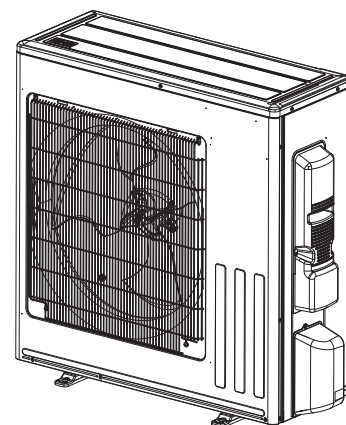


TECHNICAL & SERVICE MANUAL

Outdoor unit

R454B

Models

SUZ-AA18NL-U1
SUZ-AA24NL-U1
SUZ-AA30NL-U1
SUZ-AA36NL-U1

SUZ-AA18/24/30/36NL

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Service manual

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Indoor unit		Outdoor unit							
		SUZ-							
Service Ref.	Service Manual No.	AA18NL(H)-U1	AA24NL(H)-U1	AA30NL(H)-U1	AA36NL(H)-U1	AA09NLHZ-U1	AA12NLHZ-U1	AA15NLHZ-U1	AA18NLHZ-U1
SLZ-AF09/12/15/18NL-U1	OCH857	○	—	—	—	○	○	○	○
SEZ-AE09/12/15/18NL-U1	HWE24090	○	—	—	—	○	○	○	○
PEAD-AA09/12/15/18/24/30/36NL-U1	HWE24030	○	○	○	○	○	○	○	○
SVZ-AP12/18/24/30/36NL-U1	—	○	○	○	○	—	○	—	○
MLZ-KX09/12/18NL-U1	OBH943	○	—	—	—	○	○	—	○
MSZ-EX09/12/15/18NL(B/S/W)-U1	TBH238	○	—	—	—	○	○	○	○
MFZ-KX09/12/15/18NL-U1	OBH944	○	—	—	—	○	○	○	○

MEANING OF SYMBOLS DISPLAYED ON THE UNIT

 Refrigerant safety Group A2L	WARNING (Risk of fire)	This unit uses a flammable refrigerant. If the 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 MANUAL 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 MANUAL, INSTALLATION MANUAL, and the like.	

2-1. ALWAYS OBSERVE FOR SAFETY

Before obtaining access to terminal, all supply circuits must be disconnected.

2-2. CAUTIONS RELATED TO NEW REFRIGERANT

Caution for units utilizing refrigerant R454B

Do not use the existing refrigerant piping.

The old refrigerant and lubricant in the existing piping contains a large amount of chlorine which may cause the lubricant deterioration of the new unit.

Make sure that the inside and outside of refrigerant piping is clean and it has no contaminants such as sulfur, oxides, dirt, shaving particles, etc., which are hazard to refrigerant cycle. In addition, use pipes with specified thickness.

Contamination inside refrigerant piping can cause deterioration of refrigerant oil, etc.

Store the piping indoors, and keep both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

The refrigerant oil applied to flare and flange connections must be ester oil, ether oil or alkylbenzene oil in a small amount.

If large amount of mineral oil enters, that can cause deterioration of refrigerant oil, etc.

Charge refrigerant from liquid phase of gas cylinder.

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

Use a vacuum pump with a reverse flow check valve.

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil, etc.

Use the following tools specifically designed for use with R454B refrigerant.

The following tools are necessary to use R454B refrigerant.

Tools for R454B	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adaptor
Torque wrench	Electronic refrigerant charging scale

Handle tools with care.

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Do not use a charging cylinder.

If a charging cylinder is used, the composition of refrigerant will change and the efficiency will be lowered.

Use the specified refrigerant only.

Never use any refrigerant other than that specified.

Doing so may cause a burst, an explosion, or fire when the unit is being used, serviced, or disposed of. Correct refrigerant is specified on name plate of outdoor unit.

If other refrigerant (R22, etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil, etc. We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

[1] Warning for service

- (1) Do not alter the unit.
- (2) For installation and relocation work, follow the instructions in the Installation Manual and use tools and pipe components specifically made for use with refrigerant specified in the outdoor unit installation manual.
- (3) Ask a dealer or an authorized technician to install, relocate and repair the unit.
- (4) This unit should be installed in rooms which exceed the floor space specified in outdoor unit installation manual. Refer to outdoor unit installation manual.
- (5) Install the indoor unit at least 2.5 m above floor or grade level.
For appliances not accessible to the general public.
- (6) Refrigerant pipes connection shall be accessible for maintenance purposes.
- (7) If the air conditioner is installed in a small room or closed room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage. Should the refrigerant leak and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.
- (8) Keep gas-burning appliances, electric heaters, and other fire sources (ignition sources) away from the location where installation, repair, and other air conditioner work will be performed.
If refrigerant comes into contact with a flame, poisonous gases will be released.
- (9) When installing or relocating, or servicing the air conditioner, use only the specified refrigerant written on outdoor unit to charge the refrigerant lines.
Do not mix it with any other refrigerant and do not allow air to remain in the lines.
If air is mixed with the refrigerant, then it can be the cause of abnormal high pressure in the refrigerant line, and may result in an explosion and other hazards.
- (10) After installation has been completed, check for refrigerant leaks. If refrigerant leaks into the room and comes into contact with the flame of a heater or portable cooking range, poisonous gases will be released.
- (11) Do not use low temperature solder alloy in case of brazing the refrigerant pipes.
- (12) When performing brazing work, be sure to ventilate the room sufficiently. Make sure that there are no hazardous or flammable materials nearby.
When performing the work in a closed room, small room, or similar location, make sure that there are no refrigerant leaks before performing the work.
If refrigerant leaks and accumulates, it may ignite or poisonous gases may be released.
- (13) Do not install the unit in places where refrigerant may build-up or places with poor ventilation such as a semi-basement or a sunken place in outdoor: Refrigerant is heavier than air, and inclined to fall away from the leak source.
- (14) Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- (15) 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).
- (16) Do not pierce or burn.
- (17) Be aware that refrigerants may not contain an odour.
- (18) Pipe-work shall be protected from physical damage.
- (19) The installation of pipe-work shall be kept to a minimum.
- (20) Compliance with national gas regulations shall be observed.
- (21) Keep any required ventilation openings clear of obstruction.
- (22) Servicing shall be performed only as recommended by the manufacturer.
- (23) The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
- (24) Maintenance, service and repair operations shall be performed by authorized technician with required qualification.

[2] Cautions for service

- (1) Perform service after recovering the refrigerant left in unit completely.
- (2) Do not release refrigerant in the air.
- (3) After completing service, charge the cycle with specified amount of refrigerant.
- (4) When performing service, install a filter drier simultaneously.
Be sure to use a filter drier for new refrigerant.

[3] Additional refrigerant charge

When charging directly from cylinder

- (1) Check that cylinder for R32 available on the market is a syphon type.
- (2) Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)

[4] Cautions for unit using R454B refrigerant

Basic work procedures are the same as those for conventional units using refrigerant R410A. However, pay careful attention to the following points.

- (1) Information on servicing
 - (1-1) Checks to the area

Prior to beginning work on systems containing FLAMMABLE REFRIGERANTS, safety checks are necessary to ensure that the risk of ignition is minimized.
For repair to the REFRIGERATING SYSTEM, 1-2 to 1-6 shall be completed prior to conducting work on the system.
 - (1-2) Work Procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapour being present while the work is being performed.
 - (1-3) General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out.
Work in confined spaces shall be avoided.
 - (1-4) Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres.
Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. nonsparking, adequately sealed or intrinsically safe.
 - (1-5) Presence of fire extinguisher

If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand.
Have a dry powder or CO2 fire extinguisher adjacent to the charging area.
 - (1-6) No ignition sources

No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion.
All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space.
Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.
 - (1-7) Ventilated area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out.
The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
 - (1-8) Checks to the refrigerating equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification.
At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.
The following checks shall be applied to installations using FLAMMABLE REFRIGERANTS:

 - the actual REFRIGERANT CHARGE is in accordance with the room size within which the refrigerant containing parts are installed.
 - the ventilation machinery and outlets are operating adequately and are not obstructed.
 - marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
 - refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.
 - (1-9) Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with.
If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.
Initial safety checks shall include:

 - that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
 - that no live electrical components and wiring are exposed while charging, recovering or purging the system.
 - that there is continuity of earth bonding.
- (2) Repairs to sealed components

Sealed electrical components shall be replaced.

(3) Repair to intrinsically safe components

Intrinsically safe components must be replaced.

(4) Cabling

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) 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 re-calibration. (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. Removal of refrigerant shall be according to 2-4.6.

(6) Removal and evacuation

When breaking into the refrigerant circuit to make repairs - or for any other purpose -conventional procedures shall be used. However, for flammable refrigerants it is important that best practice be followed, since flammability is a consideration.

The following procedure shall be adhered to:

- safely remove refrigerant following local and national regulations;
 - evacuate
 - purge the circuit with inert gas
 - evacuate
 - continuously flush or purge with inert gas when using flame to open circuit
 - open the circuit

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes.

For appliances containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process might need to be repeated several times.

Compressed air or oxygen shall not be used for purging refrigerant systems.

For appliances containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum.

This process shall be repeated until no refrigerant is within the system. When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

(7) 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 minimize 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.

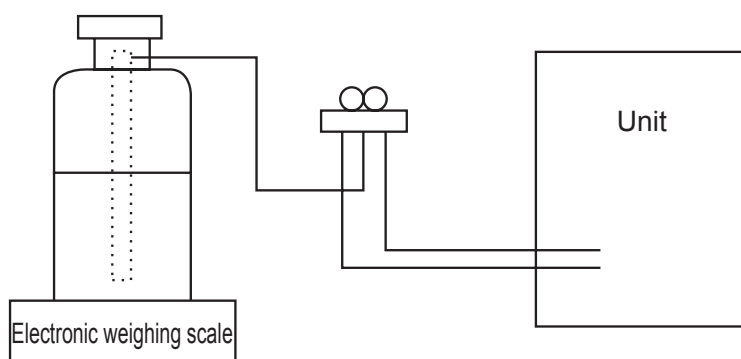
(8) Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely.

Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

Continued to the next page

- a) Become familiar with the equipment and its operation.
- b) Isolate system electrically.
- c) Before attempting the procedure, ensure that:
- mechanical handling equipment is available, if required, for handling refrigerant cylinders.
 - all personal protective equipment is available and being used correctly.
 - the recovery process is supervised at all times by a competent person.
 - recovery equipment and cylinders conform to the appropriate standards.
- d) Pump down refrigerant system, if possible.
- e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- f) Make sure that cylinder is situated on the scales before recovery takes place.
- g) Start the recovery machine and operate in accordance with instructions.
- h) Do not overfill cylinders. (no more than 80 % volume liquid charge)
- i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
- j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- k) Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.
- (9) Labelling
- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant.
- The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.
- (10) Recovery
- When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available.
- All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shutoff valves in good working order.
- Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the flammable refrigerant.
- If in doubt, the manufacturer should be consulted. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.
- The recovered refrigerant shall be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.
- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.
- The compressor body shall not be heated by an open flame or other ignition sources to accelerate this process.
- When oil is drained from a system, it shall be carried out safely.



[5] Service tools

Use the below service tools as exclusive tools for R454B refrigerant.

No.	Tool name	Specifications
①	Gauge manifold	· Only for R454B
		· Use the existing fitting specifications. (UNF1/2)
		· Use high-tension side pressure of 768.7 PSIG [5.3 MPa.G] or over.
②	Charge hose	· Only for R454B
		· Use pressure performance of 738.2 PSIG [5.09 MPa.G] or over.
③	Electronic weighing scale	—
④	Gas leak detector	· Use the detector for R454B.
⑤	Adaptor for reverse flow check	· Attach on vacuum pump.
⑥	Refrigerant charge base	—
⑦	Refrigerant cylinder	· Only for R454B
		· Cylinder with syphon
⑧	Refrigerant recovery equipment	—

3

PART NAMES AND FUNCTIONS

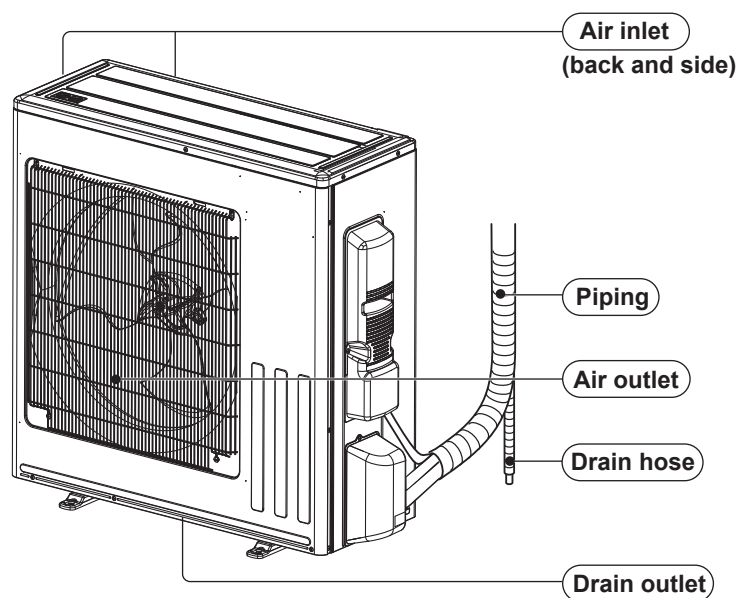
SUZ-AA18NL(H)-U1
SUZ-AA09NLHZ-U1

SUZ-AA24NL(H)-U1
SUZ-AA12NLHZ-U1

SUZ-AA30NL(H)-U1
SUZ-AA15NLHZ-U1

SUZ-AA36NL(H)-U1
SUZ-AA18NLHZ-U1

OUTDOOR UNIT



Outdoor unit model			SUZ-AA18NL(H)	SUZ-AA24NL(H)	SUZ-AA30NL(H)	SUZ-AA36NL(H)
Power supply	V , phase , Hz		208/230 , 1 , 60			
Max. fuse size (time delay)		A	42	40	41	
Min. circuit ampacity		A	25	24	25	
Fan motor		A	0.5			
Compressor	Model		SRB172FQHMT	SRB220FQYMT		
	Refrigeration oil	fl oz. (L) (Model)	14.5 (0.43)/ (RM68EH)	15.6 (0.46)/ (RM68EH)		
Refrigerant control			Linear expansion valve			
Sound level*1	Cooling	dB(A)	54	55		
	Heating	dB(A)	55			
Air flow High - Med. - Low	Cooling	CFM	2193-2193-1097	1974-1974-1097		
	Heating	CFM	1949 - 1949 - 1364			
Fan speed High - Med. - Low	Cooling	rpm	900-900-450	810-810-450		
	Heating	rpm	800-800-560			
Defrost method			Reverse cycle			
Dimensions	W	in.	33-1/16			
	D	in.	13			
	H	in.	34-5/8			
Weight		lb.	115	117		
External finish			Munsell 3Y 7.8/1.1			
Control voltage (by built-in transformer)		V DC	12 - 24			
Refrigerant piping			Not supplied			
Refrigerant pipe size (Min. wall thickness)	Liquid	in.	1/4 (0.0315)			
	Gas	in.	1/2 (0.0285)	5/8 (0.0315)		
Connection method	Indoor		Flared			
	Outdoor		Flared			
Between the indoor & outdoor units	Height difference	ft.	50	100		
	Piping length	ft.	100			
Refrigerant charge (R454B)			2 lb. 16 oz.	3 lb. 4 oz.		

Note: Test conditions are based on AHRI 210/240.

Rating conditions (Cooling) — Indoor: 80°F D.B., 67°F W.B., Outdoor: 95°F D.B., (75°F W.B.)

(Heating) — Indoor: 70°F D.B., 60°F W.B., Outdoor: 47°F D.B., 43°F W.B.

OPERATING RANGE

(1) POWER SUPPLY

	Rated voltage	Guaranteed voltage (V)
Outdoor unit	208/230 V 1 phase 60 Hz	Min. 187 208 230 Max. 253

Outdoor unit model			SUZ-AA09NLHZ	SUZ-AA12NLHZ	SUZ-AA15NLHZ	SUZ-AA18NLHZ
Power supply	V , phase , Hz		208/230 , 1 , 60			
Max. fuse size (time delay)		A	41	42		
Min. circuit ampacity		A	24	25		
Fan motor		A	0.5			
Compressor	Model		SRB172FQHMT			
	Refrigeration oil	fl oz. (L) (Model)	14.5 (0.43)/ (RM68EH)			
Refrigerant control			Linear expansion valve			
Sound level*1	Cooling	dB(A)	54		55	
	Heating	dB(A)	55			
Air flow High - Med. - Low	Cooling	CFM	2193-2193-1097			
	Heating	CFM	1949 - 1949 - 1364			
Fan speed High - Med. - Low	Cooling	rpm	900-900-450			
	Heating	rpm	800-800-560			
Defrost method			Reverse cycle			
Dimensions	W	in.	33-1/16			
	D	in.	13			
	H	in.	34-5/8			
Weight		lb.	115			
External finish			Munsell 3Y 7.8/1.1			
Control voltage (by built-in transformer)		V DC	12-24			
Refrigerant piping			Not supplied			
Refrigerant pipe size (Min. wall thickness)	Liquid	in.	1/4 (0.0315)			
	Gas	in.	3/8 (0.0315)		1/2 (0.0285)	
Connection method	Indoor		Flared			
	Outdoor		Flared			
Between the indoor & outdoor units	Height difference	ft.	50			
	Piping length	ft.	100			
Refrigerant charge (R454B)			2 lb. 16 oz.			

Note: Test conditions are based on AHRI 210/240.

Rating conditions (Cooling) — Indoor: 80°F D.B., 67°F W.B., Outdoor: 95°F D.B., (75°F W.B.)

(Heating) — Indoor: 70°F D.B., 60°F W.B., Outdoor: 47°F D.B., 43°F W.B.

OPERATING RANGE

(1) POWER SUPPLY

	Rated voltage	Guaranteed voltage (V)
Outdoor unit	208/230 V 1 phase 60 Hz	Min. 187 208 230 Max. 253

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OUTLINES AND DIMENSIONS

SUZ-AA18NL(H)-U1
SUZ-AA09NLHZ-U1

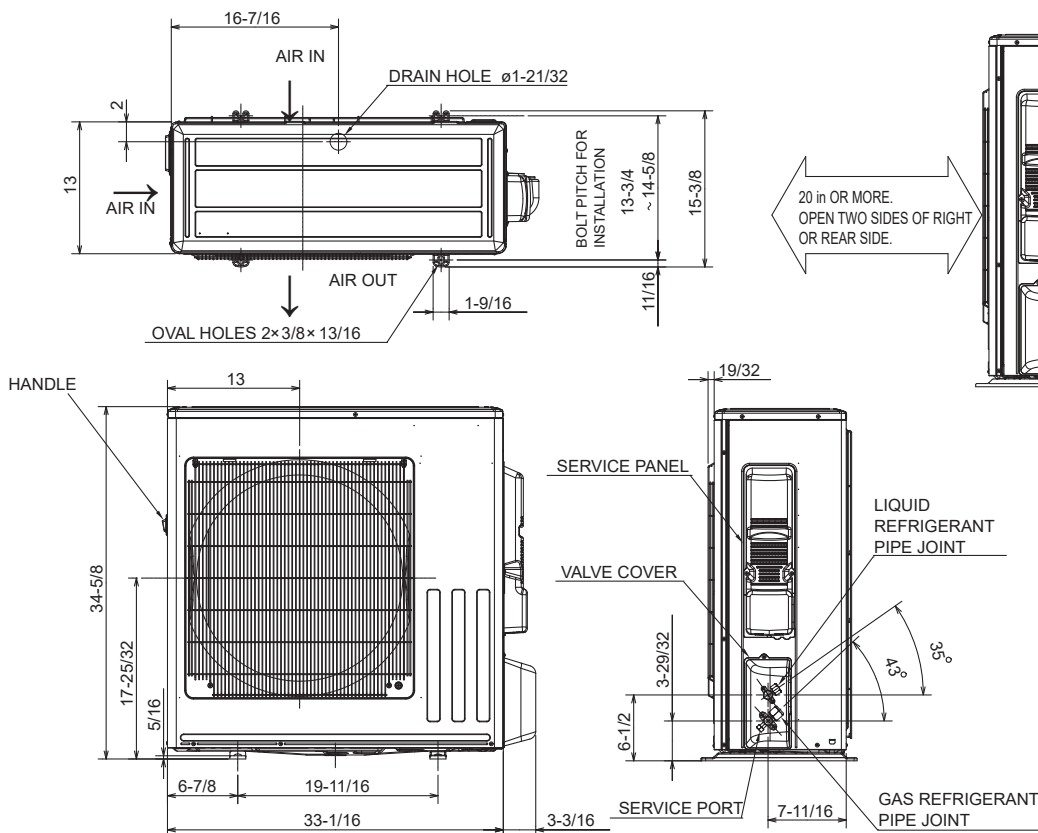
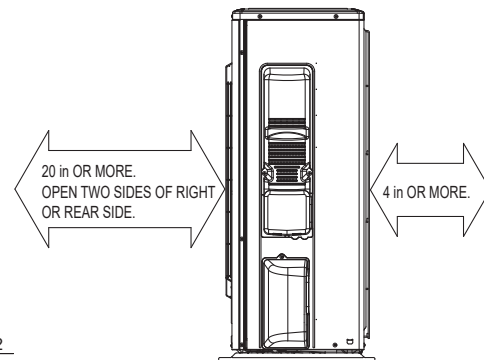
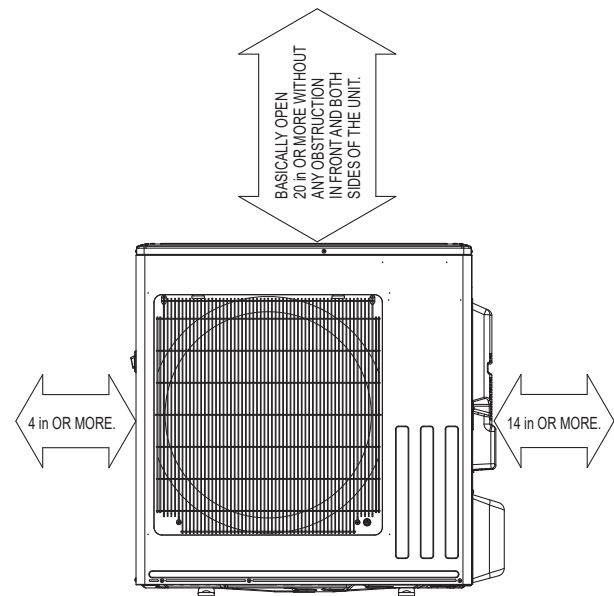
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SUZ-AA12NLHZ-U1

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SUZ-AA15NLHZ-U1

SUZ-AA36NL(H)-U1
SUZ-AA18NLHZ-U1

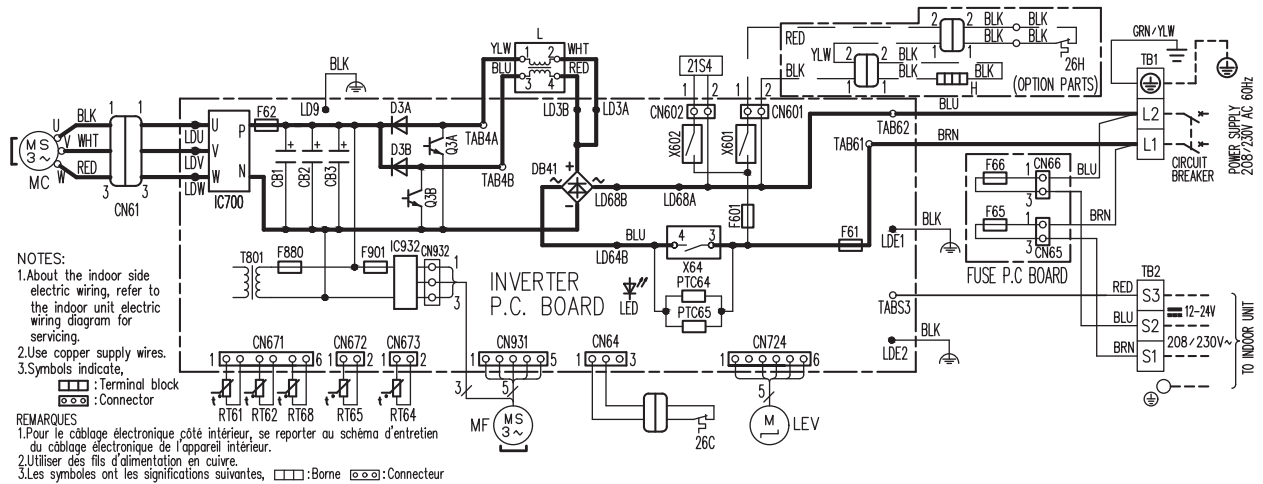
Unit: inch

REQUIRED SPACE



REFRIGERANT PIPE JOINT	LIQUID REFRIGERANT PIPE	FLARED ø6.35 (1/4")
	GAS REFRIGERANT PIPE	AA09/12 : FLARED ø9.52 (3/8") AA15/18 : FLARED ø12.7 (1/2") AA24/30/36 : FLARED ø15.88 (5/8")

SUZ-AA18NL-U1

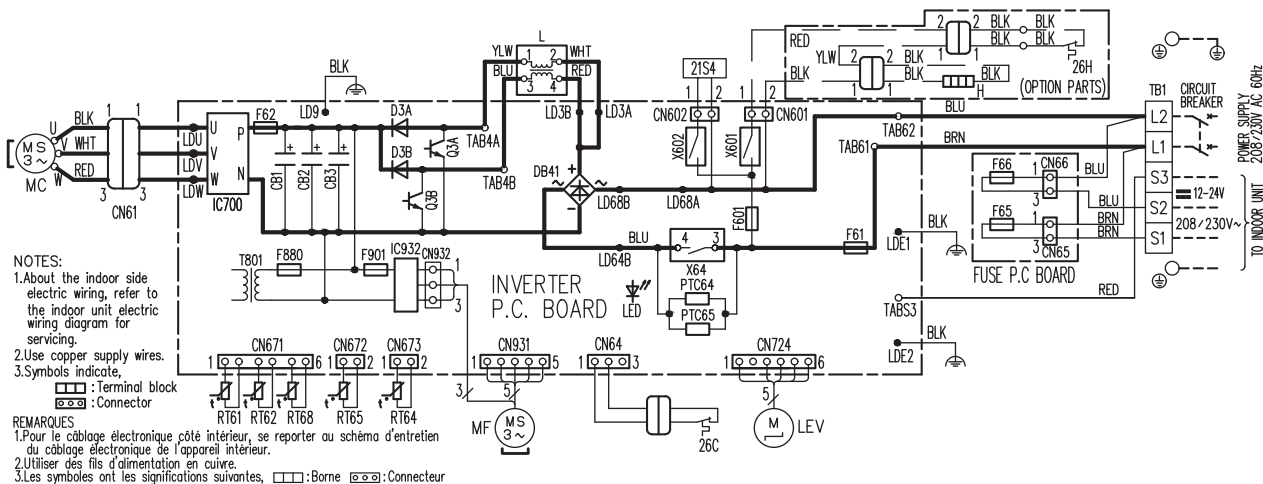


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1,CB2,CB3	SMOOTHING CAPACITOR	L	REACTOR	RT65	AMBIENT TEMP. THERMISTOR
CN61	CONNECTOR	LED	LED	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB41	DIODE MODULE	LEV	EXPANSION VALVE COIL	TB1,TB2	TERMINAL BLOCK
D3A,D3B	DIODE	MC	COMPRESSOR	T801	TRANSFORMER
F61	FUSE (25A 250V)	MF	FAN MOTOR	X64,X601,X602	RELAY
F62	FUSE (15A 250V)	PTC64,PTC65	CIRCUIT PROTECTION	21S4	REVERSING VALVE COIL
F65,F66	FUSE (T6.3AL250V)	Q3A,Q3B	SWITCHING POWER TRANSISTOR	26C	COMPRESSOR PROTECTOR
F601,F880,F901	FUSE (T3.15AL250V)	RT61	DEFROST TEMP. THERMISTOR	26H	HEATER PROTECTOR(OPTION PARTS)
H	DEFROST HEATER	RT62	DISCHARGE TEMP. THERMISTOR		
IC700,IC932	POWER MODULE	RT64	FIN TEMP. THERMISTOR		

SUZ-AA24NL-U1

SUZ-AA30NL-U1

SUZ-AA36NL-U1

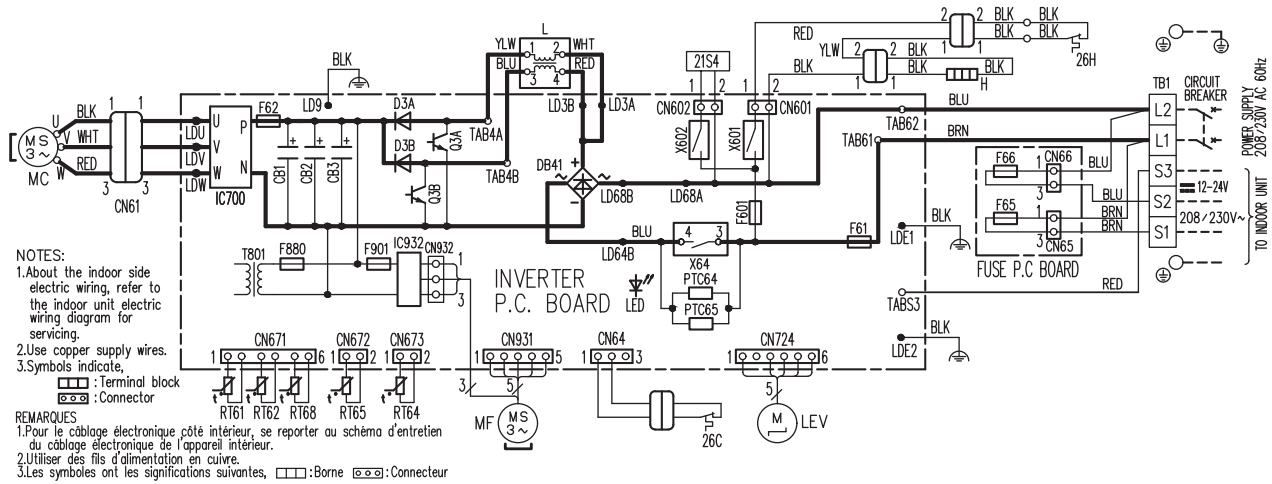


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1,CB2,CB3	SMOOTHING CAPACITOR	L	REACTOR	RT65	AMBIENT TEMP. THERMISTOR
CN61	CONNECTOR	LED	LED	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB41	DIODE MODULE	LEV	EXPANSION VALVE COIL	TB1	TERMINAL BLOCK
D3A,D3B	DIODE	MC	COMPRESSOR	T801	TRANSFORMER
F61	FUSE (25A 250V)	MF	FAN MOTOR	X64,X601,X602	RELAY
F62	FUSE (15A 250V)	PTC64,PTC65	CIRCUIT PROTECTION	21S4	REVERSING VALVE COIL
F65,F66	FUSE (T6.3AL250V)	Q3A,Q3B	SWITCHING POWER TRANSISTOR	26C	COMPRESSOR PROTECTOR
F601,F880,F901	FUSE (T3.15AL250V)	RT61	DEFROST TEMP. THERMISTOR	26H	HEATER PROTECTOR(OPTION PARTS)
H	DEFROST HEATER	RT62	DISCHARGE TEMP. THERMISTOR		
IC700,IC932	POWER MODULE	RT64	FIN TEMP. THERMISTOR		

SUZ-AA24NLH-U1

SUZ-AA30NLH-U1

SUZ-AA36NLH-U1



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1,CB2,CB3	SMOOTHING CAPACITOR	L	REACTOR	RT65	AMBIENT TEMP. THERMISTOR
CN61	CONNECTOR	LED	LED	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB41	DIODE MODULE	LEV	EXPANSION VALVE COIL	TB1	TERMINAL BLOCK
D3A,D3B	DIODE	MC	COMPRESSOR	T801	TRANSFORMER
F61	FUSE (25A 250V)	MF	FAN MOTOR	X64,X601,X602	RELAY
F62	FUSE (15A 250V)	PTC64,PTC65	CIRCUIT PROTECTION	21S4	REVERSING VALVE COIL
F65,F66	FUSE (T6.3AL250V)	Q3A,Q3B	SWITCHING POWER TRANSISTOR	26C	COMPRESSOR PROTECTOR
F601,F880,F901	FUSE (T3.15AL250V)	RT61	DEFROST TEMP. THERMISTOR	26H	HEATER PROTECTOR
H	DEFROST HEATER	RT62	DISCHARGE TEMP. THERMISTOR		
IC700,IC932	POWER MODULE	RT64	FIN TEMP. THERMISTOR		

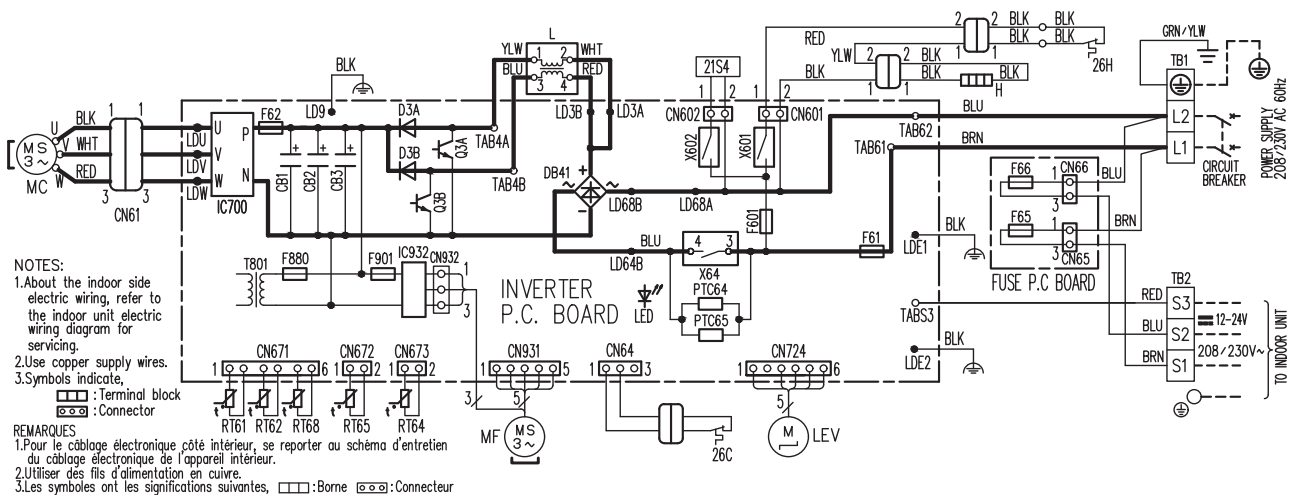
SUZ-AA09NLHZ-U1

SUZ-AA12NLHZ-U1

SUZ-AA15NLHZ-U1

SUZ-AA18NLHZ-U1

SUZ-AA18NLH-U1



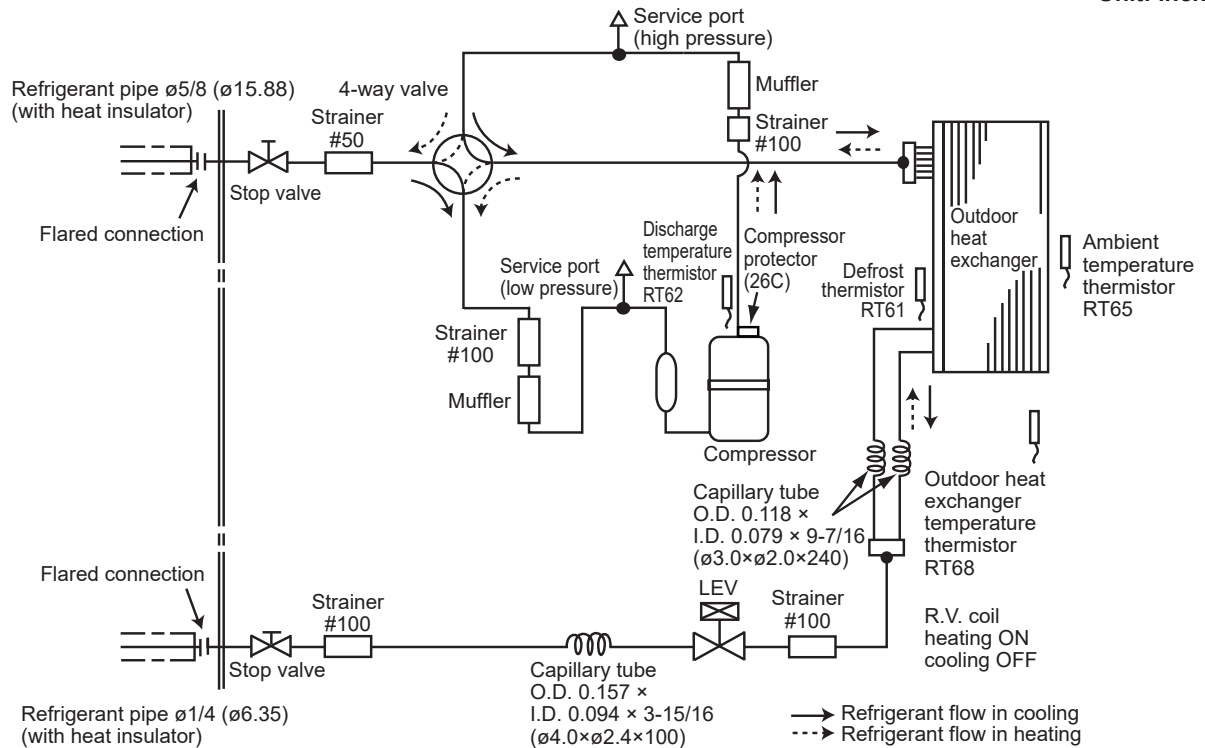
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1,CB2,CB3	SMOOTHING CAPACITOR	L	REACTOR	RT65	AMBIENT TEMP. THERMISTOR
CN61	CONNECTOR	LED	LED	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB41	DIODE MODULE	LEV	EXPANSION VALVE COIL	TB1,TB2	TERMINAL BLOCK
D3A,D3B	DIODE	MC	COMPRESSOR	T801	TRANSFORMER
F61	FUSE (25A 250V)	MF	FAN MOTOR	X64,X601,X602	RELAY
F62	FUSE (15A 250V)	PTC64,PTC65	CIRCUIT PROTECTION	21S4	REVERSING VALVE COIL
F65,F66	FUSE (T6.3AL250V)	Q3A,Q3B	SWITCHING POWER TRANSISTOR	26C	COMPRESSOR PROTECTOR
F601,F880,F901	FUSE (T3.15AL250V)	RT61	DEFROST TEMP. THERMISTOR	26H	HEATER PROTECTOR
H	DEFROST HEATER	RT62	DISCHARGE TEMP. THERMISTOR		
IC700,IC932	POWER MODULE	RT64	FIN TEMP. THERMISTOR		

SUZ-AA24NL(H)-U1

SUZ-AA30NL(H)-U1

SUZ-AA36NL(H)-U1

Unit: inch (mm)



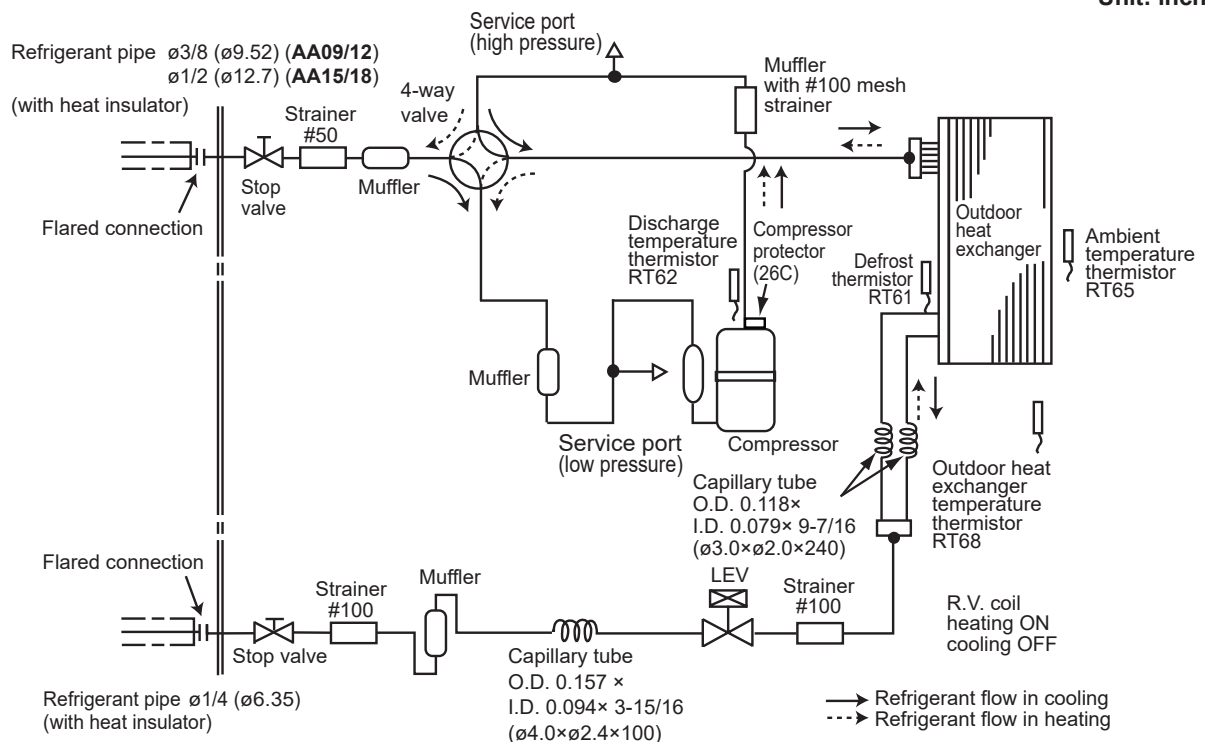
SUZ-AA09NLHZ-U1

SUZ-AA12NLHZ-U1

SUZ-AA18NLHZ-U1

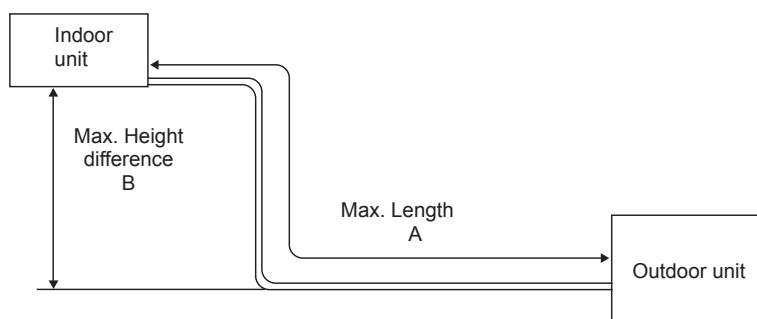
SUZ-AA18NL(H)-U1

Unit: inch (mm)



MAX. REFRIGERANT PIPING LENGTH and MAX. HEIGHT DIFFERENCE

Model	Refrigerant piping: ft.		Piping size O.D: in.	
	Max. Length A	Max. Height difference B	Gas	Liquid
SUZ-AA09/12NLHZ	100	50	3/8	1/4
SUZ-AA15/18NLHZ SUZ-AA18NL(H)		50	1/2	1/4
SUZ-AA24/30/36NL(H)		100	5/8	1/4



ADDITIONAL REFRIGERANT CHARGE (R454B: oz.)

NOTE: Refrigerant piping exceeding 25 ft. requires additional refrigerant charge according to the calculation.

Model	Outdoor unit precharged	Refrigerant piping length (one way): ft.								
		25	30	40	50	60	70	80	90	100
SUZ-AA09/12/15/18NLHZ SUZ-AA18NL(H)	2 lb. 16 oz.	0	1.08	3.24	5.40	7.56	9.72	11.88	14.04	16.20

Calculation: $X \text{ oz.} = 1.08/5 \text{ oz./ft.} \times (\text{Refrigerant piping length (ft.)} - 25)$

Model	Outdoor unit precharged	Refrigerant piping length (one way): ft.								
		25	30	40	50	60	70	80	90	100
SUZ-AA24/30/36NL(H)	3 lb. 4 oz.	0	1.08	3.24	5.40	7.56	9.72	11.88	14.04	16.20

Calculation: $X \text{ oz.} = 1.08/5 \text{ oz./ft.} \times (\text{Refrigerant piping length (ft.)} - 25)$

STANDARD OPERATION DATA

Representative matching			SLZ-AF09NL		SLZ-AF12NL		SLZ-AF15NL		SLZ-AF18NL		SLZ-AF18NL	
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Total	Capacity	W	9000	12000	12000	15000	15000	17000	18000	20000	18000	20000
	SHF	—	0.88	-	0.80	-	0.75	-	0.70	-	0.70	-
	Input	kW	720	1020.00	860.00	1290	1180	1500	1500	1880	1500	1880
Electrical circuit	Indoor unit		SLZ-AF09NL		SLZ-AF12NL		SLZ-AF15NL		SLZ-AF18NL		SLZ-AF18NL	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	0.20	0.15	0.24	0.19	0.32	0.27	0.43	0.38	0.43	0.38
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA15NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	2.9/2.6	4.5/4.1	3.9/3.5	5.7/5.1	5.2/4.7	7.3/6.5	6.8/6.1	8.6/7.8	6.8/6.1	8.6/7.8
Refrigerant circuit	Condensing pressure	PSIG	299	363	306	388	319	411	332	444	332	444
	Suction pressure	PSIG	145	108	140	104	126	103	113	102	113	102
	Discharge temperature	°F	143	149	142	158	153	179	161	191	161	191
	Condensing temperature	°F	100	108	102	112	103	117	107	127	107	127
	Suction temperature	°F	57	41	55	39	49	38	46	38	46	38
	Ref. pipe length	ft.	25		25		25		25		25	
	Refrigerant charge (R454B)	—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.	
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80
		WB	°F	67	60	67	60	67	60	67	60	60
	Discharge air temperature	DB	°F	59	102	58	105	55	108	56	110	56
		WB	°F	58	71	57	71	54	72	54	73	54
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95
		WB	°F	75	43	75	43	75	43	75	43	75



Representative matching			SEZ-AE09NL		SEZ-AE12NL		SEZ-AE15NL		SEZ-AE18NL		SEZ-AE18NL		
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Total	Capacity	W	9000	12000	12000	15000	15000	18000	18000	20000	18000	20000	
	SHF	—	0.80	-	0.84	-	0.88	-	0.83	-	0.83	-	
	Input	kW	800	1150.00	920.00	1210	1220	1420	1450	1550	1450	1550	
Electrical circuit	Indoor unit		SEZ-AE09NL		SEZ-AE12NL		SEZ-AE15NL		SEZ-AE18NL		SEZ-AE18NL		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	0.50	0.39	0.57	0.46	0.74	0.63	0.74	0.63	0.74	0.63	
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA15NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	3.2/2.9	5.0/4.5	3.3/3.0	5.4/4.8	4.6/4.1	6.4/5.7	5.6/5.0	6.8/6.1	5.6/5.0	6.8/6.1	
	Refrigerant circuit	Condensing pressure	PSIG	306	423	307	351	319	345	329	338	329	338
Suction pressure		PSIG	120	111	142	104	138	101	137	99	137	99	
Discharge temperature		°F	146	167	142	147	150	157	152	156	152	156	
Condensing temperature		°F	101	123	102	105	103	104	105	102	105	102	
Suction temperature		°F	52	41	56	39	54	37	53	36	53	36	
Ref. pipe length		ft.	25		25		25		25		25		
Refrigerant charge (R454B)		—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80	70
		WB	°F	67	60	67	60	67	60	67	60	67	60
	Discharge air temperature	DB	°F	60	105	57	104	58	100	58	100	58	100
		WB	°F	58	71	57	71	58	70	58	70	58	70
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95	47
		WB	°F	75	43	75	43	75	43	75	43	75	43

Representative matching			PEAD-AA09NL		PEAD-AA12NL		PEAD-AA15NL		PEAD-AA18NL		PEAD-AA18NL	
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Total	Capacity	W	9000	12000	12000	15000	15000	18000	18000	20000	18000	20000
	SHF	–	0.93	-	0.87	-	0.88	-	0.82	-	0.82	-
	Input	kW	750	1010.00	880.00	1200	1150	1290	1410	1510	1410	1510
Electrical circuit	Indoor unit		PEAD-AA09NL		PEAD-AA12NL		PEAD-AA15NL		PEAD-AA18NL		PEAD-AA18NL	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	0.39	0.39	0.50	0.50	0.72	0.72	0.72	0.72	0.72	0.72
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA15NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	2.7/2.4	4.0/3.6	3.6/3.2	5.1/4.5	4.4/3.9	5.8/5.2	5.8/5.1	6.7/6.0	5.8/5.1	6.7/6.0
Refrigerant circuit	Condensing pressure	PSIG	298	349	306	356	319	326	328	343	328	343
	Suction pressure	PSIG	148	108	144	104	140	101	132	99	132	99
	Discharge temperature	°F	143	145	141	148	150	151	154	158	154	158
	Condensing temperature	°F	100	105	102	106	103	100	51	103	105	103
	Suction temperature	°F	58	41	57	39	55	37	#REF!	36	51	36
	Ref. pipe length	ft.	25		25		25		25		25	
	Refrigerant charge (R454B)	–	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.	
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80
		WB	°F	67	60	67	60	67	60	67	60	60
	Discharge air temperature	DB	°F	59	102	59	100	58	99	56	103	56
		WB	°F	59	71	58	70	58	70	56	71	56
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95
		WB	°F	75	43	75	43	75	43	75	43	75



Representative matching			PEAD-AA24NL		PEAD-AA30NL		PEAD-AA36NL		
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Total	Capacity	W	24000	25000	27000	30000	33000	34000	
	SHF	–	0.79	-	0.82	-	0.85	-	
	Input	kW	1900	2020.00	2270.00	2600	3070	2670	
Electrical circuit	Indoor unit		PEAD-AA24NL		PEAD-AA30NL		PEAD-AA36NL		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	0.85	0.85	1.10	1.10	1.60	1.60	
	Outdoor unit model		SUZ-AA24NL(H)		SUZ-AA30NL(H)		SUZ-AA36NL(H)		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	8.3/7.4	9.3/8.3	10.0/8.9	11.8/10.5	12.2/10.9	11.0/9.8	
Refrigerant circuit	Condensing pressure	PSIG	348	348	359	358	381	309	
	Suction pressure	PSIG	124	94	123	89	122	81	
	Discharge temperature	°F	163	169	164	179	183	169	
	Condensing temperature	°F	109	109	110	110	114	96	
	Suction temperature	°F	53	38	49	37	56	36	
	Ref. pipe length	ft.	25		25		25		
	Refrigerant charge (R454B)	–	3 lb. 4 oz.		3 lb. 4 oz.		3 lb. 4 oz.		
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70
		WB	°F	67	60	67	60	67	60
	Discharge air temperature	DB	°F	55	103	56	103	58	97
		WB	°F	55	71	56	71	57	69
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47
		WB	°F	75	43	75	43	75	43



Representative matching			SVZ-AP12NL		SVZ-AP18NL		SVZ-AP18NL		SVZ-AP24NL		SVZ-AP30NL	
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Total	Capacity	W	12000	15000	18000	20000	18000	20000	22800	25000	27000	30000
	SHF	—	0.89	-	0.83	-	0.83	-	0.73	-	0.77	-
	Input	kW	950	1200.00	1490.00	1530	1490	1530	1930	2130	2400	2500
Electrical circuit	Indoor unit		SVZ-AP12NL		SVZ-AP18NL		SVZ-AP18NL		SVZ-AP24NL		SVZ-AP30NL	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	0.90	0.81	1.44	1.29	1.44	1.29	1.60	1.40	2.00	1.70
	Outdoor unit model		SUZ-AA12NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)		SUZ-AA24NL(H)		SUZ-AA30NL(H)	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	3.3/2.9	4.7/4.1	5.1/4.4	6.2/5.4	5.1/4.4	6.2/5.4	7.4/6.5	9.1/8.1	9.5/8.4	10.2/9.0
Refrigerant circuit	Condensing pressure	PSIG	306	335	328	335	328	335	350	360	355	315
	Suction pressure	PSIG	145	104	135	99	135	99	122	95	129	87
	Discharge temperature	°F	141	142	153	154	153	154	168	177	165	164
	Condensing temperature	°F	102	102	105	100	105	100	57	110	110	101
	Suction temperature	°F	57	39	52	36	52	36	57	38	56	37
	Ref. pipe length	ft.	25		25		25		25		25	
	Refrigerant charge (R454B)	—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		3 lb. 4 oz.		3 lb. 4 oz.	
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80
		WB	°F	67	60	67	60	67	60	67	60	60
	Discharge air temperature	DB	°F	58	101	58	97	58	97	57	106	56
		WB	°F	58	70	58	69	58	69	56	72	56
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95
		WB	°F	75	43	75	43	75	43	75	43	75

Representative matching			SVZ-AP36NL		
Item		Unit	Cooling	Heating	
Total	Capacity	W	33000	34200	
	SHF	—	0.72	-	
	Input	kW	3530	2810.00	
Electrical circuit	Indoor unit		SVZ-AP36NL		
	Phase, Hz		1,60	1,60	
	Volts		208/230	208/230	
	Current	A	3.00	2.70	
	Outdoor unit model		SUZ-AA36NL(H)		
	Phase, Hz		1, 60	1, 60	
	Volts		208/230	208/230	
	Current	A	13.2/11.6	10.8/9.5	
Refrigerant circuit	Condensing pressure	PSIG	381	305	
	Suction pressure	PSIG	112	81	
	Discharge temperature	°F	189	167	
	Condensing temperature	°F	114	94	
	Suction temperature	°F	52	35	
	Ref. pipe length	ft.	25		
	Refrigerant charge (R454B)	—	3 lb. 4 oz.		
Indoor unit	Intake air temperature	DB	°F	80	70
		WB	°F	67	60
	Discharge air temperature	DB	°F	54	97
		WB	°F	54	69
Outdoor unit	Intake air temperature	DB	°F	95	47
		WB	°F	75	43

Representative matching			MLZ-KX09NL		MLZ-KX12NL		MLZ-KX18NL		MLZ-KX18NL	
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Total	Capacity	W	9000	12000	12000	15000	16400	19000	16400	19000
	SHF	—	0.81	-	0.73	-	0.71	-	0.71	-
	Input	kW	730	1030.00	900.00	1330	1390	1750	1390	1750
Electrical circuit	Indoor unit		MLZ-KX09NL		MLZ-KX12NL		MLZ-KX18NL		MLZ-KX18NL	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	3.1/2.8	4.2/3.8	4.2/3.8	5.2/4.6	6.3/5.7	7.8/7.0	6.3/5.7	7.8/7.0
Refrigerant circuit	Condensing pressure	PSIG	299	369	307	409	324	426	324	426
	Suction pressure	PSIG	139	108	129	104	114	100	114	100
	Discharge temperature	°F	143	151	144	164	165	185	165	185
	Condensing temperature	°F	100	109	102	112	104	120	104	120
	Suction temperature	°F	55	41	51	39	49	37	49	37
	Ref. pipe length	ft.	25		25		25		25	
	Refrigerant charge (R454B)	—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.	
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80
		WB	°F	67	60	67	60	67	60	67
	Discharge air temperature	DB	°F	55	111	52	118	51	116	51
		WB	°F	55	73	52	75	51	75	51
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95
		WB	°F	75	43	75	43	75	43	75



Representative matching			MSZ-EX09NL(B/S/W)		MSZ-EX12NL(B/S/W)		MSZ-EX15NL(B/S/W)		MSZ-EX18NL(B/S/W)		MSZ-EX18NL(B/S/W)		
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Total	Capacity	W	9000	12000	12000	15000	15000	17000	16400	20000	16400	20000	
	SHF	—	0.96	-	0.82	-	0.73	-	0.69	-	0.69	-	
	Input	kW	710	900.00	850.00	1150	1260	1330	1390	1700	1390	1700	
Electrical circuit	Indoor unit		MSZ-EX09NL(B/S/W)		MSZ-EX12NL(B/S/W)		MSZ-EX15NL(B/S/W)		MSZ-EX18NL(B/S/W)		MSZ-EX18NL(B/S/W)		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	2.65	3.78	3.65	4.66	5.12	6.08	6.12	7.01	6.12	7.01	
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA15NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)		
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	
	Current	A	2.7/2.4	4.0/3.6	3.8/3.4	4.9/4.4	5.3/4.8	6.4/5.7	6.4/5.8	7.4/6.7	6.4/5.8	7.4/6.7	
Refrigerant circuit	Condensing pressure	PSIG	298	322	306	351	320	372	324	401	324	401	
	Suction pressure	PSIG	149	108	140	104	116	102	114	99	114	99	
	Discharge temperature	°F	142	137	142	147	156	166	165	178	165	178	
	Condensing temperature	°F	100	98	102	104	104	109	104	114	104	114	
	Suction temperature	°F	59	41	55	39	45	38	49	36	49	36	
	Ref. pipe length	ft.	25		25		25		25		25		
	Refrigerant charge (R454B)	—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80	70
		WB	°F	67	60	67	60	67	60	67	60	67	60
	Discharge air temperature	DB	°F	60	94	57	102	52	105	52	111	52	111
		WB	°F	59	68	56	71	52	72	52	73	52	73
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95	47
		WB	°F	75	43	75	43	75	43	75	43	75	43



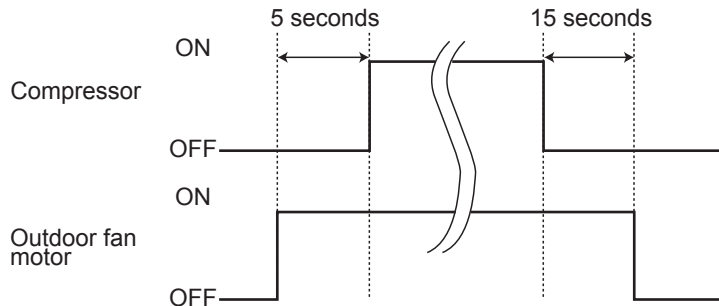
Representative matching			MFZ-KX09NL		MFZ-KX12NL		MFZ-KX15NL		MFZ-KX18NL		MFZ-KX18NL	
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Total	Capacity	W	9000	12000	12000	15000	15000	17000	18000	20000	18000	20000
	SHF	—	0.96	-	0.82	-	0.78	-	0.75	-	0.75	-
	Input	kW	720	910.00	860.00	1170	1170	1270	1450	1690	1450	1690
Electrical circuit	Indoor unit		MFZ-KX09NL		MFZ-KX12NL		MFZ-KX15NL		MFZ-KX18NL		MFZ-KX18NL	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.17	0.17	0.17
	Outdoor unit model		SUZ-AA09NLHZ		SUZ-AA12NLHZ		SUZ-AA15NLHZ		SUZ-AA18NLHZ		SUZ-AA18NL(H)	
	Phase, Hz		1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60	1, 60
	Volts		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
	Current	A	2.7/2.5	3.9/3.5	4/3.6	5.2/4.7	5.2/4.7	6.4/5.8	6.8/6.2	7.3/6.6	6.8/6.2	7.3/6.6
Refrigerant circuit	Condensing pressure	PSIG	299	322	306	360	320	349	330	387	330	387
	Suction pressure	PSIG	149	108	140	104	131	102	126	99	126	99
	Discharge temperature	°F	143	137	142	150	152	158	156	173	156	173
	Condensing temperature	°F	59	99	102	105	104	105	105	112	105	112
	Suction temperature	°F	100	41	55	40	51	38	49	36	49	36
	Ref. pipe length	ft.	25		25		25		25		25	
	Refrigerant charge (R454B)	—	2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.		2 lb. 16 oz.	
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70	80	70	80
		WB	°F	67	60	67	60	67	60	67	60	67
	Discharge air temperature	DB	°F	59	100	56	107	54	103	53	110	53
		WB	°F	59	70	56	72	54	71	53	73	53
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47	95	47	95
		WB	°F	75	43	75	43	75	43	75	43	75

9-1. OUTDOOR FAN MOTOR CONTROL

The fan motor turns ON/OFF, interlocking with the compressor.

[ON] The fan motor turns ON 5 seconds before the compressor starts up.

[OFF] The fan motor turns OFF 15 seconds after the compressor has stopped running.



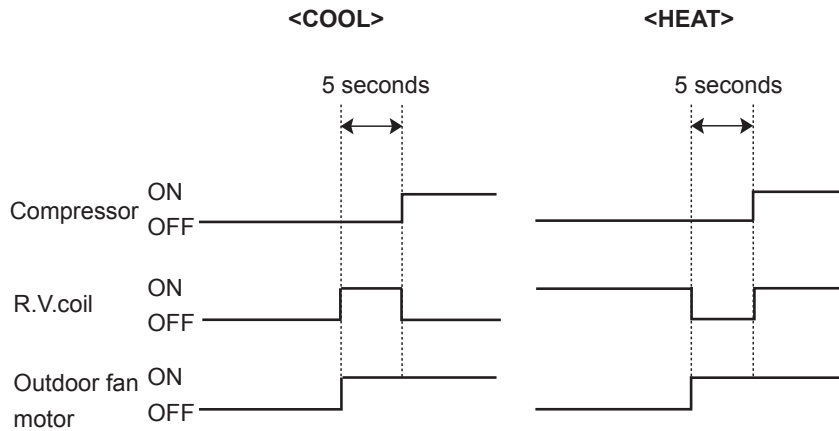
9-2. R.V. COIL CONTROL

Heating ON

Cooling OFF

Dry OFF

NOTE: The 4-way valve reverses for 5 seconds right before start-up of the compressor.



9-3. RELATION BETWEEN MAIN SENSOR AND ACTUATOR

Sensor	Purpose	Actuator				
		Compressor	LEV	Outdoor fan motor	R.V.coil	Indoor fan motor
Discharge temperature thermistor	Protection	○	○			
Indoor coil temperature thermistor	Cooling: Coil frost prevention	○				
	Heating: High pressure protection	○	○			
Defrost thermistor	Heating: Defrosting	○	○	○	○	○
Fin temperature thermistor	Protection	○		○		
Ambient temperature thermistor	Cooling: Low ambient temperature operation	○	○	○		
Outdoor heat exchanger temperature thermistor	Cooling: Low ambient temperature operation	○	○	○		
	Cooling: High pressure protection	○	○	○		

10-1. CHANGE IN DEFROST SETTING**Changing defrost finish temperature**

<JS> To change the defrost finish temperature, cut/solder the JS wire of the outdoor inverter P.C. board.
(Refer to "11-6. TEST POINT DIAGRAM AND VOLTAGE".)

Jumper		Defrost finish temperature	
		SUZ-AA18NL(H)-U1 SUZ-AA24NL(H)-U1 SUZ-AA30NL(H)-U1 SUZ-AA36NL(H)-U1	SUZ-AA09NLHZ-U1 SUZ-AA12NLHZ-U1 SUZ-AA15NLHZ-U1 SUZ-AA18NLHZ-U1
JS	Soldered (Initial setting)	50°F (10°C)	
	None (Cut)	64°F (18°C)	

10-2. PRE-HEAT CONTROL SETTING**PRE-HEAT CONTROL**

When moisture gets into the refrigerant cycle, it may interfere the start-up of the compressor at low outside temperature. The pre-heat control prevents this interference. The pre-heat control turns ON when outside temperature is 68°F (20°C) or below. When pre-heat control is turned ON, compressor is energized. (About 50 W)

<JK> To activate the pre-heat control, cut the JK wire of the inverter P.C. board. (Refer to "11-6. TEST POINT DIAGRAM AND VOLTAGE".)

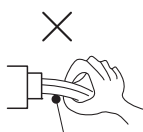
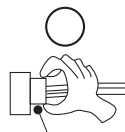
NOTE: When the inverter P.C. board is replaced, check the Jumper wires, and cut/solder them if necessary.

11-1. CAUTIONS ON TROUBLESHOOTING**1. Before troubleshooting, check the following**

- 1) Check the power supply voltage.
- 2) Check the indoor/outdoor connecting wire for miswiring.

2. Take care of the following during servicing

- 1) Before servicing the air conditioner, be sure to turn OFF the main unit first with the remote controller, and turn off the breaker.
- 2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the electronic control P.C. board.
- 3) When removing the electrical parts, be careful of the residual voltage of smoothing capacitor.
- 4) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.
- 5) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.

**Lead wiring****Housing point****3. Troubleshooting procedure**

- 1) First, check if the OPERATION INDICATOR lamp is blinking ON and OFF to indicate an abnormality.
- 2) Before servicing check that the connector and terminal are connected properly.
- 3) When the electronic control P.C. board seems to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
- 4) Refer to "11-2. TROUBLESHOOTING CHECK TABLE" and "11-3. HOW TO PROCEED "SELF-DIAGNOSIS"".

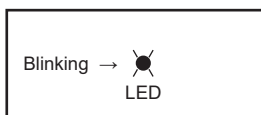
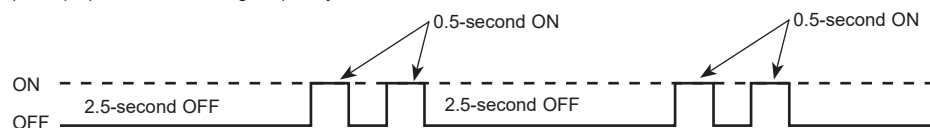
11-2. TROUBLE SHOOTING CHECK TABLE

No.	Symptoms	LED indication	check code	Abnormal point/ Condition	Condition	Remedy
1	Outdoor unit does not operate.	1-time blink every 2.5 seconds	UP	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started.	• Reconnect connector of compressor. • Refer to "11-5. ⒶHow to check inverter/compressor". • Check stop valve.
2			U3	Outdoor thermistors	Discharge temperature thermistor shorts, or opens during compressor running.	• Refer to "11-5. ⒸCheck of outdoor thermistors".
			U4		Fin temperature thermistor, defrost thermistor, P.C. board temperature thermistor, outdoor heat exchanger temperature thermistor or ambient temperature thermistor shorts, or opens during compressor running.	
3		6-time blink 2.5 seconds OFF	FC	Outdoor control system	Nonvolatile memory data cannot be read properly.	• Replace inverter P.C. board.
4			E8 / E9	Serial signal	The communication fails between the indoor and outdoor unit for 3 minutes.	• Check indoor/outdoor connecting wire. • Replace indoor or outdoor P.C.board if abnormality is displayed again.
5		11-time blink 2.5 seconds OFF	UE	Stop valve/ Closed valve	Closed valve is detected by compressor current.	• Check stop valve.
6		16-time flash 2.5 seconds OFF	PL	Outdoor refrigerant system abnormality	A closed valve and air trapped in the refrigerant circuit are detected based on the temperature sensed by the indoor and outdoor thermistors and the current of the compressor.	• Check for a gas leak in a connecting piping, etc. • Check stop valve. • Refer to "11-5. ⒸCheck of outdoor refrigerant circuit".
7	'Outdoor unit stops and restarts 3 minutes later' is repeated.	2-time blink 2.5 seconds OFF		Overcurrent protection	Large current flows into intelligent power module.	• Reconnect connector of compressor. • Refer to "11-5. ⒶHow to check inverter/compressor". • Check stop valve.
8		3-time blink 2.5 seconds OFF		Discharge temperature overheat protection	Temperature of discharge temperature thermistor exceeds 116°C, compressor stops. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	• Check refrigerant circuit and refrigerant amount. • Refer to "11-5. ⒼCheck of LEV".
9		4-time blink 2.5 seconds OFF		Fin temperature/P.C. board temperature thermistor overheat protection	Temperature of fin temperature thermistor on the heat sink exceeds 72 to 86°C or temperature of P.C. board temperature thermistor on the inverter P.C.board exceeds 72 to 85°C.	• Check around outdoor unit. • Check outdoor unit air passage. • Refer to "11-5. ⒹCheck of outdoor fan motor".
10		5-time blink 2.5 seconds OFF		High pressure protection	Indoor coil thermistor exceeds 70°C in HEAT mode. Defrost thermistor exceeds 70°C in COOL mode.	• Check refrigerant circuit and refrigerant amount. • Check stop valve.
11		8-time blink 2.5 seconds OFF		Compressor synchronous abnormality	The waveform of compressor current is distorted.	• Reconnect connector of compressor. • Refer to "11-5. ⒶHow to check inverter/compressor".
12		10-time blink 2.5 seconds OFF		Outdoor fan motor	Outdoor fan has stopped 3 times in a row within 30 seconds after outdoor fan start-up.	• Refer to "11-5. ⒹCheck of outdoor fan motor". • Refer to "11-5. ⒹCheck of inverter P.C. board".
13		12-time blink 2.5 seconds OFF		Each phase current of compressor	Each phase current of compressor cannot be detected normally.	• Refer to "11-5. ⒹCheck of inverter P.C. board".
14		13-time blink 2.5 seconds OFF		DC voltage	DC voltage of inverter cannot be detected normally.	• Refer to "11-5. ⒶHow to check inverter/compressor".
15	Outdoor unit operates.	1-time blink 2.5 seconds OFF		Frequency drop by current protection	When the input current exceeds approximately 12A(KA18)/16A(KA24)/16A(KA30)/16A(KA36), compressor frequency lowers.	• The unit is normal, but check the following. • Check if indoor filters are clogged. • Check if refrigerant is short. • Check if indoor/outdoor unit air circulation is short cycled.
16		3-time blink 2.5 seconds OFF		Frequency drop by high pressure protection	Temperature of indoor coil thermistor exceeds 131 °F [55 °C] in HEAT mode, compressor frequency lowers.	
				Frequency drop by defrosting in COOL mode	Indoor coil thermistor reads 46 °F [8 °C] or less in COOL mode, compressor frequency lowers.	
17		4-time blink 2.5 seconds OFF		Frequency drop by discharge temperature protection	Temperature of discharge temperature thermistor exceeds 232 °F [111 °C], compressor frequency lowers.	• Check refrigerant circuit and refrigerant amount. • Refer to "11-5. ⒼCheck of LEV". • Refer to "11-5. ⒸCheck of outdoor thermistors".
18		7-time blink 2.5 seconds OFF		Low discharge temperature protection	Temperature of discharge temperature thermistor has been 122 °F [50 °C] or less for 20 minutes.	• Refer to "11-5. ⒼCheck of LEV". • Check refrigerant circuit and refrigerant amount.
19		8-time blink 2.5 seconds OFF		PAM protection PAM: Pulse Amplitude Modulation	The overcurrent flows into IGBT (Insulated Gate Biopolar transistor: TR821) or the bus-bar voltage reaches 320 V or more, PAM stops and restarts.	This is not malfunction. PAM protection will be activated in the following cases: 1. Instantaneous power voltage drop. (Short time power failure) 2. When the power supply voltage is high.
				Zero cross detecting circuit	Zero cross signal for PAM control cannot be detected.	
20		9-time blink 2.5 seconds OFF		Inverter check mode	The connector of compressor is disconnected, inverter check mode starts.	• Check if the connector of the compressor is correctly connected. • Refer to "11-5. ⒶHow to check inverter/compressor".

NOTE: 1. The location of LED is illustrated at the right figure. Refer to "11-6. TEST POINT DIAGRAM".
2. LED is lighted during normal operation.

Inverter P.C. board

The blinking frequency shows the number of times the LED blinks, every 2.5-second OFF.
(Example) When the blinking frequency is "2".



11-3. HOW TO PROCEED "SELF-DIAGNOSIS"

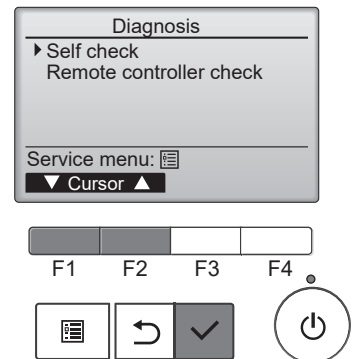
11-3-1. Self-diagnosis <PAR-4xMAA ("x" represents 0 or later)>

- ① Select "Service" from the Main menu,
and press the [✓] button.

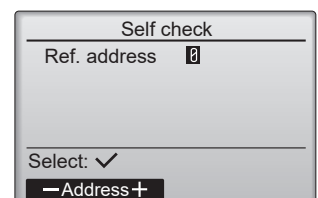
Select "Check" from the Service menu,
and press the [✓] button.

Select "Diagnosis" from the Check menu,
and press the [✓] button.

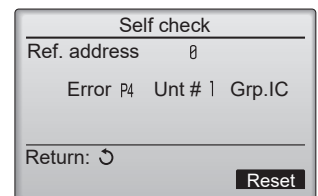
Select "Self check" with the [F1] or [F2] button,
and press the [✓] button.



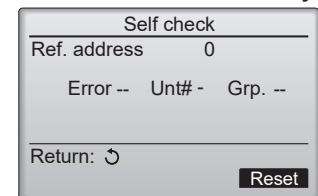
- ② With the [F1] or [F2] button, enter the refrigerant address, and press the [✓] button.



- ③ Check code, unit number, attribute will appear. "-" will appear if no error history is available.



When there is no error history



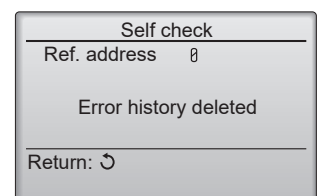
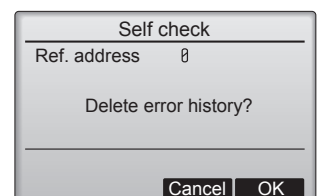
- ④ Resetting the error history

Press the [F4] button (Reset) on the screen that shows the error history.

A confirmation screen will appear asking if you want to delete the error history.

Press the [F4] button (OK) to delete the error history.

If deletion fails, "Request rejected" will appear.
"Unit not exist" will appear if no indoor units that are correspond to the entered address are found.



Navigating through the screens

- To go back to the Service menu [⌂] button
- To return to the previous screen.....[↶] button

11-3-2. Remote controller check <PAR-4xMAA ("x" represents 0 or later)>

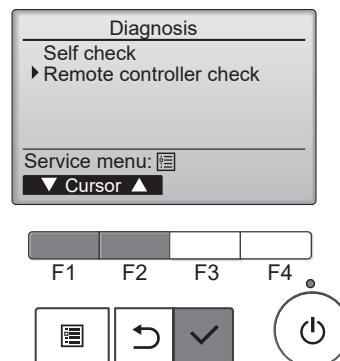
If operations cannot be completed with the remote controller, diagnose the remote controller with this function.

- ① Select "Service" from the Main menu, and press the [✓] button.

Select "Check" from the Service menu,
and press the [✓] button.

Select "Diagnosis" from the Check menu,
and press the [✓] button.

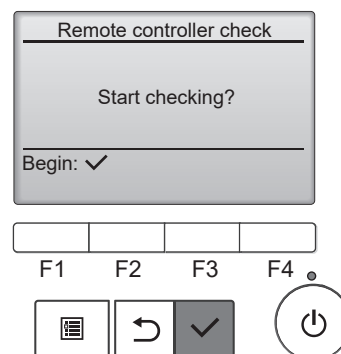
Select "Remote controller check" with the [F1] or [F2] button,
and press the [✓] button.



- ② Select "Remote controller check" from the Diagnosis menu and press the [✓] button to start the remote controller check and see the check results.

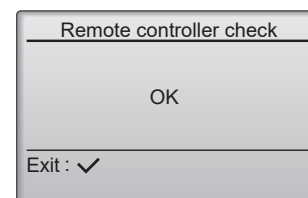
To cancel the remote controller check and exit the "Remote controller check" menu screen, press the [F1] or the [F2] button.

The remote controller will not reboot itself.



- ③ OK: No problems are found with the remote controller. Check other parts for problems.
E3, 6832: There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.
NG (ALL0, ALL1): Send-receive circuit fault. The remote controller needs replacing.
ERC: The number of data errors is the discrepancy between the number of bits in the data transmitted from the remote controller and that of the data that was actually transmitted over the transmission line. If data errors are found, check the transmission line for external noise interference.

Remote controller check results screen



If the [✓] button is pressed after the remote controller check results are displayed, remote controller check will end, and the remote controller will automatically reboot itself.

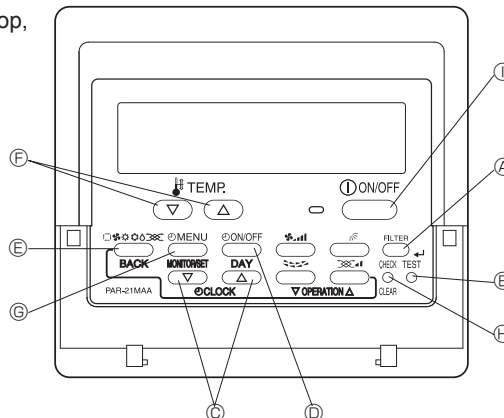
Check the remote controller display and see if anything is displayed (including lines). Nothing will appear on the remote controller display if the correct voltage (8.5–12 VDC) is not supplied to the remote controller. If this is the case, check the remote controller wiring and indoor units.

11-3-3. Self-diagnosis <PAR-21MAA>

When a problem occurs to the air conditioner, the indoor and outdoor units will stop, and the problem is shown in the remote controller display.

[CHECK] and the refrigerant address are displayed on the temperature display, and the check code and unit number are displayed alternately as shown below.

- ① (If the outdoor unit is malfunctioning, the unit number will be "00".)
- ② In the case of group control, for which one remote controller controls multiple refrigerant systems, the refrigerant address and check code of the unit that first experienced trouble (i.e., the unit that transmitted the check code) will be displayed.
- ③ To clear the check code, press the **ON/OFF** button.



(Alternating Display)



When using remote-/local-controller combined operation, cancel the check code after turning off remote operation.
During central control by a MELANS controller, cancel the check code by pressing the **ON/OFF** button.

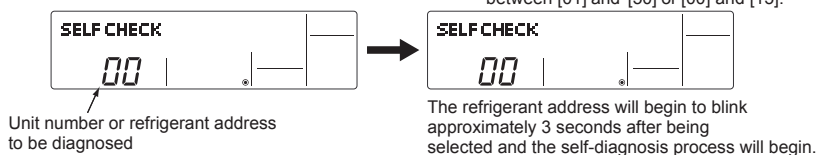
11-3-4. Self-Diagnosis During Maintenance or Service <PAR-21MAA>

Since each unit has a function that stores check codes, the latest check code can be recalled even if it is cancelled by the remote controller or power is turned off.

Check the error history for each unit using the remote controller.

- ① Switch to self-diagnosis mode.

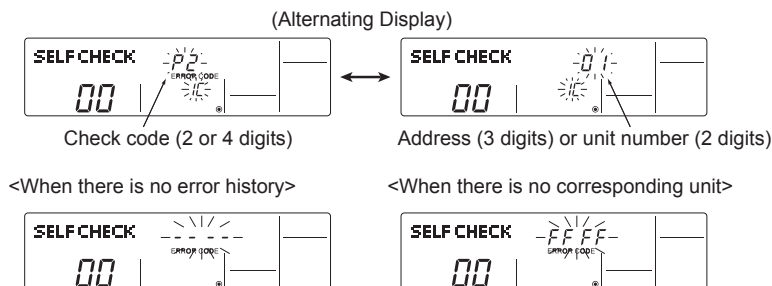
Press the **CHECK** button (Ⓜ in the picture above) twice within 3 seconds.
The display content will change as shown below.



- ③ Display self-diagnosis results.

<When there is error history>

(For the definition of each check code, refer to the indoor unit's installation manual or service handbook.)



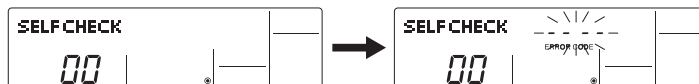
- ④ Reset the error history.

Display the error history in the diagnosis result display screen (see step ③).



Press the **ON/OFF** button (Ⓢ in the picture in the previous page) twice within 3 seconds. The self-diagnosis address or refrigerant address will blink.

When the error history is reset, the display will look like the one shown below. However, if you fail to reset the error history, the error content will be displayed again.



⑤ Cancel self-diagnosis.

Self-diagnosis can be cancelled by the following 2 methods.

Press the **CHECK** button (Ⓢ in the picture in the previous page) twice within 3 seconds.

→ Self-diagnosis will be cancelled and the screen will return to the previous state in effect before the start of self-diagnosis.

Press the **ON/OFF** button (Ⓢ in the picture in the previous page). → Self-diagnosis will be cancelled and the indoor unit will stop.

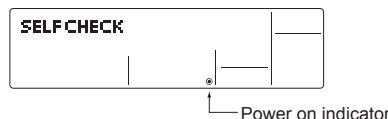
11-3-5. Remote controller check <PAR-21MAA>

If the air conditioner cannot be operated from the remote controller, diagnose the remote controller as explained below.

① First, check that the power-on indicator is lit.

If the correct voltage (DC12 V) is not supplied to the remote controller, the indicator will not light.

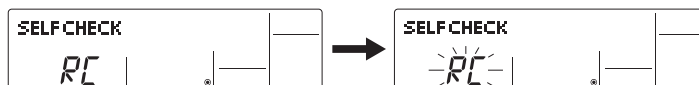
If this occurs, check the remote controller's wiring and the indoor unit.



② Switch to the remote controller self-diagnosis mode.

Press the **CHECK** button (Ⓢ in the picture in the previous page) for 5 seconds or more. The display content will change as shown below.

Press the **FILTER** button (Ⓢ in the picture in the previous page) to start self-diagnosis.



③ Remote controller self-diagnosis result

[When the remote controller is functioning correctly]



Check for other possible causes, as there is no problem with the remote controller.

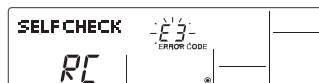
[When the remote controller malfunctions]

(Error display 1) "NG" blinks. → The remote controller's transmitting-receiving circuit is defective.



The remote controller must be replaced with a new one.

[Where the remote controller is not defective, but cannot be operated.]
(Error display 2) [E3], [6833] or [6832] blinks. → Transmission is not possible.



There might be noise or interference on the transmission path, or the indoor unit or other remote controllers are defective. Check the transmission path and other controllers.

(Error display 3) "ERC" and the number of data errors are displayed.
→ Data error has occurred.

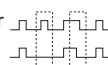


The number of data errors is the difference between the number of bits sent from the remote controller and the number actually transmitted through the transmission path. If such a problem is occurring, the transmitted data is affected by noise, etc. Check the transmission path.

When the number of data errors is "02":

Transmission data from remote controller

Transmission data on transmission path



④ To cancel remote controller diagnosis

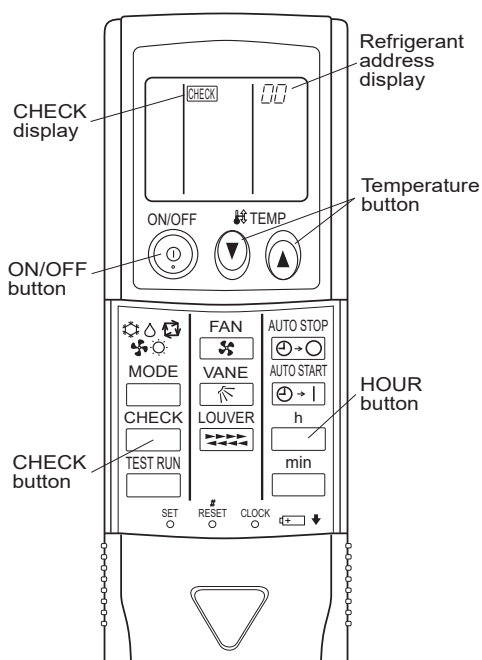
Press the **CHECK** button (Ⓢ in the picture in the previous page) for 5 seconds or more. Remote controller diagnosis will be cancelled, "PLEASE WAIT" and operation lamp will blink. After approximately 30 seconds, the state in effect before the diagnosis will be restored.

11-3-6. Self-diagnosis <Wireless remote controller>

<In case of trouble during operation>

When a malfunction occurs to air conditioner, both indoor unit and outdoor unit will stop and operation lamp blinks to inform unusual stop.

<Malfunction-diagnosis method at maintenance service>



[Procedure]

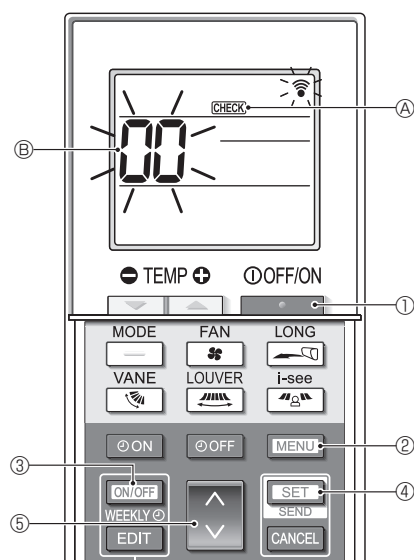
1. Press the CHECK button twice.
 - "CHECK" lights, and refrigerant address "00" blinks.
 - Check that the remote controller's display has stopped before continuing.
2. Press the temperature buttons.
 - Select the refrigerant address of the indoor unit for the self-diagnosis.
 - Note: Set refrigerant address using the outdoor unit's DIP switch (SW1). (For more information, see the outdoor unit installation manual.)
3. Point the remote controller at the sensor on the indoor unit and press the HOUR button.
 - If an air conditioner error occurs, the indoor unit's sensor emits an intermittent beep sound, the operation light blinks, and the check code is output. (It takes 3 seconds at most for check code to appear.)
4. Point the remote controller at the sensor on the indoor unit and press the ON/OFF button.
 - The check mode is cancelled.

11-3-7. Self-diagnosis <Wireless remote controller PAR-SL101A-E>

<In case of trouble during operation>

When a malfunction occurs to air conditioner, both indoor unit and outdoor unit will stop and operation lamp blinks to inform unusual stop.

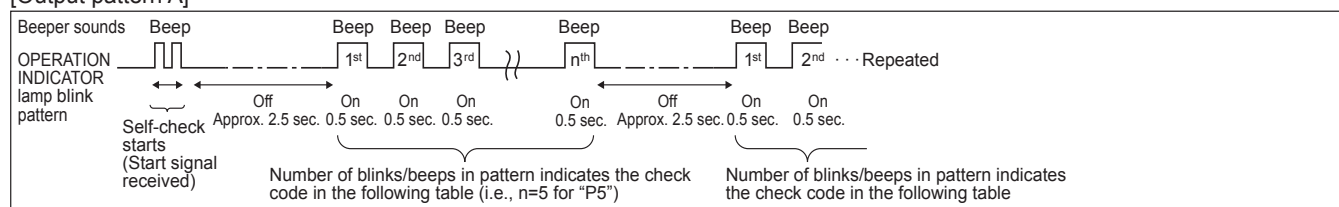
<Malfunction-diagnosis method at maintenance service>



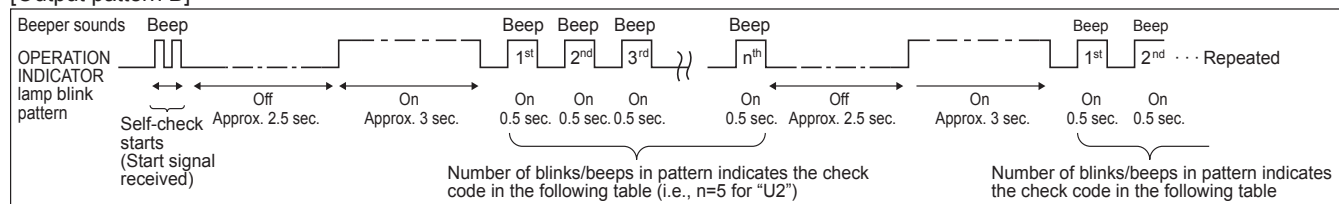
1. Press the button ① to stop the air conditioner.
 - If the weekly timer is enabled (WEEKLY is on), press the button ③ to disable it (WEEKLY is off).
2. Press the button ② for 5 seconds.
 - comes on and the unit enters the self-check mode.
3. Press the button ⑤ to select the refrigerant address (M-NET address) ⑥ of the indoor unit for which you want to perform the self-check.
4. Press the button ④.
 - If an error is detected, the check code is indicated by the number of beeps from the indoor unit and the number of blinks of the OPERATION INDICATOR lamp.
5. Press the button ①.
 - and the refrigerant address (M-NET address) ⑥ go off and the self-check is completed.

- Refer to the following tables for details on the check codes.

[Output pattern A]



[Output pattern B]



[Output pattern A] Errors detected by indoor unit

Wireless remote controller	Wired remote controller		
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code	Symptom	Remark
1	P1	Intake sensor error	As for indoor unit, refer to indoor unit's service manual.
2	P2	Pipe (TH2) sensor error	
	P9	Pipe (TH5) sensor error	
3	E6, E7	Indoor/outdoor unit communication error	
4	P4	Drain sensor error/Float switch connector (CN4F) open	
5	P5	Drain pump error	
	PA	Forced compressor stop (due to water leakage abnormality)	
6	P6	Freezing/Overheating protection operation	
7	EE	Communication error between indoor and outdoor units	
9	E4, E5	Remote controller signal receiving error	
12	Fb (FB)*	Indoor unit control system error (memory error, etc.)	
14	PL	Abnormality of refrigerant circuit	
—	E0, E3	Remote controller transmission error	
—	E1, E2	Remote controller control board error	

[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller	Wired remote controller		
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code	Symptom	
1	E9	Indoor/outdoor unit communication error (Transmitting error) (Outdoor unit)	
2	JP	Compressor overcurrent interruption	
3	U3, U4	Open/short of outdoor unit thermistors	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

Notes: 1. If the beeper does not sound again after the initial 2 beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.

2. If the beeper sounds 3 times continuously "beep, beep, beep (0.4 + 0.4 + 0.4 sec.)" after the initial 2 beeps to confirm the self-check start signal was received, the specified refrigerant address is incorrect.

*The check code in the parenthesis indicates PAR-30MAA model.

11-4. TROUBLE CRITERION OF MAIN PARTS

Part name	Check method and criterion	Figure															
Defrost thermistor (RT61)	Measure the resistance with a tester.																
Fin temperature thermistor (RT64)	Refer to “Inverter P.C. board” in "11-6. TEST POINT DIAGRAM AND VOLTAGE”, for the chart of thermistor.																
Ambient temperature thermistor (RT65)																	
Outdoor heat exchanger temperature thermistor (RT68)																	
Discharge temperature thermistor (RT62)	Measure the resistance with a tester. Before measurement, hold the thermistor with your hands to warm it up. Refer to “Inverter P.C. board” in "11-6. TEST POINT DIAGRAM AND VOLTAGE”, for the chart of thermistor.																
Compressor	Measure the resistance between terminals with a tester. (Temperature: 14 to 104 °F (-10 to 40 °C)) <table border="1"><thead><tr><th></th><th colspan="2">Normal (Ω)</th></tr><tr><th></th><th>AA09/12/15/18</th><th>AA24/30/36</th></tr></thead><tbody><tr><td>U-V</td><td></td><td></td></tr><tr><td>U-W</td><td>1.37 - 1.69</td><td>0.64 - 0.78</td></tr><tr><td>V-W</td><td></td><td></td></tr></tbody></table>		Normal (Ω)			AA09/12/15/18	AA24/30/36	U-V			U-W	1.37 - 1.69	0.64 - 0.78	V-W			
	Normal (Ω)																
	AA09/12/15/18	AA24/30/36															
U-V																	
U-W	1.37 - 1.69	0.64 - 0.78															
V-W																	
Outdoor fan motor	Measure the resistance between lead wires with a tester. (Temperature: 14 ~ 104 °F (-10 ~ 40 °C)) <table border="1"><thead><tr><th rowspan="2">Color of lead wire</th><th>Normal (Ω)</th></tr><tr><th>AA09/12/15/18 AA24/30/36</th></tr></thead><tbody><tr><td>RD – BK BK – WH WH – RD</td><td>8 to 10</td></tr></tbody></table>	Color of lead wire	Normal (Ω)	AA09/12/15/18 AA24/30/36	RD – BK BK – WH WH – RD	8 to 10											
Color of lead wire	Normal (Ω)																
	AA09/12/15/18 AA24/30/36																
RD – BK BK – WH WH – RD	8 to 10																
R. V. coil (21S4)	Measure the resistance with a tester. (Temperature: 14 to 104 °F (-10 to 40°C)) <table border="1"><thead><tr><th>Normal (kΩ)</th></tr></thead><tbody><tr><td>0.97 to 1.38</td></tr></tbody></table>	Normal (kΩ)	0.97 to 1.38														
Normal (kΩ)																	
0.97 to 1.38																	
Expansion valve coil (LEV)	Measure the resistance with a tester. (Temperature: 14 ~ 104 °F (-10 ~ 40 °C)) <table border="1"><thead><tr><th>Color of lead wire</th><th>Normal (Ω)</th></tr></thead><tbody><tr><td>RD – OG</td><td rowspan="4">37 to 54</td></tr><tr><td>RD – WH</td></tr><tr><td>RD – BU</td></tr><tr><td>RD – YE</td></tr></tbody></table>	Color of lead wire	Normal (Ω)	RD – OG	37 to 54	RD – WH	RD – BU	RD – YE									
Color of lead wire	Normal (Ω)																
RD – OG	37 to 54																
RD – WH																	
RD – BU																	
RD – YE																	
Defrost heater	Measure the resistance using a tester. [Temperature: 14 - 104°F (-10 - 40°C)] <table border="1"><thead><tr><th>Normal (kΩ)</th></tr></thead><tbody><tr><td>376 - 461</td></tr></tbody></table>	Normal (kΩ)	376 - 461														
Normal (kΩ)																	
376 - 461																	

11-5. TROUBLESHOOTING FLOW

Ⓐ How to check inverter/compressor

Disconnect the connector (CN61) between compressor and the intelligent power module (IPM).

Check the voltage between terminals.

.....See 11-5.Ⓑ "Check of open phase".

Are the voltages balanced?

No

Replace the inverter P.C. board.

Yes

Check the compressor.

.....See 11-5.Ⓒ "Check of compressor".

Ⓑ Check of open phase

- With the connector between the compressor and the intelligent power module disconnected, activate the inverter and check if the inverter is normal by measuring the voltage balance between the terminals.

Output voltage is 50 - 130 V. (The voltage may differ according to the tester.)

<Operation method (Test run operation)>

1. Press the TEST (RUN) button twice.
2. Press the MODE button and switch to the COOL (or HEAT) mode.
3. Compressor starts at rated frequency in COOL mode or 58 Hz in HEAT mode.
4. Indoor fan operates at High speed.
5. To cancel test run operation, press the ON/OFF button on remote controller.

<Measurement point>

at 3 points

BK (U) - WH (V)

BK (U) - RD (W)

WH(V) - RD (W)

Measure AC voltage between the lead wires at 3 points.

- NOTE:** 1. Output voltage varies according to power supply voltage.
 2. Measure the voltage by analog type tester.
 3. During this check, LED of the inverter P.C. board blinks 9 times.
 (Refer to "11-6. TEST POINT DIAGRAM AND VOLTAGE".)

Ⓒ Check of compressor

Refer to 11-5.Ⓓ "Check of compressor winding".

Is the compressor normal?

No

Replace the compressor.

Yes

Refer to 11-5.Ⓔ "Check of compressor operation time".

Does the compressor operate continuously?

No

Refer to 11-5.Ⓕ "Check of compressor start failure".

Yes

OK.

D Check of compressor winding

- Disconnect the connector between the compressor and intelligent power module, and measure the resistance between the compressor terminals.

<Measurement point>

Measure the resistance between the lead wires at 3 points.

BK - WH

BK - RD

WH - RD

<Judgement>

Refer to "11-4. TROUBLE CRITERION OF MAIN PARTS".

0[Ω] Abnormal [short]

Infinite [Ω] Abnormal [open]

NOTE: Be sure to zero the ohmmeter before measurement.

E Check of compressor operation time

- Connect the compressor and activate the inverter. Then measure the time until the inverter stops due to over current.

<Operation method>

Start heating or cooling operation by pressing the TEST button

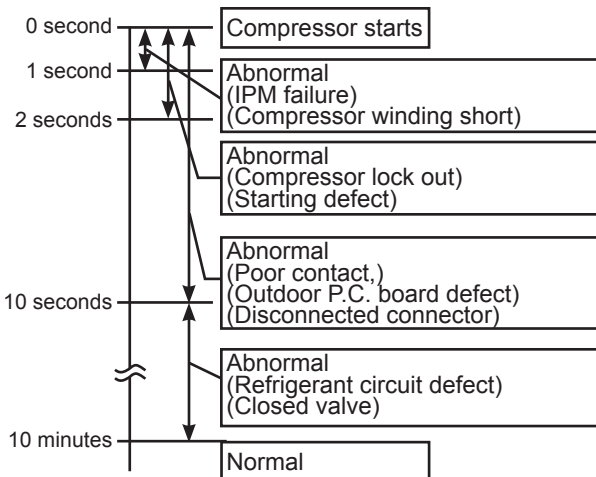
twice on the remote controller. (Test run mode)

(TEST RUN OPERATION: Refer to 11-5(B))

<Measurement>

Measure the time from the start of compressor to the stop of compressor due to overcurrent.

<<Judgement>>



F Check of compressor start failure

Confirm that 1~4 is normal.

- Electrical circuit check

1. Contact of the compressor connector

2. Output voltage of inverter P.C. board and balance of them (See 11-5.(B))

3. Direct current voltage between DB61(+) and (-) on the inverter P.C. board

4. Voltage between outdoor terminal block S1-S2

Does the compressor run for 10 seconds or more after it starts?

Yes

Check the refrigerant circuit.
Check the stop valve.

No

After the compressor is heated with a drier,
does the compressor start? *1

No

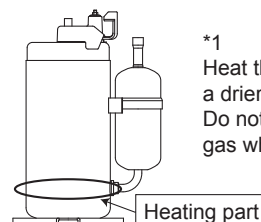
Replace the compressor.

Yes

Compressor start failure. Activate pre-heat control.
(Refer to "10-2. PRE-HEAT CONTROL SETTING")

WARNING:

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.

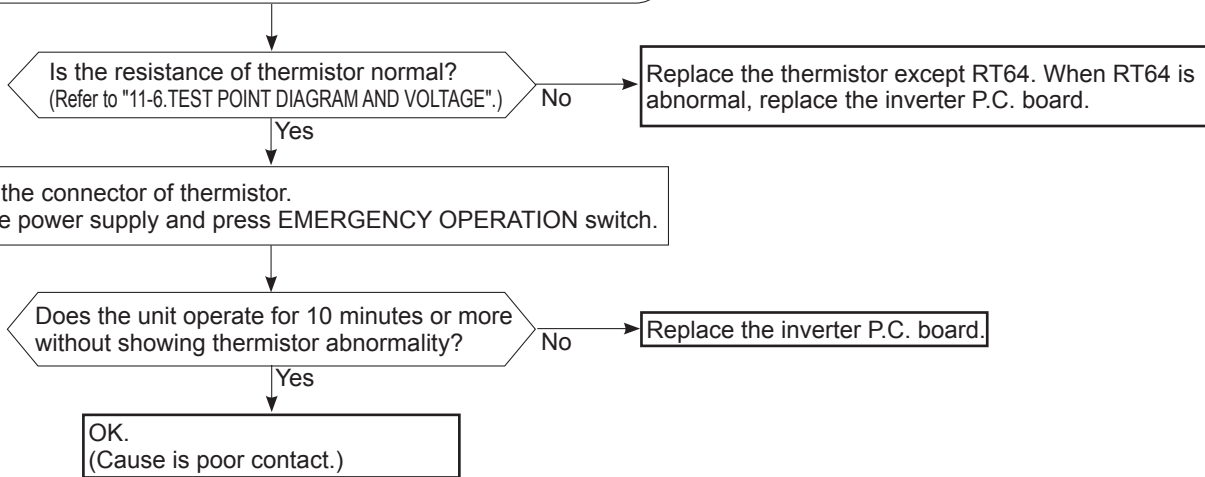


*1

Heat the compressor with a drier for about 20 minutes. Do not recover refrigerant gas while heating.

G Check of outdoor thermistors

Disconnect the connector of thermistor in the outdoor P.C. board (see below table), and measure the resistance of thermistor.



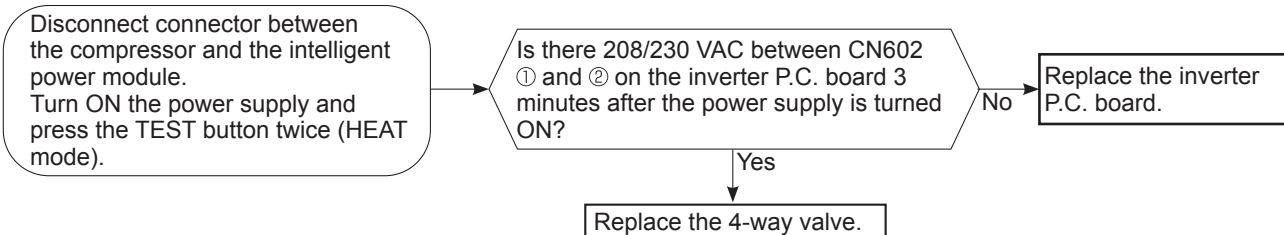
Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	Between CN671 pin1 and pin2	Inverter P.C. board
Discharge temperature	RT62	Between CN671 pin3 and pin4	
Fin temperature	RT64	Between CN673 pin1 and pin2	
Ambient temperature	RT65	Between CN672 pin1 and pin2	
Outdoor heat exchanger temperature	RT68	Between CN671 pin5 and pin6	

H Check of R.V. coil

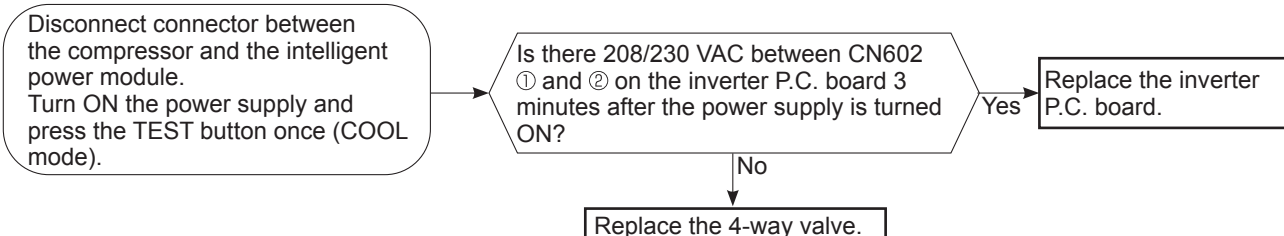
First of all, measure the resistance of R.V. coil to check if the coil is defective. Refer to "11-4. TROUBLE CRITERION OF MAIN PARTS".

In case CN602 is disconnected or R.V. coil is open, voltage is generated between the terminal pins of the connector although no signal is being transmitted to R.V. coil. Check if CN602 is connected.

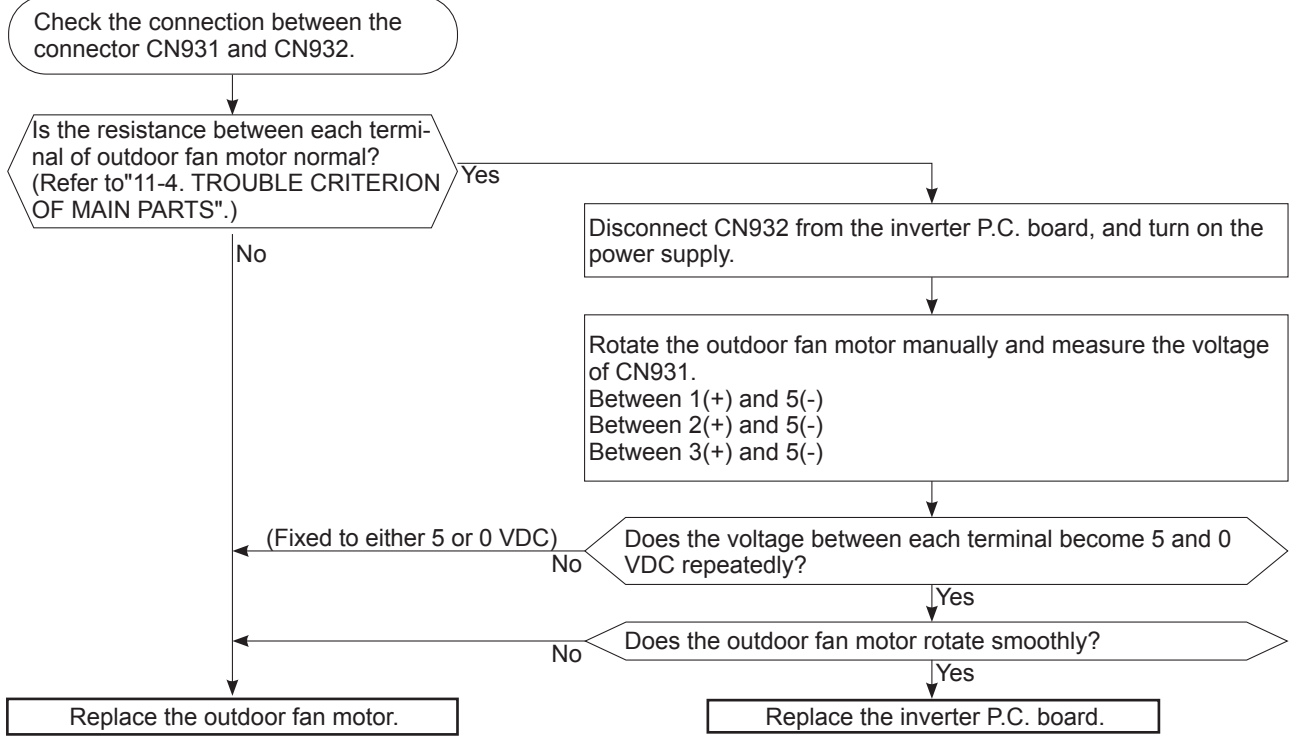
Unit operates in COOL mode even if it is set to HEAT mode.



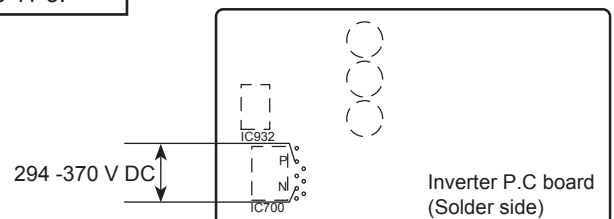
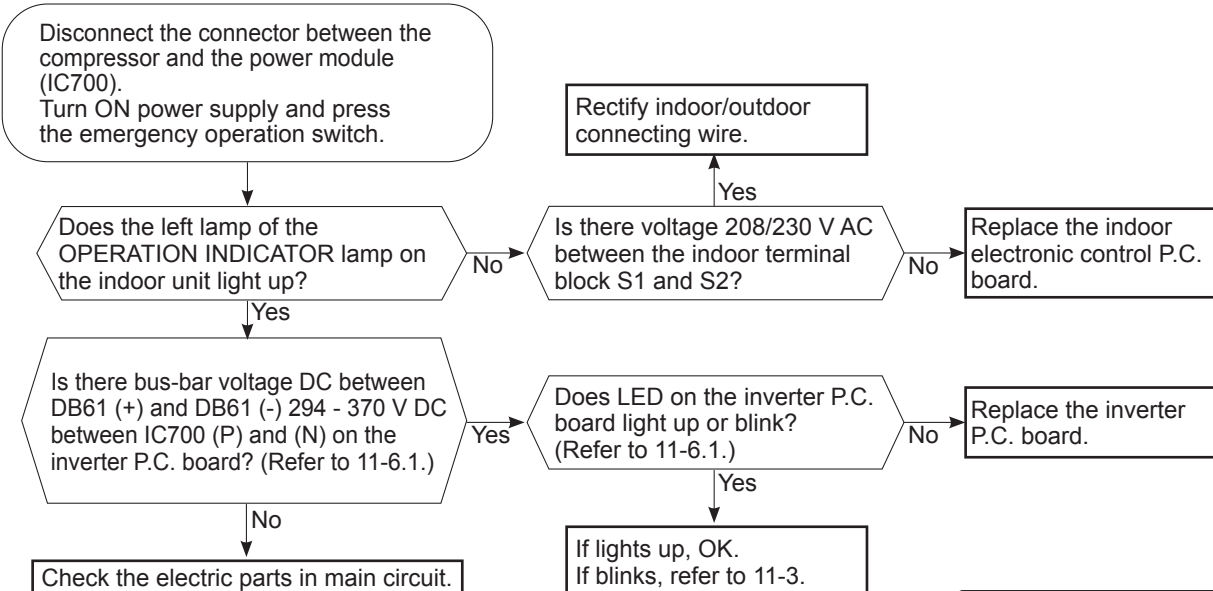
Unit operates in HEAT mode even if it is set to COOL mode.



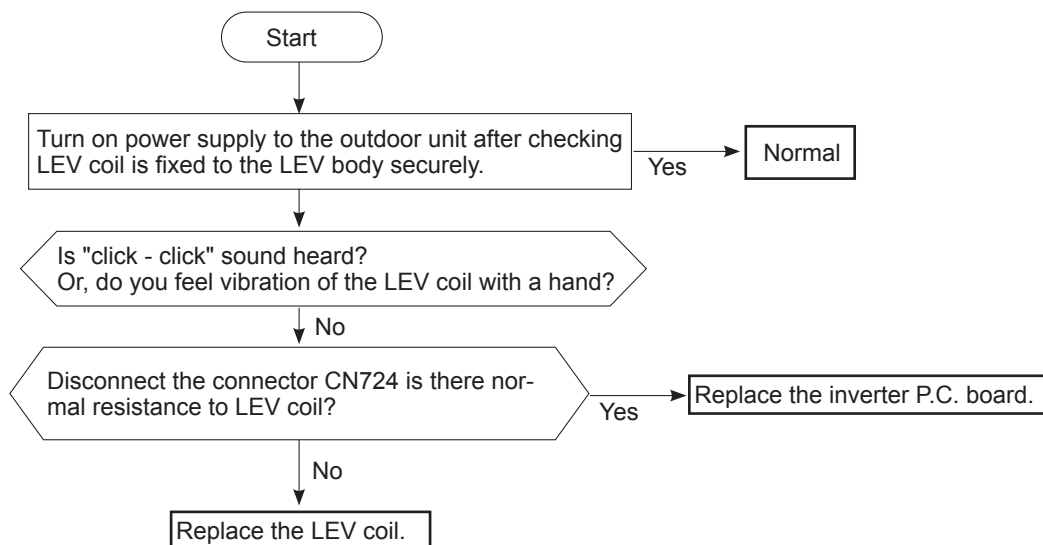
I Check of outdoor fan motor



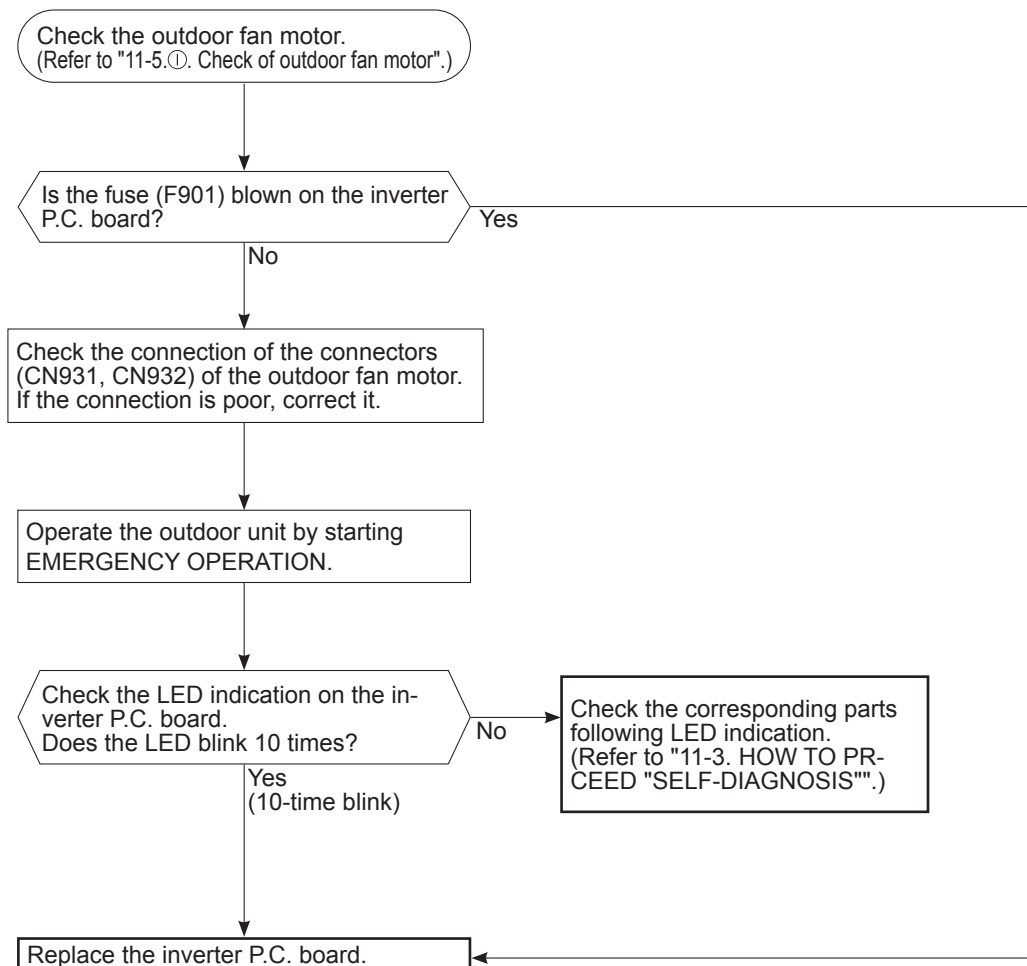
J Check of power supply



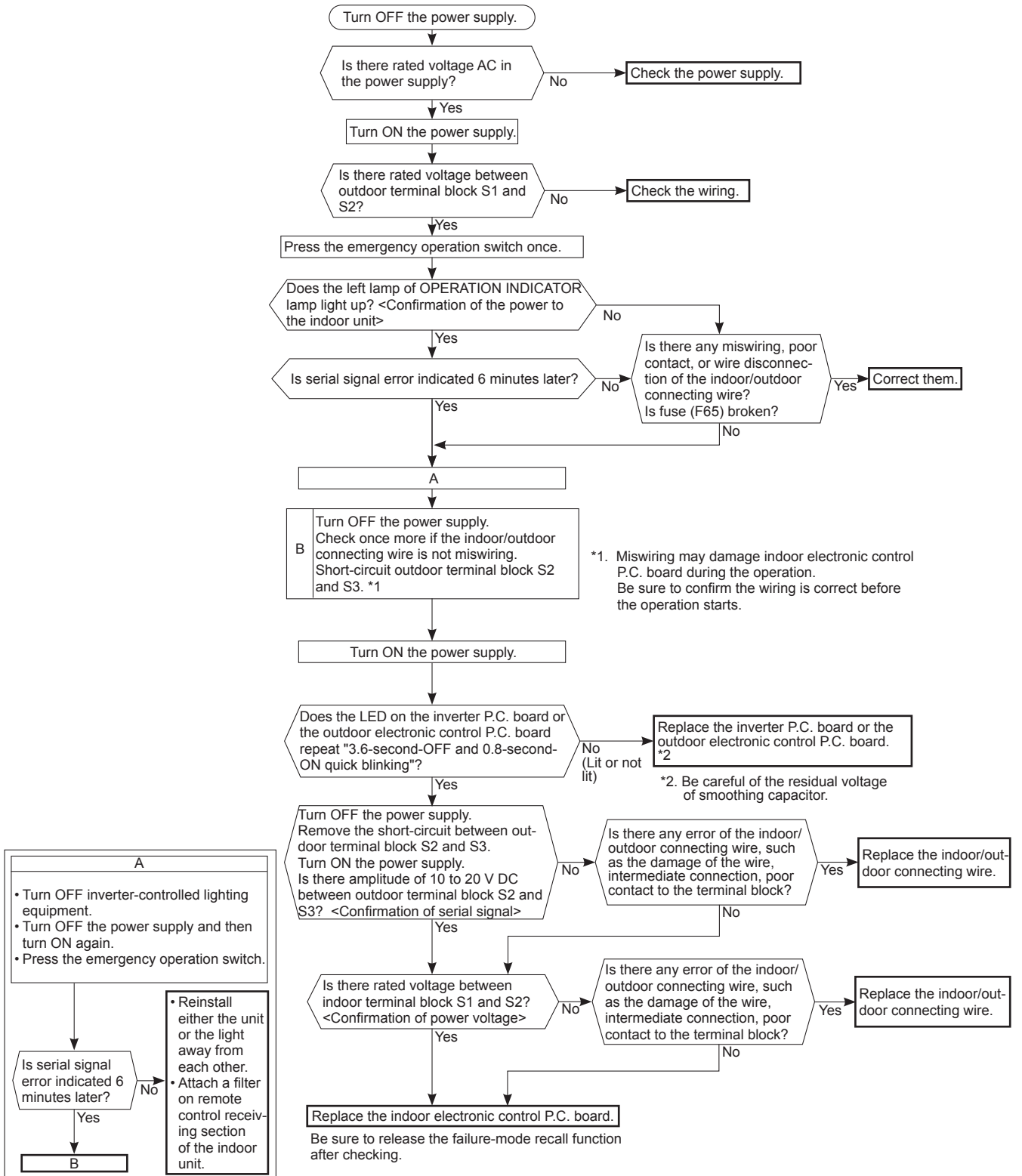
K Check of LEV



L Check of inverter P.C. board



M How to check miswiring and serial signal error



Ⓐ Check the defrost heater

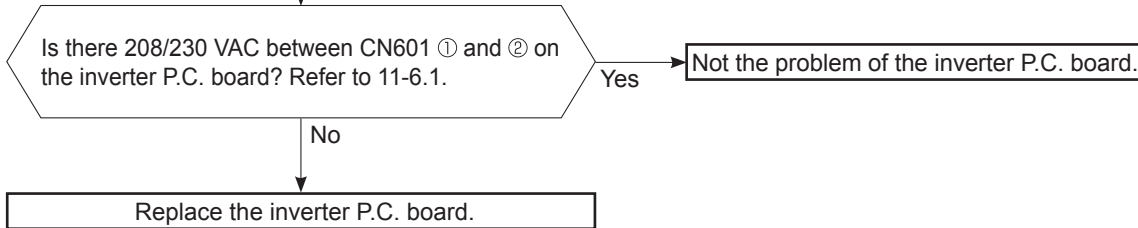
SUZ-AA18/24/30/36NLH-U1 SUZ-AA09/12/15/18NLHZ-U1

Check the following points before checking electric continuity.

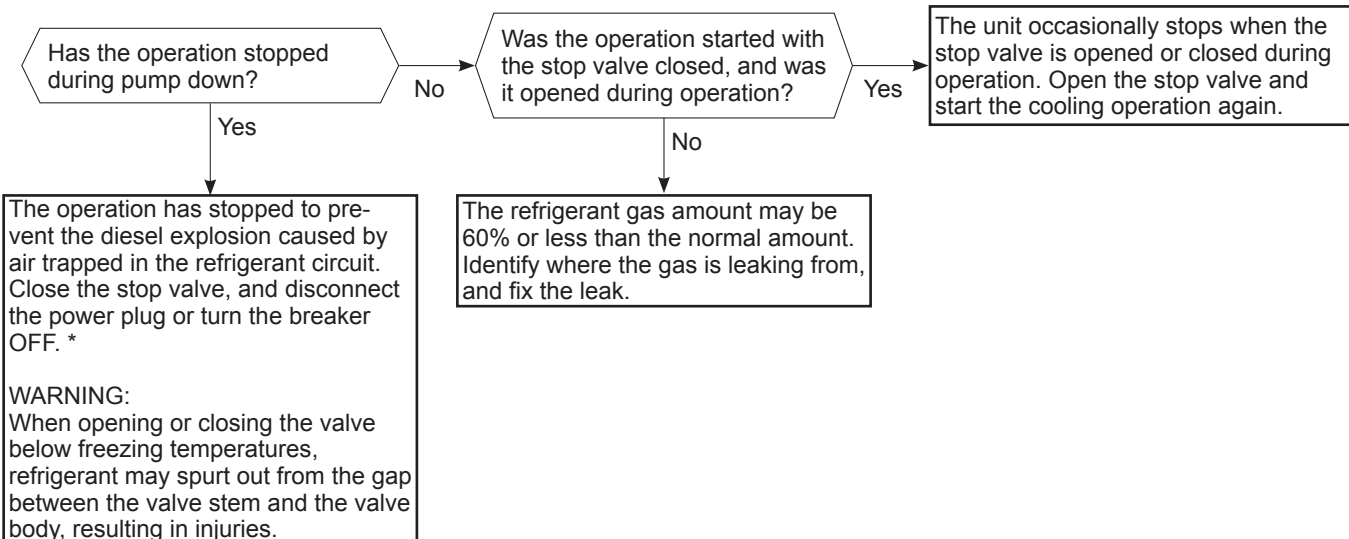
1. Does the resistance of ambient temperature thermistor have the characteristics? Refer to 11-6.1.
2. Is the resistance of defrost heater normal? Refer to 11-4.
3. Does the heater protector remain conducted (not open)?
4. Are both ambient temperature thermistor and circuit of defrost heater securely connected to connectors?

In HEAT mode, for more than 5 minutes, let the ambient temperature thermistor continue to read 32°F (0°C) or below, and let the defrost thermistor continue to read 30°F (-1°C) or below.

NOTE: In case both thermistors are more than the above temperature, cool them with cold water etc...

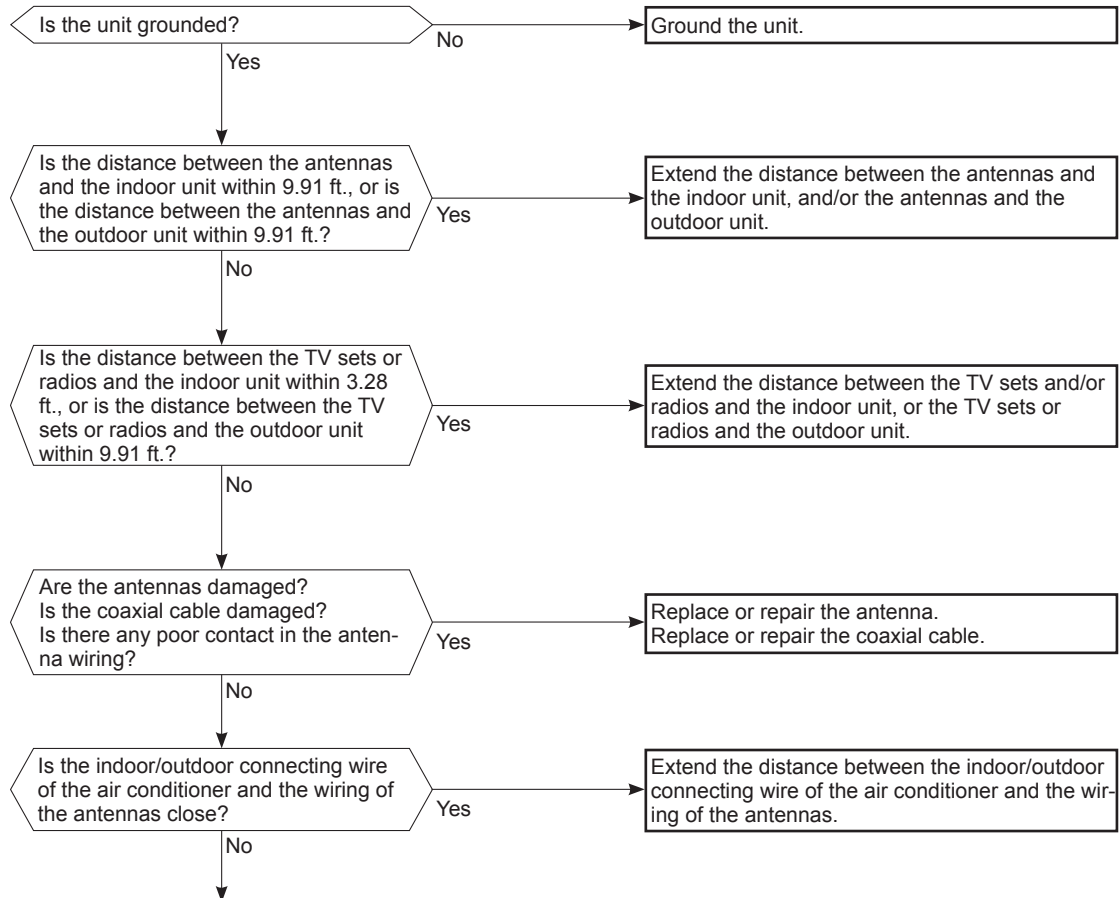


Ⓑ Check of outdoor refrigerant circuit



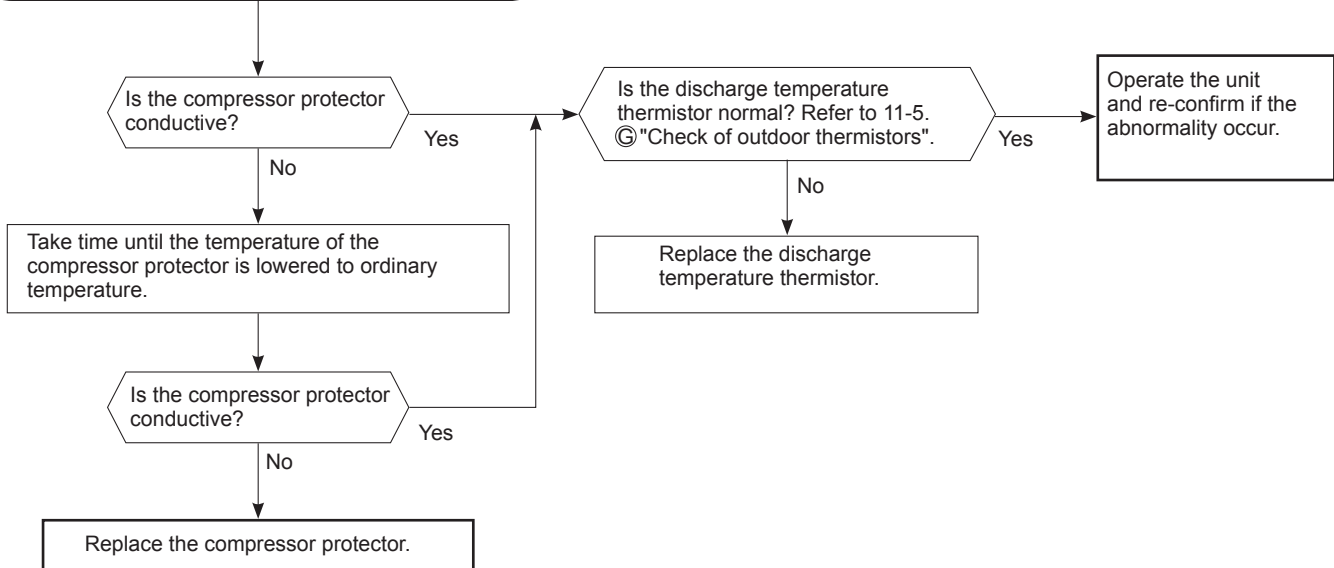
* **CAUTION** : Do not start the operation again to prevent hazards.

P Electromagnetic noise enters into TV sets or radios



Q Check of compressor protector

Disconnect the connector of compressor protector in the inverter P.C. board, and check the conduction of compressor protector



11-6. TEST POINT DIAGRAM AND VOLTAGE

1. Inverter P.C. board

SUZ-AA18NL(H)-U1

SUZ-AA24NL(H)-U1

SUZ-AA30NL(H)-U1

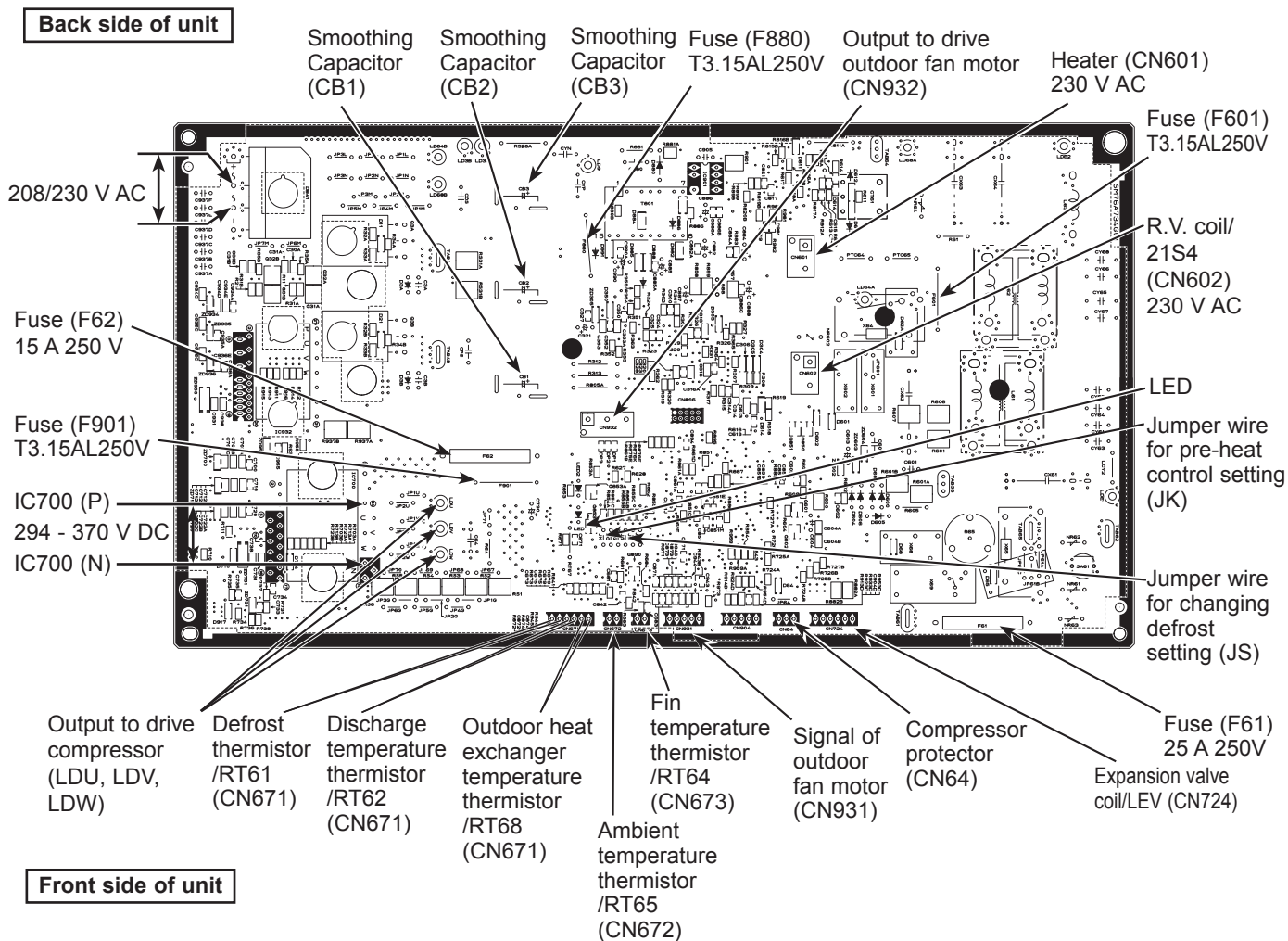
SUZ-AA36NL(H)-U1

SUZ-AA09NLHZ-U1

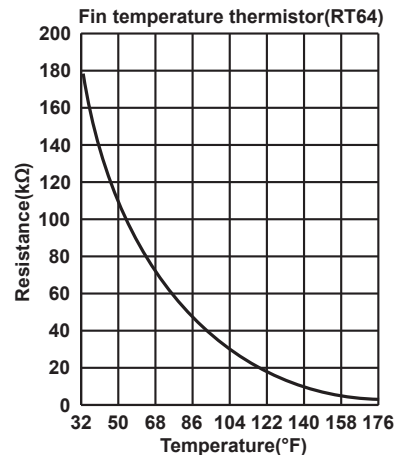
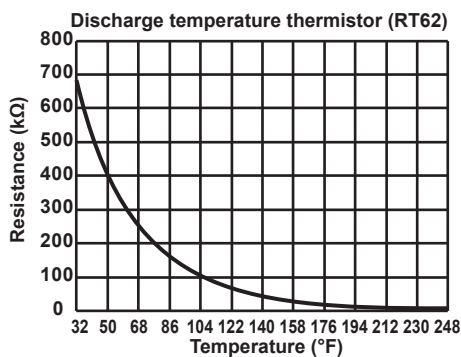
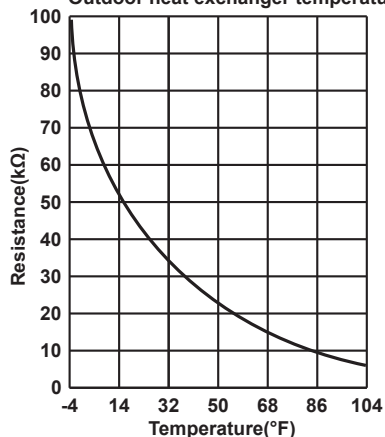
SUZ-AA12NLHZ-U1

SUZ-AA15NLHZ-U1

SUZ-AA18NLHZ-U1



Defrost thermistor(RT61)
Ambient temperature thermistor(RT65)
Outdoor heat exchanger temperature thermistor(RT68)



2. Fuse P.C. board

SUZ-AA18NL(H)-U1

SUZ-AA24NL(H)-U1

SUZ-AA30NL(H)-U1

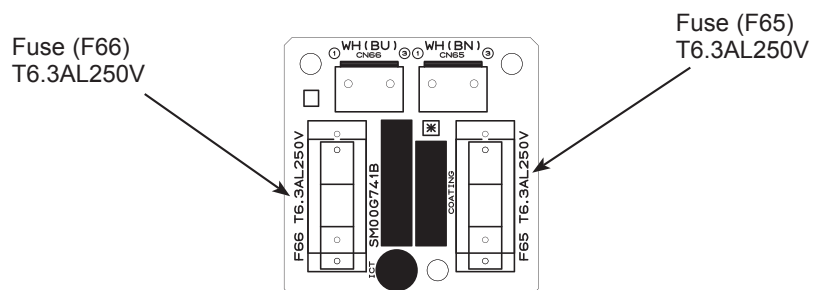
SUZ-AA36NL(H)-U1

SUZ-AA09NLHZ-U1

SUZ-AA12NLHZ-U1

SUZ-AA15NLHZ-U1

SUZ-AA18NLHZ-U1



12-1. UNIT FUNCTION SETTING BY THE REMOTE CONTROLLER

Each function can be set according to necessity using the remote controller. The setting of function for each unit can only be done by the remote controller. Select function available from the table 1.

<Table 1> Function selections

(1) Functions available when setting the unit number to 00.

Function	Settings	Mode No. Wired remote controller (RF thermostat)	Setting No.	● : Initial setting (when sent from the factory)	Check	Remarks
Power failure automatic recovery	Not available	01	1			The setting is applied to all the units in the same refrigerant system.
Indoor temperature detecting	Available (Approx. 4-minute wait-period after power is restored.)	(101)	2	●		
LOSSNAY connectivity	Indoor unit's internal sensor	02	1	●		
	Data from main remote controller *1	(—)	2			
			3			
Power supply voltage	Not supported	03	1	●		
	Supported (indoor unit dose not intake outdoor air through LOSSNAY)	(103)	2			
	Supported (indoor unit intakes outdoor air through LOSSNAY)		3			
Frost prevention temperature	230V	04	1	●		
	208V	(104)	2			
	2°C [36°F] (Normal)	15	1	●		
	3°C [37°F]	(115)	2			

*1 Can be set only when a wired remote controller is used.

When using 2 remote controllers (2-remote controller operation), the remote controller with built-in sensor must be set as a main remote controller.

(2) Functions are available when setting the unit number to 01.

Function	Settings	Mode No. Wired remote controller (RF thermostat)	Setting No.	● : Initial setting (Factory setting)				Check
				Ceiling concealed	Ceiling cassette	Ceiling suspended	Multi position	
				SEZ-AE·NL	SLZ-AF·NL	PEAD-AA·NL	SVZ-AP·NL	
Filter sign	100h	07 (107)	1					
	2500h		2		●			
	No filter sign indicator		3	●		●	●	
External static pressure	5/15/35/50Pa (0.02/0.06/0.14/0.20in.WG)	08 (108)		Refer to the table below	—	Refer to the table below	Refer to the table below	
		10 (110)		Refer to the table below	—	Refer to the table below	Refer to the table below	
Heater control *2	No heater present	11 (111)	1	—	—	●	●	
	Heater present		2	—	—			
	SEZ, SLZ :Set temp -4.5°F ON PEAD, SVZ :Heater not operation in Defrost/Error	23 (123)	1	●	●	●	●	
	SEZ, SLZ :Set temp -1.8°F ON PEAD, SVZ :Heater not operation in Defrost/Error*4		2					
Set temperature in heating mode *3	Available	24 (124)	1	●	●	●	●	
	Not available		2					
Fan speed during the heating thermo OFF	Extra low	25 (125)	1	●	●	●	●	
	Stop		2					
	Set fan speed		3					
Fan speed during the cooling thermo OFF	Set fan speed	27 (127)	1	●	●	●	●	
	Stop		2					
Detection of abnormality of the pipe temperature (P8)	Available	28 (128)	1	●	●			
	Not available		2			●	●	

*2 For the detail of Heater control, refer to the service manual.

*3 4 degC (7.2 degF) up

*4 Depend on the error, heater may not operate please refer to SVZ service manual.

External static pressure setting for SEZ.

External static pressure	Setting No.		● : Initial setting (Factory setting)	Check
	Mode No. 08	Mode No. 10		
5Pa (0.02in.WG)	1	2		
15Pa (0.06in.WG)	1	1	●	
35Pa (0.14in.WG)	2	1		
50Pa (0.20in.WG)	3	1		

External static pressure setting for PEAD.

External static pressure	Setting No.		● : Initial setting (Factory setting)	Check
	Mode No. 08	Mode No. 10		
35Pa (0.14in.WG)	2	1		
50Pa (0.20in.WG)	3	1	●	
70Pa (0.28in.WG)	1	2		
100Pa (0.40in.WG)	2	2		
150Pa (0.60in.WG)	3	2		

External static pressure setting for SVZ (Vertical, Horizontal left, Horizontal right position*).

External static pressure	Setting No.		● : Initial setting (Factory setting)	Check
	Mode No. 08	Mode No. 10		
75Pa (0.3in.WG)	1	1		
125Pa (0.5in.WG)	2	1	●	
200Pa (0.8in.WG)	3	1		

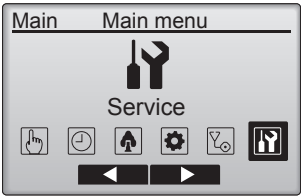
* Regarding to down flow setting, please refer to down flow kit installation manual.

12-1-1. Selecting functions using the wired remote controller <PAR-41MAA>

<Service menu>

Maintenance password is required

- ① Select "Service" from the Main menu, and press the [✓] button.
- *At the main display, the menu button and select "Service" to make the maintenance setting.

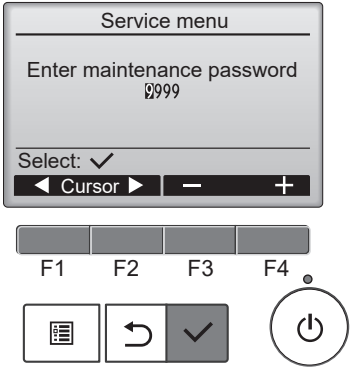


- ② When the Service menu is selected, a window will appear asking for the password.

To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the [F1] or [F2] button.

Set each number (0 through 9) with the [F3] or [F4] button.

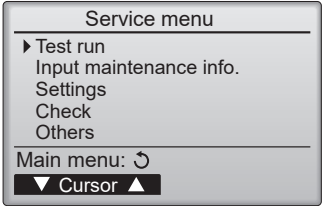
Then, press the [✓] button.



Note: The initial maintenance password is "9999". Change the default password as necessary to prevent unauthorized access. Have the password available for those who need it.
: If you forget your maintenance password, you can initialize the password to the default password "9999" by pressing and holding the [F1] button for 10 seconds on the maintenance password setting screen.

- ③ If the password matches, the Service menu will appear.

Note: Air conditioning units may need to be stopped to make only at "settings". There may be some settings that cannot be made when the system is centrally controlled.



A screen will appear that indicates the setting has been saved.



Navigating through the screens

- To go back to the Service menu [list icon] button
- To return to the previous screen..... [circular arrow] button

12-2. FUNCTION SETTING

12-2-1. PAR-41MAA

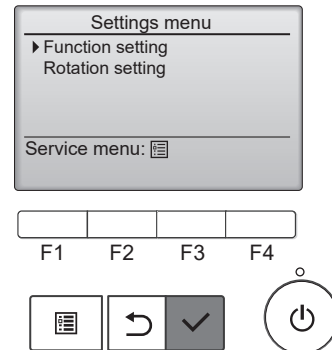
1. Select "Service" from the Main menu, and press the [✓] button.



Select "Function setting", and press the [✓] button.



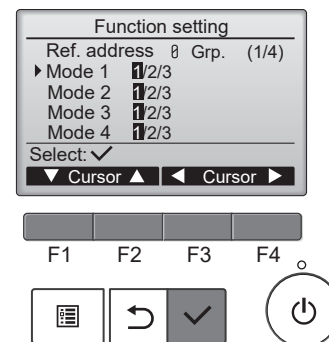
Select "Setting" from the Service menu, and press the [✓] button.



<The display format and the setting method vary with indoor units.>

Pattern 1

2. Set the indoor unit refrigerant addresses and unit numbers with the [F1] through [F4] buttons, and then press the [✓] button to confirm the current setting.

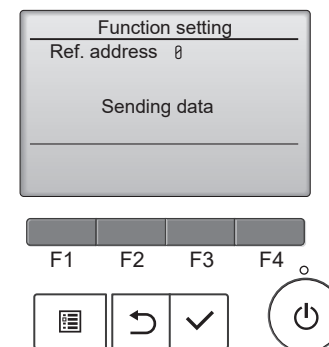
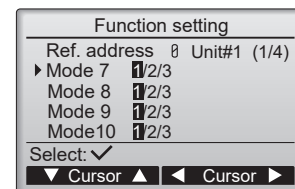


3. When data collection from the indoor units is completed, the current settings appears highlighted. Non-highlighted items indicate that no function settings are made. Screen appearance varies depending on the "Unit No." setting.

4. Use the [F1] or [F2] button to move the cursor to select the mode number, and change the setting number with the [F3] or [F4] button.

5. When the settings are completed, press the [✓] button to send the setting data from the remote controller to the indoor units.

6. When the transmission is successfully completed, the screen will return to the Function setting screen.



Pattern 2

4. Toggle through the pages with the **[F3]** or **[F4]** button.
5. Select the mode number with the **[F1]** or **[F2]** button, and then press the **[✓]** button.
6. Select the setting number with the **[F1]** or **[F2]** button.
 Setting range for modes 1 through 28: 1 through 3
 Setting range for modes 31 through 66: 1 through 15
7. When the settings are completed, press the **[✓]** button to send the setting data from the remote controller to the indoor units.
8. When the transmission is successfully completed, the screen will return to the Function setting screen.

Note:

- Refer to the indoor unit Installation Manual for the detailed information about initial settings, mode numbers, and setting numbers for the indoor units.
- Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.

Function setting	
Ref. address	Grp. (1/8)
Mode 1	1
Mode 2	1
Mode 3	1
Mode 4	1

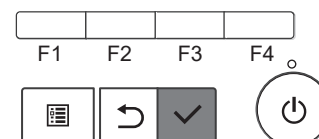
Save: ✓

▼ Cursor ▲ ◀ Page ▶

Function setting	
Ref. address	Grp. (1/8)
Mode 1	1
Mode 2	1
Mode 3	1
Mode 4	1

Request: ✓

— Value +



<Detaching method of the terminal with locking mechanism>

The terminal which has the locking mechanism can be detached as shown below.

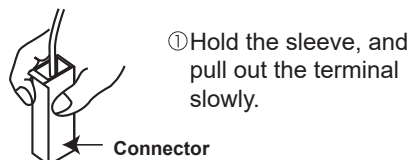
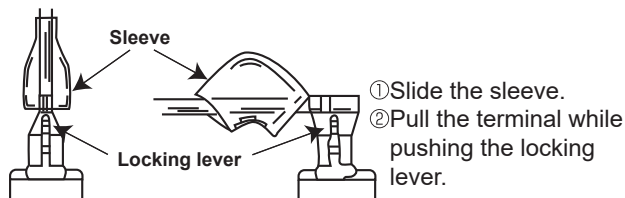
There are 2 types of the terminal with locking mechanism.

The terminal without locking mechanism can be detached by pulling it out.

Check the shape of the terminal before detaching.

(1) Slide the sleeve and check if there is a locking lever or not.

(2) The terminal with the connector shown below has the locking mechanism.



13-1. SUZ-AA09NLHZ
SUZ-AA18NL

SUZ-AA12NLHZ
SUZ-AA18NLH

SUZ-AA15NLHZ

SUZ-AA18NLHZ

NOTE: Turn OFF the power supply before disassembly.

—————: Indicates the visible parts in the photos/figures.
-----: Indicates the invisible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the cabinet (1) Remove the screws of the service panel. (2) Remove the screws of the top panel. (3) Remove the screw of the valve cover. (4) Remove the service panel. (5) Remove the top panel. (6) Remove the valve cover. (7) Remove the screws fixing the conduit cover. (Photo 3) (8) Remove the conduit cover. (9) Remove the screw fixing the conduit plate. (Photo 4) (10) Remove the conduit plate. (11) Disconnect the power supply and indoor/outdoor connecting wire. (12) Remove the screws of the cabinet. (13) Remove the cabinet. (14) Remove the screws of the back panel. (15) Remove the back panel. Photo 2	Photo 1

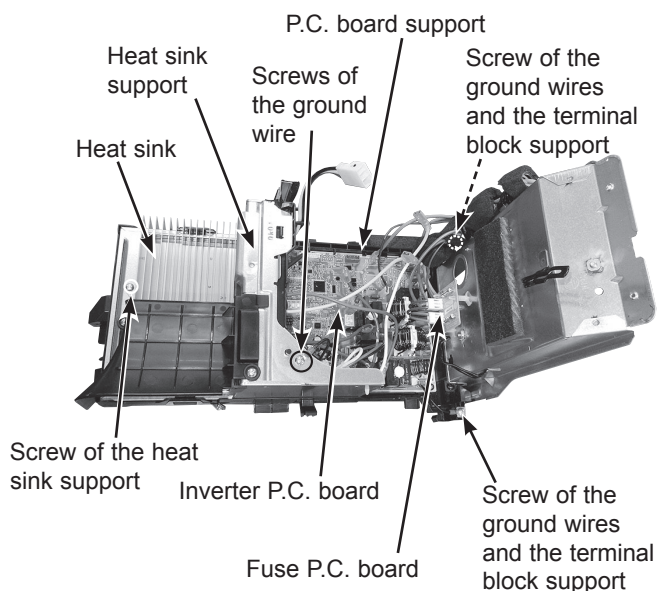
OPERATING PROCEDURE

2. Removing the inverter assembly, inverter P.C. board and fuse P.C. board

2-1. Removing the inverter assembly and inverter P.C. board

- (1) Remove the top panel, cabinet and service panel. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the following connectors:
 - <Inverter P.C. board>
 - CN602 (R.V. coil)
 - CN931, CN932 (Fan motor)
 - CN671 (Defrost temperature thermistor, discharge temperature thermistor and outdoor heat exchanger temperature thermistor)
 - CN672 (Ambient temperature thermistor)
 - CN724 (Expansion valve coil)
 - CN601 (Defrost heater and heater protector)
 - CN64 (Compressor protector)
- (3) Remove the compressor connector (CN61).
- (4) Remove the screws fixing the heat sink support and the separator.
- (5) Remove the screws fixing the P.C. board support and the motor support.
- (6) Remove the fixing screws of the terminal block support and the back panel.
- (7) Remove the inverter assembly.
- (8) Remove the screws of the ground wires and the terminal block support.
- (9) Remove the screw of the heat sink support, and the heat sink support from the P.C. board support.

Photo 6 (Inverter assembly)



PHOTOS/FIGURES

Photo 3

Screws of the conduit cover

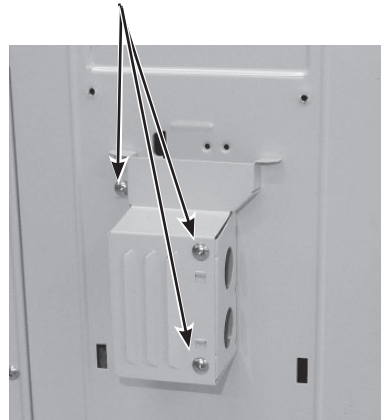


Photo 4

Screw of the conduit plate

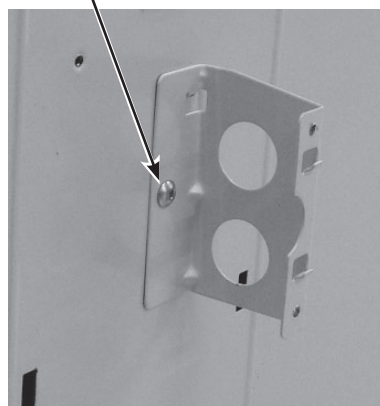


Photo 5

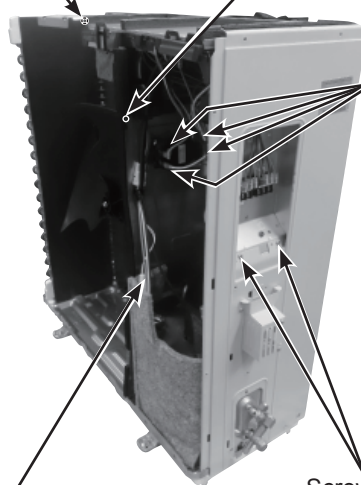
Screw of the P.C. board support and the motor support

Screw of the heat sink support and the separator

Lead wires of the reactor

Connector of compressor protector

Screws of the terminal block support and the back panel

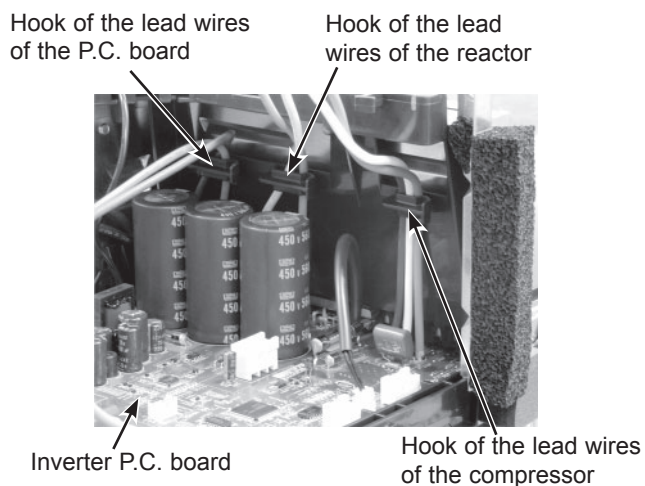


OPERATING PROCEDURE

* Connection procedure when attaching the inverter P.C. board (Photo 8, 9)

1. Attach the heat sink support to the P.C. board support.
2. Hook the lead wires of the compressor, the reactor and the P.C. board to each hooks on the heat sink support as shown Photo 8.
3. Connect the lead wires of the expansion valve coil to the connector on the inverter P.C. board. Pull the lead wires of the expansion valve coil toward you and put them on the hook on the P.C. board support as shown in Photo 9.
4. Tighten the lead wires of the fan motor (CN931, CN932), defrost temperature thermistor, discharge temperature thermistor, outdoor heat exchanger temperature thermistor and ambient temperature thermistor with the fastener as shown in Photo 9.

Photo 8



PHOTOS/FIGURES

Photo 7

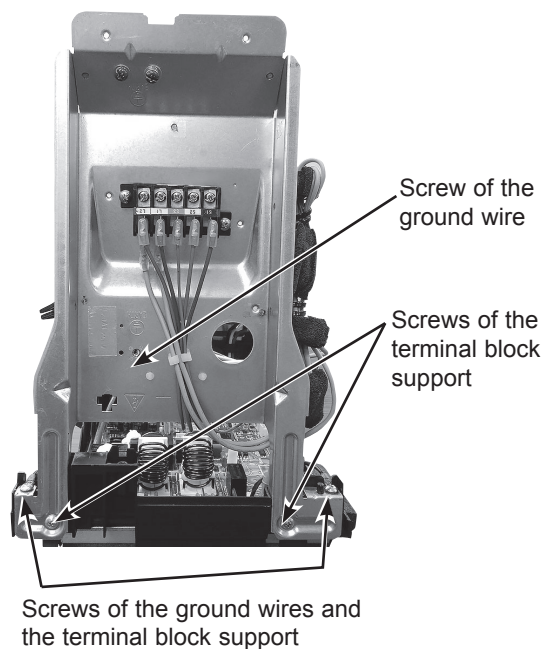
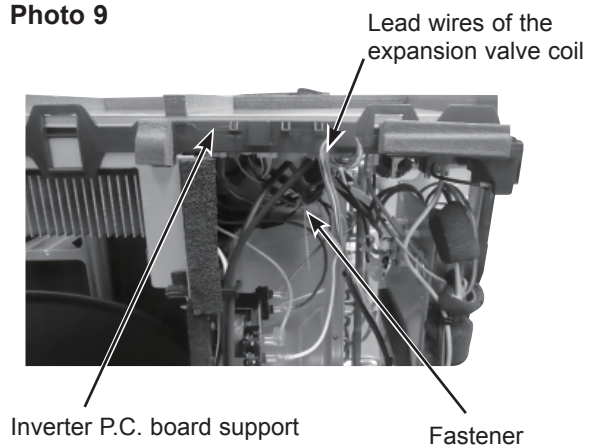


Photo 9



OPERATING PROCEDURE

2-2. Removing the fuse P.C. board

- (1) Remove the top panel, cabinet and service panel. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the inverter P.C. board connectors. (Refer to section 2-1. (2))
- (3) Remove the compressor connector (CN61).
- (4) Remove the screws fixing the heat sink support and the separator.
- (5) Remove the screws fixing the P.C. board support and the motor support.
- (6) Remove the fixing screws of the terminal block support and the back panel.
- (7) Remove the inverter assembly.
- (8) Remove the following disconnected connectors:
<Fuse P.C. board>
CN65, CN66 (Terminal block)
- (9) Remove the fuse P.C. board from the supports. (Photo 11)

PHOTOS/FIGURES

Photo 10

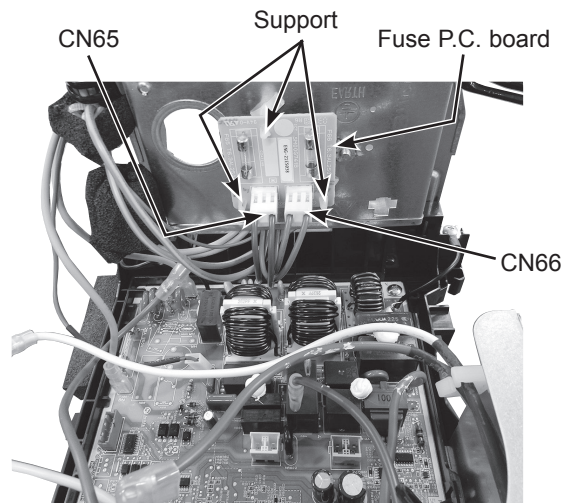
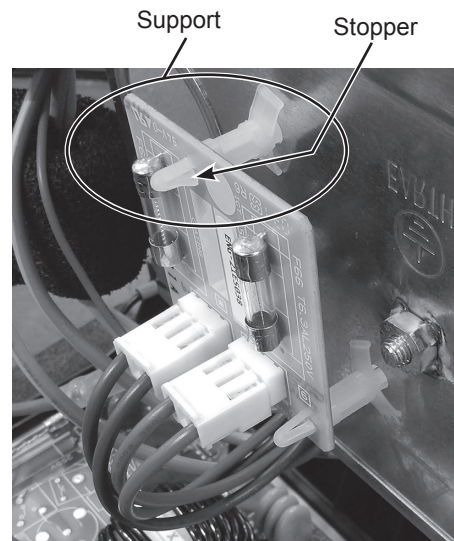
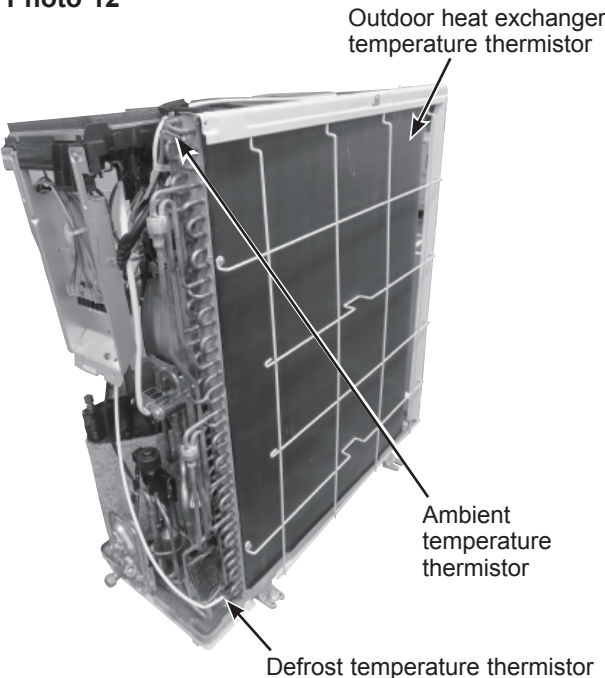
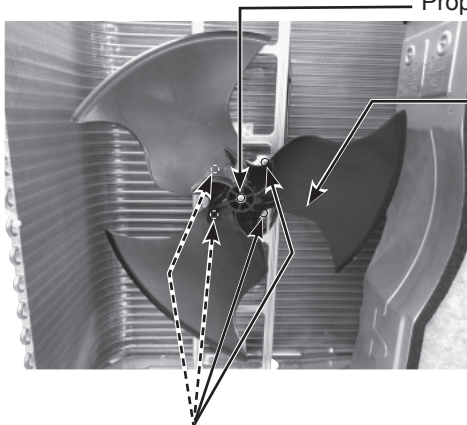


Photo 11



Pinch the stopper of the support, and push it into the hole to remove the fuse P.C. board.



OPERATING PROCEDURE	PHOTOS/FIGURES
3. Removing the discharge temperature thermistor, defrost temperature thermistor, outdoor heat exchanger temperature thermistor and ambient temperature thermistor (1) Remove the cabinet and panels. (Refer to section 1.) (2) Disconnect the lead wire to the reactor and the following connectors: <Inverter P.C. board> CN671 (Defrost temperature thermistor, discharge temperature thermistor and outdoor heart exchanger temperature thermistor) CN672 (Ambient temperature thermistor) (3) Pull out the discharge temperature thermistor from its holder. (Photo 14) (4) Pull out the defrost temperature thermistor from its holder. (5) Pull out the outdoor heat exchanger temperature thermistor from its holder. (Photo 12) (6) Pull out the ambient temperature thermistor from its holder.	Photo 12 
4. Removing outdoor fan motor (1) Remove the top panel, cabinet and service panel. (Refer to section 1.) (2) Disconnect the following connectors: <Inverter P.C. board> CN931, CN932 (Fan motor) (3) Remove the propeller fan nut. (4) Remove the propeller fan. (5) Remove the screws fixing the fan motor. (6) Remove the fan motor.	Photo 13 

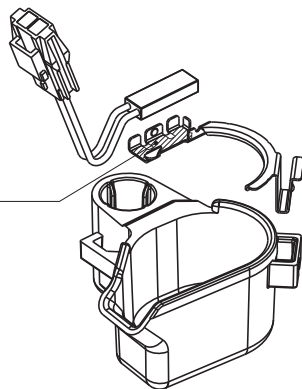
OPERATING PROCEDURE

5. Removing the compressor and 4-way valve

- (1) Remove the cabinet and panels. (Refer to section 1.)
- (2) Remove the inverter assembly. (Refer to section 2)
- (3) Remove the screws fixing the reactor.
- (4) Remove the reactor.
- (5) Remove the soundproof felt.
- (6) Recover gas from the refrigerant circuit.
- NOTE:** Recover gas from the pipes until the pressure gauge shows 0 psig.
- (7) Detach the brazed part of the suction and the discharge pipe connected with compressor.
- (8) Remove the compressor nuts.
- (9) Remove the compressor.
- (10) Remove the screw fixing the R.V. coil (Photo 15)
- (11) Remove the R.V. coil
- (12) Detach the brazed parts of 4-way valve and pipe. (Photo 15)

Figure 1

Attach the compressor protector to the protector holder with the surface on which the model name is printed facing the area hatched in the figure.



PHOTOS/FIGURES

Photo 14

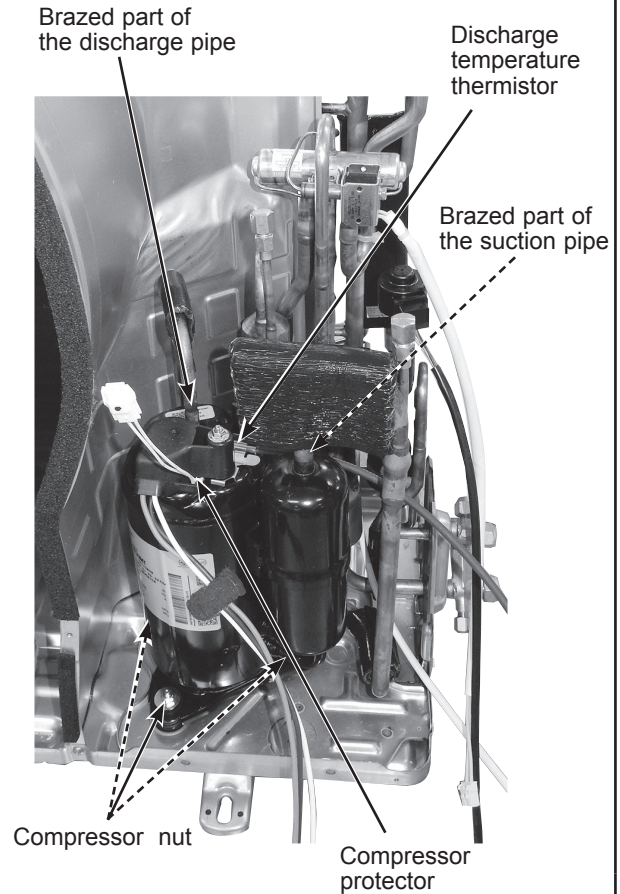
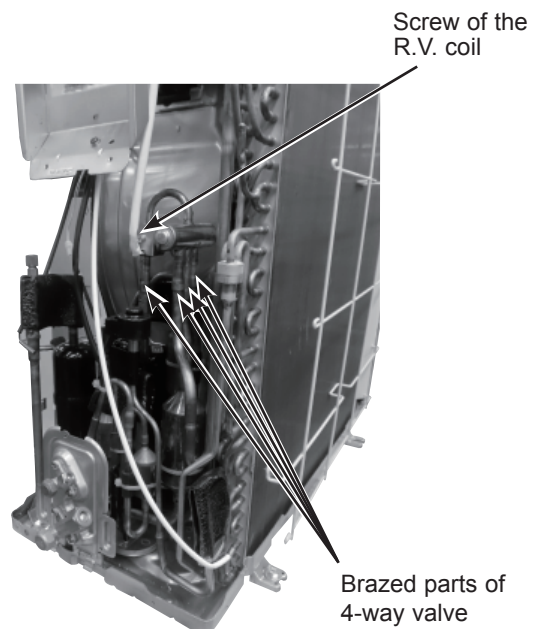


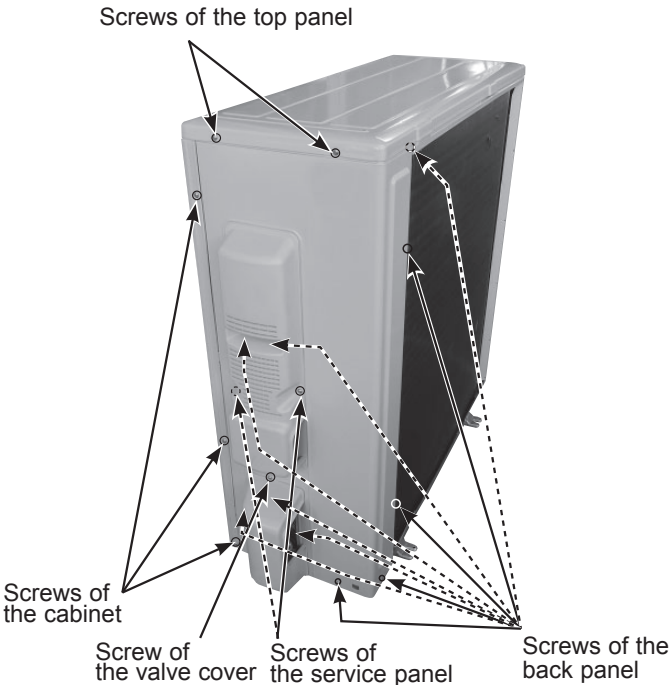
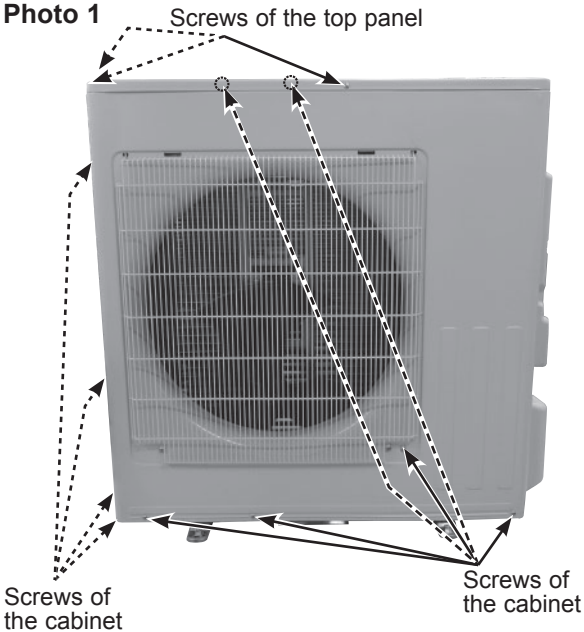
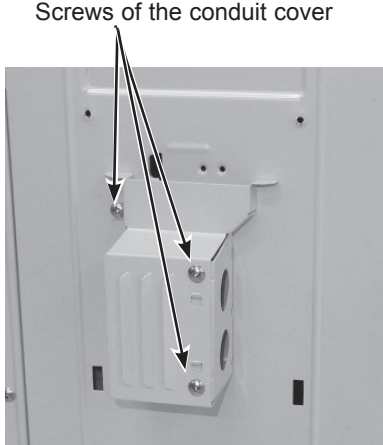
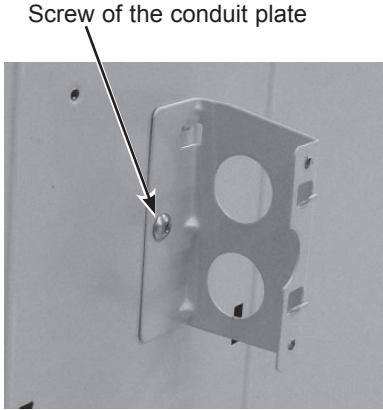
Photo 15



13-2. SUZ-AA24NL SUZ-AA30NL SUZ-AA36NL
SUZ-AA24NLH SUZ-AA30NLH SUZ-AA36NLH

NOTE: Turn OFF the power supply before disassembly.

—————: Indicates the visible parts in the photos/figures.
 - - - - -: Indicates the invisible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the cabinet (1) Remove the screws of the service panel. (2) Remove the screws of the top panel. (3) Remove the screw of the valve cover. (4) Remove the service panel. (5) Remove the top panel. (6) Remove the valve cover. (7) Remove the screws fixing the conduit cover. (Photo 3) (8) Remove the conduit cover. (9) Remove the screw fixing the conduit plate. (Photo 4) (10) Remove the conduit plate. (11) Disconnect the power supply and indoor/outdoor connecting wire. (12) Remove the screws of the cabinet. (13) Remove the cabinet. (14) Remove the screws of the back panel. (15) Remove the back panel. Photo 2  Screws of the top panel Screws of the cabinet Screw of the valve cover Screws of the service panel Screws of the back panel	Photo 1  Screws of the top panel Screws of the cabinet Screws of the cabinet Photo 3  Screws of the conduit cover Photo 4  Screw of the conduit plate

OPERATING PROCEDURE

2. Removing the inverter assembly, inverter P.C. board and fuse P.C. board

2-1. Removing the inverter assembly and inverter P.C. board

- (1) Remove the top panel, cabinet and service panel. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the following connectors:
 - <Inverter P.C. board>
 - CN602 (R.V. coil)
 - CN931, CN932 (Fan motor)
 - CN671 (Defrost temperature thermistor, discharge temperature thermistor and outdoor heat exchanger temperature thermistor)
 - CN672 (Ambient temperature thermistor)
 - CN724 (Expansion valve coil)
 - CN601 (Defrost heater and heater protector)
 - CN64 (Compressor protector)
- (3) Remove the compressor connector (CN61).
- (4) Remove the screws fixing the heat sink support and the separator.
- (5) Remove the screws fixing the P.C. board support and the motor support.
- (6) Remove the fixing screws of the terminal block support and the back panel.
- (7) Remove the inverter assembly.
- (8) Remove the screws of the ground wires and the terminal block support.
- (9) Remove the screw of the heat sink support, and the heat sink support from the P.C. board support.

PHOTOS/FIGURES

Photo 5

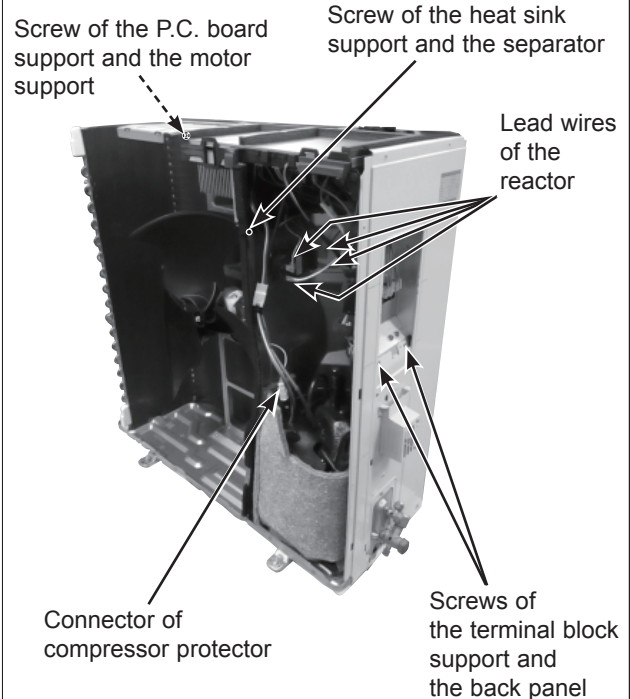
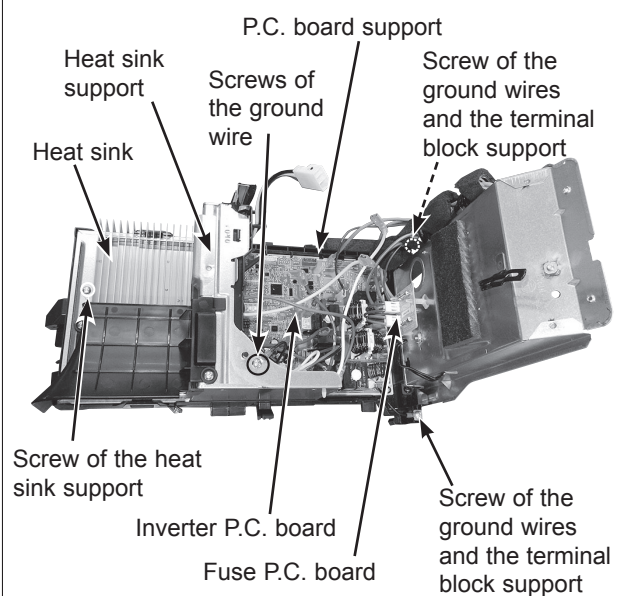


Photo 6 (Inverter assembly)

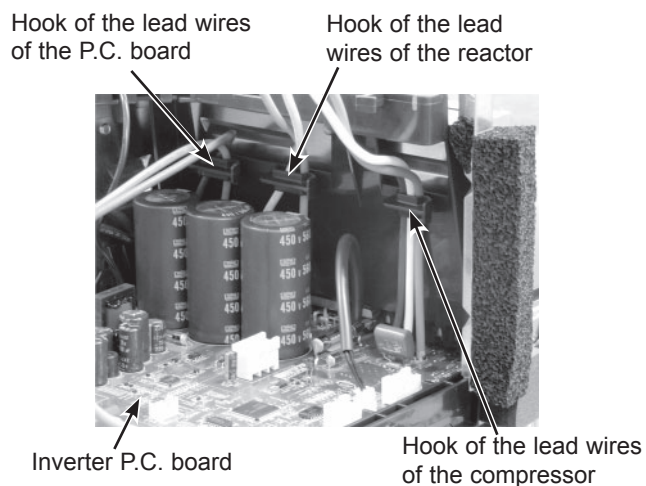


OPERATING PROCEDURE

* Connection procedure when attaching the inverter P.C. board (Photo 8, 9)

1. Attach the heat sink support to the P.C. board support.
2. Hook the lead wires of the compressor, the reactor and the P.C. board to each hooks on the heat sink support as shown Photo 8.
3. Connect the lead wires of the expansion valve coil to the connector on the inverter P.C. board. Pull the lead wires of the expansion valve coil toward you and put them on the hook on the P.C. board support as shown in Photo 9.
4. Tighten the lead wires of the fan motor (CN931, CN932), defrost temperature thermistor, discharge temperature thermistor, outdoor heat exchanger temperature thermistor and ambient temperature thermistor with the fastener as shown in Photo 9.

Photo 8



PHOTOS/FIGURES

Photo 7

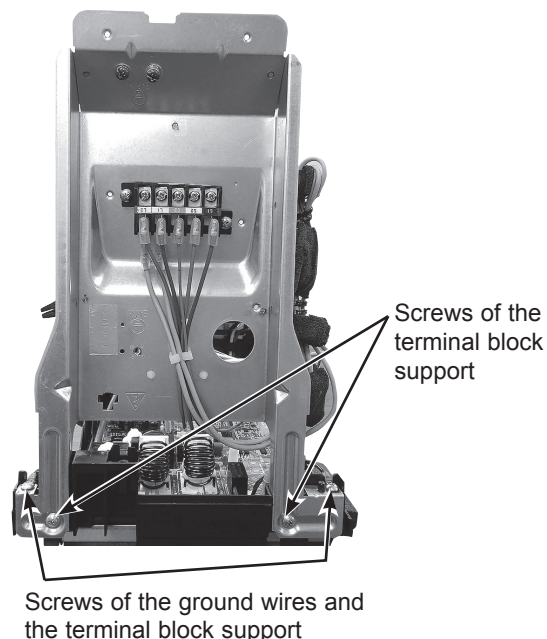
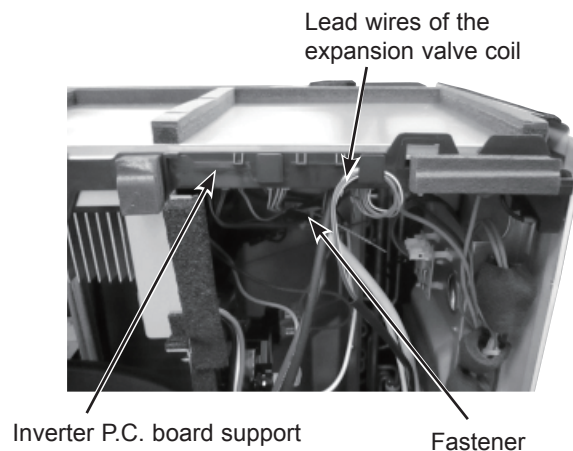


Photo 9



OPERATING PROCEDURE

2-2. Removing the fuse P.C. board

- (1) Remove the top panel, cabinet and service panel. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the inverter P.C. board connectors. (Refer to section 2-1. (2))
- (3) Remove the compressor connector (CN61).
- (4) Remove the screws fixing the heat sink support and the separator.
- (5) Remove the screws fixing the P.C. board support and the motor support.
- (6) Remove the fixing screws of the terminal block support and the back panel.
- (7) Remove the inverter assembly.
- (8) Remove the following disconnected connectors:
<Fuse P.C. board>
CN65, CN66 (Terminal block)
- (9) Remove the fuse P.C. board from the supports. (Photo 11)

PHOTOS/FIGURES

Photo 10

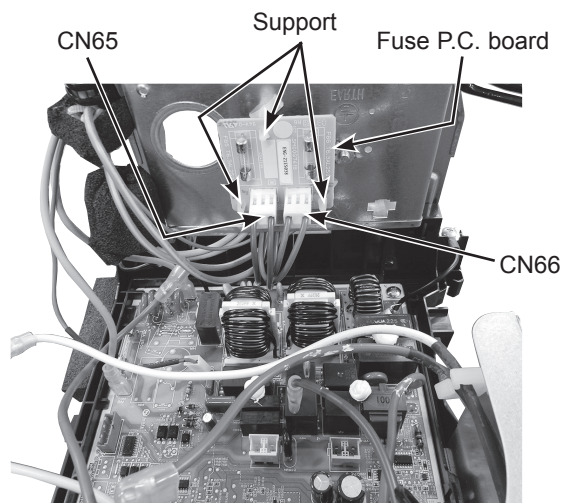
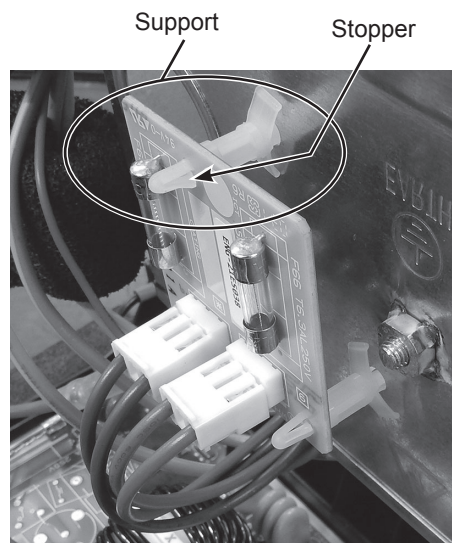
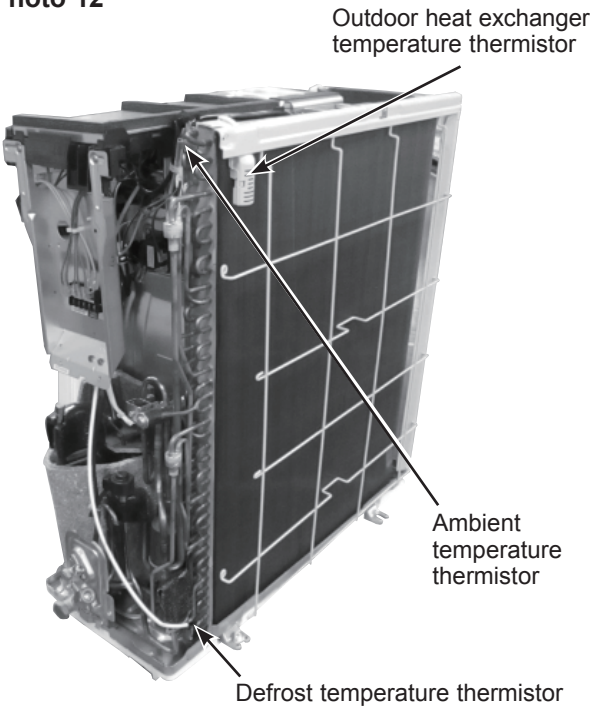
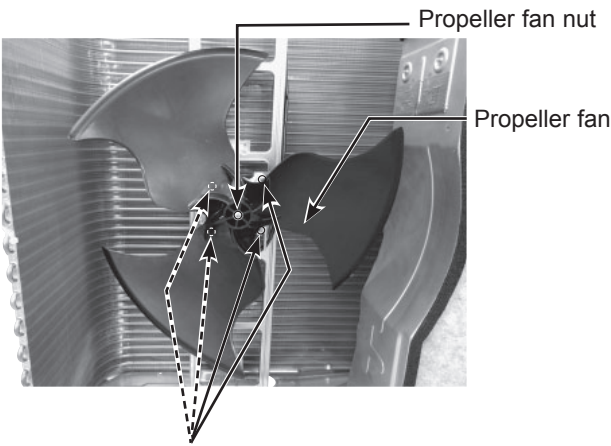


Photo 11



Pinch the stopper of the support, and push it into the hole to remove the fuse P.C. board.

OPERATING PROCEDURE	PHOTOS/FIGURES
3. Removing the discharge temperature thermistor, defrost temperature thermistor, outdoor heat exchanger temperature thermistor and ambient temperature thermistor (1) Remove the cabinet and panels. (Refer to section 1.) (2) Disconnect the lead wire to the reactor and the following connectors: <Inverter P.C. board> CN671 (Defrost temperature thermistor, discharge temperature thermistor and outdoor heart exchanger temperature thermistor) CN672 (Ambient temperature thermistor) (3) Pull out the discharge temperature thermistor from its holder. (Photo 14) (4) Pull out the defrost temperature thermistor from its holder. (5) Pull out the outdoor heat exchanger temperature thermistor from its holder. (Photo 12) (6) Pull out the ambient temperature thermistor from its holder.	Photo 12  Outdoor heat exchanger temperature thermistor Ambient temperature thermistor Defrost temperature thermistor
4. Removing outdoor fan motor (1) Remove the top panel, cabinet and service panel. (Refer to section 1.) (2) Disconnect the following connectors: <Inverter P.C. board> CN931, CN932 (Fan motor) (3) Remove the propeller fan nut. (4) Remove the propeller fan. (5) Remove the screws fixing the fan motor. (6) Remove the fan motor.	Photo 13  Propeller fan nut Propeller fan Screws of the outdoor fan motor

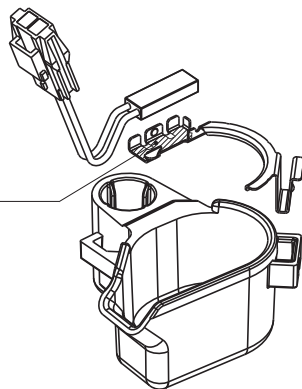
OPERATING PROCEDURE

5. Removing the compressor and 4-way valve

- (1) Remove the cabinet and panels. (Refer to section 1.)
- (2) Remove the inverter assembly. (Refer to section 2)
- (3) Remove the screws fixing the reactor.
- (4) Remove the reactor.
- (5) Remove the soundproof felt.
- (6) Recover gas from the refrigerant circuit.
- NOTE:** Recover gas from the pipes until the pressure gauge shows 0 psig.
- (7) Detach the brazed part of the suction and the discharge pipe connected with compressor.
- (8) Remove the compressor nuts.
- (9) Remove the compressor.
- (10) Remove the screw fixing the R.V. coil (Photo 15)
- (11) Remove the R.V. coil
- (12) Detach the brazed parts of 4-way valve and pipe. (Photo 15)

Figure 1

Attach the compressor protector to the protector holder with the surface on which the model name is printed facing the area hatched in the figure.



PHOTOS/FIGURES

Photo 14

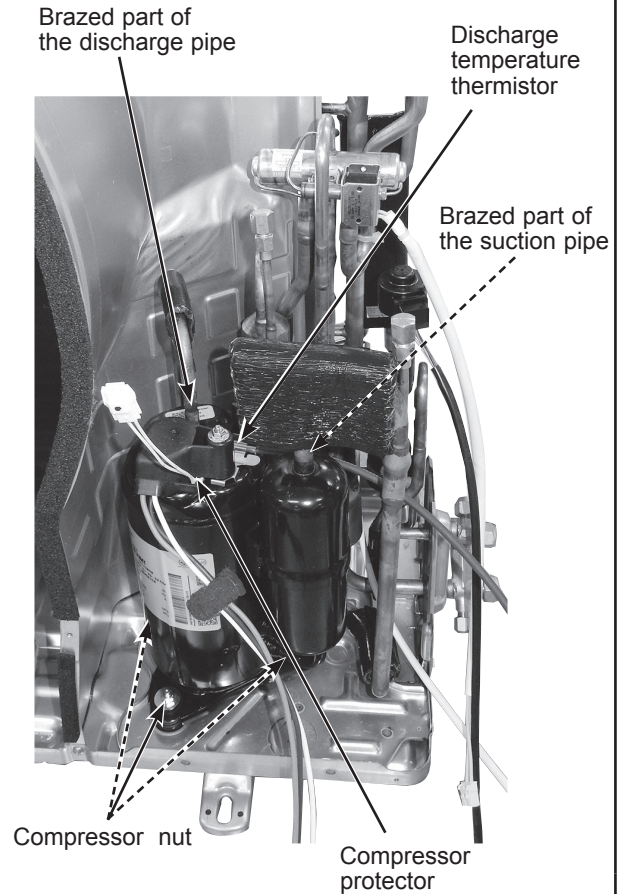
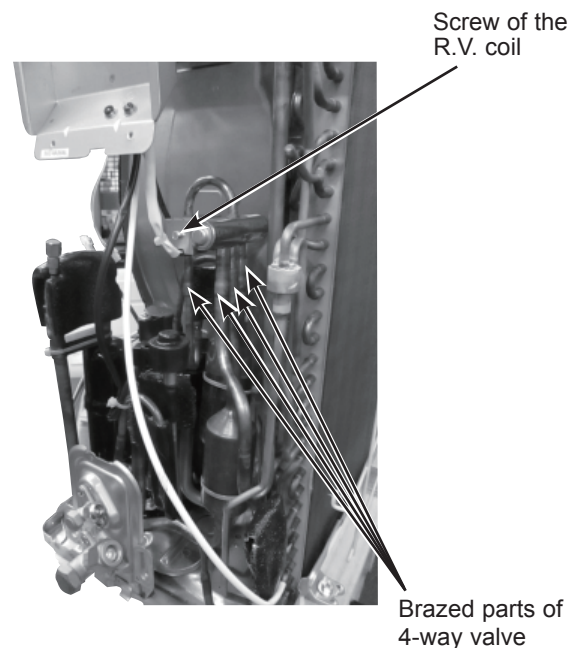


Photo 15



Model name		Indoor unit		SLZ-AF18NL		MLZ-KX18NL		MFZ-KX18NL		
		Outdoor unit		SUZ-AA18NL		SUZ-AA18NL		SUZ-AA18NL		
Cooling	at 95°F	Max. Capacity	Btu/h	18,000		16,400		18,000		
		Rated Capacity *1	Btu/h	18,000		16,400		18,000		
		Min. Capacity	Btu/h	5,300		5,200		5,000		
		Total Input	W	1,500		1,390		1,450		
		EER2	Btu/h/W	12.0		11.7		12.4		
		Moisture Removal	Pints/h	4.8		4.2		4.1		
		SHF		0.70		0.71		0.75		
		Power factor	%	99		98		98		
		SEER2	Btu/h/W	17.5		17.2		17.2		
		Heating	at 47°F	Max. Capacity	Btu/h	21,800		21,000		22,500
Rated Capacity	Btu/h			20,000		19,000		20,000		
Min. Capacity	Btu/h			7,900		8,200		8,500		
Total Input	W			1,880		1,750		1,690		
COP	W/W			3.10		3.1		3.4		
Power factor	%			99		98		98		
at 17°F	Rated Capacity			Btu/h	13,200		12,600		13,400	
	Total Input		W	1,430		1,370		1,350		
	COP		W/W	2.7		2.6		2.9		
	HSPF2(IV/V)		Btu/h/W	9.6		10.0		10.3		
	Power supply		Phase,Cycle,Voltage		1-phase, 60 Hz, 208/230 V					
Breaker size			30							
Voltage	Indoor - Outdoor S1-S2		AC208 V / 230 V							
	Indoor - Outdoor S2-S3		DC24 V							
	Indoor - Remote controller		DC12 V							
Indoor unit	MCA		A		1.0					
	MOCP		A		15					
	Fan Motor Output		W		50		30		40	
	Air flow(LoLo-Lo-Mid-Hi)		DRY (CFM)		300-420-475		212-293-346-403		198-254-328-420-490	
			WET (CFM)		270-378-429		-		168-216-279-357-417	
	External Static Pressure		in. WG [Pa]		0		-			
	Sound Pressure Level (LoLo-Lo-Mid-Hi)		dB(A)		32-40-43		29-36-41-47		28-33-39-45-50	
							26-37-42-48		29-35-40-45-49	
	Dimensions		W:mm [inch]		570 [22-7/16]		1102 [43-3/8]		750 [29-1/2]	
			D:mm [inch]		570 [22-7/16]		360 [14-3/16]		215 [8-7/16]	
			H:mm [inch]		208 [8-4/16]		185 [7-5/16]		600 [23-5/8]	
	Weight Unit		kg [lbs]		14 [31]		15.5 [34]		15 [33]	
	Field Drain pipe size		mm [inch]		32 [1-1/4]		20 [13/16]		16 [5/8]	
	Refrigerant pipe size Gas		mm [inch]		ø12.7 [1/2]					
	Refrigerant pipe size Liquid		mm [inch]		ø6.35 [1/4]					
RemoteController		Attached in Indoor Unit								
Outdoor unit	MCA		A		25					
	MOCP		A		42					
	SCCR		kA		5					
	Inverter input		A		17.2					
	Fan Motor Output		W		50					
	Compressor		Model		SRB172FQHMT					
	Air flow		CFM		2,193/1,949					
	Refrigerant Control		Electronic Expansion Valve							
	Defrost Method		Reverse Cycle							
	Sound Pressure Level at cooling		dB(A)		54					
	Sound Pressure Level at heating		dB(A)		55					
	External Finish Color		Ivory Munsell 3Y 7.8/1.1							
	Dimensions		W: mm [inch]		840 [33-1/16]					
			D: mm [inch]		330 [13]					
			H: mm [inch]		880 [34-10/16]					
	Weight Unit		kg [lbs]		52.16 [115]					
	Refrigerant	Type		R454B						
Charge		kg [lbs,oz]		1.35 [2 lbs + 16 oz]						
Oil		Model		RM68EH						
		L [oz]		0.43 [14.5]						
Refrigerant		Gas side O.D.		mm [inch]		12.7 [1/2]				
Pipe Size	Liquid side O.D.		mm [inch]		6.35 [1/4]					
Refrigerant	Height difference		15 [50]							
pipe length	Length		30 [100]							
Refrigerant Piping		Not supplied								
Connection Method	Indoor/Outdoor		Flared							

NOTES: *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)

Model name		Indoor unit	MSZ-EX18NL
		Outdoor unit	SUZ-AA18NL
Cooling	at 95°F	Max. Capacity	Btu/h 16,400
		Rated Capacity *1	Btu/h 16,400
		Min. Capacity	Btu/h 5,300
		Total Input	W 1,390
		EER2	Btu/h/W 11.7
		Moisture Removal	Pints/h 4.5
		SHF	0.69
		Power factor	% 95
		SEER2	Btu/h/W 17.5
Heating	at 47°F	Max. Capacity	Btu/h 21,700
		Rated Capacity	Btu/h 20,000
		Min. Capacity	Btu/h 8,400
		Total Input	W 1,700
		COP	W/W 3.4
		Power factor	% 92
	at 17°F	Rated Capacity	Btu/h 13,100
		Total Input	W 1,340
		COP	W/W 2.8
	HSPF2(IV/V)		Btu/h/W 10.6
Power supply		Phase,Cycle,Voltage	1-phase, 60 Hz, 208/230 V
		Breaker size	A 30
Voltage	Indoor - Outdoor S1-S2		AC208 V / 230 V
	Indoor - Outdoor S2-S3		DC24 V
	Indoor - Remote controller		DC12 V
Indoor unit	MCA	A	1.0
	MOCP	A	15
	Fan Motor Output	HP	0.04
	Air flow(SLo-Lo-Mid-Hi-SHi)	COOL DRY (CFM)	208-248-288-343-408
		COOL WET (CFM)	188-223-259-309-367
		HEAT DRY (CFM)	232-264-313-347-497
	External Static Pressure	in. WG [Pa]	0
	Sound Pressure Level (SLo-Lo-Mid-Hi-SHi)		30-33-36-40-43
		dB(A)	30-33-37-43-49
	Dimensions	W:mm [inch]	885 [34-13/16]
		D:mm [inch]	195 [7-11/16]
		H:mm [inch]	299 [11-3/4]
	Weight Unit	kg [lbs]	11.5 [26]
	Field Drain pipe size	mm [inch]	16 [5/8]
	Refrigerant pipe size Gas	mm [inch]	ø12.7 [1/2]
	Refrigerant pipe size Liquid	mm [inch]	ø6.35 [1/4]
RemoteController		Attached in Indoor Unit	
Outdoor unit	MCA	A	25
	MOCP	A	42
	SCCR	kA	5
	Inverter input	A	17.2
	Fan Motor Output	W	50
	Compressor	Model	SRB172FQHMT
	Air flow	CFM	2,193/1,949
	Refrigerant Control	Electronic Expansion Valve	
	Defrost Method	Reverse Cycle	
	Sound Pressure Level at cooling	dB(A)	54
	Sound Pressure Level at heating	dB(A)	55
	External Finish Color	Ivory Munsell 3Y 7.8/1.1	
	Dimensions	W: mm [inch]	840 [33-1/16]
		D: mm [inch]	330 [13]
		H: mm [inch]	880 [34-10/16]
	Weight Unit	kg [lbs]	52.16 [115]
Refrigerant	Type	R454B	
	Charge	kg [lbs,oz]	1.35 [2 lbs + 16 oz]
	Oil	Model	RM68EH
		L [oz]	0.43 [14.5]
Refrigerant	Gas side O.D.	mm [inch]	12.7 [1/2]
Pipe Size	Liquid side O.D.	mm [inch]	6.35 [1/4]
Refrigerant	Height difference	15 [50]	
pipe length	Length	30 [100]	
Refrigerant Piping		Not supplied	
Connection	Indoor/Outdoor		Flared
Method			

NOTES: *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)

Model name		Indoor unit		SEZ-AD18NL	PEAD-AA18NL
		Outdoor unit		SUZ-AA18NL	SUZ-AA18NL
Cooling	at 95°F	Max. Capacity	Btu/h	18,000	18,000
		Rated Capacity ^{*1}	Btu/h	18,000	18,000
		Min. Capacity	Btu/h	5,500	5,500
		Total Input	W	1,400	1,410
		EER2	Btu/h/W	12.8	12.7
		Moisture Removal	Pints/h	4	2.9
		SHF		0.75	0.82
		Power factor	%	95	95
		SEER2	Btu/h/W	17.0	17.2
		Heating	at 47°F	Max. Capacity	Btu/h
Rated Capacity	Btu/h			20,000	20,000
Min. Capacity	Btu/h			8,400	8,400
Total Input	W			1,510	1,510
COP	W/W			3.8	3.8
Power factor	%			95	97
at 17°F	Rated Capacity		Btu/h	13,100	13,100
	Total Input		W	1,240	1,250
	COP		W/W	3.0	3.0
	HSPF2(IV/V)		Btu/h/W	10.4	10.4
Power supply	Phase,Cycle,Voltage		1-phase, 60 Hz, 208/230 V		
	Breaker size	A	30		
Voltage	Indoor - Outdoor S1-S2		AC208 V / 230 V		
	Indoor - Outdoor S2-S3		DC24 V		
	Indoor - Remote controller		DC12 V		
Indoor unit	MCA	A	1.38	2.25	
	MOCP	A	15		
	Fan Motor Output	W	96	121	
	Air flow(LoLo-Lo-Mid-Hi)	DRY (CFM)	423-529-635	403-424-512-600	
		WET (CFM)	-	-	
	External Static Pressure	in. WG [Pa]	5-15-35-50 [0.02-0.06-0.14-0.20]	0.14-0.20-0.28-0.40-0.60 [35-50-70-100-150]	
	Sound Pressure Level (LoLo-Lo-Mid-Hi)	dB(A)	30-34-38	28-29-34-37	
	Dimensions	W:mm [inch]	1190 [46-7/8]	900 [35-7/16]	
		D:mm [inch]	700 [27-9/16]	732 [28-7/8]	
		H:mm [inch]	200 [7-7/8]	250 [9-7/8]	
	Weight Unit	kg [lbs]	27 [60]		
	Field Drain pipe size	mm [inch]	32 [1-1/4]		
	Refrigerant pipe size Gas	mm [inch]	12.7 [1/2]		
	Refrigerant pipe size Liquid	mm [inch]	6.35 [1/4]		
RemoteController		Attached in Indoor Unit			
Outdoor unit	MCA	A	25		
	MOCP	A	42		
	SCCR	kA	5		
	Inverter input	A	17.2		
	Fan Motor Output	W	50		
	Compressor	Model	SRB172FQHMT		
	Air flow	CFM	2,193/1,949		
	Refrigerant Control		Electronic Expansion Valve		
	Defrost Method		Reverse Cycle		
	Sound Pressure Level at cooling	dB(A)	54		
	Sound Pressure Level at heating	dB(A)	55		
	External Finish Color		Ivory Munsell 3Y 7.8/1.1		
	Dimensions	W: mm [inch]	840 [33-1/16]		
		D: mm [inch]	330 [13]		
		H: mm [inch]	880 [34-10/16]		
	Weight Unit	kg [lbs]	52.16 [115]		
Refrigerant	Type		R454B		
	Charge	kg [lbs,oz]	1.35 [2 lbs + 16 oz]		
	Oil	Model	RM68EH		
		L [oz]	0.43 [14.5]		
Refrigerant	Gas side O.D.	mm [inch]	12.7 [1/2]		
Pipe Size	Liquid side O.D.	mm [inch]	6.35 [1/4]		
Refrigerant	Height difference		15 [50]		
pipe length	Length		30 [100]		
Refrigerant Piping		Not supplied			
Connection Method	Indoor/Outdoor		Flared		

NOTES: *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)



Model name		Indoor unit		PEAD-AA24NL		PEAD-AA30NL		PEAD-AA36NL	
		Outdoor unit		SUZ-AA24NL		SUZ-AA30NL		SUZ-AA36NL	
Cooling	at 95°F	Max. Capacity	Btu/h	24,000		27,000		33,000	
		Rated Capacity *1	Btu/h	24,000		27,000		33,000	
		Min. Capacity	Btu/h	9,100		9,500		9,900	
		Total Input	W	1,900		2,270		3,070	
		EER2	Btu/h/W	12.2		11.7		10.7	
		Moisture Removal	Pints/h	4.6		4.4		4.4	
		SHF		0.79		0.82		0.85	
		Power factor	%	95		95		95	
		SEER2	Btu/h/W	21.2		20.3		19.4	
		Heating	at 47°F	Max. Capacity	Btu/h	28,200		31,400	
Rated Capacity	Btu/h			25,000		30,000		34,000	
Min. Capacity	Btu/h			8,300		8,500		8,700	
Total Input	W			2,020		2,600		2,670	
COP	W/W			3.6		3.3		3.7	
Power factor	%			97		97		97	
at 17°F	Rated Capacity		Btu/h	17,100		18,700		21,000	
	Total Input		W	1,620		1,980		2,110	
	COP		W/W	3.0		2.7		2.9	
	HSPF2(IV/V)		Btu/h/W	10.0		9.5		9.3	
Power supply	Phase,Cycle,Voltage		1-phase, 60 Hz, 208/230 V						
	Breaker size	A	25		30				
Voltage	Indoor - Outdoor S1-S2		AC208 V / 230 V						
	Indoor - Outdoor S2-S3		DC24 V						
	Indoor - Remote controller		DC12 V						
Indoor unit	MCA	A	2.25		2.25		3.50		
	MOCP	A	15						
	Fan Motor Output	W	121			300			
	Air flow(LoLo-Lo-Mid-Hi)	DRY (CFM)	512-565-636-742		618-671-742-883		848-936-1024-1201		
		WET (CFM)	-						
	External Static Pressure	in. WG [Pa]	0.14-0.20-0.28-0.40-0.60 [35-50-70-100-150]						
	Sound Pressure Level (LoLo-Lo-Mid-Hi)	dB(A)	27-29-31-35		30-32-34-38		34-36-38-42		
	Dimensions	W:mm [inch]	1100 [43-5/16]				1400 [55-1/8]		
		D:mm [inch]	732 [28-7/8]						
		H:mm [inch]	250 [9-7/8]						
	Weight Unit	kg [lbs]	30 [67]				37 [82]		
	Field Drain pipe size	mm [inch]	32 [1-1/4]						
	Refrigerant pipe size Gas	mm [inch]	15.88 [5/8]						
	Refrigerant pipe size Liquid	mm [inch]	9.52 [3/8]						
RemoteController			Attached in Indoor Unit						
Outdoor unit	MCA	A	24		25				
	MOCP	A	40		41				
	SCCR	kA	5						
	Inverter input	A	16.4						
	Fan Motor Output	W	50						
	Compressor	Model	SRB220FQYMT						
	Air flow	CFM	1,974/1,949						
	Refrigerant Control		Electronic Expansion Valve						
	Defrost Method		Reverse Cycle						
	Sound Pressure Level at cooling	dB(A)	55						
	Sound Pressure Level at heating	dB(A)	55						
	External Finish Color		Ivory Munsell 3Y 7.8/1.1						
	Dimensions	W: mm [inch]	840 [33-1/16]						
		D: mm [inch]	330 [13]						
		H: mm [inch]	880 [34-10/16]						
	Weight Unit	kg [lbs]	55 [121]						
Refrigerant	Type		R454B						
	Charge	kg [lbs,oz]	1.47 [3 lbs + 4 oz]						
	Oil	Model	RM68EH						
		L [oz]	0.46[15.6]						
Refrigerant	Gas side O.D.	mm [inch]	15.88 [5/8]						
Pipe Size	Liquid side O.D.	mm [inch]	6.35 [1/4]						
Refrigerant	Height difference		30 [100]						
pipe length	Length		30 [100]						
Refrigerant Piping			Not supplied						
Connection	Indoor/Outdoor		Flared						
Method									

NOTES: *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)



Model name		Indoor unit		SVZ-AP18NL	SVZ-AP24NL	SVZ-AP30NL	SVZ-AP36NL
		Outdoor unit		SUZ-AA18NL	SUZ-AA24NL	SUZ-AA30NL	SUZ-AA36NL
Cooling	at 95°F	Max. Capacity	Btu/h	18,000	22,800	27,000	33,000
		Rated Capacity ¹	Btu/h	18,000	22,800	27,000	33,000
		Min. Capacity	Btu/h	5,700	9,000	9,400	9,800
		Total Input	W	1,490	1,930	2,400	3,530
		EER2	Btu/h/W	12.0	11.8	11.2	9.3
		Moisture Removal	Pints/h	2.8	5.6	5.5	8.2
		SHF		0.83	0.73	0.77	0.72
		Power factor	%	98	98	98	98
		SEER2	Btu/h/W	16.2	19.5	17.8	15.8
		Heating	at 47°F	Max. Capacity	Btu/h	23,800	28,000
Rated Capacity	Btu/h			20,000	25,000	30,000	34,200
Min. Capacity	Btu/h			8,500	8,300	8,600	8,700
Total Input	W			1,530	2,130	2,500	2,810
COP	W/W			3.8	3.4	3.5	3.5
Power factor	%			99	99	99	99
at 17°F	Rated Capacity		Btu/h	12,800	17,100	18,600	20,800
	Total Input		W	1,290	1,770	2,010	2,320
	COP		W/W	2.9	2.8	2.7	2.6
	HSPF2(IV/V)		Btu/h/W	9.8	9.4	9.0	8.2
Power supply	Phase,Cycle,Voltage		1-phase, 60 Hz, 208/230 V				
Voltage	Breaker size		A	30	25	30	
	Indoor - Outdoor S1-S2		AC208 V / 230 V				
	Indoor - Outdoor S2-S3		DC24 V				
	Indoor - Remote controller		DC12 V				
Indoor unit	MCA	A	3.00		4.13		
	MOCP	A			15		
	Fan Motor Output	W	121		244		
	Air flow(LoLo-Lo-Mid-Hi)	DRY (CFM)	471-573-675	471-573-700	613-744-875	767-910-910	
	External Static Pressure	in. WG [Pa]	0.3-0.5-0.8				
	Sound Pressure Level (LoLo-Lo-Mid-Hi)	dB(A)	36-41-45		36-45-49	47-49-49	
	Dimensions	W:mm [inch]	432 [17]		534 [21]		
		D:mm [inch]	548 [21-5/8]		548 [21-5/8]		
		H:mm [inch]	1011 [39-13/16]		1111 [43-3/4]		
	Weight Unit	kg [lbs]	44[97]		55[122]		
	Field Drain pipe size	mm [inch]	19.05 [3/4]				
	Refrigerant pipe size Gas	mm [inch]	12.7 [1/2]		15.88 [5/8]		
	Refrigerant pipe size Liquid	mm [inch]	6.35 [1/4]		9.52 [3/8]		
	RemoteController		Attached in Indoor Unit				
Outdoor unit	MCA	A	25	24	25		
	MOCP	A	42	40	41		
	SCCR	kA	5				
	Inverter input	A	17.2	16.4			
	Fan Motor Output	W	50				
	Compressor	Model	SRB172FQHMT	SRB220FQYMT			
	Air flow	CFM	2,193/1,949	1,974/1,949			
	Refrigerant Control	Electronic Expansion Valve					
	Defrost Method	Reverse Cycle					
	Sound Pressure Level at cooling	dB(A)	54		55		
	Sound Pressure Level at heating	dB(A)	55				
	External Finish Color	Ivory Munsell 3Y 7.8/1.1					
	Dimensions	W: mm [inch]	840 [33-1/16]				
		D: mm [inch]	330 [13]				
		H: mm [inch]	880 [34-10/16]				
	Weight Unit	kg [lbs]	52.16 [115]		55 [121]		
Refrigerant	Type	R454B					
	Charge	kg [lbs,oz]	1.35 [2 lbs + 16 oz]		1.47 [3 lbs + 4 oz]		
	Oil	Model	RM68EH				
		L [oz]	0.43[14.5]		0.46[15.6]		
Refrigerant	Gas side O.D.	mm [inch]	12.7 [1/2]		15.88 [5/8]		
Pipe Size	Liquid side O.D.	mm [inch]	6.35 [1/4]				
Refrigerant	Height difference		15 [50]		30 [100]		
pipe length	Length		30 [100]		30 [100]		
Refrigerant Piping		Not supplied					
Connection Method	Indoor/Outdoor		Flared				

NOTES: 1. Rating conditions (cooling)-Indoor: D.B. 26.7°C (80°F), W.B. 19.4°C (67°F) Outdoor: D.B. 35°C (95°F), W.B. 23.9°C (75°F)
(heating)-Indoor: D.B. 21.1°C (70°F), W.B. 15.6°C (60°F) Outdoor: D.B. 8.3°C (47°F), W.B. 6.1°C (43°F)
2. Rating conditions (heating)-Indoor: D.B. 21.1°C (70°F), W.B. 15.6°C (60°F) Outdoor: D.B. -8.3°C (17°F), W.B. -9.4°C (15°F)

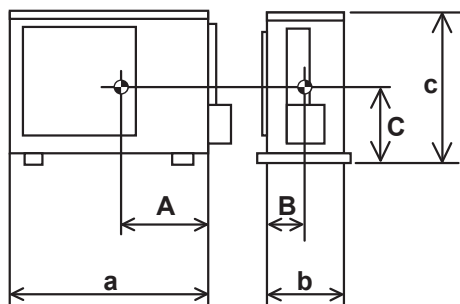
Operating range

		Indoor intake air temperature	Outdoor intake air temperature
Cooling	Maximum	D.B. 32°C (90°F), W.B. 23°C (73°F)	D.B. 46°C (115°F)
	Minimum	D.B. 19°C (66°F), W.B. 15°C (59°F)	D.B. -5°C (23°F) D.B. -18°C (0°F)*
Heating	Maximum	D.B. 28°C (83°F)	D.B. 21.1°C (70°F), W.B. 15°C (59°F)
	Minimum	D.B. 10°C (50°F)	D.B. -20°C (-4°F), W.B. -20°C (-4°F)

* In case that the wind baffle is installed. (In case that the wind baffle is not installed, the minimum temperature will be -5°C (23°F) DB.)

T2-1. OUTDOOR UNIT

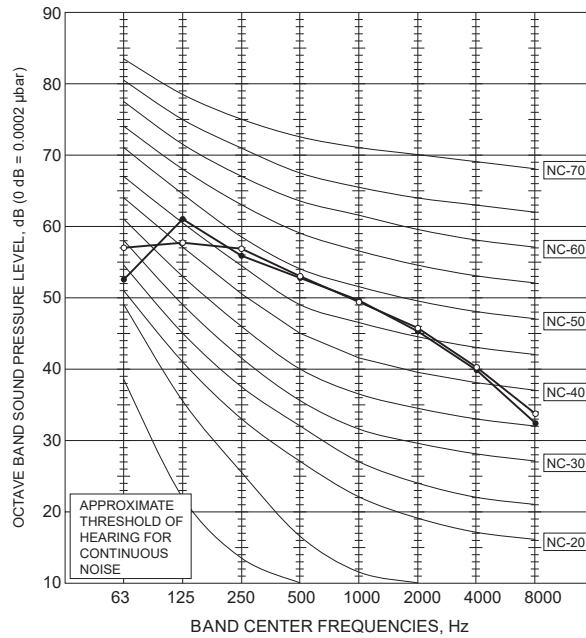
Unit: inch(mm)



Model	A	B	C	a	b	c
SUZ-AA18NL	12-22/32 (322)	6-27/32 (174)	14-61/64 (380)	33-1/16 (840)	13 (330)	34-10/16 (880)
SUZ-AA24NL SUZ-AA30NL SUZ-AA36NL	12-19/32 (320)	6-27/32 (174)	15-5/64 (383)			

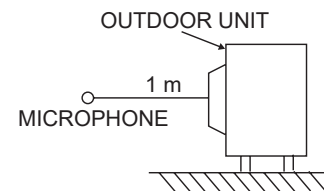
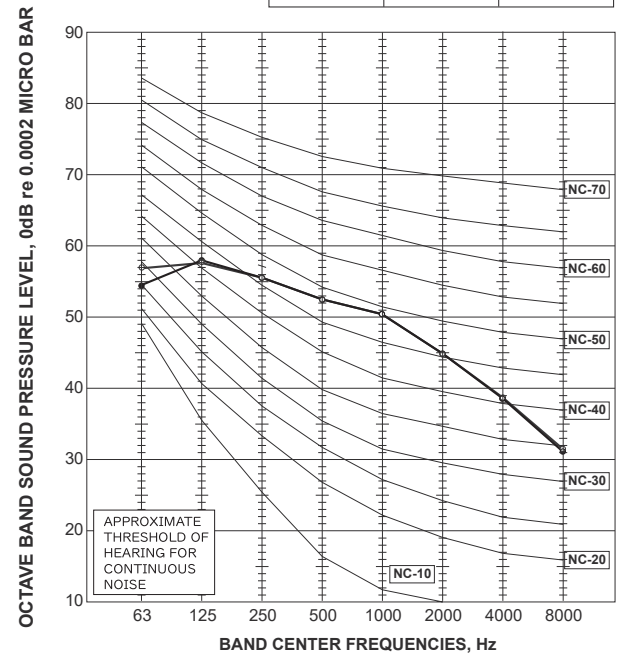
SUZ-AA18NL

NOTCH	SPL(dB(A))	LINE
COOLING	54	●—●
HEATING	55	○—○



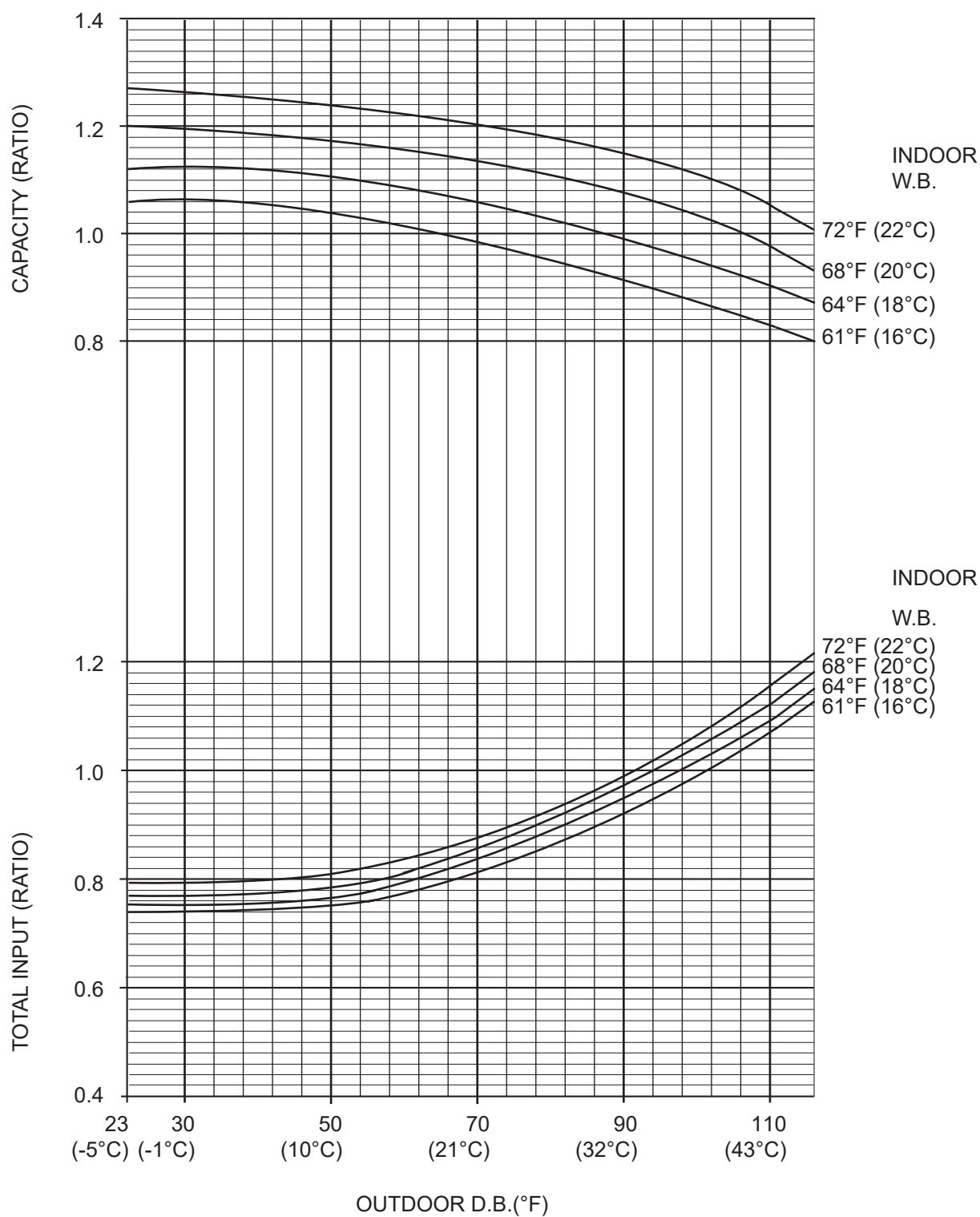
SUZ-AA24/30/36NL

FUNCTION	SPL(dB(A))	LINE
COOLING	55	●—●
HEATING	55	○—○



T4-1. PERFORMANCE CURVE

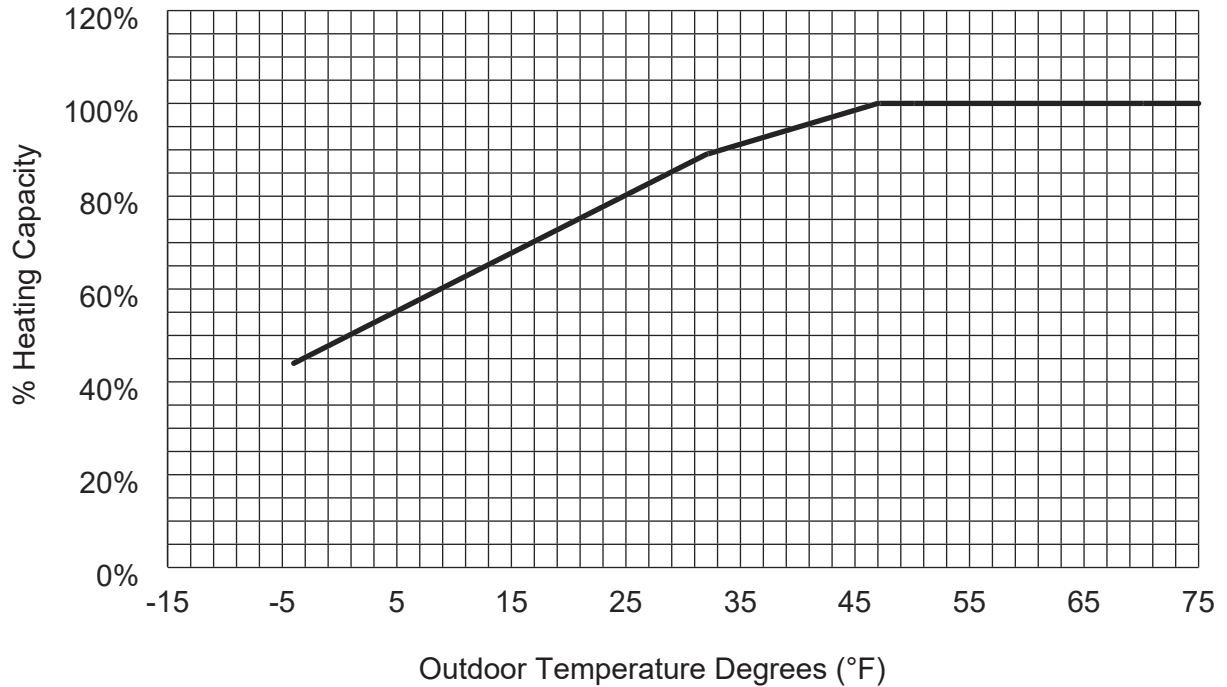
Cooling performance curve



Note : This diagram shows the case where the operation frequency of a compressor is fixed.

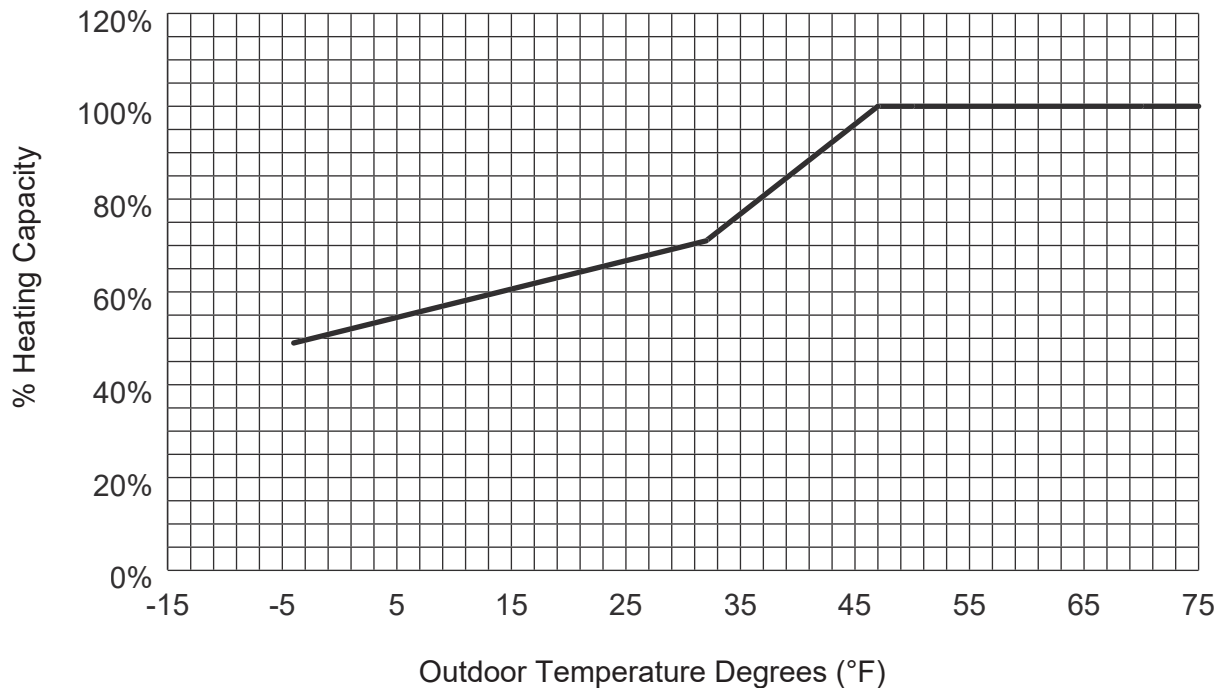
T4-2. MAX. HEATING CAPACITY IN LOW AMBIENT TEMPERATURE

SUZ-AA18NL



Outdoor Temperature Degrees (°F)	-13	-4	5	17	23	32	41	47	50	70	75
% Heating Capacity	-	44%	53%	66%	69%	89%	90%	100%	100%	100%	100%

SUZ-AA24/30/36NL



Outdoor Temperature Degrees (°F)	-13	-4	5	17	23	32	41	47	50	70	75
% Heating Capacity	-	49%	56%	62%	61%	71%	94%	100%	100%	100%	100%

T5-1. INVERTER TYPE**T5-1.1 Cooling capacity corrections**

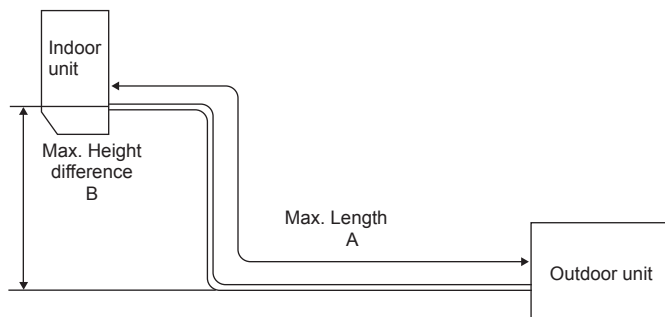
Model	Refrigerant piping length (one way: ft (m))			
	25 (7.6) (std.)	40 (12.2)	65 (19.8)	100 (30.5)
SUZ-AA18NL	1.0	0.985	0.963	0.933
SUZ-AA24/30/36NL	1.0	0.983	0.956	0.921

T5-1.2 Heating capacity corrections

Model	Refrigerant piping length (one way: ft (m))			
	25 (7.6) (std.)	40 (12.2)	65 (19.8)	100 (30.5)
SUZ-AA18/24/30/36NL	1.0	0.997	0.993	0.987

T5-1.3 Max. refrigerant piping length & max. Height difference

Model	Refrigerant piping: ft. (m)		Piping size O.D: in. (mm)	
	Max. Length A	Max. Height difference B	Gas	Liquid
SUZ-AA18NL	100 (30.5)	50 (15.2)	1/2 (12.7)	1/4 (6.35)
SUZ-AA24/30/36NL		100 (30.5)	5/8 (15.88)	1/4 (6.35)

**T5-1.4 Additional refrigerant charge (R454B: oz.)**

NOTE: Refrigerant piping exceeding 25 ft. requires additional refrigerant charge according to the calculation.

Model	Outdoor unit precharged	Refrigerant piping length (one way): ft. (m)								
		25 (7.6)	30 (9.1)	40 (12.2)	50 (15.2)	60 (18.3)	70 (21.3)	80(24.4)	90 (27.4)	100 (30.5)
SUZ-AA18NL	2 lb. 16 oz. (1.35 kg)	0	1.08 (30 g)	3.24 (90 g)	5.40 (150 g)	7.56 (210 g)	9.72 (270 g)	11.88 (330 g)	14.04 (390 g)	16.20 (450 g)

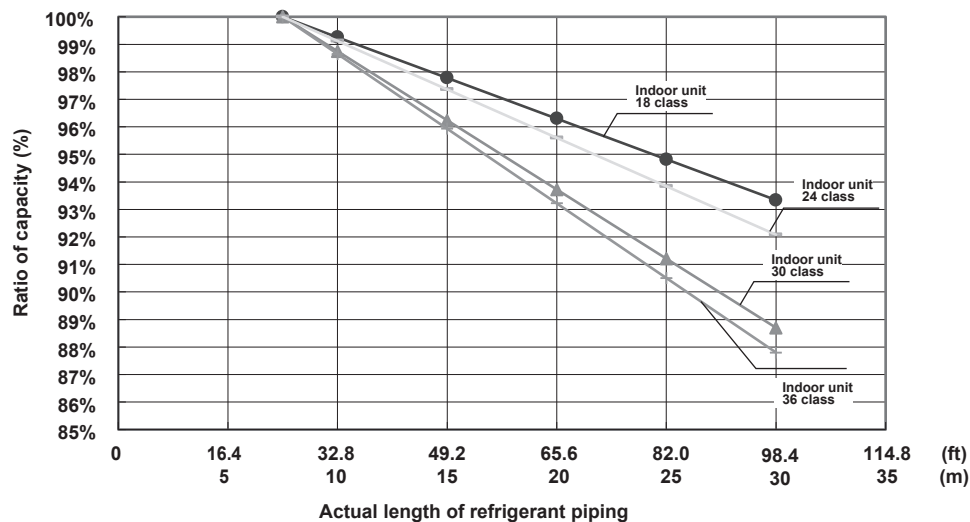
Calculation: X oz. = 1.08/5 oz./ft. × (Refrigerant piping length (ft.) - 25)

Model	Outdoor unit precharged	Refrigerant piping length (one way): ft. (m)								
		25 (7.6)	30 (9.1)	40 (12.2)	50 (15.2)	60 (18.3)	70 (21.3)	80(24.4)	90 (27.4)	100 (30.5)
SUZ-AA24/30/36NL	3 lb. 4 oz. (1.47 kg)	0	1.08 (30 g)	3.24 (90 g)	5.40 (150 g)	7.56 (210 g)	9.72 (270 g)	11.88 (330 g)	14.04 (390 g)	16.20 (450 g)

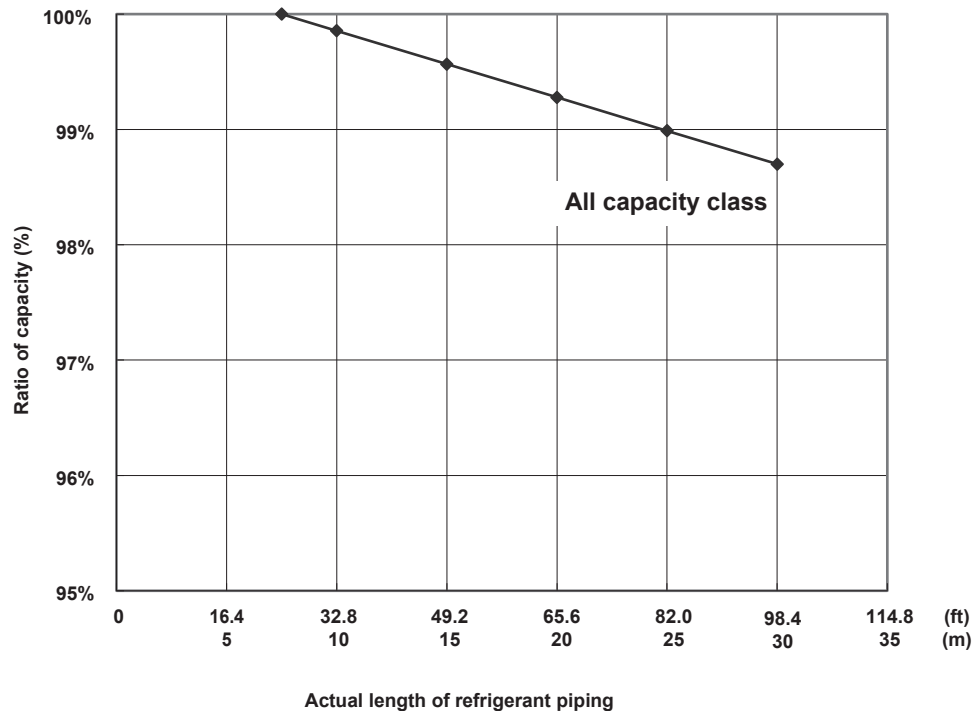
Calculation: X oz. = 1.08/5 oz./ft. × (Refrigerant piping length (ft.) - 25)

T6-1. CAPACITY CORRECTION RATIO CURVE FOR PIPING LENGTH

Correction ratio of capacity according to the length of piping (cooling)



Correction ratio of capacity according to the length of piping (heating)



The length intended for the capacity calculation, which counts the length of refrigerant piping and the number of bends, is called actual length.

Length of refrigerant piping (ft) + (Number of bends × 0.984 ft) = Actual length of refrigerant piping (ft)
 [Length of refrigerant piping (m) + (Number of bends × 0.3 m) = Actual length of refrigerant piping (m)]

SLZ-AF18NL
SUZ-AA18NL
1) COOLING

Rated
 Q(Btu/h): 18,000
 W: 1,500

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	16,432	16,432	12,324	8,216	-	4,838	15,386	15,386	11,539	7,693	-	4,530	14,041	14,041	10,531	7,021	-	4,134
		W	1,685	1,685	1,264	842	-	427	1,644	1,644	1,233	822	-	416	1,575	1,575	1,182	788	-	399
110	43.3	Q(Btu/h)	17,178	17,178	12,884	8,589	-	5,058	15,983	15,983	11,988	7,992	-	4,706	14,639	14,639	10,979	7,320	-	4,310
		W	1,658	1,658	1,243	829	-	420	1,616	1,616	1,212	808	-	409	1,541	1,541	1,156	771	-	390
105	40.6	Q(Btu/h)	17,925	17,925	13,444	8,963	-	5,278	16,581	16,581	12,436	8,290	-	4,882	15,386	15,386	11,539	7,693	-	4,530
		W	1,637	1,637	1,228	818	-	415	1,575	1,575	1,182	788	-	399	1,507	1,507	1,130	753	-	382
100	37.8	Q(Btu/h)	18,523	18,523	13,892	9,261	-	5,454	17,328	17,328	12,996	8,664	-	5,102	15,983	15,983	11,988	7,992	-	4,706
		W	1,589	1,589	1,192	795	-	403	1,541	1,541	1,156	771	-	390	1,473	1,473	1,104	736	-	373
95	35.0	Q(Btu/h)	19,270	19,270	14,452	9,635	-	5,674	18,000	18,000	13,500	9,000	-	5,300	16,730	16,730	12,548	8,365	-	4,926
		W	1,562	1,562	1,171	781	-	396	1,500	1,500	1,125	750	-	380	1,438	1,438	1,079	719	-	364
90	32.2	Q(Btu/h)	19,867	19,867	14,900	9,934	-	5,850	18,672	18,672	14,004	9,336	-	5,498	17,328	17,328	12,996	8,664	-	5,102
		W	1,507	1,507	1,130	753	-	382	1,438	1,438	1,079	719	-	364	1,384	1,384	1,038	692	-	351
85	29.4	Q(Btu/h)	20,614	20,614	15,461	10,307	-	6,070	19,419	19,419	14,564	9,710	-	5,718	18,075	18,075	13,556	9,037	-	5,322
		W	1,452	1,452	1,089	726	-	368	1,384	1,384	1,038	692	-	351	1,336	1,336	1,002	668	-	338
80	26.7	Q(Btu/h)	21,212	21,212	15,909	10,606	-	6,246	20,017	20,017	15,012	10,008	-	5,894	18,822	18,822	14,116	9,411	-	5,542
		W	1,397	1,397	1,048	699	-	354	1,322	1,322	991	661	-	335	1,281	1,281	961	640	-	324
75	23.9	Q(Btu/h)	21,959	21,959	16,469	10,979	-	6,466	20,614	20,614	15,461	10,307	-	6,070	19,494	19,494	14,620	9,747	-	5,740
		W	1,336	1,336	1,002	668	-	338	1,260	1,260	945	630	-	319	1,232	1,232	924	616	-	312
70	21.1	Q(Btu/h)	22,481	22,481	16,861	11,241	-	6,620	21,062	21,062	15,797	10,531	-	6,202	20,166	20,166	15,124	10,083	-	5,938
		W	1,267	1,267	950	634	-	321	1,205	1,205	904	603	-	305	1,158	1,158	868	579	-	293
67	19.4	Q(Btu/h)	22,705	22,705	17,029	11,353	-	6,685	21,510	21,510	16,133	10,755	-	6,334	20,614	20,614	15,461	10,307	-	6,070
		W	1,205	1,205	904	603	-	305	1,158	1,158	868	579	-	293	1,096	1,096	822	548	-	278

* It may not reach the above capacities in low ambient temperatures.

SLZ-AF18NL
SUZ-AA18NL
2) HEATING

Rated
Q(Btu/h): 20,000
W: 1,880

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	20,915	19,188	14,391	9,594	-	9,420	21,800	20,000	15,000	10,000	-	9,818	21,937	20,126	15,094	10,063	-	9,880
		W	2,419	2,197	1,647	1,098	-	504	2,344	2,129	1,597	1,064	-	489	2,194	1,993	1,495	997	-	457
60	15.6	Q(Btu/h)	20,910	19,183	14,387	9,592	-	8,852	21,800	20,000	15,000	10,000	-	9,229	22,335	20,491	15,368	10,245	-	9,456
		W	2,351	2,135	1,601	1,067	-	509	2,272	2,063	1,547	1,032	-	492	2,137	1,941	1,456	970	-	463
55	12.8	Q(Btu/h)	20,889	19,164	14,373	9,582	-	8,279	21,800	20,000	15,000	10,000	-	8,640	22,801	20,918	15,688	10,459	-	9,037
		W	2,280	2,071	1,553	1,035	-	512	2,198	1,996	1,497	998	-	494	2,088	1,896	1,422	948	-	469
50	10.0	Q(Btu/h)	20,850	19,129	14,347	9,564	-	7,701	21,800	20,000	15,000	10,000	-	8,052	23,246	21,327	15,995	10,663	-	8,586
		W	2,208	2,005	1,504	1,002	-	514	2,122	1,927	1,445	963	-	494	2,047	1,859	1,394	929	-	476
45	7.2	Q(Btu/h)	20,489	18,797	14,098	9,399	-	7,117	21,483	19,709	14,782	9,855	-	7,463	23,424	21,490	16,118	10,745	-	8,137
		W	2,133	1,937	1,453	969	-	514	2,044	1,856	1,392	928	-	492	2,004	1,820	1,365	910	-	482
40	4.4	Q(Btu/h)	19,655	18,032	13,524	9,016	-	6,529	20,691	18,983	14,237	9,491	-	6,874	23,572	21,626	16,219	10,813	-	7,831
		W	2,056	1,867	1,401	934	-	512	1,965	1,784	1,338	892	-	489	1,979	1,797	1,348	899	-	493
35	1.7	Q(Btu/h)	18,799	17,247	12,935	8,624	-	5,937	19,899	18,256	13,692	9,128	-	6,285	23,139	21,229	15,922	10,614	-	7,308
		W	1,977	1,796	1,347	898	-	508	1,883	1,710	1,283	855	-	484	1,943	1,764	1,323	882	-	499
30	-1.1	Q(Btu/h)	17,702	16,240	12,180	8,120	-	5,342	18,873	17,315	12,986	8,657	-	5,696	21,901	20,092	15,069	10,046	-	6,609
		W	1,897	1,722	1,292	861	-	503	1,800	1,635	1,226	818	-	478	1,866	1,695	1,271	847	-	495
25	-3.9	Q(Btu/h)	16,255	14,913	11,185	7,457	-	4,744	17,497	16,052	12,039	8,026	-	5,107	21,300	19,542	14,656	9,771	-	6,217
		W	1,814	1,648	1,236	824	-	497	1,716	1,558	1,169	779	-	470	1,840	1,671	1,253	835	-	504
20	-6.7	Q(Btu/h)	14,791	13,569	10,177	6,785	-	4,145	16,121	14,790	11,092	7,395	-	4,518	20,137	18,475	13,856	9,237	-	5,644
		W	1,730	1,571	1,178	786	-	488	1,629	1,479	1,110	740	-	460	1,763	1,601	1,201	801	-	498
15	-9.4	Q(Btu/h)	13,306	12,207	9,155	6,104	-	3,546	14,745	13,527	10,145	6,764	-	3,929	18,863	17,305	12,979	8,653	-	5,026
		W	1,644	1,493	1,120	747	-	479	1,541	1,399	1,049	700	-	448	1,697	1,542	1,156	771	-	494
10	-12.2	Q(Btu/h)	11,799	10,825	8,119	5,413	-	2,948	13,369	12,265	9,199	6,132	-	3,340	17,591	16,138	12,104	8,069	-	4,395
		W	1,557	1,414	1,061	707	-	468	1,450	1,317	988	659	-	435	1,612	1,464	1,098	732	-	484
5	-15.0	Q(Btu/h)	10,267	9,419	7,064	4,710	-	2,355	11,992	11,002	8,252	5,501	-	2,751	15,939	14,623	10,967	7,311	-	3,656
		W	1,470	1,335	1,001	667	-	455	1,359	1,234	925	617	-	421	1,516	1,377	1,033	688	-	470
0	-17.8	Q(Btu/h)	8,703	7,985	5,989	3,992	1,996	1,773	10,616	9,740	7,305	4,870	2,435	2,162	13,207	12,116	9,087	6,058	3,029	2,690
		W	1,382	1,255	942	628	314	442	1,265	1,149	862	574	287	405	1,357	1,233	924	616	308	434
-4	-20.0	Q(Btu/h)	7,423	6,811	5,108	3,405	1,703	1,319	9,515	8,730	6,547	4,365	2,182	1,691	13,667	12,538	9,404	6,269	3,135	2,429
		W	1,313	1,193	895	596	298	431	1,189	1,080	810	540	270	390	1,275	1,158	869	579	290	419

* Above data is for heating operation without any frost.

MLZ-KX18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 16,400
W: 1,390

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	14,971	14,971	11,228	7,485	-	4,747	14,018	14,018	10,514	7,009	-	4,445	12,793	12,793	9,595	6,397	-	4,056
		W	1,561	1,561	1,171	781	-	427	1,523	1,523	1,142	762	-	416	1,460	1,460	1,095	730	-	399
110	43.3	Q(Btu/h)	15,651	15,651	11,739	7,826	-	4,963	14,563	14,563	10,922	7,281	-	4,617	13,338	13,338	10,003	6,669	-	4,229
		W	1,536	1,536	1,152	768	-	420	1,498	1,498	1,123	749	-	409	1,428	1,428	1,071	714	-	390
105	40.6	Q(Btu/h)	16,332	16,332	12,249	8,166	-	5,178	15,107	15,107	11,330	7,554	-	4,790	14,018	14,018	10,514	7,009	-	4,445
		W	1,517	1,517	1,138	758	-	415	1,460	1,460	1,095	730	-	399	1,396	1,396	1,047	698	-	382
100	37.8	Q(Btu/h)	16,876	16,876	12,657	8,438	-	5,351	15,788	15,788	11,841	7,894	-	5,006	14,563	14,563	10,922	7,281	-	4,617
		W	1,473	1,473	1,104	736	-	403	1,428	1,428	1,071	714	-	390	1,365	1,365	1,023	682	-	373
95	35.0	Q(Btu/h)	17,557	17,557	13,168	8,778	-	5,567	16,400	16,400	12,300	8,200	-	5,200	15,243	15,243	11,432	7,622	-	4,833
		W	1,447	1,447	1,085	724	-	396	1,390	1,390	1,043	695	-	380	1,333	1,333	1,000	666	-	364
90	32.2	Q(Btu/h)	18,101	18,101	13,576	9,051	-	5,739	17,012	17,012	12,759	8,506	-	5,394	15,788	15,788	11,841	7,894	-	5,006
		W	1,396	1,396	1,047	698	-	382	1,333	1,333	1,000	666	-	364	1,282	1,282	962	641	-	351
85	29.4	Q(Btu/h)	18,782	18,782	14,086	9,391	-	5,955	17,693	17,693	13,270	8,846	-	5,610	16,468	16,468	12,351	8,234	-	5,222
		W	1,346	1,346	1,009	673	-	368	1,282	1,282	962	641	-	351	1,238	1,238	928	619	-	338
80	26.7	Q(Btu/h)	19,326	19,326	14,495	9,663	-	6,128	18,237	18,237	13,678	9,119	-	5,783	17,149	17,149	12,861	8,574	-	5,437
		W	1,295	1,295	971	647	-	354	1,225	1,225	919	612	-	335	1,187	1,187	890	593	-	324
75	23.9	Q(Btu/h)	20,007	20,007	15,005	10,003	-	6,344	18,782	18,782	14,086	9,391	-	5,955	17,761	17,761	13,321	8,880	-	5,632
		W	1,238	1,238	928	619	-	338	1,168	1,168	876	584	-	319	1,141	1,141	856	571	-	312
70	21.1	Q(Btu/h)	20,483	20,483	15,362	10,241	-	6,495	19,190	19,190	14,393	9,595	-	6,085	18,373	18,373	13,780	9,187	-	5,826
		W	1,174	1,174	881	587	-	321	1,117	1,117	838	559	-	305	1,073	1,073	804	536	-	293
67	19.4	Q(Btu/h)	20,687	20,687	15,515	10,344	-	6,559	19,598	19,598	14,699	9,799	-	6,214	18,782	18,782	14,086	9,391	-	5,955
		W	1,117	1,117	838	559	-	305	1,073	1,073	804	536	-	293	1,016	1,016	762	508	-	278

* It may not reach the above capacities in low ambient temperatures.

MLZ-KX18NL
SUZ-AA18NL
2) HEATING

Rated
 Q(Btu/h): 19,000
 W: 1,750

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	20,148	18,229	13,672	-	-	9,778	21,000	19,000	14,250	-	-	10,191	21,132	19,119	14,340	-	-	10,255
		W	2,430	2,045	1,534	-	-	494	2,355	1,982	1,486	-	-	479	2,205	1,855	1,391	-	-	448
60	15.6	Q(Btu/h)	20,142	18,224	13,668	-	-	9,189	21,000	19,000	14,250	-	-	9,580	21,515	19,466	14,599	-	-	9,815
		W	2,362	1,987	1,490	-	-	499	2,283	1,921	1,440	-	-	482	2,147	1,807	1,355	-	-	453
55	12.8	Q(Btu/h)	20,122	18,206	13,654	9,103	-	8,594	21,000	19,000	14,250	9,500	-	8,969	21,964	19,872	14,904	9,936	-	9,380
		W	2,291	1,928	1,446	964	-	502	2,208	1,858	1,393	929	-	484	2,098	1,765	1,324	883	-	459
50	10.0	Q(Btu/h)	20,085	18,172	13,629	9,086	-	7,993	21,000	19,000	14,250	9,500	-	8,357	22,393	20,261	15,195	10,130	-	8,912
		W	2,218	1,866	1,400	933	-	503	2,132	1,794	1,345	897	-	484	2,057	1,730	1,298	865	-	467
45	7.2	Q(Btu/h)	19,737	17,858	13,393	8,929	-	7,388	20,695	18,724	14,043	9,362	-	7,746	22,565	20,416	15,312	10,208	-	8,446
		W	2,143	1,803	1,352	902	-	503	2,054	1,728	1,296	864	-	482	2,013	1,694	1,270	847	-	473
40	4.4	Q(Btu/h)	18,933	17,130	12,848	8,565	-	6,777	19,932	18,034	13,525	9,017	-	7,135	22,707	20,545	15,408	10,272	-	8,128
		W	2,066	1,738	1,304	869	-	501	1,974	1,661	1,246	830	-	479	1,988	1,673	1,255	836	-	483
35	1.7	Q(Btu/h)	18,110	16,385	12,289	8,192	-	6,163	19,169	17,343	13,007	8,672	-	6,523	22,290	20,167	15,125	10,084	-	7,586
		W	1,987	1,672	1,254	836	-	498	1,892	1,592	1,194	796	-	474	1,952	1,642	1,232	821	-	489
30	-1.1	Q(Btu/h)	17,052	15,428	11,571	7,714	-	5,545	18,181	16,449	12,337	8,225	-	5,912	21,097	19,088	14,316	9,544	-	6,860
		W	1,906	1,603	1,203	802	-	493	1,809	1,522	1,141	761	-	468	1,875	1,577	1,183	789	-	485
25	-3.9	Q(Btu/h)	15,659	14,167	10,626	7,084	-	4,925	16,855	15,250	11,437	7,625	-	5,301	20,519	18,565	13,923	9,282	-	6,453
		W	1,823	1,534	1,150	767	-	486	1,724	1,450	1,088	725	-	460	1,848	1,555	1,166	778	-	493
20	-6.7	Q(Btu/h)	14,248	12,891	9,668	6,445	-	4,302	15,529	14,050	10,538	7,025	-	4,689	19,398	17,551	13,163	8,775	-	5,858
		W	1,738	1,462	1,097	731	-	478	1,637	1,377	1,033	689	-	450	1,771	1,490	1,118	745	-	488
15	-9.4	Q(Btu/h)	12,818	11,597	8,698	5,798	-	3,680	14,204	12,851	9,638	6,425	-	4,078	18,170	16,440	12,330	8,220	-	5,217
		W	1,652	1,390	1,043	695	-	469	1,548	1,302	977	651	-	439	1,706	1,435	1,076	717	-	484
10	-12.2	Q(Btu/h)	11,366	10,284	7,713	5,142	-	3,060	12,878	11,651	8,739	5,826	-	3,467	16,945	15,332	11,499	7,666	-	4,562
		W	1,565	1,317	987	658	-	458	1,458	1,226	920	613	-	427	1,619	1,363	1,022	681	-	474
5	-15.0	Q(Btu/h)	9,890	8,948	6,711	4,474	-	2,445	11,552	10,452	7,839	5,226	-	2,856	15,354	13,892	10,419	6,946	-	3,795
		W	1,477	1,243	932	621	-	446	1,365	1,149	861	574	-	412	1,523	1,281	961	641	-	460
0	-17.8	Q(Btu/h)	8,384	7,586	5,689	3,793	1,896	1,840	10,227	9,253	6,939	4,626	2,313	2,244	12,722	11,511	8,633	5,755	2,878	2,792
		W	1,389	1,169	877	584	292	433	1,271	1,069	802	535	267	396	1,364	1,147	861	574	287	425
-4	-20.0	Q(Btu/h)	7,151	6,470	4,853	3,235	1,618	1,369	9,166	8,293	6,220	4,147	2,073	1,755	13,165	11,911	8,934	5,956	2,978	2,521
		W	1,320	1,110	833	555	278	422	1,194	1,005	754	502	251	382	1,485	1,249	937	625	312	475

* Above data is for heating operation without any frost.

MFZ-KX18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 18,000
W: 1,450

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	16,432	16,432	12,324	8,216	-	4,564	15,386	15,386	11,539	7,693	-	4,274	14,041	14,041	10,531	7,021	-	3,900
		W	1,629	1,629	1,222	814	-	427	1,589	1,589	1,192	795	-	416	1,523	1,523	1,142	761	-	399
110	43.3	Q(Btu/h)	17,178	17,178	12,884	8,589	-	4,772	15,983	15,983	11,988	7,992	-	4,440	14,639	14,639	10,979	7,320	-	4,066
		W	1,602	1,602	1,202	801	-	420	1,563	1,563	1,172	781	-	409	1,490	1,490	1,117	745	-	390
105	40.6	Q(Btu/h)	17,925	17,925	13,444	8,963	-	4,979	16,581	16,581	12,436	8,290	-	4,606	15,386	15,386	11,539	7,693	-	4,274
		W	1,582	1,582	1,187	791	-	415	1,523	1,523	1,142	761	-	399	1,457	1,457	1,092	728	-	382
100	37.8	Q(Btu/h)	18,523	18,523	13,892	9,261	-	5,145	17,328	17,328	12,996	8,664	-	4,813	15,983	15,983	11,988	7,992	-	4,440
		W	1,536	1,536	1,152	768	-	403	1,490	1,490	1,117	745	-	390	1,424	1,424	1,068	712	-	373
95	35.0	Q(Btu/h)	19,270	19,270	14,452	9,635	-	5,353	18,000	18,000	13,500	9,000	-	5,000	16,730	16,730	12,548	8,365	-	4,647
		W	1,510	1,510	1,132	755	-	396	1,450	1,450	1,088	725	-	380	1,390	1,390	1,043	695	-	364
90	32.2	Q(Btu/h)	19,867	19,867	14,900	9,934	-	5,519	18,672	18,672	14,004	9,336	-	5,187	17,328	17,328	12,996	8,664	-	4,813
		W	1,457	1,457	1,092	728	-	382	1,390	1,390	1,043	695	-	364	1,337	1,337	1,003	669	-	351
85	29.4	Q(Btu/h)	20,614	20,614	15,461	10,307	-	5,726	19,419	19,419	14,564	9,710	-	5,394	18,075	18,075	13,556	9,037	-	5,021
		W	1,404	1,404	1,053	702	-	368	1,337	1,337	1,003	669	-	351	1,291	1,291	968	646	-	338
80	26.7	Q(Btu/h)	21,212	21,212	15,909	10,606	-	5,892	20,017	20,017	15,012	10,008	-	5,560	18,822	18,822	14,116	9,411	-	5,228
		W	1,351	1,351	1,013	675	-	354	1,278	1,278	958	639	-	335	1,238	1,238	929	619	-	324
75	23.9	Q(Btu/h)	21,959	21,959	16,469	10,979	-	6,100	20,614	20,614	15,461	10,307	-	5,726	19,494	19,494	14,620	9,747	-	5,415
		W	1,291	1,291	968	646	-	338	1,218	1,218	914	609	-	319	1,190	1,190	893	595	-	312
70	21.1	Q(Btu/h)	22,481	22,481	16,861	11,241	-	6,245	21,062	21,062	15,797	10,531	-	5,851	20,166	20,166	15,124	10,083	-	5,602
		W	1,225	1,225	919	612	-	321	1,165	1,165	874	583	-	305	1,119	1,119	839	559	-	293
67	19.4	Q(Btu/h)	22,705	22,705	17,029	11,353	-	6,307	21,510	21,510	16,133	10,755	-	5,975	20,614	20,614	15,461	10,307	-	5,726
		W	1,165	1,165	874	583	-	305	1,119	1,119	839	559	-	293	1,059	1,059	795	530	-	278

* It may not reach the above capacities in low ambient temperatures.

MFZ-KX18NL
SUZ-AA18NL
2) HEATING

Rated
Q(Btu/h): 20,000
W: 1,690

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	21,587	19,188	14,391	-	-	10,135	22,500	20,000	15,000	-	-	10,564	22,641	20,126	15,094	-	-	10,630
		W	2,465	1,975	1,481	-	-	504	2,389	1,914	1,435	-	-	489	2,237	1,792	1,344	-	-	457
60	15.6	Q(Btu/h)	21,581	19,183	14,387	9,592	-	9,525	22,500	20,000	15,000	10,000	-	9,930	23,052	20,491	15,368	10,245	-	10,174
		W	2,396	1,919	1,439	960	-	509	2,316	1,855	1,391	927	-	492	2,178	1,745	1,309	872	-	463
55	12.8	Q(Btu/h)	21,560	19,164	14,373	9,582	-	8,908	22,500	20,000	15,000	10,000	-	9,297	23,533	20,918	15,688	10,459	-	9,723
		W	2,324	1,862	1,396	931	-	512	2,240	1,794	1,346	897	-	494	2,128	1,705	1,278	852	-	469
50	10.0	Q(Btu/h)	21,520	19,129	14,347	9,564	-	8,286	22,500	20,000	15,000	10,000	-	8,663	23,993	21,327	15,995	10,663	-	9,238
		W	2,250	1,802	1,352	901	-	514	2,163	1,732	1,299	866	-	494	2,086	1,671	1,253	836	-	476
45	7.2	Q(Btu/h)	21,147	18,797	14,098	9,399	-	7,658	22,173	19,709	14,782	9,855	-	8,029	24,176	21,490	16,118	10,745	-	8,755
		W	2,174	1,741	1,306	871	-	514	2,083	1,669	1,252	834	-	492	2,042	1,636	1,227	818	-	482
40	4.4	Q(Btu/h)	20,286	18,032	13,524	9,016	-	7,025	21,355	18,983	14,237	9,491	-	7,396	24,329	21,626	16,219	10,813	-	8,425
		W	2,096	1,679	1,259	839	-	512	2,002	1,604	1,203	802	-	489	2,017	1,615	1,212	808	-	493
35	1.7	Q(Btu/h)	19,403	17,247	12,935	8,624	-	6,388	20,538	18,256	13,692	9,128	-	6,762	23,882	21,229	15,922	10,614	-	7,863
		W	2,015	1,614	1,211	807	-	508	1,920	1,538	1,153	769	-	484	1,980	1,586	1,190	793	-	499
30	-1.1	Q(Btu/h)	18,270	16,240	12,180	8,120	-	5,748	19,479	17,315	12,986	8,657	-	6,128	22,604	20,092	15,069	10,046	-	7,111
		W	1,933	1,548	1,161	774	-	503	1,835	1,470	1,102	735	-	478	1,902	1,523	1,143	762	-	495
25	-3.9	Q(Btu/h)	16,777	14,913	11,185	7,457	-	5,105	18,059	16,052	12,039	8,026	-	5,495	21,984	19,542	14,656	9,771	-	6,689
		W	1,849	1,481	1,111	741	-	497	1,749	1,401	1,050	700	-	470	1,875	1,502	1,126	751	-	504
20	-6.7	Q(Btu/h)	15,265	13,569	10,177	6,785	-	4,460	16,639	14,790	11,092	7,395	-	4,861	20,784	18,475	13,856	9,237	-	6,072
		W	1,763	1,412	1,059	706	-	488	1,660	1,330	997	665	-	460	1,797	1,439	1,079	720	-	498
15	-9.4	Q(Btu/h)	13,733	12,207	9,155	6,104	-	3,815	15,218	13,527	10,145	6,764	-	4,227	19,468	17,305	12,979	8,653	-	5,408
		W	1,676	1,342	1,007	671	-	479	1,570	1,258	943	629	-	448	1,730	1,386	1,039	693	-	494
10	-12.2	Q(Btu/h)	12,178	10,825	8,119	5,413	-	3,172	13,798	12,265	9,199	6,132	-	3,594	18,156	16,138	12,104	8,069	-	4,729
		W	1,587	1,271	954	636	-	468	1,479	1,184	888	592	-	435	1,643	1,316	987	658	-	484
5	-15.0	Q(Btu/h)	10,597	9,419	7,064	4,710	-	2,534	12,377	11,002	8,252	5,501	-	2,960	16,451	14,623	10,967	7,311	-	3,934
		W	1,498	1,200	900	600	-	455	1,385	1,109	832	555	-	421	1,545	1,238	928	619	-	470
0	-17.8	Q(Btu/h)	8,983	7,985	5,989	3,992	1,996	1,907	10,957	9,740	7,305	4,870	2,435	2,326	13,631	12,116	9,087	6,058	3,029	2,894
		W	1,409	1,129	846	564	282	442	1,289	1,033	775	516	258	405	1,383	1,108	831	554	277	434
-4	-20.0	Q(Btu/h)	7,662	6,811	5,108	3,405	1,703	1,419	9,821	8,730	6,547	4,365	2,182	1,819	14,106	12,538	9,404	6,269	3,135	2,613
		W	1,339	1,072	804	536	268	431	1,212	971	728	485	243	390	1,506	1,206	905	603	302	485

* Above data is for heating operation without any frost.

MSZ-EX18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 16,400
W: 1,390

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	14,971	14,971	11,228	7,485	-	4,838	14,018	14,018	10,514	7,009	-	4,530	12,793	12,793	9,595	6,397	-	4,134
		W	1,561	1,561	1,171	781	-	427	1,523	1,523	1,142	762	-	416	1,460	1,460	1,095	730	-	399
110	43.3	Q(Btu/h)	15,651	15,651	11,739	7,826	-	5,058	14,563	14,563	10,922	7,281	-	4,706	13,338	13,338	10,003	6,669	-	4,310
		W	1,536	1,536	1,152	768	-	420	1,498	1,498	1,123	749	-	409	1,428	1,428	1,071	714	-	390
105	40.6	Q(Btu/h)	16,332	16,332	12,249	8,166	-	5,278	15,107	15,107	11,330	7,554	-	4,882	14,018	14,018	10,514	7,009	-	4,530
		W	1,517	1,517	1,138	758	-	415	1,460	1,460	1,095	730	-	399	1,396	1,396	1,047	698	-	382
100	37.8	Q(Btu/h)	16,876	16,876	12,657	8,438	-	5,454	15,788	15,788	11,841	7,894	-	5,102	14,563	14,563	10,922	7,281	-	4,706
		W	1,473	1,473	1,104	736	-	403	1,428	1,428	1,071	714	-	390	1,365	1,365	1,023	682	-	373
95	35.0	Q(Btu/h)	17,557	17,557	13,168	8,778	-	5,674	16,400	16,400	12,300	8,200	-	5,300	15,243	15,243	11,432	7,622	-	4,926
		W	1,447	1,447	1,085	724	-	396	1,390	1,390	1,043	695	-	380	1,333	1,333	1,000	666	-	364
90	32.2	Q(Btu/h)	18,101	18,101	13,576	9,051	-	5,850	17,012	17,012	12,759	8,506	-	5,498	15,788	15,788	11,841	7,894	-	5,102
		W	1,396	1,396	1,047	698	-	382	1,333	1,333	1,000	666	-	364	1,282	1,282	962	641	-	351
85	29.4	Q(Btu/h)	18,782	18,782	14,086	9,391	-	6,070	17,693	17,693	13,270	8,846	-	5,718	16,468	16,468	12,351	8,234	-	5,322
		W	1,346	1,346	1,009	673	-	368	1,282	1,282	962	641	-	351	1,238	1,238	928	619	-	338
80	26.7	Q(Btu/h)	19,326	19,326	14,495	9,663	-	6,246	18,237	18,237	13,678	9,119	-	5,894	17,149	17,149	12,861	8,574	-	5,542
		W	1,295	1,295	971	647	-	354	1,225	1,225	919	612	-	335	1,187	1,187	890	593	-	324
75	23.9	Q(Btu/h)	20,007	20,007	15,005	10,003	-	6,466	18,782	18,782	14,086	9,391	-	6,070	17,761	17,761	13,321	8,880	-	5,740
		W	1,238	1,238	928	619	-	338	1,168	1,168	876	584	-	319	1,141	1,141	856	571	-	312
70	21.1	Q(Btu/h)	20,483	20,483	15,362	10,241	-	6,620	19,190	19,190	14,393	9,595	-	6,202	18,373	18,373	13,780	9,187	-	5,938
		W	1,174	1,174	881	587	-	321	1,117	1,117	838	559	-	305	1,073	1,073	804	536	-	293
67	19.4	Q(Btu/h)	20,687	20,687	15,515	10,344	-	6,685	19,598	19,598	14,699	9,799	-	6,334	18,782	18,782	14,086	9,391	-	6,070
		W	1,117	1,117	838	559	-	305	1,073	1,073	804	536	-	293	1,016	1,016	762	508	-	278

* It may not reach the above capacities in low ambient temperatures.

MSZ-EX18NL
SUZ-AA18NL
2) HEATING

Rated
 Q(Btu/h): 20,000
 W: 1,700

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min	
65	18.3	Q(Btu/h)	20,819	19,188	14,391	-	-	10,016		21,700	20,000	15,000	-	-	10,440		21,836	20,126	15,094	-	-	10,505	
		W	2,290	1,986	1,490	-	-	494		2,219	1,925	1,444	-	-	479		2,078	1,802	1,352	-	-	448	
60	15.6	Q(Btu/h)	20,814	19,183	14,387	9,592	-	9,413		21,700	20,000	15,000	10,000	-	9,814		22,232	20,491	15,368	10,245	-	10,054	
		W	2,226	1,930	1,448	965	-	499		2,151	1,866	1,399	933	-	482		2,024	1,755	1,316	878	-	453	
55	12.8	Q(Btu/h)	20,793	19,164	14,373	9,582	-	8,803		21,700	20,000	15,000	10,000	-	9,187		22,696	20,918	15,688	10,459	-	9,609	
		W	2,159	1,873	1,404	936	-	502		2,081	1,805	1,354	902	-	484		1,977	1,715	1,286	857	-	459	
50	10.0	Q(Btu/h)	20,755	19,129	14,347	9,564	-	8,188		21,700	20,000	15,000	10,000	-	8,561		23,140	21,327	15,995	10,663	-	9,129	
		W	2,090	1,813	1,360	907	-	503		2,009	1,742	1,307	871	-	484		1,938	1,681	1,261	840	-	467	
45	7.2	Q(Btu/h)	20,395	18,797	14,098	9,399	-	7,568		21,385	19,709	14,782	9,855	-	7,935		23,317	21,490	16,118	10,745	-	8,652	
		W	2,020	1,752	1,314	876	-	503		1,935	1,679	1,259	839	-	482		1,897	1,645	1,234	823	-	473	
40	4.4	Q(Btu/h)	19,565	18,032	13,524	9,016	-	6,943		20,596	18,983	14,237	9,491	-	7,309		23,464	21,626	16,219	10,813	-	8,326	
		W	1,947	1,689	1,266	844	-	501		1,860	1,613	1,210	807	-	479		1,874	1,625	1,219	813	-	483	
35	1.7	Q(Btu/h)	18,713	17,247	12,935	8,624	-	6,313		19,808	18,256	13,692	9,128	-	6,682		23,033	21,229	15,922	10,614	-	7,771	
		W	1,872	1,624	1,218	812	-	498		1,783	1,547	1,160	773	-	474		1,839	1,595	1,197	798	-	489	
30	-1.1	Q(Btu/h)	17,620	16,240	12,180	8,120	-	5,680		18,787	17,315	12,986	8,657	-	6,056		21,800	20,092	15,069	10,046	-	7,028	
		W	1,796	1,558	1,168	779	-	493		1,705	1,478	1,109	739	-	468		1,767	1,532	1,149	766	-	485	
25	-3.9	Q(Btu/h)	16,181	14,913	11,185	7,457	-	5,045		17,417	16,052	12,039	8,026	-	5,430		21,203	19,542	14,656	9,771	-	6,610	
		W	1,718	1,490	1,117	745	-	486		1,624	1,409	1,057	704	-	460		1,742	1,511	1,133	755	-	493	
20	-6.7	Q(Btu/h)	14,723	13,569	10,177	6,785	-	4,407		16,047	14,790	11,092	7,395	-	4,804		20,045	18,475	13,856	9,237	-	6,001	
		W	1,638	1,421	1,065	710	-	478		1,542	1,338	1,003	669	-	450		1,669	1,448	1,086	724	-	488	
15	-9.4	Q(Btu/h)	13,245	12,207	9,155	6,104	-	3,770		14,677	13,527	10,145	6,764	-	4,178		18,776	17,305	12,979	8,653	-	5,344	
		W	1,557	1,350	1,013	675	-	469		1,459	1,265	949	633	-	439		1,607	1,394	1,045	697	-	484	
10	-12.2	Q(Btu/h)	11,745	10,825	8,119	5,413	-	3,135		13,307	12,265	9,199	6,132	-	3,551		17,510	16,138	12,104	8,069	-	4,673	
		W	1,475	1,279	959	639	-	458		1,373	1,191	893	596	-	427		1,526	1,324	993	662	-	474	
5	-15.0	Q(Btu/h)	10,220	9,419	7,064	4,710	-	2,504		11,937	11,002	8,252	5,501	-	2,925		15,866	14,623	10,967	7,311	-	3,888	
		W	1,392	1,207	905	604	-	446		1,286	1,116	837	558	-	412		1,435	1,245	934	622	-	460	
0	-17.8	Q(Btu/h)	8,664	7,985	5,989	3,992	1,996	1,885		10,567	9,740	7,305	4,870	2,435	2,299		13,146	12,116	9,087	6,058	3,029	2,860	
		W	1,309	1,135	851	568	284	433		1,198	1,039	779	519	260	396		1,285	1,115	836	557	279	425	
-4	-20.0	Q(Btu/h)	7,389	6,811	5,108	3,405	1,703	1,403		9,472	8,730	6,547	4,365	2,182	1,798		13,604	12,538	9,404	6,269	3,135	2,583	
		W	1,244	1,079	809	539	270	422		1,126	976	732	488	244	382		1,399	1,213	910	607	303	475	

* Above data is for heating operation without any frost.

SEZ-AD18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 18,000
W: 1,400

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	16,432	16,432	12,324	8,216	-	5,021	15,386	15,386	11,539	7,693	-	4,701	14,041	14,041	10,531	7,021	-	4,290
		W	1,573	1,573	1,179	786	-	438	1,534	1,534	1,151	767	-	427	1,470	1,470	1,103	735	-	410
110	43.3	Q(Btu/h)	17,178	17,178	12,884	8,589	-	5,249	15,983	15,983	11,988	7,992	-	4,884	14,639	14,639	10,979	7,320	-	4,473
		W	1,547	1,547	1,160	774	-	431	1,509	1,509	1,132	754	-	420	1,438	1,438	1,079	719	-	401
105	40.6	Q(Btu/h)	17,925	17,925	13,444	8,963	-	5,477	16,581	16,581	12,436	8,290	-	5,066	15,386	15,386	11,539	7,693	-	4,701
		W	1,528	1,528	1,146	764	-	426	1,470	1,470	1,103	735	-	410	1,406	1,406	1,055	703	-	392
100	37.8	Q(Btu/h)	18,523	18,523	13,892	9,261	-	5,660	17,328	17,328	12,996	8,664	-	5,295	15,983	15,983	11,988	7,992	-	4,884
		W	1,483	1,483	1,112	742	-	413	1,438	1,438	1,079	719	-	401	1,374	1,374	1,031	687	-	383
95	35.0	Q(Btu/h)	19,270	19,270	14,452	9,635	-	5,888	18,000	18,000	13,500	9,000	-	5,500	16,730	16,730	12,548	8,365	-	5,112
		W	1,458	1,458	1,093	729	-	406	1,400	1,400	1,050	700	-	390	1,342	1,342	1,007	671	-	374
90	32.2	Q(Btu/h)	19,867	19,867	14,900	9,934	-	6,071	18,672	18,672	14,004	9,336	-	5,705	17,328	17,328	12,996	8,664	-	5,295
		W	1,406	1,406	1,055	703	-	392	1,342	1,342	1,007	671	-	374	1,291	1,291	968	646	-	360
85	29.4	Q(Btu/h)	20,614	20,614	15,461	10,307	-	6,299	19,419	19,419	14,564	9,710	-	5,934	18,075	18,075	13,556	9,037	-	5,523
		W	1,355	1,355	1,016	678	-	378	1,291	1,291	968	646	-	360	1,247	1,247	935	623	-	347
80	26.7	Q(Btu/h)	21,212	21,212	15,909	10,606	-	6,481	20,017	20,017	15,012	10,008	-	6,116	18,822	18,822	14,116	9,411	-	5,751
		W	1,304	1,304	978	652	-	363	1,234	1,234	925	617	-	344	1,195	1,195	897	598	-	333
75	23.9	Q(Btu/h)	21,959	21,959	16,469	10,979	-	6,710	20,614	20,614	15,461	10,307	-	6,299	19,494	19,494	14,620	9,747	-	5,956
		W	1,247	1,247	935	623	-	347	1,176	1,176	882	588	-	328	1,149	1,149	862	575	-	320
70	21.1	Q(Btu/h)	22,481	22,481	16,861	11,241	-	6,869	21,062	21,062	15,797	10,531	-	6,436	20,166	20,166	15,124	10,083	-	6,162
		W	1,183	1,183	887	591	-	329	1,125	1,125	844	563	-	313	1,080	1,080	810	540	-	301
67	19.4	Q(Btu/h)	22,705	22,705	17,029	11,353	-	6,938	21,510	21,510	16,133	10,755	-	6,573	20,614	20,614	15,461	10,307	-	6,299
		W	1,125	1,125	844	563	-	313	1,080	1,080	810	540	-	301	1,023	1,023	767	511	-	285

* It may not reach the above capacities in low ambient temperatures.

SEZ-AD18NL
SUZ-AA18NL
2) HEATING

Rated
Q(Btu/h): 20,000
W: 1,510

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	22,546	19,188	14,391	-	-	10,016	23,500	20,000	15,000	-	-	10,440	23,648	20,126	15,094	-	-	10,505
		W	2,232	1,764	1,323	-	-	494	2,163	1,710	1,282	-	-	479	2,025	1,601	1,201	-	-	448
60	15.6	Q(Btu/h)	22,540	19,183	14,387	9,592	-	9,413	23,500	20,000	15,000	10,000	-	9,814	24,076	20,491	15,368	10,245	-	10,054
		W	2,169	1,715	1,286	857	-	499	2,096	1,657	1,243	829	-	482	1,972	1,559	1,169	779	-	453
55	12.8	Q(Btu/h)	22,518	19,164	14,373	9,582	-	8,803	23,500	20,000	15,000	10,000	-	9,187	24,579	20,918	15,688	10,459	-	9,609
		W	2,104	1,663	1,247	832	-	502	2,028	1,603	1,202	802	-	484	1,927	1,523	1,142	762	-	459
50	10.0	Q(Btu/h)	22,476	19,129	14,347	9,564	-	8,188	23,500	20,000	15,000	10,000	-	8,561	25,059	21,327	15,995	10,663	-	9,129
		W	2,037	1,610	1,208	805	-	503	1,958	1,548	1,161	774	-	484	1,889	1,493	1,120	747	-	467
45	7.2	Q(Btu/h)	22,087	18,797	14,098	9,399	-	7,568	23,158	19,709	14,782	9,855	-	7,935	25,251	21,490	16,118	10,745	-	8,652
		W	1,968	1,556	1,167	778	-	503	1,886	1,491	1,118	746	-	482	1,849	1,462	1,096	731	-	473
40	4.4	Q(Btu/h)	21,187	18,032	13,524	9,016	-	6,943	22,305	18,983	14,237	9,491	-	7,309	25,410	21,626	16,219	10,813	-	8,326
		W	1,897	1,500	1,125	750	-	501	1,813	1,433	1,075	717	-	479	1,826	1,443	1,083	722	-	483
35	1.7	Q(Btu/h)	20,265	17,247	12,935	8,624	-	6,313	21,451	18,256	13,692	9,128	-	6,682	24,944	21,229	15,922	10,614	-	7,771
		W	1,824	1,442	1,082	721	-	498	1,738	1,374	1,030	687	-	474	1,793	1,417	1,063	709	-	489
30	-1.1	Q(Btu/h)	19,082	16,240	12,180	8,120	-	5,680	20,345	17,315	12,986	8,657	-	6,056	23,609	20,092	15,069	10,046	-	7,028
		W	1,750	1,383	1,038	692	-	493	1,661	1,313	985	657	-	468	1,722	1,361	1,021	681	-	485
25	-3.9	Q(Btu/h)	17,523	14,913	11,185	7,457	-	5,045	18,862	16,052	12,039	8,026	-	5,430	22,962	19,542	14,656	9,771	-	6,610
		W	1,674	1,323	992	662	-	486	1,583	1,251	939	626	-	460	1,697	1,342	1,006	671	-	493
20	-6.7	Q(Btu/h)	15,944	13,569	10,177	6,785	-	4,407	17,378	14,790	11,092	7,395	-	4,804	21,708	18,475	13,856	9,237	-	6,001
		W	1,596	1,262	946	631	-	478	1,503	1,188	891	594	-	450	1,627	1,286	964	643	-	488
15	-9.4	Q(Btu/h)	14,344	12,207	9,155	6,104	-	3,770	15,895	13,527	10,145	6,764	-	4,178	20,334	17,305	12,979	8,653	-	5,344
		W	1,517	1,199	900	600	-	469	1,422	1,124	843	562	-	439	1,566	1,238	929	619	-	484
10	-12.2	Q(Btu/h)	12,719	10,825	8,119	5,413	-	3,135	14,411	12,265	9,199	6,132	-	3,551	18,963	16,138	12,104	8,069	-	4,673
		W	1,437	1,136	852	568	-	458	1,338	1,058	794	529	-	427	1,487	1,176	882	588	-	474
5	-15.0	Q(Btu/h)	11,068	9,419	7,064	4,710	-	2,504	12,928	11,002	8,252	5,501	-	2,925	17,182	14,623	10,967	7,311	-	3,888
		W	1,356	1,072	804	536	-	446	1,254	991	743	496	-	412	1,399	1,106	829	553	-	460
0	-17.8	Q(Btu/h)	9,382	7,985	5,989	3,992	1,996	1,885	11,444	9,740	7,305	4,870	2,435	2,299	14,237	12,116	9,087	6,058	3,029	2,860
		W	1,276	1,008	756	504	252	433	1,167	923	692	461	231	396	1,252	990	743	495	248	425
-4	-20.0	Q(Btu/h)	8,002	6,811	5,108	3,405	1,703	1,403	10,257	8,730	6,547	4,365	2,182	1,798	14,733	12,538	9,404	6,269	3,135	2,583
		W	1,212	958	719	479	240	422	1,097	867	650	434	217	382	1,363	1,078	808	539	269	475

* Above data is for heating operation without any frost.

PEAD-AA18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 18,000
W: 1,410

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	16,432	16,432	12,324	8,216	-	4,838	15,386	15,386	11,539	7,693	-	4,530	14,041	14,041	10,531	7,021	-	4,134
		W	1,584	1,584	1,188	792	-	427	1,545	1,545	1,159	773	-	416	1,481	1,481	1,111	740	-	399
110	43.3	Q(Btu/h)	17,178	17,178	12,884	8,589	-	5,058	15,983	15,983	11,988	7,992	-	4,706	14,639	14,639	10,979	7,320	-	4,310
		W	1,558	1,558	1,169	779	-	420	1,519	1,519	1,140	760	-	409	1,449	1,449	1,086	724	-	390
105	40.6	Q(Btu/h)	17,925	17,925	13,444	8,963	-	5,278	16,581	16,581	12,436	8,290	-	4,882	15,386	15,386	11,539	7,693	-	4,530
		W	1,539	1,539	1,154	769	-	415	1,481	1,481	1,111	740	-	399	1,416	1,416	1,062	708	-	382
100	37.8	Q(Btu/h)	18,523	18,523	13,892	9,261	-	5,454	17,328	17,328	12,996	8,664	-	5,102	15,983	15,983	11,988	7,992	-	4,706
		W	1,494	1,494	1,120	747	-	403	1,449	1,449	1,086	724	-	390	1,384	1,384	1,038	692	-	373
95	35.0	Q(Btu/h)	19,270	19,270	14,452	9,635	-	5,674	18,000	18,000	13,500	9,000	-	5,300	16,730	16,730	12,548	8,365	-	4,926
		W	1,468	1,468	1,101	734	-	396	1,410	1,410	1,058	705	-	380	1,352	1,352	1,014	676	-	364
90	32.2	Q(Btu/h)	19,867	19,867	14,900	9,934	-	5,850	18,672	18,672	14,004	9,336	-	5,498	17,328	17,328	12,996	8,664	-	5,102
		W	1,416	1,416	1,062	708	-	382	1,352	1,352	1,014	676	-	364	1,301	1,301	975	650	-	351
85	29.4	Q(Btu/h)	20,614	20,614	15,461	10,307	-	6,070	19,419	19,419	14,564	9,710	-	5,718	18,075	18,075	13,556	9,037	-	5,322
		W	1,365	1,365	1,024	682	-	368	1,301	1,301	975	650	-	351	1,255	1,255	942	628	-	338
80	26.7	Q(Btu/h)	21,212	21,212	15,909	10,606	-	6,246	20,017	20,017	15,012	10,008	-	5,894	18,822	18,822	14,116	9,411	-	5,542
		W	1,313	1,313	985	657	-	354	1,243	1,243	932	621	-	335	1,204	1,204	903	602	-	324
75	23.9	Q(Btu/h)	21,959	21,959	16,469	10,979	-	6,466	20,614	20,614	15,461	10,307	-	6,070	19,494	19,494	14,620	9,747	-	5,740
		W	1,255	1,255	942	628	-	338	1,185	1,185	888	592	-	319	1,158	1,158	868	579	-	312
70	21.1	Q(Btu/h)	22,481	22,481	16,861	11,241	-	6,620	21,062	21,062	15,797	10,531	-	6,202	20,166	20,166	15,124	10,083	-	5,938
		W	1,191	1,191	893	596	-	321	1,133	1,133	850	567	-	305	1,088	1,088	816	544	-	293
67	19.4	Q(Btu/h)	22,705	22,705	17,029	11,353	-	6,685	21,510	21,510	16,133	10,755	-	6,334	20,614	20,614	15,461	10,307	-	6,070
		W	1,133	1,133	850	567	-	305	1,088	1,088	816	544	-	293	1,030	1,030	773	515	-	278

* It may not reach the above capacities in low ambient temperatures.

PEAD-AA18NL
SUZ-AA18NL
2) HEATING

Rated
Q(Btu/h): 20,000
W: 1,510

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	22,546	19,188	14,391	-	-	10,016	23,500	20,000	15,000	-	-	10,440	23,648	20,126	15,094	-	-	10,505
		W	2,232	1,764	1,323	-	-	484	2,163	1,710	1,282	-	-	469	2,025	1,601	1,201	-	-	439
60	15.6	Q(Btu/h)	22,540	19,183	14,387	9,592	-	9,413	23,500	20,000	15,000	10,000	-	9,814	24,076	20,491	15,368	10,245	-	10,054
		W	2,169	1,715	1,286	857	-	488	2,096	1,657	1,243	829	-	472	1,972	1,559	1,169	779	-	444
55	12.8	Q(Btu/h)	22,518	19,164	14,373	9,582	-	8,803	23,500	20,000	15,000	10,000	-	9,187	24,579	20,918	15,688	10,459	-	9,609
		W	2,104	1,663	1,247	832	-	491	2,028	1,603	1,202	802	-	474	1,927	1,523	1,142	762	-	450
50	10.0	Q(Btu/h)	22,476	19,129	14,347	9,564	-	8,188	23,500	20,000	15,000	10,000	-	8,561	25,059	21,327	15,995	10,663	-	9,129
		W	2,037	1,610	1,208	805	-	493	1,958	1,548	1,161	774	-	474	1,889	1,493	1,120	747	-	457
45	7.2	Q(Btu/h)	22,087	18,797	14,098	9,399	-	7,568	23,158	19,709	14,782	9,855	-	7,935	25,251	21,490	16,118	10,745	-	8,652
		W	1,968	1,556	1,167	778	-	493	1,886	1,491	1,118	746	-	472	1,849	1,462	1,096	731	-	463
40	4.4	Q(Btu/h)	21,187	18,032	13,524	9,016	-	6,943	22,305	18,983	14,237	9,491	-	7,309	25,410	21,626	16,219	10,813	-	8,326
		W	1,897	1,500	1,125	750	-	491	1,813	1,433	1,075	717	-	469	1,826	1,443	1,083	722	-	472
35	1.7	Q(Btu/h)	20,265	17,247	12,935	8,624	-	6,313	21,451	18,256	13,692	9,128	-	6,682	24,944	21,229	15,922	10,614	-	7,771
		W	1,824	1,442	1,082	721	-	488	1,738	1,374	1,030	687	-	464	1,793	1,417	1,063	709	-	479
30	-1.1	Q(Btu/h)	19,082	16,240	12,180	8,120	-	5,680	20,345	17,315	12,986	8,657	-	6,056	23,609	20,092	15,069	10,046	-	7,028
		W	1,750	1,383	1,038	692	-	483	1,661	1,313	985	657	-	458	1,722	1,361	1,021	681	-	475
25	-3.9	Q(Btu/h)	17,523	14,913	11,185	7,457	-	5,045	18,862	16,052	12,039	8,026	-	5,430	22,962	19,542	14,656	9,771	-	6,610
		W	1,674	1,323	992	662	-	476	1,583	1,251	939	626	-	450	1,697	1,342	1,006	671	-	483
20	-6.7	Q(Btu/h)	15,944	13,569	10,177	6,785	-	4,407	17,378	14,790	11,092	7,395	-	4,804	21,708	18,475	13,856	9,237	-	6,001
		W	1,596	1,262	946	631	-	468	1,503	1,188	891	594	-	441	1,627	1,286	964	643	-	477
15	-9.4	Q(Btu/h)	14,344	12,207	9,155	6,104	-	3,770	15,895	13,527	10,145	6,764	-	4,178	20,334	17,305	12,979	8,653	-	5,344
		W	1,517	1,199	900	600	-	459	1,422	1,124	843	562	-	430	1,566	1,238	929	619	-	474
10	-12.2	Q(Btu/h)	12,719	10,825	8,119	5,413	-	3,135	14,411	12,265	9,199	6,132	-	3,551	18,963	16,138	12,104	8,069	-	4,673
		W	1,437	1,136	852	568	-	448	1,338	1,058	794	529	-	418	1,487	1,176	882	588	-	464
5	-15.0	Q(Btu/h)	11,068	9,419	7,064	4,710	-	2,504	12,928	11,002	8,252	5,501	-	2,925	17,182	14,623	10,967	7,311	-	3,888
		W	1,356	1,072	804	536	-	437	1,254	991	743	496	-	404	1,399	1,106	829	553	-	450
0	-17.8	Q(Btu/h)	9,382	7,985	5,989	3,992	1,996	1,885	11,444	9,740	7,305	4,870	2,435	2,299	14,237	12,116	9,087	6,058	3,029	2,860
		W	1,276	1,008	756	504	252	424	1,167	923	692	461	231	388	1,252	990	743	495	248	416
-4	-20.0	Q(Btu/h)	8,002	6,811	5,108	3,405	1,703	1,403	10,257	8,730	6,547	4,365	2,182	1,798	14,733	12,538	9,404	6,269	3,135	2,583
		W	1,212	958	719	479	240	414	1,097	867	650	434	217	374	1,363	1,078	808	539	269	465

* Above data is for heating operation without any frost.

PEAD-AA24NL
SUZ-AA24NL
1) COOLING

Rated
Q(Btu/h): 24,000
W: 1,900

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	21,909	21,909	16,432	10,954	-	8,307	20,515	20,515	15,386	10,257	-	7,778	18,722	18,722	14,041	9,361	-	7,099
		W	2,134	2,134	1,601	1,067	-	708	2,082	2,082	1,562	1,041	-	690	1,995	1,995	1,497	998	-	662
110	43.3	Q(Btu/h)	22,905	22,905	17,178	11,452	-	8,685	21,311	21,311	15,983	10,656	-	8,080	19,519	19,519	14,639	9,759	-	7,401
		W	2,100	2,100	1,575	1,050	-	696	2,047	2,047	1,536	1,024	-	679	1,952	1,952	1,464	976	-	647
105	40.6	Q(Btu/h)	23,900	23,900	17,925	11,950	-	9,062	22,108	22,108	16,581	11,054	-	8,383	20,515	20,515	15,386	10,257	-	7,778
		W	2,074	2,074	1,555	1,037	-	688	1,995	1,995	1,497	998	-	662	1,909	1,909	1,432	954	-	633
100	37.8	Q(Btu/h)	24,697	24,697	18,523	12,349	-	9,364	23,104	23,104	17,328	11,552	-	8,760	21,311	21,311	15,983	10,656	-	8,080
		W	2,013	2,013	1,510	1,006	-	667	1,952	1,952	1,464	976	-	647	1,865	1,865	1,399	933	-	618
95	35.0	Q(Btu/h)	25,693	25,693	19,270	12,846	-	9,742	24,000	24,000	18,000	12,000	-	9,100	22,307	22,307	16,730	11,154	-	8,458
		W	1,978	1,978	1,484	989	-	656	1,900	1,900	1,425	950	-	630	1,822	1,822	1,366	911	-	604
90	32.2	Q(Btu/h)	26,490	26,490	19,867	13,245	-	10,044	24,896	24,896	18,672	12,448	-	9,440	23,104	23,104	17,328	11,552	-	8,760
		W	1,909	1,909	1,432	954	-	633	1,822	1,822	1,366	911	-	604	1,753	1,753	1,314	876	-	581
85	29.4	Q(Btu/h)	27,485	27,485	20,614	13,743	-	10,422	25,892	25,892	19,419	12,946	-	9,817	24,100	24,100	18,075	12,050	-	9,138
		W	1,839	1,839	1,379	920	-	610	1,753	1,753	1,314	876	-	581	1,692	1,692	1,269	846	-	561
80	26.7	Q(Btu/h)	28,282	28,282	21,212	14,141	-	10,724	26,689	26,689	20,017	13,344	-	10,120	25,095	25,095	18,822	12,548	-	9,515
		W	1,770	1,770	1,327	885	-	587	1,674	1,674	1,256	837	-	555	1,622	1,622	1,217	811	-	538
75	23.9	Q(Btu/h)	29,278	29,278	21,959	14,639	-	11,101	27,485	27,485	20,614	13,743	-	10,422	25,992	25,992	19,494	12,996	-	9,855
		W	1,692	1,692	1,269	846	-	561	1,596	1,596	1,197	798	-	529	1,560	1,560	1,170	780	-	517
70	21.1	Q(Btu/h)	29,975	29,975	22,481	14,988	-	11,366	28,083	28,083	21,062	14,041	-	10,648	26,888	26,888	20,166	13,444	-	10,195
		W	1,605	1,605	1,204	803	-	532	1,527	1,527	1,145	763	-	506	1,466	1,466	1,100	733	-	486
67	19.4	Q(Btu/h)	30,274	30,274	22,705	15,137	-	11,479	28,680	28,680	21,510	14,340	-	10,875	27,485	27,485	20,614	13,743	-	10,422
		W	1,527	1,527	1,145	763	-	506	1,466	1,466	1,100	733	-	486	1,388	1,388	1,041	694	-	460

* It may not reach the above capacities in low ambient temperatures.

PEAD-AA24NL
SUZ-AA24NL
2) HEATING

Rated
Q(Btu/h): 25,000
W: 2,020

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min	
65	18.3	Q(Btu/h)	27,055	23,985	17,989	11,993	-	10,061		28,200	25,000	18,750	12,500	-	10,487		28,377	25,157	18,868	12,579	-	10,553	
		W	3,041	2,528	1,896	1,264	-	430		2,947	2,450	1,837	1,225	-	417		2,759	2,293	1,720	1,147	-	390	
60	15.6	Q(Btu/h)	27,048	23,979	17,984	11,990	-	9,548		28,200	25,000	18,750	12,500	-	9,955		28,892	25,613	19,210	12,807	-	10,199	
		W	2,891	2,403	1,802	1,202	-	437		2,794	2,322	1,742	1,161	-	423		2,628	2,185	1,639	1,092	-	398	
55	12.8	Q(Btu/h)	27,021	23,955	17,966	11,978	-	9,029		28,200	25,000	18,750	12,500	-	9,423		29,494	26,147	19,611	13,074	-	9,856	
		W	2,751	2,287	1,715	1,143	-	444		2,651	2,204	1,653	1,102	-	428		2,519	2,094	1,570	1,047	-	406	
50	10.0	Q(Btu/h)	26,972	23,911	17,933	11,956	-	8,504		28,200	25,000	18,750	12,500	-	8,891		30,071	26,659	19,994	13,329	-	9,481	
		W	2,621	2,179	1,634	1,089	-	449		2,519	2,094	1,570	1,047	-	431		2,430	2,020	1,515	1,010	-	416	
45	7.2	Q(Btu/h)	25,844	22,911	17,184	11,456	-	7,973		27,098	24,023	18,017	12,011	-	8,360		29,546	26,193	19,645	13,097	-	9,115	
		W	2,501	2,079	1,559	1,039	-	453		2,397	1,992	1,494	996	-	434		2,349	1,953	1,465	976	-	425	
40	4.4	Q(Btu/h)	23,123	20,499	15,374	10,249	-	7,436		24,342	21,580	16,185	10,790	-	7,828		27,731	24,585	18,438	12,292	-	8,918	
		W	2,392	1,988	1,491	994	-	456		2,285	1,900	1,425	950	-	436		2,302	1,913	1,435	957	-	439	
35	1.7	Q(Btu/h)	20,393	18,079	13,559	9,040	-	6,893		21,586	19,137	14,353	9,568	-	7,296		25,101	22,253	16,690	11,126	-	8,484	
		W	2,293	1,906	1,429	953	-	458		2,184	1,815	1,362	908	-	436		2,253	1,873	1,404	936	-	450	
30	-1.1	Q(Btu/h)	18,372	16,287	12,215	8,144	-	6,344		19,588	17,365	13,024	8,683	-	6,764		22,730	20,151	15,113	10,075	-	7,849	
		W	2,205	1,833	1,375	916	-	459		2,093	1,740	1,305	870	-	436		2,169	1,803	1,352	902	-	452	
25	-3.9	Q(Btu/h)	17,397	15,423	11,567	7,711	-	5,790		18,726	16,601	12,451	8,301	-	6,232		22,796	20,210	15,157	10,105	-	7,587	
		W	2,128	1,769	1,327	885	-	459		2,013	1,673	1,255	837	-	434		2,158	1,794	1,346	897	-	466	
20	-6.7	Q(Btu/h)	16,390	14,530	10,897	7,265	-	5,230		17,864	15,837	11,878	7,918	-	5,701		22,315	19,783	14,837	9,891	-	7,121	
		W	2,063	1,715	1,286	857	-	459		1,943	1,615	1,211	807	-	432		2,102	1,748	1,311	874	-	467	
15	-9.4	Q(Btu/h)	15,343	13,602	10,201	6,801	-	4,665		17,002	15,073	11,304	7,536	-	5,169		21,750	19,282	14,462	9,641	-	6,612	
		W	2,009	1,670	1,253	835	-	457		1,883	1,565	1,174	783	-	428		2,074	1,724	1,293	862	-	472	
10	-12.2	Q(Btu/h)	14,245	12,629	9,472	6,314	-	4,093		16,140	14,308	10,731	7,154	-	4,637		21,238	18,828	14,121	9,414	-	6,102	
		W	1,969	1,637	1,227	818	-	455		1,834	1,524	1,143	762	-	424		2,037	1,694	1,270	847	-	471	
5	-15.0	Q(Btu/h)	13,080	11,596	8,697	5,798	-	3,515		15,278	13,544	10,158	6,772	-	4,105		20,306	18,001	13,501	9,001	-	5,456	
		W	1,942	1,614	1,211	807	-	452		1,795	1,492	1,119	746	-	418		2,002	1,665	1,248	832	-	466	
0	-17.8	Q(Btu/h)	11,818	10,477	7,858	5,239	-	2,930		14,416	12,780	9,585	6,390	-	3,574		17,934	15,899	11,924	7,949	-	4,446	
		W	1,930	1,605	1,203	802	-	450		1,766	1,468	1,101	734	-	411		1,895	1,575	1,182	788	-	441	
-4	-20.0	Q(Btu/h)	10,709	9,494	7,120	4,747	-	2,456		13,726	12,169	9,126	6,084	-	3,148		19,715	17,478	13,108	8,739	-	4,522	
		W	1,935	1,608	1,206	804	-	448		1,751	1,456	1,092	728	-	405		2,176	1,809	1,357	905	-	504	

* Above data is for heating operation without any frost.

PEAD-AA30NL
SUZ-AA30NL
1) COOLING

Rated
Q(Btu/h): 27,000
W: 2,270

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	24,647	24,647	18,485	12,324	-	8,672	23,079	23,079	17,309	11,539	-	8,120	21,062	21,062	15,797	10,531	-	7,411
		W	2,550	2,550	1,912	1,275	-	730	2,488	2,488	1,866	1,244	-	712	2,384	2,384	1,788	1,192	-	683
110	43.3	Q(Btu/h)	25,768	25,768	19,326	12,884	-	9,066	23,975	23,975	17,981	11,988	-	8,436	21,959	21,959	16,469	10,979	-	7,726
		W	2,508	2,508	1,881	1,254	-	718	2,446	2,446	1,835	1,223	-	700	2,332	2,332	1,749	1,166	-	668
105	40.6	Q(Btu/h)	26,888	26,888	20,166	13,444	-	9,461	24,871	24,871	18,654	12,436	-	8,751	23,079	23,079	17,309	11,539	-	8,120
		W	2,477	2,477	1,858	1,239	-	709	2,384	2,384	1,788	1,192	-	683	2,280	2,280	1,710	1,140	-	653
100	37.8	Q(Btu/h)	27,784	27,784	20,838	13,892	-	9,776	25,992	25,992	19,494	12,996	-	9,145	23,975	23,975	17,981	11,988	-	8,436
		W	2,405	2,405	1,804	1,202	-	689	2,332	2,332	1,749	1,166	-	668	2,229	2,229	1,671	1,114	-	638
95	35.0	Q(Btu/h)	28,905	28,905	21,678	14,452	-	10,170	27,000	27,000	20,250	13,500	-	9,500	25,095	25,095	18,822	12,548	-	8,830
		W	2,363	2,363	1,772	1,182	-	677	2,270	2,270	1,703	1,135	-	650	2,177	2,177	1,633	1,088	-	623
90	32.2	Q(Btu/h)	29,801	29,801	22,351	14,900	-	10,485	28,008	28,008	21,006	14,004	-	9,855	25,992	25,992	19,494	12,996	-	9,145
		W	2,280	2,280	1,710	1,140	-	653	2,177	2,177	1,633	1,088	-	623	2,094	2,094	1,570	1,047	-	600
85	29.4	Q(Btu/h)	30,921	30,921	23,191	15,461	-	10,880	29,129	29,129	21,846	14,564	-	10,249	27,112	27,112	20,334	13,556	-	9,539
		W	2,197	2,197	1,648	1,099	-	629	2,094	2,094	1,570	1,047	-	600	2,021	2,021	1,516	1,011	-	579
80	26.7	Q(Btu/h)	31,817	31,817	23,863	15,909	-	11,195	30,025	30,025	22,519	15,012	-	10,564	28,232	28,232	21,174	14,116	-	9,934
		W	2,115	2,115	1,586	1,057	-	605	2,001	2,001	1,500	1,000	-	573	1,938	1,938	1,454	969	-	555
75	23.9	Q(Btu/h)	32,938	32,938	24,703	16,469	-	11,589	30,921	30,921	23,191	15,461	-	10,880	29,241	29,241	21,930	14,620	-	10,288
		W	2,021	2,021	1,516	1,011	-	579	1,907	1,907	1,430	954	-	546	1,864	1,864	1,398	932	-	534
70	21.1	Q(Btu/h)	33,722	33,722	25,291	16,861	-	11,865	31,593	31,593	23,695	15,797	-	11,116	30,249	30,249	22,687	15,124	-	10,643
		W	1,918	1,918	1,438	959	-	549	1,824	1,824	1,368	912	-	522	1,752	1,752	1,314	876	-	502
67	19.4	Q(Btu/h)	34,058	34,058	25,544	17,029	-	11,983	32,266	32,266	24,199	16,133	-	11,353	30,921	30,921	23,191	15,461	-	10,880
		W	1,824	1,824	1,368	912	-	522	1,752	1,752	1,314	876	-	502	1,658	1,658	1,244	829	-	475

* It may not reach the above capacities in low ambient temperatures.

PEAD-AA30NL
SUZ-AA30NL
2) HEATING

Rated
Q(Btu/h): 30,000
W: 2,600

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	30,125	28,782	21,587	14,391	-	10,304	31,400	30,000	22,500	15,000	-	10,739	31,597	30,189	22,641	15,094	-	10,807
		W	3,541	3,253	2,440	1,627	-	440	3,432	3,153	2,365	1,577	-	427	3,213	2,952	2,214	1,476	-	399
60	15.6	Q(Btu/h)	30,118	28,775	21,581	14,387	-	9,779	31,400	30,000	22,500	15,000	-	10,195	32,170	30,736	23,052	15,368	-	10,445
		W	3,367	3,093	2,320	1,547	-	448	3,254	2,989	2,242	1,495	-	433	3,061	2,812	2,109	1,406	-	407
55	12.8	Q(Btu/h)	30,088	28,746	21,560	14,373	-	9,247	31,400	30,000	22,500	15,000	-	9,650	32,841	31,377	23,533	15,688	-	10,093
		W	3,204	2,943	2,207	1,472	-	454	3,087	2,836	2,127	1,418	-	437	2,933	2,695	2,021	1,348	-	416
50	10.0	Q(Btu/h)	30,032	28,693	21,520	14,347	-	8,709	31,400	30,000	22,500	15,000	-	9,106	33,483	31,990	23,993	15,995	-	9,710
		W	3,052	2,804	2,103	1,402	-	459	2,933	2,695	2,021	1,347	-	441	2,830	2,600	1,950	1,300	-	426
45	7.2	Q(Btu/h)	28,777	27,494	20,620	13,747	-	8,165	30,173	28,827	21,621	14,414	-	8,561	32,899	31,432	23,574	15,716	-	9,335
		W	2,913	2,676	2,007	1,338	-	463	2,791	2,564	1,923	1,282	-	444	2,736	2,514	1,885	1,257	-	435
40	4.4	Q(Btu/h)	25,747	24,599	18,449	12,299	-	7,615	27,104	25,896	19,422	12,948	-	8,016	30,878	29,501	22,126	14,751	-	9,133
		W	2,785	2,559	1,919	1,279	-	467	2,661	2,445	1,834	1,222	-	446	2,680	2,463	1,847	1,231	-	449
35	1.7	Q(Btu/h)	22,708	21,695	16,271	10,848	-	7,059	24,036	22,964	17,223	11,482	-	7,472	27,950	26,704	20,028	13,352	-	8,689
		W	2,670	2,453	1,840	1,227	-	469	2,543	2,337	1,752	1,168	-	446	2,624	2,410	1,808	1,205	-	461
30	-1.1	Q(Btu/h)	20,457	19,545	14,659	9,772	-	6,497	21,811	20,838	15,629	10,419	-	6,927	25,309	24,181	18,136	12,090	-	8,038
		W	2,568	2,359	1,769	1,180	-	470	2,438	2,239	1,680	1,120	-	446	2,526	2,321	1,741	1,161	-	462
25	-3.9	Q(Btu/h)	19,371	18,507	13,881	9,254	-	5,930	20,851	19,921	14,941	9,961	-	6,383	25,383	24,252	18,189	12,126	-	7,770
		W	2,478	2,277	1,708	1,139	-	470	2,344	2,153	1,615	1,077	-	445	2,513	2,309	1,732	1,155	-	477
20	-6.7	Q(Btu/h)	18,250	17,436	13,077	8,718	-	5,356	19,891	19,004	14,253	9,502	-	5,838	24,847	23,739	17,804	11,870	-	7,293
		W	2,402	2,207	1,655	1,104	-	469	2,262	2,078	1,559	1,039	-	442	2,448	2,249	1,687	1,125	-	478
15	-9.4	Q(Btu/h)	17,084	16,322	12,242	8,161	-	4,777	18,931	18,087	13,565	9,044	-	5,293	24,218	23,139	17,354	11,569	-	6,772
		W	2,340	2,150	1,613	1,075	-	468	2,193	2,015	1,511	1,007	-	438	2,416	2,220	1,665	1,110	-	483
10	-12.2	Q(Btu/h)	15,862	15,155	11,366	7,577	-	4,191	17,971	17,170	12,878	8,585	-	4,749	23,647	22,593	16,945	11,297	-	6,249
		W	2,293	2,106	1,580	1,053	-	466	2,135	1,962	1,471	981	-	434	2,373	2,180	1,635	1,090	-	482
5	-15.0	Q(Btu/h)	14,564	13,915	10,436	6,957	-	3,599	17,012	16,253	12,190	8,127	-	4,204	22,610	21,602	16,201	10,801	-	5,588
		W	2,261	2,077	1,558	1,039	-	463	2,090	1,920	1,440	960	-	428	2,332	2,142	1,607	1,071	-	477
0	-17.8	Q(Btu/h)	13,160	12,573	9,430	6,286	3,143	3,000	16,052	15,336	11,502	7,668	3,834	3,660	19,969	19,078	14,309	9,539	4,770	4,553
		W	2,248	2,065	1,549	1,033	516	460	2,057	1,890	1,417	945	472	421	2,207	2,028	1,521	1,014	507	452
-4	-20.0	Q(Btu/h)	11,924	11,392	8,544	5,696	2,848	2,515	15,284	14,602	10,952	7,301	3,651	3,224	21,952	20,973	15,730	10,487	5,243	4,631
		W	2,253	2,070	1,553	1,035	518	458	2,039	1,873	1,405	937	468	415	2,535	2,329	1,746	1,164	582	515

* Above data is for heating operation without any frost.

PEAD-AA36NL
SUZ-AA36NL
1) COOLING

Rated
Q(Btu/h): 33,000
W: 3,070

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	30,124	30,124	22,593	15,062	-	9,037	28,207	28,207	21,156	14,104	-	8,462	25,743	25,743	19,307	12,871	-	7,723
		W	3,448	3,448	2,586	1,724	-	764	3,364	3,364	2,523	1,682	-	745	3,224	3,224	2,418	1,612	-	714
110	43.3	Q(Btu/h)	31,494	31,494	23,620	15,747	-	9,448	29,303	29,303	21,977	14,651	-	8,791	26,838	26,838	20,129	13,419	-	8,051
		W	3,392	3,392	2,544	1,696	-	751	3,308	3,308	2,481	1,654	-	733	3,154	3,154	2,366	1,577	-	699
105	40.6	Q(Btu/h)	32,863	32,863	24,647	16,432	-	9,859	30,398	30,398	22,799	15,199	-	9,120	28,207	28,207	21,156	14,104	-	8,462
		W	3,350	3,350	2,513	1,675	-	742	3,224	3,224	2,418	1,612	-	714	3,084	3,084	2,313	1,542	-	683
100	37.8	Q(Btu/h)	33,959	33,959	25,469	16,979	-	10,188	31,768	31,768	23,826	15,884	-	9,530	29,303	29,303	21,977	14,651	-	8,791
		W	3,252	3,252	2,439	1,626	-	720	3,154	3,154	2,366	1,577	-	699	3,014	3,014	2,260	1,507	-	668
95	35.0	Q(Btu/h)	35,328	35,328	26,496	17,664	-	10,598	33,000	33,000	24,750	16,500	-	9,900	30,672	30,672	23,004	15,336	-	9,202
		W	3,196	3,196	2,397	1,598	-	708	3,070	3,070	2,303	1,535	-	680	2,944	2,944	2,208	1,472	-	652
90	32.2	Q(Btu/h)	36,423	36,423	27,317	18,212	-	10,927	34,232	34,232	25,674	17,116	-	10,270	31,768	31,768	23,826	15,884	-	9,530
		W	3,084	3,084	2,313	1,542	-	683	2,944	2,944	2,208	1,472	-	652	2,832	2,832	2,124	1,416	-	627
85	29.4	Q(Btu/h)	37,793	37,793	28,344	18,896	-	11,338	35,602	35,602	26,701	17,801	-	10,680	33,137	33,137	24,853	16,568	-	9,941
		W	2,972	2,972	2,229	1,486	-	658	2,832	2,832	2,124	1,416	-	627	2,734	2,734	2,050	1,367	-	605
80	26.7	Q(Btu/h)	38,888	38,888	29,166	19,444	-	11,666	36,697	36,697	27,523	18,349	-	11,009	34,506	34,506	25,880	17,253	-	10,352
		W	2,860	2,860	2,145	1,430	-	633	2,706	2,706	2,029	1,353	-	599	2,621	2,621	1,966	1,311	-	581
75	23.9	Q(Btu/h)	40,257	40,257	30,193	20,129	-	12,077	37,793	37,793	28,344	18,896	-	11,338	35,739	35,739	26,804	17,869	-	10,722
		W	2,734	2,734	2,050	1,367	-	605	2,579	2,579	1,935	1,290	-	571	2,520	2,520	1,890	1,260	-	558
70	21.1	Q(Btu/h)	41,216	41,216	30,912	20,608	-	12,365	38,614	38,614	28,961	19,307	-	11,584	36,971	36,971	27,728	18,485	-	11,091
		W	2,593	2,593	1,945	1,297	-	574	2,467	2,467	1,850	1,234	-	546	2,369	2,369	1,777	1,185	-	525
67	19.4	Q(Btu/h)	41,627	41,627	31,220	20,813	-	12,488	39,436	39,436	29,577	19,718	-	11,831	37,793	37,793	28,344	18,896	-	11,338
		W	2,467	2,467	1,850	1,234	-	546	2,369	2,369	1,777	1,185	-	525	2,243	2,243	1,682	1,121	-	497

* It may not reach the above capacities in low ambient temperatures.

PEAD-AA36NL
SUZ-AA36NL
2) HEATING

Rated
Q(Btu/h): 34,000
W: 2,670

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min		Max	Rated	75%	50%	25%	Min	
65	18.3	Q(Btu/h)	34,539	32,620	24,465	16,310	-	10,546		36,000	34,000	25,500	17,000	-	10,992		36,226	34,214	25,660	17,107	-	11,061	
		W	3,604	3,341	2,506	1,670	-	450		3,493	3,238	2,429	1,619	-	436		3,270	3,031	2,273	1,516	-	408	
60	15.6	Q(Btu/h)	34,530	32,612	24,459	16,306	-	10,009		36,000	34,000	25,500	17,000	-	10,435		36,883	34,834	26,125	17,417	-	10,691	
		W	3,426	3,176	2,382	1,588	-	458		3,311	3,070	2,302	1,535	-	442		3,115	2,888	2,166	1,444	-	416	
55	12.8	Q(Btu/h)	34,495	32,579	24,434	16,290	-	9,465		36,000	34,000	25,500	17,000	-	9,877		37,652	35,561	26,670	17,780	-	10,331	
		W	3,260	3,022	2,267	1,511	-	464		3,142	2,913	2,185	1,456	-	447		2,985	2,768	2,076	1,384	-	425	
50	10.0	Q(Btu/h)	34,432	32,519	24,389	16,260	-	8,914		36,000	34,000	25,500	17,000	-	9,320		38,388	36,256	27,192	18,128	-	9,938	
		W	3,106	2,880	2,160	1,440	-	470		2,985	2,767	2,076	1,384	-	451		2,880	2,670	2,002	1,335	-	435	
45	7.2	Q(Btu/h)	32,992	31,159	23,370	15,580	-	8,357		34,593	32,671	24,503	16,335	-	8,762		37,718	35,623	26,717	17,811	-	9,554	
		W	2,964	2,748	2,061	1,374	-	474		2,840	2,633	1,975	1,317	-	454		2,784	2,581	1,936	1,291	-	445	
40	4.4	Q(Btu/h)	29,518	27,878	20,909	13,939	-	7,794		31,075	29,348	22,011	14,674	-	8,205		35,402	33,435	25,076	16,717	-	9,348	
		W	2,834	2,628	1,971	1,314	-	477		2,708	2,511	1,883	1,255	-	456		2,728	2,529	1,897	1,264	-	459	
35	1.7	Q(Btu/h)	26,034	24,588	18,441	12,294	-	7,225		27,557	26,026	19,519	13,013	-	7,648		32,044	30,264	22,698	15,132	-	8,893	
		W	2,717	2,519	1,889	1,260	-	479		2,588	2,400	1,800	1,200	-	457		2,670	2,475	1,856	1,238	-	471	
30	-1.1	Q(Btu/h)	23,454	22,151	16,613	11,075	-	6,650		25,006	23,617	17,713	11,808	-	7,090		29,017	27,405	20,554	13,703	-	8,228	
		W	2,613	2,423	1,817	1,211	-	481		2,481	2,300	1,725	1,150	-	456		2,571	2,384	1,788	1,192	-	473	
25	-3.9	Q(Btu/h)	22,209	20,975	15,731	10,488	-	6,069		23,905	22,577	16,933	11,289	-	6,533		29,102	27,485	20,614	13,743	-	7,953	
		W	2,522	2,338	1,754	1,169	-	481		2,385	2,211	1,659	1,106	-	455		2,558	2,371	1,778	1,186	-	488	
20	-6.7	Q(Btu/h)	20,923	19,761	14,820	9,880	-	5,482		22,805	21,538	16,154	10,769	-	5,975		28,487	26,904	20,178	13,452	-	7,464	
		W	2,445	2,267	1,700	1,133	-	480		2,302	2,134	1,601	1,067	-	452		2,491	2,310	1,732	1,155	-	489	
15	-9.4	Q(Btu/h)	19,587	18,498	13,874	9,249	-	4,889		21,705	20,499	15,374	10,249	-	5,418		27,766	26,224	19,668	13,112	-	6,931	
		W	2,382	2,208	1,656	1,104	-	478		2,232	2,069	1,552	1,034	-	448		2,459	2,279	1,709	1,140	-	494	
10	-12.2	Q(Btu/h)	18,186	17,175	12,881	8,588	4,294	4,290		20,604	19,459	14,595	9,730	4,865	4,861		27,112	25,606	19,204	12,803	6,401	6,396	
		W	2,333	2,163	1,622	1,082	541	476		2,173	2,015	1,511	1,007	504	443		2,415	2,239	1,679	1,119	560	493	
5	-15.0	Q(Btu/h)	16,698	15,770	11,828	7,885	3,943	3,684		19,504	18,420	13,815	9,210	4,605	4,303		25,922	24,482	18,361	12,241	6,120	5,719	
		W	2,301	2,133	1,600	1,067	533	473		2,127	1,972	1,479	986	493	438		2,373	2,200	1,650	1,100	550	488	
0	-17.8	Q(Btu/h)	15,087	14,249	10,687	7,125	3,562	3,071		18,403	17,381	13,036	8,690	4,345	3,746		22,894	21,622	16,217	10,811	5,406	4,660	
		W	2,288	2,121	1,591	1,060	530	471		2,093	1,941	1,456	970	485	431		2,246	2,082	1,562	1,041	521	462	
-4	-20.0	Q(Btu/h)	13,671	12,911	9,683	6,456	3,228	2,574		17,523	16,549	12,412	8,275	4,137	3,300		25,168	23,770	17,827	11,885	5,942	4,740	
		W	2,293	2,126	1,594	1,063	531	469		2,075	1,924	1,443	962	481	424		2,579	2,391	1,793	1,196	598	527	

* Above data is for heating operation without any frost.

SVZ-AP18NL
SUZ-AA18NL
1) COOLING

Rated
Q(Btu/h): 18,000
W: 1,490

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	16,432	16,432	12,324	8,216	-	7,759	15,386	15,386	11,539	7,693	-	7,266	14,041	14,041	10,531	7,021	-	6,631
		W	1,674	1,674	1,255	837	-	550	1,633	1,633	1,225	816	-	537	1,565	1,565	1,174	782	-	515
110	43.3	Q(Btu/h)	17,178	17,178	12,884	8,589	-	8,112	15,983	15,983	11,988	7,992	-	7,548	14,639	14,639	10,979	7,320	-	6,913
		W	1,646	1,646	1,235	823	-	541	1,606	1,606	1,204	803	-	528	1,531	1,531	1,148	765	-	503
105	40.6	Q(Btu/h)	17,925	17,925	13,444	8,963	-	8,465	16,581	16,581	12,436	8,290	-	7,830	15,386	15,386	11,539	7,693	-	7,266
		W	1,626	1,626	1,220	813	-	535	1,565	1,565	1,174	782	-	515	1,497	1,497	1,123	748	-	492
100	37.8	Q(Btu/h)	18,523	18,523	13,892	9,261	-	8,747	17,328	17,328	12,996	8,664	-	8,183	15,983	15,983	11,988	7,992	-	7,548
		W	1,578	1,578	1,184	789	-	519	1,531	1,531	1,148	765	-	503	1,463	1,463	1,097	731	-	481
95	35.0	Q(Btu/h)	19,270	19,270	14,452	9,635	-	9,100	18,000	18,000	13,500	9,000	-	8,500	16,730	16,730	12,548	8,365	-	7,900
		W	1,551	1,551	1,163	776	-	510	1,490	1,490	1,118	745	-	490	1,429	1,429	1,072	714	-	470
90	32.2	Q(Btu/h)	19,867	19,867	14,900	9,934	-	9,382	18,672	18,672	14,004	9,336	-	8,817	17,328	17,328	12,996	8,664	-	8,183
		W	1,497	1,497	1,123	748	-	492	1,429	1,429	1,072	714	-	470	1,374	1,374	1,031	687	-	452
85	29.4	Q(Btu/h)	20,614	20,614	15,461	10,307	-	9,734	19,419	19,419	14,564	9,710	-	9,170	18,075	18,075	13,556	9,037	-	8,535
		W	1,442	1,442	1,082	721	-	474	1,374	1,374	1,031	687	-	452	1,327	1,327	995	663	-	436
80	26.7	Q(Btu/h)	21,212	21,212	15,909	10,606	-	10,017	20,017	20,017	15,012	10,008	-	9,452	18,822	18,822	14,116	9,411	-	8,888
		W	1,388	1,388	1,041	694	-	456	1,313	1,313	985	657	-	432	1,272	1,272	954	636	-	418
75	23.9	Q(Btu/h)	21,959	21,959	16,469	10,979	-	10,369	20,614	20,614	15,461	10,307	-	9,734	19,494	19,494	14,620	9,747	-	9,205
		W	1,327	1,327	995	663	-	436	1,252	1,252	939	626	-	412	1,223	1,223	917	612	-	402
70	21.1	Q(Btu/h)	22,481	22,481	16,861	11,241	-	10,616	21,062	21,062	15,797	10,531	-	9,946	20,166	20,166	15,124	10,083	-	9,523
		W	1,259	1,259	944	629	-	414	1,197	1,197	898	599	-	394	1,150	1,150	862	575	-	378
67	19.4	Q(Btu/h)	22,705	22,705	17,029	11,353	-	10,722	21,510	21,510	16,133	10,755	-	10,158	20,614	20,614	15,461	10,307	-	9,734
		W	1,197	1,197	898	599	-	394	1,150	1,150	862	575	-	378	1,089	1,089	816	544	-	358

* It may not reach the above capacities in low ambient temperatures.

SVZ-AP18NL
SUZ-AA18NL
2) HEATING

Rated
Q(Btu/h): 20,000
W: 1,530

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C						68°F / 20.0°C						59°F / 15.0°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
65	18.3	Q(Btu/h)	22,834	19,188	14,391	-	-	10,135	23,800	20,000	15,000	-	-	10,564	23,950	20,126	15,094	-	-	10,630
		W	2,313	1,788	1,341	-	-	504	2,242	1,733	1,299	-	-	489	2,099	1,622	1,216	-	-	457
60	15.6	Q(Btu/h)	22,828	19,183	14,387	9,592	-	9,525	23,800	20,000	15,000	10,000	-	9,930	24,384	20,491	15,368	10,245	-	10,174
		W	2,248	1,737	1,303	869	-	509	2,173	1,679	1,259	840	-	492	2,044	1,580	1,185	790	-	463
55	12.8	Q(Btu/h)	22,805	19,164	14,373	9,582	-	8,908	23,800	20,000	15,000	10,000	-	9,297	24,892	20,918	15,688	10,459	-	9,723
		W	2,181	1,685	1,264	843	-	512	2,102	1,624	1,218	812	-	494	1,997	1,543	1,157	772	-	469
50	10.0	Q(Btu/h)	22,763	19,129	14,347	9,564	-	8,286	23,800	20,000	15,000	10,000	-	8,663	25,379	21,327	15,995	10,663	-	9,238
		W	2,112	1,632	1,224	816	-	514	2,029	1,568	1,176	784	-	494	1,958	1,513	1,135	756	-	476
45	7.2	Q(Btu/h)	22,369	18,797	14,098	9,399	-	7,658	23,454	19,709	14,782	9,855	-	8,029	25,573	21,490	16,118	10,745	-	8,755
		W	2,040	1,576	1,182	788	-	514	1,955	1,511	1,133	755	-	492	1,916	1,481	1,111	740	-	482
40	4.4	Q(Btu/h)	21,458	18,032	13,524	9,016	-	7,025	22,589	18,983	14,237	9,491	-	7,396	25,735	21,626	16,219	10,813	-	8,425
		W	1,967	1,520	1,140	760	-	512	1,879	1,452	1,089	726	-	489	1,893	1,463	1,097	731	-	493
35	1.7	Q(Btu/h)	20,524	17,247	12,935	8,624	-	6,388	21,725	18,256	13,692	9,128	-	6,762	25,262	21,229	15,922	10,614	-	7,863
		W	1,891	1,461	1,096	731	-	508	1,801	1,392	1,044	696	-	484	1,858	1,436	1,077	718	-	499
30	-1.1	Q(Btu/h)	19,326	16,240	12,180	8,120	-	5,748	20,605	17,315	12,986	8,657	-	6,128	23,910	20,092	15,069	10,046	-	7,111
		W	1,814	1,402	1,051	701	-	503	1,722	1,331	998	665	-	478	1,785	1,379	1,034	690	-	495
25	-3.9	Q(Btu/h)	17,747	14,913	11,185	7,457	-	5,105	19,102	16,052	12,039	8,026	-	5,495	23,255	19,542	14,656	9,771	-	6,689
		W	1,735	1,341	1,006	670	-	497	1,641	1,268	951	634	-	470	1,760	1,360	1,020	680	-	504
20	-6.7	Q(Btu/h)	16,147	13,569	10,177	6,785	-	4,460	17,600	14,790	11,092	7,395	-	4,861	21,985	18,475	13,856	9,237	-	6,072
		W	1,655	1,279	959	639	-	488	1,558	1,204	903	602	-	460	1,686	1,303	977	651	-	498
15	-9.4	Q(Btu/h)	14,527	12,207	9,155	6,104	-	3,815	16,097	13,527	10,145	6,764	-	4,227	20,593	17,305	12,979	8,653	-	5,408
		W	1,573	1,215	911	608	-	479	1,474	1,139	854	569	-	448	1,624	1,255	941	627	-	494
10	-12.2	Q(Btu/h)	12,882	10,825	8,119	5,413	-	3,172	14,595	12,265	9,199	6,132	-	3,594	19,205	16,138	12,104	8,069	-	4,729
		W	1,490	1,151	863	576	-	468	1,387	1,072	804	536	-	435	1,542	1,191	893	596	-	484
5	-15.0	Q(Btu/h)	11,209	9,419	7,064	4,710	-	2,534	13,093	11,002	8,252	5,501	-	2,960	17,401	14,623	10,967	7,311	-	3,934
		W	1,406	1,086	815	543	-	455	1,300	1,004	753	502	-	421	1,450	1,120	840	560	-	470
0	-17.8	Q(Btu/h)	9,502	7,985	5,989	3,992	1,996	1,907	11,590	9,740	7,305	4,870	2,435	2,326	14,418	12,116	9,087	6,058	3,029	2,894
		W	1,322	1,022	766	511	255	442	1,210	935	701	467	234	405	1,298	1,003	752	502	251	434
-4	-20.0	Q(Btu/h)	8,105	6,811	5,108	3,405	1,703	1,419	10,388	8,730	6,547	4,365	2,182	1,819	14,921	12,538	9,404	6,269	3,135	2,613
		W	1,256	971	728	485	243	431	1,137	879	659	439	220	390	1,413	1,092	819	546	273	485

* Above data is for heating operation without any frost.

SVZ-AP24NL
SUZ-AA24NL
1) COOLING

Rated
Q(Btu/h): 22,800
W: 1,930

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	20,813	20,813	15,610	10,407	-	8,216	19,489	19,489	14,617	9,744	-	7,693	17,786	17,786	13,339	8,893	-	7,021
		W	2,168	2,168	1,626	1,084	-	741	2,115	2,115	1,586	1,058	-	723	2,027	2,027	1,520	1,013	-	693
110	43.3	Q(Btu/h)	21,759	21,759	16,320	10,880	-	8,589	20,246	20,246	15,184	10,123	-	7,992	18,543	18,543	13,907	9,271	-	7,320
		W	2,133	2,133	1,600	1,066	-	729	2,080	2,080	1,560	1,040	-	711	1,983	1,983	1,487	991	-	678
105	40.6	Q(Btu/h)	22,705	22,705	17,029	11,353	-	8,963	21,002	21,002	15,752	10,501	-	8,290	19,489	19,489	14,617	9,744	-	7,693
		W	2,106	2,106	1,580	1,053	-	720	2,027	2,027	1,520	1,013	-	693	1,939	1,939	1,454	969	-	663
100	37.8	Q(Btu/h)	23,462	23,462	17,597	11,731	-	9,261	21,949	21,949	16,461	10,974	-	8,664	20,246	20,246	15,184	10,123	-	7,992
		W	2,045	2,045	1,533	1,022	-	699	1,983	1,983	1,487	991	-	678	1,895	1,895	1,421	947	-	648
95	35.0	Q(Btu/h)	24,408	24,408	18,306	12,204	-	9,635	22,800	22,800	17,100	11,400	-	9,000	21,192	21,192	15,894	10,596	-	8,365
		W	2,009	2,009	1,507	1,005	-	687	1,930	1,930	1,448	965	-	660	1,851	1,851	1,388	925	-	633
90	32.2	Q(Btu/h)	25,165	25,165	18,874	12,583	-	9,934	23,651	23,651	17,739	11,826	-	9,336	21,949	21,949	16,461	10,974	-	8,664
		W	1,939	1,939	1,454	969	-	663	1,851	1,851	1,388	925	-	633	1,780	1,780	1,335	890	-	609
85	29.4	Q(Btu/h)	26,111	26,111	19,583	13,056	-	10,307	24,598	24,598	18,448	12,299	-	9,710	22,895	22,895	17,171	11,447	-	9,037
		W	1,868	1,868	1,401	934	-	639	1,780	1,780	1,335	890	-	609	1,718	1,718	1,289	859	-	588
80	26.7	Q(Btu/h)	26,868	26,868	20,151	13,434	-	10,606	25,354	25,354	19,016	12,677	-	10,008	23,841	23,841	17,880	11,920	-	9,411
		W	1,798	1,798	1,348	899	-	615	1,701	1,701	1,276	850	-	582	1,648	1,648	1,236	824	-	564
75	23.9	Q(Btu/h)	27,814	27,814	20,861	13,907	-	10,979	26,111	26,111	19,583	13,056	-	10,307	24,692	24,692	18,519	12,346	-	9,747
		W	1,718	1,718	1,289	859	-	588	1,622	1,622	1,216	811	-	555	1,585	1,585	1,188	792	-	542
70	21.1	Q(Btu/h)	28,476	28,476	21,357	14,238	-	11,241	26,679	26,679	20,009	13,339	-	10,531	25,544	25,544	19,158	12,772	-	10,083
		W	1,630	1,630	1,223	815	-	558	1,551	1,551	1,163	776	-	530	1,489	1,489	1,117	745	-	509
67	19.4	Q(Btu/h)	28,760	28,760	21,570	14,380	-	11,353	27,246	27,246	20,435	13,623	-	10,755	26,111	26,111	19,583	13,056	-	10,307
		W	1,551	1,551	1,163	776	-	530	1,489	1,489	1,117	745	-	509	1,410	1,410	1,058	705	-	482

* It may not reach the above capacities in low ambient temperatures.

SVZ-AP24NL
SUZ-AA24NL
2) HEATING

Rated
Q(Btu/h): 25,000
W: 2,130

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min			
65	18.3	Q(Btu/h)	26,863	23,985	17,989	11,993	-	10,061	28,000	25,000	18,750	12,500	-	10,487	28,176	25,157	18,868	12,579	-	10,553			
		W	3,341	2,665	1,999	1,333	-	460	3,238	2,583	1,937	1,292	-	446	3,031	2,418	1,814	1,209	-	417			
60	15.6	Q(Btu/h)	26,857	23,979	17,984	11,990	-	9,548	28,000	25,000	18,750	12,500	-	9,955	28,687	25,613	19,210	12,807	-	10,199			
		W	3,176	2,534	1,900	1,267	-	468	3,070	2,449	1,837	1,224	-	452	2,888	2,304	1,728	1,152	-	425			
55	12.8	Q(Btu/h)	26,830	23,955	17,966	11,978	-	9,029	28,000	25,000	18,750	12,500	-	9,423	29,285	26,147	19,611	13,074	-	9,856			
		W	3,022	2,411	1,808	1,206	-	475	2,913	2,324	1,743	1,162	-	457	2,768	2,208	1,656	1,104	-	435			
50	10.0	Q(Btu/h)	26,780	23,911	17,933	11,956	-	8,504	28,000	25,000	18,750	12,500	-	8,891	29,858	26,659	19,994	13,329	-	9,481			
		W	2,880	2,297	1,723	1,149	-	480	2,767	2,208	1,656	1,104	-	461	2,670	2,130	1,597	1,065	-	445			
45	7.2	Q(Btu/h)	25,661	22,911	17,184	11,456	-	7,973	26,906	24,023	18,017	12,011	-	8,360	29,337	26,193	19,645	13,097	-	9,115			
		W	2,748	2,192	1,644	1,096	-	484	2,633	2,101	1,576	1,050	-	464	2,581	2,059	1,544	1,030	-	455			
40	4.4	Q(Btu/h)	22,959	20,499	15,374	10,249	-	7,436	24,169	21,580	16,185	10,790	-	7,828	27,535	24,585	18,438	12,292	-	8,918			
		W	2,628	2,096	1,572	1,048	-	488	2,511	2,003	1,502	1,001	-	466	2,529	2,017	1,513	1,009	-	469			
35	1.7	Q(Btu/h)	20,249	18,079	13,559	9,040	-	6,893	21,433	19,137	14,353	9,568	-	7,296	24,923	22,253	16,690	11,126	-	8,484			
		W	2,519	2,010	1,507	1,005	-	490	2,400	1,914	1,436	957	-	467	2,475	1,975	1,481	987	-	481			
30	-1.1	Q(Btu/h)	18,242	16,287	12,215	8,144	-	6,344	19,449	17,365	13,024	8,683	-	6,764	22,569	20,151	15,113	10,075	-	7,849			
		W	2,423	1,933	1,450	966	-	491	2,300	1,835	1,376	917	-	466	2,384	1,902	1,426	951	-	483			
25	-3.9	Q(Btu/h)	17,274	15,423	11,567	7,711	-	5,790	18,593	16,601	12,451	8,301	-	6,232	22,635	20,210	15,157	10,105	-	7,587			
		W	2,338	1,865	1,399	933	-	491	2,211	1,764	1,323	882	-	465	2,371	1,892	1,419	946	-	498			
20	-6.7	Q(Btu/h)	16,273	14,530	10,897	7,265	-	5,230	17,737	15,837	11,878	7,918	-	5,701	22,156	19,783	14,837	9,891	-	7,121			
		W	2,267	1,808	1,356	904	-	491	2,134	1,703	1,277	851	-	462	2,310	1,843	1,382	921	-	500			
15	-9.4	Q(Btu/h)	15,234	13,602	10,201	6,801	-	4,665	16,881	15,073	11,304	7,536	-	5,169	21,596	19,282	14,462	9,641	-	6,612			
		W	2,208	1,761	1,321	881	-	489	2,069	1,650	1,238	825	-	458	2,279	1,818	1,364	909	-	505			
10	-12.2	Q(Btu/h)	14,144	12,629	9,472	6,314	-	4,093	16,025	14,308	10,731	7,154	-	4,637	21,087	18,828	14,121	9,414	-	6,102			
		W	2,163	1,726	1,294	863	-	487	2,015	1,607	1,205	804	-	453	2,239	1,786	1,339	893	-	504			
5	-15.0	Q(Btu/h)	12,987	11,596	8,697	5,798	-	3,515	15,170	13,544	10,158	6,772	-	4,105	20,162	18,001	13,501	9,001	-	5,456			
		W	2,133	1,702	1,276	851	-	484	1,972	1,573	1,180	787	-	447	2,200	1,755	1,316	878	-	499			
0	-17.8	Q(Btu/h)	11,735	10,477	7,858	5,239	-	2,930	14,314	12,780	9,585	6,390	-	3,574	17,807	15,899	11,924	7,949	-	4,446			
		W	2,121	1,692	1,269	846	-	481	1,941	1,548	1,161	774	-	440	2,082	1,661	1,246	831	-	472			
-4	-20.0	Q(Btu/h)	10,633	9,494	7,120	4,747	-	2,456	13,629	12,169	9,126	6,084	-	3,148	19,575	17,478	13,108	8,739	-	4,522			
		W	2,126	1,696	1,272	848	-	479	1,924	1,535	1,151	767	-	434	2,391	1,908	1,431	954	-	539			

* Above data is for heating operation without any frost.

SVZ-AP30NL
SUZ-AA30NL
1) COOLING

Rated
Q(Btu/h): 27,000
W: 2,400

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	24,647	24,647	18,485	12,324	-	8,581	23,079	23,079	17,309	11,539	-	8,035	21,062	21,062	15,797	10,531	-	7,333
		W	2,696	2,696	2,022	1,348	-	809	2,630	2,630	1,973	1,315	-	789	2,521	2,521	1,890	1,260	-	756
110	43.3	Q(Btu/h)	25,768	25,768	19,326	12,884	-	8,971	23,975	23,975	17,981	11,988	-	8,347	21,959	21,959	16,469	10,979	-	7,645
		W	2,652	2,652	1,989	1,326	-	796	2,586	2,586	1,940	1,293	-	776	2,466	2,466	1,849	1,233	-	740
105	40.6	Q(Btu/h)	26,888	26,888	20,166	13,444	-	9,361	24,871	24,871	18,654	12,436	-	8,659	23,079	23,079	17,309	11,539	-	8,035
		W	2,619	2,619	1,964	1,310	-	786	2,521	2,521	1,890	1,260	-	756	2,411	2,411	1,808	1,205	-	723
100	37.8	Q(Btu/h)	27,784	27,784	20,838	13,892	-	9,673	25,992	25,992	19,494	12,996	-	9,049	23,975	23,975	17,981	11,988	-	8,347
		W	2,542	2,542	1,907	1,271	-	763	2,466	2,466	1,849	1,233	-	740	2,356	2,356	1,767	1,178	-	707
95	35.0	Q(Btu/h)	28,905	28,905	21,678	14,452	-	10,063	27,000	27,000	20,250	13,500	-	9,400	25,095	25,095	18,822	12,548	-	8,737
		W	2,499	2,499	1,874	1,249	-	750	2,400	2,400	1,800	1,200	-	720	2,301	2,301	1,726	1,151	-	690
90	32.2	Q(Btu/h)	29,801	29,801	22,351	14,900	-	10,375	28,008	28,008	21,006	14,004	-	9,751	25,992	25,992	19,494	12,996	-	9,049
		W	2,411	2,411	1,808	1,205	-	723	2,301	2,301	1,726	1,151	-	690	2,214	2,214	1,660	1,107	-	664
85	29.4	Q(Btu/h)	30,921	30,921	23,191	15,461	-	10,765	29,129	29,129	21,846	14,564	-	10,141	27,112	27,112	20,334	13,556	-	9,439
		W	2,323	2,323	1,742	1,162	-	697	2,214	2,214	1,660	1,107	-	664	2,137	2,137	1,603	1,068	-	641
80	26.7	Q(Btu/h)	31,817	31,817	23,863	15,909	-	11,077	30,025	30,025	22,519	15,012	-	10,453	28,232	28,232	21,174	14,116	-	9,829
		W	2,236	2,236	1,677	1,118	-	671	2,115	2,115	1,586	1,058	-	635	2,049	2,049	1,537	1,025	-	615
75	23.9	Q(Btu/h)	32,938	32,938	24,703	16,469	-	11,467	30,921	30,921	23,191	15,461	-	10,765	29,241	29,241	21,930	14,620	-	10,180
		W	2,137	2,137	1,603	1,068	-	641	2,016	2,016	1,512	1,008	-	605	1,970	1,970	1,478	985	-	591
70	21.1	Q(Btu/h)	33,722	33,722	25,291	16,861	-	11,740	31,593	31,593	23,695	15,797	-	10,999	30,249	30,249	22,687	15,124	-	10,531
		W	2,027	2,027	1,521	1,014	-	608	1,929	1,929	1,447	964	-	579	1,852	1,852	1,389	926	-	556
67	19.4	Q(Btu/h)	34,058	34,058	25,544	17,029	-	11,857	32,266	32,266	24,199	16,133	-	11,233	30,921	30,921	23,191	15,461	-	10,765
		W	1,929	1,929	1,447	964	-	579	1,852	1,852	1,389	926	-	556	1,753	1,753	1,315	877	-	526

* It may not reach the above capacities in low ambient temperatures.

SVZ-AP30NL
SUZ-AA30NL
2) HEATING

Rated
Q(Btu/h): 30,000
W: 2,500

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min			
65	18.3	Q(Btu/h)	30,701	28,782	21,587	14,391	-	10,304	32,000	30,000	22,500	15,000	-	10,739	32,201	30,189	22,641	15,094	-	10,807			
		W	3,379	3,128	2,346	1,564	-	500	3,274	3,032	2,274	1,516	-	485	3,065	2,838	2,129	1,419	-	454			
60	15.6	Q(Btu/h)	30,693	28,775	21,581	14,387	-	9,779	32,000	30,000	22,500	15,000	-	10,195	32,785	30,736	23,052	15,368	-	10,445			
		W	3,212	2,974	2,231	1,487	-	509	3,104	2,874	2,156	1,437	-	492	2,920	2,704	2,028	1,352	-	462			
55	12.8	Q(Btu/h)	30,663	28,746	21,560	14,373	-	9,247	32,000	30,000	22,500	15,000	-	9,650	33,469	31,377	23,533	15,688	-	10,093			
		W	3,056	2,830	2,122	1,415	-	516	2,946	2,727	2,046	1,364	-	497	2,799	2,591	1,944	1,296	-	472			
50	10.0	Q(Btu/h)	30,606	28,693	21,520	14,347	-	8,709	32,000	30,000	22,500	15,000	-	9,106	34,123	31,990	23,993	15,995	-	9,710			
		W	2,912	2,696	2,022	1,348	-	522	2,798	2,591	1,943	1,296	-	501	2,700	2,500	1,875	1,250	-	484			
45	7.2	Q(Btu/h)	29,327	27,494	20,620	13,747	-	8,165	30,749	28,827	21,621	14,414	-	8,561	33,527	31,432	23,574	15,716	-	9,335			
		W	2,779	2,573	1,930	1,286	-	527	2,663	2,466	1,849	1,233	-	505	2,610	2,417	1,813	1,208	-	495			
40	4.4	Q(Btu/h)	26,239	24,599	18,449	12,299	-	7,615	27,622	25,896	19,422	12,948	-	8,016	31,468	29,501	22,126	14,751	-	9,133			
		W	2,657	2,460	1,845	1,230	-	530	2,539	2,351	1,763	1,175	-	507	2,557	2,368	1,776	1,184	-	510			
35	1.7	Q(Btu/h)	23,142	21,695	16,271	10,848	-	7,059	24,495	22,964	17,223	11,482	-	7,472	28,484	26,704	20,028	13,352	-	8,689			
		W	2,548	2,359	1,769	1,179	-	533	2,426	2,247	1,685	1,123	-	507	2,503	2,318	1,738	1,159	-	523			
30	-1.1	Q(Btu/h)	20,848	19,545	14,659	9,772	-	6,497	22,227	20,838	15,629	10,419	-	6,927	25,793	24,181	18,136	12,090	-	8,038			
		W	2,450	2,268	1,701	1,134	-	534	2,326	2,153	1,615	1,077	-	507	2,410	2,232	1,674	1,116	-	525			
25	-3.9	Q(Btu/h)	19,741	18,507	13,881	9,254	-	5,930	21,249	19,921	14,941	9,961	-	6,383	25,868	24,252	18,189	12,126	-	7,770			
		W	2,365	2,189	1,642	1,095	-	534	2,236	2,071	1,553	1,035	-	505	2,398	2,220	1,665	1,110	-	542			
20	-6.7	Q(Btu/h)	18,598	17,436	13,077	8,718	-	5,356	20,271	19,004	14,253	9,502	-	5,838	25,322	23,739	17,804	11,870	-	7,293			
		W	2,292	2,122	1,592	1,061	-	533	2,158	1,998	1,499	999	-	502	2,336	2,163	1,622	1,081	-	544			
15	-9.4	Q(Btu/h)	17,410	16,322	12,242	8,161	-	4,777	19,293	18,087	13,565	9,044	-	5,293	24,681	23,139	17,354	11,569	-	6,772			
		W	2,233	2,067	1,551	1,034	-	532	2,092	1,937	1,453	969	-	498	2,305	2,134	1,601	1,067	-	549			
10	-12.2	Q(Btu/h)	16,165	15,155	11,366	7,577	-	4,191	18,315	17,170	12,878	8,585	-	4,749	24,099	22,593	16,945	11,297	-	6,249			
		W	2,187	2,025	1,519	1,013	-	529	2,037	1,886	1,415	943	-	493	2,264	2,096	1,572	1,048	-	547			
5	-15.0	Q(Btu/h)	14,842	13,915	10,436	6,957	-	3,599	17,337	16,253	12,190	8,127	-	4,204	23,042	21,602	16,201	10,801	-	5,588			
		W	2,157	1,998	1,498	999	-	526	1,994	1,846	1,385	923	-	486	2,225	2,060	1,545	1,030	-	542			
0	-17.8	Q(Btu/h)	13,411	12,573	9,430	6,286	3,143	3,000	16,358	15,336	11,502	7,668	3,834	3,660	20,350	19,078	14,309	9,539	4,770	4,553			
		W	2,145	1,986	1,489	993	496	523	1,962	1,817	1,363	909	454	478	2,106	1,950	1,462	975	487	513			
-4	-20.0	Q(Btu/h)	12,152	11,392	8,544	5,696	2,848	2,515	15,576	14,602	10,952	7,301	3,651	3,224	22,372	20,973	15,730	10,487	5,243	4,631			
		W	2,150	1,990	1,493	995	498	521	1,945	1,801	1,351	901	450	471	2,418	2,239	1,679	1,119	560	586			

* Above data is for heating operation without any frost.

SVZ-AP36NL
SUZ-AA36NL
1) COOLING

Rated
Q(Btu/h): 33,000
W: 3,530

Indoor W.B. Outdoor D.B. (°F) (°C)			71°F / 21.7°C						67°F / 19.4°C						63°F / 17.2°C					
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min
115	46.1	Q(Btu/h)	30,124	30,124	22,593	15,062	-	8,946	28,207	28,207	21,156	14,104	-	8,377	25,743	25,743	19,307	12,871	-	7,645
		W	3,965	3,965	2,974	1,983	-	921	3,868	3,868	2,901	1,934	-	899	3,707	3,707	2,780	1,854	-	861
110	43.3	Q(Btu/h)	31,494	31,494	23,620	15,747	-	9,353	29,303	29,303	21,977	14,651	-	8,702	26,838	26,838	20,129	13,419	-	7,970
		W	3,901	3,901	2,926	1,950	-	906	3,804	3,804	2,853	1,902	-	884	3,627	3,627	2,720	1,813	-	842
105	40.6	Q(Btu/h)	32,863	32,863	24,647	16,432	-	9,759	30,398	30,398	22,799	15,199	-	9,027	28,207	28,207	21,156	14,104	-	8,377
		W	3,852	3,852	2,889	1,926	-	895	3,707	3,707	2,780	1,854	-	861	3,546	3,546	2,660	1,773	-	824
100	37.8	Q(Btu/h)	33,959	33,959	25,469	16,979	-	10,085	31,768	31,768	23,826	15,884	-	9,434	29,303	29,303	21,977	14,651	-	8,702
		W	3,740	3,740	2,805	1,870	-	869	3,627	3,627	2,720	1,813	-	842	3,466	3,466	2,599	1,733	-	805
95	35.0	Q(Btu/h)	35,328	35,328	26,496	17,664	-	10,491	33,000	33,000	24,750	16,500	-	9,800	30,672	30,672	23,004	15,336	-	9,109
		W	3,675	3,675	2,756	1,838	-	854	3,530	3,530	2,648	1,765	-	820	3,385	3,385	2,539	1,692	-	786
90	32.2	Q(Btu/h)	36,423	36,423	27,317	18,212	-	10,817	34,232	34,232	25,674	17,116	-	10,166	31,768	31,768	23,826	15,884	-	9,434
		W	3,546	3,546	2,660	1,773	-	824	3,385	3,385	2,539	1,692	-	786	3,256	3,256	2,442	1,628	-	756
85	29.4	Q(Btu/h)	37,793	37,793	28,344	18,896	-	11,223	35,602	35,602	26,701	17,801	-	10,573	33,137	33,137	24,853	16,568	-	9,841
		W	3,417	3,417	2,563	1,709	-	794	3,256	3,256	2,442	1,628	-	756	3,143	3,143	2,357	1,572	-	730
80	26.7	Q(Btu/h)	38,888	38,888	29,166	19,444	-	11,549	36,697	36,697	27,523	18,349	-	10,898	34,506	34,506	25,880	17,253	-	10,247
		W	3,288	3,288	2,466	1,644	-	764	3,111	3,111	2,333	1,555	-	723	3,014	3,014	2,261	1,507	-	700
75	23.9	Q(Btu/h)	40,257	40,257	30,193	20,129	-	11,955	37,793	37,793	28,344	18,896	-	11,223	35,739	35,739	26,804	17,869	-	10,613
		W	3,143	3,143	2,357	1,572	-	730	2,966	2,966	2,224	1,483	-	689	2,898	2,898	2,174	1,449	-	673
70	21.1	Q(Btu/h)	41,216	41,216	30,912	20,608	-	12,240	38,614	38,614	28,961	19,307	-	11,467	36,971	36,971	27,728	18,485	-	10,979
		W	2,982	2,982	2,236	1,491	-	693	2,837	2,837	2,128	1,418	-	659	2,724	2,724	2,043	1,362	-	633
67	19.4	Q(Btu/h)	41,627	41,627	31,220	20,813	-	12,362	39,436	39,436	29,577	19,718	-	11,711	37,793	37,793	28,344	18,896	-	11,223
		W	2,837	2,837	2,128	1,418	-	659	2,724	2,724	2,043	1,362	-	633	2,579	2,579	1,934	1,289	-	599

* It may not reach the above capacities in low ambient temperatures.

SVZ-AP36NL
SUZ-AA36NL
2) HEATING

Rated
Q(Btu/h): 34,200
W: 2,810

Indoor D.B. Outdoor W.B. (°F) (°C)			77°F / 25.0°C							68°F / 20.0°C							59°F / 15.0°C						
			Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min	Max	Rated	75%	50%	25%	Min			
65	18.3	Q(Btu/h)	34,731	32,812	24,609	16,406	-	10,546	36,200	34,200	25,650	17,100	-	10,992	36,427	34,415	25,811	17,207	-	11,061			
		W	3,754	3,516	2,637	1,758	-	630	3,638	3,408	2,556	1,704	-	611	3,406	3,190	2,393	1,595	-	572			
60	15.6	Q(Btu/h)	34,722	32,803	24,603	16,402	-	10,009	36,200	34,200	25,650	17,100	-	10,435	37,088	35,039	26,279	17,519	-	10,691			
		W	3,569	3,343	2,507	1,671	-	641	3,449	3,231	2,423	1,615	-	619	3,245	3,039	2,279	1,520	-	583			
55	12.8	Q(Btu/h)	34,687	32,771	24,578	16,385	-	9,465	36,200	34,200	25,650	17,100	-	9,877	37,862	35,770	26,827	17,885	-	10,331			
		W	3,396	3,181	2,386	1,590	-	650	3,273	3,066	2,299	1,533	-	626	3,110	2,913	2,185	1,456	-	595			
50	10.0	Q(Btu/h)	34,623	32,710	24,533	16,355	-	8,914	36,200	34,200	25,650	17,100	-	9,320	38,602	36,469	27,352	18,235	-	9,938			
		W	3,235	3,031	2,273	1,515	-	657	3,109	2,913	2,184	1,456	-	632	3,000	2,810	2,107	1,405	-	610			
45	7.2	Q(Btu/h)	33,176	31,343	23,507	15,671	-	8,357	34,785	32,863	24,647	16,432	-	8,762	37,928	35,833	26,874	17,916	-	9,554			
		W	3,088	2,892	2,169	1,446	-	664	2,959	2,771	2,079	1,386	-	636	2,900	2,717	2,037	1,358	-	623			
40	4.4	Q(Btu/h)	29,682	28,042	21,032	14,021	-	7,794	31,247	29,521	22,141	14,761	-	8,205	35,598	33,632	25,224	16,816	-	9,348			
		W	2,953	2,766	2,074	1,383	-	668	2,821	2,642	1,982	1,321	-	638	2,841	2,661	1,996	1,331	-	643			
35	1.7	Q(Btu/h)	26,179	24,732	18,549	12,366	-	7,225	27,710	26,179	19,634	13,090	-	7,648	32,222	30,442	22,831	15,221	-	8,893			
		W	2,831	2,651	1,988	1,326	-	671	2,696	2,525	1,894	1,263	-	639	2,781	2,605	1,954	1,303	-	659			
30	-1.1	Q(Btu/h)	23,584	22,281	16,711	11,140	-	6,650	25,145	23,756	17,817	11,878	-	7,090	29,178	27,566	20,675	13,783	-	8,228			
		W	2,722	2,550	1,912	1,275	-	673	2,584	2,420	1,815	1,210	-	639	2,678	2,509	1,881	1,254	-	662			
25	-3.9	Q(Btu/h)	22,332	21,098	15,824	10,549	-	6,069	24,038	22,710	17,033	11,355	-	6,533	29,264	27,647	20,735	13,823	-	7,953			
		W	2,627	2,461	1,846	1,230	-	673	2,485	2,327	1,745	1,164	-	636	2,664	2,496	1,872	1,248	-	683			
20	-6.7	Q(Btu/h)	21,039	19,877	14,908	9,938	-	5,482	22,932	21,665	16,249	10,832	-	5,975	28,645	27,063	20,297	13,531	-	7,464			
		W	2,547	2,385	1,789	1,193	-	672	2,398	2,246	1,685	1,123	-	633	2,595	2,431	1,823	1,215	-	685			
15	-9.4	Q(Btu/h)	19,695	18,607	13,955	9,304	-	4,889	21,825	20,619	15,465	10,310	-	5,418	27,921	26,378	19,783	13,189	-	6,931			
		W	2,481	2,324	1,743	1,162	-	670	2,325	2,177	1,633	1,089	-	628	2,561	2,399	1,799	1,199	-	691			
10	-12.2	Q(Btu/h)	18,287	17,276	12,957	8,638	4,319	4,290	20,719	19,574	14,680	9,787	4,893	4,861	27,262	25,756	19,317	12,878	6,439	6,396			
		W	2,430	2,277	1,707	1,138	569	667	2,264	2,120	1,590	1,060	530	621	2,515	2,356	1,767	1,178	589	690			
5	-15.0	Q(Btu/h)	16,790	15,863	11,897	7,931	3,966	3,684	19,612	18,528	13,896	9,264	4,632	4,303	26,066	24,626	18,470	12,313	6,157	5,719			
		W	2,397	2,245	1,684	1,123	561	663	2,216	2,075	1,557	1,038	519	613	2,472	2,316	1,737	1,158	579	683			
0	-17.8	Q(Btu/h)	15,171	14,333	10,750	7,167	3,583	3,071	18,505	17,483	13,112	8,742	4,371	3,746	23,021	21,749	16,312	10,875	5,437	4,660			
		W	2,383	2,232	1,674	1,116	558	659	2,181	2,042	1,532	1,021	511	603	2,340	2,191	1,644	1,096	548	647			
-4	-20.0	Q(Btu/h)	13,747	12,987	9,740	6,494	3,247	2,574	17,620	16,647	12,485	8,323	4,162	3,300	25,308	23,910	17,932	11,955	5,977	4,740			
		W	2,388	2,237	1,678	1,119	559	656	2,162	2,025	1,519	1,012	506	594	2,687	2,517	1,887	1,258	629	738			

* Above data is for heating operation without any frost.

Earthquake-proof strength analysis <Anchor bolt>

1.Type: SUZ Inverter Outdoor unit

2.Model name: SUZ-AA18NL

3.Specification

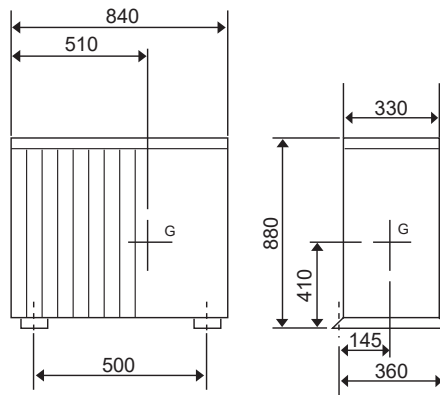
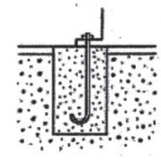
- (1) Unit mass $W = 60.3$ kg
- (2) Anchor bolt
- The total number of bolts. $N = 4$
 - The size and shape. $\phi = M 10$ type
 - The axis section area per one bolt. $A = 78$ mm² = 78×10^{-6} m²
 - The total number of bolts in one side which be pulled stronger when the unit inverted. $N_t = 2$
 - The height between the installing surface and the center of gravity of the unit $H_g = 380$ mm = 0.380 m
 - The bolt-span from the examination angle $L = 360$ mm = 0.360 m
 - The distance between the center of bolt and the center of gravity of the unit $L_g = 189$ mm ($L_g \leq L/2$) = 0.189 m

4.The examination calculation (by rounding off to the first decimal place of each item)

- (1) The horizontal seismic coefficient for designing $K_h = 1.0$
- (2) The vertical seismic coefficient for designing $K_v = K_h/2 = 0.5$
- (3) The horizontal earthquake forces for designing $F_h = K_h \cdot W \cdot 9.8 = 590.9$ N
- (4) The vertical earthquake forces for designing $F_v = K_v \cdot W \cdot 9.8 = 295.5$ N
- (5) The withdrawal strength of the anchor bolt $R_b = \frac{F_h \cdot H_g \cdot (W \cdot 9.8 - F_v) \cdot L_g}{L \cdot N_t} = 234.3$ N
- (6) The shear forces of the anchor bolt $Q = F_h/N = 147.7$ N
- (7) The stress arising to the anchor bolt
- The tensile stress. $\sigma = R_b/A = 3.0$ MPa < $f_t = 176$ MPa
 - The shearing stress. $\tau = Q/A = 1.9$ MPa < $f_s = 101$ MPa
 - The stress when affected by both the shearing and the tensile at the same time. $f_{ts}' = 1.4f_t - 1.6\tau = 243.4$ MPa
However f_{ts} equals f_{ts}' when f_{ts}' less than or equal to f_t , and f_{ts} equal f_t when f_{ts}' is greater f_t .
 $\sigma = 3.0$ MPa < $f_{ts} = 101.0$ MPa

(8) The construction way of the anchor bolt

- 1.The construction way of the anchor bolt. = Boxed J type anchor
- 2.The thickness of the concrete. = 120 mm = 0.120 m
- 3.The length of buried part of bolt. = 70 mm = 0.070 m
- 4.The permissible withdrawal weight. $T_a = 3136$ N > $R_b = 234$ N



Since the results from the examination above, the anchor bolt has enough strength.

Earthquake-proof strength analysis <Anchor bolt>

1.Type: SUZ Inverter Outdoor unit

2.Model name: SUZ-AA24NL

3.Specification

(1) Unit mass

W= 61.2 kg

(2) Anchor bolt

1.The total number of bolts.

N= 4

2.The size and shape.

"=M 10 type

3.The axis section area per one bolt.

A= 78 mm²= 78 × 10⁻⁶ m²

4.The total number of bolts in one side which be pulled stronger when the unit inverted.

Nt= 2

(3) The height between the installing surface and the center of gravity of the unit

Hg= 383 mm= 0.383 m

(4) The bolt-span from the examination angle

L= 360 mm= 0.360 m

(5) The distance between the center of bolt and the center of gravity of the unit

Lg= 189 mm(Lg ≤ L/2)= 0.189 m

4.The examination calculation (by rounding off to the first decimal place of each item)

(1) The horizontal seismic coefficient for designing

Kh= 1.0

(2) The vertical seismic coefficient for designing

Kv=Kh/2= 0.5

(3) The horizontal earthquake forces for designing

Fh=Kh · W · 9.8= 599.8 N

(4) The vertical earthquake forces for designing

Fv=Kv · W · 9.8= 299.9 N

(5) The withdrawal strength of the anchor bolt $R_b = \frac{F_h \cdot H_g - (W \cdot 9.8 - F_v) \cdot L_g}{L \cdot N_t}$

= 240.3 N

(6) The shear forces of the anchor bolt

Q=Fh/N= 149.9 N

(7) The stress arising to the anchor bolt

1.The tensile stress.

$\sigma = R_b/A = 3.1$ MPa < ft=176MPa

2.The shearing stress.

$\tau = Q/A = 1.9$ MPa < fs=101MPa

3.The stress when affected by both the shearing and the tensile at the same time. $f_{ts}' = 1.4f_t - 1.6\tau = 243.4$ MPa
However fts equals fts' when fts' less than or equal to ft, and fts equal ft when fts' is greater ft.

$\sigma = 3.1$ MPa

< fts= 101.0 MPa

(8) The construction way of the anchor bolt

1.The construction way of the anchor bolt.

= Boxed J type anchor

2.The thickness of the concrete.

= 120 mm= 0.120 m

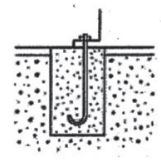
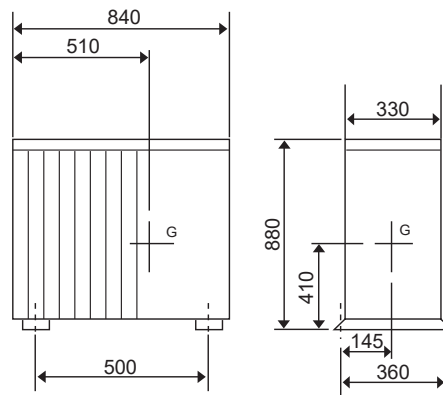
3.The length of buried part of bolt.

= 70 mm= 0.070 m

4.The permissible withdrawal weight.

Ta= 3136 N > Rb= 240 N

Since the results from the examination above, the anchor bolt has enough strength.



Earthquake-proof strength analysis <Anchor bolt>

1.Type: SUZ Inverter Outdoor unit

2.Model name: SUZ-AA30NL

3.Specification

(1) Unit mass

W= 61.2 kg

(2) Anchor bolt

1.The total number of bolts.

N= 4

2.The size and shape.

"=M 10 type

3.The axis section area per one bolt.

A= 78 mm²= 78 × 10⁻⁶ m²

4.The total number of bolts in one side which be pulled stronger when the unit inverted.

Nt= 2

(3) The height between the installing surface and the center of gravity of the unit

Hg= 383 mm= 0.383 m

(4) The bolt-span from the examination angle

L= 360 mm= 0.360 m

(5) The distance between the center of bolt and the center of gravity of the unit

Lg= 189 mm(Lg ≤ L/2)= 0.189 m

4.The examination calculation (by rounding off to the first decimal place of each item)

(1) The horizontal seismic coefficient for designing

Kh= 1.0

(2) The vertical seismic coefficient for designing

Kv=Kh/2= 0.5

(3) The horizontal earthquake forces for designing

Fh=Kh · W · 9.8= 599.8 N

(4) The vertical earthquake forces for designing

Fv=Kv · W · 9.8= 299.9 N

(5) The withdrawal strength of the anchor bolt $R_b = \frac{F_h \cdot H_g \cdot (W \cdot 9.8 - F_v) \cdot L_g}{L \cdot N_t}$

= 240.3 N

(6) The shear forces of the anchor bolt

Q=Fh/N= 149.9 N

(7) The stress arising to the anchor bolt

1.The tensile stress.

$\sigma = R_b/A = 3.1$ MPa < ft=176MPa

2.The shearing stress.

$\tau = Q/A = 1.9$ MPa < fs=101MPa

3.The stress when affected by both the shearing and the tensile at the same time. $f_{ts}' = 1.4f_t - 1.6\tau = 243.4$ MPa
However fts equals fts' when fts' less than or equal to ft, and fts equal ft when fts' is greater ft.

$\sigma = 3.1$ MPa

< fts= 101.0 MPa

(8) The construction way of the anchor bolt

1.The construction way of the anchor bolt.

= Boxed J type anchor

2.The thickness of the concrete.

= 120 mm= 0.120 m

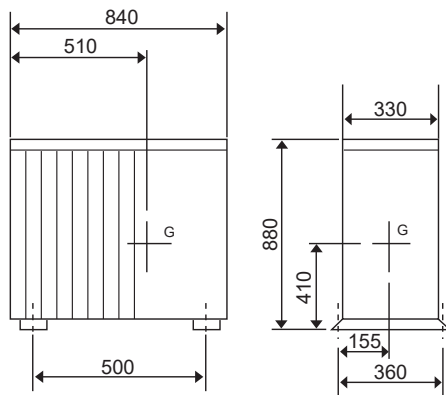
3.The length of buried part of bolt.

= 70 mm= 0.070 m

4.The permissible withdrawal weight.

Ta= 3136 N > Rb= 240 N

Since the results from the examination above, the anchor bolt has enough strength.



Earthquake-proof strength analysis <Anchor bolt>

1.Type: SUZ Inverter Outdoor unit

2.Model name: SUZ-AA36NL

3.Specification

(1) Unit mass

W= 61.2 kg

(2) Anchor bolt

1.The total number of bolts.

N= 4

2.The size and shape.

"=M 10 type

3.The axis section area per one bolt.

A= 78 mm²= 78 × 10⁻⁶ m²

4.The total number of bolts in one side which be pulled stronger when the unit inverted.

Nt= 2

(3) The height between the installing surface and the center of gravity of the unit

Hg= 383 mm= 0.383 m

(4) The bolt-span from the examination angle

L= 360 mm= 0.360 m

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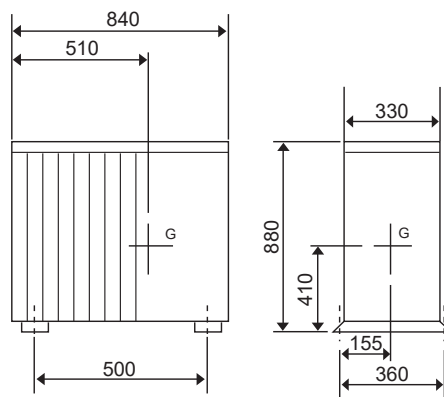
3.The length of buried part of bolt.

= 70 mm= 0.070 m

4.The permissible withdrawal weight.

Ta= 3136 N > Rb= 240 N

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