Owner's Manual

Stealth Ducted Unitary Air Handler

Models:
SC-24-AH
SC-36-AH
SC-48-AH
SC-60-AH

To Users

Thank you for selecting Stealth Comfort products. Please read this installation manual carefully before installing and using this product.

(1) Not for use by children under 8 years old without supervision.
(2) In general it is recommended to leave power connected during stand-by status. If you power off for longer periods of disuse, energize and preheat the unit before resuming use.
(3) This product is designed for residential use. Using for other purposes, such as commercial use may impact performance.
(4) This product can't be installed in corrosive, inflammable or explosive environments.
(5) If the product needs to be installed, moved or maintained, we recommend using a qualified professional. Users should not disassemble or maintain the unit by themselves.
(6) All the illustrations and information in the instruction manual are only for reference. Due to continuous improvement, you may see some small differences in your actual product. If you find inaccuracies in this manual, please contact your selling dealer or professional installer.

Exception Clauses

Manufacturer will bear no responsibilities when personal injury or property loss is caused by the following reasons:

(1) Damage the product due to improper use or misuse of the product.

(2) Alter, change, maintain or use the product with other equipment without abiding by the instruction manual of manufacturer.

(3) After verification, the defect of product is directly caused by corrosive gas.

(4) After verification, defects are due to improper operation during transportation of product.

(5) Operate, repair, maintain the unit without abiding by instruction manual or related regulations.

(6) After verification, the problem or dispute is caused by the quality specification or performance of parts and components that produced by other manufacturers.

(7) The damage is caused by natural calamities, bad using environment or force majeure.

Contents

Please dispose of the product responsibly and in adherence to all local, state and federal guidelines. This equipment contains refrigerant chemicals that should not be discharged into the atmosphere.

1 Safety Precautions

⚠WARNING

This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory--authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing. Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information. This is the safety--alert symbol ⚠.

When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: **DANGER**, **WARNING**, **CAUTION** and **NOTICE**. These words are used with the safety--alert symbol.

⚠ DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
⚠WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates important but not hazard-related information, used to indicate risk of property damage.

⚠WARNING

Electrical shock hazard:

Failure to follow this warning could result in personal injury or death.

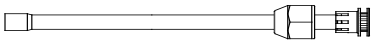
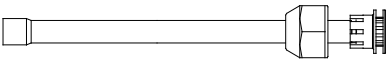
Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.

2 Product Introduction

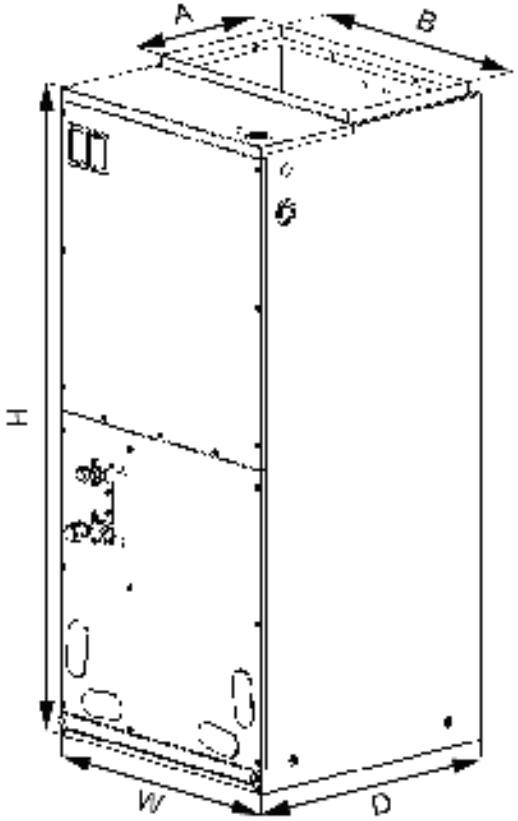
2.1 Product Description

The Stealth air handler offers the perfect combination of superior product quality, operating efficiency, operating sound levels and value for money. The condensing unit uses the environmentally friendly refrigerant R410A, which is chlorine-free to help prevent damage to the ozone layer.

2.2 Optional Accessories

Indoor unit accessories				
No.	Name	Appearance	Q'ty	Usage
1	Adaptor pipe		1	To allow for brazing to the liquid pipe
2	Adaptor pipe		1	To allow for brazing to the gas pipe

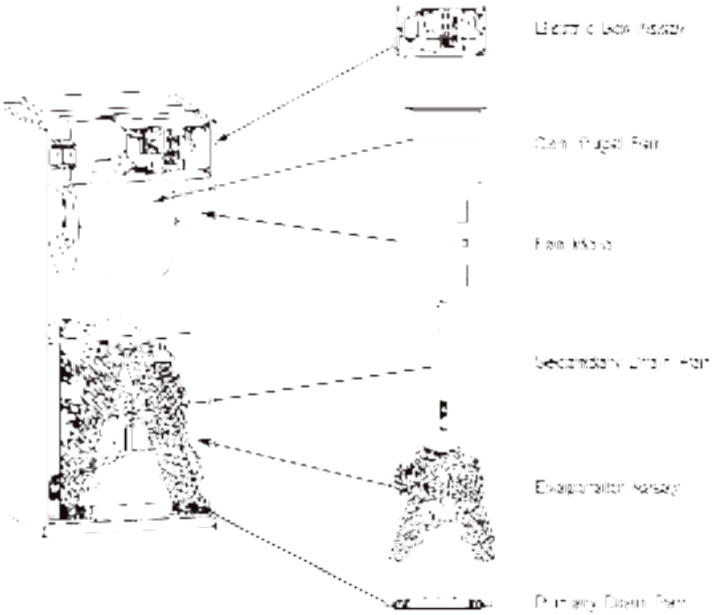
2.3 Physical Dimension



Unit: inch

Model	Dimension				
	W	D	H	A	B
SC-24-AH SC-36-AH	21-1/4"	21-1/4"	48-1/4"	11-5/8"	20"
SC-48-AH SC-60-AH	24-3/4"	21-1/4"	57"	11-5/8"	20"

2.4 Names of Main Parts



2.5 General Information

Model	Cooling capacity(ton)	Optional electric heater (kW)
SC-24-AH	2.0	5/8/10
SC-36-AH	3.0	5/8/10
SC-48-AH	4.0	10/15/20
SC-60-AH	5.0	10/15/20

Model	Motor @ 230V ~, 60Hz	
	HP	FLA
SC-24-AH SC-36-AH	1/2	2.1
SC-48-AH SC-60-AH	1	3.2

Unit: inches

Model	Filter size
SC-24-AH SC-36-AH	20×20×1
SC-48-AH SC-60-AH	21×20×1

NOTES:

①. Based upon W/nominal tonnage, dry coil and filter should be installed.

②. Use 0.96 as approximate SCFM correction factor for wet coil.

2.6 Dip switch configuration

Set the indoor fan speed through the eight dip switches of the indoor main control board. The higher level, the higher speed of the indoor unit fan. Operation Instruction is below:

Dip switch settings must be completed before power on the unit.

After the unit is shut down or stopped at the temperature point, the indoor unit will delay for a few minutes and then shut down. The extra time allows for additional drying of the coil to prevent mold accumulation during cooling, and extra efficiency during heating.

During installation and debugging, check whether the thermostat has a fan delay and shutdown time setting. If the thermostat setting has been made, the air handler delay will be equal to the thermostat setting time plus the fan delay time of the indoor unit.

Model	Level	Heat (SA2)				Cool (SA1)			
SC-24-AH	Level 1	1	0	0	0	0	0	0	0
	Level 2	1	0	0	1	0	0	0	0
	Level 3	1	0	1	0	0	0	0	0
	Level 4-Default	1	0	1	1	0	0	0	0
	Level 5	1	1	0	0	0	0	0	0
	Level 6	1	1	0	1	0	0	0	0
	Level 7	1	1	1	0	0	0	0	0
	Level 8	1	1	1	1	0	0	0	0
SC-36-AH	Level 1	0	0	0	0	0	0	0	0
	Level 2	0	0	0	1	0	0	0	0
	Level 3	0	0	1	0	0	0	0	0
	Level 4-Default	0	0	1	1	0	0	0	0
	Level 5	0	1	0	0	0	0	0	0
	Level 6	0	1	0	1	0	0	0	0
	Level 7	0	1	1	0	0	0	0	0
	Level 8	0	1	1	1	0	0	0	0

Model	Level	Heat (SA2)				Cool (SA1)			
SC-48-AH	Level 1	1	0	0	0	0	0	0	0
	Level 2	1	0	0	1	0	0	0	0
	Level 3	1	0	1	0	0	0	0	0
	Level 4-Default	1	0	1	1	0	0	0	0
	Level 5	1	1	0	0	0	0	0	0
	Level 6	1	1	0	1	0	0	0	0
	Level 7	1	1	1	0	0	0	0	0
	Level 8	1	1	1	1	0	0	0	0
SC-60-AH	Level 1	0	0	0	0	0	0	0	0
	Level 2	0	0	0	1	0	0	0	0
	Level 3	0	0	1	0	0	0	0	0
	Level 4-Default	0	0	1	1	0	0	0	0
	Level 5	0	1	0	0	0	0	0	0
	Level 6	0	1	0	1	0	0	0	0
	Level 7	0	1	1	0	0	0	0	0
	Level 8	0	1	1	1	0	0	0	0

NOTE: 0 means dip switch to ‘on’, 1 means dip switch to number.

2.7 Fan Performance Data

Model	SC-24-AH											
Level	Static pressure(Inches W.C.)											
	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Speed 1(CFM)	1030	900	840	-	-	-	-	-	-	-	-	-
Speed 2(CFM)	1080	960	900	840	-	-	-	-	-	-	-	-
Speed 3(CFM)	1220	1120	1060	990	850	-	-	-	-	-	-	-
Speed 4(CFM)	1390	1290	1240	1180	1070	960	-	-	-	-	-	-
Speed 5(CFM)	1580	1490	1440	1390	1290	1180	1090	970	830	-	-	-
Speed 6(CFM)	1720	1640	1600	1550	1450	1360	1250	1130	960	-	-	-
Speed 7(CFM)	1800	1730	1680	1630	1550	1460	1370	1270	1150	970	830	
Speed 8(CFM)	1850	1820	1790	1740	1660	1580	1500	1410	1340	1200	1080	930

Model	SC-36-AH											
Level	Static pressure(Inches W.C.)											
	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Speed 1(CFM)	1150	1050	950	880	-	-	-	-	-	-	-	-
Speed 2(CFM)	1200	1100	1000	940	850	-	-	-	-	-	-	-
Speed 3(CFM)	1380	1260	1200	1100	950	-	-	-	-	-	-	-
Speed 4(CFM)	1550	1460	1390	1310	1160	1010	830	-	-	-	-	-
Speed 5(CFM)	1710	1650	1600	1560	1480	1400	1310	1210	1080	930	-	-
Speed 6(CFM)	1840	1800	1750	1710	1640	1590	1500	1420	1330	1220	1100	960
Speed 7(CFM)	1870	1830	1810	1800	1760	1690	1620	1520	1440	1350	1250	1150
Speed 8(CFM)	1900	1860	1840	1830	1790	1720	1660	1600	1540	1440	1320	1220

Model	SC-48-AH											
Level	Static pressure(Inches W.C.)											
	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Speed 1(CFM)	1640	1500	1450	1350	-	-	-	-	-	-	-	-
Speed 2(CFM)	1680	1560	1500	1380	1300	-	-	-	-	-	-	-
Speed 3(CFM)	1810	1690	1620	1550	1380	-	-	-	-	-	-	-
Speed 4(CFM)	1930	1830	1770	1710	1580	1430	1280	-	-	-	-	-
Speed 5(CFM)	2200	2110	2040	1980	1860	1720	1620	1490	1380	-	-	-
Speed 6(CFM)	2240	2190	2145	2100	2010	1870	1750	1615	1500	1380	-	-
Speed 7(CFM)	2280	2240	2200	2180	2130	2080	2000	1880	1750	1600	1420	
Speed 8(CFM)	2300	2260	2220	2190	2140	2090	2040	1980	1930	1800	1700	1550

Model	SC-60-AH											
Level	Static pressure(Inches W.C.)											
	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Speed 1(CFM)	1660	1540	1470	1400	-	-	-	-	-	-	-	-
Speed 2(CFM)	1850	1720	1650	1600	1400	-	-	-	-	-	-	-
Speed 3(CFM)	1920	1800	1730	1650	1480	1315	-	-	-	-	-	-
Speed 4(CFM)	2110	2000	1950	1860	1760	1640	1490	1325	-	-	-	-
Speed 5(CFM)	2250	2200	2190	2140	2040	1930	1800	1670	1520	1370	-	-
Speed 6(CFM)	2260	2220	2200	2170	2090	2010	1910	1760	1650	1550	1430	1380
Speed 7(CFM)	2300	2260	2230	2200	2150	2115	2050	1990	1920	1840	1750	1660
Speed 8(CFM)	2320	2280	2250	2230	2190	2140	2080	2040	2000	1950	1920	1890

NOTE: Please refer to above table for fan speed selection, and '-' is not allowed to be used.

3 Preparing for Installation

3.1 Pre-Installation Instructions

3.1.1 Checking Product Condition

After receiving the product, please check if there is any damage caused by transportation. Shipping damage is the responsibility of the carrier. Verify the model number, specifications and accessories are correct prior to installation. Do not install transportation-damaged or mis-shipped equipment - contact your original dealer.

3.1.2 Before Installation

Carefully read all instructions for the installation prior to installing product. Make sure each step or procedure is understood and any special considerations are taken into account before starting installation. Assemble all tools, hardware and supplies needed to complete the installation. Some items may need to be purchased locally. Make sure everything needed to install the product is on hand before starting.

3.1.3 Codes & Regulations

This product is designed and manufactured to comply with national codes. It is the installer's responsibility to install the product in accordance with such codes and/or any prevailing local codes/regulations. The manufacturer assumes no responsibility for equipment installed in violation of codes or regulations.

3.1.4 Replacement Parts

When reporting shortages or damages, or ordering repair parts, give the complete product model and serial numbers as stamped on the product. Replacement parts for this product are available through your contractor or local distributor.

3.2 Important Safety Instructions

Recognize safety symbols, words, and labels

The following symbols and labels are used throughout this manual to indicate immediate or potential hazards. It is the owner's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of serious personal injury or death, property damage and/or product damage.

⚠ DANGER Immediate hazards which will result in property damage, product damage, severe personal injury or death.

⚠ WARNING Hazards or unsafe practices could result in property damage, product damage, severe personal injury or death.

NOTICE Hazards or unsafe practices which may result in property damage, product damage, severe personal injury or death.

⚠ WARNING Before serving or installing this equipment. The electrical power to this unit must be in the “off” position. Caution, more than one disconnect may exist. Failure to observe this warning may result in an electrical shock that can cause personal injury or death.

⚠ WARNING

The United States Environmental Protection Agency (“EPA”) has issued various regulations regarding the introduction and disposal of refrigerants introduced into this unit. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. These regulations may vary due to the passage of laws. A certified technician must perform the installation and service of this product. Should questions arise, contact your local EPA office.

⚠ WARNING

Due to high system pressure and electrical shock in potential, installation and service work can be dangerous. Only trained and qualified persons are permitted to install or service this equipment. Observe all warnings contained in this manual and labels/tags attached to the equipment.

⚠ WARNING

This product is factory shipped for use with a 208/230V-1Ph-60Hz electrical power supply. This air handler must not be reconfigured to operate with any other power supply.

⚠ WARNING

The unit must have an uninterrupted, unbroken electric grounding to minimize the possibility of personal injury if an electric fault occurs. The electric grounding circuit may consist of an appropriate sized power cord which connected with the grounding piece located in the unit control box and also connecting to the building electric service panel. Other methods of grounding are permitted if performed in accordance with the “National Electric Code” (NEC)/ “American National Standards Institute” (ANSI)/ “National Fire

Protection Association" (NFPA) 70 and local/state codes. In Canada, electric grounding conforms to the Canadian electric code CSA c22.1. Failure to observe this warning can result in electrical shock that can cause personal injury.

Special warning for installation of furnaces or air handling units in enclosed areas, such as garages, utility rooms or parking areas.

Carbon monoxide producing devices (such as an automobile, space heater, gas water heater, etc.) should not be operated in enclosed areas such as unventilated garages, utility rooms or parking areas because of the danger of carbon monoxide (CO) poisoning resulting from the exhaust emissions. If a furnace or air handler is installed in an enclosed area such as a garage, utility room or parking area and a carbon monoxide producing device is operated therein, there must be adequate ventilation directly to outside.

This ventilation is necessary to avoid the danger of CO poisoning which can occur if a carbon monoxide producing device continues to operate in the enclosed area. Carbon monoxide emission can be (re)circulated throughout the building if the furnace or air handler is operating in any mode.

CO can cause serious illness including permanent brain damage or death.

4 Installation

4.1 Unit Inspection

Upon delivery, inspect the unit for damage. Any damage must be reported immediately to the carrier. Do not install such an equipment damaged by freight which determines the integrity and safety of the unit.

Please check the equipment model number to ensure the unit is appropriately sized for the condensing unit.

If an incorrect unit is supplied, it must not be installed and it is to be returned to the supplier. The manufacturer assumes no responsibility for the installation of incorrectly delivered units. The evaporator coil contains high-pressure inert gas for holding charge.

4.2 Location

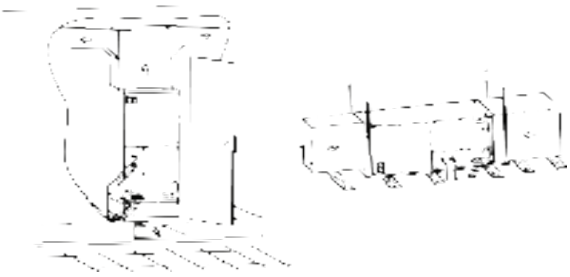
⚠WARNING This air handler is designed for indoor installation only. Do not install it outdoors.

When installing the air handler, take consideration to minimize the length of refrigerant tubing as much as possible. Do not install the air handler in a location either above or below the condenser that violates the instructions provided with the condenser. Service clearance is to take precedence. Allow a minimum of 24” in front of the unit for service clearance. When installing in an area directly over a finished ceiling (such as an attic), an emergency drain pan is required directly under the unit. See local and state codes for requirements. When installing this unit in an area that may become wet, elevate the unit with a sturdy, non-porous material. In installations that may lead to physical damage (i.e. a garage) it is advised to install a protective barrier to prevent such damage.

This air handler is designed for a complete supply and return ductwork system. Do not operate this product without all ductwork attached.

If air handler is installed as Fig. A, the air handler should be concealed in a specific room or space in a utility area.

If air handler is installed as Fig. B, make sure that there is enough space for care and maintenance and the height between the air handler and ground is above 8' in a utility area.



A B

4.3 Piping Work

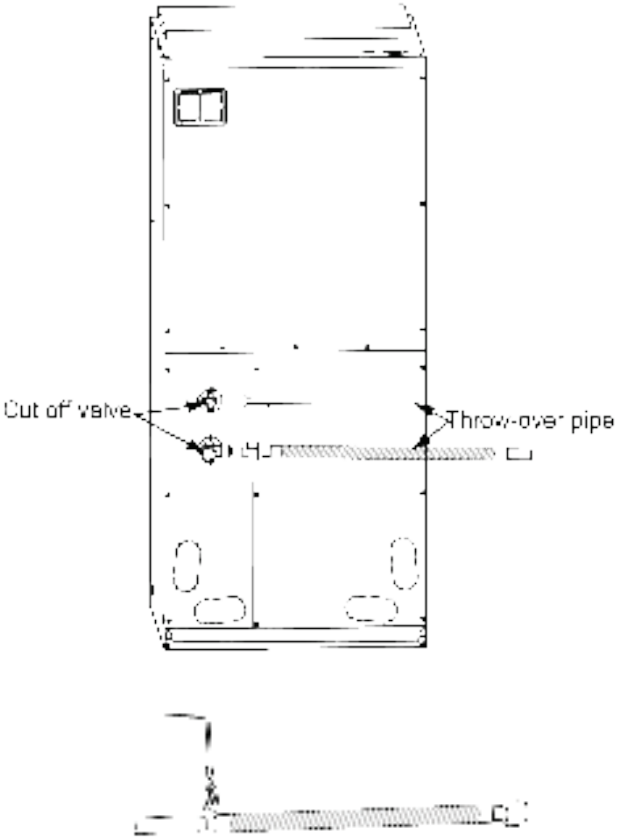
4.3.1 Specification of Connection Pipe

Model	External diameter (inch)	
	Gas pipe	Liquid pipe
SC-24-AH SC-36-AH SC-48-AH SC-60-AH	Φ3/4"	Φ3/8"

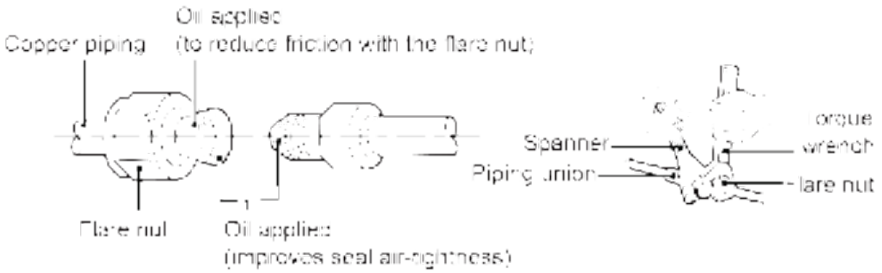
4.3.2 Piping Preparation

4.3.2.1 Solder Connection

All cut ends are to be round, burr free, and cleaned. Failure to follow this practice increases the chances for refrigerant leakage.



4.3.2.2 Screw Connection



Pipe diameter (inch)	Tightening torque (N·m)
Φ1/4	15-30
Φ3/8	35-40
Φ1/2	45-50
Φ5/8	60-65
Φ3/4	70-75
Φ7/8	80-85

4.4 Condensate Removal

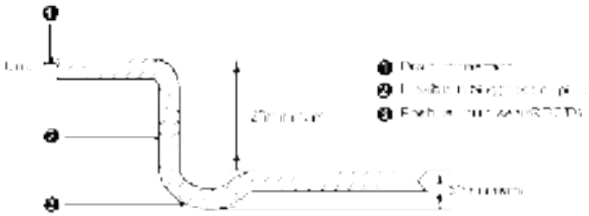
(1) It is not allowed to connect the condensate drain pipe into sewer pipe or other pipelines which are likely to produce corrosive gasses or unpleasant odors indoors.

(2) It is not allowed to connect the condensate drain pipe into rain pipe to prevent rain water from pouring in and cause property loss or personal injury.

(3) Condensate drain pipe should be connected into a dedicated drain system for the air conditioner.

(4) The drain pan has primary and secondary drain connection. 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. Do not over-tighten the drain connection in order to prevent possible damage to the evaporator drain pan. See the following figure for details of a typical condensate line “P” trap.



4.5 Ductwork

This air handler is designed for a complete supply and return ductwork system.

⚠WARNING

Do not operate the unit without all ductwork completed.

Do not operate this product without all ductwork attached.

Inadequate ductwork that restricts airflow can result in improper performance and compressor or heater failure. Ductwork is to be constructed in a manner that limits restrictions and maintains suitable air velocity. Ductwork should be sealed to the unit with tape and mastic to prevent leakage.

Return ductwork: Do not terminate the return ductwork in an area that can introduce toxic or objectionable fumes/odors into the ductwork. The return ductwork is to be introduced into the air handler bottom (up flow configuration).

Return Air Filters: Each installation must include a return air filter. This filtering may be performed at the air handler or externally such as a return air filter grille.

4.6 Electric Heater

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

⚠WARNING Refer to the “Electric heater kits installation” section of this manual and the instructions provided with the heater kit for the correct installation procedure.

⚠WARNING The electrical characteristics of the air handler, the electric heater kit, and the supply power should be identical. This air handler does not have factory

installed electric heater. Electric heater is available as an accessory. If installing this option, the only heater kits that can be used are the series as indicated below. It is forbidden to use the electric heater other than those recommended.

⚠WARNING Installation and debugging when attention to verify the switch sequence of electrical heating and fan, ensure the fan must be turned on when electric heating operation and ensure the electric heating is turned off before the fan to avoid unsafe.

4.6.1 Electric Heater Kits Available

SN.	Kit	Description	Ref. air handler use(ton)
1	SC-EAH-5kw	Circuit breaker, 5kW heat strip	2.0/3.0
2	SC-EAH-8kw	Circuit breaker, 8kW heat strip	2.0/3.0
3	SC-EAH-10kw	Circuit breaker, 10kW heat strip	2.0/3.0/4.0/5.0
4	SC-EAH-15kw	Circuit breaker, 15kW heat strip	4.0/5.0
5	SC-EAH-20kw	Circuit breaker, 20kW heat strip	4.0/5.0

4.6.2 Electric Heater Kits Installation

⚠CAUTION

(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) Use copper conductors only.

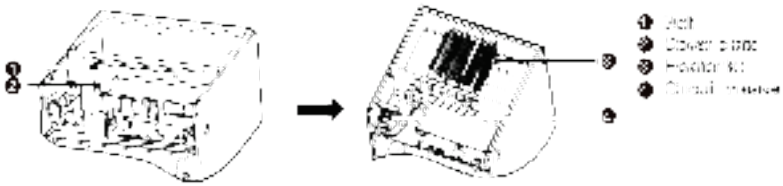
(4) Installation must follow national electric code and other applicable codes.

(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.

1) Refer to the Table for appropriate heater kit.
2) Check any physical damage, do not install damaged heater kit.
3) Remove the upper access panel from air handler.
4) Remove cover plate from air handler.
5) Slide the heater kit in to the slot and secure element plate with previously removed screws.
6) Insert power leads into the circuit breaker lugs or stripped red and black wires (for heater kit without circuit breaker) and tighten.
7) Connect ground wire to ground lug.

8) Knock off 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 positions of circuit breakers. If circuit breaker is not installed, do not knock off the holes; otherwise, electric shock may occur.

9) Replace access panel and check operation.



10) Connection of power cords and thermostat wires.

4.7 Electrical Installation

4.7.1 Requirement and Notice on Electrical Installation

⚠WARNING

The electrical installation for the air conditioner should follow these requirements:

①. The electrical installation must be conducted by professionals in compliance with local laws and regulations and the instructions in this manual. Never extend the power cords. The electric circuit must be equipped with a circuit breaker and air switch both with sufficient capacity.

②. The unit's operating power must be within the nominal range stated in the instruction manual. Use a specialized power circuit for the air conditioner. Do not draw power from another power circuit.

③. The air conditioner circuit should be at least 5' away from any inflammable surface.

④. The external power cords, the thermostat wires and thermostat must be effectively fixed.

⑤. The external power cords, the thermostat wires and thermostat can't directly contact any hot objects. For example: they must not contact chimney pipes, warm gas pipes or other hot appliances.

⑥. The external power cords, the thermostat wires and thermostat must not be squeezed. Never pull, stretch or bend the wires.

⑦. The external power cords, the thermostat wires and thermostat must not contact metal beams or edges on the ceiling, or touch any metal burrs or sharp metal edges.

⑧. Connect wires correspondingly by referring to the circuit diagram labeled on the unit or electric box. Screws must be securely tightened.

⑨. Wiring terminals should be connected firmly to the terminal board. Loose connections are dangerous and to be avoided.

⑩. After the electrical installation is finished, please use wire clamps to secure all power wiring and the thermostat wires. Make sure the wires are not clamped too tight.

4.7.2 Electrical Parameters

Model	Power supply	Minimum circuit ampacity (A)	Maximum overcurrent protection (A)
SC-24-AH SC-36-AH	208/230V-1Ph-60Hz	4	15
SC-48-AH SC-60-AH		8	

NOTICE

①. Fuse is located on the main board.

②. Install a circuit breaker at every power terminal near the units (indoor unit and thermostat) with at least 3mm contact gap. The units must be able to be plugged or unplugged.

③. Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.

④. Specifications of power cords listed in the above table are applicable in a working condition where ambient temperature is 104°F and multi-core copper cable (e.g. YJV copper cable, with insulated PE and PVC sheath) is protected by a conduit, and is resistant to 194°F in maximum (see IEC 60364-5-52). If working condition changes, please adjust the specifications according to national standards.

⑤. Specifications of circuit breaker are based on a working condition where the working temperature is 104°R. If working condition changes, please adjust the specifications according to national standards.

⑥. Adopt 5pc of AWG18 power cords to be the communication cords between indoor unit and thermostat. The maximum length is 98'. Please select a proper length according to local conditions. Communication cords must not be twisted together.

⑦. The wire gauge of communication cord should not be less than AWG18. It's recommended to use AWG18 wire as the communication cords.

4.7.3 Connection of Power Cords and Thermostat Wires

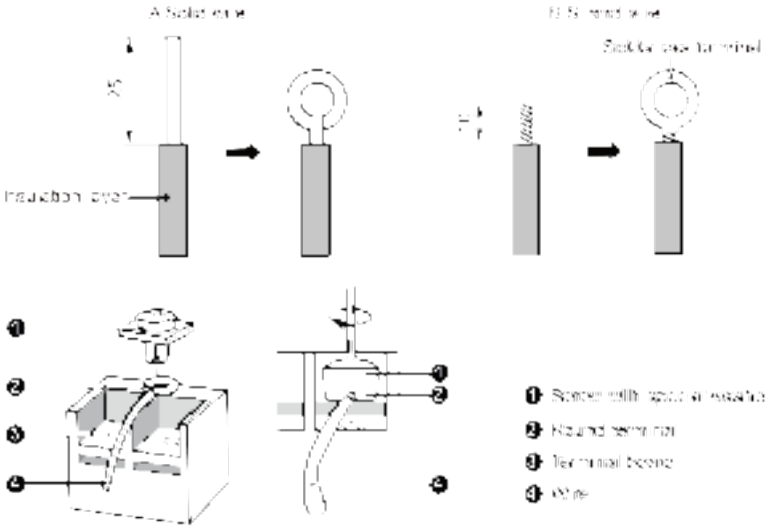
(1) For solid wires (as shown below):

1) Use wire cutters to cut off the wire end and then peel away about 1" of the insulation layer.
2) Use a screwdriver to unscrew the terminal screw on the terminal board.
3) Use nippers to bend the solid wire into a ring that fits the terminal screw.
4) Form a proper ring and then put it on the terminal board. Use a screwdriver to tighten up the terminal screw.

(2) For strand wires (as shown below):

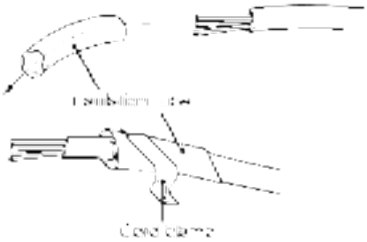
1) Use wire cutters to cut off the wire end and then peel away about 1/2" of the insulation layer.
2) Use a screwdriver to unscrew the terminal screw on the terminal board.
3) Use a round terminal fastener or clamp to fix the round terminal firmly on the peeled wire end.
4) Locate the round terminal conduit. Use a screwdriver to replace it and tighten up the terminal screw (as shown below).

Unit:mm



(3) How to connect the thermostat wires and power cords.

Feed the thermostat wires and power cords through the insulation tube. Then secure the wires with wire clamps (as shown in the following figure.)



⚠WARNING

①. Before working, please ensure the indoor unit and thermostat are powered off.

②. Match the terminal numbers and wire colors with the colors indicated in the indoor unit.

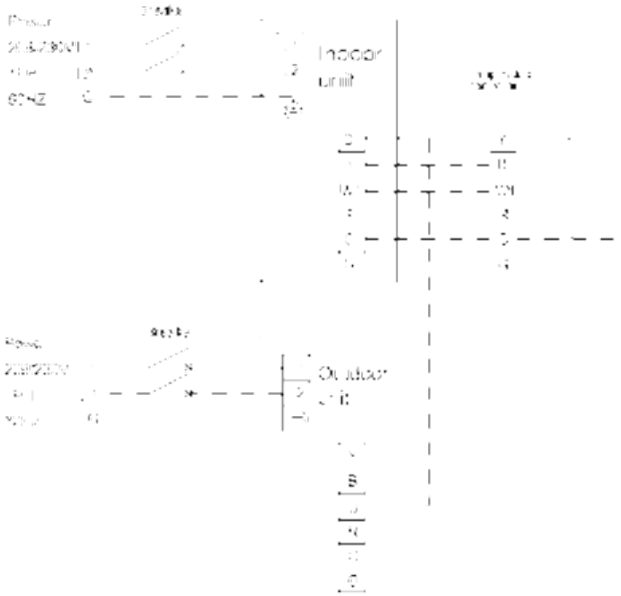
③. Incorrect wiring connections may burn out the electrical components.

④. Connect the wires securely to the wiring box. Incomplete installation may lead to fire hazard.

⑤. Please use wire clamps to secure the external covers of connecting wires. (Insulators must be clamped securely; otherwise, electric shock may occur.)

⑥. Ground wire should be connected.

Wires of indoor unit (Only for air handler without electric heater)



NOTE: Y means Compressor control signal for the outdoor unit;

B which is energized under the heating mode means 4-way valve control signal;

D means defrosting signal;

R means 24V AC power supply;

C means 24V common;

G means indoor unit fan signal for the indoor unit;

W1 means heater control signal.

NOTE: For cooling only unit, there is no need to connect the B and D terminals.

NOTE: When outdoor defrosts, D of outdoor unit will send 24V signal to avoid cold winds.

NOTE: When the electric heating operates, the indoor unit fan is forced to open.

⚠WARNING

①. High and low voltage wires should be fed through different insulating rubber rings on the electric box cover.

②. Do not bundle up the thermostat wires or lay them side by side, otherwise errors will occur.

③. High and low voltage wires should be secured separately with the appropriately sized clamps.

④. Use screws to tighten up the thermostat wires and power cords of unit on the terminal board. Poor connections may lead to fire hazard.

⑤. If the thermostat wires of unit and power cords are poorly connected, the air conditioner may get damaged.

⑥. Ground the unit by connecting the ground wire.

⑦. The units should comply with applicable local and national rules and regulations on power consumption.

⑧. When connecting the high voltage wiring, make sure the phase of the power supply matches with the corresponding terminals, otherwise the compressor will be reversed causing damage and lack of operation.

5 Installation Check and Trial Run

5.1 Checking Items after Installation

Items to be checked	Problems might happen due to improper installation	Check
Check if each parts of the unit have been installed securely.	The unit might tip over, vibrate or emit noise.	
Check if the unit has passed through leakage test.	It may cause poor cooling or heating performance or damage.	
Check if the unit has been insulated properly.	It may cause unwanted condensation.	
Check if the water can be drained fluently.	It may cause unwanted condensation.	
Check if the power voltage agrees with that on the nameplate.	Malfunction or damage to equipment.	
Check if the wiring and pipe line has been installed correctly.	Malfunction or damage to equipment.	
Check if the unit has been earthed soundly.	Hazard of electric shock.	
Check if the wiring conforms to the wire gage.	Malfunction or damage to equipment.	
Check if there is obstruction blocking the air inlet/outlet.	It may cause poor cooling or heating performance or damage.	
Check if the piping length and refrigeration charging volume has been recorded.	To provide information for future servicing.	
Check if the piping connection and valves have been set properly.	Malfunction or damage to equipment.	
Make sure there is no crack among air return and supply pipe.	It may cause air leak, vibration and noise.	
Check if the panel is mounted firmly.	It may cause air leak, vibration and condensation.	

5.2 Trial Run

5.2.1 Preparation for Trial Run

(1) Never power on the unit until all the installation work has been done.

(2) All the thermostat and high voltage wiring has been securely connected correctly. Valves on the gas and liquid line should be completely open.

(3) Any scattered objects should be removed, such as tools and debris.

(4) Check if the unit appearance and piping system has been damaged during transportation or handling.

(5) Check if the terminals are loose and the phases are correct.

5.2.2 Trial Run

(1) Trial run can be initiated by professional installer only after above items have been checked.

(2) Power on the unit and press ON/OFF button to activate.

(3) After compressor starts up, please immediately stop the unit if you hear sounds such as grinding, banging, loud whine or scraping.

(4) Trial run under several modes and check if the unit operates normally.

6 Common Malfunction and Elimination

If the unit doesn't run normally, please check the following items before ask for service.

Phenomenon	Reason	Treatment
The unit can not be activated.	The unit doesn't connect with power supply.	Connect with power supply.
	Low voltage.	Check if circuit voltage is within rated scope.
	Fuse broken or breaker trips off.	Replace fuse or connect breaker.
The unit operates but stops immediately.	Air inlet/outlet of indoor unit is blocked.	Remove obstacles.
Abnormal cooling or heating.	Air inlet/outlet of indoor unit is blocked.	Remove obstacles.
	Inappropriate temperature setting.	Adjust setting at thermostat.
	Doors or windows are opened.	Close the door or windows.
	Direct sunshine.	Draw curtain or louver.
	Too much heat source in the room.	Reduce heat source.
	Filter screen is blocked by dirt.	Clean the filter.

NOTE: If reasons are still unclear after checking above items, please contact Gree service center and show phenomena and models.

Following circumstances are not malfunction.

“Malfunction”		Reason
Unit doesn’t run.	When unit is started immediately after it is just turned off.	Overload protection switch makes it run after 3 minutes delay.
	When power is turned on.	Standby operating for about 1 minute.
Mist comes from the unit.	Under cooling.	Indoor high humidity air is cooled rapidly.
The unit emits noise.	Slight cracking sound is heard when just turned on.	It is noise when electronic expansion valve initialization.
	There is consecutive sound when cooling.	That's sound for gas refrigerant flowing in the unit.
	There is sound when unit starts or stops.	That's sound for gas refrigerant stops flowing.
	There is slight and consecutive sound when unit is running or after running.	That's sound for operation of drainage system.
The unit blows out dust.	When unit runs after no operation for a long period.	Dust in indoor unit is blew out.
The unit emits odor.	Operating.	The room odor absorbed by the unit is blew out again.
Indoor unit still runs after switch off.	After every indoor unit receive "stop" signal, fan will keep running.	Indoor fan can be set as “ON” or “AUTO” mode. Under “ON” mode, indoor fan will keep running after switch off the unit.

There are LED indicators on the main board of the indoor unit, which are used to display the operating status and malfunction information of the unit.

LED indicator	Color	Function
Power Indicator	Red	Indoor unit main board is powered on, Power Indicator is on.
Running Indicator	Green	After detecting the indoor fan turn-on signal, the running indicator light is on, when detecting the indoor fan turning-off signal, the running indicator light is off. When detecting a system failure, the running indicator light flashes.

Different running indicator flashing light means different system failure.

malfunction	Running Indicator status	Remark
Indoor Jumper cap failure	Light out 3S then flash once	Flash means light on 0.5S then light out 0.5S
Indoor fan failure	Light out 3S then flash twice	
Indoor tube temperature sensor failure	Light out 3S then flash four times	

7 Maintenance and Care

Regular check, maintenance and care should be performed by professional personnel, which will prolong the unit life span.

7.1 Drain Pipe

Regularly check if the drain pipe is clogged in order to drain condensate smoothly.

7.2 Notice before Seasonal Use

(1) Check if the inlet/outlet of the indoor unit is clogged.

(2) Check if the ground wire is grounded well.

(3) Check if the filter screen has been seated snugly.

(4) Check if the unit is installed firmly. If there is something abnormal, please contact the local appointed service center.

7.3 Maintenance after Seasonal Use

(1) Cut off main power supply of the unit.

(2) Clean filter screen of indoor units.

(3) Clean the dust off the indoor units.

(4) In the event of rusting, use anti-rust paint to stop spreading of rust.

7.4 Parts Replacement

Purchase parts from local appointed service center or dealer if necessary.

8 After-Sales Service

In case the air-conditioning unit you bought has any quality problem or you have any inquiry, please contact the local after-sales service agency designated by factory.

Warranty should meet the following requirements:

(1) First run of the unit should be operated by professional personnel from factory appointed service center.

(2) Only factory manufactured accessories can be used on the machine.

(3) All the instructions listed in this manual should be followed.

(4) Warranty will be automatically invalid if fails to obey any item mentioned above.