry, bath, shower, or swimming pool.
- Make sure you can access the plug after having installed the indoor unit.

### Outdoor unit

- Choose a locations that minimizes noise and airflow to the neighbors.
- Select a location which allows enough ventilation for the fan of the outdoor unit.
- Do not cover intake and outlet of the air of the condenser.
- Choose a location which is strong enough to withstand the full weight and vibration of the outdoor unit and permits safe installation.
- Avoid any proximity to hazardous and flammable gases, liquids.
- When handling the outdoor unit, keep it always upright. Handling must be done by qualified people being able to handle heavy loads.
- After having opened packaging, make sure that all equipments are undamaged and all parts at right and available.
- Make sure that clearance requirements are met. (As seen from the front):
  - Left side: min. 30 cm to any wall
  - Right side: min. 50 cm to any wall
  - Top: min. 50 cm to any cover
  - Front: min. 200 cm to any wall or greater obstacle
  - Back: min. 30 cm to any wall

### 9. ELECTRICAL WIRING

- All electrical work must be done according to local and national building codes and any other local and national regulations covering any electrical work.
- The rated voltage and exclusive circuit must be used. Check Type plate ! The diameter of the supplied power cord cables should be sufficient, but check with your local codes.
- Don't pull the power cord too strong.
- The air conditioner must be safely earthed. The earth wire must be connected to the special ground of the power supply of your house. This has to be done by a certified and skilled service personnel. Appropriate protection switches against leakage of electricity and safety breakers have to be installed to protect life and the unit against damage, shortenings and overloads of the supplying wiring system in the house. The service personnel has to check, if these protection devices fit to local codes and the requirements of the air conditioner.
- The air conditioner is class 1, so it must be earthed and grounded.
- The yellow green wires are the earth wires and are not to be used for any other purposes. They may not be cut off and are to fixed by the tapping screw.
- The power supply must have an access for the earth wire of the air conditioner.
- This unit is not intended to be used by persons with reduced physical, mental or sensory capabilities or a lack of experience and knowledge, unless they are supervised for their safety concerning the use of the appliance.

#### Condensate pump

Note: The device of condensate pump is not provided with this air conditioner unit. If you need the device, you may order it and install it according to the electrical diagrams.

All following electrical charts are in English. They are for information and may vary. Check circuit diagram sticked in the unit. Following index explains used word and acronyms:

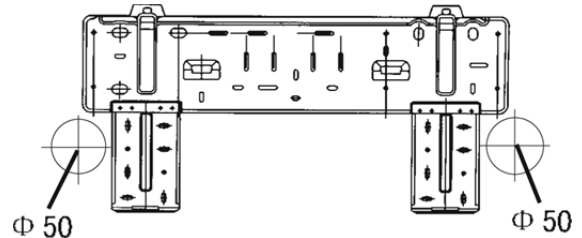
BL: Black BN: Brown BL: Blue RD: Red YE/GN: Yellow/Green POWER: FAN MOTOR: INDOOR UNIT: COMP: Compressor TEM: Temperature	SENSOR: TUBE: OUTROOM: Ambient temperature outside EXHAUST: Outlet of the air STEP MOTOR: DISPLAY: TRANSFORMER: MAIN: Main board PUMP: Condensate pump indoor unit
--	--



### 10. INSTALLATION OF THE INDOOR UNIT

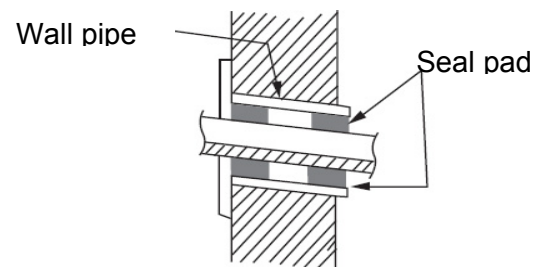
#### Install the frame (rear panel)

- Level with plumb line or leveler. As the drain outlet is on the left side, it is better that the left side shall be lower when adjusting the wall-mounted board
- Use screws and dowels to secure the wall-mounting frame on the wall
- After installation is completed, check, if frame is mounted safely. The frame has to withstand the weight of 60kg and the fixing screws shall be able to take up this stress.



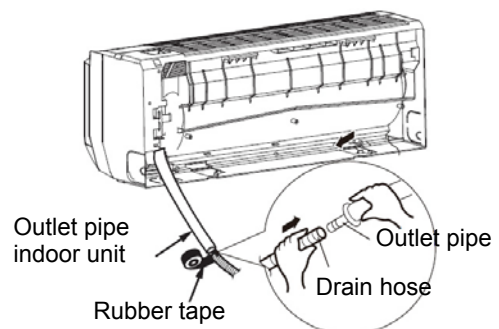
#### Wall opening and pipe installation through wall

- Drill a hole through the wall according to picture right with a diameter of 65mm
- Make sure the hole has a slight falling to the outside to prevent coming water from outside
- To prevent the fitting pipe and the cable passing through the wall from being harmed and also protect the hollow wall from rodents/insects, install a wall pipe cover on both sides.
- Fill the hole with foam/Sealing paste, after you have made all other connections (Drainage, cables, etc.)

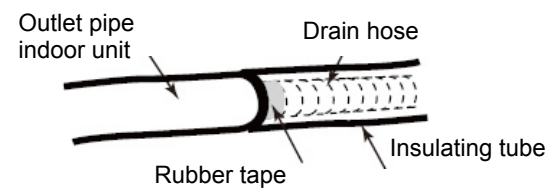


#### Install drain hose

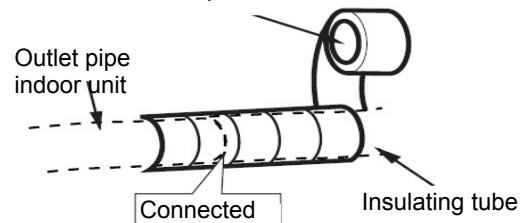
- The flexible drainage pipe must descend to the outside in order to allow smooth running of water.
- Connect the drain hose to the outlet of the indoor unit. Bind the joint with rubber tape



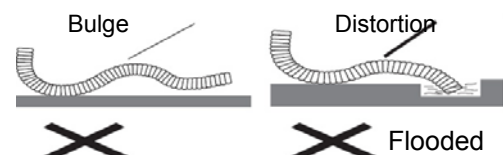
- Insert the drain hose into an insulating tube



- Wrap the insulating tube with wide rubber tape to prevent shifting of inner tube

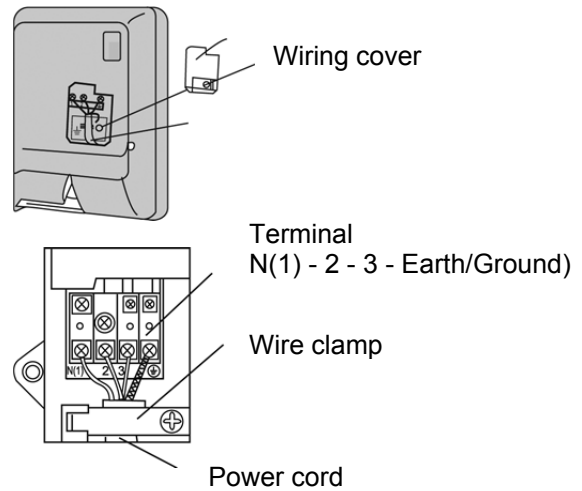


- Pay attention to avoid twists, ridges and distortion of the drainage pipe in the layout and not to immerse the outlet in water.



#### Connection of indoor and outdoor cables

- Pull open the front panel of the indoor
- Unscrew the screw fixing the covering plate of terminal board.(See figure on the right)
- Pass the power cable through a separate cable duct on the back of indoor unit and pull it out from the front. Connect the Neutral wire of the power connection cables to the "N (1) "terminal of the terminal board, connect the Signal wire to the "2" terminal, and connect the L- wire to the "3" terminal and connect the earthing wire to the (earth) terminal
- Place the section of power cable with protective pipe into pressing groove and close the cover plate. Tighten the fixing screws to clamp the connecting cable.
- Put the front panel back into position



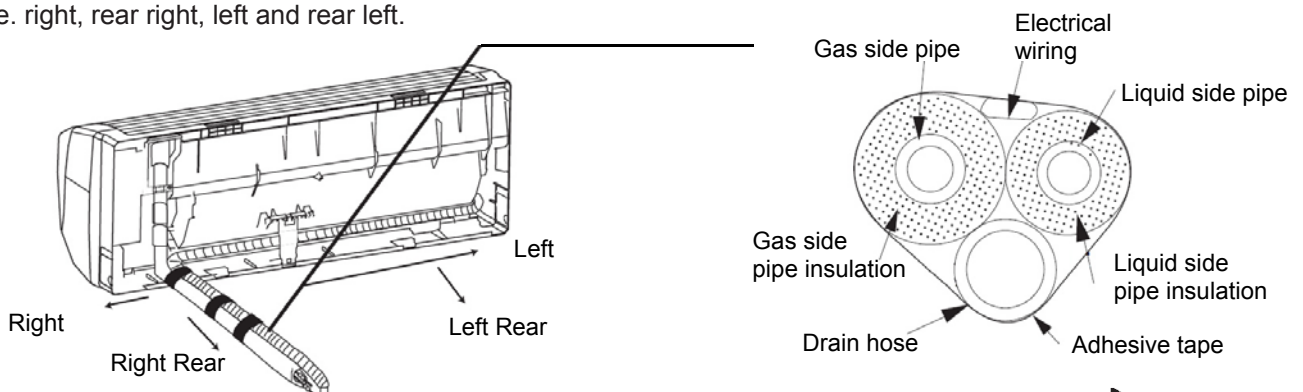
### NOTES:

If the connecting cables are too short, replace the whole cable from outdoor to indoor unit by a longer cable. No joints within the cable is allowed. Make sure you have the proper diameter for the extended length. When the cable gets longer, you might need to choose a cable with thicker diameter for the copper conductor. Don't choose Aluminum conductors.

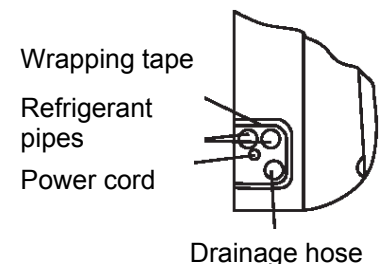
- Be sure to connect the cable correctly. Incorrect connections will cause fault to some electrical parts.
- Tighten the terminal screw to avoid looseness.
- After tightening the screw, gently pull the cable for tightness. Incorrect connection of earthing cable might cause electric shock.
- Be sure to fix the junction cover plate securely and press it closely against connecting cable. Improper fixing of junction cover plate might allow dust or water to enter or expose connecting terminal directly under the external force, whereas fire or electric shock might occur.

### Install the indoor unit

- The refrigerant pipe can come out from four directions, i.e. right, rear right, left and rear left.



- When positioning the refrigerant pipings (line) at the left or right side, cut the tailings in the casing of the indoor unit in the appropriate size.
- Wrap the piping (incl. cables) by using adhesive tape and pass them through the cut-off-tailings holes .
- Hung the claws at the rear side of the indoor unit to the hook on the wall-mounting frame. Move the unit left and right to see if it is steady.
- The installation height of the indoor unit must be at least 2,0 m.



### 11. INSTALLATION OF THE OUTDOOR UNIT

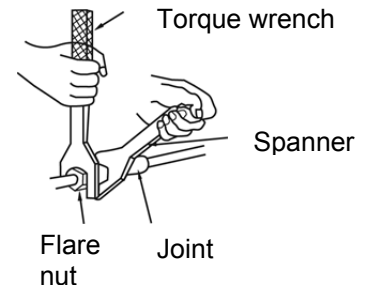
Modify the outdoor unit and connect it to SolarCool panel:

Do this first ! See separate installation manual for SolarCool panel

#### Connecting the outdoor unit to indoor unit

- The taper end of the connecting pipe must be in line with the corresponding tape face of the valve joint. Tighten the nut of the connecting pipe and then use spanner to tighten the nut.

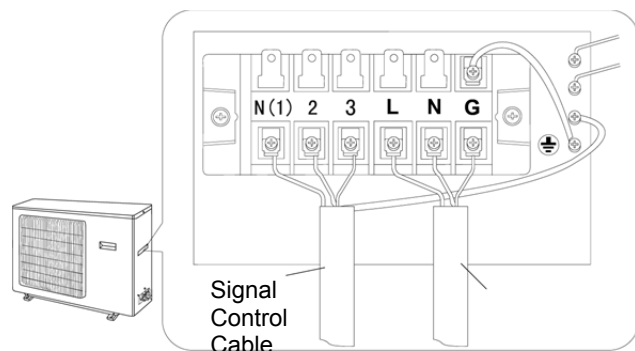
Hexagon nut	Torque (Nm)
Ø 6 - (1/4")	15 - 20
Ø 9,5 - (3/8")	31 - 35
Ø 12 - (1/2")	50 - 55
Ø 16 - (5/8")	60 - 65
Ø 19 - (3/4")	70 - 75



**NOTE:** Connect the connecting pipe to the indoor unit first and then connect it to the outdoor unit. Pay attention to the bending and layout when preparing the connecting pipe in order not to harm it. Do not screw the joint nut too tightly, otherwise leakage will be caused.

#### Connecting the cables and power supply at the outdoor unit

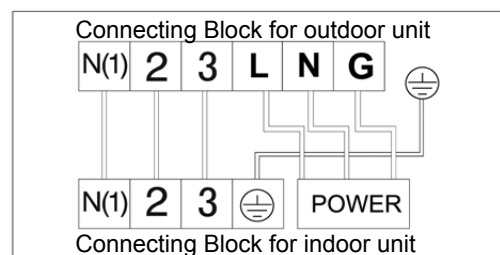
- Remove the lid at the outdoor unit
- Remove the cable clamp, connect the power supply (L for hot/Live wire L2 or N for neutral and G to Ground/Earth)
- Connect the signal control cables of the indoor units with the terminals at the lower row of the terminal. Make sure that the wiring is in accordance with the indoor unit.
- Fix the wiring with the cable clamps.
- Make sure that the wiring has been connected securely
- Reassemble the lid on the outdoor unit



**NOTE:**

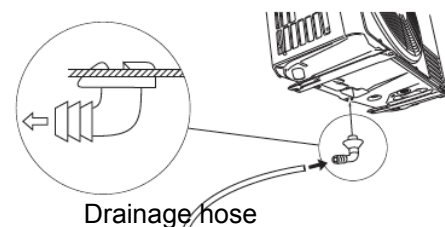
- Wrong wiring will cause electrical malfunction and may damage the unit, harm your health and might even kill you.
- Do not pull the wires when you fix them with the clamps

Diagram



#### Drainage of outdoor unit

- When the air-conditioning runs in the heating mode, the condensate water generated at the outdoor unit and the water generated by defrosting shall be drained through the drainage hose to a proper place.
- Installation: Insert the drainage hose into the ø 25 mm (1") hole in the base plate of the outdoor unit. Connect the other end of the drainage hose an appropriate place to remove all the upcoming water.



#### Mounting

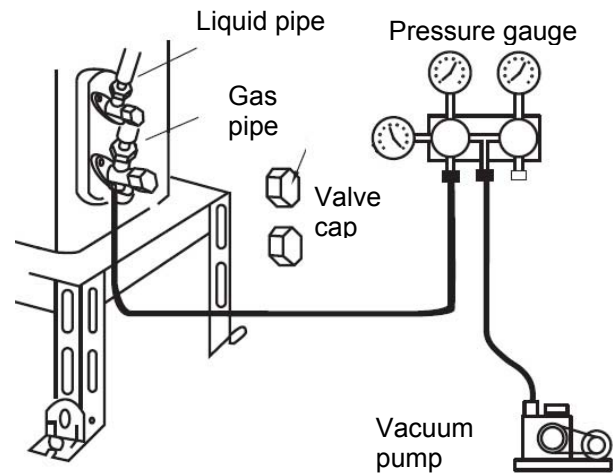
Mount the outdoor unit with heavy and suited bolts on to the ground or an appropriate rack. Perpendicular ground plates provide four holes for mounting. Make sure that the outdoor unit is assembled safe and may withstand vibrations, major wind and other weather forces.

**12. AIR PURGING AND LEAKAGE TEST**

**NOTE:** To be carried out only by skilled, qualified and trained personnel with professional equipment

Humid air left inside the refrigerant circuit can cause compressor malfunction. After having connected the indoor and outdoor units, bleed the air and humidity from the refrigerant circuit using a vacuum pump

- Remove the nut covers of from the pressure check valves on the thicker gas pipe.
- Connect the charging hose (middle) to the vacuum pump, then connect the Low-pressure (Lo) end to the charging valve of the gas pipe. (as shown in Fig)
- Open the vacuum pump to evacuate. When gauge indicates 1 bar, fully tighten Lo handle of manifold valve and stop evacuation. Keep it for over 15 minutes to ensure the pressure is constant.
- Remove valve caps of gas and liquid valve.
- Slightly loosen core of liquid valve with hexagon wrench until the pressure exceeds 0 bar.
- Remove charging hose from charging end of gas valve and screw the flare nuts of charging end.
- Open cores of gas and liquid valve entirely by hexagon wrench.
- Tighten the valve caps of gas and liquid valve, and then test whether there is any leakage or not. Use for leakage test a water/detergent solution and wet the joint. If a leak exists, you will see bubbles.



**13. FILL WITH REFRIGERANT FOR CONNECTION PIPES**

- Pressure: The suction line pressure: 900 Pa (CMO18/24); 1 000 Pa (CMO28) (with indoor temperature 24°C/outdoor temperature 35°C in cooling mode)
- Standard length of connecting pipes (between indoor and outdoor unit): 5m – 7,5m – 8m
- Min. length of connecting pipes: for 5m no minimum length required. For 7,5 and above a minimum length of 3m is required
- Max length of connecting pipes:

SWM09	SWM12	SWM18	SWM24	SWM30	SWM36	SWM42	SWM48
15 m	20 m	25 m	25 m	30 m	30 m	30 m	30 m

- Refrigerant oil- if available: add 1 ml for each m of connecting pipe (indoor-outdoor unit and ->solar panel)  
 Example: connecting pipe from indoor to outdoor unit is 10m: → 10 ml  
 connecting pipe from outdoor unit to solar panel is 15m: → 15 ml  
 Total + 25 ml
- Refrigerant Charge R410: add depending on inner diameter of liquid and gas pipe. The connection from the outdoor unit to the solar panel is type gas pipe

Liquid pipe	Gas pipe	Additional refrigerant ( g/m)
Ø 6- 1/4"	Ø 9,5- 3/8" or Ø 12- 1/2"	20
Ø 6- 1/4" or Ø 9,5- 3/8"	Ø 16 - 5/8" or Ø 19- 3/4"	50
Ø 12- 1/2"	Ø 19 - 3/4" or Ø 22- 7/8"	110
Ø 16- 5/8"	Ø 25,4- 1" or Ø 31,8- 1 1/4"	140
Ø 19- 3/4"	-	250
Ø 22- 7/8"	-	350

## 14. TEST OPERATION

### Preparation

- Do not switch on the power before all installation work is completed.
- Confirm that the control line is correctly installed and all electrical lines are firmly connected.
- Open the shutoff valves of the big and small connecting pipes.
- Remove all foreign articles, especially metal scraps, line ends and forceps, from the unit.

### Test run

- Connect to the power supply, press the "ON/OFF" key on the remote controller, and the air-conditioning unit starts to operate.
- Press the MODE button, select the operating modes such as Cool, Heat, Fan, Swing mode and observe if the operation is normal.

## 15. CHECK AFTER INSTALLATION

Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	May cause condensation and water dropping
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may break down or the components may be burned out
Are the lines and pipelines correctly installed?	The unit or components may break down
Has the unit been safely grounded?	Risk of electrical leakage
Are the models of lines in conformity with requirements?	The unit may break down or the components may be burned out
Are there any obstacles near the air inlet and outlet of the indoor and outdoor units?	The unit may break down or the components may be burned out
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	The wrong amount of refrigerant has be installed and causes insufficient cooling and heating



**16. WARRANTY**

<p>Your HVAC comes with a warranty of 2 years for all parts. In order for your warranty to be effective, you must complete out this form and return it to SolarCool Europe. For full warranty coverage it needs an approval and signature from the certified and qualified service personnel.</p> <p>It is the responsibility of the owner to provide sufficient prove for its purchase and installation. We recommend to keep all documentations over the full warranty period.</p> <p>Location of installation                  Country _____                  Town _____                  Street _____</p>	<p>Purchaser name _____                  Purchase Date _____                  Model _____                  Serial No _____                  Owner’s phone _____                  Owner’s email _____                  Owner’s signature _____                  _____                  Dealer’s name _____                  Installer’s name _____                  Installer’s address _____                  _____                  Installer’s signature/stamp _____                  _____</p>
---	---

**Limited warranty by SolarCool Europe**

Valid is the warranty claim as published on the Homepage of SolarCool Europe at the time of purchase date. SolarCool hereby warrants to the consumer that all units are free from defects in materials and workmanship, and will replace or repair system components in accordance with the terms of this Limited Warranty. The terms of this warranty are effective from the date of installation, and apply only to products purchased and installed within Europe and Turkey. The installer shall be responsible for installation in accordance with the SolarCool Installation Manual and all building/electrical codes in effect at the time of installation. All transportation, service labor and diagnostic calls other than those specifically allowed by this Warranty are excluded.

This Warranty shall not apply to damaged system components caused by transportation, improper installation, service or alteration, acts of God, improper electrical supply or refrigerant charge, corrosive atmosphere, misuse or failure to properly maintain equipment. This Warranty does not apply to field-supplied and installed components for this system.

If the warranty offered by SolarCool Europe on its Homepage differs from that written here, the always better for the customer applies. For details see [www.sednaaireurope.com](http://www.sednaaireurope.com)

**All European certifications passed: CE RoHS**

SolarCool has a policy of continuous product and product data improvement and it reserves the right to change design and specifications without notice. Solarcool™ is a trademark of SolarCool Europe