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FRIEDRICH MR36Y3F Owner's Manual

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Refrigerant

R410A

Ceiling S

SPLIT TYPE AIR CONDITIONING

INSTALLATION INSTRUCTIONS

SHEET

(PART NO. 9364488028)

For authorized service personnel only.

IMPORTANT!

Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

For safe installation and trouble-free operation, you must:

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all danger, warning, and caution notices given in this manual.

WARNING:

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION:

This symbol refers to a hazard or unsafe practice which can result in personal injury and the potential for product or property damage.

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This air conditioner uses new re

The basic installation work procedures are the same as conventional r
However, pay careful attention to the following points:

- ① Since the working pressure is 1.6 times higher than that of conv
installation and service tools are special. (See the table below.)
Especially, when replacing a conventional refrigerant model with
conventional piping and flare nuts with the R410A piping and flare
- ② Models that use refrigerant R410A have a different charging port
conventional refrigerant and for safety. Therefore, check beforeha
1/2 UNF 20 threads per inch.]
- ③ Be more careful that foreign matter (oil, water, etc.) does not ente
storing the piping, securely seal the openings by pinching, taping, c
- ④ When charging the refrigerant, take into account the slight change
always charge from the liquid phase side whose composition is sta
- ⑤ When moving, if the compressor stops during pump down, close th

Special tools for R410A

Tool name	
Gauge manifold	Pressure is high and cannot be measured wi refrigerants, the diameter of each port has be It is recommended the gauge with seals -0.1 3.8 MPa (-76 cmHg to 38 kgf/cm ²) for low pr
Charge hose	To increase pressure resistance, the hose ma
Vacuum pump	A conventional vacuum pump can be used by
Gas leakage detector	Special gas leakage detector for HFC refrige

Copper pipes

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 40 mg/10 m. Do not use copper pipes having a collapsed, deformed or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants.

As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials.

Thicknesses of copper pipes used with R410A are as shown in the table. Never use copper pipes thinner than that in the table even when it is available on

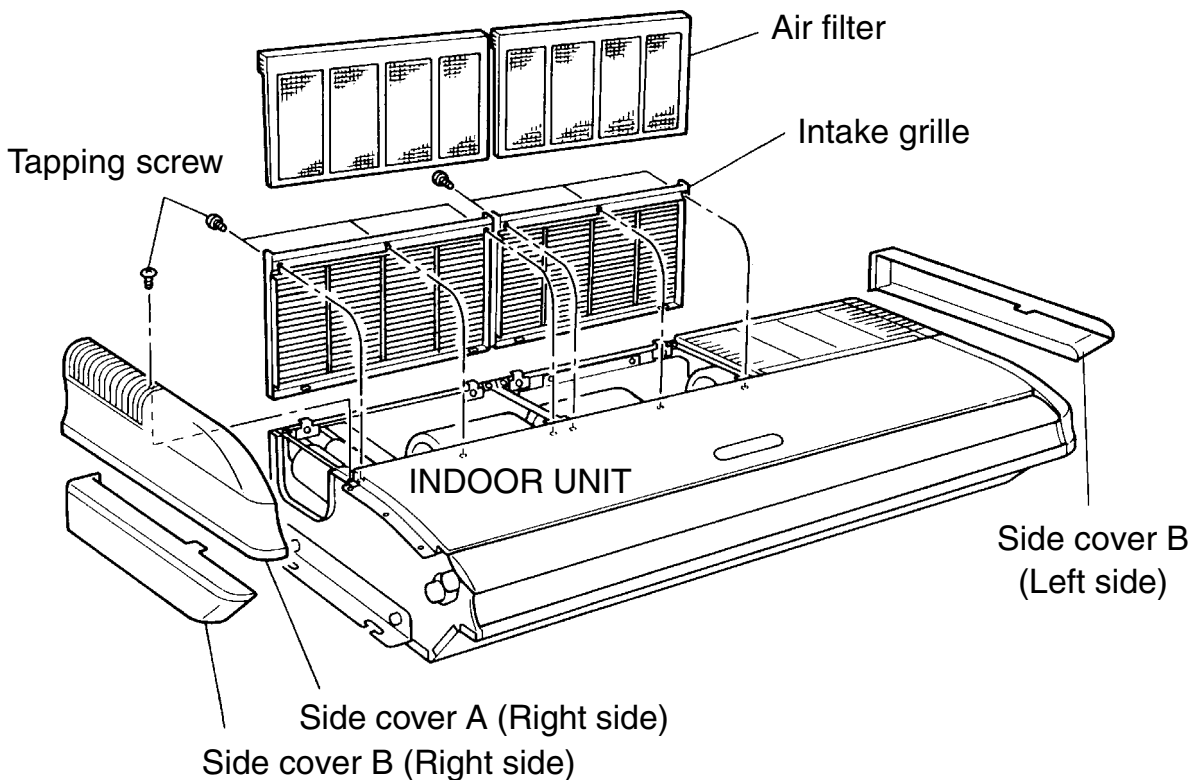
INSTALLATION PROCEDURE

1

PREPARING INDOOR UNIT INSTALLATION

REMOVE THE INTAKE GRILLE AND SIDE COVER

- (1) Remove the two Air filters.
- (2) Remove the two Intake grilles.
 - For ④ Left rear drain and ⑤ Left drain: Remove air filters and intake grilles at three places. (Refer to “2 INDOOR UNIT INSTALLATION”.)
- (3) Remove the Side cover A (Right side) and Side cover B (Right and Left side).
 - For ⑤ Left drain : Remove both the Side cover A (Right and Left side). (Refer to “2 INDOOR UNIT INSTALLATION”.)
- (4) This air conditioner can be set up to intake fresh air. For information about how to install for fresh-air intake, refer to “10 FRESH-AIR INTAKE”.



2

INDOOR UNIT INSTALLATION

3

CONNECTING THE PIPE

CAUTION

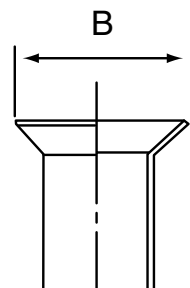
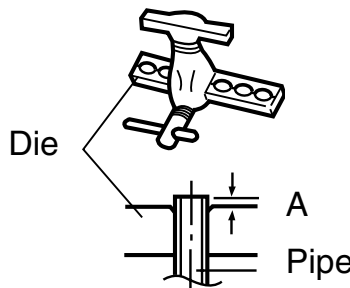
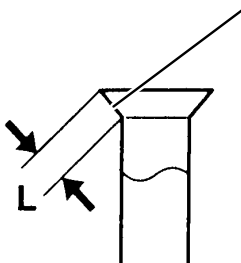
- ① Do not use mineral oil on flared part. Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- ② While welding the pipes, be sure to blow dry nitrogen gas through them.
- ③ The maximum lengths of this product are shown in the table. If the units are further apart than this, correct operation can not be guaranteed.

1. FLARING

- (1) Cut the connection pipe to the necessary length with a pipe cutter.
- (2) Hold the pipe downward so that cuttings will not enter the pipe and remove the burrs.
- (3) Insert the flare nut (always use the flare nut attached to the indoor and outdoor units respectively) onto the pipe and perform the flare processing with a flare tool.

Use the special R410A flare tool, or the conventional flare tool.

Check if [L] is flared uniformly and is not cracked or scratched.



Pipe outside diameter	Dimension A
	Flare tool for R410A, clutch type
6.35 mm (1/4 in.)	0 to 0.5 mm (0 to 0.0197 in.)
9.52 mm (3/8 in.)	
12.70 mm (1/2 in.)	
15.88 mm (5/8 in.)	

 **WARNING**

- ① **Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.**
- ② **Match the terminal board numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.**
- ③ **Connect the connection cords firmly to the terminal board. Imperfect installation may cause a fire.**
- ④ **Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)**
- ⑤ **Always connect the ground wire.**

HOW TO CONNECT WIRING TO THE TERMINALS

A. For solid core wiring

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm (15/16") to expose the solid wire.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- (4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.

B. For strand wiring

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip

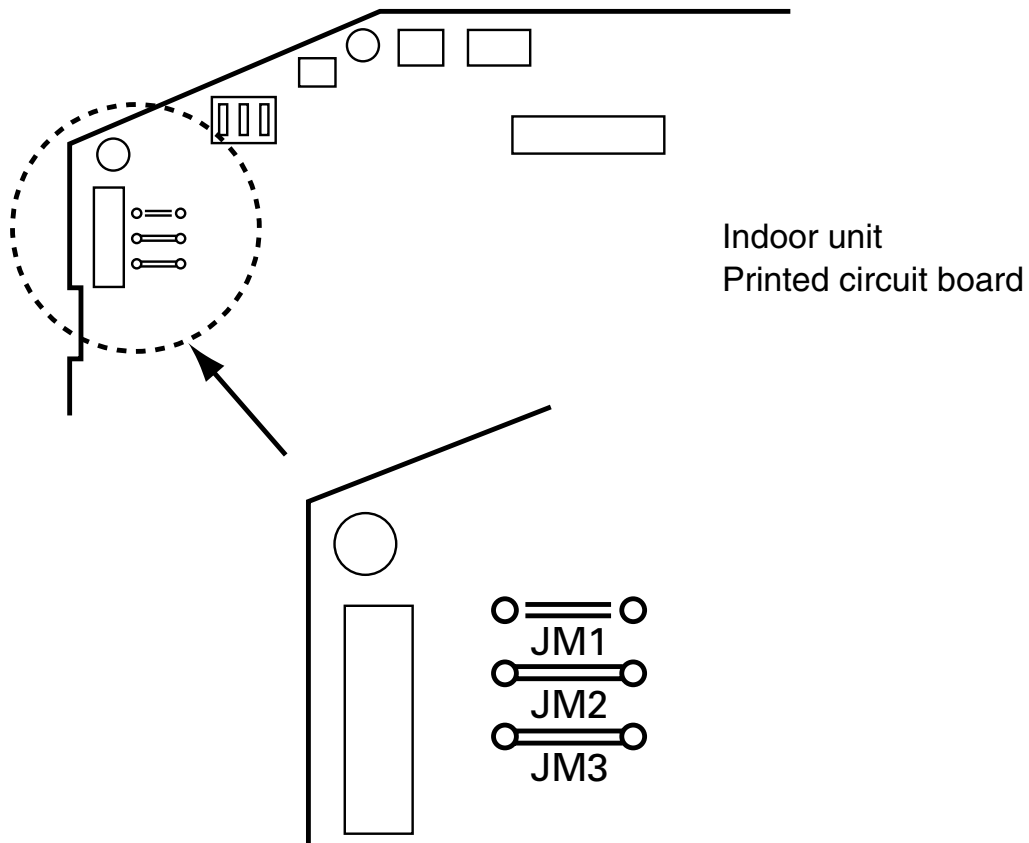
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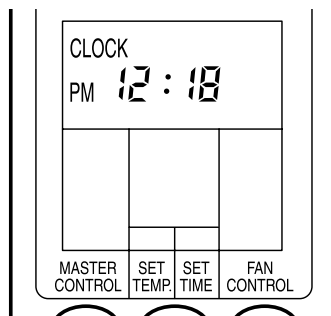
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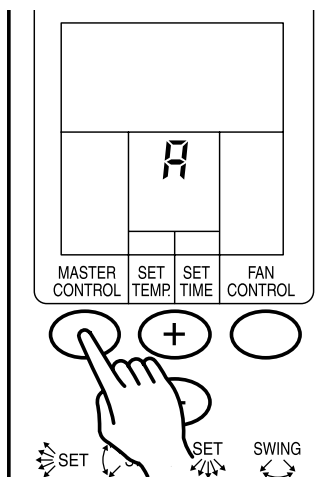


- Remote control unit settings

(1) Press the START/STOP button and display only the clock.

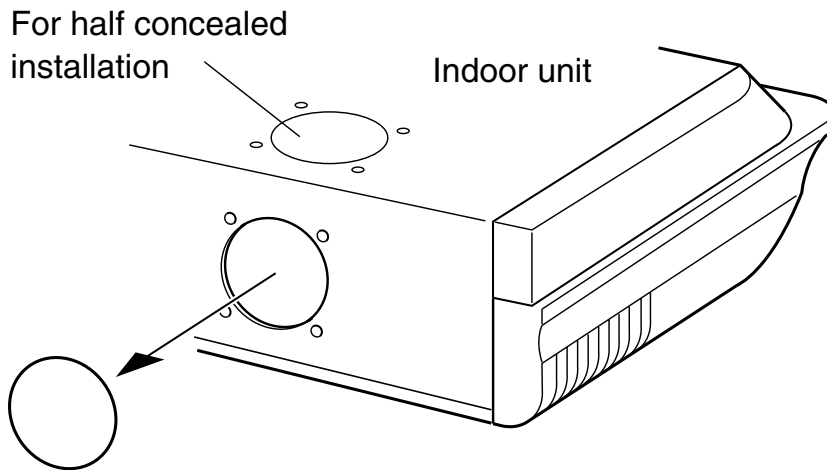


(2) Press the MASTER CONTROL button continuously for more than five seconds to display the current signal code.



FRESH-AIR INTAKE

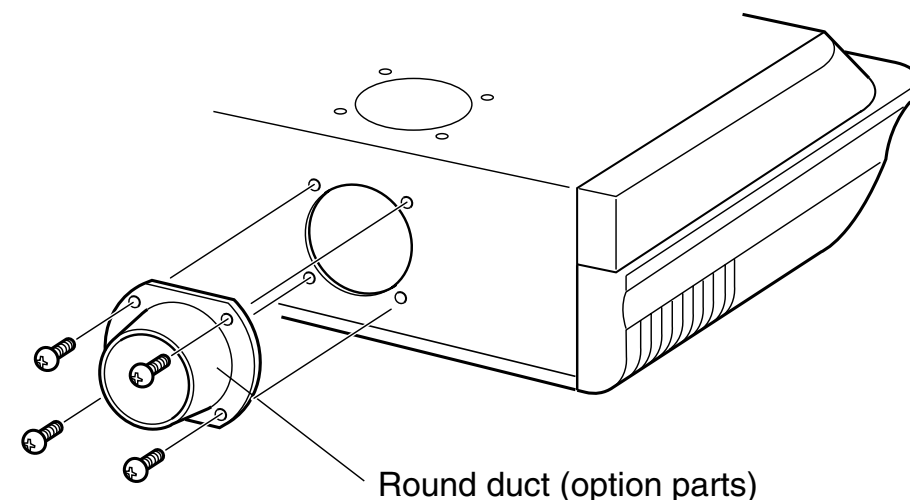
- (1) Open up the knockout hole for the fresh-air intake, as shown in the figure. (If using half-concealed installation, open up the top knockout hole instead.)



⚠ CAUTION

- ① When removing the cabinet (iron plate), be careful not to damage the indoor unit internal parts and surrounding area (outer case).
- ② When processing the cabinet (iron plate), be careful not to injure yourself with burrs, etc.

- (2) Fasten the round flange (optional) to the fresh-air intake, as shown in the figure. (If using half-concealed installation, attach to the top.)



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Error code	Error contents
13	Outdoor signal abnormal
14	Excessive outdoor pressure (permanent stop)
15	Compressor temperature sensor
16	Pressure switch error
17	IPM error
18	CT error
19	Active filter module (AFM) error
1A	Compressor does not operate
1b	Outdoor unit fan error
1c	Communication error (inverter → multicontroller)
1d	2 way valve sensor error
1E	Expansion valve error
1F	Connection indoor unit error

SPECIAL INSTALLATION METHODS

CAUTION

- ① When setting the rotary switch and DIP switches, do not touch any other parts on the circuit board directly with your bare hands.
- ② Be sure to turn off the main power.

1. GROUP CONTROL SYSTEM