ENGLISH

Haier

Installation Instructions
Installation Manuel
Instrucciones de instalación

MRV Indoor Unit
Unité intérieure MRV
Unidad Interior con MRV

MVAX009ME2AA1
MVAX012ME2AA1
MVAX018ME2AA1
MVAX024ME2AA1
MVAX030ME2AA1
MVAX036ME2AA1
MVAX042ME2AA1
MVAX048ME2AA1
MVAX054ME2AA1
MVAX060ME2AA1

Design may vary by model number.

L'aspect peut varier selon le numéro de modèle.

El diseño puede variar según el número de model.

No. 0150563873 B
31-5000755 Rev. 0 06-23 GEA

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RECORD KEEPING

Thank you for purchasing this Haier product. This installation manual will help you get the best performance from your new unit.

For future reference, record the model and serial number located on the label on the side of your air conditioner/heat pump, and the date of purchase.

Staple your proof of purchase to this manual to aid in obtaining warranty service if needed.

To register your new Haier Duct Free system go to Haierductless.com/product-registration and input the model/serial number information on this page. To receive a 10-year compressor and parts warranty, registration is required within 60 days of installation.

_____
Model number

_____
Serial number

_____
Date of purchase

IMPORTANT SAFETY INFORMATION

⚠NOTICE

This manual should be given to the building owner and kept for future reference.

- There are two types if indications. Both are related to safety and should be strictly followed.

⚠WARNING **"Warning"** highlights issues that pose a risk of major injury or death.

⚠CAUTION **"Caution"** highlights issues that pose a risk of equipment or bodily injury.

- After installation and start-up commissioning, please give the manual to the user. The manual should be kept in safe place and close to the unit.

⚠WARNING **For your safety, the information in this manual must be followed to minimize the risk of fire, electric shock, or personal injury.**

- The power supply wiring must be replaced by the manufacturer or a qualified contractor if it becomes damaged in order to avoid hazard or injury.
- This equipment should not be used or serviced by personnel who have not been properly trained in its operation and maintenance.
- Children should be supervised and kept away from this equipment.
- This equipment is not intended to be operated by means of an external timer or separate remote-control system.
- Keep the equipment and its cord out of reach of children.

- Your air conditioner model may be updated or changed from time to time as Haier Products are improved.
- MRV series multiple air conditioning systems adopt the consistent running mode, in which all indoor units must operate in the same mode; either heating or cooling.
- The air conditioning unit should be powered on for over 12 hours before use to protect the compressor.
- All indoor units associated with the same refrigeration system should have a common electrical disconnect switch and power source.

Product Features:

1. Suspended indoor unit installation saves space.
2. Automatic display of error and fault codes. Please refer to Page 25.
3. Optional central controller.
4. The system will resume operation in the last operating mode in the event of a power outage.
5. I understood all controllers are purchased separately for MRV products.

⚠WARNING **RISK OF ELECTRIC SHOCK. Could cause injury or death.**

- An adequate ground is essential before connecting the power supply.
- Disconnect all connected electric power supplies before servicing.
- Repair or replace immediately all electrical wiring that has become frayed or otherwise damaged. Do not use wiring that shows cracks or abrasion damage along its length or at either end.

⚠WARNING **RISK OF FIRE. Could cause injury or death.**

- Do not store or use combustible materials, gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

IMPORTANT SAFETY INFORMATION

⚠WARNING **For your safety, the information in this manual must be followed to minimize the risk of fire, electric shock, or personal injury.**

- Use this equipment only for its intended purpose as described in this manual.
- This heat pump must be properly installed in accordance with these instructions before it is used.
- All wiring should be rated for the amperage value listed on the rating plate. Use only copper wiring.
- All electrical work must be completed by a qualified electrician and completed in accordance with local and national building codes.
- Any servicing must be performed by a qualified individual.

For any service which requires entry into the refrigerant sealed system, Federal regulations require that the work is performed by a technician having a Class II or Universal certification.

- All air conditioners contain refrigerants, which under federal law must be removed prior to product disposal. If you are getting rid of an old product with refrigerants, check with the company handling disposal.
- These R-410A heat pumps systems require that contractors and technicians use tools, equipment and safety standards approved for use with this refrigerant. DO NOT use equipment certified for R22 refrigerant only.

⚠WARNING

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

To avoid danger of suffocation, keep the plastic bag or thin film used as the packaging material away from young children.

Be sure not to allow foreign materials (oil, water, etc) entering the refrigerant piping. Seal the ends of refrigerant piping before storage.

For installation purposes, be sure to use the parts supplied by the manufacturer or other prescribed parts. The use of non-prescribed parts can cause serious accidents such as the unit falling, water leakage, electric shock, or fire.

The rated power supply of this product is 208/230 VAC/60hz/1PH. Verify the voltage is within 187~253 range before turning the equipment on.

Supply power to the heat pump should be from a dedicated circuit that meets branch circuit ampacity requirements.

Use a special branch circuit breaker and receptacle matched to the power circuit capacity of the heat pump. (Install in accordance with local technical standard for electrical equipment .)

Do not extend the power cord.

Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.

Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

IMPORTANT SAFETY INFORMATION

⚠WARNING

Installation and maintenance should be performed by an authorized agency. The wrong operation of this air condition equipment may cause water damage, electric shock or fire.

- Please install the unit on a solid foundation or structure strong enough to support the unit.
- The installation of this equipment should follow local building codes.
- Use the proper size electrical wiring and secure all terminals, organize all wiring and make sure all wiring is not under stress. Inspect all wiring for insulation blemishes and damage. Improper wire size may lead to fire.
- This unit is only compatible with R-410A refrigerant. Use of any other refrigerant may lead to abnormally high pressures and may cause damage or injury.
- Only use branches supplied by Haier. Use of any other branches will void warranty.
- Make sure all condensate drain piping is properly trapped when connected to building drains to avoid drawing foul gasses into the building envelope.
- Care should be taken to ensure that there are no refrigerant leaks. R-410A is a heavy gas and will displace oxygen. Ventilate the area if a leak if found.
- Keep equipment away from flammable environments.
- The drain pipe should be installed per this manual to ensure proper drainage. The pipe should be well insulated to avoid condensation. Inadequate installation may lead to water damage.
- Both liquid pipe and the vapor pipe should be well insulated. Inadequate insulation may lead to system performance deterioration or condensate formation.
- This equipment should not be used or serviced by personnel who have not been properly trained in its operation and maintenance.
- Children should be supervised to ensure that they do not play on or near the equipment.
- Keep the appliance and its power supply wiring out of reach of children.
- This equipment is not intended to be operated by means of an external timer or separate remote-control system

⚠CAUTION

Earth ground conductor should be connected via the equipment disconnect to the ground buss in the breaker panel. The earth ground conductor should not be connected to any gas lines, water lines, lightening rods, or telephone grounds.

- A circuit breaker should be installed. If not, it may cause electric shocks or accidents.
- The equipment should be checked for current leakage after installation and power-up.
- Water or moisture may discharge from the equipment when relative humidity rises above 80%, when condensate drain lines become blocked or when air filters become blocked or heavily soiled.

Attention

Notices during Operation	Do not put any heating apparatus under the indoor units. The heat may cause distortion of the units.	3-minutes protection To protect the unit, there is a 3-minute time-delay after the unit stops or after power is applied.
	Pay attention to the ventilation to avoid anoxic injury	Close the window to avoid outdoor air getting in. Curtains or window shutters can be put down to avoid the sunshine.
	Do not place an open flame in the path of blowing air	Turn off the system and remove power when servicing the unit.
	Do not use the unit for special purposes such as preserving foods, works of art etc. It is an air conditioner for comfort cooling / heating, not a precision refrigeration system	Turn equipment off at the control before isolating power.
	Turn off the power to save energy if the unit will be not used for a long period. The unit continues to use power even though the equipment is turned off at the controller	Please keep children away from this air conditioning equipment.

IMPORTANT SAFETY INFORMATION

⚠CAUTION

- It is highly recommended that you do not open or close the stop valves when the outdoor temperature is below -5°F(-21°C) as this may cause refrigerant leakage.
- Make sure power is turned on for at least 12 hours after periods of being powered down in an 32 °F (0°C) environment or lower.
- Do not touch the fins of the coil. Touching the coil fins could result in damage to the fins or personal injury such as skin rupture.
- Ensure the power circuit capacity is adequate for all loads connected to the electrical service panel. Increase the conductor and panel capacity if the total electrical loads exceed the power source capacity.
- Contact the power utility if the power provided is below equipment rating plate requirements.
- Be sure to install a breaker of the specified capacity.
- Regulation of cables and breaker differs from each locality, refer in accordance with local rules.
- Do not use existing refrigerant lines.
- Use refrigerant tubing that is clean and free of any contamination which may cause damage to the system including sulfur, copper oxide, dust, metal chips, powder, oil or water.
- Avoid brazing lines together. Use a continuous length of copper tubing as oxides formed during improper brazing techniques can damage the equipment.
- Do not use copper pipes that have a collapsed, deformed, or discolored portion (especially on the interior surface).
- Otherwise, the expansion valve or capillary tube may become blocked with contaminants.
- Improper line sizing will degrade performance. Peak pressure of R410A is much higher than R22. Use copper tubing with adequate wall thickness.
- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 4 in. (100 mm) or more.
- If the pipe is bent repeatedly at the same place, it will break.

READ AND SAVE THESE INSTRUCTIONS

BEFORE YOU BEGIN

Read these instructions completely and carefully.

- **IMPORTANT –** Save these instructions for local inspector's use.
- **IMPORTANT –** Observe all governing codes and ordinances.
- **Note to installer** – Be sure to leave these instructions with the Consumer.
- **Note to consumer** – Keep these instructions for future reference.
- **Skill level** – A licensed certified technician (to handle refrigerant R-410A, recovery, etc) and a qualified electrician are required for installation and service of this split heat pump system.
- Proper installation is the responsibility of the installer.
- Product failure due to improper installation is not covered under the limited warranty.
- For personal safety, this system must be properly grounded.
- Protective devices (fuses or circuit breakers) acceptable for installation are specified on the nameplate of each unit.
- Make sure to avoid wiring or plumbing inside the wall when installing.

⚠CAUTION

- The dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures is in the installation part.
- The minimum CLEARANCE from the appliance to combustible surfaces is in the installation part.
- Details of supplementary heating elements is in the installation part.
- The maximum operating pressure is considered when connecting to any outdoor units
- These units must only be connected to other units that have been confirmed as complying to
  - UL 60335-1
  - UL 60335-2-40
  - CSA C22.2 #60335-1
  - CSA C22.2 #60335-2-40

SPECIFICATIONS

			9k	12k	18k	24k	30k	36k
Capacity	Cooling	Btu/h	9000	12000	18000	24000	30000	36000
	Heating	Btu/h	8500	13500	20000	27000	34000	40000
Electrical	Power supply	V/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
	MCA	A	2.05	2.05	2.25	2.40	3.05	4.40
	MOP	A	15	15	15	15	15	15
	ESP	in. W.G.	0.3/0.5/0.9	0.3/0.5/0.9	0.3/0.5/0.9	0.3/0.5/0.9	0.3/0.5/0.9	0.3/0.5/0.9

			42k	48k
Capacity	Cooling	Btu/h	42000	48000
	Heating	Btu/h	46000	54000
Electrical	Power supply	V/Ph/Hz	208-230/1/60	208-230/1/60
	MCA	A	4.50	4.50
	MOP	A	15	15
	ESP	in. W.G.	0.3/0.5/0.9	0.3/0.5/0.9
			54k	60k
Capacity	Cooling	Btu/h	54000	60000
	Heating	Btu/h	60000	66000
Electrical	Power supply	V/Ph/Hz	208-230/1/60	208-230/1/60
	MCA	A	6.90	6.90
	MOP	A	15	15
	ESP	in. W.G.	0.3/0.5/0.9	0.3/0.5/0.9

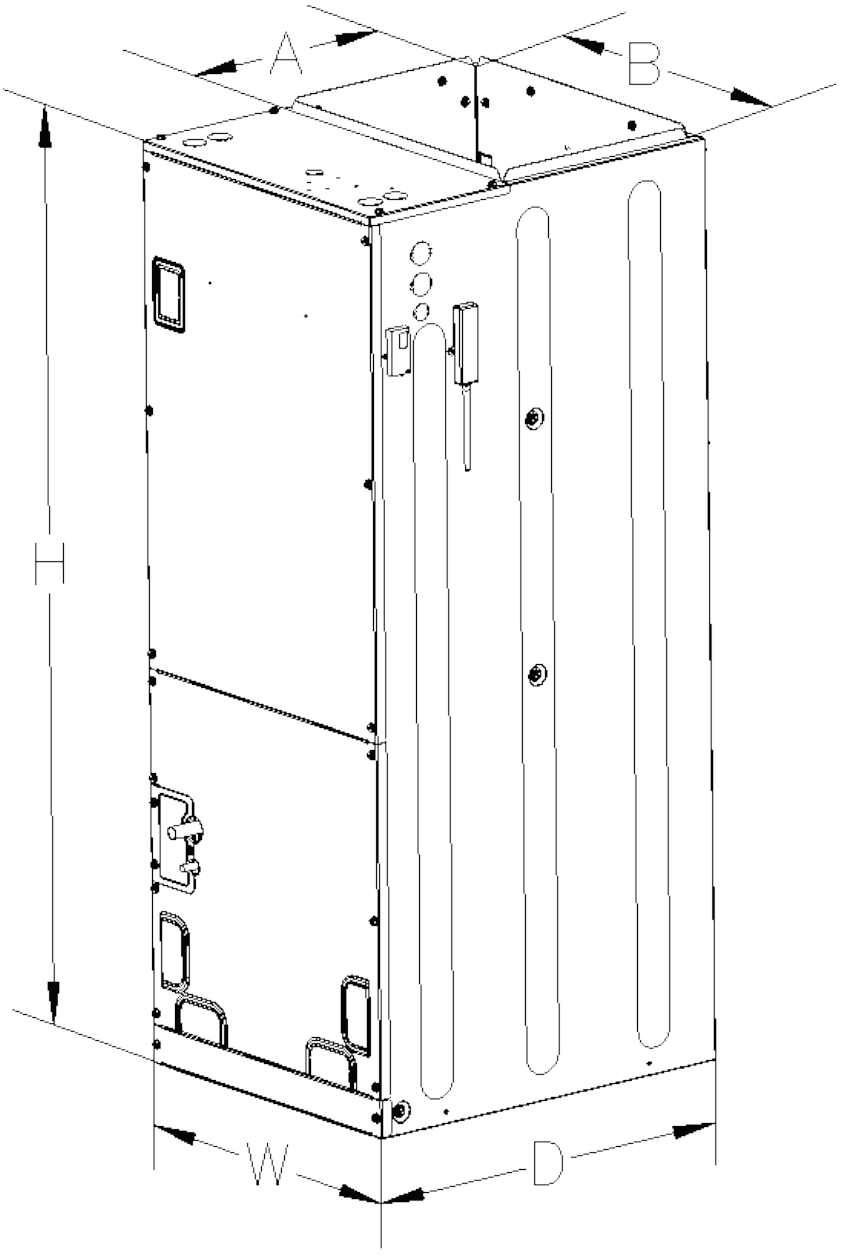
Operating Conditions:
Normal operating conditions are listed below

Cooling Dry	Indoor	Max	DB: 90°F (32°C)	WB: 74°F (23°C)
		Min	DB: 64°F (18°C)	WB:57°F (14°C)
	Outdoor	Max	DB: 115°F (46°C)	WB: 74°F (23°C)
		Min	DB: 23°F (-5°C)	
Heating	Indoor	Max	DB: 80°F (27°C)	
		Min	DB: 59°F (15°C)	
	Outdoor	Max	DB: 75°F (24°C)	WB: 59°F (15°C)
		Min	DB: -4°F (-20°C)	

SPECIFICATIONS

Unit Dimensions

Model	Width	Depth	Height	A	B
MVAX009-036ME2AA1	17-1/2 in. (445mm)	21 in. (533mm)	47in. (1194mm)	11-11/16in. (297mm)	16-1/2 in. (419mm)
MVAX042/048ME2AA1	21 in. (533mm)		53in. (1346mm)		20 in. (506mm)
MVAX054/060ME2AA1	24-3/4 in. (629mm)		57in. (1448mm)		23-3/4 in. (603mm)



INSTALLATION INSTRUCTIONS

⚠CAUTION

- Choose a suitable installation location.
- For installations of any orientation in high humidity environments (85% or more relative humidity), the foam installation provided in the downflow kits should be installed to prevent damage to electronic components.
- Avoid places with high salinity (salt water) and high sulfur gas. Unit will corrode and damage will not be covered by warranty.
- Avoid excess oil (including mechanical oil) and steam. This can reduce efficiencies and product performance.
- Avoid areas where machines generate high frequency electromagnetic waves; this can cause control issues.

⚠WARNING

Protect the machine from high winds and earthquake by securing the base of the machine. Install according to local or national building codes. Improper installation can cause personal injury and property damage.

Select the following places to install indoor units.

1. Where there is enough room for the unit above the ceiling
2. Where the drainpipes can be well positioned
3. Where the distance between the air outlet port of the machine and the floor is not more than 8.86ft(2.7m)
4. Where air inlet & outlet of the indoor units are not blocked
5. Where the structure is sturdy enough to bear the weight of the unit;
6. Where there are no objects that can be damaged water if a condensate leak should occur.
7. Avoid close proximity to televisions and radios

Required Tools for Installation:

- Brazing torch
- 15% silver phosphorous copper brazing alloy
- Wire stripper
- Soap-and-water solution or gas leakage detector
- Torque wrench
- 17mm, 22mm, 26mm
- Tubing cutter
- Reaming tool
- Flaring tool
- Razor knife
- Measuring tape
- Level
- Vacuum pump
- Micron gauge
- Nitrogen
- Mini-Split AD-87 Adapter (1/4" to 5/16")
- Non-adhesive Tape
- Adhesive Tape
- Electrical wiring

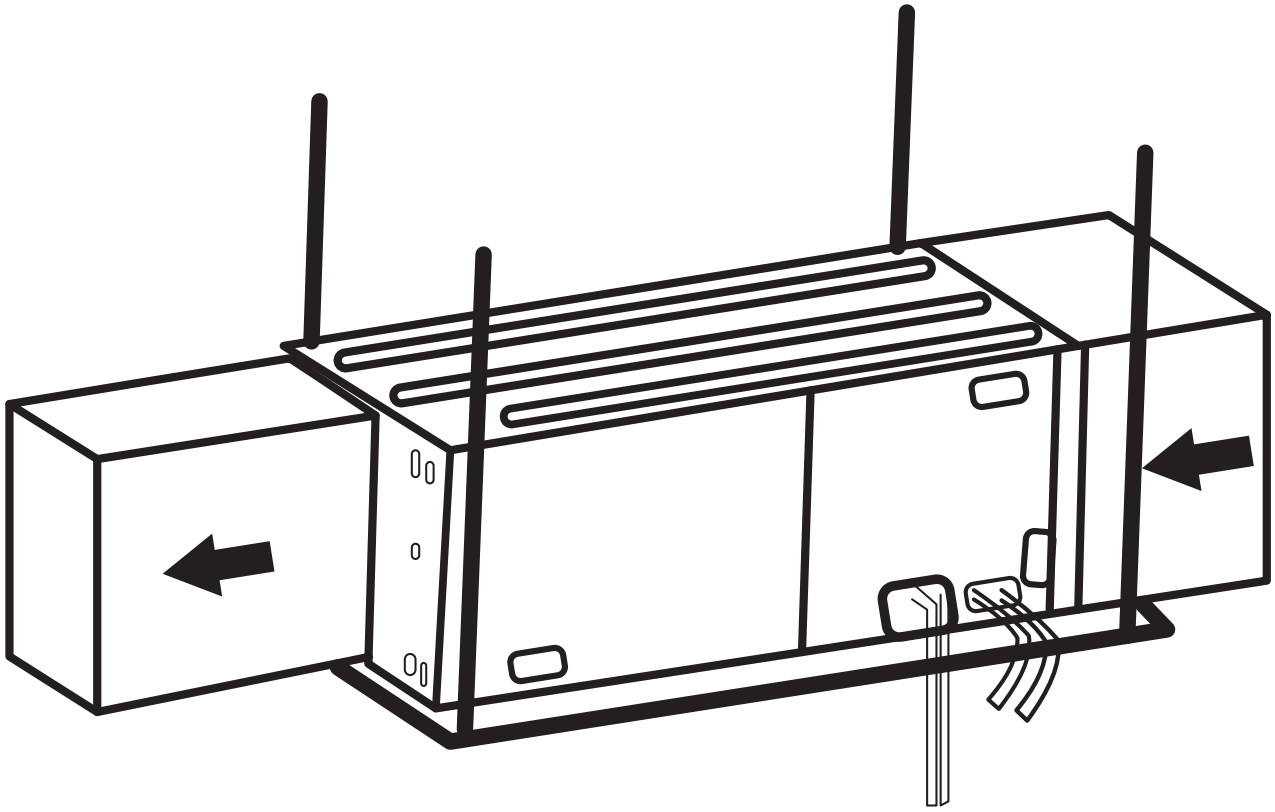
Included Accessories:

Part No	Part Name	Qty
1	Installation Manual	1
2	Plastic Cable Tie	5

INSTALLATION INSTRUCTIONS

Installation Space

- If air handler is installed in the upright position, the unit should be in a concealed area and not accessible to the general public or animals.
- If air handler is installed in the vertical position, make sure there is enough room around the unit for service and maintenance. The unit should be installed more than 8 feet/2500mm off the ground. The unit should be in a concealed area and not accessible to the general public or animals.



INSTALLATION INSTRUCTIONS

Installating the Unit

The unit may be installed in upflow, horizontal left flow, horizontal right flow, or downflow configurations. Sections 4.1 through 4.4 show how to install the unit in each configuration. The air handler should be mounted level in any configuration, not doing so may result in improper drainage. In the upflow and downflow configurations, the handler should be installed with the following service and combustible materials clearances:

SERVICE CLEARANCES (in)						
MODEL	UPFLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	24	19 ⅔			21 ⅜	34 5⁄7
MVAX042-048ME2AA1					24 1⁄7	38 1⁄6
MVAX054-060ME2AA1					25 ⅝	41 ⅔
MODEL	DOWNFLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	24	19 ⅔			34 5⁄7	21 ⅜
MVAX042-048ME2AA1					38 1⁄6	24 1⁄7
MVAX054-060ME2AA1					41 ⅔	25 ⅝
MODEL	HORIZONTAL RIGHT FLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	24	21 ⅜	34 5⁄7	19 ⅔	39	19 ⅔
MVAX042-048ME2AA1		24 1⁄7	38 1⁄6			
MVAX054-060ME2AA1		25 ⅝	41 ⅔			

COMBUSTIBLE CLEARANCES (in)						
MODEL	UPFLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	48	39 ⅜			42 7⁄9	69 4⁄9
MVAX042-048ME2AA1					48 1⁄3	76 1⁄3
MVAX054-060ME2AA1					51 1⁄4	83 1⁄3
MODEL	DOWNFLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	48	39 ⅜			69 4⁄9	42 7⁄9
MVAX042-048ME2AA1					76 1⁄3	48 1⁄3
MVAX054-060ME2AA1					83 1⁄3	51 1⁄4
MODEL	HORIZONTAL RIGHT FLOW					
	FRONT	LEFT	RIGHT	BEHIND	BELOW	ABOVE
MVAX009-036ME2AA1	48	42 7⁄9	69 4⁄9	39 ⅜	78 ¾	39 ⅜
MVAX042-048ME2AA1		48 1⁄3	76 1⁄3			
MVAX054-060ME2AA1		51 1⁄4	83 1⁄3			

INSTALLATION INSTRUCTIONS

Upflow (Vertical) Installation

- The air handler should be mounted securely to the floor, attached to a return plenum. The installer is responsible for ensuring the proper sizing and seal of ducts.

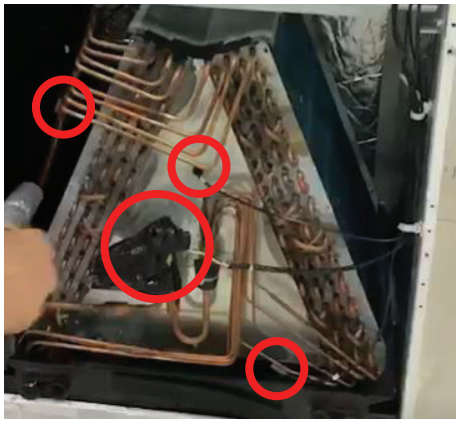
Horizontal Left Flow Installation

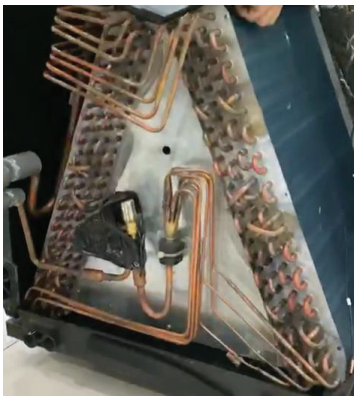
- The unit should be set up for left flow out of the factory. Open the front panel to confirm that the drain pan is on the left side of the coil, so that it is below the coil once the unit is rotated onto its left side.

Horizontal Right Flow Installation

- The drain pan needs to be moved from the left side of the coil to catch and drain condensate.

1. Detach TC1 and TC2 thermistors, ring temperature sensor, and thermostat from front of coil. The EEV coil, one thermistor, and the temperature sensor are on the front of the coil, and the second thermistor on the left side.



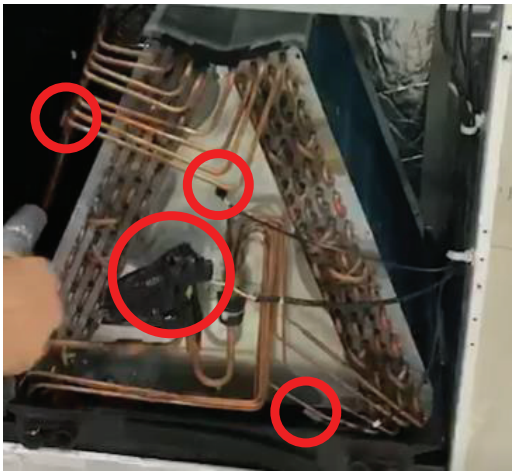


2. Slide coil assembly and both drain pans out of the air handler
3. Remove the drain pan from the left side of the coil. Move it to the right side, rotating it 180 degrees and resting it in the same way that it was previously placed on the left side.
4. Slide coil assembly back into the air handler and re-attach the thermistors and thermostat detached in step 1.

INSTALLATION INSTRUCTIONS

Downflow Installation

1. Detach TC1 and TC2 thermistors, ring temperature sensor, and thermostat from front of coil. The EEV coil, one thermistor, and the temperature sensor are on the front of the coil, and the second thermistor on the left side.



2. Slide coil assembly and both drain pans out of the air handler. The side water tray should be removed from the unit for downflow installations.

3. Rotate the coil onto its side to access the bottom opening.

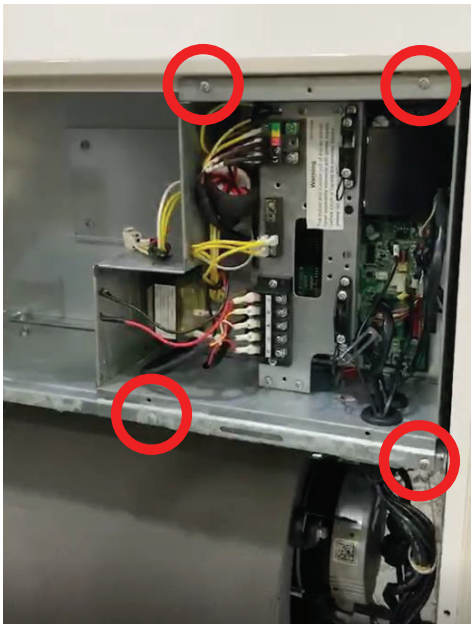
4. Install four foam gaskets, one on each inside corner of the coil assembly.


INSTALLATION INSTRUCTIONS

Downflow Installation

5. Screw metal side panels onto coil, one on each side.

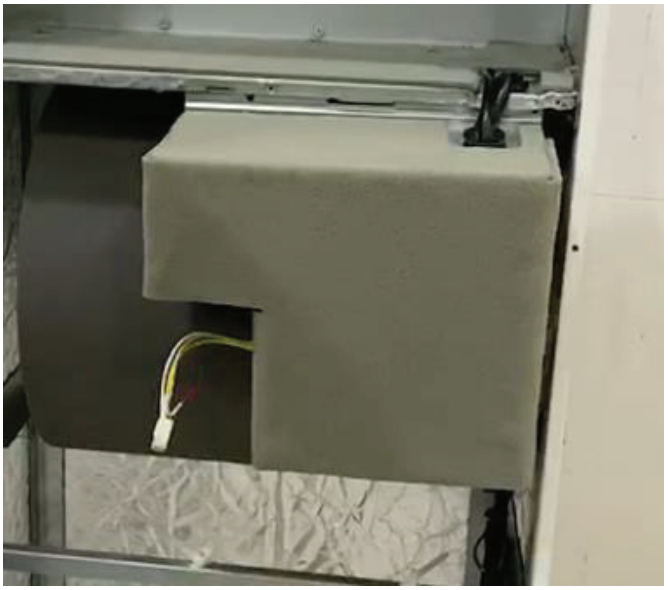
6. Unscrew internal electrical box. Loosen the black waterproof cable plug and adjust the harness to allow for more slack in the wires. This is required in order to take tension off the cables when the electrical box is moved in step 7.



INSTALLATION INSTRUCTIONS

Downflow Installation

7. Carefully hang electrical box by the metal edge. No tension should be on the wires. There is a lip on the back edge of the metal shelf that aligns with the slot at the bottom of the front of the electrical box.



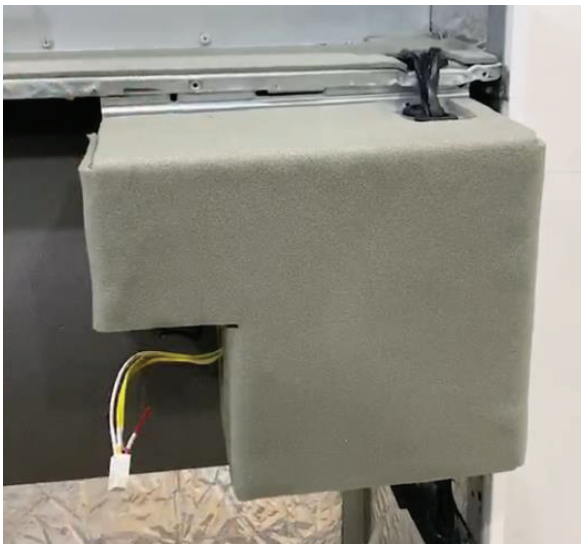
8. (Optional) If needed, install electric heater, following directions in the Electric Heather Installation Manual.

9. Install insulation on the surface directly below the electrical box and breakers.

INSTALLATION INSTRUCTIONS

Downflow Installation

10. Screw metal side panels onto coil, one on each side.



11. Unscrew internal electrical box. Loosen the black waterproof cable plug and adjust the harness to allow for more slack in the wires. This is required in order to take tension off the cables when the electrical box is moved in step 7.

12. Rotate the unit 180 degrees, so that the electrical components are on the bottom of the unit and the coil will be at the top.

INSTALLATION INSTRUCTIONS

Downflow Installation

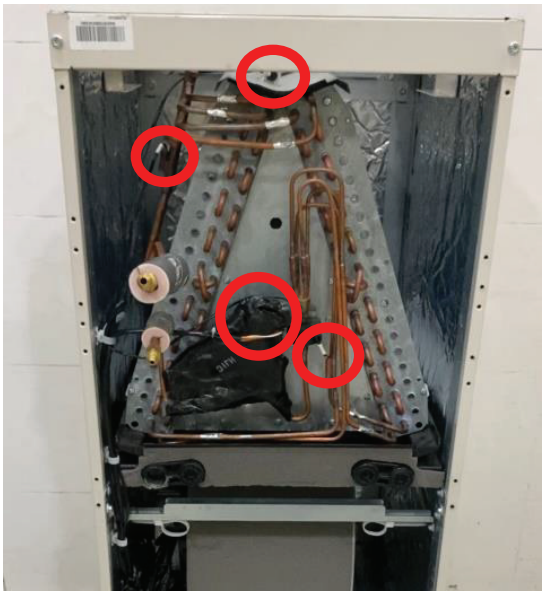
13. Undo white cable ties along the side of the unit to make room for coil reinstallation.

14. Slide the coil back into the unit along the side rails in the orientation shown below. Only include the bottom drain pan, the side drain pan should not be re-installed.

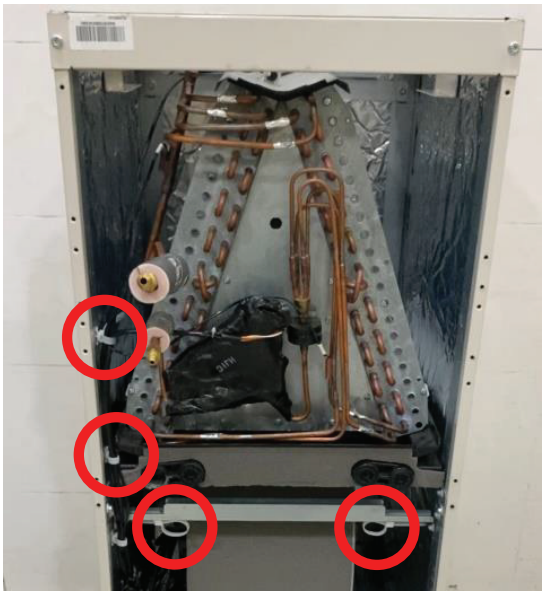
INSTALLATION INSTRUCTIONS

Downflow Installation

15. Re-insert the EEV coil and TC1/TC2 sensors in their original positions, as shown below. The ring temperature sensor should be inserted into the upper hole of the evaporator cover with a wire clamp. The hole in the front of the triangular plate (where the temperature sensor was originally located) may remain open and unblocked.



16. Manage TC1/TC2, ring temperature sensor, and EEV coil cables using the elastic straps fastened to the unit. Make sure to keep all cables outside of the drain pan.

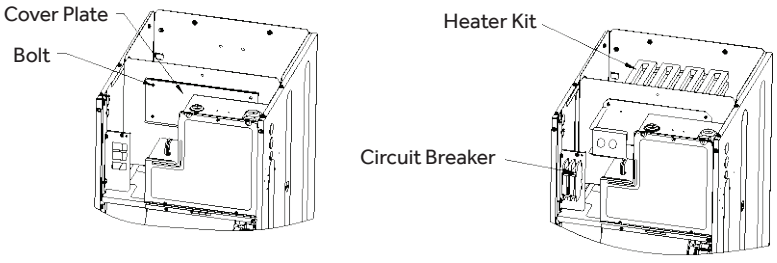


INSTALLATION INSTRUCTIONS

Electric Heater

The air handlers listed in this manual do not have a factory installed electric heater. An electric heat kit is available as an accessory. Please refer to installation instructions provided with heater kit for the correct installation procedure.

1. Ensure that all power supply is disconnected prior to installing the heater kit.
2. A means of strain relief and conductor protection must be provided at the supply wire entrance into cabinet.
3. Only use copper conductors.
4. Installation must follow national electric code and other applicable codes.
5. If this appliance is installed in an enclosed area such as a garage or utility room with any carbon monoxide producing appliance, ensure the area is properly ventilated to the outside.
6. A filter dryer is recommended for installation based on nominal tonnage.
   - Refer to the Table below for the appropriate optional heater kit.
   - Check for any physical damage; do not install damaged heater kit.
   - Remove the upper access panel from air handler.
   - Remove cover plate from air handler.
   - Slide the heater kit into the slot and secure element plate with previously removed screws.
   - Insert power leads into the circuit breaker lugs or stripped red and black wires (for heater kit without circuit breaker) and tighten.
   - Connect ground wire to ground lug.
   - Break out appropriate area of the plastic circuit breaker cover on the access panel of the air handler. Knock off the holes according to the actual installation number and circuit breaker positions. If a circuit breaker is not installed, do not knock off the holes; otherwise, electric shock may occur.
   - Replace access panel and check operation.
   - Connect power cords and thermostat wires.



The only heater kits that can be used are UAZEH series on the following page

Machine Model	Matched Heating Model
MVAX009ME2AA	UAZEH05A/08A/10A
MVAX012ME2AA	UAZEH05A/08A/10A
MVAX018ME2AA	UAZEH05A/08A/10A
MVAX024ME2AA	UAZEH05A/08A/10A
MVAX030ME2AA	UAZEH05A/08A/10A
MVAX036ME2AA	UAZEH05A/08A/10A
MVAX042ME2AA	UAZEH05A/08A/10A/15A/20A
MVAX048ME2AA	UAZEH05A/08A/10A/15A/20A
MVAX054ME2AA	UAZEH05A/08A/10A/15A/20A
MVAX060ME2AA	UAZEH05A/08A/10A/15A/20A

Electric Heater (cont)

Oudoor unit, central control and all indoor units are of parallel connection via two lines without polarity.

There are three ways of connecting the line control and indoor units:

A. One wired control to control multiple units, i.e. 2-3 indoor units, as shown in the above figure, (1-3 indoor units). The indoor unit 3 is the wire controlled main unit and others are the wired controlled subordinate units. The remote control and the main unit (directly connected to the indoor unit of wired control) are connected via three wires with polarity. Other indoor units and the main unit are connected via three lines with polarity. SW01 on the main unit of wired control is set to 0 while SW01 on other subordinate units of wired control are set to 1, 2 and so on in turn. (Please refer to the code setting A at page 15)

B. One wired control controls one indoor unit, as shown in the above figure (indoor unit 4-8). The indoor units and the wired control are connected via three lines with polarity.

C. Two wired controls control one indoor unit, as shown in the figure (indoor unit 9). Either of the wired controls can be set to be the main wired control while the other is set to be the auxiliary wired control. The main wired control and indoor units, and the main and auxiliary line controls are connected via three lines with polarity.

Note: For DC motor/low ESP duct type, the PCB comes with the terminal blocks. Please be sure to pay attention to do the wiring according to the labels. The power lines and signal lines go through the metal wire hole separately with the protective sleeve of the connecting line.

Wire gauge size and breaker size for total indoor amp draw. Current NEC guidelines and local codes will trump this chart.

Items Total Current of Indoor Units(A)	Cross Section AWG (mm^2)	Length in.(m)	Rated Current of Overflow Breaker (A)	Rated current of residual Circuit Breaker(A) Ground Fault Interrupter(mA) Response time(S)	Cross Sectional Area of Signal Line
<7	14(2.5)	65.6(20)	10	10 A,30 mA,0.1S or below	16 AWG (1.25mm^2)
≥7 and <11	12(4)	65.6(20)	15	15 A,30 mA,0.1S or below	
≥11and <16	10(6)	82(25)	20	20 A,30 mA,0.1S or below	
≥16 and <22	8(8)	98.4(30)	30	30 A,30 mA,0.1S or below	
≥22 and <27	6(10)	131(40)	30	30 A,30 mA,0.1S or below	

The electrical power line and signal line connections must be tight.

- Every indoor unit must have a ground connection.
- The power wire should be size up if it exceeds the permissible length.
- Shielding of the control wire of all the indoor and outdoor units should be connected together and grounded at one point.
- Signal lines should not exceed 3280ft (1000m)

INSTALLATION INSTRUCTIONS

Piping Permissible Length & Height Difference

- Please refer to the Haier MRV selection software.
- Additional Refrigerant Charge
- Add refrigerant according to the installation manual of outdoor unit. The addition of R410A refrigerant must be performed with a digital scale to ensure the specified amount is added. Not following this can potentially cause efficiency issues or compressor failure.

Pipe Sizing

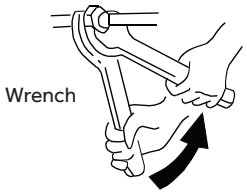
Please refer to the manual of the outdoor unit.

Model		MVAX009 - 012ME2AA	MVAX018 - 036ME2AA	MVAX042 - 048ME2AA	MVAX054 - 060ME2AA
Piping Size in (mm)	Gas pipe	Ø3/8"(Ø9.52)	Ø5/8"(Ø15.88)	Ø5/8"(Ø15.88)	Ø5/8"(Ø15.88)
	Liquid pipe	Ø1/4"(Ø6.35)	Ø3/8"(Ø9.52)	Ø3/8"(Ø9.52)	Ø3/8"(Ø9.52)
Piping Material	R-410a rated seamless copper tubing				

Connecting Procedures of Refrigerant Piping

Connect all the refrigerant tubes via flare connections.

- Dual wrenches must be used in the connection of indoor unit tubing.
- For tightening torque refer to the table.



Mounting Torque lb -in (N-m)	Flare Torque Spec ft-lb (N-m)
104.4 (11.8)	13 (18)
216.8 (24.5)	30 (40)
693.9 (78.4)	76 (103)

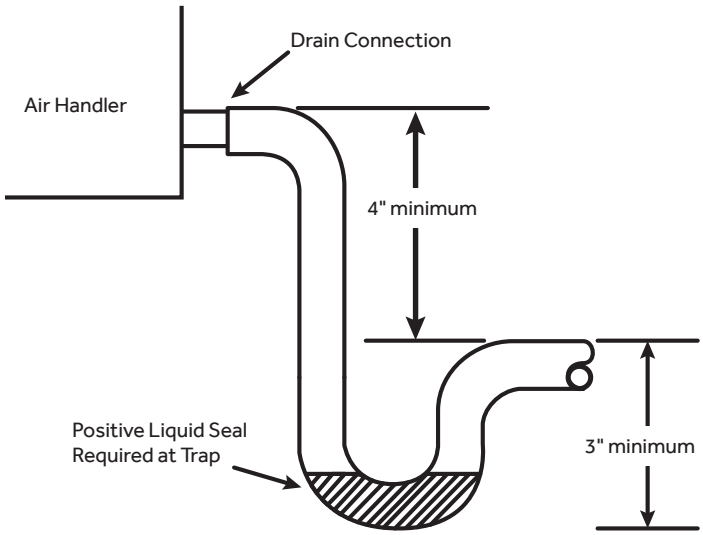
Cutting and Enlarging

- Cut the tube to the needed length
- Ream the cut to remove shoulder. Do this with the tube facing down to help fillings fall out.
- Add supplied flare nut to tube.
- Use 45° flare tool to create flare.

INSTALLATION INSTRUCTIONS

Condensate Removal

- The air handler uses ¾" NPT connections for drainage. Apply a plastic-approved thread sealant and tighten the adapter. DO NOT over-tighten the drain connection in order to prevent damage to the evaporator drain pan.
- The drain pan has primary and secondary drain connections. Condensate removal is performed by attaching a 3/4" PVC pipe to the evaporator coil pan and terminated in accordance with local or state Plumbing/HVAC codes.
- The installation must include a "P" style trap that is located closely to the evaporator coil. See the diagram below for details of a typical condensate line "P" trap.

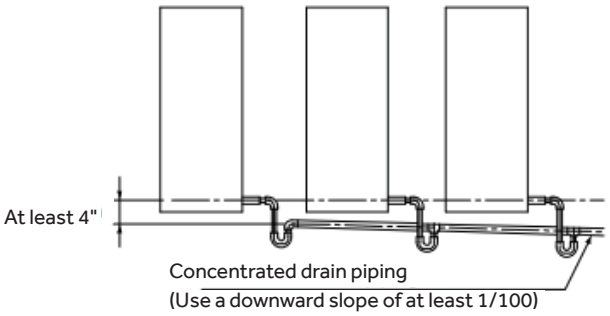


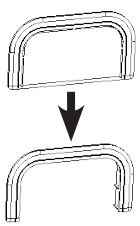
Routing Drainage:

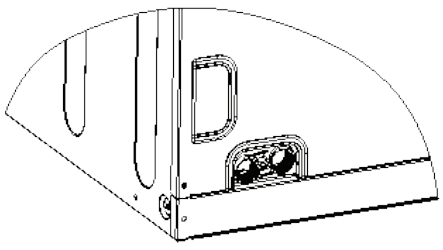
- The condensate drain pipe should be connected into a special drain system for the unit. Maintain the required service clearances required around the unit.
- DO NOT connect the condensate drain pipe into the waste pipe or other pipelines that are likely to produce corrosive or peculiar smells. This will prevent odors from entering indoors or corrupting the unit.
- DO NOT connect the condensate drain pipe into the rain pipe. This will prevent rain water from pouring in and causing property loss or personal injury.

Connecting the drain lines:

- Connect drain pipes to the high and low drainage holes at the same time to prevent blockage of the low drainage holes.
- The secondary (higher) drain line should be run such that the occupants will notice if it is draining through the secondary drain, indicating a blockage in the primary drain.
- DO NOT install horizontal drain lines. The slope should be confirmed by the installation conditions, and the installer should ensure water is drained away smoothly. It is recommended to maintain a slope of at least 1/100, or approximately 1/8" per foot.
- The appropriate drain hole covers should be knocked out of the front panel to access the drain connections. Use these covers to block drain openings that are not in use to prevent air loss and a reduction in heating/cooling capacity.







ELECTRICAL WIRING

⚠WARNING

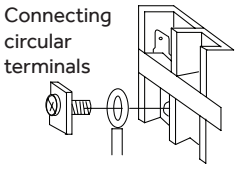
- Follow local codes when selecting wire gauge and connecting to building power.
- Use the cable strain relief clips and locking conduit clamps to prevent wires from being pulled off terminal posts.
- Unit must be properly grounded. Do not use water or gas piping, phone ground or lightning rod.

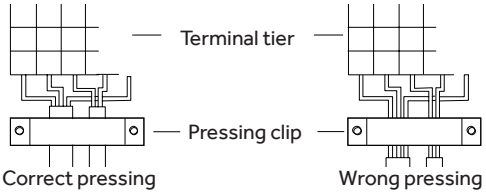
⚠CAUTION

- Use only a properly sized circuit breaker. Use only properly sized copper conductors or electric shock could occur.
- Unit requires 208/230VAC - 2 conductor wires and a ground. No neutral.
- All indoor units should be wired to the same breaker to prevent some of the units from being powered off while others are energized.
- Controller wiring and refrigerant tubing can be arranged and ran together.
- Disconnect power from both outdoor and indoor units prior to servicing any component in the system

Wire Connections

1. **Connecting ring terminals:**
   The method of using circular terminal is shown in the figure. Take off the screw, connect it to the terminal after placing it through the ring at the end of the lead and tighten it down.
2. **Connecting using straight terminals:**
   The method of using straight terminals is shown as follows: loosen the screw before putting the wire into the terminal block, tighten the screw and confirm it has been tightened by pulling the line gently.
3. **Clamp the wires:**
   Secure the wires with the strain relief clips.



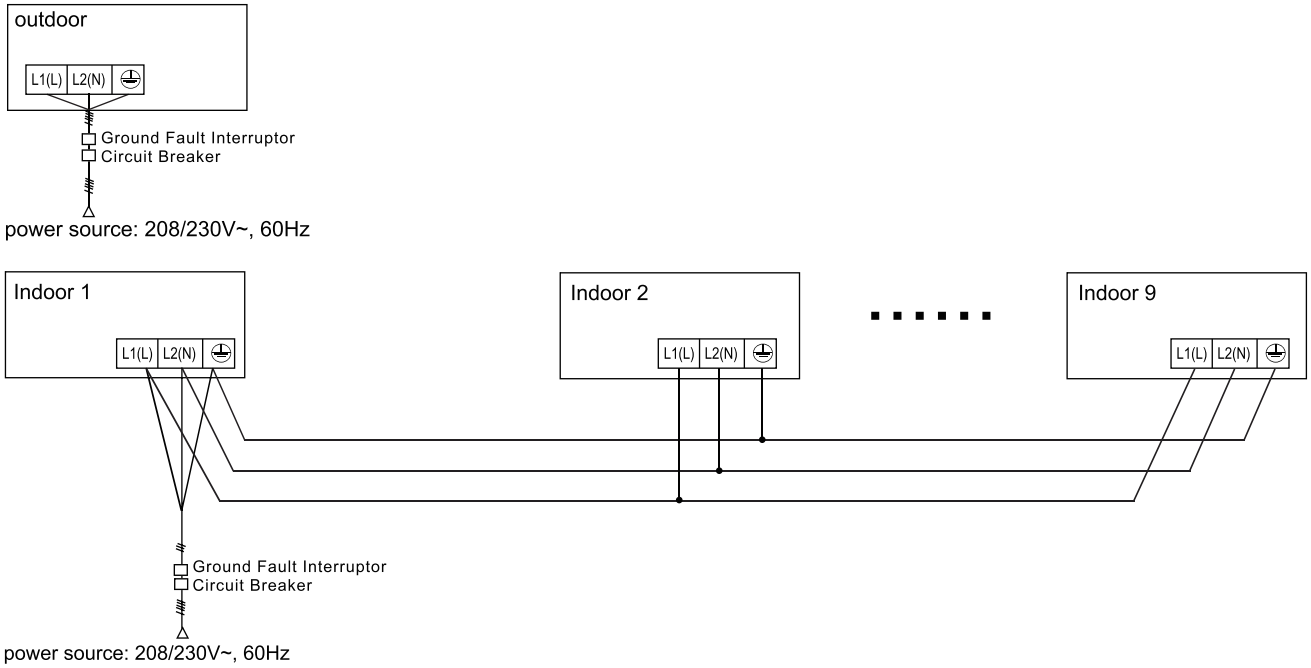


Power Wiring

- Indoor units and outdoor units should be connected to separate power breakers
- Indoor units must share one single electrical breaker. Circuit breaker specifications should be calculated. It is recommended to have both indoor & outdoor units connected to GFCI and surge devices.

ELECTRICAL WIRING

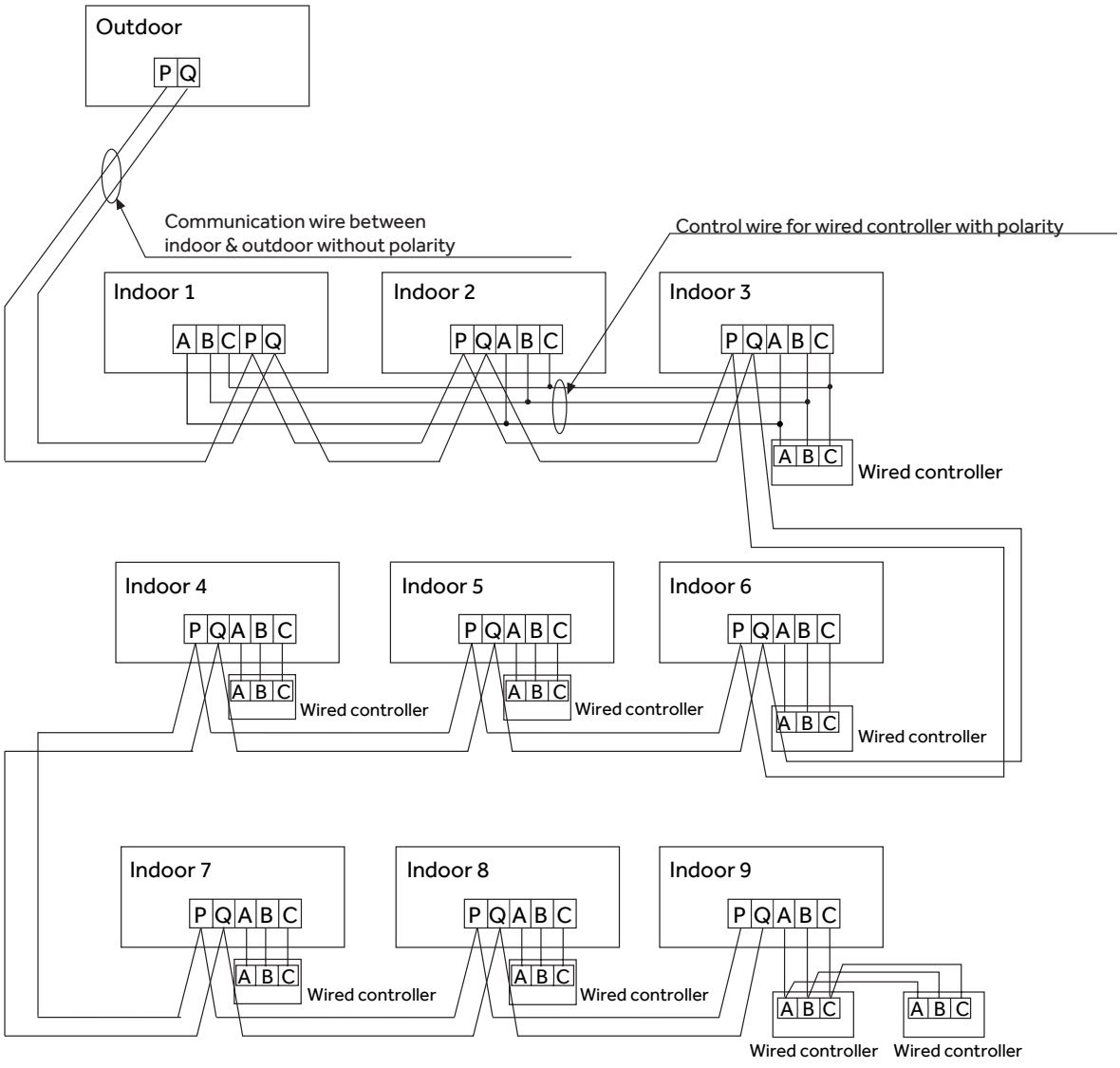
Power Wiring



- Indoor units and outdoor units should be connected to separate power breakers
- Indoor units must share one single electrical breaker. Circuit breaker specifications should be calculated. It is recommended to have both indoor & outdoor units connected to GFCI and surge devices.

CONTROL WIRING

Control Wire Drawing



Wired Controller ABC Chart

Length of Controller Wire ft (m)	Wiring Dimensions AWG (mm2)
≤820(250)	18(0.75) x 3 core shielding line

- The shielding layer of the controller wire must be grounded at the outdoor unit chassis ground.
- The total length of the controller wire shall not be more than 820ft(250m)

DIP SWITCH SETTING

The dip switch is set to the "On" position if "1" is indicated in the table. The dip switch is set to the "Off" position if "0" is indicated in the table.

- Dip switches set in the factory to on are marked with red.

Definition principles of code switches:

(A) Definition of SW03:

- SW03_1-4 is used to set indoor address when grouping multiple indoor units connected to single wired controller YR-E16B or QACT17A.
- SW03_5-8 set capacity of the indoor unit (factory set). Must only set when replacing board.

SW03_1 SW03_2 SW03_3 SW03_4	Address of wire controlled indoor unit (group address)	[1]	[2]	[3]	[4]	Address of wire controlled indoor unit (group address)
SW03_1 SW03_2 SW03_3 SW03_4	Address of wire controlled indoor unit (group address)	0	0	0	0	0# (wire controlled main unit) (default)
		0	0	0	1	1# (wire controlled subordinate unit)
		0	0	1	0	2# (wire controlled subordinate unit)
		0	0	1	1	3# (wire controlled subordinate unit)
		...	...	...	...	.....
		1	1	1	1	15# (wire controlled subordinate unit)
SW03_5 SW03_6 SW03_7 SW03_8	Capability of indoor unit	[5]	[6]	[7]	[8]	Capability of indoor unit
		0	0	1	0	9000BTU
		0	0	1	1	12000BTU
		0	1	1	0	18000BTU
		0	1	1	1	24000BTU
		1	0	0	1	30000BTU
		1	0	1	0	36000BTU
		1	0	1	1	42/48000BTU (The default speed is for 48000BTU unit, speed for 42000BTU unit should be selected by SW01-1)
		1	1	0	0	54/60000BTU (The default speed is for 60000BTU unit, speed for 54000BTU unit should be selected by SW01-1)

DIP SWITCH SETTING

(B) Definition and description of SW02

- SW02_1-8 is used to set indoor unit address on system. Set address only if using central controller YCZ-A004 and HC-LA1CDBT. Leave default if no central controller is used.

SW02_1	Adress setting mode	[1]	Address setting mode							
		[0]	Automatic setting (default)							
		[1]	Code-set address							
SW02_2 ~ SW02_8	Code-set indoor unit address and centralized controller address	[2]	[3]	[4]	[5]	[6]	[7]	[8]	Address of indoor unit	Address of centralized controller
		0	0	0	0	0	0	0	0# (Default)	0# (Default)
		0	0	0	0	0	0	1	1#	1#
		0	0	0	0	0	1	0	2#	2#
		...	...	...	...	...	...	...	...	...
		0	1	1	1	1	1	1	63#	63#
		1	0	0	0	0	0	0	0#	64#
		1	0	0	0	0	0	1	1#	65#
		1	0	0	0	0	1	0	2#	66#
		...	...	...	...	...	...	...	...	...
		1	1	1	1	1	1	1	63#	127#

Note:

- Set the address by code when connecting the centralized controller or gateway or charge system.
- Address of centralized controller=communication address + 0 or + 64.
- SW02_ 2=OFF, address of centralized controller = communication address + 0 =c ommunication address
- SW02_ 2=ON, address of centralized controller = communication address + 64 (applies when centralized controller is used and there are more than 64 indoor units)

(C) Definition and description of SW01

SW01_1	Model selection	0		Reserved
		1		Model selection 42K/54K
SW01_2	Has filter or not	0		Filter reminder cancelled (Default)
		1		Filter reminder (EE: time 750h)
SW01_3 ~ SW01_4	Electric heating parameter setting	[3][4]		ΔT and ΔTp
		0	0	Default value EE group 1: ΔT=2F and ΔTp=10min
		0	1	Group 2: EE ΔT=3F and ΔTp=15min
		1	0	Group 3: EE ΔT=4F and ΔTp=20min
		1	1	Reserved

DIP SWITCH SETTING

Dip Switch Setting of YR-E16B and QACT17A Wired Controller
Function switches

DIP Switch	ON/OFF Station	Function	Default Setting
Sw1	On	Subordinate wired controller	Off
Off	Main wired controller		
Sw2	On	Ambient temp. display on	Off
Off	Ambient temp. display off		
Sw3	On	Collect ambient temp. from PCB of indoor	Off
Off	Collect ambient Temp. from wired controller		
Sw4	On	Non-volatile memory invalid	Off
Off	Non-volatile memory valid		
Sw5	On	Old protocol	Off
Off	Self adaption		
Sw6	On	reserved	Off
Off	reserved		
Sw7	On	Model with Up/Down and Left/Right swing	Off
Off	Model with Up/Down swing		
Sw8	On	Fresh Air unit	Off
Off	General unit		

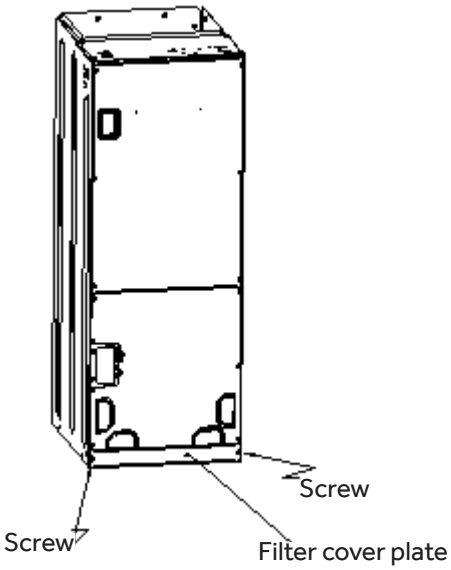
For other wired remote controller settings, please refer to controller manual.
The difference between main and subordinate wired controller

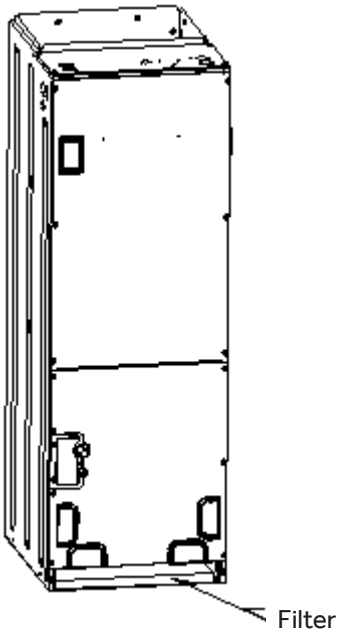
Comparison item	Main wired controller	Subordinate wired controller
Function	All function	ON/OFF, Mode, Fan speed, Temp, Setting, Swing, Energy saving, Clock function, Mode Setting, Screen Saving and Child lock are available.
		Cancel the filter cleaning icon.
		Look up the detailed parameter and malfunction code.

MAINTENANCE

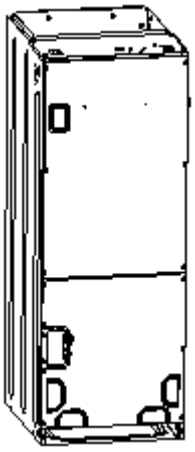
Attention:

- Repair can only be performed by qualified service technicians.
- All power should be turned off before servicing equipment. Only after switching off the power supply can the operator clean the air conditioner otherwise there is a risk of electric shock or injury.
- Make sure to use a stable platform while cleaning or servicing the equipment. Do not flush the equipment with water or electric shock may occur.

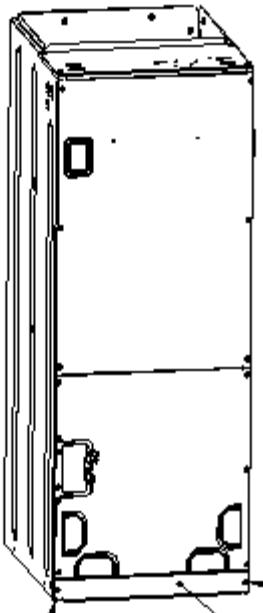




Put in the filter



Remove the filter cover plate



Replace the filter cover plate

TROUBLESHOOTING

Please check the following when consigning repair service:

	Symptoms	Reasons
All of these are not problems.	Running water noise	Water running sound can be heard during starting operation, during operation or immediately after stopping. The running water sound may become louder 2-3 minutes after the unit starts. The sound is refrigerant circulating inside the system.
	Cracking sound	During operation, the air conditioner may make a crackling sound. This is caused from the temperature changes of the heat exchanger.
	Unpleasant odor in outlet air	The terrible smell may be caused from organic materials from walls, carpeting, furniture, cigarette smoke and cosmetics that collect on the outside of the refrigerant coil.
	Flashing operating indicator	When switching it on again after power failure, turning on the manual power switch will show the operating indicator flashes.
	Waiting indicator	Displayed when the control is set it to the cooing or heating mode and the current mode of operation is opposite to the requested setting.
	Idle indoor unit still has sound of refrigerant flowing and radiating temperatures	Some refrigerant flow is allowed to pass through idle indoor units to prevent oil and refrigerant from blocking the metering valve. This flow may result in some radiating temperature and noise.
	Clicking sound when unit comes on	The sound is made due to the expansion valve resetting when the unit is powered on
Please make another ckeck. Check if there is a power failure.	Start or Stop working automatically	Check to see if the system operation is being controlled by the timer function. Timer - **ON** and Timer - **OFF**
	Failure to work	Check if there is a power failure. Check if the power supply fuse or breaker are open. Check if the unit is displaying any faults. Check if wait symbol is displayed. This is due to other indoor units connected to the same outdoor unit that are running in the opposite mode. System can heat and cool simultaneously under heat recovery mode.
	Poor cooling & heating effects	Check if outdoor fan intake or outlet grilles are blocked. Check if doors and windows are open. Check if the air filter is blocked with debris or dust. Check if the fan setting is too low. Check if the system mode is set to **FAN** mode. Check if the temperature is set correctly.

Under the following circumstances, immediately stop the operation, disconnect the manual supply switch and contact the after-service personnel.

- When control buttons are inoperable
- When circuit breakers trip repeatedly
- When the outdoor unit is blocked with ice or foreign objects.
- When the system fails to restart after power reset.
- When system operates abnormally

TEST RUN AND FAULT CODE

Before RUN TEST

- Connect unit to the power supply of the outdoor units to energize the heater of the compressor. Power the system on for 12 hours prior to start up to protect the compressor.
- Check if the connections of the drainpipe and wire connection lines are correct.
- Run the drain line below the outlet of the unit. Insulate the condensate drain piping to prevent condensation. Install drain piping with proper slope away from the indoor units.
- Checkup of Installation
- Check if the main voltage is correct
- Check for any leaks at the piping joints
- Check if the connection of the main power for the indoor & outdoor units are correct
- Check if the serial numbers of the terminals are matched properly
- Check if the installation place meets the requirement
- Check if there is too much noise
- Check if the connecting line is fastened
- Check if the refrigerant and condensation lines are insulated
- Check if the water is drained to the outside
- Check if the indoor units are positioned

RUN TEST

- Equipment installers should test-run all equipment. Test procedures are listed in the installation manual. Take the testing procedures according to the manual and check if the temperature regulator works properly.
- When the machine fails to start due to the room temperature, the following procedures can be taken to do the compulsive running. The function is not provided for the type with remote control.
- Set the YR-E16B and QACT17A wired controller to cooling/heating mode, press "ON/OFF" button for 10 seconds to enter into the compulsive cooling/heating mode. Press "ON/OFF" button again to quit the compulsive running and stop the operation of the system.

Fault Remedies

- When any fault appears, consult the fault code of line control or the number of LED flashes on the control panel of the indoor units/health lamp of receiving window of remote control. Refer to the below table lookup fault descriptions.

TEST RUN AND FAULT CODE

INDOOR UNIT FAULTS

Failure Code at Wired Controller	PCB LED5 (indoor Units) / Receiver Timer Lamp (Remote Controller)	Fault Descriptions
01	1	Fault of indoor unit ambient temp. sensor TA
02	2	Fault of indoor unit pipe temp. sensor TC1
03	3	Fault of indoor unit pipe temp. sensor TC2
04	4	Fault of indoor unit dual heat source temp. sensor
05	5	Fault of indoor unit EEPROM
06	6	Fault of communication between indoor & outdoor units
07	7	Fault of communication between indoor unit and wired control
08	8	Fault of indoor unit water drainage
09	9	Fault of duplicate indoor unit address
0A	10	Reserve
0C	12	Fault of zero crossing
0E	14	Fault of DC fan
Outdoor unit code	20	Corresponding faults of outdoor units

NOTES

LIMITED WARRANTY

Staple your receipt here. Proof of the original purchase date is needed to obtain service under the warranty.

Models: MVHP*, MVHR*, MVAB*, MVAL*, MVAM*, MVAW*, MVAD*, VP1*, VP4*

For The Period Of:	Haier Will Replace:
10 year limited parts warranty From the date of the original installation date	This limited warranty cover all defects in workmanship or material for the mechanical and electrical parts contained in the Product("Defective Parts") for a period of 10 years from the date of original installation. Haier will provide new or refurbished parts, or a replacement for all or part of the unit, at its sole discretion, to your licensed HVAC technician installer. This warranty also covers all defects in workmanship or material for the unit controller for a period of 1 year. The remote controller is covered by 1-year accessory warranty. Haier will provide new or refurbished controller, at its sole discretion.
10 year compressor warranty from the date of original installation	The compressor contained in this product is warrantied for a period of 10 years from the Date of Purchase. Haier will provide a new or refurbished compressor, or a replacement for all or part of the unit, at its sole discretion, to your licensed HVAC technician installer.

EXCLUDED COMPONENTS

The following components are not covered by this warranty: cabinets, cabinet pieces, air filters, driers, refrigerant, refrigerant line sets, belts, wiring, fuses, oil nozzles, unit accessories and any parts not affecting unit operation.

WHAT IS THE DATE OF ORIGINAL INSTALLATION

The “date of original installation” is the date that the unit is originally commissioned by the certified Haier technician or installers and all product start- up procedures have been properly completed and verified by the installers’s invoice. If the installtion date cannot be verified, then the Date of Original Installation will be sixty days after the manufacturer date, as determined by the Product’s serial number.

WHAT IS THE DATE OF PURCHASE

The “Date of Purchase” is the date that the original installation is complete and all product start-up procedures have been properly completed and verified by the installer’s invoice. If the installation date cannot be verified, then the Date of Purchase will be sixty (60) days after the manufacture date, as determined by the Product’s serial number. You should keep and be able to provide your original sales receipt from the installer as proof of the Date of Purchase. In new construction, the Date of Purchase will be the date the owner purchased the residence from the builder.

WHO’S QUALIFIED FOR 10 YEAR WARRANTY

10 Year parts and compressor warranty will be qualified if the following conditions are met. Otherwise, the unit will be covered for 1 year Parts/Compressor warranty.

- Complete the installation and commissioning per Haier’s instructions.
- All pipe-work including brazing was performed per Haier’s instructions.
- Correct refrigerant charge was weighed and calculated at the time of commissioning.

The warranty will not be continued if the equipment is removed from the original installation site.

HOW CAN YOU GET SERVICE

Contact your licensed HVAC technician installer. All installation and service must be performed by a licensed HVAC technician. Failure to use a licensed HVAC technician for installation of this Product voids all warranty on this Product.

LIMITED WARRANTY

THIS WARRANTY DOES NOT COVER

- Damage from improper installation.
- Damage in shipping.
- Defects other than from manufacturing (i.e., workmanship or materials).
- Damage from misuse, abuse, accident, alteration, lack of proper care and/or regular maintenance, or incorrect electrical voltage or current.
- Damage resulting from floods, fires, wind, lightning, accidents or similar conditions.
- Damage from installation or other services performed by other than a licensed HVAC technician.
- Labor and related services for repair or installation of the Product.
- A Product purchased from an online retailer.
- Damage as a result of subjecting Product to an atmosphere with corrosives or high levels of particulates (such as soot, aerosols, fumes, grease).
- A Product sold and/or installed outside of the 50 United States, the District of Columbia, or Canada.
- Batteries for the controller and other accessories provided with the Product for installation (e.g., plastic hose).
- Normal maintenance, such as cleaning of coils, cleaning filters, and lubrication.
- For Product installed in non-owner occupied applications, Product that has not been maintained annually by a licensed HVAC technician (proof required).

10 YEAR STANDARD REGISTERED LIMITED WARRANTY

All "Indoor and Outdoor Products," identified in Attachment 1, registered by the installer or the Original Owner within 60 days of the Date of Purchase shall receive a Standard Registered Limited Warranty, which shall be identical to the Standard Base Warranty, except that the Limited Parts Warranty shall be for a term of 10 Years and the Limited Compressor Warranty shall be for a term of 10 years. All Product not registered within 60 days of the Date of Purchase shall be subject to the Standard Base Warranty. Some states and provinces do not allow warranty terms to be subject to registration; in those states and provinces the longer terms for Limited Parts Warranty and the Limited Compressor Warranty apply.

THIS LIMITED WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy provided in this warranty is exclusive and is granted in lieu of all other remedies. This warranty does not cover incidental or consequential damages. Some states and provinces do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you. Some states and provinces do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary by state and province. This warranty covers units within the 50 United States, the District of Columbia and Canada. This warranty it provided by GE Appliances *a* Haier *company*, Louisville, KY 40225.

ATTACHMENT 1

The "Product" is defined as Haier brand Ductless Split Units. The "Product" contains 2 sub-categories of goods: "Indoor and Outdoor Products" and "Selected Installation Products," which are further defined below: "Indoor and Outdoor Products" can further be identified by the following model number descriptions: 1U*, 2U*, 3U*, 4U*, AB*, AD*, AL*, AM*, AW*, AF*, MVA* MVH* "Selected Installation Products," identified by the following model number descriptions: PB-* FQG-*, AH1-*, MS1-* and MS3-*