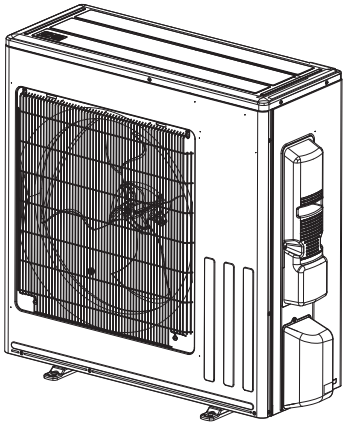
Installer's Guide

Variable Speed Side Discharge
HP 2-3 Ton R454B

5HPL6024A1000A
5HPL6036A1000A



Note: *"Graphics in this document are for representation only. Actual model may differ in appearance."*

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

October 2025 **DLR-SVN002A-EN**

Contents

1. The following should always be observed for safety

MEANINGS OF SYMBOLS DISPLAYED ON INDOOR UNIT AND/OR OUTDOOR UNIT

 Refrigerant safety Group A2L	**WARNING** (Risk of fire)	This unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OPERATING INSTRUCTIONS carefully before operation.	
	Service personnel are required to carefully read the OPERATION MANUAL and INSTALLATION MANUAL before operation.	
	Further information is available in the OPERATING INSTRUCTIONS, INSTALLATION MANUAL, and the like.	

- **Please provide an exclusive circuit for the air conditioner and do not connect other electrical appliances to it.**
- **Be sure to read "The following should always be observed for safety" before installing the air conditioner.**
- **Be sure to observe the cautions specified here as they include important items related to safety.**
- **The indications and meanings are as follows.**

⚠ **Warning:**
Could lead to death or serious injury.

⚠ **Caution:**
Could lead to serious injury when operated incorrectly.
- **After reading this manual, be sure to keep it together with the instruction manual in a handy place on the customer's site.**

⏚ : Indicates a part which must be grounded.

⚠ **Warning:**
Carefully read the labels affixed to the main unit.

⚠ **Warning:**

■ **Do not install the unit by yourself (user).**
Improper or incomplete installation could cause fire, electric shock, injury due to the unit falling, or water leakage. Consult a qualified installer or the dealer from whom you purchased the unit.

■ **Follow the instructions detailed in the installation manual.**
Incomplete installation could cause fire or electric shock, injury due to the unit falling, or leakage of water.

■ **Install the unit securely in a place that can bear the weight of the unit.**
If the installation location cannot bear the weight of the unit, the unit could fall causing injury.

■ **Perform electrical work according to the installation manual and be sure to use an exclusive circuit. Do not connect other electrical appliances to the circuit.**
If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.

■ **Ground the unit correctly.**
Do not connect the ground wire to a gas pipe, water pipe, lightning rod or telephone ground. Defective grounding could cause electric shock.

■ **Do not damage the wires.**
Damaged wires could cause fire.

■ **Be sure to shut off the main power when setting up the indoor P.C. board or wiring.**
Failure to do so could cause electric shock.

■ **Use the specified wires to securely connect the indoor and outdoor units. Attach the wires firmly to avoid applying stress to the terminal block.**
Improper connection could cause fire.

■ **Do not install the unit in a place where flammable gas may leak.**
If gas leaks and accumulates around the unit, it could cause an explosion.

■ **Do not use intermediate connection of the power cord or the extension cord. Do not connect many devices to one AC outlet.**
It could cause a fire or an electric shock.

■ **Use the parts provided or specified parts for the installation work.**
The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.

■ **Securely attach the electrical cover to the indoor unit and the service panel to the outdoor unit.**
If the electrical cover of the indoor unit and/or the service panel of the outdoor unit are not attached securely, dust, water, etc. could collect in the unit and could cause a fire or an electric shock.

■ **When installing or relocating the unit, make sure that no substance other than the specified refrigerant (R454B) enters the refrigerant circuit.**
Any foreign substances in the refrigerant circuit can cause abnormal pressure rise or an explosion.

■ **Do not discharge the refrigerant into the atmosphere. Check that the refrigerant gas does not leak after installation has been completed. If refrigerant leaks during installation, ventilate the room.**
If refrigerant comes in contact with a fire, harmful gas could be generated.
If refrigerant gas leaks indoors, and comes into contact with the flame of a fan heater, space heater, stove, etc., harmful gases will be generated.

■ **Use appropriate tools and piping materials for installation.**
The pressure of R454B is 1.6 times higher than R22. Not using the appropriate tools and materials, or improper installation could cause the pipes to burst causing an injury.

■ **When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.**
If the refrigerant pipes are disconnected while the compressor is running and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high, causing the pipes to burst.

■ **When installing the unit, securely connect the refrigerant pipes before starting the compressor.**
If the compressor is started before the refrigerant pipes are connected and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high, causing the pipes to burst.

■ **Fasten a flare nut with a torque wrench as specified in this manual.**
If fastened too tight, a flare nut could break and cause refrigerant leakage.

■ **Install the unit according to national wiring regulations.**

■ **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.**

■ **When opening or closing the valve below freezing temperatures, refrigerant may spurt out from the gap between the valve stem and the valve body, resulting in injuries.**

■ **When using a gas burner or other flame-producing equipment, completely remove all of the refrigerant from the air conditioner and ensure that the area is well-ventilated.**
If the refrigerant leaks and comes in contact in fire or heating part, it will create harmful gas and there is risk of fire.

■ **Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.**

■ **The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).**

■ **Do not pierce or burn.**

■ **Be aware that refrigerants may not contain an odour.**

■ **Pipe-work shall be protected from physical damage and be in compliance with national and local codes and standards.**

■ **The installation of pipe-work shall be kept to a minimum.**

■ **Do not remove RED MARKING near the pipe connection part.**

■ **All field joints shall be accessible for inspection prior to being covered or enclosed.**

■ **P65 WARNING! - This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov**

■ **RISK OF FIRE! - Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing. Dispose of property in accordance with federal or local regulations. Flammable refergerant used.**

1. The following should always be observed for safety

⚠ **Caution:**

- **Please follow applicable federal, state, or local codes to prevent potential leakage/electric shock. Or install a ground fault interrupt for the prevention of leakage and electric shock.**
- **Perform the drainage/piping work securely according to the installation manual.**
  If there is defect in the drainage/piping work, water could drip from the unit, and damage household items.
- **Depending on the installation area, install a Ground Fault Interrupt (GFI) circuit breaker.**
  If the Ground Fault Interrupt (GFI) circuit breaker is not installed, an electric shock could occur.
- **Please wear protective equipment when you touch the base of the outdoor unit.**
  It could cause injury if you do not wear the protective equipment.
- **Do not touch the air inlet or the aluminum fins of the outdoor unit.**
  This could cause injury.
- **Do not install the outdoor unit where small animals may live.**
  If small animals enter the unit and damage its electrical parts, it could cause a malfunction, smoke emission, or fire. Keep the area around the unit clean.

2. Selecting the installation location

2.1. Outdoor unit

- Where it is not overly exposed to strong winds. If the outdoor unit with defrosting function is exposed to a wind, the defrosting time will be longer.
- Where airflow is good and dustless.
- Where neighbors are not annoyed by operation sound or hot air.
- Where rigid wall or support is available to prevent the increase of operation sound or vibration.
- Where there is no risk of combustible gas leakage.
- If installing the unit in a location high above the ground, be sure to secure the unit legs.
- Where it is at least 10 ft. (3 m) away from the antenna of TV set or radio. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
- Install the unit horizontally.
- Please install it in an area not affected by snowfall or blowing snow. In areas with heavy snow, please install a canopy, a pedestal and/or baffle boards.

Note:

- It is advisable to make a piping loop near outdoor unit so as to reduce vibration.
- For increased efficiency, install the outdoor unit in a location where continuous direct sunlight or excessive water can be avoided as much as possible.

⚠ **Warning:**

Do not install the unit in an enclosed area in order to prevent the refrigerant from accumulating when it leaks.

⚠ **Caution:**

When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.

- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall and a baffle board on the air outlet side.

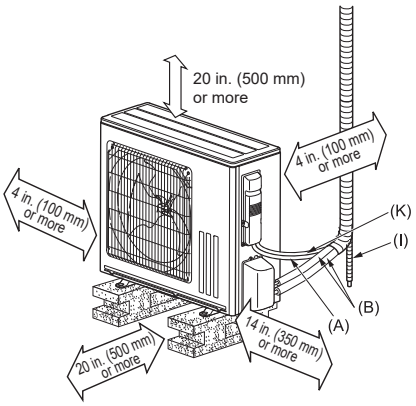
Avoid the following places for installation where air conditioner trouble is liable to occur.

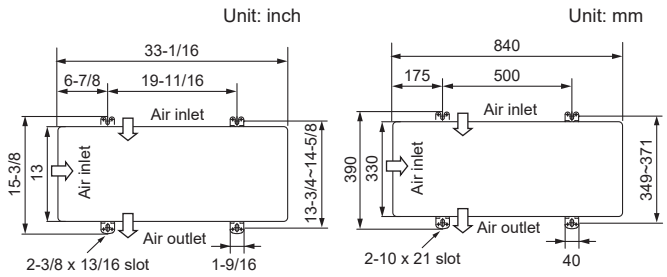
- Where flammable gas could leak
- Where there is an excessive amount of machine oil in the air.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Salty places such as the seaside.
- Where sulfide gas is generated such as a hot spring.
- Where there is high-frequency or wireless equipment.
- Where there is emission of high levels of VOCs, including phthalate compounds, formaldehyde, etc., which may cause chemical cracking.

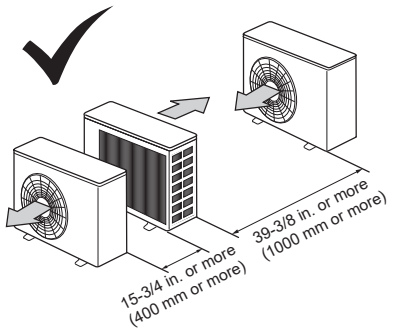
The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

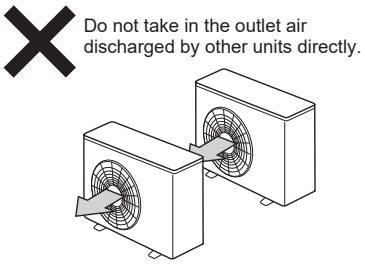
3. Installation diagram

5HPL6024A1000AA, 5HPL6036A1000AA









Note:
- The dimensions indicated in the arrows (⇔) above show the required space to guarantee performance of the air conditioner. Install the outdoor unit where the maximum possible space can be provided, considering later relocation, services, or repairs.
- The cooling/heating performance and the efficiency of power usage may fall about 10% at the place where short cycle is likely occur due to poor ventilation. Installing the air outlet guide (optional) can improve performances.
- If air from the outlet blows against the wall, it may cause stains on the wall.

When the piping is to be attached to a wall containing metals (tin plated) or metal netting, use a chemically treated wooden piece 25/32 in. (20 mm) or thicker between the wall and the piping or wrap 7 to 8 turns of insulation vinyl tape around the piping.

Units should be installed by licensed contractor accordingly to local code requirement.

Note:
When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.
- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall.
- To prevent exposure to wind, it is recommended to install a baffle board on the air outlet side of the outdoor unit.

Drain piping for outdoor unit
Install the unit horizontally.
Do not use drain socket in cold regions. Drain may freeze and make the fan stop.
The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

4. Refrigerant piping work

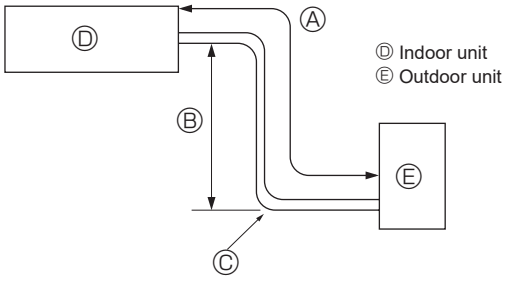


Fig. 4-1

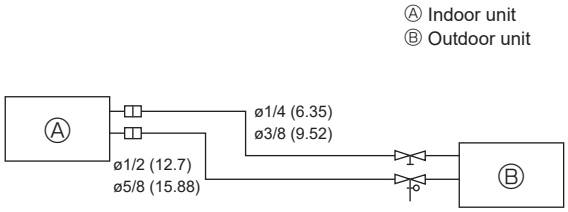


Fig. 4-2

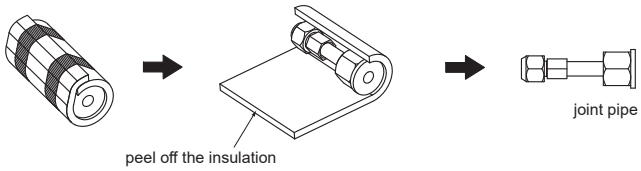


Fig. 4-3

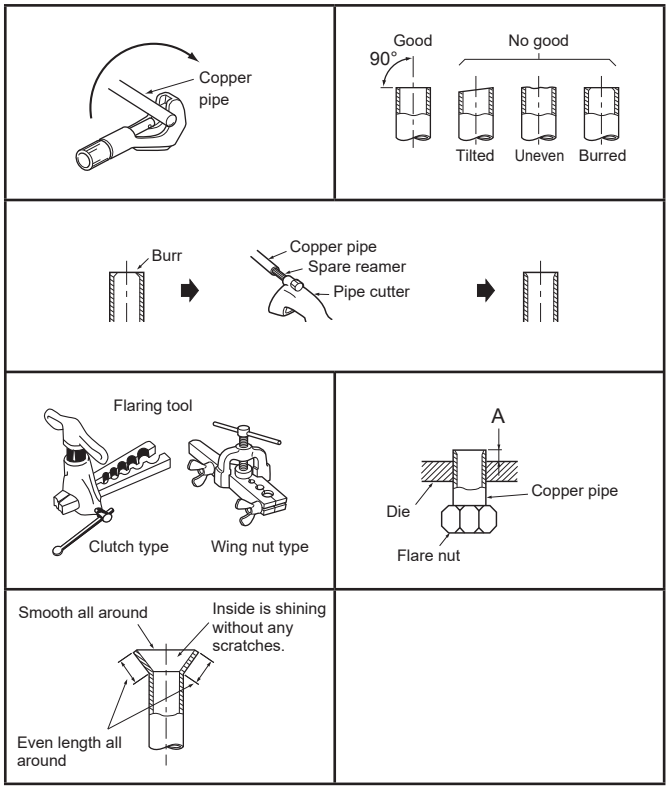


Fig. 4-4

4.1. Refrigerant pipe (Fig. 4-1, Fig. 4-2, Fig. 4-3)

► **Check that the difference between the heights of the indoor and outdoor units, the length of refrigerant pipe, and the number of bends in the pipe are within the limits shown below.**

Models	Ⓐ Pipe length (one way)	Ⓑ Height difference	Ⓒ Number of bends (one way)
24, 36	Max. 100 ft (30 m)	Max. 100 ft (30 m)	Max. 10

- Height difference limitation is defined regardless of which unit, indoor or outdoor, is positioned higher.
- Refrigerant adjustment ... If pipe length exceeds 25 ft. (7.5 m), additional refrigerant (R454B) charge is required.
  (The outdoor unit is charged with refrigerant for pipe length up to 25 ft. (7.5 m).)

Pipe length	Up to 25 ft (7.5 m)	No additional charge is required.
	Exceeding 25 ft (7.5 m)	Additional charge is required. (Refer to the table below.)
Refrigerant to be added	24, 36	1.08 oz each 5 ft. (20 g/m)

- Table below shows the specifications of pipes commercially available.

Model	Pipe	Outside diameter	Min. wall thickness	Insulation thickness	Insulation material
		inch (mm)	inch (mm)	inch (mm)	
24	For liquid	1/4 (6.35)	0.0315 (0.8)	5/16 (8)	Heat resisting foam plastic 0.045 specific gravity
	For gas	5/8 (15.88)	0.0315 (0.8)	5/16 (8)	
36	For liquid	1/4 (6.35)	0.0315 (0.8)	5/16 (8)	
	For gas	5/8 (15.88)	0.0315 (0.8)	5/16 (8)	

- To prevent condensation, insulate the 2 refrigerant pipes.
- Refrigerant pipe bending radius must be 4 in. (100 mm) or more
- Use the joint pipe (Fig. 4-3) included with the side cover with outdoor unit to connect the liquid pipe of indoor unit.

⚠ **Caution:**
Be sure to use the insulation of specified thickness (table on the above). Excessive insulation may cause incorrect installation of the indoor unit, and too little insulation may cause condensate to form.

- The unit has flared connections on both indoor and outdoor sides.
- Remove the valve cover from the outdoor unit, then connect the pipe.
- Refrigerant pipes are used to connect the indoor and outdoor units.
- Be careful not to crush or over bend the pipe in pipe bending.
- Please carefully consider the indoor unit location when piping lengths are less than 16 ft (5 m) as there could be intermittent noises during normal operation that would be noticeable in very quiet environments.

4.2. Flaring work (Fig. 4-4)

1) Cut the cooper pipe as straight as possible with a pipe cutter.
2) Remove all burrs from the cut section of pipe, ensuring that precautions are taken to avoid getting metal shavings into the piping.
3) Remove flare nuts attached to indoor and outdoor units, then put them on pipe.
4) Flaring work. Firmly hold copper pipe in the dimension shown in the table. Select A inch (mm) from the table according to the tool you use.
5) Check
   • Compare the flared work.
   • If flare is defective, cut off the section and repeat procedure.

Pipe diameter inch (mm)	Nut inch (mm)	A inch (mm)			Tightening torque	
		Clutch type tool for R410A/ R454B	Clutch type tool for R22	Wing nut type tool for R22	N·m	ft·lb (kgf·cm)
1/4 (6.35)	1/4 (17)	0 to 0.02 (0 to 0.5)	0.04 to 0.06 (1.0 to 1.5)	0.06 to 0.08 (1.5 to 2.0)	13.7 to 17.7	10 to 13 (140 to 180)
3/8 (9.52)	3/8 (22)				34.3 to 41.2	25 to 30 (350 to 420)
1/2 (12.7)	1/2 (26)			0.08 to 0.10 (2.0 to 2.5)	49.0 to 56.4	36 to 42 (500 to 575)
5/8 (15.88)	5/8 (29)				73.5 to 78.4	54 to 58 (750 to 800)

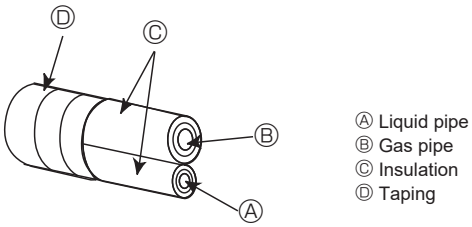


Fig. 4-5

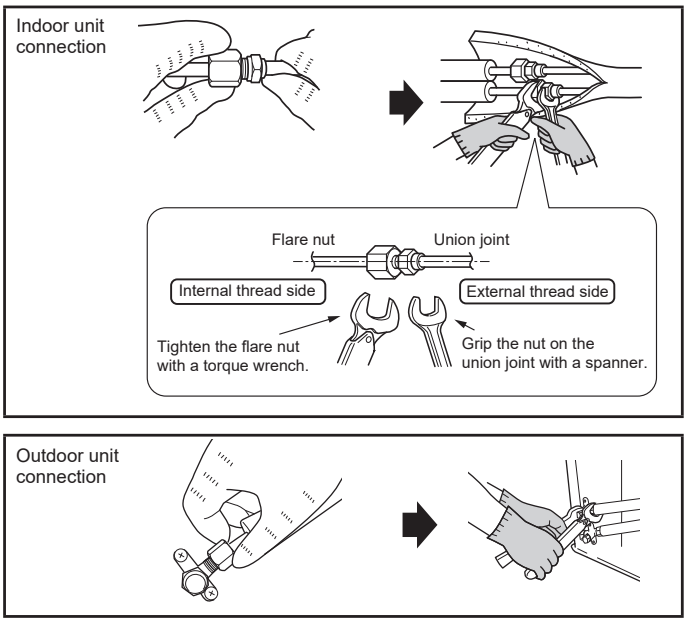


Fig. 4-6

4.3. Connecting pipes (Fig. 4-5, Fig. 4-6)

- Fasten flare nut with a torque wrench as specified in the table (refer to 4.2.).
- When fastened too tight, flare nut may eventually break and cause refrigerant leakage.
- Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.

Indoor unit connection

Connect both liquid and gas piping to indoor unit.

- Do not apply refrigeration oil on screw threads. Excessive tightening torque will result in damage on the screw.
- To connect, first align the center, then tighten the first 3 to 4 turns of flare nut by hand.
- Use tightening torque table in (4-2.) as a guideline for indoor unit side joints, and tighten using two wrenches. Excessive tightening damages the flare section.

Outdoor unit connection

Connect pipes to stop valve pipe joint of the outdoor unit following the same procedure detailed in Indoor unit connection.

- For tightening, use a torque wrench or spanner.

⚠ **Warning:**

- **When installing the unit, securely connect the refrigerant pipes before starting the compressor.**
- **Be careful of flying flare nut. (Internally pressurized)**
  Remove the flare nuts as follows:
  1. Loosen the nut until you hear a hissing noise.
  2. Do not remove the nut until the gas has been completely released (i.e., hissing noise stops)
  3. Check that the gas has been completely released, and then remove the nut.

Ⓐ (Fig. 4-6)

Pipe diameter		Flare dimensions øA dimensions	
inch	(mm)	inch	(mm)
1/4”	(6.35)	11/32 - 23/64	(8.7 - 9.1)
3/8”	(9.52)	1/2 - 33/64	(12.8 - 13.2)
1/2”	(12.7)	41/64 - 21/32	(16.2 - 16.6)
5/8”	(15.88)	49/64 - 25/32	(19.3 - 19.7)

4.4. Refrigerant pipe nitrogen pressure test method

1) Connect the testing tools.
   - Make sure the stop valves are closed and do not open them.
   - Add pressure to the refrigerant lines through the service port of the stop valve for GAS.
2) Do not add pressure to the specified pressure all at once; add pressure little by little.
   1. Pressurize to 0.5 MPa (73 psig, 5 kgf/cm2G), wait 5 minutes, and make sure the pressure does not decrease.
   2. Pressurize to 1.5 MPa (218 psig, 15 kgf/cm2G), wait 5 minutes, and make sure the pressure does not decrease.
   3. Pressurize to 4.15 MPa (601 psig, 41.5 kgf/cm2G) and measure the surrounding temperature and refrigerant pressure.
3) If the specified pressure holds for 24 Hours and does not decrease, the pipes have passed the test and there are no leaks.
   - If the surrounding temperature changes by 1°F (0.5°C), the pressure will change by about 1 psig (0.007 MPa). Make the necessary corrections.
4) If the pressure decreases in steps 2) or 3), there is a gas leak. Look for the source of the gas leak.

Note:

- Field-made refrigerant joints indoors shall be tightness tested. The method shall have a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0.25 times the MAXIMUM ALLOWABLE PRESSURE. No leak shall be detected.

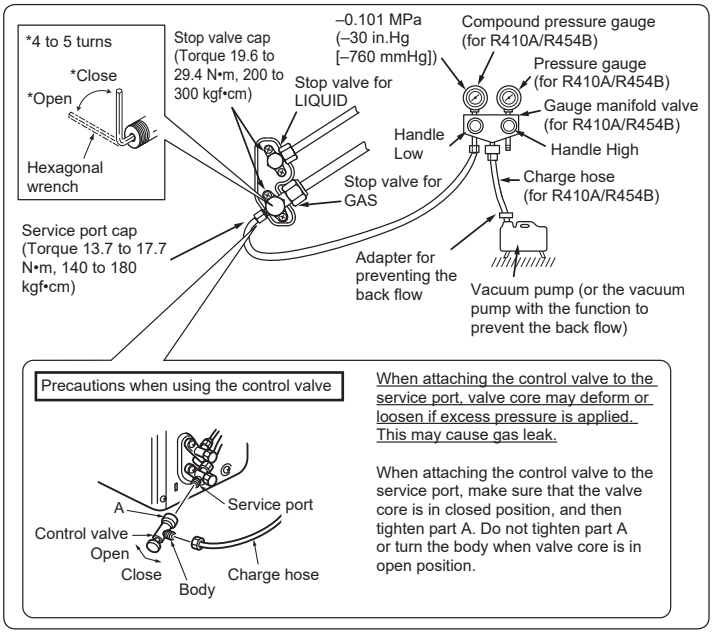
4.5. Insulation and taping

1) Cover piping joints with pipe cover.
2) For outdoor unit side, insulate the piping, including valves.
3) Apply piping tape (G) starting from the connection on the outdoor unit.
   - When piping has to be installed through a ceiling, closet or where the temperature and humidity are high, use additional field-supplied insulation to prevent condensation.

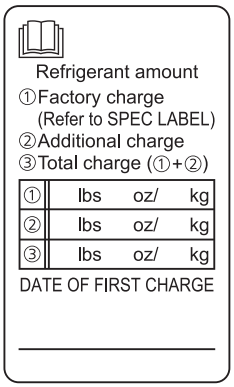
4. Refrigerant piping work

4.6. Purging procedures and leak test

1) Remove service port cap of stop valve on the side of the outdoor unit gas pipe.
2) Connect gauge manifold valve and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.



3) Run the vacuum pump 15 minutes or more.
4) Check the vacuum with the gauge manifold valve, then close it and shut off the vacuum pump.
5) Leave as it is for one or two minutes. Make sure pointer gauge manifold valve remains in the same position. Confirm that pressure gauge shows -0.101 MPa [Gauge] (-30 in.Hg [-760 mmHg]).
6) Quickly remove gauge manifold valve from service port of stop valve.
7) After refrigerant pipes are connected and evacuated, fully open all stop valves on both sides of gas pipe and liquid pipe. Operating the unit without fully opening the valves lowers the performance and causes problems.
8) Refer to 4.1. Refrigerant pipe, and charge the prescribed amount of additional refrigerant and record refrigerant amount on “Refrigerant amount label” (Fig. 1) if needed. Be sure to charge slowly with liquid refrigerant. Otherwise, composition of the refrigerant in the system may be changed and affect performance of the air conditioner.
9) Tighten cap of service port.
10) Conduct a leak test


Refrigerant amount
①Factory charge
(Refer to SPEC LABEL)
②Additional charge
③Total charge (①+②)

①	lbs	oz/	kg
②	lbs	oz/	kg
③	lbs	oz/	kg

DATE OF FIRST CHARGE

Note:
Fill in the date of installation to DATE OF FIRST CHARGE on the label. Labels are located on both indoor and outdoor units.

Fig. 1

Note:
Detection of flammable refrigerants
Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
The following leak detection methods are deemed acceptable for all refrigerant systems.
Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity may not be adequate, or may need recalibration. (Detection equipment shall be calibrated in a refrigerant-free area.)
Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.
Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.
If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

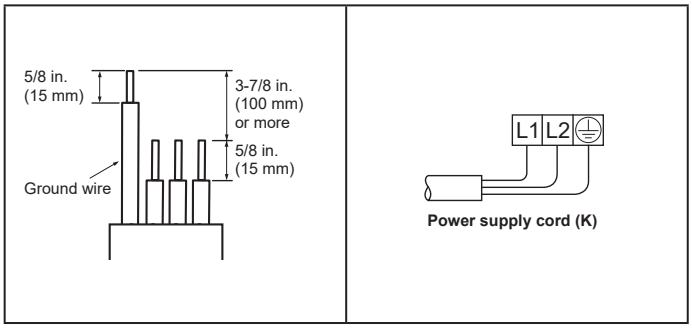
Charging procedures
In addition to conventional charging procedures, the following requirements shall be followed.
- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept in an appropriate position according to the instructions.
- Ensure that the refrigerating system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigerating system.

Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

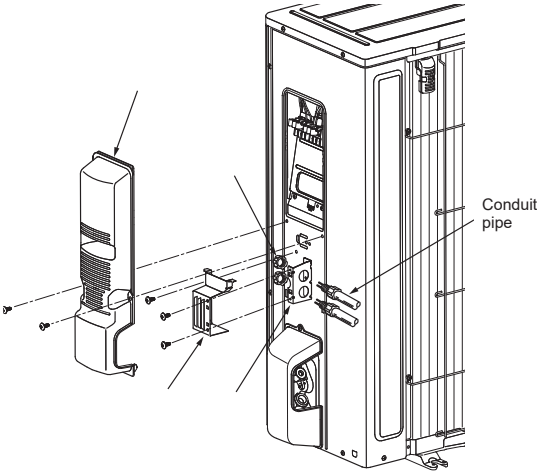
5. Electrical work

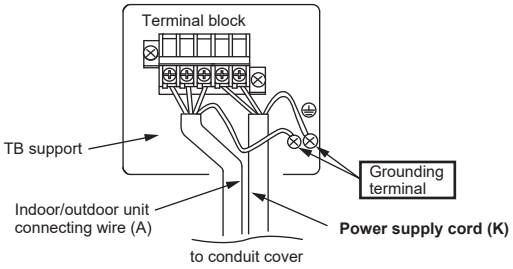
5.1. Connecting wires for outdoor unit

1) Remove the service panel.
2) Remove the conduit cover.
3) Attach the conduit connector to conduit plate with lock nut then secure it against unit with screws.
4) Connect ground wires of indoor/outdoor unit connecting wire (A) and power supply cord (K) to the TB support.
5) Loosen the terminal screw, and attach indoor/outdoor unit connecting wire (A) from the indoor unit correctly on the terminal block. Attach the wire to the terminal block securely so that its core cannot be seen, and no external force affects the connecting section of the terminal block.
6) Firmly tighten the terminal screws. After tightening, verify that the wires are tightly fastened.
7) Connect power supply cord (K).
8) Install the conduit cover.
9) Install the service panel securely.

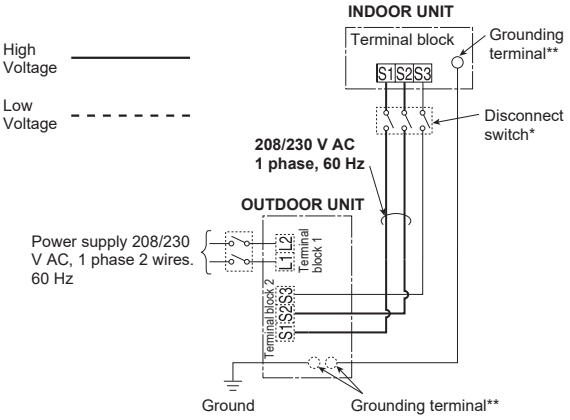


5HPL6024A1000AA, 5HPL6036A1000AA





- Make ground wire a little longer than others. (More than 3-7/8 in. [100 mm])
- For future servicing, leave some slack in the connecting wires.
- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.



Remark:
* A disconnect switch is required. Check the local code.
** Use a ring tongue terminal in order to connect a ground wire to terminal.

- Connect the cable from the indoor unit correctly on the terminal-block.
- Use the same terminal block and polarity as is used with the indoor unit.
- For aftercare maintenance, give extra length to connecting cable.

- Both ends of connecting cable (extension wire) are peeled off. When too long, or connected by cutting off the middle, peel off power supply cable to the size given in the figure.
- Be careful not to contact connecting cable with piping.

⚠ Caution:
- **Use care not to make miswiring.**
- **Firmly tighten the terminal screws to prevent them from loosening.**
- **After tightening, pull the wires lightly to confirm that they do not move.**

⚠ Warning:
- **Be sure to attach the service panel of the indoor unit securely. If it is not attached correctly, it could result in a fire or an electric shock due to dust, water, etc.**
- **Tighten terminal screws securely.**
- **Wiring should be done so that the power lines are not subject to tension. Otherwise, heat may be generated or fire may occur.**
- **LIVE ELECTRICAL COMPONENTS! - Failure to follow this Warning could result in property damage, severe personal injury, or death.**
  Follow all electrical safety precautions when exposed to live electrical components. It may be necessary to work with live electrical components during installation, testing, servicing, and troubleshooting of this product.
- **HIGH LEAKAGE CURRENT! - Failure to follow this Warning could result in property damage, severe personal injury, or death.**
  Earth connection essential before connecting electrical supply.
- **REMOVE POWER! - Remove power when servicing.**

IMPORTANT NOTES
Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

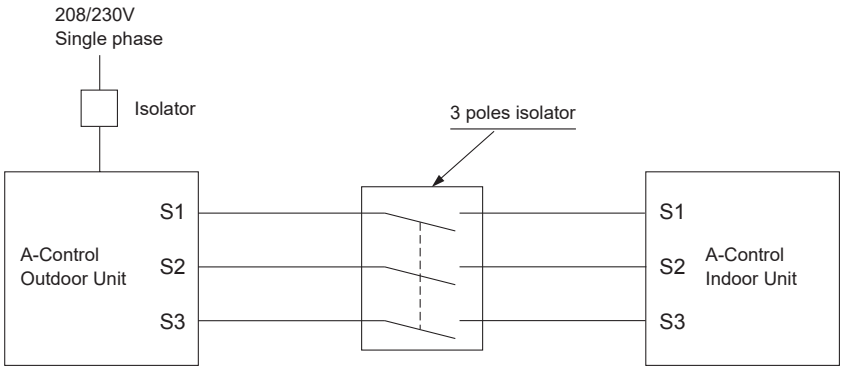
5. Electrical work

5.2. Field electrical wiring

Outdoor unit model			5HPL6024A1000AA, 5HPL6036A1000AA
Power supply			~/N (single), 60 Hz 208/230 V
Breaker size		*1	25/30 A
Max. Fuse size (time delay)		*1	40/41 A
Min. Circuit Ampacity			24/25 A
Wiring Wire No. × size	Outdoor unit power supply		2.1 × Min. AWG 14
	Outdoor unit power supply earth		1 × Min. AWG 14
	Indoor unit-Outdoor unit		3 × AWG 14 (Polar)
	Indoor unit-Outdoor unit ground		1 × Min. AWG 16
Circuit rating	Outdoor unit L1-L2	*2	208/230 VAC
	Indoor unit-Outdoor unit S1-S2	*2	208/230 VAC
	Indoor unit-Outdoor unit S2-S3	*2	12 VDC - 24 VDC (Polar)

*1. Please follow applicable federal, state, or local codes to prevent potential leakage/electric shock. Or install a ground fault interrupt for the prevention of leakage and electric shock.
*2. The figures are NOT always against the ground.
S3 terminal has 24 VDC against S2 terminal. However between S3 and S1, these terminals are NOT electrically insulated by the transformer or other device.

Notes: 1. Wiring size must comply with the applicable local and national code.
2. Use copper supply wires.
3. Use wires rated 600V or more for the power supply cables and the indoor/outdoor unit connecting cables.
4. Install an earth longer than other cables.
5. Power supply cords and indoor unit/outdoor unit connecting cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 60245 IEC 57)
6. The appliance shall be installed in accordance with national wiring regulations.



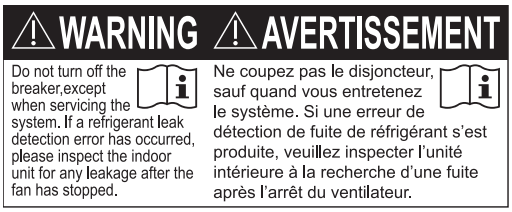
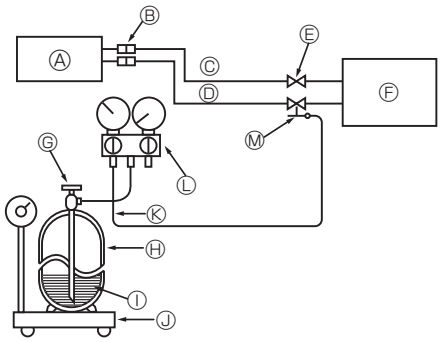


Fig. 1

⚠ **Warning:**
- **In case of A-control wiring, there is high voltage potential on the S3 terminal caused by electrical circuit design that has no electrical insulation between power line and communication signal line. Therefore, please turn off the main power supply when servicing. And do not touch the S1, S2, S3 terminals when the power is energized. If isolator should be used between indoor unit and outdoor unit, please use 3-pole type.**
- **When the outdoor unit is connected to the indoor unit with the refrigerant sensor installed, the outdoor unit shall be always ON except during servicing. (Refer to the installation manual for the indoor unit whether an alarm is installed or not.) The local switch and the breaker shall be always ON except during servicing.**
- **Explain to customers to affix the included labels(Fig.1) both on the main breaker and the sub-panel. If the local switch or the breaker is OFF, the refrigerant sensor cannot detect the refrigerant leakage since the electricity is not supplied.**

6. Maintenance



Ⓐ Indoor unit
Ⓑ Union
Ⓒ Liquid pipe
Ⓓ Gas pipe
Ⓔ Stop valve
Ⓕ Outdoor unit
Ⓖ Refrigerant gas cylinder operating valve
Ⓗ Refrigerant gas cylinder for R454B with siphon
Ⓘ Refrigerant (liquid)
Ⓙ Electronic scale for refrigerant charging
Ⓚ Charge hose (for R454B)
Ⓛ Gauge manifold valve (for R454B)
Ⓜ Service port

Fig. 6-1

6.1. Gas charge (Fig. 6-1)

1. Connect gas cylinder to the service port of stop valve (3-way).
2. Execute air purge of the pipe (or hose) coming from refrigerant gas cylinder.
3. Replenish specified amount of refrigerant, while running the air conditioner for cooling.

Note:
In case of adding refrigerant, comply with the quantity specified for the refrigerating cycle.

⚠ **Caution:**
- **Do not discharge the refrigerant into the atmosphere.**
  Take care not to discharge refrigerant into the atmosphere during installation, reinstallation, or repairs to the refrigerant circuit.
- **For additional charging, charge the refrigerant from liquid phase of the gas cylinder.**
  If the refrigerant is charged from the gas phase, composition change may occur in the refrigerant inside the cylinder and the outdoor unit. In this case, ability of the refrigerating cycle decreases or normal operation can be impossible. However, charging the liquid refrigerant all at once may cause the compressor to be locked. Thus, charge the refrigerant slowly.

To maintain the high pressure of the gas cylinder, warm the gas cylinder with warm water (under 104 °F, 40 °C) during cold season. But never use naked fire or steam.

7. Pumping down

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that refrigerant is not released into the atmosphere.
1) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
2) Fully close the stop valve on the liquid pipe side of the outdoor unit.
3) Close the stop valve on the gas pipe side of the outdoor unit almost completely so that it can be easily closed fully when the pressure gauge shows 0 psi [Gauge] (0 Mpa).
4) Start the emergency COOL operation.
   To start the emergency operation in COOL mode, disconnect the power supply plug and/or turn off the breaker. After 15 seconds, connect the power supply plug and/or turn on the breaker, and then press the E.O. SW once. (The emergency COOL operation can be performed continuously for up to 30 minutes.)
5) Fully close the stop valve on the gas pipe side of the outdoor unit when the pressure gauge shows (0.1 to 0 psi [Gauge] (0.05 to 0 Mpa)).
6) Stop the emergency COOL operation.
   To stop operation, press the E.O. SW several times until all LED lamps turn off. Refer to operating instructions for details.

⚠ **Warning:**
When the refrigeration circuit has a leak, do not execute pump down with the compressor.
When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst if air etc. get into it.

Supplier's Declaration of Conformity
47 CFR §2.1077 Compliance Information

Unique Identifier: 5HPL60A1000A series**

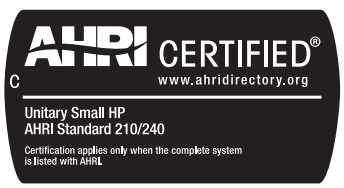
Responsible Party - U.S. Contact Information

Trane U.S. Inc
6200 Troup Hwy, Tyler, TX
75707
United States
903-730-4000

FCC Compliance Statement

This device complies with part 18 of the FCC Rules.

Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane. com or tranetechnologies.com.



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DLR-SVN002A-EN 01 October 2025
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