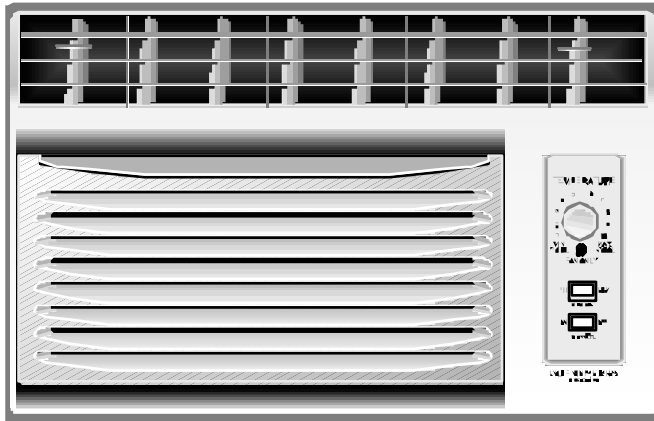


Haier

Domestic Air Conditioner

SERVICE MANUAL



Model
HW-05LN03

● **Feature**

- Anti-mold filter
- Mechanical control
- Easy clean filters
- Slide chassis
- 4-way airflow direction
- 2 cool settings, 2 fan settings

Content

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1. Product Code Illumination and Series introduction

1). Model code rule description

Model identification:

$$\frac{H}{A} \quad \frac{W}{B} - \frac{\quad}{C} \quad \frac{\quad}{D \quad E} \quad \frac{\quad}{F}$$

A: Abbreviation of Haier

B: Abbreviation of Window

C: Nominal cooling capacity (BTU/h) with the first two numbers based on one thousand unit.

D: Function code

C - Cooling only

H - Heating pump

E - Electric aided heating

E: Developing sequence

F: The type of power supply

Examples:

HW-05LN03

It represents window air conditioner. Cooling capacity is 5000 BTU/h and the power supply is 220V / 50Hz.

2). Standard situation/conditions

| No. | Operating condition | Indoor air state | | outdoor air state | |
|-----|----------------------------|------------------|------|-------------------|------|
| | | D.B. | W.B. | D.B. | W.B. |
| 1 | Nominal cooling | 27 | 19 | 35 | 24 |
| 2 | Nominal heating | / | / | / | / |
| 3 | Nominal electrical Heating | / | / | / | / |

3) Brief introduction of window air conditioner series

1. Temperature set knob can adjust the temperature of the air in room
2. Function set knob can control the fan speed as well as the cooling speed.
3. Vent helps you to exhaust any stale unwanted air in the room and draw fresh outside air in the room.
4. Air directional louvers can control airflow up - down - right side - left side.

2. Specification

| Item | | Unit | HW-05LN03 | |
|------------------|-------------------------|------------------------------------|---------------|-----------------|
| Cooling capacity | | BTU/h | 5000 | |
| Heating capacity | | BTU/h | / | |
| Power supply | | | 1, 220, 50 | |
| Cooling | Power input | W | 520 | |
| | Running current | A | 2.4 | |
| | EER | BTU/(hW) | 2.82 | |
| Heating | Power input | W | / | |
| | Running current | A | / | |
| | COP | BTU/(hW) | / | |
| Sound Level | Indoor side | dB(A) | 56/55 | |
| | Outdoor side | dB(A) | 59/58 | |
| Dimension | Net(width*depth*height) | mm | 475×365×320 | |
| | Package | mm | 515×411×373 | |
| Weight | Net | Kg | 19 | |
| | Gross | Kg | 22 | |
| Compressor | Manufacture | | RUICHI | |
| | Type | | 39R123BD-64SB | |
| | Oil Charge | ml | 210 | |
| Pressure | Heating side | MPa | 2.65 | |
| | Cooling side | MPa | 0.65 | |
| Refrigerant | Model | | R22 | |
| | Charge | g | 420 | |
| Fan | Type | Indoor unit | | centrifugal fan |
| | | Outdoor unit | | axial fan |
| | Fan Speed | High | r/min | 1030 |
| | | Low | r/min | 980 |
| Air volume | | m ³ | 270 | |
| Moisture removal | | 10 ⁻³ m ³ /h | 2.0 | |

3. Safety and Precaution

SAFETY PRECAUTIONS

WARNING: *Following these basic precautions will reduce the risk of fire, electrical shock, injury or death when using your air conditioner.*



- 1) Air conditioner must be connected to proper electrical outlet with the correct electrical supply. *(see table)*
- ⚠ 2) Proper grounding must be ensured to reduce the risk of shock and fire. **DO NOT CUT OR REMOVE THE GROUNDING PRONG.** If you do not have a three-prong electric receptacle outlet in the wall, have a certified electrician install the proper receptacle. The wall receptacle **MUST** be properly grounded.
- ⚠ 3) Do not use if power cord is frayed or otherwise damaged. Also avoid using it if there are cracks or abrasion damage along the length, plug or connector.
- ⚠ 4) **DO NOT USE AN ADAPTER OR AN EXTENSION CORD.**
- ⚠ 5) When installing your air conditioner in a window, make sure the window is strong enough to hold the weight of the air conditioner. You also want to secure and correctly install your air conditioner properly to prevent it from falling. Extra brackets and or support may be required depending on your window.
- 6) Do not block airflow inside or outside the air conditioner with blinds, drapes, protective covers, shrubs or bushes.
- 7) Be careful of sharp edges on the front and rear fins of the unit that could cut and cause serious injury.
- 8) Be careful when lifting the air conditioner to install or remove the unit. Always use two or more people for this.
- 9) Always unplug the air conditioner before servicing it or moving it.

4. Warning and Cautions

WARNINGS



Following the safety messages is very important.

These messages can save you from being injured or killed.

Warning symbols alert you to be careful and means **Danger**. Always follow instructions to be safe and reduce chances of injury or death.

Warning and **Danger** signs will precede safety messages.

Electrical Safety



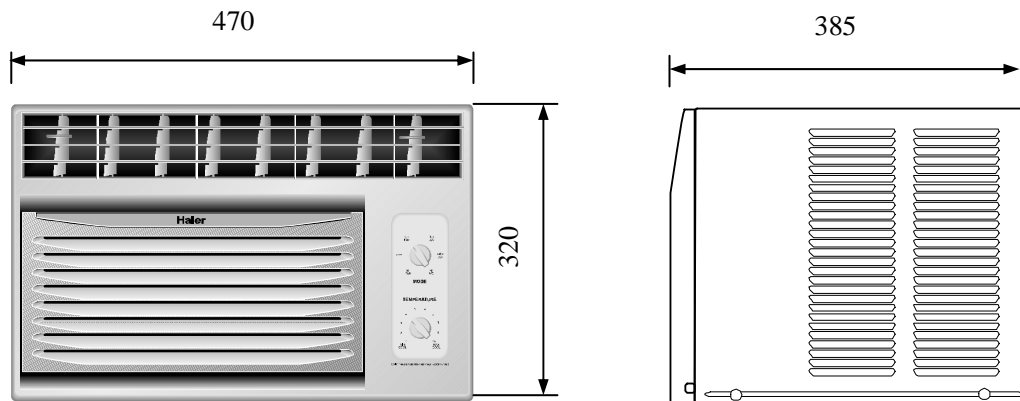
Grounding: This room air conditioner must be grounded. Grounding reduces the risk of electric shock by providing an escape wire for the electric current. The power cord has a grounding wire with a grounding plug. Plug it into an outlet that is properly installed and grounded.

WARNING: Improper use of the grounding plug can result in a risk of electric shock. Call a qualified electrician if you don't understand the grounding instructions or if you are not sure if the air conditioner is properly grounded. If the wall outlet is not grounded, please contact an electrician to have it replaced with a properly grounded outlet.

Do not, under any circumstances, cut or remove the third (ground) prong from the power cord.









Adapter Plug: We strongly advise against using an adapter plug.

5. Net Dimension



6. Installation and Accessory Parts

Before you install your air conditioner check the following:

- 1) The unit is free of all obstructions inside and outside the room e.g. drapes, curtains, furniture, plants, shrubs, bushes, trees, other structures like building, garage etc. Air conditioner must have clear unobstructed airflow through the condenser to remove the heat.
 - 2) The window is strong enough to hold the weight of the air conditioner. Extra brackets or supports may be needed depending on your windows. (Brackets or Supports not provided in all models)
 - 3) The window sill and track are strong enough to hold the weight of the air conditioner.
 - 4) The wall is strong enough to hold the unit. Extra brackets or supports may be needed depending on the wall. (Brackets or Supports not provided in all models).
 - 5) There is adequate and proper power supply near the air conditioner.
-  6) DO NOT use adapter plugs.
 -  7) DO NOT use extension cords.
 -  8) DO NOT cut or remove the ground prong.
 -  9) DO NOT modify the plug or the electrical wall outlet in any way. If plug does not fit the electrical outlet have a certified electrician do the necessary change.
 -  10) DO NOT connect electrical power to the unit before installation.
 -  11) DO NOT use if power cord is worn out, frayed or otherwise damaged. Avoid using if there are cracks or abrasion damage along the length, plug or connection.
 -  12) DO NOT install into any existing cabinet or sleeve which does not have side and top air vents.
 -  13) Be careful of exposed sharp edges of the cabinet and sharp coils (fins) on the back of the unit that could cut and cause serious injury.

Installing Unit into A Window

Window Opening Requirements

The air conditioner is designed to fit into double or single hung sash type windows. Each of the units comes with an installation kit that provides adjustable mounting louvers, to fill the gaps between the sides of the unit, and the window frame. The chart below reflects the dimensions of the units with, and without installation kits. Measure your window opening width and compare it to the chart below to ensure that it meets the minimum and maximum window width requirements.

Installation and Accessory Parts

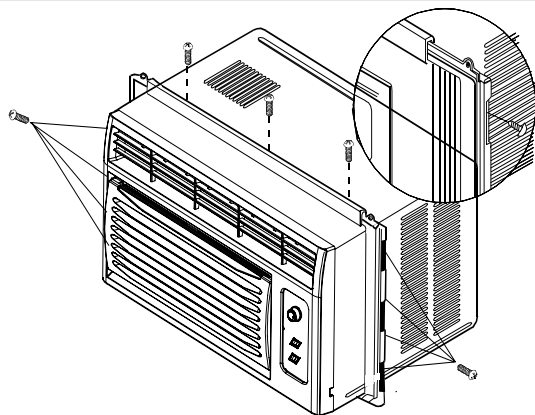
| Model Dimension | HW-05LN03 |
|--------------------|--------------------|
| A(inch) | $5\frac{3}{25}$ " |
| B(inch) | $12\frac{3}{5}$ " |
| C(inch) | $13\frac{2}{5}$ " |
| D(inch) Max | $33\frac{1}{5}$ " |
| D(inch) Min | $22\frac{1}{2}$ " |
| Case High | $12\frac{7}{16}$ " |
| Case Width | $18\frac{9}{16}$ " |
| Case Depth | $13\frac{3}{8}$ " |

1 ASSEMBLE CURTAINS/TOP RAIL

Install top rail with 3 short screws $13/32$ ".

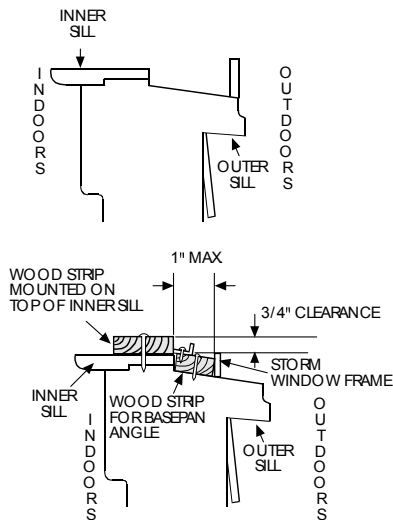
Insert the side curtains into the top and bottom rails of the air conditioner. Fasten the curtains to the unit with 8 short screws $13/32$ ".

Caution: Never expose plastic front or grille to extreme temperatures.



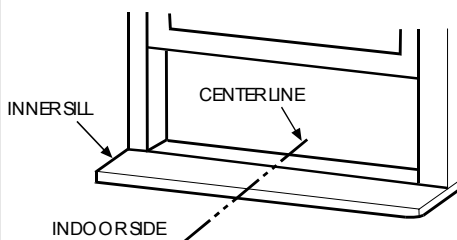
2 PREPARE WINDOW FOR INSTALLATION

1. This unit is designed for installation in standard double hung windows with actual opening widths of 22" to 36". The upper and lower sash must open sufficiently to allow a clear vertical opening of 14" from the bottom of the sash to the window stool.
2. If storm window presents interference, fasten a 2" wide wood strip (not included) (OUTER SILL) to the inner window sill across the full width of the sill. The wood strip should be thick enough to raise the height of the window sill so that the unit can be installed without interference by the storm window frame (STORM WINDOW FRAME) or wood strip (OUTDOORS) to help condensation to drain properly to the outside.
3. Install a second wood strip (approximately 6" long by 3/2" wide and same thickness as first strip) in the center of the outer sill flush against the back of the inner sill. This will raise basepan angle.
4. If the distance between STORM WINDOW FRAME and WOOD STRIP MOUNTED ON TOP OF INNER SILL is more than 1", two of wood strip are not necessary.



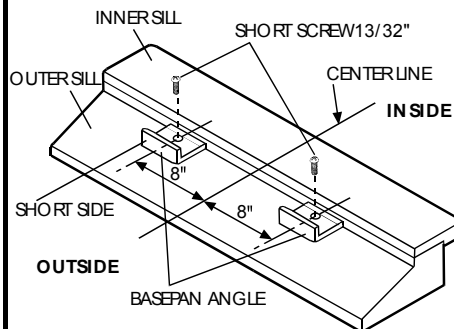
3 LOCATING UNIT IN WINDOW

Open the window and mark center line on the center of the inner sill.



4 ATTACH BASEPAN ANGLE

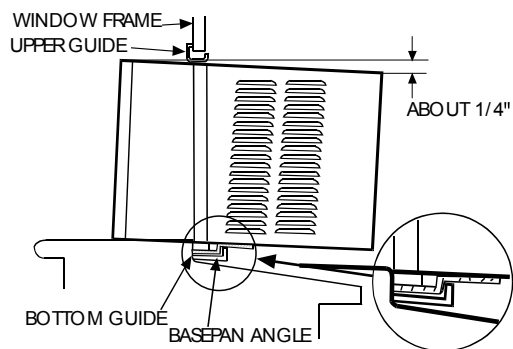
Install the basepan angle behind the inner window sill, with the short side of basepan angle as shown. Use the 2 short screws 13/32" provided. The basepan angle helps to hold unit securely in place. Be sure to place basepan angle edge flush against back of inner sill.



Installation and Accessory Parts

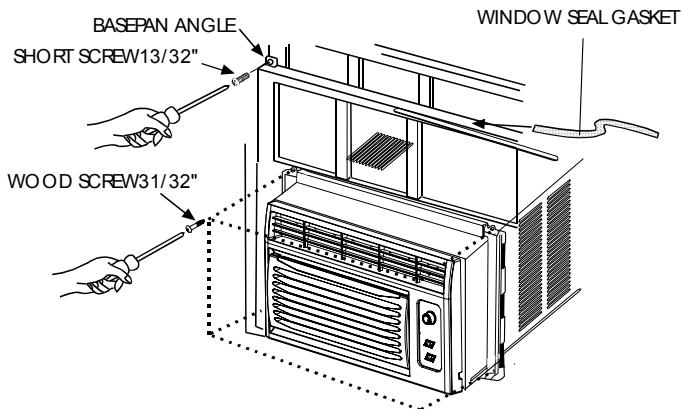
5 INSTALL THE AIR CONDITIONER IN THE WINDOW

Carefully lift the air conditioner and slide it into the open window. Make sure the bottom guide of the air conditioner drops into the notches of the basepan angle. While steadying the air conditioner, carefully bring the window sash down behind the upper guide of the air conditioner.

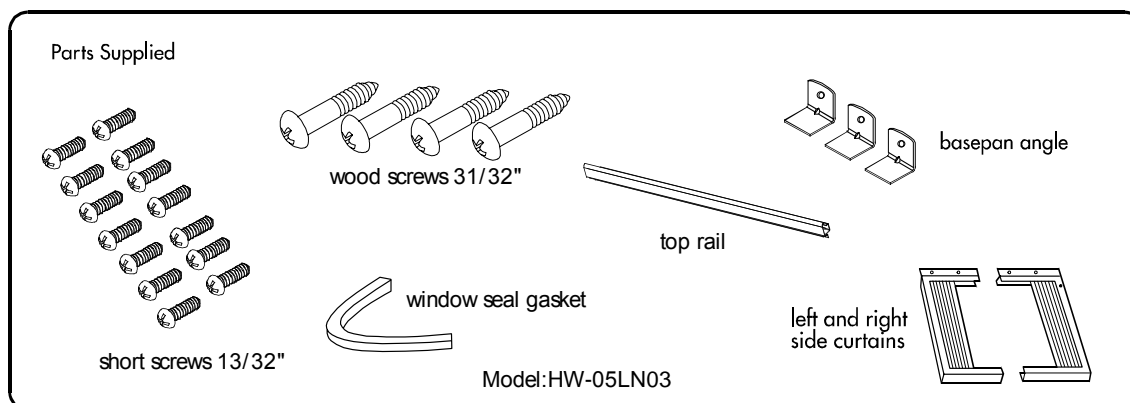


6 INSTALL THE SEAL GASKET AND SASH LOCK

Extend the side curtains to fill the window opening using 4 wood screws 31/32" to secure them. Cut the seal gasket to the window width. Stuff the sash seal between the glass and the window to prevent air and insects from getting into the room. Fasten the basepan angle, using a short screw 13/32".



Parts



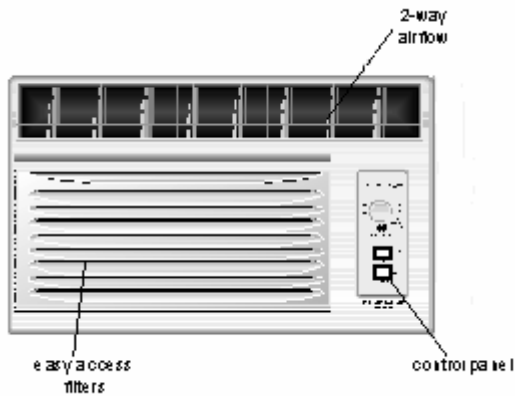
Installation and Accessory Parts

Tools

You will need to have the following tools to help you in the installation of your air conditioner.

- Scissors
- Phillips Screwdriver
- Standard Screwdriver
- Pliers
- Wrench
- Drill and Drill Bits
- Tape Measure
- Gloves
- Level
- Sockets

7. Parts and Functions



MODEL: HW-05LN03

1. Temperature Set Knob

This knob adjusts the temperature of the air. The Higher the setting the cooler the air temperature. With this knob you can set the temperature to your desired comfort level. Min. Cool being the warmest and Max. Cool being the coldest.

2. MODE Set Switch

With this knob you can control the fan speed as well as the cooling speed.

You have 2 Fan speeds to choose from HI and LO.

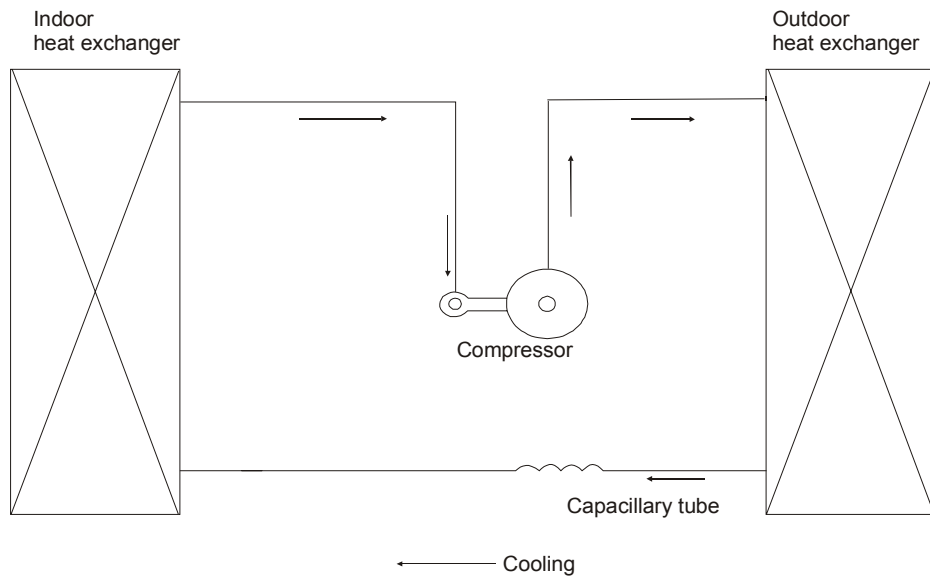
3. 2-Way Air Flow

The air directional louvers let you control the direction of the airflow in your required direction. The airflow can be directed right side – left side.

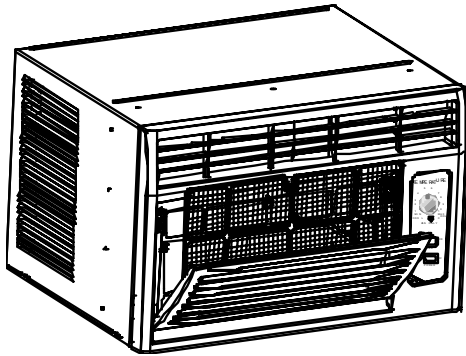
4. Window Install Kit.

Enables you to install the air conditioner in a double hung window. Extra brackets or support may be needed depending on your window.

8. System Flow Chart



9.Maintenance Service and Trouble Shooting



- **Always unplug your air conditioner before cleaning.**
- **The air filter behind the front grille should be checked and cleaned at least once every 2 weeks or more often if necessary.**

To remove:

1. Open the inlet grille downward by pulling out the top of the inlet grille.
2. Remove the air filter from the front grille assembly by pulling the air filter up slightly.
3. Clean the filter with warm, soapy water below 40°C(104°F).
4. Rinse and gently shake the water from the filter and let it dry before replacing it.

DO NOT use your air conditioner without the air filter in place.

- **To clean the front panels or the cabinet DO NOT use harsh chemicals, abrasives, ammonia, chlorine, bleach, concentrated detergents, solvents or metal scouring pads.**

Some of these chemicals may dissolve, damage and/or discolor your air conditioner .

- **Always use a soft cloth dampened with water or mild soap and water solution to wipe the front of the cabinet.**

Wipe dry with a soft cloth.

Maintenance Service and Trouble Shooting

Trouble Shooting

If air conditioner does not operate:

- Check if unit is plugged in. The plug may have come loose.
- Check if the unit is in "off" mode.
- The fan control may be in "off" position.

Air from air conditioner is warm:

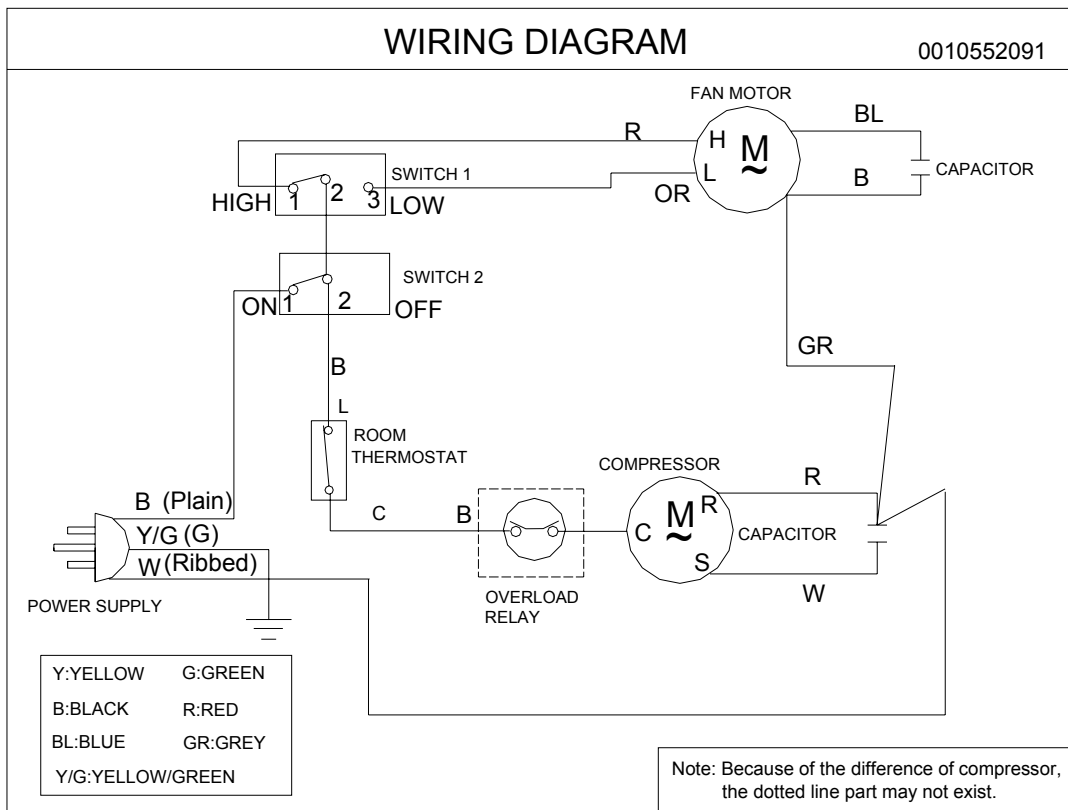
- The A/C setting may need to be raised.
- The temperature outside the room is below 65 ° F. The compressor will not cycle on if the temperature outside is below 65 ° F.

Ice formation on cooling coils:

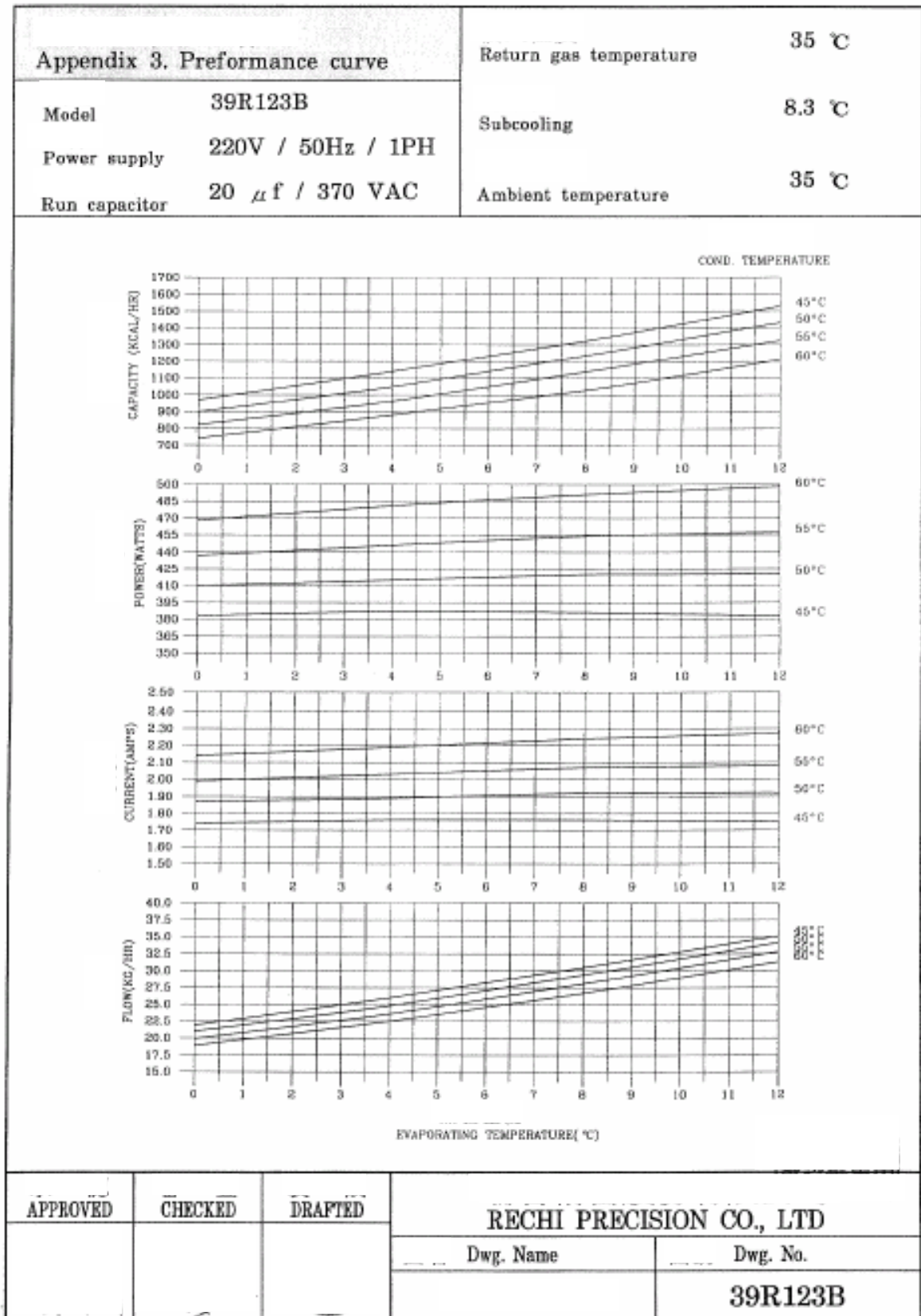
- Outside temperature too cold .Set the unit on fan only setting to defrose ice.
- Lower temperature setting. Temperature setting may be too cold.
- Unit BTU may be too high for the room.

- To store your air conditioner, after the season, remove the unit from the window as per the installation guide. Repack the unit in its original box and store away. If you do not intend to remove it from the window then cover the outside with a winter cover.
This can be purchased from the retailer where you purchased your air conditioner or from your local hardware store.
- Before putting away your unit make sure any water left in the pan is removed and drained away. Water left in the pan could lead to Rusting or damage to the electrical connections.

10.Wiring Diagram



11. Compressor performance diagram



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